

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO

----- X
UNITED STATES OF AMERICA,

Plaintiff,

v.

Civil No. -----

THE CITY OF CLEVELAND HEIGHTS, OHIO and
THE STATE OF OHIO,

Defendants.

----- X

PARTIAL CONSENT DECREE

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A. Plaintiff United States of America, on behalf of the United States Environmental Protection Agency (“EPA”), has filed a Complaint in this action concurrently with this Partial Consent Decree alleging that Defendant, the City of Cleveland Heights, Ohio (“City” or “Cleveland Heights”), violated Sections 301 and 309 of the Clean Water Act (“CWA” or “Act”), 33 U.S.C. §§ 1311 and 1319, and regulations implementing the Act.

B. Cleveland Heights operates a Sanitary Sewer System that collects raw sewage and conveys it to interceptors tributary to the Easterly Wastewater Treatment Plant, a sewage treatment plant. The interceptors and treatment plant are owned and operated by the Northeast Ohio Regional Sewer District (“NEORS”). Cleveland Heights is a Member Community of NEORS and its residents pay wastewater and stormwater fees to NEORS for NEORS’s operations and its environmental improvement programs. Cleveland Heights also operates a municipal storm sewer system that collects stormwater and conveys it through various outfalls to waters of the United States. The City’s storm sewer system is currently subject to a General Permit under the Ohio Environmental Protection Agency Authorization for Small Municipal Storm Sewer Systems to Discharge Storm Water Under the National Pollutant Discharge Elimination System Permit OHQ00003, Effective September 11, 2014 (“General Permit”). Cleveland Heights’ sewer systems includes separate trench and common trench storm and sanitary sewers. The common trench sewers have three manhole configurations that are “over-under” (or “invert plate”) manholes, “divider wall” manholes, and “common standard” manholes. The common trench sewers were generally designed and constructed to save space and minimize cost of excavation, though they are no longer built. The sanitary and storm sewers in common trench systems, through design and/or deterioration, have multiple points of connection, such that when either the sanitary sewage system or the stormwater system exceed

their capacity, raw sanitary sewage can enter the stormwater system and flow to waters of the United States.

C. During negotiation of this Partial Consent Decree, Cleveland Heights undertook the Fairmount Boulevard Project and the Randolph Avenue Project to begin to address certain active overflows in the Cleveland Heights' system. NEORS D has initiated a Sewer System Evaluation Study of the Cleveland Heights' sewers served by the Heights Hilltop Interceptor ("HHI"). The HHI system was constructed during the period 1994-2005 to convey separate sanitary sewage flows originating in Cleveland Heights and 15 other HHI tributary area communities to the NEORS D Easterly Treatment Plant. The HHI system was designed to convey 5-year, 1-hour design flows from the member communities, and helped reduce basement flooding and Sanitary Sewer Overflows ("SSOs") in the tributary area. Cleveland Heights in 2015 advanced its Integrated Planning Framework initiatives with significant public engagement, confirming stormwater initiatives as a community priority.

D. The Complaint against Cleveland Heights alleges that the City has violated and continues to violate the Act and the implementing regulations by (1) discharging water containing raw sewage from point sources within the Sanitary Sewer System, resulting in SSOs to waters of the United States, waters of the State, and public and private property; and (2) violating its General Permit by discharging untreated sewage through its storm sewers.

E. The State of Ohio ("State" or "Ohio") is joined as a Party under Section 309(e) of the CWA, 33 U.S.C. § 1319(e), which requires the state in which a municipality is located to be joined as a party whenever the municipality is a party to a civil action brought by the United States under Section 309 of the CWA. The Complaint includes the State of Ohio as a defendant, and the Parties anticipate that the State of Ohio will move to realign as a plaintiff shortly after the

filing of the Complaint.

F. Cleveland Heights denies any liability to the United States or the State arising out of the transactions or occurrences alleged in the Complaint.

G. The Parties agree that this Partial Consent Decree is an initial step toward settlement that does not fully resolve any claims Plaintiff has for injunctive relief or civil penalties for the violations alleged in the Complaint. Under this Partial Consent Decree, Cleveland Heights will develop, subject to EPA approval, an Integrated Overflow Control Master Plan with the goal to eliminate SSOs. Cleveland Heights also has or will (1) improve operation and maintenance practices and (2) perform certain early action projects to reduce SSOs. The Parties anticipate negotiating a second consent decree (or modification to this Partial Consent Decree) that will govern the timing and implementation of the Integrated Overflow Control Master Plan. The Parties agree that entry of this Partial Consent Decree supersedes any prospective requirements of the administrative orders EPA issued to Cleveland Heights in 2007 and 2012. The United States reserves its rights, consistent with Paragraphs 79 and 81, to seek civil penalties for the City's failure to fully comply with the administrative orders prior to the entry of this Partial Consent Decree.

H. The Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation among the Parties and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I, and with the consent of the Parties, IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Section 309(b) of the Act, 33 U.S.C. § 1319(b), and over the Parties. Venue is proper in this District pursuant to Section 309(b) of the CWA, 33 U.S.C. § 1319(b), and 28 U.S.C. §§ 1391(b) and 1395(a), because the violations alleged in the Complaint are alleged to have occurred in this judicial district and Cleveland Heights is located in this district. For purposes of this Decree, or any action to enforce this Decree, Cleveland Heights consents to the Court's jurisdiction over this Decree and any such action and over Cleveland Heights and consents to venue in this judicial district.

2. For purposes of this Consent Decree, Cleveland Heights agrees that the Complaint states claims upon which relief may be granted pursuant to Section 309(b) of the CWA, 33 U.S.C. § 1319(b).

II. APPLICABILITY

3. The obligations of this Consent Decree apply to and are binding upon the United States and the State, and upon Cleveland Heights and any successors, assigns, or other entities or persons otherwise bound by law.

4. No transfer of ownership or operation of the Sewer System or any portion of the Sewer System, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Cleveland Heights of its obligation to ensure that the terms of the Decree are implemented, unless (1) the transferee agrees to undertake the obligations required by this

Decree and to be substituted for Cleveland Heights as a Party under the Decree and thus be bound by the terms thereof, and (2) the United States consents to relieve Cleveland Heights of its obligations. The United States' decision to refuse to approve the substitution of the transferee for Cleveland Heights shall not be subject to judicial review. At least 30 Days prior to such transfer, the City shall provide a copy of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer, together with a copy of the proposed written agreement, to the United States. Cleveland Heights shall require, as a condition of any sale or transfer, that the purchaser or transferee agrees in writing to be bound by this Consent Decree and submit to the jurisdiction of the Court for its enforcement. Any attempt to transfer ownership or operation of the Sewer System (or any portion of the Sewer System) without complying with this Paragraph constitutes a violation of this Decree.

5. No later than seven Days after the Date of Lodging, Cleveland Heights shall post a copy of this Consent Decree on its website. Within five Days of that posting, Cleveland Heights shall provide written notice, either by hard copy or by electronic mail, to all elected officials and employees whose duties might reasonably include compliance with any provision of this Consent Decree.

6. Cleveland Heights shall be responsible for ensuring that all employees involved in performing any work pursuant to this Consent Decree perform such work in a manner consistent with the requirements of this Consent Decree. Cleveland Heights shall provide written notice that a copy of this Consent Decree is posted on its website to all successful bidders retained to perform work expressly required by this Consent Decree and shall be responsible for ensuring that any contractors hired to perform work pursuant to this Consent Decree comply with the

terms of this Consent Decree. Cleveland Heights shall condition any such contract upon performance of the work in conformity with the terms of this Consent Decree.

7. In any action to enforce this Consent Decree, Cleveland Heights shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

III. OBJECTIVES

8. The express purpose of the Parties entering into this Consent Decree is for Cleveland Heights to take all necessary measures, consistent with the terms and conditions of this Consent Decree and the objectives of the Act, to achieve full compliance with the CWA, O.R.C. 6111, and all applicable federal and state regulations.

IV. DEFINITIONS

9. Terms used in this Consent Decree that are defined in the Act or in regulations promulgated pursuant to the Act shall have the meanings assigned to them in the Act or such regulations, unless otherwise provided in this Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

a. “Basin” shall mean a portion of the Sanitary Sewer System that is a distinct wastewater collection area as designated by Cleveland Heights.

b. “Building/Private Property Backup” shall mean a wastewater release or backup occurring into a building or private property that is caused by blockages, flow conditions, or malfunctions within the Sanitary Sewer System. Building/Private Property Backup does not include wastewater backups resulting from (i) flow conditions caused by overland flooding or (ii) blockages, flow conditions, or malfunctions of a Private Sewer Service Line.

c. “Calendar Year” shall mean a period starting on January 1 and ending on December 31.

d. “City” or “Cleveland Heights” shall mean the City of Cleveland Heights, Ohio.

e. “CCTV” shall mean closed circuit television.

f. “Complaint” shall mean the complaint filed by the United States in this action.

g. “Cross Connection” shall mean any connection, whether by pipe or any other means, including by the absence of a sufficient barrier, between any part of the Sanitary Sewer System and any part of the Municipal Separate Storm Sewer System that allows flow between the two systems.

h. “Date of Lodging” shall mean the date on which this Decree is lodged with the United States District Court for the Northern District of Ohio.

i. “Day” shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day.

j. “Deliverable” shall mean any written document required to be submitted by Cleveland Heights to EPA under this Consent Decree, other than reports required under Section VII of the Consent Decree.

- k. “EPA” shall mean the United States Environmental Protection Agency and any of its successor departments or agencies.
- l. “Effective Date” shall have the definition provided in Section XV.
- m. “FOG” shall mean fats, oils, and grease.
- n. “FOG Control Device” shall mean any grease trap, FOG interceptor, or other mechanism or device, which attaches to, or is applied to a FOG Generator’s wastewater plumbing fixtures and lines, the purpose of which is to collect, contain, or remove FOG from the waste stream of a FOG Generator prior to discharge into the Sanitary Sewer System.
 - o. “FOG Generator” shall mean any non-residential food service establishment or food preparation or processing establishment that discharges FOG into the Sanitary Sewer System.
 - p. “General Permit” shall mean the Authorization for Small Municipal Storm Sewer Systems to Discharge Storm Water Under the National Pollutant Discharge Elimination System Permit OHQ00003 issued by the State of Ohio on September 11, 2014 covering the Municipal Separate Storm Sewer System and any predecessor state permits for the MS4, and any subsequent general permits issued by the State and applicable to the MS4.
 - q. “Illicit Discharge” shall have the meaning set forth at 40 C.F.R. 122.26(b)(2).
 - r. “Infiltration/Inflow” or “I/I” shall mean the total quantity of water from Infiltration and Inflow without distinguishing the source.
 - s. “Infiltration” shall have the meaning set forth at 40 C.F.R. § 35.2005(b)(20).
 - t. “Inflow” shall have the meaning set forth at 40 C.F.R. § 35.2005(b)(21).

u. “Interest” shall mean interest calculated based on the rate established pursuant to 28 U.S.C. § 1961 as of the date the interest period begins.

v. “Known SSOs” shall mean the list of SSOs currently identified by Cleveland Heights and listed in Appendix C and any other SSO locations discovered by the City after the Date of Lodging.

w. “Month” shall mean one month running from the numbered day to the same numbered day of the following calendar month, regardless of whether the particular month has 28, 29, 30, or 31 days. In the case where a triggered event would occur on a day of the month which does not exist (for example, on February 30), then the event shall be due on the first day of the following month (for example, March 1).

x. “Municipal Separate Storm Sewer System” or “MS4” shall mean Cleveland Heights’ system of municipal conveyances designed to collect, convey, and discharge stormwater to waters of the United States.

y. “NEORS D” shall mean the Northeast Ohio Regional Sewer District.

z. “NEORS D System” shall mean the wastewater collection and transmission system owned and/or operated by NEORS D and designed to collect and convey municipal sewage (domestic, commercial, and industrial) to NEORS D’s wastewater treatment plants.

aa. “Ohio EPA” or “OEPA” shall mean the Ohio Environmental Protection Agency and any successor departments or agencies of the State of Ohio.

bb. “Over-under Sewers” shall mean a separate sewer system in which the sanitary and storm sewers are installed in a common trench, one above the other; share common manholes; and are separated by a removable plate that is intended to allow access to the lower sewer.

cc. “Paragraph” shall mean a portion of this Decree identified by an arabic numeral.

dd. “Partial Consent Decree,” “Consent Decree,” or “Decree” shall mean this Decree and all appendices attached hereto (listed in Section XXII).

ee. “Parties” shall mean the United States, the State, and the City of Cleveland Heights.

ff. Plaintiff shall mean the United States.

gg. “Private Sewer Service Line” shall mean a portion of a sewer system, not owned by Cleveland Heights, used to convey wastewater from a property parcel or a building to the Sanitary Sewer System.

hh. “Recreation Season” shall mean the period between May 1 and October 31 in a given calendar year.

ii. “Sanitary Sewer Overflow” or “SSO” shall mean any discharge, overflow, spill, diversion, or release of wastewater, regardless of volume, from, or caused by, conditions in the Sanitary Sewer System and shall include:

