



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

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**Meeting Minutes for November 13, 2008**

*Minutes approved January 8, 2009*

**Members in Attendance:**

Kathleen Baskin	Designee, Executive Office of Energy and Environmental Affairs
Marilyn Contreas	Designee, Department of Housing and Community Development
Jonathan Yeo	Designee, Department of Conservation and Recreation
Glenn Haas	Designee, Department of Environmental Protection
Gerard Kennedy	Designee, Department of Agricultural Resources
Thomas Cambareri	Public Member
John Lebeaux	Public Member
David Rich	Public Member
Bob Zimmerman	Public Member

**Others in Attendance:**

Michele Drury	DCR	Tom Lamonte	DEP
Linda Hutchins	DCR	Joanna Carey	DFG/Riverways
Bruce Hansen	DCR	Steve Pearlman	Neponset River Watershed Assn.
Sara Cohen	DCR	Jeff Hanson	Hanson Murray & Assoc./Aquaria
Erin Graham	DCR	Edward A. Lawton	Massachusetts Farm Bureau
Frank Hartig	DCR	Paul Lauenstein	WSCAC/Neponset River Watershed Assn.
Marilyn McCrory	DCR	Chris Waldron	USGS
Anne Monnelly	DCR	Mary Booth	WSCAC
Vandana Rao	EEA	Carl Gustafson	USDA/NRCS
Margaret Callanan	EEA	Jennifer Pederson	Massachusetts Water Works Assn.
Duane LeVangie	DEP	Andrew Poyant	CDM
David Terry	DEP	Joseph Duggan	Wellesley DPW
David Ferris	DEP	Kerry Mackin	Ipswich River Watershed Assn.
Alan Slater	DEP	Phil Guerin	Worcester DPW

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Baskin noted a change in the order of items on the agenda.

**Agenda Item #1: VOTE: Revisions and Additions to Regulations in 314 CMR sections 2.00, 5.00, 6.00, 12.00, and 20.00**

Baskin noted that MassDEP had presented the proposed regulatory changes to the commission at the October meeting, and that a vote had been postponed to allow resolution of a few outstanding issues.

The first issue was a memorandum of understanding between MassDEP and the Department of Agricultural Resources. Kennedy reported that the agencies are making progress on the MOU, which would describe a pilot program that would allow agricultural operations to manage the wastewater they generate within the framework of the proposed regulations. He offered to present the details on the MOU to the commission when the agreement is finalized. Haas added that MassDEP commissioner Burt is committed to making sure the agencies come to agreement on these outstanding issues.

The second issue was related to concerns expressed by the Massachusetts Water Works Association. Pederson explained that the major issues of concern were the use of TOC as a surrogate for emerging contaminants and the absence of guidance for geohydrological evaluation and effluent monitoring. Pederson acknowledged reports on TOC provided by DEP, but said the association is still not confident that TOC is the appropriate surrogate and urged MassDEP to consider other surrogates. On the monitoring guidance, she said the association had provided comments, but that, as DEP's guidance has not been finalized, these comments had not been incorporated. She added that the association does not feel the proposed regulations are protective enough of groundwater supplies to move forward with the proposed changes at this time.

Haas responded that MassDEP convened an advisory committee, which included the Massachusetts Water Works Association. He acknowledged that not all of the literature supports the use of TOC as a surrogate, but that MassDEP feels comfortable, given the information available, that TOC is the appropriate surrogate. He added that MassDEP will continue to work with MWWA on geohydrological monitoring guidance.

Baskin noted that the commission had received a number of conflicting comments on whether the TOC standard is appropriate, including a comment letter from the Cape Cod Water Protection Collaborative, sent on behalf of a number of Cape Cod municipalities. This letter objected to the requirement that the wastewater be treated to essentially eliminate TOC prior to discharging into Zone IIs, stating that the cost associated with this would cripple wastewater treatment plants on Cape Cod. Yeo asked Haas how restrictive the proposed requirement would be for wastewater utilities on Cape Cod. Haas responded that MassDEP would be willing to work with interested parties to identify a method that would be more cost effective and equally protective of public health and the environment. However, he added that not enough information was available to make changes at this point.

