Joint WAC/WSCAC Meeting

Held virtually

April 19, 2022

Members in Bold in Attendance:

Wayne Chouinard (Chair, Town of Arlington), **Kannan Vembu** (Vice-Chair)**, Adrianna Cillo** (BWSC)**, Craig Allen**, Dan Winograd, George Atallah**, James Guiod** (AB)**,** Karen Lachmayr**, Martin Pillsbury**, Mary Adelstein**,** Philip Ashcroft, **Stephen Greene**, **Taber Keally** (NepRWA)

WSCAC members: Jerry Eves, WSCAC Chair; Michael Baram. Whitney Beals,Steven Daunais, Tata & Howard, Bill Fadden, OARS. Paul Lauenstein, NepRWA

Non-Members in Attendance

Lexi Dewey, WSCAC staff
Andreae Downs, WAC staff
Mandy Hart, WSCAC staff

Vandana Rao, EEA; Kristin Anderson, Gwen Speeth, David Stoff—Save the Alewife; Jim Barsanti, Michele Barden EPA, Lou Taverna, MWRA Advisory Board; Pete Frick, ADS; David White, Devon Winkler

MWRA: Tom Durkin, Director of Finance; Matt Horan, Deputy Director of Finance; Michael Cole – Budget Director; Wendy Leo, Environmental Quality; Denise Ellis-Hibbett, Katie Ronan, Jim Coyne, Sally Carroll

MWRA Updates: CSO control plans have been submitted; Annual CSO report on overflows and rainfall of CSO to the Court due April 30; Sewage Notification Law compliance—MWRA will submit a plan to DEP July 6 and including communities that also discharge to the same water bodies; No news on Deer Island permit. Clinton Permit deadline has been extended to April 26; Many upgrades and repairs have been delayed or scaled back because of supply chain and other COVID-related issues; Still lots of vacancies at MWRA;

CSO links:

https://www.mwra.com/cso/public-notice/2022-04-15-joint-public-notice-charlesfinal.pdf;

https://www.mwra.com/cso/public-notice/2022-04-15-joint-public-notice-alewifefinal.pdf

https://www.mwra.com/cso/variances/040122--cso-scope.pdf

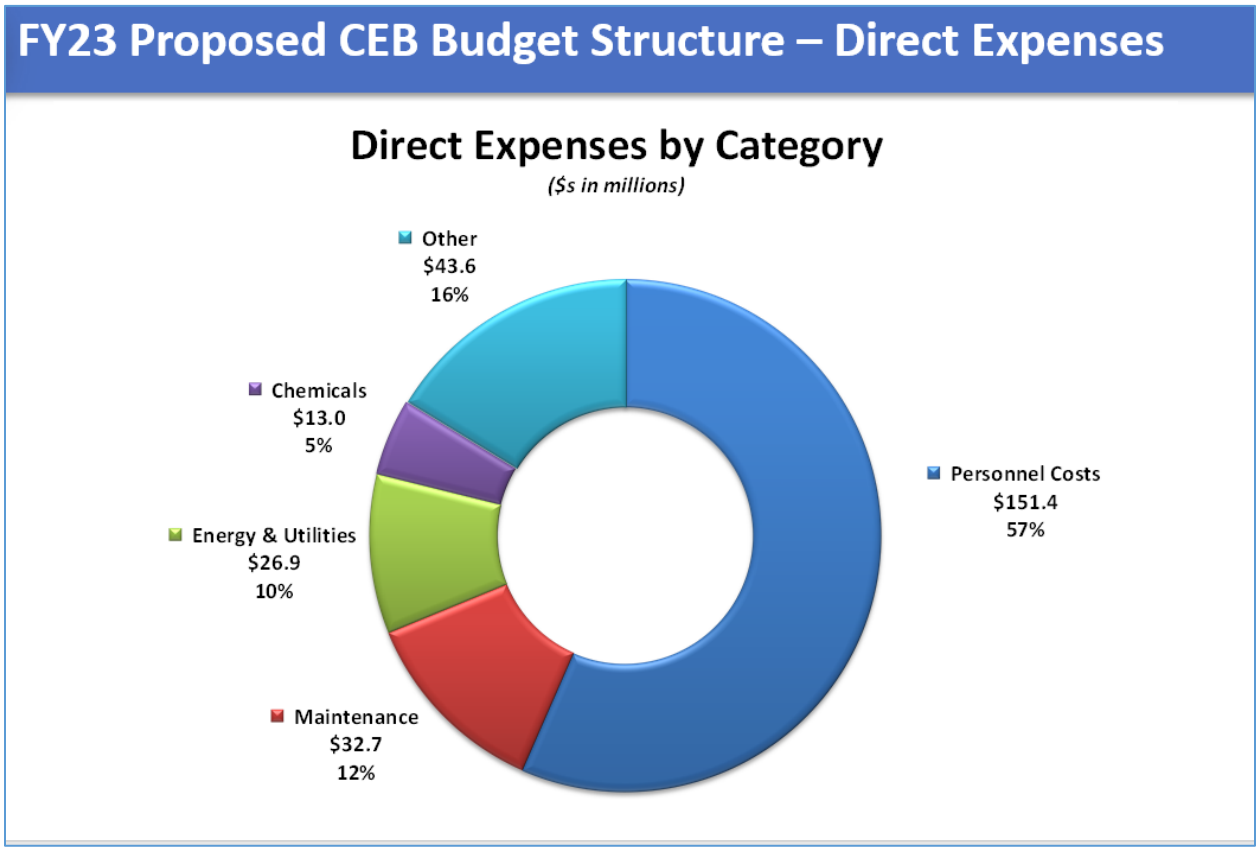
WAC Director's report: Attached, but highlight is the OMSAP meeting report on Contaminants of Emerging Concern and how they might be converted into recommendations for MWRA—when there are multiple sources.

Featured Presentation-FY23 MWRA Budget

Tom Durkin noted that as they plan for the FY 23 budget, MWRA faces a number of **budget challenges**.

- The rate of inflation
- Material and supply delays due to shortages and shipment delays
- Difficulty obtaining new hires to fill staff vacancies (MWRA anticipates this condition will continue and will make some financial assumptions for the coming year).

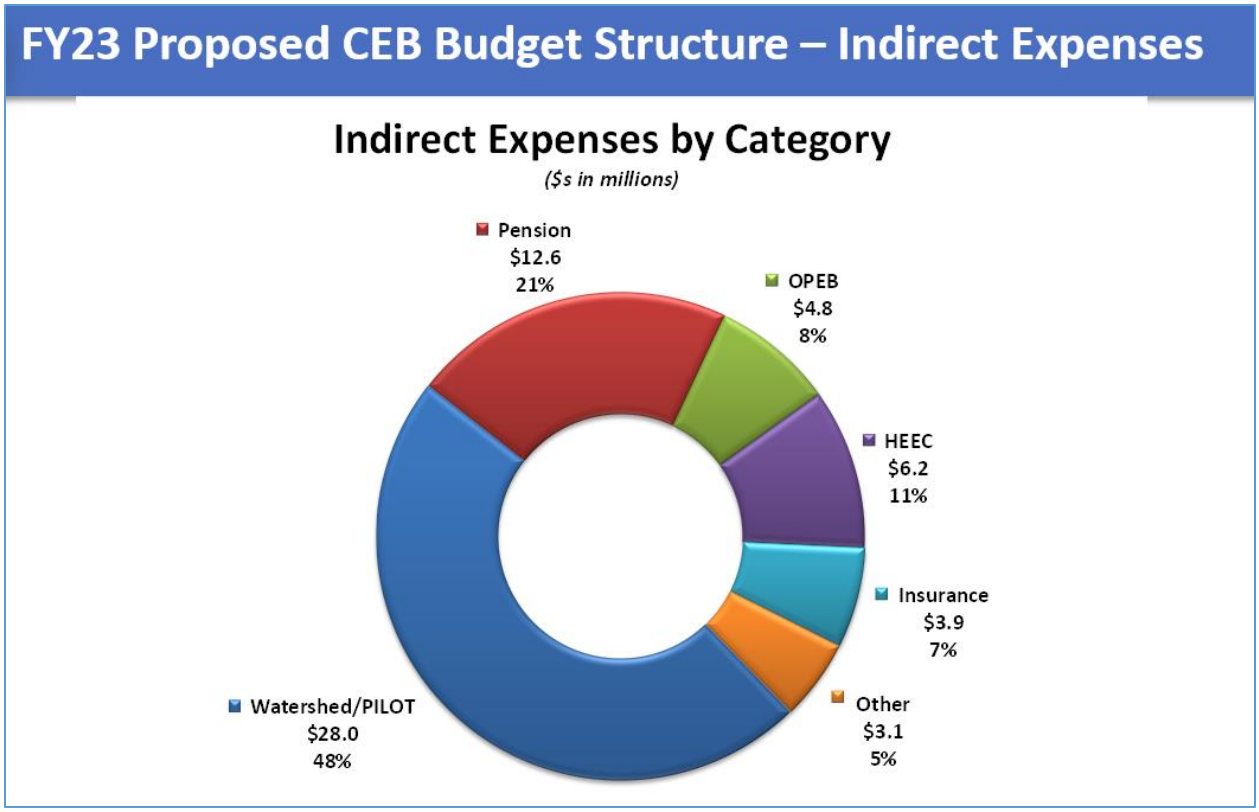
Tom turned it over to Mike Cole to begin the next part of the presentation.



Mike explained that the proposed budget is increasing by 3.4% year over year. Direct expenses are increasing by $7.8 million or 3%. This is in line with historical trends. Personnel costs make up the largest part of the budget at $151.4 million or 57%. This cost includes salaries, workers compensation, overtime, and fringe benefits. Overtime and workers compensation generally remain flat over time.

Energy & Utilities, and Chemicals are two areas where inflation is having a large impact. Maintenance costs have not seen much change. Utilities have increased due to supply chain issues and increasing material costs. Electricity prices are increasing by $1.8 million each year or 9.5%. Chemical contract renewals will take place in FY23 and are expected to rise by 15% or more.

MWRA is expecting the pellet plant operating costs to increase and be reflected in the contract renewal in December.



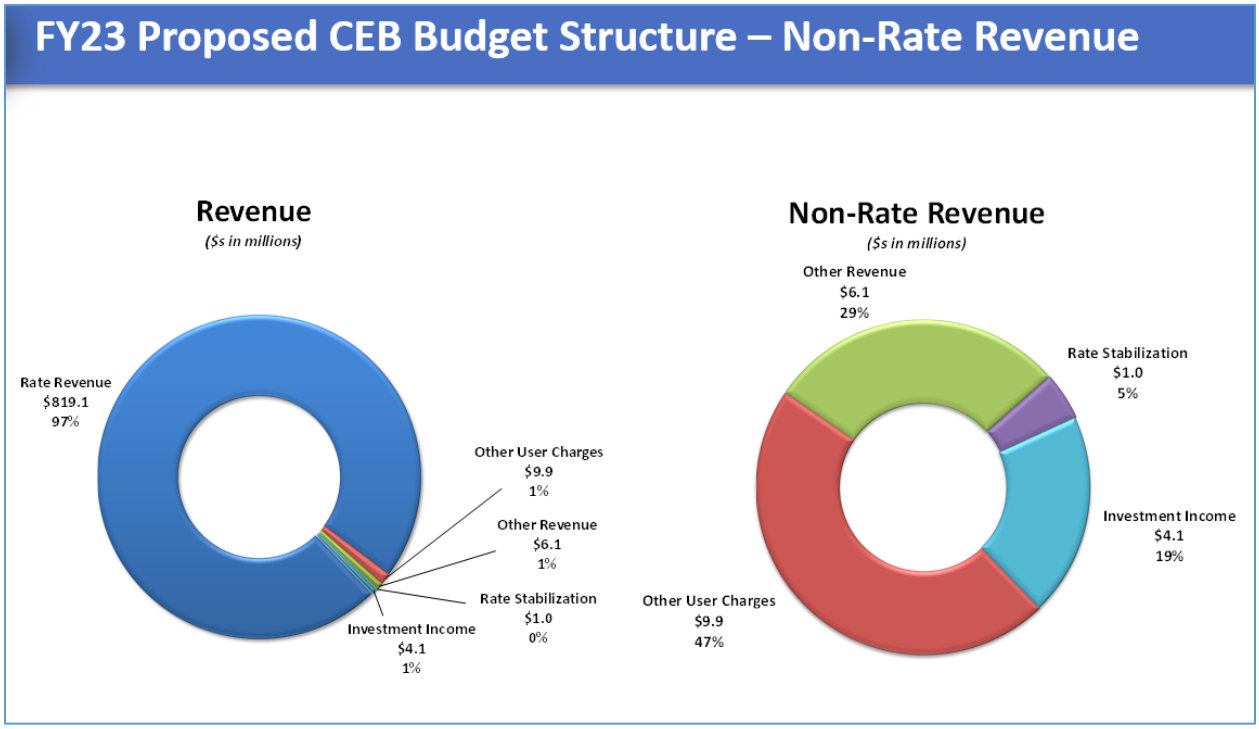
Indirect Expense amounts are projected to increase by just under $2 million or 3½ percent.

