



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

Meeting Minutes for January 10, 2008

Minutes approved July 10, 2008

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
Joseph E. Pelczarski	Designee, Massachusetts Office of Coastal Zone Management
Scott Horsley	Public Member
John Lebeaux	Public Member
David Rich	Public Member
Bob Zimmerman	Public Member

Others in Attendance:

Bruce Hansen	DCR	Jennifer Pederson	Massachusetts Water Works Assn.
Erin Graham	DCR	Jo Carey	DFG, Riverways
Linda Hutchins	DCR	Margaret Kearns	DFG, Riverways
Anne Monnelly	DCR	Joan Kimball	DFG, Riverways
Michele Drury	DCR	Robin Johnson	CDM
Sara Cohen	DCR	Paul Lauenstein	Citizen, Sharon
Frank Hartig	DCR	Jill Cowie	Watershed Action Alliance of SE Mass.
Marilyn McCrory	DCR	Mike Armstrong	Mass. Div. of Marine Fisheries
Margaret Callanan	EOEEA	Sam Mygatt	Epsilon Associates
Vandana Rao	EOEEA	Brian Graves	Epsilon Associates
Peter Weiskel	USGS	Mike Scherer	Normandeu Associates

Agenda Item #1: Executive Director's Report

Hansen provided an update on the hydrologic conditions for December 2007. He advised that the three-month forecast was for below-normal rainfall.

Baskin announced that the Drought Management Task Force was scheduled to meet January 17 to decide if the Drought Advisory should be lifted.

Haas provided an update on renewal of approximately 400 registrations under the Water Management Act. He reported that all registrations had expired as of December 31, 2007, and all

registrations were renewed for ten years. He noted that, for the first time, MassDEP had included conditions with the registrations. The conditions require public water suppliers to attain the goal of 65 gpcd for residential water use and 10% unaccounted-for water by the end of ten years, with interim milestones. The conditions also require restrictions on outdoor water use when a drought advisory is declared. He added that approximately 190 of the 400 registrations represent public water suppliers with no Water Management Act permit; the others have both a registration and a permit.

Agenda Item #2: Vote on the Minutes of April and May 2006

Baskin invited motions to approve the meeting minutes for April 2006 and May 2006. She noted one minor change made to the minutes for April 2006 that had been distributed to commissioners.

V O T E	A motion was made by Yeo with a second by Tisa to approve the meeting minutes for April 2006.
	The vote to approve was unanimous of those present, with two abstentions

V O T E	A motion was made by Yeo with a second by Tisa to approve the meeting minutes for May 2006.
	The vote to approve was unanimous of those present, with one abstention.

Agenda Item #3: Vote on Water Resources Commission 2008 Workplan

Baskin noted that the workplan had previously been discussed, and the current version reflects comments made. Haas requested that tasks be prioritized, noting MassDEP’s keen interest in making sure that the water needs forecasts are completed. Baskin pointed to codes indicating priority tasks, but acknowledged that the workplan tasks had not been ranked. Yeo echoed Haas’s concern and said that water needs forecasting was an extremely high priority for his staff.

Commission members discussed minor revisions to the workplan. Baskin reviewed the high-priority tasks, and staff reported on progress to date. On the Streamflow Policy task, Haas commented that there is no “right” streamflow number and he requested that the policy be presented to the commission for discussion of criteria at an early stage in the policy’s development. Baskin acknowledged that staff will seek the commission’s guidance on what a streamflow policy should look like. In response to a question from Pelczarski on funding of stream gages, Baskin responded that it is assumed that funding will be available. Pelczarski suggested writing into the policy the necessity for streamflow gage data.

Baskin then reviewed the medium-priority tasks and explained what will be involved. Zimmerman requested modifying the Drought Management Plan criteria. In accordance with the plan, it takes months to step into a drought. Drought warnings should be tied to triggers, such as rainfall, streamflows, or groundwater levels. He added that, in the most recent drought, problems were evident long before a drought advisory was officially declared. He suggested a statewide directive from DCR or MassDEP would be more appropriate than a town-by-town response. Haas acknowledged Zimmerman’s point, but added that the drought levels are based on more

than one indicator. He said the Drought Management Task Force is trying to balance the ability to make decisions quickly with the need to rely on science. Zimmerman urged the state to act now to reduce stress in order to avoid future problems, should the drought continue.

On the implementation of water conservation standards, Haas urged the commission to push the state to do more on outreach – for example, asking the Board of Education’s cooperation in making water conservation a mandatory part of the school curriculum across the state.

