

**Representative Policy Board  
Finance Committee  
South Central Connecticut Regional Water District  
Via Remote Access\*\***

**AGENDA**

**Regular Meeting of Monday, June 14, 2021 at 5:00 p.m.**

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1. Safety Moment
2. Approval of Minutes – May 10, 2021 meeting
3. Alliance for Water Efficiency and Conservation: M. Dickenson
4. Discussion re RPB Compensation – Retro Payment
5. Consider and Act on possible recommendation to RPB for extension of zero interest rate through July 20, 2021
6. Quarterly Report on RPB Approved Projects
7. Notification of Committee Chair Election - July 2020
8. Adjourn

**Note:** As a reminder, the next meeting of the Finance Committee will be held on Monday, July 19, 2021 at 5:00 p.m. (regular meeting).

\*\*In accordance with the Governor Lamont's, Executive Order No. 7B for the Protection of Public Health and Safety during COVID-19 Pandemic and Response, the public meeting will be held remotely. Members of the public may attend the meeting via conference call, videoconference or other technology. For information on attending the meeting via remote access, and to view meeting documents, please visit <https://www.rwater.com/about-us/our-boards/board-meetings-minutes?year=2021&category=1435&meettype=&page=>. For questions, contact the board office at 203-401-2515.

**Topic: RPB Finance Committee Meeting**

Time: Jun 14, 2021 05:00 PM Eastern Time (US and Canada)

Join Zoom Meeting (*via conference call*)

Dial by your location

+1 312 626 6799 US (Chicago)

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+1 301 715 8592 US (Washington DC)

+1 253 215 8782 US (Tacoma)

+1 346 248 7799 US (Houston)

+1 408 638 0968 US (San Jose)

+1 669 900 6833 US (San Jose)

Meeting ID: 859 9165 8320

Passcode: 310041

Find your local number: <https://us02web.zoom.us/j/85991658320>

# SAFETY MOMENT

## NATIONAL TRAILS DAY

June 5, 2021 was named the American Hiking Society's National Trails Day. It is dedicated to a day of service and advocacy for hometown trails.

Millions of people have found physical, mental, and emotional restoration on trails during the pandemic. Let's return the favor and care for America's magnificent trails systems and ensure everyone is the U.S. can enjoy trails and natural areas, not only on June 5<sup>th</sup> but throughout the year.

Actions that make a difference:

- Commit to trail service this year
- Speak up – Tell your Member of Congress to Co-Sponsor the Transit to Trails Act (H.R. 2924/S1461)
- Leave a trail better than you found it
- Give a gift
- Recreate responsibly



Tap Into  
Safety



Regional Water Authority

Service – Teamwork – Accountability – Respect – Safety

 Regional Water Authority

**UNAPPROVED DRAFT**

**Representative Policy Board  
Land Use Committee  
South Central Connecticut Regional Water District**

**Minutes of May 12, 2021 Meeting**

The regular meeting of the Land Use Committee of the Representative Policy Board of the South Central Connecticut Regional Water District (“RWA”) took place on Wednesday, May 12, 2021 at 257 Fenn Road, Cheshire, Connecticut. Chair Betkoski presided.

Present: Committee Members: P. Betkoski, P. DeSantis, B. Eitzer, R. Harvey, M. Horbal, M. Levine, G. Malloy, J. Oslander and J. Mowat Young

RPB:	T. Slocum
Authority:	D. Borowy
Management:	T. Norris, J. Triana, N. Smith
Cheshire Land Trust:	D. Schrumm and S. Simone
Town Manager:	S. Kimball
RPB Staff:	J. Slubowski

Chair Betkoski called the meeting to order at 5:30 p.m. He reviewed the Safety Moment distributed to members.

On motion made by Mr. Malloy, seconded by Mr. Horbal, and unanimously carried, the Committee approved the minutes of its April 14, 2021 meeting.

On motion made by Mr. Harvey, seconded by Ms. Young, and unanimously carried, the Committee approved the minutes of its April 19, 2021 meeting.

Mr. Triana, the RWA’s Real Estate Manager, introduced members of the Cheshire Land Trust (CLT) and Mr. Kimball, Cheshire Town Manager, who provided information about 257 Fenn Road in Cheshire, formerly known as the Ricci property, which included:

- Historical/settlement information
- RWA and CLT owned property and easement
- Preservation
- Grant assistance
- Acreage

Mr. Triana stated that the RWA and the CLT both hold easements on the property for the sole purposes of land preservation and protection of the public water supply. He reported that the property will be open for hiking and recreation to the residents of Cheshire.

At 4:45 p.m., Mr. Levine entered the meeting.

Discussion took place regarding property name, ownership, easements, and watershed preservation.

At the end of the discussion Mr. Triana introduced Ms. Smith, the RWA’s Natural Resources Analyst, whose effective date of employment at the RWA was April 19, 2021.

Update on *The Land We Need for the Water We Use Program* – J. Triana reported:

Reservoir Levels (Percent Full)

	Current Year	Previous Year	Historical Average	Drought Status
April 30, 2021	98	99	94	None

Rainfall (inches)

	Current Year	Previous Year	Historical Average
April 2021	3.59	5.70	4.27
Fiscal YTD (6/1/20 – 4/30/21)	37.18	46.01	42.63

Land We Need for the Water We Use Program (Dispositions/Acquisitions)

- Durham - Corresponded with property owner of 16+/- acres.
- Killingworth – Corresponded with a property owner of 4+/- acres.

Hamden, Olin property option – FMA approved the transfer of the option. Sent draft of the transfer to HLCT and their attorney for review.

Hamden, Skiff St. ACES condemnation – Murtha contacted the AG’s office. Noted we were notified since we had an interest in the ACES property.

North Branford, Beech St. and Poms La. parcels (NB 4A and p/o NB 4) – Continued to discuss these parcels with the interested party.

Guilford and Madison (GU 21 and MA 2A) – Discussed Class III land with member of the Guilford Sportsman Association.

Rental houses:

- Hamden, 95 Ives St. (HA 13) – LUC found application to be complete. RPB scheduled public hearing for June 17<sup>th</sup>. Sent letters to required parties.
- Hamden, 233 Skiff St. (HA 9A) – Corresponded with Town Attorney about condemnation of areas they worked on beyond the plans.
- Woodbridge, 1029 Johnson Rd. – Discussed status of the house with Amity-Woodbridge Historical Society. Corresponded with owner about plans.
- Woodbridge, 2040 Litchfield Tpk. – Met with the owners about the deed restrictions, access easement, and historical conservation easement. Issued letter indicating all the items that need to be addressed including the un-approved solar panels and the missing faux chimney. Gave them until Sept. 1<sup>st</sup> to install the chimney. Solar panels could stay, but may need to be adjusted to allow room for the faux chimney.

Forestry Update

- Guilford – West of Sugar Loaf ash salvage (GU 4) – 40% complete
- Killingworth - East Hammonasset Leaf Screen Thinning, (KI 4) - Contract not yet awarded.
- Hamden - Overstory removal and Tornado Salvage, (HA 36) – Not started yet.
- Madison - Nathan’s Pond Slash Wall Harvest (MA 6) – **5% complete.**
- Seymour - Silvermine Road Slash Wall Harvest (SE 9) – Awarded contract. Not started yet.
  - Met with CAES and NRCS to use a sprinkle infiltrometer to measure soil permeability and runoff in timber harvests.
  - Planted a new riparian buffer at Farm River-EH diversion.
  - Planted hundreds of Pitch Pine at the Lake Gaillard tunnel project for long-term erosion control.

- Completed forest inventory for East of North Chestnut Hill Road.

Recreation

- Hired Melanie Hennessey for the recreation staff.
- Trout stocking occurred at Maltby Lakes – 1800 fish with 12 being tagged. Three tagged fish were caught in April.
- Boating program opened for the season at Lake Saltonstall (April 10<sup>th</sup>).
- Acquired 5 kayaks for use at Lake Saltonstall. Added them to our inventory of vessels for anglers to rent.
- History walk at Maltby Lakes had 20 participants.
- Bird walk at Lake Saltonstall had 6 participants.
- Met CFPA and Rockland Preserve staff to look over Mattabeset Trail relocation in Madison.
- Met with Customer Service staff to discuss recreation updates and programs.
- Met with mountain bike planner at Genesee area to look at proposed route for one trail.
- Completed draft of Lake Chamberlain fishing trails and sent to others for review.

	April		March	
	2021	2020	2021	2020
Permit Holders	6,502	4,479	6,336	4,049

Special Activity Permits

- Quinnipiac University (Professor Scott Davies)-Study bird nest boxes and record bird nesting activity and success, band the adults and chicks, and collect tissue samples for analysis during breeding season, Lake Chamberlain Recreation Area, the small mown field with lots of small cedars on the east side of Sperry Road just south of Lake Chamberlain where Patrick Leahy already has some boxes, Lake Watrous, and Lake Dawson, (04/07/21-12/31/21)
- Nicholas G. McDonald (Curatorial Affiliate Yale Peabody Museum, Author, Lecturer) – Geology research - Lake Saltonstall and Lake Gaillard (04/08/21-04/08/22)
- Quinnipiac University Department of Biological Sciences (Lisa Connelly, Senior Instructor) – Education/field trips for students; measure the health of the aquatic ecosystems that surround QU campus, Clark’s Pond and Mill River, (04/09/2021-04/30/2021).
- University of Connecticut (Ms. Nancy Marek, Ph.D. Student) – drone flights to map locations of invasive understory shrub species; Japanese barberry, multiflora rose, Northeast quadrant of forested region near Lake Gaillard, (04/14/21 – 05/05/21)
- New Haven Bird Club, (Mr. Patrick T. Leahy)-Fall bird walk to observe species that are wintering on Lakes along the West River, Lake Bethany, Lake Watrous, and Lake Dawson, Bethany and Woodbridge, (10/16/21)

Other items

- Encroachments/agreements –
  - Agricultural fields – Signed license agreements with Potter for the 4 fields in north Guilford. Signed agreement with the Cave’s to use the fields at Lake Gaillard around North St. for Christmas trees. Signed license agreement with Stewart to use field on Wiese Albert Rd., Haddam. Visited all western fields with Tanev to discuss expectations.
  - Killingworth, Bunker Hill Rd. (KI 9A) – Signed license agreement with Lally to use part of the field.
  - Killingworth, Emmanuel Church Rd. (KI 14 and KI 14A) – Discussed encroachment with staff from the Church.

