THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION

100 CAMBRIDGE STREET, BOSTON MA 02114

Meeting Minutes for January 13, 2011

Minutes approved February 10, 2011

Members in Attendance:

Kathleen Baskin	Designee, Executive Office of Energy and Environmental Affairs
Marilyn Contreas	Designee, Department of Housing and Community Development
Anne Carroll	Designee, Department of Conservation and Recreation
Mark Tisa	Designee, Department of Fish and Game
Joseph E. Pelczarski	Designee, Massachusetts Office of Coastal Zone Management
John Lebeaux	Public Member
Bob Zimmerman	Public Member

Others in Attendance:

Karen Pelto	MassDEP
Sara Cohen	DCR
Jennifer Pederson	MA Water Works Assn.
Linda Hutchins	DCR
Margaret Callanan	EEA
Michele Drury	DCR
Erin Graham	DCR
Bruce Hansen	DCR
Marilyn McCrory	DCR
Stephen Boksanski	Green Industry Alliance

Agenda Item #1: Executive Director's Report

Hansen provided an update on the hydrologic conditions for December 2010. Precipitation was 112 percent above normal, statewide, in December, with the Cape Cod region a little below normal. The highest snowfall amounts reported for the January 12, 2011, storm were in Savoy, where 38 inches of snow was recorded. Groundwater conditions for December were above normal on Cape Cod and normal elsewhere. Surface water flows were normal statewide in December. Reservoir levels were slightly below normal, with two exceptions. Drought indicators show no tendency for drought through March.

Agenda Item #2: Vote on the Minutes of November 2010

Baskin invited motions to approve the meeting minutes for November 18, 2010.

VOTE	A motion was made by Zimmerman with a second by Contreas to approve the meeting minutes for November 18, 2010. The vote to approve was unanimous of those present, with one abstention (Lebeaux).

Agenda Item #3: Presentation and Discussion: Draft 2011 WRC Work Plan and Update on CY 2010 WRC Work Plan

Carroll reviewed the work conducted in 2010 by the Water Resources Commission and staff. Work was concentrated in three main areas: water needs forecasting, Interbasin Transfer Act reviews, and the Sustainable Water Management Initiative. Water needs forecasts were completed for four river basins, and one is in progress. The Interbasin Transfer Act work included eleven advisory opinions and several other items. Efforts related to the Sustainable Water Management Initiative have taken a substantial amount of staff time, and periodic updates have been provided to the commission over the past year. Drury added that not all activities related to the Interbasin Transfer Act come before the commission for formal discussion or approval. In response to a question from Tisa, Drury confirmed that when pre-consultation meetings are held with applicants, personnel from the Department of Fish and Game are consulted for their concerns with the proposal. She acknowledged technical assistance recently provided by Division of Marine Fisheries staff in following up on actions required of applicants.

Carroll reviewed the proposed 2011 Work Plan. She invited comments and suggestions before a vote on the Work Plan at the February commission meeting. Work on the Sustainable Water Management Initiative will continue, with a commission vote anticipated in the June timeframe. Staff will develop water needs forecasts for public water suppliers in four river basins in 2011. Staff will convene an internal work group to review the Water Conservation Standards, which were last updated in 2006. This internal review will identify the scope of work for updating, from minor editorial changes to technical changes. It is anticipated that proposed changes would be presented to the commission for discussion in the summer. Carroll noted potential Interbasin Transfer reviews that may come before the WRC or WRC staff.

Contreas requested clarification on the Birch Road wells interbasin transfer in Framingham. Hutchins reviewed the history of this project and noted that the town has retained the U.S. Geological Survey to help with a groundwater model that may answer questions related to the interaction of surface water and groundwater. Studies will be conducted over the next year or two. Drury added that the Department of Conservation and Recreation is a stakeholder, because the wells abut Cochituate State Park.

Pederson requested clarification on the applicability of the Permit Extension Act on the water needs forecasting effort. Carroll responded that WRC staff is coordinating with MassDEP on the implications of the act. She added that staff currently plans to continue with the current schedule of forecasts.

Pederson added that the Massachusetts Water Works Association questions the need to do an in-depth review of the Water Conservation Standards, as it is the organization's belief that Massachusetts has some of the most aggressive standards in the country. She added that the organization would like to see the outcome of the Sustainable Water Management Initiative before delving too deeply into the Water Conservation Standards. Carroll clarified that the intention over the next few months is not for a wholesale revision of the standards but to identify areas in need of updating. Before more substantial changes would be proposed, staff would report the results of its review to the commission and convene a stakeholder work group.