Yeo thanked the Massachusetts Water Works Association for providing comments and expressed concern that the water suppliers still have concerns. He urged MassDEP to continue to work with the water suppliers on developing guidance to provide assurance that the regulations properly balance the goals of encouraging recharge while maintaining water quality at the wellhead. He requested a status report on the development of the guidance document. Haas agreed to provide a status report. He added that the proposed regulations are substantially more stringent than the current regulations.

Cambareri described the technical and financial impacts to Cape Cod communities in complying with the proposed changes to the regulations, including identifying suitable discharge sites. He noted that some towns are well along in developing very costly comprehensive wastewater

management plans, which will have to be revisited in order to comply with the regulations. He noted that towns are looking for some flexibility and asked Hass to discuss how MassDEP proposes to work with communities on Cape Cod to further this discussion. Haas responded that MassDEP would likely form a stakeholder group to hear from both sides on the wastewater reuse issue. He noted that new technologies for treatment of nitrogen are constantly evolving and that this effort will take more time, research, and work with stakeholders.

Rich acknowledged Ferris for his work on the regulations but said he still had serious concerns about a number of issues. He expressed a preference for having a signed MOU in place between DAR and MassDEP before approving the regulations. He also expressed concern that the regulations may delay development of needed wastewater treatment facilities, particularly on Cape Cod. He asked if approval could be delayed until the concerns expressed by various parties had been adequately addressed. Pederson added that MWWA lacks confidence that its concerns will be addressed, since it has been working with MassDEP for more than a year without resolution of some of the issues. She outlined a number of other issues that need to be looked at.

Pearlman asked what opportunity there would be for public comment on the guidance document. Ferris responded that MassDEP intends to work with the Groundwater Advisory Committee. He noted that the guidance documents are not new but are being updated. The only new piece, he added, is that all the monitoring requirements are being put into one document to ensure that the permits are consistent. In addition, monitoring requirements for pharmaceuticals and personal care products are under discussion.

Lawton expressed concern, on behalf of agricultural interests, that completion of the MOU remains a priority for MassDEP. He requested that the commission keep agricultural interests up to date on progress on the MOU. Baskin responded that the MOU is a priority at the highest levels of the state agencies and noted a strong commitment to complete it. She expressed confidence that the remaining issues can be resolved and added the commission will expect DAR and MassDEP to follow through on that commitment. Gustafson thanked the agencies for their efforts and urged the agencies to remove any negative impacts on family farms.

Baskin thanked all those who commented on the regulations before the commission for their thoughtful comments. She noted that MassDEP Commissioner Burt had requested that the commission vote on the proposed regulations today so that MassDEP could move forward with other important regulations, including stormwater regulations. She noted MassDEP's willingness to work with stakeholders on emerging information and to reopen the regulations for further revision, if necessary.

Cambareri noted that the Cape Cod Water Collaborative had requested postponement of the vote and expressed hesitance about supporting the regulations. Baskin requested the sense of the commission on the proposed regulations. Rich and LeBeaux stated that they still had too many questions and concerns and could not support a vote in favor at this time.

Baskin said the commission would proceed with a vote nonetheless, but requested MassDEP to note that the votes will not be unanimous and that the commission is looking to MassDEP to work with the stakeholders to incorporate new data as it becomes available.

<b>V O T E</b>	<p>A motion was made by Haas with a second by Yeo to approve the revisions and additions to the regulations in 314 CMR sections 2.00, 5.00, 6.00, 12.00, and 20.00.</p> <p>The vote to approve was five in favor, three opposed (Cambareri, Rich, and LeBeaux), and one abstention (Zimmerman).</p>
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**Agenda Item #2: VOTE: Proposed Adjustments to Water Needs Forecasting Methodology**

Baskin noted that Department of Conservation and Recreation staff had been “road testing” the water needs forecasting methodology over the past few months, by examining data and developing forecasts for water suppliers in the Hudson, Blackstone, and Charles River basins. Based on this experience in working with the methodology, she said, staff members were proposing a few changes to be incorporated into the methodology, as described in a memorandum to the commission dated November 7, 2008 (see attachments). Baskin noted that she had received three comment letters on the proposed changes, one of which had nine signatories. She added that the commission recognizes the value of public input and noted the long public comment process on revisions to the methodology throughout 2007. She also noted that water suppliers in the Charles and Blackstone River basins were required to submit applications to renew their Water Management Act permits by the end of November, and that this was why a vote on the proposed changes was being requested before that deadline. She added that the proposed changes were straightforward.

