

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY

UNITED STATES OF AMERICA

Plaintiff,

v.

JERSEY CITY MUNICIPAL UTILITIES
AUTHORITY, and THE STATE OF
NEW JERSEY,

Defendants.

Civil Action No. _____

CONSENT DECREE

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WHEREAS, 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 Consent Decree alleging that Defendant Jersey City Municipal Utilities Authority (hereinafter "Defendant" or "JCMUA") violated Section 301(a) of the Clean Water Act ("CWA" or the "Act"), 33 U.S.C. Section 1311(a), and the New Jersey Pollutant Discharge Elimination System General Permit for Combined Sewer System ("CSS General Permit") that has been issued to it pursuant to Section 402 of the Act, 33 U.S.C. Section 1342, due to unauthorized, illegal and persistent discharges of pollutants from its Combined Sewer System. The State of New Jersey is a defendant in this action solely for the purposes of Section 309(e) of the Act, 33 U.S.C. § 1319(e).

WHEREAS, the Complaint against Defendant alleges that Defendant has violated the CWA and its CSS General Permit conditions and limitations in a number of ways, including but not limited to, causing dry weather overflows, failing to properly operate and maintain its combined sewer system, failing to prevent tidal intrusion into the collection system, and allowing the discharge of untreated sewage from the collection system onto public and private property located in Jersey City, where people have or could come into contact with the untreated sewage.

WHEREAS, Defendant does not admit any liability to the United States arising out of the transactions or occurrences alleged in the Complaint.

WHEREAS, 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 between the Parties and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, 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 Sections 309(b) and (d) of the CWA, 33 U.S.C. § 1319(b) and (d), and over the Parties. Venue lies in this District pursuant to Section 309(b) of the CWA, 33 U.S.C. § 1319(b), 28 U.S.C. §§ 1391(b) and (c), and 1395, because Defendant resides and is located in this judicial district. For purposes of this Decree, or any action to enforce this Decree, Defendant consents to the Court's jurisdiction over this Decree and any such action stemming from this Decree and consents to venue in this judicial district.

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

II. APPLICABILITY

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

4. No transfer of ownership or operation of the Facility, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Defendant of its obligation to ensure that the terms of the Decree are implemented. At least thirty (30) Days prior to such transfer, Defendant 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 EPA Region 2, the United States Attorney for the District of New Jersey, and the United States Department of Justice, in accordance with Section XV of this Decree (Notices). Any attempt to transfer ownership or operation of the Facility without complying with this Paragraph constitutes a violation of this Decree.

5. Defendant shall provide a copy of this Consent Decree to all officers, employees, and agents whose duties might reasonably include compliance with any provision of this Decree, as well as to any contractor retained to perform work required under this Consent Decree. Defendant shall condition any such contract upon performance of the work in conformity with the terms of this Consent Decree.

6. In any action to enforce this Consent Decree, Defendant 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. OBJECTIVE

7. The express purpose of the Parties entering into this Consent Decree is for Defendant to fulfill the requirements of the Clean Water Act, the regulations promulgated thereunder, and its CSS General Permit by operating and maintaining its Facility to maximize flow of untreated sewage to the proper treatment facility, as well as, eliminate any dry weather overflows, or discharges of untreated sewage from its Facility onto public and private property.

IV. DEFINITIONS

8. Terms used in this Consent decree that are defined in the CWA or in regulations promulgated pursuant to the CWA shall have the meanings assigned to them in the

CWA 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. "Building/Private Property Backup" shall mean a Sewer Overflow in the form of wastewater release or backup into a building or onto private property that is caused by blockages, flow conditions, or any malfunction in JCMUA's system. A wastewater backup or release, that is caused by blockages, flow conditions, or other malfunctions of a Private Lateral and/or Common Sewer is not a Building/Private Property Backup for purposes of this Decree.

b. "Common Sewer" shall mean a sanitary or combined sewer, which services two or more separately owned buildings and passes through or exists within two or more separately owned properties prior to connecting to the sewer in the public right of way.

c. "Complaint" shall mean the complaint filed by the United States in this action;

d. "Consent Decree" or "Decree" shall mean this Decree *and* all appendices attached hereto;

e. "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;

f. "Defendant" shall mean the Jersey City Municipal Utilities Authority ("JCMUA");

g. "Dry Weather Overflow" means a type of combined sewer overflow which is not the direct result of an increase in wastewater flows due to events of precipitation including floods, storm events, and prolonged snow melts;

h. "EPA" shall mean the United States Environmental Protection Agency and any of its successor departments or agencies;

i. "Effective Date" shall have the definition provided in Section XVI.

j. "Facility" shall mean Defendant's Combined Sewer Collection System, which includes: 232 miles of gravity sewers, 3,600 catch basins, 5,800 manholes, 20 combined sewer outfalls, 25 combined sewer regulators, 21 floatable control facilities, 20 netting facilities, 4 interceptor sewers, 11 remote pump stations, and 2 regional pump stations (east and west). Any changes to the Defendant's Combined Sewer Collection System after the Effective Date of this Decree shall also be included in the definition of Facility, and subject to the terms of this Decree.

k. "Paragraph" shall mean a portion of this Decree identified by an arabic numeral;

l. "Parties" to this Consent Decree shall mean the United States and Defendant;

m. "Private Lateral" shall mean that portion of the Wastewater Collection and Transmission System, not owned by the Defendant, used to convey wastewater from a building or buildings to that portion of the Wastewater Collection and Transmission System owned by Defendant;

n. "Section" shall mean a portion of this Decree identified by a roman numeral;

o. "Sewer Overflow" or "Overflow" shall mean an overflow, spill, diversion, or release of wastewater from the Defendant's sewer collection system. This term shall include: 1) discharges to surface; and 2) any release of wastewater from the sewer collection system to public or private property that does not reach waters of the United States or the State, including Building/Private Property Backups;

p. "State" shall mean the State of New Jersey; and

q. "United States" shall mean the United States of America, acting on behalf of EPA.

V. CIVIL PENALTY

9. Within thirty (30) Days after the Effective Date of this Consent Decree, Defendant shall pay the sum of \$375,000.00 as a civil penalty, together with interest accruing from the date on which the Consent Decree is lodged with the Court, at the rate specified in 28 U.S.C. § 1961, as of the date of lodging.

10. Defendant shall pay the civil penalty due by FedWire Electronic Funds Transfer ("EFT") to the U.S. Department of Justice in accordance with written instructions to be provided to Defendant, following entry of the Consent Decree, by the Financial Litigation Unit of the U.S. Attorney's Office for the District of New Jersey, Federal Building, Room 701, 970 Broad Street, Newark, NJ 07102-2506. At the time of payment, Defendant shall send a copy of the EFT authorization form and the EFT transaction record, together with a transmittal letter, which shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in

United States v. Jersey City Municipal Utilities Authority, and shall reference the civil action number and DOJ case number 90-5-1-1-09499, to the United States in accordance with Section XV of this Decree (Notices); by email to acctsreceivable.CINWD@epa.gov; and by mail to:

EPA Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, Ohio 45268

11. Defendant shall not deduct any penalties paid under this Decree pursuant to this Section or Section IX (Stipulated Penalties) in calculating its federal or State or local income tax.

VI. COMPLIANCE REQUIREMENTS

12. At all times, Defendant shall comply with Section 301(a) of the CWA, 33 U.S.C. § 1311 (a), as well as the CSS General Permit issued pursuant to Section 402 of the CWA, 33 U.S.C. § 1342, and any permit Defendant subsequently applies for and obtains, including but not limited to the New Jersey Pollutant Discharge Elimination System permit ("NJPDES permit").

