
Welcome!

Town of Rotterdam
Water Infrastructure



Syracuse University PST101 at Schalmont High School

What is the issue?

The outdated water infrastructure within the Town of Rotterdam is unable to supply water necessary for economic and population growth.



Negative Impacts on the Community

Health

Water Supply & Water Main Breaks

- Basic necessity
- Water main breaks
- Boil water advisories

Safety

Fire Protection

- Fire Hydrant Pressure

Restrictions

Water Usage

- Water restrictions
 - Conservation
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Water Restrictions

“On July 24, 2020, the Rotterdam Town Board amended Local Law to establish rules and regulations to help maintain our water system. We now have an even/odd lawn sprinkling system. “

- Town of Rotterdam (July 24, 2020)



Fire Protection

“In order to maintain sufficient water supply and pressure at all times for fire protection and household use, from May 1 through September 15, lawn sprinkling, garden sprinkling and other use of public water shall be restricted...”

- Town of Rotterdam (July 24, 2020)

Evidence of the Problem

On a national scale:

- “The 2.2 million miles of pipes that carry water into homes, businesses and public places are breaking”
- Wall Street Journal (2022)
 - “Every two minutes, there's a new crack somewhere in the country's buried water pipe system”
- Wall Street Journal (2022)
 - “Between 2012 and 2018, the rate of water main breaks increased by 27 percent, reaching an estimated 250,000 to 300,000 per year”
- American Society of Civil Engineers (2020)
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Evidence of the Problem

On the local level:

- “Wells 1, 2, and 3 are 75-years-old and will soon get to a point where they cannot be cleaned and are, therefore, not useful”
- As the town grows, the small pipes will not be able to provide enough water to support residents and businesses

- J. Peterson, Sr. Water Plant Operator (November 17, 2022)

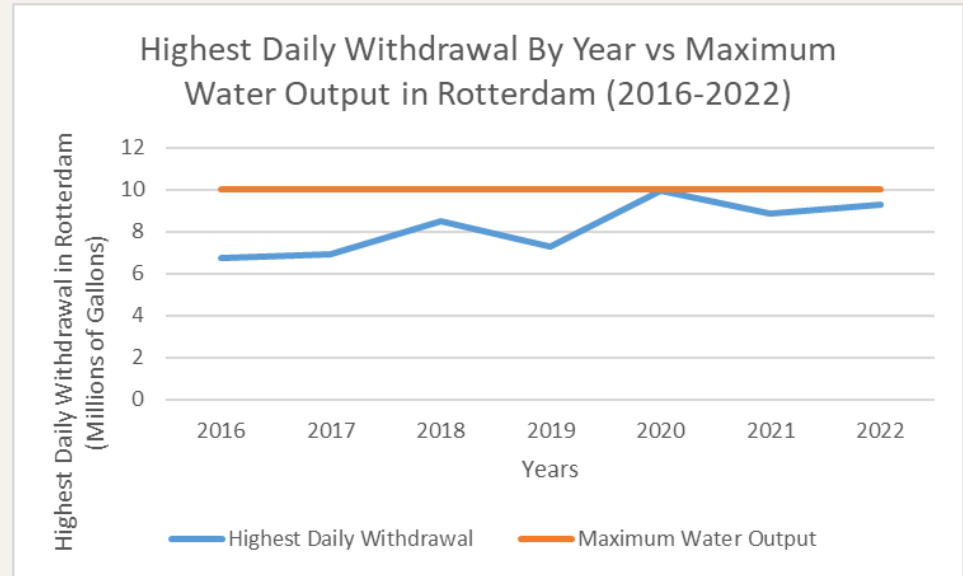
Outdated Infrastructure

The current water infrastructure was built in the 1950s, and not built to sustain the current amount of water that town uses throughout the year.



Increasing Consumption of Water

- Increasing daily withdrawals
- Highest daily withdrawal gets dangerously close to the maximum



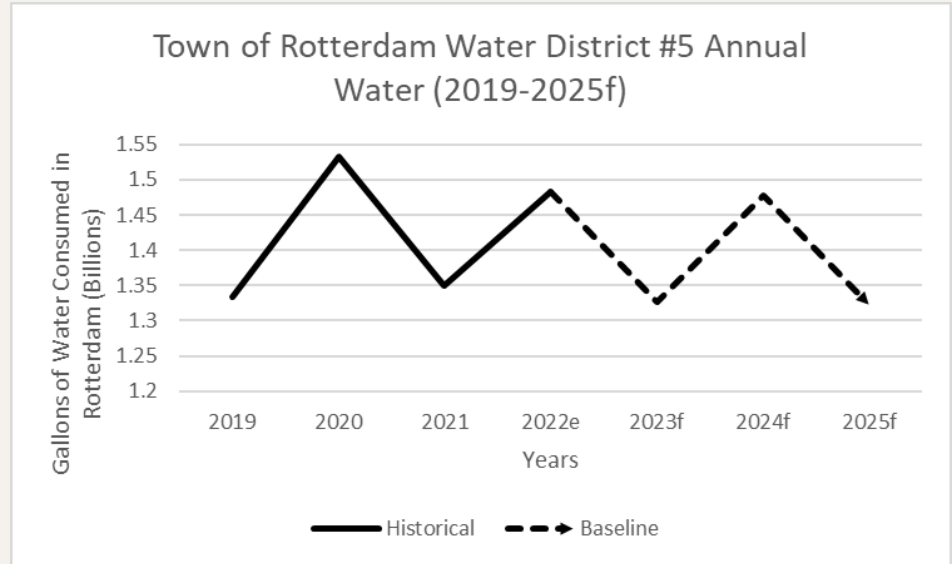
Water Department of Rotterdam (2022)

Causes of the Problem

The Town of Rotterdam uses water in amounts that stress the capacity of the old and deteriorating systems.

