

September 30, 2021

*Via Certified Mail*

Marsha Zierk  
Career Law Clerk for the Hon. Richard G. Stearns  
U.S. District Court, District of Massachusetts  
John Joseph Moakley U.S. Courthouse  
1 Courthouse Way, Suite 2300  
Boston, MA 02210

Re: *U.S. v. Metropolitan District Commission et al.*, Civil Action No. 85-0489-RGS  
*Conservation Law Foundation v. MDC et al.*, Civil Action No. 83-1614-RGS

Dear Ms. Zierk:

Charles River Watershed Association (“CRWA”) and Mystic River Watershed Association (“MyRWA”) submit this letter to the Court regarding recent developments in the above-captioned matters. As the watershed associations representing the Charles and Mystic Rivers, CRWA and MyRWA have a significant interest in the final outcome of these long-standing cases, including the Massachusetts Water Resources Authority’s (“MWRA”) compliance with the required reductions in Combined Sewer Overflow (“CSO”) discharges set forth in the Long Term Control Plan (“LTCP”). We appreciate the opportunity to once again provide our views on this matter to the Court.

Echoing the statements of our July 19, 2021 letter to the Court in this matter, we would once again like to acknowledge MWRA’s substantial work in implementing the LTCP and improving conditions in the Charles and Mystic Rivers. MWRA and its partners, including its member communities, regulators, rate payers and advocacy organizations, have invested substantial resources, in the form of both time and money, toward achieving the goals of the LTCP. Given all of these efforts, in our view it would be unacceptable to see these efforts fall short of anything less than what has been agreed upon by all parties.

As was presented at the April 2, 2021 status conference and June 2021 memorandum to the Court, there are currently sixteen CSO outfalls in the Charles and Mystic River watersheds that will not achieve the required levels of control by the end of 2021. Work is currently underway at six of these outfalls that is anticipated to reduce CSO discharges to levels in line with the LTCP, but that work will extend beyond December of this year. The MWRA has not yet identified a plan for bringing the remaining ten outfalls into compliance with the LTCP.

We expect that any extension granted to MWRA to achieve compliance will be granted based on the following requirements:

1. An expectation of full compliance by the extended deadline, and
2. A thorough analysis of the role green infrastructure and real-time monitoring can play in achieving LTCP requirements and the role it can play in maintaining those requirements as our climate changes.

## The LTCP and Its Required Levels of Control

MWRA is to be commended for its work to date on reducing CSO discharges, which has resulted in significant improvements to water quality in the Charles and Mystic River watersheds. However, it is critically important that every outfall, including the sixteen that are not currently in compliance, meet the levels of control set forth in the LTCP. Nothing less is acceptable.

As the Court knows well, the current levels of control set forth in the LTCP are the result of lengthy negotiations and significant compromise. They cannot be further compromised at this late stage. We expect MWRA to achieve the reduced level of discharges that was agreed upon as being reasonably protective of water quality and achievable, and we expect the Court to hold them to this standard.

MWRA is further obligated to achieve these levels of control even outside of the above-captioned matters; specifically, under the state water quality variances issued by MassDEP.<sup>[1]</sup> Under the variances, “CSO discharges shall be limited to those set forth in Attached Exhibit B, with allowances for any conditions that exceed Typical Year conditions.”<sup>[2]</sup> Exhibit B to each of the variances contains a chart titled “LTCP Levels of Control from Second Stipulation.”<sup>[3]</sup> In other words, the levels of control from the LTCP have been expressly adopted by and incorporated into the state water quality variances and are therefore legally binding upon MWRA under the state water quality standards. Failure to comply with the variances is a violation of the Massachusetts surface water quality standards, 314 CMR 4.00.<sup>[4],[5]</sup>

It is also important to keep in mind that the LTCP is based on the “typical year,” which in turn is based on the *historical* rainfall records from 1949-1987 and 1992. However, our climate is already changing and we know that the “typical year” is no longer typical.

According to the Fourth National Climate Assessment, “[t]he recent dominant trend in precipitation throughout the Northeast has been towards increases in rainfall intensity, with increases in intensity exceeding those in other regions of the contiguous United States.”<sup>[6]</sup> In Massachusetts, “[p]recipitation is expected to increase over this century” with “[t]otal annual precipitation . . . projected to increase by 1 to 6 inches by mid-century, and by 1.2 to 7.3 inches by the end of this century,” resulting in “up to 54.3 inches of rain per year, compared to the 1971-2001 average annual precipitation rate of 47 inches per year” in the state.<sup>[7]</sup> Even more importantly for this discussion, “[b]y mid-century, the state can expect to receive greater than 1 inch of rain on an average of up to 10 days per year” and “[t]he number of days with rainfall accumulation over 1 inch may reach 11 days by the end of this century,” representing “an increase of 4 days from the observed average between 1971 and 2000.”<sup>[8]</sup> Given these projected increases, it is safe to assume that CSO discharges will only be exacerbated as heavy precipitation events increase.