Baskin continued by reviewing the lower-priority tasks and invited suggestions for outside speakers. She concluded by noting that EOEEA plans to become more engaged in water issues and may wish to amend the work plan. Lauenstein asked if the commission intended to increase the number of water conservation coordinators in individual communities. Baskin responded that the state certainly encourages towns to fill this position but does not have funding to support staffing of these positions.

V O T E	A motion was made by Haas with a second by Tisa to approve the WRC 2008 Workplan. The vote to approve was unanimous of those present.
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Agenda Item #4: Discussion and Acceptance of Public Comments on Index Streamflows

Hutchins provided an overview of the Index Streamflows document and highlighted continuing research, which includes expanding the analysis to 61 gages. She also provided an overview of the public comment process and of public comments received on the document. She highlighted individual comments, which were generally supportive. Concern was expressed by the Massachusetts Water Works Association about how the statistics outlined in the document will be applied in a regulatory context. MWWA suggested the document be approved with a condition that the Index Streamflows approach not be used in any regulatory context. Hutchins noted that this concern did not address the document itself but how it will be used, and that the latter question was outside the scope of the document itself. She added that a number of other detailed technical comments were received, and that these will be taken into consideration. She concluded by saying that the document would be posted on the WRC web site, and the goal was to present the document to the commission for a vote in February.

Haas acknowledged MWWA’s concerns about the need for public process in adopting policy or in using documents such as the stressed basins designations in a regulatory context. Horsley agreed with Haas, that public process is very important, but concluded that it is obvious that documents such as index streamflows and stressed basins should be used in regulations and permitting, and it should be clearly stated that this is the intent. Pederson responded that the index streamflows document has been presented as a set of statistics, and though the document itself is not a regulation, it will be used by a regulatory agency. Therefore, she said, there should be some public vetting when the document is used in regulation and permitting. Zimmerman agreed with both Pederson and Horsley, saying that the commission should make it very clear that index streamflows will be used in a regulatory context. Horsley responded that regulatory agencies should use the best available science, and that this report is no different from reports

developed by the USGS. Hutchins pointed to a list in the introduction of the document of how index streamflow statistics could be used and noted that the intent that these will serve planning and regulatory needs is clearly stated, while the details on how they will be applied are not prescribed in this document. Baskin concluded that the concerns expressed about how the statistics will be used should not hold up approval of the document. Haas agreed that the document should be adopted as a scientific document, but added that it is incumbent on the regulatory agencies to seek broad public input when adopting policies.

Agenda Item #5: Discussion: Request for Technical Modification of Interbasin Transfer Act Approval, Aquaria Regional Desalinization Project

Mygatt explained the reasons for the request for a technical modification of a previously approved plan to monitor and protect fishery resources for the Aquaria regional desalination plant in North Dighton. He reviewed the history of permitting of the Aquaria project.

Haas apologized for not being able to stay through the presentation, but noted that MassDEP has reviewed the proposed technical change and is satisfied that the Filtrex system will meet the monitoring standards and be equivalent to the Gunderboom system. Baskin added that no vote would be taken today on the proposed modification.

Mygatt explained that, following approval of the project, Aquaria became concerned about reliability, costs, and performance of the Gunderboom system and started exploring other technologies, including the Filtrex system, an industrial filtration device. He compared the two systems and noted that the project's consultants conducted field and laboratory studies and concluded that the Filtrex system would provide protection of the fisheries that is equal to or better than that provided by the Gunderboom system. He noted, however, that Aquaria would retain the right to install the Gunderboom system.

Yeo noted that DCR had used a Gunderboom at Wachusett Reservoir, and it required a substantial amount of maintenance.

Mygatt noted that the Filtrex system occupies a smaller portion of the river and involves no entrainment while the Gunderboom results in 7 – 11% entrainment. Scherer then summarized testing of the Filtrex system at the Alden Research Laboratory and field work in the Taunton River, reporting on impingement and survival rates for fish eggs and larvae.

Scherer answered a number of technical questions from commissioners and the public about operation and performance of the Filtrex system. Mygatt acknowledged that the proposed use is a new application for the Filtrex technology. Tisa expressed concern that ichthyoplankton studies were not done during the peak spawning season and asked if there were any data from the peak spawning season from which one could extrapolate what mortality would be at higher densities. Scherer responded that it is not clear that mortality is related to density and explained methods for calculating mortality. Other questions had to do with ice formation; use of air bursts; the flow rate at the intake; use of the Filtrex in a corrosive, saline environment; algal growth; potential for clogging; composition of the Filtrex candles; and potential for leaching of contaminants from the plastic materials to drinking water.

