

WAC
5/15/20, 10:30 am
Virtual

WAC Members: Mary Adelstein, Craig Allen, Philip Ashcroft, George Atallah, Adrianna Cillo (BWSC), Wayne Chinouard (vice-chair), Zhanna Davidovitz, Stephen Greene, James Guidod (AB), Taber Keally, Karen Lachmayr (chair), Martin Pillsbury, Dan Winograd, Kannan Vembu

WSCAC Members: Paul Lauenstein

Staff: Andreae Downs

MWRA: Wendy Leo, Sean Navin, Claudia Baptista, Sally Carroll, David Duest, Denise Ellis-Hibbett, Debra Farmelant, Margery Johnson, Nate Little, Ester Lwebuga, Patricia Mallet, Geetha Mathiyalakan, Meredith Norton, Katie Ronan, Patrick Smith, Maret Smolow

Guests: John Dimodica (Noresco), Michael DiBara (DEP), Ann Lowery (DEP), Lexi Dewey (WSCAC), Michael Amar (NYDEP), Jane Gjwana (NYDEP), Sharon Nall (NH Department of Environmental Services), Kendall Christiansen (industry consultant), Lou Taverna (Advisory Board)

VOTE: April Minutes

REPORTS:

Advisory Board: budget recommendations, summary at WSCAC meeting. Adopted by the MWRA Board at its early May meeting.

Community loans—distributed to the communities from the MWRA, already some flexibility in how to distribute and collect them. Do borrow to finance them. Paid for through regular assessment program. Comm. Have 3 years of deferral on one or both loans.

Budget—used same process, but this year more streamlined. In many cases were able to reduce spending estimates in ways that AB usually suggests, but this year the MWRA took their assumptions on how many positions will remain vacant (both in the Authority and at DCR's watershed division) to heart.

Also cut capital financing account. Due to defeasance, so had some flexibility to do that. The Advisory Board argued, and the MWRA agreed, that a 1% rate increase gave the lowest possible rate increase to communities this year, while ensuring future increases would be steady and predictable.

Also received debt service assistance, which was subtracted directly from community assessments of those communities that paid into the sewer debt account.

Lou Taverna explained how this flexibility allows communities to either keep rates low to reduce the impact on households, or to continue to do needed work in the face of lower water sales and delinquent accounts (details in the Director's Report, below).

MWRA: —lot going on with the CSO variances. Public briefing May 28th, 10am (virtual). Hoping to start sending out notifications fairly shortly for any CSO releases.

May 27 virtual MWRA board meeting

OMSAP subcommittee meets May 19th. They are still looking at ways monitoring program can be modified to address more current questions.

Administration of MWRA is planning for a return to the workplace, but until get state guidance, nothing is imminent.

CHAIR: Thanks for presentation.

Anaerobic digestion and beneficial re-use of gas is 50% plus of renewable energy, so the Wastewater Advisory Committee has historically and will continue to be very interested in this topic.

WAC is interested also in co-digestion if possible, but the question is the market for food waste and tipping fees. Greater Lawrence is now taking much of the metro-area food waste.

WAC is very interested in monitoring the further optimization of energy production with di-gas, as new and better technologies continue to emerge/develop. The CHP study will help us understand more about what more can be generated.

DIRECTOR—report attached

PRESENTATION

MWRA's Energy Program Update

Denise Breiteneicher, Program Manager, Energy and Environmental Management; Robert Huang, Program Manager, Energy Management, Deer Island Treatment Plant

Overview: The MWRA's Energy program grew organically. From the start, the goal was to manage total energy consumption to reduce the amount paid for energy, cut peak demand, improve efficiency and meet greenhouse gas reduction goals.

First took care of low-hanging fruit—lighting changes, variable-frequency drives (for motors on pumps and ventilation fans), no/low cost process changes (shaft level adjustments, secondary operational changes) energy audits, building management systems.

