THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION

100 CAMBRIDGE STREET, BOSTON MA 02114

Meeting Minutes for October 14, 2010

Minutes approved November 18, 2010

Members in Attendance:

Kathleen Baskin	Designee, Executive Office of Energy and Environmental Affairs
Marilyn Contreas	Designee, Department of Housing and Community Development
Anne Carroll	Designee, Department of Conservation and Recreation
Dave Terry	Designee, Department of Environmental Protection
Gerard Kennedy	Designee, Department of Agricultural Resources
Tim Purinton	Designee, Department of Fish and Game
Joseph E. Pelczarski	Designee, Massachusetts Office of Coastal Zone Management
John Lebeaux	Public Member

Others in Attendance:

Michael Martin	Wareham Water Dept.; Water Infrastructure Finance Commission
Christopher Woodcock	Woodcock & Associates
Erin Graham	DCR
Brent Courchene	AECOM
John Clarkeson	EEA
Duane LeVangie	DEP
Vandana Rao	EEA
Michele Drury	DCR
Jennifer Pederson	Massachusetts Water Works Assn.
Susan Figelman	DEP
Bruce Hansen	DCR
Marilyn McCrory	DCR
Linda Correia	Aquaria Water LLC
Nathan Henderson	AECOM

Agenda Item #1: Presentation and Discussion: Water Rates: Can They Encourage Conservation and Provide Stable Revenues?

Baskin introduced Christopher Woodcock, a water-rate expert who has advised the state on how water utilities finance their operations. Mr. Woodcock, she said, has also provided outreach to water suppliers in cooperation with MassDEP.

Woodcock stated that it was an honor to speak to the Water Resources Commission. He described his background and experience as an engineer and economist. Describing himself as a strong supporter of tap water, he noted the importance of tap water in every aspect of human activity.

He reviewed general economic theory, including the effect of demand on price and the concept of price elasticity. He noted that water is a commodity for which there is no substitute. Because water for drinking is an essential use, price has less of an ability to affect water consumption. If water is essential to create a product, water for such manufacturing uses is also less responsive to price changes. He reviewed other uses of water where water is less essential, such as water for industrial cooling, and where price can have some effect in driving down demand. For some uses – such as water for landscaping, golf courses, or municipal athletic fields – there is debate about whether water is an essential use or not. He noted general agreement that health, sanitation, and drinking are considered essential uses of water.

He described tap water in the United States as an incredible bargain, noting that tap water generally costs less than one dollar a day; is delivered 24 hours a day, 365 days a year and is of high quality. He added that most agree that the cost of tap water does not reflect its true value, and it would be difficult, given the current pricing of water, to increase price enough to affect consumption. He discussed the difficulties for water utilities in increasing water rates, noting that people perceive any increase as a large increase, whereas the reality is that the price of water is so low that a large percentage increase in water rates can result in a very small cost increase for the consumer.

Woodcock reviewed the three components of water rates: variable charges, fixed charges, and one-time charges. He discussed various types of rate structures, including uniform or flat rates, increasing block rates, seasonal rates, and budget rates. He noted that for increasing block rates to encourage conservation, the rate should be stepped by classes of meter size or users. Seasonal rates produce more of a price response when billing is monthly.

He explained that conservation rates charge more for discretionary uses of water, such as outdoor water uses, with the goal of discouraging nonessential uses. However, decreasing consumption decreases revenues for the water utility. He noted that when revenues drop, water departments typically make cuts to capital improvements. He added that it is difficult for water departments to continually request rate increases in response to drops in demand. He encouraged supporters of water conservation to attend hearings on water rate increases to support such increases.

Woodcock discussed the difference between rate increases and bill increases, noting that a rate increase, with reduced consumption, may result in no net increase in bills at the customer level. In order to provide stable revenues, Woodcock said that water utilities must target discretionary uses with higher prices. He described the advantages of monthly billing in helping a water utility to make adjustments in response to fluctuations in consumption. He also recommended that utilities establish a revenue stabilization fund, which requires that the utility be funded through an enterprise fund. He recommended reserves equal to twenty to twenty-five percent of the operating budget. He noted a downward trend in water consumption, and urged water utilities and agencies to be prepared to address the effect of these trends on revenues.

Pelczarski asked if it is possible to separate revenues for infrastructure from revenues for consumption. Martin responded that the Wareham Water District established a consumption-based capital improvement charge, where the more a customer uses, the more it pays for a particular capital improvement. The water rate was used to pay for debt service on capital expenditures.

Rao asked if a rate structure can be designed to satisfy basic needs, with any uses above that being charged at a higher rate. Woodcock responded that conservation rates try to encourage consumers to use less, which makes revenues variable, depending on weather and other factors, while expenses do not change. He added that 95 to 98 percent of water utility costs are fixed, while revenues will fluctuate based on consumption, and it is difficult to predict what those fluctuations will be. In the long run, he added, as revenue consists of a greater percentage of nondiscretionary uses of water, through rates that drive down discretionary uses, it may be possible to have some stability in revenue. LeVangie responded that MassDEP has heard from suppliers who indicated that those who have implemented conservation and demand management practices restricting discretionary use have more stable revenues overall and do not experience the wide swings in revenue from year to year that other systems experience. Clarkeson commented that rates based primarily on nondiscretionary water use will result in more stable revenues to cover basic business costs, with revenues from discretionary uses going into a reserve.