13. Defendant is undertaking a Combined Sewer System Capacity and Condition Assessment Study ("Capacity and Condition Assessment Study") to better understand its entire system and to identify actions that need to be undertaken to address flooding and other problems on its system. The Capacity and Condition Assessment Study should enable Defendant to prioritize improvements needed and begin addressing those improvements in an orderly fashion as capital improvement funding becomes available. Defendant has embarked on a phased approach to this Capacity and Condition Assessment Study. Defendant shall complete all phases of the Capacity and Condition Assessment Study no later than April 15, 2015. The

remaining phases of the Capacity and Condition Assessment Study shall be completed according to the following schedule:

Phase of the Capacity Assessment Study	Date Study is to be completed	Date the Report of the Study and Recommendations are to be submitted to EPA
Phase IV (1094 manholes and associated pipes inspected)	No later than January 15, 2012	No later than April 15, 2012
Phase V (1138 manholes inspected and associated pipes inspected)	No later than January 15, 2013	No later than April 15, 2013
Phase VI (1082 manholes inspected and associated pipes inspected)	No later than January 15, 2014	No later than April 15, 2014
Phase VII (1,227 manholes inspected and associated pipes inspected)	No later than January 15, 2015	No later than April 15, 2015

The locations to be inspected in the remaining phases of the Capacity and Condition Assessment Study are set forth in spreadsheets attached to this Consent Decree as Appendix A. After completing each phase of the Capacity and Condition Assessment Study, Defendant shall prepare for EPA approval a report containing any recommended actions that are to be implemented by Defendant as a result of the Study by the dates indicated above. Defendant's report to EPA shall include recommended actions and the time frame for completing each action. The Parties agree that the extent of the repairs and actions necessarily resulting from each phase of the Capacity and Condition Assessment Study are presently unknown and cannot be estimated until after each phase of the Capacity and Condition Assessment Study is completed. The Parties agree to confer on an as needed basis to discuss the relative priority to be given to the actions resulting from the Capacity and Condition Assessment Study. Defendant shall complete all of

the recommended actions resulting from the Capacity and Condition Assessment Study as soon as practicable, but no later than December 31, 2021.

14. Defendant will install a residential complaint system which should enable Defendant to better understand and characterize any releases that occur into public and private areas from its Facility. Defendant will analyze the complaints received on the system for a period of one year, and provide to EPA for approval no later than September 30, 2011 a report analyzing all received complaints, determinations made regarding the cause of the complaint, remedial actions taken and proposed to eliminate any release(s) on the system that are attributable to Defendant. EPA will provide comments on the report to Defendant within sixty (60) days of receipt. A summary of the residential complaints received shall be discussed in the Quarterly Reports required under Section VIII (Reporting Requirements).

15. Any unpermitted Sewer Overflow including a Building/Private Property Backup constitutes a violation of this Consent Decree.

16. Defendant shall purchase two additional vacuum trucks no later than August 31, 2011. These two vacuum trucks shall be in service no later than January 31, 2012. At all times during pendency of this Consent Decree, Defendant shall at a minimum maintain in service three vacuum trucks to assist with the operation and maintenance of its Facility. Failure to maintain three vacuum trucks throughout the duration of this Consent Decree constitutes a violation of the Consent Decree, and shall be included in the Quarterly Reports as required under Section VIII (Reporting Requirements).

17. No later than sixty (60) days after the Effective Date, Defendant shall post, and continuously thereafter shall maintain, signs within 10 feet of each and every CSO point.

Each such sign shall be in substantially the same form as the sign attached in Appendix B. Sign dimensions should be at a minimum 18 x 24 inches and made of durable weatherproof material. Signs shall be visible to the unaided eye from land and water from a distance of 100 feet. In the first Quarterly Report submitted pursuant to Section VIII after the completion date for the posting of the signs required by this Paragraph, an authorized representative of Defendant shall certify that all signs required by this Paragraph have been posted and remain in place.

18. Telemetry

a. Defendant has completed a telemetry feasibility study which was submitted to EPA for review and approval on December 14, 2010. This feasibility study was approved by EPA on February 10, 2011. Defendant shall install a telemetry system and implement a telemetry pilot study which will utilize both depth measurement for detection of CSO discharges and tide gate closure sensors for detection of tidal intrusion at the locations within its CSS identified below:

- i. Brown Place regulator chamber
- ii. Sip Avenue regulator chamber
- iii. Mill Creek regulator chamber
- iv. Mina Drive regulator chamber
- v. Second Street regulator chamber
- vi. Secaucus Road regulator chamber
- vii. Grand Street regulator chamber
- viii. York regulator chamber
- ix. Within the North West Interceptor

- x. Within the South West Interceptor
- xi. Within the North East Interceptor
- xii. Within the South East Interceptor

b. The pilot study telemetry system shall be designed to detect Dry Weather Overflows, Combined Sewer Overflows, and tidal intrusion. The Defendant shall install and implement the pilot study telemetry system by no later than October 15, 2011.

c. Defendant shall continuously implement the pilot study telemetry system and continue to detect Dry Weather Overflows, Combined Sewer Overflows and tidal intrusion until Defendant commences implementation of the telemetry system, consistent with Paragraph d., below.

d. By January 15, 2013, the Defendant shall submit a report with the results of the pilot study telemetry system to EPA for review and approval ("Telemetry Report"). The Telemetry Report shall include recommendations on the telemetry system to be installed on Defendant's Combined Sewer System, and a schedule for installation of telemetry on the system. Defendant shall install and implement the telemetry system as approved by EPA.

e. In the Quarterly Reports required under Section VIII (Reporting Requirements), the Defendant shall provide the following information based on data gathered from the pilot study telemetry system and approved telemetry system:

i. indicate when a Dry Weather Overflow occurs at the regulator chambers listed in a.i.– viii, above, including the estimated volume and duration of the Dry Weather Overflow; and

ii. when a CSO discharge occurs at the locations listed in a., above, during wet weather, indicate the duration (including start and stop time of the CSO event).

f. Based on rainfall data collected by the Defendant, the Defendant shall utilize the Storm Water Management Model ("SWMM") to estimate overflow volumes for its entire CSS, consisting of each regulator chamber location, and shall provide this information in the Quarterly Reports required under Section VIII (Reporting Requirements). For regulator chambers listed in a.i.– viii., above, the Quarterly Report shall show the SWMM results and the corresponding telemetry results for each Combined Sewer Overflow discharge.

g. Until otherwise excused by EPA pursuant to this Paragraph, Defendant shall continuously implement the telemetry system in the approved Telemetry Report and continue to detect dry weather overflows, combined sewer overflows and tidal intrusion until termination of the Consent Decree. After Defendant has satisfactorily completed the requirements of pilot telemetry study required under this Paragraph, Defendant may request that it terminate implementation of all or a portion of the telemetry system. After review of the Defendant's request, EPA shall in writing: a) approve the request; b) approve the request upon specified conditions; c) approve part of the request and disapprove the remainder; or d) disapprove the request. The determination of whether the Defendant may terminate all or part of the telemetry system is in the sole discretion of EPA.

19. Defendant shall prevent the intrusion of the receiving waters into Defendant's combined sewer collection and conveyance system past Defendant's combined sewer overflow control facilities (CSO regulators/tide gates). Such protection shall be provided against the intrusion of receiving waters.

20. Defendant shall take all measures necessary to prevent the occurrence of Dry Weather Overflows (DWOs). Each DWO event shall be reported as required under Section VIII (Reporting Requirements).

21. Defendant shall complete the Cuneo Place sewer replacement (between Ogden Avenue and Palisades Avenue) no later than July 30, 2011. The replacement includes two pipe reaches on Cuneo Place that total approximately 260 feet.

22. Defendant shall complete a sewer separation and regulator modification study for the combined sewers in Mina Drive (County Village area), between Route 440 to Sycamore Road on the east and from Pine Crest south to Briarwood Road. The Mina Drive Sewer separation study will include a detailed survey of the area including basement and first floor elevations, pipe elevations, and modeling of both sanitary and storm water flows. This study shall determine if sewer separation is feasible given the existing infrastructure. This study shall be completed no later than December 31, 2011, and the study with recommendations shall be sent to EPA for approval no later than March 15, 2012.

23. Defendant shall complete the sewer cleaning project at the Claremont Carteret Trunk Sewer no later than December 31, 2012. This project is more fully described in Appendix C.

24. Defendant shall construct a pump station at the Southern end of Pine Street where it intersects with the New Jersey Transit Light Rail tracks (referred to as the "Pine Street Pump Station"). The Pine Street Pump Station will pump combined sewage during wet weather conditions to prevent flooding at the southern end of Pine Street. The project will relieve flooding conditions in the Pine Street area by having a pump station that will

automatically start pumping combined sewage from the existing 15" combined sewer into the existing 30" sewer. The Pine Street Pump Station construction shall be completed, and in service no later than November 30, 2013.