Now MWRA is moving into incorporating energy savings into facility rehabs. Taking the audits when doing facility rehabs and building it into the design. That doesn't mean MWRA is ignoring

any remaining lighting or individual energy project, but now becoming incorporated into engineering design.

MWRA has negotiated MOUs with Eversource and NGrid. They give us more money per KWH saved, but also go out of their way to give us advice, free audits, etc. Also, MWRA receives grants from DEP, explores new technology from Mass. CEC, and even work with outside groups such as NEWEA, representing wastewater plants all over NE to give MWRA energy saving ideas.

Focusing on efficiency—still some low hanging fruit out on DI, including lighting and VFDs (variable frequency drives). Demand Response with utilities, renewables—RFP out for a solar canopy over several parking lots.



New Projects Moving Forward at DITP

- DITP Solar PV Canopy/Battery Storage
 - Location: Parking Lot #1 and/or Parking Lot #2
 - Capacity: 1 MW canopy/250 kW battery
 - Status:
 - Power Purchase Agreement RFP issued on February 19, 2020
 - Proposals due May 27, 2020
- DITP Combined Heat and Power
 - Initial report issued w/performance and economic evaluation of existing system



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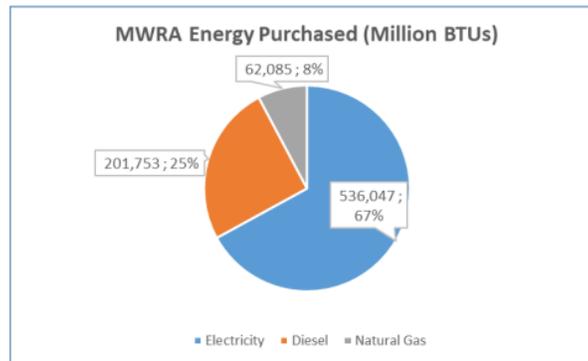
Overall, MWRA purchases a lot of energy. \$20m/year on electricity. 66% of electricity used at DI.

Use about 1.5m gallons of diesel. DI is 60% of that purchase for supplemental boiler fuel for heating, and for backup generators.



Background – MWRA Annual Energy Purchased

- Electricity:
 - 157.1 GWh and \$18.2M
 - 66% and 55% DITP
- Diesel:
 - 1.5M gallons and \$2.9M
 - 60% DITP
- Natural Gas:
 - 621K therms and \$0.6M
 - 0% DITP



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Natural gas—DI doesn't have any. Other MWRA-owned facilities use about 600K therms. If look at as BTUs, 2/3 of purchases is electricity.

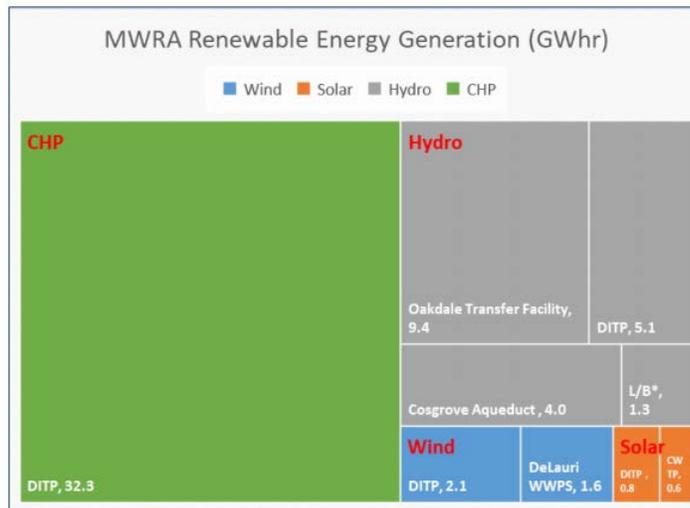
MWRA self generates about \$6m/year in electricity. Another \$500K/year in RECs

More than half of MWRA renewable energy generated is CHP. Next is hydro power



Background: Renewable Energy Generation at a Glance

- Combined Heat and Power (CHP) at DITP leads effort
- Followed by
 - Hydro
 - Wind
 - Solar



*L&B stands for Loring Road Covered Storage Facility (1.2 GWhr) and Brutsch Water Treatment Facility (0.2 GWhr)

Everyone sees the wind and solar, but it's the hidden stuff (hydro and CHP) that really gives us all the renewables. Looking to bring more solar/battery storage projects online.

