

## Appendix A

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### **Gowanus Canal Administrative Order on Consent Agreements (KeySpan and NYCDEP)**

**(Electronic Only)**

NEW YORK STATE DEPARTMENT OF  
ENVIRONMENTAL CONSERVATION

In the Matter of the  
Development and Implementation  
of a Remedial Investigation Program for  
the Gowanus Canal in Brooklyn, NY  
under Article 27, Title 13  
of the Environmental Conservation Law  
by:

KeySpan Energy Delivery New York,  
  
Respondent.

**ORDER ON CONSENT  
and  
ADMINISTRATIVE  
SETTLEMENT**

Index # A2-0523-0705

**WHEREAS,**

1. A. The New York State Department of Environmental Conservation (“Department”) is responsible for inactive hazardous waste disposal site investigation and remedial programs pursuant to Article 27, Title 13 of the Environmental Conservation Law (“ECL”) and may issue orders consistent with the authority granted to the Commissioner by such statute.

B. The Department is responsible for carrying out the policy of the State of New York to conserve, improve and protect its natural resources and environment and control water, land, and air pollution consistent with the authority granted to the Department and the Commissioner by Article 1, Title 3 of the ECL.

C. This Order on Consent and Administrative Settlement (“Settlement Agreement”) is issued pursuant to the Department's authority under, *inter alia*, ECL Article 27, Title 13, ECL Article 71, Title 27, and ECL § 3-0301, and resolves Respondent’s liability to the State under the “Comprehensive Environmental Response, Compensation, and Liability Act of 1980”, as amended (“CERCLA”), 42 U.S.C. § 9601 *et seq.*, to the extent set forth herein. It is the intent of the Department and KeySpan Energy Delivery New York (“KeySpan” or the “Respondent”) that this Settlement Agreement constitutes an administrative settlement within the meaning of CERCLA § 113(f)(2), 113(f)(3)(B), 42 U.S.C. § 9613(f)(2), 9613(f)(3)(B) and is a settlement under, *inter alia*, ECL Article 27, Title 13, ECL Article 71, Title 27, and ECL 3 0301. Accordingly, pursuant to CERCLA § (f)(3)(B), 42 U.S.C. § 9613(f)(3)(B), Respondent may seek contribution from persons not parties to this Settlement Agreement to the extent set forth in Subparagraph XII.I. Such efforts by Respondent will be supported by the Department in such manner as the Department reasonably deems appropriate.

2. KeySpan Energy Delivery New York (“KeySpan” or the “Respondent”) is a New York corporation with offices at One MetroTech Center, Brooklyn, New York 11201.

3. A. Respondent formerly owned and/or operated three manufactured gas plants (“MGP”) on lands in the immediate vicinity of the Gowanus Canal, in Brooklyn, New York (“Remedial Investigation Work Site” or “Site”) at which, *inter alia*, coal tar and associated hazardous substances (“MGP Wastes”) have come to be located at each of the sites and potentially in the sediments of the Gowanus Canal. These MGPs, known as Citizens Gas Works, Fulton Municipal Works and Metropolitan (collectively referred to herein as the “MGP Sites”), are more particularly described in Exhibit “A” attached hereto. The Department and KeySpan anticipate that these MGP Sites are, or in the near future will be, the subject of consent orders with the Department for necessary and appropriate remedial response actions.

B. The Department and KeySpan recognize that the MGP Sites were historical industrial operations located along the Gowanus Canal and that the Gowanus Canal was historically the location of numerous, intensive industrial and commercial activities. KeySpan and the Department acknowledge, therefore, that MGP Wastes and residues from many other former manufacturing and other operational sources are expected to be found in the Gowanus Canal sediments.

C. The Department previously received a report entitled, “Draft Historical Study of the Gowanus Canal” dated February 24, 2003, prepared by GEI Consultants, Inc., which was a study of the industrial and commercial development of the area in the vicinity of the Gowanus Canal. The Study identified current or former industrial or commercial operations that may have impacted the waters or sediments contained within the Canal.

D. The Department and Respondent acknowledge that Respondent is regulated by the Public Service Commission (“PSC”) of the State of New York. Costs incurred for site investigation and remediation activities must be reviewed and approved by the PSC in order to be recoverable through rates. The Department will support Respondent’s position that any necessary and appropriate response actions by Respondent were required to address Respondent’s liability for such activities.

4. A. The Department and Respondent recognize that the MGP Sites have the potential to release MGP Wastes to the Gowanus Canal and elsewhere. Respondent is currently investigating, and/or plans to investigate in the future, the environmental conditions at the MGP Sites to fully characterize the MGP Sites and any migration of MGP Wastes off-site to the Gowanus Canal and elsewhere. Pursuant to this Settlement Agreement, Respondent agrees to study the potential for the release of these MGP Wastes to the Gowanus Canal and to delineate their extent in the Canal including where they are commingled and/or intermingled with non-MGP Wastes. Respondent’s study of Gowanus Canal sediments will be focused on comparing conditions at the MGP Sites with the Gowanus Canal sediments and assessing the similarities and differences. Respondent agrees to identify non-MGP sources of contaminants identified in Gowanus Canal sediments. Exhibit “A-1” of this Settlement Agreement is a map showing the location of the MGP Sites and the Gowanus Canal.

B. The Department and KeySpan recognize that implementation of this Settlement Agreement, and Consent Orders for the MGP Sites, will expedite the cleanup of the MGP Sites and the Gowanus Canal sediments. The Department and KeySpan further agree that the settlement set forth herein will avoid potentially prolonged and complicated litigation, and that this Settlement Agreement is mutually acceptable, fair, reasonable, and in the public interest.

C. The Gowanus Canal and the MGP Sites are not currently listed in the *Registry of Inactive Hazardous Waste Disposal Sites* in New York State.

5. A. The Department alleges that Respondent is a “covered person” as defined in CERCLA § 107(a), 42 U.S.C. § 9607(a) and that Respondent is liable to the State of New York under CERCLA § 107(a) for the response actions related to investigation work activities required by this Settlement Agreement.

B. Respondent consents to the Department’s issuance of this Settlement Agreement without: (i) an admission or finding of liability, fault, wrongdoing, or violation of any law, regulation, permit, order, requirement, or standard of care of any kind whatsoever; (ii) an acknowledgment that there has been a release or threatened release of hazardous waste; or (iii) an acknowledgment that the release or threatened release of hazardous waste at or from the MGP Sites constitutes a significant threat to public health or the environment.

6. Solely with regard to the matters set forth below, Respondent hereby waives any right to a hearing as may be provided by law, consents to the issuance and entry of this Settlement Agreement, and agrees to be bound by its terms. Respondent consents to and agrees not to contest the authority or jurisdiction of the Department to issue or enforce this Settlement Agreement, and agrees not to contest the validity of this Settlement Agreement or its terms or the validity of data submitted to the Department by Respondent pursuant to this Settlement Agreement.

**NOW**, having considered this matter and being duly advised, **IT IS ORDERED THAT:**

I. Development, Performance, and Reporting of Work Plans

A. Work Plans

All activities at the Site that comprise any element of an Inactive Hazardous Waste Disposal Site Investigation Program shall be conducted pursuant to one or more Department-approved work plans (“Work Plan” or “Work Plans”) and this Settlement Agreement, and all activities shall be consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. Part 300, as required under CERCLA, 42 U.S.C. § 9600 *et seq.*. The Work Plan(s) under this Settlement Agreement shall investigate sediment contamination in the Gowanus Canal resulting from discharge or migration from the MGP Sites and be developed and implemented in accordance with 6 NYCRR Part 375, “DER-10,

Technical Guidance for Site Investigation and Remediation,” and/or Exhibits E, F and G. All Department-approved Work Plans shall be incorporated into and become enforceable parts of this Settlement Agreement and shall be attached as Exhibit “B.” Upon approval of a Work Plan by the Department, Respondent shall implement such Work Plan in accordance with the schedule contained in such Work Plan. Nothing in this Subparagraph shall mandate that any particular Work Plan be submitted.

Each Work Plan submitted shall use one of the following captions on the cover page:

1. “Site Characterization Work Plan” (“SC Work Plan”): a Work Plan whose objective is to identify the presence of any hazardous waste disposed of at the Site. Such Work Plan shall be developed in accordance with Exhibit “E”;
2. “Remedial Investigation Work Plan” (“RI Work Plan”): a Work Plan whose objective is to perform a Remedial Investigation. Such Work Plan shall be developed and implemented in accordance with Exhibit “F”;
3. “IRM Work Plan”: a Work Plan whose objective is to provide for an Interim Remedial Measure. Such Work Plan shall be developed in accordance with Exhibit “G”;

B. Submission/Implementation of Work Plans

1. (a) Respondent’s proposed “Gowanus Canal Sediment Sampling Work Plan” has already been submitted to the Department. It has been reviewed by the Department and approved subject to Respondent’s acceptance of certain conditions contained in the Department’s approval letter. Respondent shall submit to the Department its acceptance of these conditions within twenty (20) days after the effective date of this Settlement Agreement. This work plan shall then be renamed “The Gowanus Canal Sediment Remedial Investigation Work Plan”.

(b) The Department may request that Respondent submit additional or supplemental Work Plans. Within thirty (30) Days after the Department’s written request, Respondent shall advise the Department in writing whether it will submit and implement the requested additional or supplemental Work Plan or whether it elects to terminate this Settlement Agreement pursuant to Paragraph XI. If Respondent elects to submit and implement such Work Plan, Respondent shall submit the requested Work Plan within sixty (60) Days after such election. If Respondent elects to terminate this Settlement Agreement or fails to make a timely election, this Settlement Agreement shall terminate pursuant to Paragraph XI.

(c) Respondent may, at Respondent’s option, propose one or more additional or supplemental Work Plans (including one or more IRM Work Plans) at any time, which the Department shall review for appropriateness and technical sufficiency.

(d) Any request made by the Department under Subparagraph I.B.1.(b) shall be subject to dispute resolution pursuant to Paragraph X.

2. A Professional Engineer must stamp and sign all Work Plans other than a Work Plan for an RI or an SC.

3. During all field activities, Respondent shall have on-site a representative who is qualified to supervise the activities undertaken. Such representative may be an employee or a consultant retained by Respondent to perform such supervision.

C. Modifications to Work Plans

The Department shall notify Respondent in writing if the Department determines that any element of a Department-approved Work Plan needs to be modified in order to achieve the objectives of the Work Plan as set forth in Subparagraph II.A or to ensure that the Remedial Investigation Program otherwise protects human health and the environment. Upon receipt of such notification, Respondent shall, subject to Respondent's right to invoke dispute resolution pursuant to Paragraph X or to terminate pursuant to Paragraph XI, submit a Work Plan for such requested work to the Department within sixty (60) Days after the date of the Department's written notice pursuant to this Subparagraph.

D. Submission of Final Reports and Annual Reports

1. In accordance with the schedule contained in a Work Plan, Respondent shall submit a final report that includes the caption of that Work Plan on the cover page and a certification that all requirements of the Work Plan have been complied with and all activities have been performed in full accordance with such Work Plan. Such certification shall be by the person with primary responsibility for the day to day performance of the activities under this Settlement Agreement and, except for RI and SC final reports, shall be by a Professional Engineer.

2. Any final report that includes construction activities shall include "as built" drawings showing any changes made to the remedial design or the IRM.

E. Review of Submittals other than Progress Reports and Health and Safety Plans

1. The Department shall make a good faith effort to review and respond in writing to each submittal Respondent makes pursuant to this Settlement Agreement within sixty (60) Days. The Department's response shall include an approval or disapproval of the submittal, in whole or in part. All Department-approved submittals shall be incorporated into and become an enforceable part of this Settlement Agreement.

2. If the Department disapproves a submittal, it shall specify the reasons for its disapproval. Within thirty (30) Days after the date of the Department's written notice that Respondent's

submittal has been disapproved, Respondent shall elect, in writing, to either (i) modify the submittal to address the Department's comments, or (ii) invoke dispute resolution pursuant to Paragraph X. If Respondent elects to modify the submittal, Respondent shall, within thirty (30) Days after such election, make a revised submittal that addresses all of the Department's stated reasons for disapproving the first submittal. In the event that Respondent's revised submittal is disapproved, the Department shall set forth its reasons for such disapproval in writing and Respondent shall be in violation of this Settlement Agreement unless it invokes dispute resolution pursuant to Paragraph X and its position prevails. Failure to make an election or failure to comply with the election is a violation of this Settlement Agreement.

3. Within thirty (30) Days after the Department's approval of a final report, Respondent shall submit such final report, as well as all data gathered and drawings and submittals made pursuant to such Work Plan, in an electronic format acceptable to the Department. If any document cannot be converted into electronic format, Respondent shall submit such document in an alternative format acceptable to the Department.

#### F. National Contingency Plan

This Settlement Agreement is, to the greatest extent possible, consistent with and complies with CERCLA, 42 U.S.C. § 9601 *et. seq.*, and the NCP, 40 C.F.R. Section 300.1, *et. seq.* All activities undertaken by KeySpan pursuant to this Settlement Agreement shall be performed in accordance with the requirements of all applicable federal and state laws and regulations. The investigation activities conducted under this Settlement Agreement, if approved by the Department, shall be considered consistent with the NCP.

#### II. Progress Reports

Respondent shall submit written progress reports to the parties identified in Subparagraph IX.A.1 by the 10<sup>th</sup> Day of each month commencing with the month subsequent to the approval of the first Work Plan and ending with the Termination Date, unless a different frequency is set forth in a Work Plan. Such reports shall, at a minimum, include: all actions taken pursuant to this Settlement Agreement during the reporting period and those anticipated for the upcoming reporting period; all approved modifications to work plans and/or schedules; all results of sampling and tests and all other data received or generated by or on behalf of Respondent in connection with the investigation activities, during the reporting period, including quality assurance/quality control information; and information regarding percentage of completion, unresolved delays encountered or anticipated that may affect the future schedule, efforts made to mitigate such delays, and information regarding activities undertaken in support of the Citizen Participation Plan during the reporting period and those anticipated for the upcoming reporting period.

#### III. Penalties

A. 1. Respondent's failure to comply with any term of this Settlement Agreement constitutes a violation of this Settlement Agreement, the ECL, and 6 NYCRR Part 375. Nothing herein

abridges Respondent's right to contest any allegation that it has failed to comply with this Settlement Agreement.

2. Payment of any penalties shall not in any way alter Respondent's obligations under this Settlement Agreement.

B. 1. Respondent shall not suffer any penalty or be subject to any proceeding or action in the event it cannot comply with any requirement of this Settlement Agreement as a result of any event arising from causes beyond the reasonable control of Respondent, of any entity controlled by Respondent, and of Respondent's contractors, that delays or prevents the performance of any obligation under this Settlement Agreement despite Respondent's best efforts to fulfill the obligation ("Force Majeure Event"). The requirement that Respondent exercise best efforts to fulfill the obligation includes using best efforts to anticipate the potential Force Majeure Event, best efforts to address any such event as it is occurring, and best efforts following the Force Majeure Event to minimize delay to the greatest extent possible. "Force Majeure" does not include Respondent's economic inability to comply with any obligation, the failure of Respondent to make complete and timely application for any required approval or permit, and non-attainment of the goals, standards, and requirements of this Settlement Agreement.

2. Respondent shall notify the Department in writing within seven (7) Days after it obtains knowledge of any Force Majeure Event. Respondent shall include in such notice the measures taken and to be taken to prevent or minimize any delays and shall request an appropriate extension or modification of this Settlement Agreement. Failure to give such notice within such seven (7) Day period constitutes a waiver of any claim that a delay is not subject to penalties. Respondent shall be deemed to know of any circumstance which it, any entity controlled by it, or its contractors knew or should have known.

3. Respondent shall have the burden of proving by a preponderance of the evidence that (i) the delay or anticipated delay has been or will be caused by a Force Majeure Event; (ii) the duration of the delay or the extension sought warranted under the circumstances; (iii) best efforts were exercised to avoid and mitigate the effects of the delay; and (iv) Respondent complied with the requirements of Subparagraph III.B.2 regarding timely notification.

4. If the Department agrees that the delay or anticipated delay is attributable to a Force Majeure Event, the time for performance of the obligations that are affected by the Force Majeure Event shall be extended for such time as is reasonably necessary to complete those obligations.

5. If the Department rejects Respondent's assertion that an event provides a defense to non-compliance with this Settlement Agreement pursuant to Subparagraph III.B, Respondent shall be in violation of this Settlement Agreement unless it invokes dispute resolution pursuant to Paragraph X and Respondent's position prevails.

#### IV. Entry upon Remedial Investigation Work Site

A. Respondent hereby consents, upon reasonable notice under the circumstances presented, to entry upon the Site (or areas in the vicinity of the Site which may be under the control of Respondent) by any duly designated officer or employee of the Department or any State agency having jurisdiction with respect to matters addressed pursuant to this Settlement Agreement, and by any agent, consultant, contractor, or other person so authorized by the Commissioner, all of whom shall abide by the health and safety rules in effect for the Site, for inspecting, sampling, copying records related to the contamination at the Site, testing, and any other activities necessary to ensure Respondent's compliance with this Settlement Agreement. Upon request, Respondent shall (i) provide the Department with suitable office space at or near the Site, including access to a telephone, to the extent available, and (ii) permit the Department full access to all non-privileged records relating to matters addressed by this Settlement Agreement. Raw data is not considered privileged and that portion of any privileged document containing raw data must be provided to the Department. In the event Respondent is unable to obtain any authorization from third-party property owners necessary to perform its obligations under this Settlement Agreement, the Department may, consistent with its legal authority, assist in obtaining such authorizations.

B. The Department shall have the right to take its own samples and scientific measurements and the Department and Respondent shall each have the right to obtain split samples, duplicate samples, or both, of all substances and materials sampled. The Department shall make the results of any such sampling and scientific measurements available to Respondent.

#### V. Payment of State Costs

A. Within forty-five (45) Days after the effective date of this Settlement Agreement, Respondent shall pay to the Department the sum of \$ 0.00, which shall represent reimbursement for State Costs as set forth on the cost summary attached as Exhibit "C." Respondent acknowledges that all past State Costs are not itemized on the cost summary and that additional charges may be billed at a later date for State Costs incurred prior to the effective date of this Settlement Agreement.

B. Within forty-five (45) Days after receipt of an itemized invoice from the Department, Respondent shall pay to the Department a sum of money which shall represent reimbursement for State Costs, other than those identified in Subparagraph V.A, for work performed at or in connection with the investigation activities through and including the Termination Date.

C. Personal service costs shall be documented by reports of Direct Personal Service, which shall identify the employee name, title, biweekly salary, and time spent (in hours) on the project during the billing period, as identified by an assigned time and activity code. Approved agency fringe benefit and indirect cost rates shall be applied. Non-personal service costs shall be summarized by category of expense (*e.g.*, supplies, materials, travel, contractual) and shall be documented by expenditure reports. The Department shall not be required to provide any other documentation of costs, provided however, that the Department's records shall be available consistent with, and in accordance with, Article 6 of the Public Officers Law.

D. Such invoice shall be sent to Respondent at the following address:

Lawrence Liebs  
KeySpan Corporation  
One MetroTech Center  
Brooklyn, New York 11201

E. Each such payment shall be made payable to the Department of Environmental Conservation and shall be sent to:

Bureau of Program Management  
Division of Environmental Remediation  
New York State Department of Environmental Conservation  
625 Broadway  
Albany, New York 12233-7012.

F. Each party shall provide written notification to the other within ninety (90) Days of any change in the foregoing addresses.

G. Respondent may contest, in writing, invoiced costs under Subparagraph V.B if it believes that (i) the cost documentation contains clerical, mathematical, or accounting errors; (ii) the costs are not related to the State's activities with respect to the Remedial Investigation Program; or (iii) the Department is not otherwise legally entitled to such costs. If Respondent objects to an invoiced cost, Respondent shall pay all costs not objected to within the time frame set forth in Subparagraph V.B and shall, within thirty (30) Days after its receipt of an invoice, identify, in writing, all costs objected to and the basis of the objection. This objection shall be filed with the BPM Director. The BPM Director or the BPM Director's designee shall have the authority to relieve Respondent of the obligation to pay invalid costs. Within forty-five (45) Days after the date of the Department's determination of the objection, Respondent shall either pay to the Department the amount which the BPM Director or the BPM Director's designee determines Respondent is obligated to pay or commence an action or proceeding seeking appropriate judicial relief.

H. If any negotiable instrument submitted to the Department pursuant to this Settlement Agreement is not honored when presented for payment, Respondent shall be in violation of this Settlement Agreement, provided that (i) the Department gives Respondent written notice of same, and (ii) the Department does not receive a certified check or bank check in the amount of the uncollected funds within fourteen (14) Days after the date of the Department's written notification.

## VI. Reservation of Rights

A. Nothing contained in this Settlement Agreement shall be construed as barring, diminishing, adjudicating, or in any way affecting any of the Department's rights or authorities, including, but not limited to, the right to require performance of further investigations and/or response action(s), to recover natural

resource damages, and/or to exercise any summary abatement powers with respect to any person, including Respondent.

B. Except as otherwise provided in this Settlement Agreement, Respondent specifically reserves all rights and defenses under applicable law respecting any Departmental assertion of remedial liability and/or natural resource damages against Respondent, and further reserves all rights respecting the enforcement of this Settlement Agreement, including the rights to notice, to be heard, to appeal, and to any other due process. The existence of this Settlement Agreement or Respondent's compliance with it shall not be construed as an admission of liability, fault, wrongdoing, or breach of standard of care by Respondent, and shall not give rise to any presumption of law or finding of fact, or create any rights, or grant any cause of action, which shall inure to the benefit of any third party. Further, Respondent reserves such rights as it may have to seek and obtain contribution, indemnification, and/or any other form of recovery from its insurers and from other potentially responsible parties or their insurers for past or future response and/or cleanup costs or such other costs or damages arising from the contamination at the site as may be provided by law, including but not limited to rights of contribution under section CERCLA § 113(f)(3)(B), 42 U.S.C. § 9613(f)(3)(B).

#### VII. Indemnification

Respondent shall indemnify and hold the Department, the State of New York, and their representatives and employees harmless for all third-party claims, suits, actions, damages, and costs of every name and description arising out of or resulting from the fulfillment or attempted fulfillment of this Settlement Agreement by Respondent and/or any of Respondent's directors, officers, employees, servants, agents, successors, and assigns except for liability arising from (i) vehicular accidents occurring during travel to or from the Site; or (ii) willful, wanton, or malicious acts or omissions, and acts or omissions constituting gross negligence or criminal behavior by the Department, the State of New York, and/or their representatives and employees during the course of any activities conducted pursuant to this Settlement Agreement. The Department shall provide Respondent with written notice no less than thirty (30) Days prior to commencing a lawsuit seeking indemnification pursuant to this Paragraph.

#### VIII. Public Notice

A. Within thirty (30) Days after the effective date of this Settlement Agreement, Respondent shall cause to be filed a Department-approved Notice of Settlement, which Notice shall be substantially similar to the Notice of Settlement attached to this Settlement Agreement as Exhibit "D," with the recording officer of the county wherein the MGP Sites and the Gowanus Canal are located to give all parties who may acquire any interest in the MGP Sites and/or the Gowanus Canal notice of this Settlement Agreement. Within sixty (60) Days of such filing, Respondent shall also provide the Department with a copy of such instrument certified by the recording officer to be a true and faithful copy.

B. If Respondent proposes to convey the whole or any part of Respondent's ownership interest in the MGP Sites, or becomes aware of such conveyance, Respondent shall, not fewer than forty-five (45) Days before the date of conveyance, or within forty-five (45) Days after becoming aware of such conveyance, notify the Department in writing of the identity of the transferee and of the nature and proposed

or actual date of the conveyance, and shall notify the transferee in writing, with a copy to the Department, of the applicability of this Settlement Agreement. However, such obligation shall not extend to a conveyance by means of a corporate reorganization or merger or the granting of any rights under any mortgage, deed, trust, assignment, judgment, lien, pledge, security agreement, lease, or any other right accruing to a person not affiliated with Respondent to secure the repayment of money or the performance of a duty or obligation.

IX. Communications

A. All written communications required by this Settlement Agreement shall be transmitted by United States Postal Service, by private courier service, or hand delivered as follows:

1. Communication from Respondent shall be sent to:

Robert Schick  
Division of Environmental Remediation  
New York State Department of Environmental Conservation  
625 Broadway  
Albany, New York 12233  
Note: four copies (one unbound) of work plans are required to be sent.

with copies to:

Gary Litwin  
Bureau of Environmental Exposure Investigation  
New York State Department of Health  
Flanigan Square  
547 River Street  
Troy, New York 12180-2216

Thomas Kunkel, Director  
Region 2  
NYS Dept of Environmental Conservation  
One Hunter's Point Plaza  
47-40 21<sup>st</sup> Street  
Long Island City, NY 11101-5407

Larry S. Eckhaus, Esq.  
Division of Environmental Enforcement  
Superfund & Brownfields Restoration Bureau  
NYS Dept of Environmental Conservation  
625 Broadway, 14th Floor  
Albany, NY 12233-5500

2. Communication from the Department to Respondent shall be sent to:

Lawrence Liebs  
KeySpan Corporation  
One MetroTech Center  
Brooklyn, New York 11201

with copies to:

Donna Riccobono, Esq.  
KeySpan Corporation  
One MetroTech Center  
Brooklyn, New York 11201

B. The Department and Respondent reserve the right to designate additional or different addressees for communication upon written notice to the other.

C. Each party shall notify the other within ninety (90) Days after any change in the addresses in this Paragraph IX or in Paragraph V.

X. Dispute Resolution

A. If Respondent disagrees with the Department's notice under (i) Subparagraph I.B requesting additional or supplemental Work Plans; (ii) Subparagraph I.C requesting modification of a Department-approved Work Plan; (iii) Subparagraph I.E disapproving a submittal, a proposed Work Plan, or a final report; (iv) Subparagraph I. G. finding that Respondent materially failed to comply with the Settlement Agreement; (v) Subparagraph III.B rejecting Respondent's assertion of a Force Majeure Event; or (vi) Subparagraph XII.G.2.iii requesting modification of a time frame, Respondent may, within thirty (30) Days of its receipt of such notice, make a written request for informal negotiations with the Department in an effort to resolve the dispute. A copy of such request shall be sent by Respondent to the appropriate Remedial Bureau Chief in the Department's Central Office. The Department and Respondent shall consult together in good faith and exercise best efforts to resolve any differences or disputes without resort to the procedures described in Subparagraph X.B. The period for informal negotiations shall not exceed thirty (30) Days from the date of the Department's initial response to the Respondent's request for informal negotiations. If the parties cannot resolve a dispute by informal negotiations during this period, the Department's position shall be considered binding unless Respondent notifies the Department in writing within thirty (30) Days after the conclusion of the thirty (30) Day period for informal negotiations that it invokes the dispute resolution provisions provided under Subparagraph X.B.

B. 1. Respondent shall file with the OH&M a request for formal dispute resolution and a written statement of the issues in dispute, the relevant facts upon which the dispute is based, factual data, analysis, or opinions supporting its position, and all supporting documentation upon which Respondent relies

(hereinafter called the “Statement of Position”). A copy of such request and written statement shall be provided contemporaneously to the Director and to the parties listed under Subparagraph IX.A.1.

2. The Department shall serve its Statement of Position no later than twenty (20) Days after receipt of Respondent’s Statement of Position.

3. Respondent shall have the burden of proving by substantial evidence that the Department’s position does not have a rational basis and should not prevail. The OH&M can conduct meetings, in person or via telephone conferences, and request additional information from either party if such activities will facilitate a resolution of the issues.

4. The OH&M shall prepare and submit a report and recommendation to the Director. The Director shall issue a final decision in a timely manner. The final decision shall constitute a final agency action and Respondent shall have the right to seek judicial review of the decision pursuant to Article 78 of the Civil Practice Law and Rules provided that Respondent notifies the Department within thirty (30) Days after receipt of a copy of the final decision of its intent to commence an Article 78 proceeding and commences such proceeding within sixty (60) Days after receipt of a copy of the Director’s final decision. Respondent shall be in violation of this Settlement Agreement if it fails to comply with the final decision resolving this dispute within forty-five (45) Days after the date of such final decision, or such other time period as may be provided in the final decision, unless it seeks judicial review of such decision within the sixty (60) Day period provided. In the event that Respondent seeks judicial review, Respondent shall be in violation of this Settlement Agreement if it fails to comply with the final Court Order or any settlement within thirty (30) Days after the effective date of such Order or settlement, unless otherwise directed by the Court. For purposes of this Subparagraph, a Court Order or settlement shall not be final until the time to perfect an appeal of same has expired.

5. The invocation of dispute resolution shall not extend, postpone, or modify Respondent’s obligations under this Settlement Agreement with respect to any item not in dispute unless or until the Department agrees or a Court orders otherwise. Except as otherwise provided in this Settlement Agreement, the invocation of the procedures set forth in this Paragraph X shall constitute an election of remedies and such election shall constitute a waiver of any and all other administrative remedies which may otherwise be available to Respondent regarding the issue in dispute.

6. The Department shall keep an administrative record of any proceedings under this Paragraph X that shall be available consistent with Article 6 of the Public Officers Law.

7. Nothing in this Paragraph X shall be construed as an agreement by the parties to resolve disputes through administrative proceedings pursuant to the State Administrative Procedure Act, the ECL, or 6 NYCRR Part 622 or 6 NYCRR Part 375.

## XI. Termination of Settlement Agreement

A. This Settlement Agreement will terminate upon the earlier of the following events:

1. Respondent's election to terminate pursuant to Subparagraphs I.B.1(b), I.C or I.E.3 so long as such election is made prior to the Department's approval of the RD/RA Work Plan for any of the MGP Sites. In the event of termination in accordance with this Subparagraph XI.A.1, this Settlement Agreement shall terminate effective the 5<sup>th</sup> Day after the Department's receipt of the written notification terminating this Settlement Agreement or the 5<sup>th</sup> Day after the time for Respondent to make its election has expired, whichever is earlier, provided, however, that if there are one or more Work Plan(s) for which a final report has not been approved at the time of Respondent's notification of its election to terminate this Settlement Agreement pursuant to Subparagraphs I.B.1(b) or I.E.3 or its failure to timely make such an election pursuant to Subparagraphs I.B.1(b) or I.E.3, Respondent shall promptly complete the activities required by such previously approved Work Plan(s) consistent with the schedules contained therein. Thereafter, this Settlement Agreement shall terminate effective the 5<sup>th</sup> Day after the Department's approval of the final report for all previously approved Work Plans; or

2. the Department's written determination that Respondent has completed all phases of the Remedial Investigation Program, in which event the termination shall be effective on the 5<sup>th</sup> Day after the date of the Department's approval of the final report relating to the final phase of the Remedial Investigation Program.

B. Notwithstanding the foregoing, the provisions contained in Paragraphs V and VII shall survive the termination of this Settlement Agreement and any violation of such surviving Paragraphs shall be a violation of this Settlement Agreement, the ECL, and 6 NYCRR Part 375, subjecting Respondent to penalties as provided under Paragraph III so long as such obligations accrued on or prior to the Termination Date.

C. If the Settlement Agreement is terminated pursuant to Subparagraph XI.A.1, neither this Settlement Agreement nor its termination shall affect any liability of Respondent for remediation of the Site and/or for payment of State Costs, including implementation of removal and remedial actions, interest, enforcement, and any and all other response costs as defined under CERCLA, nor shall it affect any defenses to such liability that may be asserted by Respondent. Respondent shall also ensure that it does not leave the site in a condition, from the perspective of human health and environmental protection, worse than that which existed before any activities under this Settlement Agreement were commenced. Further, the Department's efforts in obtaining and overseeing compliance with this Settlement Agreement shall constitute "reasonable efforts" under law to obtain a voluntary commitment from Respondent for any further activities to be undertaken as part of a Remedial Program for the Site.

## XII. Miscellaneous

A. Respondent shall retain professional consultants, contractors, laboratories, quality assurance/quality control personnel, and third party data validators ("Respondent's Contractors" or

“Contractor(s)”) acceptable to the Department to perform its obligations under this Settlement Agreement. If the Department has not previously approved Respondent’s Contractors for the work required by this Settlement Agreement, Respondent shall submit the Contractors’ qualifications to the Department a minimum of thirty (30) Days before the start of any activities for which each such Contractor will be responsible. The Department’s approval of each such Contractor shall be obtained prior to the start of work by that Contractor. The responsibility for the performance of all Contractors retained by Respondent shall rest solely with Respondent. Subject to the requirements of this Subparagraph, Respondent retains the right to select or change firms or individuals in its sole discretion.

B. Respondent shall allow the Department to attend and shall notify the Department at least seven (7) Days in advance of any field activities as well as any pre-bid meetings, job progress meetings, the substantial completion meeting and inspection, and the final inspection and meeting; nothing in this Settlement Agreement shall be construed to require Respondent to allow the Department to attend portions of meetings where privileged matters are discussed.

C. Respondent shall use “best efforts” to obtain all access, permits, easements, rights-of-way, rights-of-entry, approvals, institutional controls, or authorizations necessary to perform Respondent’s obligations under this Settlement Agreement.

1. The Department may exempt Respondent from the requirement to obtain any state or local permit or other authorization for any activity on the site needed to implement this Settlement Agreement that the Department determines is conducted in a manner which satisfies all substantive technical requirements applicable to like activity conducted pursuant to a permit.

2. If, despite Respondent’s best efforts, any necessary access, easements, rights-of-way, rights-of-entry, approvals, institutional controls, or authorizations required to perform this Settlement Agreement are not obtained within forty-five (45) Days after the effective date of this Settlement Agreement, or within forty-five (45) Days after the date the Department notifies Respondent in writing that additional access beyond that previously secured is necessary, Respondent shall promptly notify the Department, and shall include in that notification a summary of the steps Respondent has taken to obtain access. The Department may, as it deems appropriate and within its authority, assist Respondent in obtaining access. If any interest in property is needed to implement an institutional or engineering control required by a Work Plan and such interest cannot be obtained, the Department may require Respondent to modify the Work Plan pursuant to Subparagraph I.C of this Settlement Agreement to reflect changes necessitated by the lack of access and/or approvals.

D. Respondent and Respondent’s successors and assigns shall be bound by this Settlement Agreement. Any change in ownership or corporate status of Respondent shall in no way alter Respondent’s responsibilities under this Settlement Agreement.

E. Respondent shall provide a copy of this Settlement Agreement to each Contractor hired to perform work required by this Settlement Agreement and shall condition all contracts entered into

pursuant to this Settlement Agreement upon performance in conformity with the terms of this Settlement Agreement. Respondent or its Contractor(s) shall provide written notice of this Settlement Agreement to all subcontractors hired to perform any portion of the work required by this Settlement Agreement. Respondent shall nonetheless be responsible for ensuring that Respondent's contractors and subcontractors perform the work in satisfaction of the requirements of this Settlement Agreement.

F. The paragraph headings set forth in this Settlement Agreement are included for convenience of reference only and shall be disregarded in the construction and interpretation of any provisions of this Settlement Agreement.

G. 1. The terms of this Settlement Agreement constitute the entire agreement between the Department and Respondent concerning implementation of the activities required by this Settlement Agreement. No term, condition, understanding, or agreement purporting to modify or vary any term of this Settlement Agreement shall be binding unless made in writing and subscribed by the party to be bound. No informal advice, guidance, suggestion, or comment by the Department shall be construed as relieving Respondent of Respondent's obligation to obtain such formal approvals as may be required by this Settlement Agreement. In the event of a conflict between the terms of this Settlement Agreement and any Work Plan submitted pursuant to this Settlement Agreement, the terms of this Settlement Agreement shall control over the terms of the Work Plan(s) attached as Exhibit "B."

2. i. Except as set forth herein, if Respondent desires that any provision of this Settlement Agreement be changed, other than a provision of a Work Plan or a time frame, Respondent shall make timely written application to the Commissioner with copies to the parties listed in Subparagraph IX.A.1. The Commissioner or the Commissioner's designee shall timely respond.

ii. Changes to a Work Plan shall be accomplished as set forth in Subparagraph I.C of this Settlement Agreement.

iii. Changes to a time frame set forth in this Settlement Agreement shall be sought by a written request to the Department's project attorney and project manager, which request shall be timely responded to in writing. The Department's decision relative to the request for a time frame change shall be subject to dispute resolution pursuant to Paragraph X.

H. 1. If multiple parties sign this Settlement Agreement, the term "Respondent" shall be read in the plural where required to give meaning to this Settlement Agreement. Further, the obligations of such Respondents under this Settlement Agreement are joint and several and the insolvency of or failure by any Respondent to implement any obligations under this Settlement Agreement shall not affect the obligations of the remaining Respondent(s).

2. If Respondent is a partnership, the obligations of all general partners, including limited partners who act as general partners, to finance and perform obligations under this Settlement Agreement and to pay amounts owed to the Department under this Settlement Agreement are joint and

several. In the event of the insolvency of or the failure of any of the general partners to implement the requirements of this Settlement Agreement, the remaining general partners shall implement all such requirements.

3. Notwithstanding the foregoing Subparagraphs XII.H. 1 and 2, if multiple parties sign this Settlement Agreement as Respondents but not all of the signing parties elect, pursuant to Subparagraph I.B, to implement a Work Plan, then all Respondents are jointly and severally liable for each and every obligation under this Settlement Agreement through the completion of the activities in such Work Plan that all such parties consented to; thereafter, only those Respondents electing to perform additional work shall be jointly and severally liable under this Settlement Agreement for the obligations and activities under such additional Work Plan(s). The parties electing not to implement the additional Work Plan(s) shall have no obligations under this Settlement Agreement relative to the activities set forth in such Work Plan(s). Only those Respondents electing to implement such additional Work Plan(s) shall be eligible to receive the release and covenant not to sue provided under Subparagraph I.G.

I. To the extent authorized under CERCLA § 113, 42 U.S.C. Section 9613, New York General Obligations Law § 15-108, and any other applicable law, Respondent shall be deemed to have resolved its liability to the State for purposes of contribution protection provided by CERCLA § 113(f)(2), 42 U.S.C. § 9613(f)(2) for “matters addressed” pursuant to and in accordance with this Settlement Agreement. “Matters addressed” in this Settlement Agreement shall mean all response actions taken by Respondent to implement this Settlement Agreement and all response costs incurred and to be incurred by any person or party in connection with the work performed under this Settlement Agreement, which costs have been paid by Respondent, including reimbursement of State Costs pursuant to this Settlement Agreement. Furthermore, to the extent authorized under CERCLA § 113(f)(3)(B), 42 U.S.C. § 9613(f)(3)(B), by entering into this administrative settlement of liability, if any, for some or all of the response actions and/or for some or all of the costs of such actions, Respondent is entitled to seek contribution under CERCLA from any person except those who are entitled to contribution protection under CERCLA § 113(f)(2), 42 U.S.C. § 9613(f)(2).

J. Unless otherwise expressly provided herein, terms used in this Settlement Agreement which are defined in ECL Article 27, Title 13, ECL Article 71, Title 36, or in regulations promulgated under such statute shall have the meaning assigned to them under said statute or regulations. Whenever terms listed in the Glossary attached hereto are used in this Settlement Agreement or in the attached Exhibits, the definitions set forth in the Glossary shall apply. In the event of a conflict, the definition set forth in the Glossary shall control.

K. Respondent’s obligations under this Settlement Agreement represent payment for or reimbursement of response costs, and shall not be deemed to constitute any type of fine or penalty.

