

PaWARN:

PA's Water/Wastewater Agency Response Network

Mike Snyder

PA-AWWA, PaWARN, MHS Consulting Services



Who and what is a WARN?

- Utilities are organized within a State
- By a Mutual Aid Agreement
- PaWARN: Modest dues 1/2 cent per population served



PaWARN's structure

- PaWARN is a 501(c)3 with a 13 member board made up of PA water and wastewater professionals.
- Associate members can make recommendations but voting power remains with utility professionals.

Support for creating PaWARN (Regulatory)

- PA Department of Environmental Protection
- PA Public Utilities Commission
- PA Emergency Management Agency
- US Environmental Protection Agency

Association support

- NAWC – PA Chapter
- PA-AWWA
- PMAA
- PRWA
- PWEA
- RCAP Solutions
- WWOAP

PaWARN Members

- Addison Borough Water
- ALCOSAN
- Aqua PA (80 individual water systems)
- Baden Municipal Authority
- Bainbridge Water Authority
- Bradford City Water Authority
- Brodhead Creek Regional Authority
- Capital Region Water
- Carlisle Boro, Bureau of Water & Wastewater
- Carroll Township Authority
- Charleroi Borough Water Authority
- Chester Water Authority
- City of Lancaster, Bureau of Water

PaWARN Members

- City of Lebanon Authority
- Columbia Water Company
- Cooper Township Sewer Authority
- Coplay Whitehall Sewer Authority
- Dallastown-Yoe Water Dept.
- Danville Wastewater Treatment Plant
- DELCORA
- Derry Township Municipal Authority
- Downingtown Municipal Water Authority
- Dover Township Water & Sewer
- East Greenville Boro Water Dept.

PaWARN Members

- East Petersburg Borough Water Department
- East Stroudsburg Boro Water & Sewer
- Easton Suburban Water Authority
- Eaton Sewer & Water Co.
- Economy Borough Municipal Authority
- Elizabethtown Area Water Authority
- Ellwood City Wastewater
- Elmhurst Twp. Sewer Authority
- Erie Water Works
- Fairview Water & Sewer Authority
- Farmington Twp. Water & Sewer

PaWARN Members

- Fox Chapel Authority
- Franklin Twp. Sewer Authority
- Fredericksburg Sewer and Water Authority
- Freeland Borough Municipal Authority
- Gettysburg Municipal Authority
- Hamburg Municipal Authority
- Hellertown Borough Authority
- Knoxville Borough Water & Wastewater
- Kutztown Borough Water & Wastewater
- Laceyville Borough Water
- Lancaster Area Sewer Authority
- Lawrenceville Water & Wastewater

PaWARN Members

- Lehigh County Authority
- Lehigh County Authority Wastewater Pretreatment
- London Grove Township Municipal Authority
- Lower Swatara Twp. Wastewater
- Macungie Borough Authority
- Manheim Borough Authority
- Marion Township Water Dept.
- Mifflintown Municipal Authority
- Millersburg Area Authority
- Milton Regional Sewer Authority
- Minersville Municipal Authority
- Mountaintop Area Joint Sanitary Authority

PaWARN Members

- Mountaintop Regional Water Authority
- Municipal Authority of the Borough of Belle Vernon
- Municipal Authority of the Borough of Lewistown
- Municipal Authority of Lower Swatara Township
- Municipal Authority, Borough of Portage
- Municipal Authority of Washington Twp.
- New Milford Municipal Authority
- New Oxford Municipal Authority
- Newport Borough Water Authority
- New Sewickley Township Authority

PaWARN Members

- Newville Water & Sewer Authority
- Northampton Borough Municipal Authority
- North Fayette County Municipal Authority
- North Penn Water Authority
- North Wales Water Authority
- Oakmont Municipal Authority
- Orwigsburg Municipal Authority
- PA American Water Company (includes 47 individual water systems)
- Phoenixville Borough Water
- Pittsburgh Water & Sewer Authority
- Pleasant Hills Authority
- Pottstown Borough Authority

