



October 30, 2015

The Honorable Emily Lloyd
Commissioner, NYC DEP
59-17 Junction Blvd
Flushing, NY 11373

RE: Flushing Creek Long Term Control Plan Comment Letter; SWIM Coalition Comments

Dear Commissioner Lloyd,

Stormwater Infrastructure Matters Coalition (S.W.I.M.) submits this comment letter on the Combined Sewer Overflow (CSO) Long Term Control Plan for Flushing Creek, as amended by the Appendix F: Supplemental Documentation (dated May 22, 2015) and further supplemental documentation dated August 9, 2015, which the New York City Department of Environmental Protection (DEP) has submitted for review to the New York State Department of Environmental Conservation (DEC). These comments are in response to DEP's request for comments at "Public Meeting #3" on Sept. 30, 2015. Since DEC is responsible for approval or disapproval of DEP's proposed plan, we reserve the right to submit additional comments to DEC, and it is our understanding that DEC will have formal public comment periods before making final decisions on whether to approve each of the City's LTCPs.

The SWIM Coalition represents over 70 organizations dedicated to ensuring swimmable and fishable waters around New York City through natural, sustainable stormwater management practices. Our members are a diverse group of community-based, citywide, regional and national organizations, water recreation user groups, institutions of higher education, and businesses.

On behalf of the SWIM Coalition Steering Committee, please accept these comments regarding the Flushing Creek plan. In short, we urge DEP – with instruction from DEC – to improve upon the current proposed plan rather than finalizing the plan as it currently stands. Among other things, the DEP should not finalize this LTCP, and the DEC should not approve this LTCP, without including Flushing Bay in the plan (including present-day loadings, projected future loadings, and hydrological connections between the waterways). We further note that many of the concerns we raise below also apply to other LTCPs that are currently pending.

Water quality impacts from Flushing Bay

Our most pressing concern is that Flushing Creek and Flushing Bay are regarded as separate waterbodies in the LTCP process, yet the Flushing Creek LTCP indicates that they impact one another in regards to water quality. NYC's largest outfall, BB-006, discharges over one billion of gallons of CSO a year near the mouth of Flushing Creek, and its impacts in the intertidal portions of the creek are evident throughout the Flushing Creek LTCP. Therefore, the water quality



problems in Flushing Creek cannot be adequately addressed in isolation from dealing with CSOs in Flushing Bay, and vice versa. The technical analysis in the LTCP, public engagement in development of the LTCP, and ultimate decisions regarding adequacy of the LTCP need to take place in the context of Flushing Bay and Flushing Creek as inter-connected waterbodies.

No actual reduction of CSO volume; continuing water quality impairment; risks of disinfection

The preferred alternative of this plan does not control any CSO volume; it only disinfects seasonal flow, in a portion of the sewershed. This results in a proposed LTCP that allows an average of 1.2 billion gallons/year of overflows. The Supplemental Documentation reports that for about 2.5 days after a 1-inch rainstorm, the creek will remain unsafe for human contact as measured by the State Department of Health's fecal coliform standards (which, themselves, are less stringent than current EPA recreational water quality criteria adopted nationally in 2012).

As reported in the plan, this approach will not achieve compliance with current dissolved oxygen standards, with the 30-day geometric mean fecal coliform standards that DEC has proposed for the creek, or with the EPA enterococcus standards for primary contact waters that DEC is required to adopt.

The city should be reducing CSO volumes, not relying on disinfection with untested effects on human and wildlife health, that furthermore still does not meet water quality standards.

The LTCP also postpones the decision of whether dechlorination will be required, even while seeking to lock-in disinfection as the preferred alternative. The health and environmental impacts of the preferred alternative cannot be properly evaluated when it remains unknown whether the disinfected discharges will be releasing huge doses of chlorine into the creek.

We also note that the LTCP does not disclose the frequency of CSO events projected in a typical year. This is an important variable to consider in comparing alternatives, as each event represents an instance where recreational will not be safe for some period of time following a rainfall.