L. This Settlement Agreement may be executed for the convenience of the parties hereto, individually or in combination, in one or more counterparts, each of which for all purposes shall be deemed to have the status of an executed original and all of which shall together constitute one and the same.

M. The effective date of this Settlement Agreement is the 10<sup>th</sup> Day after the date the Commissioner or the Commissioner's designee signs this Settlement Agreement.

DATED: Albany, New York  
\_\_\_\_\_, 2005

DENISE M. SHEEHAN, ACTING  
COMMISSIONER, NEW YORK STATE  
DEPARTMENT OF ENVIRONMENTAL  
CONSERVATION

By: \_\_\_\_\_  
Dale A. Desnoyers, Director  
Division of Environmental Remediation

## CONSENT BY RESPONDENT

Respondent, KeySpan Energy Delivery New York, hereby consents to the issuing and entering of this Order on Consent and Administrative Settlement, waives Respondent's right to a hearing herein as provided by law, and agrees to be bound by this Order on Consent and Administrative Settlement.

By:\_\_\_\_\_

Title:\_\_\_\_\_

Date:\_\_\_\_\_

STATE OF NEW YORK     )  
                                      ) s.s.:  
COUNTY OF                 )

On the \_\_\_\_\_ day of \_\_\_\_\_, in the year \_\_\_\_\_, before me, the undersigned, personally appeared \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

\_\_\_\_\_  
Signature and Office of individual  
taking acknowledgment

**EXHIBIT “A”**

**DESCRIPTION OF MGP SITES**

**EXHIBIT “A-1”**

**MAP OF MGP SITES AND GOWANUS CANAL**

**EXHIBIT “B”**

**DEPARTMENT-APPROVED WORK PLAN(S)**

**EXHIBIT “C”**

**COST SUMMARY**

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## EXHIBIT "D"

### NOTICE OF Settlement Agreement

KeySpan Energy Delivery New York ("Respondent") is subject to an Order On Consent and Administrative Settlement (Index # A2-0523-0705) (the "Settlement Agreement") issued by the Commissioner of the New York State Department of Environmental Conservation (the "Department" under Article 27, Title 13, and Article 71, Title 27 of the Environmental Conservation Law of the State of New York ("ECL")) for the Gowanus Canal located at Brooklyn, New York.

The Gowanus Canal has been designated by the Department as a Remedial Investigation Work Site, pursuant to ECL Section 27-1313, and the Department has determined that the Gowanus Canal presents a significant threat to the public health or environment. The Site is more particularly described in the legal description that is attached hereto as Schedule "A." **[This paragraph can be changed to set forth the status of the site]**

The purpose of the Settlement Agreement is to provide for the development and implementation of an inactive hazardous waste disposal site remedial investigation program for the Gowanus Canal. The effective date of the Settlement Agreement was \_\_\_\_\_. A copy of the Settlement Agreement, as well as any and all Department-approved Work Plans under this Settlement Agreement can be reviewed at the Department's \_\_\_\_\_ offices located at \_\_\_\_\_ by contacting \_\_\_\_\_.

This Notice of Settlement Agreement is being filed with the \_\_\_\_\_ recording officer in accordance with Paragraph VIII of the Settlement Agreement to give all parties who may acquire any interest in the Site notice of this Settlement Agreement.

**WHEREFORE**, the undersigned has signed this Notice of Settlement Agreement in compliance with the terms of the Settlement Agreement.

KEYSPAN ENERGY DELIVERY NEW YORK  
Respondent

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

[acknowledgement]

**APPENDIX “A”**

**(TO EXHIBIT “D”)**

**MAP OF THE PROPERTY**

## **EXHIBIT “E”**

### **SC WORK PLAN REQUIREMENTS**

The SC Work Plan shall include but not be limited to:

1. A chronological description of the anticipated SC activities together with a schedule for the performance of these activities.
2. A Sampling and Analysis Plan that shall include:
  - (i) A quality assurance project plan that describes the quality assurance and quality control protocols necessary to achieve the initial data quality objectives. This plan shall designate a data validation expert and must describe such individual’s qualifications and experience;
  - (ii) A field sampling plan that defines sampling and data gathering methods in a manner consistent with the “Field Methods Compendium,” OSWER Directive 9285.2-11 (draft June 1993), as supplemented by the Department; and
  - (iii) A health and safety plan to protect persons at and in the vicinity of the site during the performance of the SC which shall be prepared in accordance with 29 CFR 1910 and all other applicable standards by a certified health and safety professional. Respondent shall add supplemental items to this plan necessary to ensure the health and safety of all persons at or in the vicinity of the site during the performance of any work pursuant to this Settlement Agreement.
3. The Work Plan shall incorporate all elements of an SC as set forth in Department technical and administrative guidance documents including, but not limited to, investigations of surface and subsurface soils, surface waters, ground water, and air.
4. The SC must be sufficiently comprehensive to allow the Department to determine whether a consequential amount of hazardous waste has been disposed at the site and, if so, whether the contamination presents a significant threat to public health and/or the environment.

## **EXHIBIT “F”**

### **RI WORK PLAN REQUIREMENTS**

The Investigation Work Plan shall include but not be limited to:

1. A chronological description of the anticipated RI/FS activities together with a schedule for the performance of these activities.
2. A Sampling and Analysis Plan that shall include:
  - (i) A quality assurance project plan that describes the quality assurance and quality control protocols necessary to achieve the initial data quality objectives. This plan shall designate a data validation expert and must describe such individual’s qualifications and experience;
  - (ii) A field sampling plan that defines sampling and data gathering methods in a manner consistent with the “Field Methods Compendium,” OSWER Directive 9285.2-11 (draft June 1993), as supplemented by the Department;
  - (iii) A health and safety plan to protect persons at and in the vicinity of the site during the performance of the RI which shall be prepared in accordance with 29 CFR 1910 and all other applicable standards by a certified health and safety professional. Respondent shall add supplemental items to this plan necessary to ensure the health and safety of all persons at or in the vicinity of the site during the performance of any work pursuant to this Settlement Agreement; and
  - (iv) A citizen participation plan that is, at a minimum, consistent with the Department’s publication “Citizen Participation in New York’s Hazardous Waste Site Remediation Program: A Guidebook,” dated June 1998, any subsequent revisions thereto, and 6 NYCRR Part 375.
3. The Work Plan shall incorporate all elements of an RI as set forth in CERCLA, as amended, the NCP, the USEPA guidance document entitled “Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA,” dated October 1988, and any subsequent revisions thereto in effect at the time the RI Work Plan is submitted, and appropriate USEPA and Department technical and administrative guidance documents.

## **EXHIBIT “G”**

### **IRM WORK PLAN REQUIREMENTS**

The IRM Work Plan shall include, at a minimum, the following:

1. a summary of the data supporting the extent of the proposed IRM;
2. a chronological description of the anticipated IRM activities;
3. a schedule for performance of the IRM activities;
4. detailed documents and/or specifications prepared, signed, and sealed by a Professional Engineer providing sufficient detail to implement the Department-approved IRM, including, as appropriate, a description of soil and sediment erosion control, storm water management and monitoring, and dust, odor, and organic vapor control and monitoring procedures to be implemented during remedial activities, and a detailed description of confirmation sampling and site restoration plans;
5. a health and safety plan, including a community air monitoring plan;
6. a contingency plan, including a description of procedures for dismantling and removing remedial structures and equipment from the site, if applicable;
7. a citizen participation plan, if required, that incorporates appropriate activities outlined in the Department’s publication “Citizen Participation in New York’s Hazardous Waste Site Remediation Program: A Guidebook,” dated June 1998, any subsequent revisions thereto, and 6 NYCRR Part 375;
8. an OM&M Plan, if the performance of the Department-approved IRM results in a treatment system which is expected to operate for greater than 18 months. If the system will not operate for greater than 18 months, or if only monitoring is required, only a monitoring plan will be needed; and
9. a description of institutional controls to be implemented as well as written approval from the owner of the affected property if the remedy selected requires implementation of an institutional control at an off-site location or if the person responsible for the remedy is not the site owner.

## **GLOSSARY OF TERMS**

The following terms shall have the following meanings:

“BPM Director”: the Director of the Bureau of Program Management within the Division of Environmental Remediation.

“CERCLA”: the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601 et seq.

“Day”: a calendar day. In computing any period of time under this Settlement Agreement, where the last day would fall on a Saturday, Sunday or State holiday, the period shall run until the close of business of the next working day.

“Department”: the New York State Department of Environmental Conservation.

“Director”: the Division Director, Division of Environmental Remediation.

“ECL”: the Environmental Conservation Law, Chapter 43-B of the Consolidated Laws of New York, as amended.

“Feasibility study”: a study undertaken to develop and evaluate options for remedial action. The feasibility study emphasizes data analysis and is generally performed concurrently and in an interactive fashion with the remedial investigation, using data gathered during the remedial investigation. The term also refers to a report that describes the results of the study. (See 6 NYCRR Part 375)

“Force Majeure Event”: an event which is brought on as a result of fire, lightning, earthquake, flood, adverse weather conditions, strike, shortages of labor and materials, war, riot, obstruction or interference by adjoining landowners, or any other fact or circumstance beyond Respondent’s reasonable control.

“Inactive Hazardous Waste Disposal Site Remedial Program” or “Remedial Program”: activities undertaken to eliminate, remove, abate, control, or monitor existing health hazards, existing environmental hazards, potential health hazards, and/or potential environmental hazards in connection with the Site and all activities to manage wastes and contaminated materials at or removed from the site. (See ECL 27-1301(3) and 6 NYCRR Part 375)

“Interim Remedial Measure” or “IRM”: a discrete set of activities, including removal activities, to address both emergency and non-emergency site conditions, which can be undertaken without extensive investigation or evaluation, to prevent, mitigate, or remedy environmental damage or the consequences of environmental damage attributable to the site. (See 6 NYCRR Part 375)

“National Contingency Plan” or “NCP”: the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, and codified at 40 C.F.R. Part 300, and any amendments thereto.

“NL”: the Navigation Law, Chapter 37 of the Consolidated Laws of New York, as amended.

“OH&M”: the Office of Hearings and Mediation Services.

“OM&M”: post-construction operation, maintenance, and monitoring; the last phase of a remedial program, which continues until the remedial action objectives for the Site are met.

“Settlement Agreement”: this Settlement Agreement and all exhibits attached hereto.

“Professional Engineer”: an individual registered as a professional engineer in accordance with Article 145 of the New York State Education Law. If such individual is a member of a firm, that firm must be authorized to offer

professional engineering services in the State of New York in accordance with Article 145 of the New York State Education Law.

“Remedial Action”: those activities, except for OM&M, to be undertaken under this Settlement Agreement to implement the ROD.

“Remedial Investigation” or “RI”: a process undertaken to determine the nature and extent of contamination. The remedial investigation emphasizes data collection and site characterization and generally is performed concurrently with the feasibility study. It includes sampling and monitoring, as necessary, and includes the gathering of sufficient information to determine the necessity for and the proposed extent of the program and to support the evaluation of proposed alternatives. (See 6 NYCRR Part 375)

“Site Characterization” or “SC”: a process undertaken to allow the Department to determine whether a consequential amount of hazardous waste has been disposed at a site and, if so, whether the contamination presents a significant threat to public health and/or the environment.

“Spill Fund”: the New York State Environmental Protection and Spill Compensation Fund as established by Article 12, Part Three of the NL.

“State Costs”: all the State’s response expenses related to this Site, including, but not limited to, direct labor, fringe benefits, indirect costs, travel, analytical costs, and contractor costs incurred by the State of New York for negotiating, implementing, overseeing, administering, or enforcing this Settlement Agreement, and any other response costs as defined under CERCLA. Approved agency fringe benefit and indirect cost rates will be applied.

“Termination Date”: the date that this Settlement Agreement is terminated pursuant to Paragraph XI.

“USEPA”: the United States Environmental Protection Agency.

**STATE OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

-----X  
In the Matter of the Alleged Violations of Articles 17 and 71  
of the Environmental Conservation Law and Part 750  
et seq., of Title 6 of the Official Compilation of Codes, Rules  
and Regulations of the State of New York (6 NYCRR);

**ORDER ON  
CONSENT**  
(CSO Order)

-by-

The City of New York and the New York City Department  
of Environmental Protection,  
Respondents.

**DEC Case #**  
CO2-20000107-8

-----X  
**WHEREAS:**

1. The Department of Environmental Conservation (the "Department" or "DEC") is a Department of the State of New York with jurisdiction to enforce the environmental laws of the State, pursuant to the Environmental Conservation Law ("ECL"), Title 6 of the Official Compilation of the Codes, Rules and Regulations of the State of New York ("NYCRR"), and Orders issued thereunder.

2. The Department has jurisdiction over the abatement and prevention of pollution to the waters of the State pursuant to Article 17 of the ECL and 6 NYCRR Part 750, *et seq.* This jurisdiction also authorizes DEC, as a State agency with an approved program per Sections 318, 402 and 405 of the federal Clean Water Act ("CWA"), 33 U.S.C. Section 1251, *et seq.*, to regulate the discharge of pollutants from point sources into the waters of the State in conformity with the CWA.

3. Pursuant to its authority to protect the waters of the State, the Department administers the State Pollutant Discharge Elimination System ("SPDES") permit program, ECL §17-0801, *et seq.* In general, the SPDES program prohibits any discharge of pollutants to the waters of the State without a permit establishing pollutant limitations and treatment requirements. Thus, SPDES permits set certain effluent limitation parameters ("parameters"), determined according to ECL §17-0809 and 6 NYCRR §750-1.11, in order to avoid contravention of mandated water pollution control requirements and water quality standards ("WQS"). Those conditions address not only the allowable range of parameters for discharge of pollutants to the waters of the State, but also the manner in which the permittee is to operate, maintain, monitor, and report on its regulated facilities and activities.

4. Combined sewer overflows ("CSOs") are discharges of untreated domestic sewage, and industrial wastewaters, combined with stormwater. CSOs occur when wet weather flows are in excess of the capacity of combined sewer systems and/or the Publicly Owned Treatment Works they serve. CSO discharges may contribute to violations of State WQS. CSOs are "point sources" subject to NPDES permit requirements, including both water quality-based and technology-based requirements of the CWA.

5. The New York City Department of Environmental Protection (“DEP”), a municipal agency, and the City of New York (“the City”) (collectively referred to herein as “Respondents”) own, operate, and are responsible for the City’s 14 Municipal Water Pollution Control Plants (collectively referred to as the “WPCPs”), which process most of the sewage generated within the City, as well as the City’s combined sanitary sewage system, related pump stations, sewer regulators, CSOs, and other appurtenances related thereto. Respondents discharge wastewater combined with stormwater from approximately 450 CSO outfalls within the City of New York.

6. In 1974, pursuant to Section 208 of the CWA, 33 U.S.C. §1288, Respondent DEP began a program to evaluate abatement of CSOs and improve water quality conditions. The program included development of a water quality model based on monitoring of CSOs and their impacts. The program concluded that the CSOs had a minimal impact on dissolved oxygen in the open waters of the City such as the Hudson and East Rivers. The program further concluded that CSOs had a measurable adverse impact in the confined tributary waters around the City.

7. In the early 1980s, Respondents initiated planning projects for CSO abatement, incorporating specific assessments of CSO-impacted water bodies. These planning projects included the City-Wide CSO Study which began in 1985 and initiation of the development of the following CSO abatement facility plans: the Flushing Bay/Creek Water Quality Facility Planning Project (WQFP) (1983), Paerdegat Basin WQFP (1986), East River WQFP (1988), Jamaica Bay WQFP (1988), Inner Harbor WQFP (1988), Newtown Creek WQFP (1990), Outer Harbor WQFP (1990), Coney Island Creek WQFP (1990), and Jamaica Tributary WQFP (1994).

8. Respondents have SPDES permits for each of their WPCPs, issued by DEC on September 30, 1988, and periodically administratively renewed and modified, with the most recent modification on July 30, 2003 (“the SPDES Permits”). In general, these SPDES permits authorize Respondents to discharge sewage effluent treated by the WPCPs into waters of the State, and set limitations on the amount and concentration of certain pollutant parameters in such effluent.

9. Respondents’ SPDES permits contain conditions designed to provide for compliance with federal and State CSO requirements, including conditions requiring the planning and implementation of strategies designed to address CSOs.

10. Respondents were unable to comply with the permit imposed deadlines for initiating and/or completing four of the plans required under the 1988 SPDES permits. Accordingly, the Department and Respondent DEP entered into an Order on Consent dated June 26, 1992 (Case No. R2-3351-90-12)(CSO Abatement Order) (the “1992 Order”). The 1992 Order was subsequently incorporated into Respondents’ SPDES permits with a provision stating that the consent order governs the Respondents’ obligations for its CSO program and that any changes to schedules for compliance will be treated as permit modifications with the opportunity for public notice and comment. In Re Application of the New York City Department of Environmental Protection, Case No. 0026131, Third Interim Decision of the Commissioner, 1993 WL 267972 (N.Y.Dept. Env.Conserv. June 1, 1993).

11. In addition to providing that Respondent DEP perform the planning projects required under the 1988 SPDES permits, the 1992 Order required Respondent DEP to implement CSO abatement projects in nine facility planning areas specified in that Order, some of which were set forth in the 1988 SPDES permits. These projects were to proceed on two Tracks. "Track One" was to address the control of CSOs that are causing or contributing to contraventions of all applicable State WQS for dissolved oxygen and coliform. "Track Two" required the Respondents to implement projects to control CSO generated floatables causing or contributing to contraventions of State WQS from CSO outfalls not controlled under Track One.

12. The 1992 Order also required the implementation of certain interim measures to be implemented before construction of the required facilities under the Track One and Track Two programs. The interim measures included "booming, skimming, and netting" at key selected CSO outfalls in New York City. Respondent DEP commenced this work in the Spring of 1993 and continues to invest significant financial resources in the operation and maintenance of this program, which has been incorporated into, and is required under, CSO Best Management Practice ("BMP") number seven (#7) of Respondents' current SPDES permits. These programs have been successful, and have significantly reduced floatables in CSO discharges.

13. The 1992 Order also required Respondents to continue an evaluation of CSO contribution to violations of ambient water quality standards and receiving water designated use impairments, including post construction monitoring and determining the need for additional CSO controls. This requirement will now be conducted in accordance with the Drainage Basin Specific and City-Wide Long Term Control Plans ("LTCP") required pursuant to Appendix A of this Order.

14. On April 19, 1994, EPA officially noticed the *Combined Sewer Overflow (CSO) Control Policy*, 59 Fed. Reg. 18688 (April 19, 1994) ("CSO Control Policy"), to establish a consistent national approach for controlling discharges from all CSOs to the waters of the United States. The CSO Control Policy provides guidance to permittees and NPDES permitting authorities on the implementation of the required nine minimum controls and development and implementation of a LTCP, which includes measures to comply with the CWA including attainment of water quality standards.

15. In addition to the requirements set forth in the 1992 Order, the Department and Respondents entered into a Modification to the CSO Abatement Order on Consent dated September 19, 1996 (Case No. R2-3351-90-12) (the "1996 Order"), requiring Respondents to implement a catch basin cleaning, construction and repair program. Respondents have completed the initial catch basin program. Thereafter, the catch basin program set forth in the 1996 Order was incorporated into Respondents' SPDES permits, with the 1996 Order as modified continuing to govern Respondents' obligations for its CSO program. In Re Application of the New York City Department of Environmental Protection, Case No. 0026131, Fifth Interim Decision of the Commissioner, 1996 WL 753920 (N.Y. Dept. Env. Conserv. October 7, 1996).

16. On December 15, 2000, amendments to Section 402 the CWA (known as the Wet Weather Water Quality Act of 2000) were enacted. These amendments require that all permits, orders, or decrees for CSO discharges, issued pursuant to the CWA after December 15, 2000, be consistent with the CSO Control Policy, 33 U.S.C. §1342(q)(1).

17. ECL section 17-0815(7) authorizes the Department to include in SPDES permits any provisions necessary to meet the requirements of the federal CWA. This includes the CSO requirements contained at Section 402(q)(1) of the federal CWA. In New York State, EPA's nine minimum control measures are addressed pursuant to requirements set forth in SPDES permits, in accordance with the CSO Control Policy and State regulations (6 NYCRR Part 750, Sections 750-1.10-750-1.14 ).

18. In compliance with the CSO Control Policy requirements for permittees, in January 1997, Respondent DEP submitted, and DEC approved, a report entitled *CSO Abatement in the City of New York: Report on Meeting the Nine Minimum CSO Control Standards* detailing Respondent DEP's compliance with the nine minimum control requirements. Respondents' current SPDES permits require implementation of fourteen CSO BMPs to address the nine minimum controls consistent with CSO Control Policy.

19. The 1992 Order as modified in 1996, pre-dated the enactment of the Wet Weather Water Quality Act of 2000, particularly the amendments to Section 402(q) of the CWA. The CSO Control Policy recognizes that work had been done by states and municipalities to abate CSOs prior to the Policy's issuance. Further, the CSO Control Policy requires integration of existing CSO abatement projects into the development and implementation of the LTCPs while encouraging coordination with State WQS reviews.

20. The CSO Control Policy recognizes that the review and appropriate revision of WQS is a part of LTCP development. The Policy further recognizes that implementation of CSO controls may not result in attainment of WQS. In such circumstances, states may consider adapting their WQS, and implementation procedures to reflect site-specific conditions including those related to CSOs." 59 Fed. Reg. 18694.

21. DEP has submitted, and DEC has approved, CSO facility plans that set forth projects which, when built, will result in improvements to water quality, but will not result in attainment of WQS under all circumstances. As such, it is the intention of the Respondents and DEC to enter into a separate Memorandum of Understanding ("MOU") to establish a process to enable the WQS reviews to proceed on such projects in accordance with the CSO Control Policy. Such reviews will commence within 60 days of when Respondents issue the Notice to Proceed to Construction for all applicable construction contracts for each CSO Abatement Project required pursuant to Appendix A of this Order.

22. Any violation of a SPDES permit condition or Order entered under Article 17, constitutes a violation of ECL §§17-0701, 17-0803, 17-0807, 17-0815 and 6 NYCRR §750-1.4.

23. Respondents have failed to comply with numerous milestones set forth in the 1992 Order. Respondents' failure to comply with these milestones is a violation of the ECL.

24. ECL Section 17-0501 makes it unlawful for any person to discharges pollutants to the waters of the State that cause or contribute to a violation of WQS.

25. On numerous occasions, the discharges from Respondents' CSOs have caused or contributed to WQS violations in the receiving waters, in violation of ECL Section 17-0501.

26. Section 402(q)(1) of the CWA and ECL Section 17-0807(4) require that SPDES permits, Orders, or Decrees contain an LTCP to address CSOs.

27. Since December of 2000, Respondents are in violation of Section 402(q)(1) of the CWA and ECL Section 17-0807(4), for failure to have an approved LTCP consistent with the CSO Control Policy.

28. Pursuant to ECL §71-1929, a person who, prior to or on May 15, 2003, violates any of the provisions of, or who fails to perform any duty imposed by, ECL Article 17 or the rules or regulations of the Department promulgated pursuant thereto, or the terms of any certificate or permit issued thereunder, shall, *inter alia*, be liable for a penalty not to exceed twenty-five thousand dollars (\$25,000) per day for each violation, and may also be enjoined from conducting such activity. Any person violating these authorities after May 15, 2003, shall, *inter alia*, be liable for a penalty not to exceed thirty-seven thousand, five-hundred dollars (\$37,500) per day for each violation, and may also be enjoined from conducting such activity.

29. In order to address the violations noted above, the Department and Respondents agree to enter into this Order, which contains revised milestones and schedules governing Respondents' CSO abatement facility planning and construction activities, and the development and implementation of the LTCPs for Respondents' CSO discharges. Respondents' implementation of the fourteen CSO BMPs, as set forth in Respondents SPDES permits, and the requirements of this Order cumulatively address the relevant requirements of the ECL and Section 402(q) of the CWA.

30. Appendix A of this Order requires Respondents to plan, design, construct, operate and evaluate CSO abatement projects. Respondents have submitted documentation to the Department demonstrating that, on a cumulative basis, the projects to be constructed pursuant to Appendix A, will provide equal or better performance, in terms of CSO percent capture on a citywide basis, than what was required by the 1992 Order. (See Exhibit 1).

31. Appendix A further requires Respondents to develop Waterbody/Watershed Facility Plans. These Plans will evaluate the effects of implementing the approved or pending facility plans, identify the causes of non-attainment of WQS and identify the highest reasonably attainable uses of the water bodies.

32. Appendix A of this Order also requires Respondents to develop and implement drainage basin specific LTCPs for CSO impacted water bodies. The design and implementation of the CSO abatement projects set forth in Appendix A will be integrated into the development and implementation of the drainage basin specific and city-wide LTCPs.

33. Compliance with this Order, the SPDES Permits and the MOU requires Respondents to: (a) construct CSO abatement facilities to ensure that if CSOs occur, they are only as a result of wet weather; (b) bring all CSOs into compliance with the CWA and ECL, after review and, if appropriate, revision of WQS as set forth in the above-referenced MOU; and c) minimize adverse impacts to water quality, aquatic biota, and human health from CSO discharges pursuant to the compliance schedule in Appendix A.

34. The Department and the Respondents have each consented to the making of this Order which supercedes the 1992 and 1996 CSO Abatement Orders, without further action, litigation, hearing or adjudication of any issues of fact or law, and without this Order constituting an admission by the Respondents of any finding or alleged violation of federal or state law or regulation, and being duly advised, and it being in the public interest;

## **IT IS HEREBY ORDERED:**

### **I. EFFECT ON PREVIOUS ORDERS**

Respondents are bound by, and agree to follow and comply with, the terms, provisions and requirements set forth in this Order, including Appendix A, which is incorporated herein. This Order supersedes and replaces, in their entirety, the 1992 and 1996 CSO Orders. Upon the effective date of this Order, the 1992 and 1996 CSO Orders are considered null and void. The requirements set forth in this Order are additional to, and do not affect any requirements set forth in, any Orders on Consent between DEC and Respondents other than the 1992 and 1996 CSO Orders. The terms of this Order shall control the implementation of the CSO abatement program to be accomplished through the construction, operation and maintenance of the CSO abatement facilities, and pursuant to the CSO Facility Plans, the development and implementation of the LTCPs, as set forth in paragraph III. below.

### **II. CIVIL PENALTY AND EBP**

A. In settlement of the violations of the 1992 Order of which the Department had actual knowledge or notice of as of the effective date of this Order, Respondents shall pay a civil penalty in the sum of two million dollars (\$2,000,000). The civil penalty shall be paid within 45 days of DEC's execution of this Order, by check made payable to the order of the "New York State Department of Environmental Conservation," which shall be forwarded to the Department of Environmental Conservation, 625 Broadway, 14<sup>th</sup> Floor, Division of

Environmental Enforcement, Albany, NY 12233-5500, attention: Elissa Armater, with a copy to Scott Crisafulli, Esq., at the same address.

## B. ENVIRONMENTAL BENEFIT PROJECT

1. In addition to the Civil Penalty set forth in paragraph II.A above, within 60 days of the effective date of this Order, Respondents shall pay the sum of one million, five hundred thousand dollars (\$1,500,000) to the Natural Heritage Trust ("NHT"), NY Art. & Cult. Aff. Law §§ 55.01 *et seq.* (McKinney's 1984 & Supp. 2004), as an Environmental Benefit Project (the "EBP"). NHT shall hold the EBP funds in escrow in accordance with a separate Agreement ("the Agreement") to be entered into between the Department and NHT, which shall provide, at minimum:

(a) The EBP funds shall be used solely for the costs of designing and implementing environmental improvement projects that capture, treat, or otherwise mitigate the impacts of stormwater and/or CSO discharges in the New York Harbor Estuary and Jamaica Bay areas.

(b) NHT may only release EBP funds pursuant to the written direction of the Department. Projects shall be selected as follows:

(i) Either party to this Order may propose projects to be funded by the EBP Funds.

(ii) The Department shall consider any projects proposed by Respondents in good faith.

(iii) All EBP projects shall adhere to the requirements of the Department's EBP Guidance.

(c) The Agreement shall require NHT to submit to the Department and Respondent DEP an annual list of the projects it performed, the costs associated with those projects, and the remaining balance of the EBP Funds.

(d). The Agreement shall reflect the parties' intent that the EBP funds, and any associated interest, be allocated, in their entirety, within five years of the date of the Agreement.

C. Consistent with the terms of the MOU referenced in paragraph 21, Respondents shall also pay the total costs, up to one million dollars, for DEC to hire outside consultants to perform the review, and if appropriate revision of WQS and/or use classifications as specified in the corresponding MOU. In the event the review and appropriate revision is not completed after one million dollars (1,000,000) is expended, additional payments may be made, at Respondents' discretion, as set forth in the MOU.

### III. COMPLIANCE SCHEDULE

A. Respondents recognize that the CWA and the ECL mandate that all CSO controls meet all technology-based (i.e. implementation of the fourteen CSO BMPs to address the nine minimum controls) and water quality based requirements consistent with the CSO Control Policy. The CWA, ECL, and the regulations promulgated thereto, also make provision for the regulation of discharges from CSOs. To achieve that end, Respondents are permanently enjoined and directed to complete and/or implement the construction projects set forth in Appendix A of this Order, in accordance with the specified project descriptions and schedules set forth therein.

1. For the CSO abatement projects to be performed pursuant to the Flushing Bay, Paerdegat Basin, Alley Creek, Inner Harbor and Outer Harbor facility plans, as set forth in Appendix A, those projects shall be conducted in accordance with the Facility Plans approved by the Department in a May 15, 2003 letter from Joseph DiMura, P.E. to Warren Kurtz, P.E. ("the Approved Facility Plans")(attached hereto as Exhibit 2). The CSO abatement projects shall be performed in accordance with the terms and schedules set forth in Appendix A and/or the Approved Facility Plans. The Approved Facility Plans are hereby incorporated into this Order by reference, and made an enforceable part herein. The Approved Facility Plans will become part of long term control planning, as set forth in paragraph III.E. below.

2. In accordance with the schedule set forth in Appendix A, Respondents must submit approvable facility plans for the Jamaica Tributaries, Coney Island Creek, Newtown Creek, Westchester Creek, Bronx River, Hutchinson River and Jamaica Bay CSO abatement projects ("the Pending Facility Plans"). Upon approval by the Department, these facility plans shall be incorporated into this Order by reference, and made an enforceable part herein. The construction required by Appendix A, shall be conducted in accordance with the Pending Facility Plans, as approved by the Department. All of these projects will contribute to the improvement of water quality, but, most will not meet current WQS under all circumstances.

a. For purposes of this Order only, a facility plan must be approvable by the Department upon submission or with only "minimal revision" in response to Department comments. Consistent with 6 NYCRR Section 750-1-2(8), minimal revision shall mean the facility plan can be revised and resubmitted to the Department within 60 days of notification by the Department that the revisions are necessary. Stipulated penalties pursuant to Section V. below, based on the failure to submit an approvable submittal, shall not begin to accrue unless 60 days after Respondents have received the Department's comments on a submittal, Respondents have not submitted an approvable revised document. It is expressly understood that stipulated penalties begin to accrue upon day 61 after Respondents have received the Department's comments on a submittal, if Respondents do not submit an approvable revised submittal by that date.

3. Pursuant to the milestones set forth in Appendix A, Respondents will submit Waterbody/Watershed Facility Plans that will support the Long Term Control Planning process on a site specific planning basis, and will briefly describe the status with the nine EPA recommended elements of a Long Term Control Plan for each waterbody. The Plans will also provide the technical framework to complete facility planning in those drainage basins (Westchester Creek, Hutchinson River, and Newtown Creek) contained in Appendix A, that do not have final conceptual designs. Subject to the Department's approval, the Waterbody/Watershed Facility Plans may refine, and/or propose minor modifications to, the existing approved and/or pending CSO facility plans. In the Newtown Creek, Westchester Creek and Hutchinson River drainage basins only, the Waterbody/Watershed Facility Plans may propose final modifications to the scope of the projects set forth in the existing Facility Plans. Upon DEC approval, the scope of the projects listed in Appendix A for those three basins will be as set forth in the approved Waterbody/Watershed Facility Plans. For all drainage basins the Waterbody/Watershed Facility Plans will also examine the extent to which additional cost effective CSO control measures may result in WQS being met.

B. Respondents shall comply with the milestones set forth in Appendix A. Appendix A and the Approved Facility Plans describe the specific construction and operation-related CSO Abatement Projects which must be done pursuant to this Order, and sets forth the milestones with which Respondents must comply in implementing the projects. To comply with the appropriate milestone, all documents must be submitted by the milestone dates set forth in Appendix A, in final form, and under the signature and seal of a professional engineer currently licensed to practice in New York State. All milestones for the Notice to Proceed to Construction ("NTPC"), the Completion of Construction, and the submittal of Drainage Basin Specific and City Wide LTCPs as set forth in Appendix A shall be Major Milestones, for purposes of paragraph V. below.

C. Respondents must submit an approvable Drainage Basin Specific LTCP for each of the water bodies governed by this Order, in accordance with the schedule set forth in Appendix A. The Drainage Basin Specific LTCPs shall be developed in accordance with the *Guidance For Long-Term Control Plan*, EPA, September, 1995 and submitted in accordance with the schedule set forth in Appendix A and be consistent with EPA's CSO Control Policy. The minimum elements of the Drainage Basin Specific LTCPs required by this paragraph are: (1) Characterization, Monitoring, and Modeling of the Combined Sewer System; (2) Public Participation; (3) Consideration of Sensitive Areas; (4) Evaluation of Alternatives; (5) Cost/Performance Considerations; (6) Operational Plan; (7) Maximizing Treatment at the Existing POTW Treatment Plant; (8) Implementation Schedule; and, (9) Post Construction Compliance Monitoring Program. Respondents shall integrate the CSO Abatement Projects required pursuant to Appendix A into the development and implementation of the Drainage Basin Specific LTCPs. Upon review and approval by the Department, Respondents shall implement the Drainage Basin Specific LTCPs.

1. For purposes of defining drainage basin specific LTCPs in this Order only, “drainage basin” refers to the areas for which Waterbody/Watershed Facility Plans are being prepared in accordance with Appendix A.

2. Once the Department approves a Drainage Basin Specific LTCP, the approved Drainage Basin Specific LTCP is hereby incorporated by reference, and made an enforceable part of this Order.

D. No later than December 2017, Respondents shall submit an approvable City-Wide LTCP to the Department. Once the Department approves the City-Wide LTCP, the approved City-Wide LTCP is hereby incorporated by reference, and made an enforceable part of this Order. The City-Wide LTCP shall incorporate elements of the individual Drainage Basin Specific LTCPs (as set forth in paragraph III.C), the post-construction water quality monitoring (as set forth in paragraph III.D.2), and the Waterbody/Watershed Facility Plans (as set forth in paragraph III.A.3).

1. The parties acknowledge that the CSO Control Policy, codified in the 2000 amendments to the CWA, recognizes that during the development of LTCPs, permittees may encounter situations where WQS and designated uses are not met because of natural background conditions or pollution sources other than CSOs, and cannot reasonably be met. 40 C.F.R. Part 131.10(g) lists and limits the circumstances under which modifications or variances from applicable WQS may be sought based on the site-specific conditions of the discharge and receiving water. It is the intent of the parties to address those situations in the MOU referenced in Whereas clause 21 of this Order.

2. Respondents will conduct CSO Abatement Project post-construction water quality monitoring. The approved Drainage Basin Specific and City-Wide LTCP shall contain schedules for the post-construction water quality monitoring required by this paragraph. This monitoring shall be done in accordance with the approved final drainage basin specific and final city-wide LTCPs, which will be consistent with the EPA guidance titled *Combined Sewer Overflows—Guidance for monitoring and Modeling*, USEPA 832-B-99-002 (January 1999).

E. All Final Design Documents submitted pursuant to paragraph III.B and Appendix A shall include a Critical Path Method (“CPM”) analysis of sequential and parallel tasks to be conducted pursuant to this Order, for the purposes of identifying critical junctions in the project schedule and avoiding conflicts that could lead to delays. To be approvable, the CPM shall evaluate Respondents’ ability to comply with the milestone dates set forth in Appendix A. The approved CPM shall address compliance with all applicable State/City Environmental Quality Review or other public notice requirements.

F. Upon approval by the Department, Respondents shall implement the studies, facility plans, engineering designs, facility construction and LTCPs, as submitted pursuant to paragraphs III.A- III.E above, in accordance with the schedules and terms of Appendix A, and the Approved Facility Plans. The Respondents shall submit a written certification of compliance to the Department regarding completion of every milestone set forth in or incorporated into Appendix A, in the Quarterly Reports required by this Order. Such written compliance notification shall be sent to the parties identified in paragraph XIV.E below. The wet weather operating plan that is required in the 14 WPCPs CSO Best Management Practices shall be required to be updated as a result of modifications made to the Combined Sewer System during the implementation of the LTCPs.

G. Any requests for modification made pursuant to paragraph XIII, that may materially affect the process, construction schedule, or performance of any CSO Abatement Project set forth in Appendix A, shall be submitted to the Department for approval 60 days in advance of implementation.

H. The following definitions shall apply to the implementation of, and compliance with, this Order:

1. "Design Completion:"

Design shall be considered complete upon the Respondents' submission of approvable plans and specifications to the Department and the New York State Environmental Facilities Corporation ("EFC") for review. Approval or disapproval of such submission by the Department shall be given in writing by either the Department or EFC within 60 days of the Respondents' submittal. If either the Department or EFC disapproves the Respondents' submittal, Respondents shall be in violation of this Order. In the event that the Department or EFC fails to respond in writing within 60 days of receipt, Respondents submission shall be deemed approved. For purposes of this provision, the date of the Department's or EFC's written response shall be the actual date of mailing, personal delivery or electronic transmission.

2. "Notice to Proceed to Construction" ("NTPC"):

Pursuant to the Wicks Law, all contracts consist of 4 elements: "G (general construction)," "P (plumbing)," "E (electrical)," and "H (heating, ventilation and air conditioning)." NTPC milestones shall be met when, at a minimum, the "G" element is noticed to proceed to construction. The noticing of any and/or all the other elements of a contract shall not be considered compliance with an NTPC milestone, until the "G" element is noticed.

### 3. "Construction Completion:"

Construction shall be considered complete when the process-related equipment and facilities are constructed in accordance with the approved plans and specifications, and are placed in operation to meet the applicable SPDES permit requirements. In addition to the foregoing, Respondents shall make all best efforts to place in operation all treatment units and associated automatic controls as soon as they are operable, to maximize CSO capture and treatment as soon as possible, up until the time the Facility complies with its SPDES permit requirements. Any dispute regarding Respondents' compliance with the best efforts clause shall be resolved in accordance with the Dispute Resolution procedure set forth in Paragraph VII below.

I. Respondents shall comply with, and be bound by, the schedules, timetables and requirements set forth in Appendix A, and the Approved Facility Plans, including the milestones incorporated therein, irrespective of the availability of financial assistance from Federal, State or other sources.

J. As required by Appendix A, Respondents shall submit a completed SPDES permit application for modification of the "receiving WPCP permit" for each CSO abatement project. The "receiving WPCP permit" shall mean the permit for the WPCP that receives flow from the combined sewer system where the CSO abatement project is located. Respondents shall not issue a Notice to Proceed to Construction on any CSO abatement project until after the modification of the receiving WPCP SPDES permit for that specific project has been issued by the Department.

