THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION

100 CAMBRIDGE STREET, BOSTON MA 02114

Meeting Minutes for November 14, 2024

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

Minutes approved February 13, 2025

Members in Attendance:

Vandana Rao	Designee, Executive Office of Energy and Environmental Affairs (EEA)
Chris Kluchman	Designee, Executive Office of Housing and Livable Communities (EOHLC)
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)
Adam Kautza	Designee, Department of Fish and Game (DFG)
Hotze Wijnja	Designee, Department of Agricultural Resources (DAR)
Thomas Cambareri	Public Member
Christine Hatch	Public Member
Kenneth Weismantel	Public Member

Members Absent:

Vincent Ragucci	Public Member
Samantha Woods	Public Member

Others in Attendance

Alexis Neffinger	CZM
Andreae Downs	Massachusetts Water Resources Authority (MWRA) Wastewater Advisory Committee
Caitlin Spence	EEA
Colleen Rizzi	MWRA
Dan Crocker	DCR
Erin Graham	DCR
Hillary Monahan	MWRA
Jason Duff	DCR
Jennifer Pederson	Massachusetts Water Works Association
Jim Straub	DCR
John Scannell	DCR
Katie Ronan	MWRA
Kara Sliwoski	DCR
Lydia Olson	Mass Rivers Alliance
Moussa Siri	MWRA Water Supply Citizens Advisory Committee
Purvi Patel	EEA
Sarah Miller	MDAR
Toni Stewart	DCR
Vanessa Curran	DCR
Viki Zoltay	DCR

Rao called the meeting to order at 1:04 pm.

Agenda Item #1: Welcome and Introductions

Rao introduced herself and welcomed attendees. A roll call of members in attendance was taken; a quorum was present. Rao asked that attendees use the chat for the purposes of asking questions or making comments. Rao announced that the meeting was being recorded for the purposes of meeting notes.

Agenda Item #2: Executive Director's Report

Rao highlighted that we are in a fairly severe drought. She mentioned that Commissioners have received emails she sent with information about the drought and drought declaration press releases. She noted that Graham would talk more about it later on the agenda during the hydrological conditions report. Rao also stated that she wanted to give an overview of actions taken based on recommendations from the Drought Management Task Force. Rao stated that the Secretary declared a Level 2- Significant Drought in the Western, Connecticut River Valley, and Southeast Regions, and Level 3- Critical Drought in the Northeast and Central region. She explained that the three Regions in Level 2- Significant Drought were at Level 0- Normal last month but quickly moved into Level 2 due to very quick onset and intensification. Rao noted that while drought is typically considered slow moving, rapid onset droughts seem to be becoming more frequent across the country. She recalled that both Level 3- Critical Drought regions were in a Level 1- Mild Drought last month, and that all five regions currently in drought have experienced rapid onset drought conditions within a month. Rao remarked that the Cape and Islands seem to be doing ok as of the last DMTF meeting, but that some indices have been tripping to below normal levels in those regions as well.

Rao stated that the DMTF will meet every other week until conditions stabilize, including this coming Monday. She explained that upgrades to the monitoring network and getting data more frequently allows the more regular meetings of the task force. Rao thanked Zoltay and Graham for being the driving forces behind this effort. Rao also noted that per the Massachusetts Drought Management Plan, the Interagency Drought Mission Group would need to start meeting. This group discusses drought conditions, impacts, and collaborates on actions across the state agencies such as increased technical assistance, sharing FAQs, pulling together funding sources to minimize impacts, and communication strategies. Rao explained that if any Regions enter Level 4 it means Emergency Drought, which has not happened at a regional scale since the 1960's and would require significant planning to determine what actions to take and what authorities the Governor has. Rao highlighted that the Governor held a press conference on Tuesday to talk about fire danger which is quite high in the Northeast and Central Regions. DCR has also posted on Instagram, X, and Facebook, and these messages can be shared by other networks. Rao also reminded that the 1-page drought alert which gets posted after every drought declaration can be shared across networks.

