



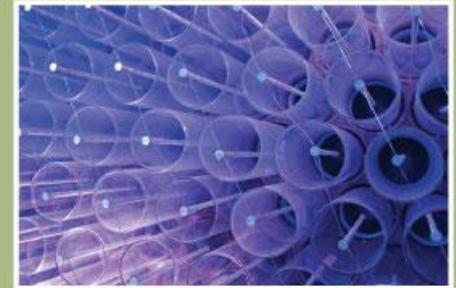
**PENNSYLVANIA  
AMERICAN WATER**

# **Small, but a Mighty Challenge: Small Water Utilities**

**National Association of Regulatory Utility  
Commissioners' Summer Committee Meetings**

**Kathy L. Pape  
Senior Vice President, American Water Mid-  
Atlantic Division and  
President, Pennsylvania American Water**

*July 26, 2016*







## Our Company

- **Subsidiary of American Water Works Co. Inc.**
- **Roots date back to early 1800s, Incorporated in 1904**
- **Largest regulated water and wastewater service provider in PA**
- **Serving approximately 2.3 million people in 36 counties**
- **Approximately 1,000 employees**
- **Customer base:**
  - **Approx. 650,000 water customers**
    - 92% residential
    - 7% commercial
    - 1% industrial/other
  - **Approx. 21,000 wastewater customers**



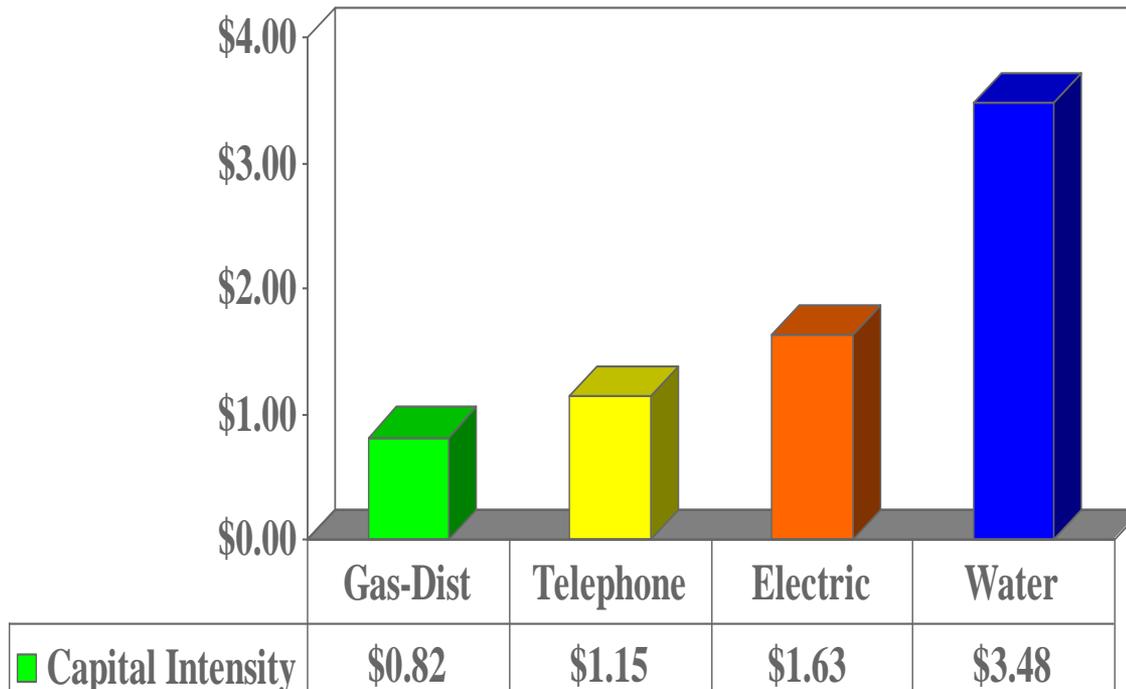
## Regulated Water Utility Must Balance ...



