



THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION

100 CAMBRIDGE STREET, BOSTON MA 02114

Meeting Minutes for May 14, 2009

Minutes approved June 11, 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
Mark Tisa	Designee, Department of Fish and Game
Thomas Cambareri	Public Member
John Lebeaux	Public Member
David Rich	Public Member

Others in Attendance:

Linda Hutchins	DCR
Bruce Hansen	DCR
Sara Cohen	DCR
Erin Graham	DCR
Marilyn McCrory	DCR
Anne Monnelly	DCR
Vandana Rao	EEA
Duane LeVangie	DEP
Michael DiBara	DEP
Tim Purinton	DFG/Riverways
Beth Lambert	DFG/Riverways
Peter Weiskel	USGS
Jennifer Pederson	Massachusetts Water Works Assn.

Agenda Item #1: Executive Director's Report

Baskin announced that the Water Resources Commission agendas are now posted on the WRC web site. She also announced upcoming workshops and conferences of interest to the commission: a low-impact development conference (May 29); a tour of low-impact development demonstration projects in Ipswich and Wilmington (June 9); and a conference sponsored by the Office of Technical Assistance focusing on water conservation in the hospitality industry (June 9).

Baskin announced that the Massachusetts Water Resources Authority has engaged noted conflict-resolution expert, Larry Susskind, to lead an invitation-only forum focusing on potential expansion of the MWRA service area. One issue to be addressed is the inclusion of Smart Growth criteria in the policy for admission to the MWRA system. A subcommittee of MWRA

board members and others will make decisions about who to invite to the forum and what will be addressed. Baskin invited WRC commissioners to e-mail her if they are interested in attending.

Hansen provided an update on the hydrologic conditions for April 2009. He said precipitation was 108% of the long-term average for April, with great variability across the state. He also noted below-normal surface water flow in the western part of state. Fire danger has dropped since late April. Drought indicators are in the normal range.

Agenda Item #2: Presentation: Massachusetts Energy Management Pilot for Water and Wastewater Plants

DiBara described pilot efforts by MassDEP to identify energy efficiency opportunities at water and wastewater treatment facilities across the state (ed. note: further information is available at <http://www.mass.gov/dep/water/wastewater/empilot.htm>). He explained that energy consumption at public water and wastewater facilities represents two to three percent of total electricity consumed in the state, and he provided estimates of the carbon footprint of these facilities. He listed the pilot's partners, which include every gas and electric utility across the state, and said that MassDEP's role is primarily as facilitator of a coalition of federal, state, private, and nonprofit stakeholders. In this role, MassDEP tries to leverage the technical and financial resources that coalition partners bring to the table. He showed the locations of the fourteen facilities participating in the pilot, which include seven water and seven wastewater facilities, and outlined the criteria for selection of these fourteen facilities.

DiBara described the project goals, which include reducing energy consumption and costs; reducing emissions; and developing a model for strategic use of utility and public funding. The pilot facilities benefited from no-cost energy audits, renewable energy assessments, and combined heat and power analysis, as well as financial assistance for implementation of improvements.

The pilot program, starting in June 2007, is being implemented in four phases. DiBara described specific improvements and the resulting cost savings at individual facilities. Opportunities identified included process efficiency improvements and equipment upgrades, a green roof, and use of renewable energy sources, such as solar, wind, and hydropower. Baskin noted that the payback period for some of the improvements was very quick. In response to a question, DiBara confirmed that the hydropower opportunities were not instream, but were at infrastructure discharge locations. He summarized the costs, estimated savings, and potential reductions in carbon dioxide emissions at each facility. For the entire pilot program, estimated savings totaled \$3.8 million annually. DiBara added that the missing piece was funding, but said this was where the coalition model can help fill gaps through rebates and assistance with cash flow.

He concluded by describing planning for phase two, which would extend the pilot to 320 water and wastewater treatment facilities across the state. MassDEP will work with the Green Communities and Audit Program of the Massachusetts Division of Energy Resources to identify municipalities that would likely benefit from energy upgrades of their water and wastewater treatment facilities. He said changes to the criteria for funding through the state revolving fund could make these types of projects eligible for SRF funding.

Yeo commented that the carbon footprint of public drinking water had been estimated to be one ten thousandth of the carbon footprint of bottled water. He asked if Energy Service Companies (ESCOs) had been considered as a financing mechanism for the identified improvements.

DiBara responded that these companies may not have the technical expertise to identify process-saving opportunities at water and wastewater facilities, but the model for this pilot program is essentially the ESCO model – that is, to identify savings that can be used to pay for capital improvements. Haas added that some regulatory changes may be needed that would allow these facilities to sell any power they generate from renewable sources directly to their municipalities at wholesale, instead of to the energy grid, where the energy is then resold at retail rates to the municipalities.

Purinton observed that the percentage of hydropower opportunities is low, compared to opportunities for other renewable sources, even though these are water facilities. Yeo responded that the system has to be designed with hydropower in mind to take advantage of changes in elevation.

Baskin commended DiBara for a successful program and asked if outreach had been done to the design community, consultants, and academia. Haas responded that MassDEP is working on a grant to hire an experienced water/wastewater operator who can help with outreach. The program is also working with the Environmental Protection Agency to develop Energy Star labeling for process equipment. Fact sheets for the pilot program will be posted on a web site.

