

Water Supply Citizens Advisory Committee

To the MWRA and its Board of Directors



Annual Report Fiscal Year 2022

WSCAC's Purpose

The Water Supply Citizens Advisory Committee (WSCAC) advises the Massachusetts Water Resources Authority (MWRA) and its Board of Directors in their development and implementation of water policies and programs. WSCAC keeps informed of relevant programs at the Massachusetts Department of Conservation and Recreation, the Division of Watershed Protection (DCR-DWSP), the Massachusetts Department of Environmental Protection (MassDEP), other state agencies, and citizen's groups in order to develop informed recommendations on water supply and related matters. WSCAC also addresses emerging public water policies, advances in water technology, and participates in environmental reviews of new projects in the MWRA service area.

Overview

WSCAC reviewed numerous MWRA and DCR-DWSP projects in FY22. Monthly meetings included discussions of:

- Ongoing redundancy projects to the MWRA water transmission system including progress of the Metropolitan Tunnel project.
- Reservoir operations and management including daily withdrawals information, infrastructure/dam updates, progress of the aquatic invasives program, water quality monitoring, and treatment.
- The effects of increased precipitation on reservoir water quality and treatment options.
- Discussion on the expansion of the MWRA water system, as introduced by the MWRA Advisory Board, with the possibility of waiving the entrance fee for five years.
- EPA updates to the Lead & Copper Rule and criteria for MWRA communities to meet to address new requirements.
- MassDEP Annual Filtration Avoidance documents and required DCR-DWSP reports.
- DCR timber showings, prescribed burning for early successional habitat, public access plans and wildlife program updates including the deer hunt, and gull harassment program.
- Road salt use in Wachusett watershed communities and the effects on tributaries and groundwater. Results from DCR's grant program to reduce road salt use.
- Toxic Per- and Polyfluoroalkyl Substances (PFAS) in community water supplies outside the MWRA service area, and the recommendations in the final report of the PFAS Interagency Task Force.
- MWRA's progress in shrinking its carbon footprint.

Summary of Continuing and Emerging Issues

WSCAC evaluates topics and material presented by MWRA staff regarding policies and projects and submits comments when appropriate. Our views are briefly summarized below.

- **Expansion of the MWRA Water System**

WSCAC supports the admission of new communities that meet the requirements to join the MWRA water system. Although the amount of water requested per community can be small relative to the overall system demand, the aggregate water demand of all new communities can be substantial when added to potential emergency water requests due to drought, contamination or infrastructure repair.

The probability of emergency water requests in communities with little storage may increase as was the case in the drought of 2016. The flash drought in 2020 provided additional evidence of changing precipitation patterns. In June of 2022, Secretary Bethany Card announced a Level 2 drought in the North and Southeast Regions and a Level 1 in the CT River Valley, Central Region and the Islands. While the Quabbin is currently in normal operating range, many communities with smaller systems can be quickly affected during early drought conditions. Currently proposed drought legislation and MassDEP's proposed changes to registration renewal proposals to align them with the MA Drought Management Plan signal the importance of a consistent and timely approach to drought conditions in the state.

The emergence of PFAS contamination in many towns outside the MWRA service area may increase requests for admission to the water system as a partial or full user. While the MWRA has tested and has found only a trace of PFAS in the Quabbin reservoir, towns outside the service area are finding PFAS in their drinking water wells and reservoirs. Watershed towns in the Quabbin watershed including Pelham, Shutesbury, New Salem and Petersham are also at risk for contamination due to the use of firefighting foam, floor wax used in schools and other potential sources. USGS has documented the presence of PFAS in rivers across the state in their report, "**Concentrations of Per- and Polyfluoroalkyl Substances (PFAS) in Selected Brooks and Rivers in Massachusetts, 2020.**"

