



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

OCT 02 2017

Mark Young, Executive Director
Lowell Regional Wastewater Utility
First Street Boulevard (Route 110)
Lowell, MA 01850

**Re: In the Matter of City of Lowell, Massachusetts
EPA Order on Consent Docket No. CWA-AO-R01-FY17-016**

Dear Mr. Young:

Enclosed is a copy of the fully executed Order on Consent ("Order") entered into between the City of Lowell, Massachusetts and EPA. The Order requires that the City submit a Combined Sewer Overflow ("CSO") Long Term Control Plan ("LTCP") within the context of an Integrated Plan ("IP"). It also requires the City to take other actions to achieve full compliance with the Clean Water Act, including undertaking interim short-term CSO projects and addressing implementation of the City's CMOM program and MS4 permit.

If you have any questions regarding the Order, please contact Doug Koopman of my staff at 617-918-1747.

Sincerely,

Susan Studlien

Susan Studlien, Director
Office of Environmental Stewardship

cc: Fred Andes, Esq.
Kevin Brander, MassDEP NERO
Tonia Bandrowicz, Regulatory Legal Office
Doug Koopman, Water Enforcement Unit

II. DEFINITIONS

3. Unless otherwise defined herein, terms used in this AOC shall have the meaning given to those terms in the CWA, 33 U.S.C. § 1251 *et seq.*, and the regulations promulgated thereunder.

III. FINDINGS

The Director makes the following findings of fact. Entry into this AOC does not constitute an admission by the City of Lowell, Massachusetts (the "City") of any violation alleged herein.

4. The City is a person under Section 502(5) of the CWA, 33 U.S.C. § 1362(5).
5. The City is the owner and, through the Lowell Regional Wastewater Utility, a department of the City of Lowell, operator of a Publicly-Owned Treatment Works ("POTW"), consisting of a sanitary sewer collection system ("Collection System") and a wastewater treatment facility ("WWTF"), and nine combined sewer overflow ("CSO") outfalls, from which it discharges "pollutants," as defined in Sections 502(6) and (12) of the CWA, 33 U.S.C. §§ 1362(6) and (12), from "point sources," as defined in Section 502(14) of the CWA, 33 U.S.C. § 1362(14). The WWTF discharges into the Merrimack River via Outfall No. 035, and the CSO outfalls discharge into the Merrimack River, the Concord River, and Beaver Brook. The Concord River and Beaver Brook discharge into the Merrimack River, which, in turn, discharge into the Atlantic Ocean. All are "navigable waters," as defined in Section 502(7) of the CWA, 33 U.S.C. § 1362(7).
6. On September 1, 2005, the Director of the Office of Ecosystem Protection of EPA, Region 1, under the authority of Section 402 of the CWA, 33 U.S.C. § 1342, issued National Pollutant Discharge Elimination System ("NPDES") permit number MA0100633 (the

“NPDES Permit”) to the City. The NPDES Permit expired on October 31, 2010 but continues in effect administratively pending re-issuance.

7. The NPDES Permit authorizes the City to discharge pollutants from the WWTF subject to the effluent limitations and monitoring requirements established therein.
8. Section 301(a) of the CWA, 33 U.S.C. § 1311(a), makes unlawful the discharge of pollutants to waters of the United States except, among other things, in compliance with the terms and conditions of an NPDES permit issued pursuant to Section 402 of the CWA, 33 U.S.C. § 1342.

Combined Sewer Overflows

9. The NPDES Permit further authorizes the City to discharge from specified CSO outfalls to the Merrimack River, Concord River and Beaver Brook provided that, among other things, the City maximizes flow to the WWTF for treatment and the discharges do not cause or contribute to violations of federal or state water quality standards.
10. Discharges from the CSO outfalls specified in the NPDES Permit contain, among other things, high levels of fecal coliform and Escherichia coli bacteria, “pollutants” within the meaning of Sections 502(6) and (12) of the CWA, 33 U.S.C. §§ 1362(6) and (12).
11. The City has been implementing a Phase I Capital Improvement Program that includes a CSO abatement program, which has reduced but not eliminated discharges from the CSO outfalls specified in the NPDES Permit. The City reports that it has invested approximately \$120 million in capital improvements between 2003 and 2013, and has committed to invest approximately \$40 million in additional capital improvements through 2019. These investments have, among other things, provided interceptor storage in large-diameter pipes and increased peak flow at the WWTF. The City further reports that its investments have

resulted in an estimated 80 percent reduction in annual CSO volume since 2003. The remaining discharges from these CSO outfalls cause or contribute to violations of Massachusetts Surface Water Quality Standards for fecal coliform or *Escherichia coli* bacteria in the Merrimack River, Concord River and Beaver Brook, in violation of the NPDES Permit.