The Watershed/Pilot budget is created by the DCR-DWSP Watershed budget that is approved annually by the members of the Water Supply Protection Trust. The budget will incorporate a vacancy adjustment now that DCR-DWSP is no longer constrained by a hiring cap. Part of the budget will be based on the timing of hiring. Lexi asked, "How do you look at the revenue portion that DCR brings in changes every year from fishing, hydroelectric revenue and forestry?"

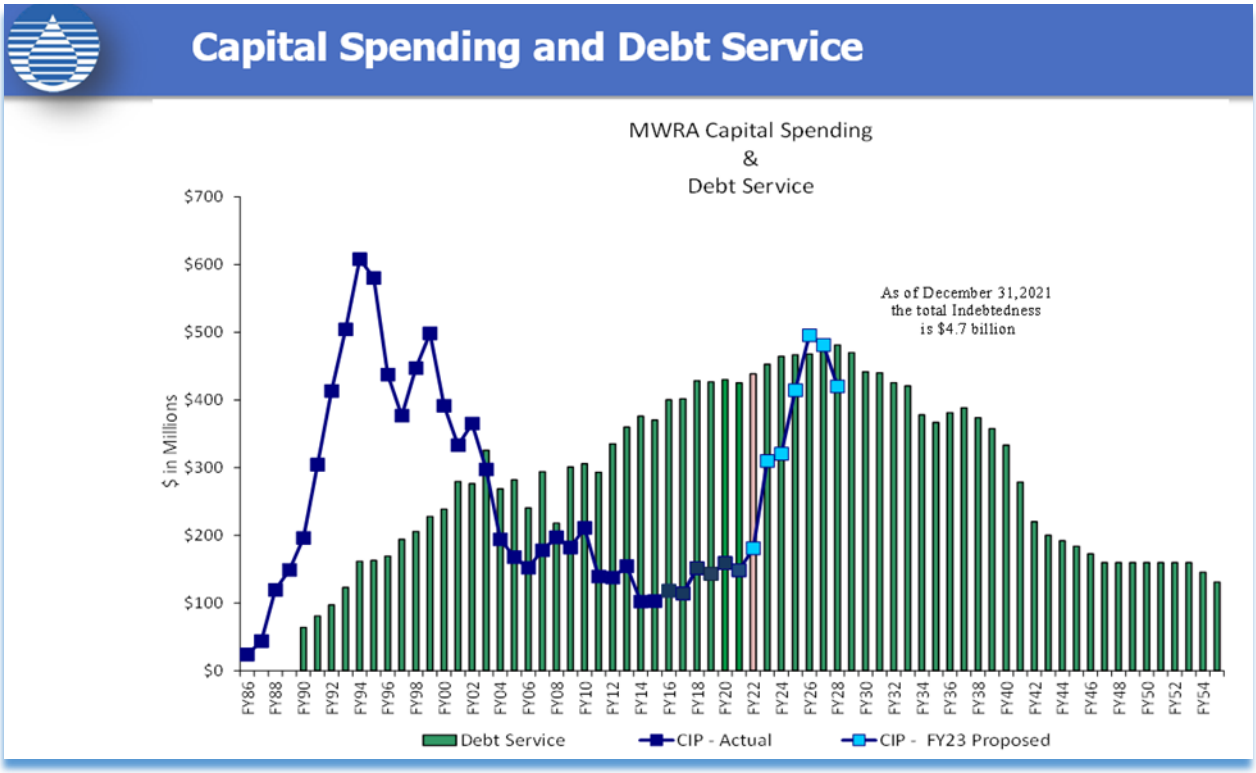
Mike answered that MWRA staff work with John Scannell, Director of Water Supply Protection and his team to include revenue details in time for the proposed budget meeting. They expect an increase in contract and fringe amounts for union workers, which makes up a large part of the budget. DCR revenue is historically around one million. The expense budget is typically around $19 million and remains relatively stable. Lexi asked, "Are you at the end of 5 year cap for land acquisition funding for the watershed?" Mike responded that the cap ends in FY23 and that they will make sure that $1 million is available to DCR-DWSP for land acquisition.

Other categories in the slide above include Pension, Insurance which has generally remained flat, Other Post-Employment Benefits, the HEEC cable, and mitigations and additions to the reserves.

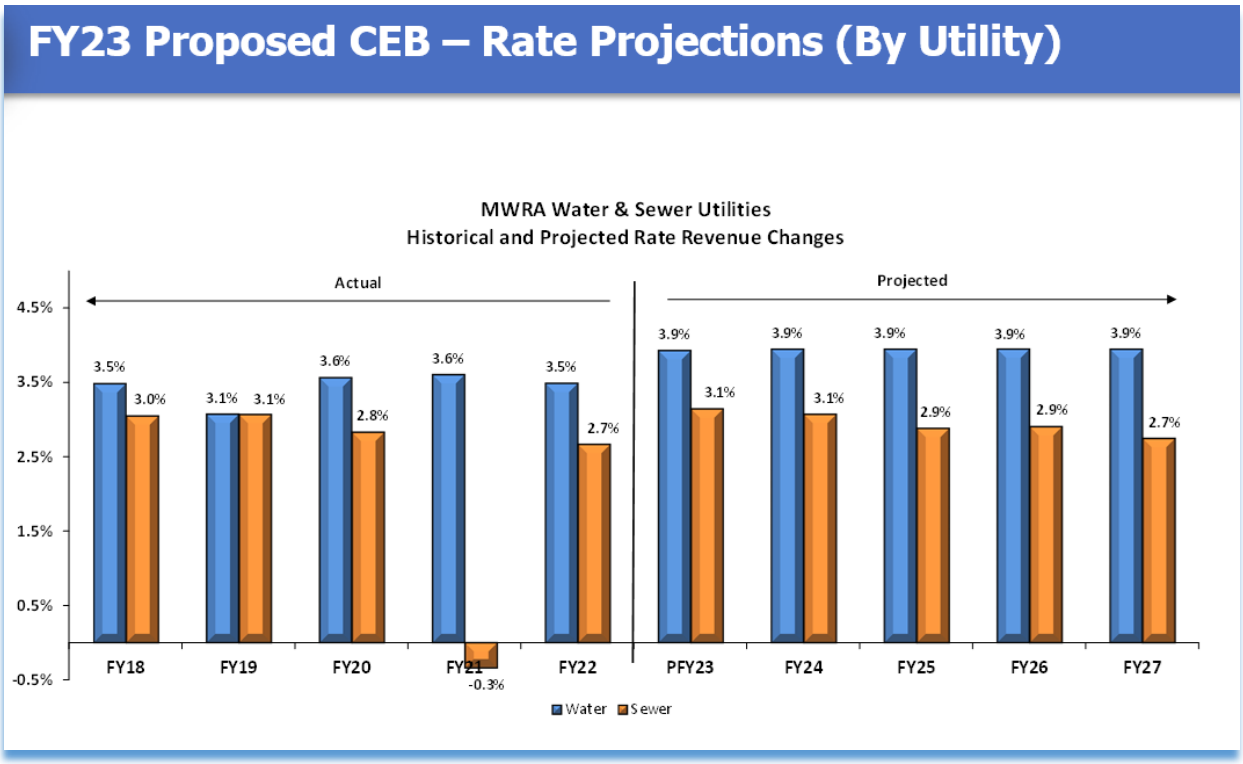
Matt Horan informed members that $513 million is projected in the Capital Finance Budget for 2023. He reiterated that over 60% of MWRA's total CEB is comprised of the capital finance budget including debt repayment. Ninety four percent of the capital finance budget is for paying interest and principal on issued bonds. MWRA anticipates $293 million in principal payments in FY23. The variable rate component of the budget is based on a 3.5 percent variable interest rate assumption.



Matt explained that revenue is growing by 3.4% or $840.2 million. Of that, 97% is rate revenue. On the right, you can see a breakdown on the non-rate revenue side that includes investment income, rate stabilization, and other user charges.



Matt explained that the mountain of debt shown above has started to level off. MWRA must manage this debt to make sure the capital program is affordable. It is a challenge to meet capital needs without putting pressure on rates. Finance staff continue to shape the mountain by monitoring debt and using defeasance to lower rates, when possible, for the future.



Tom explained that the water utility is proposed to increase by 3.9%. Water accounts for 1/3 of the budget, while wastewater accounts for 2/3.

Tom added that setting the budget starts with one number, that is, the rate of increase year over year for both water and sewer combined for all MWRA communities. The MWRA Finance team sets the water and wastewater assessments in order to meet debt obligations and expenses. They don't just look at fiscal year 2023, but instead look ahead with a five year projection. This allows for sustainability and predictability in order to allow both the MWRA and its communities to plan for the upcoming years.

One aspect of this proposed budget reflects inflation and how that affects the price of chemicals, for example. Chemicals are bought on a 3-year contract. They are expected to increase by 15% in the next contract renewal. Inflation has caused gas and diesel prices to rise as well as utilities.

FY23 Proposed CIP – Top Spending Projects Excluding Community Loans in FY23

Project	Subphase	FY23 $s in Millions	% of Total
Deer Island Treatment Plant Asset Protection	Clarifier Rehabilitation Phase 2 - Construction	$31.2	10.1%
Facility Asset Protection	Prison Point Rehabilitation - Construction	19.7	6.4%
Corrosion & Odor Control	NI Odor Control HVAC Improvements Construction Phase 2	15.2	4.9%
Metro Redundancy Interim Improvements	Waltham Water Pipeline Construction	14.0	4.5%
MWRA Facilities Management	Office Space Modifications	13.8	4.5%
Deer Island Treatment Plant Asset Protection	Fire Alarm System Replacement - Construction	8.3	2.7%
Metro Redundancy Interim Improvements	WASM/SPSM West Pressure Reducing Valve Construction	7.9	2.5%
New Connecting Mains-Shaft 7	CP3-Sect 23,24,47, Rehabilitation	7.8	2.5%
NIH Redundancy & Storage	Section 89 & 29 Replacement - Construction	7.1	2.3%
Central Monitoring System	CWTP SCADA Upgrade Construction	5.4	1.7%
Metro Redundancy Interim Improvements	WASM 3 CP-1	5.2	1.7%
Siphon Structure Rehabilitation	Construction	5.0	1.6%
	Total Contracts > $5.0 million (excl. Loan Programs)	**$140.7**	**45.4%**
	Other Project Spending	**$169.0**	**54.6%**
	Total FY23 Spending	**$309.7**	**100.0%**

Above is a snapshot of the top projects included in the FY23.

