



THE COMMONWEALTH OF MASSACHUSETTS  
WATER RESOURCES COMMISSION  
100 CAMBRIDGE STREET, BOSTON MA 02114

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**Meeting Minutes for April 13, 2023**

Meeting conducted remotely via Zoom meeting platform, 1:00 p.m.

*Minutes approved July 13, 2023*

**Members in Attendance:**

Vandana Rao	Designee, Executive Office of Energy and Environmental Affairs (EEA)
Becca George	Designee, Department of Housing and Community Development (DHCD)
Kathleen Baskin	Designee, Department of Environmental Protection (MassDEP)
Tyler Soleau	Designee, Massachusetts Office of Coastal Zone Management (CZM)
Anne Carroll	Designee, Department of Conservation and Recreation (DCR)
Todd Richards	Designee, Department of Fish and Game (DFG)
Hotze Wijnja	Designee, Department of Agricultural Resources (DAR)
Thomas Cambareri	Public Member (joined at 1:24 pm)
Christine Hatch	Public Member
Vincent Ragucci	Public Member
Kenneth Weismantel	Public Member
Samantha Woods	Public Member

**Others in Attendance:**

Erin Graham	DCR/Office of Water Resources (OWR)
Jason Duff	DCR/OWR
Sara Cohen	DCR/OWR
Vanessa Curran	DCR/OWR
Viki Zoltay	DCR/OWR
Jennifer Pederson	Massachusetts Water Works Association
John Scannell	DCR
Katie Ronan	Massachusetts Water Resources Authority (MWRA)
Lexi Dewey	Water Supply Citizens Advisory Committee (WSCAC)
Andrew Gottlieb	Association to Preserve Cape Cod (APCC)
Kristin Andres	APCC
Andreae Downs	Wastewater Advisory Committee
Matt Olszewski	Tufts MPH candidate
Nicole Dewberry	Three Rivers Water District, Town of Palmer
Sarah Bower	Massachusetts Rivers Alliance
Stephen Boksanski	Green Industry Alliance
Richard Bradley	GIA & Superscape Landscape
Duane LeVangie	MassDEP
Katharine Lange	Massachusetts Rivers Alliance
Pine duBois	Jones River Watershed Association
Joanne Zygmunt	Old Colony Planning Council
Nadia Madden	DCR/OWR

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Rao called the meeting to order at 1:05 p.m.

**Agenda Item #1: Welcome and Introductions**

Rao announced that the meeting was being recorded for the purpose of the meeting minutes and all votes would be taken by roll call. All attendees were asked to type their name and affiliation in the chat window for the purposes of documenting attendance in the meeting minutes. Rao invited those who wish to speak during the meeting to indicate this in the chat window. Cohen conducted a roll call attendance of Commission members.

**Agenda Item #2: Executive Director's Report**

Rao acknowledged and thanked Linda Balzotti for her many years of service to the Commonwealth. Linda recently retired from the Department of Housing and Community Development and was the agency's designee to the WRC. Becca George is currently the DHCD designee. George said that Chris Kluchman will be the new DHCD designee once her approval is finalized. Kluchman is the Housing Choice program Director and also the Deputy Director of the Division of Community Services.

Rao noted that the Secretary's team is staffing up, with some new agency commissioners on board and a few more to be named soon. There has been a lot of focus and conversation on climate change and climate resilience and how the Secretariat can align its programs accordingly.

Rao added that in the meeting packet, there was a quarterly update on WRC special projects. The last update was in January. Moving forward we will be continuing to provide an update in writing, with periodic presentations on particular projects as more results are available. There was also a letter sent from the WRC to the Town of Groton, acknowledging that the Interbasin Transfer Act does not apply to their proposal to develop a new well, as they are relinquishing an old well and transferring the existing volume to the new well (no increase in the present rate of interbasin transfer). Hatch asked about the siting of the well, does that make any changes to the wellhead protection area and/or SWMI management of surface and groundwater connections? Rao responded that staff looked at that and it did not change as they are located close together in the town. DEP also looks at these issues.

**Agenda Item #3: Hydrologic Conditions**

Rao introduced Graham to present the Hydrologic Conditions Report for March 2023 (<https://www.mass.gov/doc/2023-march-hydrologic-conditions/download>).

