THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION

100 CAMBRIDGE STREET, BOSTON MA 02114

Meeting Minutes for February 12, 2009

Minutes approved April 16, 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
David Terry	Designee, Department of Environmental Protection
Mark Tisa	Designee, Department of Fish and Game
Joseph E. Pelczarski	Designee, Massachusetts Office of Coastal Zone Management
David Rich	Public Member

Others in Attendance:

Michele Drury	DCR	Peter Weiskel	USGS
Linda Hutchins	DCR	Steve Silva	U.S. EPA, Water Quality Branch
Bruce Hansen	DCR	Ralph Abele	U.S. EPA
Sara Cohen	DCR	Jennifer Pederson	Massachusetts Water Works Assn.
Erin Graham	DCR	Mary Booth	WSCAC
Marilyn McCrory	DCR	Joe Duggan	Wellesley DPW
Anne Monnelly	DCR	Paul Lauenstein	WSCAC/Neponset River Watershed Assn
Frank Hartig	DCR	George Comiskey	PRCWA, Georgetown, MA
Vandana Rao	EEA	Kerry Mackin	Ipswich River Watershed Assn.
Duane LeVangie	DEP	Nathan Henderson	AECOM
Tom LaMonte	DEP	Pine duBois	Jones River Watershed Assn.
Gerry Szal	DEP	Sam Mygatt	Epsilon Associated
Russ Cohen	DFG/Riverways	Jeff Hansen	

Agenda Item #1: Executive Director's Report

Hansen provided an update on the hydrologic conditions for January 2009. He reported that rainfall in January was above average, ranking as the 33rd wettest January in 116 years. He reported that there is no indication of drought through April 2009.

Baskin reported on ongoing conversations with the Massachusetts Water Resources Authority about MWRA's proposal for facilitated water supply expansion. She summarized a report by MWRA Executive Director Fred Laskey to the MWRA Board, which instructed Laskey to return with options they could consider. Laskey's report to the MWRA Board outlined possible changes

to the Interbasin Transfer Act review and approval process, including consolidating donor basin applications and consolidating review of applications by communities in receiving basins for review by the Water Resources Commission. Other concepts discussed by Laskey included a proposal for a direct line of cold water from the Quabbin Reservoir to the McLaughlin Fish Hatchery, releases to the Nashua River, and possible removal of a dam. Baskin reported that much discussion centered on Smart Growth and the Secretary's indication of a strong preference for Smart Growth assurances to discourage sprawl in communities participating in the proposed concept of facilitated water sales. Baskin invited comments from the commission.

Yeo commented that both DCR and DFG see advantages in proceeding with some of these proposals, including the opportunity to improve habitat with funding from MWRA. Tisa agreed. Baskin reminded the commission that it will have to consider the proposals related to interbasin transfer.

Agenda Item #2: Vote on the Minutes of April 2008, May 2008, and January 2009

Baskin invited motions to approve the meeting minutes for April 2008, May 2008, and January 2009.

VOTE	A motion was made by Yeo with a second by Tisa to approve the meeting minutes for April 2008, May 2008, and January 2009. The vote to approve was unanimous of those present.

Agenda Item #3: Vote on WRC 2009 Workplan

In response to the suggestion at the January commission meeting that some tasks be removed from the workplan, Baskin explained that the workplan prioritizes tasks and that it is understood that staff will work on tasks identified as intermediate priorities only as time and resources permit.

VOTE	A motion was made by Tisa with a second by Contreas to approve the Water Resources Commission 2009 Workplan. The vote to approve was unanimous of those present.

Agenda Item #4: Vote on Aquaria Monitoring Plan for Filtrex

Baskin reminded the commission that at a previous meeting, the commission approved the use of Filtrex as a fish exclusion system at the Aquaria desalination plant, with conditions, including a monitoring plan.

Drury acknowledged staff from MassDEP, the Office of Coastal Zone Management, and Division of Marine Fisheries who provided indispensable expertise during technical reviews. Drury provided background on the project and described the Filtrex system, which has no history as a fish exclusion system. She said the proponent has been working with the agencies over the past year to develop a monitoring plan and Quality Assurance Project Plan. She outlined the

conditions associated with the staff recommendation on the monitoring plan (see Attachments listed at the end of this document).

