

Massachusetts Water Infrastructure: Toward Financial Sustainability

Recommendations of the Massachusetts
Water Infrastructure Finance Commission



Martin Pillsbury
Metropolitan Area
Planning Council
Boston, MA





The Water Headlines...

- Massachusetts has a drinking water finance problem.....
 -and a wastewater finance problem....
 -and soon to have a storm water finance problem.
- Water is one of our state's *greatest assets*, but if we don't manage it well, it can be a *liability*.
- What will it take to manage it well?
 - *Smart, sustainable policies and regulations*
 - *Innovative approaches to water management*
 - *Sustained investment in critical infrastructure*



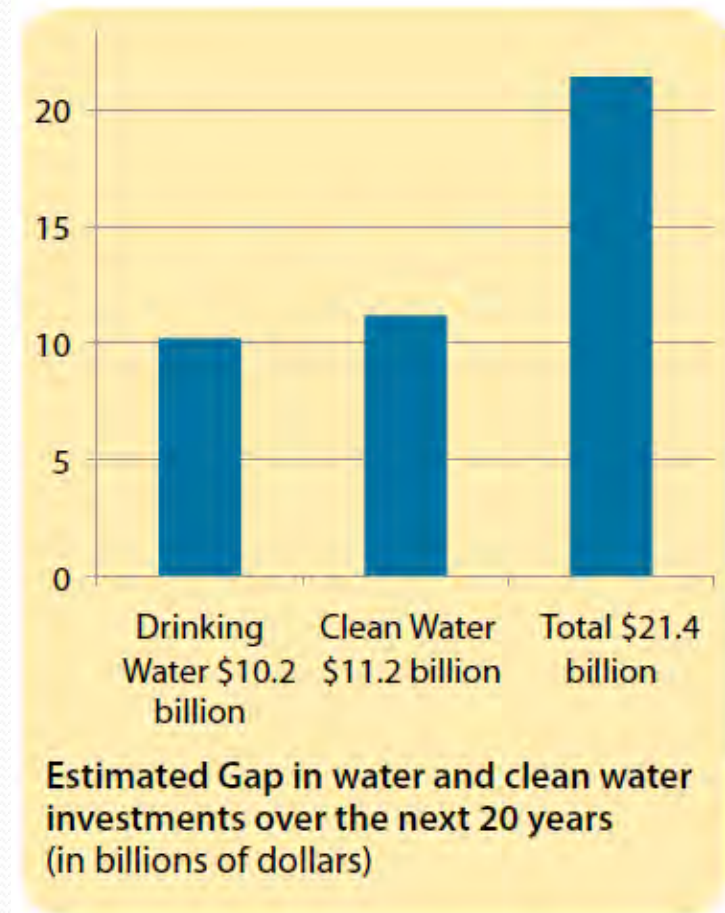
Water Infrastructure Finance Commission

- Established by the Legislature in 2009
- Chaired by Senator Jamie Eldridge
- Leading House member Rep. Carolyn Dykema
- 18 members from multiple water stakeholder groups
- Convened in May 2010 and issued its final report in Feb. 2012

- Charged with *“developing a comprehensive, long-range water infrastructure finance plan for the commonwealth and municipalities”*

Mind the Gap (\$21.4 Billion of it)

The Commission estimates that over the next 20 years the Commonwealth faces a **\$10.2 billion gap** in funding for *drinking water* and an **\$11.2 billion gap** in funding for *wastewater* projects, for a total gap of **\$21.4 billion.**



Mind the Gap (\$21.4 Billion of it)

The Commission's estimate of the gap is based on 20-year revenue estimates minus EPA capital needs surveys and costs for O&M and debt service:

