THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION

100 CAMBRIDGE STREET, BOSTON MA 02114

Meeting Minutes for September 8, 2011

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

Minutes approved October 13, 2011

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
Ann Lowery	Designee, Department of Environmental Protection
Gerard Kennedy	Designee, Department of Agricultural Resources
Tim Purinton	Designee, Department of Fish and Game
Joseph E. Pelczarski	Designee, Massachusetts Office of Coastal Zone Management
Thomas Cambareri	Public Member

Members Absent

John Lebeaux	Public Member
Bob Zimmerman	Public Member

Others in Attendance:

Michele Drury	Dept. of Conservation & Recreation
Bruce Hansen	DCR
Erin Graham	DCR
Anne Carroll	DCR
Sara Cohen	DCR
Michelle Moon	DCR
Laila Parker	Dept. of Fish & Game, Div. of Ecological Restoration
Beth McCann	Dept. of Environmental Protection
Steve McCurdy	MassDEP
Jen Pederson	MA Water Works Assn.
Marilyn McCrory	DCR
Margaret Van Deusen	Charles River Watershed Assn.
Lexi Dewey	Water Supply Citizens Advisory Committee (WSCAC)
Paul Lauenstein	Neponset River Watershed Assn. & WSCAC

Baskin called the meeting to order at 1:05 p.m.

Agenda Item #1. Executive Director's Report

Baskin requested an update on hydrological conditions for August 2011. Hansen reported that August was a very wet month, possibly setting a record (*Ed. note*: confirmed following the meeting as the second wettest August in the last 117 years in Massachusetts). Statewide, nine and one-half inches of precipitation fell, ranging from 329 percent of normal in the western region to 119 percent of normal in the Cape Cod and Islands region. During the Tropical Storm Irene event on August 28, nearly ten inches of rain fell in six hours in the western region. On top of already saturated ground, this rainfall intensity caused high streamflows and flooding,

especially in the Deerfield and Hoosic river basins. Flood levels were the highest ever recorded at several gaging stations, and several stations were inundated.

Hansen noted that if such record events continue to occur, the state should consider updating the precipitation frequency analysis in the near future so that appropriate design standards can be established for bridges and other infrastructure. Groundwater levels were normal or above normal statewide. Surface water flows were generally above average, except in the southeast region, where they were normal. Some rivers in the western part of state are currently above flood stage. Reservoir levels are generally above normal. There are no indications that drought conditions will occur in the next three months.

Agenda Item #2. Vote on the Minutes of July 2011 and August 2011

Baskin invited motions to approve the meeting minutes for July 14, 2011, and August 11, 2011.

VOTE	A motion was made by Contreas with a second by Cambareri to approve the meeting minutes for July 14, 2011. The vote to approve was unanimous of those present with one abstention (Kennedy).

VOTE	A motion was made by Contreas with a second by Purinton to approve the meeting minutes for August 11, 2011. The vote to approve was unanimous of those present with two abstentions (Kennedy and Cambareri).

Agenda Item #3. Presentation: Amended Clean Water SRF regulations: Enhanced Subsidy to Certain Nutrient Management Projects

Baskin distributed copies of one-page summary and a redlined version of proposed changes to the Clean Water State Revolving Fund regulations. She offered to e-mail this document. Baskin introduced Steve McCurdy, director of Municipal Services at MassDEP.

McCurdy summarized proposed amendments to 310 CMR 44, the Clean Water State Revolving Fund (SRF) program. MassDEP is recommending that the regulations conform to a statuary change made as an attachment to the Environmental Bond Bill. This provides for zero percent interest loans for nutrient management projects under the Clean Water SRF. MassDEP worked with the legislation's sponsor, Senator Robert O'Leary, to develop appropriate regulatory language to implement the program. McCurdy outlined five conditions projects must meet to qualify for the zero percent SRF financing. He added that the expectation is that a small subset of projects will meet the criteria. He noted that the public comment was solicited and received on the proposed amendments.

McCurdy emphasized that, in amending the regulations, MassDEP is responding to a legislative initiative. He said it is likely that fewer projects will be financed as a result of the deeper subsidy provided to qualifying nutrient management projects. He explained how the loan program is financed. Additional meetings to provide guidance to stakeholders will be held in September and October, and guidance will be posted on MassDEP's web site.