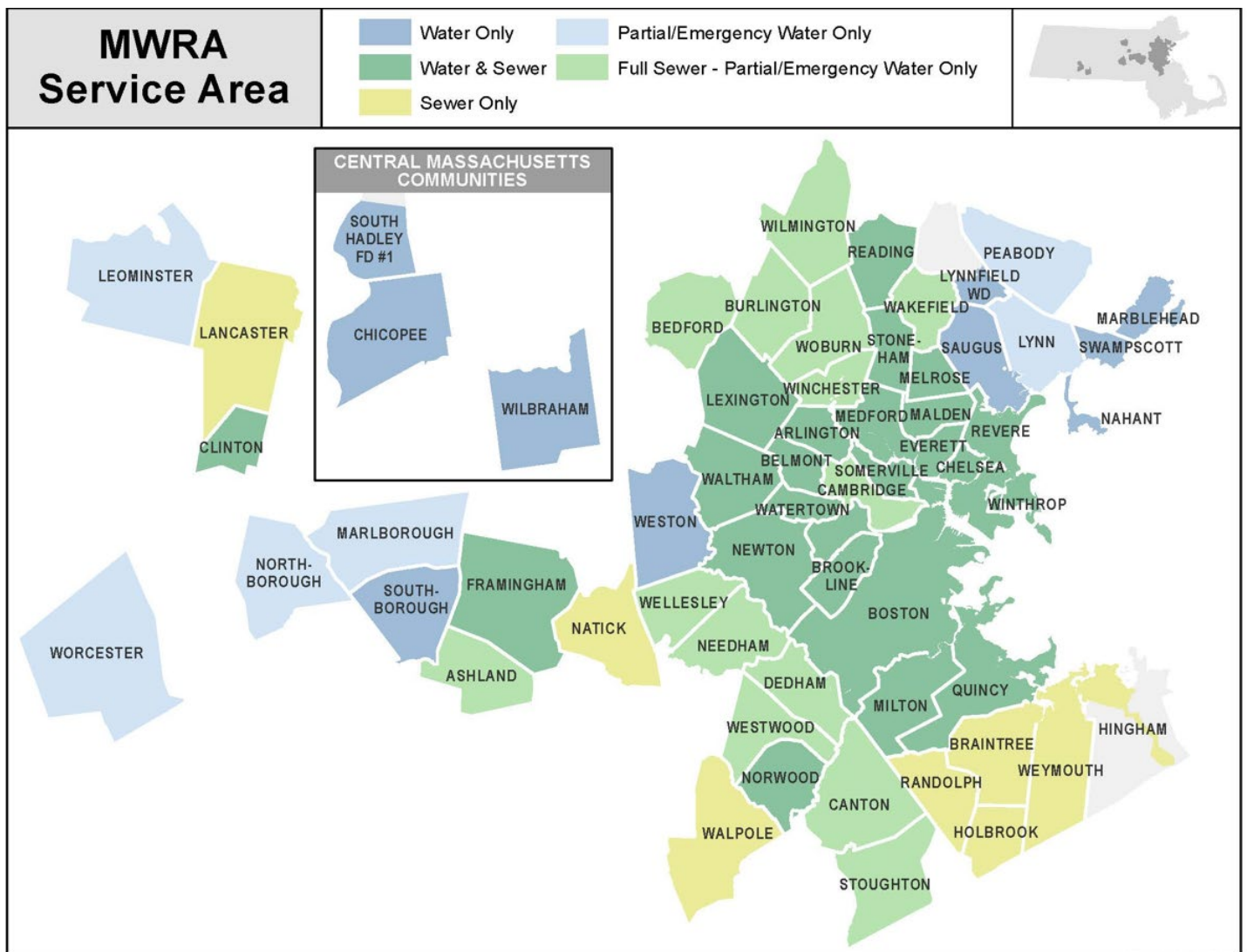
All of the above considerations underscore the benefit of continued efforts to encourage efficient use of finite and vital water resources under the management of the MWRA.

WSCAC continues to discuss the Advisory Board proposal to waive the entrance fee for communities interested in joining the MWRA water system. The following points have been raised by members:

- Under what conditions does the MWRA Board of Directors support the potential to sell 20 mgd and a 5 year waiver of the entrance fee for communities to join the MWRA waterworks system?

- While the Advisory Board has made clear the financial benefit to existing users when more communities join the system, is waiving the entrance fee the best option to encourage communities in stressed basins and those with contamination issues to join? Is it fair to other communities who have already paid the entrance fee?
- How is the potential community's high cost of infrastructure to connect being addressed?

