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. Lucica Hiller
Stormwater Program Manager
City of Somerville
93 Highland Avenue
Somerville, MA 02143

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

Dear Ms. Hiller:

The United States Environmental Protection Agency ("EPA") has received and reviewed the "Updated CSO Control Plan Scope of Work and Schedule" submitted by the City of Somerville, MA (the "City") in accordance with the Variance for Combined Sewer Overflow ("CSO") Discharges to Alewife Brook/Upper Mystic River Basin (the "Variance").

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 Cambridge, 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.

Sincerely,

TODD BORCI Digitally signed by TODD BORCI
Date: 2022.05.11 16:34:09 -04'00'

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

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

Attachment

Sub-Task 2.3 - Development of an Updated Typical Rainfall Year and Extreme Rainfall Events

EPA appreciates the City giving thought to future climate change impacts on the development of CSO alternatives. Continuing collaboration between the City of Somerville, the City of Cambridge, 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[1] and peer-reviewed studies[2], 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 believes the City calling out scenarios such as the 10-year, 24-hour 2070 event are particularly on point as potential metrics for future CSO design. EPA also expects the City 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 encourages the City to collaborate with the City of Cambridge, as it has conducted detailed analyses of precipitation events, storm surge, and operation of the Amelia Earhart Dam to determine flooding scenarios that will impact concurrent CSO discharges. EPA encourages the City to collaborate with Cambridge 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.

Sub-Task 2.4 – Determine Current Level of CSO Control with Updated Typical Year

EPA notes the City will incorporate Phosphorous, TSS, and other pollutants of concern into its baseline pollutant loading evaluation. EPA encourages this approach, and would further encourage 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.

Task 3 – Public Participation Plan

EPA appreciates the thoroughness the City has put into how to engage the public during this process. EPA would expect 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 they do not want to attend a public meeting where they are presented with a

[1] https://www.weather.gov/media/owp/oh/hdsc/docs/Atlas14_Volume10.pdf
[2] https://journals.ametsoc.org/view/journals/hydr/18/6/jhm-d-16-0195_1.xml

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 at large City parcels along Alewife Brook such as Dillboy Field, and extensive green infrastructure in those areas of the City that contribute to combined sanitary sewer and drain lines. EPA strongly encourages the City, along with the City of Cambridge 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 both the City's "Somerville Climate Forward" initiative [3], as well as with Cambridge's "Resilient Cambridge"[4] and "Climate Change Preparedness and Resilience"[5] efforts and provide at large benefit to the MWRA member communities.

The ultimate solution to these issues will involve not only significant investment by Somerville 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[6], 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[7]), exacerbates the flooding issue. EPA encourages the City to engage and work with the Massachusetts Department of Conservation and Recreation ("DCR") during this process. EPA will work with the City, Cambridge, 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.

[3] https://www.somervillema.gov/departments/programs/somerville-climate-forward
[4] https://www.cambridgema.gov/CDD/Projects/Climate/climatechangeresilianceandadaptation
[5] https://www.cambridgema.gov/~/media/Files/CDD/Climate/CCPR/ccprpreparednesshandbook_cambridge.pdf
[6] https://www.mwra.com/harbor/pdf/infinf.pdf
[7] 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.

Sub-Task 4.2 – Cost/Benefit Evaluation of Technically Feasible Alternatives: 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 in Sub-Task 4.1(c), as those reductions will reduce the cost of compliance with the Mystic River Alternative TMDL as well as any potential future additional permitting costs.

EPA expects the City to explore a comprehensive financial capability analysis in accordance with existing EPA guidance and policies[8,9]. EPA encourages the City to consider alternative or tiered rate structures to avoid adverse impacts on lower income residents.

[8] https://www.epa.gov/sites/default/files/2015-10/documents/csofc_0.pdf
[9] https://www.epa.gov/sites/default/files/2015-10/documents/municipal_fca_framework_0.pdf