Rao moved on to explain that staff are finalizing a Request for Responses for a new Drought Resiliency and Water Efficiency grant program through EEA. A notice of intent already has been posted to let eligible applicants know that this grant program will be coming out soon. Rao said that this spring is when the work would begin, and projects related to indoor water use or

planning efforts are also eligible. Multiple informational sessions will be held for interested applicants.

Rao asked the Commission how they would like to be engaged on drought-related matters. Kluchman thanked Rao for the update and asked if Rao was making any special attempts to reach out to small and rural towns, mentioning a few organizations such as the Rural Policy Advisory Commission. She noted that communities with a lot of private wells may need advice for information on drought and conservation of water. Rao responded that drought messages are sent to MEMA to be distributed through their mailing list but that there was likely more that could be done and the drought mission group should discuss this topic.

Wijnja commented that MDAR reached out to agricultural groups and noted that while the drought hit at the end of the growing season, some crops like pumpkins still needed moisture to complete the growing cycle and therefor farmers relied more on irrigation this fall compared to other fall seasons. He also mentioned that some crops such as cover crops are seeded in the fall, which is expected to be very challenging this year. MDAR is keeping an eye out for additional information and the needs of the agricultural groups and communities. Rao replied that Michael Botello is expected to give an update to the DMTF on this topic.

Weismantel asked what normal weather pattern is not happening and causing rain to miss MA. Rao responded that she has not heard the National Weather Service talk about that, but it is something staff can ask them for their perspective. She also mentioned that most of the country is seeing significant deficits, especially for the month of October, and that most precipitation that is falling is in the form of intense storms.

Pederson asked for an update on the local drought management plan guidance. Rao replied that it was still going through internal review and agreed that pushing that out soon would be a good idea to help communities. Pederson also asked if MEMA is planning an outreach call soon with municipalities, boards of health, and public water systems. Rao said that this is one of the agenda topics to discuss at the upcoming DMTF meeting.

There were no further questions or updates from Commissioners.

Agenda Item #3: Update: Hydrologic Conditions

Rao introduced Graham to present the Hydrologic Conditions Report for October 2024.

- *Temperature*: Monthly average temperatures were mostly normal to above normal. Northeast Regional Climate Center (NRCC), the Worcester climate site had its 12th warmest October on record.
- *Precipitation*: October precipitation was below normal. According to the NRCC, Massachusetts had its second driest October on record. All Regions are at an elevated Index Severity Level (ISL) for the 1-mos look-back. Weismantel asked what weather pattern is causing the rain to miss Massachusetts. Graham called attention to a link in the Report to an article that discusses the high-pressure system behind the dry weather.
- *Evapotranspiration:* The Evaporative Demand Drought Index is starting to show a signal. All Regions are elevated at the 1-mos look-back, and the 2-mos look-back, which is used for drought monitoring, is elevated in all Regions except Cape Cod and the Islands Regions.

- *Keetch-Byram Drought Index (KBDI)*: At the end of October, the KBDI was elevated in all Regions except Cape Cod and the Islands Regions. There has a been an increase in wildfires. At the October Drought Management Task Force meeting Dave Celino reported there were 206 wildfires in October. Usually there are about 15 in October.
- *Streamflow*: Streamflow was mostly below normal with only five gages in the normal range. A couple gages reached record lows. All Regions are at an elevated (ISL) except the Cape Cod Region.
- *Flooding*: There was no flooding in October to report.
- *Groundwater*: Levels ranged mostly from below normal to normal. There was one well on Cape Cod that was above normal. Effects of the drought are starting to show in the groundwater levels. The Western Region is at ISL 1, and the Connecticut River Valley and Northeast Regions are at ISL 2.
- *Lakes & Impoundments*: At the end of October, nine of the reported lakes and impoundment levels were below their 30th percentile. Every Region except the Cape Cod Region had at least one lake or impoundment below normal. The Central and Southeast Regions are at ISL 1, and the Northeast Region at ISL 2.
- *MA Drought status*: Rao gave an update of the MA Drought status during the Executive Director's report.
- *US Drought Monitor (USDM)*: At the beginning of October there was a large area of D0 (Abnormally Dry) across the state not including the southeast part of the state, and there was an area of D1 (Moderate Drought) in the northeast. By the end of October, much of the state had deteriorated- the USDM showed a large area of D1, an area of D2 (Severe Drought) in the metro Boston area and northeast, and small areas of D0 in the west, central, and southeast parts of the state.
- *NOAA Climate Prediction Center outlooks*: The November outlook shows chances likely for above-normal temperatures, and chances leaning for below-normal precipitation. The 3-month outlook shows chances leaning for above-normal temperatures and no strong signal for precipitation. The November drought outlook shows drought persisting in the northern parts of the state with some expansion into the southeastern part. The 3-mos drought outlook shows drought removal likely for most of the state except some areas of the northeast where the drought will remain but improve.