WSCAC members look forward to reviewing the North and South Shore system expansion reports that will be available in December. These reports will provide essential details to improve the discussion on expansion of the system.

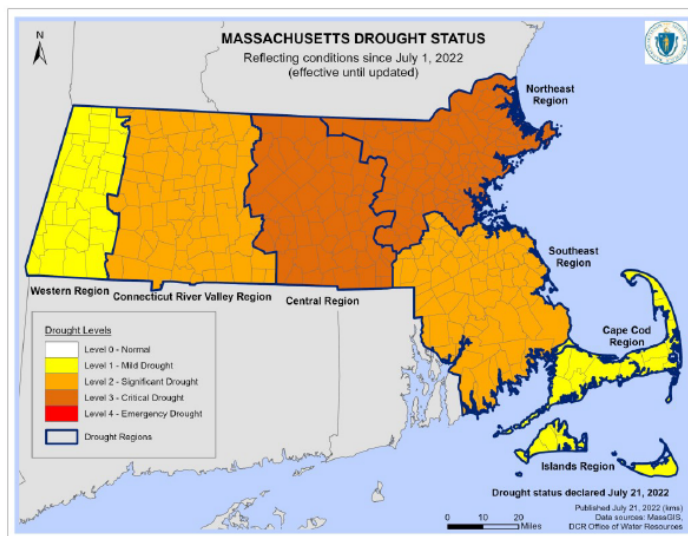


- **Water Conservation**

All of Massachusetts is currently experiencing drought.

DROUGHT STATUS

The Massachusetts Executive Office of Energy and Environmental Affairs has declared a **Level 3 – Critical Drought** in the Northeast and Central Regions, a **Level 2 – Significant Drought** in the Connecticut River Valley and Southeast Regions, and a **Level 1 – Mild Drought** in the Western, Cape Cod and Islands Regions.



CURRENT CONDITIONS

With over five months of below normal rainfall, drought has set in all across the state, and intensified in some regions. Streamflow is severely impacted with dry stream beds and ponding; drought-induced fire danger is on the rise, and; drought conditions are starting to impact our farms, with losses in soil moisture, more heavy irrigation needed and initial signs of crop loss.

The MWRA, through its enabling act, is authorized to promote water conservation and environmental quality in managing the water system. MWRA encourages, but does not require, restrictions on nonessential outdoor water use from its fully supplied communities, unless MWRA’s drought plan is activated. Quabbin water continues to be transferred, treated, delivered and used for lawn irrigation in MWRA communities throughout the summer months.

The Massachusetts Water Conservation Standards, the MA Drought Management Plan and the anticipated changes to MassDEP’s proposed registration renewals, all point to the need for consistency during drought conditions and alignment with the MA Drought Management Plan. The MWRA has its own drought plan and is a regional supplier thus making it exempt from these proposed changes. Yet the importance of water conservation should not be underestimated. Demand management remains the most affordable and practical way to use water wisely. Water allocation that meets the needs of public health, fire safety and the environment is the foundation that should guide water policy decision-making.

- **DCR Watershed Forestry Program**

The link between water quality and watershed protection is well-documented. WSCAC has stayed active in reviewing DCR forestry management on watershed lands for this reason. WSCAC members have had several concerns over the years with regard to forestry practices and continue to advocate for green recertification on DCR-DWSP lands. Concerns have grown during the last fiscal year and are summarized here.

- Lack of advanced regeneration on marked timber lot sales
- Healthy trees marked for cutting, and leaving dead and dying trees on site
- The spread of invasive plants on timber lots and landings

The Scientific Technical Advisory Committee (STAC) report was prepared in November 2012 during a moratorium on logging. **This report strongly suggested DCR-DWSP use the irregular shelterwood method. This method consists of small openings of 1/3 acre with thinning in between.** Diverse regeneration is the foundation of a future resilient and resistant forest and yet regeneration surveys show that this is not reliably occurring. This is not surprising given that diverse regeneration generally occurs slowly. Clearcutting forests that do not have diverse advance regeneration 3-4' tall and have an uncontrolled population of moose will result in failure. These cutting practices, not part of DCR-DWSP's Land Management Plan, continue annually on watershed lands. Cutting healthy trees for revenue and to attract logging companies is not recommended in the STAC report. The report states, *"Since these watersheds must be protected and managed in perpetuity, patience, not efficiency, is the key measure of forest stewardship."*

