



**United States Environmental Protection Agency  
Region 1 – EPA New England  
5 Post Office Square – Suite 100  
Boston, MA 02109-3912**

**Sent Via Email (dated as indicated in electronic signature)**

Ms. Catherine Daly Woodbury  
Senior Project Manager  
City of Cambridge DPW  
147 Hampshire Street  
Cambridge, MA 02139

Re: Cambridge MA Updated CSO Control Plan Scope of Work and Schedule

Dear Ms. Woodbury:

The United States Environmental Protection Agency (“EPA”) has received and reviewed the “City of Cambridge CSO Control Plan Scope” submitted by the City of Cambridge, MA (the “City”) in accordance with the Variance for Combined Sewer Overflow (“CSO”) Discharges to Alewife Brook/Upper Mystic River Basin and the Variance for Combined Sewer Overflow Discharges to the Charles River Basin (collectively referred to as the “Variance” or “Variances”).

EPA has reviewed the Updated Scope of Work and appreciates the thought and effort the City has put into the document. EPA has reviewed the separate but related Updated Scopes of Work produced by the City of Somerville, MA and the Massachusetts Water Resources Authority (“MWRA”) and will be sharing respective comments with all parties in an effort to encourage consistency amongst all parties.

If you have questions regarding these comments, please contact Todd Borci at 617-918-1358 or [borci.todd@epa.gov](mailto:borci.todd@epa.gov).

Sincerely,

Todd J. Borci  
Enforcement Officer  
Environmental Compliance Assurance Division  
US EPA Region 1

cc: Kathy Watkins, City of Cambridge  
Richard Raiche, City of Somerville  
Brian Postlewaite, City of Somerville  
David Coppes, MWRA  
Eric Worrall, MassDEP  
Kevin Brander, MassDEP  
Michael Wagner/EPA  
Jeff Kopf/EPA

Attachment

### **Section 4.2.1 and Section 4.3**

EPA expects the City to incorporate future climate change impacts into the development of a revised “Typical Year”. EPA notes the City has invested extensive resources into the evaluation of future precipitation events through the City’s “Resilient Cambridge”<sup>1</sup> and “Climate Change Preparedness and Resilience”<sup>2</sup> efforts. Continuing collaboration between the City of Cambridge, the City of Somerville, and the Massachusetts Water Resources Authority (“MWRA”) in developing a revised typical year that incorporates future predicted precipitation events with respect to both overall storm size and storm intensity is warranted. As noted by recent National Oceanic and Atmospheric Association (“NOAA”) guidance<sup>3</sup> and peer-reviewed studies<sup>4</sup>, precipitation events have increased in both event intensity and overall total precipitation, and acutely so here in the Northeast. These increased precipitation events, in both frequency and intensity, have already had a significant impact on area infrastructure and therefore must be incorporated into a revised typical year. EPA also expects the City’s proposal to look at select precipitation events that coincide with high tide and how such events will be influenced by current climate change projections for sea level rise. EPA notes that such events have occurred several times over the past few years, and each has had an acute impact on respective CSO and SSO discharge events. EPA notes that such events have been considered in detail by the City in its related climate change preparedness efforts referenced above. EPA encourages the City to collaborate with Somerville and MWRA to propose an appropriate “typical year” design scheme for further discussion with EPA and MassDEP. We know that our wastewater infrastructure will need to evolve over time as the climate continues to change; decisions about CSO control alternatives need to take this into account.

### **Section 4.3**

EPA notes the City mentions the incorporation of additional water quality goals such as phosphorous reduction into their evaluation. EPA encourages this approach and suggests the City coordinate with the City of Somerville as they mention the incorporation of phosphorous, TSS, and other pollutants of concern into their baseline pollutant loading evaluation. EPA encourages the City to assess the cost benefits of CSO controls that further reduce these pollutants and meet not only CSO requirements but may assist the City with other Clean Water Act (“CWA”) obligations such as Municipal Separate Storm Sewer System (“MS4”) General Permit requirements.

