SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF NEW YORK

In the Matter of the Application of	:	
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NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION, CARTER H. STRICKLAND, as Commissioner of the New York City Department of Environmental Protection, and THE CITY OF NEW YORK,	:	
	:	
Petitioners,	:	
	:	No. 400236-2014
for a Judgment Pursuant to Article 78 of the Civil Practice Law and Rules and CPLR Section 3001	:	AFFIDAVIT OF GARY E. KLINE, P.E.
against	:	
	:	
JOSEPH J. MARTENS, as Commissioners of the New York State Department of Environmental Conservation, and the NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION,	:	
	:	
Respondents.	:	

State of New York)
) ss:
County of Albany)

Gary E. Kline, being duly sworn, deposes and says:

1. I have been employed by respondent New York State Department of Environmental Conservation (collectively with respondent Joseph Martens, "DEC") since 1979. Since 2006, I have been the Section Chief of the New York City Municipal Compliance Section within DEC's Division of Water. In my current duties I oversee a group of five professionals that are responsible for DEC's monitoring of the New York City Department of Environmental Protection's municipal wastewater program, including its combined and separate sewer systems, for compliance with federal and state law.

2. I received a Bachelor of Science degree in Civil and Environmental Engineering from Clarkson University in Potsdam, N.Y., in 1979. I have been a registered New York State Professional Engineer since 1984. I have approximately 35 years of professional work experience, all of which has been involved working on environmental issues, including both groundwater and soil remediation, water quality management, environmental restoration, and the planning, design and construction of sewage treatment works.

3. This action concern the Article 78 challenge by petitioners (collectively, the "City") to DEC's December 12, 2013, determination to disapprove the City's long-term control plan to address combined sewer overflows ("CSOs") in the Alley Creek and Little Neck Bay watershed (the "Alley Creek plan").

4. I submit this affidavit in support of DEC's response to the amended verified petition and DEC's counterclaims in this action. In this affidavit, I discuss one of the bases for DEC's disapproval of the Alley Creek plan: the failure of the plan to satisfy DEC's two-step analytical framework for evaluating and selecting CSO control measures.

5. I base this affidavit on my personal knowledge from participating in DEC's analysis and decisionmaking regarding the Alley Creek plan, including discussions between DEC and the City since 2004; my professional training and general professional experience, including my understanding of certain provisions of the Clean Water Act; my review of policy and guidance documents issued by the federal Environmental Protection Agency ("EPA"), including the 1994 CSO Control Policy, R1513-R1524, and the 2001 *Guidance: Coordinating CSO Long-Term Planning with Water Quality Standards Review* ("CSO/WQS Guidance"), R1208-R1286; my personal communications with the United States Environmental Protection Agency ("EPA") regarding the requirements for developing approvable CSO long-term control

plans ("LTCPs"); my knowledge of the provisions of the 2005 and 2012 CSO administrative consent orders regarding the City's obligation to complete and implement long-term control plans; and my review of the two versions of the Alley Creek plan that the City has submitted as well as other documents and records relating to those plans and the issues they raised.

I. Background

6. Alley Creek flows through northeast Queens into Little Neck Bay, which is part of the East River.

7. A combined sewer system carries both sewage from residences and businesses and the storm water flow from rainfall and snowmelt in a single set of pipes. The City has over 400 outfalls that discharge this combined sewage, without treatment, to waterbodies during rain events or other times when the flow is too large for the system to handle. These discharge events are known as CSOs.

8. The Clean Water Act requires that each state set water quality standards for each waterbody within its borders. 33 U.S.C. § 1313(a). For the purpose of setting these standards, the Act sets as a goal that "wherever attainable," water quality that "provides for the protection and propagation of fish, shellfish, and wildlife, and provides for recreation in and on the water" would be achieved by 1983. 33 U.S.C. § 1251(a)(2). This is known as the fishable/swimmable use goal.

9. DEC last reassessed the water quality standards and classifications for the City Harbor and its associated waterbodies in 1985.

10. At that time, these City waters were severely polluted, in large part due to discharges from City sewer systems, including: (a) the dry weather flows in the sanitary sewer system which were untreated or only partially treated before being discharged to the City's

waters; (b) CSOs; and (c) illicit sanitary connections to separate storm sewers, which received no treatment before being discharged.

11. As a result, at that time most of the City's waters were too contaminated with pathogens and other pollutants to support direct contact recreation such as swimming. DEC accordingly designated a lesser use, secondary contact, for these waters. Alley Creek was one of these waters, receiving a Class I designation that did not support swimming or other direct contact recreation.

