

# Brookfield Water System:

Partnership to Resolve Contamination and  
Fragmented Community Systems



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*Water Company*

*Stewards of the Environment™*



# Panel Speakers

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**Hon. John W. Betkoski III**

Vice Chairman – Public Utilities Regulatory Authority of Connecticut

**Hon. William Davidson**

First Selectman – Brookfield, Connecticut

**Charles V. Firlotte**

President and CEO – Aquarion Water Company

**Moderator – W. David LeVasseur**

Undersecretary for Intergovernmental Policy,  
Connecticut Office of Policy and Management

# About Brookfield

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- Situated in Western Connecticut (Northern Fairfield County)
- 20.4 square miles
- Incorporated in 1778
- Population – 16,825



# Brookfield

# Brookfield Demographics

- Median Age – 41
- Family Household – 78.52%
- White Collar Commuters
- Housing Occupancy  
Total units – 6,283
- Median home value – \$405,000



1757

# Brookfield Demographics

## Economics (*By Employment*)

Wholesale/Retail (regional shopping area)	36.4%
Services	30.4%
Manufacturing	11.8%
Const. & Mining	7.5%
Trans. & Utilities	5.9%
Finance, Ins. And Real Estate	4.0%
Government	3.1%
Agriculture	0.8%



## Brookfield Mills

# Brookfield Issues/Obstacles

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- No prior integrated water systems
- Over 150 community water systems
- Fire suppression – water tanks required for commercial properties
- Large number of individual wells



Farming  
History

# Brookfield Issues/Obstacles

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- Uranium contamination throughout town due to large granite beds
- Hydrocarbon contamination from old gas stations
- Dry cleaner chemical contamination



Granite Beds



# Brookfield's Water Companies

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- In 1997, two water companies divided up Brookfield
  - Brookfield Water Company (Northern Brookfield)
  - Rural Water Company (Southern Brookfield)
- Companies run by entrepreneurs
- Limited capital for investment



# Municipal Water Main Expansions

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- Brookfield Water Main
  - Funding – Originally privately funded
  - Purchased by town
- Barnbeck Water Main
  - Funding – Private / State / Municipal
  - Completion – Summer 2010
- Silvermine Water Main
  - Funding – Private / American Recovery & Reinvestment Act / State / Municipal
  - Completion – October 2010