25. Defendant shall complete the sewer cleaning and lining for Sixth and Tenth Streets area no later than March 1, 2014. This project is more fully described in Appendix C.

26. Defendant shall reconstruct the Van Winkle Trunk Sewer. This project will involve cleaning and installing a cured in place liner where the inter single wythe of brick has collapsed, and replacing the sewer pipes with reinforced concrete pipe where the interior two wythe of brick pipe has completely failed. This reconstruction project shall be completed no later than March 1, 2015.

27. Defendant shall replace the Brown Place Sewer no later than June 30, 2015. This project is more fully described in Appendix C.

28. Defendant shall finish replacing the Duncan Avenue Outfall areas no later than June 30, 2015. This project is more fully described in Appendix C.

29. Defendant shall replace portions of the sewers on Sip Avenue no later than August 30, 2015. This project is more fully described in Appendix C.

30. Defendant shall clean, line, and replace as necessary, the Grand Street Twin 54" Sewers. Construction for this project is expected to take a minimum of four years. This project shall be completed no later than October 1, 2019. This project is more fully described in Appendix C.

31. Operation and Maintenance. Defendant submitted the Operation and Maintenance Manual (O&M) with revisions (dated January 5, 2011) to EPA for approval, which EPA approved on January 19, 2011. Defendant shall maintain the O&M Manual as current, and review the O&M Manual periodically, but not less than once a year, to determine whether modifications or revisions to it are necessary and shall make such modifications. Defendant shall operate its system in accordance with its EPA approved O&M Manual, or as subsequently modified in accordance with this Paragraph. Defendant shall report to EPA in its Quarterly Report, as described in Section VIII of this Decree (Reporting Requirements), any revisions or updates made to the O&M Manual. Any proposed major modifications of the Manual shall be submitted to EPA for prior approval. The O&M Manual, and subsequent approved amendments and/or modifications to the Manual, is incorporated by reference as is set forth fully in this Decree, and shall be implemented in accordance with the dates contained in the schedule approved by EPA.

32. Pump Station Evaluation. JCMUA shall at all times maximize the conveyance of wastewater to the treatment plan(s) and minimize the frequency and duration of CSOs to the receiving waters.

a. Pump Station Operation and Maintenance. No later than January 1, 2013, JCMUA shall submit to EPA an evaluation of all pump stations throughout its CSS. This Pump Station Evaluation ("PSE") shall include, without limitation, for each pump station, an evaluation of the following:

- i. design capacity;
- ii. current effective capacity;

- iii. peak capacity;
- iv. adequacy of pump station condition, based upon both physical inspection and recent operating and mechanical failure history during at least the past five years;
- v. adequacy of pump station design and equipment, including standby pumps;
- vi. backup power;
- vii. availability of replacement parts;
- viii. routine and emergency funding mechanisms to make corrections;
- ix. adequacy of pump stations to convey contractual flow and maximize existing station capacity flow to PVSC;
- x. adequacy of pump stations to convey flow to PVSC from North Bergen;
- xi. critical response time, defined as the time interval between activation of the high wet well level alarm and the first CSO, under peak flow conditions; and
- xii. the ability of maintenance personnel to take corrective action within the critical response time calculated for the pump stations.

b. No later than July 1, 2013, based on the PSE, JCMUA shall submit an engineering report, for review and approval by EPA, in accordance with Approval of Deliverables Section of CD, which will make any necessary recommendations for upgrading the pump stations

("Pump Station Report") and will provide an implementation schedule, if necessary, to ensure that the following standards are maintained:

- i. all pump stations are operated in accordance with good engineering practices and the O&M Manual, considering current and expected future uses;
- ii. JCMUA maximizes the conveyance of wastewater to the treatment plant and to minimize the frequency and duration of CSOs to the receiving waters; and
- iii. All pump stations function in accordance with the requirements described in the "Pump Systems" chapter of the most current version of Water Environment Federation's Manual of Practice FD-4, "Design of Wastewater and Storm water Pump Stations."

Upon approval by EPA, the Pump Station Report shall be incorporated by reference as if set forth fully in this Decree. JCMUA shall implement the approved Pump Station Report, in accordance with the approved schedule, if any, and shall complete all work set forth in the approved schedule by no later than July 1, 2014. The Parties agree that the extent of any repairs and actions identified in the Pump Station Report are presently unknown and cannot be estimated until after the completion of the Pump Station Report; thus JCMUA may seek to modify the July 1, 2014 date pursuant to Section XVIII (Modification) if substantial repairs and actions are necessary. JCMUA shall continue to maintain pump stations in accordance with the O&M Manual thereafter.

33. Grease Inspection Program. Defendant has implemented a Grease Inspection Program. Defendant shall continue to implement the Grease Inspection Program throughout the duration of this Consent Decree including, at a minimum, the following: (1)

directing at least two employees to inspect food establishments in the Jersey City area that are connected to the combined sewer system, (2) coordinating inspections and Defendant's findings with the Passaic Valley Sewerage Commissioners (PVSC), and (3) notifying PVSC when violations are found, including, but not limited to, establishments that do not have grease traps and require such traps, establishments that do not properly maintain their grease traps or fail to properly maintain their outdoor grease or oil storage containers, and/or establishments whose storm drains show evidence of grease and/or oil. Defendant shall report on the grease program implementation in the Quarterly Reports, described in Section VIII, including information on staffing levels, and the number of inspections and copies of all notices provided to PVSC where violations were found.

34. Approval of Deliverables After review of any plan, report, or other item that is required to be submitted pursuant to this Consent Decree, EPA 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. If Defendant has not received any approval, partial approval, disapproval or comments from EPA to a plan, report, or other item or deliverable submitted by Defendant pursuant to this Decree within sixty (60) days of confirming EPA has received the plan, report or other item or deliverable, Defendant may proceed in implementing that plan, report or other item or deliverable. However, nothing in this Paragraph shall prevent EPA from discussing any concern it may have with any plan, report, or other item or deliverable submitted by Defendant at any time during the effectiveness of this Decree. Defendant shall make reasonable efforts to address any concern raised by EPA to a plan, report or other item or deliverable submitted pursuant to this Decree.

35. If the submission is approved pursuant to Paragraph 34.a, Defendant shall take all actions required by the plan, report, or other document, in accordance with the schedules and requirements of the plan, report, or other document, as approved. If the submission is conditionally approved or approved only in part, pursuant to Paragraph 34.b or 34.c, Defendant shall, upon written direction from EPA take all actions required by the approved plan, report, or other item that EPA determines are technically severable from any disapproved portions, subject to Defendant's right to dispute only the specified conditions or the disapproved portions, under Section XI of this Decree (Dispute Resolution).

36. If the submission is disapproved in whole or in part pursuant to Paragraph 34.c or 34.d, Defendant shall, within forty-five (45) Days or such other time as the Parties agree to in writing, correct all deficiencies and resubmit the plan, report, or other item, or disapproved portion thereof, for approval, in accordance with the preceding Paragraphs. If the resubmission is approved in whole or in part by EPA Defendant shall proceed in accordance with the preceding Paragraph.

37. Any stipulated penalties applicable to the original submission, as provided in Section IX of this Decree, shall accrue during the forty-five (45) Day period or other specified period, but shall not be payable unless the resubmission is untimely or is disapproved in whole or in part; provided that, if the original submission was so deficient as to constitute a material breach of Defendant's obligations under this Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

38. If a resubmitted plan, report, or other item, or portion thereof, is disapproved in whole or in part, EPA may again require Defendant to correct any deficiencies, in

accordance with the preceding Paragraphs, or may itself correct any deficiencies, subject to Defendant's right to invoke Dispute Resolution and the right of EPA to seek stipulated penalties as provided in the preceding Paragraphs.

39. Permits. Where any compliance obligation under this Section requires Defendant to obtain a federal, state, or local permit or approval, Defendant shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. Defendant may seek relief under the provisions of Section X of this Consent Decree (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 Defendant has submitted timely and complete applications and has taken all other actions necessary to obtain all such permits or approvals.

