THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION

100 CAMBRIDGE STREET, BOSTON MA 02114

Meeting Minutes for December 14, 2017

100 Cambridge Street, Boston, MA, 1:00 p.m.

Minutes approved April 12, 2018

Members in Attendance:

Vandana Rao, Chair	Designee, Executive Office of Energy and Environmental Affairs (EEA)
Linda Balzotti	Designee, Department of Housing and Community Development (DHCD)
Anne Carroll	Designee, Department of Conservation and Recreation (DCR)
Duane LeVangie	Designee, Department of Environmental Protection (MassDEP)
Hotze Wijnja	Designee, Department of Agricultural Resources (DAR)
Michelle Craddock	Designee, Department of Fish and Game (DFG)
Todd Callaghan	Designee, Massachusetts Office of Coastal Zone Management (CZM)
Kenneth Weismantel	Public Member
Marcella Molina	Public Member
Vincent Ragucci	Public Member
Thomas Cambareri	Public Member
Bob Zimmerman	Public Member

Members Absent:

None

Others in Attendance:

Jennifer Sulla	EEA
Sara Cohen	DCR
Marilyn McCrory	DCR
Michele Drury	DCR
Viki Zoltay	DCR
Vanessa Curran	DCR
Gerard Kennedy	DAR
Jennifer Pederson	MWWA
Peter Weiskel	USGS
Kate Bentsen	DFG/DER
Beth Card	Massachusetts Water Resources Authority (MWRA)
Lexi Dewey	Water Supply Citizens Advisory Committee to the MWRA
Andreae Downs	MWRA Wastewater Advisory Committee
Gabby Queenan	Mass Rivers Alliance
Margaret Van Deusen	Charles River Watershed Association

Rao called the meeting to order at 1:04 pm with a roll call.

Agenda Item #1: Executive Director's Report

Rao stated that MassDEP held an informational workshop for Water Management Act (WMA) permit renewals for the Parker River Basin meeting in mid-November. The meeting was well attended, including water suppliers, the local watershed organization and other non-profits, and DCR. She asked LeVangie to provide more information. He stated that his was one of the last basins left to permit. He confirmed the meeting was well attended and all public water suppliers (PWSs) were present, including a few new superintendents, and that meeting them is helpful. Rao acknowledged all the hard work that goes into water needs forecasts, outreach meetings and working with communities to renew WMA permits.

Rao gave an update on activities since the last drought. She said that the state is out of the drought for now, but there are several on-going activities to prepare for future droughts. In order to encapsulate this past drought, the state is working with USGS to write a drought retrospective, documenting the conditions and impacts and to serve as useful reference for future staff. The document will be brought back to the Commission sometime next year.

NOAA has started a Drought Early Warning System (DEWS) process for the Northeast states, including Massachusetts. This involves online tools for better preparation – data management, public communication, etc. Carroll added that this is a two year process with some federal resources attached for developing dashboards and other resources. There is $13.5 million available for the program, nationally.

Cambareri asked about the preamble to Water Management Act permits, i.e. the "statement of findings" which refer to the safe yield methodology adopted for the SWMI program. He stated that it was important not to apply this safe yield methodology to the Cape Cod aquifer. Rao stated that this was why permits were put out as drafts, so that we can benefit from such feedback.

Agenda Item #2: Hydrologic Conditions Report

Zoltay referred to the Hydrologic Conditions report. The month of November had 1.5 to over 2.5 inches of precipitation deficit, this translates to 10% to 75% of normal. The indices are normal for this month, but will need to catch up to stay in the normal range. The state continues to teeter on the brink of dryness. Streamflow averaged about normal, with only a few below normal areas. November did not have as much rain as October; this has resulted in declining streamflow in November. This is also reflected in the groundwater levels being spotty and not fully recovered. In the Western and Connecticut River Valley regions, the majority of wells were below normal, but in order to trigger a drought index, at least three months must be below normal. The rest of the regions were normal for groundwater. All reservoirs reported normal levels. The US Drought Monitor does not show any dry conditions for the state, as of the end of the month. The outlook for December is for below normal temperatures; for January and February, above normal temperatures are predicted. Equal chances of above or below normal are predicted for precipitation.