Monnelly thanked representatives of water suppliers in the Blackstone and Charles River basins for their patience with DCR during the development of water needs forecasts. She stated that the methodology was working well, in general, and incorporates significant levels of conservation. However, she added, staff felt the need to resolve several issues, as had been mentioned at previous commission meetings. She described three proposed changes to the water needs forecasting methodology. These changes, she added, are generally related to the uncertainties associated with population and employment projections and the twenty-year timeframe for forecasts.

The first recommendation is to accommodate for uncertainty in growth projections by adding a five percent buffer to the projection for the final of the four five-year planning periods. Monnelly explained that the buffer would not be automatically given, but would be allocated by MassDEP, during the five-year review process, if the water supplier can demonstrate that it is experiencing unanticipated growth and is meeting MassDEP’s performance standards.

Monnelly then described the second proposed change, which is to use a consistent data source to estimate current employment. She explained that staff had found that the two data sources currently being used for employment result in discrepancies and inconsistencies related to different data collection methods and assumptions. Therefore, staff proposed to eliminate one source of data – data from the Office of Labor and Workforce Development – and to interpolate current employment from the employment projections developed by the Regional Planning Agencies.

Monnelly then described the third recommendation, which is to eliminate the ten percent reduction in nonresidential water use over ten years. She emphasized that staff fully supports the goal of incorporating greater efficiency into nonresidential water use. However, after working with the data, she said staff did not feel comfortable applying the ten percent reduction due to the variability in the reporting of nonresidential water use and the lack of detail on the composition of the nonresidential sector. She provided examples showing the volumes of water involved in eliminating the ten percent reduction. Baskin added that the order of magnitude for eliminating the ten percent reduction translates to an increase in water use ranging from 0.5 percent to 5.6 percent for the 21 communities examined in the Charles and Blackstone basins.

Monnelly then provided examples showing the impact of the proposed changes on water needs forecasts, showing the original and revised projections for water suppliers in the Charles River Basin. She pointed out that, even with the proposed changes to the methodology, the projections for the final 20-year time period remain either close to or less than the amounts currently authorized.

Monnelly then outlined the next steps in implementing the proposed changes, if they are approved by the Water Resources Commission. The first step would be to revise the projections for water suppliers in the Charles and Blackstone basins before November 30, so that communities can include DCR projections in their applications for renewal of their Water Management Act permits. She added that the proposed changes would be incorporated into the methodology document at a future date, along with other changes that address smaller, more technical issues. Pederson requested an opportunity for input on the internal technical work group.

Mackin expressed concern that the proposed changes would be voted on without an opportunity for meaningful public participation. She also requested more data on the trends in nonresidential use over the last 20 to 30 years in order to assess the reductions that are achievable. She urged the commission to not vote on the changes at this meeting.

Lauenstein expressed concern about further degradation of the environment given that the projected volumes of water to be withdrawn in 20 years are greater than the amounts currently being withdrawn. He also asked if the performance standard of 65 gallons per person per day for residential water use would remain fixed over 20 years, or if a gradual improvement in water-use efficiency should be assumed, given continuing improvements in technology.

Baskin clarified that MassDEP works with the communities to determine what numbers to include in the permits. She added that MassDEP can consider the impact of technology improvements at the five-year reviews. LeVangie added that the methodology only describes what a community's needs could be in 20 years and does not address where the water will come from or whether the water is available. He added that the environmental impact issue must be addressed in the permit review process.

Pearlman expressed concern that the five-year review sometimes does not occur and that a water supplier may not have to demonstrate a need for the five percent buffer. LeVangie acknowledged that permit reviews are often delayed for a variety of reasons. He clarified that the water supplier

can apply to move the higher volume forward, if it demonstrates a need for the higher volume earlier in the 20-year period. Pearlman responded that he did not object to the buffer, but only to giving the buffer without proper review by MassDEP.