Zimmerman asked if the commission planned to address climate change adaptation. Baskin responded that EEA is planning to release a climate change adaptation report that summarizes an examination of potential strategies to address impacts of predicted climate-change. She added

that some work on changes in precipitation over time had also been done by the Water Resources Commission in the past. Zimmerman commented that it would be wise for the Water Resources Commission to consider how the state would respond to an extended drought and avoid a short-term response to a crisis that might be harmful to the environment in the long term. He also suggested the commission examine the implications of large-scale failure of compromised dams across the state. Carroll commented that there are many aspects of dams that are not within the commission's control. She noted that past commission meetings have included presentations on dam removal and stream restoration. She invited specific suggestions for making further progress. Zimmerman responded that the commission at least has the responsibility to raise the issue so that the potential for catastrophe and liability is understood, noting that there are 3,000 dams in Massachusetts, with the majority in private ownership. Carroll suggested that the commission invite DCR's Office of Dam Safety to provide an update on the information it has and the needs it has identified.

Zimmerman also suggested that the work plan proactively conduct a policy examination of the expansion of the Massachusetts Water Resources Authority (MWRA) water supply service area.

On the issue of climate adaptation, Hutchins noted that work in 2010 include updating the state Drought Management Plan and looking preemptively at the implications of drought.

Pederson commented that the water restrictions enacted by many public water suppliers in the summer of 2010 were driven by conditions in Water Management Act permits.

Baskin responded to a number of the issues raised. She said that the updated Drought Management Plan will be presented to the Water Resources Commission for approval. Discussions of expansion of the MWRA water supply service area would need to be coordinated with the Secretary of Energy and Environmental Affairs, who is the chairman of the MWRA Board. She said staff will incorporate comments on the work plan and bring a revised work plan to the commission for approval at the February meeting.

Agenda Item #4: Presentation and Discussion: Update on Water Needs Forecasting Effort

Drury noted that in January 2010, WRC staff presented a progress report on water needs forecasts completed from 2008 to 2010. Today's presentation will focus on forecasts done in 2010.

McCrory provided a brief overview of the forecasting effort since 2008. Staff has completed forecasts for public water suppliers in ten river basins. Staff reviewed data for 101 public water suppliers and provided completed forecasts for 78 PWSs. Of these, 37 are projected to exceed their currently authorized withdrawal volume at some point in the forecast period. Twenty-two temporary allocations were provided to public water suppliers (PWSs) who were unable to provide data needed to complete a forecast. She added that there are other sources of water withdrawal that are not being captured in the forecasting effort.

McCrory noted that forecasts are provided only for public water suppliers with Water Management Act permits or with potential needs that will exceed their current withdrawal authorizations. She pointed out that the geographic area covered by a forecast may not be contiguous with town and basin boundaries. She clarified that the water needs forecast is an

indication of a water supplier's potential needs, but is not an allocation or an indication that water is available to meet those potential needs.

Pederson asked if the number of PWSs who are anticipated to exceed their currently authorized withdrawal volumes is based on the 65/10 forecast scenario (which assumes the PWS meets the water conservation standards of 65 RGPCD and 10% unaccounted-for water) or the Current Trends scenario. McCrory explained that this number represents the 65/10 scenario for all basins except Cape Cod and the Islands basins, which received only forecasts based on the Current Trends scenario.

Tisa asked when PWSs are projected to exceed their authorized volume. McCrory clarified that the number 37 represents PWSs who may exceed their authorized withdrawal volume at some point in the 20-year planning period covered by the forecast, and that the number of PWSs would be higher if the buffer volume were added to the 20-year forecast volume. Baskin asked if there were differences among basins. McCrory clarified that most of the PWSs who are anticipated to exceed their authorized volumes are in the South Coastal, Cape Cod, and Islands basins. She noted that a different method of estimating population served was used in the Cape Cod and Islands basins to account for the seasonal influx of population. Drury added that, because of the difficulties of determining population served, a PWS's existing patterns of water use were carried forward in the forecasts for Cape Cod and the Islands basins.

McCrory then reviewed graphs showing water needs forecasts for the South Coastal, Cape Cod, and Islands basins. For the South Coastal Basin, she pointed out that recent average water use remains below total authorized withdrawal volume, which is based on the water needs forecasts prepared with a previous methodology in the late 1980s. She also pointed out the two projection scenarios, 65/10 and Current Trends, are very close to each other, but noted that if data from PWSs who received temporary allocations were included, there would likely be a greater difference between the two scenarios.