- *Temperature*: Monthly average temperatures were above normal across the state
- *Precipitation*: Normal to above normal for the month except for the Islands Region where precipitation was below normal. The Central and Islands Regions are at elevated Index Severity Levels for the 2-month lookback period.
- *Snowfall*: snow cover only remained in the Western Region at the end of March, where there was a large storm mid-month
- *Keetch Byram Drought Index and Evapotranspiration*: the indices are outside of their reporting seasons
- *Streamflow*: Mostly normal, with one gage at the 29<sup>th</sup> percentile which is just below normal
- *Flooding*: the mid-month storm caused some minor flooding on the Assabet, Taunton, and Shawsheen Rivers

- *Groundwater*: Ranged from normal to above normal
- *Lakes and Impoundments*: Most are above 30<sup>th</sup> percentile/100% full, except for the site on Cape Cod
- *US Drought Monitor*: no drought conditions depicted on the map at the end of March
- *NOAA April Outlook*: shows equal chances for below-normal, normal, or above-normal temperatures and precipitation
- *NOAA 3-Month Outlook*: chances for above-normal temperatures and equal chances for below-normal, normal, or above-normal precipitation

**Agenda Item #4: Vote to approve meeting minutes for January 3, 2023**

Rao invited a motion to approve the meeting minutes for the special meeting held on January 3, 2023.

V O T E	A motion was made by Weismantel with a second by Ragucci to approve the meeting minutes for January 3, 2023.
	The vote to approve was unanimous of those present, with one abstention (George).

Cambareri joined at 1:24 p.m.

**Agenda Item #5: Presentation: Water Conservation Social Media Products**

Rao noted that WRC staff have been working with a design and marketing firm to help with messaging and visualization of water conservation/drought related products. We’ve been refining products and also created some new ones. This is perfect timing with Earth Week next week. EEA has been looking to put out some water conservation messages. Rao introduced Duff to walk through the products and noted that staff are open to feedback or any comments.

Duff showed all the updated and new graphics that staff have been working on over the last few months. They will be posted on the web in the near future. The first several graphics all pertain to drought levels, and can be used to notify residents and businesses about water conservation during the various levels of drought. The next series of graphics explore the theme of what we pay for when we pay for water – infrastructure, power/energy, treatment processes, and people. Rao acknowledged that staff worked with a small stakeholder group with MA Waterworks Association and several water suppliers to think through what would be most helpful to them and how to simplify/clarify the messages. The next group of messages include water saver tips related to both indoor and outdoor water use. These provide information on topics such as detecting indoor and outdoor leaks, saving water while washing cars, water-efficient appliances, and utilizing native and drought-tolerant plantings. Carroll added that DAR has an excellent website for finding native plants and the nurseries that carry them.

Baskin noted that DEP appreciates the development of these messages and the different topics that are covered. Commissioner Heiple has asked DEP staff to post similar messages for Earth Week and they will plan to use these products, kicking off for Earth Week and continuing through the summer. Richards agreed it would be helpful to include the link for native plants, and MassWildlife also has resources for native plant suggestions. Richards also had a suggestion for the “people” graphic in the series of messages related to the cost of water. He suggested tweaking the language from “Who really brings water to life” to “Who really brings water to your

life". Rao agreed with the suggestion. Hatch commented that these are missing any mention of impervious surfaces and the related stormwater treatment, which can be significant. Baskin suggested tying in stormwater reuse by planting rain gardens. Carroll provided the link to the MDAR plant finder: <https://www.mass.gov/service-details/choosing-pollinator-friendly-native-plants-in-home-gardening-or-landscaping>. Wijnja noted that the use of rain barrels can help minimize runoff and conserve water for outdoor use. Woods added that another thing we pay for is watershed protection to keep water supplies clean.

Duff continued with additional images that provide alternative ideas for watering plants, taking care of trees during drought, and golden lawns. The last few materials discussed that a heavy rainfall may occur during drought but doesn't end it, hydrant flushing, fire danger during drought, and how to report impacts to the Water Impact Reporter. DuBois suggested including recommendations on what type of grass seed to buy. Carroll added that WaterSense has some great information about efficient irrigation practices. Hatch provided a link to a film on impervious surfaces: <https://www.turnaround-films.com/1-0imperviousproblem>. Cambareri commented on the graphic that shows private and public wells share the same aquifer – he is ok with the intent but the scale of the drawdown for private and public appears the same on the graphic. Rao noted that staff are also working on a short video on droughts to share with the public which will take shape over the next few months. Pederson expressed thanks for the opportunity to provide feedback to improve the graphics and make them more usable for the water suppliers. Rao agreed that the feedback was very helpful in refining the messages. The full presentation can be viewed at: <https://www.mass.gov/doc/april-13-2023-wrc-attachment-water-conservation-social-media-products/download>.