PaWARN Members

- Reading Area Water Authority
- Red Lion Municipal Authority
- Riegelsville Borough Water Dept.
- Rixford Water Association
- Roulette Township Water & Sewer Authority
- Schuylkill County Municipal Authority
- Shrewsbury Borough Water Dept.
- South Middleton Township Municipal Authority
- Springtown Water Authority
- State College Borough Water Authority
- Stewartstown Borough Authority
- Suez (Includes 12 individual water/wastewater systems)

PaWARN Members

- Susquehanna Township Authority
- Swatara Township Authority
- Telford Borough Authority
- Tri-County Joint Water Authority
- United Water PA (includes 12 individual water systems)
- Waymart Area Authority
- West Branch Sewer Authority
- West Lebanon Township Water Department
- Western Berks Water Authority

PaWARN Members

- West View Municipal Authority
- Whitehall Township Authority
- Whitemarsh Township Authority
- Wilkinsburg-Penn Joint Water Authority
- Williamsport Municipal Water & Sanitary Authority
- Wrightsville Borough Municipal Authority
- Wyoming Valley Sanitary Authority
- York Water Company

FlaWARN: Hurricane Michael

Event:	<u>Hurricane Michael</u>
Post:	<u>Inlet Beach Utilities in Bay Co. Generator Need</u>
Submitted by:	<u>Ron Trygar, rtrygar@treeo.ufl.edu</u>

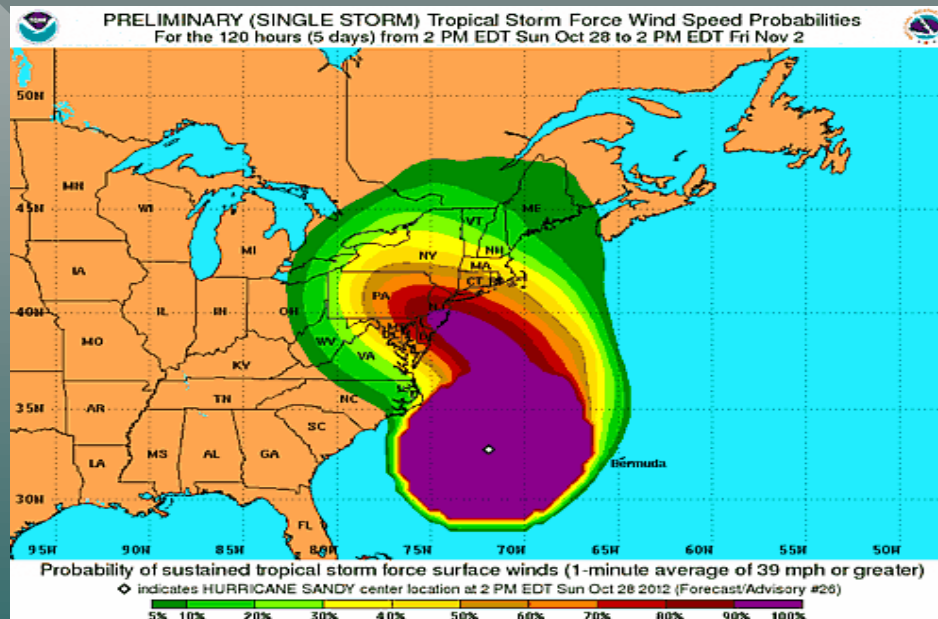
Event:	<u>Hurricane Michael</u>
Post:	<u>Available - Two LS Crew, with Generators or Pumps and other equipment</u>
Submitted by:	<u>A. Randolph Brown, randolph.brown@copbfl.com</u>

Event:	<u>Hurricane Michael</u>
Post:	<u>Repair crews with excavators and generators & water operator</u>
Submitted by:	<u>Catina Gomez, catina@regionalutilities.net</u>

Event:	<u>Hurricane Michael</u>
Post:	<u>Sending 130 KW generator, 80 KW generator, and a 6" bypass pump with City of West Palm Beach team</u>
Submitted by:	<u>Kevin Carter, KCARTER@broward.org</u>

PaWARN: Hurricane Sandy 2012

Storm is predicted to have a direct impact on Pennsylvania, especially the eastern sector



Example of Sandy response

- Generator travels across state: Erie Water Works responds to request from Lehigh County Authority for generator.