- Killingworth, Rt. 148 (KI 14) – Discussed the encroachment with Jurewicz. Probably came from previous owners since they recently bought their property.
  - Woodbridge, Sperry Rd. field (WO 5) – Urbano said she would continue with the Christmas tree license agreement
  - Branford, Hilltop Dr. (BR 6) – Signed license agreement with the town for them to install a gate along the property line.
  - Bethany, Bethany Horsemen – Signed new license agreement for use of the trails around Lake Chamberlain.
  - Seymour, Seymour emergency radio (SE 1) – Received letter from town exercising option to renew the agreement for another 5 years.
  - Seymour, ginseng request (SE 3) – Discussed possibility of allowing neighbor to grow and harvest ginseng on our property.
  - Madison, Dead Hill Rd. (MA 4) – Spoke to abutter about trees taken down over the property line. Done in concert with a woodcutter who will pay for the wood.
- Invasive plants – Treated or documented invasive plant populations in East Haven, Hamden, Bethany, North Branford, Orange, and West Haven. Met with Nancy Marek to GPS ground control points and perform a drone mission related to identifying invasive species using drones. Discussed invasives management with Wallingford Water Dept. staff.

Invasive Species Documented/ Mapped (ac)	243 acres
Invasive Species Treated (ac/MH)	26.5 acres

- Personnel – Nicole Smith started as the Natural Resources Analyst on April 19<sup>th</sup>.
- Eli Whitney Museum – Continued to discuss license agreement that affords access to the site with EWM staff.
- East Haven, Virginia Rd. (EH 3) – Had Juliano find boundaries and reset pins for us to remark the boundary lines.
- North Branford/Guilford, Reeds Gap Rd. – Contacted by surveyor working on nearby property pointing out that a 0.5-acre parcel was attributed to us, but more likely owned by his client. Researched and agreed with his assumption. Contacted Guilford assessor’s office to correct the matter.
- Hamden, LWWTP campus – Corresponded with girl scouts wishing to install bat boxes at the site.
- New Haven, East Rock Park access to Lake Whitney dam – Attended Park Commission meeting to discuss the easements that we would need to work on the dam.
- Pollinator gardens – RE staff assisted other RWA departments with installation of pollinator pathway gardens in multiple locations.
- East Haven, Beach Ave. – Decided to go ahead with acquiring the easements needed to install a depth main. Murtha will initiate a full title search of all the properties.
- Cell phone antennas – Discussed potential site in Cheshire with town staff and they were not in support, therefore we ended discussion with the cell phone company representative. Signed form for Crown Castle to add antennas at the Orange site for DISH network. This will eventually result in greater income from that site.
- Comcast lease, Burwell Tank site – Sent our comments to Comcast staff who were reviewing them.

Mr. Norris, the RWA’s Vice President of Asset Management provided an update on the Prospect Dam. He reported that a leak was detected and the RWA has currently reduced the water level.

Mr. Triana reported that the committee is expected to visit the Eli Whitney Museum at its July or August meeting. More details to follow.

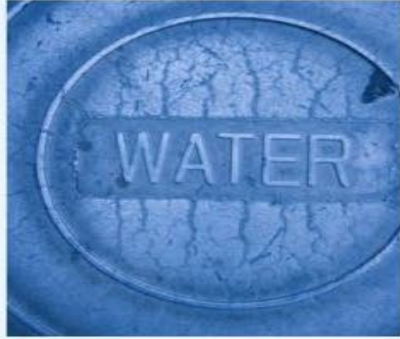
The next regular meeting of the committee is Wednesday, June 9, 2021 at 5:30 p.m.

At 5:21 p.m., on motion made by Mr. Malloy, seconded by Mr. Harvey, and unanimously carried, the meeting adjourned.

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Peter Betkoski, Chairman



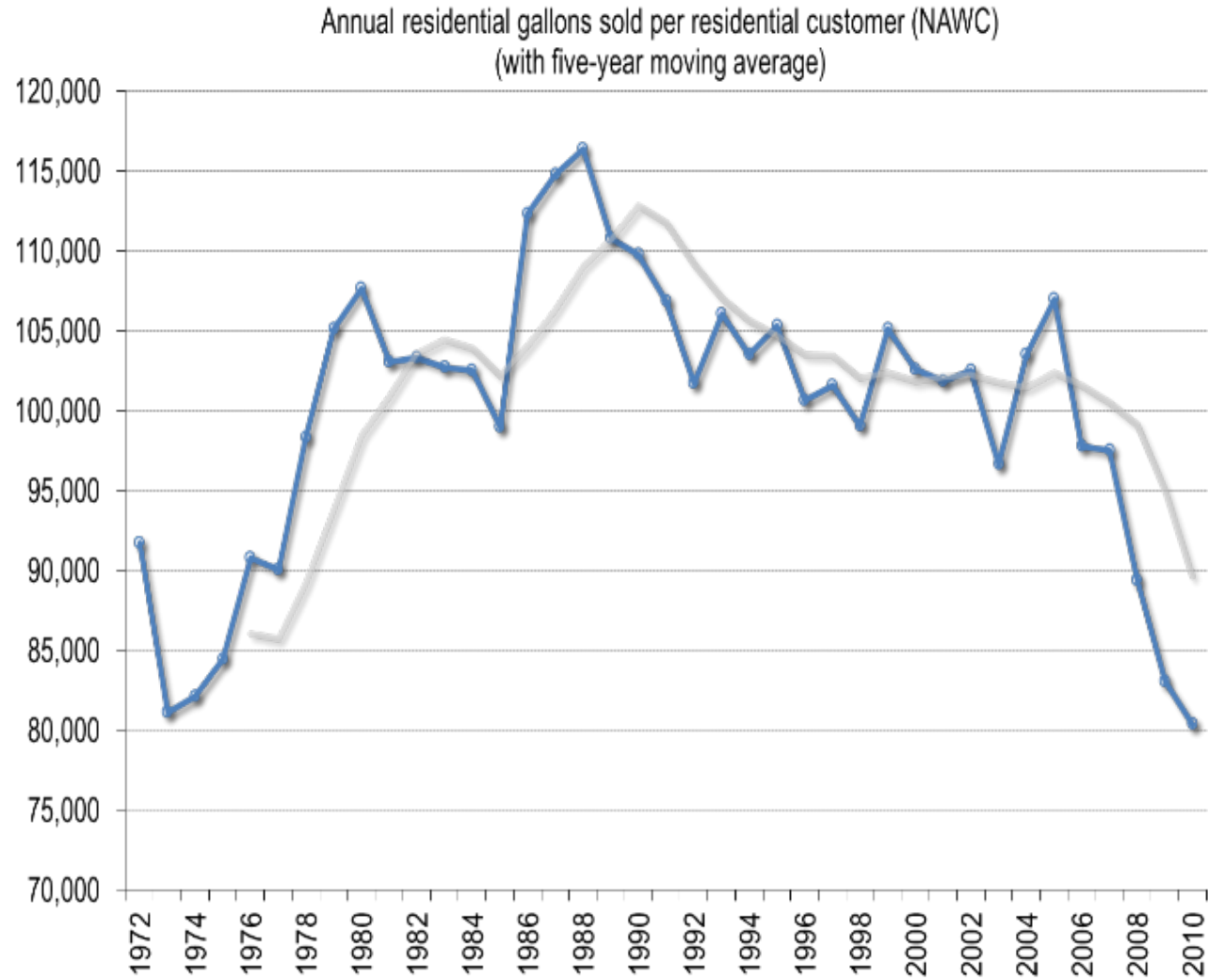


# Financing Sustainable Water



# Utility Financial Management: Becoming Harder Than Ever?

# Residential Water Sales



# Isn't this a Success Story?

- ▶ *Yes, but with side effects*
- ▶ Lowered demand means reduced sales revenue
- ▶ Reduced sales revenue can mean not fully collecting fixed costs
  - Short-run variable costs (water, pumping energy, chemicals)
  - Long-run capacity costs (supply, transmission, storage, treatment)
- ▶ Revenue stability therefore becomes an issue – *and conservation is often blamed*
- ▶ Left untreated, long-term unstable revenue collection can affect bond ratings

