Brookfield Water System:
Partnership to Resolve Contamination and Fragmented Community Systems
Panel Speakers

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

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

• Median Age – 41

• Family Household – 78.52%

• White Collar Commuters

• Housing Occupancy
  Total units – 6,283

• Median home value – $405,000
## Brookfield Demographics

### Economics (By Employment)

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesale/Retail (regional shopping area)</td>
<td>36.4%</td>
</tr>
<tr>
<td>Services</td>
<td>30.4%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>11.8%</td>
</tr>
<tr>
<td>Const. &amp; Mining</td>
<td>7.5%</td>
</tr>
<tr>
<td>Trans. &amp; Utilities</td>
<td>5.9%</td>
</tr>
<tr>
<td>Finance, Ins. And Real Estate</td>
<td>4.0%</td>
</tr>
<tr>
<td>Government</td>
<td>3.1%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>0.8%</td>
</tr>
</tbody>
</table>

![Brookfield Mills Image]
Brookfield Issues/Obstacles

• No prior integrated water systems

• Over 150 community water systems

• Fire suppression – water tanks required for commercial properties

• Large number of individual wells
Brookfield Issues/Obstacles

- 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

• 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

- **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
Municipal Water Main Expansions

- **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
Greenridge Subdivision – Regulator’s Dilemma
Greenridge History

- 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

- 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

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

- **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

- **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

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

• **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
PUKA Develops the Solution
The Solution

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

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

Benefits

• More robust staff

• Less impact on customer bills

• Timely completion
Aquarion Growth Addresses Brookfield Woes
Aquarion Growth

2010
Topstone Hydraulic

355 Customers
Aquarion Growth

2011

Brookfield Water Company

204 Customers
Aquarion Growth

Rural Water Company

2011
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

Total Customers Added: Upwards of 30,000 in the Greater Danbury Area
Bringing Clean, Pure Drinking Water to Brookfield

AQUARION Water Company
Stewards of the Environment™
Brookfield: Successful Water Line Construction

Marking the water main route

Construction begins in the Fall of 2011

Whisconier Rd. (Route 25)
Prefabricated pump station is lifted into position.
Brookfield: Successful Water Line Construction

A Peek Inside
Brookfield: Successful Water Line Construction

Excavation Begins
Brookfield: Successful Water Line Construction

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

- 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.