THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION

100 CAMBRIDGE STREET, BOSTON MA 02114

Meeting Minutes for June 14, 2012

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

Minutes approved August 9, 2012

Members in Attendance:

Vandana Rao	Designee, Executive Office of Energy and Environmental Affairs (EEA)
Marilyn Contreas	Designee, Department of Housing and Community Development (DHCD)
Michele Drury	Designee, Department of Conservation and Recreation (DCR)
Bethany Card	Designee, Department of Environmental Protection (MassDEP)
Gerard Kennedy	Designee, Department of Agricultural Resources (DAR)
Tim Purinton	Designee, Department of Fish and Game (DFG)
Thomas Cambareri	Public Member

Members Absent

Joseph E. Pelczarski	Designee, Massachusetts Office of Coastal Zone Management (CZM)
John Lebeaux	Public Member
Bob Zimmerman	Public Member

Others in Attendance:

Linda Hutchins	DCR
Jennifer Pederson	Mass. Water Works Assn.
Bruce Hansen	DCR
Steve Pearlman	Neponset River Watershed Assn.
Ann Lowery	MassDEP
Rebecca Haney	MA Office of Coastal Zone Management
Julia Knisel	MA Office of Coastal Zone Management
Erin Graham	DCR
Marilyn McCrory	DCR

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

Agenda Item #1: Executive Director's Report

Hansen provided an update on the hydrologic conditions for May 2012. Average rainfall statewide was five inches, or 136 percent of normal for the month, and ranged from 103 percent of normal in the Central region to 226 percent of normal in the Western region. This helped alleviate drought conditions. Rainfall was distributed throughout the month, keeping soil moisture above normal and fire danger low. Groundwater levels were generally normal statewide, with a few exceptions. Statewide streamflow was in the normal range, with the exception of the south-central region, where conditions were below normal. Most streams have returned to a normal flow for this time of year, despite the lack of snow melt. Reservoir levels are mostly at normal levels for this time of year. The Drought Monitor shows improvement over the previous month, though twenty-five percent of the state remains abnormally dry. The

Standardized Precipitation Index indicates below-normal values for the Central, Northeast, and Southeast drought regions of the state. The Seasonal Drought Outlook predicts no drought conditions in Massachusetts through August.

Rao asked about the impact of an extremely dry winter on spring peak flows. Hansen confirmed that peak streamflows correspond with peak melt and runoff from snow melt. He added that some aquatic plants and animals depend on this peak flow for their life cycles. Rao suggested it is worth monitoring the timing of these events.

Rao announced that the 2012 update of the Water Conservation Standards was adopted at the May commission meeting and has been posted on the Water Resources Commission website (on the Commission's Water Policies & Guidelines page), as well as in several other locations on the websites of DCR and MassDEP.

Cambareri requested an update on the Sustainable Water Management Initiative (SWMI). Rao announced that the draft SWMI framework was published for public comment in February. A two-month comment period followed, and more than 200 comment letters, many with multiple signatories, were submitted. Agency staff are in the process of reviewing comments, grouping them into topic areas, and assessing next steps for the framework. EEA anticipates that a final framework will be published in Fall 2012. Changes to the Water Management Act regulations would follow. Rao added that the commission will be kept informed on progress.

Purinton asked about the status of appointments of members to the Water Resources Commission. Rao advised that EEA is in the process of interviewing candidates, adding that there is a process that must be followed, as these are gubernatorial appointees.

Agenda Item #2: Vote on the Minutes of May 2012

Rao invited a motion to approve the meeting minutes for May 10, 2012. She noted that the minutes should be amended on page four to correct a citation to the Massachusetts General Laws: the correct citation, in the second and fourth paragraphs, is MGL Chapter 165, Section 11.

VOTE	A motion was made by Purinton with a second by Kennedy to approve the meeting minutes for May 10, 2012. A motion was made by Contreas with a second by Card to amend the minutes, as noted. The vote to amend the minutes was unanimous of those present. A motion was made by Kennedy with a second by Purinton to accept the meeting minutes for May 10, 2012, as amended. The vote to approve was unanimous of those present, with one abstention (Cambareri).

Agenda Item #3: Presentation: Update on Regulatory Reform at MassDEP

Rao introduced Bethany Card and Ann Lowery of MassDEP's Bureau of Resource Protection. Rao noted that MassDEP's budget has been significantly cut and its workforce reduced by about twenty-five percent over the past decade. In response to concerns about the impacts of these cuts on MassDEP's workload, as well as the impacts of new regulations, Commissioner Ken Kimmell initiated a review of the agency's operations and ways of doing business. She added that, as these reforms pertain to any impacts to water regulations that typically come before the Water Resources Commission, a more detailed briefing will be provided.

Card presented background on the genesis of the regulatory reform initiative. Given the agency-wide budget cuts and the loss of 360 full-time-equivalent staff members in recent years, the agency needed to consider changes that would enable it to continue to do business in a way that is protective of the environment and helpful to stakeholders. The agency has identified twenty-one reforms, of which fourteen fall within the Bureau of Resource Protection.