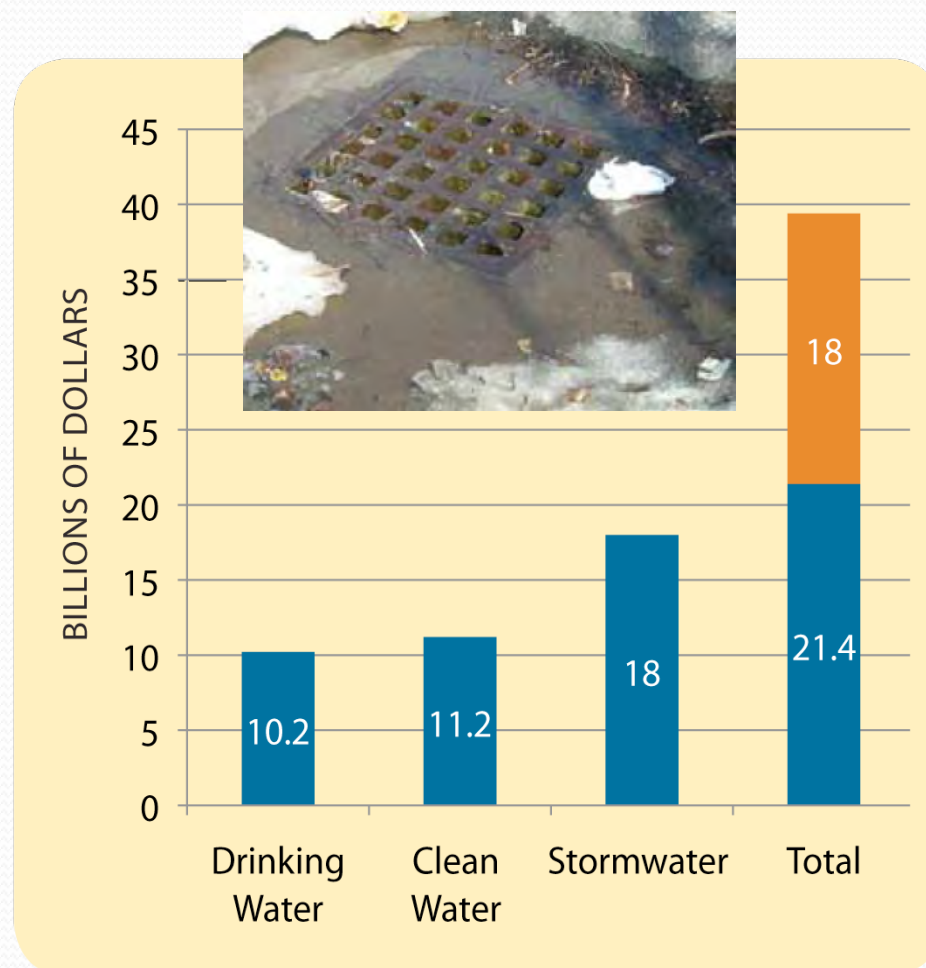
Results of Massachusetts Gap analysis (in \$ billions)

	20-Year est. Rate revenue	-	EPA needs survey estimate of 20-year capital needs		20-Year increase in O&M and debt service	=	20-year Gap
Drinking water	\$11.4	-	\$6.8	+	\$14.8	=	\$10.2
Clean water	\$10.4	-	\$7.95	+	\$13.5	=	\$11.2

Note: Numbers in chart do not total accurately due to rounding.

Total Projected 20-Year Funding Gap

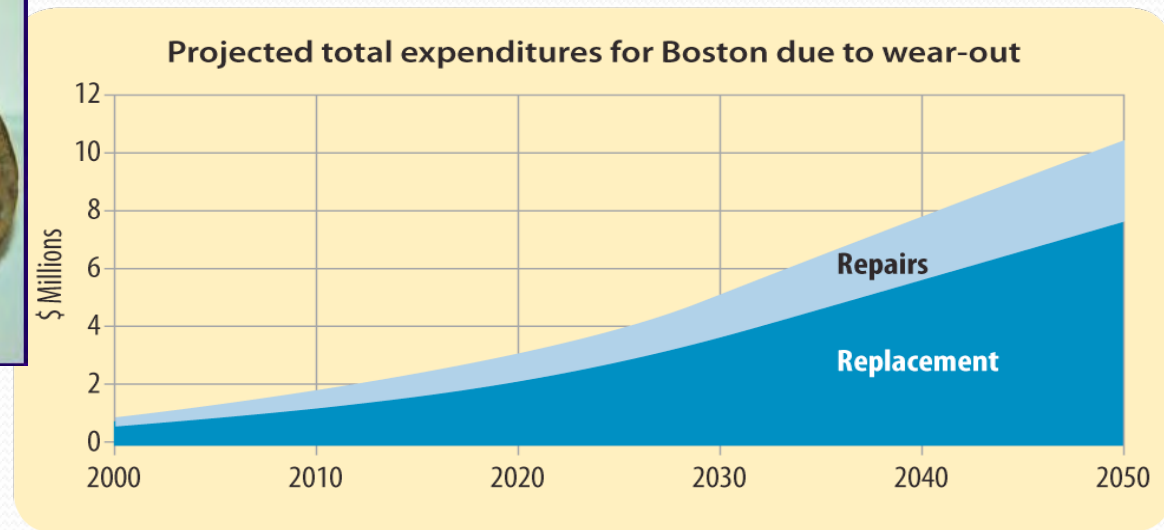
While stormwater costs are more difficult to project, the gap could increase by another **\$18 billion** if stormwater mitigation costs are included (depending on EPA stormwater regulations)



