
RECOMMENDATIONS:

CONTINUE THE WORK OF THE COMMISSION

1. Create a coalition to continue advocacy for the recommendations of the Commission

2. Fund an asset-based analysis of the gap between projected needs and revenues.

The Commission recommends that the State supplement the current data available on water-related infrastructure funding by conducting an asset-based analysis based on a survey of a statistically significant and regionally diverse sample of Massachusetts communities in order to provide a baseline of information to evaluate the success of efforts to meet the water infrastructure needs of the Commonwealth. This study will provide a baseline of information on costs and investments in Massachusetts.

EDUCATE THE PUBLIC

3. Raise public awareness of the true value and cost of water-related services.

To gain and sustain public support for water infrastructure investments, and to convince voters and elected officials to raise appropriate revenues, it is important to communicate with stakeholders such as residents, businesses, community leaders, and institutions about the true cost of supplying water, wastewater, and stormwater services. The true cost includes not just direct costs, but also hidden costs and externalities over the lifetime of an asset.

- a. Allocate funding to EOEEA for developing a campaign and educational program on the true cost of water infrastructure, and the implications of inaction. Audiences should include both residents and public officials. Materials should explain the need to support capital planning, asset management, wise investments, and adequate rates to support our water infrastructure. In developing the message, consult with appropriate agencies, trade organizations, advocates, environmental groups, local districts and authorities.
- b. Charge EOEEA to work with all stakeholders, including municipalities, districts, and authorities to get out the message through appropriate media and public service outreach. Investigate and utilize opportunities for public/private partnerships for education and outreach.
- c. Charge appropriate agencies to advocate for asset management, capital planning, and enterprise accounts for communities.

INCREASE FUNDING

4. Advocate for increased federal funding

It is critical to make sure that water infrastructure financing receives a growing share of the federal budget. All parties interested in sustainable investments in water infrastructure need to redouble their efforts at influencing the debate in Congress in order to maximize available funding to Massachusetts

- a. Advocate with Congress for maximizing funding for existing critical accounts:
 - State Revolving Funds for Safe Drinking Water Act and Clean Water Act
 - USDA Rural Development Water Infrastructure Program
 - Key energy and Sustainability Accounts with impact on water-related infrastructure investments

- b. Advocate with Congress to create new programs and funding:
 - New tax credits for research and development and innovation in water technology
 - New tax credits and accelerated depreciation for innovative storm water solutions
 - New subsidies to assist communities with full cost rates

5. Increase available resources at the state level

Massachusetts has had some successful programs to assist municipalities, authorities, and districts meet the high costs of water investments. Some of these sources have been cut in recent years and should be restored.

The Commonwealth has one of the most highly leveraged SRF programs in the country. It is critical that the Legislature continue to fund the state share of this crucial fund.

It is also important to find additional sources of revenues to address the identified gap in resources and the growing need for water-related infrastructure investment.

- a. Maintain strong annual funding levels for the Commonwealth’s share of the State Revolving Funds in the Water Pollution Abatement Trust
- b. Maintain the leveraging capability of the Water Pollution Abatement Trust
 - 1. Maintain the leveraging capacity of the trust by utilizing the 2% interest rate as the standard interest rate for most loans
 - 2. Consider offering lower interest rates (under 2%) for projects that meet certain objectives for affordability, environmental sustainability, inter-municipal cooperation, nutrient reduction, etc.
 - 3. Consider expansion of nutrient deficiency 0% loan program (ten year sunset) for other priorities, particularly stormwater mitigation (CSO).
 - 4. Consider ways to fund design/engineering expenditures retroactively through the SRF if the project ultimately goes to construction.
- c. Restore historic levels of funding (\$50-60 million annually) to the Commonwealth Sewer Rate Relief Fund pursuant to Section 2Z of Chapter 29 of the General Laws. This funding should come from the General Fund.
- d. Deposit all Safe Drinking Water Assessments into a dedicated fund in DEP for implementation of the Safe Drinking Water Act.
- e. Institute new broad-based sources of funding at the state level.
- f. Institute new broad-based sources of funding at the state level. Raise revenues (at least \$200 million per year) in new revenues from:

Sources with a nexus to the water investment issue, including:

- 1. New fees on pollutants such as fertilizers, pesticides
- 2. New Bottle Bill revenue
- 3. New Charges on water-related items such as port fees, building permits,
- 4. The Commission has extensively discussed the possibility of instituting a statewide water surcharge (“the mil”). Given the absence of consensus on whether or how the institution of such a surcharge might occur, we make no finding on such option at this time but instead recommend further consideration of the matter.