## IV. PROJECT ADMINISTRATION

A. Respondents shall submit quarterly status reports to the Department ("Quarterly Reports"). The Quarterly Reports shall describe the actions that have been taken toward achieving compliance with this Order during the previous 3 month period, including all the following:

1. A list of the Respondents' construction contracts necessary to fulfill the requirements of this Order, including compliance with all milestones. This list will identify, by percentage, the amount of the contract that has been completed.
2. A detailed description of: (a) the work performed pursuant to this Order during the reporting period, including the status of all milestones, met or not met, (b) for any missed milestones an explanation of the noncompliance and how Respondents intend to return to compliance; and (c) all anticipated activities for the next 3 month period.

3. Information regarding unresolved delays encountered or anticipated that may affect the future schedule for implementation of the Respondents' obligations under the Order, and efforts made to mitigate and/or cure those delays or anticipated delays. Each quarterly report must provide an update on whether Respondent DEP is complying with the CSO Order by providing a comprehensive report, in the form of charts detailing compliance and non-compliance with each requirement in the CSO Order and the milestone dates listed in the appendix to this Order. These charts should also compare the dates in the CSO Order with the Respondent DEP's anticipated construction schedule, indicate how much time has been gained or lost, and also set forth Respondent DEP's plan for recovering lost time.
4. Description of community relations activities during the reporting period and the activities anticipated for the next three months.
5. Any changes in key personnel.
6. Any other issues with the potential to materially affect the work required under this Order, including any change orders that might materially affect the construction work required by this Order.
7. A description of the progress/status of the Drainage Basin Specific and City-Wide LTCPs development including the following elements: (1) Characterization, Monitoring, and Modeling of the Combined Sewer System; (2) Public Participation; (3) Consideration of Sensitive Areas; (4) Evaluation of Alternatives; (5) Cost/Performance Considerations; (6) Operational Plan; (7) Maximizing Treatment at the Existing WPCP Treatment Plant; (8) Implementation Schedule; and, (9) Post Construction Compliance Monitoring Program. This reporting on the progress of the Drainage Basin Specific and City-Wide LTCPs development shall be included in the first and third quarterly reports of each calendar year beginning in the year 2005 and continuing until all Appendix A requirements have been completed and approved.

B. The Quarterly Reports shall include an Executive Summary which summarizes the information required by sections 1-7 above. The Respondents shall choose the format for the first executive summary, and shall modify the format in accordance with subsequent reasonable requests by DEC following Respondents' submission of the first Quarterly Report under this Order.

C. From the effective date of this Order until all requirements of this Order have been met, Respondents shall submit these Quarterly Reports to the Department on the 30<sup>th</sup>

day of the month following the end of a quarterly period. The quarterly periods are defined as January 1<sup>st</sup>-March 31<sup>st</sup>, April 1<sup>st</sup>-June 30<sup>th</sup>, July 1<sup>st</sup>- September 30<sup>th</sup>, and October 1<sup>st</sup>-December 31<sup>st</sup>.

D. In addition to the Quarterly Reports, representatives of the parties shall hold quarterly progress meetings, to discuss and resolve any problems that may arise in the planning, design and construction of the CSO abatement facilities set forth in this Order. As necessary, responsible staff of the Respondents involved in any aspect of the Respondents' compliance with this Order shall attend progress meetings.

E. Within 30 days of the effective date of this Order, Respondents shall designate a Project Manager who reports to an executive officer of the Respondents. The Project Manager will be responsible for assuring that construction of the CSO abatement facilities proceeds as smoothly and efficiently as possible, and that Respondents comply with the terms of this Order (the "Project Manager"). Within thirty days of the effective date of the Order, Respondents shall notify the Department of such designation. The Project Manager shall have, at a minimum, the following duties:

1. Facilitating the coordination of the Respondents' activities among its departments and agencies in order to expedite compliance with the terms of this Order, and ensuring that appropriate representative of other Respondents' departments and/or agencies attend the quarterly meetings;
2. Facilitating the procurement of additional consultants;
3. Attending all quarterly meetings;
4. Filing all necessary reports in a timely manner;
5. Detecting problems that might delay implementation of this Order and taking all necessary steps to overcome the effects of such problems, including but not limited to, promptly notifying the Department; and
6. Pursuant to paragraph III.F, submitting to the Department a written certification of compliance, with the milestones set forth in Appendix A. These certifications shall be submitted in the Quarterly reports required by this Order.

## **V. STIPULATED PENALTIES**

A. Any judgment against Respondents pursuant to this Section shall be due and payable, and may be entered upon thirty days notice to Respondents. Interest shall accrue on

any stipulated penalty not paid when due, at a judgment rate not to exceed 9% per annum, non-compound, or such other judgment interest rate as General Municipal Finance Law §3-a or any successor law shall establish.

B. If Respondents fail to meet any of the milestone dates set forth in Appendix A the Department shall have judgment against Respondents, and Respondents consent to entry of judgment in this Court for a stipulated penalty in the amounts set forth below, for each day of violation:

| <b><u>PERIOD OF NON-COMPLIANCE</u></b>            | <b><u>PENALTY PER-DAY</u></b> |
|---------------------------------------------------|-------------------------------|
| 1 <sup>st</sup> day through 30 <sup>th</sup> day  | \$ 3,500                      |
| 31 <sup>st</sup> day through 40 <sup>th</sup> day | 5,000                         |
| 41 <sup>st</sup> day through 50 <sup>th</sup> day | 7,500                         |
| 51 <sup>st</sup> day through 60 <sup>th</sup> day | 10,000                        |
| Each day beyond the 60 <sup>th</sup> day          | 25,000                        |

The milestones set forth in Appendix A shall be classified as either major or minor schedule milestones. As set forth in paragraph III.B above, major schedule milestones shall be Notice to Proceed to Construction, Construction Completion and the submittal of the Drainage Basin Specific and City-Wide LTCP milestones set forth in Appendix A. Minor schedule milestones shall be all other milestones set forth in Appendix A. Stipulated penalties which accrue as a result of the Respondents' failure to comply with minor schedule milestones shall be paid into an interest bearing escrow account established by the Respondents with, and administered by, the Environmental Facilities Corporation ("EFC") (Minor Milestone Escrow Account). If Respondents comply with the next related Notice to Proceed to Construction milestone date, for the same water body, as set forth in Appendix A, and on or before that date Respondents complete the requisite work for which the stipulated penalty has been assessed, then, upon the written approval of the Department, the accrued stipulated penalty shall be released to the Respondents, however EFC shall keep an amount of the accrued interest equal to its administrative expenses for administering the Minor Milestone Escrow Account. Upon the withdrawal of these funds EFC will provide a written statement of its costs to Respondents. If Respondents do not comply with the next related Notice to Proceed to Construction schedule milestone date, for the same waterbody, set forth in Appendix A, then the stipulated penalty and any accrued interest shall be paid to the Major Milestone Escrow Account, as described below.

In the event of Respondents' non-compliance with any Notice to Proceed to Construction major milestone date set forth in Appendix A, Respondents shall pay the stipulated penalty amount into an interest bearing escrow account established with EFC for this purpose (Major Milestone Escrow Account). If Respondents comply with the final Construction Completion milestone date for which the related Notice to Proceed date as set forth in Appendix A was missed, then the accrued stipulated penalties, and interest, for

which payment has been made into the Major Milestone Escrow Account, shall be released to the Respondents. However, EFC shall keep an amount of the accrued interest equal to its administrative expenses for administering the Major Milestone Escrow Account. Upon the withdrawal of these funds EFC will provide a written statement of its costs to Respondents. If Respondents do not comply with the final Construction Completion milestone date for a specific project for which a related Notice to Proceed Milestone was violated, then upon written notice to Respondents the funds in the Major Milestone Escrow Account attributable to that related Notice to Proceed Milestone shall be paid to the Department in the same manner as the civil penalty set forth in paragraph II.A. above. Should Respondents fail to comply with any LTCP milestone, as set forth in Appendix A, the stipulated penalties due shall be paid by Respondents to the Department in the same manner as the civil penalty set forth in paragraph II.A. above.

C. For all events of non-compliance with any terms of this Order or its Appendices, other than those violations addressed by paragraphs VI.A or B above, the Department shall have Judgment against Respondents, and Respondents consent to entry of a Judgment, for a stipulated penalty in the amounts set forth below, for each day of violation:

| <b><u>PERIOD OF NON-COMPLIANCE</u></b>            | <b><u>PENALTY PER-DAY</u></b> |
|---------------------------------------------------|-------------------------------|
| 1 <sup>st</sup> day through 30 <sup>th</sup> day  | \$ 1,000                      |
| 31 <sup>st</sup> day through 40 <sup>th</sup> day | 2,500                         |
| 41 <sup>st</sup> day through 50 <sup>th</sup> day | 3,500                         |
| 51 <sup>st</sup> day through 60 <sup>th</sup> day | 7,500                         |
| Each day beyond the 60 <sup>th</sup> day          | 15,000                        |

D. In the event that a discharge, action or inaction by Respondents violates a requirement of this Order which is recited in both a decretal paragraph and corresponding appendix provision, Respondents shall only be liable, and subject to penalty for, a single violation.

## **VI. FORCE MAJEURE**

A. Respondents shall not be in default of the provisions of this Order, if their non-compliance is directly attributable to, an Act of God, war, insurrection, terrorism, strike, judicial injunction, failure of a federal or State agency or authority to issue any necessary permit or approval in a timely fashion where, in accordance with applicable law or regulations, Respondents have timely submitted a complete application and all necessary supporting information and are otherwise entitled to such permit or approval, catastrophic condition, or other circumstance that is entirely beyond their control, and where Respondents have made all good faith efforts to comply with the provisions of this Order at issue ("force majeure"). If such a force majeure event occurs, Respondents shall be entitled to an extension of the schedule milestone(s), limited to the period of time caused by such event that placed compliance with a provision of this Order beyond Respondents' control.

Penalties for failure to satisfy any Order requirement, due to a force majeure event, can be excused only under the terms of this decretal paragraph, and only where Respondents took all steps reasonably necessary to avoid or mitigate the delay, and strictly complied with the notice requirements of this paragraph, and that the delay is limited to an amount of time equal to the period of delay directly attributable to the force majeure. As a condition precedent to obtaining any relief under this provision, Respondents shall notify the Department in writing that a force majeure event has occurred, no later than twenty days after the date Respondents knew or should have known of the occurrence of any force majeure event. Respondents shall include in such notice the measures taken and to be taken by Respondents to prevent or minimize any compliance delays and shall request an appropriate extension or modification of the applicable deadlines under this Order. Failure to give such notice within such twenty day period constitutes a waiver of the ability to evoke force majeure as a defense to stipulated penalties.

B. Whenever a milestone is missed, pursuant to a force majeure event or otherwise, the Respondents shall exercise their best efforts to recoup all lost time, including where appropriate, the payment of extraordinary expenses for overtime, double shifts, or additional contractors or consultants, or alternative methods to the extent allowable under local law.

C. If the Department determines, that no force majeure event occurred and a stipulated penalty is due, Respondents shall promptly pay the stipulated penalty plus interest from the date of the missed milestone, or invoke the dispute resolution provisions set forth in paragraph VII below.

## **VII. DISPUTE RESOLUTION**

DEC and the Respondents recognize that in the course of the design, construction and modification of the CSO Abatement Projects/tasks required by this Order, disputes may arise between the parties regarding the appropriateness of any disapproval by the DEC of a required submittal by the Respondents, conditions attached to the DEC's approval of a required submittal, whether DEC has appropriately rejected a modification requested by the Respondents pursuant to Paragraph XIII, whether a force majeure event has in fact occurred, any other determination by the DEC under this Order, or the Respondents' compliance with the terms of this Order. In the event such a dispute arises, it shall be resolved as follows:

A. If DEC disapproves a submittal required by the Respondents under this Order, approves a required submittal with conditions that the Respondents deem unacceptable, makes any other determination that the Respondents have violated this Order, or declines to agree to an Order modification requested by the Respondents pursuant to Paragraph XIII, then the DEC Region 2 Water Engineer shall issue a written determination ("DEC Determination") to the Respondents setting forth the basis for disapproval of the submittal, conditional approval of the submittal, other basis for determining that the Respondents have violated this Order, or basis for not agreeing to a requested Order modification. If the

Respondents dispute the DEC Determination, Respondents may seek to resolve the dispute by requesting informal negotiations with DEC. Upon such a written request by the Respondents, DEC and the Respondents shall make reasonable efforts to resolve the dispute through informal negotiations. DEC shall make all good faith efforts to meet with and/or discuss the dispute in question with the Respondents, as soon as practicable, and the parties shall make reasonable efforts to resolve the dispute through informal negotiations. Unless both parties agree in writing otherwise, the time to conclude informal negotiations shall terminate 45 days from the day Respondents receive the DEC Determination.

B. The Respondents shall also have the right to challenge a DEC Determination in an Article 78 proceeding in New York State Supreme Court for New York County. To do so the Respondents must commence the Article 78 proceeding within 45 days of receiving the DEC Determination. If such a proceeding is commenced, any DEC Determinations hereunder shall be deemed to be final agency actions. If the Respondents do not commence an Article 78 proceeding within 45 days of receiving the DEC Determination, then the Respondents shall waive the right to challenge the Determination and the assessment of any penalties associated with that Determination. The parties may agree, in writing and on a case-by-case basis, to extend the 45 day period within which the Respondents must commence an Article 78 proceeding to challenge a particular DEC Determination. The 45 day period for informal negotiation and for the Respondents to commence an Article 78 proceeding shall run concurrently. Respondents' remedies for dispute resolution under this Order shall be limited to the informal negotiations noted above and bringing an Article 78 proceeding in New York State Supreme Court for New York County. The Respondents shall have no right to any formal administrative review of a DEC Determination.

C. In any Article 78 proceedings challenging a DEC Determination, service of the petition and accompanying papers commencing the proceeding and all subsequent papers shall be made by the Respondents on the State in accordance with Paragraph XIV.E below or to such other individuals as the DEC shall designate pursuant thereto. Service on those individuals shall be deemed valid service on the State.

D. If, in the case of a challenge by Respondents to a DEC Determination disapproving a submittal required under this Order or approving a required submittal with conditions that the Respondents consider unacceptable, the submittal is found to have been approvable as submitted, then no penalties or interest may be assessed and subsequent milestone dates shall be extended appropriately, as agreed upon by the Respondents and State or as otherwise determined by the Court. If the submittal is found to have been properly disapproved, then penalties and interest shall be assessed from the date of DEC's Determination, subject to the minimum notice requirements of this Order, and the subsequent milestone dates shall not be extended, unless otherwise agreed upon by the State and Respondents, or ordered by the Court, for good cause shown by the Respondents.

E. If, in the case of a challenge by Respondents to a DEC Determination rejecting an Order modification requested by the Respondents pursuant to Paragraph XIII, the DEC Determination is found to be arbitrary and capricious, then no penalties or interest may be assessed and subsequent milestone dates shall be extended appropriately, as agreed upon by the Respondents and State or as otherwise determined by the Court. If the DEC Determination rejecting the modification is found to have been properly disapproved, then penalties and interest shall be assessed from the date of DEC's Determination, subject to the minimum notice requirements of this Order, and the subsequent milestone dates shall not be extended, except unless otherwise agreed upon by the State and Respondents, or ordered by the Court, for good cause shown by the Respondents.

F. If, in the case of a challenge by Respondents to a DEC Determination of violation predicated on a claim of force majeure by the Respondents, DEC's Determination is found to be arbitrary and capricious, then no penalties or interest may be assessed, and subsequent milestone dates shall be extended appropriately, as agreed upon by the Respondents and State, or as otherwise determined by the Court, if the Respondents demonstrate that the force majeure materially affects the Respondents' ability to meet subsequent milestones. If the Respondents do not demonstrate that the force majeure materially affects the Respondents' ability to meet subsequent milestones, then no subsequent milestone shall be extended, regardless of whether the DEC Determination is found to be arbitrary and capricious. If the Respondents' claim of force majeure is rejected, then penalties and interest shall be assessed from the date of DEC's Determination, subject to the minimum notice requirements of this Order, and subsequent milestones shall not be extended.

G. In the case of any other challenge by the Respondents to a determination by DEC issued hereunder (including, but not limited to, a challenge to a DEC Determination that the Respondents have failed to submit a quarterly construction report on time, failed to make a monitor payment, failed to submit any other report required hereunder on time, etc.), if DEC's Determination is upheld then penalties and interest shall be deemed due and payable when originally assessed by DEC, subject to the minimum notice requirements of this Order. Regardless of whether or not DEC's determination is upheld, the bringing of such a challenge by the Respondents, pursuant to this Paragraph G, shall in no way result in an extension of any milestone dates under this Order.

H. The State shall have the right to enforce any administrative judgment assessed against the Respondents pursuant to Paragraph V, and any other obligation of the Respondents hereunder, in New York State Supreme Court for New York County. The Respondents consent that the State may commence an action in that Court to enforce any such judgment or other obligation, and that service of the papers commencing the action in accordance with Paragraph XIV.E shall be deemed valid and complete service on the Respondents.

## **VIII. ENVIRONMENTAL MONITORS REQUIRED**

### **A. Independent Environmental Monitors Required**

Within 120 days of the effective date of this Order, Respondents shall, at their own expense, retain an Independent Environmental Monitor (IEM) to provide independent environmental monitoring services for the construction to be conducted pursuant to this Order. The monitoring services shall be performed by a minimum of one, and a maximum of four, full-time individuals employed by the IEM for each year this Order is in effect. The number of individual monitors may be adjusted as set forth in paragraph VIII.F below.

1. For purposes of paragraph VIII.A. only, should Respondents be unable to comply with the 120-day requirement set forth above, Respondents may invoke the force majeure provisions set forth in Paragraph VI. Provided Respondents otherwise comply with the force majeure provisions set forth in Paragraph VI., a force majeure event will be found if Respondents' noncompliance is directly attributable to either Respondents' procurement rules or otherwise reasonable delays resulting from contractual issues. Should a force majeure event make Respondents' compliance with the 120-day requirement impossible, for the reasons described above, Respondents shall diligently proceed with their procurement process to fulfill the requirements of Paragraph VIII. of this Order. Until this procurement process is complete and Respondents retain permanent IEMs, Respondents agree to fund temporary interim IEMs in accordance with paragraph VIII.F to be retained by the Department.

### **B. Selection of the IEM**

1. The IEM may be an individual(s), partnership, corporation, governmental or inter-state entity. Provided that Respondents comply with the requirements of paragraph VIII, the selection of the IEM shall be subject to approval by the Department in its sole discretion, consistent with Respondents contract procurement requirements. Engineering, consulting, and other types of firms and individuals who are currently performing consulting or contracting work for Respondent DEP in any other capacity, at any facility owned or operated by Respondents, are precluded from functioning as an IEM.

2. The IEM must have staff available that possess the requisite educational background, certifications, licenses and/or experience necessary to perform the various tasks outlined in the Work Plan described in paragraph VIII.D, below. It is permissible for the IEM to subcontract for specialized services (e.g., geologic or liner installation) with the prior written approval of the Department. The IEM, if an individual, must be a New York State licensed professional engineer, and if a partnership, corporation, or other type of entity, must have a New York State licensed professional engineer on staff who will be responsible for all environmental monitoring activities at Respondents' facilities.

### C. Agreement Between Respondents and the IEM

The monitoring services shall be conducted in accordance with an Independent Environmental Monitoring Service Agreement (IEM Agreement) described in paragraph VIII.C, below, between Respondents and the IEM. The IEM Agreement shall include the name(s) of the IEM's New York State licensed professional engineer(s) responsible for all facility environmental monitoring activities. The IEM Agreement shall be subject to the Department's approval. The Department may not unreasonably withhold its approval of the IEM Agreement. The Department shall provide a written explanation of its basis for any disapproval of an IEM proposed by Respondents. If Respondents do not agree with the Department's disapproval, Respondents may invoke the dispute resolution provisions set forth in paragraph VII. In addition, the IEM Agreement will set forth the parties' obligations as follows:

#### 1. Respondents' Obligations Under the IEM Agreement

- a. The IEM will have the right to access any of Respondents' facilities that are addressed by this Order at all reasonable times;
- b. The IEM will have the right to review any information located at the site that would otherwise be available to Department staff in the normal course of their duties; and
- c. Respondents will provide the IEM with adequate office space at a location to be determined. This office space shall include, at a minimum: a lockable desk, chair, lockable file cabinet, telephone service, computer equipment, electricity, lights, heat and air conditioning.

#### 2. IEM Obligations Under the IEM Agreement:

- a. The IEM must be available to Department staff at all times while at one of Respondents facilities, either by telephone, cell phone, e-mail, or other similar means;
- b. The IEM and the IEM's staff must report directly to, and be directed by, the Department in all matters relating to the environmental monitoring described herein;
- c. In the event that an IEM determines that a violation of this Order, or any other legal authority, exists, the IEM must notify the Department before the close of business the same day that the violation was discovered in accordance with procedures determined by the Department. The IEM shall assist the Department in any investigation or enforcement action that is taken against the Respondents for any violation(s) relating to the facility; and

d. The parties to the IEM Agreement may agree that the IEMs shall summarize the activities they conducted each quarter in a detailed quarterly summary which shall be provided to the Respondents within 60 days of the end of each quarter.

#### D. Work Plan

A Work Plan must be developed by Respondents and the IEM and approved by the Department. The Work Plan must include, but not be limited to, a detailed description of the following:

1. the monitoring of Respondents' facilities during construction to ensure the facilities are constructed in accordance with the design plans and the requirements of the permit;
2. the monitoring of soil borings, the installation of all monitoring wells or any other subsurface investigation conducted at or in proximity to the facility site;
3. the monitoring of Respondents' facilities during operation to ensure compliance with the requirements of this Order;
4. the conducting of inspections of Respondents' facilities and the completion of a Department approved inspection report noting all major activities that occurred during the day of the inspection, and documenting any violations of the Order;
5. all reports or other written materials that will be produced by the IEM along with the schedule of submission to the Department;
6. The review and comment to be done on all reports required to be submitted by the Respondents to the Department; and
7. The IEM Agreement between the Respondents and the IEM must specify the minimum time that individual monitors are required to be at one of the Respondents' facilities and for what activities. This schedule must be included in the Work Plan.

#### E. Further Conditions Relating To Materials Provided To Or Generated By IEMs

1. All documentation, inspection reports, logs, photos, and records developed, collected or generated by any IEM in connection with the monitoring of Respondents shall be the sole property of the Department and are not subject to prior review or approval by Respondents. Upon the written request of Respondents, the IEM may transmit copies of non-confidential documents and reports to Respondents. All IEMs shall retain all monitoring materials or copies of the monitoring materials at the location set forth in

paragraph VIII.A.3 above, and these monitoring materials shall remain at that location in the event that a new IEM assumes the environmental monitoring responsibilities.

2. Department staff or an IEM shall have the right to seek any other non-confidential and non-privileged information from Respondents pertaining to environmental compliance activities under this Order as needed, and all such information shall be supplied to Department staff or the IEM at a frequency to be determined by the Department.

F. Adjustments to the Number of Individual Monitors

1. Upon commencement of the agreement between the Respondent and the IEM, the monitoring services to be provided shall be the equivalent of two full-time employees of the IEM.

2. As of January 1, 2006, the IEM Agreement between the Respondent and the IEM, shall provide for monitoring services to be the equivalent to four full-time employees of the IEM. This number shall remain until such time as the Department issues a written determination that less monitoring services are needed.

a. If Respondents believe that there is insufficient work to occupy the IEM staff time called for under this Order, Respondents may provide to the Department a detailed written explanation (with relevant documentation) of its request to decrease the amount of IEM staff time. Upon receipt of such transmittal, the Department shall review such request in good faith and, if the Department concurs in writing, Respondents may decrease, or need not increase, the IEM staff time in accordance with their Agreement with the IEM.

G. Change in the IEM.

1. The discharge or replacement of an IEM shall be subject to the approval of the Department at its sole discretion. In the event that Respondents seek to replace the existing IEM with another IEM, Respondents must submit a written request to the Department at least 30 calendar days prior to the proposed termination date for the existing IEM. The request shall include information regarding the IEM being proposed as well as an explanation of the reasons for desiring the replacement of the existing IEM. The Department's written approval must be obtained prior to the termination of the existing IEM and the employment of a new IEM. The Department may not unreasonably withhold its approval of a request to discharge or replace an IEM. The Department shall provide a written explanation of its basis for any disapproval of a discharge or replacement request by Respondents. If Respondents do not agree with the Department's disapproval, Respondents may invoke the dispute resolution provisions set forth in paragraph VII.

2. A continuity of monitoring services between the old IEM and the new IEM must be maintained during any transition period in order to ensure appropriate facility monitoring, unless otherwise approved by the Department in writing.

## **IX. RESERVATION OF RIGHTS**

A. Nothing contained in this Order shall be construed as a release or waiver by the Department of its rights to: (1) seek injunctive relief to abate any violation of law or this Order; (2) seek stipulated penalties and entry of judgment as provided in Paragraph V of this Order; (3) seek penalties and other relief for any violations of law or, other orders and/or permits (other than those alleged herein), including but not limited to any violations at any of Respondents WPCPs, except to the extent that this Order supplants those orders or permits; (4) reallege the violations listed in this Order to obtain injunctive relief or damages in support of natural resource damage claims; (5) seek penalties and other relief for any criminal liability for any violations listed in this Order; or (6) seek to modify, suspend, or revoke any DEC issued permit.

B. Except as expressly set forth herein, nothing contained in this Order shall be construed as a release or waiver of Respondents' rights to oppose and defend against injunctive relief, imposition of penalties, damages or any other imposition of liability by the Department. Nothing contained in this Order shall be construed as a waiver by Respondents of their rights to seek a modification of any permit or order.

C. The Department reserves all such rights as it has to require Respondents to take any additional measures required to protect human health or the environment, including, but not limited to, the right of the DEC Commissioner or his/her designee to exercise any summary abatement powers, whether at common law, or granted pursuant to statute or regulation, against Respondents or any other party.

D. Except as expressly set forth herein, nothing set forth in this Order shall be read as relieving Respondents of any of its obligations pursuant to any permits, orders on consent, or consent decrees to which it is subject.

## **X. INDEMNITY**

Respondents shall indemnify and hold harmless New York State, the Department, EFC and any of their employees or contractors for any and all claims, actions, damages, and costs resulting from Respondents' acts, or from actions taken by the Department in fulfillment or attempted fulfillment of the provisions of this Order to the extent that they are not caused by intentional, negligent or reckless acts of New York State, the Department, EFC or any of their employees or contractors.

## **XI. ACCESS**

For the purpose of ensuring compliance with this Order, Respondents shall allow duly authorized representatives of the Department full access to the Facility without prior notice in order for the Department to inspect and determine the status of Respondents'

compliance with this Order. Upon the arrival of the Department's authorized representative, he or she shall contact the Facility's plant superintendent or his/her designee and shall allow the plant superintendent or his/her designee to accompany him or her on the inspection so long as that request does not delay the commencement of the inspection or otherwise interfere with such inspection.

## **XII. TERMINATION**

This Consent Order shall be deemed completely satisfied and shall terminate when each of the following conditions has been fully satisfied: (1) Respondents' payment of the civil penalty and EBP funds as set forth in Paragraph II above; and (2) Respondents' written certification and DEC's written verification, of timely completion of each compliance action required in Appendix A.

## **XIII. MODIFICATION**

A. If Respondents desire that any of the provisions, terms or conditions of this Consent Order be changed, they shall make timely written application setting forth the grounds for the relief sought to the individuals listed in paragraph XIV.E below. DEC shall not unreasonably withhold approval for any reasonably made application by Respondents. Any change to this Consent Order must be in writing and signed by the DEC Commissioner or his/her designee. DEC reserves the right to designate additional or different addressees for communication upon written notice to Respondent DEP. Modifications to this order will be published for notice and comment in accordance with 6 NYCRR Part 621.

B. This Order and its annexed Appendix constitute the entire agreement of the parties. No obligation of the Department or Respondents shall be deemed to have been waived or otherwise modified without the express written consent of the Department or Respondents, respectively.

## **XIV. GENERAL PROVISIONS**

A. All references to "days" herein are to calendar days unless otherwise specified.

B. The section headings set forth in this Order are included for convenience of reference only and shall be disregarded in the construction and interpretation of any of the provisions of this Order.

C. This Order and its Appendices shall apply to, and be binding upon the parties, their officers, agents, servants, employees, successors and assigns, and each of them, and upon all persons, firms and corporations acting under, through or for, in active concert or participation with, the parties.

D. No communication by the Department shall constitute a modification, approval or alteration of any obligation of, or required conduct by, Respondents under this Order, other than a formal written communication expressly identified by the Department as such.

E. All submittals to DEC required by this Order shall be made, one copy unless otherwise designated, as follows:

Director, DEC Division of Water  
DEC  
625 Broadway, 4<sup>th</sup> Floor  
Albany, NY 12233-3500  
(Two copies)

DEC, Division of Water  
Compliance Bureau Director  
625 Broadway, 4<sup>th</sup> Floor  
Albany, NY 12233-3500

DEC Region 2 Water Engineer  
47-40 21st Street  
Long Island City, NY 11101

Environmental Facilities Corporation  
625 Broadway, Albany NY 12207  
Att: Timothy Burns, P.E.

All communications and modification requests, other than technical submissions, to DEC under this Order shall be made to the above parties and also to:

Scott Crisafulli, Esq.  
Division of Environmental Enforcement  
625 Broadway, 14<sup>th</sup> Floor  
Albany, NY 12233-5500

The Department reserves the right to designate additional or different individuals or addressees for communication upon written notice to Respondents, or to request that technical submissions be additionally made to Mr. Crisafulli.

F. All responses to submittals, and any other correspondence regarding technical issues that are sent to Respondents, shall be provided to:

Warren Kurtz, P.E.  
Deputy Commissioner

NYCDEP, Bureau of Environmental Engineering  
59-17 Junction Blvd., Corona, NY 11368.

All other writings transmitted under this Order shall be submitted to:

Judah Prero, Esq.  
NYCDEP, Bureau of Legal Affairs  
59-17 Junction Blvd.  
Corona, NY 11368.

## **XV. RELEASE**

Subject to Paragraph IX, upon the completion of the work required by this Order the Department hereby releases Respondents for the violations of the 1992 Order of which the Department had actual knowledge or notice of as of the effective date of this Order.

## **XVI. PUBLIC NOTICE**

A. After the Respondents sign this Order, DEC shall publish notice that the Order has been proposed and that public review and comment is sought. Notice shall be published in the Environmental Notice Bulletin, and, with costs to be borne by the Respondents, in a newspaper(s) of general circulation in the New York City Metropolitan area, and shall specify where interested members of the public can obtain a copy of the complete Order. DEC shall additionally hold a public meeting to discuss and respond to questions about the Order. The places where the Order may be obtained shall include the offices of DEC Region 2, and the DEC website, where it will be posted. The public shall be given 30 days to submit comments to DEC.

B. After the Respondents sign this Order, DEC shall additionally submit a copy of it to EPA. The Order shall be submitted to the EPA Administrator for Region II.

C. DEC shall consider all comments submitted on the Order, and shall provide copies of the comments to the Respondents. If DEC determines that the comments do not warrant modification of the Order, then DEC shall sign the Order and send signed copies of the Order to the Respondents in accordance with Paragraph XIV.E. The Order shall be effective in accordance with Paragraph XVII below.

D. If DEC determines that any of the comments warrant modification of the Order, then DEC shall modify it accordingly and seek the Respondents' agreement to the modification or modifications.

1. If the Respondents agree to the modification(s), then DEC shall sign it upon receipt of written notice from the City in accordance with Paragraph XIV.E

that the modifications are acceptable. DEC shall send signed copies of the Order to the Respondents in accordance with Paragraph XIV.E. The Order shall be effective in accordance with Paragraph XVII below.

2. If the Respondents do not agree to the modification(s), if any, then the Order shall not be binding on the Respondents. The parties shall endeavor, in good faith, to resolve the Respondents' objections to DEC's proposed modifications. Should the parties resolve the Respondents' objections, then the Order shall be modified accordingly, and the Respondents' and DEC shall sign the modified Order.

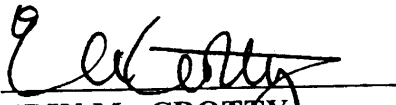
3. In the event of a substantive and significant modification to the construction compliance schedules provided for in this Order, the State shall provide public notice pursuant to this Paragraph.

#### **XVII. EFFECTIVE DATE**

The effective date of this Order is the date it is signed by the DEC Commissioner or his/her designee.

**DATED:**            **JAN 14 2005**, 2005  
                         ALBANY, NEW YORK

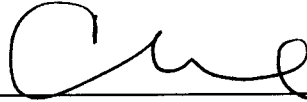
**New York State Department of  
Environmental Conservation by:**

  
**ERIN M. CROTTY**  
**COMMISSIONER**

EDMS#49542v10

## CONSENT BY RESPONDENTS

The New York City Department of Environmental Protection hereby consents to the issuance and entry of the foregoing Order, waives its right to a hearing herein as provided by law, and agrees to be bound by the provisions, terms and conditions contained herein.



Christopher O. Ward, Commissioner  
New York City Department of  
Environmental Protection

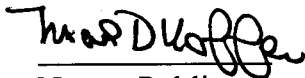
8.17.09

DATE

## ACKNOWLEDGMENT

State of New York )  
County of QUEENS ) ss.:

On the 17th day of AUGUST, 2004 before me personally came CHRISTOPHER O. WARD to me known, who being by me duly sworn did depose and say that he maintains an office at 59-17 Junction Blvd. in the County of Queens and that he was duly authorized to execute the foregoing instrument and did so on behalf of the Respondents of New York.

  
Notary Public

MARK D. HOFFER  
NOTARY PUBLIC, State of New York  
No. 02HO4682255  
Qualified in Queens County  
Certificate Filed in New York, Nassau and Suffolk Counties  
Commission Expires March 30, 2006

## CONSENT BY NEW YORK CITY CORPORATION COUNSEL

The New York City Corporation Counsel hereby consents to the issuance and entry of the foregoing Order without further notice, waives its right to a hearing herein, and agrees to be bound by the terms, conditions and provisions hereof.

Michael A. Cardozo,  
Corporation Counsel of the  
City of New York

BY: William S Plache  
Title: ASSISTANT CORPORATION COUNSEL

Date: August 2, 2004

## ACKNOWLEDGMENT

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

On this 2<sup>nd</sup> day of August, 2004, before me personally came William Plache, to me known, who being duly sworn, deposed and stated that (s)he maintains an office at 100 Church Street, NY, NY that (s)he is an Assistant Corporation Counsel, Environmental Law Section of The New York City Corporation Counsel, and that (s)he was authorized by said Department to execute the foregoing instrument.

[Signature]  
Notary Public

HILARY MELTZER  
Notary Public, State of New York  
No. 02ME5010465  
Qualified in New York County  
Commission Expires June 5, 2007



**Department of  
Environmental  
Protection**

59-17 Junction Boulevard  
Flushing, New York  
11373-5108

**Christopher O. Ward  
Commissioner**

**Warren Kurtz, P.E.  
Deputy Commissioner**

Bureau of Environmental  
Engineering

96-05 Horace Harding Expwy  
Corona, NY 11358-5107

Tel. (718) 595-6002  
Fax. (718) 595-5999  
warrenk@dep.nyc.gov

James DeZolt, P.E.  
Assistant Director, Division of Water  
NYSDEC  
625 Broadway  
Albany, NY 12233-1040

AUG 16 2004

**Re: NYCDEP's CSO Program**

Dear Mr. DeZolt:

This letter provides a comparison between the projected environmental benefits of the Combined Sewer Overflow ("CSO") program to be undertaken by the New York City Department of Environmental Protection ("DEP") under the accompanying Order on Consent, and the CSO program initially envisioned at the time the 1992 CSO Consent Order was entered into. The projections set forth below, for both the 1992 and the 2004 programs, are based on the information available to DEP at this time and the assumptions and analytic methodologies described below. This analysis demonstrates the comparative environmental benefits of the two programs. It does not, however, constitute a guarantee as to the absolute percentage of CSO flow that either the 1992 or the 2004 program would capture. The design and performance of each of the projects described in the 2004 CSO Order are governed solely by the milestones in that Order and required submissions.

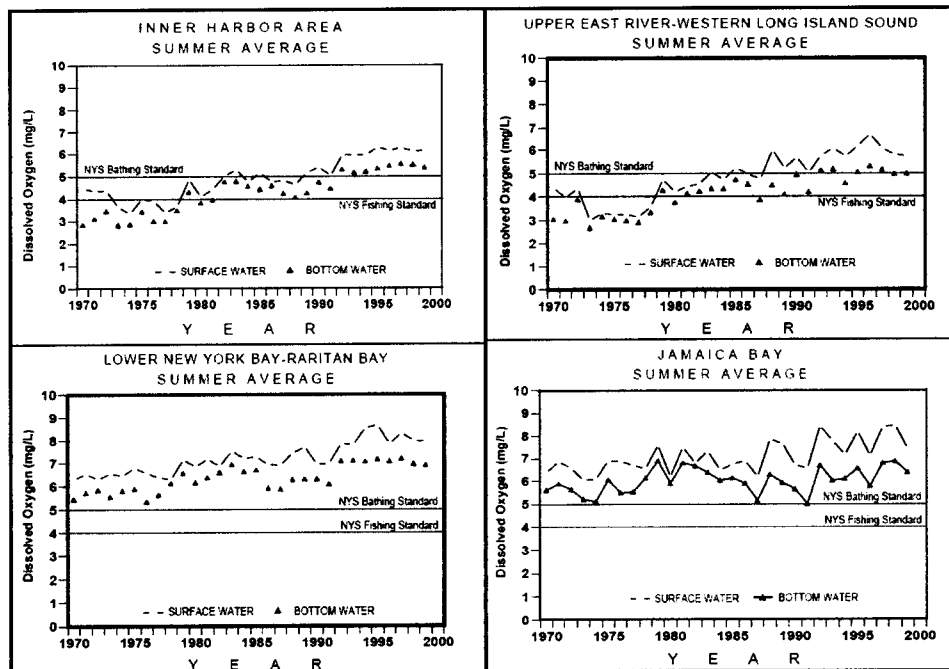
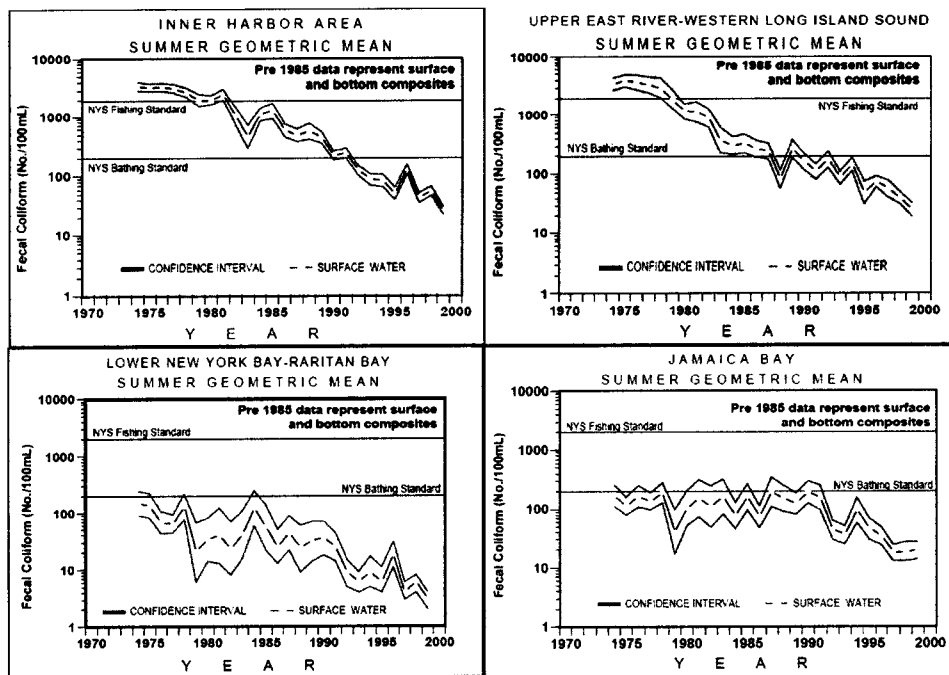
***Technical and Regulatory Review***

This letter summarizes DEP's currently proposed CSO program and contrasts its projected environmental benefits to the program envisioned in the 1992 CSO Consent Order ("the original plan"). In addition, a description is provided for the regulatory issues as they have evolved since the signing of the 1992 CSO Consent Order, including NYC's actions to address these issues. In sum, DEP's currently proposed CSO program will result in additional environmental benefits beyond that committed to in the original plan as well as bring the CSO program in line with current EPA and DEC guidance on managing CSOs.