The first three recommendations in the 2012 STAC report are copied below, and remain incomplete:

1. Develop a 20 to 30 page illustrated plain-language summary of the DWSP system and management plans for a *"Scientific American"* audience in collaboration with the DCR, EEOEA, and MWRA Public Affairs offices. Develop a 4-page system and plan overview document for the same audience; it also should serve as a briefing document for visitors. Both documents should be readily accessible on the DCR website. The 4-page overview should be small enough to disseminate as an email attachment.
2. Continue and enhance source water protection efforts in the Wachusett Reservoir watershed in collaboration with other DCR offices (e.g., the Forest Legacy Program, Service Forestry), private landowners, local communities and service clubs, NGOs (e.g., Nashua River Watershed Association, The Nature Conservancy, Wildlands & Woodlands), schools, colleges, and universities. Systematically explore new approaches such as those in development by the Trust for Public Land, Portland Water District (Maine), Chesapeake Bay Program, Denver Water, and many others to identify promising ways to sustain and enhance the DWSP program (Webb 2012).
3. Re-start active management of DWSP forests using the silvicultural methods, harvest planning, and marking and layout techniques employed on the Hardwick and Pelham blocks of the Quabbin Forest and the Wachusett Forest (i.e., site specific adaptation of the irregular shelterwood method) as a the primary approach to the diversifying stand structure and species composition. Large openings with irregular boundaries and other site-specific ecological features (which clearly differentiate them from the controversial geometric patch cuts that led to the harvesting moratorium) could be implemented with

conservative BMPs and strict operational control on hydrologically remote areas to create early successional habitat and enhance biological diversity. This recommendation should not be construed as an endorsement of traditional even-aged management methods that, first and foremost, focus on timber values not watershed protection, wildlife habitat enhancement, or other goals and objectives that are much more likely to—in concert with the other recommendations—restore and sustain public trust. Simply put, silvicultural methods that are inherently controversial should be set aside when they jeopardize the watershed forest management program as a whole. Since these watersheds must be protected and managed in perpetuity, patience, not efficiency, is the key measure of forest stewardship. At the other end of the management and successional continuum, silvicultural methods (i.e., specialized thinning techniques) to deliberately accelerate the development of old-growth characteristics in appropriate stands should be considered.



Quabbin Lot #3163, Blackington Road, New Salem-2021



Bials Hill, Gate 21-Lot # 3162 Prescott Peninsula, New Salem 2021



Oaks marked for timber harvest-Lot #3168, Prescott Peninsula, Gate 20-New Salem 2022

Consideration of carbon sequestration needs to be included in DCR-DWSP cutting plans. In this photo, healthy vibrant oaks are marked for cutting to improve wildlife field habitat. Left to grow, these oaks will greatly augment carbon sequestration.



Invasive Oriental bittersweet and other invasives on timber lots

The DCR-DWSP forestry program underwent a moratorium to review cutting practices that did not follow the DCR's Land Management Plan. Specifically there were clear cuts of 3 acres or more without the required diverse and advanced (2-4 ft. tall) regeneration in place. Consequently, these harvests failed to promote regeneration due to conditions on the site including compaction from heavy equipment, deer and moose browsing and inadequate shade to protect seedlings.

Climate change continues to affect New England forests which are experiencing a variety of pests and pathogens affecting oaks, hemlocks, beech, ash, and white pine. All of these species are found in the watershed forest, and the ability to maintain healthy species diversity is challenging. Evaluating new strategies and management options to keep the watershed forest healthy must be ongoing. Third party oversight can assist in these areas.

WSCAC members voted to end the harvesting moratorium on logging watershed lands on the condition that recertification of third-party oversight of logging operations would be implemented.

WSCAC continues to support the benefits of green recertification for watershed lands:

1. Recertification adds credibility and accountability to the requirement to conduct forest management and avoid costly filtration.
2. Recertification can revitalize the knowledge base of watershed forest management by providing direct access to research and technical support from a wide range of forestry professionals.
3. Recertification strengthens public support, knowledge and understanding of DCR's forest management.