Other revenues from statewide sources that may or may not need legislative approval

Deposit all revenues into a dedicated trust to assure long term sustainability of resources

Include provisions for communities without existing utilities or with utilities that serve only a small fraction of the municipal population

New revenues should be used to support a mixed program of 1) “direct support for cities and towns (similar to the “Chapter 90 model” used to support highway investments); 2) leveraged loans; 3) grants

The program should reward municipalities, authorities, and districts that adopt best management practices in full cost pricing, financial management, asset management, and environmental sustainability, and use watershed-based solutions and regional approaches.

The grants and loans should be directed toward a diverse set of needs including assistance with cost-benefit analysis, planning, design, and construction; principal forgiveness, additional debt relief, and funding to encourage research and development.

- g. Charge the Water Pollution Abatement Trust with finding additional ways to extend the capacity of the Trust

6. Encourage municipalities, districts, and authorities to cover reasonable costs of service (full cost pricing) when setting rates.

The Commonwealth should encourage full cost pricing by all municipal, authority, and district systems. With large needs for investments, communities will need to rely more on rates to cover the full costs of water, wastewater, and stormwater costs.

Transparency, stability, and predictability of rates will play an ever- increasing role in determining the availability and cost of capital for infrastructure needs. A consistent and purposeful rate structure builds credibility with customers and creditors. Encourage communities to adopt full cost pricing:

- a. Charge DOR/Division of Local Services to adopt definitions, best management practices, and policies as needed for full cost pricing, delineating what direct and indirect costs should be covered by full cost pricing.
- b. Give funding priority to municipalities, districts, and authorities that utilize full cost pricing
- c. Provide funding for the appropriate agencies for technical assistance to communities interested in moving toward full cost pricing in rates and to provide rate structure studies
- d. Encourage Water Pollution Abatement Trust, DEP, and other agencies to offer priority in grants and loans for municipalities, districts, and authorities utilizing full cost pricing

ADDRESS AFFORDABILITY

As we address the Water Infrastructure challenge, we recognize that there are some less affluent communities that may have more difficulty in paying their “fair share” of the costs. There has been much discussion at the national level as to what level of rates it is reasonable to ask a community to pay, and what happens if a community can’t pay. We need to find ways to pay for water infrastructure investments in all communities while addressing the issue of affordability.

The EPA has never adopted a measure to indicate how much an individual household can pay for water services before they become unaffordable. Rather, EPA has adopted criteria that set benchmarks for system-wide rates collected from all customers of a water system relative to the median household income (MHI) in a service area. The EPA benchmark is set at 2.0 to 2.5 percent of MHI each for wastewater and drinking water.

7. Institute measures to address affordability for low income rate payers and communities.

- a. Direct WPAT to review SRF policies and identify ways to address affordability to municipalities and to individual ratepayers. Consider making SRF loan decisions more needs-based using the MHI index; offer more points on SRF applications to less affluent communities; use MHI benchmark as factor in setting level of funding, interest rate, or principal forgiveness.
- b. Include Median Household Income in the selection criteria for SRF loans, grants, interest rates and principal forgiveness by setting a benchmark for water and sewer rates at no more than 1.25% each of median household income.
- c. Seek new federal and state support for affordability issues

ENCOURAGE BEST PRACTICES

It is in the State's interest to encourage or require that water, wastewater, and stormwater utilities adopt best management practices that encourage financial and environmental sustainability.

8. Encourage Best Management Practices in asset management, capital improvement plans, and enterprise accounting

These practices encourage a municipality to plan, operate, and undertake infrastructure investments more effectively. These practices make it easier for rate payers and voters to understand the full, life cycle costs of water, sewer, and stormwater services. These practices can also reduce operating costs.