No decisions on floatables control

According to the supplemental documentation (Aug. 9, 2015), it appears that the City intends to defer feasibility studies on floatables control measures remain for until a future stage, after LTCP approval. An approvable LTCP should fully address floatable issues and establish clear obligations for floatables reduction and elimination. Further, DEC's comments to DEP note that failure to remove floatables may limit the effectiveness of disinfection; this underscores the importance of resolving the floatables issue, if disinfection remains part of the LTCP.

Use Attainability Analysis (UAA)

The UAA presented in the plan is completely insufficient to satisfy Clean Water Act requirements.



The UAA states that complete elimination of CSO discharges to Flushing Creek would not attain fishable/swimmable standards, due to other pollution sources, including runoff from separate storm sewer and direct drainage areas of the watershed, as well as CSO discharges to Flushing Bay. In the UAA, DEP acknowledges that it must revisit this assessment after evaluating CSO control alternatives for Flushing Bay. We agree that Flushing Creek cannot be evaluated without first understanding the water quality impacts of Flushing Bay; as a result, the UAA included with the Flushing Creek LTCP is simply incomplete.

More specifically, the UAA fails to satisfy any of the specific legal standards it relies on:

Without addressing the water quality benefits of CSO reduction *in combination with* achievable pollution reduction from the MS4 and direct drainage areas (which the LTCP does not do), DEP cannot draw the conclusion (as it asserts in the UAA) that primary contact water quality is not attainable because “human caused conditions (direct drainage and urban runoff) create high bacteria levels that prevent the attainment of the use and that *cannot be fully remedied* for large storms (UAA factor #3).” (emphasis added). Yet, there is no discussion in the LTCP of what is needed to reduce the pollutant loadings from the MS4 and direct drainage areas of the Flushing Creek watershed or to reduce CSO discharges in Flushing Bay, nor any discussion of water quality improvements that such reductions could achieve in combination with further CSO controls in Flushing Creek.

DEP also attempts to rely on “UAA factor #4” to justify a failure to attain primary contact criteria for pathogens.

However, the city misstates the standard and has not demonstrated that it meets the actual standard. DEP asserts that “[c]hanges to the shoreline to channelize it and create bulkheads have modified the water such that access to the Creek is limited.” However, under EPA’s regulations, satisfying factor #4 actually requires a showing that “[d]ams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use.”

Limited existing shoreline access and “hydrologic modifications” that prevent attainment of a use are not the same thing. Moreover, the fact that access is currently limited is not, under the Clean Water Act, a permissible rationale to allow pollution to continue in a water body. Throughout New York City, as elsewhere in the country, urban waters that were once inaccessible have been reclaimed for recreational use; the Clean Water Act is designed to enable this transformation by making waters safe for recreation.

With regard to non-attainment of dissolved oxygen standards, DEP’s UAA makes completely unsupported claims and cannot satisfy the applicable legal standards. The UAA again cites “factor #4,” but presents no evidence (in any part of the LTCP) of the linkage between dissolved oxygen impairment and hydrologic modifications to the waterbody, much less that such modifications (if they inhibit dissolved oxygen attainment) cannot be remedied. Similarly, the UAA cites “factor #5” and asserts that “physical conditions related to the natural features of the waterbody...*unrelated to water quality*...preclude attainment of aquatic life protection uses” (emphasis added). But the UAA (and the rest of the LTCP) provide no information concerning the unsuitability of the waterbody, independent of water quality, to fully support aquatic life. Indeed, since the creek is part of an estuarine system, this claim seems implausible.



Flushing Creek is used by people and will continue to be used by people. The Creek needs to be clean enough to swim and fish in, including human powered boating that over a thousand dragon boaters engage in a year. We urge DEC not to accept the Use Attainability Analysis included in this LTCP.

Coordination with other pollution control programs & TMDLs

Flushing Creek was removed from the 2014 Section 303 (d) List of Impaired/TMDL Waters because it is a "Category 4b Water" for which a "TMDL is not necessary because other required control measures are expected to result in restoration in a reasonable period of time." The "other required control measures" cited were those to be implemented under the NYC CSO Order. Under the proposed LTCP, however, those "other required control measures" will NOT result in restoration of this waterbody.