(Hydrologic Conditions Report is available at: https://www.mass.gov/service-details/hydrologic-conditions-reports-0)

Agenda Item #3: Vote on the Minutes of September 2017

VOTE	A motion was made by Weismantel with a second by Balzotti to approve the meeting minutes for September 14, 2017. The vote to approve was unanimous of those present, with one abstention.

Agenda Item #4: Presentation on Final Revisions on the Interbasin Transfer Act Regulations and Response to Comments

Rao stated many aspects of regulations needed updates. The regulation revision process was an in-depth, multi-agency effort. Staff has come back to WRC many times to get thoughts and feedback. Stakeholder feedback was solicited and a public comment period was held last year. This year was spent reviewing comments, thinking in-depth about how to address those comments, and developing a detailed Response to Comments document. The regulations have also been going through the internal review and approval process.

Documents provided today are: the original regulations, the red-line/strikeout version of the revised regulations, a clean copy of the revised regulations, and a summary of changes due to the public comment process. Today will be a recap of what has been presented previously. Nothing today is new.

The original regulations were promulgated in 1986. Although the Act includes transfers of wastewater, the 1986 regulations did not specifically address wastewater transfers. From 1987 to 2013, the WRC developed policies to address the gaps in regulations.

The goals of the regulation revision:

- incorporate WRC policies that address gaps
- incorporate current thinking on analyses for various types of transfers
- streamline procedures
- clarify terms
- improve organization

Starting in December 2013, Staff:

- convened an interagency work group
- conducted targeted outreach to stakeholders and solicited feedback
- made presentations and asked the Commission to deliberate at seven WRC meetings
- reviewed all substantive changes in detail
- held formal public hearings

Overview of major changes:

- specified insignificance criteria for different types of transfers
- added a streamlined option for transfers ≤10,000gpd
- added a regional water supply approval process
- specified the process for wastewater transfers
- revised the approach for local water resources management planning

Carroll described the changes in more detail.
Insignificance:

- The Act allows for a transfer of less than 1 mgd to potentially be determined as insignificant, based on impacts to the donor basin
- Currently, the insignificant criteria in the regulations assume that all requests are direct river withdrawals, which is hardly ever the case
- The revised regulations now include criteria for different types of transfers, such as wastewater transfers, transfers mainly impacting streamflow and transfers mainly impacting lakes, ponds or reservoirs
- The criteria for transfers impacting streamflow has been updated and tested to assure that it is protective enough, based on past projects
- The criteria for transfers mainly impacting lakes, ponds or reservoirs include metrics specific to these types of systems. The requirements for flow augmentation and/or other downstream flow protection measures, where appropriate and achievable, remain
- A pathway for smaller transfers (less than or equal to 10,000 gpd) has been provided. These generally have been one office building, etc. Initial screening examines potentially impacted nearby water bodies, special resource values, and other community water or wastewater systems

Regional water supply approval process:
- Designed to remove redundancy so a regional donor basin proponent would not need to go through process each time a new community wants to join
- Split the process, so donor and receiving basin proponents can apply separately
- Received feedback that the 20-year planning horizon is appropriate for water systems, but also added a 10 year check-in period to review any significant changes that may have occurred

Local water resources management plan
- This plan is redundant to other local planning efforts
- Instead of requiring a plan as a criterion for approval, the regulations now ask for a description of how the transfer is consistent with the proponent's long range planning efforts

Wastewater transfers
- Incorporated 1987 guidance, which included wastewater interpretations of the definitions for Receiving Area and Viable Sources
- Clarified data specific for wastewater systems

The public comment process included two public hearings, and written comments from 10 stakeholder groups. Feedback received included concerns about areas needing clarity or specificity of language, communication with potentially impacted entities, and support or concern for various metrics. Our response to comments incorporated as many concerns as possible, provided rationale for these decisions and discussed limits of the Interbasin Transfer Act, which prevent some of the comments from being incorporated.