Testimonial

- “The big generator from Erie was AWESOME – we have our offices up and running on that this morning! Thanks!”

*Liesel Adam, Customer Care &
Communications Manager
Lehigh County Authority*

Hurricane Irene, TS Lee 2011

- Generator for New Milford
- Sewage By-Pass Pump for Lancaster
- Pumps for flooded wastewater systems



Hurricane Irene, TS Lee (cont'd)

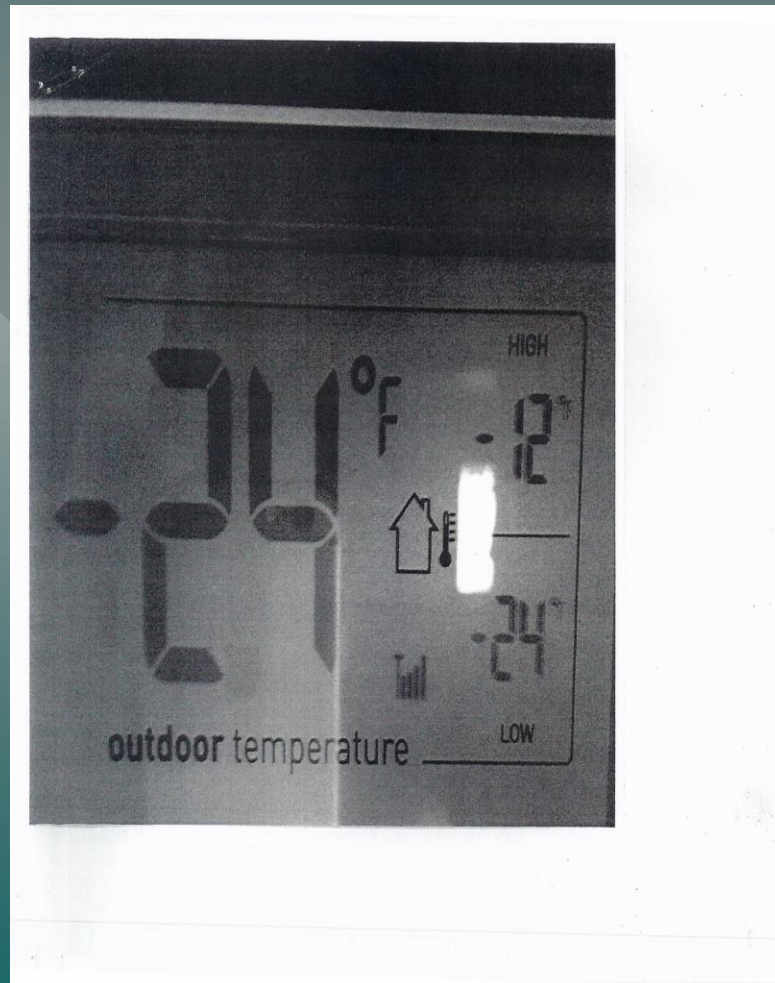
- Emergency interconnect for Lebanon
- Bulk water for numerous rural townships
- Bulk water for PEMA EOC



City of Bradford Emergency

- February 23, 2015: Transmission main ruptures, drains two 2-million gallon reservoirs – 18,000 people without water. Temperature is -24 degrees.
- February 24, 2015: PEMA holds emergency conference call: Asks PaWARN to deploy to the Command Post in Bradford.

Yikes!