Pederson commended MassDEP for this program, adding that the Massachusetts Water Works Association had received good feedback on the program. She commented that it is a good example of technical assistance that is really helpful to the operators.

Agenda Item #3: Vote on the Minutes of July, August, and September, 2008, and April 2009

Baskin invited a motion to approve the meeting minutes for July, August, and September, 2008, and April 2009.

V	A motion was made by Lebeaux with a second by Contreas to approve the meeting minutes
O	for July 2008, August 2008, September 2008, and April 2009.
T	
E	The vote to approve was unanimous of those present, with one abstention (Haas).

Baskin noted that these minutes will be posted on the WRC's website as soon as possible.

Agenda Item #4: Vote: Incorporation of WRC-approved revisions into the Water Needs Forecasting Policy and Methodology

Baskin noted that the proposed revisions to the water needs forecasting policy and methodology had been discussed at the April commission meeting. She added that these revisions are not significant and resulted from "road testing" the policy and methodology in several major river basins over the past year. Monnelly briefly reviewed the changes outlined in the April 7, 2009, memo from staff and presented at the April commission meeting. She noted that no comments had been received on the proposed changes. She added that the final version of the revised policy and methodology is dated May 1 and had been included in the May meeting package.

V O T E	<p>A motion was made by Haas with a second by Yeo to approve the “Policy for Developing Water Needs Forecasts for Public Water Suppliers and Communities and Methodology for Implementation,” as revised, May 1, 2009.</p> <p>The vote to approve was unanimous of those present.</p>
----------------------------	---

Baskin said the revised water needs forecasting policy and methodology would be posted to WRC’s web site as soon as possible.

Agenda Item #5: Presentation: Riverways' River Restoration and Monitoring Program: Where We Are and Where We'd Like to Go

Lambert introduced the Massachusetts Riverways program and its work with many partners to remove dams for the purpose of restoring rivers in Massachusetts. She noted that Riverways is a nonregulatory program that takes a proactive approach with dam owners to identify obsolete and deteriorating dams for removal. She said there is a high level of interest in dam removal, and that while Mass Riverways has taken the lead on most projects to date, other state agencies, municipalities, regional planning organizations, and nongovernmental organizations are now also taking the lead on these projects. She noted that the many ongoing and potential projects provide an opportunity and a responsibility to monitor the effects of dam removal. She explained that systematic monitoring is a key tool in understanding effects of dam removal and communicating the benefits to rivers.

Lambert outlined the key questions the Riverways program hopes to answer through monitoring, including questions related to recovery of habitat, individual species, and water quality. Without monitoring data, it is difficult to adapt designs to take advantage of lessons learned or to communicate project successes and results to stakeholders and potential funders. She added that there are potential opportunities to address more complex, scientific questions related to movement of sediment and channel development, changes in nutrient availability and transport, and channel morphology development. She added that very little river restoration monitoring is being done nationally, and that funding sources are reluctant to support monitoring.

The program uses the Stream Barrier Removal Monitoring Guide developed by the Gulf of Maine Council. This protocol recommends physical, chemical, and biological monitoring parameters, including photo points, water quality, macroinvertebrates, cross-sections, longitudinal profiles, grain-size analysis, riparian vegetation, and fish. With more than twenty dam removal projects currently in progress, program staff must make decisions about which parameters to monitor at each site. Because there is no budget for this effort, monitoring is being implemented largely through partnerships with academic institutions, municipalities, federal and other state agencies, and nonprofit organizations. She presented examples of river restoration projects and their monitoring efforts, which provided valuable information on the physical and biological changes following dam removal. She concluded by outlining next steps in implementing monitoring programs. She added that no other state is developing a formal river restoration monitoring program.

Yeo expressed support for the concept of doing long-term monitoring and said that the Department of Conservation and Recreation is currently removing two small dams using its own staff and the staff of other state agencies. In response to a question from Pederson, Lambert confirmed that the Riverways program does look at the impact of dam removal on public water

supplies – for example, whether an impoundment is contributing to recharge of groundwater wells. Pederson suggested that, in addition to colleges, the technical high schools have environmental science programs and may be a source of volunteers for field work.

Baskin asked what the program was looking for in photo-point data. Lambert explained that the program follows a recommended protocol for photo points. Photo data are tied to the places where other monitoring data are collected, such as stream channel cross sections, to show how the channel changes over time. She added that the photos are taken at different seasons and at all angles, looking upstream, across the stream, and down stream, providing a comprehensive view of the area affected by the dam removal.

Haas commented that MassDEP had recently changed the wetlands regulations to make dam removal a limited project, resulting in simpler restoration requirements. Purinton added that the Riverways program wants to make sure it is not getting ahead of the regulations and works with MassDEP and local Conservation Commissions on education.

Meeting adjourned

Attachments distributed or presented at meeting:

- Current Water Conditions in Massachusetts, May 14, 2009
- Presentation handouts: Massachusetts Energy Management Pilot for Water and Wastewater Plants.
- Presentation: River Restoration Monitoring: Where We Are and Where We Hope to Go. Riverways Program.