## Water Is the Most Capital-Intensive Industry

- Water requires more capital per revenue than all other utilities and manufacturing industries

Capital Invested per \$1 of Revenue



*AUS Utility Reports*

## Challenges Facing Today's Small Water Utilities

- Cash flow negative-need to access capital markets-limited access to capital markets
- Aging infrastructure, history of deferred maintenance
- Increasingly stringent (costly) environmental regulations
- Lack of financial resources and technical expertise
- HOAs/Developers want to exit water business
- No successor(s) as business owners get older/retire



## Small System Weaknesses

- **One sizeable capital project can consume all cash flow**
- **Rate cases not filed or too late to provide relief**
  - Regulatory lag and rate case expense causes further harm
- **Many family-owned systems not operated as a business**
- **Difficult for small, single entity to address range of challenges facing water utilities**





# Acquisitions and Investment in Troubled Systems

| System   | Date | Improvements   | System Issues   |
|--|------|--|---|
| <b>Clarion Area Authority (Wastewater)</b>                                 | 2008 | Upgrade treatment and collection system                      | System under DEP Consent Order to remedy permit violations and overflows  |
| <b>Claysville Donegal Joint Municipal Authority (Water and Wastewater)</b> | 2008 | Wastewater – upgrade treatment and collection                | Levels of disinfection by products exceeded Pa-DEP's drinking water standards                                       |
| <b>Wallaceton Municipal Authority</b>                                      | 2009 | Replaced storage tank; Installed new pipe and fire hydrants  | Water system was under Pa-DEP consent order due to its source of supply being under the influence of surface water. |
| <b>Saxonburg Area Authority</b>  | 2009 | Installed new pipe and fire hydrants; Replaced booster pumps | Service was not reliable. System experienced leaks and extended period of varying or low pressure to customers.     |
| <b>Nittany Water Company</b>   | 2010 | Installed new pipe and fire hydrants                         | Unaccounted for water (UFW) over 46 percent   |
| <b>Lake Spangenberg Water Company</b>                                      | 2012 | Installed new pipe and fire hydrants                         | Poor financial viability to maintain assets.  |
| <b>Fernwood Resort</b>   | 2012 | Installed new treatment systems and new pipe                 | Manganese removal required.   |
| <b>Clean Treatment Sewage Company</b>                                      | 2013 | Upgrade treatment and collection facilities                  | Numerous violations of Clean Water Act.   |
| <b>All Seasons Water</b>   | 2013 | Installed new pipe, water meters and water quality equipment | Numerous violations of Safe Drinking Water Act related to treatment, reliability, reporting                         |
| <b>Indian Rocks POA</b>  | 2013 | Upgrade wells and replace small diameter pipe                | High URW. Did not have technical or financial ability to address critical issues.                                   |
| <b>Olwen Heights Water Company</b>   | 2013 | Installed new mains  | High UFW (73%). Under PUC order since 2005 to reduce UFW.   |

## Acquisition Option for Nonviable Systems

- Nittany Water Company serving Centre and Clinton counties
- “Troubled system” with high unaccounted for water and history of main break and service outages



Before



After



## Acquisition Option for Nonviable Systems

- Saxonburg Area Authority serving Butler County
- History of unreliable service, leaks and poor water pressure



Before



After

## Solution for Small Systems With Compliance Issues

- Wallaceton Municipal Authority serving Clearfield County
- Under DEP consent order due to source of supply issues



**Before**



**After**

## Berry Hollow Water Co: Case Study of Troubled Small System Acquisition

- System serving 70 customers with history of water quality and supply problems
- Customers under boil water advisory
- Pennsylvania American Water acquired system early April 2014
- In first week:
  - Company shuttled water, installed new access road to well site and located substantial water leak
  - Water tanker brought on site as primary source until wells rehabilitated
  - Temporary pump station set on site to pull from Tanker and pump into system
- Boil water advisory lifted less than two weeks after acquisition





## PA PUC Statement of Policy on Small Water Systems

- **“Viable water system”** defined as self-sustaining and has financial, managerial and technical capabilities to meet PUC and DEP requirements on long-term basis
- **Viability of small water systems**
  - Many small water systems “are not viable and need to be restructured”
  - Most new water systems being created are small and are likely candidates for becoming nonviable
- **PUC and DEP will work together and with other agencies to “substantially restrict the number of nonviable water systems” ... and “encourage the restructuring of existing nonviable small systems”**