What's Behind the Gap?

Water utilities face many cost challenges:

1. **Aging systems.** Some systems were constructed in the 1800s. And although Federal investments in the 1970s brought new treatment plants, many of these are nearing the end of their service life.



2. **Environmental and public health concerns must be addressed.** Many systems face expensive regulatory requirements to address environmental or public health needs.

What's Behind the Gap?

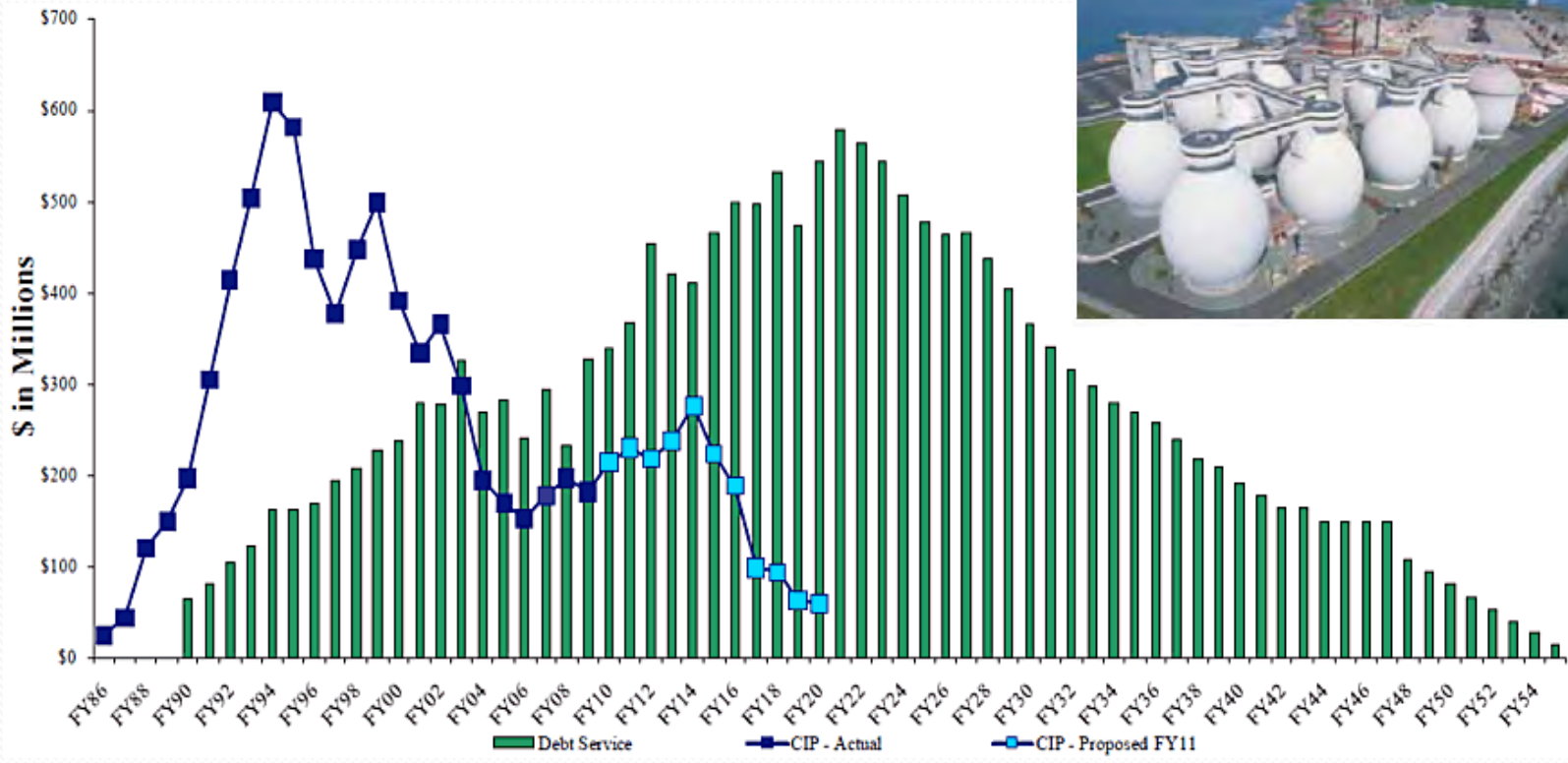
Water utilities face many cost challenges:

- 3. Lack of state control over Clean Water permits.** Massachusetts has not accepted “primacy” to enforce the Clean Water Act. This may provide flexibility to prioritize scarce resources.
- 4. Security and redundancy investments are required.** Communities must invest to protect the public during emergencies -- from natural disasters to system failures to acts of terrorism.
- 5. Operating costs are rising.** Water and wastewater operations use a significant amount of energy, chemicals and manpower. As these costs rise, so does the cost of providing clean water.
- 6. Many water utilities are not running at optimal efficiency.** Best management practices are used only partially by systems across the state. Many need technical assistance and training.

What's Behind the Gap?

Water utilities face many cost challenges:

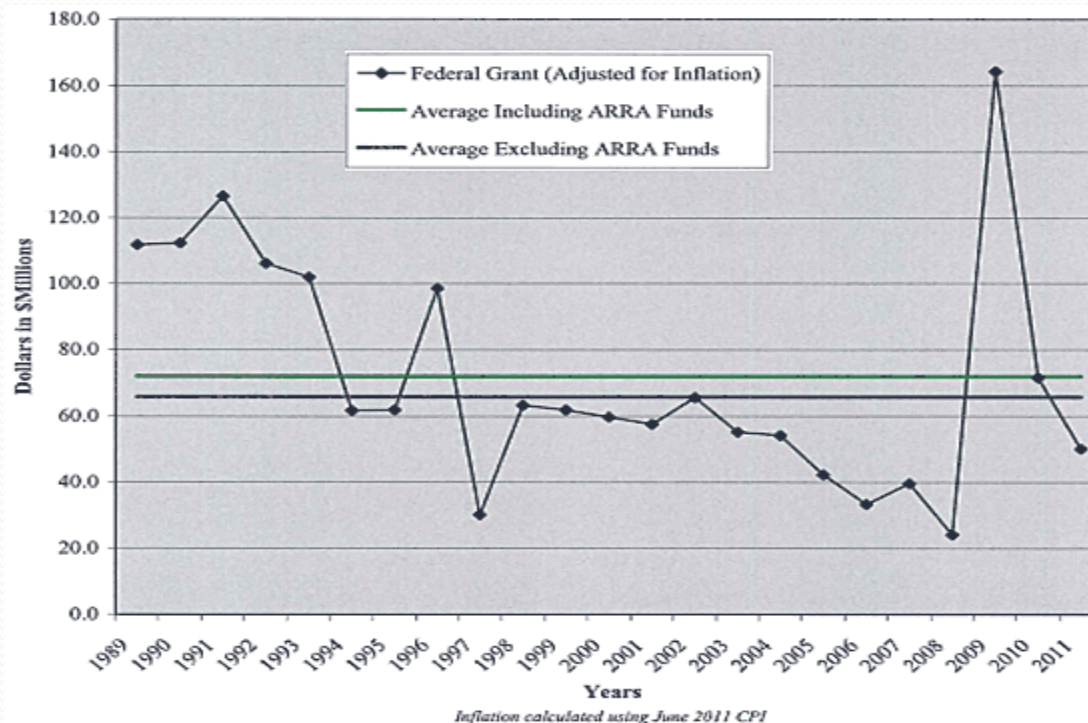
- 7. **Municipal debt is a growing burden.** Municipalities have taken on increasing debt to maintain their infrastructure. A significant portion of their finances is now consumed by debt service.