BRADFORD CITY WATER AUTHORITY
WATER SYSTEM OVERVIEW

The diagram illustrates the water distribution network for Bradford City. Key components and their current status are as follows:

- Water Treatment Plant:** Centrally located, receiving input from the Raw Water Pump.
- Raw Water Pump:** Located at the bottom center, feeding into the Water Treatment Plant.
- Reservoirs and Tanks (Water Levels):**
 - RESERVOIR #3: 40.2 FT
 - RESERVOIR #2: 0.0 FT
 - RESERVOIR #4: -0.2 FT
 - KENDALL AVE TANK: -0.3 FT
 - EDGEWOOD RD TANK: -0.3 FT
 - GILBERT LANE TANK: 9.5 FT
 - BON AIRE TANK: 7.6 FT
 - RAV WATER RESERVOIR #5: 69.0 FT
 - FOSTER HOLLOW TANK: 21.3 FT
 - AIRPORT TANK: 84.4 FT
 - F.C.I. McKEAN: 17.7 FT
 - BIG SHANTY: 13.7 FT
 - ROUTE 219 PUMP STATION: 13.7 FT
- Pump Stations and Stations (Alarm Status):**
 - MAPLEWOOD AVE PUMP STATION: **ALARM**
 - BIG SHANTY PUMP STATION: **ALARM**
 - ROUTE 219 PUMP STATION: **ALARM**
 - BOSS AVE PUMP STATION: **ALARM**
 - ANN LANE PUMP STATION: **ALARM**
 - COLONIAL HTS PUMP STATION: **ALARM**
 - MUNN ROAD PUMP STATION: **ALARM**
 - HARRISBURG RUN PUMP STATION: **ALARM**
 - HILLSIDE PUMP STATION: **ALARM**
 - CONSTITUTION AVE PUMP STATION: **ALARM**
- Other Features:**
 - REPEATER:** Located near the top center.
 - CENTRIFUGE AND CLARIFIERS:** Located near the bottom left.
 - DERRICK CITY:** Indicated at the bottom right.