The LTCP identifies CSOs from Flushing Bay, as well as runoff from separate sewer and direct drainage areas of the Flushing Creek Watershed, as sources contributing to impairment. We strongly urge the Department of Environmental Conservation to either develop a TMDL for Flushing Creek and Flushing Bay, or develop another mechanism for integrating the CSO and MS4 programs so that water quality improvement measures can be implemented in a holistic and coordinated manner. Compartmentalizing water quality improvement programs for a given watershed, as is this LTCP, will not achieve Clean Water Act goals.

We further note that DEC, upon approval of the 2012 CSO Order, provided public assurances that LTCPs would include such a pollution budget where CSO reduction alone would not achieve WQS. In the "Responsiveness Summary" accompanying the Order¹, DEC stated (Response 5.3) that "As noted in the CSO Control Policy, among other applicable criteria...DEP should demonstrate that for each LTCP:...Where WQS and designated uses are not met in part because of natural background conditions or pollution sources other than CSOs, a total maximum daily load, including a wasteload allocation and a load allocation, or other means should be used to apportion pollutant loads" (emphasis added). DEP must follow-through on that, and DEC must insist on it.

Seasonal vs year round attainment

We continue to question the seasonal water quality attainment over the year round attainment. Thanks to the improvements made to date in many waterbodies, more people are using these resources for not only recreation but also for educational purposes. Many boaters, including the Empire Dragon Boat Team, use Flushing Bay several times a week beyond just the recreational season. By only aiming for seasonal attainment in Flushing Creek, we are dismissing opportunities for boaters and other recreational uses on the Creek and the Bay, as well as educational opportunities for nearby schools.

¹ http://www.dec.ny.gov/docs/water_pdf/csosum2012.pdf



Sampling does not align with recreation season

The sampling for the Flushing Creek took place from November 2013 to May 2014, yet the recreation season in which there will be seasonal disinfection is from May 1st to October 31st. We do not believe DEP can draw conclusions about water quality during the recreational season without sampling during the same timeframe.

Updating pathogen water quality criteria

It is our understanding that DEC intends to determine the adequacy of the LTCP based on the state's pending water quality standards updates, which rely on fecal coliform criteria for primary contact. However, as DEC has acknowledged (including at the water quality standards hearing earlier this year), the state is required to further revise its primary contact standards to reflect EPA's recreational water quality criteria, based on a more scientifically valid -- and more protective -- enterococcus standard. Under the Clean Water Act, for "coastal recreational waters," the state is required to make this change by late 2015; while it appears the state will miss that deadline, it is nonetheless clear that this change is coming soon, on a far faster time frame than the implementation of the city's LTCPs. We believe all LTCPs currently under review and all future LTCPs should be evaluated based on compliance with the enterococcus criteria. At a minimum, the LTCPs must include a "reopener" that requires the city to update the plans -- with public participation and subject to DEC review and approval -- when the state water quality criteria are updated.²

"Sensitive Areas" & "Primary Contact Recreation"

In the Responsiveness Summary addressing comments on the 2012 CSO Order, DEC stated (Response 5.10) that "in accordance with the EPA CSO Policy, all LTCPs will identify and address appropriate CSO controls for sensitive areas." In each of the LTCPs submitted to date, DEP has asserted that there are no "sensitive areas" because, among other reasons, there are no "primary contact" uses of the waterbody. But this is true only if one limits term "primary contact" to swimming or other activities where a person purposefully submerges the water. However, as members of the public have attested in many public meetings on the various LTCPs, recreation such as kayaking and canoeing, which take place throughout the city's waterways - including here on the Creek - involves a substantial likelihood of significant contact with the water. Accordingly, many other states and EPA have recognized paddling as a form of "primary contact." DEP and DEC should do the same, and should therefore ensure that the LTCP gives heightened attention to limiting CSO pollution in areas where such recreation is most likely to occur.

² In connection with this point, we note that, in DEC's Responsiveness Summary accompanying the 2012 CSO Order, DEC stated (Response 5.3) that, pursuant to the CSO Policy, all LTCPs must ensure that "[t]he planned control program is designed to allow cost effective expansion or cost effective retrofitting if additional controls are subsequently determined to be necessary to meet WQS or designated uses."