***Agenda Item #6: Presentation and Discussion: Water Smart Landscaping Programs***

Rao introduced Samantha Woods, who is a WRC public member and also with the North and South Rivers Watershed Association (NSRWA) to give the first presentation. Woods described that the NSRWA program has been around for over 20 years and was originally called Greenscapes and focused on residential land care. Over the years it has evolved to encompass more than just landscaping and the name was changed to Watersmart South Shore to reflect that. It's a coalition of towns on the South Shore that participate in this educational program to help them send out messages around both water conservation and water quality/stormwater pollution prevention. Thousands of local school-aged children, adults, and businesses have been educated on these topics. The mantra is there should be nobody who doesn't know where their water comes from, where it goes, or how they can be better stewards of it. There are 12 communities participating this year – Cohasset, Duxbury, Hanover, Hingham, Hull, Kingston, Marshfield, Norwell, Pembroke, Rockland, Scituate, and Weymouth. Towns cycle in and out depending on their interest but for the most part these are the core communities.

What NSRWA provides to these towns is the ability to comply with their MS4 (Municipal Separate Storm Sewer Systems) permits from EPA, which requires targeted education to various audiences. The MassDEP Water Management Act also has education requirements but they are not as prescriptive as the MS4 permits. Towns can meet some of their educational requirements for both permits through the work that NSRWA does with them or on their behalf. It makes sense for a watershed association to partner with the communities in that watershed and help build the towns' capacities, especially as many towns don't have much capacity around education. Per the MS4 permits, messaging needs to go out to four specific audiences –

residents; businesses, institutions, and commercial facilities; developers and construction; and industrial facilities. Each audience has certain requirements.

The in-school program is the shining star of the educational components and has been presented in schools for over a decade. The “Water All Around You” program is geared towards the 5<sup>th</sup> grade and they aim to see all 5<sup>th</sup> graders in a town in the public schools participate, and can add on private schools if the schools would like. In 2022 the program was presented at 19 schools and reached over 3,000 students. This program has been shared on the North Shore as well, and about 350 parents per year are enlisted/trained to help run the stations. Other types of education include web, print, social media, videos, and events. There is an annual event called the Gardening Green Expo held in conjunction with a local nursery. It used to be a full two days of in-person lectures, vendors, and exhibitors to teach attendees about soil health, reducing the need for outdoor water, and planting more water-efficient and wildlife-friendly lawns and gardens. COVID has changed things and the event had to go virtual. Now it’s hybrid with Zoom webinars (there were 5 this year) and an in-person component. Well over 1,000 people attended the webinars and about 400 attended the Expo in person this year.

NSRWA also sells rain barrels from the Great American Rain Barrel Company and composters from Earth Machine. To involve artists, there have been a number of different campaigns. For example, rain barrels were painted by artists, displayed at local libraries, and given away as prizes. Artists also painted decorative fish and they were raffled off. Using grant funding, a video was created, recruiting people from the towns, to advocate for pledging to use water for people, not lawns. Woods also shared the website link [www.watersmartsouthshore.org](http://www.watersmartsouthshore.org) which provides information and links to materials. The full presentation can be viewed at: <https://www.mass.gov/doc/april-13-2023-wrc-presentation-nsrwa-water-smart-program/download>.

Hatch and George appreciated the great work that NSRWA is doing. Boksanski asked if NSRWA worked with anyone in the landscaping industry when creating these messages as there is some common ground. Woods responded that when this program first started a landscaper was hired to work with NSRWA to help develop the recommendations, along with doing a lot of research on best practices. It’s hard to find landscapers who are available to help with these sorts of things as they are so busy. NSRWA has also previously partnered with the Ecological Landscaping Association. Boksanski offered to connect offline regarding shared goals. Pederson asked if NSRWA was able to look at water use prior to and after implementation of the program. Woods responded that it hasn’t been looked at in this way, but over the past 20 years there has been a lot more awareness and acceptance of these practices. For example, in Scituate, the program has been run since 2003, and in 2011 a regulation was implemented to restrict water usage and that was measurable. Education reaches those who are open to it and regulation gets the rest. But the regulations can’t pass if the majority aren’t educated. Also with the droughts that have been occurring over the last few years, that has also prompted people to take more action. LeVangie added that Scituate has been below their registered volume over the last several years, and there are a lot of variables in play, but water use is below what it was 40 years ago.