- (1) discharges to waters of the United States or waters of the State from the Sanitary Sewer System;
- (2) any release of wastewater from the Sanitary Sewer System to public or private property that does not reach waters of the United

States or waters of the State, including Building/Private Property Backups; and

- (3) any release of wastewater from the Sanitary Sewer System that enters the Municipal Separate Storm Sewer System.

jj. “Sanitary Sewer System” shall mean the portion of the sewer system owned and/or operated by the City that is designed to convey sewage from residences, commercial buildings, industrial plants, and institutions to the NEORS D System.

kk. “Second Consent Decree” shall mean the consent decree envisioned by the Parties that, if successfully negotiated and agreed by the Parties and approved by the Court, will govern the timing and implementation of the approved Integrated Overflow Control Master Plan. The Second Consent Decree may consist of a modification to this Partial Consent Decree, if the Parties deem a modification to be the appropriate document.

ll. “Section” shall mean a portion of this Decree identified by a roman numeral.

mm. “Sewer Segment” shall mean the continuous run of gravity sewer line pipe extending from one manhole to the next manhole.

nn. “Sewer System” shall mean the sewer system owned and/or operated by Cleveland Heights that is designed to convey sewage and stormwater, including both the Sanitary Sewer System and the Municipal Separate Storm Sewer System.

oo. “State” shall mean the State of Ohio.

pp. “Sub-catchment” shall mean the geographical area served by and drained to a distinct portion of the Municipal Separate Storm Sewer System.

qq. “Subparagraph” shall mean a portion of a Paragraph identified by a

lowercase letter.

rr. “Subsection” shall mean a portion of a Section identified by an uppercase letter.

ss. “Tethered Block Monitoring” shall mean a low-technology method of detecting sewer overflow activation in which a tethered wooden block is used to detect overflow activity. The block is placed so as to be disturbed by any overflow and the overflow point is visually inspected after storm events.

tt. “United States” shall mean the United States of America, acting on behalf of EPA.

uu. “Waters of the State” shall have the meaning set forth at ORC 6111.01(H).

vv. “Website” shall mean a website and/or webpage dedicated to posting materials related to this Consent Decree and linked to the official website for the City of Cleveland Heights. The url for the Website shall begin www.clevelandheights.com.

ww. “Year” shall mean a period running from a given date to the same date the following year (*e.g.*, from January 18, 2018 to January 18, 2019).

V. COMPLIANCE REQUIREMENTS

10. Permit Compliance. Cleveland Heights shall comply at all times with its General Permit.

11. Sanitary Sewer Overflows. Sanitary Sewer Overflows are prohibited under the Act, and shall constitute violations of this Consent Decree. To the extent that sanitary sewage is discharged to waters of the United States through Cleveland Heights' Municipal Separate Storm Sewer System, such discharges are also violations of Cleveland Heights' General Permit.

12. Schedule. Subject to the provisions of this Consent Decree, all actions required under this Section V of this Consent Decree shall be completed as expeditiously as practicable and no later than June 30, 2021, except those ongoing actions required under the Capacity, Management, Operation, and Maintenance Program approved pursuant to Paragraph 21 and Appendix B.

13. Permits. Where any compliance obligation under this Section requires Cleveland Heights to obtain a federal, state, or local permit or approval, Cleveland Heights shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. Cleveland Heights may only seek relief under the provisions of Section IX (Force Majeure) for any delay in the performance of any such obligation resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation, if Cleveland Heights has submitted timely and complete applications and has taken all other actions necessary to obtain all such permits or approvals.

A. Early Action Projects

14. Cleveland Heights has worked with EPA, OEPA, and NEORSO to identify projects that can be done before completion of the Sewer System Evaluation Survey and that will reduce future SSOs. The early action projects listed below will be part of the overall remedy set forth in the Integrated Overflow Control Master Plan.

15. Fairmount Boulevard. Cleveland Heights and NEORSO have completed a project that adds approximately 2,500 feet of relief sewer and rehabilitates approximately 2,500 feet of existing sewer along a portion of Fairmount Boulevard (generally between Wellington Road and Idlewood Road). This project is expected to greatly reduce SSOs in that area of Cleveland Heights. Upon becoming owner or operator of the Fairmount relief sewer, Cleveland Heights shall operate the Fairmount relief sewer as part of the Sanitary Sewer System consistent with the objectives of this Consent Decree, including, but not limited to, addressing SSOs from the Sanitary Sewer System.

16. Randolph Road. Cleveland Heights has completed a project that rehabilitates approximately 2,300 feet of existing sewer in the area near Randolph Road. This project is expected to reduce SSOs in that area of Cleveland Heights.

B. Sewer System Evaluation Survey

17. Cleveland Heights shall perform a Sewer System Evaluation Survey (“SSES”) that satisfies the requirements of Section II of Appendix A. The SSES shall be completed in two phases. By December 4, 2017, Cleveland Heights shall submit for EPA review and approval a SSES Work Plan that describes how the SSES work will be conducted. Phase 1 of the SSES shall include at least 50% of the Sanitary Sewer System, including all Known SSOs, areas for which available information indicates significant capacity limitations may exist, all areas necessary for

developing the Integrated Overflow Control Master Plan, and shall satisfy the requirements of Paragraph 5 of Appendix A. In no event shall the development of the Integrated Overflow Control Master Plan or the work to be performed under the plan be delayed because of the timing of the SSES work.

18. By November 1, 2019, Cleveland Heights shall complete the Phase 1 SSES. By February 3, 2020, Cleveland Heights shall submit a Phase 1 SSES Report to EPA. The Phase 1 SSES Report shall describe how Cleveland Heights performed the SSES, including how the City complied with the SSES requirements of Appendix A, and describe the findings of the Phase 1 SSES.

19. By June 30, 2021, Cleveland Heights shall complete the Phase 2 SSES, covering the remainder of the Sanitary Sewer System not studied in Phase 1. By September 30, 2021, Cleveland Heights shall submit a Phase 2 SSES Report to EPA. The Phase 2 SSES Report shall describe how Cleveland Heights performed the SSES, including how the City complied with the SSES requirements of Appendix A, and describe the findings of the Phase 2 SSES.

C. Capacity, Management, Operation, And Maintenance

20. Cleveland Heights shall implement the Interim Management, Operation, and Maintenance requirements set forth in Paragraph 4 of Appendix B in accordance with the deadlines set forth in that paragraph.

21. By December 1, 2017, Cleveland Heights shall submit for EPA review and approval a written Capacity, Management, Operation, and Maintenance Program (“CMOM Program”) that satisfies the requirements of Appendix B.

22. Cleveland Heights shall implement the CMOM Program upon approval of the program by EPA, unless otherwise directed by EPA.

D. Monitoring

23. Cleveland Heights shall carry out monitoring of rainfall, SSO activation, and flow within the Sewer System so as to (a) characterize ongoing SSO activity, and (b) support the development of the System Model, the Capacity Assessment Report, and the Integrated Overflow Control Master Plan.

24. Cleveland Heights has submitted a Real Time Monitoring Plan, dated May 30, 2017 and approved by EPA, that is intended to satisfy the requirements of Section III of Appendix A. The Real Time Monitoring Plan shall provide information on ongoing SSO activity until completion of all tasks required by the approved Integrated Overflow Control Master Plan. Cleveland Heights has commenced implementation of the approved Real Time Monitoring Plan. The Parties agree that the Real Time Monitoring Plan may be modified by Cleveland Heights, subject to EPA approval, and any such modification will not constitute a material modification under this Consent Decree.

25. By March 2, 2018, Cleveland Heights shall submit for EPA review and approval a System Characterization Monitoring Plan that satisfies the requirements of Section III of Appendix A. The System Characterization Monitoring Plan shall support development of the SSES, System Model, and the Integrated Overflow Control Master Plan. Cleveland Heights shall implement the System Characterization Monitoring Plan upon approval of the plan by EPA, unless otherwise directed by EPA.

E. System Modeling And Capacity Assessment

26. System Modeling Plan. By March 30, 2018, Cleveland Heights shall develop and submit to EPA a System Modeling Plan that describes how Cleveland Heights will model its Sanitary Sewer System to (a) satisfy the requirements of this Subsection E and Section IV of Appendix A and (b) adequately support the development of the Capacity Assessment Report and the Integrated Overflow Control Master Plan. The System Modeling Plan shall include:

- a. a description of the model software to be used;
- b. a description of the model scope and model configuration process to be used;
- c. identification of input parameters, constraints, assumed values, and outputs;
- d. a description of the calibration/validation process to be used and the criteria to be used to judge calibration.

27. System Model. By April 1, 2019, Cleveland Heights shall develop a System Model of its Sanitary Sewer System that satisfies the requirements of this Subsection E and Section IV of Appendix A. The System Model shall establish the relationship between rainfall and the wet-weather flow rate in the Sanitary Sewer System, and, applying that relationship, shall identify those elements of the Sanitary Sewer System that are predicted to experience surcharging or SSOs during the various rainfall events identified in Appendix A. The System Model shall also be used in the development and implementation of operation and maintenance procedures and to establish priorities for, and evaluate the impacts of, proposed system modifications and upgrades.

28. Capacity Assessment Report. By March 2, 2020, Cleveland Heights shall develop and submit to EPA a Capacity Assessment Report of the results of the modeling of the Sanitary Sewer System. Specifically, this Capacity Assessment Report shall document how Cleveland Heights addressed the requirements of this Section, including the modeling process, the flow monitoring program, model calibration/verification, and identification of those elements of the Sanitary Sewer System predicted to experience surcharge or overflow during the modeled wet-weather events. The Capacity Assessment Report shall, at a minimum, characterize Sanitary Sewer System performance by identifying, for each condition considered, each Sewer Segment operating in surcharged condition, each manhole or structure at which an SSO might be expected to occur, and whether the capacity of the Sanitary Sewer System is exceeded.

29. The Capacity Assessment Report shall also:
- a. describe the System Model, including the brand of model software and its capabilities;
 - b. discuss any deviations from the planned model development as set forth in the System Modeling Plan;
 - c. describe the rainfall, SSO, and system flow monitoring performed, the results of the monitoring, any deviations from the planned monitoring, and any issues of data quality;
 - d. provide a demonstration that sufficient data was collected from a sufficient number of events and a sufficient number of large events to support adequate model calibration/verification;
 - e. describe the flow monitoring results and calculated I/I rates;
 - f. identify areas targeted for additional investigation and the results of those

investigations;

- g. provide digitized legible map(s) and schematics that identify and characterize the portions of the Sanitary Sewer System included in the model;
- h. identify input parameters, constraints, assumed values, and outputs;
- i. include a detailed description of activities undertaken to configure, calibrate, and verify the model, including graphical and tabular summaries of calibration and validation results compared to calibration criteria; and
- j. include a discussion of the results of the model, including
 - (1) legible map(s) depicting the locations where surcharging and overflows are expected to occur during current peak dry-weather flows, anticipated future dry-weather flows, and the storms specified in Appendix A; and
 - (2) tabular and graphical depictions of SSO locations and volumes.

F. Integrated Overflow Control Master Plan

30. By June 1, 2021 Cleveland Heights shall submit an Integrated Overflow Control Master Plan (“Master Plan”) for EPA review and approval.

31. The Master Plan shall:

- a. Incorporate the results of the SSES, Capacity Assessment Report, Real Time Monitoring Plan, and System Characterization Monitoring Plan described above and in Appendix A;
- b. Use a first-stage screening process to identify technically practical controls to meet the requirements of the Consent Decree;
- c. Identify the sizes of such practical controls required to provide adequate

capacity in each of the storm events included in Section V of Appendix A;

d. Provide estimates of the (1) capital, operation and maintenance, and present-value costs and (2) time required for design, construction, and implementation for each identified remedial measure identified as technically practical after the first-stage screening process. Such costs shall be provided for each technically practical control measure as sized for each of the storm events included in Section V of Appendix A. The estimated costs shall be provided in consistent, year-specific dollars;

e. Identify the specific remedial measures the City will undertake that will (1) result in the elimination of SSOs; (2) ensure that there is adequate capacity in the Sanitary Sewer System to collect and convey anticipated peak flows under current and projected future conditions; and (3) result in the elimination of Illicit Discharges, Cross Connections, and non-stormwater discharges into the MS4;

f. Identify a proposed implementation schedule for the selected remedial measures that includes dates for the notice to proceed, beginning of construction, completion of construction, and placement in operation; and

g. Identify a plan for monitoring and modeling to evaluate the success of the remedial measures.

32. Remedial measures proposed by Cleveland Heights in its Master Plan to address capacity limitations may include but are not limited to:

a. removing I/I sources, including footing drains and other sources of private I/I, and/or through the use of innovative approaches such as green infrastructure;

b. removing Cross Connections between the Sanitary Sewer System and the MS4;

- c. increasing the capacity of gravity sewer lines;
- d. constructing storage or equalization basin facilities; and
- e. hiring additional personnel or purchasing additional equipment.

33. The remedial measures in the Master Plan shall achieve the goal of ensuring adequate capacity in the Sanitary Sewer System and eliminating SSOs as expeditiously as practicable.

34. In proposing the timing and order of remedial measures, Cleveland Heights shall set priorities based upon potential for harm to human health or the environment, frequency and volume of SSOs, the location of SSOs in low-income census tract areas, and technical engineering judgment.