- **Redundancy for the MWRA's Metropolitan Water Transmission System**

WSCAC supports MWRA's ongoing redundancy projects to the water supply system. They improve system resilience to potentially harmful internal and external events. Infrastructure rehabilitation and maintenance to ensure reliable water service to rate-paying communities is essential to public health and safety. The Metropolitan Water Tunnel Program will provide vital redundancy and the ability to rehabilitate the older tunnel system. As a member of the Tunnel Working Group, WSCAC continues to have access to important information on how the process is moving forward. Tunnel staff have provided several excellent presentations at WSCAC meetings. We look forward to reading the Draft Environmental Impact Report in the fall.

- **Climate Change, Energy Efficiency & the MWRA's Carbon Footprint**

WSCAC supports MWRA's ongoing energy-efficiency efforts at all MWRA campuses and the annual updating of its Greenhouse Gas Inventory. The committee looks forward to learning more about the proposed Deer Island Combined Heat & Power project in the fall which will provide alternatives on the potential increases in renewable percentages at the wastewater treatment plant.

MWRA's work on energy efficiency initiatives for facility rehabilitation and new construction is commendable. Expanding the fleet of electric vehicles and charging stations will be an important addition to reducing MWRA's carbon footprint. This work is critical as we move toward the goals of the Global Warming Solutions Act: 80 percent below statewide 1990 GHG emission levels by 2050.

Activities

Comment Letters

May 25, 2021-Submitted comments to Senate President Spilka and Senator Rodrigues on DCR staffing levels.

April 27, 2021-Submitted comments to MEPA on the MWRA Metro. Tunnel Program ENF.

April 9, 2021-Submitted comments to the MWRA Board of Directors responding to the March MWRA Staff Summary on green certification of DCR watershed lands.

March 23, 2021-Submitted comments to the Surface Transportation Board on the significance of the sale of Pan Am Railways to CSX.

February 15, 2021-Submitted comments to the MWRA Board of Directors on the benefits of recertifying DCR watershed lands.

Sign-On Letters

February 1, 2021-Signed on to Water Infrastructure Alliance letter of support

Virtual Events Attended by Staff

**May 2022 -Mass Rivers Alliance- Virtual Meeting with David Cash, EPA Region 1
EPA Webinar – Green Infrastructure
CHEJ PFAS Webinar
Tour of Proposed MWRA Tunnel Shaft Sites**

**April 2022- PFAS-The Wild West or Is It
PFAS Interagency Task Force hearing and press conference**

**March 2022- Alliance for Water Efficiency webinar
MWRA Advisory Board Infrastructure Working Group
2022 PFAS Crystal Ball Webinar
Boston Globe PFAS Webinar**

February 2022-EPA Water Research Webinar Series-Assessing the Toxicity of PFAS Chemicals to Aquatic Organisms

**January 2022 – Baystate Roads Webinar on road salt
STB Public Hearings**

November 2021– Congresswoman Trahan – 495 Metro West Partnership

**October 2021 – PFAS Interagency Taskforce Hearing
Field trip to DCR prescribed burn site
How to Make Water Efficiency as Routine as Recycling- NEWWA 2021
Water Resources & Sustainability Symposium**

September 2021 – PFAS Interagency Task Force Hearing

**August 2021- Webinar on The Low Income Household Water Assistance Program
(LIHWP)**

**July 2021- MassDEP Water Management Act hearing
MMA PFAS Webinar
Tour of Lower Gate House project & River Rd. Construction**

Presentations to WSCAC

MWRA Advisory Board Update

MWRA Advisory Board Joint Meeting

September 16, 2021

MWRA Update

Fred Laskey, MWRA

September 16, 2021

Wastewater Advisory Committee 2021- 2022

Andreae Downs

September 16, 2021

WSCAC Presentation for Joint WSCAC/WAC Meeting

Lexi Dewey, WSCAC

September 16, 2021

Known and Unknowns on Health and Environmental Justice for PFAS

Phil Brown Ph.D. Professor of sociology and health services

October 8, 2021

Road Salt and Elevated Chlorides in the Wachusett Watershed

Jamie Carr, Head of Environmental Quality, DCR

November 9, 2021

Continuous Forestry Update: 60 Years of Tree Measurements, On DWSP Watershed Lands