Szal said that MassDEP is eager to test the Filtrex system since it has the potential to completely stop entrainment of any organism and has a smaller footprint in the river. He outlined the sampling program, which he described as a strong, statistically valid program that which will allow staff to assess how Filtrex performs compared to the Gunderboom system. Tisa asked if there were any plans to publish results. Baskin clarified that publication of results is not part of the commission's requirement.

Baskin asked if the proponent had determined which exclusion system it planned to use for 2009. Mygatt expressed a preference for the Filtrex system. Szal noted that there may be lessons learned through sampling that would require a change in strategy. He asked if commission approval would be needed, if such changes are agreeable to both Aquaria and the state agencies. Drury responded that the 2003 decision allows modifications to the monitoring plan, as conditions warrant.

VOTE	A motion was made by Yeo with a second by Tisa to approve Aquaria's revised operational monitoring plan for the use of Filtrex at Taunton River Desalination Plant, with the conditions that biomonitoring work be conducted as outlined in: • The most recent revision of the Biomonitoring Plan and QAPP dated January 19, 2009, and the impact assessment spreadsheets sent to the agencies on January 25, 2009; • And using the Methods outlined in DEP's memo of February 5, 2009. The vote to approve was unanimous of those present.

Agenda Item #5: Vote on WRC Handbook

Drury noted minor corrections made to the draft handbook. She added that the goal is to post the handbook on the commission's web site and to make the handbook available to new commissioners. Baskin noted that, from time to time, minor changes may have to be made to the handbook. She requested approval of the general document, with the understanding that the commission will allow staff the latitude to make such minor corrections and additions. Yeo and Tisa commended staff for their work in compiling the handbook and acknowledged that it will be a useful document. Baskin invited input from commissioners over time if they wish to suggest additions or changes. Tisa suggested that the date on the document be changed if minor changes are made.

VOTE	A motion was made by Rich with a second by Tisa to approve the Water Resources Commission Handbook. The vote to approve was unanimous of those present.

Agenda Item #6: Presentation: Update on Basin Stress Reclassification

Baskin introduced the presenters, Weiskel and Hutchins, and thanked them for their hard work on the basin stress reclassification project. Hutchins noted that staff has been working with a task force and USGS since 2007 to update the stress classifications. She outlined the timetable for updating these classifications. USGS has conducted the scientific studies that will be used to support updated basin stress classifications. However, USGS is not involved in the actual development of the classifications.

Weiskel made a presentation on USGS work on indicators of alteration to streamflow, water quality, and habitat for Massachusetts stream basins. He noted that "indicators" should be viewed as semi-quantitative factors. He outlined the objectives of the Phase 1 effort, which were to develop indicators of streamflow alteration, habitat fragmentation, and water quality for Massachusetts stream basins. For indicators of streamflow alteration, he said USGS is examining a variety of flow conditions to obtain a complete picture of biota needs. He mentioned the importance of the Sustainable Yield Estimator, a computer application that estimates unimpacted flows at any stream in the state (with the exception of the mainstem Merrimack and Connecticut Rivers), and analyzes the net alteration of flow associated with reported withdrawals and wastewater discharges. He added that the first version of the estimator, a cooperative program between USGS and MassDEP, is expected to be published in summer 2009.

Weiskel presented some results showing percent flow alteration using various measures. He noted an overall pattern, with net depletion of streamflow in certain headwater areas, and net surcharging of flow in some mainstem reaches. He also noted that it is more accurate to use fine-scale subbasins in calculating indicators of flow alteration to avoid attributing effects in a subbasin to a larger area.

He also reviewed other indicators of basin alteration, such as dam density (number of dams per stream mile)—an indicator of habitat fragmentation by dams. He outlined an indicator of water quality (the percentage of assessed stream miles in a basin listed on the Federal 303(d) list) and also discussed total impervious cover as an indicator of basin alteration. In response to a question from Mackin, Weiskel said the DFW fish community study was not part of this study but would be incorporated into the state report. There was also some discussion of the parameters used to assess water quality. Silva responded that bacteria is one of the most important parameters in Massachusetts. Weiskel added that the report will be explicit about what is meant by a "pollutant," and that this may include thermal pollution.

