

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF MISSOURI  
WESTERN DIVISION

UNITED STATES OF AMERICA, )

)

)

)

)

)

Civil Action No. 4:10-cv-0497-GAF

Plaintiff, )

)

v. )

)

THE CITY OF KANSAS CITY, )

MISSOURI )

)

Defendant. )

)

THE STATE OF MISSOURI )

)

Non-aligned Party, )

Joined pursuant to 33 U.S.C. § 1319(e) )

)

)

)

**THIRD AMENDED CONSENT DECREE**

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## AMENDED CONSENT DECREE

WHEREAS, Plaintiff, the United States of America (“United States”), by the authority of the Attorney General of the United States and through its undersigned counsel, acting at the request and on behalf of the Administrator of the United States Environmental Protection Agency (“EPA”), on May 18, 2010 filed a Complaint concurrently with the Consent Decree, alleging that Defendant, the City of Kansas City, Missouri (“Kansas City,” “City,” or “Defendant”) has violated and continues to violate the Clean Water Act (“the Act” or “CWA”), 33 U.S.C. § 1251 et seq., and the conditions and limitations of its National Pollutant Discharge Elimination System (“NPDES”) Permit Numbers MO-0024929, MO-0024911, MO-0049531, MO-0048313, MO-0048305, and MO-0024961, by discharging untreated sewage from its sewage collection system, including but not limited to Combined Sewer Overflows (“CSOs”) and Sanitary Sewer Overflows (“SSOs”), as these terms are defined in Section V of this Amended Consent Decree, into the Missouri River, Fishing River, Wilkerson Creek, Rocky Branch Creek, Todd Creek, Blue River, Brush Creek, Penn Valley Lake, and their tributaries, hereinafter “receiving streams” as defined in Section V of this Amended Consent Decree;

WHEREAS, the Defendant is a municipality organized and existing under the laws and constitution of the State of Missouri;

WHEREAS, the Defendant owns and operates a Publicly Owned Treatment Works (“POTW”) that includes six wastewater treatment plants and associated collection systems in Kansas City, that serves the citizens of Kansas City, and several surrounding counties and municipalities. Four of the wastewater treatment plants owned and operated by the City are located within the separate sanitary sewer system and are permitted to discharge treated effluent into the

Missouri River, Fishing River, Wilkerson Creek, Rocky Branch Creek, Todd Creek, and their tributaries. These separate sanitary sewer system wastewater treatment plants are the Birmingham Sewage Treatment Plant, Fishing River Wastewater Treatment Plant, Rocky Branch Wastewater Treatment Plant, and Todd Creek Wastewater Treatment Plant. Defendant also owns and operates two wastewater treatment plants located within the combined sewer system area: Westside Wastewater Treatment Plant and the Blue River Wastewater Treatment Facility. These two treatment plants are permitted to discharge treated effluent into the Missouri River;

WHEREAS, the claims contained in the Complaint were resolved by agreement of the United States and the City (jointly, the “Parties”) as reflected in the Consent Decree entered by this Court on September 27, 2010 (the “Consent Decree”), and as subsequently amended on January 9, 2015 and November 9, 2017;

WHEREAS, Kansas City has satisfied certain requirements of the Consent Decree, including payment of the civil penalty and performance of the Supplemental Environmental Project, and has made and continues to make good faith progress to implement the remaining requirements;

WHEREAS, in recognition of Kansas City’s demonstrated willingness to proactively address its CSOs and SSOs by timely meeting the requirements of the existing Consent Decree over the past ten years, as well as the City’s future commitments as detailed in this Amended Consent Decree, the United States is willing to utilize the adaptive management process as laid out in this Amended Consent Decree;

WHEREAS, the Parties have determined, in the course of Defendant’s implementation of the Consent Decree, that certain objectives of the Consent Decree may be achieved more effectively and/or more efficiently with amendment to certain provisions of the Consent Decree, including

modification to several control measures and their implementation;

WHEREAS, the Parties have determined, in the course of Defendant's implementation of the Consent Decree, that certain factual premises upon which the Consent Decree was based have changed in ways material to the effective and efficient implementation of the Consent Decree;

WHEREAS, recognition of the foregoing determinations and changed facts has caused the Parties twice previously to agree to modify the Consent Decree, with the Court's approval, and similar considerations cause the Parties now to seek the Court's approval of this Amended Consent Decree;

WHEREAS, the State of Missouri, has been joined in this action to satisfy the requirements of Section 309(e) of the Act, 33 U.S.C. § 1319(e). No allegation is made in the Complaint that the laws of Missouri prevent the City from raising revenues needed to comply with this Amended Consent Decree;

WHEREAS, pursuant to its NPDES permits, the City developed a Long Term Control Plan ("LTCP") and pursuant to its approved work plans, the LTCP is included in the City's Overflow Control Plan ("OCP"). The OCP includes the LTCP and a Sanitary Sewer System Control Plan ("SSSC Plan") to address both CSOs and SSOs;

WHEREAS, the City has followed the LTCP development process as provided in both EPA's April 19, 1994 "Combined Sewer Overflow (CSO) Policy" ("CSO Policy") and Missouri law in the development of its approved LTCP as part of the OCP. The State of Missouri approved the City's OCP by letter dated April 14, 2010;

WHEREAS, the City has developed a comprehensive Capacity, Management, Operation and Maintenance program ("CMOM") and has committed to continued full implementation of the

CMOM program consistent with its Current NPDES Permits and OCP;

WHEREAS, the City has developed a Nine Minimum Control (“NMC”) Plan consistent with the CSO Policy and has committed to continued full implementation of the NMC plan consistent with its Current NPDES Permits and OCP;

WHEREAS, this Amended Consent Decree does not, in any way, address nutrient controls which may be required by the current NPDES Permits for the City’s Wastewater Treatment Plants;

WHEREAS, the City has implemented green solutions in an effort to sustainably control sewer overflows and reduce environmental impacts from urban stormwater. Furthermore, the City intends to continue to apply an adaptive management approach in order to extensively utilize green infrastructure in lieu of and in addition to structural controls and EPA encourages the City to utilize green infrastructure as appropriate to reduce or replace gray Control Measures provided that any green measures proposed provide the same or greater level of control required by the Control Measures identified in Appendix “A” and are approved by EPA consistent with this Amended Consent Decree;

WHEREAS, EPA has approved specific Control Measures contained within the OCP, which the City shall implement, pursuant to the provisions and schedules specified in this Amended Consent Decree and its Appendices;

WHEREAS, the Control Measures required by this Amended Consent Decree set forth explicitly in Appendix “A” are designed to eliminate or reduce overflows from the Combined and Separate Sewer Systems and to improve water quality and protect human health and the environment. While it is acknowledged that continued implementation of the Control Measures will require significant further capital expenditures, the Parties have agreed to a modified

Appendix “A” that sets achievement of specific Performance Criteria on a schedule that recognizes the financial capabilities of the City and its ratepayers as well as the engineering demands required to achieve compliance with this Amended Consent Decree;

WHEREAS, in order to implement the remaining obligations of this Amended Consent Decree, the City has made a number of project, program, and financial assumptions, as detailed in Appendix “A,” based upon the information available to it at this time.

WHEREAS, the City, through the Mid America Assistance Coalition, provides assistance to low-income customers in need, and has, since the inception of the program in 2009, committed approximately \$2 million in funds, helping approximately 6,500 customers in need. The City intends to continue and/or to increase its annual level of commitment to this or other needs-based assistance programs throughout the implementation of this Amended Consent Decree;

WHEREAS, bi-weekly water quality samples have been collected since 2010 at seven locations along Brush Creek. Frequently, *E. coli* concentrations exceed the recreational season standard for full body contact. This is a public health concern along one of the City’s most iconic attractions for residents and visitors alike. The City continues to work with stakeholders to evaluate the best alternatives to expend the funds dedicated to this stream to yield the greatest environmental benefit and human health protection in the timeframe of this Amended Consent Decree;

WHEREAS, this third modification to the Consent Decree supersedes the Consent Decree and all prior modifications; and

WHEREAS, the Parties agree, and the Court, by entering this Amended Consent Decree, finds that this modification is fair, reasonable, and in the public interest and that entry of this Amended



Consent Decree is the most appropriate way of resolving the claims alleged in the Complaint.

NOW, THEREFORE, without admission by the City of any of the non-jurisdictional allegations in the Complaint and this Amended Consent Decree, and without adjudication of any issue of fact or law, and with the consent of the Parties, it is hereby ORDERED, ADJUDGED, and DECREED as follows:

### **I. JURISDICTION**

This Court has jurisdiction over the subject matter of this action and over the parties to this action pursuant to Section 309(b) of the CWA, 33 U.S.C. § 1319(b) and 28 U.S.C. §§1331, 1345, and 1355. The Complaint stated a claim upon which relief may be granted against the City under Section 309 of the CWA, 33 U.S.C. § 1319, for injunctive relief and civil penalties. The City waives any and all objections that it may have to the Court's jurisdiction to enter and enforce this Amended Consent Decree.

### **II. VENUE**

Venue is proper in this Court pursuant to Section 309(b) of the CWA, 33 U.S.C. § 1319(b) and 28 U.S.C. §§ 1391(b) and 1395(a).

### **III. BINDING EFFECT**

- A. The provisions of this Amended Consent Decree shall apply to and be binding on the City as defined in Section V below and its officers, directors, employees, agents, servants, successors and assigns, upon all persons, firms, and corporations in active concert or participation with the City or its officers, directors, agents, employees, successors and assigns, and upon the United States.
- B. Effective from the Date of Lodging of this Amended Consent Decree until its termination,

the City shall give written notice of this Amended Consent Decree to any person or entity to whom the City transfers ownership or operation of any wastewater treatment plant, collection system or any other portion of its wastewater treatment and collection system and shall provide a copy of this Amended Consent Decree to any such person or entity. The City shall notify EPA and the United States Department of Justice (“DOJ”) in writing of any successor in interest at least thirty (30) days prior to any such transfer. Any sale or transfer of the City’s interests in or operating role with respect to the City’s wastewater treatment plant or collection system shall not in any manner relieve the City of its responsibility to meet the terms and conditions of this Amended Consent Decree unless the Parties agree in writing.

- C. The City shall provide a copy of this Amended Consent Decree to each entity the City retains to perform the work or any portion thereof required by this Amended Consent Decree upon execution of any contract relating to such work, and shall provide a copy to each entity that the City is currently retaining no later than thirty (30) days after the date of entry of this Amended Consent Decree. Providing a copy shall include either making this Amended Consent Decree available electronically or by paper copy if requested by the entity retained. Any action taken by any entity retained by the City to implement the City’s duties under this Amended Consent Decree shall be considered an action of the City for purposes of determining compliance with this Amended Consent Decree.

#### **IV. PURPOSE**

The express purpose of the Parties entering into this Amended Consent Decree is for the City to take all measures necessary to: (a) achieve full compliance with the CWA and the regulations

promulgated thereunder; (b) achieve full compliance with the City's Current NPDES Permits as they relate to the capacity at the WWTPs and capacity, management, operation and maintenance of the collection systems; (c) achieve the goal of eliminating SSOs; and (d) to achieve the goal of eliminating bypasses prohibited by 40 C.F.R. § 122.41(m), as these terms are defined in Section V of this Amended Consent Decree.

## **V. DEFINITIONS**

- A. Unless otherwise defined herein, terms used in this Amended Consent Decree shall have the meanings given to those terms in the CWA, 33 U.S.C. §§ 1251 et seq., and the regulations promulgated under the CWA.
- B. The following terms used in this Amended Consent Decree shall be defined as follows:
1. "Amended Consent Decree" shall mean this Amended Consent Decree.
  2. "Achievement of Full Operation" shall mean completion of construction and installation of equipment or infrastructure such that the equipment or infrastructure has been placed into full operation and is expected to both function and perform as designed in accordance with Project Specifications.
  3. "Approved Supplemental Control Measures Plan" shall mean any Supplemental Control Measures Plan approved by EPA in accordance with Subparagraph VII.B of this Amended Consent Decree or established through Dispute Resolution pursuant to Section XIV of this Amended Consent Decree.
  4. "Bypass" as that term is defined in 40 C.F.R. § 122.41(m) means the intentional diversion of waste streams from any portion of a treatment facility. Any treatment plant bypass must be consistent with applicable regulatory and NPDES permit

- requirements.
5. “City” shall mean the City of Kansas City, Missouri.
  6. “Collection System” or “sewer system” shall mean the sewage collection and transmission system (including, but not limited to, all pipes, force mains, gravity sewer lines, lift stations, pump stations, diversion structures, manholes, and appurtenances thereto but does not in any way include private laterals) owned or operated by the City and designed to collect and convey wastewater (e.g., commercial, industrial and domestic wastewater) to the WWTPs or to one or more points of discharge.
  7. “Combined Sewer Overflow” or “CSO” shall mean a discharge, release and/or overflow from the combined sewer system at a point prior to the headworks of a WWTP.
  8. “Combined Sewer Overflow Outfall” or “CSO Outfall” shall mean the outfall from which a CSO is discharged.
  9. “Combined Sewer System” or “CSS” shall mean the portion of the City’s Sewer System designed to convey municipal sewage (i.e., domestic, commercial and industrial wastewaters) and storm water runoff through a single-pipe system to a WWTP and/or to a combined sewer overflow structure and/or overflow.
  10. “Consent Decree” shall mean the Consent Decree entered by this Court on September 27, 2010.
  11. “Control Measure” shall mean the construction, control measures, actions and other activities set forth in Appendix “A” or any revision to Appendix “A” made pursuant to the terms of this Amended Consent Decree, including the sewer system phase, basin,

control measure name, Project Specifications and Date of Achievement of Full Operation.

12. "Current NPDES Permits" means the City's NPDES Permits Nos. MO-0024929, effective date March 25, 2011, and revised April 22, 2014 and June 1, 2014; MO-0024911, effective date November 16, 2011; MO-0049531, effective date September 1, 2013, and revised July 1, 2014; MO-0048313, effective date November 15, 2011, and revised May 23, 2013; MO-0048305, effective date March 5, 2012; MO-0024961, effective date February 25, 2011, and revised August 8, 2012; and any such permit which succeeds Permit Nos. MO-0024929, MO-0024911, MO-0049531, MO-0048313, MO-0048305, and MO-0024961 issued to the City, and which is in effect at a particular time in question, and any extended, modified or reissued permit.
13. "Date of Entry of the Amended Consent Decree" shall mean the date this Third Amended Consent Decree is approved and signed by the Court.
14. "Date of Lodging of the Amended Consent Decree" shall mean the date this Consent Decree is filed for lodging with the Clerk of the Court for the United States District Court for the Western District of Missouri.
15. The terms "day" or "days" as used herein shall mean a calendar day or calendar days. In computing any period of time under this Amended Consent Decree, where the last day would fall on a Saturday, Sunday, federal or state holiday, the period shall run until the close of the next business day.
16. "Defendant" shall mean the City of Kansas City, Missouri.
17. "Design" shall include the completion of detailed plans and specifications as needed to

- begin construction.
18. “Final Capture of Wet Weather Flows” shall mean the overall Percent Capture of “Typical Year” Wet Weather Flows achieved upon the Achievement of Full Operation of all EPA-approved Control Measures and shall be no less than 85% calculated consistent with the 1994 CSO Control Policy, determined pursuant to Appendix “D,” Post-Construction Monitoring Program.
  19. “Gravity sewer line” shall mean a pipe that receives, contains and conveys wastewater not normally under pressure, which wastewater is intended to flow unassisted under the influence of gravity.
  20. “Green Infrastructure” shall mean a wastewater treatment technology or process that uses natural or engineered systems, such as green roofs, rain gardens and permeable pavement that mimics natural processes and directs storm water to areas where it can be stored, infiltrated, evapotranspired, or re-used.
  21. “Infiltration,” as defined by 40 C.F.R. § 35.2005(b)(20) shall mean water other than wastewater that enters a sewer system (including sewer service connections and foundation drains) from the ground through means including, but not limited to, defective pipes, pipe joints, connections, or manholes.
  22. “Inflow,” as defined by 40 C.F.R. § 35.2005(b)(21), shall mean water other than wastewater that enters a sewer system (including sewer service connections) from sources including, but not limited to, roof leaders, cellar drains, yard drains, area drains, drains from springs and swampy areas, manhole covers, cross connections between storm sewers and sanitary sewers, foundation drains, storm sewers, catch basins,

- cooling water discharges, storm waters, surface runoff, street wash waters, or drainage.
23. “Interim Percent Capture of Wet Weather Flows” shall mean the percentage of the total overall volume capture of “Typical Year” wet weather flows required to be achieved by December 31, 2024, December 31, 2030, and December 31, 2035, respectively, as set forth in Appendix “A.” Achievement of Interim Percent Capture of Wet Flows shall be determined pursuant to Appendix “D,” Post-Construction Monitoring Program.
24. “I/I” shall mean the total quantity of water from inflow and infiltration without distinguishing the source.
25. “MGD” or “mgd” means million gallons per day.
26. “Monthly Operating Report” or “MOR” is defined as those discharge monitoring reports which Kansas City submits to the MDNR on a monthly basis pursuant to Section A of the City’s NPDES Permit Nos. MO-0024929, MO-0024911, MO-0049531, MO-0048313, MO-0048305, and MO-0024961 and any similar provision in any of the City’s Current NPDES Permits.
27. “Missouri DNR” or “MDNR” means the State of Missouri Department of Natural Resources, a part of the executive branch of the government of the State of Missouri. Subject to the supervisory, rulemaking, and adjudicative authority of the Missouri Clean Water Commission, as described in Chapter 644 RSMo. MDNR issued the Current NPDES Permits at issue in this Amended Consent Decree.
28. “Overflow Control Plan” or “OCP” shall mean, for the purpose of this Amended Consent Decree, the remedial measures, controls and activities, set forth in Appendix “A.” Many of these control measures derive from the Long Term Control Plan and

Sanitary Sewer System Plan collectively referred to by the City as the Overflow Control Plan approved by the MDNR by letter dated April 14, 2010.