Brian Keevan, DCR-DWSP Environmental Analyst

November 9, 2021

Metro Water Redundancy Program Update

MWRA staff

February 8, 2022

2021 Water Use Trends and Reservoir Status

Metropolitan Redundancy Interim Improvements Projects

MWRA Staff

February 16, 2022

Reservoir System Status Updates

MWRA Staff

March 8, 2022

MWRA Fiscal Year 2023 – Proposed CEB and CIP

MWRA Staff

April 19, 2022

Final Report of the PFAS Interagency Task Force

MWRA Staff & Legislative Staff

May 10, 2022

DCR Prescribed Burn Program

June 14, 2022

Meetings

MWRA Board of Directors - Monthly

Water Supply Protection Trust – Quarterly

MWRA Advisory Board - Monthly

Water Resources Commission – Monthly

Reservoir Operations Group – Quarterly

Drought Management Task Force – As Needed

Metropolitan Water Tunnel Working Group

Quabbin Watershed Advisory Committee -
Quarterly

Members

Michael Baram, Town of Belmont

Janet Rothrock, League of Women Voters

Whitney Beals, New England Forestry
Foundation (retired)

Bruce Spencer, retired DCR Chief Forester

William Copithorne, P.E. Town of Arlington

Steve Daunais, Tata & Howard

Andrea Donlon, CT River Conservancy

Gerald Eves, WSCAC Chair, Trout
Unlimited

Bill Fadden, OARs and SuAsCo Wild &
Scenic Rivers

William Kiley, Boston Water and Sewer

Paul Lauenstein, Neponset River Watershed
Association

Martha Morgan, Nashua River Watershed
Association

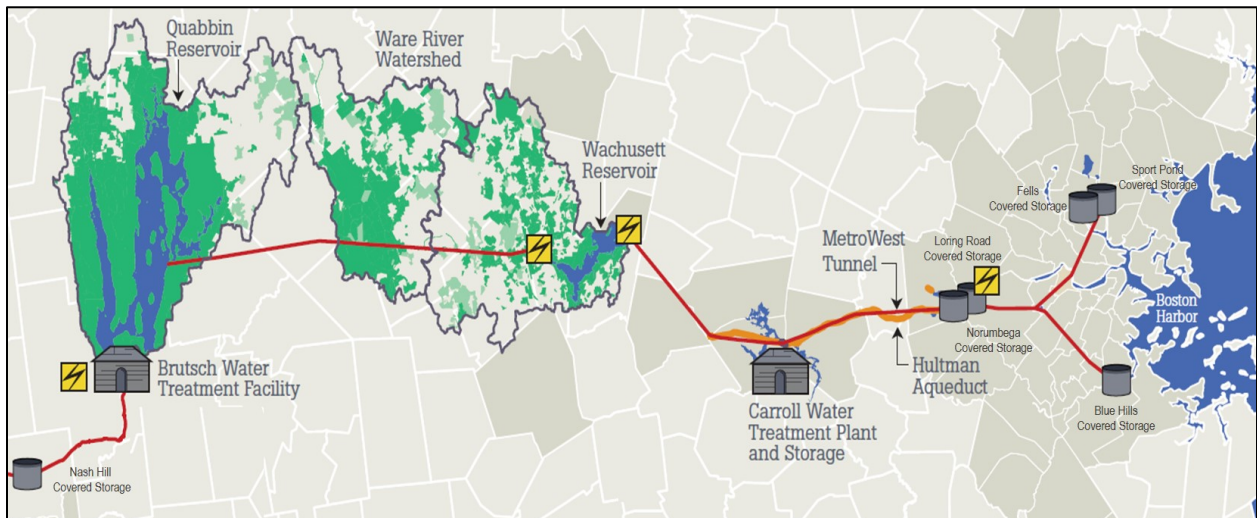
Martin Pillsbury, Metropolitan Area
Planning Council

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MWRA Water System and DCR Watersheds

WSCAC looks forward to supporting the MWRA and its Board of Directors with water supply and water protection issues in FY23 and beyond.