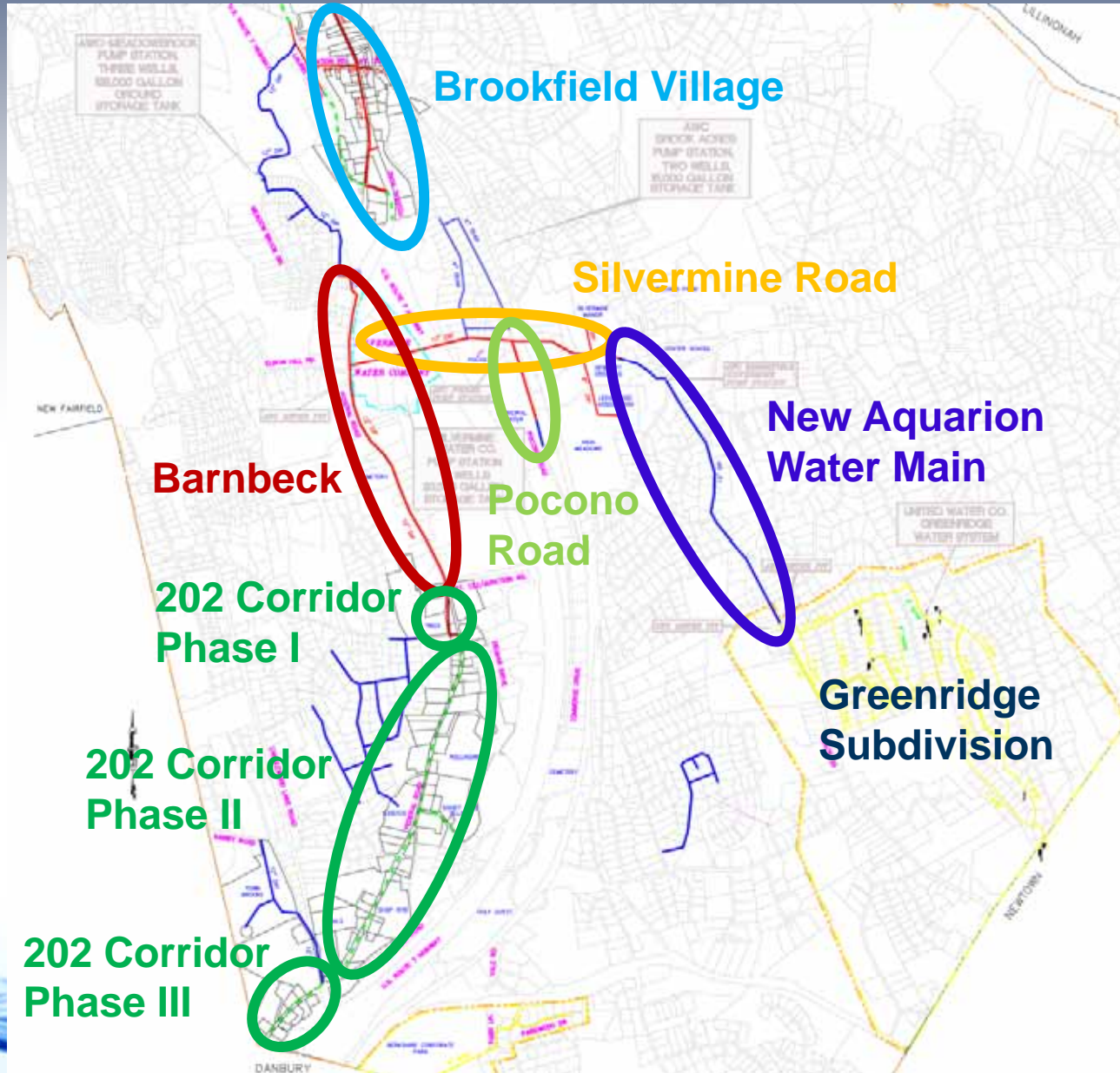
Volunteer  
Fire Dept.

# Municipal Water Main Expansions

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- Pocono Water Main
  - Needed for Senior Center, Fire Department and Town Hall
  - Funding – Municipal
  - Completion – October 2010
- Southern Water Main (Federal Road – 202 Corridor)
  - Phase I – Completed October 2011
  - Phase II – November 2012 Completion Goal, 800 feet short of Danbury
  - Phase III – Future project to bring line to Danbury. Will become a regional water supply

# Municipal Water Main Expansions



# Greenridge Subdivision – Regulator's Dilemma

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# Greenridge History

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- 228 houses / 912 residents
- Built between 1967 – 1975
- Subdivision was within Rural Water's area of control, but they chose to give it up
- Community systems (Greenridge Tax District) supplied water and oil
- Lines run through backyards with mature tree and plant growth, making it difficult to locate leaks

# Greenridge History

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- Multiple public health concerns
- Community oil system had line breaks, contaminated wells
- Oil system had to be abandoned
- 8 to 10 wells; volunteer operations; no upgrades
- Greenridge Tax District attempted to find water company to manage the system
- Public water testing determined uranium and radon contamination in 2006 and with it, cancelling opportunity to find a water company to manage the system

# Greenridge History

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- Residents could not drink or cook with tap water
- In 2007, Greenridge tax district made request to cease operations



Temporary  
Water Source

# PURA's Greenridge Decision Timeline

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# Greenridge Timeline

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- **January 23, 2008** – United Water ordered to acquire Greenridge's existing service area.  
Required:
  - A full system evaluation
  - Recommended plan of action
  - Completion of approved plan within 18 months
- **January 15, 2009** – United planned to connect with its Newtown water system
- **January 2, 2010** – Review of costs and charges
- **May, 2010** – United commences improvements in Newtown

