



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

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**Meeting Minutes for October 11, 2012**

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

*Minutes approved December 13, 2012*

**Members in Attendance:**

Kathleen Baskin	Designee, Executive Office of Energy and Environmental Affairs (EEA)
Anne Carroll	Designee, Department of Conservation and Recreation (DCR)
Bethany Card	Designee, Department of Environmental Protection (MassDEP)
Gerard Kennedy	Designee, Department of Agricultural Resources (DAR)
Tim Purinton	Designee, Department of Fish and Game (DFG)
Thomas Cambareri	Public Member
Raymond Jack	Public Member
Paul Matthews	Public Member

**Members Absent**

Marilyn Contreas	Designee, Department of Housing and Community Development (DHCD)
John Lebeaux	Public Member
Bob Zimmerman	Public Member

**Others in Attendance:**

Michele Drury	DCR
Linda Hutchins	DCR
Bruce Hansen	DCR
Thomas Orcutt	Town of Groton
Rena Swezey	Town of Groton Conservation Commission
Michele Collette	Planner, Town of Groton
Mark Haddad	Town Manager, Town of Groton
Dawn Dunbar	Town of Groton, Board of Health
Patrice Garvin	Town of Groton, Board of Selectmen
Robert Rafferty	Woodard & Curran
Rosemary Blacquier	Woodard & Curran
Carol Quinn	Lost Lake Sewer Committee
Angela Garger	Lost Lake Sewer Committee & Groton Lakes Assn.
Peter Weiskel	U.S. Geological Survey
Vandana Rao	EEA
Erin Graham	DCR
Jennifer Pederson	Mass. Water Works Assn.
Sara Cohen	DCR
Laila Parker	DFG, Div. of Ecological Restoration
Marilyn McCrory	DCR

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Baskin called the meeting to order at 1:00 p.m.

**Agenda Item #1: Executive Director's Report**

Baskin noted that Joe Pelczarski, a long-term member of the Water Resources Commission, representing the Office of Coastal Zone Management, had retired. She paid tribute to Mr. Pelczarski, noting his forty years of service to the commonwealth and his central role in disaster management and ensuring that the commonwealth is prepared for emergencies. She added that his service to the Water Resources Commission will be missed and that she will coordinate with CZM on a replacement.

Hansen provided an update on the hydrologic conditions for September 2012. Precipitation was 130 percent of normal statewide, with all regions reporting above-normal amounts. Groundwater levels were generally normal statewide, with the exception of the extreme western area of the state, where groundwater levels were below normal. Average streamflows were in the normal range. Reservoir levels were generally normal for this time of year, with the smaller reservoirs reporting below-normal values. Hansen reported on various drought indices. The Drought Monitor showed normal conditions in Massachusetts for the first time in five months, and the Standardized Precipitation Index values are in the normal range. The seasonal drought outlook indicates normal conditions through December 2012.

Baskin provided an update on the Sustainable Water Management Initiative (SWMI). EEA's Undersecretary for Environment, along with the commissioners of DEP and DFG, met with the governor to discuss the SWMI framework, comments received, and an approach going forward. She reported that EEA will be issuing a final framework along with a response to comments this fall, along with supplemental technical reports of independent scientists. Work on the pilot project continues, with Phase Two beginning. She added that EEA is also looking at funding for projects to assist the communities in implementing the SWMI framework. DEP will be drafting regulations over the next few months, with a target for final regulations by the end of 2013.

Purinton asked if existing permits will be extended until the regulations are complete. Card and Baskin explained that all permits have been extended by the Permit Extension Act until August 2014, and thus all permittees will continue to operate under existing permit conditions.

Baskin announced the New England Water Works Association is sponsoring a Water Resources Symposium on October 25.