“Recovery Time” and “Wet Weather Advisories”

The LTCPs submitted to date all include analysis of “recovery time” (i.e., the length of time after a CSO event that a water body would remain too polluted for contact). They also propose issuing “wet weather advisories,” based on recovery times, to the extent that the proposed CSO improvements do not fully meet primary contact water quality standards. The analysis here is complex, and appears to reflect substantial back-and-forth between DEC and DEP about the appropriate methodologies to evaluate recovery time. This issue should more fully vetted with recreational users of the City’s waters, to ensure that this analysis -- and any resulting advisory system -- reflects the realities of how people actually use the waterways and uses the best communication strategies to inform people about advisories. (For example, we urge DEP to study real-time notification systems, such as Newtown Creek Alliance’s Weather in the Watershed CSO Alert System, and plan to expand your Wait! program citywide.)

Further, the LTCPs present the recovery time analysis based on state Dept. of Health fecal coliform standards, but the analysis should be done based on enterococcus standards from EPA’s Recreational Water Quality Criteria (i.e., the “STV”), and advisories should be based on that standard.

In addition, advisories should begin as soon as possible, based on the current pollutant loadings; implementation of an advisory system should not wait until CSO controls included in the LTCP have been implemented.

Finally, we emphasize that this endorsement of improved public notification does not mean that we support the level of continuing CSO pollution that DEP proposes to allow. Advisories are not a substitute for a plan that reduces pollution as needed to meet Clean Water Act goals. Rather, to the extent unsafe pathogen levels cannot be eliminated 100% of the time, we support the development and implementation of effective public advisory systems as soon as possible.

Dry weather discharges

The LTCP characterization study found high bacteria counts during dry weather from sample location OW3, yet does not discuss how DEP will investigate these potential dry weather discharges. The findings on Page ES-8 state, “The higher concentrations for dry weather fecal coliform and enterococci at OW-3 are being investigated by DEP for possible illicit discharges.” Yet the baseline conditions on page 6-4 state “In accordance with BMPs #1 and #5, DEP collects quarterly samples of bacteria water quality at the mouth of Flushing Creek in dry weather to assess whether dry weather sewage overflows occur or illicit connections to storm sewers exist. No evidence of illicit sanitary sewer connections was observed based on these data and no illicit sources were included in the baseline conditions.” Illicit discharges would seem to have sizable impacts on water quality, despite DEP’s ongoing work on the creek. Our understanding is that DEP is assuming no illicit discharge for the baseline analysis in anticipation that the current dry weather discharges are abated. We would like to know the status of this investigation and what further actions DEP is taking to manage illicit discharges.



Lack of attention to ecosystem health

As noted above in the discussion of the UAA, the LTCP seems to treat dissolved oxygen (D.O.) criteria as an afterthought. The LTCP must be improved to fully address dissolved oxygen impairment. Among other things, it should identify and quantify any other pollution sources that may contribute to D.O. impairment; unlike pathogens, it appears the LTCP does not even attempt to do this source analysis for D.O. Only then can the necessary CSO reductions -- in combination with other pollution reductions -- be determined in order to attain D.O. compliance.

Seasonal vs year round attainment

We continue to question the focus on seasonal water quality improvement over the year round attainment. Thanks to the improvements made to date in many waterbodies, more people are using these resources for not only recreation but also for educational purposes. By only aiming for seasonal attainment, we are limiting the opportunities to use the Creek as an outdoor classroom and a natural laboratory.

Green Infrastructure Targets

We strongly support maximizing the use of cost-effective green infrastructure to reduce CSOs. The LTCP, however, provides no analysis to justify the selected green infrastructure penetration rate for the CSO portion of the Flushing Creek watershed. The feasibility of green infrastructure targets -- including higher or lower than the assumed "baseline" for the watershed -- should be examined in each LTCP, based on the most current information and experience DEP has gained through the initial years of its green infrastructure program, so that both DEC and the public can weigh in on the reasonableness of DEP's proposed targets.