# Greenridge Timeline

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- **June 1, 2010** – PURA stops construction following concerns on neighboring Newtown water supply
- **June 7 & 17, 2010** – New evidence about impact on Newtown system
- **August 10, 2010** – First Selectman of Brookfield introduces his plan for providing water to Greenridge
- **October 15, 2010** – PURA considers new options – Brookfield option

# Greenridge Timeline

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## Initial United Water Plan (using Newtown's water supply)

- Financial burden would be too great for Greenridge residents
  - Initially, \$2,300 per year / \$118,000 per homeowner over 50 years
- United Water asked to review other options
  - 12/88 plan – 12% would be charged to Greenridge residents. The remaining 88% would be passed on to United Water's customer base
- Brookfield Plan – would have been \$10,000 per resident, but would take a year longer to complete. Payments would have been over a 20 year period, through a municipal benefit assessment (low-cost interest rate)

# Greenridge Timeline

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- **May, 19, 2011** – United filed Joint Stipulation regarding Newtown / Greenridge interconnection improvements. (United is restricted from serving new customers along the new water main during a three-year moratorium, subject to exceptions)
- **May 27, 2011** – Aquarion offers alternative solution and made a party to proceedings
- **June 16, 2011** – Aquarion ordered to file a plan
- **June 24, 2011** – Aquarion files proposal. Water would come from the Meadowbrook wellfield in the Limekiln Brook Watershed
- **June 30, 2011** – Joint application for Aquarion to acquire Brookfield Water Company and Rural Water Company

# PURA Develops the Solution

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# The Solution

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The Aquarion proposal would require the following:

- Installation of a 275 gpm booster pump at the existing Brookfield Pocono Road pump station
- Extension of the existing 12-inch water main from its terminus on Silvermine Road a distance of 6,900 feet to approximately 1,500 feet north of Thomsen Farm Road
- Installation of a new pump station at Silvermine Road. The pump station will include two booster pumps, a fire pump and provision for an emergency generator
- An underground meter pit at the Terminus Point
- Improvements to the existing Greenridge system

# The Solution

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## Benefits

- No restrictions from serving new customers along the new water main
- Shorter run of water main and less difficult installation
- Will assist in resolving other water supply contamination problems in Brookfield
- Least costly solution
- Brookfield sourced water for Brookfield residents
- Eliminates environmental concerns on the Pootatuck River and Aquifer, the sole source aquifer for the entire Town of Newtown

# The Solution

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## Benefits

- More robust staff
- Less impact on customer bills
- Timely completion



# Aquarion Growth Addresses Brookfield Woes

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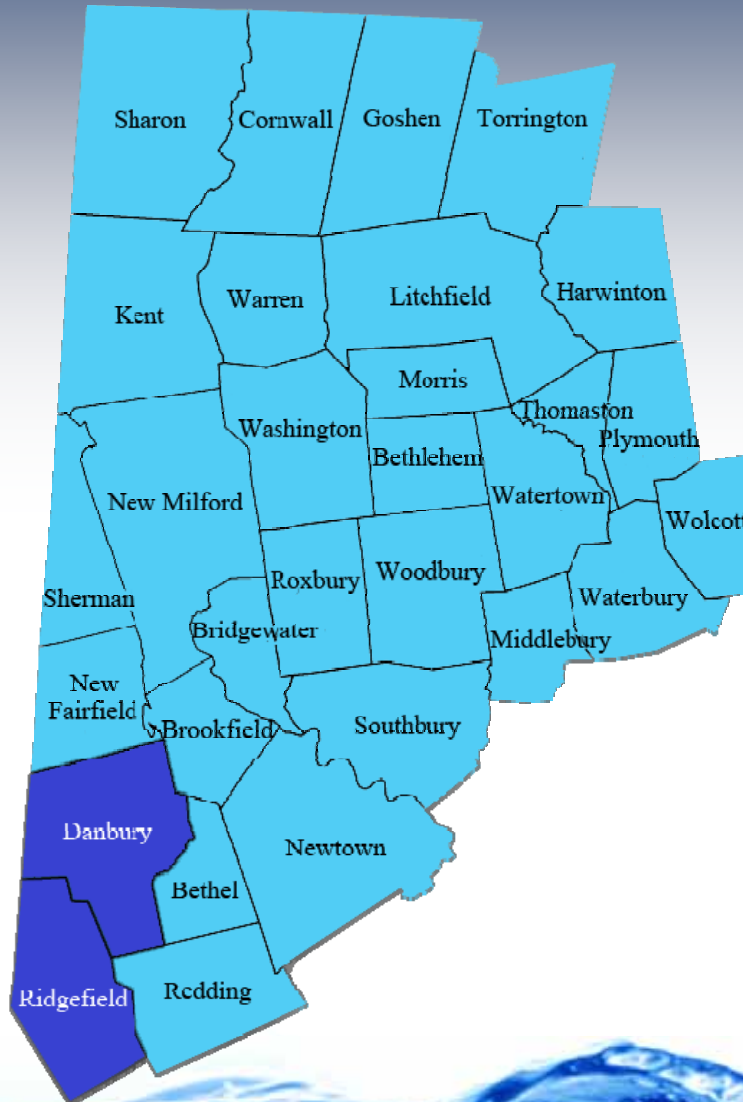