VI. REVIEW, APPROVAL, AND IMPLEMENTATION OF DELIVERABLES

35. EPA Action on Deliverables Requiring Approval. After review of any Deliverable that is required to be approved pursuant to this Consent Decree, EPA, after consultation with OEPA, shall in writing:

- a. approve the submission;
- b. approve the submission upon specified conditions;
- c. approve part of the submission and disapprove the remainder; or
- d. disapprove the submission.

36. Approved Deliverables. If a Deliverable is approved by EPA pursuant to Subparagraph 35.a, Cleveland Heights shall take all actions required by the Deliverable in accordance with the schedules and requirements of the Deliverable as approved. If the Deliverable is conditionally approved or approved only in part pursuant to Subparagraph 35.b or 35.c, Cleveland Heights shall, upon written direction from EPA, take all actions required by the

approved Deliverable that EPA determines are technically severable from any disapproved portions. Following EPA approval of any submission or portion thereof, such Deliverable or portion thereof so approved shall be incorporated into and become enforceable under this Consent Decree. Implementation of any non-deficient portion of a Deliverable shall not relieve Cleveland Heights of any liability for stipulated penalties for any deficient portion of the Deliverable.

37. Disapproved Deliverables. If the Deliverable is disapproved in whole or in part pursuant to Subparagraph 35.c or 35.d, Cleveland Heights shall, within 30 Days or such other time as EPA and Cleveland Heights agree to in writing, correct all deficiencies and resubmit to EPA the Deliverable, or disapproved portion thereof, for approval. If the resubmission is approved in whole or in part, Cleveland Heights shall proceed in accordance with Paragraph 36.

38. Resubmitted Deliverables. If a resubmitted Deliverable, or portion thereof, is disapproved in whole or in part, EPA may again require Cleveland Heights to correct any deficiencies, in accordance with Paragraph 37. EPA also retains the right to modify or develop any disapproved portion of the resubmitted Deliverable. Upon EPA's correction of any such deficiencies, the resubmitted Deliverable, or portion thereof, shall be incorporated into and become enforceable under this Consent Decree and Cleveland Heights shall take all actions to immediately implement the EPA-corrected Deliverable in accordance with the schedules and/or terms of the Deliverable as approved, subject to Cleveland Heights' right to invoke Dispute Resolution under Section X (Dispute Resolution) of this Consent Decree and the right of EPA to seek stipulated penalties as set forth in Paragraph 39.

39. Accrual of Stipulated Penalties. Any stipulated penalties applicable to the untimely submission of the original Deliverable, as provided in Section VIII (Stipulated

Penalties) of this Consent Decree, shall accrue during the 30-Day period or other specified period, but shall not be payable unless the resubmitted Deliverable is untimely or is disapproved in whole or in part; provided that, if the original Deliverable was so deficient as to constitute a material breach of Cleveland Heights' obligations under this Consent Decree, the stipulated penalties applicable to the original Deliverable shall be due and payable notwithstanding any subsequent resubmission.

40. Certification. In all submissions, notices, documents, or reports required to be submitted to the United States (including EPA) or the State pursuant to this Consent Decree, Cleveland Heights shall, pursuant to 40 C.F.R. § 122.22, sign and certify such submission, notices, documents, and reports as follows:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

41. Admissibility in Other Proceedings. Any information submitted by Cleveland Heights pursuant to this Consent Decree may be used by the United States or Ohio in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law. Cleveland Heights shall not object to the accuracy, authenticity, and/or admissibility into evidence of any submission in any proceeding to enforce this Consent Decree. Cleveland Heights reserves all rights and defenses in all other proceedings.

42. Copy to OEPA. The City shall provide a copy of each document to OEPA at the same time such document is provided to EPA.

VII. REPORTING REQUIREMENTS

43. Annual Reports. By March 31 of each year after the Effective Date, until termination of this Decree pursuant to Section XVIII, Cleveland Heights shall submit electronically to EPA and OEPA an Annual Report for the preceding Calendar Year that contains all information necessary to determine Cleveland Heights' compliance with the requirements of this Consent Decree. The Annual Reports shall each include, at a minimum and in addition to any Annual Report requirement set forth elsewhere in this Consent Decree, information on the following topics:

a. a description of the projects and activities conducted during the reporting period to comply with the requirements of this Decree, a projection of work to be performed pursuant to this Consent Decree during the next reporting period, and notice of any anticipated failures to meet future requirements of the Consent Decree or approved plans;

b. a trends analysis of the number, volume, duration, and causes of the City's SSOs for a rolling 24-Month period updated to reflect the SSOs that occurred during the reporting period, including identification of any newly identified and/or previously unknown SSOs and Cross Connections discovered during the reporting period;

c. a compilation of the information about each SSO during the applicable reporting period, as required by the Monthly SSO Reports described in Paragraph 44.c, along with identification of any cause or condition that contributed to each SSO and all remedial actions taken to mitigate the effects of each SSO or prevent SSO recurrence;

d. information that Cleveland Heights obtained or received (*e.g.*, customer complaints) regarding discharges from private laterals, including any information received specifying the location of the discharge, and a description of the circumstances of the discharge;

and

e. a description of any non-compliance with the requirements of this Consent Decree and an explanation of each violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, Cleveland Heights shall so state in the report. Cleveland Heights shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of the cause of the violation, within 30 Days of the Day Cleveland Heights becomes aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Cleveland Heights of its obligation to provide the notice required by Section IX of this Consent Decree (Force Majeure).

44. Public Website. Within one Month of the Date of Lodging, Cleveland Heights shall have an operable, discoverable Website dedicated to posting Consent Decree Deliverables. EPA shall have an opportunity to review and comment on the structure and content of the Website before it becomes discoverable to the general public. Cleveland Heights shall announce the availability of the Website by a press release, and the City's official homepage, www.clevelandheights.com, shall include a link to the Website. Cleveland Heights shall describe the purpose of each type of document posted and shall include the following language: "[Name of document] has been posted in accordance with the Consent Decree in United States v. City of Cleveland Heights. [Name of document] may not have been reviewed or verified by EPA prior to posting. If you have any questions about the information in the [name of document], how it was collected, or what it means, please contact Cleveland Heights Utilities Commissioner at 216-291-5995. Each posted document shall remain posted for at least five years. All posted documents

shall be readily accessible, searchable, clearly labeled, and clearly presented to the public. The Website shall include the following:

- a. Partial Consent Decree. Cleveland Heights shall post on the Website an electronic copy of the entered Partial Consent Decree.
- b. Consent Decree Submissions. Cleveland Heights shall post to the Website all final EPA-reviewed and/or -approved plans, reports, or other submissions required by Sections V (Compliance Requirements) and VII (Reporting Requirements). Documents requiring EPA approval shall be posted within seven days of approval. All other documents shall be posted within 30 days of submissions to EPA.
- c. Monthly SSO Reports. Beginning with the first full month after the Date of Lodging, Cleveland Heights shall compile and post on the Website monthly SSO Reports. These reports shall provide information on the occurrence of SSOs and the impacts of SSOs on receiving waters in the Cleveland Heights service area. The area of impact shall be displayed on a map, which shall include: SSO identification and location; activation time, duration, and estimated volume; and name of the waterbody and public areas potentially affected. Cleveland Heights shall also offer an email alert to the general public of availability of the reports. The SSO Reports shall also be sent to EPA and OEPA. EPA shall have an opportunity to review and comment on the intended format of the SSO Reports before the initial report is posted.
- d. Other Public Presentations and Education Materials. Cleveland Heights shall post to its Website materials used in presentations to the public related to the work under this Partial Consent Decree and other relevant educational materials identified by the City, OEPA, or EPA.

45. Public Signage. Cleveland Heights shall erect signage to inform the public that a rain related sewer overflow may occur that may impact the water body. Signage will be placed at locations to be determined pursuant to the CMOM. Upon agreement of the Parties, future signage will be added or deleted to conform to the SSOs and outfalls reported to EPA and OEPA. Signage will clearly warn the public that the location is an overflow that may contain sanitary sewage; inform the public that contact with sewage poses a potential health risk; and identify a contact point within the City for further questions.

46. Except as otherwise provided in the Sewer Overflow Response Plan required by Appendix B, whenever any violation of this Consent Decree or any other event affecting the Sewer System may pose an immediate threat to the public health or welfare or the environment, Cleveland Heights shall notify EPA and OEPA orally or by email as soon as possible, but no later than 24 hours after Cleveland Heights first knew of the violation or condition. This procedure is in addition to the requirements set forth in in this Section.

47. Each report submitted by Cleveland Heights under this Section shall be signed by an official of Cleveland Heights and include the certification set forth in Paragraph 40. This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

48. The reporting requirements of this Consent Decree do not relieve Cleveland Heights of any reporting obligations required by the Act or implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement.

VIII. STIPULATED PENALTIES

49. Cleveland Heights shall be liable for stipulated penalties to the United States for violations of this Consent Decree as specified below, unless excused under Section IX (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Decree, including any work plan or schedule approved under this Decree, according to all applicable requirements of this Decree and within the specified time schedules established by or approved under this Decree.

50. Upon the Effective Date of this Consent Decree, the stipulated penalty provisions of this Decree shall be retroactively enforceable with regard to any and all violations of this Decree that occurred between the Date of Lodging and the Effective Date of the Decree, provided that stipulated penalties that may have accrued before the Effective Date may not be collected unless and until this Decree is entered by the Court.

51. Failure to Submit Timely or Complete Deliverables. The following stipulated penalties shall accrue per violation per Day for any failure to submit a timely or complete Deliverable, and any failure to make any required material changes to such document within the required time:

Period of Noncompliance:	Penalty Per Document Per Day:
1 to 30 Days	\$1,000
31 to 60 Days	\$2,000
More than 60 Days	\$3,000

52. Failure to Comply with Reporting Requirements. The following stipulated penalties shall accrue per violation per Day for any failure to submit a timely or complete report under Section VII (Reporting Requirements):

Period of Noncompliance:	Penalty Per Report Per Day:
1 to 30 Days	\$750
31 to 60 Days	\$1,500
More than 60 Days	\$2,000

53. All Other Violations of the Consent Decree. For any violation of the Consent Decree where the stipulated penalty is not otherwise specified, a stipulated penalty of \$750 per Day per violation shall accrue.

54. Stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

55. Cleveland Heights shall pay any stipulated penalty within 30 Days of receiving the United States' written demand.

56. The United States may, in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due it under this Consent Decree.

57. Stipulated penalties shall continue to accrue as provided in Paragraph 54, during any Dispute Resolution, but need not be paid until the following:

a. If the dispute is resolved by agreement or by a decision of EPA that is not appealed to the Court, Cleveland Heights shall pay accrued penalties determined to be owing,

together with Interest, to the United States within 30 Days of the effective date of the agreement or the receipt of EPA's decision or order.

b. If the dispute is appealed to the Court and the United States prevails in whole or in part, Cleveland Heights shall pay all accrued penalties determined by the Court to be owing, together with Interest, within 60 Days of receiving the Court's decision or order, except as provided in Subparagraph c, below.

c. If any Party appeals the District Court's decision, Cleveland Heights shall pay all accrued penalties determined to be owing, together with Interest, within 15 Days of receiving the final appellate court decision.

58. Cleveland Heights shall pay stipulated penalties owing to the United States by FedWire Electronic Funds Transfer ("EFT") to the U.S. Department of Justice account, in accordance with instructions provided to Cleveland Heights by the Financial Litigation Unit ("FLU") of the United States Attorney's Office for the Northern District of Ohio after the Effective Date. The payment instructions provided by the FLU will include a Consolidated Debt Collection System ("CDCS") number, which Cleveland Heights shall use to identify all payments required to be made in accordance with this Consent Decree. At the time of payment, Cleveland Heights shall send notice that payment has been made to: (i) EPA via email at cinwd_acctsreceivable@epa.gov or via regular mail at EPA Cincinnati Finance Office, 26 W. Martin Luther King Drive, Cincinnati, Ohio 45268 and (ii) the United States, EPA, the State of Ohio, and OEPA via email or regular mail in accordance with Section XIV. Such notice shall state that the payment is for stipulated penalties owed pursuant to the Consent Decree in *United States v. City of Cleveland Heights* and shall reference the civil action number, CDCS Number, and DOJ case number 90-5-1-1-10457.

59. If Cleveland Heights fails to pay stipulated penalties according to the terms of this Consent Decree, Cleveland Heights shall be liable for Interest on such penalties, as provided for in 28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Paragraph shall be construed to limit the United States from seeking any remedy otherwise provided by law for Cleveland Heights' failure to pay any stipulated penalties.

60. Subject to the provisions of Section XII (Effect of Settlement/Reservation of Rights), the stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States (including, but not limited to, statutory penalties, additional injunctive relief, mitigation or offset measures, and/or contempt) for Cleveland Heights' violation of this Consent Decree or applicable law. Where a violation of this Consent Decree is also a violation of the Act and/or O.R.C. 6111, Cleveland Heights shall be allowed a credit, for any stipulated penalties paid, against any statutory penalties imposed for such violation.