29. "Paragraph" shall mean a portion of this Amended Consent Decree identified by Arabic numerals.
30. "Parties" shall mean the signatories to this Amended Consent Decree, Plaintiff, the United States, and Defendant, the City of Kansas City, Missouri.
31. "Performance Criteria" shall mean the numeric and narrative specifications that must be met to achieve the Purpose of this Amended Consent Decree as set forth in Section IV, including the Interim Percent Capture of Wet Weather Flows and the Final Capture of Wet Weather Flows as specified in this Amended Consent Decree and Appendix "A," or as specified in any revision to Appendix "A" made pursuant to the terms of this Amended Consent Decree.
32. "Plaintiff" means the United States of America, on behalf of EPA.
33. "Project Specifications" shall mean the numeric and/or narrative specifications set forth in Table A.2 of Appendix "A" of this Amended Consent Decree.
34. "Post-Construction Monitoring Program" shall mean the post-construction monitoring program set forth as Appendix "D," as well as any additional post-construction monitoring or modeling activities as specified in any revision to Appendix "A" made pursuant to the terms of this Amended Consent Decree.
35. "Publicly Owned Treatment Works" or "POTW" shall mean a publicly owned treatment works or POTW as defined in 40 C.F.R. § 403.3(o).
36. "Receiving Stream" or "receiving water" or "receiving water body" shall mean water



- bodies that receive discharge from the treatment plants and/or the collection system(s), including but not limited to the Missouri River, Fishing River, Wilkerson Creek, Rocky Branch Creek, Todd Creek, Blue River, Brush Creek, Penn Valley Lake, and other waters.
37. “Separate sanitary sewer system” or “SSS” shall mean a conduit designed, or modified in a process called “separation,” to carry only sewage, and not storm water, from residences, commercial buildings, industrial plants and institutions for treatment at a wastewater treatment plant.
38. “Sanitary sewer overflow,” or “SSO,” shall mean any discharge to waters of the United States from the City’s Sanitary Sewer Collection System through point sources not specified in any NPDES permit, as well as any release of wastewater from the City’s Separate Sanitary Sewer System to public or private property that does not reach waters of the United States or the State; provided, however, that wastewater backups into buildings that are caused by blockages, flow conditions, or malfunctions in a building lateral, other piping or conveyance system that is not owned or operationally controlled by the City or that are the result of overland, surface flooding not emanating from the City’s sewer system, are not SSOs for the purposes of this Amended Consent Decree.
39. “Section” shall mean a portion of this Amended Consent Decree identified by Roman numerals.
40. “State” shall mean the State of Missouri.
41. “Sub-paragraph” shall mean a portion of a paragraph identified by lower case letters.
42. “Subsection” shall mean a portion of this Amended Consent Decree identified by

capital letters.

43. “Unpermitted CSO Discharge” shall include any release of untreated or partially treated sewage from the City’s combined sewer system that is not authorized by any of the City’s NPDES permits.
44. “Supplemental Control Measures” shall mean any additional Control Measure approved as part of a Supplemental Control Measure Plan in accordance with Subparagraph VII.B of this Amended Consent Decree or established through Dispute Resolution pursuant to Section XIV of this Amended Consent Decree.
45. “Wastewater treatment plants” and “WWTPs” shall mean the wastewater treatment plants operated by the City and set forth as follows:
- ii Birmingham Sewage Treatment Plant, NPDES Permit MO-0049531, located in Clay County, at 10801 NE 28<sup>th</sup> Street, Kansas City, Missouri 64161;
  - iii Fishing River Wastewater Treatment Plant, NPDES Permit MO-0048313, located in Clay County, at 10300 NE 118<sup>th</sup> Street, Kansas City, Missouri 64157;
  - iv Rocky Branch Wastewater Treatment Plant, NPDES Permit MO-0048305, located in Clay County, at 500 NE 132<sup>nd</sup> Street, Kansas City, Missouri 64165;
  - v Todd Creek Wastewater Treatment Plant, NPDES Permit MO-0024961, located in Platte County, at 7600 NW 144<sup>th</sup> Street, Kansas City, Missouri 64163;
  - vi Westside Wastewater Treatment Plant, NPDES Permit MO-0024929, located in Jackson County, at 1849 Woodswether Road, Kansas City, Missouri 64105;
- and

vii Blue River Wastewater Treatment Facility, NPDES Permit MO-0024911, located in Jackson County, at 7300 Hawthorne Road, Kansas City, Missouri 64120.

## **VI. SUBMISSIONS REQUIRING EPA APPROVAL**

- A. EPA review: after review of any plan, report or other item that the City is required to submit for approval to EPA pursuant to this Amended Consent Decree, EPA shall: (a) approve the submission, in whole or in part; (b) approve the submission upon specified conditions; (c) disapprove, in whole or in part, the submission, providing comments identifying deficiencies and directing the City to modify the submission; or (d) any combination of the above. If EPA partially approves, disapproves the submission, in whole or in part, or if EPA approves it upon specified conditions, EPA shall notify the City in writing of those portions of the submission that EPA disapproves or approves upon specified conditions. Except where specifically provided otherwise, the City shall provide MDNR with copies of all submittals made to EPA. EPA shall provide MDNR notice and the opportunity to comment on the submittal, and EPA agrees to consider any comment by MDNR that is received by EPA within forty-five (45) days of the date of EPA's notice to MDNR.
- B. The City's obligations upon EPA approval: In the event of approval, or approval upon conditions by EPA, the City shall proceed to take any action required by the plan or other item as approved by EPA, except as provided in Subsection E.
- C. The City's obligations upon EPA disapproval: Upon receipt of notice of disapproval, partial approval, or conditional approval of a submission pursuant to Subsection VI.A

above, the City shall within sixty (60) days, if no other time frame is specified in the notice, address the disapproved portions of the plan, report or other item and resubmit the plan or other item for approval, subject to the City's rights under Section XIV, Dispute Resolution.

- D. Procedures for Resubmitted Plans: EPA may take any of the actions described in Subsection VI.A above with respect to any resubmitted document. In the event that EPA disapproves a resubmitted plan, report or other item, or portion thereof, EPA may again require the City to address the disapproved portions and resubmit the plan within sixty (60) days of receipt of the disapproval. If the City fails to timely submit the plan or again does not address the disapproved portions, the City shall be deemed out of compliance with this Amended Consent Decree. The City shall within ten (10) business days, unless a longer period is specified by EPA, proceed with any action required pursuant to the approved resubmitted plan, or the City may initiate the dispute resolution provisions of the Amended Consent Decree, pursuant to Section XIV. If the Court upholds EPA's disapproval or approval upon conditions, stipulated penalties shall accrue for such violation from the date on which the resubmitted submission was originally required.
- E. The City shall proceed, if directed by EPA, to take any action required by any approved portion of the City's submission or resubmission, unless such action is directly dependent upon any unapproved portion of, or condition of approval imposed by EPA on, the submission or resubmission and the City invokes its right to dispute resolution under Section XIV as to the unapproved portion or condition(s) imposed as part of EPA's approval. Implementation of any approved portion of a submission shall not relieve the City of any liability for stipulated penalties for not implementing the unapproved and/or

conditionally approved portion(s).

- F. Any stipulated penalties applicable to the original submission shall not be payable unless the first resubmission, as set forth in Subsection D above, is untimely or is disapproved in whole or in part so as to require another resubmission; provided that, if the original submission was so deficient as to constitute a material breach of the City's obligations under this Amended Consent Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmissions.
- G. All plans, reports, and other items required to be submitted to EPA under this Amended Consent Decree shall, upon approval by EPA pursuant to Section VI, herein, be enforceable under this Amended Consent Decree. In the event EPA approves or approves upon conditions a portion of a plan, report, or other item required to be submitted to EPA under this Amended Consent Decree, the approved portion shall be enforceable under this Amended Consent Decree, unless such action is directly dependent upon an unapproved portion of the submission or resubmission and the City invokes its right to dispute resolution under Section XIV.
- H. EPA agrees to use its best efforts to expeditiously review and comment on submittals that the City is required to submit to EPA for approval pursuant to the terms and provisions of this Amended Consent Decree. If EPA cannot complete its review of a submittal within ninety (90) days of receipt of the submittal, or within the time period otherwise provided in this Amended Consent Decree, EPA shall so notify the City before the expiration of the applicable review period. If EPA fails to approve, provide comments, or otherwise act on a submittal within ninety (90) days of receipt of the submittal, or within the time period

otherwise provided in this Amended Consent Decree, the City shall be granted an extension by EPA equal to the number of days that EPA's approval was untimely to complete any dependent subsequent milestones.

**VII. IMPLEMENTATION OF SEWER SYSTEM REMEDIAL MEASURES AND POST-CONSTRUCTION MONITORING**

A. Compliance Program and Schedules for the Implementation of the Control Measures. The City shall achieve and maintain compliance with the City's Current NPDES Permits as they relate to the capacity at the WWTPs and capacity, management, operation and maintenance of the collection systems, the provisions of the CWA, 33 U.S.C. § 1281 et seq., and the CSO Policy, in accordance with the compliance program and schedules set forth below.

1. Implementation of the Overflow Control Measures. The City shall implement the EPA-approved Control Measures and meet the Performance Criteria and implementation schedule in accordance with this Amended Consent Decree and Appendix "A." Implementation of all EPA-approved Control Measures set forth in Appendix "A" shall be pursuant to Section IV, Purpose, of this Amended Consent Decree. Upon the Date of Achievement of Full Operation for each Control Measure, the City shall certify to EPA that the Control Measure has been completed as designed in accordance with applicable Project Specifications. The City shall achieve full operation of all EPA-approved CSO Control Measures and meet all CSO Performance Criteria by no later than December 31, 2040, and shall achieve

full operation of all EPA-approved SSO Control Measures by no later than December 31, 2035.

2. Progression and Evaluation of the Phased Implementation of Control Measures:

- i. By December 31, 2024, the City shall achieve full operation of all Phase 1 Control Measures and meet the Phase 1 Interim Percent Capture of Wet Weather Flows of 66 percent, as specified in Appendix “A” or as specified in a plan approved by EPA pursuant to Section VII.A.3.iv.
- ii. By December 31, 2030, the City shall achieve full operation of all EPA-approved Phase 2 Control Measures and meet the Phase 2 Interim Percent Capture of Wet Weather Flows of 74 percent, as specified in Appendix “A” or as specified in a plan approved by EPA pursuant to Section VII.A.3.iv.
- iii. By December 31, 2035, the City shall achieve full operation of all EPA-approved Phase 3 Control Measures and meet the Phase 3 Interim Percent Capture of Wet Weather Flows of 77 percent, as specified in Appendix “A” or as specified in a plan approved by EPA pursuant to Section VII.A.3.iv.
- iv. By December 31, 2040, the City shall meet the Final Capture of Wet Weather Flows of 85 percent, as specified in Appendix “A,” and demonstrate compliance with the Final Capture of Wet Weather Flows consistent with Appendix “D.”

3. Opportunity to Request Revised or Alternative Control Measures:

- i. The City may request a revised and/or an alternative Control Measure in lieu of an EPA-approved Control Measure no less than two years prior to

the Date of Achievement of Full Operation for each SSO or CSO Control Measure as set forth in Appendix “A,” pursuant to the procedure set forth in this Section VII.A.3. The City will provide additional advance time for EPA review of more complex proposals, as appropriate and when seeking to replace SSO or CSO Control Measures with construction schedules longer than one year. The City may submit a proposal to EPA, for review and approval, of one or more revised and/or alternative Control Measure(s), including Project Specifications (such as size and length of new sewer lines, sewer infrastructure or upgraded pumping capacity; the volume of storage, acreage of Green Infrastructure improvements, or acreage of CSS area to be separated; and the anticipated volume reduction or level of service, etc.) and Achievement of Full Operation dates, in lieu of the specific SSO and CSO Control Measures set forth in Appendix “A.”

- ii. A proposed revised and/or alternative Control Measure must: (1) reflect sound engineering practices; (2) alone, or in conjunction with other Control Measures, result in an equal or greater level of control as that required for the original Control Measure(s) in Appendix “A”; and (3) include a schedule for implementation of the proposed revised and/or alternative Control Measure that is as expeditious as possible, but no later than the original Date of Achievement of Full Operation for the original Control Measure, provided EPA may approve a schedule extension of a Date of Achievement of Full Operation of up to one year for an alternative and/or



revised Control Measure that will achieve an equal or greater level of control than the original Control Measure where the City demonstrates the need for such an extension. “Equal or greater” level of control shall include consideration of the overall level of control as well as higher volumes or pollutant loadings resulting from delays in implementation or reordering of work.

- iii. In addition, EPA may approve a schedule extension of more than one year for the Date of Achievement of Full Operation for an alternative and/or revised Control Measure where the City demonstrates that the proposed alternative and/or revised Control Measure: (1) reflects sound engineering practices; (2) alone, or in conjunction with other Control Measures, will result in an equal or greater level of control as that required for the original Control Measure(s) in Appendix “A”; (3) includes a schedule for implementation that is as expeditious as possible; and (4) will result in no adverse short- or long-term impacts to sensitive waters or beneficial uses of affected waters, or any disproportionate impact on any one or more geographic areas. EPA’s action upon a request for an extension of more than one year shall be discretionary and not subject to review or dispute resolution under Section XIV of this Amended Consent Decree. As used in this paragraph, “equal or greater” level of control shall include consideration of the overall level of control as well as higher volumes or

pollutant loadings resulting from delays in implementation or reordering of work.