Card described the process for gathering ideas on what reforms would be appropriate and the impact they would have. The effort included a public process in Fall 2011, with stakeholder groups and public comment on a draft action plan. The result will be regulatory changes, which MassDEP is drafting for review and promulgation. She added that the commission will have an opportunity to comment formally on the proposed reforms.

Card outlined key principles embedded in the process: (1) any reforms will not weaken environmental standards; the emphasis is on streamlining processes; (2) the reforms will be accomplished without needing to increase staffing levels; (3) any changes needed must be within the agency's control and not require legislative action; (4) new responsibilities will not be transferred to municipalities; (5) MassDEP will continue to meet its obligations under federal regulatory and grant programs, including commitments related to the Clean Water Act and Safe Drinking Water Act. Card noted that other ways of improving and streamlining processes are being considered, including an overhaul of information management systems.

She outlined themes that can be seen in the proposed reforms, such as eliminating duplicative approvals, not reducing public participation opportunities, creating incentives for better environmental outcomes, and providing alternative compliance mechanisms where direct staff oversight may have to be reduced or shifted to areas of greater environmental concern.

Lowery provided details on reforms being considered by the Bureau of Resource Protection in its Wetlands, Waterways, and Wastewater programs. In the Wetlands and Waterways programs, examples include eliminating duplicative requirements for submittals to multiple programs; consolidating permits and streamlining review processes for certain types of projects; creating standard conditions for certain minor activities in the wetlands buffer zone; creating a new standard operating procedure for reviews under the Wetlands Protection Act (WPA) to focus staff oversight on sensitive resource areas; and exempting constructed stormwater management systems from regulation as naturally occurring resource areas under the WPA.

Examples in the Waterways program area include codifying agency practice on the length of Chapter 91 license terms in a new policy and coordinating the timing of Chapter 91 license reviews to coincide with the MEPA review process. Another reform, introduced by the legislature, allows MassDEP to issue a General Chapter 91 license for small docks and piers accessory to residential use, with self-certification by the owner and different size thresholds for inland and coastal structures.

Examples in the Wastewater programs include eliminating state permitting of sewer connections; allowing web-based public notice for wastewater permitting; and eliminating duplicative state permitting of septic systems. Some provisions in the sewer regulations will be shifted to other MassDEP regulations.

Lowery advised that draft regulations are in the process of being written, with review and approval anticipated in summer 2012. She added that MassDEP will present details on the

changes to the Water Resources Commission, and there will be a public comment period and public hearings in the fall. Promulgation is expected before the end of 2012.

Pederson asked if public water suppliers would continue to receive notification on groundwater discharge permits in certain zones. Lowery responded that the groundwater discharge regulations are not being changed as part of the regulatory reform effort, and added that any interested party can file a request for notification on a particular issue.

In response to a question from Purinton about how the regulations would be presented for public comment, Card explained that an effort will be made to group regulations that go together without delaying regulations that may be ready sooner. Lowery added that Executive Order 485 requires review of regulations within two weeks, and completing this process is a high priority for the governor. In response to a question from Kennedy about changes to solid waste regulations, Lowery explained that a major overhaul of these regulations is in progress in MassDEP's Bureau of Waste Prevention, including changes to the way organic and other compostable materials are handled. One change will allow wastewater treatment plants to accept organic material in order to increase energy generation at facilities with anaerobic digestion.

Rao asked how the regulations would be packaged together for review by the Water Resources Commission. Card invited the commission to indicate its preference on how to manage the reviews in the most efficient manner.

Agenda Item #4: Presentation and Discussion: Massachusetts Shoreline Change Project and recent updates, Massachusetts Office of Coastal Zone Management

Rao introduced Julia Knisel, coastal shoreline and floodplain manager with the Massachusetts Office of Coastal Zone Management (CZM). Knisel introduced Rebecca Haney, coastal geologist with CZM and explained that CZM's shoreline and floodplain management program addresses erosion, flooding, and sea level rise issues statewide.

Knisel explained the role of erosion in supplying sediment along the coastline. She noted that the erosion process becomes problematic when it intersects with coastal properties and infrastructure. Shoreline development and its supporting infrastructure, such as sewerage systems, are susceptible to hazards during certain seasons and storm events, and shoreline stabilization structures sometimes increase erosion. The challenge in reviewing development and redevelopment projects susceptible to these hazards, she noted, is to make sure that such projects can accommodate dynamic conditions along the shoreline.

Knisel reviewed the history of CZM's efforts over the past thirty years to delineate the shoreline and identify erosion hot spots. Shoreline change maps for the entire Massachusetts coast were first produced in 1989. These mapped changes in the shoreline position from the mid-1800s to 1970. In 1997, CZM analyzed shoreline positions to calculate rates of change in feet or meters per year. Additional data from 1994 aerial photography was added in 2001. More recently, CZM has worked with USGS to produce a 2008/2009 shoreline using aerial photography.