VII. SUPPLEMENTAL ENVIRONMENTAL PROJECT

40. Defendant shall implement a Supplemental Environmental Project ("SEP"), which is described as the removal of designated common sewers at the following addresses in Jersey City, New Jersey: 102 through 112A Yale Avenue (involves twelve houses), 14 through 26 Boyd Avenue (involves seven houses), 58 through 64 Clarke Avenue (involves four houses), 146 through 152 Romaine Avenue (involves four houses) and 143 through 147 Clerk Street (involves three houses). The Defendant shall construct individual lateral sewers in order to connect these buildings to its combined sewer system, thereby eliminating the common sewers at these locations. The SEP shall be completed by December 31, 2012. Although Defendant is not required by law to service common sewers connected to its combined collection system, problems with common sewers are responsible for numerous basement backups of

sewage in Jersey City. These basement backups constitute a threat to the public health of Jersey City's residents. The purpose of this SEP is to remove the designated common sewers in environmental justice localities to abate the aforementioned public health threat.

41. Defendant is responsible for the satisfactory completion of the SEP in accordance with the requirements of this Decree. "Satisfactory completion" for purposes of the SEP means removing the designated common sewers at all of the addresses listed above in Paragraph 40 with the construction of new laterals that will connect with the existing combined sewer mains in Defendant's combined collection system. Defendant may use contractors or consultants in planning and implementing the SEP.

42. With regard to the SEP, Defendant certifies the truth and accuracy of each of the following:

a. that all cost information provided to EPA in connection with EPA's approval of the SEP is complete and accurate and that Defendant in good faith estimates that the cost to implement the SEP exclusive of any permit costs, is \$550,000.00;

b. that, as of the date of executing this Decree, Defendant is not required to perform or develop the SEP by any federal, state, or local law or regulation and is not required to perform or develop the SEP by agreement, grant, or as injunctive relief awarded in any other action in any forum;

c. that the SEP is not a project that Defendant was planning or intending to construct, perform, or implement other than in settlement of the claims resolved in this Decree;

d. that Defendant is not a party to any open federal financial assistance transaction that is funding or could be used to fund the same activity as the SEP.

Defendant further certifies that, to the best of its knowledge and belief after reasonable inquiry, there is no such open federal financial transaction that is funding or could be used to fund the same activity as the SEP, nor has the same activity been described in an unsuccessful federal financial assistance transaction proposal submitted to EPA within two years of the date of this settlement. For the purposes of this certification, the term "open federal financial assistance transaction" refers to a grant, cooperative agreement, loan, federally-guaranteed loan guarantee or other mechanism for providing federal financial assistance whose performance period has not yet expired;

e. that Defendant has not received and will not receive credit for the SEP in any other enforcement action; and

f. that Defendant will not receive any reimbursement for any portion of the SEP from any other person.

43. SEP Completion Report

a. Within thirty (30) Days after the date set for completion of the SEP, Defendant shall submit a SEP Completion Report to the United States in accordance with Section XV of this Consent Decree (Notices). The SEP Completion Report shall contain the following information:

- i. a detailed description of the SEP as implemented;
- ii. a description of any problems encountered in completing the SEP and the solutions thereto;

- iii. an itemized list of all eligible SEP costs expended;
- iv. certification that the SEP has been fully implemented pursuant to the provisions of this Decree; and
- v. a description of the environmental and public health benefits resulting from implementation of the SEP (with a quantification of the benefits and pollutant reductions, if feasible).

44. EPA may, in its sole discretion, require information in addition to that described in the preceding Paragraph, in order to evaluate Defendant's SEP Completion Report.

45. After receiving the SEP Completion Report, the United States shall notify Defendant whether Defendant has satisfactorily completed the SEP. If Defendant has not completed the SEP in accordance with this Consent Decree, stipulated penalties may be assessed under Section IX of this Consent Decree.

46. Disputes concerning the satisfactory performance of the SEP and the amount of eligible SEP costs may be resolved under Section XI of this Decree (Dispute Resolution). No other disputes arising under this Section shall be subject to Dispute Resolution.

47. Each submission required under this Section shall be signed by an official with knowledge of the SEP and shall bear the certification language set forth in Paragraph 51.b.

48. Any public statement, oral or written, in print, film, or other media, made by Defendant making reference to the SEP under this Decree shall include the following language: "This project was undertaken in connection with the settlement of an enforcement action, United States v. Jersey City Municipal Utilities Authority, taken on behalf of the U.S. Environmental Protection Agency under the Clean Water Act."

49. For federal income tax purposes, Defendant agrees that it will neither capitalize into inventory or basis nor deduct any costs or expenditures incurred in performing the SEP.

50. If Defendant satisfactorily completes the SEP, but does not spend the full amount of the estimate set forth in Paragraph 42.a above, and if EPA determines that the amount remaining reasonably could be applied toward the removal of additional common sewers, Defendant shall propose additional location(s) for the removal of common sewer(s) within thirty (30) days of receiving notice from EPA that the remaining amount can reasonably be applied toward removing additional common sewer(s).

VIII. REPORTING REQUIREMENTS

51. Defendant shall submit the following Quarterly Progress Reports:

a. Beginning three months from the date of lodging of this Consent Decree, and throughout the effective period of this Consent Decree, Defendant shall submit to EPA a written report on a quarterly basis detailing the current status and/or progress of the actions taken in compliance with this Consent Decree, including any non-compliance with the requirements of this Decree. The Quarterly Progress Report shall report on Defendant's activities with regard to Section VI (Compliance Requirements) of this Consent Decree, along with all pertinent deliverables required to be submitted under this Consent Decree, and at a minimum shall set forth:

i. the specific activities undertaken by Defendant relating to completion of work required under the compliance schedules specified in this Consent Decree, and identification of those

requirements which have been accomplished since the previous report;

- ii. any impediments encountered by Defendant in meeting the compliance schedules under this Consent Decree, the steps that have been taken by Defendant to overcome such impediments, including the anticipated dates by which such steps will be taken;
- iii. a description of the requirements of this Consent Decree which were not complied with, the dates of such non-compliance, a description of steps taken to achieve and maintain compliance, and the computations made in determining the amount of stipulated penalties due; and .

b. Defendant shall submit the Quarterly Progress Reports within thirty (30) Days after the end of the three month period being reported. The above reporting requirements do not relieve Defendant of the obligation to submit reports or information required by the CWA, regulations promulgated thereunder, the General Permit, or any other permit or local, state, or federal law. All Quarterly Progress Reports and other submissions required pursuant to this Consent Decree shall be in English and signed by a responsible official. The Quarterly Progress Reports and all other submissions shall contain the following certification:

“I certify that based on my inquiry of the person or persons directly responsible for gathering the information, the information contained in or accompanying this submission 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, or for failure to submit information required to be submitted under this Consent Decree, including the possibility of fine and imprisonment for knowing violations.”

c. The Parties may agree that Defendant shall be required to submit Progress Reports on a tri-annual, rather than on a quarterly basis. Such agreement must be memorialized in writing by the Parties, and shall not be considered a "material modification" for purposes of Section XVIII of this Consent Decree (Modification).

52. If Defendant violates, or has reason to believe that it may violate, any requirement of this Consent Decree, Defendant shall notify the United States of such violation and its likely duration, in writing, within ten (10) business Days of the Day Defendant first becomes aware of the violation, with an explanation of the 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, Defendant shall so state in the report. Defendant 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 thirty (30) Days of the Day Defendant becomes aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Defendant of its obligation to provide the notice required by Section X of this Consent Decree (Force Majeure).

53. Whenever any violation of this Consent Decree or of any applicable permits or any other event affecting Defendant's performance under this Decree, or the performance of its Facility, may pose an immediate threat to the public health or welfare or the environment, Defendant shall notify EPA orally or by electronic or facsimile transmission as soon as possible, but no later than 24 hours after Defendant first knew of the violation or event. This procedure is in addition to the requirements set forth in the preceding Paragraph.

54. For any DWOs that occur throughout the duration of this Decree, Defendant shall provide to EPA and the State written notification of any DWOs within twenty-four (24) hours. The report shall describe the location of each DWO, an estimate of the volume (in gallons) discharged, the cause or suspected cause of the DWO, and the estimated date, time and duration when the dry weather overflow occurred. In addition, Defendant shall include information on the steps taken to reduce, eliminate, prevent recurrence of, and/or otherwise respond to the dry weather overflow. Defendant shall also submit to EPA copies of any written reports of DWOs that it provided to NJDEP, or any other governmental agencies or departments.

55. All reports shall be submitted to the persons designated in Section XV of this Consent Decree (Notices).

56. The reporting requirements of this Consent Decree do not relieve Defendant 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.