- iv. As part of any request for revised and/or alternative Control Measures, the City shall provide:
  1. Description of the process utilized to select the Control Measure;
  2. Modeled performance of the proposed project alone or in conjunction with other control measures; and
  3. A description of the public engagement process (to the extent warranted) concerning the revised and/or alternative Control Measures.
- v. EPA will review and approve or deny such requests pursuant to and governed by the procedures of Section VI of this Amended Consent Decree, except for those requests which include a schedule extension of more than one year for the Date of Achievement of Full Operation for an alternative and/or revised Control Measure, which will be reviewed and approved or denied pursuant to Section VII.A.3.iii. In no event will EPA's disapproval of any revised or alternative Control Measure be cause for the extension of a Date of Achievement of Final Operation for an existing Control Measure.
- vi. For the purposes of this Amended Consent Decree, a proposed revision and/or alternative to an EPA-approved Control Measure that changes an Interim Percent Capture of Wet Weather Flows, the Final Capture of Wet Weather Flows, a Date of Achievement of any Interim Percent Capture of

Wet Weather Flows, the Date of Achievement of Final Percent Capture of Wet Weather Flows, or any Typical Year CSO discharge volume reduction requirement shall constitute a material modification of this Amended Consent Decree requiring judicial approval pursuant to Section XXIV (Modification) of this Amended Consent Decree. Other proposed revisions and/or alternatives to EPA-approved Control Measures that meet the criteria in Section VII.A.3.ii., and as designed, will not cause any adverse impacts to sensitive water bodies or beneficial uses of affected waters, or any disproportionate impacts on any one or more geographic areas, if approved by EPA shall constitute non-material modifications pursuant to Section XXIV (Modification) of this Amended Consent Decree. For those requests that include a schedule extension of more than one year for the Date of Achievement of Full Operation for an alternative and/or revised Control Measure (which will be reviewed and approved or denied pursuant to Section VII.A.3.iii), EPA's determination that a proposal meets the requirements of Section VII.A.3 and EPA's decision to disapprove such a proposal shall not be subject to Section XIV, Dispute Resolution. In no event will Section VI.H. act to extend any deadline for Achievement of Full Operation of a Control Measure or to achieve an Interim Percent Capture of Wet Weather Flows or the Final Capture of Wet Weather Flows.

B. Demonstration of Compliance with Performance Criteria for Final Capture of Wet Weather Flows.

1. No later than December 31, 2032, the City shall submit to EPA for review and approval a Further Measures Plan that identifies any additional or revised control measures which the City determines are necessary to achieve the Final Capture of Wet Weather Flows by December 31, 2040. The City can use an integrated plan as that term is defined in Section 402(s) of the CWA, 33 U.S.C. § 1342(s), to guide its development of any Further Measures Plan. Any modification proposed by the City that would extend the deadline for Implementation of the Control Measures beyond December 31, 2040 shall be subject to Section XXIV (“Modification”) of this Amended Consent Decree and Rule 60(b).
2. By the latest specified date for Achievement of Full Operation for all the EPA-approved Control Measures as set forth in Appendix “A” and/or any revision to Appendix “A,” for each Phase, and by the December 31, 2040, final completion date, the City shall achieve the relevant Interim and Final Performance Criteria as specified in Appendix “A” and/or any revision to Appendix “A.” The Post-Construction Monitoring plan as set forth in Appendix “D” shall be used to determine whether the City has achieved the Interim and Final Performance Criteria and achieved the Purpose of this Amended Consent Decree, including compliance with its Current NPDES Permits.

- i. If by the latest specified Date of Achievement of Full Operation for all the EPA-approved Control Measures for each Phase, the City has failed to

achieve the Interim Percent Capture of Wet Weather Flows or the applicable criterion for the SSO Control Measure set forth in Table A, the City shall submit to EPA as soon as practicable but no later than 180 days after submittal of the Interim Evaluation of Progress Report for the SSO Control Measure or CSO Interim Percent Capture of Wet Weather Flows, as set forth in Appendix “A,” for EPA approval a plan for performing supplemental control measures and/or revising existing Control Measures and additional post-construction monitoring and modeling (“Supplemental Control Measures Plan”) that, at a minimum, shall include:

1. a detailed description of the proposed and/or revised control measure(s) to be implemented;
2. a demonstration that implementation of the proposed and/or revised Control Measure(s) will achieve, as appropriate, (i) Interim Percent Capture of Wet Weather Flows better than or equal to that which was to be achieved by the original Control Measure or equal to or better control than the applicable criterion set forth in Table A.2 for the original Control Measure;
3. a schedule for implementation of the proposed Supplemental Control Measure Plan that is as expeditious as possible, but no later than 2 years after EPA approval of the proposed Supplemental Control Measure however, EPA may approve a later date; and

4. a post-construction monitoring plan for the proposed supplemental or revised work in accordance with Appendix “D.”
  - ii. The City may develop an integrated plan as that term is defined in Section 402(s) of the CWA, 33 U.S.C. § 1342(s), to guide and inform its development of a Supplemental Control Measures Plan. EPA shall provide the opportunity to comment on the submittal to the State pursuant to Subsection VI.A.
  - iii. Upon EPA approval, the Supplemental Control Measures Plan shall be incorporated into Appendix “A,” be filed with the Court, and shall be enforceable pursuant to the terms of this Amended Consent Decree. A Supplemental Control Measures Plan that meets all of the requirements of Section VII.B.2.a and b and that does not change the final deadlines for compliance in Section VII.A.1, above, shall not be considered a material modification that requires judicial approval pursuant to Section XXIV, Modification, herein.
- C. The EPA’s decision to approve and/or disapprove a submission of a Supplemental Control Measures Plan shall be subject to Section XIV, Dispute Resolution, except that Section VI.H. will not act to extend any deadline pursuant to Section VII.B.3 for Achievement of Full Operation of the Supplemental Control Measures Plan, to achieve an Interim Percent Capture of Wet Weather Flows, or the Final Capture of Wet Weather Flows.

- D. Post-Construction Monitoring Program. The City shall perform the Post-Construction Monitoring pursuant to the CSO Policy and as set forth in Appendix “D.”
- E. Compliance with NPDES Permits. The City shall at all times comply with the City’s Current NPDES Permits as they relate to the capacity at the WWTPs and capacity, management, operation and maintenance of the collection systems, and the requirements set forth in the CSO Policy that no discharges from CSOs occur during dry weather.
- F. Nine Minimum Controls. The City shall implement its approved NMC Plan consistent with the requirements of the CSO Policy. The City shall annually review its NMC Plan and update the plan as necessary. If the City makes revisions to the approved NMC Plan, other than minor corrections or adjustments, the City shall submit such revised provisions to the EPA for review and approval, with a copy to MDNR. Such revisions shall not be considered modifications to this Amended Consent Decree for purposes of Section XXIV of this Amended Consent Decree.
- G. Elimination of Unpermitted CSO Discharges within the City’s Combined Sewer System. The City shall demonstrate that unpermitted CSO discharges from its Combined Sewer System have been eliminated to the extent practicable. If the City experiences an unpermitted CSO discharge, then the City shall by no later than five (5) days following such an event, submit a report to MDNR, in accordance with the City’s Current NPDES Permits.
- H. Capacity, Management, Operation and Maintenance Program. The City shall continue to implement the Capacity, Management, Operations, and Maintenance (“CMOM”) Program Plan incorporated into the Consent Decree and attached hereto as Appendix “C” to this

Amended Consent Decree. The City shall annually review its CMOM Program Plan and update the program as necessary to ensure proper operation and maintenance of the Sewer System in accordance with the City's Current NPDES Permits. If the City makes revisions to the approved CMOM Program Plan, other than minor corrections or adjustments, the City shall submit such revised provisions to the EPA for review and approval, with a copy to MDNR, in the annual report, pursuant to Section IX. Such revisions shall not be considered modifications for purposes of Section XXIV of this Consent Decree.

### **VIII. FUNDING**

The City intends to seek federal and state grant funding assistance. However, the City's duty to comply with the terms of this Amended Consent Decree is not contingent on the receipt of federal or state grant funds or the City's financial capabilities. Failure to comply is not excused by the lack of federal or state grant funds, by the processing of any applications for the same, or by the City's financial capabilities, except as expressly provided by Section XXIV.B of this Amended Consent Decree.

### **IX. REPORTING**

A. City shall submit in writing to EPA an electronic or hardcopy annual status report on or before March 31 of each year, for the preceding calendar year, for the duration of this Amended Consent Decree. The annual status report shall contain a summary of the status and progress of implementation of all Control Measures required by Section VII and Appendix "A," including but not limited to the status of the following matters:

1. Development and implementation of all plans and reports addressing Control Measures required by Section VII and Appendix "A" of this Amended Consent



Decree, including a statement of whether specific scheduled milestone dates in the schedules included in Appendix “A” were timely met during the reporting period. Upon completion of a specific project in Appendix “A,” the City shall submit a certification that the specified work has been completed consistent with the Date of Achievement of Full Operation and Project Specifications outlined in Appendix “A,” including the following documentation of the completed work to EPA:

- a. For work performed by a private contractor: an inspection report by City personnel of the completed project and certification by the Water Services Department Director, Deputy Director or Assistant Director, that the specified work has been completed.
  - b. For work performed by City personnel: a copy of the work order or similar document for the project verified by the Water Services Department Director, Deputy Director or Assistant Director, as having been completed.
  - c. The Water Services Department Director, Deputy Director or Assistant Director may delegate the certification responsibilities above by providing advance written notice to EPA for approval.
2. A statement setting forth the deadlines and other terms that the City is required by this Amended Consent Decree to meet since the date of the last annual report, whether and to what extent the City has met these requirements, and the reasons for any noncompliance;
  3. A general description of the progress made toward achievement of the Interim and Final Performance Criteria set forth in Appendix “A” within the twelve-month

period, and the work to be performed pursuant to Appendix “A” during the following twelve-month period. Notification to EPA of any anticipated delay in performance shall not, by itself, excuse the delay.

4. The annual status report shall contain a summary of and/or copies of reports documenting the following during the previous year:
  - a. Copies of all unpermitted CSO discharge reports submitted to MDNR.
  - b. Copies of all other reports that were submitted to MDNR under its Current NPDES Permits during the prior twelve (12) months not otherwise submitted to EPA. Nothing in this Amended Consent Decree shall be construed to modify the City’s Current NPDES Permits, so as to relieve the City of any of its reporting requirements pursuant to its Current NPDES Permits.
  - c. A report demonstrating compliance with the NMC Plan and CMOM Plan contained in Appendices “B” and “C,” respectively, during the prior twelve (12) months.
  - d. An update on implementation of Green Infrastructure Control Measures, that includes the following:
    - i. a narrative description of activities undertaken, progress made, problems encountered and resolutions, and other relevant developments in the City’s Green Infrastructure Program;
    - ii. a description of the results of implementation of the Green Infrastructure Monitoring Plan required by Section VII, including

the results of all Ongoing Field Performance Testing performed in the previous 12 months;

- iii. for each basin, an estimate of the volumes of storm water that will be controlled by Green Infrastructure Projects and thus diverted from the Combined Sewer System and from discharge as CSO;
- iv. a summary of maintenance and inspection tasks completed in the previous 12 months;
- v. a summary of Field Performance Testing results from representative sites completed since the Effective Date of this Amended Consent Decree, including an explanation of any deviation from the Project Specifications for those projects;
- vi. a description of any impediments to Green Infrastructure implementation and actions taken by the City to overcome such impediments, as well as these or similar impediments might be avoided in the future (lessons learned for future Green Infrastructure Projects); and
- vii. a summary of any corrective actions planned.

B. Any additional report required to be submitted pursuant to Appendix “D” shall be submitted in accordance with the schedules set forth therein.

C. All reports required to be submitted herein shall contain a certification in accordance with Section XVII of this Amended Consent Decree.

D. The City shall maintain copies of all written submissions prepared pursuant to this Section

and the Appendices of this Amended Consent Decree until the date of termination of this Consent Decree, unless upon the City's request, EPA agrees in writing to allow certain records to be discarded. The City shall provide notice to MDNR prior to any records being discarded.

- E. The City shall maintain on its website until termination of this Amended Consent Decree an updated copy of Table A.2 in Appendix "A" listing all approved Control Measures, and associated Project Specifications and implementation schedules.

## **X. COMMUNICATIONS**

- A. Except as specified otherwise, when the Plaintiff, Defendant, or MDNR transmit written notification (including all reports) or communication required by or in conjunction with the terms of the Amended Consent Decree to EPA, DOJ, the United States' Attorney, MDNR or the City, the notification shall be addressed as follows:

As to the United States Department of Justice:

Chief  
Environmental Enforcement Section  
Environment and Natural Resources Division  
U.S. Department of Justice  
Post Office Box 7611  
Washington, D.C. 20044-7611  
Reference Case No. 90-5-1-1-064381/1

As to the United States Attorney:

Assistant United States Attorney  
Western District of Missouri  
400 East 9<sup>th</sup> Street  
Kansas City, Missouri 64106

As to EPA:

Director  
Water Enforcement Branch  
Enforcement and Compliance Assurance Division  
U.S. Environmental Protection Agency, Region 7  
11201 Renner Boulevard  
Lenexa, Kansas 66219

and

Regional Counsel  
Office of Regional Counsel  
U.S. Environmental Protection Agency, Region 7  
11201 Renner Boulevard  
Lenexa, Kansas 66219

As to the State:

Chief Counsel Litigation Division  
State of Missouri Office of Attorney General  
207 West High Street  
Jefferson City, Missouri 65102

and

Chief  
Water Pollution Compliance and Enforcement Section  
Missouri Department of Natural Resources  
P.O. Box 176  
Jefferson City, Missouri 65102

and

Director  
Kansas City Regional Office  
Missouri Department of Natural Resources  
500 NE Colbern Road  
Lee's Summit, Missouri 64086-4710

As to the City:

City Attorney  
City of Kansas City, Missouri  
City Hall, 23rd Floor  
414 East 12<sup>th</sup> Street  
Kansas City, Missouri 64106

and

City Manager  
City of Kansas City, Missouri  
City Hall, 29th Floor  
414 E. 12th Street  
Kansas City, MO 64106

- B. The Parties, upon written notification to the others listed in Subsection X.A, above, may change the addresses for communication. All notifications or communications shall be deemed submitted on the date they are postmarked and sent by first class mail or certified mail, return receipt requested or sent by electronic mail.

#### **XI. CIVIL PENALTY**

The City has timely paid a civil penalty of \$600,000 in accordance with the terms of the Consent Decree in this matter.

#### **XII. STIPULATED PENALTIES**

- A. Failure to Submit Timely and/or Complete Documents required by Section VII and/or the Appendices of this Amended Consent Decree. The City shall be subject to pay to the United States stipulated penalties, as set forth below, for each day the City fails to submit and/or submits an incomplete or otherwise disapproved plan, report, or other submittal required under Section VII and/or the Appendices of this Amended Consent Decree or fails to make any required material changes to those documents per EPA's comments within the required time frames. If a due date falls on a holiday or weekend, the due date shall be the following business day. The City shall be subject to stipulated penalties for failure to meet each document submission date as follows:

**Period of Noncompliance**

**Penalty per Violation per Day**

1st to 30th day

\$500

31st to 60th day	\$1,000
more than 60 days	\$1,500

B. Remedial Measures Requirements. The City shall be subject to pay to the United States stipulated penalties as set forth below for each day the City fails to satisfy any remedial measures requirements set forth in Section VII, to include without limitation Achievement of Full Operation for each Control Measure by the date specified in Appendix “A” for each project and achieving the Interim or Final Percent Capture of Wet Weather Flows. Stipulated penalties for failure to meet an Interim Percent Capture of Wet Weather Flows shall accrue beginning on the applicable deadline set forth in Appendix “A,” unless the City has timely submitted the Supplemental Control Measures Plan in accordance with Section VII.B.1.a. The stipulated penalties for failure to meet each such requirement shall be as follows:

<b><u>Period of Noncompliance</u></b>	<b><u>Penalty per Violation per Day</u></b>
1st to 30th day	\$1,000
31st to 60th day	\$2,000
more than 60 days	\$4,000

C. Unpermitted CSO Discharges. The City shall be subject to pay stipulated penalties for any unpermitted CSO discharge as follows:

1. For each unpermitted CSO discharge occurring in a basin during the period from twelve (12) months after the date of entry of this Amended Consent Decree through the completion of basin specific EPA-approved Control Measures required by Section VII and/or the Appendices of this Amended Consent Decree, the City shall

be subject to pay \$500 per violation per day.