12. To address the untreated or partially treated sanitary sewer discharges, the City subsequently upgraded its wastewater treatment plants or built new ones. This resulted in significant reduction in the levels of pathogens and other contaminants in the waters, but not necessarily enough to reach full fishable/swimmable use.

13. Because CSOs were a significant cause of the remaining pollution and impairment of the waters, DEC focused on reducing the City's CSO discharges.

14. Currently, on average, the City discharges approximately 25 billion gallons per year in combined sewer overflows without treatment to the City's waters. These ongoing CSOs have detrimental impacts on the recreational uses of the near shore waters of the city and cause violations of the state water quality standards through the City harbor and related waterbodies.

15. Under the federal Clean Water Act and the state Environmental Conservation Law, DEC issues permits to the City for its CSO discharges through the State Pollution Discharge Elimination System, or SPDES.

16. EPA's CSO policy sets out a two-phase program for developing and issuing SPDES permits for CSO discharges. First, the municipality receives a permit requiring it to comply with nine minimum technology measures for CSO control. R1517, R1522. In addition,

the municipality develops a long-term control plan that identifies controls that would produce further reductions in CSO pollution. Upon DEC approval of the long-term control plan, the identified CSO controls become requirements in a new, updated permit. R1522.

II. DEC's Analytical Framework for the Selection of CSO Controls in Long-Term Control Plans

17. In reviewing long-term control plans, DEC applies a two-step analytical framework for determining whether the list of CSO controls selected in the plan is legally sufficient. First, the plan must evaluate if there are reasonable and cost-effective alternatives to reduce CSOs sufficiently to meet the fishable/swimmable use goals of the Clean Water Act wholly. Second, if there are no such alternatives, the plan must select controls that will achieve the maximum pollution reduction benefits reasonably attainable and as a result incrementally improve attainment toward the fishable/swimmable use goals of the Clean Water Act on a partial basis – seasonally, temporally and/or geographically – if possible. Such partial attainment would then constitute the "highest attainable use."

18. DEC bases this analytical framework on a reasonable interpretation of the CSO Control Policy, as adopted by federal statute, and the CSO/WQS Guidance.

19. Under the CSO Control Policy, the long-term control plans are to comply with the "objectives and requirements" of the Clean Water Act. R1514. DEC interprets this language to require that long-term control plans comply with the objectives and goals of the Clean Water Act, including the goal of meeting the fishable/swimmable use "wherever attainable" under section 101(a)(2) of the Act, 33 U.S.C. § 1251(a)(2).

20. The CSO Control Policy also states that the end result should be "cost effective CSO controls that ultimately meet appropriate health and environmental objectives." R1514.

21. These two principles set out in the CSO Control Policy – attaining full fishable/swimmable use whenever possible and use of cost-effective controls – are embodied in the first step of DEC's framework, which requires municipalities to evaluate whether there are reasonable and cost-effective alternatives to reduce CSOs sufficiently to meet the full fishable/swimmable use goal of the Clean Water Act.

22. Elsewhere, the CSO Control Policy sets out a stringent criterion for selecting the alternatives to be included in a long-term control plan: the controls must "maximize pollution reduction benefits reasonably attainable." R1519.

23. The policy also acknowledges that if the fishable/swimmable use cannot be met at all times everywhere in the waterbody, that an alternative is to attain the use on a partial basis. R1521.

24. Similarly, the CSO/WQS Guidance acknowledges the Clean Water Act goal of providing fishable/swimmable water quality wherever attainable. R1221, R1232. The guidance also acknowledges that when "primary contact recreation is not feasible, [or] is not feasible all the time," there can be alternatives to full swimmable/fishable use, such as a subcategory of recreational uses that would allow less protective uses at certain times "on a case-by-case basis." R1234.

25. These two principles from the policy and the guidance – seeking at least partial attainment of the fishable/swimmable use and maximization of pollution control – are embodied in the second step of DEC's framework, since that step requires that the municipality, if it determines that the waterbody cannot attain the full fishable/swimmable use, must select controls that, if possible, allow attainment of at least partial fishable/swimmable use at certain times or in certain locations, without limiting the controls considered to only those that are cost effective.

26. More generally, both of the steps in DEC's framework reflect a tight connection between the CSO controls selected in a long-term control plan and the possible revision of water quality standards. This is consistent with both the CSO Control Policy and the CSO/WQS Guidance.

27. For example, the CSO Control Policy states that one of the "key principles" of the policy was the "[r]eview and revision, as appropriate, of water quality standards . . . when developing CSO control plans to reflect the site-specific wet weather impacts of CSOs." R1515; *see also* R1514 (indicating an objective that "development of the CSO permittees' long-term CSO control plans are coordinated with the review and possible revision of water quality standards on CSO-impacted waters").