Discussion ensued on the problems for a utility with the perception that a rate stabilization fund has become too large or contains more money than is needed to support the utility's operating budget. Clarkeson commented that it is not legal for a community to transfer funds from a water utility's enterprise fund to be used for other purposes. Martin observed that many communities subsidize the water rate with other charges not related to usage. He added that rates are more complex than usage, and must be customized to a community's customer mix. Woodcock pointed out that expenditures from an enterprise fund, even for water infrastructure needs, require a community to choose to appropriate funds. Terry commented that MassDEP will be testifying about shortfalls in distribution infrastructure and the revenues needed to cover the cost of infrastructure needs. Pederson added that Tighe and Bond will present information on rate trends over the past ten years to the Water Infrastructure Finance Commission on November 30, 2010.

Rao pointed out the need to ensure that water remains affordable to all. Woodcock acknowledged affordability is a real concern, since water is essential for life. He described methods some water departments have used verify a customer's need for an income-based rate, such as using qualification for electric or gas utilities' income-based programs. The problem, he pointed out, is that it is usually the property owner who is billed for water and that the owner may not be the income-qualified customer. To make sure that qualified customers are not wasting water through unfixed leaks, some utilities require a water audit as a condition of qualification.

Baskin thanked Woodcock for his presentation and discussion.

Agenda Item #2: Presentation and VOTE: Proposed Modifications to Aquaria's Sampling Protocol

Drury thanked staff from the Division of Marine Fisheries, MassDEP, and the Office of Coastal Zone Management for their assistance in reviewing the modifications proposed by Aquaria to its sampling protocol at the company's desalination plant in Dighton. She acknowledged representatives from Aquaria. Requested modifications and recommendations from WRC staff are as follows:

1. Discontinue winter sampling: Staff recommends that sampling continue while the Gunderboom fish exclusion system remains in place, through November 15, and resume when the Gunderboom is redeployed March 1, with the proviso that winter sampling may be resumed if warranted by future conditions.
2. Reduce the number of samples collected from impingement monitoring from four to two and collect samples after the air burst: Staff recommends that the number of samples can be reduced, but that the samples should be collected prior to the air burst.
3. Eliminate dive sampling and reduce the number of samples from two to one: Staff agrees that dive sampling can be eliminated and the number of samples reduced.
4. Reduce the frequency of entrainment monitoring from three times per week to two times per week: Staff recommends that frequency remain three times per week while the Gunderboom is deployed.
5. Reduce the frequency of in-river fisheries monitoring from three times per week to two times per week: Staff recommends that frequency remain three times per week while the Gunderboom is deployed.
6. Aquaria agreed to seine inside the Gunderboom perimeter after each deployment: Staff recommends that, by December 31, 2010, Aquaria provide a protocol for routine inspection of the Gunderboom throughout the deployment period to identify and address potential subsequent breaching.
7. Reduce frequency of water quality sampling from three times per week to two times per week: Staff recommends that water quality sampling be discontinued until withdrawals increase, with the exception of sampling required under the EPA-issued NPDES permit.

Drury requested approval of the proposed modifications with the adjustments recommended by WRC staff. The proposed modifications, along with the original monitoring plan, would be in effect for the next sampling period and must remain in effect until such time as the WRC approves further modifications, as described under the conditions of Aquaria's ITA approval (Conditions 5 and 6 under Criterion #5). Agency staff also request three to six months' lead time for future requests to modify the sampling protocol.

Henderson noted that Aquaria would like to discuss end points for monitoring with the resource agencies. He asked that the focus be shifted to an assessment of the plant's overall impact on fisheries.

Purinton reported that the Division of Marine Fisheries is largely supportive of the staff recommendation, but had requested some tightening of the language, particularly in the recommendation that winter sampling be eliminated. Discussion ensued on other methods that could provide information on winter entrainment. Commission members discussed the pros and cons of tabling the recommendation on winter sampling while voting on the rest of the staff recommendation. Purinton then proposed specific changes to the language of the staff recommendation, and these were discussed. Baskin summarized the discussion by noting that some points of discussion remain to be resolved.

Drury noted that the monitoring is not to determine when a shutoff threshold is reached. Instead, the intent of monitoring, in the Aquaria case, is to ensure that safeguards in place at the plant that are intended to protect the resources operate as proposed.

Baskin proposed that the commission vote on the staff recommendation, as modified at this meeting, and that the Water Resources Commission direct staff and the proponent to work together on the remaining issues. In response to a question from Kennedy, Carroll clarified that the commission is being asked to vote on the recommendation to discontinue winter sampling, with the understanding that discussions on this question will continue between agency staff and the proponent, and that the commission has the authority to reopen discussions as conditions warrant.

V O T E	A motion was made by Lebeaux with a second by Terry to approve the staff recommendation, as amended, on the proposed modifications to Aquaria's Operational Monitoring Plan. The vote to approve was unanimous of those present.

Baskin directed staff and the proponent to work out details related to video monitoring, winter sampling – if it is reintroduced – and water quality monitoring or modeling on the salt wedge and to discuss end points or interim end points for monitoring related to certain types of withdrawals. Baskin requested that this discussion take place, to the extent possible, before the next meeting of the Water Resources Commission.

Agenda Item #3: Executive Director's Report

Baskin noted that a drought advisory remains in effect for the central and northeast regions of the state. The Drought Management Task Force is scheduled to meet again on October 15, 2010.

Baskin provided a brief update on the status of the Sustainable Water Management Initiative. The technical and advisory committees have narrowed in on ideas on how to calculate safe yield and how to incorporate an environmental protection factor.

Hansen provided an update on the hydrologic conditions for September. Precipitation was 69 percent of normal for September, with streams in the western region experiencing record daily low flows. The month was also the third warmest September on record, with elevated temperatures contributing to low flows in the western region. Statewide, streamflow varied but was below normal in two-thirds of the state. Fire danger has decreased but remains elevated because of dry subsoil conditions.

Meeting adjourned

Attachments distributed or presented at meeting:

- Current Water Conditions in Massachusetts, October 14, 2010.