12. The City's discharge of pollutants, including fecal coliform and *Escherichia coli* bacteria, from its CSO outfalls in quantities that cause or contribute to violations of the state water quality standards, has occurred in violation of a NPDES permit and Section 301(a) of the CWA, 33 U.S.C. § 1311(a).

MS4 Outfalls

13. In addition to the discharges authorized by its NPDES Permit, the City owns and operates a municipal separate storm sewer system (the "MS4 System") from which it discharges storm water runoff containing "pollutants," as defined in Sections 502(6) and (12) of the CWA, 33 U.S.C. §§ 1362(6) and (12), from "point sources," as defined in Section 502(14) of the CWA, 33 U.S.C. § 1362(14), to the Merrimack River and certain of its tributaries, all "navigable waters," as defined in Section 502(7) of the CWA, 33 U.S.C. § 1362(7).
14. On April 18, 2003, the Director of the Office of Ecosystem Protection of EPA, Region 1, under the authority of Section 402(p) of the CWA, 33 U.S.C. § 1342(p), issued *National Pollutant Discharge Elimination System ("NPDES") General Permit for Storm Water Discharges From Small Municipal Separate Storm Sewer Systems* (the "MS4 Permit") for the Commonwealth of Massachusetts. The MS4 Permit authorizes the discharge of stormwater from separate storm sewers subject to the requirements contained therein. The

MS4 Permit became effective on May 1, 2003; it expired on May 1, 2008 but continues in effect administratively pending re-issuance.

15. On July 29, 2003, the City submitted a notice of intent that its separate storm water discharges be covered under the MS4 Permit.
16. The MS4 Permit requires that the City develop, implement, and enforce a Storm Water Management Program (the "SWMP") that includes, among other things, an ordinance or other regulatory mechanism to require sediment and erosion control at construction sites. If such an ordinance does not exist, the development and adoption of an ordinance must be part of the program. The MS4 Permit requires that all elements of the SWMP be implemented by the expiration date of the MS4 Permit.
17. As evidenced by the Small MS4 General Permit Annual Report submitted by the City on May 2, 2016, the City has not yet adopted an ordinance requiring sediment and erosion control at construction sites.
18. The City's failure to implement an ordinance requiring sediment and erosion control at construction sites is a violation of the MS4 Permit and Section 301(a) of the CWA, 33 U.S.C. § 1311(a).

IV. AOC

19. It is the express purpose of the Parties in entering into this AOC to require the City to take all measures necessary to fulfill the objectives of the CWA, to achieve and maintain compliance with the CWA, the Permits, and any applicable Federal and State regulations. All work pursuant to this AOC shall be performed using sound engineering practices to ensure that construction, management, operation, and maintenance of the Collection System and WWTF comply with the CWA, including any practices that are employed to improve

the resilience of the Collection System and WWTF to the impacts of climate change.

Engineering designs and analyses required to be performed pursuant to this AOC shall be, as applicable, consistent with good engineering practices and generally accepted guidance and literature related to the construction, management, operation, and maintenance of the Collection System and WWTF.

20. By no later than March 31, 2018, the City shall submit to EPA and the Massachusetts Department of Environmental Protection (“MADEP”) for review a draft Financial Capability Assessment (“FCA”) that assesses the City’s baseline financial condition and capability in accordance with the requirements of Section II.C.8 of EPA’s *Combined Sewer Overflow Control Policy*, 59 Fed. Reg. 18688, April 19, 1994; EPA’s guidance entitled *Combined Sewer Overflows-Guidance for Financial Capability Assessment and Schedule Development* (EPA832-B-97-004, March 1997) (“FCA Guidance”), EPA’s Financial Capability Assessment Framework, issued on November 24, 2014 (“Financial Capability Assessment Framework”); and any subsequently issued applicable guidance.
21. By no later than December 31, 2018, the City shall submit to EPA and MADEP for review and approval, a CSO model update and evaluation of a range of CSO alternatives consistent with the requirements of EPA’s *Combined Sewer Overflow Control Policy*, 59 Fed. Reg. 18688, April 19, 1994, and EPA’s guidance entitled *Combined Sewer Overflows-Guidance for Financial Capability Assessment and Schedule Development* (EPA832-B-97-004, March 1997), and any subsequently issued CSO-related guidance.
22. By no later than December 31, 2019, the City shall submit to EPA and MADEP for review and approval an Integrated Plan (“IP”), consistent with EPA’s *Integrated Municipal Stormwater and Wastewater Planning Approach Framework*, issued on June 5, 2012, and