28. The CSO/WQS Guidance similarly seeks to coordinate CSO long-term control plans and water quality standards review. For example, the guidance states that the end result of the long-term control plan process is a plan that "contains adequate data and information to support the selection of CSO controls and identify needed revisions to the water quality standards." R1262.

29 The regulatory tool that EPA has created to evaluate the highest use that can be attained in a waterbody is the use attainability analysis.

30. EPA has acknowledged that a use attainability analysis can conclude that more stringent water quality standards can be attained. R1261 (data and analyses may support "more or less stringent standards"). That was also a basis for DEC's analytical framework requiring that municipalities evaluate whether the water quality standards for a given waterbody can be upgraded to either full fishable/swimmable use, or at least partial fishable/swimmable use. R1262-R1263 ("the state may determine that the recreational uses are not fully attained all the

time, and may refine the recreational uses to reflect the maximum level of control from a well-designed and operated control program that does not cause substantial and widespread economic and social impact").

31. In a use attainability analysis, one of the grounds for determining that a use is not attainable is that the use would require controls beyond those otherwise required under the Clean Water Act and such controls would cause "substantial and widespread economic and social impact." 40 C.F.R. § 131.10(g)(6).

32. In February 2014, EPA sent a letter to DEC, with a copy to me, regarding long-term control plans for CSOs and their relationship to review and revision of water quality standards. A true and complete copy of that letter is attached as Exhibit A to this affidavit.

33. In that official agency statement, EPA "reiterate[d]" the agency's position regarding the basis for designing long-term control plans. Exhibit A at 1. EPA agreed that DEC's two-step analytical framework for selecting CSO controls to be included in such plans correctly implemented the CSO Control Policy:

> EPA supports NYSDEC's position that, wherever possible, the LTCP should be developed to comply with the "fishable/swimmable goals" of the Clean Water Act (CWA), unless the requisite use attainability analysis (UAA) is conducted and adequately demonstrates that this goal is not attainable in which case the LTCP must then be developed to attain the highest attainable use. To this end, as part of the LTCP development process, NYSDEC and NYCDEP should work together to determine whether the "fishable/swimmable" goals" of the CWA can be attained, and when the analyses show that the fishable/swimmable goal is not fully attainable, the highest attainable use and associated [water quality] criteria should be identified.

Exhibit A at 1.

III. <u>DEC's Review of the Alley Creek Plans for Compliance with the DEC Framework</u>

34. The City submitted its first Alley Creek plan on July 2, 2013. R0376-R0594.

35. After receiving DEC's September 12, 2013 comments on the first Alley Creek plan, the City submitted its second, and final, Alley Creek plan on November 12, 2013. R0005-R0262.

36. On December 12, 2013, DEC made a determination to disapprove the City's final Alley Creek plan. R0001-R0004.

37. According to the analyses presented in the final Alley Creek plan, Little Neck Bay meets the Class SB water quality standards, which are consistent with the fishable/swimmable use goals of the Clean Water Act, in all areas of the bay except for a local beach area that is likely being impacted by leaking septic systems, not CSOs.

38. Alley Creek, however, does not meet – and in the City's modeling is not projected to meet – water quality standards which are consistent with the fishable/swimmable (primary contact) use goals of the Clean Water Act. Alley Creek only meets the Class I standards, which do not allow use beyond secondary contact such as boating.

39. I reviewed the final Alley Creek plan under DEC's two-step analytical framework described above. In addition to reviewing the City's conclusions regarding selection of CSO controls, I looked at the final Alley Creek plan to see if it provided sufficient supporting data and analysis to establish that when the recreational uses in and on the water are not fully attained all the time, the recreational uses may reflect the maximum level of control from a well designed and operated CSO control program that does not cause substantial and widespread economic hardship and social impact.

40. Based on my analysis and others' analysis, DEC concluded that the final Alley Creek plan failed to meet the requirements of the analytical framework under the CSO Control Policy.

41. The fundamental problem was that the plan's analysis took a binary approach that effectively ignored the second step of the framework. The plan evaluated whether Alley Creek could meet the Class SB standards, which correspond to the fishable/swimmable use goal of the Clean Water Act, 100 percent of the time. The plan determined that it was not possible to do so, and then concluded that the only other option was to select controls that met the current Class I standard. Thus, the plan never evaluated whether there were reasonable and effective CSO controls that would allow the water quality to go beyond the Class I standard, and meet the fishable/swimmable use, at least part of the time, or at least in certain parts of the creek.

42. As a result, the City's plan identified no additional control measures for CSOs into Alley Creek beyond those that the City had agreed to elsewhere or was otherwise bound to undertake, resulting in no further progress towards the fishable/swimmable goal.