IX. FORCE MAJEURE

61. "Force majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of Cleveland Heights, of any entity controlled by Cleveland Heights, or of Cleveland Heights' contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Cleveland Heights' best efforts to fulfill the obligation. The requirement that Cleveland Heights exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any potential force majeure event (a) as it is occurring and (b) following the potential force majeure, such that the delay and any adverse effects of the delay are

minimized. “Force Majeure” does not include Cleveland Heights’ financial inability to perform any obligation under this Consent Decree.

62. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, whether or not caused by a force majeure event, Cleveland Heights shall provide notice orally or by electronic or facsimile transmission to EPA and OEPA, within 72 hours of when Cleveland Heights first knew that the event might cause a delay. Within 14 Days thereafter, Cleveland Heights shall provide in writing to EPA and OEPA an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Cleveland Heights’ rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and a statement as to whether, in the opinion of Cleveland Heights, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Cleveland Heights shall include with any notice all available documentation supporting the claim that the delay was attributable to a force majeure. Failure to comply with the above requirements shall preclude Cleveland Heights from asserting any claim of force majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Cleveland Heights shall be deemed to know of any circumstance of which Cleveland Heights, any entity controlled by Cleveland Heights, or the City’s contractors knew or should have known.

63. If EPA, after a reasonable opportunity for review and comment by OEPA, agrees that the delay or anticipated delay is attributable to a force majeure event, the time for performance of the obligations under this Consent Decree that are affected by the force majeure

event will be extended by EPA, after a reasonable opportunity for review and comment by OEPA, for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify Cleveland Heights in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

64. If EPA, after a reasonable opportunity for review and comment by OEPA, does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Cleveland Heights in writing of its decision.

65. If Cleveland Heights elects to invoke the dispute resolution procedures set forth in Section X (Dispute Resolution), it shall do so no later than 30 days after receipt of EPA's notice. In any such proceeding, Cleveland Heights shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Cleveland Heights complied with the requirements of Paragraphs 61 and 62. If Cleveland Heights carries this burden, the delay at issue shall be deemed not to be a violation by Cleveland Heights of the affected obligation of this Consent Decree identified to EPA and the Court.

X. DISPUTE RESOLUTION

66. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. Cleveland Heights' failure to seek resolution of a

dispute under this Section shall preclude Cleveland Heights from raising any such issue as a defense to an action by the United States to enforce any obligation of Cleveland Heights arising under this Decree.

67. Informal Dispute Resolution. Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Cleveland Heights sends the United States a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed 30 Days from the date the dispute arises, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States shall be considered binding unless, within 21 Days after the conclusion of the informal negotiation period, Cleveland Heights invokes formal dispute resolution procedures as set forth below.

68. Formal Dispute Resolution. Cleveland Heights shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Cleveland Heights' position and any supporting documentation relied upon by Cleveland Heights.

69. The United States shall serve its Statement of Position within 45 Days of receipt of Cleveland Heights' Statement of Position. The United States' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States'

Statement of Position shall be binding on Cleveland Heights, unless Cleveland Heights files a motion for judicial review of the dispute in accordance with the next Paragraph.

70. Judicial Review. Cleveland Heights may seek judicial review of the dispute by filing with the Court and serving on the United States, in accordance with Section XIV (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within 21 Days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Cleveland Heights' position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree. The United States shall respond to Cleveland Heights' motion within the time period allowed by the Local Rules of this Court. Cleveland Heights may file a reply memorandum, to the extent permitted by the Local Rules.

71. Standard of Review

a. Disputes Concerning Matters Accorded Record Review. Except as otherwise provided in this Consent Decree, in any dispute brought under Paragraph 68 pertaining to the adequacy or appropriateness of plans, procedures to implement plans, schedules or any other items requiring approval by EPA under this Consent Decree; the adequacy of the performance of work undertaken pursuant to this Consent Decree; and all other disputes that are accorded review on the administrative record under applicable principles of administrative law, Cleveland Heights shall have the burden of demonstrating, based on the administrative record, that the position of the United States is arbitrary and capricious or otherwise not in accordance with law.

b. Other Disputes. Except as otherwise provided in this Consent Decree, in

any other dispute brought under Paragraph 68, Cleveland Heights shall bear the burden of demonstrating that its position complies with this Consent Decree and better furthers the objectives of the Consent Decree.

72. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Cleveland Heights under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 57. If Cleveland Heights does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section VIII (Stipulated Penalties).

XI. INFORMATION COLLECTION AND RETENTION

73. The United States, the State, and their representatives, including attorneys, contractors, and consultants, shall have the right of entry into the Sewer System or any facility covered by this Consent Decree at all reasonable times, upon presentation of credentials, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States or the State in accordance with the terms of this Consent Decree;
- c. obtain samples and, upon request, splits of any samples taken by Cleveland Heights or its representatives, contractors, or consultants;
- d. obtain documentary evidence, including photographs and similar data; and
- e. assess Cleveland Heights' compliance with this Consent Decree.

74. Upon request, Cleveland Heights shall provide EPA and the State or their authorized representatives splits of any samples taken by Cleveland Heights. Upon request, EPA and the State shall provide Cleveland Heights splits of any samples taken by EPA or the State.

75. Until five Years after the termination of this Consent Decree, Cleveland Heights shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate in any manner to Cleveland Heights' performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States or the State, Cleveland Heights shall provide copies of any documents, records, or other information required to be maintained under this Paragraph.

76. At the conclusion of the information-retention period provided in the preceding Paragraph, Cleveland Heights shall notify the United States and the State at least 90 Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States or the State, Cleveland Heights shall deliver any such documents, records, or other information to EPA or the State. Cleveland Heights may assert that certain documents, records, or other information is privileged under the attorney-client privilege or any other privilege recognized by federal law. If Cleveland Heights asserts such a privilege, it shall provide the following: (a) the title of the document, record, or information; (b) the date of the document, record, or information; (c) the name and title of each author of the document, record, or information; (d) the name and title of each addressee and

recipient; (e) a description of the subject of the document, record, or information; and (f) the privilege asserted by Cleveland Heights. However, no documents, records, or other information required to be created or generated pursuant to this Consent Decree shall be withheld on grounds of privilege.

77. Cleveland Heights may also assert that information required to be provided under this Section is protected as Confidential Business Information (“CBI”) under 40 C.F.R. Part 2. As to any information that Cleveland Heights seeks to protect as CBI, Cleveland Heights shall follow the procedures set forth in 40 C.F.R. Part 2. If no claim of confidentiality accompanies documents or information when they are submitted to EPA, then the public may be given access to such documents or information without further notice in accordance with 40 C.F.R. Part 2, Subpart B. No documents, records, or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of confidentiality.

78. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States or the State pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Cleveland Heights to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XII. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

79. This Consent Decree is a partial remedy for the civil claims of the United States for the violations alleged in the Complaint filed in this action. Therefore, this Consent Decree does not resolve these civil claims and is without prejudice to the United States’ right to seek further relief to address these claims or any future claims, including, but not limited to, further injunctive relief, and civil penalties, and the right of the United States to seek further

administrative relief to address these claims. Except as expressly provided in this Consent Decree, the State of Ohio and Cleveland Heights reserve all rights and defenses. It is the present intention of the Parties to seek to negotiate the Second Consent Decree to fully resolve the civil claims of the United States for the violations alleged in the Complaint and any additional Clean Water Act violations. However, the Parties recognize that such negotiations may not result in such a resolution and that the United States reserves the right to take such actions as it deems appropriate and necessary to resolve these claims and any future claims.

80. The United States and the State reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree. This Consent Decree shall not be construed to limit the rights of the United States or the State to obtain penalties or injunctive relief under the Act or implementing regulations, or under other federal or state laws, regulations, or permit conditions. The United States and the State further reserve all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, the Sewer System, whether related to the violations addressed in this Consent Decree or otherwise.

81. In any subsequent administrative or judicial proceeding initiated by the United States or the State for injunctive relief, civil penalties, or other appropriate relief relating to the Sewer System, Cleveland Heights shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States or the State in the subsequent proceeding were or should have been brought in the instant case. In addition, in this and any subsequent administrative or judicial proceeding initiated by the United States for injunctive relief, civil penalties, or other appropriate relief

relating to the Cleveland Heights' compliance with the Clean Water Act, Cleveland Heights shall not assert, and may not maintain, any defense or claim based upon any defense of laches, estoppel, or waiver, or other similar equitable defense based on the running of any statute of limitations or the passage of time during the period commencing on February 1, 2015.

82. This Consent Decree is not a permit, or a modification of any permit, under any federal, State, or local laws or regulations. Cleveland Heights is responsible for achieving and maintaining complete compliance with all applicable federal, State, and local laws, regulations, and permits; and Cleveland Heights' compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States and the State do not, by their consent to the entry of this Consent Decree, warrant or aver in any manner that Cleveland Heights' compliance with any aspect of this Consent Decree will result in compliance with provisions of the Act, O.R.C. 6111, or with any other provisions of federal, State, or local laws, regulations, or permits.

83. This Consent Decree does not limit or affect the rights of Cleveland Heights, the United States, or the State against any third parties, not party to this Consent Decree, nor does it limit the rights of third parties, not party to this Consent Decree, against Cleveland Heights, except as otherwise provided by law.

84. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

XIII. COSTS

85. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States and the State shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any stipulated penalties due but not paid by Cleveland Heights.

86. Performance of the terms of this Consent Decree by Cleveland Heights is not conditioned on the receipt of any federal, State, or local funds. Application for construction grants, state revolving loan funds, or any other grants or loans, or delays caused by inadequate facility planning or plans and specifications on the part of Cleveland Heights shall not be cause for extension of any required compliance date in this Consent Decree.

XIV. NOTICES

87. Unless otherwise specified in this Decree, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and addressed as follows:

Party	Email Address	Mailing Address
EPA	r5weca@epa.gov Re: DJ # 90-5-1-1-10457 (City of Cleveland Heights)	Chief, Water Enforcement and Compliance Assurance Branch (WC-15J) U.S. Environmental Protection Agency, Region 5 77 West Jackson Boulevard Chicago, IL 60604 and Regional Counsel (C-14J) U.S. Environmental Protection Agency, Region 5 77 West Jackson Boulevard Chicago, IL 60604
DOJ	eescdcopy.enrd@usdoj.gov Re: DJ # 90-5-1-1-10457	EES Case Management Unit Environment and Natural Resources Division U.S. Department of Justice P.O. Box 7611 Washington, D.C. 20044-7611 Re: DJ # 90-5-1-1-10457
State or Ohio	lawrence.helkowski@ohioattorneygeneral.gov	L. Scott Helkowski Environmental Enforcement Section 30 E. Broad Street, 25 th Floor Columbus, OH 43215-3400
OEPA		Erin Sherer Manager, NPDES and Pretreatment Ohio EPA - DSW Lazarus Government Center 50 W. Town St., Suite 700 P.O. Box 1049 Columbus, Ohio 43216-1049
Cleveland Heights	citymanager@clvhts.com and jjuliano@clvhts.com	City Manager City of Cleveland Heights 40 Severance Circle Cleveland Hts., OH 44118 and Director of Law City of Cleveland Heights 40 Severance Circle Cleveland Hts. OH 44118

88. Materials required to be sent to the United States shall be sent to DOJ and EPA as directed in the previous paragraph. Materials may be sent by email or mail, and need not be sent by both. Materials sent by email must be text searchable pdf documents.

89. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided above.

90. Notices submitted pursuant to this Section shall be deemed submitted upon sending, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

XV. EFFECTIVE DATE

91. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket; provided, however, that Cleveland Heights hereby agrees that it shall be bound to perform duties scheduled to occur prior to the Effective Date. In the event the United States withdraws or withholds consent to this Consent Decree before entry, or the Court declines to enter the Consent Decree, then the preceding requirement to perform duties scheduled to occur before the Effective Date shall terminate.

XVI. RETENTION OF JURISDICTION

92. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree or entering orders modifying this Decree, pursuant to Sections X and XVII, or effectuating or enforcing compliance with the terms of this Decree.

XVII. MODIFICATION

93. Except as otherwise set forth in Appendix B, the terms of this Consent Decree, including any attached appendices, may be modified only by a subsequent written agreement signed by all the Parties. Where the modification constitutes a material change to this Decree, it shall be effective only upon approval by the Court. Non-material changes to this Consent Decree may be made by written agreement of the Parties without court approval, and the Parties may by mutual agreement determine that a modification is non-material.

94. Any disputes concerning modification of this Decree shall be resolved pursuant to Section X (Dispute Resolution), provided, however, that, instead of the burden of proof provided by Paragraph 71, the Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XVIII. TERMINATION

95. After Cleveland Heights has completed the requirements of Section V (Compliance Requirements), including the appendices referenced in Section V, and has thereafter maintained continuous satisfactory compliance with this Consent Decree for a period of two Years, and has paid any accrued stipulated penalties as required by this Consent Decree, Cleveland Heights may serve upon the United States and the State a Request for Termination, stating that Cleveland Heights has satisfied those requirements, together with all necessary supporting documentation.

96. Following receipt by the United States and the State of Cleveland Heights' Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether Cleveland Heights has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States, after

consultation with the State, agrees that the Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Decree.