Purinton asked if MassDEP anticipates providing safeguards against subsidizing nutrient-removal projects that may have significant negative ecological impacts. McCurdy responded that there will be ample opportunity, through the comprehensive wastewater management planning

process and the MEPA process, for input into project applications by regulatory agencies and the public. He added that the statute attempts to incorporate smart growth principles by ensuring that any sewering does not cause unchecked sprawl. He added that the program expects a wide variety of projects besides centralized wastewater treatment and sewering.

In response to a request for clarification from Baskin, McCurdy confirmed that less money is likely to be available to borrowers because some nutrient management project loans will be more deeply subsidized than standard SRF loans, which charge a two percent interest rate. Baskin called attention to condition #5 in the statute: "(5) the applicant has adopted land use controls…intended to limit wastewater flows to the amount authorized under zoning and wastewater regulations as of the date of the approval of the CWMP." Baskin asked if this condition responds to concerns by Cape Cod communities who wish to maintain some control over the character of their communities by controlling unintended growth that might result from sewering. She noted that the regulations outline methodologies to calculate current wastewater flow capacity. McCurdy confirmed the intent of Condition 5, but noted that there is an option to increase wastewater flows if a community designates a growth area with increased densities. These land use controls must stay in effect until the loan is paid back. Lowery and Contreas confirmed that MassDEP and the Department of Housing and Community Development collaborated on developing these details in the regulations.

Cambareri commended MassDEP for writing regulations that implement the statute. He noted that restoration of coastal water quality has been an important issue to Cape Cod communities for more than fifteen years. He added that the National Estuaries Program has provided the scientific basis for comprehensive wastewater management plans, and fifteen communities are in various stages of developing these plans. He stated that the legislation adds to the tools public officials can use to finance and gain public support for multi-million dollar public works projects.

McCurdy indicated that, once the regulations are promulgated, the first opportunity for proponents to seek funding will be Fall 2011. In response to several questions about public participation and comments, McCurdy stated that no substantial changes to the regulations resulted from the public hearings, which were held in Boston.

Baskin noted that the Water Resources Commission will vote on the amended regulations at the October meeting.

Agenda Item #4. Update: DCR's Office of Water Resources' Water Conservation Project with the Urban Parks Division

Drury introduced Michelle Moon, a graduate student at Tufts University, who served as an intern at the Department of Conservation and Recreation's (DCR) Office of Water Resources. Drury noted that Moon's project grew out of the commonwealth's Leading by Example program and a staff initiative to collaborate with DCR's Division of Urban Parks on implementing the water conservation standards. She acknowledged the enthusiastic support of the Urban Parks Division and its director, Samantha Overton, and thanked Moon for her hard work on the project.

Moon acknowledged DCR staff who provided help throughout the project. She provided an overview of the project, which involved developing and conducting a water audit covering both indoor and outdoor water uses at twelve parks and two golf courses in the DCR urban parks system. She described the process of collecting information using a water audit checklist, which

she developed for the project, verifying information, and brainstorming with staff on recommendations and next steps.

Moon summarized the results of her investigations. Overall, the parks were in compliance with the water conservation standards. The Charles River parks and the two golf courses presented the most opportunities to reduce water consumption. Moon described a list of tasks; a ranking of their cost, ease of implementation, and benefits; and a checklist developed for staff to monitor progress. Moon outlined the recommendations developed for the parks and golf courses. She also described a list of short- and long-term goals developed in collaboration with parks staff and highlighted the goals staff are working on.

Yeo thanked Moon for her work and commented that both state and urban parks have made progress, but much work needs to be done to improve infrastructure. He cited leaking pools as one example. He added it is helpful to have pilot projects like this one.

Lowery asked how relevant the recommendations are to other parks in the state. Moon responded that the report included many general recommendations that could apply to other parks. Yeo explained that the urban parks experience more intensive water usage than some of the state parks, which are in more rural settings.

Baskin commented that there may be an opportunity to think about how to better design parks from the start, suggesting design guidance on replacement plants and grasses that would be more drought tolerant. Moon noted that this was one of the recommendations.

