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July 11, 2017

Joseph DiMura
Director, Bureau of Water Compliance
New York State Department of Environmental Conservation
Division of Water
625 Broadway
Albany, NY 12233-3506

Re: CSO Order on Consent (DEC Case #CO2-20110512-25, modification to
DEC Case No #CO2-20000107-8)
Appendix A, IX Westchester Creek CSO, G. Submit Approvable Drainage
Basin Specific LTCP for Westchester Creek
Reponses to June 6th, 2017 DEC Comment Letter

Dear Mr. DiMura:

The New York City Department of Environmental Protection (DEP) received the New York State Department of Environmental Conservation's (DEC) on June 6, 2017 letter commenting on the above-referenced CSO Long Term Control Plan (LTCP). In its letter, the New York State Department of Environmental Conservation (DEC) noted that the projected levels of attainment for the primary contact recreation standard (fecal coliform) presented in the April 2015 Westchester Creek LTCP Supplemental Documentation (2015 Supplement) differ from those presented in the June 2014 Westchester Creek LTCP (2014 LTCP), and requested clarification of the disparities.

The difference in the projected levels of attainment for the primary contact recreation standard (fecal coliform) is attributable to a change in the annual CSO and stormwater bacterial loads. Modeling of these updated CSO and stormwater bacterial loadings for the 2015 Supplement showed a slight reduction in those loadings due to some refinements in the model catchment areas and some additional CSO data collected after DEP submitted the June 2014 LTCP.

The fecal coliform loadings for the June 2014 LTCP and the 2015 Supplemental are set forth in the respective Tables 6-2.

Table 6-2. Annual CSO, Stormwater, and Direct Drainage Volumes and Loads (2008 Rainfall)

Source	Volumetric Discharge (MG/yr)	Enterococci Load (cfu x 10 ¹²)	Fecal Coliform Load (org x 10 ¹²)	BOD Load (Lbs)
CSO	289	1,660	5,857	71,876
Stormwater/Direct Drainage	327	348	766	40,658
Total	627	2,007	6,623	112,534

Source: Westchester Creek LTCP – June 2014

Table 6-2. Annual CSO, Stormwater, and Direct Drainage Volumes and Loads (2008 Rainfall)

Source	Volumetric Discharge (MG/yr)	Enterococci Load (cfu x 10 ¹²)	Fecal Coliform Load (org x 10 ¹²)	BOD Load (lbs)
CSO	290	1,131	4,511	71,876
Stormwater	106	203	488	12,931
Highway Runoff (HP-839)	55	17	42	6,714
Direct Drainage	164	40	27	21,013
Total	615	1,391	5,068	112,534

Source: Westchester Creek LTCP Supplemental Documentation – April 2015

As these tables show, the total fecal discharge loads were reduced from 6,623 org x 10¹² in the 2014 LTCP to 5,068 org x 10¹² in the 2015 Supplement. The changes in the bacterial loads are attributable to the following updates and changes:

- The 2014 LTCP used the mass balance approach to calculate the CSO bacterial concentrations for the all CSO outfalls discharging into Westchester Creek. The mass balance calculation is described on page 6-5 of the 2014 LTCP. This methodology essentially assigns a geometric mean bacterial concentration to the sanitary flow and the stormwater flow based on historic data; the InfoWorks model is then used to calculate the relative contribution of both sanitary and stormwater to determine the corresponding CSO bacterial loading. DEP used the mass balance approach in the 2014 LTCP because limited CSO data existed for CSO outfalls HP-014 and HP-016. On pages 6-5 and 6-6 of the 2014 LTCP, DEP noted *“the calculated GM bacteria concentrations are higher than those measured in 2014. However, since the 2014 data are limited, the calculated concentrations are used herein for baseline conditions, representing conservative estimates of the CSO loadings.”*
- For the April 2015 Supplemental LTCP Document, DEP used the Monte Carlo approach to derive updated bacterial concentrations for outfalls HP-014 and HP-016, as described on page SD-36 of the 2015 Supplement. The Monte Carlo approach uses actual data collected from CSO outfalls HP-014 and HP-016 between the 2014 LTCP and the 2015 Supplement. This change resulted in a reduction of the CSO fecal load, from 5,857 org x 10¹² to 4,511 org x 10¹². The Monte Carlo approach is consistent with all other submitted

LTCPs in which DEP sampled CSO outfalls directly. For CSO locations where no data was available on the CSO concentrations, the mass balance approach is used.

- In the 2015 Supplement, the recategorization of one stormwater outfall to a highway drain (outfall HP-839) resulted in a refinement of the associated load, and the fecal coliform load dropped from $252 \text{ org} \times 10^{12}$ to $42 \text{ org} \times 10^{12}$.

Should you require additional information regarding the 2014 LTCP and the 2015 Supplement, please do not hesitate to contact me at (718) 595-5972, or KMahoney@dep.nyc.gov.

Yours truly,



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