Callaghan thanked Staff for their hard work. Zimmerman expressed concerns about the regional system regulations. Rao responded that the ten-year check in period would allow the Commission to review any changes and the Commission can determine if any changes impact the terms of the approval. The twenty year term requires that any unallocated volume will expire. Drury added that the initial environmental analysis is very rigorous and the Commission does vote on the full amount. Rao added that the regional review process is not solely available to the MWRA. Other regional

systems could benefit from less redundancy. Zimmerman stated that climate change is unknown, models only provide general definition of what to expect. He is concerned that if there is an eight-year drought, what could be done? He asked if the Commission can put an unintended consequences re-opener clause. Carroll stated that the WRC can put in conditions for specific concerns, such as shut-off thresholds, etc. Drury added that the applications are evaluated against a variety of historic climatic conditions, including the drought of record and they must demonstrate that a transfer will maintain a "reasonable instream flow" under these conditions. In addition, the Commission has included shut-off thresholds as conditions on several approvals. If conditions worsen below these thresholds, the transfer will not be made.

Drury said that the ten year review language says "The Commission will review the report and provide a determination within six months of receipt. If, in its opinion, conditions in the donor basin have not changed materially within the ten-year period, the original approval shall continue under its existing terms". So this does give Commission the option to revisit these decisions.

Van Deusen asked if the WRC conditions applications now. Carroll responded yes and gave the examples of Foxborough and Aquaria. The WRC amended the Foxborough decision when monitoring indicated that the impacts at the site were different from what was predicted from the model submitted with the application. Aquaria is reporting more frequently because of concerns identified through the monitoring program. The Act gives the Commission broad authority. Weismantel expressed concerns that an applicant needed certainty as long as they were abiding by conditions of approval process.

Drury said that this is where the thresholds come in as well. If the climate is changing, and thresholds designed for existing conditions are being hit more frequently, that is a risk that an applicant takes. One of our standards conditions is that if a transfer is approved, the proponent will agree in writing to abide by all conditions. This is legally binding, so the Commission does have broad authority to condition decisions.

Zimmerman was concerned that the environment has paid for our mistakes. Rao replied that the Interbasin Transfer Act was written solely to protect environment. The Commission has done rigorous analyses before making decisions on ITA requests.

Van Deusen asked if drought management plans would be looked at as part of ITA review? Many systems don't have plans or they are outdated. Carroll stated that the Act requires that applicants have a contingency plan for water shortages. This would include droughts. Van Deusen asked if an applicant is just required to provide a plan, or would it be reviewed as part of the process? Drury answered that plans will be reviewed.

Weismantel asked if we would be rescinding those policies that are now incorporated into the regulations? Rao answered that we can revisit policies that are no longer relevant and bring back to Commission at a future meeting for retraction. Weismantel then asked if we could define WRC and staff duties, as appropriate. Do we have formal definition of what staff does? Rao and Drury responded that the Commission has addressed this in the past and we could summarize this at a future meeting. Rao added that the guidance documents will be updated and more detail can be added there about what staff does on the Commission's behalf. But, she added, this might take another year.

Also, Weismantel asked about the requirement for drainage bylaws: is this part of stormwater management? Staff was going to check where this language came from. Cambareri suggested that of may refer to the small MS4 permit regulations (2003). Rao stated that drainage bylaw is meant to encompass stormwater, recharge and similar bylaws.

Zimmerman and Van Deusen were concerned that the term "significance", as defined in the original revision, had been eliminated. If that term now gets dropped, how does MEPA get triggered? Rao and Drury responded that any transfer that is not insignificant would be a transfer would need to undergo a full review for approval and therefore explicitly requires MEPA review. It is in the Act. It is a criterion that must be met for approval. Using the word "significant" was redundant and so was eliminated from the proposed regulations. Rao added that MEPA has to be completed before the Commission can act on a "significant" transfer. Drury added that staff routinely requires a proponent, even of potentially insignificant transfers, to check with MEPA about any review triggers.

Zimmerman is concerned about the elimination of the criterion for a local water resources management plan. He cited an example of communities which share resources, but don't necessarily act in ways that are equitable. Carroll responded that the provision for planning is still in the regulations; proponents are just asked to address it differently.