The aged water system combined with overconsumption of water can cause infrastructure issues including water main breaks and system failures.

-J. Peterson, Rotterdam Sr. Water Plant
Operator (November 17, 2022)



Water Department of Rotterdam (2022)

Policy Statement

The Rotterdam Town Board will enact a policy that will direct the Department of Public Works to award contracts for infrastructure improvements to the water system referring to the Barton & Loguidice Rotterdam Water System Improvements Project.



Key Improvements suggested by Barton & Loguidice

- Pipe size and material changes to water mains from the Rice Road well field along West Campbell Road, Burdeck Street, North Thompson Street, Altamont Avenue, Carman Road, and Helderberg Avenue.
- Replacement of inoperative mainline valves on Parklawn Avenue, Robinwood Avenue, Pinelawn Avenue, Cedarlawn Avenue, Willow Street, Beverly Street, and Curry Road.
- New mainline gate valves and hydrants for new pipelines.

- Barton & Loguidice (2022)



Benefits and Costs

Benefits

The infrastructure improvements would:

- Increase amount of available water
- Strengthen firefighting efforts
- Decrease the risk and cost associated with water main breaks
- Grow the town's economy

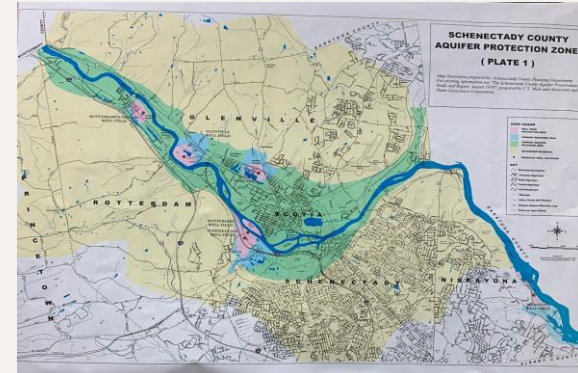
Costs

The infrastructure improvements could:

- Cause traffic delays and business disruptions
- Increase taxes
- \$33,900,000 Estimated Cost
 - Grants are available
 - Barton & Loguidice (2022)

Effectiveness

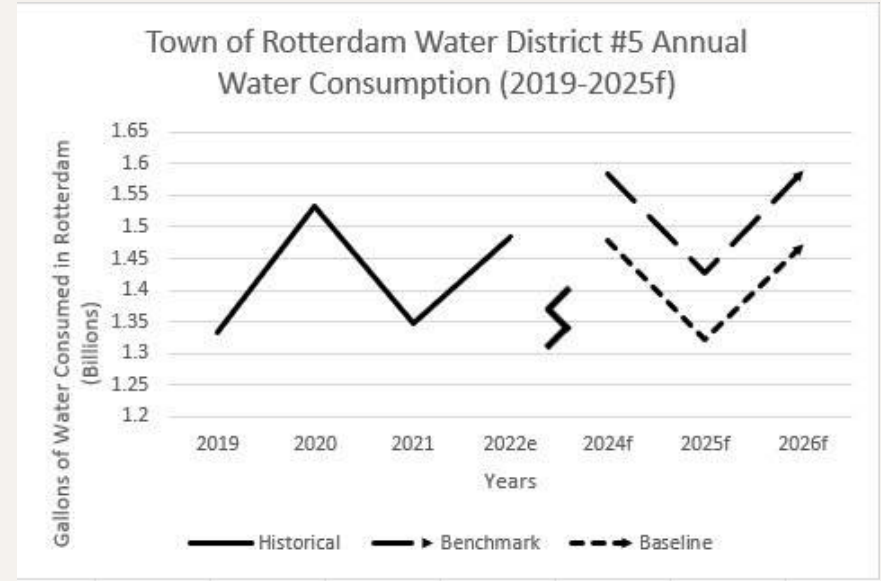
- “Invest in infrastructure to increase supply of water for irrigation, industrial, and domestic uses”
 - The Futurist (2003)
- The American Jobs Plan
 - Building businesses and growing the nation's economy relies on improving water infrastructure
 - Allows for efficient and greater use of water
 - White House (2021)



Effectiveness

Improvements to the infrastructure:

- Town of Rotterdam can supply more water
 - Business & Residential Use
- Less risk for water main breaks



Town of Rotterdam Water Department (2022)

Feasibility

- Town Board Support is Essential
 - Supervisor Mollie Collins and Town Board Member Joe Mastroianni
 - expressed the dire need for water infrastructure improvements
 - M. Collins (October 18, 2022) & J. Mastroianni (January 11, 2023)
 - Town officials
 - Senior Water Plant Operator Justin Peterson and Stormwater Manager Mary Barrie
 - expressed the need for infrastructure changes and support these efforts
 - J. Peterson & M. Barrie (November 17, 2022)
 - Taxpayers may not support funding dramatic changes to infrastructure
 - Barton & Loguidice (2022)
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Water Conservation Policy

The Rotterdam Town Board will require all homeowners utilizing public water in the Town of Rotterdam to install water meters by December 2024.