Discussion continued on quantifying savings and on the use of irrigation systems at parks. Yeo noted that current water demand in the urban parks is a fraction of demand in the 1980s, adding that there is room for management improvements. Drury invited observers to report any problems, and noted that this project helped raise awareness among parks staff about proper irrigation schedules.

Lauenstein asked if there was an opportunity to retrofit toilets with dual-flush toilets and educational signage. Moon responded that this was one of the recommendations.

Pederson commented that state facilities should be held to the same standards for mandatory outdoor watering restrictions of one to two days per week that public water suppliers are expected to adhere to. Drury responded that the project recommended that the parks follow any restrictions put in place by the public water supplier. She thanked Pederson for the suggestion and acknowledged that more work needs to be done on this.

Cambareri commented that it is important for public parks to provide public drinking water fountains, as an alternative to bottled water. Purinton suggested the Leo Martin Golf Course switch its irrigation water source from the Charles River to the MWRA. Drury noted that the golf course is authorized to withdraw water through a Water Management Act registration; Baskin added that Purinton raises large policy questions on the benefits of relieving stress on a particular river basin versus using potable water for irrigation.

Baskin thanked Moon for her work and presentation and congratulated her on finishing her thesis.

Agenda Item #5. Presentation: Overview of the 1978 Water Supply Policy Statement

Drury provided background on the 1978 Water Supply Policy Statement and its relevance to the commission and the commonwealth today. She noted that the Water Resources Commission's enabling act designates the commission as the policy-setting body for the state and for overseeing the policies established by state agencies. The enabling act requires that the Water Supply Policy Statement be updated every five years. Updates were last completed in 1984 and 1996.

The broad theme of the policy statement was that the commonwealth and its political subdivisions are responsible for providing drinking water to their citizens, recognizing the limitation of the resource and balancing consumptive and nonconsumptive uses and needs. Drury noted that the statement was a far-reaching document that formed the basis for all water programs since it was adopted. She outlined statutes and programs that resulted from the statement, including the Interbasin Transfer Act, Water Management Act, river basin planning, revision of the state plumbing code, water conservation standards, and others.

Drury outlined the organization of the document into three broad recommendations (policies, programs, and short-term actions), with three subcategories in each: water supply management, water demand management, and administrative management.

Drury indicated that elements of the statement will be discussed at the next several commission meetings, in order to begin the process of updating the statement, as required. She noted that the 1978 statement was a product of its times, reflecting the 1960s drought – which left many communities short of water – the advent of the environmental movement and passage of the Clean Water Act, and efforts to divert the Connecticut River to serve water supply needs in eastern Massachusetts. She asked the commission to consider whether the approach to updating the statement should be another update or a more comprehensive review reflecting recent initiatives – such as river basin planning, the Sustainable Water Management Initiative, smart growth, and climate change – to create a document that will move the state forward in the 21st century. She said the next few commission meetings will be devoted to brainstorming on the issues and getting a sense of where the commission would like to go with the update.

Kennedy asked who was responsible for developing the Water Supply Policy Statement. Drury confirmed that the statement was a Water Resources Commission document, and it has stood the test of time. She said the next update would also be a commission document, which can provide direction to subsequent administrations on where the state should be going with water supply policy and water resources policy. She acknowledged this is a long-term effort.

Baskin clarified that the next agenda item would be a more in-depth discussion of one piece of the Water Supply Policy Statement: demand management policies and programs. Baskin and Drury asked commissioners and the public to contribute ideas today and at future meetings.

Yeo commented that the ability of the water supply and water resources community to move forward depends on a solution to infrastructure financing. Baskin noted that Senator James Eldridge is scheduled to report at a future meeting on the recommendations of the Water Infrastructure Finance Commission. Yeo pointed out that a referendum has been proposed that would limit water and sewer rate increases to two and one-half percent, and that this would be potentially devastating to water suppliers' ability to manage and maintain their systems. Yeo also

cautioned that most states appropriate substantial funding and engage a consultant to conduct long-range planning studies.

Kennedy asked how this update relates to the Water Policy document published in 2004. Baskin responded that the then Executive Office of Environmental Affairs published its first water policy in 2004. That document was broader, covering water resources. Baskin noted that there may be elements from the Water Policy document the commission would want to carry forward. Drury added that the proposed update would provide a longer-range vision, providing direction for the next 25 years or longer, while recognizing that it would continue to be updated as science and technology evolve. The policy document would come from the commission and be implemented statewide.