any subsequently issued integrated planning guidance. It is intended that the IP will address the community's capital needs related to stormwater, drinking water, and wastewater. The IP shall propose a schedule for the design, construction, and implementation of all measures necessary to meet applicable Clean Water Act requirements, including, but not limited to, all CSO discharge control measures (including all sewer system, green infrastructure, and facility improvements), designed to ensure compliance with water quality standards.

23. The City shall meet the requirements of the Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 61 – 62I and 301 CMR 11.000, for the planning and implementation of each project under the IP.
24. The IP schedule shall be incorporated and enforceable hereunder upon approval by EPA and MADEP, provided, however, that it may be modified in accordance with the following paragraphs. The City shall implement all the control measures in accordance with IP schedule as approved by EPA and MADEP.
25. The City shall continually assess the progress that it makes toward achieving the objectives of its IP, including those related to CSO discharge volume reductions and CSO discharge events projected for the specific design precipitation events and the typical annual precipitation record as presented in the approved IP. The City may recommend changes to the IP based on these assessments and/or other new information, including but not limited to information concerning implementation of its adaptive management approach, performance and water quality data, alternative technology, and changed economic conditions. As necessary, the City shall submit to EPA and MADEP for approval any recommended

changes to the elements in the approved IP, along with, as necessary, a revised financial capability analysis.

26. Any changes to the IP shall be incorporated and enforceable hereunder upon approval by EPA and the MADEP. The City shall implement the revised IP in accordance with the modified schedule as approved by EPA and MADEP.

IMPLEMENTATION OF INTERIM PROJECTS

27. By December 31, 2018, the City shall submit to EPA and MADEP for review and approval, recommended measures to eliminate street flooding in the Middlesex Street area, including a proposed schedule for the design and construction of the measures. The schedule shall be incorporated and enforceable hereunder upon approval by EPA and MADEP. The City shall implement such measures in accordance with the schedule as approved by EPA and the MADEP.

By March 31, 2019, the City shall complete upgrades to the primary and secondary clarifiers at the WWTF in order to allow the clarifiers to maximize wet-weather flow through the WWTF.

CMOM

28. Continuing the requirement in paragraph 11 of the September 30, 2010 EPA-issued Administrative Order (Docket No. 010-026), as modified by this paragraph, beginning April 30, 2018, and annually thereafter, the City shall submit a CMOM Program Implementation Annual Report (the "CMOM Annual Report") to EPA and MADEP detailing the actions taken by the City during the prior calendar year, or known by the City to have been taken by other parties, to resolve the deficiencies identified in the CMOM Corrective Action Plan (CMOM CAP), implement the City's CMOM Program Plan and comply with this AOC.

This report may be submitted as part of the annual CSO report submitted annually by April 30th as required by the City's NPDES Permit. The CMOM Program Annual Report shall also include:

a. A summary listing of all overflows, spills, and releases that have occurred during the previous calendar year, including building/private property backups, that result from capacity limitations, blockages, vandalism, and mechanical, electrical, and structural failures in that portion of the Collection System owned by the City. The tabular listing shall be organized chronologically and shall include:

- i. the dates and times that each event began and was stopped, or if it is continuing, a schedule for its termination;
- ii. the location (nearest address) of each such event;
- iii. the source of the notification to the City;
- iv. the cause of the event including, but not limited to, whether it was caused by debris, fats, oils, and grease, or root blockages, collapsed pipes, mechanical, electrical and structural failures, hydraulic overloads and/or vandalism;
- v. the estimated gallons of wastewater released and the method used to estimate the volume;
- vi. a clear statement of whether the release did or did not reach a stormwater catch basin or any other portion of the City's MS4. If the release occurred to the ground or street, regardless of whether the discharge reached any portion of the City's MS4, the City shall provide the distance to the