## How Is PA PUC Implementing Small Systems Policy

- **Commission policy encourages and supports:**
  - Developing comprehensive facility, management and financial plans to enable small systems to operate on sound business basis
  - Comprehensive planning at the local, county and regional level to ensure water system viability
  - Encouraging the restructuring, physically or administratively, of contiguous and noncontiguous systems (including nonviable) to form a single viable water system or authority
- **Facilitate processes to help obtain financial assistance from government/financial bodies (e.g. PENNVEST) for viable systems**
- **Develop “safety net programs” to deal with nonviable water systems**

## PA PUC Policies Encourage Regionalization

- **Statement of policy on system acquisitions**
  - Consolidation of water and wastewater systems, with appropriate management, can “result in greater environmental and economic benefits to customers”
  - Regionalization through mergers and acquisitions “will allow the water industry to institute better management practices and achieve greater economies of scale”





## Acquisition Incentives

- To encourage mergers and acquisitions (when in the public interest) to foster regionalization, the PA PUC will consider:
  - Rate of return premiums
  - Acquisition adjustment
    - ◆ Credit acquisition adjustment
    - ◆ Debit acquisition adjustment
  - Deferral of acquisition improvement costs
  - Plant improvement surcharge
- Standard Tariff Pricing
- Act 11 of 2013



## How Can a PUC Help Small Companies

- Abbreviated filing requirements
- Expedited rate case procedure
- Option orders
- Quarterly meetings among PUC, DEP, SRF funding agencies (Holistic View)
- Require regionalization
- Force takeover

## Value of Water

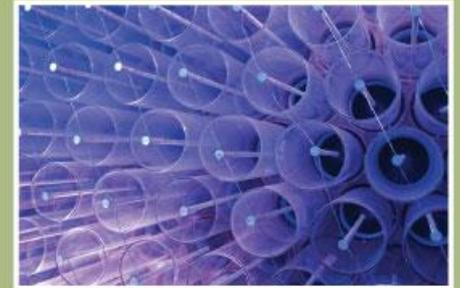
- **Quality water delivered directly to customer's tap for about one penny per gallon**
  - Bottled water =  
\$1.19 per 16 oz. bottle
  - Milk = \$3.75 per gallon
  - Gasoline =  
\$2.25 per gallon





PENNSYLVANIA  
AMERICAN WATER

Thank you



# Small, but a Mighty Challenge: Small Water Utilities

*Presentation to the*  
**NARUC Water Committee**



Art Graham, Commissioner  
Florida Public Service Commission  
July 26, 2016

# Discussion Topics

1. Staff-Assisted Rate Cases
2. Price Index Rate Adjustments
3. Pass Through Rate Adjustments
4. Reserve Accounts
5. PSC water and wastewater workshops
6. Florida Rural Water Association



# Staff-Assisted Rate Cases

- For water or wastewater utilities with annual revenues of \$275,000 or less, or \$550,000 combined
- The utility's only required expense is its nominal filing fee
- FPSC staff performs all analysis
- The Commission may authorize the collection of interim rates, subject to refund, until after the final rates are implemented



# Staff-Assisted Rate Cases *(cont.)*

- “Proposed Agency Action” avoids an extensive hearing process - unless it is protested
  
- The utility agrees to accept the PAA outcome, unless:
  - The Commission votes a revenue requirement decrease, or
  - Someone else protests the PAA decision
  
- Takes 6-7 months from filing to a Commission vote



# Price Index Rate Adjustments

- An annual rate adjustment tool for utilities; is approved administratively
- By March 31 of each year, the FPSC establishes a cost increase or decrease based on the federal “GNP implicit price deflator”
- For major categories of operating costs - applicable to most O&M expenses
- Utility applies, adjusted rates become effective without hearing or Commission action 60 days later



# Pass Through Rate Adjustments

- Actual cost changes in specified expense categories are passed through to customers via a rate adjustment
- Utility's filing is reviewed by PSC staff
- Utility automatically can implement the increase without hearing or Commission action 45 days after filing requirements are met