***Technical Review***

Since the 1970's tremendous progress has been made in improving water quality in NY Harbor. Open water pathogen concentrations have been steadily trending downward and dissolved oxygen concentrations have been trending upward. The increase in wet weather capture at the WPCPs to the current estimated level of 69% has been a contributing factor to this improvement, among other actions undertaken by the City since the 1992 CSO Consent Order was signed. Although the 1992 Order focused on CSO storage tank projects for eight (8) locations (Flushing Bay, Paerdegat Basin, Hutchinson River, Bronx River, Westchester Creek, Alley Creek, Fresh Creek and Newtown Creek), DEP has since expanded the program to a more robust, diverse and comprehensive program.





DEP's current approach to CSO abatement is not limited to designing tanks, but rather, is a key element of many of DEP's water pollution control initiatives. DEP now evaluates cost effective ways to control CSOs when evaluating upgrades to a WPCP or pump stations. This has resulted in plans to provide additional facilities at the Hunts Point, Newtown Creek, 26<sup>th</sup> Ward, and Jamaica WPCPs to treat more flow at the treatment plant. It has resulted in enlarging the Gowanus Canal and Avenue V Pumping Stations to direct more combined sewage into the interceptor and away from the local receiving waters. Further, DEP's efforts to provide centralized treatment of CSOs is the focal point of the wet weather operating plans for the WPCPs and the regulator automation efforts, the SCADA

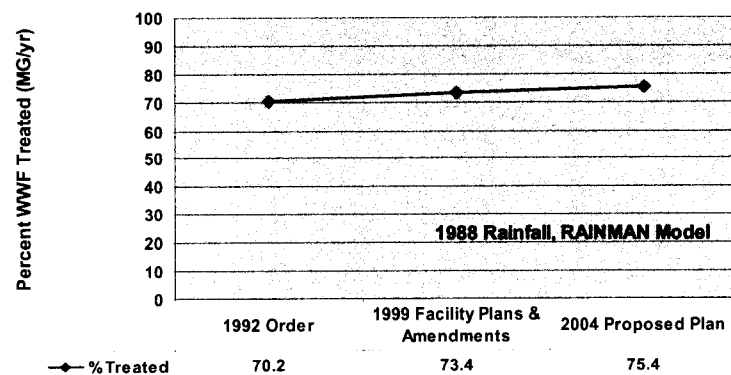
efforts, the installation of throttling gates in interceptors and the inline storage and real time control activities.

In addition, DEP has evaluated and implemented other cost-effective methods to improve water quality including the use of flushing tunnels, sewer cleaning, in-stream aeration, sewer separation in large areas of Southeastern Queens, floatables containment booms, skimmer boats and catch basin modifications for hoods and hangars at over 130,000 locations citywide. The City's CSO control program now contains in excess of 30 different projects, a major increase in scope from the eight retention facilities anticipated when the 1992 CSO Consent Order was signed. The attached table outlining CSO program costs indicates which projects have been added to the program since the 1992 Consent Order was executed, as well as the resulting increased CSO capture.

When fully built-out, the program will cost the City considerably more than originally envisioned when the 1992 Order was signed and will provide more benefits to the environment. The program DEP is proposing is estimated to cost in excess of \$2.1 billion (see attached – all costs are in 2004 dollars). When DEP entered into the 1992 CSO Order, the estimated cost of the tank program was \$1.4 billion (escalated to 2004 dollars). Even when additional costs are included for project elements presented in the 1999 Facility Plans, DEP projected that the total cost of all the CSO controls would be \$1.6 billion (escalated to 2004).

The more extensive CSO program reflected in the draft 2004 Consent Order improves upon the City's previous commitments under the 1992 Consent Order by increasing the amount of wet weather flow being treated from an estimated level of 70.2% under the 1992 Consent Order to an estimated

73.0% under the draft 2004 Consent Order.<sup>1</sup> Moreover, when other programs above and beyond those set forth in the draft 2004 Consent Order are considered, the City's currently proposed CSO control program is expected to provide treatment for an estimate of 75.4 percent of the wet weather flow. This is also up from the estimated level of 70.2 percent wet weather treatment that was anticipated to be provided by the elements of the program known to the City when it entered into the 1992 Order.

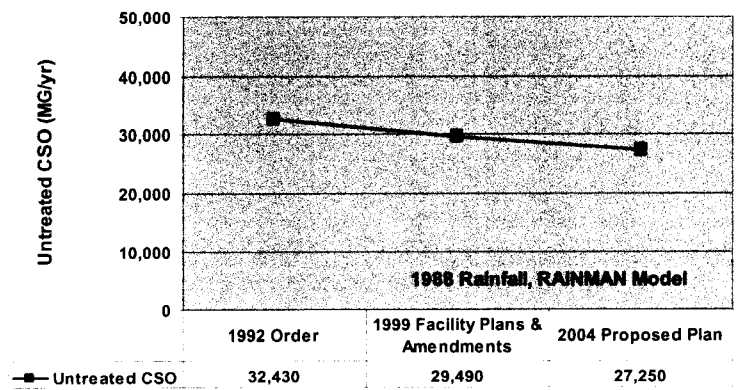


Additionally, the projects required under the draft 2004 CSO Consent Order, exclusive of other projects currently being undertaken by DEP, will reduce untreated CSOs to an estimated level of 29.65 billion gallons a year, compared to an estimate of 32.4 billion gallons of untreated CSO discharges under the 1992 program. Moreover, when the other projects DEP is undertaking, in addition to those required under the draft 2004 Consent Order, are considered, the currently proposed

<sup>1</sup> Future modifications to the design of CSO abatement projects, if such modifications are approved by DEC, may result in a decrease in the amount and/or percentage of citywide CSO capture, or an increase in the amount of untreated CSO discharge, from the current projections. Although DEP understands that this letter will be appended to the Consent Order between DEP and DEC, neither the amount nor the percentage of citywide capture projected in this letter is intended to represent a commitment by DEP to meet that amount or percentage if projects are modified in the future, and the amount and percentage of capture represented in this letter will not become a standard against which future project modifications will be assessed.

CSO program is expected to further reduce untreated CSOs to an estimated level of about 27 billion gallons a year.

There are other benefits that cannot be measured as wet weather capture that result from the currently proposed CSO program. For example, the flushing tunnel activation in Gowanus Canal, the aeration of Newtown Creek, the destratification of Shellbank Basin and the floatables controls in the Bronx River have all provided water quality benefits that are not quantified through the estimates provided herein as wet weather flow capture or CSO volume reduction. In addition, the floatables controls already in place through catch basin hooding and the interim CSO boom and skimmer boat program, although not easily quantified, are estimated, when combined with the wet weather volume estimates above, to provide an overall reduction in the City's floatable load to the harbor of about 90 percent from the pre-1992 Order conditions.



In addition, the floatables controls already in place through catch basin hooding and the interim CSO boom and skimmer boat program, although not easily quantified, are estimated, when combined with the wet weather volume estimates above, to provide an overall reduction in the City's floatable load to the harbor of about 90 percent from the pre-1992 Order conditions.

Finally, many of NYC's planning initiatives originating from the CSO program have lead to the development of regional water quality analyses and modeling tools such as the System-Wide Eutrophication Model (SWEM) and the NYC Tributary CSO models. The CSO model was the basis of a By-Pass Model that has been used by the IEC, NYS DEC and US EPA to predict the impacts of unanticipated discharges. The Long Island Sound Study (LISS) has adopted SWEM as the official water quality model for that program and is in the process of reevaluating trading ratios. The NY/NJ Harbor Estuary Program (HEP) is utilizing SWEM and the CSO Tributary Models to evaluate TMDLs for pathogens, toxics and nutrients. The investments that NYC made in data gathering and development of these analytical tools are now paying dividends to the entire region, including State and Federal regulators.

In summary, it is clear that NYC's currently proposed CSO program commits more money and achieves a greater environmental benefit through implementation of more comprehensive abatement and infrastructure improvements than ever envisioned by the 1992 CSO Order.

### ***Regulatory Review***

As the technical components of DEP's CSO program have continued to evolve, Federal regulations have also evolved starting with the EPA's CSO Control Policy which was finalized in 1994. The Clean Water Act was amended in 2000 to specifically incorporate the CSO Control Policy. With the codification of the CSO Control Policy, it is required that all CSO programs including NPDES permits and associated Consent Orders comply with the conditions of the CSO policy. This action occurred well after the 1992 consent order was signed and requires that NYC's CSO program be updated to reflect Federal CSO policy requirements. Significantly, the CSO Control Policy provides that a CSO Long Term Control Plan should be developed in conjunction with a Use Attainability Analysis (UAA). The Policy provides that if existing WQS would not be met even after full build-out of all CSO abatement projects contained in the Long Term Control Plan, as determined

by the UAA, the state water quality manager should review and revise WQS based on the findings of the UAA.

In recognition of this requirement and the fact that the approved levels of CSO abatement would not meet water quality standards, DEP initiated the Use and Standards Attainment (USA) project to bring the engineering program into compliance with regulatory requirements. This project was designed to follow the step-by-step process outlined in the CSO policy for the development of CSO abatement projects that includes water quality analysis, facility planning, water quality standards compliance determination, standards review and revision, as appropriate, public outreach and development of long term control plans. Both EPA and DEC have been active participants in the USA project through the government steering committee and EPA has endorsed the program as a cutting edge initiative and encouraged its development and implementation.

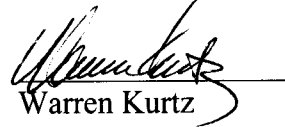
The result has been the development of holistic waterbody/watershed plans for Paerdegat Basin and the Bronx River that recommend implementation of engineering solutions based on the "knee-of-the-curve" approach for CSO storage (Paerdegat) and floatables control (Bronx River) as well as public outreach to support other waterbody or riparian improvements. In addition, it is recommended that Use Attainability Analyses (UAAs) be performed for each of these waterbodies and that a new water use classification be developed that recognizes the special nature of Urban Tributaries. EPA has encouraged the City and DEC to work together on the process of approving the Paerdegat UAA in order to serve as a model going forward for other tributaries in the Harbor that will require similar regulatory actions.

All of this previous work has served as the foundation for the development of a City-wide CSO Long Term Control Plan, as per the CSO Policy, that will integrate cost-effective engineering solutions consistent with regulatory requirements and community vision. The waterbody/watershed plans that are developed and finalized under the LTCP will serve as the basis for water quality standards review and revision, through the UAA process, for each waterbody that will not meet Clean Water Act - fishable/swimmable water quality uses, after all CSO abatement projects are completed. While the City recognizes the potential exposure to litigation by implementing projects before the regulatory process has been completed, DEP has committed to designing and commencing construction on all projects proposed under the 2004 Consent Order before the regulatory review process is complete. We understand that DEP and DEC have reached conceptual agreement on the CSO program as follows:

- 1) With respect to those projects that are already under construction or about to enter construction phases (Flushing Creek, Paerdegat Basin, Alley Creek, Inner Harbor and Outer Harbor), construction will continue as planned, even though the regulatory review prescribed under the CSO Control Policy has not yet taken place for those water bodies. We understand that, pursuant to a separate Memorandum of Understanding, DEC will begin the regulatory review processes for the basins affected by these projects, based on DEP's analyses, before construction is complete.
- 2) For Coney Island Creek, design and construction will continue as planned since this project is presumed to meet water quality standards based upon the presumptive approach.
- 3) For the rest of the projects that were identified in the 1992 CSO Consent Order as Track 1 Projects (Westchester Creek, Hutchinson River, Fresh Creek, Jamaica Tributaries and Newtown Creek) the City will commit to the phased construction of the recommendations made in the approved facility plans for these project areas as detailed in the revised Appendix

A of the proposed Consent Order. This phased implementation will include final design and the commencement of construction related to these five water bodies, with the understanding that DEC will undertake the WQS review and revision envisioned under the CSO Control Policy – based on the UAAs for those water bodies – once construction begins.

Very truly yours,

A handwritten signature in black ink, appearing to read "Warren Kurtz", written over a horizontal line.

Warren Kurtz

NYCDEP

Deputy Commissioner

Bureau of Environmental Engineering

**NYCDEP CSO Program Costs  
2004\$**

| Projects                                                  | 1992 Order     | 1999 Facility Plans & Amendments | 2004 Proposed Plan | Non-Percent Capture Benefits            |
|-----------------------------------------------------------|----------------|----------------------------------|--------------------|-----------------------------------------|
| North River WPCP Construction                             |                |                                  |                    |                                         |
| Red Hook WPCP Construction                                |                |                                  |                    |                                         |
| Flushing Creek                                            | \$320          | \$291                            | \$291              |                                         |
| Paerdegat Basin                                           | \$216          | \$357                            | \$357              |                                         |
| Westchester                                               | \$120          | \$127                            |                    |                                         |
| -Phase 1                                                  |                |                                  | \$27               |                                         |
| -Future Phases                                            |                |                                  | \$133              |                                         |
| Alley Creek                                               | \$90           | \$95                             | \$109              |                                         |
| Bronx River                                               | \$85           | \$85                             | \$11               |                                         |
| Hutchinson River                                          | \$70           | \$91                             |                    |                                         |
| -Phase 1                                                  |                |                                  | \$21               |                                         |
| -Future Phases                                            |                |                                  | \$61               |                                         |
| Catch Basin Hooding                                       | \$30           | \$30                             | \$30               | Reduce Floatables                       |
| IFCP Booming/Skimming                                     | \$4            | \$4                              | \$4                | Reduce CSO Floatables                   |
| CAVF                                                      | \$33           | \$33                             | \$33               |                                         |
| Jamaica Bay                                               |                |                                  |                    |                                         |
| - 34 MG Fresh Creek Storage Tank                          | \$340          |                                  |                    |                                         |
| -26th Ward WPCP Wet Weather Expansion                     |                |                                  | \$282              |                                         |
| -Sewer Cleaning                                           |                | \$4                              | \$4                |                                         |
| -Dredging Hendrix                                         |                | \$2                              | \$2                | Improve Habitat                         |
| Inner Harbor                                              |                |                                  |                    |                                         |
| - Gowanus Flushing Tunnel Activation                      |                |                                  | \$11               | Meet WQS + Secondary Contact Recreation |
| - Gowanus Canal PS/FM                                     |                |                                  | \$51               |                                         |
| -Regulator Improvements                                   |                | \$10                             | \$10               |                                         |
| -Throttling Facilities                                    |                | \$10                             | \$10               |                                         |
| -In-line Storage                                          |                | \$4                              | \$4                |                                         |
| Outer Harbor                                              |                |                                  |                    |                                         |
| -Regulator Improvements                                   |                | \$5                              | \$5                |                                         |
| -Throttling Facility                                      |                | \$2                              | \$2                |                                         |
| -In-line Storage                                          |                | \$3                              | \$3                |                                         |
| Coney Island Creek                                        |                | \$107                            | \$107              |                                         |
| Newtown Creek                                             |                |                                  |                    |                                         |
| -Aeration Zone 1                                          |                | \$1                              | \$8                | Improve Dissolved Oxygen to > 1.0 mg/L  |
| -Aeration Zone 2                                          |                |                                  | \$16               |                                         |
| -Throttling Facility                                      |                |                                  | \$2                |                                         |
| -Sewer Diversion                                          |                | \$6                              | \$3.5              |                                         |
| -Regulator B1 Improvements                                |                |                                  | \$1.5              |                                         |
| -In-Line Storage                                          |                | \$6                              |                    |                                         |
| -3.5 MG Storage Tank                                      | \$69           | \$69                             |                    |                                         |
| -9 MG Storage Tank                                        |                |                                  | \$133              |                                         |
| Jamaica Tribs                                             |                |                                  |                    |                                         |
| -Jamaica WPCP Wet Weather Expansion                       |                | \$100                            | \$100              |                                         |
| -Interceptor Cleaning                                     |                | \$6                              | \$6                |                                         |
| -Carson Avenue Sewer(SE-152)                              |                | \$80                             | \$80               | Eliminate CSOs                          |
| -Shellbank Destratification                               |                | \$1                              | \$1                | Eliminate Odors                         |
| -Warnerville/Meadowmere DWO                               |                | \$6                              | \$6                | Eliminate DWOs                          |
| -HRPCT Pilot/Demo Testing                                 |                | \$20                             | \$20               |                                         |
| -Future Sewer Buildout                                    |                |                                  |                    | Eliminate CSOs                          |
| Inter-Pier Skimmer Vessels                                |                |                                  | \$9                | Reduce Floatables                       |
| <b>Subtotal</b>                                           | <b>\$1,378</b> | <b>\$1,556</b>                   | <b>\$1,954</b>     |                                         |
| Wet Weather Capture (%)                                   | 70.2           | 73.4                             | 73.0               |                                         |
| Untreated CSO (MG/year)                                   | 32,430         | 29,490                           | 29,650             |                                         |
| Bowery Bay WPCP Main Sewage Pumps                         |                |                                  | \$30               |                                         |
| Hannah Street Pumping Station Upgrade and Diversion Sewer |                |                                  | \$30               |                                         |
| SCADA                                                     |                |                                  | \$50               |                                         |
| OMNIBUS IV Consent Order                                  |                |                                  |                    |                                         |
| -Hunts Point Headworks                                    |                |                                  | \$26               |                                         |
| -26th Ward Bypass                                         |                |                                  | \$0                |                                         |
| -Tallman Island Velocity Gates                            |                |                                  | <1                 |                                         |
| -Tallman Island Interceptor Improvements                  |                |                                  | \$55               |                                         |
| Newtown Creek Consent Order                               |                |                                  |                    |                                         |
| -Newtown Creek to 700 MGD                                 |                |                                  | \$12               |                                         |
| <b>Grand Total</b>                                        | <b>\$1,378</b> | <b>\$1,556</b>                   | <b>\$2,157</b>     |                                         |
| Wet Weather Capture (%)                                   | 70.2           | 73.4                             | 75.4               |                                         |
| Untreated CSO (MG/year)                                   | 32,430         | 29,490                           | 27,250             |                                         |

Note: costs are for the specific plan and not cumulative across plans.

### ***Quantification of CSO Reductions***

Quantification of these benefits has been computed recently using the RAINMAN Model for the various CSO control plans. RAINMAN is a computer program that was originally developed and applied City Wide during the NYC 208 Study in an earlier less sophisticated form. It is a Fortran program that is based on the rationale formula and does not employ any hydraulic equations. It simply performs a flow balance around sub-catchments within a given WPCP drainage area. Individual outfall overflows are calculated hourly, as is the flow to the WPCP. Since the model does not employ hydraulic calculations, it does require a high level of model calibration and knowledge about the conveyance system to provide reasonable estimates of flow volumes and pollutant loads. Before use in any applications, RAINMAN is cross-calibrated against the results of the more sophisticated models that simulate the detailed hydraulics of the sewer systems. Once that is accomplished RAINMAN is a very accurate tool for developing annual CSO volumes and loads. For the purpose of this analysis, the model was applied using the 1988 rainfall record. This year had a rainfall volume about at an average volume of rainfall but had higher than average storm intensities. These higher than average rainfalls would cause more overflows than would be expected in the average year. The larger overflows are more appropriate for use in planning for CSO facilities, in that planning for them would yield a slightly more protective control facility.

|                                                       | <b>Total Volume<br/>(inches)</b> | <b>Average Intensity<br/>(inches/hour)</b> |
|-------------------------------------------------------|----------------------------------|--------------------------------------------|
| <b>Citywide Long Term Average<br/>Rainfall Record</b> | <b>43.1</b>                      | <b>0.561</b>                               |
| <b>1988 JFK Airport</b>                               | <b>40.7</b>                      | <b>0.677</b>                               |

**New York State Department of Environmental Conservation  
Division of Water, 4<sup>th</sup> Floor**

Bureau of Permits

625 Broadway, Albany, New York 12233-3500

Phone: (518) 402-8111 • FAX: (518) 402-9029

Website: [www.dec.state.ny.us](http://www.dec.state.ny.us)



Erin M. Crotty  
Commissioner

May 15, 2003

Mr. Warren Kurtz, P.E.  
Deputy Commissioner  
Director, Bureau of Environmental Engineering  
NYC Department of Environmental Protection  
96-05 Horace Harding Expressway, 5<sup>th</sup> Floor Low Rise  
Corona, New York 11368

**Re: Modified CSO Facility Planning Reports  
CSO Abatement Consent Order  
Case # R2-3351-9012**

Dear Mr. Kurtz:

This correspondence addresses the Department's review of the following modified CSO abatement facility planning reports submitted on April 10, 2003 ("the Reports"): Flushing Bay, Paerdegat Basin, Alley Creek, Inner Harbor and Outer Harbor, Coney Island Creek, Jamaica Tributaries, and Westchester Creek. The Reports are required by the CSO Order on Consent entered into by the Department and NYCDEP (# R2-3351-9012) ("the Order") on June 26, 1992. Pursuant to a January 2, 2003 letter granting an extension pursuant to the Order, the Reports were due to be submitted by February 3, 2003. As noted above, NYCDEP actually submitted the Reports on April 10, 2003.

This correspondence is organized into the three following areas: 1. CSO Facility Plans Approved by the Department; 2. Unapproved Facility Plans that need additional information to obtain Department approval; and, 3. Notice of Violation for late submittal of reports beyond the February 3, 2003 extension approved by the Department.

**1 Approved Facility Plans:**

The Department hereby approves the following reports: Flushing Bay, Paerdegat Basin, Alley Creek, Inner Harbor and Outer Harbor. Enclosed is a stamped approved copy of each Facility Plan. One stamped approved copy will be kept by the Division of Water in Central Office, the Environmental Facilities Corporation, and the DEC Region 2 Office for future reference.

In addition to the requirements set forth in the approved plans, the NYCDEP must comply with the following conditions, when implementing the plans:

- a. The design and construction of these facilities must be under the direct supervision of a P.E. currently licensed to practice in New York State.
- b. The SPDES application Form 2-A Supplement must be submitted for new facilities concurrent with submittal of the final design report.
- c. In accordance with ECL §§ 17-0505 and 17-0701, construction of facilities cannot commence until after a SPDES permit has been issued. To do so otherwise is a violation of the ECL which will be enforced by the Department.
- d. In accordance with Clean Water Act, §402 (q)(1), the Department is reviewing the consent order for conformance with the USEPA Combined Sewer Overflow Control Policy. In accordance with the EPA "Demonstration Approach," which is set forth in the Overflow Control Policy, upon completion of construction, NYCDEP must conduct post-construction water quality monitoring to demonstrate compliance with water quality standards.
- e. NYCDEP must comply with the following compliance milestones specified in the approved facility plans for each project: 1. Start Design; 2. Complete Design with CPM Analysis and SPDES application; 3. Notice to Proceed to Construction, and 4. Complete Construction. These milestones are specified in the enclosed Table 1 and are hereby incorporated into, and made an enforceable part of, the Order.
- f. Integration of the operation of the Regional CSO Retention Facilities with the host Water Pollution Control Plant (WPCP) will be defined in the Wet Weather Operating Plan (WWOP) for such WPCPs in accordance with the SPDES permit requirements.

**2. Unapproved Facility Plans:**

Please find the enclosed Table 2 summarizing the Department's comments regarding the Coney Island Creek, Jamaica Tributaries, and Westchester Creek Reports and Table 3 responding to some of the comments in your April 9, 2003 letter. The Westchester Creek table reflects the Department discussions held on May 2<sup>nd</sup>, 2003 with your staff and the staff of Lawler, Matusky and Skelly (LMS) regarding the deficiencies in the Westchester Creek Report. In order for DEC to determine whether these reports are approvable, NYCDEP must respond to the comments in the attached table by June 30, 2003. We request that you incorporate your comments as an addendum to these reports. Please submit four (4) copies each to the Department by June 30, 2003 to be stamped for approval. Upon submittal, one stamped approved copy will be kept by the Division of Water in Central Office, the Environmental Facilities Corporation, and the DEC Region 2 Office for future reference.

The Department anticipates that ongoing discussion and meetings will continue on the remaining projects and facility plans that are required under the CSO consent order. After the submittal of the remaining Track One projects and schedules, the Department expects to provide NYCDEP with a draft modified consent order that is comprehensive, consistent with the current

EPA and Department CSO guidance and policies, and reflective of the current NYCDEP CSO abatement program.

**3. Notice of Violation:**

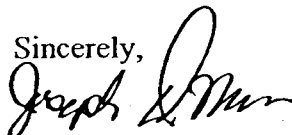
The Department's approval and request for more information on the Reports notwithstanding, please be advised that this correspondence also notifies NYCDEP that it violated the Order by not submitting the Reports in a timely manner. As noted above, NYCDEP submitted the Reports on April 10, 2003, thereby missing the February 3, 2003 milestone by 66 days.

According to Section D of the Order, for failure to meet a specified milestone date, the stipulated penalties are \$3,500 for the 1<sup>st</sup> Day through 30<sup>th</sup> Day of non-compliance. Therefore, the Department could assess stipulated penalties under the Order in the amount of \$1,617,000.00 (7 reports x \$3500/day x 66 days late). However, in an effort to settle this matter the Department is willing, for settlement purposes only, to accept a penalty payment of \$24,500 (7 reports x \$3500 x 1/day late for each report. It is the Department's hope that the City is willing to settle for this reduced amount.

To discuss a possible administrative settlement of these violations and/or to discuss any efforts the City has taken or proposes to take to comply with the requirement of the Order, you should contact the Scott Crisafulli, Esq. at (518) 402-9507. If the City does not respond within 10 days, this notice may result in a civil enforcement proceedings against the City.

If you have any questions, please contact me at (518) 402-8117.

Sincerely,



Joseph DiMura, P.E.  
Acting Director, Bureau of Permits  
Division of Water

**Attachments**

cc: Lenny Meyerson - Region 2  
Timothy Burns - EFC  
Brandon Chew - BWCP, w/o encl.  
Scott Crisafulli, w/o encl

bcc: Joseph DiMura  
Cheryle Merkley  
Dare Adelugba

Table 1.

## APPROVED COMPLIANCE MILESTONE DATES

| CSO Project Area | Task Name                                                                                                 | START DATE    | COMPLETE DESIGN WITH CPM ANALYSIS & SPDES APPLICATION | NOTICE TO PROCEED TO CONSTRUCTION | COMPLETE CONSTRUCTION |
|------------------|-----------------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------|-----------------------------------|-----------------------|
| Alley Creek      | - Phase I, Stage 1 - Outfall and Sewer System Improvements<br>- Phase I, Stage 2 - CSO Retention Facility | 1/00<br>9/02  | 2/02<br>10/04                                         | 12/02<br>8/05                     | 12/05<br>7/08         |
| Outer Harbor     | -Phase I - Regulator Improvements<br><i>Fixed Orifices Automation</i>                                     | 10/03<br>7/02 | 1/05<br>11/06                                         | 11/05<br>(1)                      | 4/08<br>(1)           |
|                  | Phase II -Port Richmond Throttling Facilities                                                             | 6/04          | 8/05                                                  | 6/06                              | 12/08                 |
|                  | Phase III - In-Line Storage                                                                               | 6/04          | 9/05                                                  | 7/06                              | 2/09                  |
| Inner Harbor     | -Phase I - Regulator Improvements: <i>Fixed Orifices Automation</i>                                       | 7/01<br>7/02  | 7/02<br>11/06                                         | 5/03<br>(1)                       | 4/06<br>(1)           |
|                  | Phase II -North River Throttling Facilities                                                               | 9/02          | 3/04                                                  | N/A                               | N/A                   |
|                  | Phase III - In-Line Storage                                                                               | 6/04          | 9/05                                                  | 7/06                              | 2/09                  |
| Paerdegat Basin  | Phase I - Influent Channel                                                                                | 10/95         | 3/97                                                  | 7/97                              | 2/02                  |
|                  | Phase II - Foundations and Substructures                                                                  | 9/99          | 8/01                                                  | 6/02                              | 12/06                 |
|                  | Phase III - Structures and Equipment                                                                      | 1/02          | 11/04                                                 | 9/05                              | 8/11                  |
| Flushing Bay     | CS4-1 Reroute and Construct Effluent Channel                                                              | 1/95          |                                                       | 4/95                              | 4/96                  |
|                  | CS4-2 Relocate Ballfields                                                                                 | 9/94          |                                                       | 1/95                              | 6/95                  |
|                  | CS4-3 Storage Tank                                                                                        | 10/96         |                                                       | 5/96                              | 8/01                  |
|                  | CS4-4 Mechanical Structures                                                                               | 10/00         |                                                       | 4/02                              | 7/04                  |
|                  | CS4-5 Tide Gates                                                                                          | 12/99         |                                                       | 4/00                              | 3/02                  |

(1) DEP must submit a letter by June 30, 2003 with a commitment to automate.

| Table 2a. WESTCHESTER CREEK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DECEMBER 9, 2002 REQUESTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | NYC DEP RESPONSES                                         | CURRENT REQUESTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p>Results of sewer system analysis justifying the replacement of the flow-through tank with a dead-end tank including:</p> <p>a) Hydraulic configurations (length, depth and width) showing that the dead-end tank would not result in surcharging.</p> <p>b) Detailed explanation of hydraulic surcharging expected to cause street flooding or back-up into building laterals by operating the 12 MG flow-through tank.</p> <p>c) Detailed explanation of the necessary construction (including costs) to alleviate each of the surcharged conditions so that a 12 MG flow-through tank would be feasible and operable.</p> <p>A side-by-side comparison showing that the 12 MG dead-end tank will achieve the same removals and water quality benefits as the 12 MG flow-through tank.</p> | <p>None</p> <p>None</p> <p>None</p> <p>Unsatisfactory</p> | <p>DEP must respond as per the attached summary of the May 2<sup>nd</sup>, 2003 telephone conference between DEP, LMS and DEC representatives.</p> <p>DEP must respond as per the attached summary of the May 2<sup>nd</sup>, 2003 telephone conference between DEP, LMS and DEC representatives.</p> <p>DEP must respond as per the attached summary of the May 2<sup>nd</sup>, 2003 telephone conference between DEP, LMS and DEC representatives.</p> <p>DEP must provide updated water quality modeling results.</p> |
| DEP must install floatables removal capability at the bypass channel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Satisfactory                                              | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Since there are no CSO abatement plans for outfalls HP-19, and HP-19A, what is the water quality condition downstream of these outfalls near the mouth of Pugsleys Creek?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Satisfactory                                              | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| The proposed completion date for this project is October 2011. This date is 3 ½ years past the previous date submitted to DEC ( June 2008) for the flow-through tank back in May 2000. Please provide a satisfactory explanation for this delay.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Satisfactory                                              | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

Table 2b.

## COMPLETE CONSTRUCTION DATES

| CSO PROJECTS                                                                                                         | PREVIOUS SUBMISSION | APRIL 2003 SUBMISSION | DEC's REQUESTS                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>CONEY ISLAND</u>                                                                                                  |                     |                       |                                                                                                                                                                                |
| Avenue V Pumping Station                                                                                             | 10/10               | 12/10                 | DEP must justify the substantial extension to the milestone dates.                                                                                                             |
| Ave V PS Force Mains                                                                                                 | 8/09                | 6/12                  |                                                                                                                                                                                |
| <u>JAMAICA TRIBUTARIES</u>                                                                                           |                     |                       |                                                                                                                                                                                |
| Warnerville PS                                                                                                       | 3/08                | 3/09                  | DEP must justify the substantial extension to each of these milestone dates and must also provide approvable milestone dates for the facilities where none have been provided. |
| HPRCT Demonstration                                                                                                  | 11/07               | 8/11                  |                                                                                                                                                                                |
| Destratification Facility                                                                                            | 8/07                | 1/09                  |                                                                                                                                                                                |
| Thurston Basin - Eliminate dry weather overflows.                                                                    | None                | None                  | DEP must submit schedule to approved along with this project.                                                                                                                  |
| Thurston Basin - Evaluate CSO control vs. high level storm sewers in Laurelton area                                  | None                | None                  | DEP must provide the anticipation completion date to be approved along with this project.                                                                                      |
| Bergen/Thurston Basins in-stream aeration.<br>(As related to the Schedule of Newtown Creek In-stream aeration study) | None                | None                  | DEP must submit schedule to approved along with this project.                                                                                                                  |
| Storm Sewer Buildout                                                                                                 | TBD                 | TBD                   |                                                                                                                                                                                |

Table 3.

**RESPONSE TO April 9, 2003 COMMENTS  
NYCDEP CSO PROGRAM**

| <b>DEP Comments</b>                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>DEC Response</b>                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>3a. <i>For Flushing Bay, Alley Creek, Paerdegat Basin Retention Facilities, and Corona Avenue Vortex Facility, the DEP is in the process of working with the NYSDEC on the Form 2-A for the facility and the draft SPDES permit for the respective drainage area WPCP. The DEP is under the assumption that a permit modification will not be required, and that the modification application will be the Form 2-A document itself.</i></p> | <p>Please be advised that an administrative permit modification will be required for the SPDES permit in that it will require the listing of new discharge outlets in the respective SPDES permit.</p>                                                                                                                                                                  |
| <p>3b. <i>As for the Spring Creek CSO Retention Facility, it is already incorporated in the 26<sup>th</sup> Ward WPCP SPDES permit and therefore is not affected by this request by the NYSDEC. However, the DEP will still be providing the NYSDEC with a Form 2-A for this facility.</i></p>                                                                                                                                                 | <p>Although the Spring Creek Auxiliary Facility is referenced in the 26<sup>th</sup> Ward WPCP, monitoring requirements have not been listed for this facility. In compliance with the NYSDEC CSO TOGS 1.6.1 and to be consistent with the rest of the CSO Retention Facilities City-wide, a Supplemental Application Form 2-A must be submitted for this facility.</p> |

## **APPENDIX A**

### **I. Alley Creek CSO**

### **Milestone Date<sup>1</sup>**

#### **A. Facility Plan Development**

1. Submit Modified Facility Plan Report
2. Submit Approvable Additional Modified Facility Plan Report
3. Submit Form 2A SPDES Application

Completed  
February 2004  
June 2003

#### **B. Comprehensive Watershed Planning**

1. Submit Approvable Alley Creek Waterbody / Watershed Facility Plan Report
2. Submit Approvable East River Waterbody / Watershed Facility Plan Report

June 2007  
  
June 2007

#### **C. Outfall and Sewer System Improvements**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

May 1996  
March 2002  
December 2002  
December 2006

#### **D. CSO Retention Facility**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

May 1996  
December 2005  
December 2006  
December 2009

#### **E. Drainage Basin Specific LTCPs**

1. Submit Approvable Drainage Basin Specific LTCP for Alley Creek
2. Submit Approvable Drainage Basin Specific LTCP for East River

6 months after approval of I.B.1.  
6 months after approval of I.B.2.

## **II. Outer Harbor CSO**

### **A. Facility Plan Development**

1. Submit Modified Facility Plan Report
2. Submit Additional Modified Facility Plan Report

Completed  
February 2004

### **B. Comprehensive Watershed Planning**

1. Submit Approvable Open Waters Waterbody / Watershed Facility Plan Report

June 2007

### **C. Regulator Improvements - Fixed Orifices**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

January 2004  
April 2005  
February 2006  
July 2008

### **D. Regulator Improvements - Automation**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

February 2005  
November 2006  
November 2007  
June 2010

### **E. Port Richmond Throttling Facility**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

June 2004  
August 2005  
June 2006  
December 2008

### **F. In-Line Storage<sup>2</sup>**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction

July 2005  
November 2006  
August 2007

4. Construction Completion

August 2010

G. Submit Approvable Drainage Basin Specific LTCP for Open Waters

January 2008

### **III. Inner Harbor CSO**

- |                                                                               |                |
|-------------------------------------------------------------------------------|----------------|
| A. Facility Plan Development                                                  |                |
| 1. Submit Modified Facility Plan Report                                       | Completed      |
| 2. Submit Additional Modified Facility Plan Report                            | February 2004  |
| <br>B. Comprehensive Watershed Planning                                       |                |
| 1. Submit Approvable Gowanus Canal Waterbody / Watershed Facility Plan Report | June 2007      |
| <br>C. Regulator Improvements - Fixed Orifices                                |                |
| 1. Initiate Final Design                                                      | March 2000     |
| 2. Final Design Completion Including CPM Analysis                             | September 2002 |
| 3. Notice to Proceed to Construction                                          | February 2003  |
| 4. Construction Completion                                                    | April 2006     |
| <br>D. Regulator Improvements - Automation                                    |                |
| 1. Initiate Final Design                                                      | February 2005  |
| 2. Final Design Completion Including CPM Analysis                             | November 2006  |
| 3. Notice to Proceed to Construction                                          | November 2007  |
| 4. Construction Completion                                                    | June 2010      |
| <br>E. In-Line Storage <sup>3</sup>                                           |                |
| 1. Initiate Final Design                                                      | July 2005      |
| 2. Final Design Completion Including CPM Analysis                             | November 2006  |
| 3. Notice to Proceed to Construction                                          | August 2007    |
| 4. Construction Completion                                                    | August 2010    |
| <br>F. Submit Approvable Drainage Basin Specific LTCP for Gowanus Canal       | January 2008   |

#### **IV. Paerdegat Basin CSO**

##### **A. Facility Plan Development**

1. Submit Modified Facility Plan Report
2. Submit Additional Modified Facility Plan Report
3. Submit Form 2A SPDES Application

Completed  
February 2004  
July 2002

##### **B. Comprehensive Watershed Planning**

1. Submit Approvable Paerdegat Basin Waterbody / Watershed Facility Plan Report

March 2003

##### **C. Influent Channel**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

October 1994  
March 1997  
February 1999  
February 2002

##### **D. Foundations and Substructures**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

October 1994  
August 2001  
June 2002  
December 2006

##### **E. Structures and Equipment**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

October 1994  
November 2004  
September 2005  
August 2011

##### **F. Submit Approvable Drainage Basin Specific LTCP for Paerdegat Basin**

November 2005

## V. Flushing Bay CSO

### A. Facility Plan Development

1. Submit Modified Facility Plan Report
2. Submit Additional Modified Facility Plan Report
3. Submit Form 2A SPDES Application

Completed  
February 2004  
June 2003

### B. Comprehensive Watershed Planning

1. Submit Approvable Flushing Bay Waterbody / Watershed Facility Plan Report
2. Submit Approvable Flushing Creek Waterbody / Watershed Facility Plan Report

June 2007

June 2007

### C. CS4-1 Reroute and Construct Effluent Channel

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

October 1992  
September 1994  
June 1995  
June 1996

### D. CS4-2 Relocate Ballfields

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

October 1992  
September 1994  
April 1995  
August 1995

### E. CS4-3 Storage Tank

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

December 1993  
September 1996  
July 1997  
August 2001

### F. CS4-4 Mechanical Structures - Initiate Final Design

1. Initiate Final Design

December 1993

2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

February 2000  
March 2002  
December 2004

G. CS4-5 Tide Gates

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

August 1998  
November 1999  
December 2000  
April 2002

H. CD-8 Manual Sluice Gates

1. Final Design Completion Including CPM Analysis
2. Notice to Proceed to Construction
3. Construction Completion

May 2003  
February 2004  
June 2005

I. Drainage Basin Specific LTCPs

1. Submit Approvable Drainage Basin Specific LTCP for Flushing Bay
2. Submit Approvable Drainage Basin Specific LTCP for Flushing Creek

6 months after approval of V.B.1.  
6 months after approval of V.B.2.