97. If the United States, after consultation with the State, does not agree that the Decree may be terminated, Cleveland Heights may invoke Dispute Resolution under Section X. However, Cleveland Heights shall not seek Dispute Resolution of any dispute regarding termination until 90 days after service of its Request for Termination.

98. In addition to the procedures set forth in Paragraphs 95-97, this Consent Decree shall terminate when the Court approves the Second Consent Decree.

XIX. PUBLIC PARTICIPATION

99. This Consent Decree shall be lodged with the Court for a period of not less than 30 Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Cleveland Heights consents to entry of this Consent Decree without further notice and agrees not to withdraw from or oppose entry of this Consent Decree by the Court or to challenge any provision of the Decree, unless the United States has notified Cleveland Heights in writing that it no longer supports entry of the Decree.

XX. SIGNATORIES/SERVICE

100. Each undersigned representative of Cleveland Heights, the State, and the Department of Justice certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

101. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Cleveland Heights agrees to accept service of process by mail or email with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

XXI. INTEGRATION

102. This Consent Decree constitutes the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supersedes all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. Other than documents that are subsequently submitted and approved pursuant to this Decree, no other document, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Decree or the settlement it represents, nor shall it be used in construing the terms of this Decree.

XXII. STAY OF LITIGATION

103. In light of the partial resolution of the United States' claims and the Parties' expectations outlined above, the Court hereby stays all litigation in this action unless or until the United States advises the Court that further litigation is needed to achieve full resolution of its claims.

XXIII. APPENDICES

104. The following Appendices are attached to and part of this Consent Decree:

“Appendix A” is the Integrated Overflow Control Master Plan Development Process;

“Appendix B” is the Requirements for the Capacity, Management, Operation, and Maintenance Program;

“Appendix C” is the list of Known SSOs.

“Appendix D” is a summary list of deadlines for actions or submissions under this Consent Decree. To the extent there is any discrepancy between Appendix D and the substantive provisions of this Decree, the substantive provisions shall control.

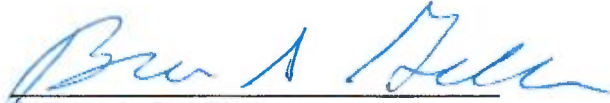
Dated and entered this ___ day of _____, 2017

UNITED STATES DISTRICT JUDGE

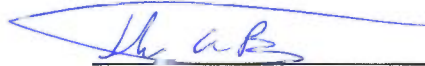
Signature Page for Cleveland Heights Clean Water Act Consent Decree

FOR THE UNITED STATES OF AMERICA:

June 29, 2017
Date



BRUCE S. GELBER
Deputy Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice



THOMAS A. BENSON
Senior Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
Washington, DC 20044-7611

DAVID A. SIERLEJA
Acting United States Attorney
Northern District of Ohio

STEVEN J. PAFFILAS
Assistant United States Attorney
Northern District of Ohio
801 West Superior Avenue; Suite 400
Cleveland, OH 44113

Signature Page for Cleveland Heights Clean Water Act Consent Decree

FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY:

6/26/17
Date



MARK POLLINS
Division Director
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
1200 Pennsylvania Ave., N.W.
Washington, DC 20460



JAMES VINCH
Attorney
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
1200 Pennsylvania Ave., N.W.
Washington, DC 20460

Signature Page for Cleveland Heights Clean Water Act Consent Decree

FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY:

6/23/17
Date



ROBERT A. KAPLAN
Acting Regional Administrator
U.S. Environmental Protection Agency, Region 5
77 W. Jackson Blvd.
Chicago, IL 60604



KRIS P. VEZNER
Associate Regional Counsel
U.S. Environmental Protection Agency, Region 5
77 W. Jackson Blvd.
Chicago, IL 60604

Signature Page for Cleveland Heights Clean Water Act Consent Decree

FOR THE STATE OF OHIO:

7/18/2017
Date


MIKE DEWINE
Ohio Attorney General

By: L. Scott Helkowski
L. Scott Helkowski (0068622)
Assistant Attorney General
Environmental Enforcement Section
30 E. Broad Street, 25th Floor
Columbus, Ohio 43215-3400

Signature Page for Cleveland Heights Clean Water Act Consent Decree

FOR THE CITY OF CLEVELAND HEIGHTS:

6/20/2017
Date



TANISHA R. BRILEY
City Manager
City of Cleveland Heights

*Authorized by Res. No. 66-2017,
adopted 6-19-17.*

Approved as to form:

[Signature]
Director of Law

APPENDIX A:

**INTEGRATED OVERFLOW CONTROL MASTER PLAN
DEVELOPMENT PROCESS**

I. OBJECTIVES

1. The Integrated Overflow Control Master Plan (“Master Plan” or “IOCMP”) will propose a specific set of remedial measures designed to meet the objectives of the Consent Decree. The Master Plan will be developed by successfully completing a number of critical intermediate tasks that includes the Sewer System Evaluation Survey (“SSES”), monitoring of SSOs and Sewer System flow, the development of the System Model, and the Capacity Assessment Report. The Master Plan shall be developed in accordance with the Consent Decree, including all appendices.

2. Cleveland Heights expects that portions of the work required to develop the Master Plan will be performed by the Northeast Ohio Regional Sewer District (“NEORS”). In particular it is anticipated that NEORS will carry out sewer system characterization activities, including SSES investigations, rainfall and flow monitoring, and capacity evaluations in the portions of Cleveland Heights Sewer System that is tributary to NEORS’s Heights Hilltop Interceptor. Cleveland Heights may utilize data, information, and the results of analyses generated by NEORS’s efforts; however, it is Cleveland Heights’ responsibility to integrate such data, information, and analyses into its efforts as required by this Consent Decree, and the obligation to accomplish the work required by this Consent Decree in a manner sufficient to adequately support the development of an effective Master Plan remains on Cleveland Heights.

3. In performing the monitoring, modeling, analyses, and evaluations required by Section V of the Consent Decree and this Appendix, Cleveland Heights shall adequately consider (a) the characteristics of each point of connection between its Sewer System and that of

NEORS and (b) any equipment owned or operated by NEORS or any other third party which is necessary to accurately model and characterize the Sewer System. Such consideration shall incorporate realistic representations of the operating characteristics and capacities of the portions of the NEORS collection system to which Cleveland Heights' Sewer System is tributary.

4. Cleveland Heights shall forward to EPA and OEPA any reports authored by NEORS that relate to NEORS's SSES, monitoring, or study of the Sewer System within 30 days of receiving such reports.

II. SEWER SYSTEM EVALUATION SURVEY

5. A Sewer System Evaluation Survey ("SSES"), as required by Paragraphs 17-19 of the Consent Decree, shall be implemented to characterize the flow response of the Sanitary Sewer System to precipitation (*e.g.*, to characterize I/I rates) and to identify the types and locations of I/I sources.

a. The SSES will be performed in two phases. The Phase 1 SSES will inspect at least 50% of the Sanitary Sewer System, focusing on the worst-performing portions of the system, including all Known SSOs and their associated tributary areas, common trench (including Over-under sewers), separate trench areas, and those portions believed to have the highest I/I rates. This Phase 1 SSES will be used with monitoring and modeling of the entire Cleveland Heights Sewer System to develop the Integrated Overflow Control Master Plan described in Section V of the Consent Decree. The Phase 2 SSES will investigate the remainder of the Sanitary Sewer System.

b. The SSES Work Plan required by Paragraph 17 of the Decree will define how the work in Paragraphs 5-7 of this Appendix A will be conducted, including, but not limited to, details and maps describing which parts of the Sewer System will be evaluated in each phase

and a demonstration that the Phase 1 SSES shall be sufficient to develop an adequate Integrated Overflow Control Master Plan.

c. The SSES activities shall be planned and implemented in accordance with the Consent Decree, this Appendix A, sound industry and engineering practice, and with reference to the following three reference publications: Handbook: Sewer System Infrastructure Analysis and Rehabilitation, EPA/625/6-91/030, 1991; Existing Sewer Evaluation and Rehabilitation, WEF MOP FD-6, 1994; and A Guide to Short Term Flow Surveys of Sewer Systems, WRC Engineering (Undated).

6. The SSES shall accomplish the following:

a. provide confirmation of location, size, and configuration of all sewers, manholes, pump stations, overflow points, Cross Connections, Over-Under Sewers, and any other features of the Sanitary Sewer System necessary to characterize flows to and discharges from all known and yet-unidentified SSO locations;

b. identify the type of sewer in each Sewer Segment (*e.g.*, common trench, over-under, etc.) and include definitions of the different sewer types;

c. identify Basins with wet weather response characteristics that result in flow conditions that cause and/or contribute to SSOs;

d. identify and quantify sources of I/I within the Basins determined to have wet weather response characteristics that cause and/or contribute to SSOs;

e. identify and quantify Known SSOs within each Basin of the Sanitary Sewer System and the overflow volumes associated with each;

f. identify Cross Connections and/or unauthorized connections between the Sanitary Sewer System and the MS4 (and specific effort shall be made to identify all missing,

ajar, or unsealed access plates in the Over/Under Sewers);

- g. identify physical and/or structural degradation and conditions of pipes, manholes, and structures of the Sanitary Sewer System that contribute to SSOs;
- h. identify the physical condition and design constraints of force mains and pump stations, including, but not limited to, mechanical reliability issues, diminished pump capacities, lack of redundant pumps, and lack of alternative power sources; and
- i. facilitate the development of the System Model required pursuant to Subsection V.E of the Consent Decree.

7. The SSES shall include the following:

- a. A system-wide inspection and assessment of all gravity Sewer Segments using CCTV to identify pipe structural degradation, Illicit Discharges, Cross Connections, and non-stormwater discharges into the MS4;
- b. the use of appropriate and accurate existing attribute data, and, as necessary, the collection and use of additional physical attribute data for the Sanitary Sewer System;
- c. a comprehensive review of known data concerning SSOs, Building/Private Property Backups, sewage flows, and Sanitary Sewer System attributes for purposes of supporting the SSES and identifying any additional data needed to conduct the SSES in accordance with this Appendix;
- d. the use of verified existing rainfall and flow data for the Sanitary Sewer System, and as necessary, the collection and use of additional flow and rainfall data;
- e. the monitoring of rainfall and flows at key locations within the Sanitary Sewer System so as to allow characterization of each Basin's wet weather flow response and the

quantification of SSO volumes at Known SSO locations and other locations at which SSOs are predicted by the model;

f. further investigative activities in those areas of the Sanitary Sewer System determined to have a significant wet weather response. The investigative activities shall locate individual sources of I/I, and shall identify physical conditions and/or design constraints of the Sewer System that cause or contribute to SSOs. These investigative activities shall include, but not be limited to, as appropriate:

- (1) Further flow monitoring to isolate sources of I/I, including the use of micromonitors;
- (2) Smoke testing;
- (3) Visual inspections of pipes and manholes;
- (4) Dye testing;
- (5) Night flow isolation;
- (6) CCTV inspection to identify sewers in need of repair, rehabilitation, or replacement; and
- (7) Building inspections.

g. the documentation of the condition of the Sewer System through the consistent application of a widely applied sewer condition rating methodology such as NASSCO's PACP methodology;

h. Manhole Inspections. Cleveland Heights shall internally inspect each manhole in its system so as to identify currently unidentified cross-connections between the Sanitary Sewer System and the MS4. Such inspections shall involve comparing observed conditions to available sewer maps, to identify any such Cross Connections. Cleveland Heights

shall thoroughly investigate all observed possible Cross Connections using techniques such as dye water testing, lamping, CCTV inspection. All newly identified Cross Connections and missing over/under plates shall be documented and, within 30 days of discovery, included in the Real-Time Monitoring Program;

i. Data Management. A documented, consistent data management approach to organize, analyze, and report all known data to be used and all of the data that Cleveland Heights will be collecting in accordance with this Appendix; and

j. Quality Control/Quality Assurance. A quality assurance and quality control methodology that is consistent with current industry practice, to ensure the accuracy and reliability of data collected in accordance with this Appendix.

III. MONITORING

8. Cleveland Heights shall carry out rainfall and dry and wet weather flow monitoring as needed to satisfy the requirements of the Consent Decree.

9. NEORS D performed rainfall and flow monitoring within the Cleveland Heights Sewer System area in 2016 and is developing and calibrating a System Model using InfoWorks ICM modeling software. Cleveland Heights shall utilize the results of the NEORS D monitoring to the extent possible. However, it is Cleveland Heights' responsibility to perform sufficient additional monitoring to allow Cleveland Heights to complete its evaluation of its Sewer System, to support an update of the System Model as appropriate, and allow the development of an effective Integrated Overflow Control Master Plan.

10. Cleveland Heights shall utilize recording flow meters to collect the flow data required by this Appendix. Monitoring site selection, equipment selection and installation, calibration, maintenance, and data quality assurance checks shall be carried out to optimize

monitoring accuracy, and shall conform to good engineering practices and the appropriate references listed in Paragraph 5 of this Appendix. The flow monitoring and rainfall data shall be used to characterize the wet weather response (I/I) of each Basin of the Sanitary Sewer System; to target specific Basins for further flow monitoring and physical investigation activities, as described above; and to support the development and calibration of the System Model.