# Pass Through Rate Adjustments (cont.)

- Allowable pass through items include, but are not limited to:
- ✓ purchased power
  - ✓ purchased water
  - ✓ purchased wastewater treatment
  - ✓ ad valorem taxes
  - ✓ **NEW**: operating permit
  - ✓ **NEW**: operator license
  - ✓ DEP required water or wastewater testing
  - ✓ National Pollutant Discharge Elimination fees
  - ✓ **NEW**: fees for wastewater biosolids disposal
  - ✓ **NEW**: required tank inspections
  - ✓ **NEW**: Commission regulatory assessment fees

# ***New:* Reserve Accounts**

- On the Commission's own motion or at request of a utility:
  - Authorize a utility reserve fund for repair/replacement of distribution/collection infrastructure nearing the end of its useful life or detrimental to water quality or reliability
  - A rate increase will be used to fund either a
    - ✓ secured escrow account
    - ✓ a letter of credit
  
- Now in rulemaking to implement the amended statute



# Florida Rural Water Association (FRWA)

- Provides technical assistance and training to member water utilities and maintenance providers
- Ten professional water field personnel (“circuit riders”) provide, at no charge, onsite assistance including
  - water treatment
  - water quality
  - water distribution
  - compliance issues
- Loaner equipment is available to members at no charge



# Workshops for Class C Utilities

- Joint workshops by FPSC and Florida Rural Water Association
- 10 locations across Florida
- Assists with issues such as:
  - Understanding the PSC's role in regulating utilities
  - Filing price index and pass-through requests
  - Comprehending Florida Statutes and PSC rules
  - Avoiding unintentional rule violations
  - Recent legislative changes



# Florida Public Service Commission Resources and Forms

[www.floridapsc.com/WaterWasteWater](http://www.floridapsc.com/WaterWasteWater)



AQUA<sup>SM</sup>

**Small, but a mighty challenge:  
small water utilities**

# Outline

- Key Terms Defined
- US Regulated Water & Wastewater -- Industry Overview
- Safe Drinking Water Act
  - Capacity Development Program
  - Technical, Managerial & Financial Capacity Resources for Small Drinking Water Systems
- What Options do small systems have?
- A Way Forward
- Examples;
  - Emlenton Water Company
  - Honesdale Water Company

# Key Terms Defined

- A **Public water system** provides water to the public for human consumption which has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Water for human consumption includes water that is used for drinking, bathing and showering, cooking, dishwashing or maintaining oral hygiene. (See PA Safe Drinking Water Act, Chapter 109)

- **Population & Water System Size: (count is “people”)**

- Very small: 25 – 500;
- Small: 501 – 3,300;
- Medium: 3,301 – 10,000;
- Large: 10,001 – 100,000;
- Very large: 100,001+.

(See US EPA Public Water Systems:  
Facts & Figures)



# U.S. Regulated Water and Wastewater Industry Overview



## Water

- 85% of population served by municipalities

- 152,002 operational public water systems (PWS).
- 97% (147,657) are considered 'small systems' under the Safe Drinking Water Act, meaning they serve 10,000 or fewer people.
- Although the majority of our PWS are considered small systems, they serve the fewest number of people
- 21% of the population receiving drinking water from PWS.



## Wastewater

- 97% of population served by municipalities

- Approximately 15,617 operational public wastewater treatment facilities.
- 72% (11,257) are considered 'small systems'.
- EPA defines a wastewater system "small" if it serves a community with a population of 10,000 or fewer people and an average daily wastewater flow of less than 1 MGD

# Safe Drinking Water Act

## Capacity Development Program

- SDWA created the Capacity Development Program which requires:
  - **New Systems** (section 1420(a): States must “ensure that all new community water systems and non-transient, non-community water systems commencing operations after October 1, 1999 demonstrate a technical, managerial, and financial capacity with respect to each national primary drinking water regulation in effect, or likely to be in effect on the date of commencement of operations.”
  - **State Capacity Development Strategies** (section 1420 (c): States must develop and implement a: strategy to assist public water systems in acquiring and maintaining technical, managerial and financial capacity.”
  - **Assessment of Capacity** (section 1452 (a)(3): States may not provide DWSRF loan assistance to systems: which lack the technical;, managerial, and financial capability to ensure compliance; or if the system is in significant noncompliance with any drinking water standard or variance.”
  - State may provide assistance if use of such assistance will ensure compliance and comply over the long haul.