Van Deusen urged the commission to craft an overarching policy statement that should frame this new document, including addressing issues of equitable allocation of a limited yet renewable resource. She urged the commission to spend some time on this overarching policy statement before looking at the pieces within the document. She acknowledged that the 1978 document was a great document for its time, but said it is weak in providing direction for the next 25 years. She added that, in view of all the work that has been completed over the last several years, the state, and particularly the commission, is in an ideal position to develop a strong statement outlining the blueprint for water resources.

Pederson noted that everyone in the room has been involved in many water resources discussions over the past few years. She urged the commission to target "water supply" and the long-term sustainability of public drinking water supplies in the statement, noting that there are enough other initiatives and documents addressing overarching water resources.

Purinton requested clarification on whether a decision had been made to keep the 1978 document. Baskin responded that it is not yet clear whether the commission is embarking on creating a brand new document or intends to modify sections of the existing document. Purinton then asked why the commission is starting to review the different pieces of the existing document if there remain some bigger questions that the commission has yet to resolve. He added that it may still make sense to start in this way. Yeo commented that, whatever the overall framework of the discussion turns out to be, demand management and water conservation will be part of the discussion. Drury added that, whatever direction the commission decides to take with the update, it needs to know what was recommended in 1978 and what has been done in order to determine where to go from here. This will be the framework for discussions over the next several meetings, with a focus on getting ideas on the table. Baskin added that the intent is to take stock of one portion of the 1978 statement to help the commission assess how large an effort this update will be.

Pelczarski requested that the 1978 document be scanned, distributed, and posted on the commission's web site. He suggested that the commission take a close look at definitions in the document, since thinking may have evolved on these. Baskin agreed that the document would be scanned and distributed.

Pederson requested further clarification on the process of discussion, updating, and public notices. Drury described the process as an open public discussion, with an initial focus on trying to capture as many ideas as possible. She added that a longer-term process, extending over more than one year, is envisioned. Baskin invited written comments as well.

Agenda Item #6. Discussion: Introduction to the 1978 Water Supply Policy Statement, Demand Management Policies and Programs: Where We've Been and Where We're Going

Cohen asked those in attendance to think, during the presentation, about what the major themes and important issues were in 1978 and identify where we are today in terms of what the major themes are. Drury called attention to the memo requesting input and ideas from commission members and their staff, and thanked those who responded.

Drury reviewed the demand management policies recommended in the 1978 statement: (1) require statewide water conservation efforts, (2) require metering, (3) require rehabilitation of water supply and distribution facilities that show large quantities of unaccounted-for water, (4) promote recycling of industrial process water and reuse of reclaimed municipal wastewater, and (5) study water rates. For each recommendation, she listed accomplishments since 1978, including changes to the Plumbing Code, adoption of water conservation standards, metering requirements under various regulatory programs, adoption of standards for water audits and leak reduction, promulgation of wastewater reuse regulations, various studies and surveys of water rates, and the prohibition of declining block rates for public water suppliers.

In response to a question from Kennedy, Yeo provided a brief history of leak reduction efforts in the metropolitan Boston and Massachusetts Water Resources Authority systems starting in the late 1970s and continuing through the 1980s, an effort he said greatly reduced leakage in all the municipal systems and saved vast amounts of water very quickly. The effort included substantial rehabilitation of pipelines as well as leak repair. The program also included metering improvements, a comprehensive water conservation program, and pricing adjustments. Technology improvements in industry and in the home also helped drive down water demand by more than one-third. Yeo noted that efficient use of water is written into the MWRA statute.

Several people acknowledged the role of the Water Supply Citizens Advisory Committee in advocating for efficiency improvements over diversion of the Connecticut River for water supply.

Purinton commented that the accomplishments related to the reuse of wastewater seemed modest and there was more potential for implementation of this recommendation. Baskin noted that having the regulatory tools in place for the first time is a significant accomplishment.