57. Any information provided pursuant to this Consent Decree may be used by the United States in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

58. Quarterly Progress Meetings

a. Representatives of EPA and Defendant shall convene informally at least on a quarterly basis pursuant to a mutually agreed-upon schedule to discuss Defendant's ongoing progress under the Consent Decree. The meeting should cover at least the following subjects:

- i. Progress in the implementation of the actions required by this Consent Decree;
- ii. Potential problems that may adversely affect progress in implementing the actions required by this Consent Decree; and
- iii. Measures that Defendant intends to take to correct problems and deficiencies encountered by Defendant or found by EPA in its inspections.

b. If, as a result of discussions at the Quarterly Progress Meetings, EPA and Defendant agree on actions to be taken and a schedule for such actions that are not otherwise provided for in this Consent Decree, the Parties shall, after consultation with counsel, follow the procedure set forth in Section XVIII (Modification). The Parties may agree that the progress meetings shall take place on a tri-annual, rather than on a quarterly basis. Such agreement must be memorialized in writing by the Parties, and shall not be considered a "material modification" for purposes of Section XVIII of this Consent Decree.

IX. STIPULATED PENALTIES

59. Defendant shall be liable for stipulated penalties to the United States for violations of this Consent Decree as specified below, unless excused under Section X (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.

60. Late Payment of Civil Penalty

If Defendant fails to pay the civil penalty required to be paid under Section V of this Decree (Civil Penalty) when due, Defendant shall pay a stipulated penalty of \$1,000.00 per Day for each Day that the payment is late.

61. Compliance with Section VI (Compliance Requirements)

The following stipulated penalties shall accrue per violation per Day for each violation of a requirement of Section VI, Paragraphs 13-33, as specified below:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 1,000.00	1st through 14th Day
\$ 2,000.00	15th through 30th Day
\$ 3,000.00	31st Day and beyond

62. Reporting Requirements

The following stipulated penalties shall accrue per violation per Day for each violation of the reporting requirements of Section VI and Section VIII of this Consent Decree, including the Reports/Plans as described in Paragraphs 13, 14, 18, 22, 31, 32, 33, 43, 51, 52, 53 and 54 of this Decree.

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 500.00	1st through 14th Day
\$ 1,000.00	15th through 30th Day
\$ 1,500.00	31st Day and beyond

63. Dry Weather Overflows: Defendant shall pay stipulated penalties in the amount of \$5,000.00 per Day for each DWO that occurs throughout the duration of this Decree when Defendant is not in compliance with its O & M Manual. Defendant shall pay stipulated penalties in the amount of \$1,500.00 per Day for each DWO that occurs throughout the duration of this Decree when Defendant is in compliance with its O & M Manual. The determination of whether the Defendant is in compliance with its O & M Manual is in the sole discretion of EPA.

64. SEP Compliance

a. If Defendant fails to satisfactorily complete the SEP by the deadline set forth in Paragraph 40, Defendant shall pay stipulated penalties for each day for which it fails to satisfactorily complete the SEP, as follows:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 500.00	1 st through 14 th day
\$ 1,000.00	15 th through 30 th Day
\$ 1,500.00	31st day and beyond

b. If Defendant fails to implement the SEP, or halts or abandons work on the SEP, Defendant shall pay a stipulated penalty of \$ 550,000.00. The penalty under this subparagraph shall accrue as of the date specified for completing the SEP or the date performance ceases, whichever is earlier.

65. Except as provided in subparagraph 64.b, above, 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.

66. EPA may in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due it under this Consent Decree.

67. Stipulated penalties shall continue to accrue as provided in Paragraph 65, 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, Defendant shall pay accrued penalties determined to be owing, together with interest, to the United States within thirty (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, Defendant shall pay all accrued penalties determined by the Court to be owing, together with interest, within sixty (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, Defendant shall pay all accrued penalties determined to be owing, together with interest, within fifteen (15) Days of receiving the final appellate court decision.

68. Obligations Prior to the Effective Date. 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 Paragraphs 13-33 that have occurred prior to the Effective Date of the Consent Decree, provided that stipulated penalties that may have

accrued prior to the Effective Date may not be collected unless and until this Consent Decree is entered by the Court.

69. Defendant shall pay stipulated penalties owing to the United States in the manner set forth and with the confirmation notices required by Paragraph 10, except that the transmittal letter shall state that the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid.

70. If Defendant fails to pay stipulated penalties according to the terms of this Consent Decree, Defendant 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 Defendant's failure to pay any stipulated penalties.

71. Subject to the provisions of Section XIII of this Consent Decree (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 for Defendant's violation of this Consent Decree or applicable law. Where a violation of this Consent Decree is also a violation of Section 301(a) of the CWA, 33 U.S.C. §§ 1311(a), or the permit issued pursuant to Section 402, 33.U.S.C. § 1342, Defendant shall be allowed a credit, for any stipulated penalties paid, against any statutory penalties imposed for such violation(s).

X. FORCE MAJEURE

72. "Force majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of Defendant, of any entity controlled by Defendant, or of Defendant's contractors, that delays or prevents the performance of any

obligation under this Consent Decree despite Defendant's best efforts to fulfill the obligation.

The requirement that Defendant 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 such event (a) as it is occurring and (b) after it has occurred to prevent or minimize any resulting delay to the greatest extent possible. "Force Majeure" does not include Defendant's financial inability to perform any obligation under this Consent Decree.

73. 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, Defendant shall provide notice orally or by electronic or facsimile transmission to Chief, Water Compliance Branch, Division of Enforcement Compliance Assistance, United States Environmental Protection Agency, Region 2, 290 Broadway - 20th Floor, New York, NY 10007, Fax # 212-637-3953, and, Chief, Water and General Law Branch, Office of Regional Counsel, United States Environmental Protection Agency, Region 2, 290 Broadway - 16th Floor, New York, NY 10007, Fax # 212-637-3202, within 72 hours of when Defendant first knew that the event might cause a delay. Within seven Days thereafter, Defendant shall provide in writing to EPA 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; Defendant's 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 Defendant, such event may cause or contribute to an endangerment to public health, welfare or the environment. Defendant 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 Defendant 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. Defendant shall be deemed to know of any circumstance of which Defendant, any entity controlled by Defendant, or Defendant's contractors knew or should have known.

74. If EPA 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 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 Defendant in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

75. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Defendant in writing of its decision.

76. If Defendant elects to invoke the dispute resolution procedures set forth in Section XI (Dispute Resolution), it shall do so no later than fifteen (15) Days after receipt of EPA's notice. In any such proceeding, Defendant 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 Defendant complied with the requirements of Paragraphs 72 and 73,

above. If Defendant carries this burden, the delay at issue shall be deemed not to be a violation by Defendant of the affected obligation of this Consent Decree identified to EPA and the Court.

XI. DISPUTE RESOLUTION

77. 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. Defendant's failure to seek resolution of a dispute under this Section shall preclude Defendant from raising any such issue as a defense to an action by the United States to enforce any obligation of Defendant arising under this Decree.

78. 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 Defendant 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 sixty (60) 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 twenty (20) Days after the conclusion of the informal negotiation period, Defendant invokes formal dispute resolution procedures as set forth below.

79. Formal Dispute Resolution. Defendant 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 Defendant's position and any supporting documentation relied upon by Defendant.

80. The United States shall serve its Statement of Position within forty-five (45) Days of receipt of Defendant's 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 Defendant, unless Defendant files a motion for judicial review of the dispute in accordance with the following Paragraph.

81. Defendant may seek judicial review of the dispute by filing with the Court and serving on the United States, in accordance with Section XV of this Consent Decree (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within ten (10) Days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Defendant's 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.

82. The United States shall respond to Defendant's motion within the time period allowed by the Local Rules of this Court. Defendant may file a reply memorandum to the extent permitted by the Local Rules.

83. Standard of Review

a. Disputes Concerning Matters Accorded Record Review. Except as otherwise provided in this Consent Decree, in any dispute brought under Paragraph 79 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, Defendant 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 79, Defendant shall bear the burden of demonstrating that its position complies with this Consent Decree and better furthers the objectives of the Consent Decree.

84. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Defendant 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 71. If Defendant does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section IX (Stipulated Penalties).