DI North Main pump stations—refurbishment saved us \$20K/year by coating it with epoxy. Earlier payback because of \$60K incentive.

MWRA energy projects completed recently—LED lighting at Southborough, \$7.5K savings Alewife pump station—as part of the rehab. Cosgrove needed a new roof, so added a lighting project with LED lighting.



Recently Completed Projects

- DITP North Main Pump Station Pump 9 Refurbishment -- epoxy coating/rebuilt -- saves \$20K/yr. and 2 yr. payback with \$59K incentive
- Southborough Interior LED Lighting Replacement – saves \$7.5K/yr. and 10 yr. payback with \$14K incentive
- Alewife Brook Pump Station Rehab included upgraded HVAC, VFDs on ventilation, more efficient pumps, insulation and energy efficient windows and doors
- Cosgrove Control Room Lighting – replaced old lighting with LED when roof was replaced



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Still working on teasing out the savings—one of the harder calculations when you incorporate energy efficiency into a larger project

Next—doing projects with battery storage—hoping this will cut off peaks from renewables, not act as a backup power source (those take too much energy)



New Projects Moving Forward – Battery Storage

- Battery Storage at Brattle Court and Chelsea
 - Funded through Eversource Grant
 - Each system is 250 kW capacity
 - Utility Interconnection Service Agreements approved and signed
 - Currently building foundation at both sites



Chelsea Battery Storage Pad

Each battery pilot will be driven by artificial intelligence. MWRA got a utility grant for this work because it will help utilities see how well the artificial intelligence model works for different types of facilities.

These are lithium ion batteries. There are other technologies, but not ready for deployment at MWRA yet.

Carroll Treatment Plant with its UV disinfection is also a big user of electricity—just not as much as Deer Island.

What is the payback period? Lights are predicted to last 18-20 years, so if they payback before the useful end of the light, MWRA will make the investment. These lights are also better for working environment. Incorporate all those questions. With incentives, lights are between 5-8 years payback (longer payback does not include the maintenance savings of having to change bulbs)

Excited about solar/PV canopy at DI to cover the big parking lots. Estimate will be about 1MW with a 250KW battery. Under a power purchase agreement so will lower cost of MWRA electricity. Agreement and installation proposals due end of May. Would double DI solar capacity and bring battery storage.

Will these arrays be leased or owned? A power purchase agreement (PPA) means a developer finances, designs, builds, owns and operates the solar canopy/battery power system on the DITP site. MWRA simply purchases discounted electricity in a 20-year fixed price agreement through the PPA. If market conditions change, MWRA can purchase the solar canopy array and battery storage system in 7 years. MWRA has no capital expense in this until then.

Combined Heat and Power Plant at Deer Island—screening a number of options about how to configure a new system (the current one is over 20 years old). The configuration MWRA will choose is probably one that produces power first, heat as a byproduct. It currently is the other way around.

Planning on lighting upgrades for Clinton—lights are old, dark and not efficient. Putting this contract together with Carroll (now going from fluorescent to LED and with new lighting controls). DI is piloting new lighting.

Nut island in middle of rehab design, looking at energy efficiencies is part of Chelsea Creek headworks rehab also.

Braintree Weymouth pump station—various energy savings components built into design. In design now.

Questions:

Looking at switching to air source heat pumps, promoted by the CEC, to replace or supplement oil heat in different facilities. The economics generally are not favorable for gas heating systems.

MWRA installed a geothermal heat pump system at the Wachusett Aqueduct Pump Station. Air source heat pumps are more cost effective.

Electric vehicles are in the fleet, MWRA is adding charging stations. TRAC staff have 2 vehicles because usually driving within the service area.