What's Behind the Gap?

Revenues are not keeping pace with needs:

- Federal and state funding sources are trending downward.** Both federal and state funding have steadily decreased since the 1970's. State Debt Service Relief was eliminated for several years, then drastically reduced.

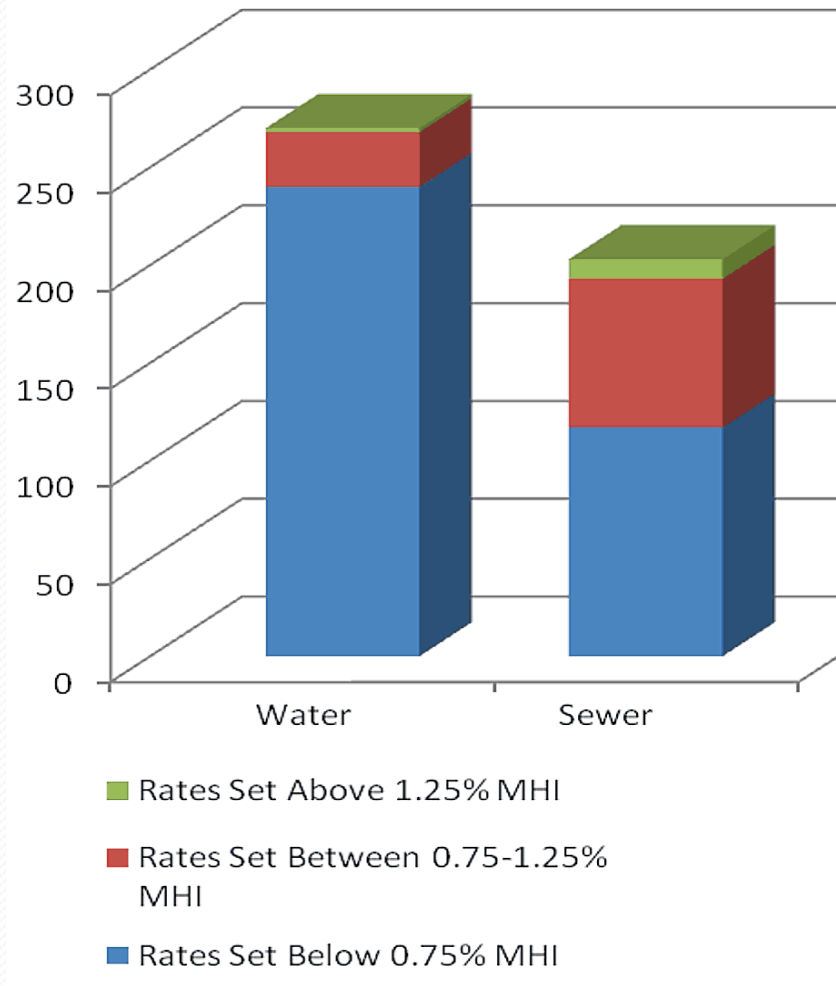


What's Behind the Gap?

Revenues are not keeping pace with needs:

- 2. Rates vary widely and do not always cover the full cost of service.

Unlike other utilities, water and sewer rates often do not come close to covering the full cost service. As a result, the public has grown accustomed to low user rates and can resist rates that reflect the true cost of service.



What's Behind the Gap?

Revenues are not keeping pace with needs:

- 3. Unanticipated financial effects of water conservation have an impact on utilities' bottom lines.** Increasing levels of water conservation is good for the environment and should be encouraged. Because water is billed based on volume sold, however, it has led to reduced revenues for maintaining water systems.
- 4. Affordability is an important issue for many communities.** Keeping water and sewer service affordable is of particular concern to individuals on low and/or fixed incomes. It is important to recognize that different communities have different abilities to pay for improvements.



Recommendations of the Commission

1. Increase funds available for water-related infrastructure at all levels

- **Sustain current programs and investments** at the state and federal level, including in particular state and federal contributions to the Water and Sewer State Revolving Funds
- Establish a new **Trust Fund**, to be funded annually at **\$200 million** and used for a mixed program of direct payments to cities and towns, low interest loans, and grants
- Incent all communities, authorities and districts to utilize **rate structures that reflect the full cost** of water supply and wastewater treatment.



