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Michele Barden  
US Environmental Protection Agency – Region 1  
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Emailed to: [barden.michele@epa.gov](mailto:barden.michele@epa.gov)

AND

Claire Golden  
MassDEP, Surface Water Discharge Program  
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Emailed to [MassDEP.npdes@mass.gov](mailto:MassDEP.npdes@mass.gov)

Re: 2023 Draft NPDES Permit No. MA0103284 to be issued to Massachusetts Water Resources Authority and to CSO-responsible Co-permittees and other municipal Co-permittees

Dear Ms. Barden and Ms. Golden:

Please accept these comments on the above referenced draft NPDES permit. My comments concern the Combined Sewer Overflow (CSO) portions of the draft permit, especially as they relate to the six CSOs that the permit authorizes to discharge into Alewife Brook and Little River, Segments MA71-20 and MA71-22, respectively. In this comment letter, I refer to those the two segments as Alewife Brook, as they have traditionally been known.

I am a resident of Arlington, Massachusetts, a member of the Arlington Redevelopment Board, on the Steering Committee of Save the Alewife Brook, an elected Arlington Town Meeting member, and a member of the Mystic River Watershed Association. I write in my individual capacity as a resident of the town that borders Alewife Brook, as a retired lawyer who specialized in environmental law, environmental justice, and land use issues, with a focus on Clean Water Act issues for part of my career, and as a person concerned about the damage CSOs have done and continue to do to the ecology of Alewife Brook and its environs and their impacts on the people and public health in the area.

I have read and agree with the excellent comments on the draft permit submitted by Stephen Perkins and by Save the Alewife Brook. Nothing in this letter is intended to contradict those comments. In this letter, I expand upon their comments and make some additional suggestions for your consideration.

#### Alewife Brook

In your review of these comments, I ask that you consider the distinctive features of Alewife Brook and the unusual resulting negative impacts of CSOs on the Brook. Alewife Brook is a very narrow channel of only 1.6 miles in length. It is subject to flooding, often overtopping its western bank in storms (most

recently in August of this year), releasing CSO-contaminated floodwaters onto the Alewife Reservation and onto the Alewife Greenway path that is used for recreation and commuting. It has flooded into the backyards of adjacent homes. In large storms, it has flooded into nearby homes, sending CSO contaminated waters into peoples' basements. Sediments, many feet in depth, cover the bottom of the Brook and reduce the flow-through capacity of the Brook during storms. Presumably, much of those sediments have been contributed by CSOs over the decades. In 2021, over 50 million gallons of untreated CSO sewage was released to the shallow and narrow Brook, a greater volume of untreated CSO sewage than released elsewhere in the MWRA sewer service area.

In addition, much of the Brook borders Environmental Justice neighborhoods as defined by the State of Massachusetts. Similar information on demographics is found using EPA's EJScreen.

EPA's nine minimum controls policy forms the basis of the draft permit requirements for CSOs. Yet, EPA formulated and adopted its nine minimum controls policy in a different era, before the current understanding of Environmental Justice and the current commitment to reducing and eliminating environmental injustices. The nine minimum controls policy also do not seem to consider the current situation in Alewife Brook, where a narrow and shallow CSO receiving stream overflows its banks, sending untreated sewage into parks, public paths, and peoples' backyards and homes.

#### Suggested Additional Permit Conditions

The permit conditions I suggest below are in addition to those suggested by Mr. Perkins and by Save the Alewife Brook in their comments on the draft permit.

The CSO discharging into Alewife Brook should have the same monitoring and reporting requirements as CSOs MWR201, MWR205A, MWR203, MWR205, MWR215, with the exception that residual chlorine monitoring is unnecessary, but PFAS analytes monitoring should be added -- especially considering the Brook flooding that occurs with its resulting impact on people, and the CSOs contribution to the sedimentation of the Brook. Such monitoring and reporting is necessary to determine the impact of the CSOs on Alewife Brook, on the surrounding areas when the Brook overflows its banks, and on public health, and may help determine priorities for further CSO reductions. It is also important because the MWRA Industrial Pretreatment Program (IPP) discharge limits are based on influent to the Deer Island Treatment Plant and on the sludge it produces and not on whether an industrial user discharge becomes part of a CSO discharge during storms. Obtaining monitoring data from the CSOs will help determine if the IPP program needs to be adjusted to take CSOs into consideration.

As MWRA, Cambridge, and Somerville move forward (albeit slowly) in proposing a new Long Term Control Plan (LTCP) for their CSOs, we have learned through public meetings that the current MWRA conveyance system is undersized in many areas to handle the flows during even some smaller storm events, resulting in CSOs. We have also learned that expected climate change will greatly exacerbate the problem. For example, under a projected new Typical Year scenario for the next LTCP, a modest five percent increase in precipitation in the Boston area could cause as much as two to four times CSO discharge volumes. It seems imperative that the permit mandate MWRA to determine how much additional capacity it will require by the years 2050 and 2070 based on climate change projections and begin a planning process for meeting that increased capacity need. That increased capacity should be required to eliminate the various bottlenecks in the MWRA system that would cause and exacerbate the frequency and volumes of CSOs into Alewife Brook expected in future years. Without such additional

capacity we will see more CSO discharges, which seem antithetical to CSO control and may well violate the anti-backsliding requirements.

Similarly, for Cambridge and Somerville, climate change will undoubtedly increase the need for greater combined sewer capacity, more sewer separation, implementation of much more green and grey infrastructure, or likely some combination of all those options to prevent more CSO activations. As with MWRA, the permit should require Cambridge and Somerville to determine how their sewer systems will meet the changing climate as projected for the years 2050 and 2070. Without that planning starting now, more CSO activations and more CSO flows will continue to occur.

It is time for EPA to reconsider the use of a typical year for CSO measurement and control, considering that climate projections are for more years of more extreme storms and droughts in the future – making the typical year a less useful tool as years become less typical. What might have made sense in the 1990s as a planning tool seems outmoded for the decades ahead. It may make more sense to use a typical rainy year model, considering the wider fluctuation of storms expected in the years ahead. The permit should require the CSO entities to do so.

It is my impression that the current location of the rain gauges may be inadequate to measure the differences in local rainfall totals and intensities. For Alewife Brook, the permit should require MWRA, Cambridge, and Somerville to use rain gauges that are in the sewer catchment areas of the CSOs that discharge to the Brook.

Finally, the permit should require Cambridge and Somerville to provide sewer maps showing the sewer catchment areas for each of the Alewife Brook CSOs and for each connection to the MWRA sewer system from their systems. MWRA should be required to provide a sewer map showing each combined sewer contributing to MWR003. I suggest this because I asked for such a map of MWRA and Cambridge. I was told by Cambridge that it has only online maps. MWRA referred me to Cambridge. Such maps are an essential tool in evaluating the CSOs and CSO planning.

Thank you for your consideration of these comments.

Sincerely,

*Eugene B. Benson*

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