The highest cost projects are sewer maintenance:

- Clarifier rehabilitation at Deer Island $31 million
- Prison Point Headworks rehabilitation $20 million
- Nut Island HVAC $15 million

Relevant Water Projects:

- Metro Redundancy Interim Improvements – The three phases: Waltham water pipeline construction, WASM/SPSM West pressure reducing valve construction, and WASM 3 CP-1, make up 27.1 million combined or 8.7% of the proposed budget.
- The Siphon Structure Rehabilitation Construction accounts for $5 million or 1.6% of the budget.

These are all sizable projects. Delays in starting or delays in construction can cause negative variances.

The proposed budget has already been submitted to the MWRA Advisory Board for review. The Advisory Board will provide comments which will be addressed by MWRA financial staff. The final budget will be voted by the MWRA Board of Directors in June.

Paul Lowenstein asked, “My question is on climate change and the urgency to deal with climate change as emissions continue. I want to commend MWRA on reducing its carbon foot print. I heard we could improve the efficiency of the combined heat and power plant that burns digester-gas (methane) on Deer Island. Right now the methane goes to heating first and then electricity. We could generate electricity first and then use the rest to heat the buildings. I heard it was an $80 million project and would like to know what’s going on with that.”

Tom answered that MWRA is now 96% green. To account for sea level rise, they now put equipment in flood zones higher, or build new entrances on project sites to reduce the threat of flooding. They just did a procurement of electricity using an interval meter that measures both time and electricity at once. It costs

more, but engineers have done an evaluation to ensure that standards are being met since the MWRA recognizes the importance of the impact on climate change as well as cost.

Advisory Board Update: James Guiod explained that staff are focused now is on the proposed MWRA FY23 budget. At their April 21st meeting, staff will present their initial recommendations on the proposed budget.

They are also looking at extending the Inflow and Infiltration funding programs.

Andreae asked James to explain the obstacles to implementing I/I work in the communities. James asked for Newton's experience, and Andreae & Lou explained that Newton has had to first investigate all of its sewer lines to be able to prioritize repairs in the areas of biggest infiltration.

Lou: Newton has an 11-year program of engineering and investigation. Now in year 9. Newton has staff to implement the engineering, but small communities may not be able to act because they don't have the staff. Newton spends every penny of I/I money, but the upfront costs of hiring staff may prevent smaller communities from executing.

James: and it's difficult sometimes to get non-engineers excited about sewers.

Lou: Newton has a sewer enterprise fund, which segregates local ratepayer funds for sewer repairs, and that allows Newton to dedicate funds just to the sewer repair program. At the time that the sewer enterprise fund was established, Newton was an outlier on extraneous flow—about 60% was not sewage.

Andreae suggested that environmental advocates should start looking at funding and enterprise funds for local sewer repairs to reduce overflows. Many communities don't pay much attention to underground infrastructure.

Q: Is there funding for public education on I/I and water conservation? Can there be regional education work on the forgotten infrastructure?

Andreae highlighted the school educators—MWRA's School Education program, which Adrianna Cillo does for BWSC.

Matt: MWRA's website has public outreach and education also.

Adrianna explained that when BWSC bills are sent out, inserts are included to educate the public about conserving water, and other topics, including stormwater, depending on the season. The water trucks at public events also give out educational materials on water & sewer.

Andreae informed the attendees that the MWRA has a number of handouts and freebies to educate and equip the public to work on water conservation starting at home including educational brochures, and low flow shower heads.

Included:

- Tips to save water at home - https://www.mwra.com/comsupport/conservation/hometips.htm
- Water Efficient Appliances - https://www.mwra.com/comsupport/conservation/appliances.htm
- Low-flow toilets - https://www.mwra.com/comsupport/conservation/toilets.htm
- Garden and Landscaping water conservation tips: https://www.mwra.com/comsupport/conservation/gardeningtips.htm

Paul: "I wanted to respond to Gwen's question on public education inquiry. When I sold my business, I insisted on water conservation as a priority. If you don't have a water committee in your town, you

should. We put inserts in water bills. The town of Sharon reduced water usage over a ten-year period by 30% and saved over 100 million gallons a year. It all ties in to a sustainability package; it reduced carbon emissions by 100 tons last year. Keep pounding the table for conservation of energy and water. It all constitutes a conservation effort.

WSCAC briefs:

- Lexi informed members that March and April minutes will be voted on at the May 10th meeting.
- Lexi asked Andreae and WAC members if they would be willing to do another joint meeting in May covering the PFAS Interagency Taskforce. She is hoping to have a report available to offer to members in time for the May meeting.

Lexi explained that WSCAC members will vote on the March and April minutes at the May 10th meeting. She asked Andreae and WAC members if they would be interested in a joint meeting in May if the final report from the PFAS Interagency Taskforce is available.

Andreae counted four WAC members that can attend, but will verify by email.

Lexi concluded by noting that the CSX/Pan Am transaction was approved and MWRA's agreement with CSX was included as part of the Order. The Surface Transportation Board's decision will be final on May 14, 2022 assuming that no one files an appeal.

Presenters were thanked for attending.

Meeting adjourned.

April Director's Report

OMSAP 3/2

ONLY looking at contaminants that would be found in the outfall at MWRA

3 papers: PCPs, PFAS, Plastics

PCPs: found they are toxic, but not at levels that would be found at the outfall. They do bioaccumulate (sunscreen, insect repellant), but no effect on wildlife.

Estrogen--shown to cause a population collapse of minnows in one study--freshwater

Recommendation: that OMSAP recommend MWRA do a literature review of materials in WWTP effluents. Identify just the ones in THIS region, in this effluent, and whether it breaks down in the process

- Monitor in effluent
- Ambient monitoring
- Sucralose model

Can find these contaminants at very low levels, but not in concentrations likely to have an effect.

How does this study compare to the South CA study? --They found the following contaminants of concern in the effluent there:

- Phthalates ● Nano-chenol?
- PPDEs--flame retardants
- PFAS

In other words, no PCPs--probably not in the top tier of contaminants of emerging concern. But the other contaminants might be of concern in the marine environment.

PFAS--is also a component of plastic. At least 15 of the 9,000 PFAS are known to be toxic. 6 are being monitored in MWRA effluent and biosolids.

General characteristics of per- and polyfluoroalkyl substances (PFAS)

- Persistent substances
- Found in everyday products including plastic
- At least 16 of 9000 total PFAS are identified as toxic
  - Six are included in new WWTP NPDES permits
  - EPA has a strategic plan to review hundreds of PFAS and identify "bad actors"
- PFAS can be biodegraded, most last for decades to hundreds of years
- New and degraded PFAS compounds may re-form into larger compounds that maybe or have been banned
- Health effects include immunotoxicity, altered reproduction and growth, endocrine disruption, metabolic interference in humans, marine mammals and other species

EPA is IDing the most persistent ones, and putting together a timeline and action plan

What do we know about their fate and effects

- Higher concentrations of PFAS are found in NW Atlantic (U.S.) than NE Atlantic (Europe); long-chained PFAS are removed during treatment, present in WWTP biosolids, some degraded PFAS become more toxic.
- Bioaccumulation and biomagnification of PFAS occur, variable in species and genera, and banned PFAS still present in human serum.
- Effects on marine mammals are associated with physiological impacts affecting growth, reproduction *etc.*, impacts to fish and seabirds, invertebrates and plankton and other biota.

PFAS can biodegrade, but also can re-form in a toxic form (PFOA and PFOS--in fact, these are in human serum).

Plastics--99% are removed in treatment, but microplastics slip by every day. However, the literature was problematic--many researchers were not aware that microplastics are in the air, and could have contaminated their samples.

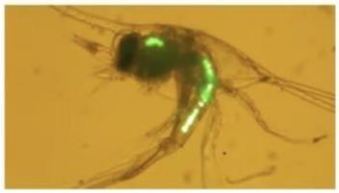
General characteristics of microplastics (MPs)

- Plastics are made from petroleum products and some from natural compounds. MPs (5 mm-1 µm) are degraded or manufactured plastics; nanoplastics (>1µm)
- Plastics are ubiquitous and valued for their characteristics that are due to additives that can be released as MPs and nanoplastics are formed.
- Additives are often toxic, e.g. BPA, $COCl_2$, phthalates, Triclosan, or their substitutes.
- In the ocean MPs are a substrate for other contaminants (*e.g.*, PCPs, PFAS, etc.) and may be ingested by biota.
- MPs and their additives are found in organs/tissues of fish, humans, invertebrates, and other biota (nanoplastics are more prevalent and found in tissues of most organisms).
- Ocean gyres altering ecosystems.

[Event, Date]

Exposure and Effects of CECs

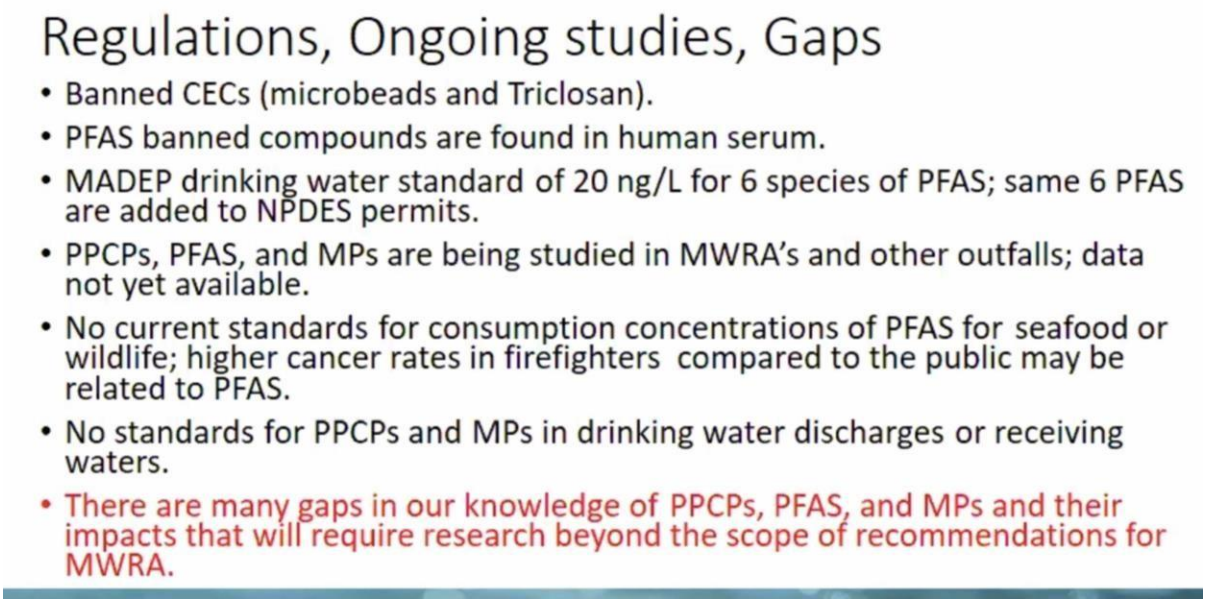
- MPs accumulate in human and marine biota tissues and organs, block digestion in some animals; and the literature on impacts are expanding both for individuals and ecosystems.
- Secondary treatment 90-99% efficient in removing MPs, but microfibers and small particles are released each day