Recommendations of the Commission

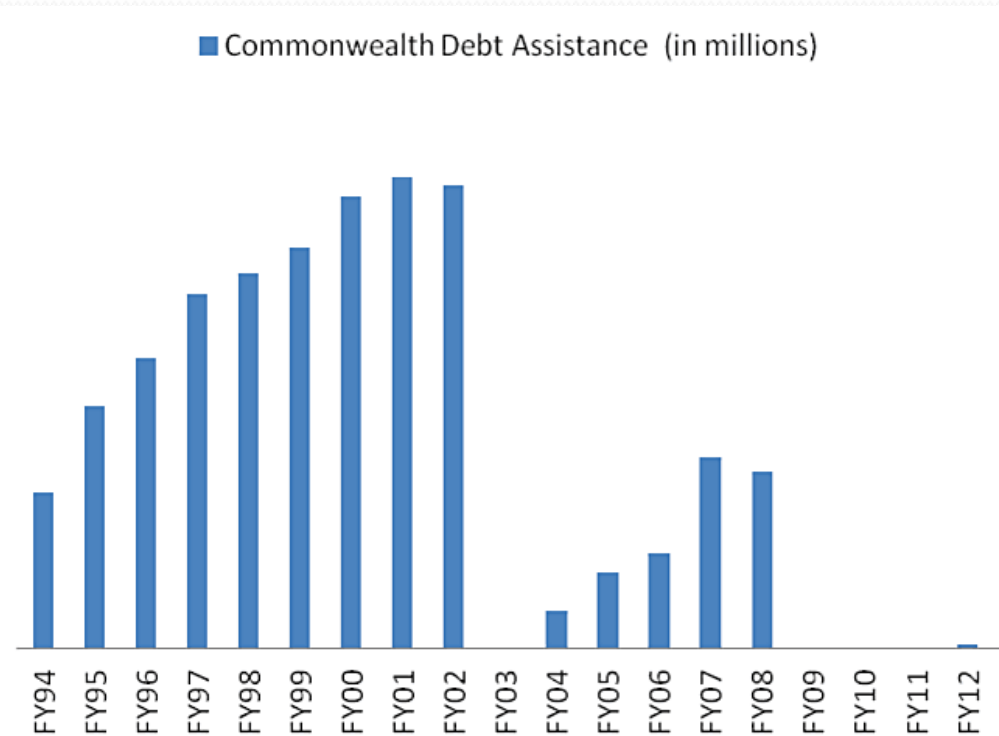
2. Reduce costs and find efficiencies

- Provide strong incentives to use best management practices
- Encourage enterprise funds for stormwater mitigation |
- Encourage appropriate regional solutions
- Use a watershed approach when making funding decisions
- Encourage efficient water and energy use
- Encourage strategic public-private partnerships

Recommendations of the Commission

3. *Assist municipalities, districts, and authorities in retiring their existing debt*

- Commit to newly structured **debt assistance program** funded at \$50-\$60 million annually through the General Fund. While the Commission strongly recommends that communities approach future debt by using full-cost pricing, it recognizes that some communities will continue to need assistance in retiring their debt.



Recommendations of the Commission

4. *Address the issue of affordability*



- Identify creative ways to address affordability for municipalities and individual ratepayers. Measure their local contribution and commitment using a ratio of average household annual utility cost to the community's Median Household Income (MHI ratio).
- Consider making SRF loan decisions more need-based by considering the MHI ratio in the selection criteria for loans, grants, interest rates and principal forgiveness
- Seek new federal and state support to address affordability concerns

Recommendations of the Commission

5. Promote Environmental Sustainability

- Promote water conservation and water reuse
- Reduce the release of nutrients
- Encourage energy efficiency
- Prioritize solutions that keep water within its basin
- Protect water sources through watershed protection programs
- Encourage integrated resource management
- Increase regulatory flexibility to better direct funding to projects that deliver the highest public benefit





Recommendations of the Commission

6. Promote Innovation

- Supporting pilot projects, proof of concept projects and new technology
- Provide technical assistance to communities for innovative approaches
- Reduce regulatory barriers to innovation
- Address the economic risk of pilot innovative projects
- Invest in Massachusetts as a hub of innovation in the field of water, wastewater, and stormwater management and technology