11. Cleveland Heights shall post data summaries from its monitoring on the Website required by Paragraph 44 of the Decree so that the information can be viewed by the public. Locations and approximate frequencies of SSOs will also be posted for public review.

A. Rainfall Monitoring

12. Cleveland Heights shall collect representative rainfall data using an adequate network of rainfall gauges for the pendency of this Consent Decree.

13. Cleveland Heights shall use a network of rain gauges with a minimum coverage of one rain gauge per two square miles, or a combination of one rain gauge per 10 square miles and Doppler radar, for its entire Service Area. All rain gauges shall be automatic recording gauges with a sensitivity of 0.01 inches of rainfall, and all gauges shall be sited and maintained in accordance with current good industry practices and the manufacturer's requirements and recommendations. Cleveland Heights may utilize NEORS D's rain gauge network and data, either by itself or in combination with additional gauges placed by Cleveland Heights as necessary to meet this requirement.

B. Real Time SSO Monitoring

14. Cleveland Heights is currently monitoring the activation of the Known SSOs using Tethered Block Monitoring. Cleveland Heights shall check the overflows monitored by Tethered Block Monitoring after each rain event of 0.25 inches or more. Cleveland Heights shall

continue to carry out Tethered Block Monitoring at each Known SSO until (a) that overflow point is physically eliminated, or (b) a real-time flow monitor or electronic activation monitor is placed at that overflow point. If such a monitor is subsequently removed, Cleveland Heights shall resume monitoring using Tethered Block Monitoring. If Cleveland Heights becomes aware of an additional SSO location, it shall, within 30 days of such discovery, begin monitoring the activity of that additional SSO using Tethered Block Monitoring.

15. The Real Time Monitoring Plan required by Paragraph 24 of the Consent Decree shall describe how Cleveland Heights shall install digital, continuously-recording, real-time telemetered flow monitors for a minimum of ten Known SSOs. Those ten Known SSOs shall be selected to include the most active Known SSOs, based upon the results of the Tethered Block Monitoring analysis that was started in October 2015. Cleveland Heights shall continue to carry out real-time flow monitoring for a period of at least three months annually, during the months from May to September, until the Master Plan is approved. At such time, the Parties will evaluate the need to continue monitoring or rely upon modeled flows and Tethered Block Monitoring confirmations to track SSO occurrences and SSO volumes. The Real Time Monitoring Plan shall describe the monitoring equipment to be used, how that equipment will be maintained, and how the resulting data shall be managed, including data quality assurance procedures.

C. System Characterization Monitoring

16. Rainfall and sewer system flow/Hydraulic Grade Line (“HGL”) data shall be collected throughout the Sanitary Sewer System so as to adequately support the SSES, System Model development and calibration, capacity evaluation, and ultimately the development of an effective Master Plan.

17. The System Characterization Monitoring Plan required by Paragraph 25 of the Consent Decree shall identify:

- a. proposed type and location of rain gauges;
- b. proposed locations for flow meters and remote level sensing devices;
- c. proposed periods of monitoring at each location;
- d. the minimum number of wet weather events to be monitored and the intended characteristics of those events (total rainfall, peak intensity, etc.);
- e. a protocol for re-evaluating the placement of flow meters and remote flow detection devices determined to be producing unacceptable data;
- f. a data review (QA) and management plan;
- g. how any monitoring performed by NEORSD that Cleveland Heights anticipates using and Cleveland Heights' own monitoring efforts comply with the requirements of Appendix A and are in accordance with good industry practice;
- h. how the combination of the monitoring carried out by NEORSD and Cleveland Heights shall together adequately support the SSES, System Model development and calibration, capacity evaluation, and ultimately the development of an effective Master Plan; and
- i. how its flow monitoring shall allow adequate characterization of the stormwater flows in the portions of its Collection System that include Over/Under Sewers.

18. Flow data shall be collected using a system of state of the art permanent and/or temporary electronic flow monitors placed at locations in the Sanitary Sewer System necessary to allow the characterization of flow from each basin consistent with industry standards. All temporary flow monitors and all new permanent flow monitors installed shall continuously measure and record both level and flow. Cleveland Heights may utilize NEORSD's flow

monitoring data, either by itself or in combination with additional gauges placed by Cleveland Heights as necessary to meet this requirement.

IV. SYSTEM MODEL

19. The System Model required by Paragraph 27 of the Consent Decree shall be performed in accordance with the Consent Decree, this Appendix A, sound engineering, and current industry practice.

20. Model Configuration. Cleveland Heights shall utilize widely accepted and supported, fully-dynamic hydraulic modeling software to develop its System Model. Cleveland Heights shall configure the System Model so as to accurately reflect current conditions regarding pipe sizes and slopes; hydraulic flow control device properties; and other system attributes. The model shall include, at a minimum: all sanitary sewer lines ten inches in diameter or larger; and all sanitary sewer lines the inclusion of which is necessary to realistically simulate all known and additional SSOs that may be identified during the SSES. The approximate horizontal locations, adequately accurate rim elevations, invert elevations of all key manholes (including all manholes where the elevations impact any discharge characteristics of one or more SSO), and the operating elevations of all flow control devices (including all SSO structures) shall be included in the System Model and shall be verified when appropriate using GPS or conventional survey techniques. Cleveland Heights shall include portions of its MS4 in the System Model as necessary to allow adequate representation of the existing behavior of the portions of its Sewer System impacted by Cross Connections.

21. Because portions of the Sewer System allow free exfiltration from the storm sewers to the Sanitary Sewer System, the Parties recognize that achieving the level of calibration typically expected within a collection system model may be challenging. Explicit modeling of the actual active Cross Connections between the two systems will be attempted; however, it is

recognized that in some cases more representative overall modeling performance may be achieved by not including a specific, active Cross Connection. Modeling of remediated portions of the system will account for effective separation of the common trench system in the public right of way and potential remaining wet weather flows from private property to assess alternatives and the resulting performance of each to achieve adequate capacity in various storm events.

22. I/I Simulation. Cleveland Heights shall utilize a widely accepted method of simulating wet weather response in its Sanitary Sewer System.

23. Calibration and Verification. To calibrate and verify the System Model, Cleveland Heights shall conduct flow metering and rainfall monitoring in its Sanitary Sewer System for a time period sufficient to collect data of adequate quality for all key calibration points for the number of appropriate calibration/verification events described in this Paragraph. Cleveland Heights shall carry out flow metering and rainfall monitoring for a minimum of 90 days; however, it is anticipated that a longer period may be required to collect sufficient data to support calibration and verification of the System Model. Cleveland Heights shall identify key calibration locations within each Basin, and shall calibrate and verify the System Model to accurately represent the Sanitary Sewer System using the latest version of NEORSD's Standards and Protocols for Hydrologic and Hydraulic Modeling of Sewer Systems. The calibration process shall be based upon three or more appropriate storm events from the flow monitoring period. The verification process shall be based on three independent, appropriate rainfall events. As the model is intended to simulate the response of the Sewer System to large precipitation events, appropriate storm events shall be those having high average and/or peak rainfall intensities. The NEORSD standards and protocols are based upon currently-accepted engineering

procedures and guidelines established in the Code of Practice for the Hydraulic Modeling of Sewer Systems Version 3.001, December 2002, prepared by The Chartered Institution of Water and Environmental Management (CIWEM - formerly WaPUG). Data sets for calibration and verification shall be based upon concurrent rainfall data, flow meter data, and other Sanitary Sewer System flow data.

V. CAPACITY EVALUATION

24. Cleveland Heights shall use its System Model to determine whether the modeled portions of its Sanitary Sewer System and MS4 are adequately sized to transport (1) peak current dry-weather flows, (2) anticipated future dry-weather flows based on a twenty-year population projection, and (3) peak wet-weather flows during the rainfall events listed below in this Paragraph at current population levels. In assessing the capacity of the Sanitary Sewer System during peak wet-weather flows, Cleveland Heights shall run the System Model using the following rainfall amounts and rainfall intensity time-distributions in accordance with NEORS D's design storm hyetographs for the following rainfalls as described in the modeling standards and protocols:

- a. 2-year/1-hour rainfall;
- b. 5-year/1-hour rainfall;
- c. 10-year/1-hour rainfall;
- d. 10-year/6-hour rainfall; and
- e. 25-year/1-hour rainfall.

Cleveland Heights shall estimate the MS4 capacity using a combination of simplified modeling and a comparison of nominal capacity and approximate runoff. Cleveland Heights shall consider inadequacies in storm sewer capacity in its evaluation of each of the storm events listed above.

25. In evaluating Sewer System capacity, Cleveland Heights shall base that determination upon the following criteria: no SSOs occurring and either one foot less surcharge than the level of basement floors in each sewer's immediate area, or no more than two feet of surcharge. Sewers without sufficient capacity in a particular storm shall be identified on a sewer segment-specific basis, and identified as such in storm-specific maps of each Basin. System capacity shall also be determined based on the activation of Known SSOs and predicted overflows at any other location. The predicted volumes of each such predicted SSO shall be determined.

APPENDIX B:

**REQUIREMENTS FOR THE
CAPACITY, MANAGEMENT, OPERATION, AND MAINTENANCE PROGRAM**

1. The Capacity, Management, Operation, and Maintenance Program (“CMOM Program”) required by Paragraph 21 of the Consent Decree shall be prepared in accordance with the Consent Decree, this Appendix B, and EPA’s *Guide for Evaluating Capacity, Operations, and Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems*, EPA Doc. 305-B-05-002, January 2005. The guide can be found online at http://www.epa.gov/npdes/pubs/cmom_guide_for_collection_systems.pdf.

2. The CMOM Program shall include written descriptions of how Cleveland Heights will implement the CMOM Program components set forth below.

3. Revisions. The Parties recognize that the City may need or want to revise the CMOM Programs during the term of this Consent Decree. Such revisions shall not be considered modifications to the Consent Decree for purposes of Section XVII (Modification). The City must obtain EPA’s prior written approval of any revision to the substance of any CMOM Program required by this Consent Decree and shall place copies of any such revised Program on the Website described in Paragraph 44 of the Consent Decree within seven days of EPA approval. The City may revise the format of any CMOM Program required by this Consent Decree without EPA’s approval and shall provide a copy of any revised Program to EPA and OEPA, and place a copy of any such revised Program on the Website, within seven Days after making such revision.

A. Interim Management, Operation and Maintenance (MOM) Measures

4. In addition to the requirements of the CMOM Program set forth in this Appendix B, Cleveland Heights shall carry out the following Interim MOM measures. The results of each

of the following activities will be incorporated into the full CMOM Program. Cleveland Heights shall:

a. Within four Months of the Date of Lodging, select, purchase, and install on City computer(s) a computerized Information Management System (“IMS”) to track and help manage system administration, operations, and maintenance activities, including:

- (1) Sewer System complaints, complaint response, complaint followup;
- (2) Sewer maintenance work orders;
- (3) Sewer System maintenance inventory;
- (4) Staff training;
- (5) Regular agency reporting; and
- (6) Public information.

b. By July 1, 2017, designate an Information Technology (“IT”) professional with the education and work experience necessary to successfully implement the Computerized IMS described above, and hire a professional to operate and maintain City Geographic Information System (“GIS”) systems.

c. By August 1, 2017, provide EPA for review and approval a report that analyzes its Fats, Oil & Grease (“FOG”) and tree root intrusion problems. The intent of this effort is to provide a common understanding with EPA regarding the degree to which these issues cause or contribute to SSOs and basement/property backups in the Sewer System. This analysis will be based upon a review of available sewer maintenance records and all other available relevant information, including information obtained by interviewing maintenance staff. The analysis will be carried out to quantify, to the degree possible, the number of SSOs

and/or building/property backups have been caused by these issues in the past three years. The City shall also characterize and consider the number of such backups that are currently prevented by high frequency cleaning.

d. Within seven Months of the Date of Lodging, have at least two staff (one being the above IT professional) complete the training provided by the IMS software provider. The City shall also have configured the software for all of the tasks listed above, so as to allow the City to begin populating the software with its system assets' attribute data.

e. By September 1, 2017, carry out a complete review of the current sewer maintenance spare parts inventory. Based upon the past three years' experience, identify deficits in the inventory and address the identified deficits.

f. By December 1, 2017, develop and implement a public information program for Sewer System "dos and don'ts" that specifically addresses:

- (1) Reporting sewer problems, including Building/Private Property Backup;
- (2) Proper home FOG disposal;
- (3) Need to obtain permits; and
- (4) Proper sewage and stormwater connections.

h. By December 1, 2017, have at least seven employees that have successfully completed training and attained certification in a recognized program for assessment and certification of both pipelines and manholes. Cleveland Heights selected the National Association of Sewer Service Companies' ("NASSCO") Pipeline Assessment and Certification Program ("PACP") and Manhole Assessment and Certification Program ("MACP") training.

B. Training Program

5. The CMOM Program shall include a Training Program for technical and skills training for appropriate categories of the City's employees. The technical and skills training program shall be designed to facilitate prevention of, and response to, SSOs.