Freezing temperatures hinder repairs



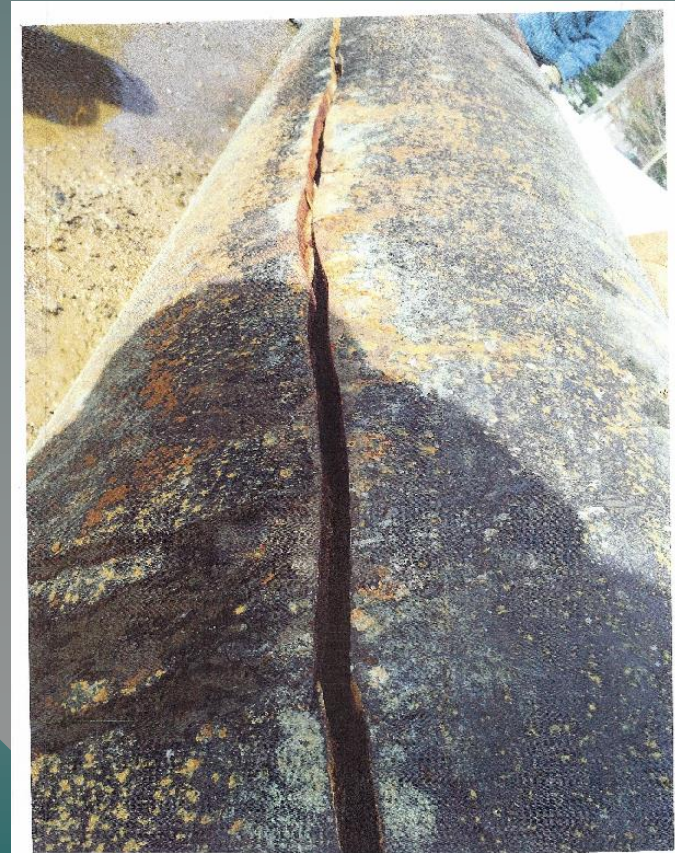
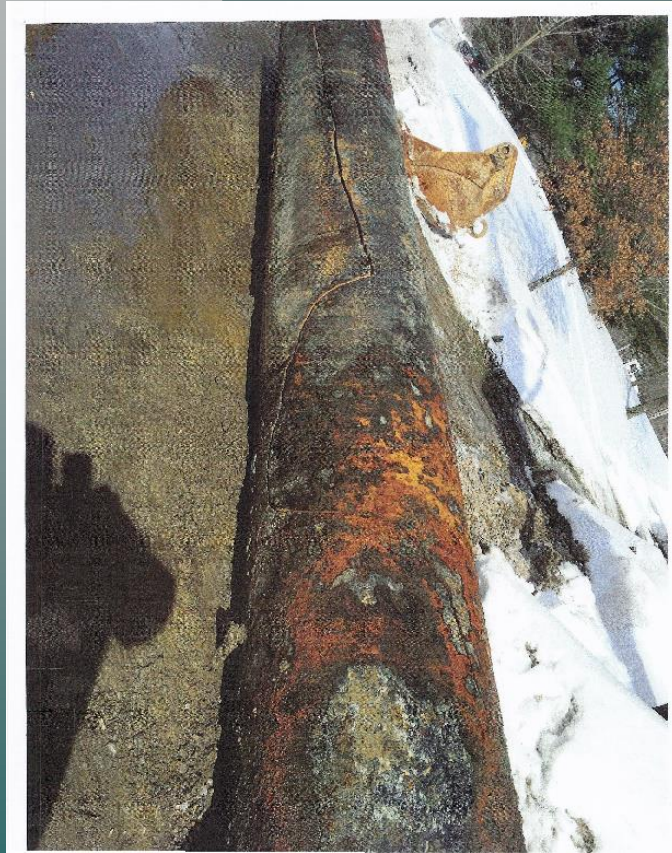
Pipe is visible after tiring excavation