Cambareri pondered some questions about groundwater levels on Cape Cod and surface water levels during drought that he will further explore.

Agenda Item #4: Vote on Meeting Minutes, August 2024

Rao invited a motion to accept the meeting minutes for August 8, 2024.

V O T E	A motion was made by Weismantel with a second by Wijnja to approve the meeting minutes for August 8, 2024. The motion was approved in a unanimous vote by those present.

Agenda Item #5: Vote: Draft WRC Annual Report, FY2024

Carroll explained that two minor changes to the Annual Report were made based on requests by Commissioners at the previous meeting. The first was from Hatch and was a request to note that the new state geologist had been identified in FY24. The second was from Pederson and was a

request to clarify the funding source for the recently initiated regional collaborative effort on the South Shore. Carroll briefly showed the Annual Report as a reminder of the format and offered the opportunity for additional feedback.

Cambareri commented that the Annual Report does a great job describing the efforts of the WRC staff and thanked everyone who worked on the document.

Rao invited a motion to approve the Draft WRC FY2024 Annual Report.

VOTE	A motion was made by Cambareri with a second by Weismantel to approve the Draft WRC FY2024 Annual Report. The motion was approved in a unanimous vote by those present.

Agenda Item #6: Presentation: Marine Invader Monitoring and Information Collaborative (MIMIC) and Rapid Assessment Surveys (RAS)

Rao asked Soleau to introduce Alexis Neffinger from CZM. Soleau explained that Neffinger is a coastal habitat and water quality specialist for CZM and that she would be presenting on two programs that CZM manages, the Marine Invader Monitoring and Information Collaborative (MIMIC) and the Rapid Assessment Surveys (RAS). The full presentation is available online at: https://www.mass.gov/doc/november-14-2024-marine-invasive-species-program-presentation/download. Highlights of the presentation include:

- A description of marine fouling communities, including what they are and where they occur. Fouling communities are the group of organisms that are attached to or associated with submerged, hard substrate, typically on man-made structures. CZM's Marine Invasives Species Program tends to focus on studying these communities because they are easy for monitoring groups to access for sampling and because these are often the initial sites of marine introductions.
    - Fouling communities are made up of many different native and non-native species, including tunicates, bryozoans, marine worms, seaweeds, mobile crabs, shrimp, and other crustaceans.
    - Introduced species are those which have been transported by human activities into a region where they were previously absent, and have established self-sustaining, reproducing populations. The rise of transoceanic, globalized, commercial shipping is the number one culprit that has led to the unprecedented increase in the rate of marine introductions, especially in the last 50 years. The non-native species introduced to these fouling communities have both ecological and economic impacts to coastal communities.
- The Marine Invader Monitoring and Information Collaborative (MIMIC) is one way that CZM is monitoring invasive species. This is a participatory science program that trains volunteers to help monitor for 18 common invaders. The Massachusetts Aquatic Invasive Species Management Plan was implemented in 2002, and after that the MIMIC program was started in 2006.
    - CZM provides high level coordination by providing training, field equipment, and other materials to MIMIC coordinators throughout New England, who then lead their own monitoring groups. All the data and observations at the end of the