Specific Action items:

- a. Provide funding for DOR/Division of Local Services to adopt definitions, best management practices, and policies as needed for enterprise funds, asset management, capital improvement plans,
- b. Increase funding to relevant agencies to provide technical assistance to communities adopting or interested in adopting best management practices
- c. Charge the WPAT to require these best management practices in any municipality, district, or authority that applies for SRF loans
- d. Work with DEP and other agencies to require these best management practices prior to application for other state grants, subsidies, or loans
- e. Offer certain presumptions in permitting to communities that have adopted minimum requirements
- f. Create an even playing field for enterprise fund communities by passing legislation that provides for an income tax deduction for enterprise fund utility bills
- g. Make it easier for communities, districts, and authorities to adopt enterprise funds by allowing local option without further legislative approval.
- h. Allow municipalities that have adopted best management practices in asset management to utilize state procurement of GPS services

9. Encourage Best Management Practices in stormwater management

Encourage municipalities, districts, and authorities to adopt best practices in stormwater mitigation approaches and technology. Integrate stormwater mitigation best practices broadly into building codes, zoning bylaws, subdivision regulations, and other regulations, so that many stormwater impacts are dealt with on a site by site basis, and so that the costs of mitigation are shared with private owners.

Specific Action Items include:

- a. Encourage municipalities, districts, and authorities to finance the public costs of stormwater mitigation through local stormwater utilities meeting state-specified minimum requirements. After consultation with EOEEA, Division of Local Services (DOR) should issue minimum accounting standards for stormwater utilities. These include:
 - 1. enterprise fund accounting,
 - 2. capital improvement plan;
 - 3. integrated water management planning

- b. Provide funding for technical assistance through appropriate agencies to assist communities wishing to establish stormwater utilities
- c. Provide funding for DEP to review and adapt standards for the reuse of stormwater to best serve public health
- d. DEP make available model bylaws for mitigating stormwater through building codes, zoning bylaws, subdivision regulations, and other appropriate regulations
- e. DEP Encourage pilot projects for stormwater management

10. Improve energy efficiency in water infrastructure systems

- a. Charge DEP, Mass Clean Energy Center and/or Green Communities Division to offer technical assistance to municipalities, districts, and authorities (particularly smaller systems) to help improve energy efficiency
- b. Encourage DEP and other state agencies to prioritize state funding for energy best management practices

11. Encourage Regionalizing and Rightsizing

- a. Find efficiencies by encouraging inter-municipal and regional agreements in situations where it will lead to more sustainable and natural use of water resources
- b. In order to increase economies, consider the centralized management of decentralized infrastructure on a watershed or regional basis
- c. Give funding priority to regional and watershed-based solutions
- d. Offer technical assistance to municipalities, districts, and authorities wishing to explore such agreements. Provide funding as needed to Division of Local Services, RPAs, DEP, others.

12. View Water, Energy, and Nutrients as assets.

- a. Encourage wastewater treatment plants to generate revenues through heating, cooling, the production of energy, and the possible sale of nutrient products
- b. Encourage Water Re-Use

13. Provide guidance for communities considering Public -Private Partnerships.

Public-private partnerships can lead to important efficiencies, but need to protect public interests. Encourage safeguards for municipalities, districts, and authorities that are considering public/private partnerships and/or privatization. In so doing, find ways of standardizing procedures to reduce costs and protect local interests while not infringing on the freedom of municipalities to propose innovative approaches.

- a. Communities should NOT be permitted to turn over the ownership of land and/or water rights to private investor owned entities. Pass legislation that would prohibit any public water supply source to be sold or leased to a private investor owned entity.
- b. Adopt standardized procurement processes for public/private partnerships that reduce uncertainty on both the public and private side.
- c. Charge the Inspector General's office with developing "model" agreements that protect the public's investment in the system, allow for oversight of the private operator, specify appropriate penalties, and encourage monitoring by the municipality.
- d. Protect rate payers by requiring that any increase in fees for water/wastewater/stormwater services provided by a "private contractor" must be approved by the Massachusetts Department of Public Utilities.

