

SENATE OF PENNSYLVANIA
CONSUMER PROTECTION & PROFESSIONAL LICENSURE
AND
VETERANS AFFAIRS & EMERGENCY PREPAREDNESS



JOINT HEARING ON STORM RELATED ISSUES: UTILITY SERVICES

OCTOBER 18, 2011



TESTIMONY BY
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AQUA PENNSYLVANIA, INC.

Good morning Chairman Tomlinson, Chairman Baker and members of the Senate Consumer Protection and Professional Licensure Committee and the Senate Veterans Affairs and Emergency Preparedness Committee.

I am Marc Lucca, vice president of production for Aqua Pennsylvania. Thank you for the opportunity to discuss Aqua's emergency preparedness plans for our operations as specifically related to recent severe weather.

Aqua provides water and wastewater services to 430,000 customers – about 1.3 million people – in Pennsylvania.

❖ **Southeast Pennsylvania**

- Service in the five-county area north and west of Philadelphia.
- Facilities include 10 water treatment plants with a capacity of 120 million gallons per day.
- 4,300 miles of water main, 62 wells and 82 storage facilities.

❖ **Shenango Valley Division**

- Service in Lawrence, Mercer and Forest Counties plus portions of Trumble County, OH.
- Two surface-water treatment plants with a capacity of 16.3 million gallons per day.

❖ **Roaring Creek Division**

- Service in the City of Shamokin and areas of Northumberland, Columbia, and Schuylkill Counties.
- One surface-water treatment plant with a capacity of 8 million gallons per day.

❖ **Northeast Division**

- Service in Bradford County to the Boroughs of Sayre, Athens, South Waverly and Townships of Athens; areas of Wayne, Pike, Monroe and Lackawanna Counties; and Susquehanna, Wyoming, Luzerne, Monroe, Northampton, Lehigh, Carbon and Schuylkill Counties.
- All systems are served by groundwater wells.

Storm Facts

❖ **Hurricane Irene: August 26-28, 2011**

- On August 14, Philadelphia had the third highest one-day precipitation on record. On August 27, Philadelphia had an additional 4.55 inches of rain.
- On August 28, Wilkes-Barre/Scranton had 3.23 inches of rain, tying the 10th highest total.

- This was Pennsylvania's fifth wettest August since 1895.
- For Allentown and Philadelphia, August was the all-time wettest month on record.
- Philadelphia Airport had 19.31 inches of rain in August.

❖ **Tropical Storm Lee: September 7-9, 2011**

- Flooding in Wikes-Barre/Scranton resulted in mandatory evacuation of areas affected by Hurricane Agnes in 1972.
- The Susquehanna River reached a record high of 42.6 feet – the third worst flood stage in its history.
- Swatara Creek in Hershey, Dauphin County reached its highest level ever.
- 7 to 15 inches of rain fell in northwestern Lancaster County.
- Lancaster City received 7.76 inches of rain and the Boroughs of Elizabethtown and Mount Joy measured 15 inches.

Storm Preparedness and Activities

As Benjamin Franklin said, "An ounce of prevention is worth a pound of cure." That has been Aqua's philosophy in preparing for events that have the potential to disrupt our service.

- ❖ Aqua has spent several million dollars to prevent storm damage. We have flood proofed some existing structures and replaced others so that they are above flood-water elevations. Projects include:
 - Increased the height of the flood wall at the Pickering Water Treatment Plant in Chester County (2010).
 - Replaced old raw-water pump stations at Schuylkill River (2010) in Chester County and Perkiomen Creek (2011) in Montgomery County.
 - Flood-proofed Cabot Well Station in Montgomery County (2009).
 - Installed emergency generators at all surface water treatment plants.
 - Completed updates to our Flood Emergency Response Plans (2008).
- ❖ Emergency generators played a critical role when recent storms caused widespread power outages. For example, during Hurricane Lee emergency generators at the Crum Creek Water Treatment Plant in Delaware County operated for about 14 hours. This plant serves Springfield Hospital, which was never without water. The generator at the Ridley Water Treatment Plant, also in Delaware County, ran for about 50 hours. This plant serves Riddle Memorial Hospital, which also was never without water.
- ❖ No Aqua customers were without water during the storm.

- ❖ Robert Pecker Hospital in Sayre, Bradford County, was under a precautionary boil water order. Aqua mobilized two 2,000-gallon trucks for potable water use at the hospital. They were later used in the Town of Sayre for community use during the recovery.

We realize that these storms were unique events and that other parts of Pennsylvania may have been more severely impacted than those areas served by Aqua. However, we are extremely proud that our advance preparations, along with the skills and experience of our dedicated employees, allowed us to maintain the reliability of our water and wastewater services for our customers without interruption.

The attached photographs illustrate the challenges we faced in maintaining the operation of our system.

Thank you again for the opportunity to be a part of today's hearing on these important issues.