## *Texans Answer Call to Save Water, Only to Face Higher Rates*

By NEENA SATIJA FEB. 8, 2014

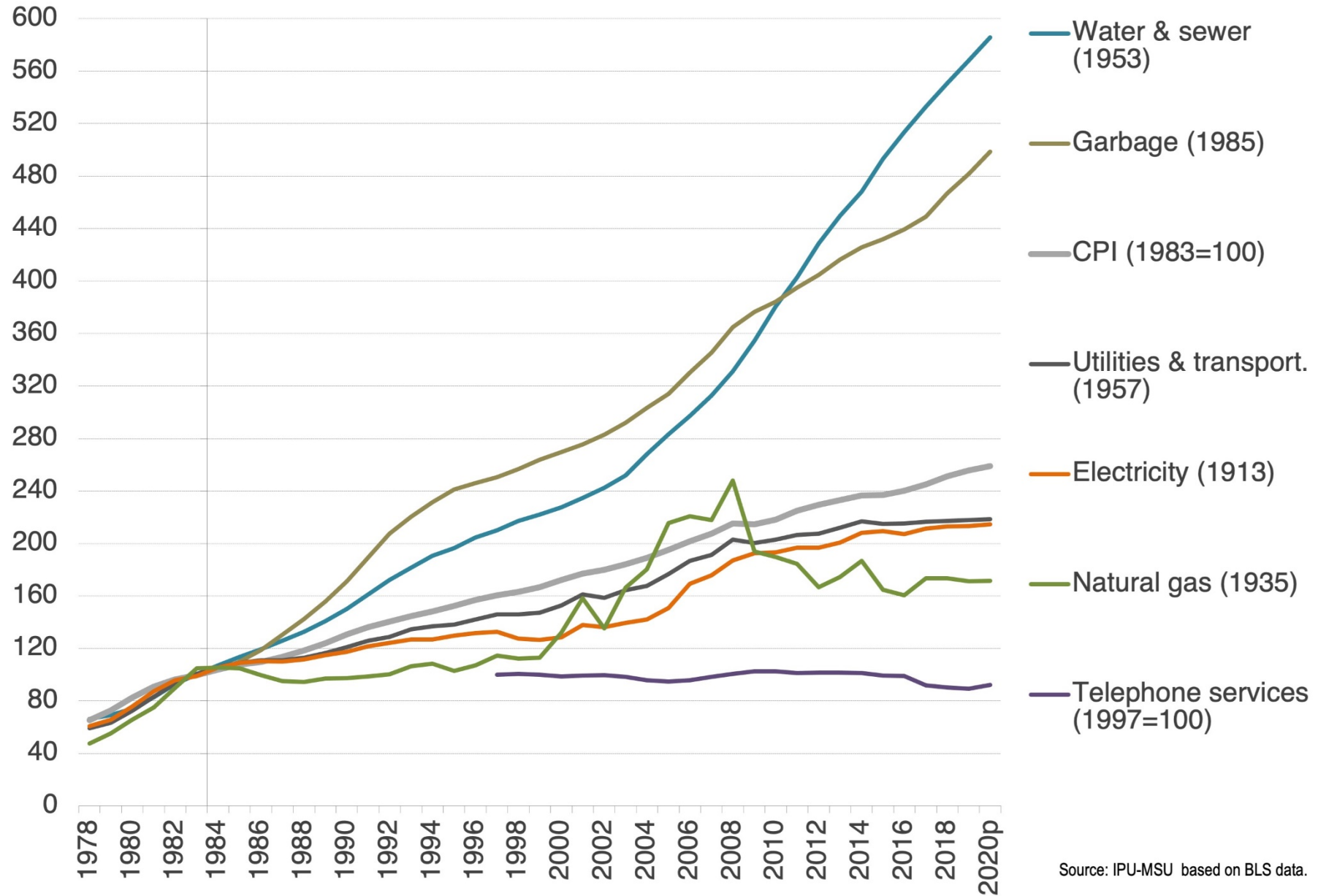


“The losses have prompted credit ratings agencies to look closer at the finances of public utilities in Texas. One agency, Fitch, downgraded some of Fort Worth’s water and sewer debt last year, and last week the firm downgraded the debt of the city’s wholesale water supplier. **Fort Worth lost \$11 million last year because of water conservation.**”

# What Really Affects Revenue Stability?

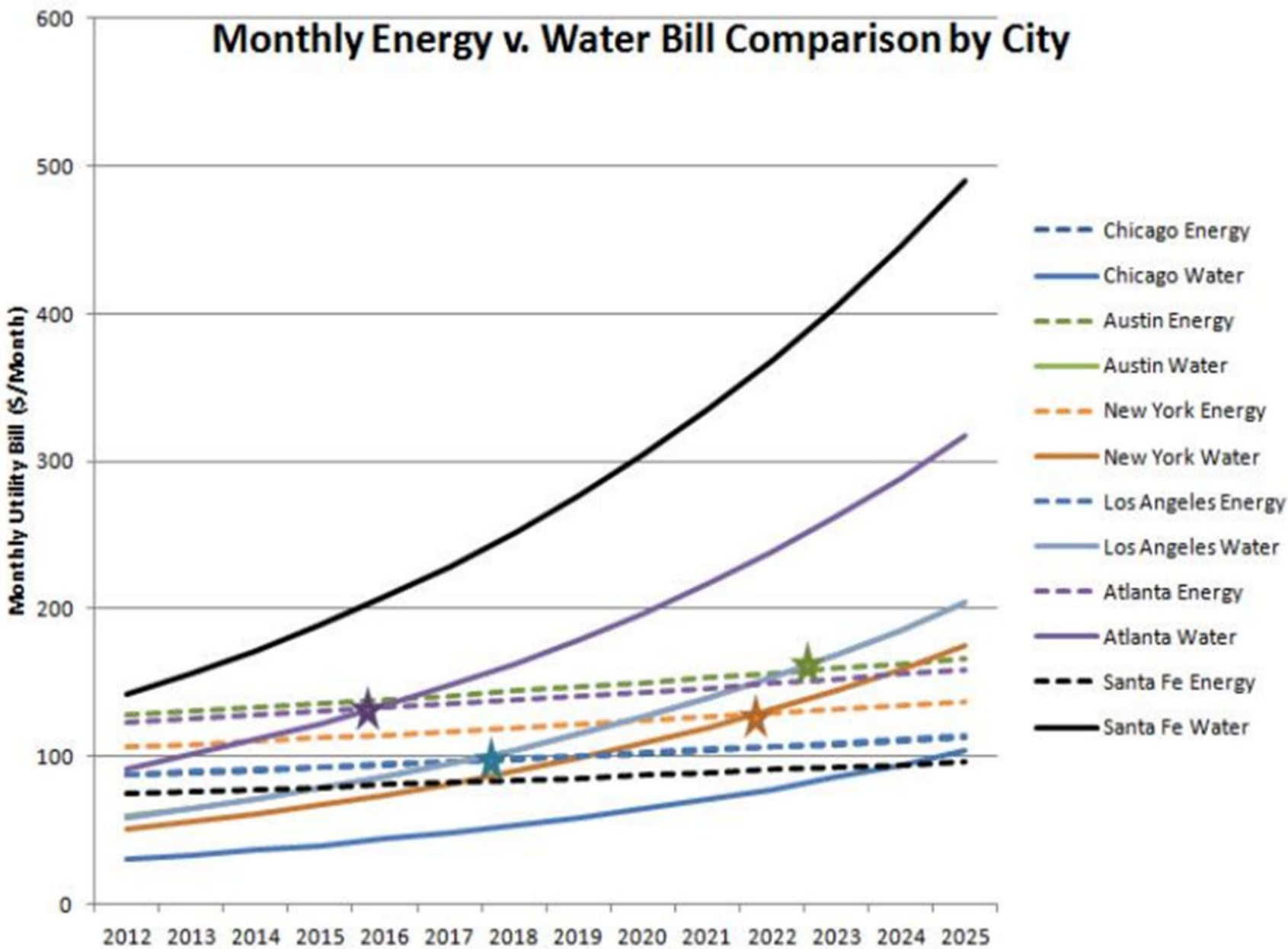
- ▶ Reduced demand from:
  - efficient fixture replacement under the plumbing and appliance codes
  - active conservation programs
  - the recession: industrial shift layoffs, home foreclosures
- ▶ Reduced peak demand in wet years
- ▶ Increased infrastructure costs
- ▶ Rise in other fixed costs
- ▶ Continuing Inflation

## Trends in the CPI for public utilities (BLS)



Source: IPU-MSU based on BLS data.

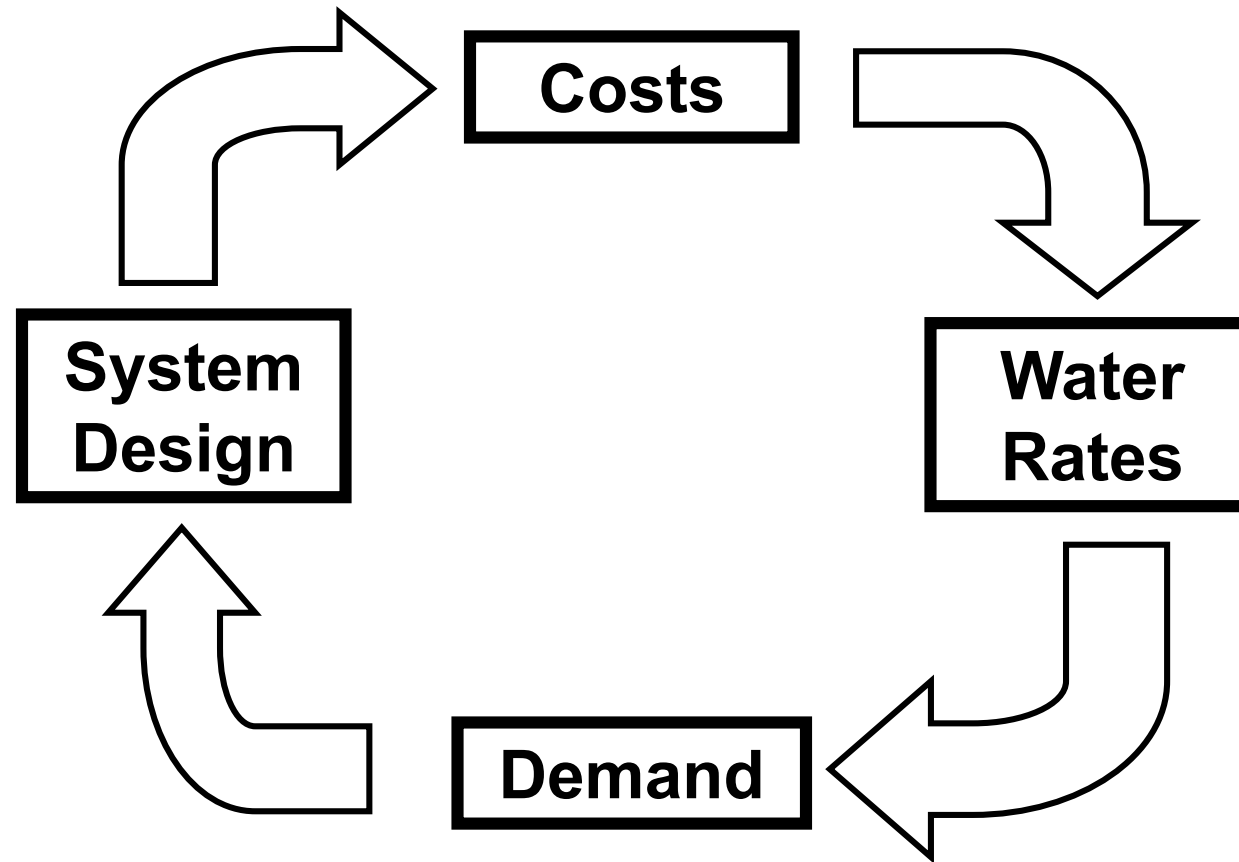
# Monthly Energy v. Water Bill Comparison by City