Ruptured pipe is finally uncovered



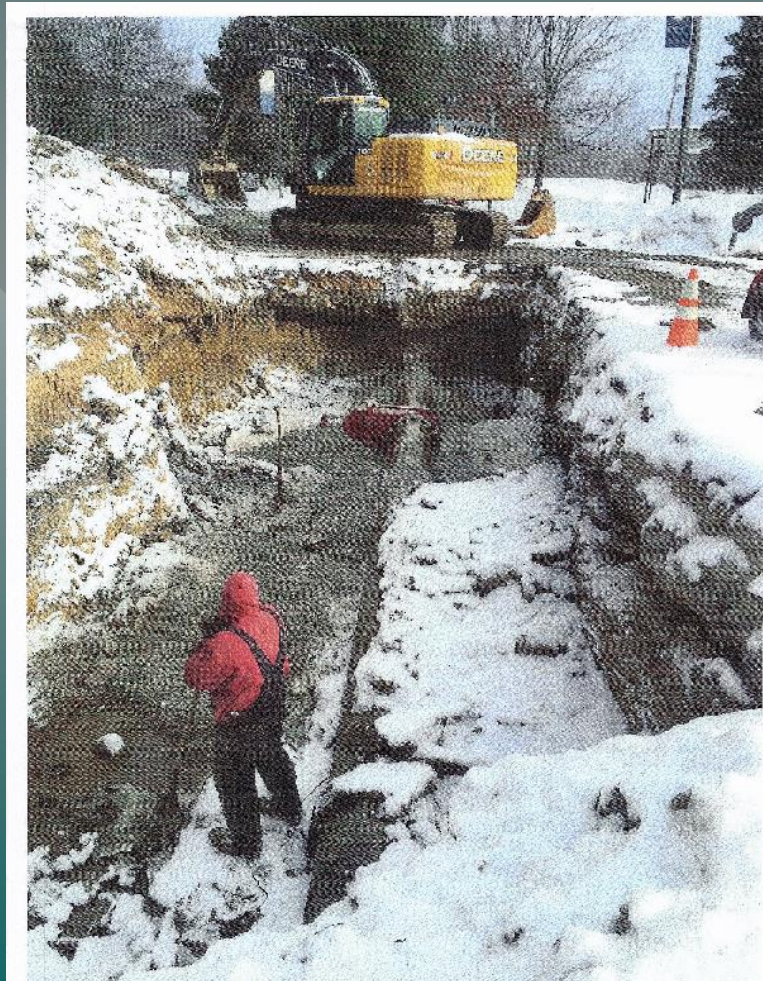
Pipe had extensive damage



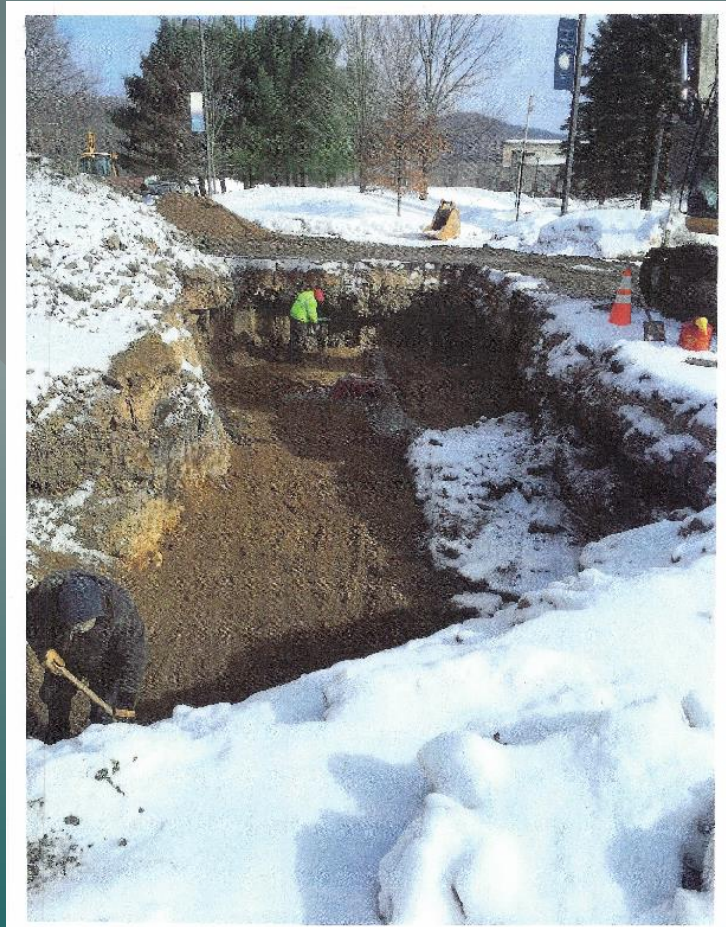
Installing New Valve on 24" Main



City of Bradford Water Emergency



Repair is complete!!!



City of Bradford Water Emergency

- Command Post includes PEMAs Incident Management Team, Law Enforcement, Fire Personnel, Red Cross, local officials and PaWARN. ICS structure is being utilized.
- PaWARN supplied bulk supply of bottled water to school district and Pitt's Bradford campus. Served as liaison between PEMA, DEP and the Water Authority.

City of Bradford Water Emergency

- City was without water for 5 days
- City held a press conference each day to update city residents on the progress of replacing the ruptured section of the main.
- Water Authority Mgr. provided an “honest and realistic” assessment each day.
- As anxiety mounted among city residents, things took an unexpected turn at Thursday’s press conference.