Queenan suggested that the request for the planning component in the revised section 313 CMR 4.09(2)(b)4 seemed vague and requested that more clarity on what would constitute long range planning be provided. Rao responded that more detail would be provided in the guidance documents and the planning component will be required in the EIR.

Van Deusen stated that the Commission should play a role in local water resources management planning, given the Governor's executive orders. The WRC has a strong advisory role in setting state policy. Rao agreed, but added that this was more appropriate for guidance, and it will be memorialized there.

Zimmerman expressed concern that the South Coastal and Boston Harbor basins were not divided. Rao responded that this was not a change made to the public version, although there was some internal discussion prior to releasing the revision to Commission and the public. These basins remain as defined in the original 1986 regulations. Although they are not hydrologically connected, this is how the Commission originally defined these basins. All the state's water management programs have been set up with these basins as originally defined.

Van Deusen is concerned that if the Boston Harbor basin is not split, an applicant in the Neponset subbasin, for example, may have to analyze the whole Boston Harbor. Carroll said that the regulations require that they be conducted at an appropriate point in the basin or subbasin. Staff interact with an applicant to determine the "appropriate point of analysis", which is usually adjacent to the point of withdrawal.

Rao stated that a vote will be requested at the next meeting. Some edits may be made based on points discussed today.

Agenda Item #5: Presentation on Agricultural Environmental Enhancement Program (AEEP) Special Drought Grants FY 2017

Kennedy stated that last year they had a one-time grant program under the Agriculture Environmental Enhancement program (AEEP), which was created around the time that the Rivers

Protection Act was enacted. The original purpose of the AEE is to protect water quality in water bodies near agricultural interests. This has evolved over the years to address other issues, including water conservation. During the last fiscal year, the Secretary approved funding to address drought issues.

The range of support programs under DAR, through the Division of Agricultural Conservation and Technical Assistance, which focusses on agricultural land protection:

- The Agriculture Preservation Restriction Program, which has protected 900 farms (80,000 acres)
- Viability programs which put covenants on farms, help develop business plans and provide funding for implementation
- The Energy Efficiency Program provides funds for renewable energy systems and energy efficiency on farms
- A special project grant program that provides funds (up to $100,000) for priority projects on farms such as battery storage. This is a joint effort with the Division of Energy Resources, which is looking at ways farms can remain in agriculture, but also produce energy.
- The Agriculture Environmental Enhancement program
- The Agriculture Climate Resiliency and Efficiency (ACRE) program, a new program

DAR also deals with food safety, urban agriculture and agriculture infrastructure.

In September 2016, most of that state was under a Drought Warning, with a Drought Watch in the western part of the state. By October, the harvest season, all of the state was under a Drought Watch. This had impacts on agriculture, especially on hay production and cranberry cultivation. In November, the secretary created a one-time, drought version of AEEP to help recover from the drought of 2016 and prepare for future droughts. This program was open to all farms engaged in commercial agriculture. The funding amount was about $250,000 total. Awards were up to $25,000, with no more than 85% of project cost for materials and labor. The RFR was issued in late November. The deadline is January 6th. Projects have to be completed by end of the fiscal year. There were 52 responses, requesting a total of over $822,000.

DAR developed criteria for selection among these projects:

1. The project had to be located in an area of drought warning as of 10/1/2016
2. For water conservation projects, there must be demonstrated efficiencies and the proponent had to list water savings over current use
3. If there had been a demonstrated crop loss in the 2016 growing season, the project must demonstrate how it would reduce crop loss in the future
4. A written NRCS cons plan would allow for higher rankings
5. There needed to be a clearly thought out time frame for implementation

Of the project proposals received, 18 were funded. The award amounts ranged from $3,200 to $25,000. The proponents were mainly cranberry growers, but there was also a range of types of farms and crops. Projects funded included trickle irrigation, rainwater capture, open loop system for geothermal, which then is fed to irrigation pond, tailwater recovery for cranberry growing, auto irrigation system, also for a cranberry farm. This is triggered by temperature and has resulted in significant water savings.

The proposed timeline for the next grant round under the AEEP program: applications will be available in February 2018, the deadline will be in April 2018, and awards will be given in July 2018. There is no drought specific component to the grant program this year.