Drury then reviewed the demand management programs recommended in the 1978 statement, noting that there was much overlap between the policies and programs. The program recommendations included (1) a vigorous state-supported program of public information and education to promote water conservation, (2) a comprehensive metering and meter replacement program, (3) a comprehensive state-supported rehabilitation program to reduce water waste in utility systems, (4) a program to provide legal and technical means to increase water reuse, and (5) a comprehensive study of water supply pricing and legislation addressing water pricing and subsidy. Drury outlined progress made on each of these recommendations since 1978.

Drury invited input on programs that should be added to the list of accomplishments. Lowery noted funding for conservation grants through the drinking water State Revolving Fund. In response to a question from Baskin, Drury confirmed that gaps in progress against the recommendations, as well as identification of areas where accomplishment has been modest – as with wastewater reuse – are all part of the discussion. Cohen requested input on some of the major themes that are important in our times.

Yeo suggested that any assessment of progress should be framed around the observation that far more was accomplished in water conservation in Massachusetts than anyone could have anticipated. He added that this was due to a combination of government action, including regulations and incentives, better system management by the water suppliers, and market forces such as pricing pressures and new technology.

Cohen posed questions for the commission to consider: What are the major issues in 2012, and what are the priorities in terms of water supply management and water demand management for the next 25 years? It is not necessary to discuss the merits of any individual idea, she said, to allow a free flow of ideas.

Carroll asked if the policy statement should address protecting water supply quality. Kennedy identified climate change and energy use as two key issues that have risen to the forefront since 1978 and the linkage between these two issues and water supply and water demand. Pelczarski pointed out technology changes in water cooling and wastewater treatment, noting that, in the 1970s, water use by power plants was considered a nonconsumptive use. Baskin clarified that two issues can be distinguished: the energy demands of water and the water demands of energy.

Purinton noted that the discussion has focused on tools to control demand for what is assumed to be an available supply. What has not been addressed, he said, is what is available or whether there is adequate supply to support multiple uses – no matter whether they are consumptive or nonconsumptive. He suggested not losing sight of the baseline from which one can implement the conservation measures.

Baskin asked Drury to explain what is meant by the terms demand management, supply management, and administrative management. Drury explained that demand management involves controlling demand by using water more efficiently. Supply management policies address questions related to the source of supply and whether there is enough supply, and administrative management policies address the legislative programs and structure needed to implement the policies and programs. She added that the update of the policy statement does not have to stick with this categorization and encouraged the commission to consider developing an organization that reflects contemporary issues and priorities. She reiterated that this is a brainstorming exercise, and all ideas are on the table.

Pederson suggested looking at the concept of unaccounted-for water, incorporating recent data from the American Water Works Association. Baskin acknowledged the comments of the Massachusetts Water Works Association on this issue when the water conservation standards were updated in 2006. She added that this topic will be addressed as part of the update of the water conservation standards and that staff will consult with MWWA, MassDEP, and others.

Pederson also suggested making sure that there are adequate protections for drinking water within any regulations related to water reuse. In addition, she suggested incorporating the water supply metric from the Sustainable Water Management Initiative into the Water Supply Policy Statement.

Regarding water rate policies, Lauenstein commented that it is not just the magnitude of rates but the rate structure that can have an effect on water-using behavior. He cited the town of Sharon, where a steeply ascending block rate structure has helped reduce water use by twenty percent over the last ten years. He said there has been a recent initiative to increase the fixed component

of the water rate structure, a change which could dilute the incentive to conserve. He suggested this is an important discussion for the commission to engage in.

Pelczarski suggested having a provision to incorporate technology as it improves, citing as examples technology that improves water quality, efficiency, or resiliency.

Cambareri suggested providing better guidance to local boards so they have the information needed to conduct informed reviews of plans and integrate state policies into their recommendations. He suggested better defining what the targets are. Drury agreed, noting that such principles as smart growth, low-impact development, and LEED (Leadership in Energy and Environmental Design) have arisen since 1978.

Pederson suggested factoring EPA's Water Sense program into demand management policies.

Lauenstein highlighted radio-read metering systems as an example of technological improvements that should be referenced. Baskin added that such technology could be incorporated into a discussion of the concept of the "smart water grid."

In reference to gaps in the list of accomplishments, Pelczarski noted that many drought management plans have been developed since 1978.