XII. INFORMATION COLLECTION AND RETENTION

85. The United States and its representatives, including attorneys, contractors, and consultants, shall have the right of entry into 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 in accordance with the terms of this Consent Decree;
- c. obtain samples and, upon request, splits of any samples taken by Defendant or its representatives, contractors, or consultants;
- d. obtain documentary evidence, including photographs and similar data; and
- e. assess Defendant's compliance with this Consent Decree.

86. Upon request, Defendant shall provide EPA or its authorized representatives splits of any samples taken by Defendant. Upon request, EPA shall provide Defendant splits of any samples taken by EPA.

87. Until five years after the termination of this Consent Decree, Defendant shall retain, and shall instruct its consultants, 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 consultants, contractors, or agents possession or control, or that come into its or its consultants, contractors, or agents possession or control, and that relate in any manner to Defendant's 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, Defendant shall provide copies of any documents, records, or other information required to be maintained under this Paragraph.

88. At the conclusion of the information-retention period provided in the preceding Paragraph, Defendant shall notify the United States at least ninety (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, Defendant shall deliver any such documents, records, or other information to EPA. Defendant 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 Defendant asserts such a privilege, it shall provide the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of each author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the privilege asserted by Defendant. However, no documents, records, or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege.

89. Defendant 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 Defendant seeks to protect as CBI, Defendant shall follow the procedures set forth in 40 C.F.R. Part 2.

90. 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 Defendant to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XIII. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

91. This Consent Decree resolves the civil claims of the United States for the violations alleged in the Complaint filed in this action through the date of lodging.

92. The United States reserves all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated in Paragraph 91. This Consent Decree shall not be construed to limit the rights of the United States to obtain penalties or injunctive relief under the CWA or implementing regulations, or under other federal or state laws, regulations, or permit conditions, except as expressly specified in Paragraph 91. The United States further reserves 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, Defendant's Facility, whether related to the violations addressed in this Consent Decree or otherwise.

93. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive relief, civil penalties, other appropriate relief relating to the Defendant's violations, Defendant 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 in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 91 of this Section.

94. This Consent Decree is not a permit, or a modification of any permit, under any federal, State, or local laws or regulations. Defendant is responsible for achieving and

maintaining complete compliance with all applicable federal, State, and local laws, regulations, and permits; and Defendant's 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 does not by its consent to the entry of this Consent Decree, warrant or aver in any manner that Defendant's compliance with any aspect of this Consent Decree will result in compliance with provisions of the CWA, 33 U.S.C. § 1251 *et seq.*, or with any other provisions of federal, State, or local laws, regulations, or permits.

95. This Consent Decree does not limit or affect the rights of Defendant or of the United States 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 Defendant, except as otherwise provided by law.

96. 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.

XIV. COSTS

97. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of the civil penalty or any stipulated penalties due but not paid by Defendant.

XV. NOTICES

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

To the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-1-1-09499

and

To EPA:

Chief, Water Compliance Branch
Division of Enforcement and Compliance Assistance
United States Environmental Protection Agency
Region 2
290 Broadway - 20th Floor
New York, NY 10007

AND

Chief, Water and General Law Branch
Office of Regional Counsel
United States Environmental Protection Agency
Region 2
290 Broadway - 16th Floor
New York, NY 10007

To Defendant JCMUA:

Jersey City Municipal Utilities Authority
555 Route 440
Jersey City, New Jersey 07305
Attention: Daniel F. Becht, Esq., Executive Director

With a copy to:

Elnardo J. Webster, Esq.
Trenk, DiPasquale, Webster, Della Fera & Sodono, P.C.
347 Mt. Pleasant Avenue, Suite 300
West Orange, New Jersey 07052

With a copy to:

Municipal Clerk

City of Jersey City
City Hall
280 Grove Street
Jersey City, New Jersey 07302

With a copy to:

Corporation Counsel
City of Jersey City
City Hall
280 Grove Street
Jersey City, New Jersey 07302

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

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

XVI. EFFECTIVE DATE

101. 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 Defendant 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.

XVII. RETENTION OF JURISDICTION

102. 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 XI and XVIII, or effectuating or enforcing compliance with the terms of this Decree.

XVIII. MODIFICATION

103. The terms of this Consent Decree, including any attached appendices, may be modified only by a subsequent written agreement signed of the Parties. Where the modification constitutes a material change to this Decree, it shall be effective only upon approval by the Court. Application for construction grants, State Revolving Loan Funds, or any other grants or loans, or other delays caused by inadequate facility planning or plans and specifications on the part of Defendant shall not be cause for extension of any required compliance date in this Consent Decree.

104. Any disputes concerning modification of this Decree shall be resolved pursuant to Section XI of this Decree (Dispute Resolution), provided, however, that instead of the burden of proof provided by Paragraph 83, 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).

XIX. TERMINATION

105. After Defendant has completed the requirements of Section VI (Compliance Requirements) of this Decree, has thereafter maintained continuous satisfactory compliance with this Consent Decree, has complied with all other requirements of this Consent Decree, including those relating to the SEP required by Section VII of this Consent Decree and has paid the civil penalty and any accrued stipulated penalties as required by this Consent Decree, Defendant may serve upon the United States a Request for Termination, stating that Defendant

has satisfied those requirements, together with all necessary supporting documentation.

106. Following receipt by the United States of Defendant's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether Defendant has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States agrees that the Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Decree.

107. If the United States does not agree that the Decree may be terminated, Defendant may invoke Dispute Resolution under Section XI of this Decree. However, Defendant shall not seek Dispute Resolution of any dispute regarding termination, under Paragraph 79 of Section XI, until sixty (60) Days after service of its Request for Termination.

XX. PUBLIC PARTICIPATION

108. This Consent Decree shall be lodged with the Court for a period of not less than thirty (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. Defendant 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 Defendant in writing that it no longer supports entry of the Decree.

XXI. SIGNATORIES/SERVICE

109. Each undersigned representative of Defendant, and the Assistant Attorney General for the Environment and Natural Resources Division of 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.

110. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Defendant agrees to accept service of process by mail 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.

XXII. INTEGRATION

111. 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 deliverables 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.

XXIII. FINAL JUDGMENT

112. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States, the State,

and Defendant. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

APPENDICES

113. The following appendices are attached to and part of this Consent

Decree:

“Appendix A” lists the locations to be inspected in the remaining phases of the Capacity and Condition Assessment Study;

“Appendix B” is a sample CSO point sign; and

“Appendix C” explains certain requirements under Section IV (Compliance Requirements).

Dated and entered this __ day of _____, 2011.

UNITED STATES DISTRICT JUDGE
District of New Jersey

FOR PLAINTIFF UNITED STATES OF AMERICA:

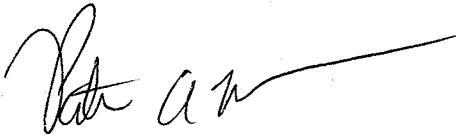


IGNACIA S. MORENO

Assistant Attorney General

Environment and Natural Resources Division

July 15, 2011



Patricia McKenna

Senior Attorney

Tyler Tarrant

Trial Attorney

U.S. Department of Justice

P.O. Box 7611

Ben Franklin Station

Washington, D.C. 20044-7611

Patricia.McKenna@usdoj.gov

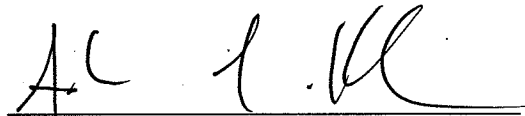
(202) 616-6517

Tyler.Tarrant@usdoj.gov

(202) 514-3483

WE HEREBY CONSENT to the entry of the Consent Decree in the United States v. Jersey City Municipal Utilities Authority, Civil Action No. _____, subject to the public notice and comment requirements of 28 C.F.R. §50.7.