Tisa asked if any analysis had been done to determine how closely the projections match up to actual water use. Drury responded that some analysis comparing projections from 20 years ago to recent data on water use had been done, and the results were quite varied. She explained that earlier methodologies assumed continued growth in per capita water use, while later methodologies began to incorporate some assumptions about conservation. Tisa commented that with continuing improvements in infrastructure, heightened awareness of water conservation, and changes to the plumbing code, much has changed in the last decade. Given these trends, he questioned the validity of forecasts that show a continuous rise in water use. Baskin pointed out that the forecast does not necessarily mean that MassDEP will allocate the forecasted volume. Tisa commented that a community's actual demands in the future should be compared to the forecasted need before water is allocated in a permit. Baskin agreed that such an analysis should be done every few years.

Cohen pointed out that, for most PWSs, the water needs forecasts assume that future consumption will meet the 65/10 targets, accounting for some of the conservation trends that Tisa mentioned. Zimmerman commented that water use in the United States has been effectively the same since 1985, even though population has grown dramatically in that period. He questioned the graphs projecting a steady increase in water demand over the next 20 years, adding that if this increase is driven by lawn irrigation, then this is something the commission should focus on. Carroll reminded the commission that there was much discussion and debate

about incorporating the 65 RGPCD standard into the water needs forecasting methodology. She added that, though some households may have a lower rate of consumption, the forecasting methodology uses a residential consumption standard that was agreed after extensive public debate. She said staff could plot water needs forecasts using different assumptions, for the sake of comparison.

Zimmerman suggested that the commission consider what causes the tremendous demand for irrigation, adding that topsoil removal by developers is one thing that drives the need for extensive lawn watering. McCrory responded that topsoil removal is generally addressed at the local level, but that the issue could be looked at in the context of the state Water Conservation Standards. Zimmerman suggested that recommendations for towns on topsoil removal be included in the Water Conservation Standards. Pelto added that, even though soil removal might be a local issue, it is important to think about how the issue could be addressed by statewide organizations working with local communities in order to avoid the unintended effect of shifting irrigation demand to private irrigation wells.

McCrory discussed results of the water needs forecasts for Cape Cod. She pointed out that recent average use has risen significantly since the mid-1980s. She added that population on Cape Cod for these communities had increased 53% since the last set of water needs forecasts was produced. Despite this population increase, recent average use is below the amount projected in the early 1990s. The water needs forecast for Cape Cod reflects the current water-use patterns (RGPCD and UAW) in the communities for which projections were done.

Zimmerman asked if the forecasts account separately for cooling water demand. He pointed out that 39% of national demand for non-irrigation water goes to cooling water for power plants and other uses. McCrory explained that when discussions about the water needs forecasting methodology took place, it was agreed that there were many incentives for industry to save money by saving water, so that specific reductions in nonresidential water use were not incorporated into the forecasting methodology. She added that the Water Conservation Standards include recommendations to industry on reducing water use. Drury added that WRC staff does not do projections for private entities that have their own water sources and Water Management Act permits.

Zimmerman commented that the important issue, even for residential withdrawals, is out-of-basin disposal of water. Drury responded that a good forum for examining this issue is the Sustainable Water Management Initiative as well as basin planning.

McCrory reviewed projections for the Islands Basin. As with Cape Cod, recent average water use has increased since the mid-1980s, but remains below the amount projected 20 years ago. However, based on the current set of population projections and current patterns of use, water use is projected to exceed currently authorized volumes within the next five years. She added that the Islands also experienced substantial population increases over the past 20 years. However, for both Cape Cod and the Islands, population has leveled off and recently showed population declines in some communities.

She concluded by outlining the basins for which water needs forecasts will be done in the next year, as well as other efforts, including working with the state's Information Technology Division to develop a database to manage the large volume of data related to water needs forecasting, and using the data to develop basin plans.

Baskin thanked the staff members who have been involved in this effort.

Agenda Item #5: Update: Sustainable Water Management Initiative

Carroll noted that since the presentation on the Sustainable Water Management Initiative at the November meeting of the Water Resources Commission, agency staff have been working on issues to be discussed at the next meetings of the technical subcommittee (January 25, 2011) and advisory committee (February 8, 2011). Baskin added that the proposed schedule anticipates draft ideas being ready for public discussion and comment in the March timeframe and ready for consideration by the Water Resources Commission in the June timeframe. Pederson asked if there would be a public outreach and comment period on the drafts before they come before the commission. Baskin confirmed that a draft would be circulated to the advisory committee and the public when it is available.

Meeting adjourned

Attachments distributed or presented at meeting:

- Current Water Conditions in Massachusetts, January 13, 2011
- Water Needs Forecasting Update, January 13, 2011 (presentation handouts)