6. The Training Program shall include training on sewer investigation, maintenance, and repair techniques and policies, as well as sanitary sewer overflow response policies and procedures. The Training Program shall focus on Cleveland Heights' standard operating procedures and practices for the operation and maintenance of the Sanitary Sewer System and shall include specific instructions on responding to and preventing SSOs in accordance with the approved Sewer Overflow Response Plan ("SORP").

7. The Training Program shall identify the training requirements for each labor category, the training records to be maintained, and how the information management system shall be used to schedule and document all training activities. For any training conducted pursuant to this Appendix B, Cleveland Heights shall memorialize in writing, and retain pursuant to Paragraph 75 of the Consent Decree, the following information: the date of the training; the topic(s) covered by the training; the names and affiliation of the instructor(s) who conducted the training; and the names of the employees who received the training. As part of each Annual Report required to be submitted pursuant to Paragraph 43 of the Consent Decree, Cleveland Heights shall include a summary list of all documented training activities completed by how many of each category of employee during the applicable reporting period.

8. The Training Program shall include technical and skills training and SSO response training, as follows:

a. Technical and Skills Training. The technical and skills training program shall be designed to facilitate prevention of and response to SSOs and shall include the following components:

i. the categories of employees (including a listing of job classifications within each category) that will be provided training, describing the specified training to be provided commensurate with the specific job responsibilities of each category of employee;

ii. a list and description of the topics to be covered in the technical and skills training for each relevant category of employee to facilitate compliance with the CWA, and the implementing regulations promulgated thereunder, through SSO prevention, response, and elimination measures (including, where appropriate, training on sewer cleaning, FOG inspection, sewer inspection, sewer repair, replacement and rehabilitation techniques, data collection, information management, and reporting and recordkeeping necessary to implement Cleveland Heights' CMOM Program) before an employee can undertake specific work assignments or tasks; and

iii. identification of the types of training records that Cleveland Heights maintains and the information management system used to plan and document completed training, including methods for addressing failure to complete minimum training requirements for each category of employee.

b. SSO Response Training. The SSO Response Training shall be designed to prevent and respond to SSOs and shall require Cleveland Heights to train employees on the elements and required implementation of the Sewer Overflow Response Plan.

C. Sewer Overflow Response Plan

9. The CMOM Program shall include the Sewer Overflow Response Plan (“SORP”) dated May 30, 2017 approved by EPA on May 30, 2017.

D. SSO Reporting And Documentation Procedures

10. The CMOM Program shall include an SSO Reporting Plan (“SSO Reporting Plan”) that generally conforms with the requirements of EPA’s 2005 *Guide for Evaluating Capacity, Management, Operation, and Maintenance Programs at Sanitary Sewer Collection Systems* and the requirements of Section VII of the Consent Decree related to SSO reporting.

E. Sanitary Sewer Cleaning Programs

11. The CMOM Program shall include a Routine Cleaning Program and a High-Frequency Cleaning Program.

12. The Routine Cleaning Program shall involve regularly-scheduled cleaning of all sanitary sewer lines to prevent SSOs. For purposes of this program, “cleaning” shall mean the physical removal of FOG, debris, roots, and other obstructions from the sanitary sewers.

13. As part of Cleveland Heights’ Routine Cleaning Program under this Subsection, the City shall:

a. clean each unique Sewer Segment in its Sanitary Sewer System not less frequently than once every five Years. To comply with this minimum cleaning frequency requirement, Cleveland Heights may count the cleaning of a Sewer Segment carried out as part of the inspection of that Sewer Segment pursuant to Paragraph 18 of this Appendix B or as part of the SSES;

b. determine appropriate cleaning frequencies for all Sewer Segments for which a minimum frequency of five Years is inadequate to prevent blockages and/or to maintain sewer design capacity;

c. clean a minimum of 25 miles of Sanitary Sewer lines each Calendar Year (prorated for any partial Calendar Year after the Effective Date in which these requirements apply). To comply with this minimum miles annual requirement, Cleveland Heights may additionally count each cleaning of a Sewer Segment cleaned under the High-Frequency Cleaning Program, pursuant to Paragraph 15 below, during the same Calendar Year; and

d. maintain information on the nature of material removed from each Sewer Segment (*e.g.*, FOG, roots, debris) and develop and maintain a system to classify the amount of such material removed (*e.g.*, heavy, moderate, or minimal) to support the identification of appropriate cleaning frequencies for all Sewer Segments for which a minimum frequency of five Years is inadequate.

14. The High-Frequency Cleaning Program shall be designed to proactively prevent recurring blockages in the Sanitary Sewer System. The High-Frequency Cleaning Program shall establish proactive cleaning schedules for those Sewer Segments that are known by Cleveland Heights to be susceptible to FOG, roots, and/or debris build-up, by requiring Cleveland Heights to more frequently clean or flush those Sewer Segments than other Sewer Segments in the Sanitary Sewer System. This is commonly known as “hot spot cleaning.”

15. The High-Frequency Cleaning Program shall:

a. identify criteria for determining when high-frequency cleaning is appropriate, such as an analysis of SSO history and related information, the review of CCTV findings, the results of previous sewer cleaning findings, and the results of Cleveland Heights’

inspections of FOG Generators (if performed);

b. establish tiered categories of “hot spot” areas within the Sanitary Sewer System based on significance of SSOs, the similarity of the cause of SSOs, or other prioritization criteria;

c. recommend appropriate cleaning frequencies and cleaning methods for each of the tiered categories identified;

d. maintain a list of Sewer Segments subject to Cleveland Heights’ High-Frequency Cleaning Program, identifying how often each Sewer Segment is cleaned; and

e. update the list of Sewer Segments subject to Cleveland Heights’ High-Frequency Cleaning Program as necessary to prevent SSOs.

16. As part of the Annual Report submitted pursuant to Paragraph 43 of this Consent Decree, Cleveland Heights shall provide:

a. the total miles of unique sanitary sewer lines cleaned during the reporting period;

b. the total miles of sanitary sewer lines cleaned during the reporting period, including all lengths of sanitary sewer lines cleaned in accordance with the High-Frequency Cleaning Program, to demonstrate that Cleveland Heights has cleaned a minimum of 25 miles of the total sanitary sewer lines;

c. an identification of whether particular Sewer Segments were added or removed from the High-Frequency Cleaning Program; and

d. legible maps(s) depicting the locations cleaned as part of the Routine Cleaning Program and the High-Frequency Cleaning Program.

F. Sewer System Inspection Programs

17. The CMOM Program shall include a Sewer System Internal Inspection Program and a Sewer System Manhole Inspection Program, both of which will commence after submission of the SSES Reports required by Paragraphs 18 and 19 of the Consent Decree. Cleveland Heights shall retain all records of inspections pursuant to the Sewer System Internal Inspection Program and the Sewer System Manhole Inspection Program for at least two inspection cycles.

18. In the Sewer System Internal Inspection Program, Cleveland Heights shall internally inspect its entire Sanitary Sewer System on a continuous 10-Year (or more frequent, as described below) cycle beginning after submission of the SSES Reports required by Paragraphs 18 and 19 of the Consent Decree. As part of the Sewer System Internal Inspection Program, Cleveland Heights shall, at a minimum:

- a. evaluate the condition of each Sewer Segment using the NASSCO PACP pipe condition rating system, or another nationally-accepted sewer evaluation methodology approved by EPA;
- b. document any observed deterioration and/or need for remediation; and
- c. inspect on a 5-Year or less cycle for each Sewer Segment where the condition is determined to be grade 3 condition or worse under the NASSCO PACP system (or equivalent grade under an alternative methodology approved by EPA). The specific reinspection frequency shall be consistent with the degree to which failure of a portion of that Sewer Segment appears imminent.

19. In the Sewer System Manhole Inspection Program, Cleveland Heights shall inspect all manholes in the Sanitary Sewer System on a continuous 10-Year (or more frequent, as

described below) cycle beginning after submission of the SSES Reports required by Paragraphs 18 and 19 of the Consent Decree. Such manhole inspections may be conducted concurrently with any Sewer Segment routine cleaning or inspection activity that occurs as part of the Routine Cleaning Program or the Sewer System Internal Inspection Program. As part of Cleveland Heights' Sewer System Manhole Inspections Program under this Subsection, Cleveland Heights shall:

- a. evaluate the condition of and prioritize each manhole using an industry-standard manhole condition rating system or nationally-accepted manhole evaluation methodology, such as the NASSCO Manhole Assessment and Certification Program, or another nationally-accepted manhole evaluation methodology approved by EPA;
- b. identify any Cross Connections located in any manhole; and
- c. document any observed deterioration and/or need for rehabilitation or replacement; and
- d. inspect on a 5-Year or less cycle for each manhole where the condition is determined to be grade 3 condition or worse under the NASSCO MACP system (or equivalent grade under an alternative methodology approved by EPA). The specific reinspection frequency shall be consistent with the degree to which failure of that manhole appears imminent.

20. As part of the Annual Report submitted pursuant to Paragraph 43 of the Consent Decree, Cleveland Heights shall provide:

- a. the location and total miles of the portions of the Sanitary Sewer System inspected under the Sewer System Internal Inspection Program; and
- b. the locations of the manholes inspected under the Sewer System Manhole Inspection Program.

G. Fats, Oils, And Grease (FOG) Control Program

21. The CMOM Program shall include a Fats, Oils, and Grease (“FOG”) Control Program. The purpose of the FOG Control program shall be to ensure that FOG accumulation is not causing or contributing to SSOs or reducing system conveyance capacity. Paragraph 4.c of this Appendix requires that Cleveland Heights carry out an evaluation of the degree to which FOG currently causes or contributes to blockages and/or SSOs in its system. The degree to which Cleveland Heights shall develop and implement specific aspects of the FOG Control Program detailed below will be consistent with the findings of that evaluation, as detailed in the approved FOG/Root Evaluation Report. The FOG Control Program shall be updated, subject to EPA approval, to the extent necessary as conditions in the City change.

22. The FOG Control Program shall, at a minimum:

a. describe other programs within Cleveland Heights, such as building codes, that have complementary existing authority to regulate FOG and how those authorities will be integrated into the FOG Control Program;

b. maintain a list of all FOG Generators that includes a description of the FOG generating process and grease trap size, updated at least annually;

c. develop recordkeeping systems and procedures to track and identify the source of all FOG-related SSOs and FOG blockages;

d. develop a compliance assistance program to help FOG Generators comply with the FOG Control Program and to provide guidance and training for FOG Generators and their employees;

e. develop a clearly-written guide for both new and existing FOG Generators that identifies applicable city ordinances and regulations related to the installation, operation, and maintenance of FOG Control Devices;

f. develop a public education program directed at reducing the amount of FOG entering the Sanitary Sewer System from private residences; and

g. establish performance indicators to be used to measure the effectiveness of the FOG Control Program and establish a periodic review in order to update the FOG Control Program as warranted.

23. In addition, to the extent necessary to address current FOG issues, the FOG Control program shall:

a. develop a comprehensive FOG control ordinance to provide legal authority to regulate and control the discharge of FOG into the Sanitary Sewer System. The FOG ordinance shall provide the legal authority to allow the City to require grease trap/interceptor installation, and to implement a permit, inspection, and enforcement program for FOG Generators;

b. promulgate the rules or regulations necessary to implement the FOG Control Program, including any of the measures set forth in this Subsection of Appendix B;

c. establish standards for the design and construction of FOG Control Devices, including standards for capacity and accessibility, site maps, design documents, and as-built drawings;

d. establish FOG Control Device management, operations, and maintenance best management practices that address onsite recordkeeping requirements, cleaning frequency, cleaning standards, use of additives, and ultimate disposal;

e. continue and refine a FOG disposal manifest system;

f. establish staffing (technical and legal) to ensure effective implementation of the FOG Control Program;

g. establish an enforcement program, including specific enforcement mechanisms for noncompliant facilities, to ensure compliance with the FOG Control Program.

As part of the Annual Report required in Paragraph 43 of the Consent Decree, Cleveland Heights shall report the number of enforcement actions initiated and concluded during the prior Calendar Year;

h. coordinate information on FOG-related SSOs to FOG inspection staff to ensure effective implementation of the FOG Control Program;

i. establish construction inspection procedures, including scheduling, inspection forms, and inspection recordkeeping requirements, to assure that FOG Control Devices are constructed in accordance with established design and construction standards;

j. establish compliance inspection procedures, including scheduling, inspection report forms, and inspection recordkeeping requirements to assure that FOG Control Devices are being managed, operated, and maintained in accordance with the established management, operations, and maintenance standards, or best management practices; and

k. develop a tiered compliance inspection frequency schedule that shall identify the number of regulated commercial FOG Generators in each tier and the frequency of inspection for each tier, including the rationale and explanation of the tier frequency schedule. All FOG Generators shall be inspected at least twice annually. Certain FOG Generators shall be inspected more frequently if, due to non-compliance with City's Fog Control Program, more frequent inspections are necessary to prevent the occurrence of SSOs.

H. Root Control Program

24. The CMOM Program shall include a Root Control Program. Paragraph 4.c of this Appendix requires that Cleveland Heights carry out an evaluation of the degree to which root intrusion causes or contributes to blockages and/or SSOs in its system. The degree to which Cleveland Heights shall develop and implement specific aspects of the Root Control Program detailed below will be consistent with the findings of that evaluation, as detailed in the approved FOG/Root Evaluation Report. The Root Control Program shall be updated, subject to EPA approval, to the extent necessary as conditions in the City change.