What about floating solar on reservoirs? MWRA still has land to use for more solar—and that's cheaper than it is on water. Staying abreast of the technology. Possible issues: What if kids throw rocks on it? What about algae growth? What would be impacts to water quality in reservoir?

Timeline for CHP—currently, engineering study looking at CHP and other options. Expect recommendations in a year, then get out a contract to implement the findings. CHP would be 3-5-year design, construction following that. 4-6 years before really start construction. 10 years by the time it gets implemented. Lot of assets may need replacement by then.

Does MWRA have a graph over time of energy usage and efficiency over time? Won't see much over the last 10 years, despite more solar on board. Solar and wind don't influence the total much compared to energy use. CHP project will influence that. But won't see other major drops.

Is 1/3 of total energy production CHP? No, more than half. Using digester gas. Greater than 98% of digester gas is beneficially used on DITP.

Next meeting June 5, 10:30

WAC year-ahead planning

Director's Report

NACWA Water Week Webinar 4/29

Andrew Sawyers, Director, Office of wastewater management, EPA—

Crisis has shown the importance of resilience in the water sector.

What is our response? COVID is the top priority right now.

- Designating water workers as essential
- Working with CDC and research community to better understand virus containment, disinfection in water
- Surveillance research with CDC
- Regulatory flexibility (office of compliance assurance) Agency will exercise discretion when it comes to inability of WWTP to comply with regulations because of the pandemic. Continued operations more important than the reporting rules when there's no ability to do both.
 - Also changes to how to meet various reporting requirements when you can't send in an actual signature on an actual piece of paper (for example)
- Questions on pre-treatment
- Stormwater discharge FAQs, to ensure that can address requirements in the crisis.
- Also questions in the agricultural community—excess milk and how to handle, mortality...

Updates on other priorities

- Guidance to states on flexibility in the SRF particularly with repayment
 - SRF rates at federal level are at 1% or lower
- Affordability work—will likely incorporate AWWA suggestions.
- Integrated planning tool—continuing to work on. Have an interim ombudsman, looking for a permanent one. Encourage municipal participation
- Peak flow blending—conversations internally and outreach done. Think have a path forward, but not on a fast track with the COVID

Jennifer McClean—director, office of ground water and drinking water EPA

Working on issues around water workers' absences due to the virus, providing information and access to same for all essential workers.

Q&A

Sawyers—know that utilities are losing money. Looking to help out.

In response to a question about how to access the very low Fed. SRF rate directly, wastewater utilities cannot get around the state or local SRF fund.

Any incidents of staff illness that put operations in WWTP at risk? Can we use private contractors?

A: Don't think any systems have been compromised, to his knowledge

Congress-critters: (didn't get names, all men—two from H two from S, prerecorded. Bipartisan). Some pushing back against President's loosening of WOTUS. Messages on importance of clean drinking water. John Kafka (?) Rep Jared Huffman.

Public works lobby: want NPDES permits to switch to 10-year rather than 5-year.

Losses just in the drinking water side may exceed \$14billion

Advisory Board Executive Committee 4/30

Joe Favaloro: Since CEB transmission in February, have had to reinvent how to do budget review. Agreed with Fred Laskey that the increases for FY21 should be smaller than usual, and that communities should get their rate increases earlier.

Fred Laskey: Clear that the economic impact will be devastating. Pressure on cities and towns is intense as well. Agree time for dramatic action. Response is a package of relief for communities and ratepayers for the next two years, potentially the year after that, and protects the predictable rate strategy in the years following.

Travis Ahern: Rate Mitigation Efforts:

1. Reducing the rate revenue requirement to 1% (from 3.6% proposed)
2. Reducing the "total payments" that communities make to the MWRA by allowing for loan repayment deferrals.