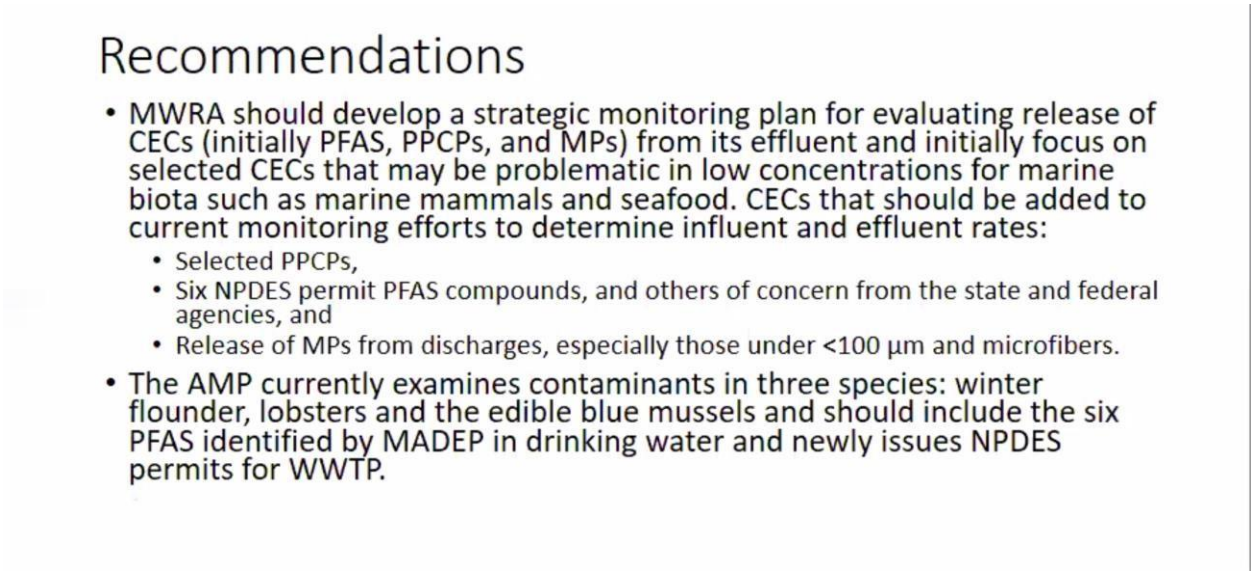


M. Cole, ensia.com

Plastics are a medium for other toxins. Esp. noted: PFAS and Triclosan

EXECUTIVE SUMMARY & RECOMMENDATIONS





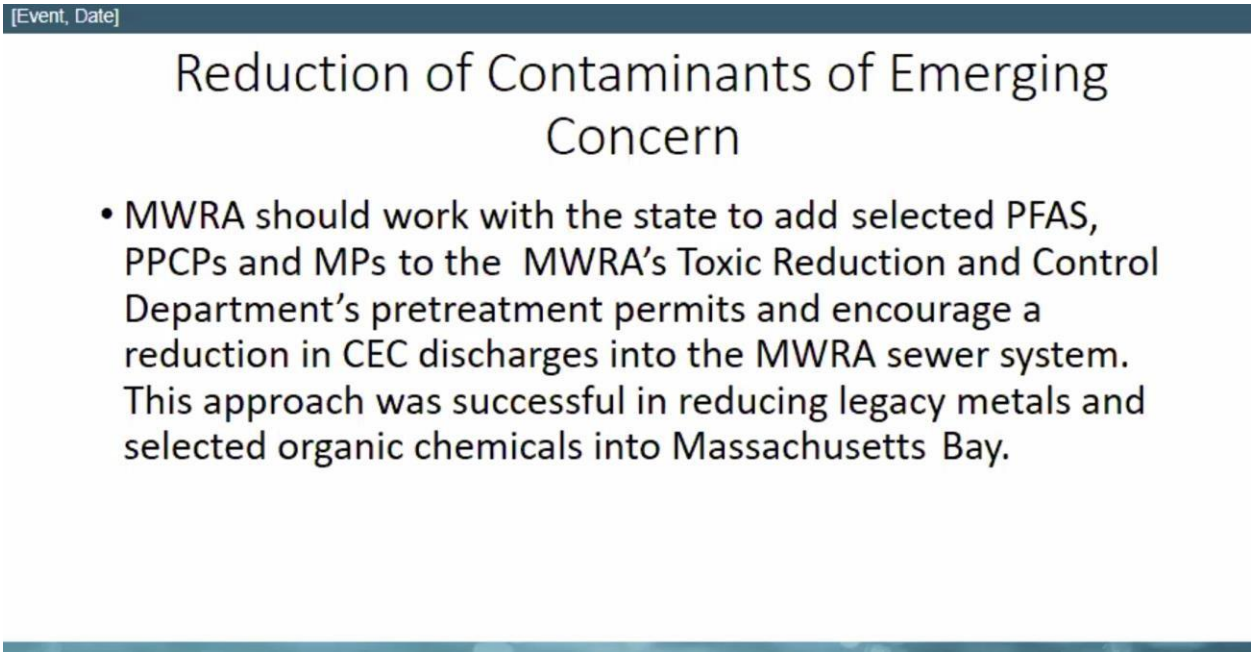
Betsy Reilley: MWRA statement: appreciates OMSAP efforts.

Encourage state agencies to work together on these issues. Not unique to MWRA or this region. MWRA continues to monitor effluent, biosolids and environment.

Particular concern with shellfish monitoring recommendations. Think these should be special studies, not permanent changes to the monitoring program.

MWRA concerned with addition of CECs because they are not under any regulatory standard (except PFAS).

MWRA supports goals of OMSAP and white papers. Consider burden on our ratepayers.



Judy: at some point, really do have to get to the sources of plastics & PFAS.

Does really want some action, as state actions on contaminants has often taken decades after a harm is recognized.

Betsy: at least 24 recommendations in the white papers, which is a lot. Suggests these be goals. What would be the steps from white paper to more specific recommendation?

Mark Patterson--Canada partnered with NGO to see how microplastics travel through the treatment process--mostly from laundry. 99% removal, but that 1% is an issue. Communicated with ratepayers who use the laundry & the treatment. May be able to get ahead of the problem by reducing the load on the plant with behavioral change from the public.

Loretta Fernandez: need to understand where microplastics originate--need a study. Question is who pays for it?

MIT Sea grant will summarize white papers in one-pager for legislators & public.

Todd Callahan: a number of additional topics that aren't addressed in these 3 papers.

Other substances Judy would like to investigate: bromates, pesticides

Jeff Rosen: any study needs a question to answer. He would ask what is the concentration near the outfall.

No mentions of risk, there's just not enough data.

To do: more explicit monitoring questions; make sure differentiate from monitoring plan or special study; create one-pagers; distinguish between substances with standards and without.

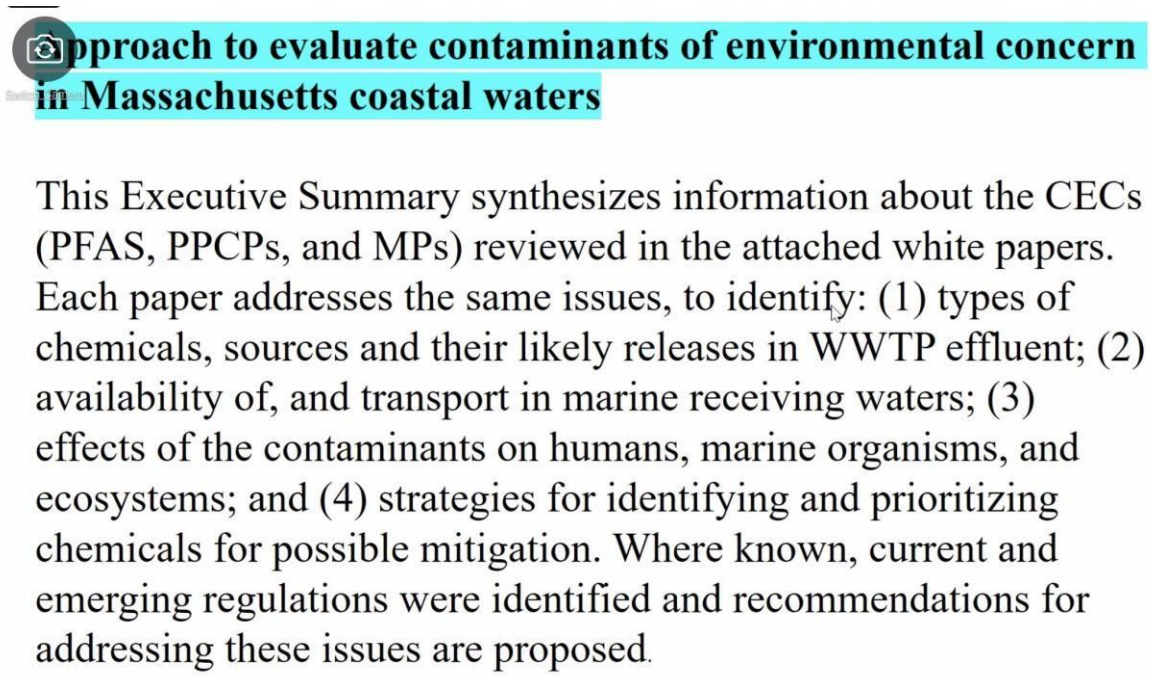
Next meeting of OMSAP goes over recommendations and any changes.

Agreement that studies should include rivers, other WWTPs, but that there are barriers.

OMSAP 3/23

Review of white papers-- redrafting of some paragraphs of the executive summary for them.

First paragraph:



pproach to evaluate contaminants of environmental concern in Massachusetts coastal waters

This Executive Summary synthesizes information about the CECs (PFAS, PPCPs, and MPs) reviewed in the attached white papers. Each paper addresses the same issues, to identify: (1) types of chemicals, sources and their likely releases in WWTP effluent; (2) availability of, and transport in marine receiving waters; (3) effects of the contaminants on humans, marine organisms, and ecosystems; and (4) strategies for identifying and prioritizing chemicals for possible mitigation. Where known, current and emerging regulations were identified and recommendations for addressing these issues are proposed.

Recommendations:

1. OMSAP recognizes that increasing knowledge on these groups of CECs is time-critical, and recommends that MWRA should begin developing a forward-looking strategic monitoring plan for CECs that are shown to have negative impacts on humans, biota, and/or the ecosystem. The purpose of the plan would be to identify the extent to which CECs are being released through MWRA to Massachusetts Bay. Monitoring should characterize concentrations and distributions in the influent, in-plant effluent, and near field near the diffusers, and their spatial and temporal variability. OMSAP recommends that the initial monitoring focus on the six PFAS compounds that are specified in the NPDES permit. Over time, other CECs would be added as their effects become better known and regulations are developed, including (but not limited to):
   a. Other PFAS compounds identified as likely to be harmful by state and federal agencies.
   b. Selected PPCPs, such as estrogen-related compounds.
   c. Determine the concentrations of MPs in influent and relative rate of removal from effluent especially those <100 μm and microfibers.
   d. Other CECs not included in the current white papers, such as PBDE, nonylphenols, phthalates, and likely others.

This is NOT monitoring for its own sake…

Agreement that 6 PFAS should be place to start & will be in permit anyway.

Knowing some CECs --nonylphenols--are of interest to DEP, should they be added? DEP watches it already for industrial uses, not sure about wastewater.

Judy--concern about monitoring things OMSAP hasn't looked at yet

EPA will be coming up with a list of 1,000 PFAS to regulate.

Recommendation 1:

1. The AMP currently examines contaminants in three species: winter flounder, lobsters, and mussels and should include the six PFAS identified by MADEP in drinking water and newly issued NPDES permits for WWTP and any other CECs identified by state and federal agencies as potential threats to humans and the ecosystem. The results from these analyses will identify the extent of bioaccumulation in representative edible seafood.