We also offer the following questions and recommendations concerning green infrastructure elements of the plan:

- The "baseline" considers Flushing Creek and Flushing Bay together, and differentiates them by Bowery Bay WWTP and Tallman Island WWTP service areas. This is inconsistent with the baselines considered in the rest of the plan. Considering the Flushing Creek CSO tributaries are all within the Tallman Island WWTP service area, this section reads that the GI Plan would manage only 8 percent of the impervious service area of the Flushing Creek watershed. Is that correct?
- We are aware of the difficulty in meeting the citywide target of 1.5% in 2015 as well as challenges faced by DEP in some watersheds where the geological conditions limit widespread GI installation. Now that DEP has more experience with GI implementation, does DEP still believe this is a reasonable and achievable target? If so, is there a basis for the assumption?
- Conversely, has DEP analyzed the feasibility of additional GI installation in the watershed, beyond the 14% target developed earlier in the GI program? For example, it is our understanding that DEP's GI targets were based on the potential for siting GI in the public right of way or in certain types of public facilities. Given the large amount of CSO that the LTCP predicts will remain under the "baseline" scenario, DEP must evaluate a broader set of GI opportunities as part of the LTCP, including opportunities on private property.



- To echo comments from our letter on the Public Meeting Presentation #2, it is critical to assess Green Infrastructure opportunities on private property, not just public land. For example, we would like to see further engagement with the community on green infrastructure opportunities on private land, and encourage expanding the green infrastructure grant program for smaller projects.
- In regard to evaluating GI opportunities on private property, DEP must assess both opportunities for retrofits of existing developed space (including through incentives and/or direct subsidy of capital costs, under existing City programs and potential new programs and policies, such as those in place in other cities); and opportunities to improve stormwater regulations applicable to redevelopment projects.
- DEC has previously stated that all of the LTCPs must evaluate that the potential for improvements to the city's stormwater rules to catalyze more green infrastructure installation. But the LTCPs developed to date have not done so. Specifically, in the Responsiveness Summary addressing comments on the 2012 CSO Order, DEC stated (Response 3.5) that "[a]s part of the evaluation of alternatives in LTCPs, DEP will also evaluate how well the stormwater controls are working in combined sewer areas as part of an overall review of the [DEP Stormwater] Rule." DEP must follow-through on this; and DEC must insist on it, as per the public assurances given in response to concerns about the 2012 CSO Order.
- The LTCP is silent on plans for maintenance of green infrastructure. This omission must be corrected, as it contravenes both the CSO Policy and DEC's explicit assurances made in 2012. Specifically, in the Responsiveness Summary addressing comments on the 2012 CSO Order, DEC stated (Response 2.5), in answer to the question "How does the Order ensure GI is maintained?":
 - "The Proposed Order requires that the City submit approvable Long-Term Control Plans. Per Paragraph II.C.6 of the EPA Combined Sewer Overflow (CSO) Control Policy (1994), an LTCP must include an Operational Plan which consists of a revised operations and maintenance program developed as part of the nine minimum controls to include agreed-upon long-term CSO controls. The revised operation and maintenance program should maximize removal of pollutants during and after each precipitation event. Green infrastructure that is considered to be CSO Controls will need to be included in the revised operations and maintenance program." (emphasis added)

"Affordability"

All of the LTCPs submitted to date devote many pages to the question of "financial capability" to pay for CSO improvements. The LTCPs present this analysis pursuant to EPA's "financial capability guidance" for CSOs. Under that guidance, the affordability of a given level of CSO controls can be factored in to the compliance schedule for implementing a LTCP; the guidance does not provide for adjusting the water quality standards that a LTCP must meet.

We agree with DEP that the costs to low-income residents should be of particular concern. However, it appears that DEP's analysis makes many unwarranted assumptions (or leaves unanswered questions) that call into question the validity of its conclusions that greater levels of CSO control cannot be achieved without imposing unfair cost burdens.