# Aquarion Growth

2010

Topstone Hydraulic

355 Customers

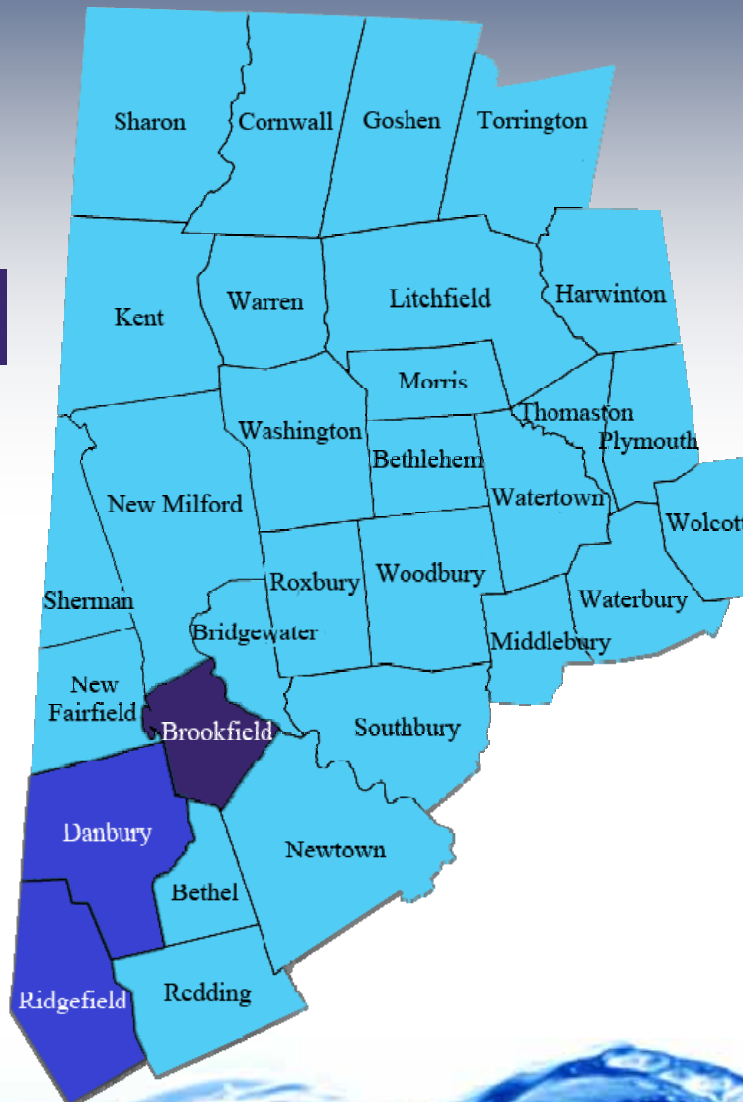


# Aquarion Growth

2011

**Brookfield Water Company**

204 Customers

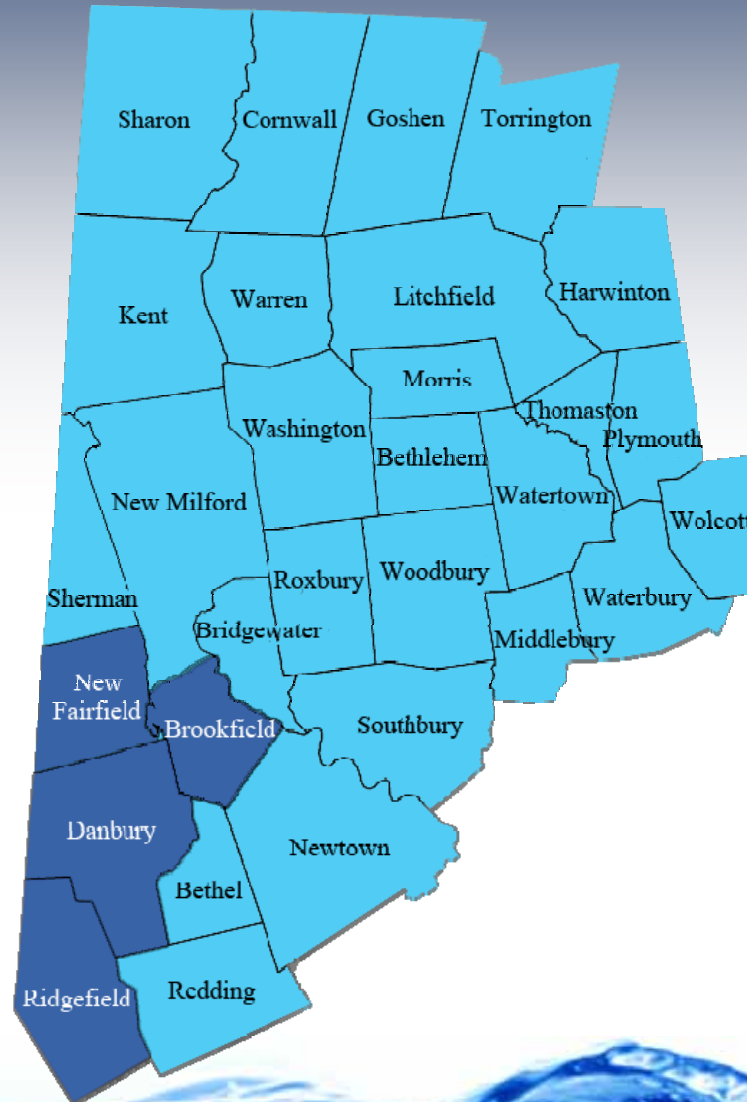


# Aquarion Growth

2011

Rural Water Company

1252 Customers

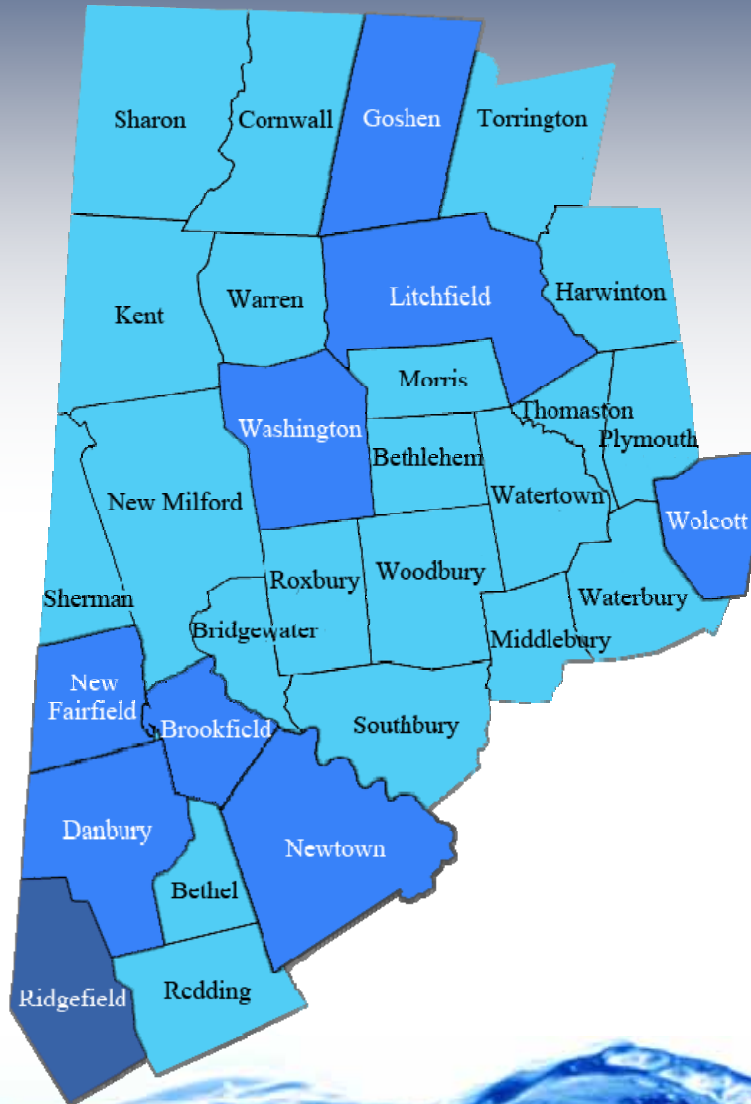


# Aquarion Growth

2011

Ron Black Systems

923 Customers

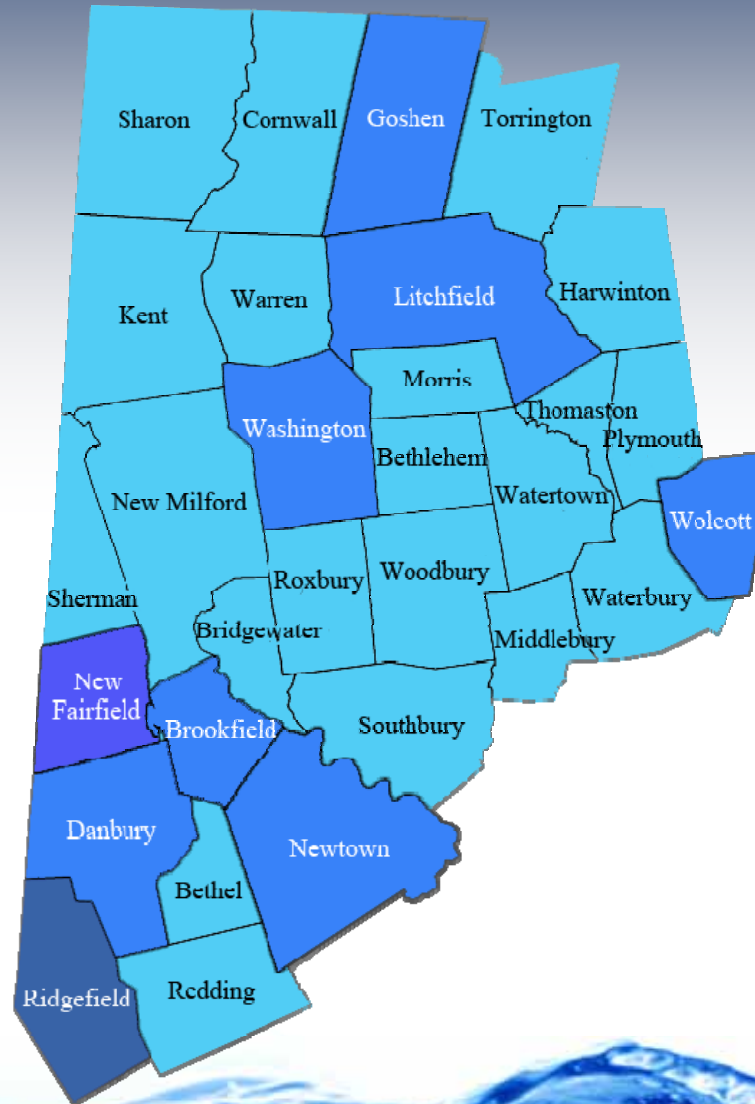


# Aquarion Growth

2012

Dunham Pond

37 Customers

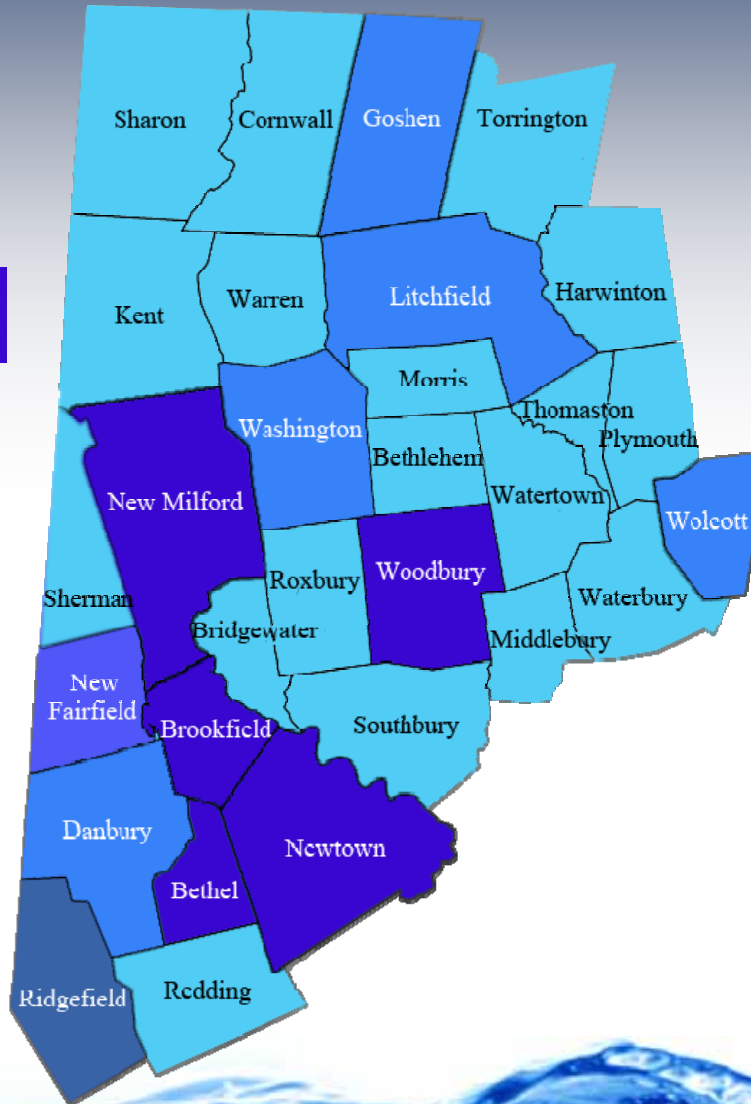


# Aquarion Growth

2012

United Water Connecticut\*

24,000 Customers



\* subject to PURA regulatory approval

# Aquarion Growth

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**Total Customers Added:  
Upwards of 30,000 in the  
Greater Danbury Area**





# Bringing Clean, Pure Drinking Water to Brookfield

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# Brookfield: Successful Water Line Construction

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Marking the water  
main route

Construction begins  
in the Fall of 2011



Whisconier Rd. (Route 25)



# Brookfield: Successful Water Line Construction

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Prefabricated pump station is lifted into position



## Pump Station



# Brookfield: Successful Water Line Construction

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A Peek Inside



# Brookfield: Successful Water Line Construction

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## Excavation Begins



# Brookfield: Successful Water Line Construction

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Water Main Installed



# Brookfield: Successful Water Line Construction

New water main  
goes online  
February 6, 2012

Project was completed  
in record time



## Making the Connections



# Summary

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- During the past two years, Brookfield has transformed from small and fragmented systems to one unified structure throughout its main corridor
- Aquarion will continue to develop new Brookfield water sources to meet economic growth demands
- Aquarion will continue to grow in the Greater Danbury area
- Aquarion delivered clean drinking water to Brookfield residents in record time







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