2. For each unpermitted CSO discharge occurring in a basin after completion of basin specific EPA-approved Control Measures required by Section VII and/or the Appendices of this Amended Consent Decree, the City shall be subject to pay a stipulated penalty of \$1,000 per violation per day.

D. Bypasses.

1. For any bypass that is prohibited by 40 C.F.R. § 122.41(m) and/or the City's Current NPDES Permits and occurs before the completion of the EPA-approved Control Measures required by Section VII and/or the Appendices of this Amended Consent Decree, the City shall be subject to a stipulated penalty of \$500 per day per bypass.
2. For any bypass that is prohibited by 40 C.F.R. § 122.41(m) and/or the City's Current NPDES Permits and occurs after the completion of the EPA-approved Control Measures required by Section VII and/or the Appendices of this Amended Consent Decree, the City shall be subject to a stipulated penalty of \$1,000 per day per bypass.

E. Sanitary Sewer Overflows. For each SSO that occurs, the City shall be subject to pay a stipulated penalty in the amount of \$500 per day per SSO.

F. Stipulated penalties shall automatically begin to accrue on the first day the City fails either to meet any of the schedules of performance required by this Amended Consent Decree or to satisfy any obligation or requirement of this Amended Consent Decree and shall



continue to accrue through the final day of the correction of the noncompliance or completion of the activity, but need not be paid except as provided in subsections A through D of Section XII of this Amended Consent Decree. Payment of stipulated penalties as set forth above shall be in addition to any other rights or remedies which may be available to the United States by reason of the City's failure to comply with requirements of this Amended Consent Decree, and any applicable federal, State or local laws, regulations, NPDES Permits, and all other applicable permits.

- G. Stipulated penalties shall be paid within thirty (30) days of EPA's written demand for payment, or as provided in the resolution of a dispute under Subsection XIV.E. Stipulated penalties shall be paid to the United States in accordance with the payment procedures detailed in Section XI, Civil Penalty. Copies of any checks and the transmittal letters shall be sent simultaneously to DOJ and EPA, as set forth in Section X.

### **XIII. FORCE MAJEURE**

- A. A "force majeure event" is any event beyond the control of the City, its contractors, or any entity controlled by the City that delays the performance of any obligation under this Amended Consent Decree despite the City's best efforts to fulfill the obligation. "Best efforts" includes anticipating any potential force majeure event and addressing 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. Unanticipated increased costs or expenses associated with implementation of this Amended Consent Decree and changed financial ability shall not, in any event, be considered a "force majeure event."
- B. The City shall provide notice orally or by electronic or facsimile transmission as soon as

possible, but not later than fourteen (14) days after the time the City first knew of, or by the exercise of due diligence, should have known of, a claimed force majeure event. The City shall also provide written notice, as provided in Section X of this Amended Consent Decree, within thirty (30) days of the time the City first knew of, or by the exercise of due diligence, should have known of, the event. The notice shall state the anticipated duration of any delay; its cause(s); the City's past and proposed actions to prevent or minimize any delay; a schedule for carrying out those actions; and the City's rationale for attributing any delay to a force majeure event. Failure to comply with these notice requirements shall preclude the City 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.

- C. If the United States agrees that a force majeure event has occurred, the United States shall provide an extension of time for the City to perform the affected requirements for the time necessary to complete those obligations. An extension of time to perform the obligations affected by a force majeure event shall not, by itself, extend the time to perform any other obligation. Where the United States agrees to an extension of time necessitated by a force majeure event, this shall be considered a non-material modification pursuant to Section XXIV of this Amended Consent Decree and shall not require Court approval.
- D. If the United States does not agree that a force majeure event has occurred or does not agree to the extension of time sought by the City, the United States' position shall be binding, unless the City invokes Dispute Resolution under Section XIV of this Amended Consent Decree. In any such dispute, the City bears the burden of proving, by a preponderance of the evidence, that each claimed force majeure event is a force majeure

event, that the City gave the notice required by Subsection XIII.B above, that the force majeure event caused any delay the City claims was attributable to that event, and that the City exercised best efforts to prevent or minimize any delay caused by the event.

#### **XIV. DISPUTE RESOLUTION**

- A. This Court shall retain jurisdiction for the purpose of adjudicating, in the manner provided in this Section, all disputes between the Parties, which may arise under this Amended Consent Decree.
- B. Unless otherwise expressly provided for in this Amended Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Amended Consent Decree.
- C. Informal Dispute Resolution. Any dispute subject to Dispute Resolution under this Amended Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when the City 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 thirty (30) days from the date the dispute arises, unless that period is modified by a written agreement. If the Parties cannot resolve a dispute by informal negotiations, the position advanced by the United States shall be considered binding unless, within thirty (30) days after the conclusion of the informal negotiation period, the City invokes formal dispute resolution procedures as set forth below or the Parties agree in writing to attempt to resolve the dispute through mediation. EPA shall provide MDNR notice of the informal dispute resolution negotiation and the opportunity to comment to EPA on the position advanced by the United States within the

informal negotiation period.

D. **Formal Dispute Resolution.** The City shall invoke formal dispute resolution procedures by serving on the United States a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but may not necessarily be limited to, any factual data, analysis, or opinion supporting the City's position and any supporting documentation relied upon by the City.

1. The United States shall serve its Statement of Position within thirty (30) days of receipt of the City's Statement of Position unless the Parties agree in writing to a longer period of additional time, and during this additional time, stipulated penalties shall not accrue. EPA agrees to consult with MDNR prior to finalizing the United States' Statement of Position. The United States' Statement of Position shall include, but may not necessarily 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 the City, unless the City files a motion for judicial review of the dispute in accordance with the following Paragraph.

2. The City may seek judicial review of the dispute by filing with the Court and serving on the United States, in accordance with Section X of this Amended Consent Decree, a motion requesting judicial resolution of the dispute. The motion must be filed within thirty (30) days of receipt of the United States' Statement of Position pursuant to the preceding paragraph unless the parties agree in writing to a longer period. The motion shall contain a written statement of the City'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 Amended Consent Decree.

3. The United States shall respond to the City's motion within the time period allowed by the Local Rules of this Court. The City may file a reply memorandum, to the extent permitted by the Local Rules of this Court.
4. In any dispute brought under this Subsection, the City shall have the burden of proof, and the standard and scope of review shall be that provided by applicable law.
5. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of the City under this Amended Consent Decree, unless and until final resolution of the dispute so provides.

E. **Stipulated Penalties.** Stipulated penalties with respect to any disputed matter (and interest thereon) shall accrue in accordance with Section XII of this Amended Consent Decree; however, payment of stipulated penalties, and any accrued interest, shall be stayed pending resolution of the dispute, as follows:

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

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

owing, and interest at the rate specified in 28 U.S.C. § 1961, within sixty (60) days of the effective date of the agreement or the receipt of EPA's decision.

2. If the dispute is appealed to this Court and the United States prevails in whole or in part, the City shall pay all accrued penalties determined by the Court to be owing, together with interest at the rate specified in 28 U.S.C. § 1961, within sixty (60) days of the Court's order, except as provided in subparagraph 3, below.
3. If any Party appeals the District Court's decision, Defendant shall pay all accrued penalties determined to be owing, together with interest at the rate specified in 28 U.S.C. § 1961, within 15 Days of receiving the final appellate court decision.

#### **XV. RIGHT OF ENTRY AND INFORMATION COLLECTION AND RETENTION**

- A. The United States, and its representatives, including attorneys, contractors, and consultants, shall have the right of entry into any facility covered by this Amended Consent Decree at all reasonable times, upon presentation of credentials, to: (1) monitor the progress of activities required under this Amended Consent Decree; (2) verify any data or information submitted to the United States and/or MDNR in accordance with the terms of this Amended Consent Decree; (3) obtain samples and, upon request, splits of any samples taken by the City or its representatives, contractors, or consultants; (4) obtain documentary evidence, including photographs and similar data; and (5) assess the City's compliance with this Amended Consent Decree.
- B. Upon request, the City shall provide EPA, or its authorized representatives splits of any samples taken by the City. Upon request, EPA shall provide the City splits of any samples taken by EPA, as well as copies of other documents collected, photos taken, or other non-

privileged information collected during any facility visit.

- C. Except as otherwise specifically provided for in this Amended Consent Decree, the City shall maintain copies of any reports, plans, permits, and documents submitted to EPA pursuant to this Amended Consent Decree, including any underlying research and data, for a period of five (5) years from the date of submission. Where a contractor fails to retain such documents, and the City can demonstrate that the contractor's missing or destroyed documents contained the same information as documents in the possession of the City, the City shall not be liable for the contractor's failure to retain such documents.
- D. At the conclusion of the information retention period provided in the preceding Subsection, the City 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 Subsection and, upon request by the United States, the City shall deliver any such documents, records, or other information to EPA. The City may assert that certain documents, records, or other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the City asserts such a privilege, it shall provide the following: (a) the title of the document, record, or information; (b) the date of the document, record, or information; (c) the name and title of each author of the document, record, or information; (d) the name and title of each addressee and recipient; (e) a description of the subject of the document, record, or information; and (f) the privilege asserted by the City. However, no documents, records, or other information required to be created or generated pursuant to the requirements of this Amended Consent Decree shall be withheld on grounds of privilege.

- E. The City 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 the City seeks to protect as CBI, the City shall follow the procedures set forth in 40 C.F.R. Part 2.
- F. This Amended 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 of Missouri pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of the City to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

#### **XVI. PERMIT OBLIGATIONS**

- A. This Amended Consent Decree does not authorize or approve the construction of any physical structure or facilities, or the modification of any existing treatment works or sewer system. Approval of such construction or modification shall be as required by applicable City, state, or federal laws or regulations, including applicable requirements of Missouri law and regulations with regard to permits to install.
- B. This Amended Consent Decree is not and shall not be interpreted to be a permit or modification of any Current NPDES Permit issued pursuant to Section 402 of the CWA, 33 U.S.C. § 1342. This Amended Consent Decree does not relieve the City of any obligation to apply for, obtain and comply with the requirements of any Current NPDES Permit, or to comply with any federal, state, or local laws or regulations.

#### **XVII. CERTIFICATION**

- A. Any report, plan, or other submission that the City is required by this Amended Consent



Decree to submit, including reports, plans or other submissions that the City is also required to submit by its Current NPDES Permits, shall be signed by an official or authorized agent of the City and shall include the following certification:

I certify under penalty of law that the document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted, and that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

- B. The City shall not object to the authenticity for purposes of admission into evidence of any report, plan, or other submission prepared in accordance with this Section or the information contained in said reports in any proceeding to enforce this Amended Consent Decree.

#### **XVIII. EFFECT OF SETTLEMENT AND RESERVATION OF RIGHTS**

- A. This Amended 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.
- B. The United States reserves all legal and equitable remedies available to enforce the provisions of this Amended Consent Decree, unless expressly stated in this Amended Consent Decree. This Amended Consent Decree shall not be construed to limit the rights of the United States or the State of Missouri to obtain penalties or injunctive relief under the CWA or implementing regulations, or under other federal or state laws, regulations, or permit conditions, unless expressly specified in this Amended Consent Decree. 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, the City's POTW, whether related to the violations addressed in this Amended Consent Decree or otherwise.

- C. This Amended Consent Decree is not a permit, or a modification of any permit, under any federal, state, or local laws or regulations. The City is responsible for achieving and maintaining complete compliance with all applicable federal, state, and local laws, regulations, and permits; and the City's compliance with this Amended Consent Decree shall not be a defense to any action commenced by the United States pursuant to any such laws, regulations, or permits. The United States does not, by its consent to the entry of this Amended Consent Decree, warrant or aver in any manner that the City's compliance with any aspect of this Amended 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.
- D. This Amended Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Amended Consent Decree.
- E. This Amended Consent Decree does not limit or affect the rights of the Parties against any third parties, not party to this Amended Consent Decree, nor does it limit the rights of third parties, not party to this Amended Consent Decree, against the City, except as otherwise provided by law.

### **XIX. FAILURE OF COMPLIANCE**

The United States reserves any and all legal and equitable remedies available to enforce the provisions of this Amended Consent Decree. The City reserves all legal and equitable defenses to enforcement under this Amended Consent Decree which are not specifically waived.

## **XX. MISSOURI AS A NON-ALIGNED PARTY**

The State of Missouri is joined as a non-aligned party to this action pursuant to Section 309(e) of the Act, 33 U.S.C. § 1319(e), which provides that whenever a municipality is a party to a civil action brought by the United States under this section, the State in which such municipality is located shall be joined as a party. The Plaintiff and Defendant reserve any and all claims and defenses with respect to the State's joinder.

## **XXI. COSTS OF SUIT**

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 and demanded but not paid by the City.

## **XXII. EFFECTIVE DATE**

The Effective Date of this Amended Consent Decree shall be the date upon which this Amended Consent Decree is entered by the Court.

## **XXIII. RETENTION OF JURISDICTION**

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

## XXIV. MODIFICATION

- A. Except as further set forth in this Section, there shall be no material modification of this Amended Consent Decree without written approval by all Parties and the Court; and any non-material modification of this Amended Consent Decree shall be in writing and signed by all Parties. Modifications (whether material or not) to this Amended Consent Decree that are specifically allowed under the terms of this Amended Consent Decree (including its Appendices) shall be made in accordance with the terms of this Amended Consent Decree.
- B. The City's request for modification may be based, among other things, on: (a) an integrated plan developed in accordance with Clean Water Act Section 402(s), 33 U.S.C. § 1342 and 33 U.S.C. § 1319; or (b) a current Financial Capability Assessment (based on EPA's Combined Sewer Overflows—Guidance for Financial Capability Assessment and Schedule Development, referenced at EPA 832-B-97-004 and dated February of 1997, and EPA's Financial Capability Assessment Framework, issued on November 24, 2014). If the Combined Sewer Overflows—Guidance for Financial Capability Assessment and Schedule Development or the Financial Capability Assessment Framework is modified or superseded after the Effective Date, the City's request for modification shall be based on the version that is in effect on the day that the request for modification is submitted.
1. Additionally, it is the intention of the Parties to this Amended Consent Decree that the City shall have the opportunity, consistent with applicable law, to conform compliance with this Amended Consent Decree to any modification in EPA's regulations or national policies governing SSOs, CSOs or bypassing; to

conform compliance with this Amended Consent Decree to any applicable new or revised water quality standards that have been approved or promulgated by EPA in accordance with 33 U.S.C. § 1313(c) and 40 C.F.R. § 131.21 and 131.22; and to conform compliance with this Amended Consent Decree to any new or more stringent requirements that are included in the City's Current NPDES Permits pertaining to the City's WWTPs or sewer system.

2. Consequently, upon issuance of any new federal law or state law or regulation that is as or more stringent than current federal law (as to the latter, as promulgated in the Federal Register) or national policy governing SSOs, CSOs or bypassing, upon EPA approval or promulgation of new or revised water quality standards in accordance with 33 U.S.C. § 1313(c) and 40 C.F.R. § 131.21 and 131.22; or upon the issuance of a Current Permit that contains new or more stringent requirements pertaining to the City's WWTPs or sewer system, the City may request modification of this Amended Consent Decree (including requests for extensions of time) from the United States to conform this Amended Consent Decree to such regulation, national policy, new or revised water quality standard or current permit.

C. Upon the City's written request for any modification, the Parties shall discuss the matter. If the Parties agree on a proposed modification to the Amended Consent Decree, they shall prepare a joint motion to the Court requesting such modification.

D. If the Parties do not agree, and the City still believes that the proposed modification of this Amended Consent Decree is appropriate, the City may seek resolution pursuant to Dispute

Resolution, Section XIV, and/or otherwise may file a motion seeking such modification in accordance with Federal Rules of Civil Procedure 60(b); provided, however, that nothing in this subparagraph is intended to waive the Plaintiff's rights to oppose such motion and to argue that such modification is unwarranted.