Drury wrapped up the discussion by requesting input directly to her on (1) any existing programs or accomplishments not mentioned today; (2) topics that should be included in an updated water supply policy; and (3) the top three priorities for demand management policies and/or programs to be included in the 2012 Work Plan of the Water Resources Commission. She clarified that the latter should cover topics that staff could start exploring for the Water Supply Policy Statement in 2012, including ideas that could be implemented in 2012.

Cohen called attention to the specific recommendations resulting from commissioners' and state agency staff review of the water supply policy statement, as outlined in the memo included with the meeting agenda. She requested that commissioners flag recommendations as priorities for action in 2012. Drury noted that the policy statement will be used as the commission's work plans in the years to come. Input was requested by September 19 for discussion at future commission meetings.

(*Ed. note*: discussion notes are attached at the end of this document, which summarize the key topics suggested to be included in an updated water supply policy, including suggestions provided as follow-up by commissioners via email).

Pederson commented that the commission, the state, and public water suppliers are currently engaged in many initiatives, such as the Sustainable Water Management Initiative (SWMI), and questioned whether adequate resources are available to tackle these issues now. Drury responded that development of the policy statement will be a multi-year effort, and that the SWMI will inform the policy statement. Baskin added that commission staff will consider stakeholders' ability to participate in the discussions.

Pederson expressed concern that the commission still lacks a full complement of public members to participate in these important discussions.

Agenda Item #7. Discussion: Massachusetts Water Conservation Standards: Review and Proposed Updates

Baskin introduced Graham and McCrory, who have been reviewing the Water Conservation Standards document, which the Water Resources Commission approved in 2006, and scoping out ideas for where to go next with an update.

McCrory noted that a review of the Water Conservation Standards is a task on the commission's 2011 Work Plan. She acknowledged helpful comments received from commission, EEA, DCR, MassDEP, and other state agency staff.

She provided background on the Water Conservation Standards, noting that the original document grew out of a recommendation in the 1978 Water Supply Policy Statement. The most recent iteration, in 2006, was a comprehensive, multi-year, multi-stakeholder effort that added a substantial amount of new material. Changes in the last five years make this a good time to review and update the standards.

She noted that to keep the standards relevant and useful, staff started with housekeeping edits, including updating agency names, verifying internet links, updating reference links, and updating data. She also highlighted format changes intended to make the document more user-friendly, such as highlighting the information relevant to particular audiences and reorganizing the Appendix section.

Beyond the housekeeping edits, staff have identified five areas where more focus and study is needed: pricing; lawn and landscape; system water audits and water losses; industrial, commercial, and institutional water use; and water-use and efficiency standards. McCrory invited input from the commission on whether these are the right issues to focus on, whether there are other areas staff should focus on, and what the commission's priorities are.

Graham and McCrory then reviewed each of the five focus areas, highlighting issues that warrant further investigation. In general, the plan is to revisit the content of each section to make sure it is up to date, with assistance from outside experts where needed; incorporate any new policies arising from initiatives such as the SWMI and the update of the water supply policy statement; and identify impediments to implementation. With respect to system water audits and water losses, Graham cited the need to evaluate current standards and practices in Massachusetts, review guidance from professional organizations and approaches other states are using, and recommending changes, as needed. Graham also highlighted the long-term need to gather and analyze data on how water is being used in Massachusetts, and how water use breaks down by sector, to help in targeting water conservation efforts and recommendations, especially regarding industrial, commercial, and institutional water use. This water-use data could also help inform an assessment of fixture and appliance efficiency standards as well as policies being developed for the update of the Water Supply Policy Statement. The assessment of efficiency standards will build on research done by interns and staff since 2006 and will consider federal changes in efficiency since 2006.

Graham and McCrory asked for feedback from the Commission.

Lowery commented that two areas were not covered in the discussion: (1) the use of water to create energy – for example, new technologies such as micro-hydropower, and (2) water reuse, where conservation interests could also be served.

Baskin reviewed the process for updating the standards. She noted that some updates are "housekeeping" in nature, and staff will take care of these. Other issues will require more in-depth investigation on the part of staff. Thirdly, there will be a few items for which staff will seek outside input. She added that she is not envisioning a large-scale effort similar to the update done in 2006, though the scale of the effort remains open for discussion.