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:



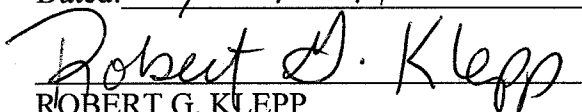
ADAM M. KUSHNER
Office Director
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Dated: 7.11.11



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

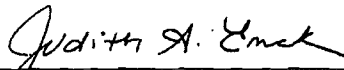
Dated: 7.1.11



ROBERT G. KLEPP
Attorney
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Dated: 6/30/11

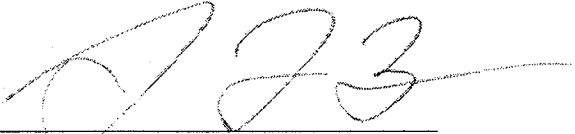
FOR THE ENVIRONMENTAL PROTECTION AGENCY:


JUDITH A. ENCK
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OF COUNSEL:

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Office of Regional Counsel
Region 2
U.S. Environmental Protection Agency
290 Broadway
New, York, New York 10007-1866

FOR DEFENDANT JERSEY CITY MUNICIPAL UTILITIES AUTHORITY:

A handwritten signature in dark ink, appearing to read 'D F Becht', written over a horizontal line.

DANIEL F. BECHT
EXECUTIVE DIRECTOR

APPENDIX A

REMAINING PHASES OF THE SEWER CAPACITY AND CONDITION ASSESSMENT STUDY

1. **PHASE IV** – to be completed in the spring/summer of 2011. A spreadsheet listing all the streets to be inspected during this phase is attached. There are 1094 manholes. This phase is centered on the downtown area bounded by the Hudson River west to the New Jersey Turnpike extensions/Hoboken Avenue, and from Hoboken/Jersey City line south to the Mill Creek Basin.

Schedule

<u>Task</u>	<u>Start Date</u>	<u>End Date</u>
Submit Proposal	January 4, 2011	January 4, 2011
Contract Award		January 27, 2011
Winter weather period	January 4, 2011	April 18, 2011
Manhole Inspections	April 18, 2011	September 16, 2011
Review & prepare Report	September 16, 2011	April 14, 2012
Submit to EPA	April 15, 2012	

Projected cost of Phase IV is \$575,000.00 plus \$208,000.00 for Police traffic control

2. **PHASE V** – to be completed in the spring/summer of 2012. A spreadsheet listing all the streets to be inspected during this phase is attached. There are 1183 manholes. The boundary line for this area begins at the intersection of Rte 139 and New Jersey Turnpike Extension running west along Rte 139 to St Tonnelle Avenue continuing west to the Hackensack River along the limit of drainage basin RW-3. Then south along the Hackensack River to New Jersey State Highway 7 then east to J. F. Kennedy Blvd. then south along J. F. Kennedy Blvd, to Belmont Avenue where the boundary runs east to Garfield Avenue, then south along Garfield Avenue to Caven Point Road. Boundary runs east along Caven Point Road to New Jersey Turnpike Extension north ending at the point of beginning.

Schedule

<u>Task</u>	<u>Start Date</u>	<u>End Date</u>
Submit Proposal	January 3, 2012	January 3, 2012
Contract Award		January 26, 2012
Winter weather period	January 3, 2012	April 13, 2012
Manhole Inspections	April 15, 2012	September 12, 2012
Review & prepare Report	September 13, 2012	April 12, 2013
Submit to EPA	April 15, 2013	

Projected cost of Phase V is \$592,250.00 plus \$214,200.00 for Police traffic control

3. **PHASE VI** – to be completed in the spring/summer of 2013. A spreadsheet listing all the streets to be inspected during this phase is attached. There are 1082 manholes. The northern boundary line for this area is New Jersey State Highway 7 than south along J. F. Kennedy Blvd. continuing south along the boundary line between drainage basins W-11, W-12 & W-13 with E-1 south to Bayonne/Jersey City line and north along the Hackensack River to Route 7.

Schedule

<u>Task</u>	<u>Start Date</u>	<u>End Date</u>
Submit Proposal	January 2, 2013	January 2, 2013
Contract Award		January 31, 2013
Winter weather period	January 2, 2013	April 12, 2013
Manhole Inspections	April 15, 2013	September 23, 2013
Review & prepare Report	September 24, 2013	April 14, 2014
Submit to EPA	April 15, 2014	

Projected cost of Phase V is \$610,000.00 plus \$220,600.00 for Police traffic control

4. **PHASE VII** to be completed in the spring/summer of 2014. A spreadsheet listing all the streets to be inspected during this phase is attached. There are 1227 manholes. The western boundary line for this area is J. F. Kennedy Blvd. and drainage basin limit line between W-11, W-12 & W-13 with E-1 south to Bayonne/Jersey City line and north along the Hudson River. This includes the Port Jersey Industrial area.

Schedule

<u>Task</u>	<u>Start Date</u>	<u>End Date</u>
Submit Proposal	January 2, 2014	January 2, 2014
Contract Award		January 30, 2014
Winter weather period	January 2, 2014	April 11, 2014
Manhole Inspections	April 14, 2014	September 18, 2014
Review & prepare Report	September 19, 2014	April 14, 2015
Submit to EPA	April 15, 2015	

Projected cost of Phase V is \$628,300.00 plus \$227,200.00 for Police traffic control

WARNING

**Possible Sewage Overflows
During and Following Wet Weather
Contact with Water May Cause Illness**



AVISO

**Posibles desbordamientos de aguas negras
durante y después de eventos de lluvia
El contacto con esta agua puede causar
enfermedades**

Report Foul Odors or
Unusual Discoloration
Call JCMUA at [201] 432-1150
or NJDEP Hotline at 1[877] 927-6337
Reference Sign No. _____
NJDES General Permit# NJ0105023
Authorization# NJ0108723

APPENDIX C

JERSEY CITY MUNICIPAL UTILITIES AUTHORITY **SEWER CONSTRUCTION AND CLEANING PROJECT DESCRIPTIONS**

1. CLAREMONT CARTERET TRUNK SEWER CLEANING –

The trunk sewers consist of two pipes: a 72-inch diameter brick pipe and a 96-inch diameter riveted steel pipe. During inspections of the trunk sewer in 2007, it was found that half of this pipe was filled with sediment. The sediment was being held in place by timber check dams embedded in 6" to 8" high concrete footings. These check dams are at 100 to 150 feet intervals, and the JCMUA does not have any record of who or when these dams were constructed. In 2008, the JCMUA personnel worked to clear the pipe removing sediment, and removed the timber portions of the check dams as well. However, the project was not completed due to budgetary constraints. In the summer of 2010, JCMUA utilized its contractor, Waterware, to remove the concrete footing portion of the check dams.

The scope of work for the Claremont Carteret Trunk Sewer Cleaning Project will consist of continuing to clean the trunk sewers from where work concluded in the Mulch Manufacturer's yard at the rear of 50 Caven Point Avenue Reliable Mulch Manufacturing (Mulch manufacture is located at the end of Caven Point Avenue adjacent to NJ Transit Light Rail Offices) extending to the intersection of Carteret Avenue and Garfield Avenue where the trunk sewer meets the collection system. The cleaning operation will utilize three vacuum trucks and a bucket truck, and will involve several employees. The ground surface from where operations stopped to Garfield Avenue is about 2,000 feet long across vacant lots with very uneven surfaces, a wood chip manufacturing facility, and New Jersey Transit Light Rail maintenance yard. The manholes are spaced between 400 ft and 800 ft. apart.

The Claremont and Carteret outfalls (outfalls 15 and 16) were inspected approximately 10-years ago and found to be in good condition but may require cleaning. The actual internal inspection of the outfalls will begin at the Claremont Carteret netting chamber extending downstream to the Tide gate Chamber located in Liberty State Park. This work will be done to determine pipe condition and if cleaning of the outfalls is required.

The cost of this work is anticipated to be \$600,000.00 in overtime for weekend work, fuel, materials and disposal cost of material removed.

2. SIXTH & TENTH STREETS CLEANING AND LINING AND SEWER REPLACEMENT (RE-16, 17 & 19)

The pipe reaches listed in the table below are to be cleaned and lined.

Sewer reaches to Cleaned and Lined		
Street	Upstream Manhole	Downstream Manhole
9 th Street	318	316
9 th Street	316	314
9 th Street	314	312
9 th Street	312	310
8 th Street	90	88
8 th Street	88	86
8 th Street	86	84
8 th Street	78	76
8 th Street	76	74
8 th Street	74	72
6 th Street	80	78
6 th Street	78	76
6 th Street	76	74
6 th Street	74	72

6 th Street	72	70
6 th Street	70	68
6 th Street	68	66
6 th Street	66	64
6 th Street	64	62

The cleaning and lining will be utilized to provide increased structural stability for the pipe. This will improve the pipes flow carrying capacity as well as extend the pipe's functional life. The method will utilize a cured in place liner. To install this type of liner closed circuit Television inspection of the mains will be done after cleaning to determine the location of sewer laterals and position around the pipe so the liner can be opened up at each lateral to allow the existing flow into the pipe. This work will required bypass pumping, as well as, extensive traffic control.