Knisel reviewed the evolution in CZM's methods to delineate the shoreline, calculate the distance between shorelines from different periods, and perform statistical analyses of rates of change over time. She discussed the Massachusetts Ocean Resource Information System (MORIS), CZM's interactive online mapping tool, which includes shorelines from 1844 to 1994, as well as shoreline-change data (*Ed. note:* MORIS can be accessed through CZM's

Massachusetts shoreline-change project page at http://www.mass.gov/czm/hazards/shoreline_change/shorelinechangeproject.htm).

Knisel described the update that is in progress, which considers 150 years of data to derive trends for discrete sections of shoreline. The analysis looks at both long- and short-term data to account for the alterations that have occurred in the last thirty years, when efforts to stabilize the shoreline have intensified with construction of seawalls, revetments, and other structures, often affecting patterns of erosion in other areas. A linear regression analysis is used to take into account all the fluctuations that occur over time. More recent average rates of change for the Massachusetts shoreline show a higher rate of erosion when compared to the long-term rate. The 2008-to-2009 shoreline data will be released in MORIS, as CZM will no longer produce paper maps.

Knisel discussed maps and graphs showing long-term and short-term averages of erosion and accretion along various sections of Massachusetts shoreline. She pointed out dramatic changes in erosion and accretion at several locations, such as Salisbury, Hull, Monomoy Island, and Nantucket.

Knisel described how the shoreline change rates were computed. She noted that the latest update accounts for uncertainty by weighting confidence in shoreline positions. Measurement uncertainty has been reduced from 8.5 meters (in the 2001 analysis) to 1.27 meters (using LiDAR data). She noted that calculating rates of change is not always straightforward; some sections of shoreline show a linear progression of erosion while other sections show fluctuations in erosion and accretion over time. Each site must be evaluated in context.

Purinton asked if the project's outcomes suggest areas where policy should be developed to influence outcomes. Knisel noted that reduced erosion rates in some areas are a reflection of mean high water lines right up to seawalls and other shoreline stabilization structures and no dry beach. She briefly mentioned a new CZM project that will focus on criteria for suitable sources of sediment, which is no longer being provided by natural processes. Other questions addressed how communities use the shoreline-change information and the effect of sediment from rivers during large flood events.

Knisel explained that the project's intent is to capture the mean high water line, or shorelines representative of non-storm conditions. In response to a question about using the data to evaluate areas subject to cyclical breaches of the shoreline, Knisel responded that more time periods showing shoreline positions would be needed than are available in the current data set, which establishes only five to seven shoreline positions over a 150-year period.

Knisel demonstrated how the MORIS online mapping tool can be used to access information about a specific stretch of shoreline. Data on shorelines at various time periods and rates of change are preloaded, so that the maps provide an at-a-glance display of shoreline changes. Data can also be exported in tables.

Kennedy asked what the options are for property owners whose property appears to be vulnerable to shoreline change, based on these data. Haney described several options such as elevating buildings and providing alternatives for natural processes that feed sand to beaches, such as through beach nourishment and planting of beach grass. Rao asked if it is less costly for communities to provide incentives for property owners to move. Haney responded that some

communities are able to get funding for elevating houses, but the cost of acquiring properties is often prohibitive.

Card asked about a reasonable time period for updates of shoreline position. Knisel responded that the best answer would be as frequently as possible. She described the challenges, time, and costs of manually interpreting aerial photos for 1,700 miles of shoreline and related analyses. She added that Massachusetts, unlike some other states, does not tie planning, zoning, or project decisions to shoreline change through setbacks or other requirements. In response to a question from Rao about how such requirements affect property owners, Knisel explained that requirements for undeveloped parcels in other states often include some multiplier, such as thirty or sixty times the average annual erosion rate, to create a buffer in front of the property to accommodate hazardous conditions. For redevelopment or improvement projects, such parcels must consider the most recent shoreline-change data. Haney added that some Massachusetts communities have enacted local bylaws, but most decisions are made on an ad hoc understanding of the vulnerability of a particular location. She added that CZM will be conducting workshops for communities so they understand how to apply the information in their day-to-day work.

Knisel offered to notify the commission when the 2008/2009 shoreline data are available in MORIS.

Meeting adjourned, 2:45 p.m.

Documents or Exhibits Used at Meeting:

- WRC Meeting Minutes for May 10, 2012
- Amended WRC Meeting Minutes for April 12, 2012
- Background information on the Massachusetts Shoreline Change Project: http://www.mass.gov/czm/hazards/shoreline_change/shorelinechangeproject.htm
- Interbasin Transfer Act project status report, 30 May 2012
- Current Water Conditions in Massachusetts, June 14, 2012
- Slide presentation: Regulatory Reform at MassDEP
- Slide presentation: Massachusetts Shoreline Change Project