Cambareri commented that the items staff had identified seem reasonable. He added that there seems to be enough new information to warrant an update, and that some of the updates seem very straightforward. He suggested that if staff need more direction or advice on issues that are more complex, they should bring those forward.

Kennedy asked how the water conservation standards are implemented. Lowery responded that MassDEP implements the standards in the Water Management Act permitting program and in reporting requirements for public water systems and the drinking water program. She added that the standards are being discussed in the context of the ongoing SWMI discussions. Drury noted that compliance with the standards is also required for interbasin transfer approvals. Baskin stated that where agencies have the authority to require that the standards be implemented, they are exercising that authority. She added that there are gaps in authority, as, for example, in industrial use. Purinton noted that the standards can be used in model bylaws. He also suggested updating two important items that are presented in the Appendix of the standards document: model bylaws and the guidance on water banks.

Cambareri agreed on providing model bylaws and water conservation targets that local boards can use in project reviews. Purinton suggested adding more examples of what communities can do, citing, as an example, Lauenstein's work in the town of Sharon. Baskin responded that these comments suggest a need to update the Appendices.

Pederson commented that it will be difficult to break out water use by sector in the commercial and industrial sector. Graham acknowledged this and responded that the intent of gathering data is to determine how to focus the chapter and the state's efforts to reduce water use in these sectors. For example, is it a better use of resources to target the institutional and commercial sectors rather than industrial users? Pederson noted that entities may be classified differently, depending on a municipality's billing system, and, therefore, it may be difficult to get a clear picture of how much water is being used in the commercial or institutional sectors. Drury suggested that industry groups or chambers of commerce may have some ideas, and the first step is to see what information is available.

Lauenstein expressed concern about water withdrawals by private wells and the need for a model bylaw that applies watering restrictions to irrigation systems regardless of whether the water source is municipal or private. He suggested this issue be addressed through recommendations in a state water policy as well. McCrory responded that many of the standards and recommendations in the water conservation standards and the issues Lauenstein raise dovetail with the Water Supply Policy Statement and issues that might be addressed through a broader policy. Baskin responded that the water conservation standards can present such approaches as generally good practice.

McCrory requested that further input on updates to the water conservation standards be sent to Michele Drury. She also asked commission members to identify agency staff with expertise in a particular focus area who could work with commission staff.

Cambareri commented on the town of Reading's rebate program, summarized in its interbasin transfer annual report, and noted the program's impressive results in terms of water savings. Kennedy asked if, following the interbasin transfer that was approved in Reading, the Ipswich River has improved. Carroll responded that a report has recently tallied results. Baskin reported that, though only a few years of data have been collected, and there have been fluctuations in weather, it appears that there have been significant improvements in the river. She added that the Ipswich River Watershed Association has reported that the lowest flow recorded in the Ipswich River since the town of Reading started using water supplied by the Massachusetts Water Resources Authority is twenty times higher than the previous lowest flow. She cautioned that this report has not been verified.

Meeting adjourned, 3:45 p.m.

Documents or Exhibits Used at Meeting:

- Meeting Minutes for July 14, 2011, and August 11, 2011
- Excerpts from Report of Water Audit for DCR Division of Urban Parks: Results, Priorities, and Next Steps
- Presentation: Water Audit for DCR Division of Urban Parks (Michelle Moon)
- Memo to Water Resources Commission from staff dated August 25, 2011: Discussion Generated through Review of the 1978 Water Supply Policy Statement (WSPS) Demand Management
- Presentation: The 1978 Water Supply Policy Statement: Background
- *Massachusetts Water Supply Policy Statement*, May 1978 (sample copy distributed)
- Presentation: Demand Management Policies, 1978 Recommendations and Accomplishments
- Amendments to 310 CMR 44, Clean Water State Revolving Fund (one-page summary by MassDEP staff)
- 310 CMR 44 DEP Selection, Approval and Regulation of Water Pollution Abatement Projects Receiving Financial Assistance from the State Revolving Fund (redline version of proposed changes)
- Response to Comments on proposed changes to 310 CMR 44, dated July 2011
- Presentation: Update of Water Conservation Standards: Staff Update to the Water Resources Commission
- Current Water Conditions in Massachusetts, August 11, 2011
- Current Water Conditions in Massachusetts, September 8, 2011
- Interbasin Transfer Required Annual Report from Town of Reading, July 28, 2011
- Interbasin Transfer Act project status report