Rao thanked Woods for her presentation and then introduced Andrew Gottlieb and Kristin Andres from the Association to Preserve Cape Cod (APCC), and asked Carroll to also say a few words of introduction. Carroll has been following APCC’s work for years as it intersects with a

number of issues that WRC/OWR staff work on, such as lakes and ponds, cyanobacteria, outdoor landscaping, and water quality. APCC has an excellent water smart landscaping program that they will be highlighting today.

Gottlieb noted that there is some overlap with the work that NSRWA is doing, but APCC is also approaching things with a water quality point of view. APCC's most recent State of the Waters report showed that 90% of embayments on Cape Cod fail to meet water quality standards and suffer from poor water quality due to nutrient enrichment, mainly from septic systems and to a lesser degree from fertilizers. The elimination of fertilizers by itself won't solve all the water quality issues, but the minimization of nutrient loading at the homeowner scale is the lowest cost action and the easiest to achieve. Many of the programs that Andres will highlight are aimed at getting people to kick the fertilizer habit, and also have implications on the water quantity side. Ponds are slightly less bad, probably due to less data but roughly 40% of monitored water bodies fail to meet water quality standards, primarily due to the presence of cyanobacteria. Nutrients, mainly phosphorus, and increased temperatures combine to make favorable conditions for cyanobacteria. The phosphorus loads due to fertilizer and the lack of native vegetation at the shoreline tend to lead to the washing of excess fertilizer into ponds.

Andres reiterated that 90% of embayments and 37% of ponds are suffering from unacceptable water quality. CapeCodWaters.org is a dedicated website for the State of the Waters project, and also has an action plan and atlas map. Andres focuses on landscape work and has been on the board for the Ecological Landscape Alliance for many years. Worldwide, more than 40% of insect species are declining. One-third are at risk of extinction. Twenty five percent of native wild bee species in the U.S. are at risk of extinction. Primary causes are habitat destruction, pesticide use, development, and a changing climate. Birds have also been affected, with 432 species of North American birds threatened with extinction. The Cape Cod Commission reported in 2014 that on Cape Cod, nearly 6 million pounds of fertilizers and 1.3 million pounds of pesticides are applied annually, with over 80% attributed to residential use.

To combat these statistics, we can shift away from the traditional landscape paradigm which is not sustainable from a water resources or biodiversity perspective. The shift would be toward ecological landscapes which are designed and cared for with nature in mind, to work with nature rather than fighting it with chemicals. Native plants are the cornerstone of an ecological landscape and are adapted to local conditions. Plants are the basis for life, and insects and plants have very specialized relationships. For example, monarch butterfly caterpillars can only eat milkweed. Birds need caterpillars for food, and 96% of bird species feed caterpillars to their young. When you don't have host plants for caterpillars, baby bird survival declines significantly. More than 70% native plants is the target. Steps to take include reducing lawn to what is needed (throw rug instead of wall to wall carpet); incorporating more native plant species; leaving leaves, seeds and stems alone to help support insects and wildlife; and avoiding chemical use. [www.Capecodnativeplants.org](http://www.Capecodnativeplants.org) is a native plant finder website to help people select native plant species, which are all well-suited to Cape Cod. In 2021 the Nauset Garden Club formed a steering committee for Pollinator Pathway Cape Cod. Andres is on the steering committee for APCC and close to 200 gardens fit the ecological landscape model.

Managing stormwater and keeping it on a particular property is also important so it doesn't contribute to larger municipal issues. Rain gardens are useful with the Cape's sandy soil and

APCC also has a rain barrel program. Gottlieb noted that not only do these native plantings not need fertilizers and pesticides, they also don't need excess water, providing water quantity benefits. The full presentation can be viewed at: <https://www.mass.gov/doc/april-13-2023-wrc-presentation-apcc-water-smart-landscaping/download>.