City of Bradford Water Emergency

- Local Volunteer Fire Departments provided 4,000 gallons per day for Hospital boilers
- Connection was made into the DA tanks
- Additional 3,000 gallons of potable water per day provided to the hospital to operate 3 separate buildings
- Hospital utilized all paper products for meals, etc

Hospital Boiler Operations



City of Bradford Water Emergency



City of Bradford Water Emergency

- Mayor commends water system personnel for their efforts in extreme weather conditions.
- Manager Kim Benjamin (now retired) receives a standing ovation at the press conference. (Writes Op Ed article for the newspaper commending his staff).
- Don't underestimate the importance of support from local officials.

City of Bradford Emergency

The Bradford (Pa.) Era, Wednesday, March 25, 2015 — 7

— Comment & opinion

You should know their names

By KIM BENJAMIN
Executive director
Bradford City Water Authority

Monday was a bit of an anniversary. Just four short weeks ago our water system that serves the entire Tuna Valley was dealt a crippling blow. The 24" water main line that provides service to our community ruptured and hemorrhaged water at an unprecedented rate. Also complicating things, and with all due respect to my very good friend Ron Orris, the weather was something less than a "Chamber of Commerce" day.

Having spent a lifetime in the Tuna Valley I will say that the beauty of Mother Nature is one of the main reasons for residing in this region.

However, there are times such as this unprecedented winter of 2015 when nature can be as brutal as a schoolyard bully and a very impressive foe.

During the first thirty-six hours of this almost surreal event, Bradford City Water Authority front line crews fought through unimaginable double digit subzero conditions that at times reached minus 24 degrees. Originally harried by the tremendous flow volumes of up to 30,000 gallons of water every 60 seconds and a heavy frost overburden extending over four feet underground, they were relentless in their determination to ignore the surrounding conditions and make an effective repair.

In the meantime a state of emergency was enacted and all local, regional and state agencies from here to Harrisburg responded swiftly and with great organizational skills to be of assistance over the next seven days. Elected and appointed officials across the Tuna Valley were of one voice to assist and safeguard the people they serve.

Like many I am often critical of government when it is at its worst. But from my strategic vantage point this was an amazing example of what government can do when it is at its very best.

Of course both the professional and volunteer first responders at all levels were key to our getting through those first critical days. That is something here along the Tuna that we as a community have grown accustomed to.



BENJAMIN

Guest Commentary

A special thanks is due to Bradford's Police Chief, Chris Lucco, who was at the top of his game as "Incident Commander" of all emergency operations.

Kudos also to all the supportive local business, industry, UPB, Bradford School District as well as the over 3,000 residential customers we strive to serve.

One week turned into four and nature continued her assault on our system as the entire Water Authority force of distribution crew, water plant operators and office staff worked in unison. They have continued working long days and weeks keeping main lines repaired, disruptions to a minimum and setting about having dozens and dozens of individual residential freeze-ups brought back on line.

Job titles and job descriptions are a key element of most all structured organizations. However, there are times when those paper guidelines must dissolve and everyone must move with a singular goal in mind. Ours has been to make every effort possible to resurrect our water system from the ravages of the most extreme weather in nearly a century. And to once again have our entire customer base have the luxury of taking water for granted.

In an event of this unprecedented size and scope there are certain to be detractors and some very unhappy customers.

I accept that criticism as it is understandable. However, for the cast and crew of the Water Authority I do not believe their strong will and purpose over the past month has been anything short of remarkable.

Many throughout the Tuna Valley have been very gracious and humbling in their comments about our staff and their efforts. I continue to comment that I am very fortunate and proud to have them all on board, not just from the past month, but for all they do all year long. They are the heart and soul of the Water Authority.

You should know their names: Jerry Anderson, John Cantoni, Troy Coppella, Shawn Cotton, Jim DeCasper, Rocky DeCasper, Bob Ellison, Jon Cobble, Mike Haviland, Steve Konecki, Tim Myer, Roger Paik, John Schuster, Dave Trumbull, Steve Vecellio and Jody Zimmerman.

"The whole is greater than the sum of its parts ... Gestalt"

Thank you.