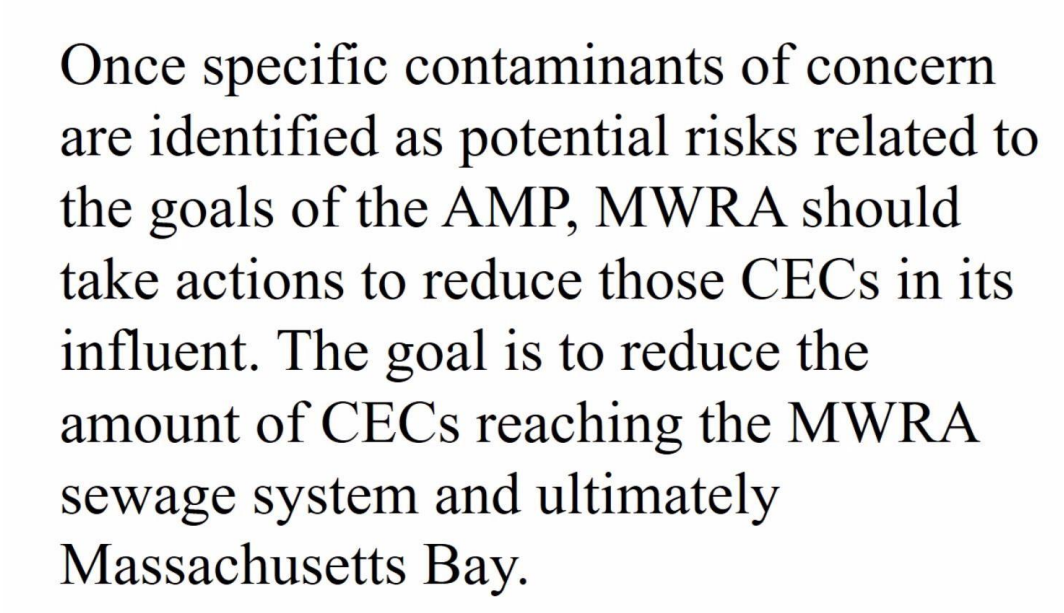
PFAS bioaccumulation is different from other kinds of CECs. Mussels and clams don't necessarily pick them up--variable depending on the environment. But talk now of restricting human intake to parts per quadrillion, which currently is impossible. Discussion on whether to use these particular species or to do others/other measurements that are more indicative/more pragmatic. Thought to step back from specific species testing.

Jeffrey Rosen: not enough money to monitor all of this--will need to set priorities. Thinks should reconsider monitoring flounder, lobsters and mussels recommendation (above) for PFAS or other CECs. Needs working group.

Juanita: different contaminants will need different organism monitoring. Doesn't want to eliminate this recommendation, just modify it.

Enough difference of opinion, that OMSAP will work on via email.

Recommendation 2:



Recommendation--add influent

Cathy V: can add special studies to the permit

Final paragraph--broadens goals to include all discharges to Mass Bay Urges collaboration, look at state-wide monitoring and include other bays.

Matt Liebman--last day.

Water Infrastructure Finance 4/4

Jenn Pederson: water infrastructure funds from Feds--ARPA, CARES, BIL, and where they have been spent, where they could be spent.

Some of the EPA money will be earmarked by Congress members

Helen Gordon: Spending that money may be difficult--supply chain, plus contractors and designers are flat out now. Timing may need to be extended.

Jeff Mahoney, UCANE--need for flexibility in time needed to complete projects

Kathy Baskin: there will be another ARPA (BIL), and those funds don't go entirely to "shovelready" projects. Know there's requests for design funding.

Disadvantaged communities are being preferentially funded.

Looking for several replacements to Carolyn Dykema.

Contract assistance is also an area where more funding would be helpful.

MWRA Board 4/13

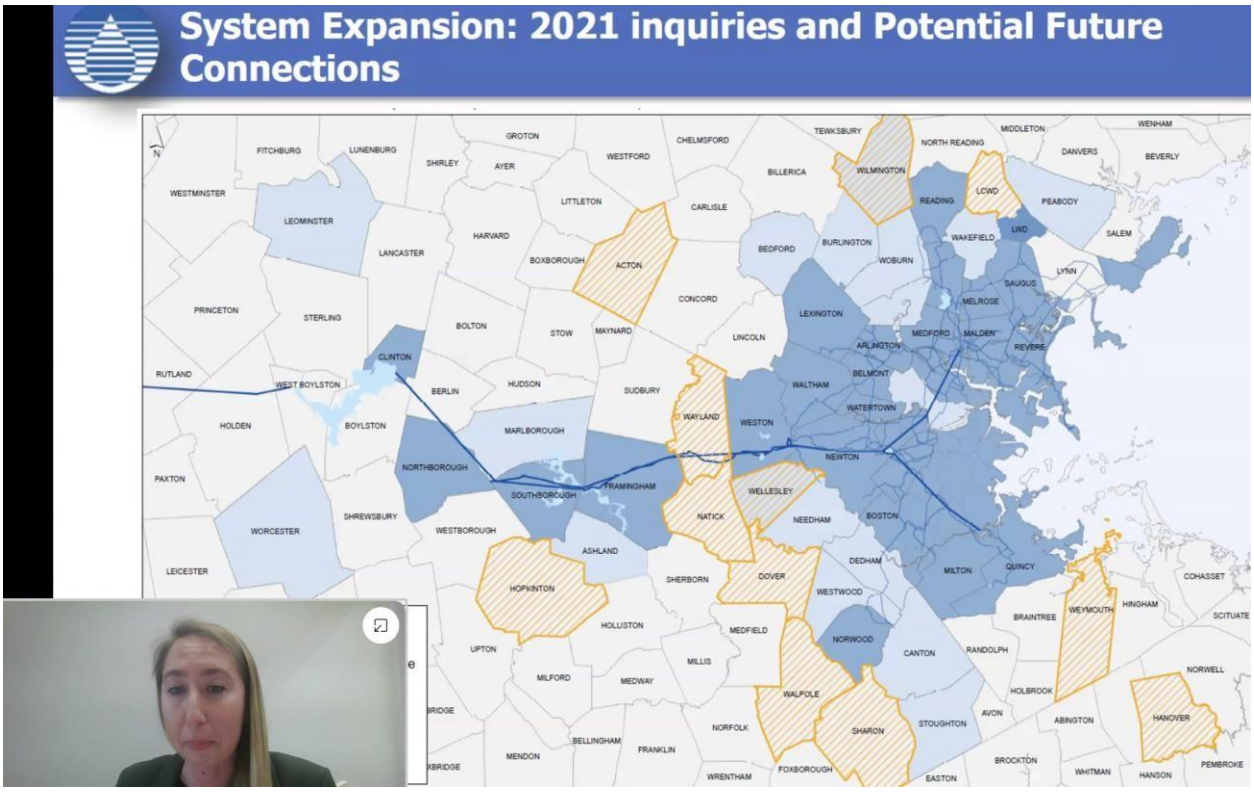
Ex Director's report: The COVID authorization for remote meetings ends in July. If the Legislature doesn't extend it, MWRA Board (and many other meetings) will return to in-person. (Note: Newton's Council is meeting in hybrid mode—in-person with a quorum, other members can zoom in)

Executive session (CLF suit and contracts): signed contracts with Steelworkers Union, including pay raises and hazard pay.

Administration & Finance

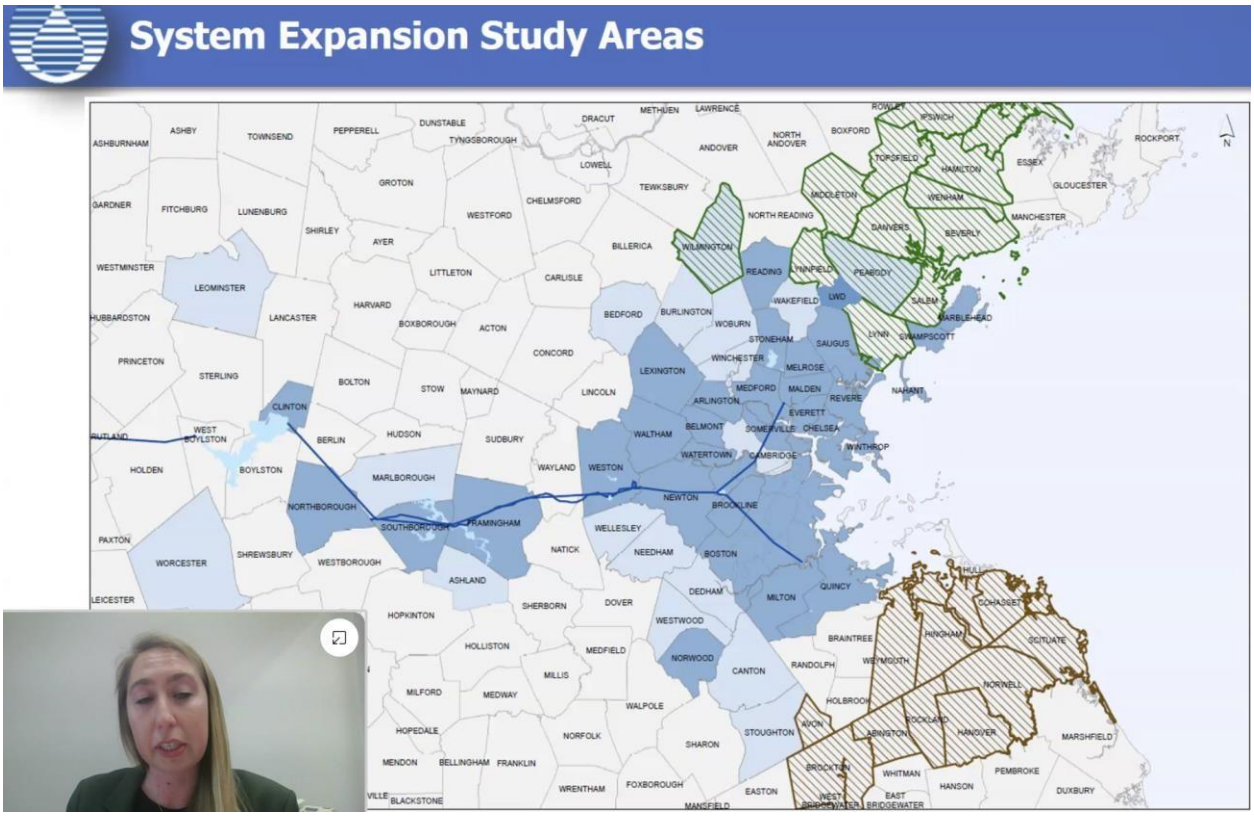
Update on **New connections** to the MWRA system: Katie Ronan

Inquiries are increasing as more communities have tested positive for the PFAS-6



Among those who made inquiries—Weston, Wellesley. Light blue—partially connected water systems, some of which, like Wellesley, are looking at purchasing more water.

MWRA is running two studies—possible system expansion for water & for sewer:



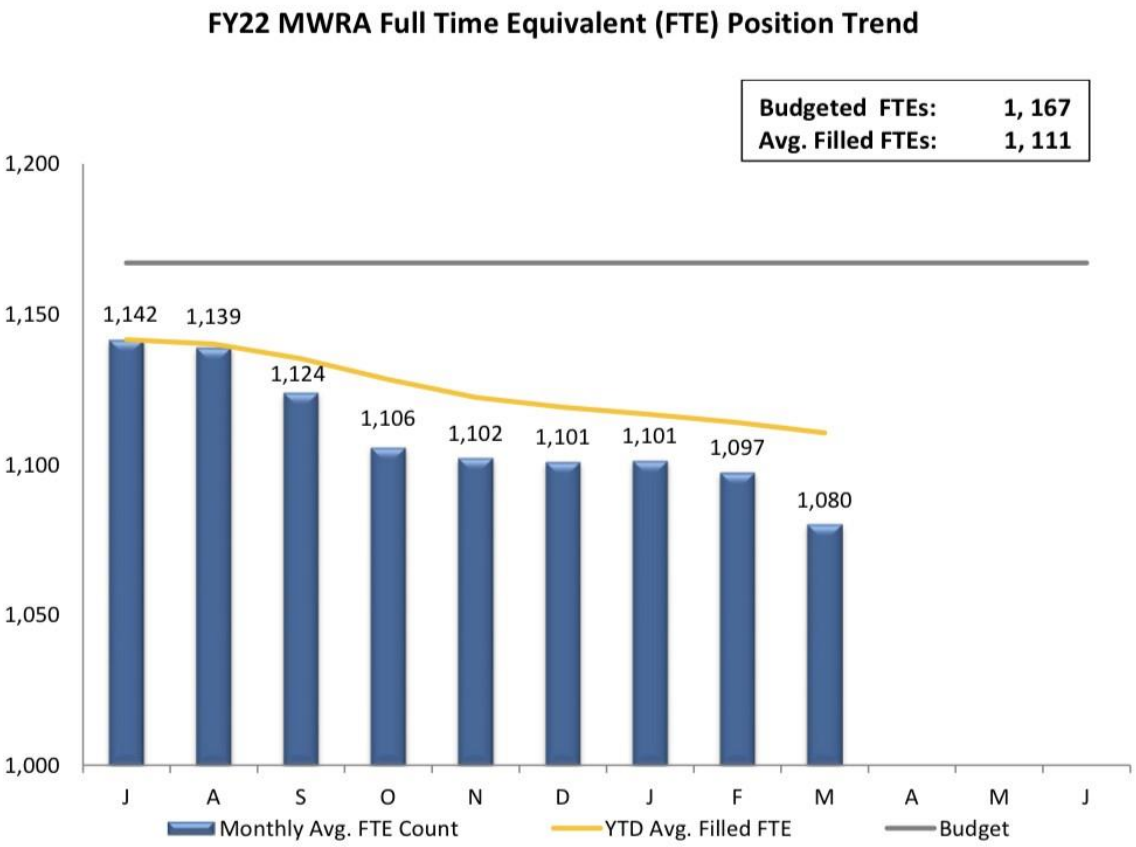
Water: green; Sewer: brown

History of MWRA admissions since 2002 here:
https://www.mwra.com/monthly/bod/boardmaterials/2022/OS-2022-0413%20Board%20Materials.pdf

Favaloro: AB working on a way to waive the MWRA entrance fee.

