



Charles River Watershed Association

By Email and Mail

February 12, 2010

Duane LeVangie
MassDEP
1 Winter Street
Boston, MA 02108

Re: Natick and Bellingham Draft Water Management Act Permits, Charles River Watershed

Dear Mr. LeVangie:

The Charles River Watershed Association (CRWA) submits the following comments on MassDEP's draft 20-year Water Management Act permits for the towns of Natick and Bellingham. These are in addition to our more general comments on the Charles River basin draft Water Management Act permits that we submitted on February 10, 2010.

Natick

The Town is registered to withdraw 0.22 mgd from the Charles and 4.10 mgd from the Concord basin. It also holds a permit for 1.31 mgd in the Charles, for a total of 5.63 mgd. Because Natick's permit was not reviewed in 2004 as it should have been, it went onto its Period 4 permit volume of 1.31 mgd by default, instead of being held to its period 3 volume of 1.14 mgd. Natick's annual system-wide average between 2002 and 2008 has not exceeded 3.70 mgd. Notably, DCR's forecast of 3.92 mgd in 2028 (4.12 mgd with a 5% buffer) is still below Natick's combined registered volume. We believe the permitted volume in the Charles basin should at least be reduced to 1.14 mgd, the limit that MassDEP would likely have held the town to if the last 5-year review had been completed.

Almost 90% of Natick's wastewater is exported out of basin to the MWRA system resulting in a large water deficit. Natick increases its July and August withdrawals from the Elm Bank wells and under the draft permit is authorized to pump a maximum of 2.20 mgd from these wells.

Going forward, MassDEP needs to ensure that the Town reports raw instead of finished water in its ASRs. CRWA is in receipt of the 2009 pumping record required to be provided to the Water Resources Commission under the Interbasin Transfer Act (ITA) Approval. It is not clear if pumpage numbers are for raw or finished water numbers. The August 30, 2006 Order to Complete at p. 5 also required "a timeline for the installation of appropriate metering in order to implement the July 2005 OTC response's source management plan ensuring compliance with the Permit's approved maximum daily withdrawal volume." Because there have been questions in

the past about whether Natick was exceeding its maximum daily pumping rate, if the “appropriate” metering has not been installed, this should be an explicit permit requirement. While the cover letter states that withdrawals up to 1.53 mgd are being authorized from the Charles basin with system-wide withdrawals of not more than 4.32 mgd, the draft permit conflicts with this. Special Condition 1 provides that the town “may take the annual average system-wide withdrawal volumes from its sources in either basin in the manner that best meets the systems operational needs . . .” This an clearly an error since there is no legal basis to authorize a registered volume in one basin to be used in another basin.

MassDEP also combines the two registered volumes to determine Natick’s baseline, which we believe is contrary to the rationale of offsets and erroneous. In fact in 2006, when MassDEP was in the process of conducting a five-year review,¹ it identified the Town’s baseline as 1.14 mgd for the Charles River watershed, stating ”[t]his volume is your baseline volume for calculating offsets and is based upon actual withdrawals from your Charles River Basin sources between 2003-2005 . . .” (emphasis added) August 30, 2006 Order to Complete at p. 7. Offsets (and baselines) should be specific to a particular basin. It would make no (environmental) sense to allow Natick to perform offsets in the Concord basin to mitigate the impacts of its withdrawals the Charles; therefore, the town should have a baseline for basin.² The Charles baseline for offsets should be 1.14 mgd for Natick.

While the streamflows requiring shut off of pumping in Special Condition 3 were thought at the time to constitute “reasonable instream flow” in the Charles River, the June 14–September 14 streamflow of 38.43 cfs (0.21 cfsm) at the Dover gage is not in fact protective.³ This summertime trigger was based on the Department of Environmental Management’s (DEM) minimum streamflow value in its *Charles River Basin Plan*, which was and adopted by the Water Resources Commission. This minimum streamflow threshold was believed to be the threshold below which any further reduction would have an adverse environmental impact on the water resources of the basin. There is no biological basis for this streamflow,⁴ and based on growing criticism by DFWELE Commissioner Phillips⁵ and others, DEM stopped developing minimum streamflows and abandoned Basin Plans in the early 1990s. While the 38.43 cfs and

¹ The five-year review was never completed.

² This particularly makes sense given MassDEP’s current deterrent approach with offsets.

³ The August ABF just calculated by the SYE is 0.34 cfsm at the Dover gage.

⁴ Fisheries’ data and sampling by MA Division of Fisheries and Wildlife and CRWA in the mainstem and tributaries show that Charles River fish populations have suffered in terms of species population and diversity. A recent study by DFW documents that 99 percent of the fish species found in the Charles are macrohabitat generalists, or warm pond-type fish, compared to river-type fish, or fluvial species, which need flowing water for at least a portion of their life cycle. Kashiwagi and Richards, *Development of Target Fish Community Models for Massachusetts Mainstem Rivers, Technical Report* (2009). In comparison, the target fish community for the Charles is predicted to contain 19 percent fluvial specialist species, 48 percent fluvial dependent species and 33 percent microhabitat generalists. *Id.* at 16. Similarity scores for species, habitat use categories and tolerance categories “ were among the lowest calculated in Massachusetts.” Kashiwagi and Richards, *supra* at 16.

⁵ DFWELE Commissioner Phillips in September, 1991, recommended the use of a much higher streamflow value for protection of fisheries in a memorandum to the Chairperson of the WRC. Commissioner Phillip’s recommended a summer flow of 0.5 cfsm for heavily regulated basins, which the Charles is.

other seasonal triggers was taken from the Interbasin Transfer Act (ITA) Approval, nothing in that approval constrains MassDEP from setting a streamflow trigger that is more accurate for protection of aquatic life. MassDEP should change the June 14-September 14 streamflow of 38.43 cfs (0.21 cfs) at the Dover gage in Special Condition 3 to at least the SYE-calculated August ABF or 0.34.

Bellingham

Although Bellingham's withdrawals totaled 1.08, 1.37 and 1.18 mgd in 2008, 2007 and 2006, respectively, the draft permit authorizes the town to continue to withdraw 3.10 mgd from the Charles and the Blackstone basins. The DCR demand forecast for Bellingham in 2028 even with a 5% buffer (1.51 mgd) is ½ of the authorized withdrawal volume. In the Charles basin, actual withdrawals are 0.69 mgd less than the 1.36 mgd authorized volume. While CRWA recognizes that MassDEP's intent is to give Bellingham flexibility between its Blackstone and Charles sources, the recent trend is to pump the Charles sources significantly in the summer: in 2007, Charles withdrawals increased three to fourfold in each of the months from June-October as compared to the amount withdrawn from Charles sources in January. These withdrawals in the highly stressed upper watershed occur during the months when flows are already quite low. Well 12 (on which Bellingham is seeking a permit amendment to increase the pumping volume) is only 600 feet from the river. While MassDEP in Table 3 is limiting withdrawals from both sources to 1.44 mgd through 2029 based on DCR's demand projections,⁶ CRWA believes that the Charles (and system-wide) authorized withdrawals should be reduced to more accurately reflect the demand projections.

Please feel free to call me if you have any questions.

Sincerely,



Margaret Van Deusen

cc: (via email only)
Lucy Edmondson
Glenn Haas
Barbara Kickham
Susan Connors
Beth McCann
Tom Lamonte
Kathy Baskin

⁶ Maximum day withdrawals from the Charles total 1.90 mgd.