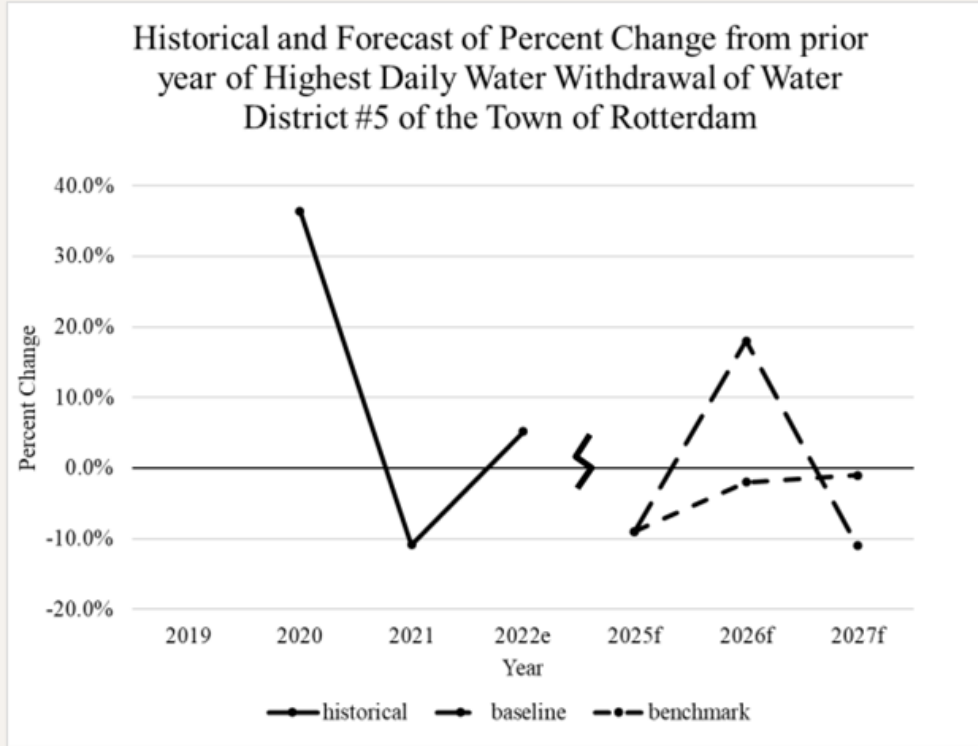


Department of
Environmental
Conservation

“ANY PWS WATER WITHDRAWAL PERMIT ISSUED AFTER APRIL 2013 CONTAINS A STANDARD CONDITION REQUIRING THE INSTALLATION OF METERS ON ALL WATER SUPPLY SOURCES AND FOR ALL CUSTOMERS. THIS INCLUDES DEC PERMIT MODIFICATION AND RENEWAL APPLICATIONS FOR EXISTING PWS SYSTEMS THAT DID NOT PREVIOUSLY HAVE METERS, SUCH AS THE TOWN OF ROTTERDAM.”

■ **NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

Effectiveness



Town of Rotterdam Water Department (2022)

Installing Water Meters

- 8% reduction of water consumption
 - Nature Partner Journals (2021)
- or 21.8 gallons a day per unit —
 - 2004 study sponsored by the U.S. Environmental Protection Agency, the National Apartment Association as well as cities and water districts in the western United States.

Benefits

- Reduces wasteful water usage
- Ensures ability for firefighting
- Postpone urgent need to replace small pipes
- Reduces the need for water restrictions
- Lower consumption households possibly see a decrease in water fees

Costs

- Approximately \$600 per home meter
 - Installation of water meters
 - Higher consumption households possible increase in water fees
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Feasibility

- Rotterdam Town Board support is necessary
 - Rotterdam will be in compliance with DEC to implement water meters in order to conserve more water
 - The Daily Gazette (2022)
 - Several town board members and residents have expressed their disinterest in implementing the water meters
 - News 10 ABC (2022)
 - Town Supervisor Mollie Collins and Senior Water Plant Operator Justin Peterson have expressed a need for a change in the town's water system
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Thank You!

Special thanks to:

- Supervisor Collins and the Town Board for considering the policy proposals.
 - Supervisor Collins for providing us with the project and the opportunity to learn about local government.
 - Justin Peterson, Senior Water Plant Operator and Mary Barrie, Town of Rotterdam Stormwater Manager for sharing their knowledge and expertise.
 - Rotterdam Town Departments for information and data.
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