Booth supported Mackin's request to examine trends in nonresidential use. Baskin responded that the ten percent reduction in nonresidential use is a recommendation, not a standard, in the Water Conservation Standards. She added that the Office of Technical Assistance, based on historical records, concluded that ten percent is a conservative number. She added that staff is confident that industry will seek ways to conserve water and save money, but, at the same time, staff recognizes that there is a lot of variability in the per capita nonresidential water use. Yeo added that water use in the nonresidential sector has been declining steadily for the past 15 to 20 years and that this trend will continue. He said eliminating the ten percent reduction from the forecasts will not have any impact on continuing efforts by industry to conserve water.

Monnelly clarified that the proposed changes did not result from any external request, but were initiated by staff after an analysis of the numbers in the Hudson, Charles, and Blackstone basins. She added that staff would be happy to work with anyone interested in trying to figure out how to improve efficiency in the nonresidential sector.

Mackin responded that trends in the industrial/commercial/institutional (ICI) sector are all downward, but the methodology is not reflecting these trends. She asked why the commission would do something contrary to the Water Conservation Standards when the magnitude of the increase under discussion would be accommodated within DEP's 100,000-gallon threshold.

Yeo responded that the ten percent reduction in ICI use is a recommendation of the Water Conservation Standards, and that this recommendation is aimed at significant water users, not at the water suppliers. Addressing Mackin's point on trends, he added that the projections are based on current ICI water demand, and therefore do reflect increasing efficiencies in ICI water use. He acknowledged that, for now, the methodology freezes this use and projects it forward, based on employment forecasts.

Baskin recognized Mackin's points and noted that commission staff had originally argued to include the ten percent reduction in ICI use as part of the forecasting methodology. She added that a ten percent reduction in a sector that represents even 56 percent of overall water use is perhaps symbolic since the volumes of water at stake are so small. (In this example, the total reduction in water use would be 5.6%). Drury noted that the nonresidential category lumps together all users who are not residential, including municipal, agricultural, and recreational users. She added that, though there is room for conservation by all these users, the data indicating the mix of users are not consistently reported, and it is difficult to know what magnitude of reductions is feasible.

Guerin expressed support for the proposed changes, saying that a 20-year forecast is only a best guess based on what is known today. He added that having a cushion in the forecast does not mean a water supplier will be able to pump additional water. He said the Water Management Act permitting program is what regulates water withdrawals and will determine whether the water is

available for withdrawal and whether environmental harm will result from using additional water.

Zimmerman responded that forecasts tend to become self-fulfilling prophecies and that it was therefore important to have forecasts that are realistic and take into consideration future growth, but do not encourage over-pumping. He then offered two amendments to the methodology: (1) that the five percent buffer be included in Year 15 only after active review and approval by MassDEP during the five-year review process; and (2) that the ten percent reduction be eliminated from future ICI use, but retained for existing ICI users.

Rich requested clarification on how the five percent buffer would be applied. LeVangie responded that MassDEP issues 20-year permits, in order to provide some certainty to communities regarding the water available for use. He expressed concern about the possibility of appeals at each five-year review period. Zimmerman clarified that he was proposing that the five percent buffer only be available after an active review by MassDEP. LeVangie responded he would have to discuss how the five percent buffer would be handled with the Water Management Act Advisory Committee, but that perhaps the buffer could represent the volume available in the permit provided that the water supplier meets the “functional equivalent” of MassDEP’s performance standards and other conditions in its permit.

Baskin noted that historically, the commission has not told MassDEP how to use the forecasts. She suggested that commission staff present the buffer number separately in the forecast. Zimmerman emphasized that his request was for active review by MassDEP to ensure that the buffer is necessary.