Cambareri requested an update on the status of the SWMI pilot projects. Card explained that the draft SWMI framework is being tested in four communities or water supply districts. The pilot effort began in May 2012 and will assess how the framework will work in practice, including the resulting tiers and how those will translate into mitigation requirements associated with the expected impact of water withdrawals. She added that Phase Two will continue through the fall, with a key component being a mock consultation exercise using the SWMI framework. Phase Two is expected to conclude by December 2012.

Hutchins announced that the University of Massachusetts-Amherst and the U.S. Geological Survey are cosponsoring a workshop on fluvial geomorphology on October 25. The purpose of this workshop is to recommend a consistent methodology to be used in assessing fluvial geomorphology conditions in rivers. Baskin added that the workshop will include a discussion of metrics to be used and states will report on their approaches. Pederson asked if the workshop is open to the public. Baskin offered to inquire or provide a briefing, and Purinton offered to have DFG staff present results to the Water Resources Commission. Hutchins noted that there is

currently no place in regulation or policy for such a methodology, and Baskin agreed it would be useful to have an agreed-upon methodology.

**Agenda Item #2: Vote on the Minutes of September 2012**

Baskin invited motions to approve the meeting minutes for September 13, 2012.

<b>V</b>	A motion was made by Jack with a second by Purinton to approve the meeting minutes for
<b>O</b>	September 13, 2012.
<b>T</b>	The vote to approve was unanimous of those present, with one abstention (Cambareri).
<b>E</b>	

**Agenda Item #3: Vote on the Request for Determination of Insignificance under the Interbasin Transfer Act for the Lost Lake Sewering Project, Groton**

Drury noted that WRC staff provided information on the Groton project at the September WRC meeting. She added that a decision on the town's final application for determination of insignificance must be made at today's meeting to comply with deadlines in the Interbasin Transfer Act. She invited town officials and other stakeholders to introduce themselves.

Drury reviewed details of the proposed interbasin transfer (*Ed. note: see [minutes](#) of the September 2012 WRC meeting*), noting that the project involves the transfer of wastewater from the Lost Lake and Four Corners areas of Groton (Merrimack River Basin) to the town of Ayer (Nashua River Basin). She noted that the request is part of a comprehensive wastewater management planning process (CWMP). In reference to discussion at the September meeting, Drury noted that injection wells had been considered but were determined to be not feasible. She showed a video illustrating the topography and steep slopes in the project area and the difficulty of installing septic systems.

Drury explained that the town has proposed a dam management plan along with a plan for outdoor watering restrictions in order to satisfy the criteria for insignificance under the Interbasin Transfer Act. She described the proposed water conservation program and noted a few changes to the staff recommendation, including a recommendation that the town adopt a bylaw to require private well owners to abide by watering restrictions and recommendations regarding review of fall drawdowns of the reservoir to ensure protection of the infrastructure and environmental resources.

In response to a comment from Purinton about the frequency of billing for sewer use, the town manager offered to consider monthly billing. Kennedy requested clarification on the timing of WRC approvals. Drury confirmed that a vote to approve insignificance under the Interbasin Transfer Act will be contingent on approval by the WRC, at a later date, of the Dam Management Plan, and that WRC approval must be given before the town puts water into the sewer.

Hutchins reviewed the technical details of the proposed sewerage project and the criteria for insignificance under the Interbasin Transfer Act. She explained that the Interbasin Transfer Act review focuses on the loss of water from the donor basin (Merrimack River Basin). She explained that the project meets all criteria for insignificance, with the town's proposed Dam Management Plan, which will provide releases from Lost Lake where no releases currently occur, satisfying the streamflow criterion. Hutchins summarized the release plan, which aims to maintain a natural flow regime out of Lost Lake to the Cow Pond Brook system.

She explained that the Lost Lake Dam Management Plan allows staff to recommend approval of the “project as proposed.” She outlined the details of the project as proposed, which includes pre- and post-sewering flow and lake-level monitoring, monthly release rates, installation of a release mechanism, outdoor water-use restrictions, and annual reporting to the Water Resources Commission. She summarized the staff recommendation to approve the project, as proposed, as meeting the criteria for insignificance under the Interbasin Transfer Act.