We urge DEC to closely scrutinize the claims made by the city in this section, and to invite the help of EPA in doing so, since EPA has more experience evaluating affordability analyses from cities around the country and would be able to help ensure that cost concerns in New York City is treated fairly in comparison to other cities. We also note that, in light



of the City's concerns about the combined impacts of spending on multiple capital investment needs and compliance obligations, it may be useful to develop an "Integrated Plan," pursuant to EPA's Integrated Planning Framework, which would help prioritize the timing of needed investments rather than seeking to lower the bar for water quality performance. (We note that DEP had indicated interest in developing an Integrated Plan, in their Oct. 2013 comments on DEC's proposed SPDES permits for the city's sewage treatment plants. We have not heard anything about this since then.)

We also note that, for all of the space in the LTCP devoted to estimating costs, only a very brief discussion of benefits follows after that section. And the benefits discussion makes no attempt to quantify the benefits and relate them to the lives of New Yorkers. DEP presents lots of numbers on how the costs of compliance will affect New Yorkers, but makes no more than a token effort at explaining the value -- economic, social, and environmental -- generated by that investment. This paints a misleading picture, framing the "financial capability" question as one of costs to be minimized, rather than valuable benefits to be gained through investment.

We offer the following specific comments on the affordability analysis:

- The LTCP takes the current rate structure as a given, rather than considering alternative rate structures that could generate more revenue without imposing unfair burdens on low-income ratepayers. As one example, a stormwater fee based on impervious area would tend to distribute burdens away from low-income residents, who typically live in multi-family buildings with a low per-household impervious footprint. Other means to limit the burden on low-income residents, while still generating additional revenue, include expanding low-income relief programs; instituting higher rates for larger, non-residential customers; or adopting more equitable and efficient rate designs (such as seasonal or tiered rates for water – which the majority of water suppliers in a nationwide survey now employ).
- The LTCPs assume that all increases in water bills are passed-through directly to most residents. In reality, since multi-family buildings are not submetered, and since much of the affordable housing stock in the city is rent-regulated, increased water and sewer rates often do not pass through fully to tenants.
- The LTCPs systematically make an erroneous comparison between the incomes of low income households in a community and the *average* water and sewer charges in that community – average charges driven by the consumption levels of all customers, not specifically low-income customers. Use of community-wide average bills may overstate the percentage of income that low income households' own water and sewer bills represent. The LTCP does not appear to present a single representation of what any cohort of low-income households actually pays in water and sewer charges.
- In light of the above points, it is improper for the LTCPs to simply assume that meeting increased revenue needs to pay for CSO improvements would result in proportionately increased water and sewer bills to low-income ratepayers.
- Some of the projected costs for other DEP programs seem vastly inflated, which calls into question the validity of many of the numbers presented and warrants closer scrutiny by DEC. For example, the LTCP asserts that



compliance with the City's new MS4 permit may cost \$2.5 billion, based on an average of a reported \$2.4 billion cost in Philadelphia and \$2.6 billion cost in Washington, DC for those cities' "stormwater" compliance. In reality, these cost figures represent those cities' CSO compliance costs, not MS4 costs, and appear wildly out of proportion with reasonably anticipated MS4 compliance costs under the City's current permit. (Further, we note that not all MS4 compliance costs are borne by DEP and, therefore, not all would affect water rates. MS4 compliance responsibilities are spread across many city agencies; DEP will coordinate but will not bear all implementation costs.)

- In the tables presenting the increased cost per household of various levels of investment, it is not clear what assumption is made about the compliance schedule across which the costs will be spread. It seems these tables may assume that all capital investments are made simultaneously, such that the cost of debt service for all of the identified capital investments would run concurrently, imposing the maximum burden on ratepayers. Any assessment of potential cost impacts should explicitly account for how affordability would vary depending on the implementation schedule.

Thank you for the opportunity to submit these comments and would welcome the opportunity to meet with you to discuss these matters further. The S. W. I. M. Coalition will continue to reach out to and educate the public on water quality issues in the City. We look forward to continuing our dialogue.

Sincerely,

Julie A. Welch, Coalition Coordinator

On Behalf of the S.W.I.M. Coalition Steering Committee:

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