- nearest down gradient stormwater catch basin and the name of the receiving water to which the catch basin discharges;
- vii. a clear statement of whether the release did or did not reach any surface water. If the release reached a surface water, the City shall include the name of the surface water and a description of the exact location where the release reached the surface water;
 - viii. the estimated gallons of wastewater discharged to the MS4 or surface water and the method used to estimate the volume;
 - ix. the measures taken to stop the overflow, spill, or release and prevent future overflows, spills, and releases at the same location;
 - x. the date that the event was reported to EPA and MADEP; and
 - xi. the date of the last event that occurred at the same location.
- b. The location of each event included in the summary listing shall also be noted on a map of the City's Collection System.
 - c. A description of the measures and programs implemented by the City to resolve any of the deficiencies identified in the CMOM CAP and to reduce the frequency, duration and volume of overflows, spills, and releases from the City's Collection System during the previous calendar year including copies of any contracts signed by the City to address any issues identified in the CMOM CAP. The report shall also include a description of the activities that the City has implemented to measure the effect and success of its efforts.
 - d. A description of the City's Collection System mapping system (e.g. GIS, paper) and the date maps were last updated.

- e. A copy of the annual Collection System operation and maintenance budgets for the current fiscal year noting the source of the funding – enterprise fund, general tax rate. Specifically indicate whether a capital replacement fund (“sinking fund”) has been established to provide for replacement of aging wastewater Collection System infrastructure.
- f. A description of the specific measures that were taken by the City under the programs designed to reduce the levels of extraneous flows that enter the City’s Collection System during the past calendar year including whether private properties are inspected during the property transfer process to determine whether infiltration/inflow sources are tied into the Collection System.
- g. A description of the City’s easement maintenance program and the number of lost or buried manholes that remain in the Collection System and the specific measures that were taken by the City under these programs during the past calendar year.
- h. A projection of the measures that will be taken during the current calendar year to resolve any deficiencies identified in the CMOM CAP and to comply with this AOC.

MS4

29. By June 1, 2018, the City will adopt a stormwater ordinance in compliance with the current MS4 Permit.

REPORTS ON COMPLIANCE AND COORDINATION PROCEDURES

30. The City shall submit with its annual NPDES report, for review by EPA and MADEP, an annual report of its progress in implementing the provisions of this AOC during the previous calendar year (January 1st through December 31st) ("Reporting Period"). EPA reserves the right to require the City to commence submitting Reports on Compliance more frequently, not to exceed biannual reporting, if deemed necessary.
31. Each annual report shall include, at a minimum:
- a. Description of activities undertaken during the Reporting Period directed at achieving compliance with this AOC;
 - b. Identification of all plans, reports, and other deliverables required by this AOC that have been completed and submitted during the Reporting Period; and
 - c. Description of the expected activities to be taken during the next Reporting Period in order to achieve compliance with this AOC.

NOTIFICATION

32. Starting 30 days after the effective date of this AOC, the technical staff of EPA, MADEP, and the City may participate in, as deemed necessary by any one party, quarterly meetings or conference calls to discuss any issues arising under this AOC and the City's progress in complying with its terms. If such meeting or conference call is scheduled, the City and/or EPA shall provide to EPA and MADEP a written agenda.
33. Where this AOC requires a specific action to be performed within a certain time frame, the City shall submit a written notice of compliance or noncompliance with each deadline.

34. Notification of compliance shall be mailed within fourteen (14) days after each required deadline. The timely submission of a required report shall satisfy the requirement that a notice of compliance be submitted.
35. Notification of noncompliance shall be reported within fourteen (14) days after each required deadline, unless written notice has been submitted pursuant to the Force Majeure Provision of this AOC. If the Force Majeure is approved by EPA, then notification of compliance or noncompliance must be submitted within fourteen (14) days of the revised deadline.
36. If noncompliance is reported pursuant to this section (Notification), the notification shall include the following information:
- a. A description of the noncompliance;
 - b. A description of any actions taken or proposed by the City to comply with the lapsed schedule requirements;
 - c. A description of any factors that tend to explain or mitigate the noncompliance;
and
 - d. An approximate date by which the City will perform the required action.
37. After a notification of noncompliance has been reported pursuant to this section, compliance with the past-due requirement shall be reported by submitting any required documents or providing EPA with a written report indicating that the required action has been achieved.