## **VI. Jamaica Tributaries CSO**

### **A. Facility Plan Development**

1. Submit Modified Facility Plan Report
2. Submit Additional Modified Facility Plan Report

April 2003  
February 2004

### **B. Comprehensive Watershed Planning**

1. Submit Approvable Bergen Basin Waterbody / Watershed Facility Plan Report
2. Submit Approvable Thurston Basin Waterbody / Watershed Facility Plan Report

June 2007

June 2007

### **C. Meadowmere & Warnerville DWO Abatement**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

January 2004

May 2005

March 2006

March 2009

### **D. Expansion of Wet Weather Capacity of Jamaica WPCP**

1. Initiate final Design
2. Submit Form 2A SPDES Application
3. Final Design Completion Including CPM Analysis
4. Notice to Proceed to Construction
5. Construction Completion

June 2007

June 2010

June 2011

June 2012

June 2015

### **E. Destratification Facility**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

January 2006

October 2006

August 2007

December 2008

### **F. Laurelton and Springfield Blvd.**

1. Submit Drainage Plan for Storm Sewer Buildout

January 2008

G. Regulator Automation

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

February 2005  
November 2006  
November 2007  
June 2010

H. Drainage Basin Specific LTCPs.

1. Submit Approvable Drainage Basin Specific LTCP for Bergen Basin
2. Submit Approvable Drainage Basin Specific LTCP for Thurston Basin

August 2012  
August 2012

## **VII. Coney Island Creek CSO**

### **A. Facility Plan Development**

1. Submit Modified Facility Plan Report

April 2003

### **B. Comprehensive Watershed Planning**

1. Submit Approvable Coney Island Creek Waterbody / Watershed Facility Plan Report

June 2007

### **C. Avenue V Pumping Station Upgrade**

1. Initiate Final Design
2. Final Design Completion including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

April 1998  
January 2005  
November 2005  
April 2011

### **D. Avenue V Force Main**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

April 1998  
September 2006  
July 2007  
June 2012

### **E. Submit Approvable Drainage Basin Specific LTCP for Coney Island Creek**

September 2007

## **VIII. Newtown Creek CSO**

### **A. Facility Plan Development**

- |                                         |              |
|-----------------------------------------|--------------|
| 1. Submit Modified Facility Plan Report | October 2003 |
|-----------------------------------------|--------------|

### **B. Comprehensive Watershed Planning**

- |                                                                               |           |
|-------------------------------------------------------------------------------|-----------|
| 1. Submit Approvable Newtown Creek Waterbody / Watershed Facility Plan Report | June 2007 |
|-------------------------------------------------------------------------------|-----------|

### **C. Aeration Zone I**

- |                                                   |               |
|---------------------------------------------------|---------------|
| 1. Initiate Final Design                          | March 2001    |
| 2. Final Design Completion Including CPM Analysis | December 2004 |
| 3. Notice to Proceed to Construction              | December 2005 |
| 4. Construction Completion                        | December 2008 |

### **D. Aeration Zone II**

- |                                                   |           |
|---------------------------------------------------|-----------|
| 1. Initiate Final Design                          | June 2007 |
| 2. Final Design Completion Including CPM Analysis | June 2010 |
| 3. Notice to Proceed to Construction              | June 2011 |
| 4. Construction Completion                        | June 2014 |

### **E. Relief Sewer / Regulator Modification**

- |                                                   |           |
|---------------------------------------------------|-----------|
| 1. Initiate Final Design                          | June 2007 |
| 2. Final Design Completion Including CPM Analysis | June 2009 |
| 3. Notice to Proceed to Construction              | June 2010 |
| 4. Construction Completion                        | June 2014 |

### **F. Throttling Facility**

- |                                                   |               |
|---------------------------------------------------|---------------|
| 1. Initiate Final Design                          | December 2005 |
| 2. Final Design Completion Including CPM Analysis | June 2008     |
| 3. Notice to Proceed to Construction              | June 2009     |
| 4. Construction Completion                        | December 2012 |

G. CSO Storage Facility

1. Initiate Final Design
2. Submit Form 2A SPDES Application
3. Final Design Completion Including CPM Analysis
4. Notice to Proceed to Construction
5. Construction Completion

November 2010

November 2013

November 2014

December 2015

December 2022

H. Submit Approvable Drainage Basin Specific LTCP for Newtown Creek

February 2016

## **IX. Westchester Creek CSO**

### **A. Facility Plan Development**

- |                                         |            |
|-----------------------------------------|------------|
| 1. Submit Modified Facility Plan Report | April 2003 |
| 2. Submit Form 2A SPDES Application     | June 2009  |

### **B. Comprehensive Watershed Planning**

- |                                                                                   |           |
|-----------------------------------------------------------------------------------|-----------|
| 1. Submit Approvable Westchester Creek Waterbody / Watershed Facility Plan Report | June 2007 |
|-----------------------------------------------------------------------------------|-----------|

### **C. Phase I (Influent Sewers)**

- |                                                   |              |
|---------------------------------------------------|--------------|
| 1. Initiate Final Design                          | January 2004 |
| 2. Final Design Completion Including CPM Analysis | June 2010    |
| 3. Notice to Proceed to Construction              | June 2011    |
| 4. Construction Completion                        | June 2015    |

### **D. CSO Storage Facility**

- |                                      |               |
|--------------------------------------|---------------|
| 1. Notice to Proceed to Construction | December 2015 |
| 2. Construction Completion           | December 2022 |

### **E. Submit Approvable Drainage Basin Specific LTCP for Westchester Creek**

February 2016

## **X. Bronx River CSO**

### **A. Facility Plan Development**

1. Submit Modified Facility Plan Report
2. Submit Additional Modified Facility Plan Report
3. Submit Form 2A SPDES Application

September 2003  
March 2004  
July 2007

### **B. Comprehensive Watershed Planning**

1. Submit Approvable Bronx River Waterbody / Watershed Facility Plan Report

June 2007

### **C. Floatables Control**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

January 2006  
July 2008  
June 2009  
June 2012

### **D. Submit Approvable Drainage Basin Specific LTCP for Bronx River**

August 2009

## **XI. Hutchinson River CSO**

### **A. Facility Plan Development**

1. Submit Modified Facility Plan Report
2. Submit Form 2A SPDES Application

July 2003  
June 2009

### **B. Comprehensive Watershed Planning**

1. Submit Approvable Hutchinson River Draft Waterbody / Watershed Facility Plan Report

June 2007

### **C. Phase I of the Storage Facility**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

April 2005  
June 2010  
June 2011  
June 2015

### **D. Future Phases**

1. Notice to Proceed to Construction
2. Construction Completion

December 2016  
December 2023

### **E. Submit Approvable Drainage Basin Specific LTCP for Hutchinson River**

February 2017

## **XII. Jamaica Bay CSO**

### **A. Facility Plan Development**

1. Submit Modified Facility Plan Report

December 2003

### **B. Comprehensive Watershed Planning**

1. Submit Approvable Jamaica Bay Waterbody / Watershed Facility Plan Report
2. Submit Approvable Creek Waterbody / Watershed Facility Plan Report
3. Submit Approvable Fresh Creek Waterbody / Watershed Facility Plan Report
4. Submit Approvable Hendrix Creek Waterbody / Watershed Facility Plan Report

June 2007

June 2007

June 2007

June 2007

### **C. Spring Creek AWPCP Upgrade**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Submit Form 2A SPDES Application
4. Notice to Proceed to Construction
5. Construction Completion

April 1998

February 2002

June 2003

March 2003

April 2007

### **D. 26th Ward Drainage Area Sewer Cleaning and Evaluation**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

January 2007

June 2007

June 2008

June 2010

### **E. Hendrix Creek Dredging**

1. Initiate Final Design
2. Final Design Completion Including CPM Analysis
3. Notice to Proceed to Construction
4. Construction Completion

January 2007

June 2007

June 2008

June 2010

F. 26th Ward Wet Weather Expansion

- |                                                   |               |
|---------------------------------------------------|---------------|
| 1. Initiate Final Design                          | June 2006     |
| 2. Final Design Completion Including CPM Analysis | June 2010     |
| 3. Submit Form 2A SPDES Application               | June 2009     |
| 4. Notice to Proceed to Construction              | June 2011     |
| 5. Construction Completion                        | December 2015 |

G. Drainage Basin Specific Long Term Control Plans

- |                                                                     |             |
|---------------------------------------------------------------------|-------------|
| 1. Submit Approvable Drainage Basin Specific LTCP for Jamaica Bay   | August 2012 |
| 2. Submit Approvable Drainage Basin Specific LTCP for Spring Creek  | August 2012 |
| 3. Submit Approvable Drainage Basin Specific LTCP for Fresh Creek   | August 2012 |
| 4. Submit Approvable Drainage Basin Specific LTCP for Hendrix Creek | August 2012 |

### **XIII. Citywide Comprehensive Floatables Plan**

#### **A. Facility Plan Development**

##### **1. Submit Modified Facility Plan Report**

December 2004

#### **XIV. Submit Approvable City-Wide LTCP**

December 2017

1. All milestone dates shall refer to the last day of the month indicated.
2. Construction of proposed in-line storage facility is contingent upon the success of the ongoing Hunts Point in-line Storage Prototype Facility as well as site specific sewer system hydraulic calculations to be reviewed and approved by NYCDEP's Bureau of Water and Sewer Operations.
3. Construction of proposed in-line storage facility is contingent upon the success of the ongoing Hunts Point in-line Storage Prototype Facility as well as site specific sewer system hydraulic calculations to be reviewed and approved by NYCDEP's Bureau of Water and Sewer Operations.

**RESPONSE TO COMMENTS ON THE  
2004 ADMINISTRATIVE CONSENT ORDER  
FOR IMPLEMENTATION OF THE  
COMBINED SEWER OVERFLOW ABATEMENT PROGRAM IN  
NEW YORK CITY**

The proposed 2004 Administrative Consent Order (“2004 ACO”) for Implementation of the Combined Sewer Abatement (“CSO”) Program in New York City (“NYC”) was published for public comments on September 8, 2004. The proposal describes an ACO between the New York State Department of Environmental Conservation (“DEC”), the New York City Department of Environmental Protection (“DEP”), the City of New York (“City”) to replace similar ACOs developed between the parties in 1992 and 1996. The public comment period, originally limited to 30 days, was extended twice to November 15, 2004, to allow for additional commentary. All comments received have been carefully reviewed and evaluated as part of the responsiveness effort.

Comments were received from public agencies, elected officials, private and non-profit organizations, and private individuals. In total, DEC received in excess of 600 official comments via letter, facsimile, or email during the comment period. DEC and DEP appreciate the careful and diligent review of the 2004 ACO and supporting materials by the commenters and the thoughtful and serious nature of the commentary. Although the comments received will not change the terms of the 2004 ACO, this commentary has been invaluable to DEC in that it confirms that NYC citizenry places CSO abatement as a high ongoing priority. Further, the terms of the 2004 ACO offer numerous opportunities for public participation and input for future CSO abatement measures and regulatory decisions.

The purpose of this document is to acknowledge and respond to the various comments received. A listing of agencies, officials, private organizations and individuals who provided comments is presented. Many of the comments received, although differing in detail, contained thematic elements similar in nature regarding DEC and DEP effort toward CSO abatement, water quality issues and standards and regulatory requirements. Therefore, an historical overview of CSO abatement in NYC is provided to place the 2004 ACO in context and perspective. This document concludes with thematic groupings and summaries of comments received and specific, focused responses.

## **LIST OF COMMENTERS**

### **FEDERAL AGENCIES**

1. United States Environmental Protection Agency, Walter E. Andrews, Chief Water Programs Branch

### **PUBLIC AGENCIES**

2. State of New Jersey Department of Environmental Protection, Lisa Jackson, Assistant Commissioner, Compliance and Enforcement
3. Interstate Environmental Commission, Eileen Millett, General Counsel

### **ELECTED OFFICIALS**

4. Tony Avella, The Council of the City of New York, 19<sup>th</sup> District Queens, Council Member on behalf of Diane Creed, Resident
5. Thomas DiNapoli, New York State Assembly, 16<sup>th</sup> District Nassau County, Chair, Committee on Environmental Protection
6. Jeffrey Dinowitz, New York State Assembly, 81<sup>st</sup> District Bronx County, Assembly Member
7. James Gennaro, The Council of the City of New York, 24<sup>th</sup> District Queens, Council Member and Chair of Committee on Environmental Protection
8. Deborah Glick, New York State Assembly, 66<sup>th</sup> District New York County, Assembly Member
9. David Yassky, The Council of the City of New York, 33<sup>rd</sup> District Brooklyn, Council Member

### **PRIVATE/NOT FOR PROFIT ORGANIZATIONS**

10. Bronx River Alliance, Resa Dimino, Director of Programs and Development
11. The Bronx Overall Economic Development Corporation, Kate Shackford, Director for Energy and the Environment

12. Downtown Boathouse, Inc., Tim Gamble, Secretary
13. Friends of Hudson River Park, Albert Butzel, President
14. Friends of Rockaway, Inc., Bernard Blum, President
15. The Gaia Institute, Paul Mankiewicz, Executive Director
16. Gowanus Dredgers Canoe Club, Owen Foote, Treasurer
17. Madison Square Garden LLP, Michael Gerrard
18. Metropolitan Waterfront Alliance, Carter Craft, Director
19. MTC Drum Shop, Marcus Demuth
20. Natural Resource Defense Council, Alison Chase
21. New York/New Jersey Baykeeper, Deborah Mans, Policy Director
22. New York Public Interest Group, Cathleen Breen
23. New York State Public Employees Federation, Roger Benson, President
24. Norton Basin Edgemere Stewardship Group, Marlen Waaijer
25. Riverkeeper, New York/New Jersey Baykeeper, NRDC and Long Island Soundkeeper, collectively referred to as "Waterkeepers" - comments were submitted by CEA Engineers, P.C., Bruce Bell, President on behalf of Waterkeepers.
26. Sierra Club, Edgar Freud, Chair of Biosolids and CSO Committee

## **INDIVIDUALS**

27. Andrew Cole, Resident
28. Marcos Dinnerstein, Resident
29. Marlene Donnelly, Resident and Member of Friends & Residents of Greater Gowanus

30. Jennifer Epstein, Resident
31. Joseph Reagle, Resident
32. Manuel Russ, Resident and Member of CAC NYCDEP Pollution Prevention, CAC NYC Harbor Estuary Program and Concern Citizens of Bensonhurst Brooklyn
33. Bill Schuck, Resident
34. Jeffrey Stanley
35. Sandy Vergano, Resident
36. Emile Zen, Resident
37. In addition, roughly 600 comments of a similar nature were received via facsimile and email from private citizens. Each of these comments included the subject line “Keep untreated sewage out of our waterways.”

## **HISTORICAL OVERVIEW OF CSO PROGRAMS IN NEW YORK CITY**

### **CSO Programs 1950 to 1992**

New York City is served primarily by a combined sewer system. Approximately 70% of the City is comprised of combined sewers totaling 4,800 miles within the five boroughs. The sewer system drains some 200,000 acres and serves a population of about eight million New Yorkers. Approximately 460 outfalls are permitted to discharge during wet-weather through combined-sewer overflows (“CSOs”) to the receiving waters of the New York Harbor. These discharges result in localized water-quality problems such as periodically high levels of coliform bacteria, nuisance levels of floatables, depressed dissolved oxygen, and, in some cases, sediment mounds and unpleasant odors.

Early CSO assessment programs began in the 1950s and culminated with the Spring Creek Auxiliary Water Pollution Control Plant, a 12 million gallon CSO retention tank, constructed on a tributary to Jamaica Bay in 1972. This project was one of the first such facilities constructed in the United States. Shortly thereafter, NYC was designated by EPA to conduct an Area-Wide Wastewater Management Plan authorized by Section 208 of the then recently enacted Clean Water Act (“CWA”). This plan was completed in 1979 and, in part, identified a number of urban tributary waterways throughout the City in need of CSO abatement. Just at that time, the City’s fiscal crisis developed and attention was diverted from CSO abatement to wastewater treatment plant upgrades as required by the CWA.

In 1983, DEP re-initiated its CSO facility-planning program in accordance with DEC-issued State Pollutant Discharge Elimination System (“SPDES”) permits for its wastewater treatment plants with a project in Flushing Bay and Creek. In 1985, a City-Wide CSO Assessment was undertaken which assessed the existing CSO problem and established the framework for additional facility planning. From this program, the City was divided into eight (8) areas, which together cover the entire harbor area. Four (4) area-wide project areas were developed (East River, Jamaica Bay, Inner Harbor, and Outer Harbor) and four (4) tributary projects areas were defined (Flushing Bay, Paerdegat Basin, Newtown Creek, and the Jamaica Tributaries). Detailed CSO Facility Planning Projects were conducted in each of these areas in the 1980s and early 1990s resulting in a series of detailed plans.

In 1989, DEP initiated the City-Wide Floatables Study in response to a series of medical waste and floating material washups and resulting bathing beach closures in New York and New Jersey in the late 1980s. This comprehensive investigation identified that the primary sources of floatable materials in metropolitan area waters, aside from illegal dumping, are CSO and stormwater discharges. The study also concluded that street litter in surface rainfall runoff is the origin of floatable materials in these sources.

## **1992 CSO Consent Order**

As a result of DEP's violations of their 1988 SPDES permits and to settle issues brought about by parties in the 1989 adjudicatory hearing regarding these same SPDES permits, DEC and DEP entered into the original CSO Administrative Consent Order in 1992 ("1992 ACO"). As a goal, the 1992 ACO required DEP to develop and implement a CSO abatement program to effectively address the contravention of water quality standards for coliforms, dissolved oxygen, and floatables attributable to CSOs. The 1992 ACO contained compliance schedules for the planning, design and construction of the numerous CSO projects in the eight CSO drainage areas.

The Flushing Bay and Paerdegat Basin CSO Retention Tanks were included in the 1992 ACO and are now under construction. In addition, two parallel "tracks" were identified for CSO planning purposes: Track I to address dissolved oxygen (aquatic life protection) and coliform bacteria (recreation) issues; and Track II to address floatables, settleable solids and other water use impairment issues. The 1992 ACO also provided for an Interim Floatables Containment Program to be implemented consisting of a booming and skimming program in confined tributaries, skimming in the open waters of the harbor, and an inventory of street catch basins where floatable materials enter the sewer systems.

In accordance with the 1992 ACO, DEP continued to implement its work for CSO abatement through the facility-planning phase into the preliminary engineering phase. Work proceeded on the planning and design of eight CSO retention tanks located on confined and highly urbanized tributaries throughout the City. The CSO retention tanks at Flushing Bay and Paerdegat Basin proceeded to final design. The Interim Floatables Containment Program was fully developed and implemented. The Corona Avenue Vortex Facility pilot project for floatables and settleable solids control was designed and implemented. The City's 130,000 catch basins were inventoried and a re-hooding program for floatables containment was implemented and completed.

For CSOs discharging to the open waters of the Inner and Outer Harbor areas, efforts were directed to the design of sewer system improvements and wastewater treatment plant modifications to increase the capture of combined sewage for processing at the plants. For the Jamaica Tributaries, efforts focused on correction of illegal connections to the sewer system and evaluation of sewer separation as control alternatives. For Coney Island Creek, attention was directed to corrections of illegal connections and other sewer system/pumping station improvements. These efforts and the combination of the preliminary engineering design phase work at six retention tank sites resulted in amendments to some of the original CSO Facility Plans included in the 1992 ACO and the development of additional CSO Facility Plans in 1999.

## **Federal Regulatory Initiatives Relevant to CSO 1994-2001**

As the technical components of DEP's CSO program have continued to evolve, Federal requirements have also evolved starting with the *Combined Sewer Overflow (CSO) Control Policy*, 59 Fed. Reg. 18688 (April 19, 1994) ("CSO Control Policy"), which was finalized in 1994. The CWA was amended by the Wet Weather Water Quality Act of 2000 to specifically incorporate the CSO Control Policy. With the codification of the CSO Control Policy, it is required that all CSO programs including NPDES permits and associated Consent Orders conform to the CSO Control Policy. This action occurred well after the 1992 ACO was signed and requires that NYC's CSO program be updated to reflect Federal CSO Control Policy requirements. Significantly, the CSO Control Policy provides that a CSO Long Term Control Plan ("LTCP") should be developed in coordination with Water Quality Standards ("WQS") review and potential Use Attainability Analysis ("UAA"). The Policy provides that if existing WQS would not be met even after full build-out of all CSO abatement projects contained in the LTCP, the state water quality-permitting agency should review and potentially revise location specific WQS based on the findings of the UAA. In addition, in 1996, EPA developed a Watershed Approach which encourages evaluation of all sources of polluting materials and impairments to waterways.

It is noted that the CWA states that "*it is the national goal that wherever attainable ...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...*" Congress provided for goal limitations with the "*wherever attainable*" language in the CWA. In addition, EPA recognized the overall goals of the CWA in the development of the CSO Control Policy. The policy was developed with the participation of national and regional EPA, state regulators, municipalities, and local and national environmental groups. The CSO Control Policy addresses these issues as follows:

This CSO Control Policy represents a comprehensive national strategy to ensure that municipalities, permitting authorities, water quality standards authorities and the public engage in a comprehensive and coordinated planning effort to achieve cost-effective CSO controls that ultimately meet appropriate health and environmental objectives and requirements. The Policy recognizes the site-specific nature of CSOs and their impacts and provides the necessary flexibility to tailor controls to local situations.

Four key principles of the Policy ensure that CSO controls are cost-effective and meet the objectives of the CWA. The key principles are:

- 1) providing clear levels of control that would be presumed to meet appropriate health and environmental objectives;
- 2) providing sufficient flexibility to municipalities, especially financially disadvantaged communities, to consider the site-specific nature of CSOs and to determine the most cost-effective means of reducing pollutants and meeting CWA objectives and requirements;
- 3) allowing a phased approach to implementation of CSO controls considering a community's financial capability; and
- 4) review and revision, as appropriate, of water quality standards and their implementation procedures when developing CSO control plans to reflect the site-specific wet weather impacts of CSOs.

See 59 Fed. Reg. at 18689.

The CSO Control Policy also instructs authorized permitting states, which includes New York, that while they are responsible to assure that the LTCP meets the requirements of the CWA, they also have the responsibility for “coordinating the review of the long-term CSO control plan and the development of the permit with the WQS authority to determine if revisions to the WQS are appropriate.” 59 Fed. Reg. at 18690.

The CSO Control Policy is very specific with regard to procedures and manner by which WQS reviews in the context of CSO discharges is to be conducted. Further, at the request of Congress, EPA provided the following guidance document: *Coordinating CSO Long-Term Planning with Water Quality Standards Review*, July 2001. The CSO Control Policy and accompanying Guidance define a process for coordination of the LTCP development and water quality standards review and possible revision. An overview of the process is provided in the CSO Control Policy:

State WQS authorities, NPDES authorities, EPA regional offices, permittees, and the public should meet early and frequently throughout the long-term CSO control planning process.

Development of the long-term plan should be coordinated with the review and appropriate revision of WQS and implementation procedures on CSO-impacted waters to ensure that the long-term controls will be sufficient to meet water quality standards. As part of these meetings, participants should agree on the data, information and analyses needed to support the development of the long-term CSO control plan and the review of applicable WQS, and implementation procedures, if appropriate. Agreements should be reached on the monitoring protocols and models that will be used to evaluate the water quality impacts of the overflows, to analyze the attainability of the WQS and to determine the water quality-based requirements for the permit...

59 Fed. Reg. at 18694.

The water quality standard review process described above emphasizes that it does not result in a modification of a site-specific WQS but rather identifies locations where it may appear to be warranted. Under these limited circumstances, federal regulations set forth at 40 CFR Part 131.10(g), then provide that a separate evaluation may be conducted to determine the attainability of a use. Any such UAA has six criteria, which are applicable to determine if a use is attainable. These criteria are as follows:

- Naturally occurring pollutant concentrations prevent the attainment of uses.
- Natural, intermittent, or low flow water levels do not allow attainment of uses.
- Anthropogenic conditions or sources of pollution that cannot be corrected or for which corrective measures would cause more deterioration of the environment than would leaving the conditions or pollutants in place;
- Dams, diversions or other hydrologic modifications.
- Physical conditions associated with the natural features of the waterbody, unrelated to quality, that impede protection of aquatic life.
- More stringent controls than those required by Sections 301(b)(1)(A) and (B) and 306 of the Clean Water Act would result in substantial and widespread economic and social impact.

Under state law and regulation any proposed change in state WQS resulting from a UAA would require public notification, comment and hearing, and ultimately submission to EPA for approval. The CSO Control Policy confirms that “EPA regulations and guidance provide States with the flexibility to adapt their WQS, and implementation procedures to reflect site-specific conditions including those related to CSOs.” 59 Fed. Reg. at 18694. The CSO Control Policy continues “in reviewing the attainability of their WQS and the applicability of their

implementation procedures to CSO-impacted waters, States are encouraged to define more explicitly their recreational and aquatic life uses and then, if appropriate, modify the criteria accordingly to protect the designated uses.” 59 Fed. Reg. at 18695. “In determining whether a use is attainable and prior to removing a designated use, States must conduct and submit to EPA a use attainability analysis.” 59 Fed. Reg. at 18695. Finally, “States must provide the public an opportunity to comment on any proposed revision to water quality standards and all revisions must be submitted to EPA for review and approval.” 59 Fed. Reg. at 18694. The 1992 ACO preceded the development of the CSO Control Policy and its incorporation into the CWA.

### **DEP Programs to Support Regulatory Requirements**

In addition to the requirement for development of a CSO LTCP, the CSO Control Policy requires the design and implementation of Nine Minimum Controls (“NMC”) to be undertaken and completed as soon as practicable before January 1, 1997. DEC has embodied the EPA NMC into 14 Best Management Practices (“BMPs”) in its Technical and Operational Guidance Series (“TOGS”). DEP was already practicing some NMC/BMPs and began a program to design and implement others after development of the CSO Control Policy. DEP completed its NMC/BMP reporting to DEC in January 1997 and all programs are now operative. DEC formally included its BMP requirements into DEP’s 14 SPDES permits in 2003. The NMC/BMPs included in the WPCP permits for CSOs are as follows:

- CSO Maintenance and Inspection Program
- Maximum Use of Collection System for Storage
- Maximize Flow to WPCP
- Wet Weather Operating Plan
- Prohibition of Dry Weather Overflow
- Industrial Pretreatment
- Control of Floatable and Settleable Solids
  - o Catch Basin Repair and Maintenance
  - o Catch Basin Retrofitting
  - o Booming, Skimming and Netting
  - o Institutional, Regulatory, and Public Education
- Combined Sewer System Replacement
- Combined Sewer/Extension
- Sewer Connection & Extension Prohibitions
- Septage and Hauled Waste
- Control of Run-off
- Public Notification
- Annual report

DEP submitted a NMC Update Report to DEC in April 2004 as required by the SPDES permits and regularly submits additional reports to demonstrate compliance with other SPDES requirements.

In recognition of the fact that the approved levels of CSO abatement in the 1992 ACO would not meet water quality standards under all circumstances, DEP initiated the Use and Standards Attainment (“USA”) Project in 1999 to bring the engineering program into compliance with the regulatory requirements of the CSO Control Policy and the subsequent 2001 Guidance. This project was designed to follow the step-by-step process outlined in the CSO Control Policy for the development of CSO abatement projects that includes water quality analysis, facility planning, water quality standards compliance determination, water quality standards review and revision as appropriate, public outreach and development of LTCPs. The USA Project uses EPA’s Watershed Approach Framework to investigate all causes of water use impairments, in addition to CSOs. The goals of the USA Project were to examine desired and attainable water uses with stakeholder involvement, reconcile WQS with realistically attainable uses given the site-specific constraints, implement the WQS review process, and serve as the technical basis for waterbody specific UAAs as appropriate.

The USA Project divided the harbor into 26 open water and tributary project areas. The project was overseen by a Government Steering Committee, which included EPA, DEC and other interested federal (USACE, National Park Service), interstate (IEC) and local agencies (DEP). In addition, active public outreach was to be achieved by the formation of Stakeholder Teams for each of the 26 project areas. Where local Stakeholder Teams have been established, these included members of the local Community Boards, representatives of local environmental groups (*i.e.*, Bronx River Alliance) and other citizens recommended by the Community Boards or active on other Citizens committees. Additionally, USA Project updates were provided to the Citizens Advisory Committee (“CAC”) on Water Quality convened in 1996 to provide oversight on DEP’s Comprehensive City-Wide Floatables Control Plan, a project supporting requirements of the 1992 ACO. The CAC included representatives from the Real Estate Board, the Borough President’s offices, the Environmental Defense Fund (EDF), the Natural Resources Defense Council (NRDC), the Department of City Planning, Mosholu Preservation Corporation, Coalition for the New York Bight, New York State DEC, US EPA Region II, NYC DEP, New York City Law Department, a Technical advisory Committee, Bronx River Working Group, Municipal Arts Society (MAS), West Harlem Environmental Action, Inc., Riverkeeper, Rent Stabilization Association, Council of NY Cooperatives, Metropolitan Waterfront Alliance, NYC Audubon Society, New York Academy of Sciences, National Audubon Society, NYC Parks Department, Staten Island Solid Waste Advisory Board, Community Preservation Corporation, Office of Management and Budget, KeySpan Energy, and miscellaneous consultants.

The USA Project continued and advanced DEP's CSO and water quality modeling capabilities. Landside models of the City's combined and separate sewer systems were updated and advanced in the USA Project to provide an improved representation of CSO discharges and control alternatives. DEP's System-Wide Eutrophication Model ("SWEM"), developed for nitrogen planning issues in the East River and Long Island Sound in 1997 was applied for water quality impact evaluations in the open waters. The Jamaica Bay Eutrophication Model ("JEM"), developed as an outgrowth of CSO facility planning work in the 26<sup>th</sup> Ward Tributary Area, was applied for impact evaluations in that waterbody. The NYC Tributary CSO Models, developed during the original CSO facility planning work in the 1980s and early 1990s, were all significantly updated using the latest technology to improve water quality impact evaluations and the assessment of CSO control alternatives.

It is appropriate to note that the Federal/State NY/NJ Harbor Estuary Program ("HEP") and the Long Island Sound Study ("LISS") have adopted SWEM for regional water quality management planning for nutrients and organic enrichment. HEP is also using modifications of SWEM for regional pathogen and toxic contaminant evaluations and planning. The investments that DEP has made to comply with the 1992 ACO and related programs, and to support Federal regulatory initiatives with data gathering and the development of these analytical tools, are now supporting programs for the entire region.

The USA Project will produce waterway-specific Waterbody/Watershed Plans to comply with a number of technical and regulatory requirements of the CSO Control Policy including technical development work to support the LTCP, coordination with state water quality standards, and active public outreach. Holistic Waterbody/Watershed Plans have been developed for Paerdegat Basin and the Bronx River. The Paerdegat Basin and the Bronx River plans recommended implementation of engineering solutions based on the "knee-of-the-curve" approach for CSO storage (Paerdegat) and floatables control (Bronx River) as well as public outreach to support other waterbody or riparian improvements.

In June 2004, DEP authorized the Long Term Control Plan Project. This work will integrate all Track I and Track II CSO Facility Planning Projects and the Comprehensive City-Wide Floatables Abatement Plan, will incorporate ongoing USA Project work in the remaining waterbodies, and will develop Waterbody/Watershed Facility Plan Reports and the LTCP for each waterbody area. The LTCP Project monitors and assures compliance with applicable Administrative Consent Orders.

### **DEP's Current Approach to CSO Planning**

DEP's current approach to CSO abatement goes beyond designing tanks; DEP considers opportunities for CSO abatement measures as part of many of its water pollution control

initiatives. DEP now evaluates cost effective ways to control CSOs when evaluating upgrades to wastewater treatment plants or pump stations. This has resulted in plans to provide additional facilities at the Hunts Point, Newtown Creek, 26<sup>th</sup> Ward, and Jamaica WPCPs to treat more flow at the treatment plant. It has resulted in enlarging the Gowanus Canal and Avenue V Pumping Stations to direct more combined sewage into the interceptor and away from the local receiving waters. Further, DEP's efforts to provide centralized treatment of CSOs is the focal point of the wet weather operating plans for the WPCPs, the regulator automation efforts, the Supervisory Control and Data Acquisition Project ("SCADA") efforts, the installation of throttling gates in interceptors and the inline storage and real time control activities. This SCADA Project will result in installation of numerous flow and water level sensors in the CSO collection system and at pump stations and will automate many regulators. Once completed, the system will provide DEP with the ability to pro-actively control the collection system to assure the maximum possible wet weather flows reach the WPCPs for treatment.

In addition, DEP has evaluated and implemented other cost-effective methods to improve water quality including the use of flushing tunnels, sewer cleaning, in-stream aeration, sewer separation in large areas of Southeastern Queens, floatables containment booms, skimmer boats and catch basin modifications for hoods and hangars at over 130,000 locations citywide. The City's CSO control program now contains in excess of 30 different projects, a major increase in scope from the eight retention facilities anticipated when the 1992 ACO was signed. Table 1., outlining CSO program costs, indicates which projects have been added to the program since the 1992 ACO was executed, as well as the resulting increased CSO capture and cost.

**Table 1.**  
**NYCDEP CSO Program Costs**  
**Millions of 2004 Dollars**

| Projects                                                         | 1992 Order     | 1999 Facility Plans & Amendments | 2004 Proposed Plan | Non-Percent Capture Benefits            |
|------------------------------------------------------------------|----------------|----------------------------------|--------------------|-----------------------------------------|
| North River WPCP Construction                                    |                |                                  |                    |                                         |
| Red Hook WPCP Construction                                       |                |                                  |                    |                                         |
| <b>Flushing Creek</b>                                            | \$320          | \$291                            | \$291              |                                         |
| <b>Paerdegat Basin</b>                                           | \$216          | \$357                            | \$357              |                                         |
| <b>Westchester</b>                                               | \$120          | \$127                            |                    |                                         |
| -Phase 1                                                         |                |                                  | \$27               |                                         |
| -Future Phases                                                   |                |                                  | \$133              |                                         |
| <b>Alley Creek</b>                                               | \$90           | \$95                             | \$109              |                                         |
| <b>Bronx River</b>                                               | \$85           | \$85                             | \$11               |                                         |
| <b>Hutchinson River</b>                                          | \$70           | \$91                             |                    |                                         |
| -Phase 1                                                         |                |                                  | \$21               |                                         |
| -Future Phases                                                   |                |                                  | \$61               |                                         |
| <b>Catch Basin Hooding</b>                                       | \$30           | \$30                             | \$30               | Reduce Floatables                       |
| <b>IFCP Booming/Skimming</b>                                     | \$4            | \$4                              | \$4                | Reduce CSO Floatables                   |
| <b>CAVF</b>                                                      | \$33           | \$33                             | \$33               |                                         |
| <b>Jamaica Bay</b>                                               |                |                                  |                    |                                         |
| - 34 MG Fresh Creek Storage Tank                                 | \$340          |                                  |                    |                                         |
| -26th Ward WPCP Wet Weather Expansion                            |                |                                  | \$282              |                                         |
| -Sewer Cleaning                                                  |                | \$4                              | \$4                |                                         |
| -Dredging Hendrix                                                |                | \$2                              | \$2                | Improve Habitat                         |
| <b>Inner Harbor</b>                                              |                |                                  |                    |                                         |
| - Gowanus Flushing Tunnel Activation                             |                |                                  | \$11               | Meet WQS + Secondary Contact Recreation |
| - Gowanus Canal PS/FM                                            |                |                                  | \$51               |                                         |
| -Regulator Improvements                                          |                | \$10                             | \$10               |                                         |
| -Throttling Facilities                                           |                | \$10                             | \$10               |                                         |
| -In-line Storage                                                 |                | \$4                              | \$4                |                                         |
| <b>Outer Harbor</b>                                              |                |                                  |                    |                                         |
| -Regulator Improvements                                          |                | \$5                              | \$5                |                                         |
| -Throttling Facility                                             |                | \$2                              | \$2                |                                         |
| -In-line Storage                                                 |                | \$3                              | \$3                |                                         |
| <b>Coney Island Creek</b>                                        |                | \$107                            | \$107              |                                         |
| <b>Newtown Creek</b>                                             |                |                                  |                    |                                         |
| -Aeration Zone 1                                                 |                | \$1                              | \$8                | Improve Dissolved Oxygen to > 1.0 mg/L  |
| -Aeration Zone 2                                                 |                |                                  | \$16               |                                         |
| -Throttling Facility                                             |                |                                  | \$2                |                                         |
| -Sewer Diversion                                                 |                | \$6                              | \$3.5              |                                         |
| -Regulator B1 Improvements                                       |                |                                  | \$1.5              |                                         |
| -In -Line Storage                                                |                | \$6                              |                    |                                         |
| -3.5 MG Storage Tank                                             | \$69           | \$69                             |                    |                                         |
| -9 MG Storage Tank                                               |                |                                  | \$133              |                                         |
| <b>Jamaica Tribs</b>                                             |                |                                  |                    |                                         |
| -Jamaica WPCP Wet Weather Expansion                              |                | \$100                            | \$100              |                                         |
| -Interceptor Cleaning                                            |                | \$6                              | \$6                |                                         |
| -Carson Avenue Sewer(SE-152)                                     |                | \$80                             | \$80               | Eliminate CSOs                          |
| -Shellbank Destratification                                      |                | \$1                              | \$1                | Eliminate Odors                         |
| -Warnerville/Meadowmere DWO                                      |                | \$6                              | \$6                | Eliminate DWOs                          |
| -HRPCT Pilot/Demo Testing                                        |                | \$20                             | \$20               |                                         |
| -Future Sewer Buildout                                           |                |                                  |                    | Eliminate CSOs                          |
| <b>Inter-Pier Skimmer Vessels</b>                                |                |                                  | \$9                | Reduce Floatables                       |
| <b>Subtotal</b>                                                  | <b>\$1,378</b> | <b>\$1,556</b>                   | <b>\$1,954</b>     |                                         |
| <b>Wet Weather Capture (%)</b>                                   | <b>70.2</b>    | <b>73.4</b>                      | <b>73.0</b>        |                                         |
| <b>Untreated CSO (MG/year)</b>                                   | <b>32,430</b>  | <b>29,490</b>                    | <b>29,650</b>      |                                         |
| <b>Bowery Bay WPCP Main Sewage Pumps</b>                         |                |                                  | \$30               |                                         |
| <b>Hannah Street Pumping Station Upgrade and Diversion Sewer</b> |                |                                  | \$30               |                                         |
| <b>SCADA</b>                                                     |                |                                  | \$50               |                                         |
| <b>OMNIBUS IV Consent Order</b>                                  |                |                                  |                    |                                         |
| -Hunts Point Headworks                                           |                |                                  | \$26               |                                         |
| -26th Ward Bypass                                                |                |                                  | \$0                |                                         |
| -Tallman Island Velocity Gates                                   |                |                                  | <1                 |                                         |
| -Tallman Island Interceptor Improvements                         |                |                                  | \$55               |                                         |
| <b>Newtown Creek Consent Order</b>                               |                |                                  |                    |                                         |
| -Newtown Creek to 700 MGD                                        |                |                                  | \$12               |                                         |
| <b>Grand Total</b>                                               | <b>\$1,378</b> | <b>\$1,556</b>                   | <b>\$2,157</b>     |                                         |
| <b>Wet Weather Capture (%)</b>                                   | <b>70.2</b>    | <b>73.4</b>                      | <b>75.4</b>        |                                         |
| <b>Untreated CSO (MG/year)</b>                                   | <b>32,430</b>  | <b>29,490</b>                    | <b>27,250</b>      |                                         |

Note: costs are for the specific plan and not cumulative across plans.