Source: <https://www.epa.gov/dwcapacity/information-states-about-building-capacity-drinking-water-systems>

# Safe Drinking Water Act -Technical, Managerial and Financial Capacity Resources for Small Drinking Water Systems

Resources are available in the following categories:

- **Asset Management:** Explains benefits of AM and implementation of specific Am practices for small systems.
- **Communication:** Explains how to effectively communicate drinking water issues to customers and decision makers.
- **Distribution:** Explains benefits of routine monitoring and information on reducing risk of and responding to contamination.
- **Energy Efficiency and Management:** Describes strategies for saving energy at public water systems.
- **Financing and Water Rates:** Provides information on developing a budget and financial plan.
- **Funding for Small Systems:** Provides information on low interest loans and grants available for small system infrastructure planning needs.
- **Safe Drinking Water Act Regulations:** Assist small systems with understanding and meeting the requirements of EPA's drinking water regulations.
- **Management:** summary of system owners' key duties in protecting public health through overseeing system operation, working with local officials and strategic planning.
- **Operation and Maintenance:** Information about how to identify treatment technologies that remove multiple contaminants; develop schedules for maintenance tasks, and checklists and logs for recording findings.
- **Training:** Basic "Training for Drinking Water Board Members"
- **Tribal Drinking Water Systems:** Explains the importance of capacity development for tribal water systems.
- **Water Efficiency and Conservation:** Explains water efficiency at public water systems; water audits; and water loss controls to control and mitigate drinking water losses in distribution systems
- **Water Security:** Explains the relationship between security and capacity development and how to use existing tools to help address small system security needs.

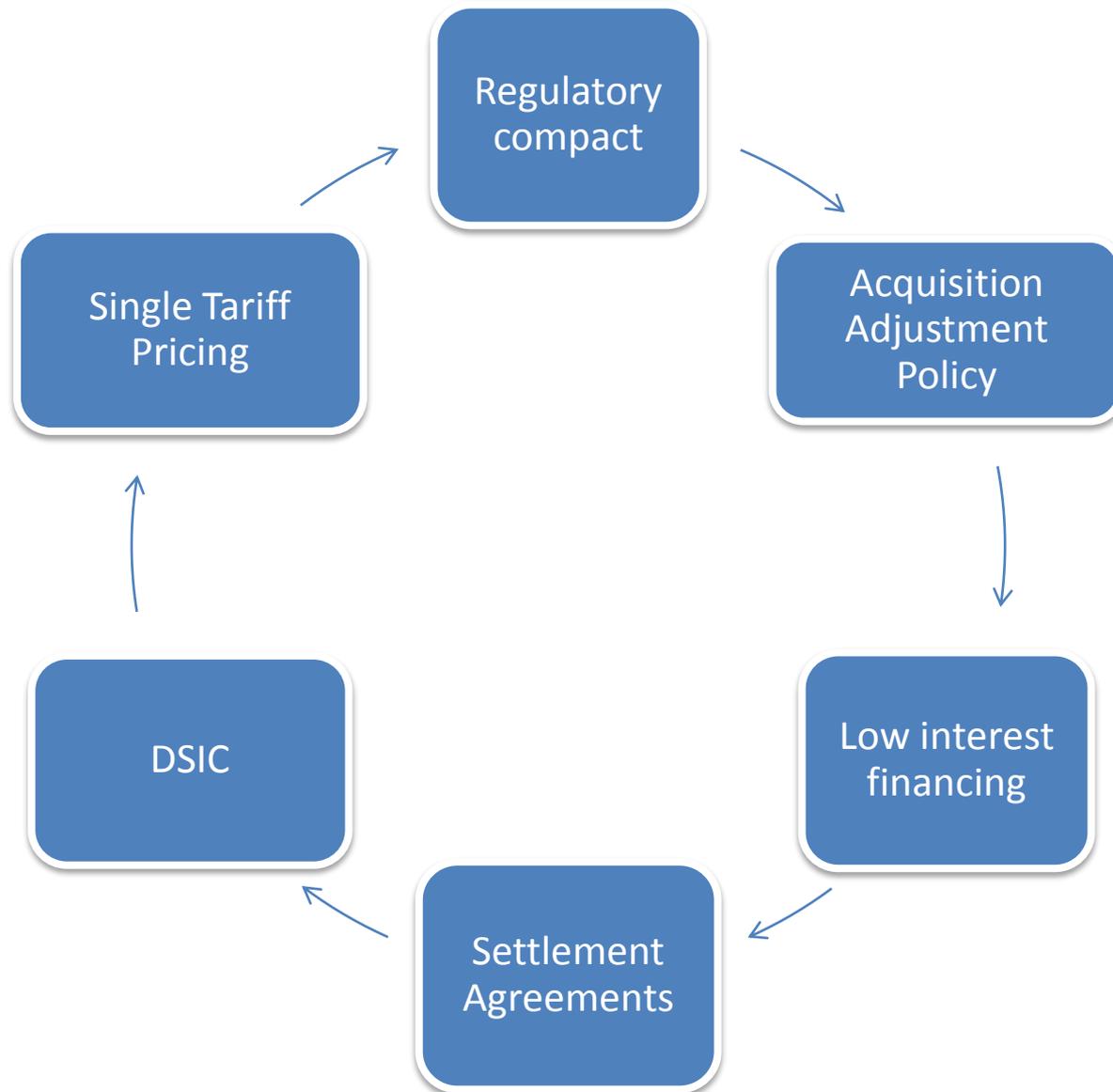
<https://www.epa.gov/dwcapacity/technical-managerial-and-financial-tmf-capacity-resources-small-drinking-water-systems>