Two main documents:

- One-page balanced budget
 - Gross budget less "non-rate revenue"
 - Budget cuts since original proposal
 - Impacts of virus on revenue
- Revised community assessment summary
 - With and without loan deferral options, by community
 - Sent to ExCom on Wed.
 - Revised assessments will be sent after MWRA board meeting

Not really focused on 2.4% by 2024 now, just sustainable and predictable

Direct expenses reduced

- \$905K in personnel costs (not personnel just recognizing vacancy rate)
- \$1.34M utility reduction (oil market)
- \$100K cut from travel for training and meetings, conferences, etc.

Indirect

- \$469K reduction to reserves
- \$90K increase in watershed \$ (still below DCR request)

Retirement board meeting today—vote on new funding schedule that would reduce the FY21 contribution by at least \$1million — Advisory Board will also ask for an OPEB reduction

Capital Financing—over 60% of budget

- \$22.13m in reductions because of tools like defeasance, playing with the lower interest rates

Revenue

- \$7m reduction in interest income
- \$1.5m reserves put to HEEC
- \$20m reduction in rate revenue from communities

Why 1%? — looking beyond FY21 and want to keep future increases smooth

Breakdown of water vs. sewer—if go lower, going into negative increase for sewer and higher increases on water side. Can't avoid rate spikes in future years if go below 1%

How can communities get below 1% this fiscal year?

Deferring loans—FY20, 21 and/or 22 to smooth increases. Stoneham has taken advantage of this in the past. Impacts will continue after this fiscal year.

Can be a significant amount that MWRA does not see until FY23.

For each community, the rates vary—but some will see a rate reduction if take advantage of deferral. Some towns, like Brookline and Lexington, will not see quite as much of a reduction because don't have much loan to defer, or have increases in water use.

Whole advisory board vote is 5/4. MWRA board May 6.

Communities would decide on whether to defer 2020 loans by June 1. For FY21, MWRA will need to know by July 31. And for FY22, sometime in FY21. Will work individually with communities to restructure loans. But better to set up all at once, impacting many years. Repayment is probably at the end of the loan term.

Bernie Cooper—agrees that would be best, but doesn't know where water demand is going and communities may need flexibility.

Fred: would prefer to know the multi-year plan for stability, but can be flexible.

Matt Horan: even if only looking at one year, will have to look at multiple years.

CIP review will come later in the spring because it doesn't affect current rate increases.

Future rates stay under 4%. Communities can defer loans to keep those future rates lower up to FY24.

There's a draft revised @1% sheet of rate increases by community. Subject to change based on AB and MWRA board votes in coming meetings. Final sheet will be published after the May 6 board meeting.

FY21 Advisory Board budget at \$599.7K Reductions are the intern position and some rate calculator work carried over from last year. Some increases in staff pay (step increases), outside auditor.

What's in the outside auditor line: was a part-time person in-house, now outsourced. Do payroll, reconciliation, tracking all expenses and income. Still in-house is accounts payable.

Advisory Board 5/4

Lenna Ostrodka: Moving at end of May to Chicago to be closer to family. Is having a baby in Sept.

Joseph Favaloro—February he started mantra of Free of 3. All that changed when the virus and impacts became clear. Far more important than any Advisory Board comments. Focused instead on important goals of communities and how to help. AB role to provide cost mitigation to communities. Not just rates, but any other charges MWRA puts on a community. Looking now at community loans. Also then looked to expedite the budget so that communities could plan. Final assessment will be voted by the MWRA Board on Wednesday.

Also looking at stable rates in the years after this one.

Fred Laskey: thanks staff on both sides for hard work on the budget. Differentiates between charge and assessment. Dramatic decrease in the rate increase, plus deferral on loans to give communities flexibility without added costs. No idea of the financial hit of the virus on the communities' or state's budgets. Retirement Board took a vote last week also.

Travis Ahern: Rate mitigation efforts

1. Optional deferral of loan repayments in FY 20, 21, 22 both water and I/I
2. Budget/rate cuts—down to 1% combined

In combination, these will allow 49 of 60 communities to decrease their total payments for FY21.

Some communities have a due date for FY20 loan repayments of May 15, but that has been deferred to June 30 to give them more time to decide. A breakdown of loan repayments will be sent to each community.