Jack requested clarification from the town on the town warrant article describing the betterment fee, noting that there are no specifics in the warrant article on the term of the betterment or what percentage of the project cost will be assessed to which property owners. Haddad explained that the motion to town meeting will be for the residents of the sewer district to pay seventy-five percent of the costs of debt service, while the town will be responsible for twenty-five percent of the costs. However, the commercial district will assume twenty-four percent of the costs, reducing the residents’ burden to fifty percent of the costs.

Purinton thanked town representatives for addressing questions raised at the September WRC meeting, and commended the town for a well-crafted proposal and innovative dam management plan. He recommended that similar dam management plans be a regular mitigation component of Interbasin Transfer Act proposals. He expressed concern about the ability of the commission to enforce conditions of the Interbasin Transfer Act approval. He also asked if the Conservation Commission will have the authority to enforce flow triggers established in the IBT approval.

Swezy confirmed that the dam management plan is under the purview of the Conservation Commission. Regarding the authority of the Water Resources Commission to enforce IBT conditions, Drury clarified that if violations of the Interbasin Transfer Act occur, the Attorney General has authority to intervene. She added that if the town does not implement the project as proposed, the commission can require the town to complete the requirements for a full Interbasin Transfer Act approval.

Cambareri expressed interest in the water quality aspects of the CWMP and asked if a Total Maximum Daily Load (TMDL) for phosphorus had been established for Lost Lake or if there are avenues other than the Interbasin Transfer Act for monitoring water quality in the future. Blacquier summarized various studies that classify the lake as degraded and estimate that leaching from septic systems is the source of forty percent of nutrients in the lake. She said there is no TMDL for Lost Lake, but noted that there are indications that the state may develop TMDLs for Great Ponds after 2014. Cambareri commented that if the sewerage project is implemented, the town should see a significant reduction in nutrients in the lake and water quality improvements.

Pederson expressed concern about the addition of language, in the conditions, regarding adoption of a bylaw applying water-use restrictions to private wells. She noted that water suppliers themselves cannot adopt such bylaws. Baskin clarified that the condition encourages the town to propose a bylaw, but implementation depends on adoption at town meeting. Baskin reviewed concerns expressed at the September WRC meeting that the conditions in the IBT approval depend on the town’s commitment to enforce water conservation requirements, especially during drought conditions. She invited comment from town representatives.

A town resident commented that few homes on the lake have lawns, and outdoor watering is currently not widespread. She added that lake residents are concerned about the health of the lake and will be instrumental in outreach related to water conservation. She noted that an existing

dam management plan involves controlled drawdowns of the lake, and she acknowledged that lake residents will have to accept restrictions on boating during a drought.

Baskin requested more details on outreach and education efforts. A resident replied that residents expressed support of weed control efforts at a meeting of the Conservation Commission, and the two lakes associations are working together to implement an ongoing and aggressive public outreach effort. Purinton requested clarification that the outreach will include an explanation that some sacrifices may be needed for the benefit of the river downstream.

Jack suggested that the town also implement a toilet retrofit program to reduce the largest use of water inside the home, noting that such retrofits represent a one-time expense. He commented further on the town of Falmouth's experience in implementing an outdoor water-use restriction bylaw that applies to private wells. He recommended including language in the bylaw that acknowledges the impact of drought conditions on the lake.

<b>V</b>	A motion was made by Purinton with a second by Kennedy to accept the staff
<b>O</b>	recommendation that the project as proposed is insignificant under the Interbasin Transfer
<b>T</b>	Act.
<b>E</b>	The vote to approve was unanimous of those present.

**Agenda Item #4: Update of the Massachusetts Drought Management Plan**

Baskin provided an overview of the development of the commonwealth's Drought Management Plan and the formation, purpose, and activities of the Drought Management Task Force. She explained that the Task force is co-chaired by the Executive Office of Energy and Environmental Affairs (EEA), which provides expertise in a number of disciplines related to drought parameters, and the Massachusetts Emergency Management Agency (MEMA), which has the capacity and authority to mobilize resources in response to emergencies.