season go through quality control by CZM before it is compiled into a master database.
    - Monitoring groups record the abundance of the 18 marine invasive species on the MIMIC list after a one-hour long search. The species on the MIMIC list can be easily identified by anyone in the field without additional laboratory equipment. The groups also record temperature and salinity for each monitoring event.
    - Since the start of the program, over 160 sites have been monitored, including marinas, cobble shores, tide pools, and dive sites.
- The Rapid Assessment Survey (RAS) program is another way that CZM is monitoring invasive species. A RAS is a mentoring approach that was developed to help researchers and resource managers better understand the spread and impact of marine invasives. The first New England RAS was organized by MIT Sea Grant in 2000. Now, CZM, MIT Sea Grant, and the MassBays Estuary Program collaborate to conduct these surveys every three to five years. CZM serves as lead coordinator for the northern New England RAS (MA to ME) and MIT Sea Grant coordinates the southern New England RAS (RI to NY). Nine surveys have been completed in New England since 2000.
    - Expert taxonomists, ecologists, organizers, and students make up the survey team for the RAS. The team identifies all native and non-native marine invertebrate and algal species at each site. Like MIMIC, sampling events last for one hour. The result is the establishment of a long term, comprehensive data set of marine fouling communities, including new invasions and range expansion. RAS Reports since 2010 are available on the CZM website.
    - In August of 2023, sites from MA to ME were sampled as part of the RAS program, including six sites north of the Cape and three sites south of the Cape.
    - One big takeaway was that marine invasive species were the aspect dominant taxa at eight of nine sites, meaning the majority of what you see when looking over the side of the dock are invasive species. No site only had native species. Another big takeaway is that every coastal region they are monitoring is seeing an increase in the percent of non-native taxa, relative to native and cryptogenic taxa.
    - A new non-native encrusting bryozoan, *Schizoporella japonica,* was found at two sites within the Gulf of Maine.
    - Neffinger reviewed several other parts of the data that were discovered in the 2023 RAS survey, which are summarized in the full presentation and will be available in the RAS report on CZM's website in 2025.

Rao thanked Neffinger for the presentation and commented that these programs are a great way to engage with people along the coast to educate them about the issue of invasive species.

Weismantel asked if the data from these programs can be used to help evaluate the progress toward reaching nitrogen loading reduction goals. Neffinger replied that she is not sure of specific species that could be used for this type of monitoring, but that in general invasive species proliferate in degraded environments, so there is the potential.

Cambareri noted that he sees a lot of barnacles on his dock and asked Neffinger if he should be aware of any possible concerns with invasive barnacles. Neffinger replied that on the most recent RAS survey, they found a barnacle that is expanding its range northward. However, they are not typically as much of a problem as other introduced species. Barnacles are also difficult to identify, which is further justification for needing the RAS program and the expertise it brings.

Wijnja asked what is being done to control the spread of marine invasives. Neffinger responded that there are only a handful of examples of successful marine invasive eradication efforts. It is very difficult to control because of how interconnected marine and estuarine systems are. Therefore, CZM puts a lot of effort into advocacy for better regulations for commercial vessels. Additionally, educating the public and recreational users about cleaning vessels and best practices for transportation across regions or the world can help. The EPA, Coast Guard, and International Maritime Organization are all working on various efforts for regulations and enforcement standards.

There were no other questions or comments for discussion.

Agenda Item #7: Presentation: Aquatic Invasive Species in MA: Who, What, Where, When, Why?

Rao introduced Carroll, who explained she was previously providing oversight for the DCR Lakes and Ponds Program until Sliwoski moved into the program manager position. Carroll noted that the presentation would cover a priority issue the Lakes and Ponds team deals with. Sliwoski introduced Straub as the program's longest standing team member and that he would be presenting on aquatic invasive species (AIS) across Massachusetts.