Manager's Testimonial

- “Bradford’s entire water system with service to 18,000 people was completely paralyzed during the winter of 2015 when a 24-inch main line break drained all 5 million gallons of water system storage.
- With a full state of emergency declared, PaWARN was an integral part of an almost instantaneous response in conjunction with the Pennsylvania Emergency Management Agency.
- A representatives of PaWARN was onsite throughout the event and worked side by side with water system personnel to do whatever was necessary to resurrect an entire water system. It is a comfort to those of us that manage and administer public water service in Pennsylvania that an organization such as PaWARN is standing by at the ready to assist in a time of need.”
- *Bradford City Water Authority ... "and a grateful community"*

PaWARN – GPP Alliance

- **As a PaWARN Member you can benefit by insuring with Glatfelter Public Practice:**
- Up to a 15% discount available
- Access to GPP through your insurance broker of choice
- Specialty coverages for entities which treat, store and distribute water/wastewater
- Access to a valued insurance leader at competitive pricing
- Risk Control tools and resources available; including educational workshops

Water Main Break SCMA

- Dec. 27-28, 2012: Schuylkill County Municipal Authority is experiencing a difficult main break.



Water Main Break SCMA

- System is running out of water.
- Needs odd-sized clamp to make the repair.
- Emergency request is posted on the PaWARN website.
- Within 3 hours, Northampton Borough Municipal Authority supplies clamp that enables SCMA to make the repair.

Testimonial

- “We experienced a real emergency that prompted the use of the PaWARN system to assist us. The system worked exactly as designed and we were able to avert disaster.”

*Patrick Caulfield, Executive Director
Schuylkill County Municipal Authority*

City of Harrisburg's sink hole



City of Harrisburg's sink hole

- Jan. 1-9, 2013: Large sinkhole in Fourth Street neighborhood has residents, politicians frustrated. Community is without potable water.
- PaWARN member system PA American Water supplies two water buffaloes so that residents have potable water.

Testimonial

- “I would like to thank PaWARN for your timely response and assistance during our recent sink hole event here in the City of Harrisburg. We have seen firsthand how valuable a network system like PaWARN can be.”

*Raly Bey, Director
City of Harrisburg, Bureau of Water*

Columbia Borough Water

- Tank intrusion on March 14, 2013 leads to isolating tank and grabbing samples.
- PaWARN contacted for bulk water tanker on Friday morning, March 15th to provide potable water to customers.
- PA American Water delivers tanker at 2 p.m. on Friday afternoon.

Case Studies: (Most Bizarre – So Far...)

- April 2011: City of Harrisburg Main Break: PaWARN member systems provide two valve-turning trucks to assist with the difficult repair.
- Unusual culprit blamed for main break!



Scary situation

- 2012: Small system near Reading, PA reports possible intentional contamination of cyanide to water supply by disgruntled employee.
- PA DEP/Water System issues “Do Not Consume” order for system’s customers.
- PaWARN notified for possible bulk water supply.

Another scary situation

- October 2013: Altoona Water Authority receives notification that its water supply has been contaminated.
- Same timeframe: Two individuals attempt to gain access to a water tower at a Poconos system claiming to be cell phone tower repairmen. Neither could produce IDs. Similar scenario happened in Maine.

PaWARN Equipment

- Godwin 6" Pump
- Kohler generators: 100kw & 125kw



State of the art website

- Each member system has a page on the website.
- Systems can post emergencies, reply to emergencies, and network through the website.
- Systems can also query for resources through the site's database

Summary: PaWARN

- PaWARN can supply “industry specific” equipment during emergencies.
- The more PaWARN members there are, the more resources we have available for emergencies.
- Because County EMAs understand the importance of mutual aid, please encourage water & wastewater systems in your jurisdiction to join PaWARN.

Contact Info:

Mike Snyder, PaWARN Coordinator

Phone: 717-774-8870 ext. 102

Cell: 717-880-1303

Email: mikesnyder@pawarn.org