- E. Following the filing of a motion under Rule 60(b), stipulated penalties shall accrue due to the City's failure, if any, to continue performance of obligations under the Amended Consent Decree that are necessarily the subject of the Rule 60(b) motion; provided, however, that such penalties need not be paid if the Court resolves the motion in the City's favor, and the City shall comply with the Amended Consent Decree as modified.

#### **XXV. PUBLIC PARTICIPATION**

This Amended 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 Amended Consent Decree disclose facts or considerations indicating that this Amended Consent Decree is inappropriate, improper, or inadequate. The City consents to entry of this Amended Consent Decree without further notice.

#### **XXVI. SIGNATORIES AND SERVICE**

- A. Each undersigned representative of the City and the Assistant Attorney General for the Environment and Natural Resources Division of the DOJ certifies that he or she is fully authorized to enter into the terms and conditions of this Amended Consent Decree, to execute this document, and to legally bind the Party he or she represents to this document.
- B. This Amended Consent Decree may be signed in counterparts, and its validity shall not be

challenged on that basis.

- C. The City agrees not to oppose entry of this Amended Consent Decree by the Court or to challenge any provision of this Amended Consent Decree, unless the United States has notified the City in writing that it no longer supports entry of this Amended Consent Decree.
- D. The City agrees to accept service of process by mail with respect to all matters arising under or relating to this Amended 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.

#### **XXVII. INTEGRATION**

This Amended Consent Decree and its Appendices constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Amended Consent Decree and, with respect to the matters addressed herein, supersede all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. Other than the Appendices, which are attached hereto, and explicitly incorporated into this Amended Consent Decree, and deliverables that are subsequently submitted and approved pursuant to this Amended Consent Decree, no other document, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Amended Consent Decree or the settlement it represents, nor shall it be used in construing the terms of this Amended Consent Decree.

#### **XXVIII. TERMINATION**

Upon motion filed with the Court by the United States and/or the City, the Court shall

terminate this Amended Consent Decree upon finding that the following has occurred:

- A. The City has achieved and maintained compliance with all provisions of this Amended Consent Decree for twelve consecutive months to the satisfaction of EPA;
  - B. The City has achieved and maintained substantial compliance with the Current NPDES Permits for twelve consecutive months; and
  - C. The City has paid all penalties due and demanded under this Amended Consent Decree.
- If the City elects to unilaterally move the Court for termination, the City shall certify to the United States at least one hundred and twenty (120) days before filing a termination motion with the Court that it has met all the requirements above in this Section and provide documentation in support of such certification.

#### **XXIX. FINAL JUDGMENT**

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

#### **XXX. APPENDICES**

The following Appendices are attached to this Amended Consent Decree:

- A. Appendix “A” is Performance Criteria of the Overflow Control Program
- B. Appendix “B” is the Nine Minimum Control Plan Performance Criteria
- C. Appendix “C” is the Capacity, Management, Operation and Maintenance plan (“CMOM”) Performance Criteria
- D. Appendix “D” is the Post-Construction Monitoring Program Performance Criteria



THE UNDERSIGNED PARTIES enter into this Amended Consent Decree in the matter of United States vs. City of Kansas City, Missouri:

FOR THE UNITED STATES OF AMERICA:

JONATHAN BRIGHTBILL  
Principal Deputy Assistant Attorney General  
United States Department of Justice  
Environmental and Natural Resources Division

January 15, 2021  
Date

/s/ Frederick S. Phillips  
FREDERICK S. PHILLIPS D.C. Bar #433729  
Senior Trial Attorney  
United States Department of Justice  
Environmental and Natural Resource Division  
Environmental Enforcement Section  
P.O. Box 7611  
Washington D.C. 20044  
Telephone: 202-305-0439

TIMOTHY A. GARRISON  
United States Attorney  
Western District of Missouri

January 15, 2021  
Date

/s/ Charles M. Thomas  
CHARLES M. THOMAS Missouri Bar # 28522  
Assistant United States Attorney  
Charles Evans Whittaker Courthouse  
400 East Ninth Street, Room 5510  
Kansas City, Missouri 64106  
Telephone: 816-426-3130

THE UNDERSIGNED PARTIES enter into this Amended Consent Decree in the matter of United States vs. City of Kansas City, Missouri:

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

**JAMES  
GULLIFORD** Digitally signed by JAMES  
GULLIFORD  
Date: 2021.01.13  
07:30:53 -06'00'

\_\_\_\_\_  
Date

\_\_\_\_\_  
JAMES B. GULLIFORD  
Regional Administrator  
U.S. Environmental Protection Agency - Region 7  
11201 Renner Boulevard  
Lenexa, Kansas 66219

**DAVID  
COZAD** Digitally signed by DAVID  
COZAD  
Date: 2021.01.12  
15:37:33 -06'00'

\_\_\_\_\_  
Date

\_\_\_\_\_  
DAVID COZAD  
Director  
Enforcement and Compliance Assurance Division  
U.S. Environmental Protection Agency - Region 7  
11201 Renner Boulevard  
Lenexa, Kansas 66219

**LESLIE  
HUMPHREY** Digitally signed by  
LESLIE HUMPHREY  
Date: 2021.01.12  
14:47:30 -06'00'

\_\_\_\_\_  
Date

\_\_\_\_\_  
LESLIE HUMPHREY  
Regional Counsel  
Office of Regional Counsel  
U.S. Environmental Protection Agency - Region 7  
11201 Renner Boulevard  
Lenexa, Kansas 66219

**MELISSA  
BAGLEY** Digitally signed by  
MELISSA BAGLEY  
Date: 2021.01.12  
14:44:46 -06'00'

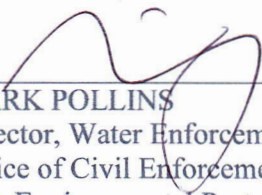
\_\_\_\_\_  
Date

\_\_\_\_\_  
MELISSA BAGLEY  
Assistant Regional Counsel  
Office of Regional Counsel  
U.S. Environmental Protection Agency - Region 7  
11201 Renner Boulevard  
Lenexa, Kansas 66219

THE UNDERSIGNED PARTIES enter into this Amended Consent Decree in the matter of United States vs. City of Kansas City, Missouri:

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

1/13/2021  
Date


  
\_\_\_\_\_  
MARK POLLINS  
Director, Water Enforcement Division  
Office of Civil Enforcement  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, D.C. 204060

OF COUNSEL:  
Chrisna Baptista  
Erin Grisby  
Attorneys-Advisors  
Water Enforcement Division  
Office of Civil Enforcement  
Office of Enforcement and Compliance Assurance  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW (MC: 2243A)  
Washington, D.C. 20460

THE UNDERSIGNED PARTIES enter into this Amended Consent Decree in the matter of United States vs. City of Kansas City, Missouri:


FOR THE CITY OF KANSAS CITY, MISSOURI:

1/15/21  
Date

  
\_\_\_\_\_  
BRIAN PLATT  
City Manager  
Office of the City Manager  
City Hall, 29<sup>th</sup> Floor  
414 East 12<sup>th</sup> Street  
Kansas City, Missouri 64106

APPROVED AS TO FORM:

1/15/21  
Date

  
\_\_\_\_\_  
MATTHEW GIGLIOTTI  
Acting City Attorney  
Office of the City Attorney  
City Hall, 23<sup>rd</sup> Floor  
414 East 12<sup>th</sup> Street  
Kansas City, Missouri 64106

## **APPENDIX A**

### **CONTROL MEASURES AND PERFORMANCE CRITERIA**

All terms used in this Appendix shall have the meaning set forth below and in Section V (“Definitions”) and Appendix “D” of the Amended Consent Decree.

#### **Implementation of Control Measures**

The City shall implement the Control Measures in Table A-2 as described below and/or as approved by EPA pursuant to the process specified in the Amended Consent Decree and this Appendix “A.”

The City shall implement the Control Measures in Table A-2 by the specified date for Achievement of Full Operation for each Control Measure as set forth in this Appendix “A” and/or any EPA-approved revision to Appendix “A.” The City shall certify to EPA that each Control Measure has been completed consistent with Section IX of this Amended Consent Decree. The City’s compliance with individual Control Measures shall not constitute a defense to a failure to achieve the Interim or Final Performance Criteria and shall not relieve the City of the obligation to submit plans proposing additional Control Measures pursuant to Section VII of the Amended Consent Decree.

#### **Final Capture of Wet Weather Flows**

Upon Achievement of Full Operation of all required Control Measures as described in Appendix “A” and/or as approved by EPA, the City shall achieve no less than 85 percent capture of wet weather flows for the Typical Year. Percent Capture of 85% shall be calculated consistent with the CSO Policy. This final performance criteria shall be considered to be met if 85% of the combined sewage is eliminated and/or captured consistent with the CSO Policy and the Typical Year CSO discharge volume is reduced by a minimum of 4.63 billion gallons as calculated using the City’s most recently calibrated hydraulic model and NOAA Atlas 14 temporal rainfall distribution and Areal Reduction Factors.

#### **Interim Percent Capture of Wet Weather Flows**

By December 31, 2024, the City shall achieve at least 66 percent capture of wet weather flows for the Typical Year. Percent capture shall be calculated consistent with the CSO Policy and shall reduce Typical Year CSO discharge by at least 2.42 billion gallons. (“Phase 1 Interim Percent Capture of Wet Weather Flows”).

By December 31, 2030, the City shall achieve at least 74 percent capture of wet weather flows for the Typical Year. Percent capture shall be calculated consistent with the CSO Policy and shall reduce Typical Year CSO discharge by at least 3.39 billion gallons. (“Phase 2 Interim Percent Capture of Wet Weather Flows”).

By December 31, 2035, the City shall achieve at least 77 percent capture of wet weather flows for the Typical Year. Percent capture shall be calculated consistent with the CSO Policy and shall reduce Typical Year CSO discharge by at least 3.68 billion gallons. (“Phase 3 Interim Percent Capture of Wet Weather Flows”).

## **Interim Evaluations of Progress**

The City will perform and submit to EPA by December 31, 2025, 2031, and 2036, an interim evaluation report of progress towards achieving the Final Capture of Wet Weather Flows (individually, “Interim Evaluation of Progress Report”), demonstrating that the City has met the required Interim Percent Capture of Wet Weather Flows, as detailed in the following:

- Demonstration of Compliance with PHASE 1 Interim Percent Capture of Wet Weather Flow. The City’s December 31, 2025 submittal shall contain:
  - A reevaluated simulation of the most recently calibrated hydraulic model (described in more detail below) that includes the Control Measures set forth below to Achieve Full Operation by no later than December 31, 2024 (“Phase 1 Projects”); and
  - A demonstration that completion of the Phase 1 projects has increased the Percent Capture to at least 66 percent of the wet weather flows and reduction in CSO volume for the Typical Year is not less than 2.42 billion gallons.
  
- Demonstration of Compliance with PHASE 2 Interim Percent Capture of Wet Weather Flows. The City’s December 31, 2031 submittal shall contain:
  - A reevaluated simulation of the most recently calibrated hydraulic model (described in more detail below) that includes the Control Measures set forth below to Achieve Full Operation by no later than December 31, 2030 (“Phase 2 Projects”); and
  - A demonstration that the completion of the Phase 2 projects has increased the Percent Capture to at least 74 percent of the wet weather flows and reduction in CSO volume for the Typical Year is not less than 3.39 billion gallons.
  
- Demonstration of Compliance with PHASE 3 Interim Percent Capture of Wet Weather Flows. The City’s December 31, 2036 submittal shall contain:
  - A reevaluated simulation of the most recently calibrated hydraulic model (described in more detail below) that includes the Control Measures set forth below to Achieve Full Operation by no later than December 31, 2035 (“Phase 3 Projects”); and
  - A demonstration that the completion of the Phase 3 projects has increased the Percent Capture to at least 77 percent of the wet weather flows and reduction in CSO volume for the Typical Year is not less than 3.68 billion gallons.

As part of the evaluation process described above, the City shall run a continuous simulation of the most recently calibrated hydraulic model, inputting the “Typical Year” design storms used to develop the original OCP and NOAA Atlas 14 temporal rainfall distribution with Areal Reduction Factors in lieu of the SCS Type II temporal rainfall distribution to demonstrate progress toward achievement of Interim Percent Capture of Wet Weather Flows. The term “Areal Reduction Factor” shall mean the ratio of the mean areal rainfall to the mean point rainfall for the same duration and return period in the same area. The City’s use of Areal Reduction Factors will be applied to account for spatial variation of rainfall over the service area with increased reliability of Typical Year design storms for individual sub-basins. System wide Areal Reduction Factors will be used to conduct Typical Year continuous simulation for determination of system-wide percent capture.

## **Green Infrastructure Control Measures**

The City intends to use an adaptive management approach to incorporate green infrastructure for stormwater management in lieu of and in addition to CSO structural controls. To effectively implement green infrastructure control measures, the City shall by the Date of Submission of the Green Infrastructure Project Plan indicated under Project Specifications of each green infrastructure control measure listed in Table A-2 below, submit to EPA the following:

- The project-specific performance levels expected to be achieved with the implementation of the green infrastructure project to reduce the amount of stormwater that enters CSS, utilizing available monitoring and modeling information, along with a demonstration of the long-term effectiveness and performance expected to be achieved with continued implementation of the project (such performance levels may include approximate effective volume of storage, acres of impervious area draining into green infrastructure improvements and/or the anticipated percent reduction in “Typical Year” wet weather flows for major green infrastructure solutions capturing at least 30 green acres);
- A detailed description of the activities and work to be performed as part of the project, including type, number, and location of green infrastructure technologies to manage stormwater; and
- A description of the post-construction monitoring and modeling to be performed, in addition to that set forth in Appendix “D” that is necessary to determine whether the Interim and Final Capture Performance Criteria set forth in this Appendix “A” will still be met upon the completion of the green infrastructure project.

EPA will review and approve or deny such Green Infrastructure Project Plan pursuant to and governed by the procedures of Section VI of this Amended Consent Decree. Once approved, the Green Infrastructure Control Measures will be implemented consistent with the approved Green Infrastructure Project Plan.

#### **Additional Evaluation of Brush Creek and Lower Town Fork Controls**

The City shall memorialize ongoing efforts focused on improving water quality in Brush Creek and Lower Town Fork Creek, and include an optimization evaluation for Brush Creek and Lower Town Fork Creek in the December 31, 2032, Further Measures Plan. Consideration shall be given to the effectiveness of completed control measures at reducing Typical Year wet weather overflows in Brush Creek and Town Fork Creek to improve water quality. The optimization evaluation of Brush Creek and Lower Town Fork Creek included in the Further Measures Plan shall consider the feasibility, cost-effectiveness, and community benefits associated with achieving 85 percent or greater capture of Typical Year wet weather flow in these basins while still achieving Final Percent Capture of Wet Weather Flows.

Improvements in water quality in Brush Creek and Town Fork Creek will be evaluated with consideration given to:

1. Continued implementation of the Integrated Water Quality Monitoring Program (“IWQMP”), which has been conducted each year since 2011;
2. Evaluation of data collected through the IWQMP and other potential sources, such as USGS, to assess pollutant sources, spatial trends in water quality, water quality trends over time and compliance with applicable water quality standards; and
3. Continued refinement and application of the water quality models that have been developed for Brush Creek and Town Fork Creek. Enhancement of the water quality model may include:

- a. Update the input of CSO discharges based on completed control measures, data collection and hydraulic model simulation outputs;
- b. Refinement of the water quality processes represented in the models or calibration of the models based on additional data collected via the IWQMP or other sources;
- c. Refinement of pollutant loads in the watershed, including the upstream boundary inputs to the water quality models;
- d. Application of the models to assess the relative contribution of the various pollutant sources and spatial trends in water quality;
- e. Application of the models to simulate water quality improvements over time as controls are implemented; and
- f. Application of the models to assess compliance with applicable water quality standards for typical year conditions.