She noted that the draft plan has been tested for a decade, and minor changes have been made recently to several of the parameters. She added that the time has come to adopt a final plan. She noted that the EEA Secretary requests review of the Drought Management Plan by the Water Resources Commission, as the state's water-policy setting body with representation from a cross-section of agencies and the public. Baskin invited comments and feedback from the commission and requested acceptance, in the coming months, of the strategy, parameters, and protocols for managing drought, as described in the final plan.

Hutchins provided background on development of the Drought Management Plan in 1999 in response to severe drought conditions. She noted the difference between drought, which is a slow-forming disaster that can linger for months or years, and other types of emergencies.

Hutchins described key elements of the plan, including composition of the Drought Management Task Force and division of the state into six hydrologic regions. Drought maps are developed as needed, and decisions on drought status are made separately for each region. She noted that the task force considers six indices of drought and pointed out that precipitation is only one of these parameters. In addition to precipitation, the task force considers crop moisture, fire danger, groundwater levels, streamflow, and reservoir levels. She also outlined the five drought levels described in the plan, ranging from Normal to Emergency, and noted that thresholds for each of the six indices are established for each of the five drought levels. She explained that the task force considers the preponderance of conditions in each region to determine the level of drought

in that region. She also described the sources of data for each of the drought indices, including a rainfall monitoring network consisting of 100 stations reporting monthly to the Department of Conservation and Recreation; the Standardized Precipitation Index calculated based on the rainfall data and used to indicate the degree of deviation from normal levels of precipitation; the USGS and Massachusetts cooperative stream gage network and groundwater observation network, showing streamflows and groundwater levels over time; the weekly Crop Moisture Index, along with consultations with the Department of Agricultural Resources; the Keetch-Byram Drought Index, a long-term indicator of soil moisture monitored by DCR's Bureau of Forest Fire Control; and a range of small, medium, and large reservoirs across the state reporting water levels monthly.

Hutchins explained the process for declaring drought. The Drought Management Task Force meets and advises the EEA Secretary on the severity of drought conditions. Under the final Drought Management Plan, EEA will issue drought statements for conditions below the emergency level. When the emergency powers of the governor are triggered, MEMA will become involved.

Carroll asked how the 1960s drought would have been classified. Hutchins explained that the 1960s drought was the worst and longest drought on record in Massachusetts and was used to define conditions at the emergency level. Similar calibrations against historical conditions in the 1980s and 1990s were used to determine thresholds for the other drought levels.

Baskin pointed out that, because the Drought Management Task Force looks at a variety of parameters, it can take some time for a majority of indices to trigger a drought declaration. She added that specific parameters can trigger action in specific areas, such as fire danger, independent of declarations by the Drought Management Task Force.

Jack called attention to procedures for obtaining federal disaster assistance for agricultural losses and asked if proactive measures were in place to encourage the most efficient methods of agricultural irrigation. He asked what the agricultural community would be required to do under drought emergency conditions. Kennedy replied that the agricultural community is aware of the need to conserve water. He noted that there is increasing demand for funding of measures that control the amount of water applied to crops, and drip irrigation is a measure supported by the Department of Agricultural Resources grant programs. He added that agricultural water use is generally considered an essential use of water and would not be restricted by the model bylaw included in the Drought Management Plan.

Pederson expressed concern that the number of reservoirs monitored represents a relatively small sample, and she requested that more detail on reservoir levels be reported. She also requested that clarifying language related to water-use restrictions be added, and she suggested that language referring to the ability to declare a drought on a watershed basis may be confusing. She expressed concern about how the language would be interpreted by Task Force members. Baskin responded that drought may straddle several of the drought regions, and there may be situations where it is useful to use a watershed designation. In addition, decisions by the Task Force involve a more fine-tuned deliberation on the standards. She offered to add more clarifying language to the plan and noted that any declaration must be accompanied by a map or a list of towns affected.