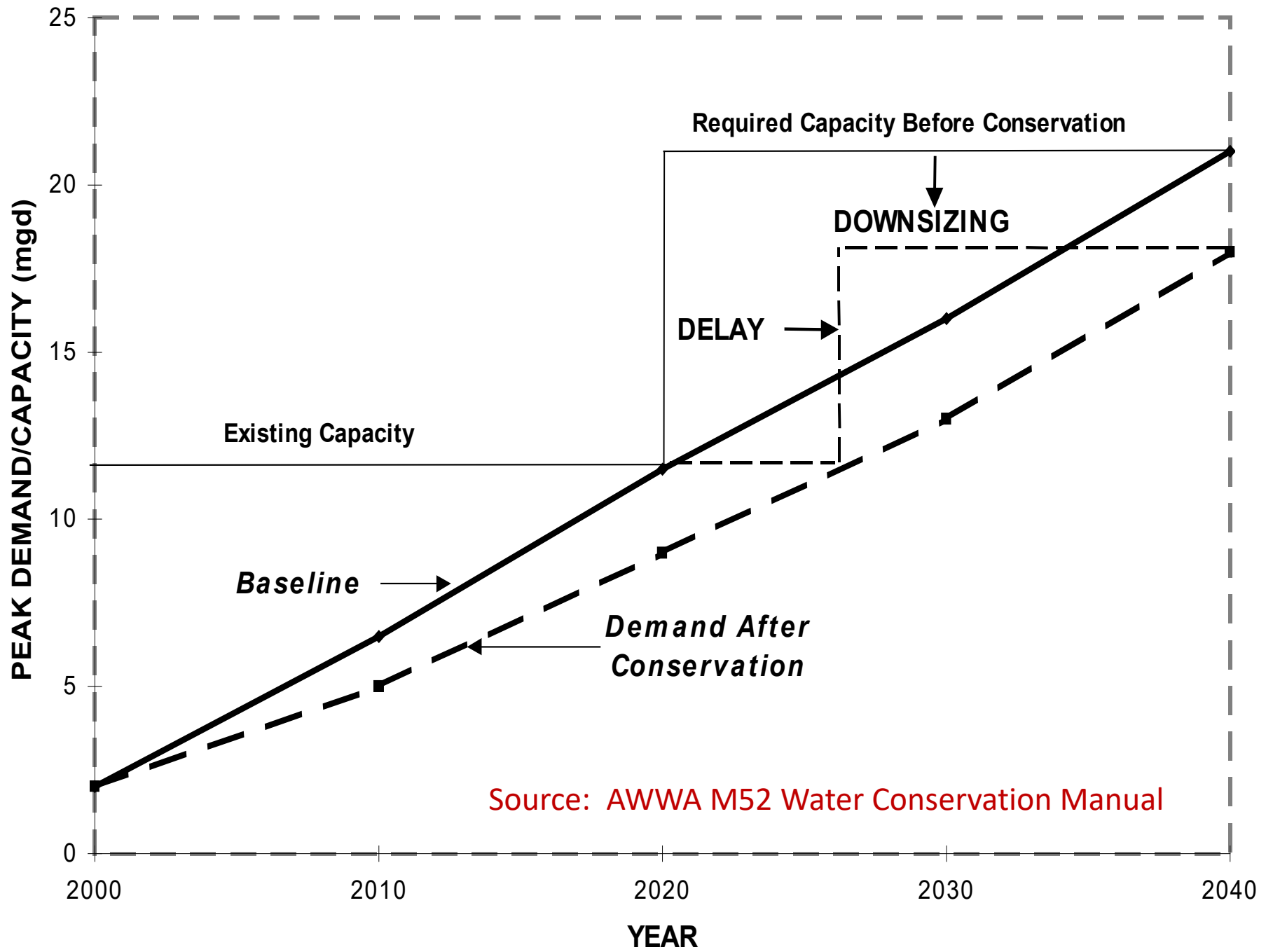
# **Cost-Effective Efficiency and the Real Impact on Rates**

# Water Flow and Flow of Economic Logic



# Conservation is Part of the Solution

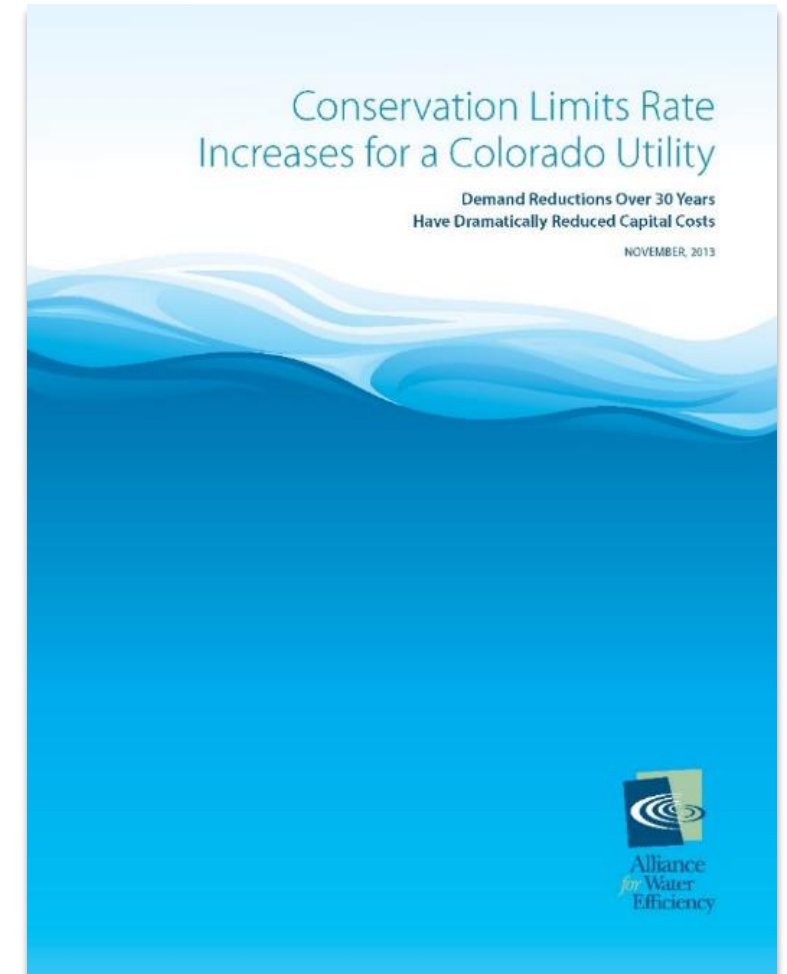
- ▶ It is a long-term cost reducer to the utility
- ▶ Revenue loss is often due to other drivers
- ▶ Every gallon saved is water that does not have to be pumped, treated and delivered
- ▶ Conservation is an investment and short-term effects must be planned for
- ▶ Reduced utility costs generally mean reduced customer rates in the long-term due to avoided infrastructure capacity increases



Source: AWWA M52 Water Conservation Manual

# Westminster's Story

- ▶ Citizens complained about being asked to conserve when rates would just go up anyway
- ▶ Westminster reviewed marginal costs for future infrastructure if conservation had not been done
- ▶ Since 1980 conservation has saved residents and businesses **80% in connection fees** and **91% in rates** compared to what they would have been without conservation



# What is RWA's Story?

- ▶ Every utility is different, with different drivers!
- ▶ Consider the key questions to determine the case for efficiency
- ▶ Where do costs come from and what are your future cost risks?
  - Wholesale water costs may be increasing
  - Costs of capital improvements
  - Short run variable costs (treatment, energy, etc.)
- ▶ What's your return on the investment in efficiency?
- ▶ How do you quantify it?
- ▶ AWE Tracking Tool provides forward-looking analysis



# AWE CONSERVATION TRACKING TOOL: UTILITY REVENUES & RATES WORKSHEET

**Review revenue requirement and rate impacts:** This worksheet calculates the impact of planned conservation on annual revenue requirement, average rates, and average bills. It assumes the volumetric revenues generated by the baseline demand and rates forecasts correspond to the utility's volumetric revenue requirement. It then adjusts forecasted annual water sales and revenue requirement using the water savings, conservation program cost, and utility avoided cost estimates calculated earlier. The adjusted revenue requirement equals the baseline revenue requirement plus annual conservation program cost minus annual avoided water supply cost. The adjusted average volumetric rate equals adjusted revenue requirement divided by adjusted annual water sales. The adjusted average monthly volumetric bill equals adjusted revenue requirement divided by number of accounts divided by 12. Calculations are done for two alternative financing strategies for planned conservation. The first strategy treats planned conservation as an operating expense. The model assumes planned conservation is paid for in the year it occurs (Pay-Go financed). The second strategy treats planned conservation as a capital expense. The model assumes planned conservation is debt financed. You can set the debt financing term using the drop-down list.