43. The City was aware of DEC's two-step framework for selecting CSO control measures for a long-term control plan at the time it submitted the two versions of the Alley Creek plan. I was present at a number of meetings where DEC and the City discussed that framework. In addition, the City noted its disagreement with the framework, and therefore its awareness of that framework, in both of the versions of the Alley Creek plan. R0249, R0582.

44. In addition, in a March 8, 2012 administrative consent order, the City agreed to perform its own use attainability analysis, if necessary, in each of its long-term control plans. R1051, R1088.

45. As noted above, in a use attainability analysis, one of the grounds for determining that a use is not attainable is that the use would require controls beyond those otherwise required under the Clean Water Act and such controls would cause "substantial and widespread economic and social impact." 40 C.F.R. § 131.10(g)(6).

46. I reviewed the final Alley Creek plan to see if the City provided any analysis or reached any conclusions regarding whether CSO controls would cause such substantial and widespread impact, but did not find any.

/s/ Gary E. Kline, P.E
Gary E. Kline

Sworn to before me
this 13th day of June, 2014

/s/ Philip J. Lodico
NOTARY PUBLIC

EXHIBIT A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

FEB 14 2014

Mr. James Tierney, Assistant Commissioner
Water and Watersheds
New York State Department of Environmental Conservation
625 Broadway, 14th Floor
Albany, New York 12233-3500

Re: **New York City CSO Long Term Control Plans and Water Quality Standards**

Dear Mr. Tierney:

As you know, the U.S. Environmental Protection Agency (EPA) is committed to improving water quality in communities impacted by combined sewer overflows (CSOs) and strongly supports the New York State Department of Environmental Conservation (NYSDEC) in its efforts to ensure that the New York City Department of Environmental Protection (NYCDEP) is taking necessary steps to implement the EPA's *1994 CSO Control Policy* to meet appropriate water quality standards. Specifically, we want to reiterate the U.S. Environmental Protection Agency's (EPA) position regarding the applicable water quality standards, including the designated uses and criteria to protect those uses that should be used as the basis for long term control plan (LTCP) design.

The 1994 CSO Control Policy states that water quality standards authorities should work to ensure that the development of the CSO permittees' LTCPs are coordinated with the review and possible revision of water quality standards on CSO-impacted waters. Further, permittees with CSOs are responsible for developing and implementing LTCPs that will ultimately result in compliance with the requirements of the CWA. EPA supports NYSDEC's position that, wherever possible, the LTCP should be developed to comply with the "fishable/swimmable goals" of the Clean Water Act (CWA), unless the requisite use attainability analysis (UAA) is conducted and adequately demonstrates that this goal is not attainable in which case the LTCP must then be developed to attain the highest attainable use. To this end, as part of the LTCP development process, NYSDEC and NYCDEP should work together to determine whether the "fishable/swimmable goals" of the CWA can be attained, and when the analyses show that the fishable/swimmable goal is not fully attainable, the highest attainable use and associated criteria should be identified. We envision that the resultant highest attainable use and level of protection would be established as the applicable standards by the State for each such water body. In these cases, a UAA would need to be completed to demonstrate that attaining the fishable and/or swimmable designated uses are not feasible based upon one or more of the six factors in 40 CFR 131.10(g) and to determine the highest attainable use.

EPA most recently articulated this position in its September 4, 2013 proposed rule, "Water Quality Standards Regulatory Clarifications." In summary, Section 101(a)(2) of the CWA

establishes the national goal that "wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and provides for recreation in and on the water" be achieved by July 1, 1983. The EPA's longstanding interpretation is that the uses specified in section 101(a)(2) of the Act are presumed attainable unless a state affirmatively demonstrates through a UAA that 101(a)(2) uses are not attainable as provided by one of six regulatory factors in section 131.10(g). Further, if a UAA indicates that the current use is unattainable, the state will need to identify and assign the "highest attainable use," which should reflect the factors and constraints on the attainability of a use that were evaluated as part of the UAA process. EPA's regulations at 40 C.F.R. § 131.10(g) describe the factors used to support removal of a designated use or sub-categorization of use. The regulatory factors and the data analysis used to evaluate removing a use should also be used to determine the highest attainable use. Therefore, a UAA that effectively considers what is attainable in the future should guide the determination of the highest attainable use. EPA expects that a UAA will be sufficiently detailed both to fully inform public review of the revision and to lay out the data, analysis and logic that support the resulting highest attainable use. When adopting the highest attainable use, states must also adopt criteria to protect that use.

If you have any questions, please call me at (212) 637-3724.

Sincerely,

for Joan Leary Matthews, Director
Clean Water Division

CC: Gary Kline, NYSDEC