Pederson requested confirmation that communities do not necessarily have to use the forecasts developed by DCR staff but can provide their own forecasts. LeVangie confirmed that communities have the option to request to renew their permit at whatever volume they want, as long as they file their application by the deadline of November 30 (for the Blackstone and Charles basins). Yeo added that it is in the collective best interests of everyone that DCR’s projections be used. Yeo also commented that Zimmerman’s second motion was “backwards,” stating that water suppliers have almost no ability to influence ICI water demand in existing facilities. He said the ten percent reduction may make sense for future demand, assuming improvements in efficiencies in new construction, but that given the uncertainties about employment projections and the future mix of ICI users, and given that nonresidential use represents a small portion of most public water suppliers’ overall use, he opposed Zimmerman’s second amendment.

LeVangie noted that the WMA permit program requires water suppliers to conduct an outreach and audit program for its largest users and to report results at the five-year review. Zimmerman responded that eliminating the ten percent reduction seemed to be a backing away from the Water Conservation Standards. Drury reiterated staff support for the ten percent reduction in ICI use, but noted that it is only a recommendation, not a standard. Zimmerman suggested a recommendation to MassDEP that the commission is looking for a ten percent reduction over ten years in ICI use.

Pederson noted that the Water Conservation Standards are reflected not only in permits but also in registrations, resulting in more requirements for water suppliers than ever before.

Lauenstein offered an example of the harm that could result from inflated water use projections, citing the dramatic decrease in demand since the mid-1980s in the service area of the Massachusetts Water Resources Authority. Mackin added that the water use projections give some impetus to implement conservation measures by limiting the amount of water than can be pumped, so that it is inadvisable to inflate the numbers. She also asked for clarification on how future use would be calculated if a community's residential consumption is below 65 gallons per person per day. Monnelly responded that DCR provides two sets of projections in that case: one using a residential demand of 65 gpcd and one reflecting the community's current average residential gpcd. She added that none of the numbers in the projections are "inflated," noting that the projections done to date are quite lean, in that in most cases, they forecast water use that is less than the amount communities are currently authorized to withdraw.

Baskin summarized Zimmerman's amendments: (1) the five percent buffer would be reported separately in the forecasts, and there would be an active negotiation between MassDEP and the water supplier before the buffer is allocated; and (2) the policy and methodology text will include a recommendation to MassDEP that ICI users reduce their water use by ten percent over ten years; however, no requirement for the ten percent reduction would be incorporated into the forecast calculations. Zimmerman agreed that this captured his intent. Drury repeated that staff intends to bring a package of revisions to the commission in early 2009, and these revisions will reflect these motions.

Duggan asked if MassDEP had placed conservation conditions on the registrations of nonpublic water suppliers. LeVangie responded that all registration renewals included a requirement for a seasonal demand management plan (SDMP) to reduce nonessential outside uses when a drought advisory or greater is declared. He added that technologies and costs will drive efficiencies for ICI users as much as permit conditions. Duggan asked how public water suppliers could expect efficiencies from their ICI customers when no requirements, other than for SDMPs, have been set forth by MassDEP for this sector. He suggested that MassDEP develop requirements for specific segments of the ICI sector and assist public water suppliers in helping this sector improve efficiency.

<b>V O T E</b>	<p>A motion was made by Yeo with a second by Contreas to adopt the changes proposed to the Water Needs Forecasting Methodology, to be used in forecasts to be developed in the Blackstone and Charles River basins and in water needs forecasts going forward, with the understanding that amendments recommended by Mr. Zimmerman concerning the 5% buffer and 10% reduction for Industrial/Commercial/Institutional use, as discussed at the meeting, will be transmitted to MassDEP.</p> <p>The vote to approve was unanimous of those present.</p>
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Baskin thanked those in attendance for their quick response to the proposed changes to the water needs forecasting methodology.