A portion of this project will also require replacing the sewer mains and manholes between manholes 86 to 84, 84 to 82, 82 to 80 and 92 to 90 on Tenth Street. These sewer pipes and manholes will be removed and replaced.

The anticipated project cost is \$550,000 for engineering and \$2 million for the construction work.

3. **BROWN PLACE SEWER REPLACEMENT**

The area of sewer construction will begin at Brown Place sewer replacement from the new manhole in Brown Place Right of Way east of Princeton Avenue to Garfield Avenue, the sewer reach between Node 19920 to manhole 330, Node 9920 to manhole No. 338 excluding the pipe reaches previously replaced as emergency construction and on Linden Avenue excluding the manhole reaches previously replaced as emergency construction. Along Brown Place, between Garfield Avenue and Princeton Avenue and just south of Princeton Avenue, more or less, and Princeton Avenue, between Brown Avenue and Linden Avenue, Between Princeton Avenue and Garfield Avenue, Garfield Avenue and Ocean Avenue, Ocean Avenue and Bergen Avenue.

The cost for engineering is anticipated to be \$500,000.00 and construction cost is anticipated to be \$3.5 million

4. **DUNCAN AVENUE OUTFALL** – Portion of the Outfall has been replaced over the course of the last 20 years; however, the project has never been completed. The Duncan Avenue Outfall is 2700 feet long and is comprised of 1375 ft - 84" Class III Reinforced Concrete Pipe (RCP), 795 ft - 72" corrugated metal culvert pipe and 530 ft of 42" circular brick. The 1375 ft of 84" RCP was constructed in Jersey City but never completed. The 795 ft - 72" is corrugated metal culvert pipe that has deteriorated and repaired a number of times. The 530 ft - 42" circular brick sewer is undersized for the volume of flow.

This project consists of two major types of construction methods: open trenching excavation for approximate distance of 1125 ft to install 1125 ft of 84" Class III Reinforced Concrete Pipe and the other is one of three tunneling methods either jacked bore/micro tunnel/shielded jacking to install twin 60" in diameter steel casing with 48" Plastic pipe inside a for a distance of 200 ft under Truck Rt. 1-9. The twin 48" Plastic pipe crossing is necessary to provide hydraulic capacity because there are too many utilities on both sides of Truck Rte 1&9 to install an 84" pipe. These utilities include the Northeast Interceptor, 13 kVA electrical cable in steel pipe, several gas mains, 16-inch water main, 8-inch water main and New Jersey Department of Transportation Storm Drainage pipe.

This project will have an estimated cost of \$4.5 million for design and construction.

5. **SIP AVENUE SEWER REPLACEMENT** – Sip Avenue Sewer replacement from Manhole 30 east of Freeman Avenue to the Sip Avenue regulator. The pipe is composed of 44" x 74" Heli-arch corrugated steel pipe (HACMP) and upstream of manhole is 54" circular brick pipe. To provide a more compatible hydraulic system the arch pipe will be replaced. Replacement of the Sip Avenue sewer will include the removal and replacement of 600 ft. of 44" x 74" Heli-arched corrugated metal culvert (HACMP). The invert of the 44" x 74" ACMP is 10 inches above the invert of the 54" diameter circular brick sewer. This project will replace the existing 44" x 74" pipe with a 54" Class III Reinforced Concrete Pipe from Freeman Avenue to the Sip Avenue Regulator.

This project will have an estimated cost of \$10.0 million for design and construction.

6. **GRAND STREET TWIN 54" SEWER REPAIRS** – During Phase III of the Capacity and Condition Assessment Study the Grand Street sewer system was of particular interest. There are multiply pipes running under Grand Street. During the CCTV investigation and subsequent video review the Fairmont Avenue sewer system also raised concerns. Below is a breakdown of the arrangement of sewer mains on Grand Street and Fairmont Avenue.

A breakdown of the 201 pipe reaches on Grand Street, 37 pipe reaches on Fairmont Avenue and eight (14) pipe reaches in the Mill Creek Trunk are shown below:

Area	Pipe Reach Description	# of Pipe Reaches
GRAND STREET	8" VP	2
	24" CB	4
	36" CB	15
	48" CB	53
	54" CB	72
	60" CB	13
	72" Steel	21
	84" CB	20
	5' x 12' BC	1
	TOTAL	201 (GRAND STREET)
FAIRMONT AVENUE	15" RCP	7
	18" VP	10
	40" CB	19
	40" CI	4
	30" x 19" HERCP	6
	TOTAL	37 (FAIRMONT AVENUE)
MILL CREEK TRUNK	54" RCP	3
	84	10
	216" x 92" Arch	1
	TOTAL	14 (MILL CREEK TRUNK)
	CUMULATIVE TOTAL	252 PIPE REACHES

Abbreviations

CI – cast iron pipe
 CB – Circular brick pipe
 OB – Oval Brick pipe a.k.a. Phillips Egg Shape
 VP – vitrified clay pipe
 BC – box culvert

RCP – reinforced concrete pipe
 Steel – rivet steel plate rolled to form pipe
 HERCP heli-elliptical reinforced concrete pipe
 ARCH also ACMP– corrugated metal pipe arch on concrete slab this only occurs in
 Jersey City at Mill CREEK

In review of the video inspection preformed by Inframetrics as part of the Grand Street sewer and Fairmont system it became obvious that there was some heavy cleaning required in some of the sewer mains while others were completely clean. The deposition of grit and sediment in sewers ended at Fairmont Avenue in Grand Street continuing upstream. However, the sewers on Fairmont Avenue had significant deposition of grit in some mains but not others. Mill Creek Trunk Sewer is included since there may be possible heavy deposition of solids in the trunk sewer.

In closer review of video inspection reports it was determined that there may be as many as 10 reaches on Grand Street possibly requiring replacement. Further cost inspection is required to determine if the observations are complete structural failure or only the inner wythe of brick has failed. There were other conditions observed and are as follows: Utility crossing through sewer main, cleaning required, lose or hanging brick(s), inner wythe collapse, seepage, repointing of joints inside the pipe, repair at lateral, protruding lateral, hanging debris and further investigation required.

Utility crossing through sewer main	cleaning required	lose or hanging brick(s)	inner wythe collapse	seepage	repointing of joints inside the pipe	repair at lateral	Hanging debris	protruding lateral	further investigation required
20	154	67	30	37	38	20	24	20	70

The improvements, reconstruction, repairs and maintenance work will range from complete sewer reach replacement at 10 possible locations on Grand Street. Fairmont will require further investigation after cleaning to determine which sections may require replacement. There are 40 sewer reaches, which, may require the use of a cured in place lining system or a shot-crete coating or sprayed on fiberglass liner or another type of lining system.

The 37 reaches where seepage appears will require some form of injected grouting to stop seepage. The grouting can vary from a cement-based grout to low viscosity chemical injection grout.

There are 38 pipe reaches requiring repointing of joints. In some of the pipe reaches simple filling of joints by pointing trowel will be acceptable, in other cases applying a troweled or shot crete coating will be more appropriate. Each reach requiring pointing will need to be evaluated independently.

Lateral repairs are patching of the pipe where a lateral has penetrated the pipe, each one will require further inspection to determine what method of repair is best suited for the condition, location in pipe, submergence and other varying factors. There are 10 protruding laterals which require cutting the pipe back to the face of the sewer main.

The removal of hanging debris can be accomplished during the cleaning process. There are 154 pipe reaches requiring cleaning to remove varying depths of sediment and grit from the sewers.

Further investigation is required on many of the pipe reaches already described to determine if more work is required or the condition of the pipe is better or worse than it appears on the video.

There are 20 pipe reaches with utilities running through the sewer main requiring relocation of the utility. Upon removal of the utility further investigation is required to determine as to the best method to seal or rebuild the pipe.

The estimated cost based on a number of assumptions regarding the number of pipes to be replaced verse lined verse just cleaned is \$22,000,000.00, which allows for yearly cost price index of 5% each year over the ten year period.