Straub said he has been with the program since 1999 and has been working on AIS the entire time. Prevention is the easiest step with AIS, though invasive species or non-native organisms do not recognize state boundaries, political affiliations, housing preferences, or monetary means. However, they do understand temperature and suitable habitat for themselves. Unfortunately, both marine and freshwater invasives are more prolific than native species, as they can reproduce vegetatively and subsequently spread and grow rapidly. Straub explained that the Lakes and Ponds Program sits within the Office of Water Resources at the Division of Water Supply Protection, which includes Caroll (Director), Vanessa Curran (Deputy Director), and four staff members, himself, Sliwoski, Tom Flannery, and Toni Stewart. The Lakes and Ponds Program does AIS management at DCR waterbodies across the state, along with water quality and watershed protection. A large part of AIS management is public education and outreach, and it is advantageous to teach the public how to identify AIS so that they can become local stewards.

The Lakes and Ponds Program works with various state and federal agencies and partners and are the lead freshwater invasives contact for the state. Straub explained there are about 3,500 lakes in the state, about 300 are DCR's and reminded everyone there are only four staff members. Great Ponds are waterbodies that are greater than 10 acres in size in their natural state and are supposed to have public access for everyone in the state.

Straub showed photos of 10 primary AIS (though there are many more), and explained some have been introduced to the US via ballast water, as Neffinger mentioned. Straub showed a map

of where AIS have been reported via iNaturalist around the state. These species have been introduced through purchasing on the internet and accidental releases from aquariums and water gardens. AIS move around primarily via people transporting them on non-decontaminated equipment before visiting another waterbody, but also via wildlife and downstream waterflow. Straub explained there is a state law regarding transporting any organism on a boat, trailer or on highways, with a $5,000 fine. However, enforcement can be difficult for environmental police officers. Straub then emphasized that education has a higher compliance rate, as the staff can educate the public by explaining the law and the ecological consequences, which allows them to envision an infested waterbody they may be familiar with and then comply with the law rather than be issued a ticket. AIS awareness messaging is universally available across the country, with the Stop Aquatic Hitchhikers logos and information. The Lakes and Ponds Program also conducts Weed Watcher trainings, where they teach the public how to identify aquatic plants so they can learn what is in their own waterbody and what to do if they find an AIS.

Overall, the national and international messaging is to clean, drain, and dry all equipment to decontaminate it; the drying process includes live wells and any other standing water. The Lakes and Ponds Program annually has around six boat ramp monitors at various waterbodies across the state, two of which are protection lakes (Walden Pond in Concord, Wallum Lake in Douglas), with the remaining waterbodies being in the Berkshires and threatened by zebra mussels. The boat ramp monitors ask boaters questions about decontamination, where they used the boat last, and removing any visible material, in addition to educating boaters on best practices. The questions asked of boaters are documented which allows for data analysis afterwards (i.e, which days/times are busier at a specific location). The survey is also utilized by the City of Pittsfield for Onota and Pontoosuc Lakes. Laurel Lake in Lee has a hot water wash station as there are zebra mussels present in that lake. Every boat leaving there gets a hot water wash to kill any microscopic organisms. In the event a plant or organism is identified on equipment by any boat ramp monitor, a photo is taken, and Lakes and Ponds staff are alerted immediately, whereas in the past, Straub indicated he was sent actual plant samples in the mail.

Crocker asked if the boat ramp monitor Survey123 connects with the Quabbin boat monitoring Survey123 database. Straub replied that it does not, but Lakes and Ponds works closely with Quabbin staff and agrees that data sharing at any level is useful. Sliwoski added that the survey could be connected to the Quabbin's.

Straub added that Lakes and Ponds wants to extend their survey use to private lake groups and more municipalities to collect and analyze more data statewide for boater use and AIS. Straub said Lakes and Ponds staff are also collecting AIS data at waterbodies utilizing Field Maps on tablets, which allows for easy data visualization. Lakes and Ponds vendors have also begun using this data collection method for DCR projects. Beyond Field Maps, Lakes and Ponds staff also monitor iNaturalist for observations of AIS across the state, which staff can then visit to confirm or correct the identifications. The Aquatic Invasive Species in Massachusetts iNaturalist project automatically includes qualifying observation reports into the project for easy tracking. USGS also has their Nonindigenous Aquatic Species online tool where observations can be reported and tracked. The site has notification settings available if one is interested in specific reports, which are emailed as they become available. AIS can spread tremendously within one season so rapid response is a significant preventative measure.