Over \$9m still due in such loans in FY20, in 21—\$32m, in 22—\$29m. More of it is water than sewer.

Budget—retirement board voted to reduce the contribution schedule by \$1m—this will be used to defense debt after FY21

Capital financing and debt repayment will be reduced, partly because of earlier defeasance.

Revenue cut from lower interest rates, using HEEC reserve, and \$20m reduction in rate.

Why 1% and not lower? Ability of MWRA to smooth rates after FY21, esp. water & sewer.

Sewer only communities will see a flat 0% rate, Water will see 3.6% rate increase.

Laskey: this is not simple—it was a lot of work to put this program together.

Coming:

1. Revised assessments at 1%

2. Community decisions on loan deferral
3. CIP review in May-June

Bernie Cooper—endorses the plan.

Laskey: we are in uncharted waters. Don't know what the new water usage picture will be. Boston's water use down.

John Sullivan: we are down about 15% now. We don't expect that to come back right away. The percentage we pay the Authority is reduced—so that percentage is spread out across other cities and towns. So what happens in 2-3 years if those communities have to start back with loan repayments as their water use is increased and their residents aren't necessarily making payments?

Ahern: Certainly, there is a risk in deferring (loan repayments). Stoneham asked for a deferral, but then gave residents a 0% increase, which led to a higher rate down the line. That's a community decision. Will have to make projections based on data that may be incomplete.

Favaloro: there is no silver bullet. It's a bridge. This is an attempt to address the short term needs of communities. May have a future impact.

Unanimous approval. The vote and recommendation will be sent to the MWRA Board.

AB budget: increases a little over 2%. Driver is mostly in audit and accounting consultant.

Working out whether the June workshop on PFAS will happen; DEP may or may not have new requirements by then.

MWRA Board 5/6-- virtual

Chair K. Theoharides:

EEA: focused on making sure residents have safe access to parks, open space, recreation, utilities. Commissioner Suuberg meeting regularly with water utilities on PPE, testing. Tracking arrearage data. Exploring how can open recreation economy; food establishments. 78% of staff work remotely. Looking at that as an operations best practice for a while yet.

Director's Report:

Seems like a lifetime ago Governor's office called and told MWRA to adjust to remote work to the extent possible. Radically transformed how MWRA does business. Alternative methods for in-person work, many working remotely. Electronic signatures for approvals. Seven confirmed cases to date, a number of presumed cases, but so far no one needed hospitalization so far. Educated staff on monitoring their own and others' health, and not come in if any doubt. Aggressively contact tracing. Making sure everyone has needed PPE. Yes, RNA is in the wastewater stream. Maintained service on both sides. Found ways around the obstacles so far. This can't go on indefinitely. Some of this may be a permanent change, but still need to do maintenance work. Developed a comprehensive plan of how and in what steps can come back in phased approach. Looking also at childcare needs of staff, being empathetic.

Items before us today: comprehensive 5–piece plan to provide flexibility to our 62 communities. Longer view, giving communities flexibility to ease the impact over the next 3 years, and doing so early. Most communities run enterprise funds. Knowing what the plan is ahead of time, important for the CEOs.

Joseph Favaloro: flexibility. Keeping rates sustainable and predictable longer term.

Tom Durkin: rate relief, with multi-year rate stability

Meeting approvals:

1. Loan deferral—Town of Stoneham experience to defer to end of loan term. Impact: -2.95% rate decrease in FY21. \$75m cushion total. Allows a tailored way for communities to reduce their contribution.
2. CEB—cuts to get to the 1% rate increase. Cutting expenses by
 - a. \$2.8m direct (energy & utilities, wages & salaries—current vacancy rate—other materials (fewer vehicle purchases, deferred), training & meetings;
 - b. Indirect by \$300K, offsets
 - c. Capital spending—defer
3. Assessments water—3.6%, sewer -.3%, combined 1%, with out years less than 4%, but more than previously projected.
4. Defeasance—\$30.6 million to provide targeted rate relief
 - a. Provides greater relief in early years
 - b. Revised from the proposed
5. Debt Service assistance: got \$892K, going to offset the June 1, 2020 assessments of communities who pay in to the sewer debt costs

Henry Vitale—on behalf of Mayor Walsh, employees of BWSC and people of Boston—thanks for meeting mission of clean drinking water & wastewater clean-up. Great information early from MWRA staff.

