



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

Meeting Minutes for March 10, 2011

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

Minutes approved April 14, 2011

Members in Attendance:

Vandana Rao	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
Mark Tisa	Designee, Department of Fish and Game
Bob Zimmerman	Public Member

Members Absent

Gerard Kennedy	Designee, Department of Agricultural Resources
Joseph E. Pelczarski	Designee, Massachusetts Office of Coastal Zone Management
Thomas Cambareri	Public Member
John Lebeaux	Public Member

Others in Attendance:

Michele Drury	DCR
John F. Shea, Esq.	Mass. Water Works Assn.
Bruce Hansen	DCR
Daniel Nvule	MWRA
Frank Koll	Ecological Landscape Assn.
Erin Graham	DCR
Peg Stolfa	DEP
Duane Levangie	DEP
Marilyn McCrory	DCR

Rao announced that the scheduled vote on the staff recommendation on the maintenance protocol for the Gunderboom fisheries exclusion system at the Aquaria desalination plant in Dighton would be postponed to a future meeting, while Aquaria and agency staff work through minor comments on the monitoring and maintenance protocols.

Agenda Item #1: Presentation: Overview of the Permit Extension Act

Stolfa provided an overview of the Permit Extension Act, which was signed into law by Governor Deval Patrick in August 2010. The act automatically extends a number of permits or approvals for two years. The purpose of the act was to extend permits for projects that might be affected by the economic downturn. No action needs to be taken by the holder of the permit or approval. Stolfa explained that the act applies broadly. As long as a permit or approval was in

effect during the qualifying period, the act applies. She outlined several exceptions, including approvals associated with federal programs.

Stolfa directed those interested to a set of frequently asked questions published by the Secretary of Housing and Economic Development on the HED website (*Ed. note: see documents and exhibits at the end of these minutes*). She added that MassDEP intended to add questions-and-answers specific to MassDEP programs to its web site. She noted that MassDEP has discussed implications of the act on Water Management Act permits with the Water Management Act Advisory Committee. WMA permits in the Ipswich River Basin are extended based on the interim permit, which was the permit in effect during the qualifying period.

Zimmerman requested clarification on the issue the act was intended to address. Stolfa replied that the act was intended to address economic issues, and the permit extensions are one piece of a larger act titled An Act Relative to Economic Development Reorganization. Shea requested clarification on how the act affects Orders of Resource Area Delineation under the Wetlands Protection Act. Lowery and Stolfa discussed the issue, and Stolfa offered to provide clarification at a later time. McCrory asked if DEP had determined new expiration dates for the Water Management Act permits. Levangie replied that the act adds two years to certain permits. Those that expired during the qualifying period were given interim permits, and the extension applies to the interim permit. In the Ipswich River Basin, not all permits will have the same expiration date. He added that DEP plans to issue 18-year permits based on the original expiration date of the permit in order to keep all permits in a basin on the same review schedule. Lowery added that a new schedule of permit expiration dates by basin is being developed to incorporate changes resulting from the Permit Extension Act.

Agenda Item #2: Executive Director's Report

Rao announced that the Sustainable Water Management Initiative continues its work. She announced that the next Advisory Committee meeting would be March 22 and the next Technical Subcommittee meeting would be April 12. The plan is to have some products of the SWMI process available in the June time frame. She acknowledged staff from all the agencies who have been working diligently on this effort.

Rao announced the annual conference of the University of Massachusetts Water Resources Research Center on April 7 at the Amherst campus. She also announced the grand opening of the Waterworks Museum at the Chestnut Hill Reservoir on March 27 and suggested that commission members may want to consider a field trip to the museum.

Hansen provided an update on the hydrologic conditions for February 2011. Rainfall in February was 127% of the long-term average, with all regions of the state above normal, making the month the twentieth wettest February in 116 years of records. Groundwater levels were average across the state. Surface water levels appeared to be average, but flows at several stations could not be rated because of ice. Reservoir levels were normal for this time of year. Drought conditions are unlikely in Massachusetts through May. Hansen warned of the potential for flooding in the central and western parts of the state in mid-March.

Yeo thanked Hansen for the interesting note on solar flares included in the hydrologic conditions report. Yeo also commented that the Quabbin Reservoir rose to 92.7 percent full after the snow pack melted.

Agenda Item #3: Vote on the Minutes of February 2011

Rao invited motions to approve the meeting minutes for February 10, 2011.