**Agenda Item #3: Presentation on DEP Water Management Act Permit Renewal Process**

LeVangie reviewed the schedule for renewing Water Management Act (WMA) permits, starting with permits expiring in the Hudson River Basin on August 31, 2008. He then provided an overview of the process for renewing 20-year WMA permits. He reviewed the three scenarios for those holding WMA registrations and/or permits and made a distinction between the minimal application requirements for those seeking to renew an existing permit, if future use is projected at or below the existing authorized volume, and the more extensive application requirements for those seeking a new permit to increase withdrawal amounts above the amount authorized in existing permits. He also outlined the permit renewal timeline and described public notice requirements. He noted that water suppliers in high- and medium-stress basins statewide are expected to achieve the performance standards of 65 gpcd and 10% unaccounted-for water within five years, while water suppliers in low and unassessed basins will have a longer period in which to achieve these performance standards. He then reviewed the requirements for a Seasonal Demand Management Plan for both registrants and permittees, noting that permittees must impose more stringent restrictions on nonessential outdoor water use. He also described the timelines and environmental triggers for implementing nonessential water use restrictions. He emphasized that all permittees must meet a minimum requirement of no nonessential outdoor water use during the hours of 9:00 a.m. to 5:00 p.m. He concluded by providing an example showing how the WMA program uses the demand projections developed by DCR.

Lauenstein asked about the extent to which the environment is evaluated during the permit renewal process. LeVangie outlined the opportunities for public comment on the WMA permits, including after applications are submitted and after MassDEP issues a draft permit. He added that MassDEP is likely to renew the permits with conditions as the questions about safe yield are resolved.

**Agenda Item #4: Executive Director's Report**

Hansen provided a brief update on the hydrologic conditions for October 2008.

Baskin announced two upcoming conferences. Baskin also announced that commission staff are proposing to switch to electronic distribution of monthly commission meeting materials and noted that paper copies would continue to be sent to the public commission members as well as to anyone on the mailing list who preferred to continue receiving paper copies. McCrory outlined the process by which the mailing would be converted to electronic mailing.

**Agenda Item #5: VOTE on the Minutes of October 16, 2008**

Baskin invited motions to approve the meeting minutes for October 16, 2008.

<b>V</b>	A motion was made by Yeo with a second by Rich to approve the meeting minutes of October 16, 2008.
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<b>E</b>	The vote to approve was five in favor with two abstentions.

**Agenda Item #6: Presentation: Water Resources Commission Handbook**

Discussion of this agenda item was postponed.

Meeting adjourned

Attachments distributed:

- Current Water Conditions in Massachusetts, November 13, 2008
- Additional attachments related to Revisions and Additions to Regulations in 314 CMR:
  - Excerpts from *Using Reclaimed Water to Augment Potable Water Resources*, 2<sup>nd</sup> ed. Water Environment Federation and American Water Works Association, 2008.
  - Technical Memorandum from James Crook, CH2MHill, dated September 25, 2003, to Alan Slater, MassDEP: “Suggested Water Reuse Criteria.”
  - Memo from MassDEP: Comparison of Current and Proposed Requirements for Discharges to Zone II’s.
  - “Wastewater Reuse”
- Comment Letters on Revisions and Additions to Regulations in 314 CMR:
  - Letter dated November 10, 2008, from Jennifer A. Pederson, Massachusetts Water Works Association, on 314 CMR 5.0 and 314 CMR 20.0.
  - Letter dated November 12, 2008, from County of Barnstable to Laurie Burt, MassDEP Commissioner, on proposed amendments to 310 CMR 5.00.
  - Letter dated November 12, 2008, from Neponset River Watershed Association, on 11/7/08 Memo to the Water Resources Commission Regarding Water Needs Forecasting Methodology.
- Memorandum to Water Resources Commission from Kathy Baskin and Anne Monnelly dated November 7, 2008, on Proposed Adjustments to Water Needs Forecasting Methodology
- Comment Letters on Proposed Adjustments to Water Needs Forecasting Methodology:
  - Memorandum dated November 12, 2008, from Heidi Ricci, Mass Audubon
  - Memorandum dated November 12, 2008, from Linda Mack, Massachusetts Association of Conservation Commissions
  - Letter dated November 12, 2008, from 11 signatories (Charles River Watershed Association, Neponset River Watershed Association, Clean Water Action, New England PEER, Eel River Watershed Association, Organization for the Assabet River, MA Assn. of Conservation Commissions, Parker River Clean Water Association, MA Sierra Club, Taunton River Watershed Association, Water Supply Citizens Advisory Committee)
- Presentation handout: Proposed Adjustments to the Water Needs Forecasting Methodology, November 13, 2008.
- Presentation handout: Water Management Act Program: Blackstone River Basin Water Withdrawal 20-Year Permit Renewals.