14. Project Delivery: Consider changes to current procurement statues in order to reduce impediments to cost-effective water, wastewater, and stormwater management.

Municipalities, districts, and authorities must meet many objectives when contracting for planning, design, construction, and operating services from the private sector. They need to assure honest practices, cost-effective use of taxpayer funds, and a fair, open, and competitive process for procuring goods and services.

Some current procurement statutes may provide impediments to the most efficient and cost-effective implementation of complex water and sewer system improvements with anticipated project costs of over 5 million dollars. The Commission urges the Inspector General and the Legislature to update current laws in the following areas:

- a. Alternative Delivery: Develop new tools to facilitate new forms of procurement for public design and construction contracts, including design/build (DB), construction manager at risk (CMR), multi-factor competitive procurement, and Qualification Based Selection (QBS).
- b. Adopt standardized procurement processes for alternate project delivery models that reduce uncertainty on both the public and private side.
- c. Develop procedures that assure a fair and objective review of competing proposals to seek the best outcome for the public, considering relevant factors such as performance, capital and operating cost, and risk allocation.
- d. Provide that cost shall not be the only determining factor in the selection of an alternative delivery contractor.
- e. Consider minimum requirements for labor agreements, project oversight, safety requirements, and project approval
- f. Increase bid limit thresholds to save time and increase efficiency
- g. Provide procurement training to municipal officials using model documents and procedures developed by the Inspector General.
- h. In order to ensure a fair, open, and productive bidding for alternative project delivery methods, consider requiring municipalities to submit their proposed RFP packages and review procedures for approval by the Inspector General and the Attorney General.

STREAMLINE ADMINISTRATIVE AND REGULATORY PROCESSES

15. Facilitate Use of the State Revolving Fund.

Application process:

- a. Charge WPAT and DEP to review and amend application process for reductions in paperwork

Loan Administration

- b. Encourage WPAT to equalize and distribute payments throughout the year (monthly or quarterly for both principal and interest)
- c. Charge WPAT to work with municipalities, districts, authorities, and engineering firms to increase "user friendliness"

16. Simplify permitting

- a. Charge DEP with evaluating the usefulness of extended permit durations.
- b. Charge DEP to conduct a regulatory review to identify ways to streamline permitting processes and identify possible areas where fast track permitting could be effective.
- c. Encourage/Require early communication among applicants and regulatory parties
- d. Allocate resources for a single project coordinator at DEP to provide assistance and coordination in the planning process of a project

- e. Charge DEP with evaluating the usefulness of a joint application form among MADEP, USACE, and local conservation commission determinations

PROMOTE ENVIRONMENTAL SUSTAINABILITY

17. Encourage investments and regulations that are aligned with environmentally sustainable principles.

The Commonwealth must make strategic investments that make the best use of available resources and that address the “triple bottom line” – optimizing environmental goals, making economic sense, addressing social inequities. Cost benefit analyses should be utilized to determine how to achieve the maximum environmental benefit with the available resources. The cost of water treatment can be reduced by taking actions to preserve the quality and quantity of water resources in the Commonwealth.

The Commonwealth must encourage investments and regulations that are aligned with environmentally sustainable principles such as:

- Promote water conservation
- Reduce the release of nutrients in watersheds
- Encourage non-structural, decentralized solutions where appropriate and as part of integrated water management
- Prioritize solutions that keep water within its basin while protecting water quality
- Prioritize solutions that use technologies that are sustainable environmentally and financially over the lifetime of the assets
- Protect water sources through watershed protection programs
- Encourage more effective management of water resources through long term planning, optimization of resources, and management efficiencies.

Action Items:

- a. Prioritize SRF funds toward projects that are aligned with environmentally sustainable principles.
- b. Pass legislation to ban or limit the use of phosphorous in products, including fertilizers
- c. Consider additional regulation to reduce the release of nutrients
- d. Consider additional regulation of pharmaceutical product disposal and phosphorous disposal
- e. Incorporate water sustainability into guidelines for schools, campuses, affordable housing, state and municipal facilities, hospitals, etc.
- f. Review the interim DEP guidelines on reclaimed water to determine whether additional uses can be approved
- g. Conduct a study of “decoupling” rates to better align regulatory conservation goals with consumer incentives
- h. Provide technical assistance and grants to support these efforts

18. Encourage investments based on watershed-based resource allocation.

River basin planning should be comprehensive and aimed toward setting affordable, prioritized goals that follow a logical sequence. Use hydrologic based boundaries rather than political ones as the basis for coordinated investments and management. Use a cost/benefit approach as part of watershed-based planning to determine how to achieve the maximum environmental gain with the available resources.