25. The purpose of the Root Control Program shall be to identify and control the intrusion of roots that contribute to SSOs.

26. As part of its Root Control Program, the City shall, at a minimum:

a. describe the staff, equipment, and procedures that will be used to identify Sewer Segments with significant root intrusion through sewer cleaning activities, CCTV inspection, and SSO response activities;

b. identify the staff, by job classification, and equipment (*e.g.*, chemicals used in chemical root control) that will be used to respond to root problems and prevent the reoccurrence of root growth;

c. describe root control activities performed in reaction to an SSO event; and

d. describe root control activities performed to prevent further recurrence of root blockages.

I. Information Management System

27. The CMOM Program shall include the City's plan for modifying the City's Information Management System.

28. The City's plan shall be called the Information Management System Development Plan and shall describe the steps Cleveland Heights will take to fully develop and implement the Information Management System required by this Subsection with a proposed schedule for carrying out all planned steps no later than December 1, 2018. Upon EPA's approval of the CMOM Program, the implementation schedule set forth in the Information Management System Development Plan shall be incorporated into the approved CMOM Program.

29. Information Management Program. Cleveland Heights shall utilize an Information Management Program capable of maintaining data on the Sanitary Sewer System assets and SSOs. The Information Management Program shall be capable of integrating specific asset and SSO data, including but not limited to:

- a. maintenance records for each asset, including maintenance history, repair history, and the status of maintenance work to be implemented and completed under the Consent Decree;
- b. SSO data as specified in the SSO Reporting Plan to evaluate and modify Sewer System cleaning and inspection programs focused on the elimination of SSOs; and
- c. spatial tracking tools, such as Geographic Information System ("GIS") or the functional equivalent.

30. Spatial Data Management System ("SDMS"). As part of its Information Management System, Cleveland Heights shall utilize an SDMS to map its Sanitary Sewer System (*e.g.*, Geographic Information System or a functionally equivalent software suite). The SDMS must allow for the electronic entry and management of all Sanitary Sewer System components, including the following associated spatial data:

- a. attribute data for Sewer Segments, including:

- i. known or estimated date of installation;
 - ii. pipe length;
 - iii. inverts at manholes;
 - iv. slope;
 - v. diameter (or dimensions if not cylindrical);
 - vi. material (if available);
 - vii. nominal capacity (*e.g.*, manning) design; and
 - viii. geographic location.
- b. attribute data for structures including:
- i. structure type (*e.g.*, siphon, manhole, junction box);
 - ii. invert elevation;
 - iii. geographic location; and
 - iv. known or estimated date of installation.

31. Routine Updates. Pursuant to Paragraph 29, above, after the implementation schedule in the Information Management System Development Plan becomes fully incorporated into the approved CMOM Program, Cleveland Heights shall begin making routine updates to the attribute data contained in its Information Management System to keep such data current. Specifically, Cleveland Heights shall update the Sanitary Sewer System attribute data maintained in the Information Management Program and/or Spatial Data Management System within 90 Days of when Cleveland Heights becomes aware of, or otherwise receives reliable information indicating, the fact that the attribute data included in its Information Management Program and/or Spatial Data Management System is incorrect or incomplete. For purposes of this Paragraph, whenever Cleveland Heights completes any inspection, testing, condition assessment,

or rehabilitation activity on a Sanitary Sewer System component, Cleveland Heights receives reliable information.

J. Standard Operating Procedures

32. The CMOM Program shall include a plan and schedule for developing Standard Operating Procedures (“SOPs”) for general operation and maintenance of all components of the Sanitary Sewer System, including gravity sewers, manholes, pump stations, force mains, and all other major ancillary facilities. SOPs shall include all major work tasks required for the successful operation and maintenance of Sanitary Sewer System components including, but not limited to:

- a. gravity sewer line and manhole cleaning and routine maintenance;
- b. gravity sewer line CCTV and other internal inspections, including application of a nationally-recognized infrastructure condition scoring system that objectively rates the relative severities of the defects discovered;
- c. manhole inspections, including application of a nationally-recognized infrastructure condition scoring system that objectively rates the relative severities of the defects discovered;
- d. gravity sewer line and manhole construction, renewal, rehabilitation, and repair performed by City crews;
- e. pump station general inspection, specific component inspection and testing, routine maintenance, and long-term maintenance to prevent pump station failures. Pump station components include, but are not limited to: pumps, motors, engines, flow control valves, check valves, operating controls, electrical systems, SCADA systems and emergency power systems;

f. pump station operational procedures, including adjustment/calibration of pump controls and operation of the alternate power system;

g. force main and ancillary component inspection, routine maintenance, and long-term preventive maintenance. Force main ancillary components include, but are not limited to: check valves, flow control valves, air release valves, and vacuum breakers;

h. ancillary component inspection, routine maintenance, and long-term preventive maintenance. Ancillary components include, but are not limited to: flow splitting/combining structures and equipment, flow control devices, flow measurement devices, and EQ Facilities; and

i. all major work tasks required under the Sewer Overflow Response Plan for responding to and resolving SSOs and blockages in gravity sewer lines, SSOs as a result of pump station malfunctions and/or hydraulic overloading, and SSOs resulting from force main failures.

33. The Standard Operating Procedures Program shall be submitted as part of the CMOM, but shall not be subject to EPA approval.

K. Private Sewer Service Line Remediation

34. The CMOM Program shall include a Private Sewer Service Line Defect Remediation Program to encourage private service line owners to remediate private service line defects that are sources of I&I and/or otherwise contribute to SSOs. This Program shall include, at a minimum:

a. A demonstration that the City possesses adequate legal authority, through ordinances or otherwise, to require owner(s) to repair, rehabilitate, replace, or take other

appropriate action to prevent private sewer service lines from contributing I&I to the Sanitary Sewer System that could cause or contribute to SSOs;

b. An escalating notification process in which City shall notify owner(s) of defective private sewer service lines of their obligation to prevent the Private Sewer Service Line from contributing I&I to the System that could cause or contribute to SSOs;

c. An escalating penalty system to encourage owner(s) to expeditiously remediate defective private sewer service lines, including the right to discontinue sewer service for failure to comply with remediation orders within the time limits specified in those orders, subject to the property owner's due process rights under local, State, and Federal law; and

d. A requirement that remediation of defects identified after the Date of Lodging shall be completed as rapidly as technically feasible, but no later than 30 months after the discovery of the defective private sewer service lines contributing I&I to the Sanitary Sewer System that could cause or contribute to SSOs.

L. Staffing Plan

35. The CMOM Program shall include a plan to ensure that Cleveland Heights has the necessary staff to allow it to effectively implement the CMOM Program and the remainder of the work required under the Consent Decree.

36. Cleveland Heights shall review existing in-house staff resources and compare those resources to its estimates of the resources needed to effectively implement the measures included in the CMOM Program. In carrying out this evaluation, Cleveland Heights shall consider anticipated near-term staff retirements and normal workforce turnover rates. It is anticipated that Cleveland Heights will also consider the availability of staff formerly dedicated to Water Department operations, as those operations have recently been transferred to NEORSD.

37. In developing its staffing plan, Cleveland Heights may consider appropriate contract use of Cuyahoga County resources; however, it is anticipated such use will be limited to addressing variable workloads and peak demands, and not for regular, core CMOM functions or CMOM management tasks.

38. The staffing plan shall propose a staffing schedule for the first five Years of CMOM Plan implementation. The schedule shall include proposed target dates for the hiring of specified numbers of staff, by job title, for that five-Year period. It should also estimate the anticipated reliance on contracted outside resources for that same five-Year period.

Cleveland Heights Consent Decree
Appendix C - Known SSOs

Count	SSO	Location
1	CH-1	Fairmount at North Woodland (3041)
2	CH-2	Fairmount at South Woodland (3026)
3	CH-3	Fairmount at Wellington (North Side)
4	CH-4	Fairmount at Dartmoor (North Side)
5	CH-5	Fairmount at Shelbourne
6	CH-6	Fairmount at Shelbourne
7	CH-7	Fairmount at Shelbourne (North Side)
8	CH-8	Fairmount at Lee (North Side)
9	CH-9	Bradford at Lee
10	CH-10	Hampshire Lane at Mayfield (North Vault)
11	CH-11	Hampshire Lane at Mayfield (South Vault)
12	CH-12	Lee at Superior
13	CH-13	Hampshire Lane at Euclid Heights
14	CH-14	Derbyshire at Euclid Heights
15	CH-15	Coventry at Cedar
16	CH-17	1685 Cumberland
17	CH-22	2225 Noble Road
18	CH-23	2828 Derbyshire
19	CH-24	3003 Euclid Heights
20	CH-25	Cumberland at Somerton
21	CH-26	Euclid Heights at Cumberland
22	CH-27	Quilliams - North of Randolph
23	CH-28	Euclid Heights at Lee
24	CH-30	Taylor Road North of Superior
25	CH-32	Fairmount at Arlington
26	CH-33	Fairmount at Fairfax
27	CH-35	Coventry and Fairmount
28	CH-36	North Park and Coventry (Northeast Corner)
29	CH-37	Fairfax at North Park (Northwest Corner)
30	CH-38	Fairmount at Marlboro
31	CH-39	3012 North Woodland
32	CH-42	12537 Cedar
33	CH-45	2764 Fairmount (In Island)
34	CH-46	Edgehill at Euclid Heights
35	CH-47	2528 Stratford
36	CH-49	2765 Fairmount (East of Church)
37	CH-50	Scarborough Road at Lamberton
38	CH-51	Langton at Atherstone
39	CH-52	Eddington north of Avondale

APPENDIX D:**SCHEDULE OF CONSENT DECREE REQUIREMENTS**

	REQUIREMENT	CITATION	SUBMIT FOR REVIEW AND APPROVAL
1	Have an operable, discoverable website dedicated to posting Consent Decree Deliverables	CD Main Text Section VII Paragraph 44	Within 1 month after CD lodged
2	Install information management system (IMS) on city computers	Appendix B Section A Paragraph 4.a	Within 4 months after CD lodged
3	Hire IT professional to implement IMS	Appendix B Section A Paragraph 4.b	July 1, 2017
4	Provide EPA a report that analyzes FOG and root problems	Appendix B Section A Paragraph 4.c	August 1, 2017
5	Carry out complete review of sewer maintenance spare parts inventory	Appendix B Section A Paragraph 4.e	September 1, 2017
6	Have at least 2 staff complete training provided by IMS software provider	Appendix B Section A Paragraph 4.d	Within 7 months after CD lodged
7	Develop and implement public information program for Sewer System	Appendix B Section A Paragraph 4.f	December 1, 2017
8	Have at least 7 employees complete training for assessment and certification of pipelines and manholes	Appendix B Section A Paragraph 4.h	December 1, 2017
9	Submit CMOM that satisfies Appendix B	CD Main Text Section V.C Paragraph 21	December 1, 2017
10	Submit SSES work plan for 2 phased approach	CD Main Text Section V.B Paragraph 17	December 4, 2017
11	Submit System Characterization Monitoring Plan that satisfies Appendix A	CD Main Text Section V.D Paragraph 25	March 2, 2018
12	Submit System Modeling Plan that satisfies Section E and IV in Appendix A	CD Main Text Section V.E Paragraph 26	March 30, 2018

REQUIREMENT		CITATION	SUBMIT FOR REVIEW AND APPROVAL
13	Fully implement and develop IMS system	Appendix B Section I Paragraph 28	December 1, 2018
14	Develop System Model of Sanitary Sewer that satisfies Section E and IV of Appendix A	CD Main Text Section V.E Paragraph 27	April 1, 2019
15	Complete Phase 1 SSES, satisfying Section II of Appendix A	CD Main Text Section V.B Paragraph 18	November 1, 2019
16	Submit Phase 1 SSES report to EPA	CD Main Text Section V.B Paragraph 18	February 3, 2020
17	Develop and submit Capacity Assessment Report	CD Main Text Section V.E Paragraph 28	March 2, 2020
18	Submit Integrated Overflow Control Master Plan	CD Main Text Section V.F Paragraph 30	June 1, 2021
19	Complete Phase 2 of the SSES	CD Main Text Section V.B Paragraph 19	June 30, 2021
20	Complete all action required in Section V	CD Main Text Section V Paragraph 12	June 30, 2021
21	Submit SSES Phase 2 report to EPA	CD Main Text Section V.B Paragraph 19	September 30, 2021
22	Post monthly SSO reports on city website	CD Main Text Section VII Paragraph 44.c	Recurring monthly
23	Must submit annual reports containing all information to determine compliance with CD	CD Main Text Section VII Paragraph 43	By March 31, annually
24	Must clean minimum of 25 miles of sanitary sewer each year	Appendix B Section E Paragraph 13.c	Recurring annually
25	Must inspect sewer segment with grade 3 condition of worse	Appendix B Section F Paragraph 18.c	Recurring every 5 years

REQUIREMENT		CITATION	SUBMIT FOR REVIEW AND APPROVAL
26	Must internally inspect entire sanitary sewer system	Appendix B Section F Paragraph 19	Recurring every 10 years