Financial update & Summary — 3rd quarter

Direct 1 million, indirect $12m, $4m income: $16.9m positive variance. Projecting a final variance similar to prior years—putting into defeasance to continue to successfully pay down highest-impact bonds.



Inflation is starting to affect utilities and chemicals, but somewhat muted. MWRA is stockpiling at lower prices where it can. (Sodium hypochlorite breaks down over time, so they can't stockpile much).

Discussion of defeasance goals: to keep rate increases predictable and sustainable—so aim for year after year under 4%, but not variable (2% this year, 5% next, for instance).

Bond approvals.

Getting some bonds with 0% by using federal stimulus funds (ARPA, CARES, BIL, etc.)

MoA with Chelsea to add traffic signals at Griffin Way

$532,000 to install modern signals and add sidewalk ramps. Street used to be MassDOT (eastern Ave), but now is Chelsea's.

Installation is not without controversy, as other truck traffic will be slightly delayed.

Contract awards: Payroll and HR—$539K for one year.

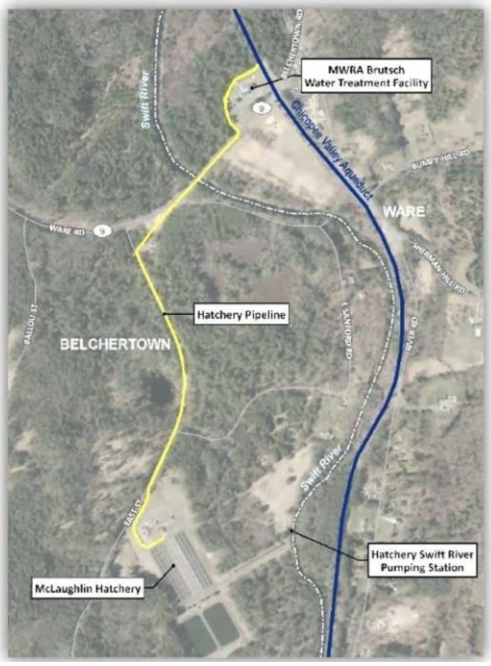
Water Supply

Brutsch Hydroelectric Facility and Fish Hatchery

Smallest of the MWRA hydro facilities

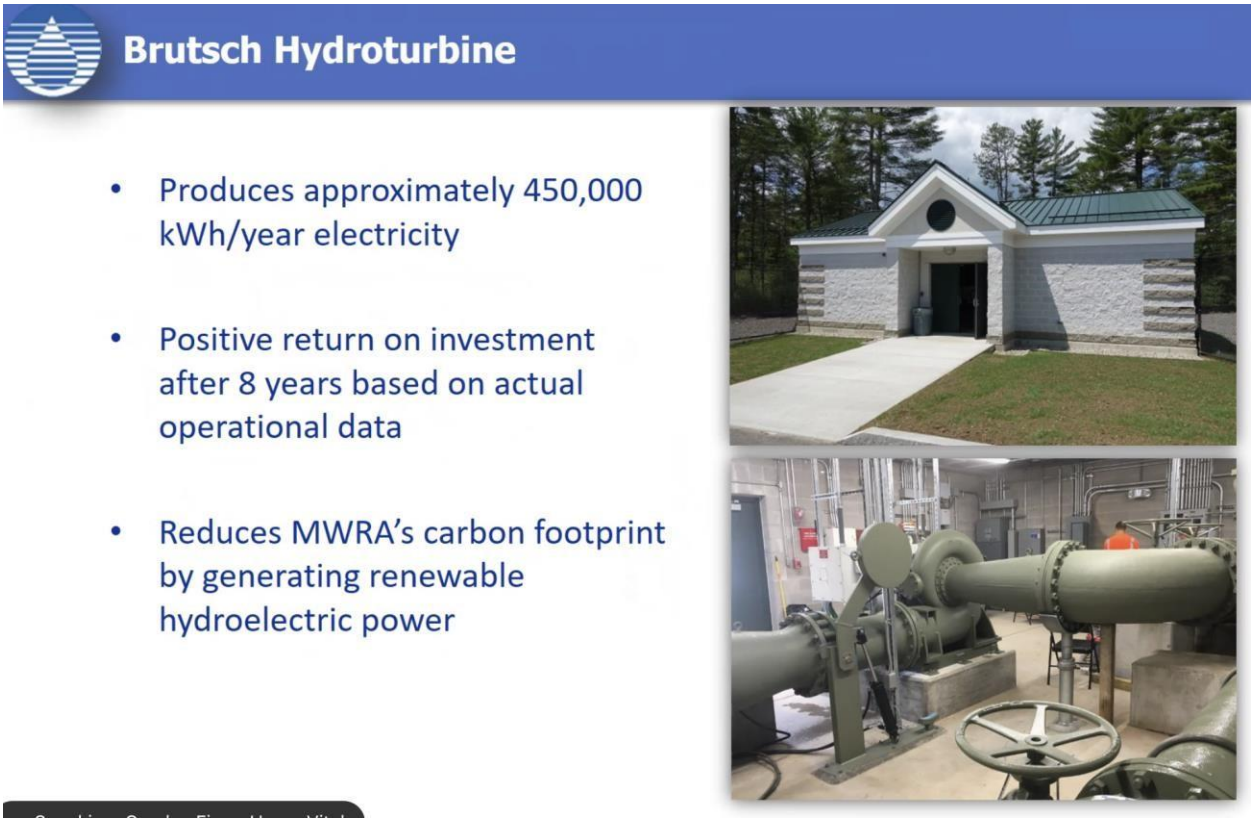
Brutsch Hydroelectric and Hatchery Pipeline

- Project included
  - 60 kW Hydroelectric Turbine at Brutsch Treatment Facility
  - 4,440 foot pipeline to McLaughlin Fish Hatchery
- Construction Completed in 2017
- Total Cost: $4,372,254
  - DFW $2,700,00
  - Grant $714,235
  - MWRA $958,019



Numerous Benefits for Hatchery

- Produces on average 250,000 lbs of brook, brown, rainbow and tiger trout per year
- Receives 6 mgd from Quabbin through Chicopee Valley Aqueduct
- Reduces Hatchery's carbon footprint by eliminating electrical demand associated with pumping water from Swift River
- Provides cold, well oxygenated water to the fish hatchery benefiting health and growth of fish



Expect positive rate of return by 2026.

Quinepoxit Dam removal design—change orders—more time, same $$. Construction fall 2023-spring 2024.

Water Resources Commission 4/14

Executive Director's Report Vandana Rao:

PFAS is one reason for so many applications for Interbasin Transfer. Arpa1 and 2 have funds for addressing PFAS and entrance fees.

Kathy Baskin: what kinds of assistance DEP can provide communities: a broad array—state supplemental budgets in 2019 and 2020 for monitoring of all public water systems and some private wells, $$ for design grants for PFAS remediation in DW. Also $$ for construction projects around PFAS via the SRF.

1/4billion dollars already allocated to construction loans around PFAS (0%); $2m for temporary water supply grants for especially hard-hit communities.

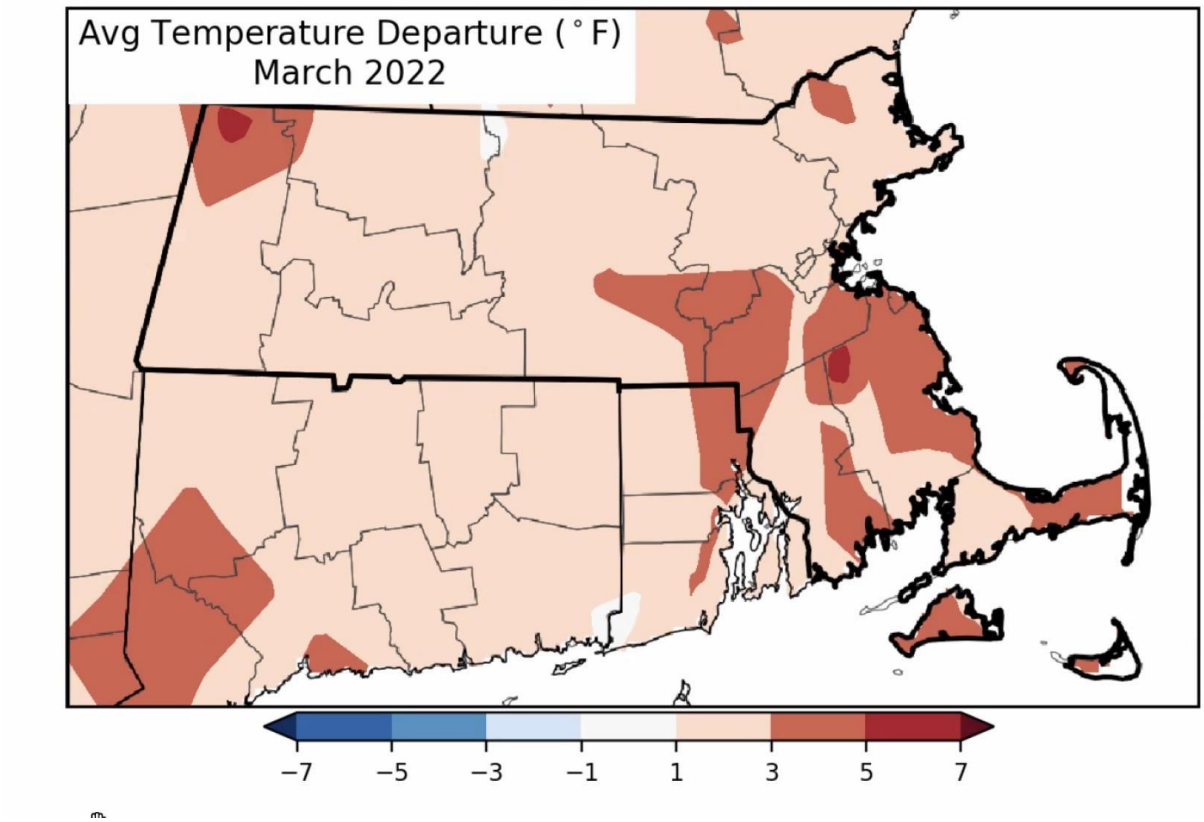
Looking forward—ARPA $$ $87m in SRF priority areas PFAS treatment for DW and CSOs

Also funding under the BIL — expecting over $1 trillion over 5 years. This year $190m into SRF. Available for general projects, emerging contaminants, removal of lead from DW.