Documents Distributed after Meeting:

- Discussion Notes: 1978 Water Supply Policy Update: Water Demand Section Water Resources Commission Meeting, Sept. 8, 2011 (attached)

DISCUSSION NOTES: 1978 Water Supply Policy Update: Water Demand Section

Water Resources Commission Meeting, Sept. 8, 2011

General Questions/Comments on 1978 Water Supply Policy Statement Overview Presentation by Michele Drury

- Before delving too deeply into the meat of the Policy, we should look at the overarching Policy Statement – What are the chief goals for the Policy? Are they the same as those of today? Do they cover things like equitable allocation, protection of habitat, sustainability, etc.?

- The Policy should be limited to issues of water supply. There are enough other initiatives dealing more widely with water resources, including the Sustainable Water Management Initiative (SWMI), which has not sufficiently dealt directly with the long-term sustainability of water supply.

- Before delving into the individual sections of the Policy, we should be discussing what the overall format, structure, process should be.

- We should determine if the definitions used in the Policy document originally conform with today's definitions of those terms, and clarify any discrepancies.

- The public needs to be notified that the Policy is being updated and public input should be included in the update.

Anything Missing from the Listed Accomplishments Under the Policy?

- DEP has a portion of the State Revolving Loan Fund (SRF) dedicated to water conservation. This should be included as an accomplishment under the Policy.

- Development of Drought Management Plans

Brainstorm Session: What are the Key Water Demand Priorities of Today?

- Recognizing and acknowledging the water conservation accomplishments to date.

- Protecting water supply quality [It was determined that this topic would be revisited under the "Supply" section of the Policy]

- Climate change: impacts on water demand and water supply

- Energy use related to meeting water demand – water conservation = energy savings and reduced greenhouse gas emissions.

- Water use for energy production (This topic needs to recognize how changes in technology have created new nexuses between water use and energy use and production)

- Measuring, tracking, and monitoring physical availability of water, and using this as a basis for allocation, prioritization, and management

- Population growth [This topic can be broadly interpreted to include total land development and patterns of land development and land use – note taker's comment]

- Defining today's priorities within the category of unaccounted-for-water (UAW) should be based on the latest thinking/understanding of this issue. Refer to the new American Water Works Association (AWWA) reports on this topic for most up-to-date thinking.

- Incorporating the best models of water rates and water rate structures – Focus on end goals of equity, incentives to conserve, and stability of revenue

- Incorporating new technologies into policy and program recommendations – There have been substantial changes since 1978 in pipes, fixtures, treatment processes, appliances, and distribution technologies

- Educating local boards, suppliers, citizens, users, and institutions about new technologies, rate structures, BMPs, etc.

- Incorporating/encouraging use of the EPA Water Sense labeling program for water-efficiency

- "Smart" metering and water grids – including technologies to improve the ease and efficiency of reading meters and providing feedback on use to customers

[**The following additional ideas were submitted by email]**

- Ensuring year-round water availability for production of food and fiber

- Developing creative financial incentives for water conservation, such as tax credits (possibly borrowing models from the energy sector – e.g. water conservation equivalents to Solar Renewable Energy Certificates/Credits (SREC), Renewable Energy Certificates/Credits (REC) or Alternative Energy Certificates/Credits (AEC))

- Addressing the aging water infrastructure of most suppliers, including: developing financing mechanisms for large capital costs; increasing awareness of the connection between adequate upkeep of water infrastructure and the secure delivery of water for public safety needs into the future; ensuring wide use of best management practices for repairs and maintenance. [May be revisited under the topic of Water Supply]

- Improving awareness of water-responsible landscape practices and efficient landscape irrigation techniques through outreach campaigns and partnerships with industry and media

- Promoting the purchase/protection of open space land for water resources protection and stormwater recharge [May be revisited under the topic of Water Supply]

- Optimizing withdrawals among various sources to protect streamflows and sensitive resources during critical habitat periods [May be revisited under the topic of Water Supply]

- Promoting and providing incentives for implementation of wastewater reuse

Discussion notes compiled by Sara Cohen, Dept. of Conservation and Recreation, Sept. 26, 2011.