**Summary of CSO Control Projects Listed in Table 1.**

- Flushing Creek – Construction is being completed on a 28 million gallon (“MG”) flow through CSO retention facility with and additional 18 MG of in-sewer storage. This facility will store and retain up to 43 MG of CSO and pump it back to the Tallman Island WPCP for treatment. Flows in excess of the storage capacity will receive screening of floatables and sedimentation of solids.
- Paerdegat Basin – Construction is ongoing on a 20 million gallon flow through CSO retention facility with and additional 30 million gallons of in-sewer storage. This facility will store and retain up to 50 MG of CSO and pump it back to the Coney Island WPCP for treatment. Flows in excess of the storage capacity will receive screening of floatables and sedimentation of solids.
- Westchester Creek – A CSO retention facility is in design for retention of CSOs being discharged to Westchester Creek. This facility could retain 12 million gallons of CSO off-line and return it to the Hunts Point WPCP for treatment. The final size of the facility will be determined based on the waterbody/watershed plans that are due to DEC in June 2007.
- Alley Creek – Construction has recently started on 5 million gallon storage facility. This facility will retain up to 5 MG of CSO and pump it back to the Tallman Island WPCP for treatment. Flows in excess of 5 MG would receive some level of floatables removal and sedimentation.
- Hutchinson River – A CSO retention facility is in design for retention of CSOs being discharged to Westchester Creek. Retention of a total of 9 MG of CSO in large sewer conduits that would be constructed has been proposed for this area. Retained CSO would be pumped back to the Hunts Point WPCP for treatment. The final size of the facility will be determined based on the waterbody/watershed plans that are due to DEC in June 2007.
- Catch Basin Hooding – DEP has spent in excess of \$40 million on a program to retrofit floatable containment hoods within over 130,000 NYC catch basins and/or to reconstruct these catch basins so that they can be made to retain floatables and prevent them from entering both combined and storm sewers.
- IFCP Booming/Skimming – DEP operates a fleet of 5 vessels that skim floatables from waters of New York Harbor and from CSO impacted tributaries. In addition, the City uses floating booms and floating nets to trap CSO floatables exiting the CSOs.
- CAVF – DEP constructed the Corona Avenue vortex facility (CAVF) on an outfall to Flushing Bay as a pilot project to test the ability of the vortex technology to remove floatables and settleable materials from overflows. The facility has the ability to treat flows up to a maximum flow rate of near 400 MGD.
- Jamaica Bay – A 34 MG CSO retention facility similar to the Flushing Creek and Paerdegat Basin facilities was originally proposed. Since the 1992 ACO, DEP has discovered that it can expand the 26<sup>th</sup> Ward WPCP to treat additional flow, clean sewers

upstream of the WPCP so more wet weather flow is delivered to the WPCP and dredge CSO sediments to achieve a significant improvement in water quality in Fresh and Hendrix Creeks.

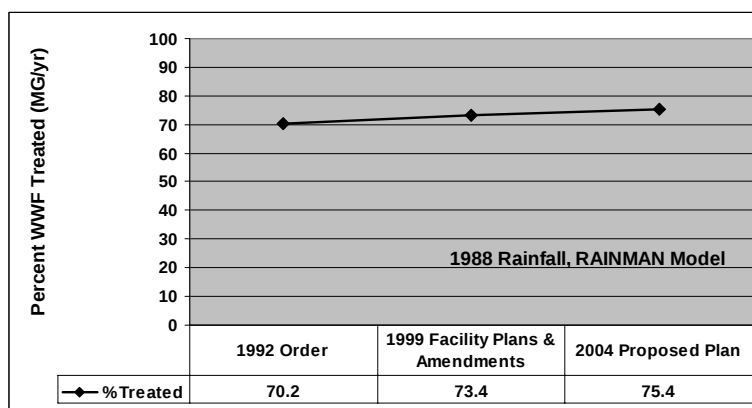
- Inner Harbor (Hudson River/Lower East River/Gowanus Canal/Newtown Creek) – A tunnel connecting Buttermilk Channel of New York Harbor and the head end of Gowanus Canal has been cleaned and pumps re-activated/re-constructed to pump clean NY Harbor water through Gowanus Canal to keep the canal flushed. Further, a new sewer is being constructed to connect the Gowanus Pump station directly to the interceptor sewer under Columbia Street thereby diverting a significant amount of sanitary sewage away from CSO outfalls to Gowanus Canal. In Manhattan and other portions of Brooklyn, CSO regulating devices are being improved and in system CSO storage facilities (throttling/in-line) to divert additional amounts of combined sewage to the local WPCPs.
- Outer Harbor (NY Bay/Raritan Bay/Kill Van Kull/Arthur Kill) - In northern Staten Island and other portions of Brooklyn, CSO regulating devices are being improved and in system CSO storage facilities (throttling/in-line) to divert additional amounts of combined sewage to the local WPCPs.
- Coney Island Creek – The Avenue V pump station in Brooklyn is being reconstructed and expanded and a new and large sewer constructed to divert combined sewage away from Coney Island Creek and toward the Owls Head WPCP.
- Newtown Creek – DEP has a multi-phased approach to CSO water quality improvement in Newtown Creek. Systems are being constructed to test whether aerating sections of the creek can improve water quality. If successful, these systems would be expanded in future phases. Throttling facilities are being constructed in the interceptors to provide for in-sewer storage and better flow control to the WPCP to reduce CSOs. Further, sewers and regulators are being reconstructed direct CSO flow to sewers that can convey the combined sewage away from the creek and towards the WPCP. Finally, a 9 million gallon CSO retention facility is planned for the head end of English Kills to contain CSO and provide for floatables and settleable solids reduction to flows that exceed the capacity of the retention facility. The final size of the facility will be determined based on the waterbody/watershed plans that are due to DEC in June 2007.
- Inter-pier Skimmer Vessels – DEP has initiated a design competition contract to evaluate whether 2-different boat manufacturers could construct a vessel that could skim floating trash from between piers and along bulkheads in highly visible areas of NY Harbor such as South Street or the Hudson River Park area.
- Bowery Bay WPCP Main Sewage Pumps – The main sewage pumps are being upgraded to allow the WPCP to increase by more than 30 MGD the wet weather flow treatment capacity.
- Hannah Street Pump Station Upgrade – The Hannah Street pump station in Staten Island is planned to be upgraded and expanded to allow it to increase the amount of CSO flow

- pumped to the Port Richmond WPCP.
- SCADA – The Supervisory Control and Data Acquisition Project will be installing flow and water level sensors within the CSO collection system; sensors within pump stations, sensors at CSO control facilities. Further the Project will be providing DEP with the ability to actively control pump stations, regulators and CSO facilities to minimize CSO overflows.
- OMNI IV – Under the Omnibus IV ACO, DEP is constructing facilities at WPCPs (Hunts Point influent pumps, 26<sup>th</sup> Ward secondary bypass channel, Tallman Island velocity gates) and reconstructing elements of the collection system (Tallman Island interceptors) to provide treatment up to two times design dry weather flow (“2xDDWF”) at WPCPs that are not capable of handling those maximum flow rates.
- Newtown Creek WPCP– As part of reconstruction of the Newtown Creek WPCP as required by a Judicial Order, DEP will be expanding the size of the WPCP so that it can treat up to 700 MGD in wet weather, a flow that will be beyond the 2xDDWF limit of other facilities but equivalent to its current wet weather treatment capacity.

When fully built-out, the program will cost the City considerably more than originally envisioned when the 1992 ACO was signed and will provide more benefits to the environment. The program DEP is proposing is estimated to cost in excess of \$2.1 billion (Table 1.) in 2004 dollars. When DEP entered into the 1992 ACO, the estimated cost of the tank program was \$1.4 billion (escalated to 2004 dollars).

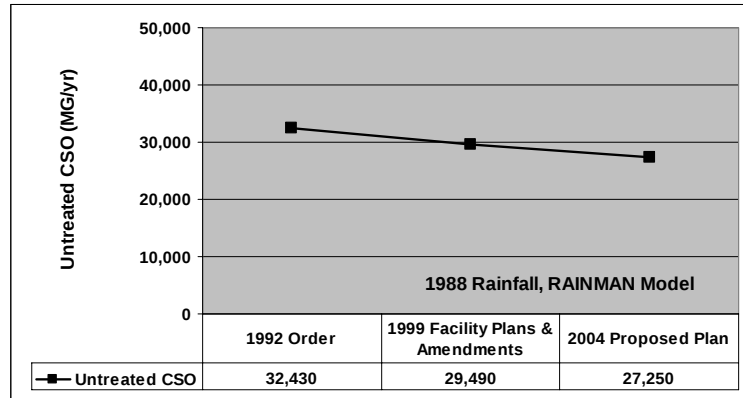
Even when additional costs are included for project elements presented in the 1999 Facility Plans, DEP projected that the total cost of all the CSO controls would be \$1.6 billion (escalated to 2004).

The more extensive CSO program Order improves upon the City’s previous commitments by increasing the amount of wet weather flow being treated. The City’s currently proposed CSO control program is expected to provide treatment for 75.4 percent of the wet weather flow. This is also up from the 70.2 percent wet weather treatment that was anticipated to be provided by the elements of the program known to the City when it entered into the 1992 ACO.



Additionally, the currently proposed program is also expected to reduce untreated CSOs from about 32 billion gallons a year of annual overflow expected as a result of the 1992 Order to about 27 billion gallons a year. This reduction to 27 billion gallons a year is even less than the 1999 expectation of more than 29 billion gallons of untreated overflow being discharged.

There are other benefits that cannot be measured as wet weather capture that result from the currently proposed CSO program. For example, the flushing tunnel activation in Gowanus Canal, the aeration of Newtown Creek, the destratification of Shellbank Basin and the floatables controls in the



Bronx River have all provided water quality benefits that are not quantified through the estimates provided herein as wet weather flow capture or CSO volume reduction. In addition, the floatables controls already in place through catch basin hooding and the interim CSO boom and skimmer boat program, although not easily quantified, are estimated, when combined with the

estimates above, to provide an overall reduction in the City's floatable load to the harbor of about 90 percent from the pre-1992 Order conditions.

All of this previous work has served as the foundation for the development of a City-Wide CSO LTCP, required by the CSO Control Policy that will integrate cost-effective engineering solutions consistent with regulatory requirements and community vision. The Waterbody/Watershed Plans that are developed and finalized under the LTCP will serve as the basis of any WQS review and possible revision, through the UAA process, for any waterbody that can not attain CWA - fishable/swimmable water quality uses, after all CSO abatement projects are completed. DEP and DEC have reached agreement on the CSO program as follows:

- 1) With respect to those projects that are already under construction or about to enter construction phases (Flushing Creek, Paerdegat Basin, Alley Creek, Inner Harbor and Outer Harbor), construction will continue as planned. Pursuant to a separate Memorandum of Understanding between DEP and DEC, DEC will begin the regulatory review processes for the basins affected by these projects, based on DEP's analyses, before construction is complete.
- 2) For Coney Island Creek, design and construction will continue as planned since this project is presumed to meet water quality standards based upon the Demonstration Approach in the CSO Control Policy.
- 3) For the rest of the projects that were identified in the 1992 ACO as Track 1 Projects (Westchester Creek, Hutchinson River, Fresh Creek, Jamaica Tributaries and Newtown Creek) DEP will commit to the phased construction of the recommendations made in the approved facility plans for these project areas. This phased implementation will include final design and the commencement of construction related to these five water bodies, with the understanding that DEC will undertake the WQS review process for the basins affected by these projects, once construction begins on the final phase of these projects.

DEC and DEP are aware that the CSO controls being developed within the densely populated NYC environment outlined above can be costly and potentially difficult to site. Further, both agencies embrace the use of more natural methods of controlling CSO pollution including infiltration of the rainfall before it has the chance to runoff into the combined sewers. However, New York City is a densely populated urban environment with areas that are nearly 100 percent impervious and with population densities in excess of 100,000 people per square mile (160 people per acre). Excluding Staten Island, the city-wide average population density is nearly 40,000 people per square mile (63 people per acre). In 1999, DEP authorized a study by independent stormwater experts to evaluate the feasibility and potential application of runoff reducing technologies within NYC. This study found that infiltration technologies and green roof technologies had the potential for application in selected areas. However, the study also found that wide scale application of the technologies within acceptable regulatory timeframes was impracticable.

DEP's current approach to CSO planning provides allowances for future growth and development within NYC. DEP prepares official estimates of population growth and projects water usage and wastewater flows to 2045, the design year for the water pollution control infrastructure including CSO abatement facilities. Currently, all CSO control facilities are evaluated and designed including provision for growth and development during this period. As site-specific projects are developed and considered in the City, DEP has developed the technical tools to evaluate the increased flow to the combined sewer system and wastewater treatment plants, and the potential effect on CSO abatement facilities, the potential for increase in CSO, and the possible impact on water quality and water uses. New buildings cannot be constructed within NYC without applying for a sewer connection permit. DEP reviews the capacity of sanitary, storm and combined sewers that are potentially impacted by the sewer connection request to assure capacity to convey storm flows and to treat sanitary flows. Development projects within New York City are subject to the CEQR review process. City Planning or another involved City agency would serve as the lead agency with the responsibility of evaluating environmental impacts of such projects. Where the lead agency finds a significant impact such as a potential violation of the ECL or CWA, that impact must be mitigated before the project is allowed to proceed.

CSO planning in NYC is also coordinated with other ongoing pollutant abatement programs. The six DEP wastewater treatment plants and all CSOs that discharge to the the East River are subject to the nitrogen reduction requirements of the Long Island Sound Study TMDL. In Jamaica Bay, DEP is actively evaluating eutrophication conditions and problems associated with nitrogen discharges in accordance with the 2002 Nitrogen Consent Order. In both regions of the harbor, DEP has determined that the discharge of nitrogen from CSOs is a minor fraction of the total nitrogen discharge to the area. In the East River region, the requirements for nitrogen reduction in CSO discharges will be complied with by the planned CSO abatement program and

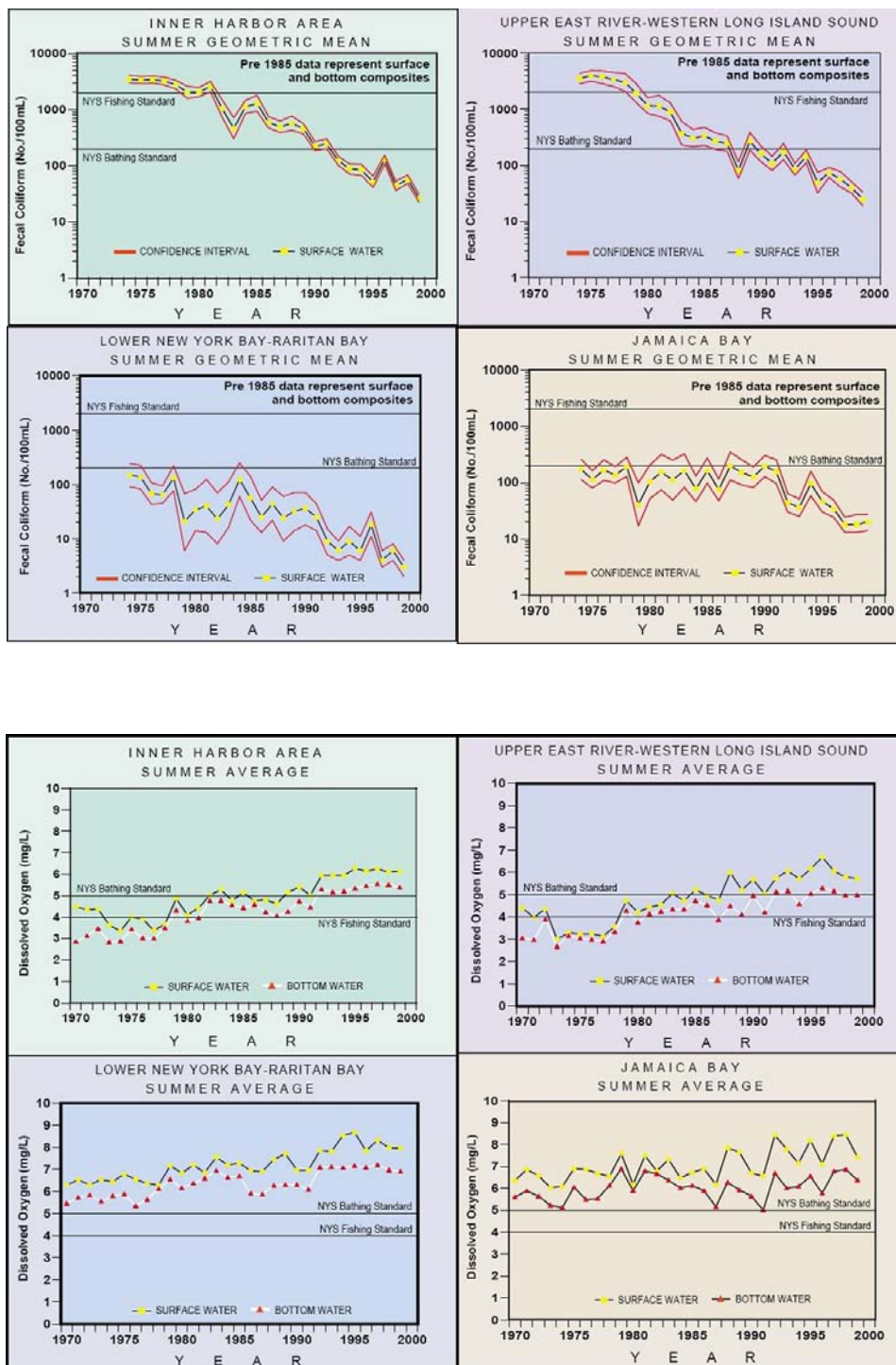
by additional nitrogen removal at the wastewater treatment plants. Whatever level of nitrogen reduction is determined to be appropriate for Jamaica Bay, a similar approach will be used.

In terms of the remaining open waters of the harbor, a number of water quality issues are under evaluation by the joint Federal-State NY/NJ Harbor Estuary Program (“HEP”) including nutrients, pathogens and toxic contaminants. DEP has donated its landside and receiving water modeling technology for use by this program. In addition, DEP is a member of the Policy and Management Committees and participates in all Work Groups. As bi-state issues develop in the shared waters of the harbor regarding CSOs, other wastewater discharges and applicable water quality criteria and standards, HEP serves as a working and regulatory forum for discussion, coordination and resolution.

DEP’s current approach to CSO planning also involves close coordination with, and active support for, U.S. Army Corps of Engineers (“ACE”) Ecological Restoration Programs, especially in CSO impacted waterways. DEP proposed CSO facilities will improve environmental conditions to such an extent that ecological restoration becomes possible and desirable. NYC is the local sponsor and shares cost for ecological restoration programs with ACE in Jamaica Bay, Flushing Bay, the Bronx River and Gowanus Canal. DEP is also coordinating with ACE on similar potential efforts in Newtown Creek.

### **Current Water Quality Conditions in New York Harbor**

As noted, DEP discharges untreated sewage and stormwater runoff from approximately 460 CSO outfalls during certain wet weather events. These discharges may cause water quality standard violations and impairments in confined tributaries, and may have some impact on the overall quality of the City’s waters. DEC’s Priority Water Bodies List states that CSOs are one of the leading causes of water quality problems in and around the City. However, it is also appropriate to recognize that, as a result of the 1992 and 1996 ACOs, as well as on-going DEP CSO abatement efforts, and other programs instituted by NYC, water quality in many NYC waterways has substantially improved. NYC’s Harbor Survey program, which has been measuring the quality of surrounding waters since 1909, has reported significant improvements in harbor-wide water quality. Open water pathogens concentrations have been steadily trending downward and dissolved oxygen concentrations have been trending upward. Since 1970, harbor-wide summer dissolved oxygen resources have increased by 50% for the benefit of marine life and fecal coliform bacteria have been reduced by 95% so that primary contact water quality conditions are now attained in the open waters of the harbor, more than is required by current WQS. No public beaches were closed in 2004, even using stricter federal indicator bacteria as required by the U.S. Environmental Protection Agency and the City’s Department of Health and Mental Hygiene. Most open waters of the harbor currently achieve aquatic life protection and primary contact recreational water uses with a high degree of compliance.



Additionally, sewer system bypasses have been reduced by 99% and the capture and treatment of wet weather flows in the combined sewer system has increased from 18% to 72%. Floatable materials from CSOs and other sources have been reduced by more than 80%.

DEC anticipates that DEP's current CSO program together with ongoing harbor-wide water quality initiatives will collectively work to further the real progress that has been made to

date and continue to improve harbor water uses and water quality to the maximum practical level attainable.

### **2004 CSO Administrative Consent Order – Summary of Commitments**

The 2004 ACO for Implementation of the Combined Sewer Abatement Program in New York City describes an agreement between DEC and DEP to revise and replace similar ACOs developed between the parties in 1992 and 1996. The 2004 ACO addresses DEP's numerous violations of the compliance schedule contained in the 1992 ACO. Specifically, the 2004 ACO requires: compliance schedules with enforceable milestones based on the projects set forth in the ACO; payable penalties of \$2 million plus an additional \$1.5 million to fund projects that will benefit receiving waters; funding of up to four Independent Environmental Monitors to assist in DEC oversight of the ACO; and the development of a LTCP as required by the 1994 CSO Control Policy.

The 2004 ACO requires the planning, design, and construction of over thirty projects City-wide. These projects include: off-line retention tanks, sewer separation, flushing tunnels, throttling facilities, and numerous other projects designed to optimize the operation of the sewer collection system, pumping stations, and treatment plants during wet weather. When fully constructed, the estimated capital cost of these projects will be in excess of \$2.1 billion in 2004 dollars (Table 1.).

The CSO abatement program required in the 2004 ACO improves upon the 1992 ACO by increasing the amount of wet weather flow being treated. The 2004 ACO requires projects that provide treatment for 75.5% of wet weather flow, an improvement over the 70.2% wet weather treatment required by the 1992 ACO. Other benefits of the 2004 ACO include improved water quality and control of floatable material discharged from CSOs. In addition to the floatables control already implemented by DEP, it is estimated that, when combined with the facilities required under the 2004 ACO, there will be a 90% reduction in the floatable load to receiving waters from the pre-1992 ACO condition will be provided.

Implementation of the terms of DEP's 14 SPDES permits along with the 2004 ACO and resultant LTCP will result in improved water uses, and continued increases in water quality in NYC waterways. Building upon the CSO abatement progress that has already been achieved, the culmination of these new requirements will result in the following: (a) the construction of CSO abatement facilities to ensure that if CSOs occur, they are only as a result of wet weather; (b) bring all CSOs into compliance with the CWA and ECL; and (c) minimize the adverse impacts to water quality, aquatic biota, and human health from CSO discharges. Water uses and water quality will improve in the City's waters as a result of the 2004 ACO. It is expected that current water use goals can be attained in certain waterways and exceeded in others. Some waterways

may need new goals that are consistent with the urban environment. All waterways will be evaluated for the highest water use attainable in accordance with Federal and State law. Both DEC and DEP are committed to the improvement of water use and water quality to the maximum extent practicable and to the development of a LTCP which will achieve regulatory requirements.

The Memorandum of Understanding (“MOU”) referenced in the 2004 ACO details how the foregoing will be accomplished in the development of NYC’s LTCP. In this MOU, DEC and DEP have agreed to a series of work efforts to examine and review regulatory options based on the Use Attainability Analysis reports and, if appropriate, seek revision of water body classifications and/or site-specific water quality standards to ensure that the CSO abatement projects, as approved by DEC, result in compliance with applicable WQS. The MOU requires DEP to provide \$1 million dollars for DEC’s work efforts under the MOU. The purpose of this \$1 million dollars is for DEC to retain independent third party consultants to review all analyses undertaken by DEP in development of the LTCP and to assist with the regulatory requirements of the WQS review process.

It is important to note that the 2004 ACO and MOU do not change current WQS, but rather describe the process by which the CSO Control Policy review procedure will be accomplished in a manner fully consistent with Federal and State law, regulations and guidance. DEP will produce Waterbody/Watershed Facility Plans for each CSO abatement project. The Waterbody/Watershed Facility Plan reports are an essential element of the LTCP that will evaluate water quality impacts that remain after the CSO abatement projects are implemented and determine if additional CSO control measures may be available to comply with water quality standards. In other words, the 2004 ACO requires DEP to determine if additional CSO abatement measures beyond those identified in the 1992 ACO could reduce the effects of impairments caused by the remaining CSOs and/or other sources. Ultimately, the Waterbody/Watershed Facility Plans will provide the technical framework for DEC’s Use Attainability Analyses for review of site-specific standards.

DEP will produce Use Attainability Analysis Reports (UAA Reports) for each basin, using the Waterbody/Watershed Facility Plans to identify what aquatic life, recreational, and aesthetic uses can be attained through implementation of the Waterbody/Watershed Facility Plans. These UAA Reports will identify existing uses, use impediments, and attainable uses based on modeling the impacts of implementing the Waterbody/Watershed Facility plans. The UAA Reports will also analyze, for each basin, the applicability of the criteria set forth in 40 CFR §131.10(g) for modifying WQS. If DEP believes circumstances warrant, DEP will petition DEC for review and revision of site-specific standards for appropriate waterways in accordance with 6 NYCRR Part 609.

It is critical to note that throughout this process the opportunities for public input have been and will continue to be extensive. Consistent with the CSO Control Policy, the development of the Waterbody/Watershed Facility Plans will be overseen by a Harbor-Wide Government Steering Committee composed of DEC, EPA, and other City, State, interstate and Federal stakeholders. Further, DEP began, and will continue to convene Waterbody/Watershed Stakeholder Teams within each affected community, with representation of local community government and organizations, local citizens, and waterbody users who will comment on CSO facility plans, water use issues and goals, and, as may be appropriate, any proposed revisions to WQS. As noted above, any proposed revisions to WQS after UAA determinations will also require public notice, comment and hearing. As a result, there will be much opportunity for public input regarding WQS issues.

In summary, the CSO abatement program required under the 2004 ACO commits more funds, achieves greater environmental benefit through improved wet weather capture and system performance, than was required under the 1992 Order. The abatement projects along with the comprehensive monitoring, the Waterbody/Watershed Facility Plan reports, the WQS review process and LTCP all fully conform to the CSO Control Policy. The 2004 ACO takes a sound technical step forward in mandating that the most critical CSO abatement projects go forward based upon the best available information, while at the same time preserving future flexibility in conformance with the 1994 EPA CSO Control Policy. The 2004 ACO, in combination with the requirements of the 14 DEP SPDES permits; the consent orders for nitrogen removal and the upgrade of the Newtown Creek WPCP; and DEP's WPCP modernization program result in both a substantial investment and a comprehensive water pollution control program for waters in and around NYC.

## **COMMENTS AND RESPONSES**

Summaries of comments made and a response to each comment are listed below and have been organized into eleven categories. The summaries of comments received represent the focus of the comment and do not quote the comments verbatim. Where multiple commenters expressed similar views and comments, those comments have been grouped and addressed together.

### **A: Water Quality, Water Quality Standards (WQS) and Use Attainability Analyses (UAA)**

**Comment:** A number of commenters believe that NYC has not been actively working to improve water quality. They have indicated the following:

- NYC has not been working to reduce CSOs and that these CSOs represent a threat to the Citizens of NYC.
- It is the City's responsibility to keep sewage and polluted runoff out of the public waterways and they have not been proactive.
- If approved, the ACO would allow DEP to abandon its obligation to eliminate or control CSOs, which will place the community at risk to possible contamination and disease.

**Response:** Even without the 1992 ACO, the City started to implement CSO controls to improve water quality in New York Harbor, as is evidenced by the fact that a CSO retention facility was constructed in 1972 to improve water quality in Spring Creek and Jamaica Bay. Overall, DEP has a capital program for improving the sewer infrastructure that expends nearly \$1 billion annually. As a result of the 1992 and 1996 ACOs, on-going DEP CSO abatement efforts, and other pollution control programs instituted by NYC, water quality in many NYC waterways has substantially improved. NYC's Harbor Survey, which has been measuring the quality of surrounding waters since 1909, has reported very significant improvements in harbor-wide water quality. Since 1970, summer dissolved oxygen resources have increased by 50% for the benefit of marine life and fecal coliform bacteria have been reduced by 95% so that primary contact water quality conditions are now attained in the open waters of the harbor, more than is required by current WQS. No public beaches were closed in 2004 even using stricter federal indicator bacteria as required by the U.S. Environmental Protection Agency (EPA) and the City's Department of Health and Mental Hygiene. Most open waters of the harbor currently achieve aquatic life protection and primary contact recreational water uses with a high degree of compliance.

Additionally, sewer system bypasses have been reduced by 99% and the capture and treatment of wet weather flows in the combined sewer system has increased from 18% to 72%. Floatable materials from CSOs and other sources have been reduced by more than 80%. Further, three new CSO retention tanks are under construction in Flushing Bay (Upper East River), Paerdegat Basin (Jamaica Bay), and Alley Creek (Little Neck Bay) at a cost of more than \$750 million. Three additional CSO retention tanks are currently being planned and a number of other controls are being implemented.

The 2004 ACO, including implementation of facilities and other controls which it requires, and the development of the LTCP will ensure that this progress continues and that water uses and water quality will continue to improve to the maximum practical level which is attainable.

**Comment:** A number of commenters have objected to the “weakening” and/or “lowering” of WQS, which is what they believed to be the intent of the ACO and they have urged that existing federal and state WQS should be achieved by the Long Term Control Plan (LTCP). Typical comments include the following:

- The ACO will result in “damage to our most cherished resources.”
- If approved, the ACO would allow DEC to abandon its obligation to eliminate or control CSOs, which will place the community at risk to possible contamination and disease.
- The proposed ACO does not represent advancement in water quality protection, but a lessening of standards and compliance schedules.
- The WQS for the City’s waters should be raised or maintained, not lowered so that recent improvements in water quality can continue.
- Clarification should be provided that DEC will only approve LTCPs that will attain the approved WQS in force at the time of approval action.
- The ACO exempts the City from current federal and state WQS for years to come and allows weaker WQS to be put in place in order to avoid additional sewer overflow controls.
- The ACO should not abrogate New York City’s 1992 commitment to develop facility plans that meet existing WQS.
- A LTCP by must, by law, meet WQS. DEP does not have reasonable justification to assume that DEC will relax WQS to sanction the level of CSO pollution remaining after implementation of facility plans.

**Response:** It is a misconception that the 2004 ACO or the LTCP will damage the environment. All projects and plans will be focused on improving these resources. Implementation of the 2004 ACO and development of the LTCP will result in enhanced CSO capture and treatment, improved water uses, and continued increases in water quality levels in NYC waterways. It is the intent of the 2004 ACO and a requirement of the LTCP to provide a “*comprehensive and coordinated planning effort to achieve cost effective CSO controls that ultimately meet appropriate health and environmental objectives.*”

The objective of the 2004 ACO and the resulting LTCP, require DEP to eliminate such impairments to the maximum extent which is practically achievable and to continue the real progress which has already been achieved.

Water uses and water quality will improve in the City's waters as a result of the 2004 ACO. It is expected that current water use goals can be attained in certain waterways, exceeded in others. Some waterways may need new goals that are appropriate to the urban environment. All waterways will be evaluated for the highest water use attainable in accordance with federal and state law. Both DEC and DEP are committed to the improvement of water uses and water quality to the maximum extent practicable and to the development of a LTCP which can achieve stated objectives.

It is noted that the CWA states that *"it is the national goal that wherever attainable ...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..."* The 2004 ACO and resulting LTCP is fully supportive of, and consistent with, this goal. Congress provided for goal limitations with the *"wherever attainable"* language in the CWA. In addition, EPA recognized the overall goals of the CWA in the development of the 1994 *Combined Sewer Overflow Control Policy* (CSO Policy). This policy was developed with the participation of national and regional EPA, state regulators, municipalities, and local and national environmental groups. Four years ago, the US Congress passed the *Wet Weather Water Quality Act of 2000* to require permits and orders to conform to the national CSO Policy. The 2004 ACO follows the requirements of that law and history. The CSO Policy addresses these issues as follows:

*"This CSO Control Policy represents a comprehensive national strategy to ensure that municipalities, permitting authorities, water quality standards authorities and the public engage in a comprehensive and coordinated planning effort to achieve cost-effective CSO controls that ultimately meet appropriate health and environmental objectives and requirements. The Policy recognizes the site-specific nature of CSOs and their impacts and provides the necessary flexibility to tailor controls to local situations.*

*Four key principles of the Policy ensure that CSO controls are cost-effective and meet the objectives of the CWA. The key principles are:*

- 1) providing clear levels of control that would be presumed to meet appropriate health and environmental objectives;*
- 2) providing sufficient flexibility to municipalities, especially financially disadvantaged communities, to consider the site-specific nature of*

*CSOs and to determine the most cost-effective means of reducing pollutants and meeting CWA objectives and requirements;*

- 3) allowing a phased approach to implementation of CSO controls considering a community's financial capability; and*
- 4) review and revision, as appropriate, of water quality standards and their implementation procedures when developing CSO control plans to reflect the site-specific wet weather impacts of CSOs."*

The CSO Policy also delegates to authorized permitting states, which includes New York, that while they are responsible to assure that the LTCP meets the requirements of the CWA, they also have the responsibility for *"coordinating the review of the long-term CSO control plan and the development of the permit with the WQS authority to determine if revisions to the WQS are appropriate."*

The CSO Policy is specific with regard to procedures and manner by which WQS reviews in the context of CSO discharges is to be conducted. Further, at the request of Congress, EPA provided *Guidance: Coordinating CSO Long-Term Planning with Water Quality Standards Review*, July, 2001. The Policy and Guidance clearly define a process for coordination of the LTCP development and water quality standards review. An overview of the process is provided in the CSO Policy:

*"State WQS authorities, NPDES authorities, EPA regional offices, permittees, and the public should meet early and frequently throughout the long-term CSO control planning process. Development of the long-term plan should be coordinated with the review and appropriate revision of WQS and implementation procedures on CSO-impacted waters to ensure that the long-term controls will be sufficient to meet water quality standards. As part of these meetings, participants should agree on the data, information and analyses needed to support the development of the long-term CSO control plan and the review of applicable WQS, and implementation procedures, if appropriate. Agreements should be reached on the monitoring protocols and models that will be used to evaluate the water quality impacts of the overflows, to analyze the attainability of the WQS and to determine the water quality-based requirements for the permit..."*

The water quality standard review process described above emphasizes that it does not result in a modification of a site-specific WQS but rather identifies locations where it may appear to be warranted. Under these limited circumstances, federal regulations then require a separate evaluation be conducted to determine the attainability of a use. Any such UAA has six criteria, which are applicable to determine if a use is attainable. Under state law and regulation any proposed change in state WQS resulting from a UAA would then require public notification, comment and hearing under, and ultimately submission to EPA for approval. The CSO Policy states:

*“EPA regulations and guidance provide States with the flexibility to adapt their WQS, and implementation procedures to reflect site-specific conditions including those related to CSOs.”*

*“In reviewing the attainability of their WQS and the applicability of their implementation procedures to CSO-impacted waters, States are encouraged to define more explicitly their recreational and aquatic life uses and then, if appropriate, modify the criteria accordingly to protect the designated uses.”*

*“In determining whether a use is attainable and prior to removing a designated use, States must conduct and submit to EPA a use attainability analysis.”*

Finally,

*“States must provide the public an opportunity to comment on any proposed revision to water quality standards and all revisions must be submitted to EPA for review and approval.”*

The Memorandum of Understanding (MOU) referenced in the 2004 ACO details how the foregoing will be accomplished in the development of DEP’s LTCP. It is to be noted that the 2004 ACO and MOU do not change current WQS, but rather describe the process by which the CSO Policy review procedure will be accomplished in a manner fully consistent with federal and state law, regulations and guidance. DEP will produce Waterbody/Watershed Facility Plans for each CSO abatement project. The Waterbody/Watershed Facility Plans will provide the technical framework for DEC’s Use Attainability Analyses for review of Site Specific Standards. Further, the Waterbody/Watershed Plans will examine the

extent to which additional cost-effective CSO control measures may result in WQS being met.

DEP will produce Use Attainability Analysis Reports (UAA Reports) for each basin, using the Waterbody/Watershed Facility Plans to identify what aquatic life, recreational, and aesthetic uses can be attained through implementation of the Waterbody/Watershed Facility Plans. These UAA Reports will identify existing uses, use impediments, and appropriate attainable uses based on modeling the impacts of implementing the Waterbody/Watershed Facility plans. The UAA Reports will also analyze, for each basin, the applicability of the criteria set forth in 40 CFR §131.10(g) for modifying WQSs.

Finally, DEP, if it believes circumstances warrant, will petition DEC for review and revision of Site Specific Standards of basin waters in accordance with 6 NYCRR Part 609.

The 1992 ACO was completed prior to development of the CSO Policy, its guidance, and its subsequent incorporation into the CWA by federal legislation. Therefore, in addition to addressing DEP's non-compliance with the 1992 ACO, one purpose of the 2004 ACO is to revise and update the 1992 ACO for CSO abatement in a manner that is in full compliance with current federal and state law.

**Comment:** A number of commenters were concerned that the proposed order is weaker than the 1992 ACO and that there would be a reduction in water quality as a result of the new ACO.

- The proposed ACO requires less CSO abatement than the 1992 ACO.
- The 1992 ACO required whatever measures necessary to achieve WQS, whereas the proposed ACO sets forth a weaker goal: implementation of facility plans that will not achieve existing WQS, along with a regulatory process for providing for WQS to be weakened so that additional controls will not be necessary.
- Wet weather flow treatment levels are estimated to climb from 70.2% under the 1992 ACO to 73.0% under the 2004 ACO and up to 75.4% of wet weather flow when "other programs above and beyond those set forth in the 2004 ACO are considered." Please provide a list or description of these "other programs."