FORCE MAJEURE PROVISION

38. "Force Majeure," for purposes of this AOC, is defined as any event arising from causes entirely beyond the control of the City or of any entity controlled by the City, including its engineers, consultants, contractors and subcontractors, that delays or prevents the timely

performance of any obligation under this AOC notwithstanding the City's best efforts to fulfill the obligation, as determined by EPA. The requirement that the City exercise "best efforts" includes using best efforts to anticipate any potential Force Majeure event and best efforts to address the effects of any such event (a) as it is occurring and (b) after it has occurred to prevent or minimize any resulting delay to the greatest extent possible. "Force Majeure" does not include the City's financial inability to perform any obligation under this AOC.

39. If any event occurs which may delay or prevent the performance of any obligation under this AOC, whether or not caused by a Force Majeure event, the City shall notify EPA within seventy-two (72) hours after the City first knew or should have known that the event might cause a delay. Within ten (10) working days thereafter, the City shall submit for approval by EPA, a written explanation of the cause(s) of any actual or expected delay or noncompliance, the anticipated duration of any delay, the measure(s) taken and to be taken by the City to prevent or minimize the delay, a proposed schedule for the implementation of such measures, and a statement as to whether, in the opinion of the City, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Notwithstanding the foregoing, the City shall notify EPA and the MADEP orally within twenty-four (24) hours of becoming aware of any event that presents an imminent threat to the public health or welfare or the environment and provide written notice to EPA and the MADEP within seventy-two (72) hours of discovery of such event. The City shall be deemed to know of any circumstances of which the City, any entity controlled by the City, or the City's contractors knew or should have known. Failure to

provide timely and complete notice in accordance with this paragraph shall constitute a waiver of any claim of Force Majeure with respect to the event in question.

40. If EPA, after consultation with the MADEP, agrees that a delay, anticipated delay, or noncompliance is attributable to Force Majeure, the time for performance of the obligations under this AOC that are affected by the Force Majeure event shall be extended by EPA, for a period of time as may be necessary to allow performance of such obligations or will excuse such noncompliance. EPA will notify the City in writing of the length of the extension, if any, for performance of the obligations affected by the Force Majeure event.
41. If EPA, after a reasonable opportunity for review and comment by MADEP, does not agree the delay, anticipated delay, or noncompliance is attributable to Force Majeure, or on the number of days of noncompliance caused by such event, EPA will notify the City in writing of its decision.
42. Delay in performance of any obligation under this AOC shall not automatically justify or excuse delay in complying with any subsequent obligation or requirement of this AOC. Failure of the City to obtain any State or Federal grants or loans shall not be considered a Force Majeure event under this AOC.

SUBMISSION OF NOTICES AND DELIVERABLES

43. Submissions required by this AOC shall be in writing and shall be mailed to the following addresses:

Doug Koopman
U.S. Environmental Protection Agency
Mail Code OES04-3
5 Post Office Square - Suite 100
Boston MA 02109 – 3912

and

Massachusetts Department of Environmental Protection
Northeast Regional Office
205B Lowell Street
Wilmington, Massachusetts 01887
Attn: Kevin Brander

44. Electronic copies of submissions shall be emailed to the following addresses:

koopman.douglas@epa.gov and Kevin.Brander@state.ma.us. Verbal notification shall be to Doug Koopman for EPA at (617) 918-1747 and Kevin Brander for MADEP at 978-694-3236. EPA and MADEP shall notify the City in writing of any changes to the contact persons or addresses.

45. The reporting requirements set forth in this AOC do not relieve the City of its obligation to submit any other reports or information as required by Federal, State or local law or regulation. EPA reserves the right to review and require modifications to the above reporting requirements.

GENERAL PROVISIONS

46. EPA reserves the right to seek any and all remedies available under Section 309 of the CWA, 33 U.S.C. § 1319, for any violation cited in this AOC.

47. The City waives any and all claims for relief and otherwise available rights or remedies to judicial or administrative review which the City may have with respect to any issue of fact or law set forth in this AOC, including, but not limited to, any right of judicial review of this AOC under the Administrative Procedure Act, 5 U.S.C. §§ 701-708.

48. Any material modification to the terms of this AOC shall be by written agreement of EPA and the City. Any nonmaterial modifications to the terms of this AOC, such as approval of modifications to submissions to EPA and MADEP or the due dates of such submissions, shall be effective upon written approval from EPA.

49. This AOC shall become effective upon signature by both parties.

09/29/2017
Date

Susan Studien
Susan Studien, Director
Office of Environmental Stewardship
Environmental Protection Agency, Region 1

Consented to by:

Sept 27, 2017
Date

Mark A. Young
Mark Young, Executive Director
City of Lowell, Massachusetts.