- a. Fund a study of what would be required to integrate watershed-based decision-making regarding land use, water infrastructure permitting, and investment as envisioned in the Clean Water Act
- b. Require agencies to integrate watershed-based planning into decision making for land use, water infrastructure permitting, and investments
- c. Encourage agencies to prioritize programs that recognize the values of natural systems and open space as assets
- d. Provide funding for DEP and/or regional planning agencies to enhance watershed planning and environmental reviews, in order to direct scarce resources to the regulations and projects that will deliver the highest public value.
- e. Prioritize SRF funds toward projects with the greatest potential benefit for the watershed

- f. Work with EPA to utilize watershed-based analysis, including cost benefit analysis, for NPDES permits to result in more efficient and more environmentally effective decisions.

19. Conduct an updated cost/benefit analysis on assuming primacy from the federal government over NPDES permitting. The study should evaluate whether the state can more effectively manage its resources and achieve better outcomes over the long run by assuming “primacy” over the administration of the federal Clean Water Act.

20. Increase regulatory flexibility to better direct funding to projects that deliver the highest public benefit

Such flexibility should include consideration of co-benefits, such as energy conservation and carbon reduction. Such flexibility should include optimization and integrated timing of construction, and the use of adaptive management models.

- a. Integrate greenhouse gas and water policy so that all environmental costs and benefits are considered when permitting projects

PROMOTE WATER INNOVATION

21: Invest in Massachusetts as a hub of innovation in the field of water, wastewater, and stormwater management and technology.

Massachusetts is in an excellent position to be a leader in developing and utilizing innovative, sustainable solutions that improve water quality and provide cost effective ways to address our infrastructure needs. This is a sector with great promise for new jobs at different levels of expertise.

As a Commonwealth, we should build on our long tradition of leadership in technology, engineering, research, and development to keep Massachusetts in the forefront of innovation. Efforts should build on existing networks and collaborative efforts and utilize the academic, technical, and professional expertise of our universities, agencies, NGO’s, and the private sector. The Commonwealth should invest in research and development.

- a. Support innovative research and collaboration among agencies, corporations, academic institutions, NGO’s, and others to promote water technology R&D.
- b. Charge a task force within the Executive Branch to develop a plan for making Massachusetts a Hub of Innovation in Water Resources.

22. Reduce obstacles to adoption of innovative technologies

Consider ways to manage and address the regulatory and financial risks faced by municipalities, authorities and the private sector to encourage the adoption of innovative solutions.

- a. Allocate resources for programs that mitigate risk:
 - 1. Pilot projects, case studies, demonstration projects
 - 2. Proof of concept projects to support nascent technologies and new applications of current technologies
 - 3. new technology vetting procedures
 - 4. outreach and technical assistance programs, to advance innovative technologies and approaches, based on the Green Communities model
 - 5. Conduct a study of regulatory barriers to innovation, including possible obstacles in procurement laws
- b. Implement a more robust alternatives analysis for projects permitted through DEP to ensure that innovative solutions are considered
- c. Greater adoption of innovative technologies require managing regulatory compliance and third party litigation to eliminate economic risk to the regulated community in the instance of failure.

23. Harness the state’s educational strengths to train engineers, scientists, researchers, and workers to be at the forefront of innovative water management across the country.

Build on existing professional and academic collaborations. Encourage public/private partnerships with universities, colleges, and trade schools, NGOs, agencies, and the private sector.

- a. Create public private partnerships with universities, colleges, and trade schools to create training programs to “fill the pipeline” with future water management professionals.
- b. Foster exchanges between industry, academia and regulators to increase awareness of developing technologies.