V O T E	A motion was made by Yeo with a second by Zimmerman to approve the meeting minutes for February 10, 2011.
	The vote to approve was unanimous of those present.

Agenda Item #4: Presentation: Water-use trends in the MWRA system and other North American cities

Nvule presented an overview of water-use trends in the Massachusetts Water Resources Authority (MWRA) system since its establishment in the mid-1980s. He displayed graphs showing a general downward trend, since 1980, in reservoir withdrawals and water sales to MWRA communities. A graph of total withdrawals from the Quabbin Reservoir showed a decline from approximately 325 mgd in 1980 to 218 mgd in 2010, with withdrawals in the last 15 years falling well below the reservoir safe yield of 300 mgd. A graph of water use in Boston showed water use in 2010 at levels not seen since 1900.

Nvule attributed this downward trend in base water use to more efficient plumbing fixtures and consumer awareness, among other factors. He showed a graph illustrating a downward trend in base water use since 1998 by communities who are fully supplied by the MWRA system, with maximum-day demand declining from a peak of 293 mgd in 2002 to 254 mgd in 2010. He noted that peak use varies based on the amount of rainfall that occurs during the irrigation season.

Tisa asked what accounts for peaks and drops in demand on particular days, such as July 4 and December 25. Yeo said an explanation for consistent drops in demand during the winter holidays might be related to businesses being closed at those times. Responding to a comment from Rao about the impact of declines in the manufacturing sector, Nvule noted that when the MWRA was established, a focus on leak detection and water efficiency, as well as consumer response to water rates, contributed to declines in water use in the 1980s and 1990s. He added that prior to 1980, water use in the MWRA service area was above safe yield. Yeo added that maximum-day demands in recent years have been below average-day demands in previous decades. He attributed this to a combination of factors, including technological improvements in plumbing fixtures, changes in the types of industries present in the service area, and reductions in water use by industries, who regard water as another utility cost.

Nvule discussed the impacts of seasonal water use. He showed a graph illustrating variations in annual seasonal demand in fully supplied communities, noting the impacts of weather on water demand. There was some discussion of how the seasonal graphs would change if the city of Boston's demand was excluded. Nvule acknowledged that seasonal demand varies by community. Nvule concluded with graphs showing fluctuations in elevations and spill volumes of the Quabbin Reservoir since 1998 and levels of the reservoir compared to percent full levels associated with the Massachusetts drought emergency planning stages.

Nvule then reported on trends in water use in other U.S. cities. He explained his methods for normalizing data from utilities of different sizes by dividing water demand by population to obtain a gross per capita water-use figure. He showed graphs comparing gross per capita demand in several cities. He pointed out that, on a volume basis, water use is increasing in some communities with high growth, such as Fairfax, Virginia, but, when divided by population, the

trend in water use since 1985 has been flat or is trending downward, in some cases. He noted that these trends have implications for policy questions, such as pressure on utility revenues, questions about system expansion, and environmental impacts.

Members discussed the trends illustrated in Nvule's graphs, commenting on areas with slow population growth or population declines versus those with significant population growth. Yeo noted USGS studies indicating declines in total water use nationwide in recent years. He commented that MWRA was among the first large utilities to tackle water conservation, plumbing codes, and leak detection. He directed attendees to a study of decreasing residential water demand across the country in the February 2011 issue of the *Journal of the American Water Works Association*.

Meeting adjourned, 2:05 p.m.

Documents or Exhibits Used at Meeting:

- Meeting Minutes for February 10, 2011
- Interbasin Transfer Act project status report, 24 February 2011
- Current Water Conditions in Massachusetts, March 10, 2011
- Link to Frequently Asked Questions on the Permit Extension Act:
http://www.mass.gov/?pageID=eheadterminal&L=5&L0=Home&L1=Economic+Analysis&L2=Executive+Office+of+Housing+and+Economic+Development&L3=Massachusetts+Permit+Regulatory+Office&L4=Zoning+and+Permitting+Laws&sid=Ehed&b=terminalcontent&f=permitting_permit_extension_act&csid=Ehed
- Rockaway, Thomas D., Paul A. Coomes, Joshua Rivard, and Barry Kornstein. "Residential water use trends in North America." *Journal AWWA*. Vol. 103, Issue 2. February 2011. pp. 76 – 89. Available at
<http://www.awwa.org/publications/AWWAJournalArticle.cfm?itemnumber=56199>