**Response:** The 1992 Order only required the elimination of contraventions of water quality standards for coliforms and dissolved oxygen attributable to CSOs. However, even before the execution of the 1992 ACO, DEC and DEP recognized that other pollutant sources contributed to waterbodies not meeting water quality standards. These pollutant sources typically included nitrogen discharges, storm sewers, and WPCP discharges. Both the 1992 and 2004 ACOs require compliance with state water quality standards. The 2004 ACO recognizes that there is a separate legal mechanism to amend state water quality standards under very limited circumstances as described in federal regulation and the CSO Control Policy. Any initiation of this process must include public participation. As required by the 2004 ACO, the MOU, and federal regulations, DEP must identify the extent of water quality standard exceedences that will remain after full implementation of the CSO abatement projects required by the 2004 ACO. If the UAA demonstrates that exceedences will remain after implementation, then DEP must demonstrate to DEC, interested members of the public, and ultimately EPA, that any applicable water quality standard is inappropriate. Critical to DEC, this process provides for independent review of DEP analyses and forbids any delay in the construction of CSO abatement facilities required by the 2004 ACO.

Overall, the 2004 ACO will also result in water quality improvements in New York Harbor and reductions in CSO overflows well beyond what was called for in the 1992 ACO. The 1992 ACO anticipated construction of eight CSO retention facilities around the Harbor. The 2004 ACO anticipates seven CSO retention facilities but includes an additional 35 actions all of which are intended to reduce CSO overflows or remove floatables to protect water uses. Further, this Order requires the development of Waterbody/Watershed Facility Plans and Drainage Basin specific LTCPs, which will result in additional projects or actions further improving water quality. For example, the ongoing planning that has occurred through this process has resulted in further watershed planning work in Westchester to reduce coliform bacteria entering New York City's portion of the Bronx River and has resulted in NYC committing to construction of CSO floatables controls on three outfalls where the previous order required such controls at only one outfall and did not even recognize the Westchester County contributions to Bronx River water quality problems. As such, the 2004 ACO and the other CSO abatement projects DEP is undertaking go much further to improve the condition of New York Harbor than did the previous 1992 ACO. Table 1. presents a comparison of the CSO facilities and abatement projects and related costs in the 1992 and 2004 ACOs, as well as listing the other CSO abatement projects that DEP is undertaking.

It should be noted that a few of the projects shown in Table 1., although not subject to the 2004 ACO are being constructed by DEP as part of other Orders or are being constructed to reduce CSO overflows. In particular;

- SCADA – The Supervisory Control and Data Acquisition Project will be installing flow and water level sensors within the CSO collection system; sensors within pump stations, sensors at CSO control facilities. Further the Project will be providing DEP with the ability to actively control pump stations, regulators and CSO facilities to minimize CSO overflows.
- OMNI IV – Under the Omnibus IV ACO, DEP is constructing facilities at WPCPs and reconstructing elements of the collection system to provide treatment up to two times design dry weather flow (“2xDDWF”) at WPCPs that are not capable of handling those maximum flow rates.
- Newtown Creek – As part of reconstruction of the Newtown Creek WPCP as required by another ACO, DEP will be expanding the size of the WPCP so that it can treat up to 700 MGD in wet weather, a flow that will be beyond the 2xDDWF limit of other facilities but equivalent to its current wet weather treatment capacity.

**Comment:** The ACO should complete any review of WQS before, not after, finalizing the planning and construction of facilities designed to meet those standards and DEC should only approve LTCPs that will attain WQS in force at the time of the approval action.

**Response:** DEC’s position throughout the development of the 2004 AOC was for DEP to complete the long delayed CSO improvement projects without the potential for added delay caused by the regulatory review process. It is recognized that DEP may undertake a waterbody specific Use Attainment Analysis (UAA) as part of the LTCP. To ensure that DEP meets its obligation to complete the specific CSO projects without prejudice from the regulatory review process, the 2004 AOC requires that all construction contracts be awarded for the drainage basin as a prerequisite to submitting a Drainage Basin LTCP and UAA. However, the bulk of this planning work would be done well before the 2017 date referenced by several commenters. Appendix A of the 2004 ACO prescribes date certain milestones for delivery of Modified Facility Plans and Waterbody/watershed plans most of which are to be delivered to DEC in 2007. Consequently, DEC has included the following language in the MOU:

*“NYSDEC may choose not to propose regulatory amendments to Site-Specific Standards prior to issuance by NYCDEP of the notice to proceed to construction*

*of the CSO Abatement Projects for the corresponding basin. The parties agree that DEC may choose not to make any regulatory amendments adopted in connection with this MOU or NYCDEP's CSO abatement program effective, until construction of the CSO Abatement Projects for the corresponding basin are complete."*

The purpose of this clause in the MOU was to provide DEC with additional control over the City's compliance with the 2004 ACO. This language will hold the City at risk for not complying with WQS if the facility is not constructed as set forth in the 2004 ACO.

Under provision III.C. of the 2004 ACO, DEP must submit approvable drainage basin-specific LTCPs in accordance with the schedules in Appendix A, and under provision III.D. DEP must submit an approvable City-Wide LTCP no later than December 2017; in cases where these LTCPs will be governed by WQS different than those currently in place (e.g. in cases where the UAA are contemplated), DEP can only do this with guidance from DEC on what those WQS will be. Any proposed revisions must go through an extensive public participation process. Further, LTCP approvals can only occur after the revised standards have been established.

Finally, this is made clear by the fact that DEC will not adopt the final LTCP for the City which is a roll-up of the Drainage Basin Specific LTCPs until the WQS review process is completed as indicated in the following language from the MOU.

*"Once the regulatory reviews and, if appropriate, revisions, of the Site-Specific Standards are complete, NYCDEP will complete the City-Wide LTCP as set forth in Appendix A of the 2004 CSO Consent Order."*

## **B: Compliance with USEPA CSO Control Policy**

### **1. SPDES Permits**

A few comments were made that relate to the draft SPDES permits, the ongoing adjudication process and relationship between the CSO Policy and the SPDES process.

- The ACO does not address the issue of the SPDES permit modifications failure to provide mechanisms to prevent CSO discharges from violating WQS established for impaired receiving waters, in violation of ECL.

- The long-term planning and implementation obligations in the order should, by mutual consent, be contemporaneously incorporated into the NPDES permits governing discharges from the City's fourteen wastewater treatment plants.
- We would like to see strict adherence to the requirement that section IX of the SPDES permit include language requiring that the ACO governs the City's obligations for its CSO abatement plan, and would further require that any modification to the ACO and its appendices would be publicly noticed for review and comment.
- The ACO needs to address the issues raised in the administrative proceeding on the 2003 draft SPDES permits. The SPDES permits must be modified in two phases to first require submittal of draft LTCPs by June 2007 (Phase I permits), then upon approval of each LTCP, to incorporate the requirements of these plans (Phase II permits).

**Response:** DEC agrees that the long-term planning and implementation obligations in the 2004 ACO should be incorporated into DEP's 14 WPCP SPDES permits. Upon execution of the 2004 ACO, or as soon as practicable thereafter, DEC staff shall propose language adjusting each of the 14 SPDES permits to effectively incorporate by reference the 2004 ACO, adhering to prior Commissioner's decisions on this topic. *See, In re NYCDEP*, 3<sup>rd</sup> Interim Decision of the Commissioner, 1993 WL 267972 \*2 (N.Y.Dept.Env.Conserv. June 1, 1993); *In re NYCDEP*, Case No. 0026131, 5<sup>th</sup> Interim Decision of the Commissioner, 1996 WL 753920 \*1 (N.Y.Dept.Env.Conserv. October 7, 1996).

The 2004 ACO in combination with the terms of the 14 WPCP SPDES permits collectively address the requirements of the 1994 CSO Control Policy. The Phased approach that the commenter specifically mentions has been addressed by the terms of the 2004 ACO, which requires the development of Water Body /Watershed facility plans by June 2007, i.e. the draft LTCP. Upon approval, the Water Body/ Watershed facility plans are incorporated into, and made an enforceable part of the 2004 ACO.

## **2. Long Term Control Plan (LTCP) Process**

**Comment:** Consistent with USEPA CSO Policy, DEC should be given assurances regarding DEP financial commitment to its LTCP and assurances that financial arrangements for the implementation of the LTCP are in place.

**Response:** The CSO Policy indicates the following with respect to financial arrangements.

*“EPA and the States will undertake action to assure that all permittees ..... are subject to enforceable schedules that require the earliest practicable compliance date considering physical and financial feasibility.”*

and;

*“However, each permittee is ultimately responsible for aggressively pursuing financial arrangements for the implementation of its long-term CSO control plan. As part of this effort, communities should apply to their State Revolving Fund program, or other assistance programs as appropriate, for financial assistance.”*

DEC has taken its steps required by the CSO Policy to include enforceable schedules that require the earliest practicable compliance date through the inclusion of the milestones spelled out in Appendix A of the 2004 ACO. If DEP fails to comply with any of these schedule milestones, DEP is subject to stipulated penalties under the 2004 ACO, as well as injunctive remedies. Furthermore, paragraph III.I. of the 2004 ACO requires DEP to comply with schedule milestones “irrespective of the availability of financial assistance from federal, state, or other sources.” DEP has developed a 10-year capital program that includes adequate funds to construct the CSO controls required in Appendix A of the 2004 ACO.

**Comment:** The ACO claims to meet requirements for the “demonstration approach” set forth in the EPA CSO Control Policy, but fails to provide for mandated TMDL Planning.

**Response:** The 2004 ACO requires DEP to prepare Waterbody/watershed Facility Planning Reports for the various segments of New York Harbor. Preparation of these reports will require many actions that are consistent with TMDL planning. EPA has recognized that urban water quality may be affected by a combination of CSOs, storm water discharges, other point sources and nonpoint source runoff. These sources may be most effectively addressed on a “watershed basis or through TMDL analyses.” The CSO Control Policy encourages permitting authorities “to evaluate water pollution control needs on a watershed management basis and coordinate CSO control efforts with other point and nonpoint source control activities.” If CSO LTCPs are integrated with an on-going TMDL or watershed analysis, EPA expects that communities will implement high priority controls while watershed plans or TMDLs are being completed. Therefore, a phased implementation of CSO controls such as required by the 2004 ACO fits well within the watershed approach.

By conducting a watershed analyses, DEP will provide the information to support

an equitable allocation of pollutant loading reductions among all point and non-point sources. This is particularly important where CSO receiving waters are affected by numerous sources, and a watershed-level effort is needed to allocate pollutant loadings. Watershed planning can promote flexibility and innovation for addressing CSOs and other pollutant sources. The planning and analyses may identify more cost effective allocation of pollutant reductions using a combination of BMPs and CSO controls which together yield greater environmental benefits than would CSO controls alone. DEP will also identify complementary environmental projects, such as upstream storm water controls, along with nonstructural CSO controls, that may enhance the aquatic habitat and foster improvements in both recreation and aquatic life uses. Development of a Watershed Plan will also support a UAA to review and revise water quality standards, if appropriate. Further, DEP will be examining the actions required, costs, and benefits of meeting current water quality standards as well as fishable/swimmable standards during the Waterbody/watershed planning process for the NYC tributaries. DEC will then through its review of the Waterbody/watershed Facility Plans, LTCPs and the water quality standards reviews determine the appropriate level of CSO control, thereby developing a watershed based management plan for that waterbody.

In parallel with the development of these planning activities, the Harbor Estuary Program (“HEP”) is evaluating nutrient, pathogen and toxic substance TMDLs. Both DEP and DEC are active participants in the HEP TMDL process being members of the technical committees, management committees and the policy committees. Through this process both DEC and DEP will be assuring that Waterbody/watershed Facility Plans and Drainage Basin Specific LTCP are consistent with the HEP TMDL process for the open waters of New York Harbor.

EPA guidance supports this watershed-based approach in its July 2001 guidance *Coordinating CSO Long-Term Planning with Water Quality Standards*.

**Comment:** The ACO relies on a separate sanitary sewer and storm water system performance standard, rather than 75-100% capture range for alternatives analysis required by the EPA CSO Control Policy. The ACO should examine a range of CSO control alternatives and evaluate the potential CSO reductions and water quality improvements for each alternative.

**Response:** The 2004 ACO does not rely on a separate sanitary sewer and storm water system performance standard. The MOU in paragraph 22 of the Where-as section states the following:

*“Through the approaches described in the CSO Policy, these plans (Waterbody/watershed) evaluate, among other things: (1) the impacts of implementing the CSO abatement projects set forth in the associated 2004 Administrative CSO Consent Order Appendix A; (2) if any additional cost effective CSO control measures may be available to meet WQS; and (3), the impacts of elimination of CSOs through complete sewer separation, to determine if WQS could ever be achieved in each of the water bodies affected by CSOs.”*

DEC will not approve Waterbody/watershed Facility Plan reports that do not contain an evaluation of a range of CSO control alternatives in the assessment of the attainment of water quality standards. One of these alternatives would be sewer separation, which is the CSO plan for the overwhelming number of CSO communities in the Country. As noted in item (2) above, from the MOU, DEC expects that other alternatives would be evaluated. DEC expects that CSO retention, end-of-pipe treatment, Best Management Practices, and other alternatives would be evaluated in the assessment of the attainment of water quality.

**Comment:** The ACO and MOU rely inappropriately on “knee-of-the-curve” analysis to determine what facilities need to be constructed and to determine the need for changes to WQS. The facility plans must include consideration of facilities based on “social and economic impact” standard for modifying standards, not the “knee of the curve” test.

**Response:** The commenter is mixing two related but separate concepts. To clarify, the 2004 ACO is consistent with the CSO Control Policy, in that it requires evaluation of cost/performance considerations. The “knee-of-the-curve” analysis is the method developed by EPA as part of the CSO Control Policy to evaluate the benefits attained from various CSO abatement alternatives in light of the cost of those alternatives. The “knee of the curve” analysis was used by DEP only in the development of the CSO abatement projects required by the 2004 ACO.

The commenter’s suggestion that the “knee-of-the-curve” analysis is used to determine the need for changes to WQS is misapplied. The Code of Federal Regulations, 40 CFR Part 131.10(g), lays out six criteria for testing whether water quality standards may be modified in development of a Use Attainability Analysis. “Social and economic impacts” represents only one of the six criteria set forth at 40 CFR Part 131.10(g). These six criteria, and not the “knee of the curve” analysis, will be used in the development of any Use Attainability Analysis.

**Comment:** The ACO should not initiate WQS review and revision without the required examination of controls over point and non-point pollution and before completing a LTCP.

**Response:** This comment is not consistent with the CSO Policy, which requires that the WQS review and possible revision process be coordinated with the development of the LTCP. However, in order to achieve environmental benefits beyond the requirements under the CSO Policy the 2004 ACO requires that DEP develop Waterbody/watershed Facility Plan Reports prior to developing Drainage Basin Specific LTCPs. These waterbody/watershed facility plans will include an evaluation of all of the sources of pollution including point and non-point pollution. As indicated in the MOU, DEC will not initiate WQS reviews and revisions prior to development and approval of the Waterbody/watershed Facility Plan Reports, or prior to the commencement of construction of the projects consistent with the terms of the 2004 ACO.

**Comment:** The LTCP should be coordinated with the NPDES authority and the state authority responsible for reviewing and revising the WQS.

**Response:** All aspects of the LTCP process will be coordinated with DEC, who is the NPDES designated permitting authority. The authority for setting, reviewing, and revising water quality standards resides initially with DEC, and ultimately with EPA. State and Federal law require that any review and revision of water quality standards include a detailed public participation process. As such, there will be full coordination of the LTCP process with the WQS review process.

**Comment:** The ACO does not address the issue of the permit modifications failure to require development of LTCPs for CSO controls by a date certain, as required by EPA and the CWA.

**Response:** The 2004 ACO is completely consistent with the EPA CSO Policy and the CWA in that CSO controls mandated in the 2004 ACO all have date certain deadlines. Dates for new facilities that may result as Waterbody/watershed Facility Plans and Drainage Basin Specific LTCPs will have schedules for any actions proposed. Further, the 2004 ACO indicates in Section III.C.2. *“Once the Department approves a Drainage Basin Specific LTCP, the approved Drainage Basin Specific LTCP is hereby incorporated by reference, and made an enforceable part of this Order.”*

### 3. Nine Minimum Controls (NMC)

**Comment:** The ACO does not address the issue of the SPDES permit modifications failure to include the Nine Minimum Controls (“NMCs”) for CSO discharges required by the 1994 EPA CSO Control Policy and CWA. The NMC must be built into the permit, not a separate ACO.

**Response** As the 2004 ACO initially explains, in January 1997, DEP submitted, and DEC approved a report entitled *CSO Abatement in the City of New York: Report on Meeting the Nine Minimum CSO Control Standards*. See 2004 ACO at 4, 18<sup>th</sup> Whereas Clause. Since that time, DEC has embodied the EPA NMCs in its own 14 Best Management Practices (BMPs), which have been added each of DEP’s SPDES permits in the last permit revision cycle. DEC has previously explained how these SPDES permit BMPs satisfy the NMCs under the 1994 EPA CSO Control Policy to the USEPA, and in turn, USEPA has explained this to the U.S. Congress. See, *EPA’s Report to Congress on Implementation and Enforcement of the CSO Control Policy*, EPA 833-R-01-003, Appendix B-1 at NY-1&2 <[http://www.epa.gov/npdes/pubs/csorcappb\\_1.pdf](http://www.epa.gov/npdes/pubs/csorcappb_1.pdf)>. The SPDES permits also require an annual report from DEP reporting on the status of and effectiveness of the BMPs contained in the SPDES permits. The first of these reports was transmitted to DEC in April of 2004.

## **C: CSO Reduction Issues**

Many commenters felt that the ACO and the CSO planning conducted by DEP to date have relied too heavily on structurally intensive solutions to abate CSO pollution. Commenters felt that similar improvements in water quality could be achieved by reducing the amount of stormwater that enters the combined sewers. Typical comments that were submitted follow:

- Strategies and methodologies for reducing stormwater from entering the system should be supported by DEP and incorporated into LTCPs. These low impact development methodologies include, but are not limited to, green buildings, planting of street trees, use of porous paving surfaces, adding green buffers to new and existing developments, bioretention ponds and infiltration basins.
- Sustainable development concepts need to be integrated into the context of the ACO procedures because of the long-term time frame essential to stormwater and other infrastructure construction planning.
- The ACO should commit DEP to: 1) provide significant funding, in addition to \$1.5 million environmental benefit project (EBP) for

research, development and pilot projects to demonstrate green techniques as cost-effective CSO abatement measures; 2) implement green methods in all development and redevelopment projects undertaken by DEP; 3) advocate and provide technical assistance for green methods in development and redevelopment projects in NYC that are undertaken by the City or other state and federal agencies; 4) work with other agencies and organizations to encourage green methods in development projects undertaken by private developers; 5) develop a public education program to encourage the use of green methods; and 6) consider implementing institutional and regulatory provisions (e.g., adopting building code provisions that allow and encourage green methods).

- We support the inclusion of an Environmental Benefit Project (EBP) that pays \$1,500,000 to the Natural Heritage Trust. The EBP allows DEP to effect improvements through innovative restoration and stormwater management techniques.
- Concrete end-of-pipe holding tanks are not the answer. The answer lies in a more realistic water budget.
- DEP and DEC are not currently doing enough to prevent CSO in the City. Sustainable policy procedures should be in the forefront of such a large system, not only to save money, but resources as well. Such procedures are omitted from the City's operations.
- DEP and the Mayor's office should assemble an interagency taskforce on storm sewer overflows and that all agencies involved in planning and development should be required to take part.

**Response:** Both DEP and DEC are aware that CSO controls being developed within the densely populated NYC environment can be costly and potentially difficult to site. Further, both agencies embrace the use of more natural methods of controlling CSO pollution including infiltration of the rainfall before it has the chance to runoff into the combined sewers.

However, the reality is that New York City is a densely populated urban environment with areas that are nearly 100 percent impervious and areas with population densities in excess of 100,000 people per square mile (160 people per acre). In fact, excluding Staten Island, the Citywide average population density is nearly 40,000 people per square mile (63 people per acre). Further, over the past 100-years or more, the City's growth and development patterns have led to construction of sewers that had their origins with removal of sanitary wastes to prevent epidemics and removal of stormwater to prevent street and home

flooding. In those times, pollution of the receiving waters was not a consideration for the design of sewers.

These patterns resulted in the diversion of large volumes of runoff to very confined waterways that were once local streams; Gowanus Canal, Newtown Creek, Flushing Creek, Paerdegat Basin, Fresh Creek, Bergen Basin, Thurston Basin, Spring Creek, Westchester Creek, etc. As such it is not unusual to have CSO being discharged into these waterbodies from upland areas that range from 2,000 to 10,000 acres or more and for these upland drainage areas to average 75 percent impervious (paved and rooftop). This amounts to combined sewage from 120,000 to 600,000 residents being discharged in small inland waterways. The consequence is that the CSO impacted tributaries can have very acute water quality problems.

The City started the search for solutions to these acute problems in the 1950's and 1960's, which resulted in construction of the Spring Creek CSO retention facility. The City has been evaluating solutions to these water quality problems for the past 40-years and continually finds that the most cost effective solutions are large centralized retention facilities that collect CSO during wet weather and pump that CSO back to the existing sewage treatment plants after the rain events end. The reason that this solution is preferred is because it is the most feasible and cost-effective solution in the current environment.

That is not to say that other low impact solutions such as infiltration, onsite retention including green roof and other techniques do not have merit. In fact although these solutions may not be practical in solving these acute problems and very localized CSO pollution problems, they may be effective as a long range strategy for combating diffuse runoff, heat island effects, and flooding of lower lying areas.

In 1999, DEP authorized a study by an independent set of stormwater experts to evaluate the feasibility and potential application of runoff reducing technologies within NYC. This study found that infiltration technologies and green roof technologies had the potential for application in selected areas. The study also found that wide scale application of the technologies within acceptable regulatory timeframes was unlikely. The study also recommended a number of follow-up activities to further evaluate the potential application of these technologies. One recommended follow-up was to develop a Citywide map of soil conditions so that an evaluation could be conducted to locate areas of the City where infiltration would be likely to succeed because the soils have the ability to percolate the

rainfall at rates high enough to allow infiltration be cost effective. The study also recommended that follow-up pilot scale investigations be conducted to develop information on the feasibility of and benefits from these technologies.

A number of things have happened since that time.

- The Department of Design and Construction formed an internal Office of Sustainable Design in 1997 and develop an April 1999 guidance entitled “High Performance Building Guidelines” that embody sustainable building design and construction methods.
- The Mayors Office in 2003 co-sponsored with the United States Environmental Protection Agency a “green building” design competition encouraging low impact develop techniques.
- Local universities (Pratt Institute, Cooper Union, Columbia University, etc.) and organizations like the GAIA Institute are conducting small and large scale pilot investigations of runoff reduction BMPs such as infiltration and green roofs.
- Earth Pledge is conducting a pilot project for a large-scale green roof on top of Pace University in lower Manhattan. As part of that project, GAIA is developing a micro-model of the green roof dynamics. That model is being linked with one of DEP’s sewershed/sewersystem hydraulic models to develop a tool so that model users can accurately assess the benefits of green roof rainfall retention. The NYC Water Board is sponsoring this project.

There have been many recent developments in the green roof and infiltration technologies. These new techniques, which are durable and low maintenance show promise for application in the future. However, they will only be successful on a large scale, as they become part of future building codes and design practices. Similar to changes in construction practices such as the institution of building sprinklers, smoke alarms, and low flow fixtures, it will take many decades for the new technologies to become widely implemented. Even with fully successful pilot projects, there is little information available as to the potential level of build out of the low impact technologies.

By adding the EBP funding of \$1.5 million, the 2004 ACO encourages additional research into the practical application of these technologies so that information can be developed which when available could possibly be incorporated into the City’s LTCPs.

**Comment:** Incremental water quality improvement scenarios should be developed in the process of implementing long-term non-point pollution and combined sewer control plan. Scenarios within this plan should look at means of diminishing sources, such as discharges and increasing the scale of sinks.

**Response:** As part of CSO control planning DEP evaluates water quality improvements through an evaluation of all sources of pollution to develop the most cost effective plans for improving water quality. Such analyses have considered the ability to diminish runoff flow entering the combined sewer system. DEP will continue to investigate source reduction opportunities as they become available through ongoing research activities.

**Comment:** For the Water Re-Use Program there should be points awarded for water use efficiency increases for toilets, showers, etc.

**Response:** DEC encourages and applauds the citizens of NYC in their past and future water conservation efforts; however, the NYC Water Board sets water rates for NYC residents. This rate setting process is not under the control of either DEC, or DEP who is the co-signer of the 2004 ACO and responsible for complying with the milestones in the 2004 ACO. DEC recommends that this comment be directed to the NYC Water Board.

**Comment:** Comments received also focused on the use of the existing WPCPs to treat wet weather flows. Typical comments follow:

- The ACO will continue to permit the CSOs to send diluted, but untreated sewage into the waterways of New York. The wastewater treatment plants have permits with enough capacity to handle most of the rain events along with the daily sanitary flow. Continuing the present overflow dilution method is unacceptable.
- Available excess treatment capacity as the City's Water Pollution Control Plants (WPCP) should be used to help achieve compliance with WQS.
- In locations where discharges of combined sewage due to lack of plant capacity are predicted to cause or contribute to failure of WQS, the current capacity of the WPCPs to accept combined sewage during rain events should be maintained to assist in meeting WQS.

**Response:** New York City treatment plants (WPCPs) are designed to treat twice the design dry weather sanitary sewage flow. Because of the success of the water conservation program, most of the WPCPs receive dry weather sewage flows that

are only between 50 and 80 percent of the design capacity. The WPCPs are required by the SPDES permits to process wet weather flows at twice their design maximum flow rate regardless of the present dry weather sewage flow. Therefore, a WPCP experiencing a dry weather sanitary flow of 50 percent of its design capacity will treat wet weather flow at 4 times the present dry weather flow capacity. Where WPCPs can not treat those maximum flows or where the sewer system does deliver that flow, the City is required by their SPDES permits as well as the Omnibus IV ACO, to make the necessary corrections. Construction for some of the required corrections is ongoing while others are in various stages of planning or design. In addition, the City is the middle of a program to install control gates in more than 100 of the largest regulators and provide instrumentation and controls under the current Supervisory Control and Data Acquisition Project (SCADA) in an effort to maximize the wet weather flow being treated at the WPCPs and to reduce CSO pollution.

Water quality in New York Harbor has been improving over the past decade because of many actions that DEC has required as well as actions DEP has taken on its own initiative. For example, water conservation has resulted in less dry weather sewage flows reaching the WPCPs and the ability to use this capacity to treat wet weather flow as discussed above. In the 15-years since 1988, the dry weather sanitary sewage flow has decreased by 28% as a result of water conservation efforts. This flow decrease along with DEC and DEP's increased emphasis on using this excess capacity to treat wet weather flow has helped to improve water quality throughout the Harbor.

DEC and DEP will continue to be vigilant about trying to find ways to use the capacity at these WPCPs to process wet weather flows. However, it is unreasonable to believe that the dry weather sanitary sewage flow will not increase over time and some of the ability to treat peak wet weather flows will diminish. No increase in dry weather sewage would mean no increase in population or water use patterns, neither of which can be controlled through the 2004 ACO. A more reasonable expectation and goal would be to (1) continue to expand water conservation efforts to minimize flow increases (2) continue to use green building techniques to maximize re-use where possible and (3) continue to optimize the amount of wet weather flow reaching the WPCPs even though the peak wet weather flows treated could be reduced.

The LTCPs being developed will certainly focus on finding better and smarter ways to optimize the amount of wet weather flow reaching the WPCPs. The NYC Department of Design and Construction and the NYC Building Department

are taking the lead in promulgating and advancing green building practices. Water conservation efforts will continue to improve as home repairs are done and the building stock is renewed using the new low flow faucets and toilets mandated by the building code.

**D: Time Frames**

**Comment:** A few commenters have noted a concern with the timeline for development of the LTCP, which is scheduled for submission to DEC in December 2017. They believe that completion of a LTCP at that point will cause unnecessary delays in implementing CSO controls that will improve water quality. Typical comments include the following:

- The long planning window proposed in the ACO is excessive. The City should need no more than three years to collect necessary data to complete a City-wide plan. The time frame for compliance in the proposed ACO should be shortened considerably. The City should be required to develop regional and City-wide long term management plans within the next few years instead of 2017.
- The ACO delays planned CSO projects far beyond their original deadlines.
- The schedule for development of LTCPs and identification of additional control measures necessary to meet surface WQS needs to be expedited.
- Given the economic and environmental importance of identifying effective, sustainable CSO controls, it is unreasonable to forestall the development of the LTCP over a decade.
- The proposed ACO does not represent advancement in water quality protection, but a lessening of standards and compliance schedules.
- The ACO violates EPA's CSO Control Policy as it improperly defers development of LTCP for drainage basins.

**Response:** The CSO Policy addresses the schedule of LTCP development as follows:

*“Permittees should develop and submit, consistent with this Policy and based on a schedule in an appropriate enforceable mechanism, a long-term CSO control plan as soon as practicable, but generally within two years after the effective date of the permit issuance/ modification. However, permitting authorities may establish a longer timetable for completion of the long-term CSO control plan on a case-by-case basis to account for site-specific factors that may influence the complexity of the planning process.*

In addition,

*“Schedules for implementation of the CSO controls may be phased based on the relative importance of adverse impacts upon WQS and designated uses, priority projects identified in the long-term control plan, and on a permittee’s financial capability.”*

These factors were considered in the preparation of the 2004 ACO.

While the CSO Control Policy states that LTCPs should “generally” be completed within two years, longer case-by-case schedules are appropriate. It is important to note that 73% of CSO communities have a population of less than 75,000 people. The general guidance of the policy was developed with these small communities in mind. The NYC sewer system serves more people than any other combined system, serving 100 times more people than the average CSO community. It is by no means unreasonable to expect that considerably more effort would be needed to complete a long term plan for NYC than the “general” combined system contemplated in the policy.

CSO planning for NYC waters is complex within the context of the CSO Policy. The large number of CSO outfalls, the extensive and complicated nature of the combined sewer system, the large number of waterbodies, the intricate nature of the New York Harbor estuary, and the thousands of sources of polluting materials contribute to the complexity of the problem setting, which is to be addressed. The data collection programs and engineering investigations needed to develop the facility plan components are therefore correspondingly complex. The number of engineering alternatives to be evaluated for the cost-effectiveness component specified in the CSO Control Policy are also large and varied. CSO facility plans often require site-acquisition and ULURP determinations, which in the urban environment of NYC, are exceedingly difficult and very time-consuming. Initial efforts are not always successful. CSO facility-plans often require Environmental Reviews, Environmental Impact Assessments, and possibly, Environmental Impact Statements further contributing to the complexity and time requirements for approvable CSO facility plan development.

The 2004 ACO provides a clear path for DEP to achieve compliance with the CSO Control Policy. Critical to achieving compliance is the integration of DEP’s current CSO abatement projects developed by Facility Plans required under the 1992 version of the Order. It is unreasonable to expect that millions of dollars of

ongoing CSO control projects and water quality improvements be delayed further, while the City undertakes the lengthy LTCP process. Instead, the CSO Control Policy specifically addresses this situation allowing municipalities that have conducted significant work illustrate the impact of the ongoing CSO improvements on a system-wide basis. The 2004 ACO incorporates this by requiring the City to conduct a watershed approach to CSO control planning concurrently with the design and construction of specific CSO improvement projects. The vast array of projects in the 2004 ACO commits over \$2 billion of CSO improvements to critically impacted areas of the waters of New York Harbor. The resulting improvement in water quality from these CSO abatement projects will form the new baseline condition that New York City will use to collect data and evaluate future long-term control planning needs.

The watershed-based approach to development of a LTCP allows the site-specific determination of the relative impacts of CSO and non-CSO sources of pollution on water quality. The City's commitment to complete CSO abatement projects, model/monitor their effect on water quality, and develop a watershed approach to Long Term Control Planning is consistent with the CSO Control Policy.

DEC's position throughout the development of the 2004 ACO was for New York City to complete the long delayed CSO improvement projects without the potential for added delay caused by the regulatory review process. It is recognized that the City may undertake a waterbody specific Use Attainment Analysis (UAA) as part of the LTCP. To ensure that DEP meets its obligation to complete the specific CSO projects without prejudice from the regulatory review process, the 2004 ACO requires that all construction contracts be awarded for the drainage basin as a prerequisite to submitting a Drainage Basin LTCP and UAA. However, the bulk of this planning work would be done well before the 2017 date referenced by several commenters. Appendix A of the 2004 ACO prescribes date certain milestones for delivery of Modified Facility Plans and Waterbody/watershed plans most of which are to be delivered to DEC in 2007.

**Comment:** A timely review and approval process is one of the key elements for successful completion of any regulatory action. There should be a 12-month approval deadline for LTCPs and if the review of any of the LTCPs has not been completed within the suggested time frame, DEC should be required to provide notification of the need for a permit modification.

**Response:** DEC recognizes that a timely review of the Waterbody/watershed Facility Plan Reports and the LTCP reports is critical to the success of improving water quality

and water uses in New York Harbor. Toward that end, the 2004 ACO sets forth a series of milestones that require timely development of certain technical information. Further, the 2004 ACO requires that DEP provide for funding for initially two and up to four Independent Environmental Monitors (“IEMs”), who will act as extensions of DEC staff to track DEP’s progress in meeting 2004 ACO milestones and to technically review the engineering and scientific reports being developed in accordance with the ACO. These IEMs will supplement DEC staff so that a timely review can be provided of the ACO required reports. The 2004 ACO requires that DEP pay for initially two and up to four IEM’s to assist in the review of DEP work products.

In addition, DEP will provide up to \$1 million dollars for DEC to retain independent third party consultants to review all analyses undertaken by DEP in development of the LTCP and to assist with the regulatory requirements of the WQS review process.

**Comment:** The 1992 ACO included final completion dates for construction on several projects, including a July 2001 date for the Paerdegat Basin CSO project, which, under the revised 2004 ACO, the completion date for construction is listed as 2011. Given this 10-year delay, what additional assurances are in place that could provide additional integrity to the 2011 date that did not exist in 2001?

**Response:** The 2004 ACO places a high priority on the critical CSO abatement projects and tasks specifically listed in Appendix A to the 2004 ACO. Appendix A prescribes clear and comprehensive milestone deliverables, an element missing from the 1992 ACO. In order to ensure that these CSO abatement projects and tasks proceed forward in a timely fashion, DEC has included in the body of the 2004 ACO stipulated financial penalties for any non-compliance with the terms of the 2004 ACO as well as the option of resorting to injunctive relief if necessary. In addition, the 2004 ACO requires DEP to fund initially two and up to four independent environmental monitors to ensure DEP’s compliance throughout the term of the 2004 ACO. Finally, the 2004 ACO calls for DEP to establish an internal CSO project manager. Ultimately, these measures will work to ensure that the 2004 ACO will be timely and aggressively enforced by DEC.

**Comment:** The 1992 ACO contains compliance schedules for the planning, design and construction of numerous CSO projects; however, DEP has not complied with the ACO and has instead incurred numerous violations that have gone unpaid. Since the 1992 ACO, DEP has failed to comply with its provisions and DEC has failed to enforce the violations and oversee the CSO abatement program. DEP has

repeatedly violated the 1992 ACO facility-planning deadlines and never funded \$250,000 for the EBP.

**Response:** The commenter is correct in noting DEP's non-compliance with certain terms of the 1992 ACO. As such, the 2004 ACO includes a \$2 million penalty and \$1.5 million in EBPs in settlement of all violations of the 1992 ACO, including any required contributions to EBPs for which the City has not provided documentation required by the 1992 ACO. In addition, DEP has also committed up to \$1 million dollars to fund DEC's work efforts under the MOU.

**Comment:** The ACO sets out a schedule for Modified Plan Reports, Waterbody/watershed Facility Plan Reports and LTCP. The ACO should explain in more detail what each of these are and how they relate to each other.

**Response:** Since signing the 1992 Consent Order, DEP has conducted planning and design analyses for CSO control facilities required in that Order. For many reasons, including the inability to acquire land to site CSO facilities, changes in facilities made during final design stages, etc, DEP has made modifications to CSO Facility Plans that were submitted to DEC. The Modified Plan Reports called for in the 2004 ACO are reports that DEC has required DEP to produce that provide detailed descriptions, engineering calculations, cost estimates and schedules that append those earlier CSO Facility Plans submitted to DEC. The Modified Plans show the changes between the original CSO Facility Plans and the new plan.

Waterbody/watershed Facility Plan Reports are reports that provide a watershed based approach to evaluating the factors impacting water quality in each of the City's open water reaches and confined tributaries. These reports examine the impacts of all sources of pollutants including CSOs, storm water, Water Pollution Control Plants, and pollutant discharges from other local municipalities. The EPA promulgated this holistic approach to examination of water quality after the 1992 Consent Order was developed. DEC has mandated that DEP examine the methods to improve water quality on this holistic basis.

The LTCP is a report mandated by the EPA CSO Control Policy that DEC is requiring DEP to produce. DEC has required DEP to produce the Waterbody/watershed Facility Plan Reports with all of the nine elements that EPA requires be present in a LTCP including; (1) Characterization, Monitoring, and Modeling of the Combined Sewer System; (2) Public Participation; (3) Consideration of Sensitive Areas; (4) Evaluation of Alternatives; (5) Cost/Performance Considerations; (6) Operational Plan; (7) Maximizing

Treatment at the Existing POTW Treatment Plant; (8) Implementation Schedule; and, (9) Post Construction Compliance Monitoring Program so that the development of a CSO LTCP can be expedited. The Waterbody/watershed plans are the draft LTCPs for the specific waterbody. However, the LTCP will not be finalized until submittal of the UAA, six months after the last notice to proceed to construction is issued for CSO abatement projects within the basin.

**E: Shared Waters**

A few comments addressed issues in waters shared between New York State and New Jersey.

**Comment:** We are concerned about the lack of consistent surface WQS for our shared waters, *i.e.* Hudson River, Arthur Kill and Kill Van Kull. Unless the standards are appropriately coordinated, the more stringent WQS for the shared waterbodies should be complied with. The ACO is deficient in acknowledging the need to address compliance with New Jersey surface WQS, which is contradictory to the provisions of the CWA.

**Response:** Consistency of water quality standards among not only New York and New Jersey, but also the standards set by the Interstate Environmental Commission impact a number of ongoing water quality efforts. EPA recently suggested, and DEC agrees that the NY-NJ Harbor Estuary Program, which brings together multiple agencies and stakeholders, is the appropriate forum to address WQS in the shared waters and to ensure that Harbor waters are reflective and protective of highest attainable uses. However, all recognize that this effort will take time.

While this effort is underway, the CSO abatement controls set forth in DEP's SPDES permits in conjunction with those in the 2004 ACO require actions to address site-specific water quality impairments in the tributaries which will reduce if not resolve water quality violations in the Arthur Kill / Kill Van Kull Complex. Any further controls necessary for the Arthur Kill / Kill Van Kull Complex and Hudson River will be developed in accordance with DEP's Waterbody/watershed Plan and the Drainage Basin Specific LTCP as required in the 2004 ACO in Appendix A Section II- Outer Harbor. These Waterbody/watershed Plans and drainage basin specific LTCPs will examine controls to meet both New York and New Jersey water quality standards as appropriate.