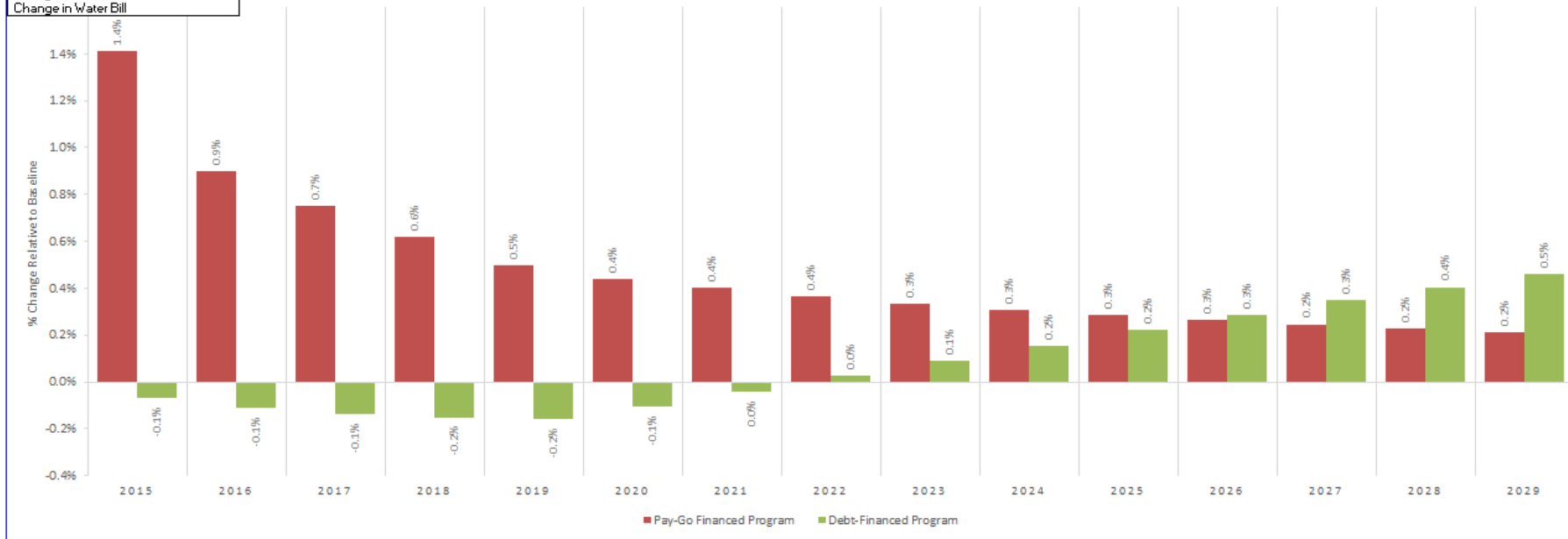
## Select Chart to View

- Change in Rev. Req.
- Revenue Requirement
- Avg. Water Rate
- Avg. Water Bill
- Change in Rev. Req.**
- Change in Water Rate
- Change in Water Bill

Debt Financing Term (Yrs):  Years to Display in Chart:

Chart Explanation

### Change in Annual Volumetric Revenue Requirement Due To Utility Conservation Program



- Show Series
- Pay-Go Financed
  - Debt Financed

## Baseline Volumetric Revenue Requirement, Average Rate, & Average Bill

### Baseline Water Sales Forecast (from 2. Specify Demands)

Customer Class	Units	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Single Family	AF	43,779	43,800	43,827	43,851	43,880	43,913	44,069	44,229	44,393	44,560	44,731	45,024	45,321	45,620	45,922
Multi Family	AF	3,324	3,309	3,295	3,281	3,268	3,257	3,254	3,252	3,250	3,250	3,250	3,259	3,269	3,279	3,290
CII	AF	13,458	13,481	13,504	13,528	13,553	13,578	13,641	13,705	13,769	13,833	13,898	14,000	14,103	14,207	14,310
Irrigation	AF	6,729	6,748	6,767	6,787	6,806	6,825	6,864	6,902	6,940	6,979	7,017	7,075	7,133	7,190	7,248
Not in use	AF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not in use	AF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not in use	AF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not in use	AF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not in use	AF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>AF</b>	<b>67,289</b>	<b>67,338</b>	<b>67,394</b>	<b>67,447</b>	<b>67,507</b>	<b>67,572</b>	<b>67,827</b>	<b>68,087</b>	<b>68,352</b>	<b>68,622</b>	<b>68,896</b>	<b>69,359</b>	<b>69,826</b>	<b>70,297</b>	<b>70,771</b>



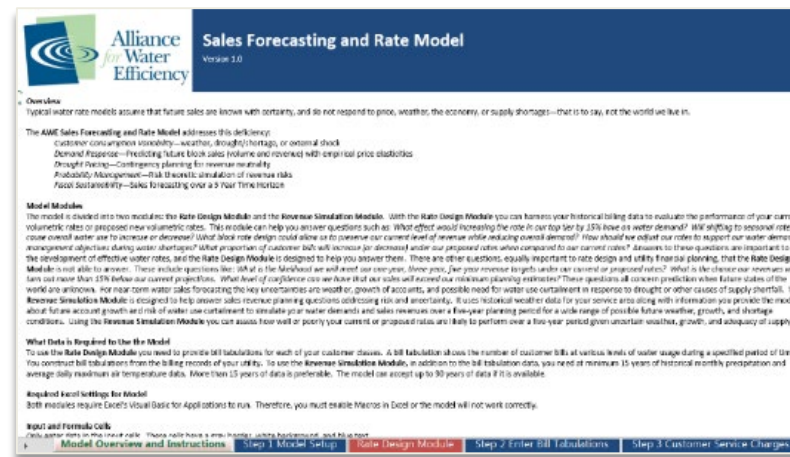
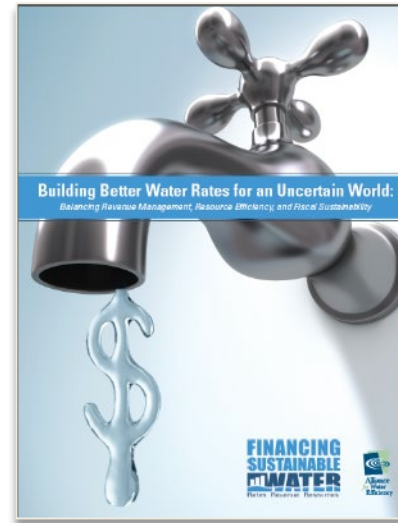
# Financing Sustainable Water

# FSW: Key Concepts

- ▶ Revenue instability is a feature of ALL rate structures
- ▶ Efficiency objectives should be identified at the start
- ▶ One size does not fit all
- ▶ Embracing uncertainty enables better decision-making
- ▶ Better rate analysis requires good data
- ▶ Customer understanding and empowerment is key
- ▶ Sound financial policies can support fiscal sustainability

# What is Financing Sustainable Water?

- ▶ **Building Better Rates in an Uncertain World: A Handbook to explain key concepts, provide case studies and implementation advice**
- ▶ **AWE Sales Forecasting and Rate Model: Innovative, user-friendly tool to model scenarios, solve for flaws, and incorporate uncertainty into rate making**
- ▶ **FinancingSustainableWater.org: Web-based resources to convene the latest research and information in one location**



# The Heart of the Problem

- ▶ Water rates have traditionally been focused solely on historical cost-recovery
- ▶ When system costs change quickly, and perhaps unpredictably, historical rates do not reflect today's cost consequences
- ▶ Rates do not then give customers correct information to make consumptive decisions

# AWE Rates Handbook (#6)

## BUILDING BETTER WATER RATES FOR AN UNCERTAIN WORLD

*BALANCING REVENUE MANAGEMENT, RESOURCE EFFICIENCY, AND FISCAL SUSTAINABILITY*

Thomas Chesnutt, A&N Technical Services

SECTION I: Introduction

SECTION II: Today's Imperative for Utility Financial Management

SECTION III: The Role of Ratemaking

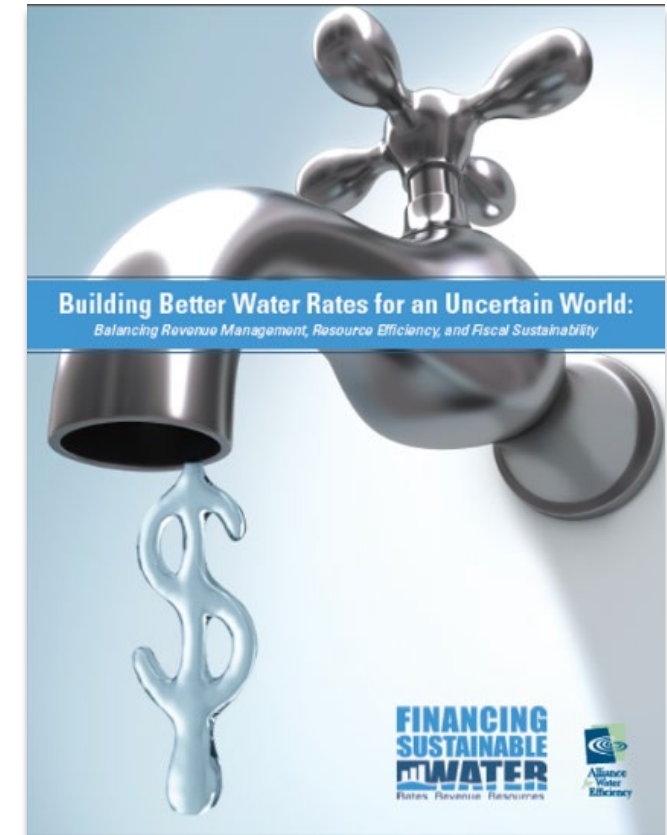
SECTION IV: Building a Better (Efficiency-Oriented) Rate Structure