# What Options do small systems have?

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- Many systems across the country, need substantial investment to repair and replace their aging infrastructure.
- However, many systems do not have financial ability to make these investments.
- Pennsylvania provides incentive for larger, well run, utilities to acquire these smaller troubled systems.
- A troubled system in PA is characterized as one that is:
  - In violation of DEP regulations
  - Found to have inadequate financial, managerial, or technical abilities
  - Found to have problems with access to water, palatability, or pressure and volume.
  - Cannot properly fund necessary improvements to limit impact on ratepayers

# A Way Forward





# Emlenton Water Company Example

# Emlenton Water Company

Emlenton, PA



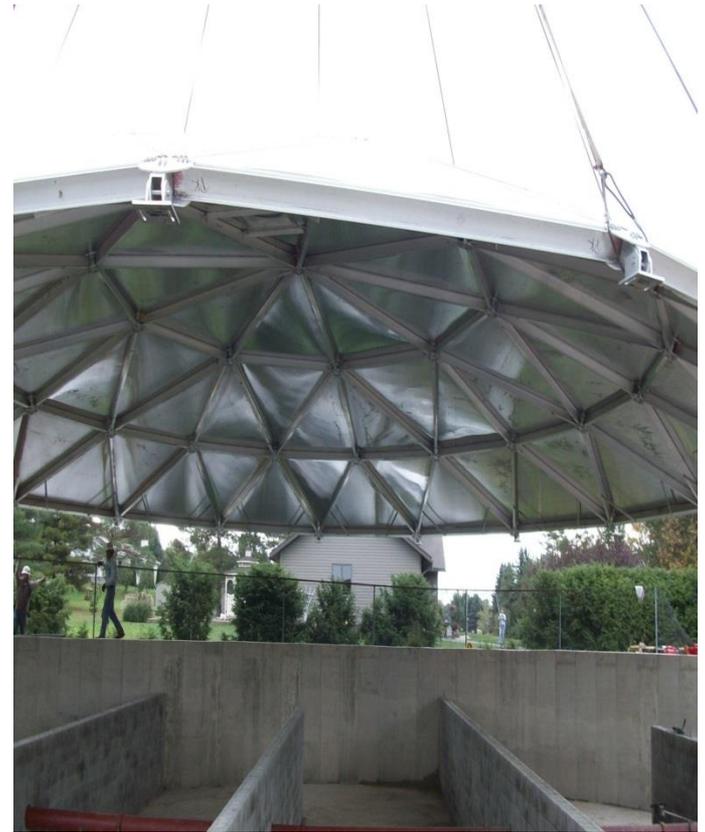
## BACKGROUND:

- ~ 2,500 customers
- Conventional Treatment
  - Source: Allegheny River
- Poorly Performing WTP
  - Existing Buildings and Structures in Poor Shape with Significant Structural Issues
  - Leaking Floating Cover on the Reservoir
  - Mechanical, Structural and Electrical Issues with the Existing High Service Pumping Station
  - Existing High Zone Standpipe in Need of Structural Repair and Painting
- **BWA for ~8-mos prior to acquisition.**

# Emlenton Water

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# The Progress News

724-867-1112 - 410 Main Street - P.O. Box A - Emlenton, PA 16675

www.progressnews.net

## Fire hydrants To Be Flushed This Week

### Aqua PA Continues With Improvements At Emlenton Plant

The residents of Emlenton Borough can finally feel a sense of relief after nearly a year of water problems plagued their community.

Since taking over the troubled Emlenton Water Company, Aqua PA has made tremendous strides in bringing the old antiquated system up to current acceptable operating standards. Gone are the monotonous trips to the water buffalos that once supplied the town with viable drinking water. Gone is the "scarlet letter" boil advisory that blanketed the community for nearly a year.

To date, Aqua PA has been in the process of changing meters and reconnecting the town's water supply lines with a newer system that will provide its customers with a better flow. One of the first areas that received attention was the Pearl St. and Garden St. areas as its occupation seemed to have very little water pressure.

In fact within the next couple months Aqua PA will be working to replace the pipeline from the Chestnut Street area from 10th to Kerr Ave., as well as from River Avenue from 6th to Main St. Within the year, the hopes are to complete Main Street.



On Thursday, July 23rd and into Friday, July 24th, Emlenton residents may notice a little discoloration in their water. On Thursday, July 23rd at 10:00 p.m. Aqua PA will start flushing the fire hydrants to clean out the water supply lines.

During the main flushing process, fire hydrants are opened, allowing water pressure to forcefully remove non-harmful sediment from the water mains. Customers may experience some temporary discoloration, which is not harmful, or decreased water pressure during the flushing process. "Customers can run cold water for a few minutes until it clears," said

Jack Walter, production manager. "Customers can also store water in advance for use during this process, and are cautioned not to wash clothes the days the mains are flushed."

Do not turn on the hot water at first as it may settle into your hot water tank.

The Aqua PA - Emlenton Plant serves approximately 1,200 people in portions of Emlenton Borough and Richland Township, Venango County and Richland Township, Clarion County in western Pennsylvania. Aqua PA announced its purchase of the The Emlenton facility in January 2009. The purchase price was \$475,000.

## Local Filmmaker Venango Digital Film Festival

Emlenton, PA (July 15th): Venango Digital Film Association (VDFA) presents its second run-up program to the 2009 Venango Digital Film Festival. This event will host professional filmmaker Daniele Wilmoth.

The screening is open to the public at the Crawford Center Auditorium, Emlenton, PA, from 7 to 9 p.m. on Sunday, August 2nd, 2009.

Daniele Wilmoth is the featured filmmaker for this year's festival run-up program. She is a prolific experimental and documentary filmmaker and a faculty member at The School of the Art Institute of Chicago and Columbia College. Wilmoth will discuss her



Daniele Wilmoth

her work on her work and film-making. One of her films shot in Venango will be shown.



The Paul W. Wood VFW Post 7840 is currently accepting items to be sent overseas to our troops.

Anyone wishing to send items may call Linda at 724-679-7234 or by calling 724-735-2566.

## Oil Bi

The Friederichs Oil State Park. The 6K are participatory projects.

A Summer mandating transportation and concerns. www.digat.com The fuel





# The Honesdale Water Company Example

# Honesdale Water Company

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## BACKGROUND

- ~ 1,800 customers
- Source Water:  
Groundwater Wells
- Poorly Performing WTP
  - High unaccounted for water
  - Discolored water, taste and odor
- Small system, privately owned



# Needed infrastructure upgrades

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- Quarry well upgrade
- Widener well upgrade
- Storage facility cleaning
- Distribution system rehab
- RF Meters



# Quarry Well

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**Thank You!**