Mygatt also summarized the monitoring plan.

Tisa commented that the Filtrex technology has promise, but it has not been field tested and therefore has no track record. He asked if the commission can reverse approval of the requested modification if it is found that mortality of herring and shad is greater with the Filtrex system. Baskin replied affirmatively, adding that this is a condition recommended by the Office of Coastal Zone Management. Mygatt stated that Aquaria would accept that condition and also agreed to purchase and install Johnson screens as a backup fisheries protection device. Baskin also confirmed that the commission could require the proponent to present results of monitoring and the effect on fisheries in a year's time.

Baskin requested the sense of the commission on the Filtrex technology. After some discussion among commission members, there was consensus that a report on monitoring results would be essential. Tisa commented that one season of study is not adequate to assess biological impacts. Mygatt responded that the intent is to obtain results after one year and then meet with the regulatory agencies. Baskin read, from the original ITA-approval decision document by the commission, the condition related to monitoring, which stated that "...Aquaria shall perform operational monitoring for a period to be decided upon based on results of the monitoring program." Baskin suggested this decision provides some flexibility, but that a review after one year of monitoring would be advisable. Baskin requested that Aquaria provide a copy of the draft monitoring plan to the commission.

Pederson requested an update on the status of the state's desalination policy. Baskin replied that the Executive Office of Energy and Environmental Affairs has received public comments and is responding to those comments. She added that two desalination facilities have been proposed: the Aquaria project and a project in Swansea.

Mygatt requested that the commission expedite approval of the technical modification of the monitoring plan, so that Aquaria can make a decision on which technology to implement. Baskin responded that commissioners needed some time to review the technical aspects of the proposal. Drury added that issues related to the Interbasin Transfer Act must be resolved before permitting under the Water Management Act can proceed.

Agenda Item #6: Presentation: River Instream Flow Stewards (RIFLS) Program

Kearns of the Riverways Program provided a presentation on the River Instream Flow Stewards (RIFLS) program, now in its fifth year. Her presentation covered the background on and goals of the program, the steps in the RIFLS process, an overview of RIFLS sites, and technical assistance and collaborations. She noted that the program currently has 60 sites with more than 100 volunteers and reviewed the wide range of issues being addressed in different watersheds. She also discussed in detail several demonstration projects. She then presented photographs illustrating extreme low-flow observations from summer and fall 2007 at RIFLS sites in rivers in Westborough, Pepperell, Rochester, Mattapoisett, Georgetown, Sharon, Shrewsbury, Worcester, Kingston, Scituate, and Wilmington.

Zimmerman commented that most wastewater treatment plants with surface water discharge were built in the 1970s, with a lifespan of 30 to 40 years. He expressed concern that that the

State Revolving Fund will continue to endorse out-of-basin disposal of wastewater, rather than replacing such plants with facilities that dispose of wastewater within the basin from which it is withdrawn. Monnelly noted that most of the communities where RIFLS has identified instream flow problems appear to be meeting the water conservation standards of 65 residential gallons per capita per day and 10% unaccounted-for water. She suggested looking at the volume of wastewater returns in each subwatershed as a potential explanation for the dry riverbed conditions. Kearns noted that even when rivers are dry, communities are not necessarily responding by imposing restrictions on water use. Zimmerman added that the key is to stop treating wastewater as “waste” and start treating it as a resource. Horsley noted that some potable water is lost to consumptive use, but that this can be offset with stormwater recharge. Yeo commented that to accomplish this would require a source of funding. Baskin noted that MassDEP is proposing draft regulations for wastewater reuse. Zimmerman observed that there are alternatives to end-of-pipe approaches. As an example, he described a model where a developer installs a small package wastewater treatment plant, which discharges to groundwater, and sells it to the municipality a nominal cost of \$1.00. The municipality can then charge sewer fees to cover operation costs. Groundwater discharge permits would ensure the plant conforms to operation and maintenance requirements.

Kearns pointed to the interactive web site for the RIFLS program: <http://www.rifls.org/> for site-specific streamflow data and other information.

Meeting adjourned

Attachments distributed:

- Current Water Conditions in Massachusetts, January 11, 2008
- Comment Letter from Charles River Watershed Association, dated January 9, 2008, on Index Streamflows for Massachusetts, October 2007 Draft.
- Table: River Instream Flow Stewards (RIFLS) Sites
- Presentation handouts, River Instream Flow Stewards (RIFLS) Program and Summer 2007 River Flow Observations
- Letters and memos related to Evaluation of the Filtrex screening device at the Aquaria Desalination Plant, Dighton, MA