SECTION V: Financial Policies & Planning for Improved Fiscal Health

SECTION VI: Implementing an Efficiency-Oriented Rate Structure

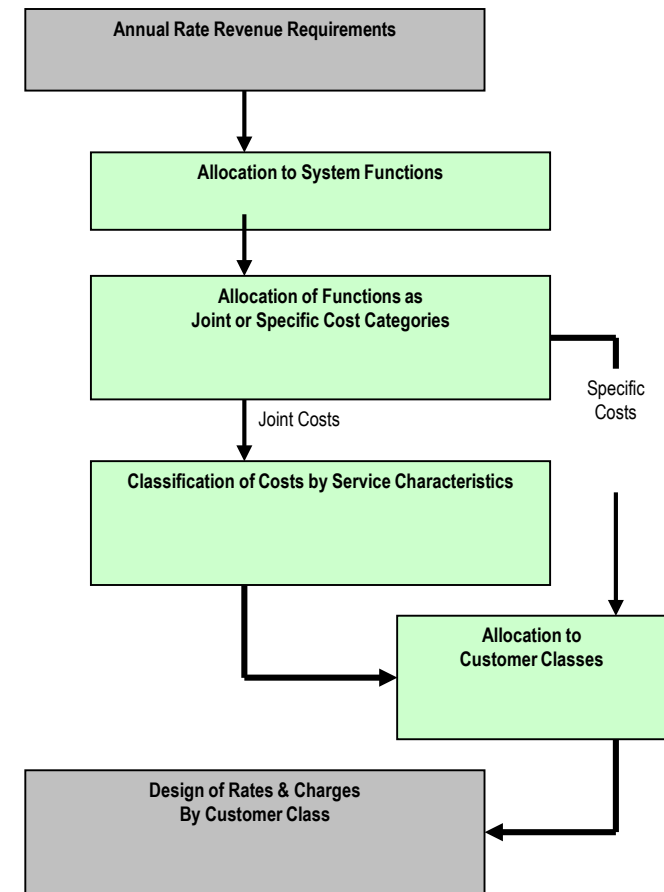
### Appendices

- Appendix A – Costing Methods
- Appendix B – Demand and Revenue Modeling
- Appendix C – AWE Sales Forecasting and Rate Model User Guide



# Building an Efficiency-Oriented Rate Structure

- ▶ Identify and Prioritize Ratemaking Objectives
- ▶ Determine Revenue Requirements
- ▶ Allocate Costs
- ▶ Design A Rate Structure
- ▶ Evaluate the Rate Structure against Objectives
- ▶ Decide on a Rate Structure



# What Answers Are Needed?

In an uncertain world, what information could lead to better water rates?

- ▶ *Customer Consumption Variability*—How can weather, drought/shortage, or external shock affect customer consumption?
- ▶ *Demand Response*—If I change rates, what happens to demand volume and revenue?
- ▶ *Drought Pricing*—How should I plan for water rates under the contingency of nonzero drought/shortage occurrence?
- ▶ *Probability Management*—What is the likelihood of deficit?
- ▶ *Fiscal Sustainability*—What are likelihoods over a 5-year time horizon
- ▶ *Affordability*—Can customers afford water service?

# A Rate Model to Help in Forecasting Sales

- ▶ Modeling Water Demand Variability
- ▶ Modeling Water Revenue Variability
- ▶ Customer Bill Analysis
- ▶ Affordability Assessment
- ▶ Assessing Fiscal Sustainability
- ▶ The AWE Sales Forecasting and Rate Model can do all this!

**Alliance for Water Efficiency**  
Sales Forecasting and Rate Model  
Version 1.0

**Overview**  
Typical water rate models assume that future sales are known with certainty, and do not respond to price, weather, the economy, or supply shortages—that is to say, not the world we live in.

The AWE Sales Forecasting and Rate Model addresses this deficiency:  
Customer Consumption Variability—weather, drought/shortage, or external shock  
Demand Response—Predicting future block sales (volume and revenue) with empirical price elasticities  
Drought Pricing—Contingency planning for revenue neutrality  
Probability Management—Risk theoretic simulation of revenue risks  
Fiscal Sustainability—Sales forecasting over a 5 Year Time Horizon

**Model Modules**  
The model is divided into two modules: the **Rate Design Module** and the **Revenue Simulation Module**. With the **Rate Design Module** you can harness your historical billing data to evaluate the performance of your current volumetric rates or proposed new volumetric rates. This module can help you answer questions such as: *What effect would increasing the rate in our top tier by 15% have on water demand? Will shifting to seasonal rates cause overall water use to increase or decrease? What block rate design could allow us to preserve our current level of revenue while reducing overall demand? How should we adjust our rates to support our water demand management objectives during water shortages? What proportion of customer bills will increase (or decrease) under our proposed rates when compared to our current rates? Answers to these questions are important to the development of effective water rates, and the **Rate Design Module** is designed to help you answer them. There are other questions, equally important to rate design and utility financial planning, that the **Rate Design Module** is not able to answer. These include questions like: *What is the likelihood we will meet our one-year, three-year, five-year revenue targets under our current or proposed rates? What is the chance our revenues will turn out more than 25% below our current projections. What level of confidence can we have that our sales will exceed our minimum planning estimates?* These questions all concern prediction when future states of the world are unknown. For near-term water sales forecasting the key uncertainties are weather, growth of accounts, and possible need for water use curtailment in response to drought or other causes of supply shortfall. The **Revenue Simulation Module** is designed to help answer sales revenue planning questions addressing risk and uncertainty. It uses historical weather data for your service area along with information you provide the model about future account growth and risk of water use curtailment to simulate your water demands and sales revenues over a five-year planning period for a wide range of possible future weather, growth, and shortage conditions. Using the **Revenue Simulation Module** you can assess how well or poorly your current or proposed rates are likely to perform over a five-year period given uncertain weather, growth, and adequacy of supply.*

**What Data is Required to Use the Model**  
To use the **Rate Design Module** you need to provide bill tabulations for each of your customer classes. A bill tabulation shows the number of customer bills at various levels of water usage during a specified period of time. You construct bill tabulations from the billing records of your utility. To use the **Revenue Simulation Module**, in addition to the bill tabulation data, you need at minimum 15 years of historical monthly precipitation and average daily maximum air temperature data. More than 15 years of data is preferable. The model can accept up to 90 years of data if it is available.

**Required Excel Settings for Model**  
Both modules require Excel's Visual Basic for Applications to run. Therefore, you must enable Macros in Excel or the model will not work correctly.

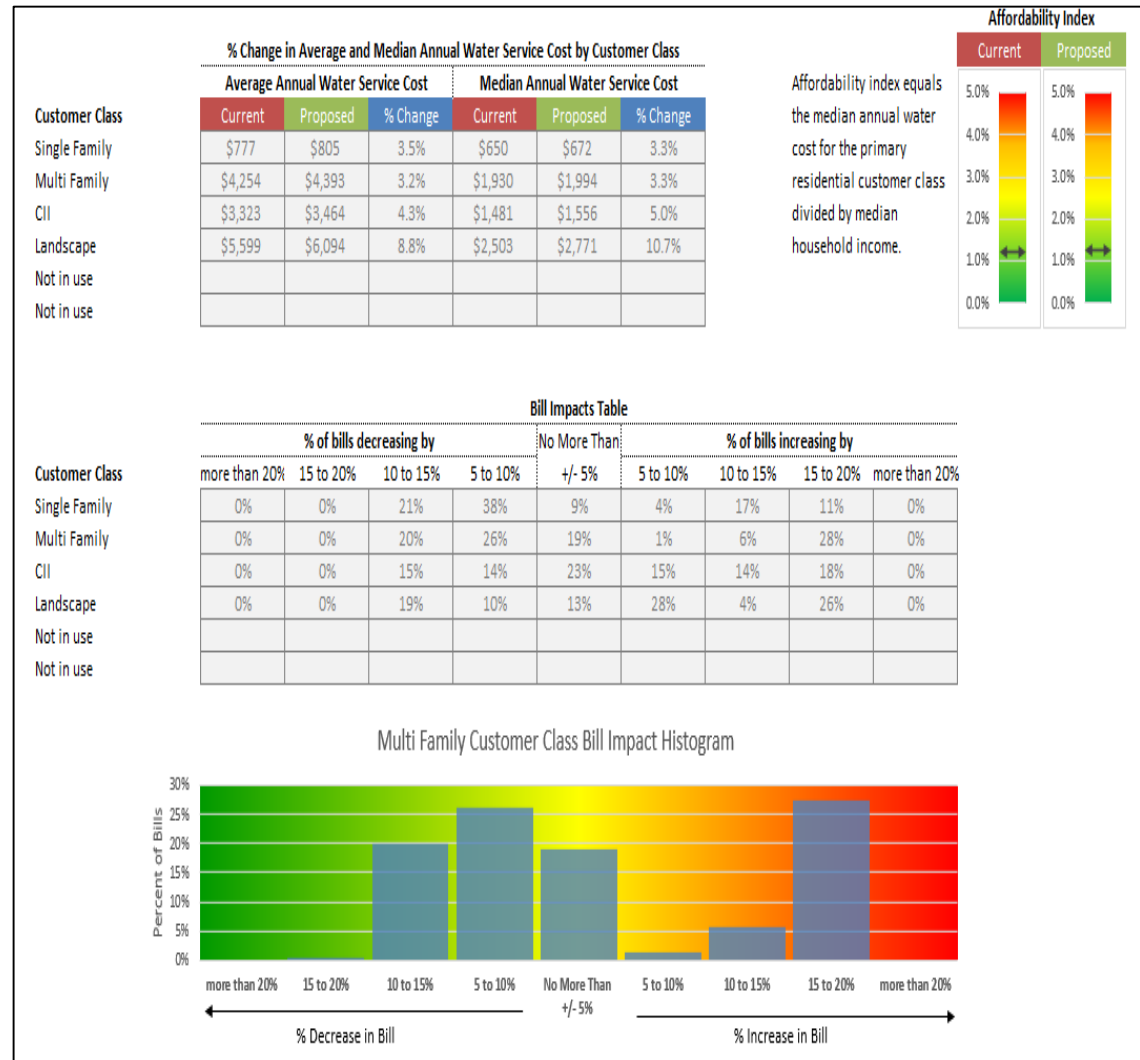
**Input and Formula Cells**  
Cells with data in the input cells. These cells have a gray border, white background, and blue text.

Model Overview and Instructions | Step 1 Model Setup | Rate Design Module | Step 2 Enter Bill Tabulations | Step 3 Customer Service Charges



# Affordability of Water Service

- ▶ AWE Sales Forecasting and Rate Model helps anticipate the impact of rate changes
- ▶ This can be used to help clearly explain changes to customers, Councils and Boards
- ▶ Provides clarity, reassurance, and an opportunity to make changes before a rate adjustment takes place



# Drought Pricing for Revenue Neutrality

- ▶ Shortages are *when*, not *if*.
- ▶ Imposing curtailments on customers affects revenues.
- ▶ Drought rates that maintain revenue neutrality through various drought stages can be planned for, communicated, and effectively implemented.