### **Demonstration of Compliance**

The City shall demonstrate compliance with the Interim Percent Capture of Wet Weather Flows and the Final Capture of Wet Weather Flows. Achievement of the Interim Percent Capture of Wet Weather Flows and the Final Capture of Wet Weather Flows shall be based upon the Post Construction Monitoring Plans as described in Appendix "D" of this Decree. By the Dates of Demonstration of Compliance set forth herein, the City shall utilize the latest version of its calibrated collection system hydraulic model as described in Section 5 of its January 30, 2009 Overflow Control Plan ("OCP") and the latest system monitoring data as described in the Post Construction Monitoring Plans as described in Appendix "D" of this Decree. The City shall calibrate the collection system hydraulic model in accordance with industry calibration standards. Upon calibration of the collection system hydraulic model (hereafter referred to as the "calibrated post-construction hydraulic model"), the City shall run a continuous simulation of the model inputting the "Typical Year" design storms used to develop the OCP using the NOAA Atlas 14 temporal rainfall distribution and Areal Reduction Factors in place of the actual storms experienced during the post construction monitoring period.

During implementation of the Control Measures set forth in this Appendix "A," the City shall not reroute flows in the sewer system for the purpose of meeting the Performance Criteria other than those measures consistent with the OCP or as otherwise approved in writing by EPA.

#### **A. Combined Sewer Overflow Controls**

For purposes of this demonstration, the "Typical Year" is defined as the 8 design storms which have the depth, duration, and frequency as described in Section 5.2.2.3 and Table 5-1 of the January 30, 2009 OCP and the use of NOAA Atlas 14 temporal rainfall distribution and Areal Reduction Factors. The term "overflow event" shall mean the activation of one or more CSOs in a basin due to a discrete storm.

The Interim and Final Performance Criteria will be met if the continuous Typical Year simulations using the calibrated post-construction hydraulic model demonstrate the collection system discharges will achieve the Interim Percent Capture of Wet Weather Flows and the Final Capture of Wet Weather Flows identified herein. For purposes of these calculations, the baseline wet weather volume used to measure the percent captured of the wet weather flows in the CSS is 11.64 billion gallons.



## **B. Sanitary Sewer Overflow Controls**

For purposes of this demonstration, SSO Performance Criteria are (a) 5-year, 24-hour storm level of service for the sanitary sewer system south of the Missouri River and (b) 2-year, 24-hour storm level of service north of the Missouri River.

All Infiltration and Inflow (“I/I”) reductions shall be estimated based upon peak flows at the lower end of the watersheds. Such a demonstration shall be made using the latest version of City’s calibrated collection system hydraulic model, or other demonstration as approved by EPA. The City shall submit an estimation of infiltration and inflow reductions along with the Interim Evaluations of Progress Reports due in 2025 and 2031 for the watersheds south of the Missouri River and for the watersheds north of the Missouri River.

**Table A-1 Completed Consent Decree Projects (As of December 31, 2019)**

<b>Sewer System</b>	<b>Project Name (Basin)</b>	<b>Achievement of Full Operation Date</b>	<b>Consent Decree Date</b>
SSS	Rocky Branch WWTP Disinfection (North of the River SSS)	09/22/11	10/11/11
SSS	Birmingham WWTP Disinfection Project (North of the River SSS)	01/05/12	01/24/12
CSS	Middle Blue River Pilot Project (Middle Blue River)	01/05/12	12/31/21
SSS	Todd Creek WWTP Disinfection (North of the River SSS)	08/16/12	12/31/13
SSS	Northland Mobile WWTP Disinfection (North of the River SSS)	10/19/12	12/31/13
CSS	Westside WWTP Disinfection (Turkey Creek/CID)	03/11/13	12/31/13
SSS	I/I Reduction: Round Grove (South of the River SSS)	08/15/13	12/31/21
SSS	Pump Station Force Main: Round Grove (South of the River SSS)	08/30/13	12/31/13
SSS	Fishing River WWTP Disinfection (North of the River SSS)	10/29/13	12/31/13
CSS	Blue River WWTP Effluent Disinfection (NEID)	11/15/13	12/31/13
CSS	SEP 2 Swope Campus Parking Lot Improvements (Middle Blue River)	09/29/14	09/27/18
CSS	SEP 2 Swope Campus Parking Lot Improvements (Middle Blue River)	07/22/15	09/27/18
CSS	SEP 2 Swope Campus Parking Lot Improvements (Middle Blue River)	09/18/15	09/27/18
CSS	Turkey Creek WWTP Pump Station Modifications (Turkey Creek/CID)	11/01/16	12/31/16
CSS	NEID Sewer Separation Diversion Structure 006	11/18/18	12/31/18
SSS	I/I Reduction: Line Creek 2 (North of the River SSS)	12/18/18	12/31/23
CSS	Middle Blue River Neighborhood Sewer Rehabilitation (Middle Blue River)	01/05/17	12/31/17
SSS	Storage: 87th Street Pumping Station Rehab (Phase 1) (South of the River SSS)	08/31/17	12/31/17
CSS	CID In-Line Gates at Santa Fe Pump Station (Turkey Creek/CID)	11/06/17	12/31/17
CSS	Middle Blue River - Distributed Storage: Outfall 059 (Middle Blue River)	11/17/17	12/31/17
CSS	Middle Blue River - Distributed Storage: Remaining Area Tributary to Outfall 069 (Middle Blue River)	11/30/17	12/31/17
SSS	I/I Reduction: Blue River North Basin (South of the River SSS)	02/13/18	12/31/18
SSS	I/I Reduction: Blue River South Basin Project Area 1 & 2 (South of the River SSS)	03/02/18	12/31/21
SSS	I/I Reduction: Line Creek/Rock Creek 1 (North of the River SSS)	03/03/18	12/31/23

CSS	Sewer Pipe Consolidation: Outfall 063 Phase 2 (Middle Blue River)	03/22/18	12/31/18
CSS	Town Fork Creek Neighborhood Sewer Rehabilitation (Town Fork Creek)	05/15/18	12/31/18
CSS	Sewer Separation: Diversion Structure 063 & 099 (Middle Blue River)	05/25/18	12/31/18
SSS	I/I Reduction: Blue River South Basin Project Area 3 (South of the River SSS)	06/18/18	12/31/21
CSS	SEP 3 Blue River Trailhead Parking Lot (South of the River SSS)	07/26/18	09/27/18
SSS	I/I Reduction: Blue River Central Basin Project 2 (South of the River SSS)	09/07/18	12/31/18
SSS	I/I Reduction: Blue River Central Basin Project 1 (South of the River SSS)	09/07/18	12/31/18
CSS	Manhole Modifications: Middle Blue River (Middle Blue River)	09/13/18	12/31/18
CSS	In-Line Storage: OK Creek Gates (Turkey Creek/CID)	10/31/18	12/31/18
CSS	Diversion Structure 065 & 073 Consolidation	12/21/18	12/31/18
SSS	I/I Reduction: Blue River South Project Area 4 & 5 - Phase 1(South of the River SSS)	7/1/19	12/31/21
CSS	Sewer separation of approximately 270 acres in the upstream drainage area to outfalls 066 and 067 in the Middle Blue River Basin. The target Typical Year overflow reduction is 33 MG and will depend on other completed control measures at date of AFO <sup>(1)</sup> .	11/4/19	12/31/19

<sup>(1)</sup> Target overflow reduction volumes are not independent performance criteria. The target overflow reduction volume for this project is based on the City's latest collection system hydraulic model which includes all completed CSS control measures. The overflow reduction volume attributed to the completion of this project shall be reported to EPA in the Interim Evaluation of Progress Report submitted at conclusion of Phase 1. City shall utilize the latest system monitoring data as described in the Post Construction Monitoring Plans in Appendix "D" of this Consent Decree to calibrate the Phase 1 post-construction model.

Table A-2 Control Measures in CSS and SSS

Sewer System Phase	Basin	Control Measure	Project Specifications*	Date of Achievement of Full Operation
CSS – 1	NEID	Install automated gate in existing Gooseneck Arch Sewer and construct 4-MGD pump station in the NEID Basin	Provide approximately 4 MG storage in existing Gooseneck Creek Arch Sewer and construct pump station to dewater the Gooseneck Creek Arch to the Blue River Interceptor Sewer. Installation of an adjustable crest gate with real-time controls inside an existing 18 ft x 21 ft Gooseneck arch sewer to provide approximately 4MG in-line storage of combined sewer overflows, and a new 4-MGD submersible pump station. Reduces sewage overflow into the environment during the typical design year. The target Typical Year overflow reduction is 19 MG and will depend on other completed control measures at date of AFO <sup>(1)</sup> . Long-term performance will depend on the hydraulic interconnectivity between this and other completed control measures.	12/31/2021
CSS - 1	NEID	Small-sewer rehabilitation in the NEID Basin. The location of the rehabilitations to be determined based upon the condition assessment of the sewers	Rehabilitation of approximately 120 manholes and 20 miles of sewers 12-inch diameter and smaller to repair structural defects and improve the performance, capacity, and reliability of CSS; to replace aging pipe infrastructure; to reduce excessive rainwater entering the combined sewer system above the first storm inlet to reduce the potential for basement backups; and to eliminate severe hydraulic restrictions caused by structural defects or inadequate pipe capacity	12/31/2020
CSS - 1	NEID	Install Green Infrastructure Projects in the NEID Basin	Green infrastructure pilot project(s) will be constructed to achieve a significantly higher level of CSO control downstream of the project area. Construction of demonstration green stormwater infrastructure along Gardner Avenue and Nicholson Avenue, consisting of five bio-retention ponds, two gravel wetland cells, three bioretention cells, and approximately 565 LF of 15-inch and 1,365 LF of 24-inch stormwater piping.	12/31/2021
CSS - 1	Brush Creek	Small-sewer rehabilitation in the Brush Creek Basin. The location of the rehabilitations to be determined based upon the condition assessment of the sewers.	Repair of 12-inch diameter and smaller sewers to reduce the quantity of flow entering the system. Work also includes repair of sewers in separated sewer system area located within CSS. Rehabilitation of approximately 500 manholes and 30 miles of sewers 24-inch diameter and smaller sewers to repair structural defects and improve the performance, capacity, and reliability of CSS and reduce SSOs in the separated sewer system area of CSS; to replace aging pipe infrastructure; to reduce excessive rainwater entering the combined sewer system above the first storm inlet to reduce the potential for basement backups; and to eliminate severe hydraulic restrictions caused by structural defects or inadequate pipe capacity	12/31/2020

<b>Sewer System Phase</b>	<b>Basin</b>	<b>Control Measure</b>	<b>Project Specifications*</b>	<b>Date of Achievement of Full Operation</b>
CSS – 1	Turkey Creek/CID	Green Infrastructure Projects in the Central Industrial District Basin	Green infrastructure pilot project(s) will be constructed in the CID to achieve a significantly higher level of control downstream of the project area. Construction of demonstration green stormwater infrastructure within the Central Industrial District, consisting of approximately 38,800 Sq. Ft. of infiltration trenches, ten infiltration wells, 158,800 Sq. Ft of permeable pavers, 2,300 ft of pipe ranging from 12-inch to 24-inch diameter, and a 155,000 Sq. Ft. bioretention area to control runoff to reduce localized flooding, reduce inflow to the combined sewer system, increase community green space, and reduce impervious area in a highly urban environment.	12/31/2020
CSS - 1	Middle Blue River	Construct an earthen wet weather storage basin with a capacity of approximately 3 million gallons, replace Diversion Structure 068	Install approximately 2,200 linear feet of new 8-inch to 36-inch diameter sanitary sewer, construction of an electrical building, gate structure building, gate structure, diversion structure, inlet/outlet structure, discharge structure and a 3 million gallon open storage basin. The storage basin controls combined sewer flows and reduces sewage overflows into the environment at outfall 058 during typical design year and increases protection of public health on adjacent public park land. The target Typical Year overflow reduction is 3 MG and will depend on other completed control measures at date of AFO <sup>(1)</sup> . Long-term performance will depend on the hydraulic interconnectivity between this and other completed control measures.	12/31/2021
CSS – 1	Turkey Creek/CID	Construction of 30 MGD enhancement of peak treatment capacity at the Westside WWTP	This is a 30 MGD increase of the peak hydraulic capacity through modification of existing treatment facilities (CEPT) and construction of additional secondary clarifiers and disinfection. Construction of chemically enhanced primary treatment (CEPT) facilities to provide 30 mgd of additional wet weather treatment capacity at the Westside WWTP. The project reduces sewer overflows in the upstream collection systems. The target Typical Year overflow reduction is 519 MG and will depend on other completed control measures at date of AFO <sup>(1)</sup> . Long-term performance will depend on the hydraulic interconnectivity between this and other completed control measures.	12/31/2022

<b>Sewer System Phase</b>	<b>Basin</b>	<b>Control Measure</b>	<b>Project Specifications*</b>	<b>Date of Achievement of Full Operation</b>
CSS - 1	Lower Blue River	Small-sewer rehabilitation in the Lower Blue River Basin. The location of the rehabilitations to be determined based upon the condition assessment of the sewers.	Repair of 12-inch diameter and smaller sewers to reduce the quantity of flow entering the system. Rehabilitation of approximately 160 manholes and 14 miles of sewers 12-inch diameter and smaller to repair structural defects and improve the performance, capacity, and reliability of CSS; to replace aging pipe infrastructure; to reduce excessive rainwater entering the combined sewer system above the first storm inlet to reduce the potential for basement backups; and to eliminate severe hydraulic restrictions caused by structural defects or inadequate pipe capacity.	12/31/2021
CSS - 1	Turkey Creek/CID	Small-sewer rehabilitation in the Turkey Creek/CID Basin. The location of the rehabilitations to be determined based upon the condition assessment of the sewers.	Repair of 12-inch diameter and smaller sewers to reduce the quantity of flow entering the system. Rehabilitation of approximately 220 manholes and 12 miles of sewers 12-inch diameter and smaller to repair structural defects and improve the performance, capacity, and reliability of CSS; to replace aging pipe infrastructure; to reduce excessive rainwater entering the combined sewer system above the first storm inlet to reduce the potential for basement backups; and to eliminate severe hydraulic restrictions caused by structural defects or inadequate pipe capacity.	12/31/2021
CSS - 1	Middle Blue River	Infiltration and Inflow Reduction - Middle Blue River Area 13	Rehabilitation of manholes and sewers to reduce I/I in a separated sewer system area within CSS. Goal is to reduce flows to the combined sewer system. I/I reduction in an area containing approximately 18 miles of sewers and 440 manholes due to high levels of measured I/I. Reduction of I/I in separated sewer system area will reduce the potential for basement backups, result in renewal of infrastructure, and reduce flows in the Blue River Interceptor Sewer Extension and downstream CSOs.	12/31/2026
CSS - 1	Lower Blue River	Conduct public sewer separation to eliminate Typical Year wet weather flows exceeding the current capacity of the 15th Street Pump Station in the Lower Blue River Basin.	Public sewer separation of approximately 22 acres to reduce sewage overflows into the environment during the Typical Year.	12/31/2022
CSS - 1	Lower Blue River	Install approximately 3,500 linear feet of approximately 54-inch diameter relief sewer	Downstream of the intersection of Hardesty Avenue and 31 <sup>st</sup> Street. Reduction of sewage overflows into the environment at outfalls 037 and 039 by installing approximately 54-inch diameter relief sewer to the Blue River Interceptor Sewer. The target Typical Year overflow reduction is 14 MG and will depend on other completed control measures at date of AFO <sup>(1)</sup> . Long-term performance will depend on the hydraulic interconnectivity between this and other completed control measures.	12/31/2023