Moreover, while we understand the need for an extension due to the complex challenges of achieving compliance with the LTCP, there is an opportunity cost to devoting four more years (past the original deadline of 2020) to LTCP compliance as opposed to starting on the next phase of planning and improvements that will have to account for our changing climate. During this four year period, the Charles and Mystic Rivers will experience excessive pollutant loading from combined sewer overflows. In 2021 to date there have been 27 days with combined sewer overflows, far exceeding the limits of the LTCP. There should be additional mitigation to offset

the discharges in excess of LTCP control levels that occur during this four year extension period.

### **All Approaches to Achieving the Required Levels of Control *Must* be Considered**

In the nearly two decades since the LTCP reduction values were agreed upon, there have been significant technological advances in water management. In considering how to achieve full compliance with the LTCP, MWRA must consider these techniques and the cost savings many of them may offer when compared to traditional gray infrastructure investments. The cost-benefit analysis conducted by MWRA during the LTCP development process is now outdated and not representative of present-day CSO management strategies. We fully acknowledge that MWRA has achieved far greater reductions in CSO volume than many other communities around the country; however, we present these examples here to demonstrate other techniques that may allow MWRA to achieve the remaining reductions required by the LTCP that have not been achievable through other methods.

#### *Green Stormwater Infrastructure for Short-Term Storage*

EPA guidance for LTCPs requires that source controls be evaluated, and a 2014 EPA guidance document titled “Greening CSO Plans” specifically discusses how to incorporate green infrastructure into the CSO planning process.<sup>[9]</sup> Other U.S. cities, such as Philadelphia and New York City, have faced similar challenges with CSOs due to old combined sewer systems and extensive development preventing easy access to pipes underground. Both cities have successfully implemented green infrastructure strategies to reduce CSOs, an approach MWRA should consider.

In 2011, the City of Philadelphia launched “Green City, Clean Waters,” a plan to implement green stormwater infrastructure to reduce overall CSO volumes.<sup>[10]</sup> So far, with the installation of over 2,800 green tools (e.g., rain gardens, green roofs, and tree trenches), the plan is keeping over 2.7 billion gallons of CSO discharges out of rivers.<sup>[11]</sup> The plan works by increasing the extent of green spaces throughout the city so that greater volumes of stormwater are absorbed by plants and soil prior to reaching the sewers, thereby reducing the rate and overall amount of runoff.<sup>[12]</sup> The use of green stormwater infrastructure also provides a wide range of benefits not offered by traditional gray infrastructure, such as improved air quality, energy savings, wetland improvement, heat reduction, and increased property values.<sup>[13]</sup> The cost-benefit analysis for the plan revealed that the total city-wide present value of the net benefits of the green infrastructure plan was over 20 times greater than that offered by a proposal for traditional gray infrastructure.<sup>[14]</sup> On costs alone, the city saved \$6.5 billion in construction costs for new pipes.<sup>[15]</sup>

New York City is taking an integrated approach to tackle CSO volumes, combining green stormwater infrastructure and traditional gray infrastructure. The city found that green stormwater infrastructure could be implemented much more cheaply than implementing a strict gray infrastructure plan, saving the city \$1.5 billion.<sup>[16]</sup> In choosing this integrated approach, the city noted that the benefits from green infrastructure were expected to accrue immediately and build over time; comparatively, gray infrastructure includes an extensive construction period and does not accrue benefits beyond water quality improvements.<sup>[17]</sup> From 2010-2020, New York City retrofitted 1,504 impervious acres with green stormwater infrastructure to manage over 5

million cubic feet of stormwater runoff.<sup>[18]</sup> The types of green stormwater infrastructure implemented range from rain gardens to infiltration basins and green streets.<sup>[19]</sup>

In addition to including the use of green stormwater infrastructure in their further investigations of CSO control techniques, we encourage MWRA to continue to maximize opportunities to reduce inflow and infiltration (“I/I”) into the system. As discussed above, annual rainfall is expected to increase in Massachusetts, which may result in an increase in I/I to the system.

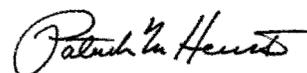
#### *Real-Time Monitoring and Control*

Real-time monitoring and system optimization have been utilized to achieve MWRA’s impressive reductions to date. This technique should be maximized using smart technology and low-cost, real-time monitoring equipment.

In 2008, the City of South Bend, Indiana, partnering with Xylem, a water technology provider, installed a real-time monitoring system with smart valves and sensors to reduce CSOs entering the St. Joseph River.<sup>[20]</sup> Since 2008, South Bend has reduced CSO discharges by 75%, preventing approximately 1.5 billion gallons per year of overflow contamination into the river.<sup>[21]</sup> The valves work to direct flow in the sewers and control stormwater levels across the system, while the sensors provide the City with vital data across multiple parameters including flow, velocity, and depth.<sup>[22]</sup> By implementing a smart system instead of relying on traditional gray infrastructure, South Bend has saved roughly \$500 million in capital work expenditure and achieved desired results 10 years ahead of schedule.<sup>[23]</sup>

Thank you for taking the time to consider the foregoing. We deeply appreciate the role the Court has played to date in overseeing efforts to reduce CSOs in the Charles and Mystic River watersheds and believe it is critical that the Court see the LTCP through its full implementation. We look forward to hearing more about next steps at future status conferences and in direct conversations with MWRA.

Sincerely,



Patrick Herron, Executive Director  
Mystic River Watershed Association

*On behalf of:*  
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Mystic River Watershed Association

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