Pederson noted potential confusion regarding how a drought declaration affects communities served by the Massachusetts Water Resources Authority (MWRA) and similar regional water

supply entities. Baskin explained that MWRA communities, in some cases, may be themselves in a drought, in terms of fire danger or other parameters, but their water supply would not necessarily be affected.

Cambareri commended the Task Force and staff for updating the plan by bringing in new indices and data. He suggested adding an appendix providing information on the significance of past droughts to serve as a point of comparison for current situations. Hutchins responded that a long record of data is available on certain parameters and committed to preparing such an appendix.

Baskin requested that commission members and the public submit comments on the Drought Management Plan by November 8. Comments will be addressed in the following weeks.

**Agenda Item #5: Update on “The Water Efficiency and Conservation State Scorecard: An Assessment of Laws and Policies”**

Baskin introduced this agenda item by noting that the intent of reviewing the Alliance for Water Efficiency’s (AWE) nationwide assessment of water efficiency laws and policies is to see what Massachusetts can learn from other states who received high scores on the assessment.

Graham noted that staff had reported on the draft scorecard at the August WRC meeting, and the final report, incorporating public comments, had been released in September (*Ed. note:* see August meeting minutes at <http://www.mass.gov/eea/docs/eea/wrc/2012-08-minutes.pdf>). She provided an overview of the purpose and results of the AWE project. The scorecard resulted from a 20-question survey and assessment of state-level laws, regulations, and policies on water conservation and efficiency. It highlights exemplary state laws and policies and scores each state on the effectiveness of these laws and policies. She noted that Massachusetts submitted comments on the draft report, and its score in the final report remains a C+. She added that this is not considered a bad score, but points to areas the state may wish to examine for improvements in policies and laws related to water efficiency and conservation.

Graham showed the interactive online tool, published with the final report (available at <http://www.allianceforwaterefficiency.org/2012-state-information.aspx>), which allows the user to explore state policies and laws in detail. She highlighted questions where Massachusetts could consider changes in its policies. Several survey questions asked if state water consumption regulations or building and plumbing codes were more stringent than federal standards. Graham pointed out that three states – California, Georgia, and Texas – require more stringent standards than federal standards for toilets and urinals, with all three states using the EPA WaterSense standard. Georgia, in addition, has more stringent standards for faucets as well as requirements for high-efficiency plumbing products in all new construction, alterations, and fixture replacements. The take-away lesson, she noted, is that other states have adopted more stringent standards, and staff are taking a closer look at Massachusetts standards for these fixtures.

Graham discussed a survey question on water-loss policies and regulations, pointing out that several states were highlighted for strong laws, while others were highlighted for the methodology they use. She noted that Massachusetts received an additional point on this question in the final report. She added that staff is looking at the American Water Works Association methodology and examples from other states of policies and regulations related to water loss control.

There was some discussion about the significance of the score and the purpose of examining the report’s results. Graham confirmed that the report gave more weight to policies codified in law.

Card acknowledged the usefulness of the study in highlighting areas where Massachusetts might focus its efforts going forward, but sought confirmation that scores would not have implications for federal funding eligibility. Graham confirmed that the intent of the report was informational for the states. Cambareri and others commented that it makes sense that states experiencing severe drought would enact more stringent measures to improve efficiency and conservation. Graham commented that the report serves as a good vehicle to start discussion on certain issues. McCrory added that staff views the report as an idea book, providing a wealth of resources on potential ways to strengthen Massachusetts's policies and laws.

McCrory reviewed several survey questions related to water conservation planning, including questions addressing whether plans are required outside of the permitting process, the authority to approve or reject plans, how often plans are required, whether a prescribed framework for plans is provided, and implementation requirements. She also discussed a survey question related to volumetric billing requirements, noting that New Jersey law requires rate structures that provide incentives for water conservation. She also highlighted approaches by various states to providing on-line calculators to guide irrigation decisions.