Weiskel then outlined the products of this effort, which will include a USGS Scientific Investigations Report and a GIS geodatabase on CD. It is expected that products will be available in summer 2009. He also described the limitations of the Phase 1 project.

Yeo commented that the USGS project represented an important scientific achievement, and he thanked the federal and state agencies who had contributed to the project. He added that it is important that "indicator" rather than "stress" be the operative word when discussing alterations. He expressed concern about the potential to punish large cities with 100-year-old reservoirs, explaining that where large reservoirs have been in existence for many years, habitat has changed. He urged individual assessments of habitat to assess whether or not the habitat is

healthy. Baskin clarified that USGS is providing the scientific underpinnings for policy, while the state develops policy based on that information.

Hutchins provided an update on the state's effort to reclassify basin stress. She reviewed the history of the basin stress classification effort, noting that an update was mandated in the 2004 Water Policy. Baskin added that this is still a work-in-progress and invited input on the draft.

Hutchins noted that the basin stress classification is intended to be a screening tool, on a statewide scale, with potential uses including indication of areas with higher hydrologic vulnerability and identification of priority areas for mitigation. The classification, she said, is meant to encourage stakeholders to "take a closer look." She presented a proposed methodology involving a basin stress reclassification rating system using river stress parameters to rate groups of river impacts. She outlined improvements in the characterization of streamflows since 2001, which was based on a limited number of gauges and used only three low-flow statistics. She added that stress classifications will likely be revisited in 2011 after completion of USGS's statewide analysis of flow alterations and their impacts on fish communities.

Hutchins thanked members of the Basin Reclassification Task Force, which met eight times over the course of a year and assisted in selecting stress metrics. She outlined four indicators of potential stress: hydrology (flow), water quality, biology, and connectivity, adding that geomorphology was not selected because a database on this is not available.

There was some discussion of an alternative to the term "stress." Hutchins outlined a classification system describing five degrees of alteration, ranging from "least impacted/near natural" to "extensive alteration," with the implication that increasing alteration leads to increasing ecological impact. Assignment of these levels of alteration would be based on water withdrawals, discharges, water quality, impoundments, and watershed development. Pelczarski requested clarification on whether streams with dams that have been in place for many years would be classified as "near natural." Baskin responded that there would have to be policy discussion around these issues.

Hutchins showed a proposed stress "report card" listing, in matrix form, subwatersheds and nine river statistics grouped into four categories: quantity, quality, habitat, and biology. In this proposal, an indicator of alteration (from least impacted to extensive) would be assigned to each statistic. She discussed the challenges associated with basin scale, explaining the need to balance the increased accuracy associated with the finer scale of the subbasin with the ease of implementation associated with the larger basin scale.

Hutchins reviewed the indicators of flow alteration, noting that the proposed classification system compares unimpacted to impacted flows. She showed a scale for rating flow alteration, ranging from one to five, and explained that the Task Force has initially selected 40% alteration as the threshold for Rating #5, which indicates extreme alteration. The 40% threshold was selected based on the USGS pilot study of impacts of flow alterations on fish communities. Baskin added that the 2001 classification system compared a basin to its neighbor, whereas the proposed classification system compares the current condition of a basin to its past condition. Baskin invited comments on the concepts and proposals presented today.

Hutchins then reviewed the flow alteration ratings for annual relative net water demand and storage ratio, adding that data are forthcoming on water-use intensity. She also reviewed the indicators of, and proposed rating systems for, water quality, habitat condition, and biological health. She noted that a site-specific study may be considered in lieu of the state classification system. She concluded by outlining the process and timetable for reclassifying basins statewide, with a target of presenting the draft document for public review in July 2009.

Baskin thanked Hutchins for her brilliant work on this effort.

Meeting adjourned

Attachments distributed or presented:

- Current Water Conditions in Massachusetts, February 12, 2009
- Memo dated February 12, 2009, from Staff to Water Resources Commission concerning Approval of Aquaria's Filtrex Monitoring Plan
- Presentation, 2009 Massachusetts Basin Stress Reclassification