<b>Sewer System Phase</b>	<b>Basin</b>	<b>Control Measure</b>	<b>Project Specifications*</b>	<b>Date of Achievement of Full Operation</b>
CSS - 1	Lower Blue River	Install approximately 3,400 linear feet of approximately 48-inch diameter relief sewer in the Lower Blue River Basin	Downstream of the intersection of Vineyard and Lawn Street. Reduction of sewage overflows into the environment at outfall 040 by installing 3,400 linear feet of approximately 48-inch diameter relief sewer to the Blue River Interceptor Sewer. The target Typical Year overflow reduction is 18 MG and will depend on other completed control measures at date of AFO <sup>(1)</sup> . Long-term performance will depend on the hydraulic interconnectivity between this and other completed control measures.	12/31/2022
CSS - 1	Town Fork Creek	Town Fork Creek Baseline Improvements	Diversion structure modifications to improve maintenance access, minimize risk of dry weather overflows and optimize collection system performance. Work may also include consolidation of diversion structures.	12/31/2022
CSS - 1	Turkey Creek/CID	Sewer separation of approximately 35 acres in the Turkey Creek Basin	Located at 31 <sup>st</sup> Street and Broadway, upstream of George Washington Lake in Penn Valley Park. Complete public sewer separation of approximately 35 acres of the combined sewer system, which will result in renewal of infrastructure and reduction of sewage overflows into the environment during the Typical Year and the improvement of water quality in George Washington Lake.	12/31/2022
CSS - 1	Lower Blue River	Install approximately 1,500 linear feet of approximately 24-inch diameter relief sewer in the Lower Blue River Basin	South of 45 <sup>th</sup> Street, between Chelsea Avenue and Van Brunt Boulevard. Reduction of sewage overflows into the environment at outfall 048 by installing 1,500 linear feet of approximately 24-inch diameter relief sewer to the Blue River Interceptor Sewer.	12/31/2023
CSS - 1	Lower Blue River	Install approximately 660 linear feet of approximately 18-inch relief sewer in the Lower Blue River Basin	Reduce frequency of Typical Year overflows at Outfall 055. Reduction of sewage overflows into the environment at outfall 055 by installing 660 linear feet of approximately 18-inch diameter relief sewer to the Blue River Interceptor Sewer.	12/31/2023
CSS - 1	Lower Blue River	Separate approximately 35 acres in the upstream drainage area to Outfall 054 in the Lower Blue River Basin	Complete public sewer separation of approximately 35 acres which will result in renewal of infrastructure and reduction of sewage overflows into the environment during the Typical Year at outfall 054.	12/31/2023
CSS - 1	Lower Blue River	Separate approximately 225 acres at 40th and Monroe in the Lower Blue River Basin	Complete public sewer separation of approximately 225 acres which will result in renewal of infrastructure, the reduction of sewage overflows to the environment, and removal of up to eight combined sewer outfalls within the Lower Blue River Basin.	12/31/2024

<b>Sewer System Phase</b>	<b>Basin</b>	<b>Control Measure</b>	<b>Project Specifications*</b>	<b>Date of Achievement of Full Operation</b>
CSS – 1	NEID	Expansion, replacement, and/or modification of solids handling facilities to accommodate additional loading from all proposed upgrades to the Blue River WWTP	Upgrade of current solids handling facilities at the Blue River WWTP by replacing two existing incinerators with an advanced digestion process to approximately 94 dry tons/day to accommodate solids loading from existing Blue River, Westside, and Birmingham WWTPs and all anticipated wet weather treatment facilities.	12/31/2024
SSS – 1	South of the MO River	Increase firm pumping capacity of the Round Grove Pump Station by 26 MGD and provide 12 MGD of additional wet-weather capacity in the Round Grove Watershed	Increase firm pumping capacity by 26 MGD through addition of standby pump(s). Upgrade Round Grove Pump Station to increase firm pumping capacity from 34 MGD to 60 MGD, provide 12 MGD of additional wet-weather capacity, and rehabilitate or replace aging facilities and equipment to improve the reliability and performance of the pump station. The additional pump station capacity will eliminate SSOs during the 5-year, 24-hour storm event in conjunction with other completed control measures and planned Phase A control measures.	12/31/2022
SSS – 1	North of the MO River	Infiltration and Inflow Reduction in the Northern Watersheds	I/I reduction as required in an area containing approximately 85 miles of sewers and 2,300 manholes will be performed to renew infrastructure and reduce excessive rainwater entering the separate sewer system and SSOs in conjunction with private I/I reduction. The system will be designed to a 2-year, 24-hour storm.	12/31/2023
SSS – 1	North of the MO River	Infiltration and Inflow Reduction in the Northwestern Watersheds	I/I reduction as required in an area containing approximately 85 miles of sewers and 2,300 manholes will be performed to renew infrastructure and reduce excessive rainwater entering the separate sewer system and SSOs in conjunction with private I/I reduction. The system will be designed to a 2-year, 24-hour storm.	12/31/2027
SSS – 1	North of the MO River	Infiltration and Inflow Reduction in the Buckeye Creek Watershed	I/I reduction as required in an area containing approximately 50 miles of sewers and 1,300 manholes will be performed to renew infrastructure and reduce excessive rainwater entering the separate sewer system and SSOs in conjunction with other completed I/I reduction projects, private I/I reduction. The system will be designed to a 2-year, 24-hour storm.	12/31/2027
SSS – 1	South of the MO River	Infiltration and Inflow Reduction in the Little Blue River Watershed	I/I reduction in as required in an area containing approximately 120 miles of sewers and 2,800 manholes will be performed to renew infrastructure and excessive rainwater entering the separate sewer system and reduce SSOs in conjunction with private I/I reduction. The system will be designed to a 5-year, 24-hour storm.	12/31/2023



<b>Sewer System Phase</b>	<b>Basin</b>	<b>Control Measure</b>	<b>Project Specifications*</b>	<b>Date of Achievement of Full Operation</b>
SSS – 1	South of the MO River	Infiltration and Inflow Reduction in the Blue River South Watershed	I/I reduction as required in an area containing approximately 95 miles of sewers and 2,500 manholes will be performed to renew infrastructure and reduce excessive rainwater entering the separate sewer system and SSOs in conjunction with other completed I/I reduction projects. The system will be designed to a 5-year, 24-hour storm.	12/31/2023
SSS – 1	South of the MO River	Supplemental Infiltration and Inflow Reduction in Round Grove Watershed	I/I reduction as required in an area containing approximately 20 miles of sewers and 500 manholes will be performed to renew infrastructure and reduce excessive rainwater entering the separate sewer system and SSOs in conjunction with other completed I/I reduction projects. The system will be designed to a 5-year, 24-hour storm and optimize relief sewers upstream of Round Grove Pump Station.	12/31/2023
SSS – 1	North and South of the MO River	City-wide Private I/I Reduction Program	Removal of prohibited private I/I source in conjunction with public I/I reduction. Voluntary Private I/I reduction program will be implemented to reduce excessive rainwater entering the separate sewer system and SSOs in conjunction with public I/I reduction projects.	12/31/2027
SSS – 1	North and South of the MO River	City-wide Sewer Stabilization within Waterways	Repair of sewers and manholes, as needed, within or adjacent to waterways to reduce excessive Inflow and Infiltration. Replacement or rehabilitation, and stabilization of sewer infrastructure within waterways as required to protect sewers and manholes from damage due to stream migration and hydrodynamic forces, renew infrastructure, and reduce excessive inflow and infiltration and SSOs in conjunction with other completed I/I reduction projects, private I/I reduction, and other planned Phase A control measures.	12/31/2024
SSS – 2	North of the MO River	Infiltration and Inflow Reduction in the Line Creek/Rock Creek Watersheds	I/I reduction as required in an area containing approximately 85 miles of sewers and 2,300 manholes will be performed to renew infrastructure and reduce excessive rainwater entering the separate sewer system and SSOs in conjunction with other completed I/I reduction projects, private I/I reduction. The system will be designed to a 2-year, 24-hour storm.	12/31/2029
SSS – 2	North of the MO River	Infiltration and Inflow Reduction in the Birmingham/Shoal Creek Watersheds	I/I reduction as required in an area containing approximately 200 miles of sewers and 5,200 manholes will be performed to renew infrastructure and reduce excessive rainwater entering the separate sewer system and SSOs in conjunction with other completed I/I reduction projects, private I/I reduction. The system will be designed for a 2-year, 24-hour storm	12/31/2029

<b>Sewer System Phase</b>	<b>Basin</b>	<b>Control Measure</b>	<b>Project Specifications*</b>	<b>Date of Achievement of Full Operation</b>
SSS – 2	South of the MO River	Dykes Branch Relief Sewer in the Blue River South Watershed	Up to 3,600 LF of 24 to 36-inch diameter relief sewers may be constructed to convey 5-year flows from Johnson County Wastewater (JCW) connection at State Line Road. Actual length and sizes will depend on I/I reduction achieved by JCW to reduce current 25:1 wet weather peaking factor. Construction of relief sewers to reduce surcharging and SSOs following completion of other private and public I/I reduction control measures in the Blue River South Basin.	12/31/2025
SSS – 2	South of the MO River	Relief Sewers in the Round Grove Watershed	Relief sewers needed to convey 5-year flows upstream of the Round Grove Pump Station SSOs. The design and construction of relief sewers to reduce surcharging and SSOs will be undertaken following completion and post-construction monitoring of private and public I/I reduction control measures in the Round Grove and Blue River Central Basins. The length and diameter of the required relief sewers are unknown at this time.	12/31/2028
CSS – 2	Through-out CSS Basins	Green Infrastructure Project 1	Green infrastructure for approximately 80 green acres (a “green acre” is an acre of impervious area draining to green infrastructure).  Date of submission of green infrastructure project plan shall be 12/31/2021.	12/31/2026
CSS – 2	NEID	Provide up to 40 MGD of additional primary treatment capacity and additional disinfection at the Blue River WWTP.	For flows that exceed the 140-MGD secondary treatment capacity, up to an additional 40 MGD will receive primary treatment and disinfection and discharge to the Blue River during wet-weather events at the Blue River WWTP. The target Typical Year overflow reduction is 293 MG and will depend on other completed control measures at date of AFO <sup>(1)</sup> . Long-term performance will depend on the hydraulic interconnectivity between this and other completed control measures.	12/31/2030
CSS – 2	NEID	Construction of a 30 MGD high rate treatment (HRT) facility with 30 MGD of disinfection at the Blue River WWTP	Discharges to the Blue River. The target Typical Year overflow reduction is 219 MG and will depend on other completed control measures at date of AFO <sup>(1)</sup> . Long-term performance will depend on the hydraulic interconnectivity between this and other completed control measures.	12/31/2030
CSS – 2	Through-out CSS Basins	Green Infrastructure Project 2	Green Infrastructure for approximately 160 green acres (a “green acre” is an acre of impervious area draining to green infrastructure).  Date of submission of green infrastructure project plan shall be 12/31/2025.	12/31/2030

<b>Sewer System Phase</b>	<b>Basin</b>	<b>Control Measure</b>	<b>Project Specifications*</b>	<b>Date of Achievement of Full Operation</b>
CSS – 2	Turkey Creek/CID	Construction of additional in-line storage gates in the Turkey Creek Basin and implementation of RT-DSS controls in other basins	To be used for real-time control of depths in combined sewer system to take advantage of available system storage and pump station capacity. Construction of additional in-line storage gates in the OK Creek Sewer in the Turkey Creek Basin and implementation of RT-DSS controls in other areas of the combined sewer system. The in-line storage within the OK Creek Sewer is anticipated to reduce sewage overflows into the environment.	12/31/2027
CSS – 3	Brush Creek	Combined sewer separation in approximately 1,140 acres of the Brookside sub-basin of the Brush Creek Basin	The project is anticipated to consist of complete public sewer separation of approximately 1,140 acres of the combined sewer system. Reduction of sewage overflows into the environment is anticipated. The target Typical Year overflow reduction is 67 MG and will depend on other completed control measures at date of AFO <sup>(1)</sup> .	12/31/2035
CSS and SSS/CSS – 3	All	City-wide Annual Sewer Rehabilitation Program	Rehabilitation of sewers through 2035 based on asset management principles to reduce business risk exposure to the City’s utility. Annual rehabilitation of priority sewers and manholes selected using asset management principles to repair structural defects and improve the performance, capacity, and reliability of SSS and CSS; to reduce excessive rainwater entering the separate sewer system and contributing to SSOs; and to eliminate severe hydraulic restrictions caused by structural defects.	12/31/2035
SSS – 3	North of the River SSS	Construct Control Measures needed to Reduce SSOs in the Line Creek, Buckeye Creek, and Birmingham Watersheds	Consists of approximately 69,000 LF of pipe ranging from 8-inch to 114-inch diameter for conveyance and in-line storage, seven flow controls, 35 MGD of HRT at Birmingham pump station, and 20 MGD of capacity improvements at the Buckeye Creek pump station.	12/31/2035
CSS – 3	Through-out CSS Basins	Green Infrastructure Project 3	Green infrastructure for approximately 240 green acres (a “green acre” is an acre of impervious area draining to green infrastructure).  Date of submission of green infrastructure project plan shall be 12/31/2029.	12/31/2035

(1) Target overflow reduction volumes are not independent performance criteria. The target overflow reduction volume for this project is based on the City’s latest collection system hydraulic model which includes all completed control measures along with future projects scheduled above to be completed within each sewer system phase (Phases 1, 2, and 3) used to establish 2024, 2030, and 2035 interim performance criteria. The overflow reduction volume attributed to the completion of this project shall be reported to EPA in the Interim Evaluation of Progress Report submitted at the conclusion of the phase that includes the project. City shall utilize the latest system monitoring data as described in the Post Construction Monitoring Plans in Appendix “D” of this Consent Decree to calibrate the post-construction model of each phase.

## **Funding Plan and Modification Based on Changed Circumstances**

Through December 31, 2035, the City intends to raise and spend approximately \$1.4 billion in future dollars to implement Control Measures and achieve the Performance Measures as provided in this Appendix “A” and an additional \$0.7 billion in future dollars to operate and maintain the existing sewer system.

The City intends to raise rates (or rate equivalents) between 2%-6% annually with an average annual rate/rate equivalent increase of 4.25%. A rate equivalent is, at the City’s discretion, non-wastewater/MS4 rate revenue such as revenues from dedicated sales and use tax, general fund contributions, federal and State grants, etc. Inclusion of the City’s funding plan is meant to reflect the City’s intention for raising funds and is not a limit on the financial expenditures that may be necessary to maintain compliance with this Consent Decree.

The Parties agree that if the City experiences a significant adverse change to its financial circumstances and/or key program assumptions or projections the City may request a modification of a Control Measure(s) and/or an extension to any deadline included within this Consent Decree pursuant to Section XXIV, Modification. The Parties agree that an adverse change to the City’s financial circumstances does not include a lack of available dollars because of municipal interfund borrowing from any Water Services Funds, as authorized by the City’s Charter.

The request for modification shall be made in writing to the United States and shall provide a detailed discussion of the significant adverse change to the City’s financial circumstances or other financial or budgetary issues which may include the following:

- Economic conditions and trends, such as City median household income changes and increases in service area poverty levels;
- Service area unemployment data and trends;
- Service area population data and trends;
- Service area size, including any changes in size or boundaries;
- Service area revenue data and trends, including changes such as water conservation efforts;
- The City’s account base data and trends, including changes such as closure of major industrial or institutional wastewater accounts;
- Changes in the costs of wastewater operations;
- Requirements of City Bond Covenants;
- Evidence that the actual or expected costs of implementation significantly exceed the City’s estimated program costs;
- Additional compliance cost or financial obligations such as changes to the City’s NPDES permit, or the water quality standards applicable to such permit, or issuance of a total maximum daily load (“TMDL”) affecting the City’s water-related obligations; and
- Any other factor relevant to changes in financial circumstances or other financial or budgetary issues.