Recommendations of the Commission

Strategies to Help Us Close the Gap

- If municipalities, districts and authorities adopt full-cost pricing combined with moderate, predictable rate increases and increase their water and sewer rates to between 1.25 and 1.50 percent of their Median Household Income, and
- If the state creates and consistently funds a new Trust Fund with \$200 million to provide a mix of direct assistance, low interest loans and grants to assist towns with their water infrastructure needs, then

...the state will be able to reduce the gap substantially, perhaps by up to 80%, over the next 20 years.

Recommendations of the Commission

Trust Fund Supplements the Existing SRF

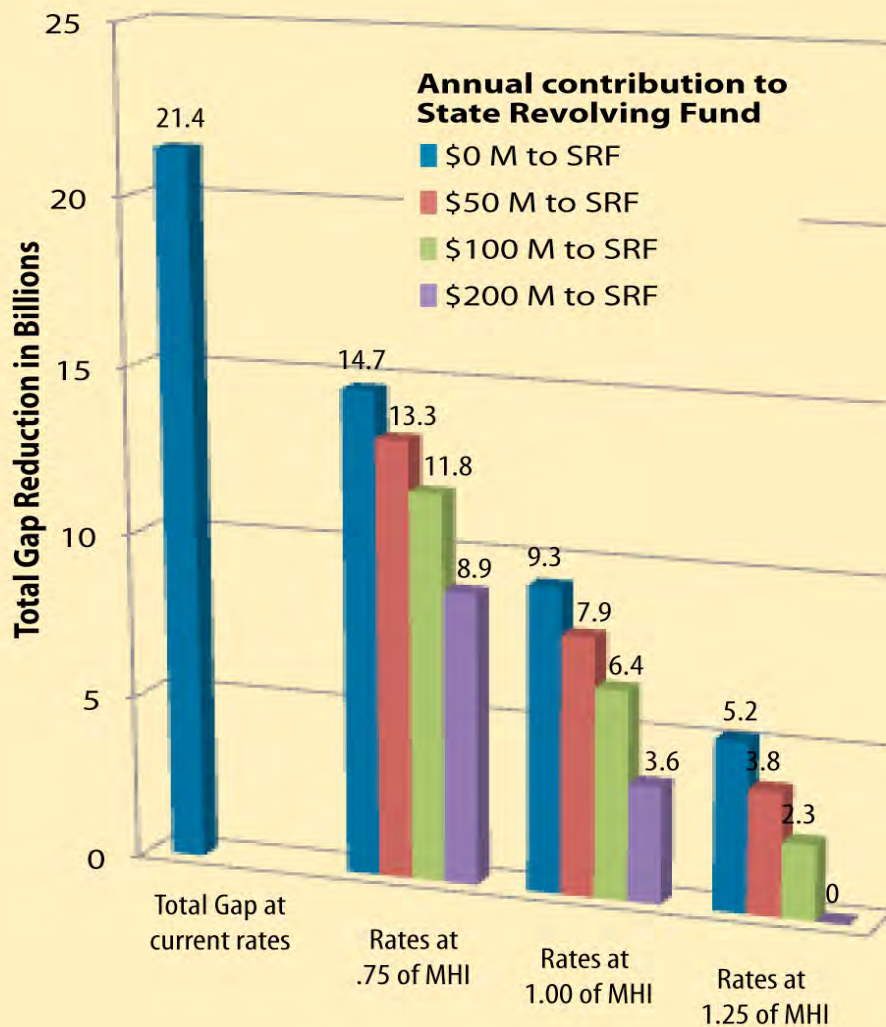
2% LEVERAGED LOAN MODEL

Existing MWPAT structure



New sustainable revenue stream





Increases in rates to 1.25% of MHI with a \$200 million annual appropriation from the state eliminates the Gap entirely



Closing the Gap in Massachusetts will require a combination of strategies:

1. Raise revenues
2. Operate our water, clean water, and stormwater utilities more efficiently
3. Assist towns in retiring their debt
4. Address the issue of affordability
5. Promote environmental sustainability
6. Promote innovation
7. Continue the work of the commission and
8. Educate the public