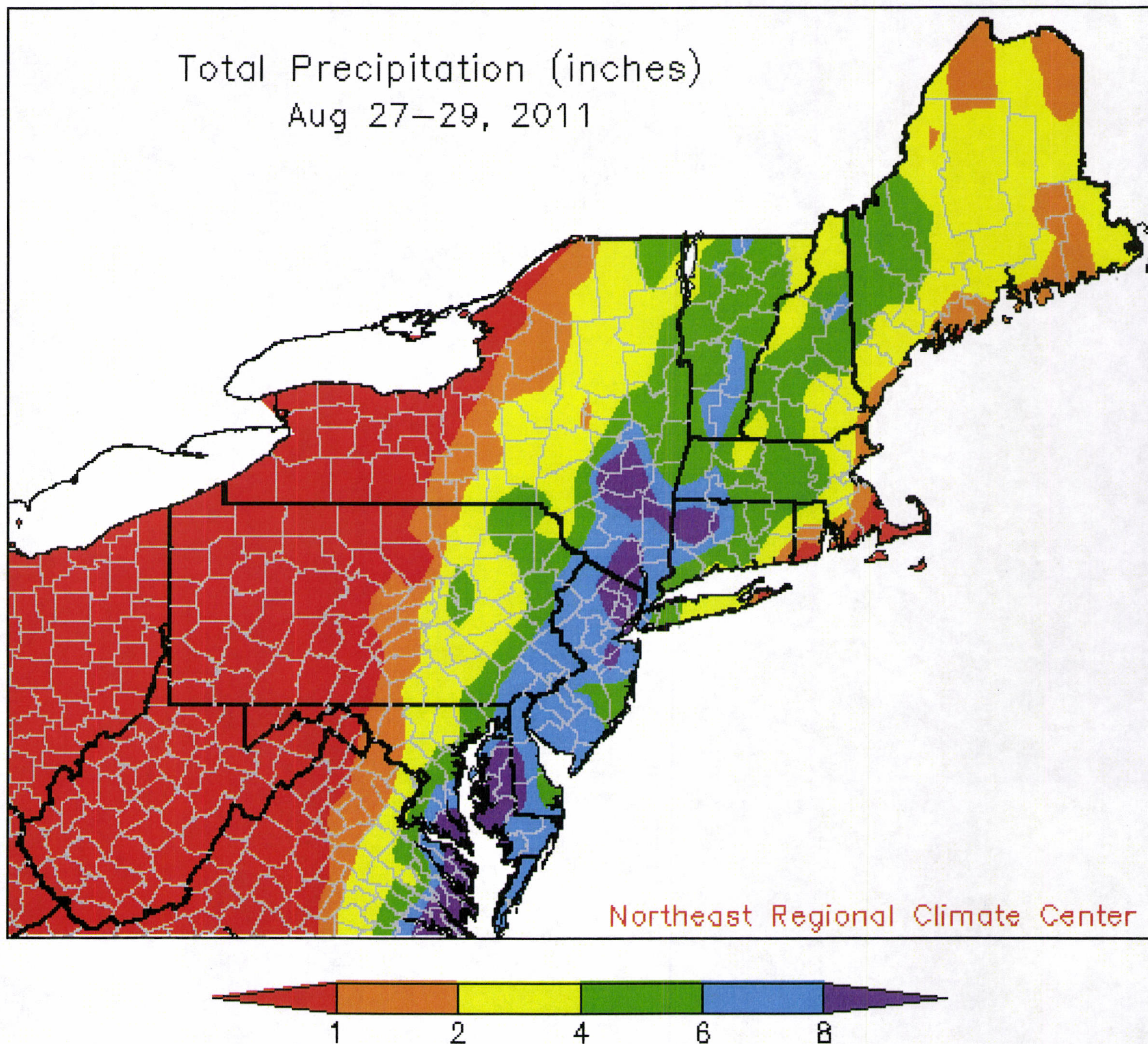


Figure 1 - Rainfall from Hurricane Lee across the mid-Atlantic states



Figure 2 - Roaring Creek Division - road washout.



Figure 3 – SE PA – Perkiomen Raw Water Pump Station and Intake. Station went into service July 2011 and remained in operation during the flood. The previous station would have been under an estimated six feet of water.



Figure 4 - Roaring Creek Division Bear Gap 1 – Bridge (Northumberland County).
Note condition of the bridge deck.



Figure 5 - SE PA Crum Creek Water Treatment Plant Washwater Tanks (Delaware County).
Crum Creek is normally confined to the creek which is parallel to the line of trees.



Figure 6 - SE PA Crum Creek Water Treatment Plant (Delaware County).
Crum Creek is over its banks and typically located along the tree line to the left of the photo.



Figure 7 - SE PA - Ingram's Mill Water Treatment Plant (Chester County).
Brandywine Creek over its banks and flood waters entering the plant.



Figure 8 - SE PA Neshaminy Water Treatment Plant (Bucks County).
Neshaminy Creek is over its banks and has flooded a road leading to our raw water intake located to the right of the photo. Water level is about five feet above the road.



Figure 9 - SE PA Pickering Creek Dam (Chester County).
Water lapping up against Highway 23.



Figure 10 - SE PA Cabot Well Station (Montgomery County)

Flood proofing project was completed in 2009. The station remained in operation during flooding from the storms.



Figure 11 - SE PA Pickering Water Treatment Plant (Chester County).

The flood wall was raised to protect the plant from flood waters from the Schuylkill River and Pickering Creek.



Figure 12 - SE PA Pickering Water Treatment Plant (Chester County).
Five 2-megawatt emergency power generators. Note catalytic converters on top of generators



Figure 13 – Portable emergency generator.