All items pass unanimously.

Laskey—going to propose more meetings for May and June to get business taken care of—easier when nobody has to travel. Thanks Advisory Board and Finance staff for work on the budget proposals.

Chair Theoharides thanks the MWRA team for the hard work on the budget package and making sure that water & sewer continue. And for donating PPE to hospital workers. Thinks teleworking has allowed for some efficiencies.

WSCAC 5/8

Announcements: Quabbin 99% full. Demand low. Plenty of water. If it rains, Quabbin will spill over the lower spillway. Full enough at Wachusett that haven't been able to transport from Quabbin. Hope to be able to do so within the next 2-3 weeks.

Stephen Estes-Smargiassi

Pandemic update: things going pretty well. Regular meetings with DEP on COVID. Lots of activity, to coordinate and to give MWRA flexibility if possible.

100% of office staff is out of the office. March 16 Steve's last day in the office. 400+/- working from home. IT folks have been doing fabulous job of getting staff access to their office computers.

Some longer-term projects—collaborative work (dam safety plan, hard copy update needs to be driven to each city or town) are on hold, but most things are getting done if they can be done remotely—updating the drought plan, data analysis. Some research on EV policies in other agencies.

100% of drinking water sampling going on—a little bit of a strain. Data looks good. One of our worries early on was that communities would lose primary staff to sickness, using less experienced samplers, rushing, using different locations. Worried the bad water sampling practices might end up with a boil water order.

Produced a full set of photo SOPs on how to do sampling. Gave to DEP, which sent them out to every system in the state.

Field Staff: Where possible, reduce staff to allow more distance. Have eliminated the overlap in Operations Control Center—no debrief. And on other operations—one team in the field, while another stays home—week on/week off. No mustering. Doing less maintenance, i.e. landscaping.

Next step: thinking about how to bring people back to the office. Also thinking about rotation there. Even those working from the office will be socially distanced. Will continue to use web meetings.

MWRA Board Meeting update Know that communities may be having difficulties. Came up with suggestions to maximum flexibility and minimize rate increases.

- Shifting loan repayments out. Numbers are up online for each community
- Using money from the DSA to directly apply to the community monthly payment due in May for immediate rate relief.
- \$25m out of current CEB to reduce rate increase to 1%. Some was easy, some direct impacts on operations.

Financial Impacts of COVID on communities—chart from AWWA.

Shows water use down, Boston has 14% decrease in water use. Waltham 13%, Nahantan (that one was a leak). Suburban communities have more increase. Chelsea is flat (food service businesses still open).

Stoneham has the most increase—not entirely clear why. Swampscott, largely residential, 13% increase.

Garden watering probably down after wet April.

Financial impact of the COVID crisis—association of water works received feedback that other industries were coming in with specific asks of Congress backed up by charts. Needed a better story line for the water utilities to get stimulus \$\$\$. So have produced a report quickly.

Categories included:

- Less sales—less \$\$\$

- Delinquencies—some water utilities have a shut-off threat and fees to heap on, but nearly every state has eliminated these options. Once folks know that, they may be more willing to stiff the water utility because there's no penalty.
 - Means have to borrow
 - Or are in deficit
- MWRA and other utilities bringing in additional computer equipment, additional cleaning, higher phone costs,
- Many utilities around the country get revenue for new development hook ups. Anticipating that growth will slow or stop.

MWRA thinking about changes in water use patterns since the shutdown. Core metropolitan area—may have lower growth rate in the near future.

About to send design work on the metro tunnel redundancy to a design consultant.

Will need to look at in a year or two with 2020 Census data and MAPC, and adjust demand assumptions. May help to have some additional growth in the suburbs, less in the center of the metro area.