Kathy will provide a 1-page summary.

Jenn Pederson: ARPA $ already went to CIP projects, remaining is going to CSO projects. BIL is very heavily targeted to disadvantaged communities, which may not be the same as those most affected by PFAS. It's also a **loan**, and there are 100s of millions of dollars' worth of needs. BUT MWRA may be waiving the connection fee to their system.

Update: Hydrologic Conditions Viki Zoltay



March was warmer than average (last 30 years' average)

Precipitation was about average across the state, but a few stations, mostly in eastern & southern part of MA saw less rain than normal.

In groundwater—some areas are at 90% (western, CT River valley), which could cause groundwater flooding (climate change result) while other parts of the state, like Nantucket and parts of the SE are well below normal—could trip a drought warning next month unless we get more April showers.

Lakes and reservoirs, with the exception of the Cape, are at or above normal. Quabbin started spilling Feb. 12 and continues.

No snow by March 31.

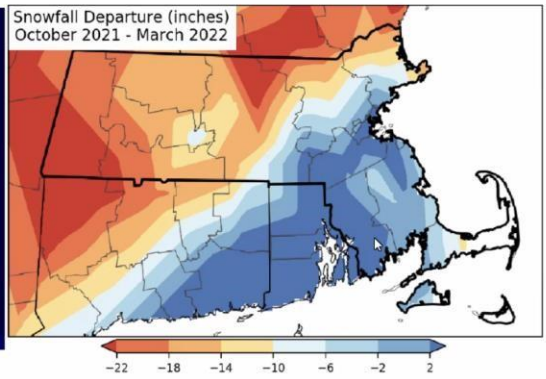
https://www.cpc.ncep.noaa.gov/products/monitoring_and_data/drought.shtml

SNOWFALL

At the end of March, snowfall was below normal for the season except in parts of southeastern MA and the Greater Boston area. There was no snow cover remaining at the end of the month.

Modeled Snow Water Equivalent at the End of the Month in Inches:
https://www.nohrsc.noaa.gov/technology/

Snowfall Departure:

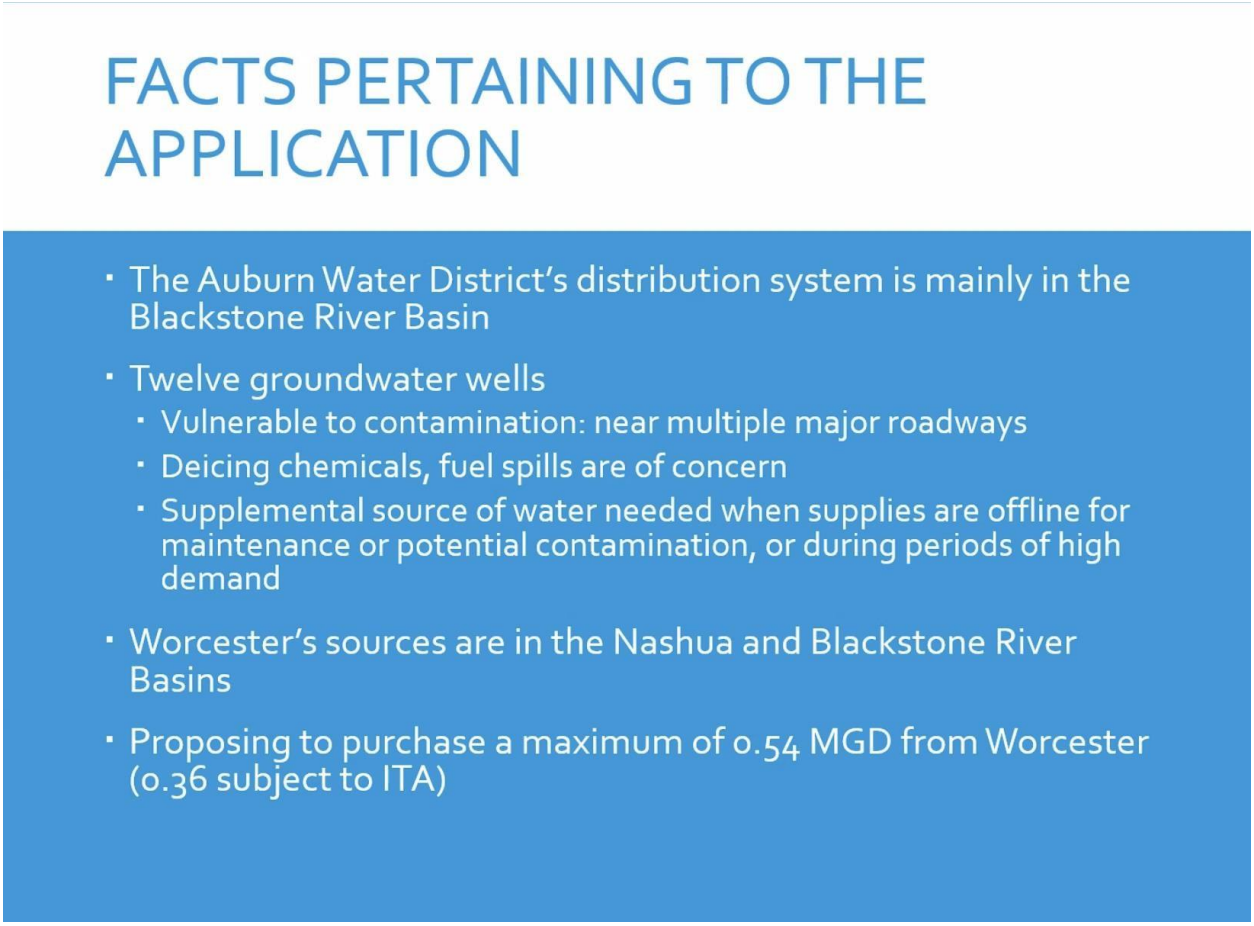


NOAA Climate Prediction Center

Temperature and Precipitation Outlook
April: The outlook issued 3/31 shows a 33-40% probability of both above-normal temperatures and precipitation.
April through June: The outlook issued 3/17 shows a 40-50% chance of above-normal temperatures, and equal chances of below-normal, normal, or above-normal precipitation. https://www.cpc.ncep.noaa.gov/

Monthly and Seasonal Drought Outlook
The monthly outlook for April released on 3/31 shows no drought development in the state. The seasonal outlook released on 3/31 and valid through June shows no drought development in the state.
http://www.cpc.ncep.noaa.gov/products/Drought

VOTE: Staff Recommendation on the Auburn Water District's Interbasin Transfer Act Application to Purchase Water from the City of Worcester Vanessa Curran



Passed

Presentation: Natural Resource Damage Assessment and Restoration
Michelle Craddock (DEP)

Annual assessment of damage related to release of toxins or oil, and possible remediation (fines, etc.)

The trustees who review this assessment:

Commonwealth of MA Trustee:
Secretary of EOEEA, program delegated to MassDEP

Federal Trustees:

Tribes

Some are also responsible for dumping hazardous material

The Commonwealth is the only trustee of groundwater resources.

The laws they use in enforcement:

Natural Resource Damages Authority: State & Federal Laws

- Massachusetts Oil and Hazardous Material Release Prevention and Response Act (Chapter 21E, sections 5A and 11A)
- Chapter 21A, section 2A – Establishes Secretary of EOEEA as NRD Trustee
- Acts of 2011, chapter 9, section 22 – Establishes NRD Trust

- Comprehensive Environmental Response, Compensation, and Liability Act 1980 (CERCLA or Superfund) & DOI Regs: 43 CFR 11
  - Covers discharge of hazardous materials

- Oil Pollution Act of 1990 & OPA Regs: 15 CFR 990
  - Covers oil discharge into waters of the U.S.

What is covered:

- Land, fish, wildlife, biota, air, water, groundwater, and drinking water supplies

- Any other resources belonging to or managed by:
  - Federal government
  - State or local government
  - Any foreign government (OPA only)
  - Indian Tribe

- Use of the natural resources
  - Bird watching, hiking, swimming, boating, fishing
  - Cultural – ceremonial, medicinal, subsistence

Environmental services are also covered:

- Physical and biological functions performed by the resource

- Includes the quality of the physical, chemical, or biological resource

- Services to other natural resources
  - Food, shelter, nesting/breeding

- Services directly benefitting and/or used by humans:
  - provisioning services (water, food, raw materials)
  - regulating services (air quality, carbon sequestration, flood control)
  - cultural services (recreational use, spiritual use)
  - supporting services (pollination, nutrient cycling)

Two results: cleanup and damage assessment & remedy/restoration

Over $70 million in NRD settlements in Massachusetts

New Bedford Harbor	$20 M
Bouchard B-120	$19.3 M
GE/Housatonic	$15 M
Fireworks (Tronox)	$6.8 M
Industri-Plex	$4.3 M
Nyanza*	$3.1 M
Sutton Brook*	$1.65 M
Textron/MMR*	$1.3 M
Charles George*	$1.2 M
Blackburn & Union*	$1 M
Rubchinuk	$747,000

Holyoke Coal Tar	$500,000
Global/Irving	$312,500
Island End	$300,000
Reed & Barton	$236,447
Barnhardt (Colrain)	$225,000
Framingham GM	$157,425
PSC Palmer*	$157,000
Posavina	$155,000
Eversource	$58,137
JP Noonan	$55,100
PJ Murphy	$52,746
Colrain acid spill	$30,000
Hallmark/Mystic	$26,801

* Includes settlement funds for injury to groundwater

Restoration Highlights: Bouchard B-120

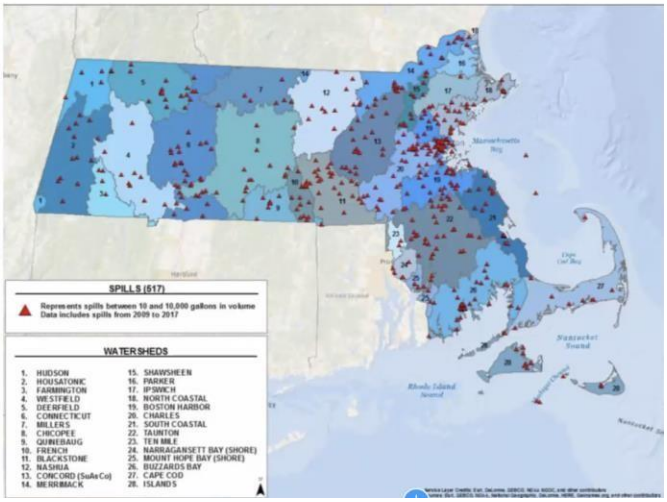
Loon translocation & restoration, bird habitat protection (Assawompset Pond and Cuttyhunk Island)

using penalty $$ to re-introduce loons, resize culverts, restore eelgrass, put in conservation moorings, dam removal

Standard Method for Small to Medium Sized Releases of Oil to Surface Water

Goal: Develop a standard approach for assessing damages from small to medium volume oil spills in Massachusetts (>10 to <10,000 gallons)