In 2001, the Northeast Aquatic Nuisance Species (NEANS) Panel was formed. The Lakes and Ponds Program worked with Coastal Zone Management (CZM) and other internal agencies as well as with neighboring state organizations. The NEANS Panel allows for easy discussion between northeast states on relevant, new and upcoming AIS issues. Through these collaborative efforts, Massachusetts was the first state to ever have an approved AIS management plan by the Federal Aquatic Nuisance Species Task Force. The plan outlines all AIS work from education to grant programs and future goals, which are worked on annually. From the plan, the Lakes and Ponds Program receives approximately $90,000 annually in federal funding for AIS coordination, education, outreach, and equipment, especially for new infestations. Straub coordinates with CZM for their survey equipment needs. Recent new infestations in Massachusetts include: hydrilla in the Connecticut River, zebra mussels in the Berkshires, waterwheel in Andover, and swollen bladderwort in Saugus. Ultimately, these new invaders utilize resources that native aquatic flora and fauna need to survive.

Straub said everyone is to report any sightings, with pictures. The sightings can be reported via the DCR Lakes and Ponds website or if someone is an iNaturalist user, an observation can be submitted there, which will be added to the AIS in Massachusetts project if they qualify based on species observed. Straub explained that more photos is better, photo quality is important, and to include waterbody name and the location of where the plant was observed.

Future Lakes and Ponds Program goals are to expand externally by allowing other waterbodies to use the boat ramp monitor survey, create more awareness of reporting sightings across the state, and development of an interactive online map viewer to allow the public to understand which AIS are in which waterbodies. Straub shared the Lakes and Ponds Program website and general email (dcr.lakesandponds@mass.gov) and encouraged all to sign up for Weed Watchers classes early in the year as the schedule fills up.

Cambareri left the meeting at 2:53 pm.

Rao asked where all the outreach to the public is done, specifically for issues like dumping of home aquariums. Straub explained there are regional groups that focus on aquariums, but on a local level it can be challenging as it is labor intensive and stores often use differing names for plants/organisms. The Department of Fish and Game oversees importation of organisms. On a state-wide scale, Straub mentioned the boat ramp monitoring, utilizing billboards on the highway, sportsmen's and boating shows, and contacting appropriate groups/parties. However, it is difficult to force people to care about another "green plant," so the messaging needs to remain as clean, drain, dry. Straub emphasized that they are lucky waterbodies are relatively small and have borders, when CZM has larger scale challenges.

Rao thanked Straub and shared her appreciation for all the work and outreach the small Lakes and Ponds program of 3.5 to 4 people does.

V O T E	A motion was made by Weismantel with a second by Hatch to adjourn the meeting. The motion was approved in a unanimous vote by those present.

Meeting adjourned at 3:09 pm.

Documents or Exhibits Used at Meeting:

1. WRC Meeting Minutes: August 8, 2024
2. FY2024 Draft WRC Annual Report
3. Receipt of a Request for Approval of an Action to Increase the Present Rate of Interbasin Transfer Under the Interbasin Transfer Act MGL Chapter 21 Section 8B-8D
4. Correspondence documents from the WRC to MEPA, including letters with the following dates and content:
    a. October 15, 2024, regarding the Notice of Project Change (NPC) for Jefferson Mills in the Town of Holden
    b. October 18, 2024, regarding the Expanded Environmental Notification Form (EENF) for Everett Docklands Innovation District and Trimount Energy Storage Facility Project in the City of Everett.
    c. October 29, 2024, regarding the Environmental Notification Form (ENF) for Paragon Dunes in Hull.
5. Interbasin Transfer Act project status report, October 30, 2024

Compiled by: WRC staff

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 10 Park Plaza, Suite 6620, Boston, MA 02116.*