All projections are wrong—just some are more useful than others. Tunnel will be built by 2037 and has a useful life of 100 years. Not making projections to 2137!! Projections are also dependent on whether current people will use same amount of water as do now, and whether new people will use more or less than current people.

To some extent, assume new users in high rises in Boston will use less water than a suburban resident in Weston.

James Guidod: DSA is going directly to communities, usually goes to defeasance.

AB is now done with budget review process. Very fast process this year.

Lou Taverna: Water enterprise accounts in most communities mean that rates fund the accounts and water work.

Newton is now wrapping up the water budget for FY21. Know we have fixed costs—personnel, etc.

Loan repayments can amount to as much as 60-70% combined with MWRA assessments. So any reduction is good.

Cost for 100cu ft. —calculate we need to raise \$10m, so estimate water use—say 1million units (100 cu. ft), based on whether will be a wet year or not. Set rates per 100 cu. ft. Based on this budget—set rate then at \$10/per.

Any decrease in MWRA assessments and loans, means can charge less per 100cf.

Same with MWRA—they have fixed costs, personnel, rent, debt service. They split their costs among water communities. On water communities, by flow share. If Boston consumes 30% of flow, that's what they pay. Newton buys 5%. In a year when Boston water use is down, Newton water use, not as much—this means Newton pays more of the share.

If people don't pay their bills, Newton & other communities don't shut off water, but put the defaulted payment on the tax bill.

Some work is on hold, like water main work, because would have to enter homes & turn off water, and people are working at home, with kids home from college, so is really inconvenient to shut off.

Can shut roads easier, because traffic is so light. But also risk of breaking something when you start construction—could hit the water main or also the gas main. Last thing Lou wants to do. Trying to balance.

Steve: Restarting needs to be thought through in buildings—films and Legionnaires can form in the water pipes and sicken people if the water pipes aren't regularly flushed. MWRA will put information up on their website. Customer outreach that needs to happen.

He went in to the Charlestown Navy Yard offices and decided not to get a cup of water from the kitchen tap.

Water Resources Commission 5/14

Directors report: COVID update—much as it was last month, remote working, lots more meetings

Kathy Baskin, DEP—weekly meetings with permittees and trying to answer questions of wastewater operators in real time and on the DEP website. Distributing cloth masks from FEMA for water and wastewater operators. Applied for masks, got 38,000, heard would get 90,000. Other states got masks, sometimes more than MA.

Working on questions, including around permit violations—are they unable to collect wastewater samples, how do they open buildings or close them.

Duane Levangie, DCR?—water restriction time is upon us, but have had enough rain that not really needed yet for outside watering.

Hydrologic report:

April was wetter than normal. Streamflow is normal or above normal. Groundwater also, with two drier than normal wells and several wells higher than normal on the cape.

Below average for snow this season. Northeast Regional Climate Center webinar did a recap.

April also cooler than normal. No drought conditions in the state.

Next three months—no strong signal for precipitation, but expect higher than normal temperatures.

Updates on Interbasin transfer act applications

- Auburn: Blackstone River Valley transfer—MEPA reviewing and WRC commenting
- Shrewsbury—proposing transfer (may not be applicable under ITA), from existing wells to a new, replacement well. Also Blackstone river withdrawal, but wastewater to the Concord basin.
- Foxborough—have a conditional decision to allow withdrawal from Witch swamp. Looking to make some changes to the monitoring

Why so many applications? Mostly because current sources show contamination (PFAS)

Burlington's application for admission into the MWRA water system:

(Vote is to accept as complete):

Need to switch source because of lack of redundancy for their current reservoir and because of 1,4 Dioxane contamination in some of the source wells.

Will keep some wells offline, keep reservoir active, and add MWRA water of 3.5mgd average.

Decision on approval possible by August WRC meeting.

Draft WRC workplan, tracking progress in real time. —drought management, water conservation standards, water needs ITA, climate and streamflow predictions, flood management, and much more.