**Comment:** The Third Interim Report from DEP does not mention any CSO abatement projects scheduled for implementation on the Hudson or East Rivers. The City's strategy of installing modified stormwater catch basins fail to ensure that all objectionable materials will be removed from CSO discharges. Because of the impacts on shared New Jersey waters, we would like to see a more effective Solids and Floatables Control Strategy and an expedited schedule.

**Response:** Because CSOs have minimal impacts on the Hudson and East Rivers, the 2004 ACO does not require any major construction projects for discharges to those water bodies, but instead focuses on the water bodies that are impaired by CSOs. The 2004 ACO does include projects such as regulator improvements and reconstruction that will reduce CSOs to those water bodies. Further, DEP is required to comply with the SPDES permit 14 Best Management Practices, including those which control floatables through maximization of flows to the WPCP and the installation of hoods on catch basins. Should additional controls be required, they will be developed in the Waterbody/watershed Plan for the Open Waters and the Drainage Basin Specific LTCP as required in the 2004 ACO in Appendix A Section I- East River and Section II- Outer Harbor.

**Comment:** Consideration of the Hudson Yards redevelopment and rezoning project and its impact on CSO discharges into shared waters is an issue of concern that needs to be resolved.

**Response:** The Hudson Yards Project is a specific action within Manhattan that was the subject of a separate Environmental Impact Statement. That Statement indicated that there were no significant impacts to the Natural Resources and as such requires no further action or statements within the 2004 ACO.

**F: Individual Water Body Issues**

**Comment:** Wet weather events should be looked at when assessing CSO effects in Gowanus Canal. We need to move towards a real policy that will bring about sincere reduction of CSO volume while working towards the elimination of dumping untreated sewage into Gowanus Canal.

**Response:** DEP is in the process of completing a Waterbody/watershed Plan for the Gowanus Canal and has conducted an extensive public outreach program in developing that plan. The plan calls for a number of CSO abatement projects including rehabilitation of the Gowanus Pump Station, reconstruction of the force

main that transfers sanitary sewage from the Pump Station west to the interceptor and then to the Red Hook WPCP, installation of CSO floatables removal screens at the outlet from the Gowanus Pump Station CSOs, rehabilitation of the pumps in the Flushing Tunnel, and miscellaneous other smaller projects and individual outfalls. These projects will become part of the 2004 ACO when the Waterbody/watershed Plan upon acceptance by DEC.

**Comment:** DEC should create a “Coney Island Creek Damage Account.” Fines collected from non-compliance, failure to meet milestone dates in upgrading pump station, and Owls Head Plant, illegal hook-ups to storm sewers, dumping construction debris and other acts of harm to the ecosystem would be deposited into this account. These funds should be used to 1) determine the feasibility to restore the box flume flushing function, or can it be modified to retain rainwater during a storm event, and afterwards to pump it to Owls Head wastewater treatment plant; 2) restore wetlands and wildlife habitat; (3) remove debris; (4) stabilize shorelines; (5) determine if there are significant CSO impact on nearby beaches and shell fish beds off Staten Island; and (6) assess how much contaminated sediment is in the creek.

**Response:** At this time, DEC does not consider a Coney Island Creek Damage Account to be necessary. DEP has initiated Waterbody/watershed Facility Planning activities for the Coney Island Creek area and according to the 2004 ACO, Appendix A; Section VII, will be submitting a Waterbody/watershed Facility Plan Report and Drainage Basin Specific LTCP to DEC. As part of that process, DEP will be conducting an extensive public participation program. DEC encourages the commenter to provide input to DEP during the public participation program for consideration for inclusion in the Waterbody/watershed Facility Plan. Further, DEP will be completing design of the Avenue V Pump Station improvement and force main shortly and starting construction in late 2005. If DEP does not adhere to the Coney Island Creek area requirements or any requirements of the 2004 ACO, DEP will face clear stipulated penalties as well as DEC’s reserved right to seek injunctive relief.

**Comment:** Newtown Creek is used for recreational boating, fishing/crabbing and sometimes swimming and its recreational use is increasing. In any planning of CSO abatement please consider the many users of Newtown Creek.

**Response:** DEP will be initiating Waterbody/watershed Facility Planning activities for the Newtown Creek area and according to the 2004 ACO, Appendix A, Section VIII will be submitting a Waterbody/watershed Facility Plan Report and Drainage

Basin Specific LTCP to DEC. As part of that process, DEP will be conducting an extensive public participation program. This input should be provided directly to DEP during the public participation program for consideration for inclusion in the Waterbody/watershed Facility Plan. Further, as indicated in the 2004 ACO, DEP will be initiating construction of facilities to improve the dissolved oxygen levels in the Creek shortly.

**Comment:** The State should be in compliance with Coastal Management Program policies for preservation and improvements and therefore, should not lower standards for wastewater discharges into Jamaica Bay.

**Response:** The State Department of the State of New York administers the Coastal Zone Management Program through review of construction and other major programs for a Coastal Zone Management Program consistency review. Projects or actions impacting the shorelines and coastal waters would be subject to the consistency review. Projects/actions would be reviewed by the Department of State for consistency. Key to the Department of State's review will likely be the following policies:

***“POLICY 30 - MUNICIPAL, INDUSTRIAL, AND COMMERCIAL DISCHARGE OF POLLUTANTS, INCLUDING BUT NOT LIMITED TO, TOXIC AND HAZARDOUS SUBSTANCES, INTO COASTAL WATERS WILL CONFORM TO STATE AND NATIONAL WATER QUALITY STANDARDS.***

***Explanation of Policy*** - Municipal, industrial and commercial discharges include not only "end-of-the pipe" discharges into surface and groundwater but also plant site runoff, leaching, spillages, sludge and other waste disposal, and drainage from raw material storage sites. Also, the regulated industrial discharges are both those which directly empty into receiving coastal waters and those which pass through the municipal treatment systems before reaching the State's waterways.”

***“POLICY 33 - BEST MANAGEMENT PRACTICES WILL BE USED TO ENSURE THE CONTROL OF STORMWATER RUNOFF AND COMBINED SEWER OVERFLOWS DRAINING INTO COASTAL WATERS.***

***Explanation of Policy*** - Best management practices include both structural and non-structural methods of preventing or mitigating pollution caused by the discharge of stormwater runoff and combined sewer overflows. At present, structural approaches to controlling stormwater runoff (e.g., construction of retention basins) and combined sewer overflows (e.g., replacement of combined system with separate sanitary and stormwater collection systems) are not economically feasible. Proposed amendments to the Clean Water Act, however, will authorize funding to address combined sewer overflows in areas where they create severe water quality impacts. Until funding for such projects becomes available, non-structural approaches (e.g., improved street cleaning, reduced use of road salt) will be encouraged.”

**Comment:** The ACO does not address water quality issues within the Hudson River and Hudson River Park. We object to it being approved without focus on an amendment to deal with the problems created within the park.

**Response:** DEP will be initiating Waterbody/watershed Facility Planning activities for the Hudson River area and according to the 2004 ACO, Appendix A, Section II will be submitting a Waterbody/watershed Facility Plan Report and Drainage Basin Specific LTCP to DEC. As part of that process, DEP will be conducting an extensive public participation program. This input should be provided directly to DEP during the public participation program for consideration for inclusion in the Waterbody/watershed Facility Plan.

**Comment:** There is a problem with the Hudson River not even being a subject in the ACO. Conditions in the Hudson may not be as deteriorated as in some other locations, but they are far from satisfactory.

**Response:** The Hudson River, Harlem River, Upper and Lower portions of New York Bay and the Kills are all included in the 2004 ACO as part of the Open Waters of New York Harbor and are the subject of a Waterbody/watershed Facility Planning milestone (Appendix A, Section II). Further, the Hudson River, along with other open water areas of New York Harbor, are all part of the ongoing TMDL process being conducted by the Harbor Estuary Program under the guidance of the EPA and the States of New York and New Jersey.

**Comment:** Recreational uses within the Bronx River should be protected and supported, not eliminated by allowing raw sewage and polluted runoff to enter the waterbody.

**Response:** DEP has been conducting a Waterbody/watershed planning activities including public participation outreach for the past few years. An outcome of those activities is the floatables screening facilities proposed out by DEP for the three major CSO outfalls on the Bronx River in the Modified Facility Plan report submitted to DEC in March 2004. These facilities are now being designed by DEP.

**Comment:** We recommend that the DEP funds for CSO abatement be invested in targeted efforts to control stormwater, particularly in the drainage areas of the most problematic CSO, as well as control floatables.

**Response:** See comment and response above.

**G: CSO Compliance with Nitrogen Total Maximum Daily Load (TMDL)**

The following comments were received concerning nitrogen.

**Comment:** The ACO does not address the issue of the proposed SPDES permit modifications failure to provide for effluent limits on nitrogen discharges from CSOs as specifically required by the TMDL allocations.

**Response** DEC has not included requirements about CSO total nitrogen discharges in the ACO since this parameter is already regulated in DEP's SPDES permits. DEP is required by the SPDES permits to submit an annual report documenting the monthly average and the 12-month rolling average total nitrogen mass loadings to the LIS. DEP has submitted the first of those reports in April of 2004, which indicates that CSO loadings to these zones are in full compliance with the CSO Wasteload allocations ("WLA") for 2004. This report also indicates that if flow conditions remain similar to those in 2003, CSO total nitrogen loadings should be less than the 2009 CSO WLA for Zone 9 and slightly above the 2009 CSO WLA for Zone 8. Further reductions in CSO total nitrogen loadings are anticipated from CSO control activities that direct CSO flows into the WPCPs. If these further reductions do not achieve compliance with the CSO WLAs for Zones 8 and 9, DEC will then require nitrogen offsets at the WPCPs.

**Comment:** Relaxed WQS could result in further damage to our cherished natural resources, including Jamaica Bay, which already suffers from excess nitrogen inputs.

**Response:** The issue of the perceived relaxation of WQS for New York Harbor waterways in general has been addressed in previous comments. In the case of Jamaica Bay, both DEP and HEP planning initiatives are in progress at the present time to evaluate the magnitude of the nitrogen enrichment and eutrophication problems, and related aesthetic and dissolved oxygen issues. The DEP effort is being undertaken in accordance with the 2002 Nitrogen Consent Order. This order acknowledges DEP's planning initiatives in Jamaica Bay (the Jamaica Bay Eutrophication Project, the Use and Standards Attainment Project and the (WPCP) Outfall Relocation Project) and requires a Comprehensive Jamaica Bay Report providing recommendations and an implementation schedule for improving water quality in Jamaica Bay by October 2006. HEP's Nutrient and Organic Enrichment Work Group is also evaluating needed load reduction requirements to achieve WQS in Jamaica Bay.

**Comment:** DEC should have more stringent nitrogen TMDL WQS for Jamaica Bay sewage treatment plant effluents.

**Response:** Nitrogen in Jamaica Bay is currently the subject of the 2002 Nitrogen Consent Order as described above. That ACO requires DEP to develop a Comprehensive Jamaica Bay Report and submit it to DEC for review and approval in 2006. The Comprehensive Jamaica Bay Report must summarize and integrate the information obtained from the Jamaica Bay Eutrophication Project (“JBEP”); the Use Standards Attainability Study Investigations and Evaluations of Jamaica Bay (“USA study”); the Outfall Relocation Feasibility Evaluation; and provide recommendations and an implementation schedule for improving water quality in Jamaica Bay either through treatment or non-treatment. Upon approval, or as soon as possible thereafter, DEC will propose a modification to DEP’s SPDES permits for the Jamaica Bay WPCPs, to require implementation of the Comprehensive Jamaica Bay Report.

#### **H: Environmental Monitors**

**Comment:** Environmental monitors should be State employees, not private monitors employed by the City. The use of private environmental monitors rather than State employees could compromise the neutrality of program monitoring, resulting in greater costs to the health and safety of New Yorkers. Private contractors hired by the municipalities or businesses that have violated ACO requirements may feel pressure to be less vigilant in monitoring the entities that have hired them. Given the important function performed by environmental monitors, it is crucial that they are able to fully monitor the CSO program without bias.

**Response:** DEC has utilized On-Site Independent Environmental Monitors (IEMs) for 10 years, and recently DEC has proposed the On-site Environmental Monitoring Policy (“Policy”), which continues to authorize this practice. As required by the Policy, the 2004 ACO requires that the IEM’s be retained pursuant to an agreement between DEP and the IEMs. This agreement is subject to the approval of DEC. In order to avoid conflicts of interest, any firm or individual conducting any business with DEP is precluded from becoming an IEM. Pursuant to the approved agreement, the IEMs must be qualified for the task, must report to DEC, and owe all duties of confidentiality to DEC. If an IEM discovers any violations, they must immediately report them to DEC. The IEM must also develop a work plan that is approvable by DEC. Additionally, all work product developed by an

IEM is the property of DEC. Lastly, the discharge or replacement of an IEM is subject to DEC's approval. These safeguards address the concerns noted in the above comment.

At this time, DEP is in active negotiations with a quasi-governmental agency to serve as the IEM. This entity possesses more than adequate qualifications to act as the IEM and has no conflicts of interest in performing the required IEM tasks under the 2004 ACO.

**Comment:** The policy in the ACO that allows for private environmental monitors should not have been changed without giving the public an opportunity to comment. The allowance for public comment on the ACO itself is simply insufficient to address this policy change. If the public is to be given a meaningful opportunity to comment, such a policy change should not be hidden in an ACO. The policy change should be clearly published, giving the public an opportunity to respond before it is applied in a particular ACO.

**Response:** The On-site Environmental Monitoring Policy to which the commenter is referring was separately made available for public comment on September 29, 2004, pursuant to New York State law. ECL § 3-0301(2.)(z). The public comment period for this Policy officially closed on November 5, 2004. All public comments received during this period are being carefully reviewed by DEC and a separate responsiveness summary will be prepared. The provisions set forth in the 2004 ACO comport with the terms of the On-site Environmental Monitoring Policy.

## **I: Public Participation**

**Comment:** Many comments were made that related to public participation. Examples of these follow:

- The ACO should be revised to substantially increase public participation. There should be a citizens activity committee, funded by the program, which addresses the stakeholder's needs on a quarterly basis.
- Public participation and inter-agency coordination should be incorporated into every aspect of the development of DEP plans and reports on CSOs. The roles of the public and other city, state and federal agencies should be described more explicitly in the ACO.

- The ACO should not include an agreement to enter into a Memorandum of Understanding (MOU) to “establish a process to enable the water quality standard reviews to be processed...” without being subject to public review.
- The ACO is not consistent with the EPA CSO Policy’s requirements for public involvement.
- There should be a citizens activity committee, funded by the program, which addresses the stakeholder’s needs on a quarterly basis

**Response** The 2004 ACO is consistent with the CSO Control Policy as that it requires submission of Waterbody/watershed Facility Plans which are followed by submission of a Drainage Basin Specific LTCP. As indicated, in section III.B.3 of the 2004 ACO, the Waterbody/watershed Facility Plans must support development of a LTCP and in section III.C of the 2004 ACO the LTCP must contain a public participation element in accordance with the EPA policy consistent with the CSO Policy. Further as was the case for the work done over the past 5-years by DEP, the development of the Waterbody/watershed Facility Plans will be overseen by a Harbor-Wide Government Steering Committee composed of DEC, EPA, and other city, state, interstate and federal stakeholders. Further, DEP began 5-years ago, and will continue, to convene Waterbody/Watershed Stakeholders Teams within each affected community, with representation of local community government and organizations, local citizens, and waterbody users who will comment on CSO facility plans, water use issues and goals, and, as may be appropriate, any proposed revisions to WQS. In addition, in about 1996, DEP formed the City-Wide Citizens Advisory Committee (CAC) on Water Quality. DEP funded a Technical Advisory Committee to work with and provide technical assistance to the CAC on Water Quality. Although the Committee has been inactive in the past year or so since the retirement of the Chairperson, DEP plans to encourage the Committee to become active again upon initiation of active LTCP planning in open water areas of NY Harbor. Any proposed revisions to WQS after UAA determinations would also require public notice, comment and possibly hearings. As a result, there will be much opportunity for public input regarding WQS issue.

**Comment:** Documents submitted by DEP regarding its progress in achieving compliance with the ACO, etc. should be readily accessible to the public and posted on DEP and DEC websites.

**Response:** Any documents so submitted are readily accessible from DEC and/or DEP through traditional Freedom of Information Law requests, 6 NYCRR Part 616.

**J: Development with New York City**

**Comment:** The ACO should provide for special procedures for large development projects - perhaps those defined as those that exceed a Type I threshold under SEQR - that would have the potential to result in CSO overflows to receiving waters during storm events and that do not already embody specific mitigation measures to prevent CSO discharges that exceed those that currently occur. Such projects should be submitted to a DEC public hearing at which comments would be received on whether the proposed development and potential CSO discharges would result in violations of the Clean Water Act (CWA), the Environmental Conservation Law (ECL), applicable State Pollutant Discharge Elimination System (SPDES) permits, and/or the ACO entered into by DEC and the City and DEP. The project could only proceed if DEC made a determination that the CSO impacts were adequately mitigated.

**Response:** Certain development projects within New York City are subject to the CEQR review process. City agencies with jurisdiction over aspects of a project would be considered involved agencies and may serve as the lead agency with the responsibility of evaluating environmental impacts of such projects. Where this lead agency finds a potentially significant impact that may result from a project, that impact must be mitigated to the maximum extent practicable before the project is allowed to proceed. DEC has the responsibility of enforcing the ECL and CWA and as such DEC regulates CSO discharges through the SPDES permits and ACOs. Therefore, if a project requires DEC's approval, DEC would be an involved agency in the environmental review process and must issue a finding under CEQR that adverse impacts have been mitigated to the maximum extent practicable. To the extent DEC identifies any deficiencies in the environmental review or mitigation measures proposed for a project, DEC may request the City to take additional actions to mitigate potential impacts and may choose to withhold its regulatory approval and associated CEQR/SEQRA determination.

**Comment:** The City allows development to proceed without regard to impacts to CSOs. The review of new building permits for adequate sewer capacity is almost non-existent, and is not related to the current sewer budget.... This policy is ruining the water quality in our rivers.

**Response:** New buildings cannot be constructed within NYC without applying for a sewer connection permit from DEP. DEP reviews the capacity of sanitary, storm and

combined sewers that are potentially impacted by the sewer connection request to assure capacity to convey storm flows and to treat sanitary flows.

**Comment:** Building permits, as well as potential tax levees, credit and incentives should be considered as instruments to address non-point pollution and CSO problems.

**Response:** DEC and DEP have agreed to the program set forth in this ACO for the purposes of regulation and enforcement. DEP and the City of New York will continue to assess alternative, innovative measures to further reduce CSOs beyond the requirements of the 2004 ACO.

#### **K. Miscellaneous**

**Comment:** The ACO should include opening use of the System-Wide Eutrophication Model (SWEM) to the public so that organizations region-wide can use the models to learn more about how pollutants affect their waterways.

**Response:** HydroQual has made both the hydrodynamic (ECOM) module and the water quality module (RCA) of the SWEM model available to the public. Both can be downloaded from the HydroQual web site. The SWEM input files can be requested from the NYC DEP Bureau of Environmental Engineering, Division of Water Quality Improvement, by addressing specific requests to the Division Chief, Mark Klein, P.E.

**Comment:** The ACO should be subject to DEC adjudicatory hearing procedures, as provided by the Third Interim Decision of the Commissioner dated June 1, 1993.

**Response:** The SPDES permit hearing that is currently underway will allow potential intervenors to attempt to raise CSO issues that are both substantive and significant to the extent that they relate to the SPDES permits. The Administrative Law Judge (“ALJ”) has already found that “[a]t a minimum, the intervenors will be provided an opportunity to comment on any resulting consent order and will have an opportunity to submit revised proposed CSO issues taking into account the terms and conditions of a resulting consent order.” *See, In re NYCDEP 2004 WL 228522 \*5* (N.Y.Dept.Env.Conserv. Jan. 28, 2004). This ruling by the ALJ will continue to govern the remaining processes associated with the ongoing SPDES permit hearing.

**Comment:** We feel the ACO is not enforceable because it only calls for stipulated monetary penalties, which is not an enforceable instrument.

**Response:** While the commenter is correct that the ACO calls for stipulated monetary penalties for any non-compliance with the terms of the ACO, including, but not limited to any missed milestone, ACO ¶ V., the ACO also specifically reserves additional enforcement rights including, but not limited to, the right to seek injunctive relief for any violation of the terms of the ACO. *See* ACO ¶ IX. In addition, such relief is specifically authorized under New York State Law. *See* ECL § 71-1929(providing for injunctive relief and payable penalties not to exceed \$37, 500 per day/per violation of any terms of a Commissioner’s Order).

**Comment:** The City’s initial look at the urban heat island effect should be extended and investigated in terms of the potential contribution of stormwater capture to the cooling of the City.

**Response:** DEC does not consider the heat island effect to be relevant to the 2004 ACO.

**Comment:** Potential authorization of food waste disposal units in commercial establishments will increase CSO pollutant loadings and requires NYSDEC’s considered vigilance.

**Response** This comment concerns the New York City Council proposed legislation designated Int 0220-2004, authorizing the installation of food waste disposal units in commercial establishments, and as such, is beyond the scope of the 2004 ACO. DEC and DEP will continue to monitor this issue to the extent that any potential discharge associated with such disposal practices could adversely impact the waters the State of New York.

**Memorandum of Understanding between**  
**the New York State Department of Environmental Conservation and**  
**the New York City Department of Environmental Protection**

WHEREAS:

1. The New York State Department of Environmental Conservation ("NYSDEC") is an agency of the State of New York, which among other things, has the authority to classify the waters of New York State and adopt water quality standards ("WQS"). See Environmental Conservation Law §§ 17-0301, *et seq.* (McKinney's 1997 & Supp. 2004) (hereafter "ECL"); 6 NYCRR Part 609.

2. The City of New York ("City") and New York City Department of Environmental Protection ("NYCDEP") own and operate 14 Municipal Water Pollution Control Plants ("WPCPs"), which process most of the sewage generated within the City. In connection with owning and operating the WPCPs, the City and NYCDEP are also responsible for Combined Sewer Overflows ("CSOs") in the City and ensuring that, consistent with EPA's CSO Control Policy, discharges from CSOs attain WQS.

3. NYSDEC and NYCDEP have recently negotiated the 2004 CSO Consent Order ACO# CO2-20000107-8 ("CSO Consent Order"), which commits NYCDEP to planning, designing and implementing a number of CSO Abatement projects. As memorialized by this Memorandum of Understanding ("MOU"), NYSDEC and NYCDEP have agreed to a series of work efforts to examine, review regulatory options, and if appropriate, seek revision of water body classifications and/or site-specific water quality standards (referred to collectively herein as "Site-Specific Standards") to ensure that the CSO Abatement projects, as approved by NYSDEC, result in compliance with applicable WQS.

**Regulatory Framework for State WQS Review.**

4. The Clean Water Act ("CWA") calls upon states to establish water body classifications and WQS, which consist of uses designated for the water bodies and criteria to protect those uses. The CWA also establishes an anti-degradation policy to ensure that where water bodies do or, through water quality improvements can, accommodate certain uses, those uses will be protected.

5. In New York, water body classifications "provide for the protection and propagation of fish, shellfish, and wildlife, and for the recreation in and on the water, and take into account the use and value of public water supplies..." 6 NYCRR § 609.1.

6. The implementing regulations of the CWA recognize, however, that in some situations, certain designated uses are not in fact achieved in a water body, and those uses cannot be attained due to any one of the six factors set forth at 40 CFR Part 131.10(g). In such situations, and consistent with the ECL, the overall anti-degradation policy of the CWA and its implementing regulations, the federal regulations allow for revising designated uses and/or WQS for such water bodies. See 40 CFR § 131.10(g). Any such revisions, however, must also comply with Article 17 of the ECL. ECL § 17-0301.

7. The federal regulations and EPA guidance provide State WQS authorities with a mechanism for reviewing and revising WQS. In particular, State WQS authorities may undertake a Use Attainability Analysis (“UAA”), a “structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological and economic factors as described [above].” 40 CFR §131.3(g).

8. In particular, UAAs may be appropriate “to reflect site-specific conditions including those related to CSOs.” CSO Policy, 59 FR at 18,694; 33 U.S.C. § 1342(q).

9. In New York, entities, including municipalities may petition the NYSDEC for reclassification of waters of the State. ECL § 17-0301, 6 NYCRR Part 609.

#### Coordinating CSO Long-Term Planning with Water Quality Standards Reviews

10. The CSO Policy establishes certain key principles to ensure that CSO controls are cost-effective and meet the requirements of the CWA. The CSO Policy expressly recognizes that there are circumstances where appropriate CSO abatement may not result in the attainment of current WQS. In such cases, the CSO Policy explains that the State WQS authority may revise Site Specific Standards as part of the planning process for developing long-term CSO control plans to reflect the site-specific wet weather impacts of CSOs.

11. The CSO Policy sets forth a series of steps that the municipality and the permitting authority should undertake in order to develop an approved approach to managing CSO discharges, and examining water quality standard attainment and revision. A key principle in the CSO Policy is that the development of a municipality’s Long Term Control Plan (“LTCP”) should be coordinated with the review and appropriate revision of WQS to ensure that the LTCP will be sufficient to meet WQS. CSO Control Policy § III.A. The CSO Policy is predicated on the fact that EPA regulations and guidance provide states with flexibility to adapt WQS to reflect site-specific conditions including those related to CSOs. Id. § III.B.

12. To better explain how the revision of WQS envisioned under the CSO Policy should occur, EPA developed the July 31, 2001 Guidance: *Coordinating CSO Long-Term Planning with Water Quality Standards Reviews* (“2001 EPA Guidance”). The 2001 EPA Guidance suggests close coordination among CSO communities, NPDES authorities, State Water Directors, EPA, and the public in the WQS review process and the development of an LTCP designed to meet the resulting WQS. Id. at 36-37.

13. The 2001 EPA Guidance provides that the NPDES authority will establish a coordination team, including, at a minimum, representatives of the municipality and the state, to oversee LTCP development and WQS review. Id. at 39. It is also recommended that the coordination team include EPA and community stakeholders. Id. The coordination team will agree on the data and analysis to support LTCP development and water quality standards review. Id. at 40.

14. The data and analysis should include, among other things: monitoring and modeling of the sewer system and its impacts on the receiving water body; a detailed description of existing and designated uses of the water body; analyses of the potential for use attainment; and the evaluation of alternative control levels, including cost and performance information for

each control alternative evaluated. Id. at 39-41. The Guidance recognizes that these elements are common to both the LTCP and the water quality standards review, and promotes “integrating water quality standards reviews with the development and implementation of an affordable level of CSO control.” Id. at 41.

15. Based on that analysis, the municipality submits a draft LTCP to the state, which includes the data and analysis assessing the attainability of current water quality standards. Id. at 44. If the state agrees that the data and analysis support the revision of WQS, based on the criteria set forth in 40 CFR § 131.10(g), the state should proceed to propose and adopt the revisions. Id. at 45. If the WQS revision differs from what the municipality anticipated, the draft LTCP will have to be revised. Id. at 46.

16. After the WQS are reviewed and the final LTCP is developed, the municipality implements the control measures of the final LTCP and performs post-construction monitoring to ensure that the controls are operating as anticipated and that the discharges comply with the WQS as revised. Id. at 47.

17. The CSO Policy provides that if the WQS review and revision is still underway at the time a SPDES permit is issued for the discharge, a WQS variance may be appropriate where the state is uncertain as to whether a standard can be attained. See CSO Policy § III.B; see also, NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.6.3(I). As envisioned by the CSO Policy, a variance would allow a CSO SPDES permit to be written to meet the WQS while the analyses are underway, and time is needed for the state to conduct additional analyses on the attainability of the standard. Id.

18. NYSDEC is authorized to grant variances from water quality based effluent limitations under certain circumstances. 6 NYCRR § 702.17; TOGS 1.6.3(I). These circumstances mirror those situations in which modification of WQS and/or use classifications may be appropriate under 40 CFR § 131.10(g).

#### Overview of Efforts to Abate CSOs in New York City

19. Pursuant to Section 208 of the CWA, the 1992, 1996, and 2004 CSO Consent Orders, and the April 2003 SPDES permits, NYCDEP is undertaking a program to evaluate and abate CSOs and improve water quality. In keeping with the applicable policy and guidance, NYCDEP is developing and implementing a City-wide LTCP in accordance with Appendix A of the 2004 CSO Consent Order.

20. In accordance with the CSO Policy, NYCDEP prepared facility plans for the CSO abatement projects based on the “knee-of-the-curve” approach, which evaluates cost versus water quality benefits and recognizes the point where each additional dollar spent results in diminishing water quality improvements. NYSDEC approved these facility plans in 1999. Although most of these plans do not demonstrate attainment of water quality standards, given the site-specific water quality considerations of each site, these plans represent cost-effective CSO controls which, when constructed, will significantly improve water quality in those waterbodies. Developing these facility plans was the first phase in developing the City-wide LTCP.

21. NYCDEP has committed to full implementation of the CSO Abatement Projects as set forth in the 2004 Administrative CSO Consent Order.

22. In light of the fact that implementation of several of the approved facility plans will not result in attainment of WQS under all circumstances, and consistent with the State and federal policy and guidance cited above, NYCDEP is completing the analysis that will be necessary to support NYSDEC's review and, if appropriate, revision of WQS. In this regard, NYCDEP has initiated development of Waterbody/Watershed Facility Plans. Through the approaches described in the CSO Policy, these plans evaluate, among other things: (1) the impacts of implementing the CSO abatement projects set forth in the associated 2004 Administrative CSO Consent Order Appendix A; (2) if any additional cost effective CSO control measures may be available to meet WQS; and (3), the impacts of elimination of CSOs through complete sewer separation, to determine if WQS could ever be achieved in each of the water bodies affected by CSOs.

23. A Harbor-Wide Government Steering Committee was convened by DEP to participate in the development of the Waterbody/Watershed Facility Plans. The Committee included NYSDEC as well as other city, state, interstate, and federal stakeholders representing regulatory, planning, and public concerns in the New York Harbor watershed. The creation of this committee is consistent with recommendation in the 2001 EPA Guidance that there be close coordination among the municipality, the state, EPA, and the public in the WQS review process and the development of an LTCP. The Steering Committee reviewed field investigation work plans and standard operating procedures executed for all waterbody/watershed assessments.

24. In connection with each project, NYCDEP has also convened a Stakeholder Team within each affected community, with representation of local community government and organizations, local citizens, and waterbody users, which is consistent with the 2001 EPA Guidance. The Stakeholder Teams are focused on gathering information to identify existing and desired waterbody and riparian uses, water quality issues, and a prioritization of use goals.

25. NYCDEP has agreed to provide the necessary resources to finish the technical requirements of the WQS review process, and to provide the necessary financial resources to enable NYSDEC to retain independent third party consultants to review the analyses undertaken by NYCDEP and complete the regulatory requirements of the WQS review process, up to a total of \$1 million.

NOW THEREFORE:

#### NYCDEP Work

1. NYCDEP is solely responsible for preparing, revising if necessary, and implementing the facility plans for each CSO abatement project. Those projects will be implemented in accordance with the 2004 CSO Consent Order.
2. NYCDEP will evaluate the effects of implementing these facility plans using a watershed-based approach to determine any causes of non-attainment of WQS and identify the highest reasonably attainable uses of the water bodies. Based on these evaluations, NYCDEP will produce Waterbody/Watershed Facility Plans for each CSO

abatement project. The Waterbody/Watershed Facility Plans will provide the technical framework for NYSDEC's Use Attainability Analyses for review of Site Specific Standards to begin 60 days after Notice to Proceed to Construction for the final project in each waterbody. The Waterbody/Watershed Facility Plans will support the LTCP process on a site-specific basis and will briefly describe the status of the nine EPA recommended elements of a Long Term Control Plan for each waterbody. Further, the Waterbody/Watershed Plans will examine the extent to which additional cost-effective CSO control measures may result in WQS being met. Finally, the Waterbody/Watershed Plans will also complete facility planning in those drainage basins (Westchester Creek, Hutchinson River, and Newtown Creek) contained in the 2004 Administrative CSO Consent Order Appendix A, that do not have final conceptual designs. Upon DEC approval, the scope of the projects listed in Appendix A of the CSO Consent Order for those three basins will be as set forth in the approved Waterbody/Watershed Plans.

3. NYCDEP will produce Use Attainability Analysis Reports (UAA Reports) for each basin, using the Waterbody/Watershed Facility Plans to identify what aquatic life, recreational, and aesthetic uses can be attained through implementation of the Waterbody/Watershed Facility Plans. These UAA Reports will identify existing uses, use impediments, and reasonably attainable uses based on modeling the impacts of implementing the Waterbody/Watershed Facility Plans. The UAA Reports will also analyze, for each basin, the applicability of the criteria set forth in 40 CFR § 131.10(g) for modifying WQSs.
4. Finally, NYCDEP, if it believes circumstances warrant, will petition NYSDEC for review and revision of Site Specific Standards of basin waters in accordance with 6 NYCRR Part 609.

#### NYSDEC Work

1. NYSDEC will work with NYCDEP in development of Waterbody/Watershed Facility Plans and UAA Reports and strive to identify regulatory options to ensure NYCDEP's compliance with WQS. Upon NYCDEP's completion of UAA Reports, NYSDEC will use the reports, in addition to any other appropriate analyses, as a basis for regulatory reviews of Site-Specific Standards in each basin in accordance with the standards set forth in 40 CFR § 131.10(g) and 6 NYCRR Part 609.
2. NYSDEC will commence such regulatory reviews for each basin identified above promptly upon NYCDEP's completion of the UAA Reports and submission of Petitions, but in no event later than 60 days following the date on which NYCDEP issues the last notice to proceed to construction for all contracts related to the associated CSO Abatement Project within each drainage basin, as set forth in Appendix A of the CSO Consent Order. NYSDEC shall diligently proceed with those reviews and, if appropriate, revisions to the Site-Specific Standards in accordance with all applicable laws and procedures including, but not limited to, the State Environmental Quality Review Act ECL Art. 8, ECL Art. 17, the State Administrative Procedures Act, and 6 NYCRR Part 609. NYSDEC will make good faith efforts to complete this review process prior to NYCDEP's completion of construction of the applicable CSO facility. However, the

inability of NYSDEC to accomplish same shall not constitute a basis for NYCDEP seeking relief from such completion of construction, or any interim milestone for the required CSO Abatement projects. NYSDEC may choose not to propose regulatory amendments to Site-Specific Standards prior to issuance by NYCDEP of the notice to proceed to construction of the CSO Abatement Projects for the corresponding basin. The parties agree that DEC may choose not to make any regulatory amendments adopted in connection with this MOU or NYCDEP's CSO abatement program effective, until construction of the CSO Abatement Projects for the corresponding basin are complete.

3. In the event that the regulatory review and revision process is not complete for a given water body by the time construction of the corresponding facility is complete, NYCDEP may apply for a variance pursuant to 6 NYCRR § 702.17 when NYSDEC seeks to revise the applicable SPDES permit. Under such circumstances, NYSDEC shall review and process such a variance application in accordance with 6 NYCRR § 702.17, the CSO Policy, and all applicable laws and regulations, and if warranted, include in the SPDES permit a variance from the water quality based effluent limits undergoing the regulatory review and revision process, consistent with the CSO Policy.

#### Completion of the City-Wide LTCP

Once the regulatory reviews and, if appropriate, revisions, of the Site-Specific Standards are complete, NYCDEP will complete the City-Wide LTCP as set forth in Appendix A of the 2004 CSO Consent Order.

#### NYCDEP Funding

1. NYCDEP shall provide NYSDEC with up to \$1,000,000 to be used solely for consultants to review the Waterbody/Watershed Facility Plans, 6 NYCRR Part 702.17 variance requests, and UAA Reports prepared by NYCDEP and, if deemed appropriate based upon the applicable standards, to develop and oversee the regulatory process associated with revising Site-Specific Standards in these basins. Failure of NYCDEP to fully fund NYSDEC shall relieve NYSDEC of all obligations set forth in this MOU. If the funding provided for above is exhausted prior to the completion of the review and revision process, NYCDEP, at its discretion, may provide additional funding to support that process. If NYCDEP does not provide such additional funding, NYSDEC's obligations under this MOU shall cease.
2. Neither NYCDEP's decision not to provide additional funding upon request or any other provision of this MOU shall in any way affect the parties' obligations under applicable federal or state laws or regulations.
3. Funds shall be made available to NYSDEC for actual and reasonable consultant costs associated with performing 6 NYCRR Part 702.17 variance requests, and reviews and, if appropriate, revisions of WQS and/or use classifications, as follows:
  - a. NYCDEP shall pay \$1,000,000 into a dedicated account established with the New York State Environmental Facilities Corporation ("EFC") for purposes of funding a NYSDEC consultant in connection with this MOU. The terms and conditions

for draw down from that account will be specified in an escrow agreement to be negotiated among the parties. EFC's management fee (the "Fee") for maintaining this account shall be taken solely from interest generated by this account. The Fee shall be assessed on an annual basis and shall be the greater of .5% of the annual interest, or five thousand dollars (\$5000). However, if the account generates less than \$5000 in interest, the Fee shall be the amount of interest generated on the account.

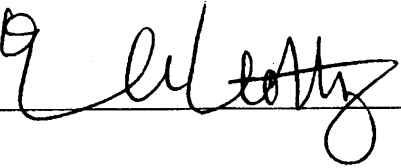
- b. NYSDEC shall submit to EFC invoices or other appropriate documentation in support of expenditures for which NYSDEC seeks reimbursement under this Memorandum of Understanding. NYSDEC shall seek reimbursement only for reasonable and customary expenses relating to work directly attributable to the review and revision of Site-Specific Standards and/or variance requests as defined herein.
- c. NYCDEP reserves the right to dispute any expense for which NYSDEC seeks reimbursement on the basis that (a) the cost is not reasonable or customary or (b) the cost is not directly attributable to review and revision of Site-Specific Standards and/or variance requests pursuant to the terms of this MOU. In the event that NYCDEP disputes any such expense, the parties agree to work in good faith to resolve such dispute.
- d. In retaining consultants for work done in connection with this Memorandum of Understanding, NYSDEC shall solicit proposals for a consultant in accordance with all applicable procurement procedures. Before entering into contract negotiations with a consultant, NYSDEC shall provide NYCDEP the name of the selected consultant and the names of at least two alternate, qualified consultants who submitted proposals. NYCDEP shall notify NYSDEC within 10 days of receiving such names whether, based on prior knowledge, or prior experience with the selected consultant or the alternate consultants, NYCDEP recommends that NYSDEC pursue, or not pursue, further negotiations. NYSDEC will give due consideration to such information prior to finalizing a contract with a consultant.

### Termination

This MOU shall be deemed completely satisfied and shall terminate when either of the following two conditions have been fully satisfied: (1) all petitions for review and appropriate revision of use classifications have been processed or (2) the funding provided for above has been exhausted and NYCDEP opts not to replenish said account.

Nothing in this MOU shall be construed as effecting the Parties' obligations under applicable federal or state laws or regulations.

YORK STATE DEPARTMENT OF  
ENVIRONMENTAL CONSERVATION

By: 

Dated: JAN 14 2005, 2004.

NEW YORK CITY DEPARTMENT OF  
ENVIRONMENTAL PROTECTION

By:   
Christopher O. Ward, Commissioner

Dated: 8.17, 2004.