Woods asked who is APCC's rain barrel manufacturer and distributor? Upcycle products is their rain barrel provider, see link at <https://apcc.org/news-events/events/rain-barrels/>. Boksanski commented that septic systems are the largest contributor of phosphorus to waterways, and kudos to DEP for starting a new regulatory proceeding. It's also important to note the session law from 2012, Chapter 262, prohibits the use of phosphorus-containing fertilizers unless a soil test indicates it is necessary (<https://malegislature.gov/Laws/SessionLaws/Acts/2012/Chapter262>). Gottlieb agreed that septic systems are the biggest problem, accounting for about 80% of nitrogen loading in estuaries, but the DEP regulations on septic systems address the nitrogen loading but don't do anything about phosphorus as the technology to remove phosphorus in septic effluent does not currently exist. Regarding fertilizers, yes there is a testing requirement but there is no requirement to show test results to buy fertilizer with phosphorus. The average homeowner doesn't know about this requirement. Native vegetated buffers along pond shores are a way to minimize phosphorus runoff from a lawn. The reality is there is a long way to go on public education to the average homeowner. Boksanski agreed. Andres added that it's desirable to give people choices and resources for those who want to make changes.

Wijnja commented that there are state regulations for the use of plant nutrients, with MDAR having the authority, the main driver of which was water quality protection. Multiple communities on Cape Cod have taken the opportunity to develop their own bylaws. As required by law, MDAR worked with UMass to be consistent with their guidelines for proper nutrient management for lawns and agriculture with the objective of protecting water quality. Relative to lawn fertilizer, most types do not contain phosphorus anymore. Gottlieb responded that 8 of the 15 Cape Cod towns adopted local fertilizer bylaws, although most feel they are inadequate to protect water quality. One town, Orleans, passed a home rule petition seeking the authority to ban the sale and utilization of all fertilizers in the town. Harwich is taking it up as a petition article this month. Statewide regulations are good but the Cape has different hydrogeology and soil characteristics and may need different regulations at a local level.

Rao led into a discussion about what the WRC can do to encourage these types of efficient landscapes and asked for feedback from attendees on how to elevate these programs to a statewide level. Woods suggested that the digital materials presented earlier in the meeting are great for those who have the capacity to share, but capacity is always a problem. There isn't a lot of funding for education and water suppliers are up against bigger infrastructure problems. The MS4 permit is what NSRWA sold the water suppliers on since those are requirements that have to be met. Gottlieb added that they face the same challenges and APCC doesn't receive any municipal funding. The funding issue will always be a problem in the non-profit sector.

Carroll asked about stormwater utilities or any other funding sources related to MS4 that could help with the education/outreach piece. Woods responded that regulatory requirements do prompt investments and results, and that there are a few stormwater utilities in the Charles River watershed because they have to comply with their MS4 permits. Gottlieb added that there are almost no stormwater conveyance systems on the Cape so MS4's influence is very limited

there. Rao commented that there are a lot more stormwater utilities now than 10-15 years ago, maybe two dozen or more in existence, and asked Baskin if she had a more recent number.

Woods said that demonstration projects are really helpful and gave the example of the MassWildlife building in Westborough. Rao mentioned the DCR Growing Wild for Pollinators initiative which has created pollinator gardens on state properties. Carroll said the initiative is partnering with 15 nurseries this year to give away native plants, and hope to have some events at DCR properties as well. Baskin said she would look into the number of stormwater utilities and get back to Rao. Rao read aloud Pederson's comment in the Zoom chat which said she appreciates the recognition that water suppliers are challenged with real water quality and infrastructure issues. If the WRC wants to expand education efforts it should be a state-funded effort. And the majority of utilities do not have the resources to even push out ready-made materials so state staff might have to be considered to implement such a state-funded program. Woods suggested that the state reach out to the landscaping community.

Rao thanked the presenters and invited a motion to adjourn the meeting.

V O T E	A motion was made by Weismantel with a second by Woods to adjourn the meeting.
	The roll-call vote to approve was unanimous of those present.

Meeting adjourned at 3:17 p.m.

**Documents or Exhibits Used at Meeting:**

1. WRC Meeting Minutes, January 3, 2023
2. Quarterly Update on WRC Special Projects
3. Letter from the WRC to the Groton Water Department dated April 4, 2023 stating that the proposed Whitney Well No. 3 does not require Interbasin Transfer Act review
4. Interbasin Transfer Act project status report, April 6, 2023

*Compiled by: (VC)*

*Agendas, minutes, and other documents are available on the web site of the Water Resources Commission at <https://www.mass.gov/water-resources-commission-meetings>. All other meeting documents are available by request to WRC staff at 251 Causeway Street, 8<sup>th</sup> floor, Boston, MA 02114.*