DAR has a new grant program, ACRE, to address climate resilience and efficiencies in the agricultural sector. The grant deadline just closed. The ACRE program is bond funded, with up to $50,000 to award per project (or 80% of project costs). Total funding under the program is $500,000. There were 38 applicants requesting a total of $1.2 million. The focus areas of the program are: improving soil health through no till agriculture, a process that has been around for many years: residue is left in fields, but a cover crop is planted into this. This does help with water conservation. Another focus is water management: irrigation engine replacement, solar irrigation, soil moisture sensors, auto irrigation, agricultural pond repairs and water reuse.

Rao asked how no till agriculture reduces water use. Kennedy replied that increasing the organic layer increases moisture retention and reduces soil erosion. There are pros and cons to no till agriculture. There definitely are water savings with this technique, but it can lead to more herbicide use. NRCS heavily promotes no till. Zimmerman asked why no till can lead to increased use of herbicides. Kennedy responded that with unmanaged field with residue, there is potential for greater weed growth. This can be addressed with cover crops, but specialized equipment is needed. This is partly why the practice is not so widely adopted, even though it is well established. The expense is one of the reasons DAR is funding no till agriculture through this program.

Six criteria were developed for project selection:

- Capacity to decrease GHG emissions, which must be estimated and/or described in detail.
- Project increases farm resiliency to changing climate impacts.
- Proposal addresses risks due to climate change (increased flooding, more frequent droughts, more severe storms, and overall increased precipitation) and proposes methods of reducing their negative impact on the farm operation and local environment.
- The project is cost effective relative to greenhouse gas mitigation and/or adaptation benefits.
- Project identifies other environmental benefits including soil conservation, water quality improvements, and/or increase in biodiversity.
- Project outlines a plan for any on-going operation and maintenance and/or any periodic replacement needs and how they will be accomplished to ensure project longevity.

ACRE is a new program, so DAR is in uncharted territory and will refine program moving forward.

Rao asked if there were any particularly innovative applications. Kennedy responded that DAR awarded a grant to a farm in Dracut to use geothermal energy to heat a greenhouse, then use the water from the open loop system to irrigate its fields. Another innovative technique being funded is auto irrigation. These systems have been around for about ten years. They provide enormous water savings and life management benefits to farmers. Carroll asked if the auto irrigation systems are based on soil moisture. Kennedy replied that they are based on temperature. Their primary application is to protect cranberry vines during frost events.

Rao stated that the award per project in this program was not a lot, but if this helps farmers try new and innovative techniques, that's a large benefit. Kennedy added that the awards can be used to leverage federal money, which is more widely available.

Rao asked if famers were recovering financially from the drought. Kennedy responded that it was too soon to quantify the financial impacts. The Bureau of National Agricultural Statistics has not yet put out its findings. Carroll mentioned that she had heard of at least one dairy farm in New Hampshire that went out of business because of the drought. Kennedy was not aware of farm failures due to drought, but farming is a marginal business. There could have been other reasons besides droughts for failures.

Kennedy's presentation is available at www.mass.gov/eea/wrc.

Meeting was adjourned at 3:02 pm.

Documents or Exhibits Used at Meeting:

1. WRC Meeting Minutes for September 2017
2. Interbasin Transfer Act Regulations (313 CMR 4.00)
   a. 313 CMR 4.00 ITA Regulation Summary Document
   b. 313 CMR 4.00 - ITA Regulation redline 5-12-2016 public review draft (approved by WRC)
   c. 313 CMR 4.00 – ITA Regulation Changes since public review draft
   d. 313 CMR 4.00 – ITA clean copy final
   e. ITA Regs - Response to Comments
3. Interbasin Transfer Act project status report, November 20, 2017.
4. 2018 Meeting Schedule, Water Resources Commission

Compiled by: VIZ/MHD
Agendas and minutes are available on the web site of the Water Resources Commission at www.mass.gov/eea/wrc under "MA Water Resources Commission Meetings." All other meeting documents are available by request to WRC staff at 251 Causeway Street, 8th floor, Boston, MA 02114.