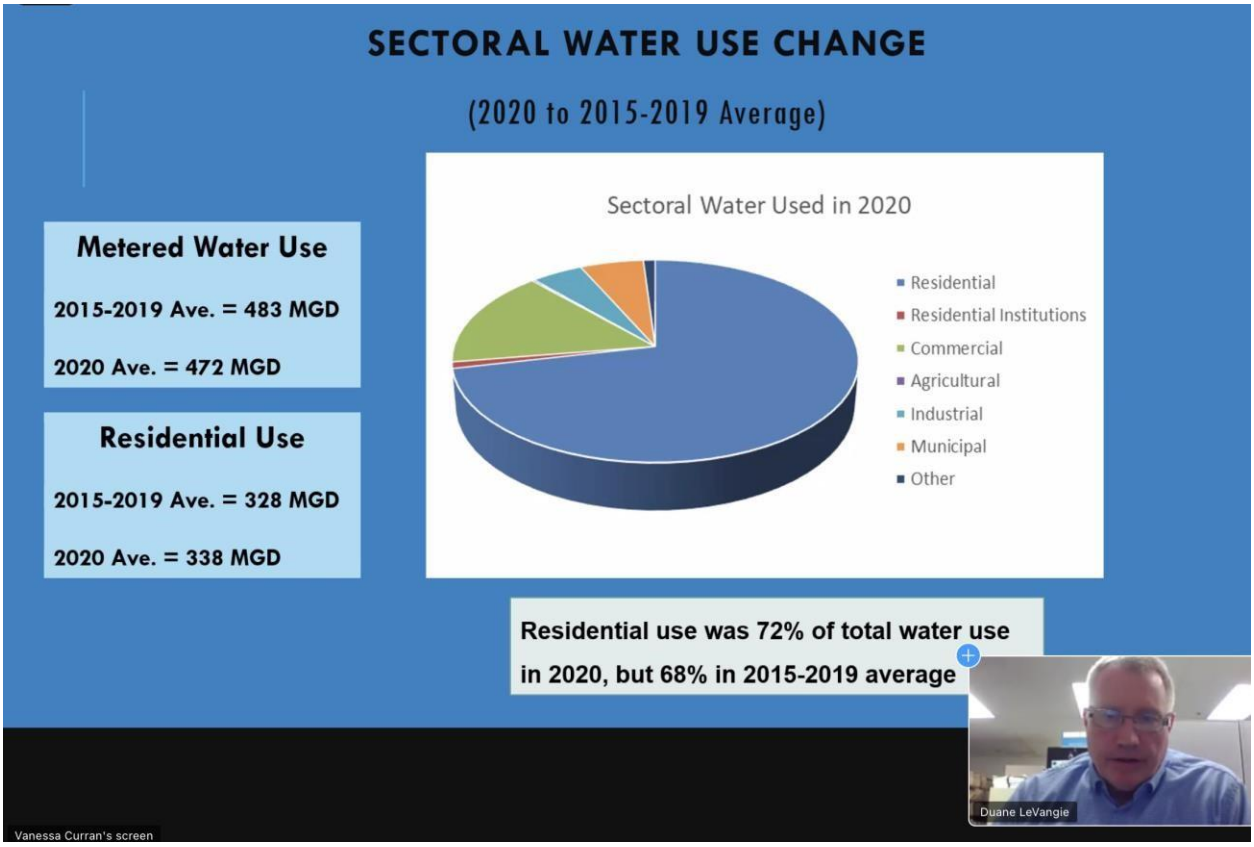
- Increase efficiency and cost effectiveness of claims
- Expedite restoration
- Ensure Commonwealth and its citizens are compensated for natural resource injuries



Presentation: 2015-2020 Massachusetts Public Water Supply Use Trends

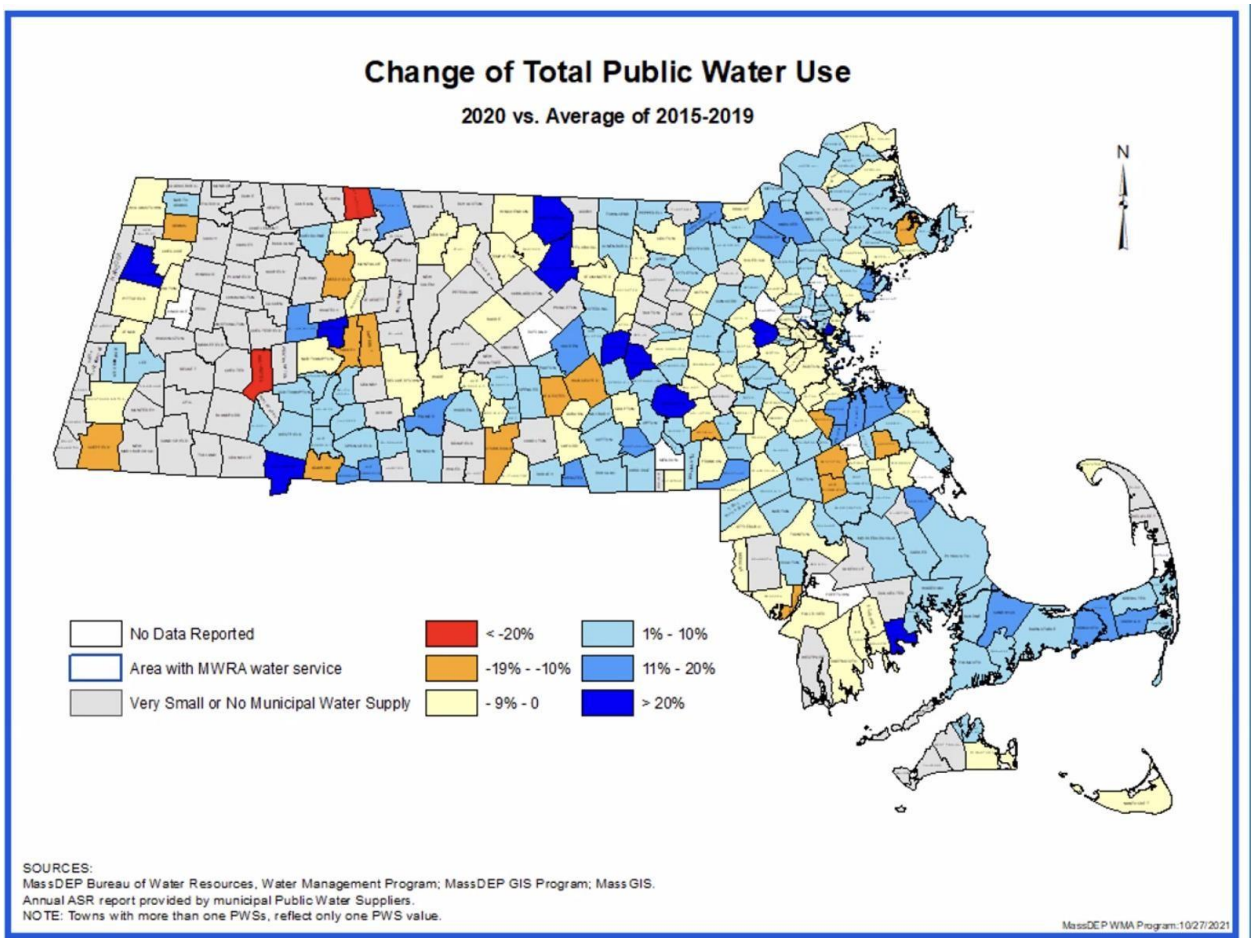
Duane LeVangie

More detailed summary of the annual review of the data.



Effect of COVID: the residential use expanded, commercial shrank.

Where water use changed:



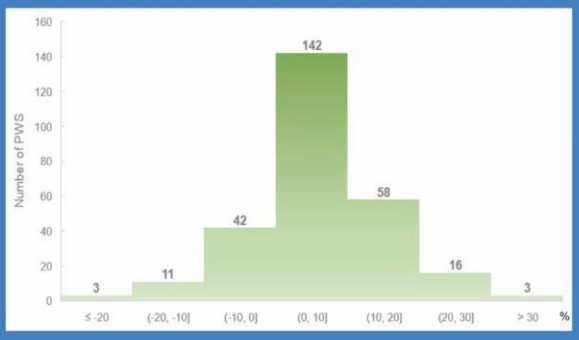
Overall, water use declined by $10m gallons/day

2015-2020 RGPCD DATA SUMMARY

	2015	2016	2017	2018	2019	2020
RGPCD Average	58	58	55	55	54	59
# PWS at 65 ≤ (%)	198 (77%)	199 (78%)	217 (87%)	212 (81%)	227 (88%)	194 (76%)
# PWS at > 66	60	55	33	40	30	61
RGPCD Range	25/127	25/135	24/112	25/110	28/99	26/139

RESIDENTIAL WATER USE CHANGE

(2020 to 2015-2019 Average)



Decreased water use in 2020 vs. 2015-2019 average:

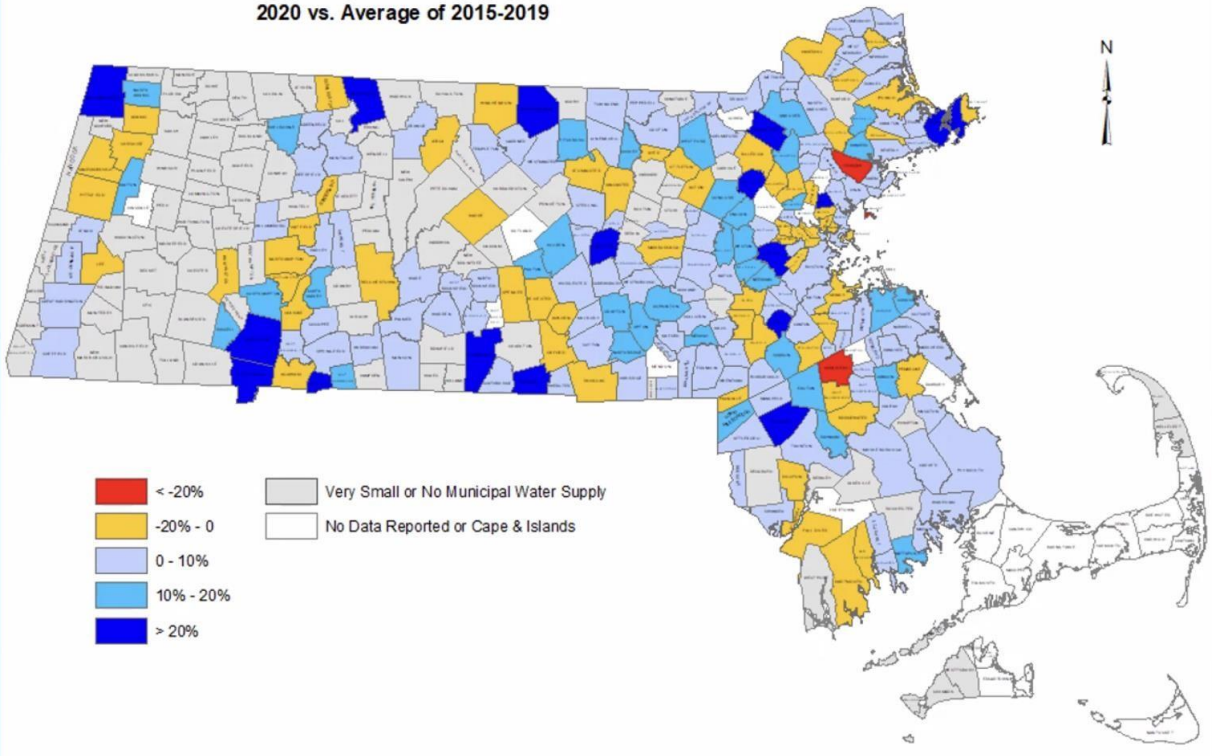
- Lowest percentile decrease in residential use was 41%
- 14 PWSs decreased by more than 10%
- 3 of those 14 PWSs decreased use over 100 MG
  - PEABODY WATER DEPT
  - FALL RIVER WATER DEPARTMENT
  - SOMERVILLE WATER DEPT

Increased water use in 2020 vs. 2015-2019 average

- Highest percentile increase in residential use was 53%
- 19 PWSs increased more than 20%.
- 5 of those 19 PWSs increased use over 100 MG
  - SANDWICH WATER DISTRICT
  - MELROSE WATER DIVISION
  - NEWTON WATER DEPT.
  - LONGMEADOW WATER DEPT
  - GLOUCESTER PUBLIC UTILITY DIVISION

Change of Residential Gallons per Capital Day (RGPCD)

2020 vs. Average of 2015-2019



SOURCES:
MassDEP Bureau of Water Resources, Water Management Program; MassDEP GIS Program; Mass GIS.
Annual ASR report provided by municipal Public Water Suppliers.
NOTE: Towns with more than one PWSs, reflect only one PWS value.

MassDEP WMA Program:10/27/2021