McCrory highlighted lessons learned from the report. She noted that states receiving the highest scores were guided by a State Water Plan. She noted that staff is using information in the report to review standards for plumbing fixtures and to review the water-loss methodology. In addition, staff will assess water conservation planning requirements and consider making evapotranspiration information available on the commission's website. She concluded by highlighting models offered by other states, such as California's establishment of a target of twenty percent reduction in water use by 2020.

Noting that the AWE report addresses measures that *could* result in conservation, Baskin asked if the report offers any results on actual water use or water conserved. Carroll responded that the survey questions indicate that this information was not the study's focus. She added that engaging in a study, such as Wisconsin did, to identify areas where the state could most improve efficiency would be useful, but would require funding.

Baskin commented that it may be easier for a state with high water use, such as California, to reduce use by twenty percent, whereas this would be more challenging in a state with lower per capita use. There was some discussion of the difficulty of comparing per capita use figures from various sources since it is not always clear whether the figures represent residential use only or include all water use. McCrory commented that what is noteworthy about the California "20 by 2020" plan is not so much the specific number, but that the state has established a target along with goals, objectives, and a timeline to achieve that target.

Pederson commented that the permit conditions in Massachusetts have the effect of regulation for the water suppliers. She urged the state to devote resources to analyzing changes in water use in Massachusetts over time, comparing water use prior to 1986, when the Water Management Act went into effect, to water use since 2003, when permit conditions were imposed. She commented that Massachusetts has made great strides.

Carroll asked Pederson to comment on areas where Massachusetts could continue to improve its conservation performance. Pederson responded that the Massachusetts Water Works Association (MWWA) would be very interested in working with WRC staff on the water loss methodology. She acknowledged that changes to plumbing fixture standards would help take the burden off water suppliers in reducing residential water use. She reiterated a previous suggestion that the



state highlight exemplary efforts by water suppliers and others in Massachusetts. She added that MWWA intends to submit a grant proposal to study water-use trends.

Responding to a comment that a water conservation plan is not needed, Graham disagreed, commenting that a plan could help prioritize where the state should focus its resources.

Jack commented that water conservation is the right thing to do, but the starting point should be identifying what the state is trying to achieve by conserving water. He added that when the state's Water Conservation Standards were last updated in 2006, conservation was viewed as a means to accommodate growth. He added that he took issue with this as a goal, as it seems to ignore the needs of natural resources. He suggested identifying the goal of water conservation and what will be done with the savings.

Baskin thanked all participants for their comments.

Meeting adjourned, 3:05 p.m.

**Documents or Exhibits Used at Meeting:**

- WRC Meeting Minutes for September 13, 2012. Available at <http://www.mass.gov/eea/docs/eea/wrc/2012-09-minutes.pdf>.
- Massachusetts Monthly Precipitation Composite Estimate, August 2012 (corrected).
- Lost Lake Sewering Pond Project, Groton:
  - Staff Recommendation, dated October 11, 2012, on the Request for Determination of Insignificance under the Interbasin Transfer Act for the Lost Lake Sewering Pond Project, Groton
  - Town of Groton Proposed Warrant Articles for 2012 Fall Town Meeting to create the Lost Lake Sewer District
- Massachusetts Drought Management Plan, September 2012 (Draft)
- Link to Alliance for Water Efficiency Final Report: The Water Efficiency and Conservation State Scorecard: An Assessment of Laws and Policies (September 1, 2012). Available at <http://www.allianceforwaterefficiency.org/final-scorecard.aspx>
- Interbasin Transfer Act project status report, 27 September 2012
- Current Water Conditions in Massachusetts, October 11, 2012
- Presentation: Groton Lost Lake Sewering IBT Insignificance Vote
- Presentation: MA Drought Management Plan
- Presentation: AWE's Water Efficiency & Conservation State Scorecard: Assessment of Laws & Policies