**3. Calculate Revenue Neutral Rates by Drought Stage**

The revenue neutral rates calculator will quickly find a set of rates for a given drought/shortage stage that will generate the same revenue condition. There are four steps to using the calculator:

Choose Drought Stage to Evaluate:

Choose Method for Calculating Revenue Neutral Rates:

**Leave or Adjust Rate in Block?**

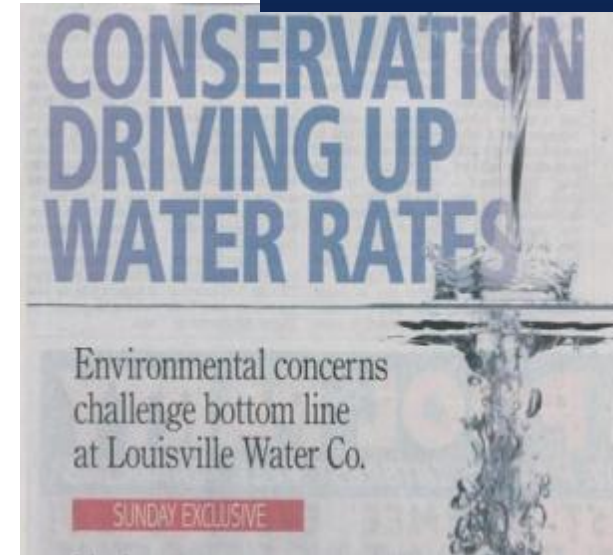
Class	Block 1	Block 2	Block 3	Block 4	Block 5
Single Family	Leave	Adjust	Adjust	Adjust	Adjust
Multi Family	Adjust	Adjust	Adjust	Adjust	Adjust
CII	Adjust	Adjust	Adjust	Adjust	Adjust
Landscape	Adjust	Adjust	Adjust	Adjust	Adjust
Not in use	Leave	Leave	Leave	Leave	Leave
Not in use	Leave	Leave	Leave	Leave	Leave

# Communicating Change

# The Political Reality

- ▶ We don't like to revise our rates
- ▶ It is politically unpopular, so rates are changed as little as possible
- ▶ The inevitable inflationary increase is postponed until it is a crisis, much less increases in other costs
- ▶ Conservation is often blamed for financial challenges – even when there are no active conservation programs in place
- ▶ This sends the wrong message to consumers

**courier-journal.com**  
A GANNETT COMPANY



**THE GLOBE AND MAIL** 

Reduced water use drains Toronto's funds for infrastructure upgrades

## **Raleigh Public Record**

Raleigh's Water Conundrum:  
Conservation v. Rates

# Communicating the Value of Water

## ▶ Customer Videos

- Explains water service and cost
- Pipes, plants, power and people that keep water flowing
- Video on Why Are Rates Rising?
- Both are Free for utility use!

## ▶ Water Rates Messaging

- ▶ Consumer-friendly language
- ▶ Explain that conservation keeps rates DOWN in the long term
- ▶ Use for speeches, talking points, press releases, etc.



“Every gallon saved is a gallon that doesn’t need to be pumped, treated or delivered – those savings are reflected in your water bill. **Conservation helps slow the rise of water rates over the long-term.**”



▶ ⏪ 🔊 1:48 / 3:03



## Water: What You Pay For

21,064 views • Jul 7, 2015

👍 87    🗨️ 6    ➦ SHARE    ≡+ SAVE    ⋮



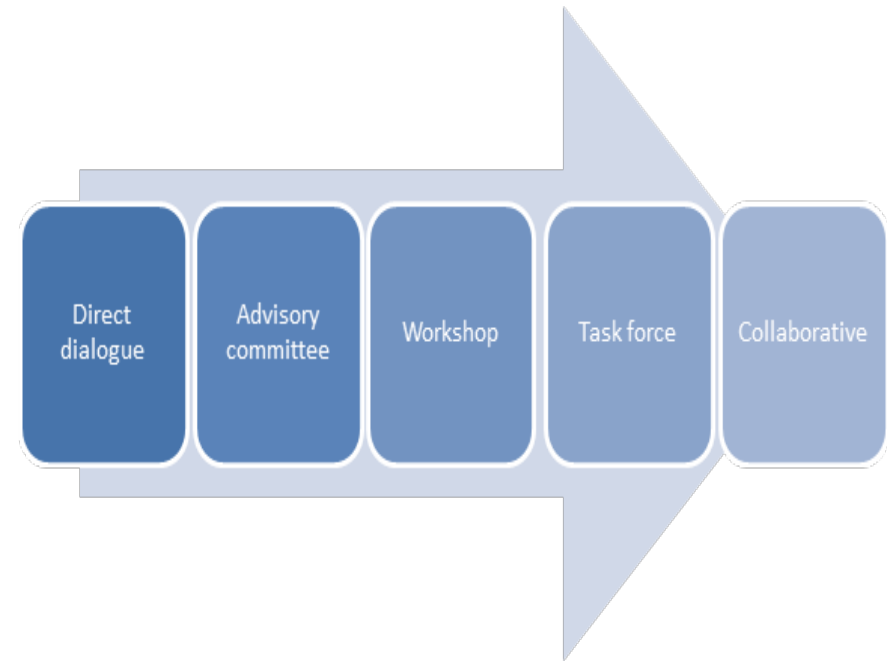
### Good Question: Why Are My Water Rates Going Up?

5,460 views • Jun 30, 2017

17 4 SHARE SAVE ...

# Public Engagement

- ▶ Integrated and Collaborative Planning
- ▶ Securing Buy-In from Leadership
- ▶ Getting to Yes: Approval from Elected Officials
- ▶ Internal Communications and Customer Service
- ▶ The Public as Partners
- ▶ Clear Signals and Empowered Customers
- ▶ Maintaining Dialogue and Fine-tuning





# Let's Change the Conversation

- ▶ Water Rates Message Plan
- ▶ Jargon-free messages on:
  - The service and value water utilities provide
  - Benefits and value of efficiency investments
  - The need for a rate revision or new rate structure
  - The relationship between conservation and rates
  - The impact of drivers such as drought or water quality
- ▶ Customizable to tell your story!
- ▶ [www.FinancingSustainableWater.org](http://www.FinancingSustainableWater.org)



## AWE Water Rates Message Plan

The Alliance for Water Efficiency has developed a set of key messages for utilities implementing conservation and efficiency-oriented rate structures or rate revisions. These messages have been developed to help utilities communicate to ratepayers, the social, fiscal and regulatory challenges that all utilities face, without jargon. As more regions become concerned with drought, crumbling infrastructure and population growth, these messages highlight the benefits and value of promoting water conservation and the significance of investing and planning for long-term water use efficiency solutions. Finally, these key messages may be helpful to support outreach to drive change in public perception, as utilities implement new rate structures (or a rate revision), garner support for new water resources, cultivate local support to repair aging infrastructure, and seek to grow support to add modern, more reliable technology to sustainably resolve our water supply issues.

Messages are the “elevator pitch” for communicating with the public. Messages summarize issues and must be backed up by facts. Key messages help **prioritize** key points; **focus** the speaker on what is most important; and help ensure **consistency** across written and verbal communications.

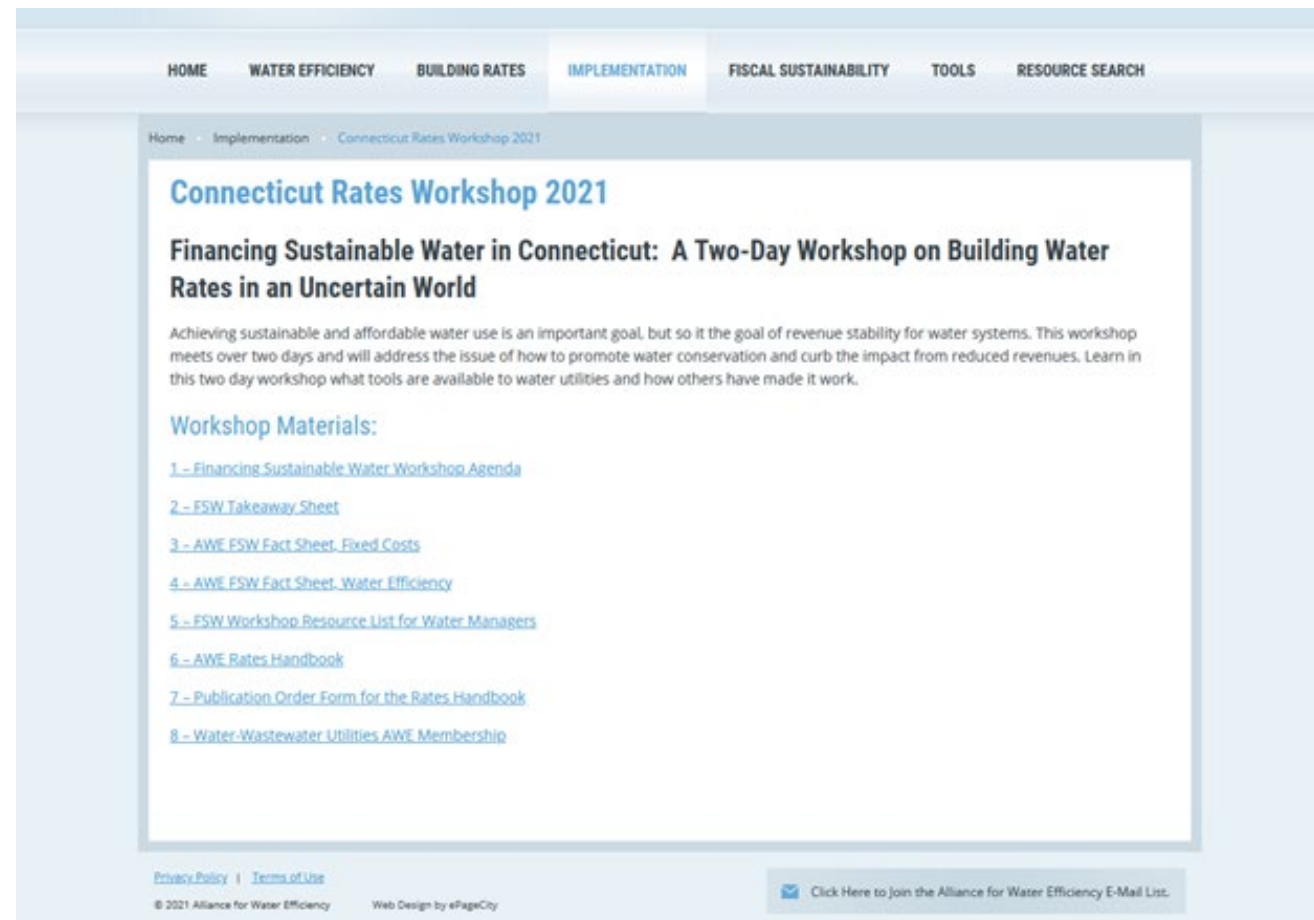
Utilities change their rate structures or increase rates under these broad scenarios, including:

- Drought or shortages of local water supplies (e.g. like pressures on groundwater);
- Operating and maintaining a reliable water system 24/7/365, including replacing aging infrastructure, responding to regulatory requirements, and addressing increasing costs (e.g. energy, safety);
- Population growth, including stretching existing supplies while building new capacity;
- Crumbling infrastructure and the significance of how a reliable water supply contributes to the growth and livelihood of the local economy;
- Regulatory mandates from local or state levels to ensure a safe and high quality supply of affordable and reliable drinking water; and
- Meeting sustainability objectives (e.g. long-term planning for the region and economy, including preparing our infrastructure to withstand extreme weather conditions, among many other disasters).

The messages have been developed to accommodate each utility's unique rate-setting scenario, and should be customized or adapted as needed to address specific challenges and/or objectives. For additional guidance on how to use these messages, please refer to the AWE Message Protocol and Q&A document on [www.FinancingSustainableWater.org](http://www.FinancingSustainableWater.org).

# Connecticut Rates Workshop March 16-17

<https://www.financingsustainablewater.org/implementation/connecticut-rates-workshop-2021>



The screenshot shows a webpage with a navigation bar at the top containing links for HOME, WATER EFFICIENCY, BUILDING RATES, IMPLEMENTATION (which is highlighted), FISCAL SUSTAINABILITY, TOOLS, and RESOURCE SEARCH. Below the navigation bar is a breadcrumb trail: Home > Implementation > Connecticut Rates Workshop 2021. The main content area features the title "Connecticut Rates Workshop 2021" in blue, followed by the subtitle "Financing Sustainable Water in Connecticut: A Two-Day Workshop on Building Water Rates in an Uncertain World". A paragraph of text describes the workshop's purpose: "Achieving sustainable and affordable water use is an important goal, but so is the goal of revenue stability for water systems. This workshop meets over two days and will address the issue of how to promote water conservation and curb the impact from reduced revenues. Learn in this two day workshop what tools are available to water utilities and how others have made it work." Below this is a section titled "Workshop Materials:" with a list of eight numbered links: 1 - Financing Sustainable Water Workshop Agenda, 2 - FSW Takeaway Sheet, 3 - AWE FSW Fact Sheet - Fixed Costs, 4 - AWE FSW Fact Sheet - Water Efficiency, 5 - FSW Workshop Resource List for Water Managers, 6 - AWE Rates Handbook, 7 - Publication Order Form for the Rates Handbook, and 8 - Water Wastewater Utilities AWE Membership. At the bottom of the page, there are links for "Privacy Policy" and "Terms of Use", a copyright notice "© 2021 Alliance for Water Efficiency", a credit "Web Design by ePageCity", and a button that says "Click Here to join the Alliance for Water Efficiency E-Mail List." The FSW logo is located in the bottom right corner.

## Financial Instruments to Manage Revenue Risk

A new white paper explores opportunities for utilities to use financial instruments - such as derivatives, insurance and bonds - to manage weather-related revenue risk in an increasingly volatile climate.



## Rates. Revenue. Resources.

Financing Sustainable Water is an initiative of the Alliance for Water Efficiency. It was created to provide practical information to guide utilities from development through implementation of rate structures that balance revenue management, resource efficiency and fiscal sustainability. This website will be updated frequently with new content and we encourage visitors to return often for additional information and resources. The Alliance serves as a North American advocate for water efficient products and programs, and provides information and assistance on water conservation efforts. [Learn More](#)



### WATER MANAGERS

Find guidance on sustainable financial management



### ELECTED OFFICIALS

Support your utility through smart management practices



### CONCERNED CITIZENS

Learn how you can help create a sustainable water future



### MEDIA

Get facts on today's water challenges and solutions



### RATES HANDBOOK

Building Better Rates for an Uncertain World



### RATE MODEL

Sales Forecasting and Rate Model

### RECENT NEWS

- [Welcome to Financing...](#)

### FEATURED RESOURCES

- [Case Study: Cobb County](#)  
Public Engagement Success
- [Report: Westminster, CO](#)  
Conservation Lowers Rates

**South Central Connecticut Regional Water Authority**  
 90 Sargent Drive, New Haven, Connecticut 06511-5966 203-562-4020  
 http://www.rwater.com

**TO:** Tim Slocum  
1285 Lilac Court  
Cheshire, CT 06410

**DATE:** June 4, 2021

**RE:** Quarterly Update of RPB  
Approved Projects

**ATTN:** \_\_\_\_\_

We are sending you  Enclosed  Under Separate Cover via  E-Mail  Hand Delivery the following items:

- Prints     Shop Drawings     Data Sheets     RPB Report  
 Sketches     Specifications     Brochures     \_\_\_\_\_

COPIES	PREPARED BY	REFERENCE NO.	DESCRIPTION
1		March – May 2021	Quarterly Report

**THESE ARE TRANSMITTED:**

- As Requested     For Your Information     \_\_\_\_\_  
 For Your Use     For Review and Comment

**Remarks:** Enclosed please find the fourth quarter Fiscal Year 2021 status report of all RPB-approved projects.

Very truly yours,

Regional Water Authority

- Copies to:** Anthony DiSalvo  
David Borowy  
Suzanne Sack  
Kevin Curseaden  
Catherine LaMarr  
Mario Ricozzi  
Larry Bingaman  
Rochelle Kowalski  
Beth Nesteriak



\_\_\_\_\_  
 Edward O. Norris, III, P.E.  
 Vice President – Engineering & Env. Services

**STATUS OF RPB-APPROVED PROJECTS  
FOURTH QUARTER FISCAL YEAR 2021 REPORT  
MARCH – MAY 2021**

*Ansonia-Derby Tank*

Date of Initial Approval by the RPB: November 2012  
Date Re-approved by the RPB: February 2019  
Amount Initially Approved by the RPB: \$4,900,000  
Revised Amount Approved by the RPB: \$5,100,000  
Amount Expended to Date: \$1,147,607  
Estimated Final Cost of Project: \$5,100,000  
Scheduled Completion: February 2020  
Anticipated Completion: November 2022

On May 26, 2021, the appellate court denied the plaintiff's February 26, 2021, petition for certification to appeal the decision from Judge Berger rendered on January 19, 2021 which dismissed the plaintiff's original appeal. This decision clears the way for RWA to move forward with the project. Murtha has reinitiated work on the closings for the Lombardi Drive and St. Paul Ukrainian Catholic Church properties as well as on the tank site lease between the City and RWA.

*System-Wide Radio Telemetry (RTU) Upgrades*

Date Approved by the RPB: July 2018  
Amount Approved by the RPB: \$5,700,000  
Amount Expended to Date: \$4,848,073  
Estimated Final Cost of the Project: \$5,700,000  
Scheduled Completion: May 2020  
Anticipated Completion: August 2021

Knapp Engineering, the contractor for this project, and EMA, RWA's consultant, are continuing to work with RWA's Instrumentation & Control and Control Room staff to transition remote sites to the new communication protocols and SCADA graphics. Five wellfield, nine pump station, and seven pressure-reducing valve (PRV) sites have been transitioned to the new technology to date

*Branford Hill Service Area Improvements*

Date Approved by the RPB: April 2020  
Amount Approved by the RPB: \$2,400,000  
Amount Expended to Date: \$2,405,151  
Final Cost of the Project: \$2,405,151  
Scheduled Completion: May 2020  
Actual Completion: May 2020

During the fourth quarter, it was determined that any potential additional paving work required by the CDOT in the project area will be the responsibility of RWA's contractor, Brennan Construction. If necessary, additional paving work will be performed under Brennan's two-year warranty for the project. This project is now fully complete.

North Sleeping Giant Wellfield Facilities Improvements

Date Approved by the RPB: June 2020  
Amount Approved by the RPB: \$2,100,000  
Amount Expended to Date: \$1,348,976  
Estimated Final Cost of the Project: \$2,100,000  
Scheduled Completion: August 2021  
Anticipated Completion: August 2021

During the quarter, the contractor for the project, Associated Construction, completed demolition and installation of the new sodium hypochlorite chemical feed system, and completed demolition of the existing fluoride chemical feed system. RWA Treatment staff removed the temporary sodium hypochlorite system and installed a temporary fluoride system.

West River Water Treatment Plant Improvements

Date Approved by the RPB: March 2021  
Amount Approved by the RPB: \$16,300,000  
Amount Expended to Date: \$1,017,415  
Estimated Final Cost of the Project: \$16,300,000  
Scheduled Completion: September 2022  
Anticipated Completion: September 2022

This project includes the installation of a dissolved air flotation system at the treatment plant, electrical improvements and chemical system improvements.

The project received approval from the Representative Policy Board at their March 18, 2021, meeting. The project was advertised for public bids on May 13, 2021 and a bid opening is scheduled for June 23, 2021. A mandatory contractor pre-bid meeting was conducted on June 3, 2021.