### **Section 6 – Public Participation and Outreach**

EPA appreciates the thought the City has put into how to engage the public during this process. EPA expects the City to hold public meetings designed to solicit feedback from the public on proposals that are still in the draft stage, such that appropriate and meaningful feedback can be incorporated into the proposal prior to finalization. EPA routinely hears from stakeholders that

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<sup>1</sup> <https://www.cambridgema.gov/CDD/Projects/Climate/climatechangeresilianceandadaptation>

<sup>2</sup> [https://www.cambridgema.gov/~media/Files/CDD/Climate/CCPR/ccprpreparednesshandbook\\_cambridge.pdf](https://www.cambridgema.gov/~media/Files/CDD/Climate/CCPR/ccprpreparednesshandbook_cambridge.pdf)

<sup>3</sup> [https://www.weather.gov/media/owp/oh/hdsc/docs/Atlas14\\_Volume10.pdf](https://www.weather.gov/media/owp/oh/hdsc/docs/Atlas14_Volume10.pdf)

<sup>4</sup> [https://journals.ametsoc.org/view/journals/hydr/18/6/jhm-d-16-0195\\_1.xml](https://journals.ametsoc.org/view/journals/hydr/18/6/jhm-d-16-0195_1.xml)

they do not want to attend a public meeting where they are presented with a final plan with no opportunity for feedback. Based on stakeholder feedback to date, it would appear the public would like an opportunity to weigh in on both the updated “typical year” and to have input on the early stages of CSO control alternatives development, before a sub-set is selected for detailed analysis. EPA is willing to discuss with the City, MassDEP, and other interested and related parties how to achieve the appropriate level of meaningful public engagement.

#### **Task 4 – CSO Control Alternatives Analysis**

EPA expects the City to consider a wide spectrum of potential alternatives during this process, such as continued separation and relining of city piping (including relining of building laterals), storage and pump-back facilities, and extensive green infrastructure in those areas of the City that will continue to contribute to combined sanitary sewer and drain lines. EPA strongly encourages the City, along with the City of Somerville and MWRA, to undertake a holistic evaluation regarding CSO discharges, flooding, and Inflow and Infiltration (“I/I”) within not only the Variance communities but also the upstream communities. EPA recognizes the significant levels of I/I in those upstream communities create and compound the ongoing CSO issue in the Alewife/Lower Mystic River and must be addressed. Extensive work within the City combined with a holistic approach would be consistent with Cambridge’s and Somerville’s extensive climate change efforts to date, as well as provide at large benefit to the MWRA member communities.

The ultimate solution to these issues will involve not only significant investment by Cambridge in separation of combined sanitary sewer systems or off-line storage of CSO volume, but also the removal of significant amounts of stormwater and groundwater that enter the sanitary sewers through direct connections, cracks, and other defects system-wide. Removal of I/I, which makes up a significant source of sanitary flows for many communities<sup>5</sup>, will also result in a significant amount of additional stormwater that will need to be managed to prevent flooding and other issues. The channelized nature of Alewife Brook, as well as the amount of sediment in the Alewife constructed channel that takes up flood storage capacity (this sediment volume was estimated by USGS in 2005 to take up approximately 0.5 million cubic feet<sup>6</sup>), exacerbates the flooding issue. EPA will work with the City, Somerville, and MWRA, as well as all the MWRA member communities upstream of the Alewife/Lower Mystic area to address the collective issues that directly impact CSO volume discharged.

#### **Section 8 – Alternative Analysis and Ranking Prioritization and Section 9 - Affordability Analysis**

EPA assumes the City’s cost/benefit analysis will capture any reductions in loadings of phosphorous and any other pollutants of concern that will be evaluated during this process, as those reductions will reduce the cost of compliance with the Charles River TMDL and the Mystic River Alternative TMDL, as well as any potential future additional permitting costs.

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<sup>5</sup> <https://www.mwra.com/harbor/pdf/infinf.pdf>

<sup>6</sup> Breault, R.F., Durant, J.L., and Robbat, Albert, Jr., 2005, Sediment quality of lakes, rivers, and estuaries in the Mystic River Basin, eastern Massachusetts, 2001–03: U.S. Geological Survey Scientific Investigations Report 2005-5191, 110 p.

EPA expects the City to explore a comprehensive financial capability analysis in accordance with existing EPA guidance and policies<sup>7,8</sup>. EPA encourages the City to consider alternative or tiered rate structures to avoid adverse impacts on lower income residents.

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<sup>7</sup> [https://www.epa.gov/sites/default/files/2015-10/documents/csofc\\_0.pdf](https://www.epa.gov/sites/default/files/2015-10/documents/csofc_0.pdf)

<sup>8</sup> [https://www.epa.gov/sites/default/files/2015-10/documents/municipal\\_fca\\_framework\\_0.pdf](https://www.epa.gov/sites/default/files/2015-10/documents/municipal_fca_framework_0.pdf)