## **APPENDIX B**

### **Nine Minimum Controls Plan Performance Criteria**

The City shall implement its Nine Minimum Controls ("NMCs") Plan in its Combined Sewer System ("CSS") area and submit a NMCs annual report, pursuant to Section IX of the Consent Decree, demonstrating compliance with the NMCs Plan performance criteria as follows:

- I. Proper Operation and Regular Maintenance Program (NMC - 1)
  - A. The City shall maintain an organization with personnel responsible for various aspects of the operation and maintenance ("O&M") program. This organization shall perform regular inspections, cleaning and repair of the system.
  - B. The City shall allocate adequate resources (i.e. personnel and capital) to maintain O&M activities.
  - C. The City shall maintain a list of the facilities (i.e. overflow weirs) critical to the performance of the CSS, and update as necessary.
  - D. The City shall maintain and implement a Combined Sewer Overflow ("CSO") Sewer Maintenance Manual that includes written procedures and/or schedules for the following:
    1. Routine and periodic maintenance of CSO outfall and diversion structures;
    2. Emergency response protocol;
    3. Dry Weather Overflow ("DWO") reporting procedures; and
    4. Training and safety practices.
  - E. The City shall maintain a log of maintenance activities performed.
  - F. The City shall conduct Closed Circuit Television Inspections ("CCTV") of the sewers in the CSS area in accordance with the approved CMOM Program.
  - G. The City shall clean the sewers in the CSS area in accordance with the approved CMOM Program.
  - H. The City shall respond to all CSO and bypass reports.
  - I. The City shall maintain a 24-hour emergency number for citizens and businesses to report CSOs and bypasses.

## II. Maximization of Storage in the Collection System (NMC - 2)

- A. In order to maximize storage in the CSS collection system, the City shall:
1. Inspect all CSS diversion structures at least once per month;
  2. Modify diversion structures, as necessary;
  3. Reduce and/or eliminate inflows (consistent with the approved OCP);
  4. Encourage localized upstream detention;
  5. Upgrade and/or adjust pump operations at interceptor lift stations, as practicable;  
and
  6. Remove obstructions to flow.

## III. Review and Modification of Pretreatment Requirements (NMC - 3)

- A. The City shall annually:
1. Maintain an inventory of non-domestic discharges to the CSS and update as necessary;
  2. Re-assess the impact of non-domestic discharges on CSOs as appropriate;
  3. Evaluate feasible and necessary modifications to the pretreatment program;
  4. Implement and enforce city-wide ordinances, as they relate to the City's pretreatment program, including but not limited to the Surcharge Program for High Strength Wastewater and the Oil and Grease Management Program; and
  5. Conduct education programs for non-domestic dischargers.

## IV. Maximization of Flow to the POTW for Treatment (NMC -4)

- A. The City has determined the capacity of the major interceptor(s) and pumping station(s) that deliver flows to the CSS Wastewater Treatment Plants ("WWTPs"). The City shall ensure that the full capacity is available by using the O&M program, as described in NMC - 2.
- B. The City shall analyze existing records to compare flows processed by the CSS WWTPs during wet weather events and dry periods and determine the relationships between

performance and flow.

- C. The City shall determine whether any inoperative or unused treatment facilities within the POTW can be used to store or treat wet weather flows, and if so, utilize the storage or treatment as appropriate.
- D. The City shall maintain Wet Weather Operating Guidelines for the CSS WWTPs that describe procedures for grit removal, monitoring pumping levels, regulating incoming flows, and balancing process operations.

V. Elimination of CSOs During Dry Weather (NMC - 5)

- A. The City shall inspect all diversion structures located within the CSS to identify potential DWOs, at least once per month.
- B. The City shall correct the cause of a DWO as soon as practicable.
- C. The City shall follow its current NPDES permits for verbal and written notification to the NPDES permitting authority that a DWO has occurred.

VI. Control of Solids and Floatable Material in CSOs (NMC - 6)

- A. The City shall conduct street sweeping to prevent extraneous solids and floatables from entering the CSS. Street sweeping shall be conducted at least two times annually on all streets with curbs within the CSS area.
- B. The City shall repair and clean catch basins.
- C. The City shall enforce City ordinances related to construction site erosion control, as appropriate.

VII. Pollution Prevention Programs to Reduce Contaminants in CSOs (NMC - 7)

The City shall implement pollution prevention measures and programs including but not limited to street cleaning, public education programs, solid waste collection, and recycling.

VIII. Public Notification (NMC - 8)

A. The City shall inform the public of the location of CSO outfalls, the occurrences of CSOs, the possible health and environmental effects of CSOs, and the recreational or commercial activities (e.g. swimming) curtailed as a result of CSOs. The public notifications shall include the following, as appropriate:

1. Posting warnings at the affected use areas (i.e. at all swimming locations) downstream of a CSO that have the potential to be affected by pollutants discharged from the CSOs;
2. Posting warnings at CSO Outfalls and as appropriate downstream public access points which are potentially affected by pollutants discharged from the CSOs;
3. Periodic notices by general circulation newspapers, local radio, and/or television; and
4. Telephone Hot-Line for interested citizen calls.

IX. Monitoring to Characterize CSO Impacts and the Efficacy of CSO Controls (NMC - 9)  
The City shall conduct any additional activities necessary to characterize the CSS, including but not limited to collecting and documenting information on CSO occurrences and known water quality problems and incidents.



## APPENDIX C

### Capacity, Management, Operation and Maintenance Plan Performance Criteria

Kansas City, Missouri (“the City”) shall implement its Capacity, Management, Operations and Maintenance (“CMOM”) Plan and submit a CMOM annual report, pursuant to Section IX of the Consent Decree, demonstrating compliance with the CMOM Plan performance criteria as follows:

#### I. Collection Systems Management

##### A. Organizational Structure

1. The City shall maintain an Organizational Structure that provides delineated job responsibilities, ensures effective employee-supervisor ratios, and guarantees adequate staff is in place to accomplish the responsibilities of the Water Services Department (“WSD”) throughout this Consent Decree. This structure shall be consulted during the annual budget process to determine staffing needs and allocate operational expenses appropriately.
2. The City shall maintain job descriptions and organizational charts and effectively communicate job responsibilities to WSD staff and acquire and maintain the level of skills and abilities necessary to perform the responsibilities of the WSD.

##### B. Communication and Customer Service

1. The City shall maintain a communication and customer service program that will inform and educate customers, WSD staff, and the community about wastewater collection, treatment and water quality issues.
2. The City shall address incoming inquiries, requests, and complaints in a timely fashion

and effectively communicate WSD activities to staff and the public. Specifically, the City shall:

- a. Track all customer service requests; and
- b. Continue to implement written Standard Operating Procedures (“SOPs”) for customer service requests submitted December 31, 2010 pursuant to this Consent Decree.

### C. Legal Authority

1. The City shall retain legal authority to conduct the following:

- a. Charge fees to all users of the sewer system, whether or not they are located within the City limits;
- b. Set rates for different classifications of sewer system users.
- c. Enter into agreements with communities outside the City limits for wastewater services;
- d. Measure and/or calculate the volumes of wastewater received from customers outside of the City limits;
- e. Solicit bids, select contractors, and construct public sanitary and combined sewers;
- f. Set standards for the use of private septic tanks or cesspools, including the cleaning of the tanks and the disposal of collected materials;
- g. Maintain the approved pretreatment program pursuant to 40 C.F.R. Part 403 and the Current NPDES Permits
- h. Prohibit the discharge of flammable or other hazardous materials into the sewer system;
- i. Regulate the release of oil and grease into the sewer system by setting acceptable discharge concentrations and setting surcharge rates for higher concentrations of discharged oil and grease;
- j. Require the pretreatment of waste from industrial or commercial users in order to

protect the POTW;

- k. Require industrial or commercial users to report on their releases into the sewer system;
  - l. Inspect the facilities of industrial or commercial users to determine the types and quantities of materials being released into the sewer system; and
  - m. Implement the City's approved pretreatment program against any industrial or commercial users who violate the terms of the ordinance or permits issued.
2. The City shall retain its ability to regulate the connection of private sewers to the public system by entering into contracts, assessing fees, requiring adherence to the City's Standard Specifications, and requiring bonds.
  3. The City shall retain the authority to deny a building permit or sewer connection permit if it is determined the receiving sewers have inadequate capacity.
  4. The City shall maintain Standard Specifications for the design and construction of new or upgraded sanitary and combined sewers.

#### D. Acquisition Considerations

The design and construction of infrastructure that is acquired into the sewer system shall comply with the City's technical specifications and construction standards. This shall apply to prospective infrastructure from both new construction and privately-owned systems being considered for a transfer of ownership to the City.

1. The City shall:
  - a. Document, a policy and guidelines for assuming ownership of preexisting

infrastructure; and

b. Ensure proper recordkeeping and documentation is performed.

E. Information Management System

1. The City shall maintain an Information Management System (“IMS”) that provides tools for tracking collection systems’ performance, costs, and work orders, and measures the effectiveness and efficiency of operation and maintenance (“O&M”) activities.

2. The City shall have adequate and effective computer-based tools to manage and track collection system data, written SOPs to ensure documentation of pertinent collection system data, and staff competent in using IMS tools. The City shall also provide IMS training and continue to move forward with mobile data entry research.

F. Geographic Information System Mapping

1. The City shall maintain a Geographic Information System (“GIS”) Mapping Program that ensures a comprehensive inventory of the sewer system is maintained, that it is assembled and presented in a manner conducive for use, and that it is easily accessible by WSD personnel who depend on the data for both performance and planning purposes. The mapping software shall identify several collection system components and attributes, including, but not limited to, gravity sewer, force main, and pipe attributes; property lines and parcels; manholes and access points; diversion structures, flow splitters, and outfalls; ownership of infrastructure; sewer easements; stormwater inlets; impervious surfaces; aerial photography; wastewater facilities (including pump stations, flood pump stations, and WWTPs); and planimetric features (including contours, roads, surface water, and land use).

2. The GIS Mapping Program shall be updated regularly.

## G. Sanitary Sewer Overflow (“SSO”) Reporting and Notification

The City shall maintain an SSO reporting and notification program that ensures that discharges from the City’s sewer system are properly documented, stored in a data management system, and properly reported to appropriate regulatory authorities and as appropriate the affected public which includes persons with the potential to come in contact with the sewage. This SSO reporting program shall include a listing of all Building/Private Property Backups discovered by or reported to the City that have occurred. This tabular listing should also include the date of the Building/Private Backup incident, the location by (specific address), source of notification (property owner, field crew, etc.) the general cause(s) of the Building/Private Backup, and actions taken or suggested by the City to halt, mitigate, and prevent future incidents. The City shall follow its Current NPDES Permits for verbal and written notification to the NPDES permitting authority that a SSO has occurred.

## II. Collection Systems Operation

### A. Budgeting

The City shall ensure adequate fiscal and personnel resources to operate and maintain its wastewater collection and treatment system.

### B. Engineering

1. The City shall maintain an Engineering Program that shall conduct the following activities:
  - a. Assess and monitor the collection system infrastructure;
  - b. Assess the collection system capacity;

- c. Identify, plan, design, and manage the construction of improvements; and
  - d. Review improvements and additions to the collection system for compliance with the City's technical specifications and construction standards.
2. The activities of the Engineering Program shall provide that:
- a. The design conveyance and integrity of the collection system is maintained;
  - b. Infiltration and Inflow ("I/I") that significantly contributes to the SSOs is removed from the system or otherwise addressed;
  - c. SSOs are minimized; and
  - d. Wet weather Combined Sewer Overflows ("CSOs") are controlled in accordance with the Nine Minimum Controls ("NMC") program and the Overflow Control Plan.

#### C. Water Quality Monitoring

The City shall implement a long-term Water Quality Monitoring Program as set forth in Appendix "D."

#### D. Pretreatment Program

The City shall continue to implement its approved pretreatment program pursuant to 40 C.F.R. Part 403 and the Current NPDES Permits.

#### E. Pump Station Operations

The City shall maintain reliable operation of the pump stations by:

1. Conducting routine inspections;
2. Troubleshooting when situations arise;

3. Performing preventative maintenance;
4. Retaining appropriate records of pump station inspections and performance; and
5. Remotely monitoring pump station operations through the use of remote dialers and a Supervisory Control and Data Acquisition (“SCADA”) system. This monitoring shall be done twenty four hours a day, seven days a week.

F. Pump Station Emergencies

1. The City shall maintain a formal emergency response plan which includes emergency response procedures that crews must follow in pump station emergencies. The City shall maintain guidelines that specify who to call and when to call based on the time of day, weather conditions, and nature of the issue.
2. Emergency response shall be provided by the City staff and/or additional resources as needed. This system shall be maintained to ensure quick response is available twenty-four hours per day, seven days per week.
3. The City shall ensure equipment is available to respond to pump station emergencies.
4. Records associated with pump station emergencies shall be completed and maintained.

G. Force Mains

The City shall:

1. Maintain an inventory and accurately map force mains and air relief valves (“ARVs”) into a GIS database;
2. Assess the condition of force mains and ARVs;
3. Investigate corrosion issues in conjunction with the condition assessment process;

4. Perform preventative maintenance when needed to protect the integrity of the infrastructure;  
and

5. Document force main maintenance activities in an IMS.

H. Smoke Testing

1. The City shall maintain a standard protocol for smoke testing.

2. Smoke Testing shall be utilized for sewer investigation and to identify specific locations where stormwater is entering the sanitary sewer system.

I. Flow Monitoring

1. The City shall use a flow monitoring program for the purpose of assessing capacity in targeted areas of the sewer system consistent with Appendix “D” of this Consent Decree. Flow monitoring shall assess system capacity during both dry and wet weather in order to assure adequate current and future capacity.

2. Flow monitoring shall provide adequate and accurate data to support the City’s Overflow Control Plan, capacity assessment and assurance analyses, and I/I investigation needs.

J. CCTV Inspection

1. The City shall use CCTV inspections to visually assess the condition of the inside of the collection system using standardized ratings to characterize conditions. CCTV inspections shall be conducted to investigate a known trouble area and as a follow- up to line cleaning.

K. Remote Sewer Inspection Program



1. The City shall maintain a remote sewer inspection program to inspect remote portions of the sanitary sewer system.

III. Collection Systems Maintenance

A. Manhole Repairs

1. The City shall maintain a manhole repair program to assure the structural integrity of manholes in the sewer system, reduce infiltration into manholes, control odor problems at manholes, increase accessibility to buried manholes, and prevent public harm due to structural failures.

2. The manhole repair program shall maintain the sewer system's manholes in a structurally sound condition and limit the occurrence of excessive infiltration into the sewer system at the manholes. WSD shall establish an annual performance goal for the manhole repair program.

B. Mainline Sewer Repairs.

1. The City shall perform physical repairs to the gravity sewer lines, as needed, to maintain adequate capacity, to reduce and eliminate excessive I/I, and to maintain the design conveyance of the pipes in the system.

2. The type of repair method used shall be determined by several factors including, but not limited to, pipe size, pipe type, pipe location, flow, surface conditions, and severity of I/I.

3. The City shall utilize appropriate sewer repair technologies, such as open cut, cured in place lining, horizontal directional drilling, boring and jacking, tunneling, pipe bursting, sliplining, grouting of joints, and point repairs.

4. The repairs shall be coordinated through an “asset management” approach to maintenance. The priority for repairs will be determined through the use of the system- wide CCTV inspection program as well as the other programs described in this CMOM Plan.

C. Sewer Cleaning

1. The City shall maintain a Sewer Cleaning Program to perform preventative maintenance cleaning and emergency cleaning on the gravity sewer system.

2. The City shall perform preventative maintenance cleaning to ensure the system is cleaned once every ten years. This includes the CSS area.

D. Response Plan

The City shall maintain and implement a Building and Private Property Backup Response Plan that provides for basement backup response procedures and a basement backup preventative program. These procedures will be employed to restore the public sewer line to a functioning condition and perform any cleanup that may be required under applicable law, including the removal of wastewater/sewage, cleaning and disinfecting floors and walls, carpet cleaning, cleaning and disinfecting of all other items amenable to cleaning and disinfecting, and repair, replacement and disposal of damaged materials. These procedures will also include cleaning and disinfection of any areas and items remaining inside of an affected building that were in contact with sewage. The basement backup preventative program will allow for the installation of systems or devices to prevent future basement backups in those eligible properties experiencing the backup of wastewater into buildings due to inadequate capacity in the City’s sewer system.

IV. Collection Systems Capacity

A. Capacity Assessment and Assurance

The City shall maintain procedures for capacity assurance as follows:

1. For new development: The developer's Engineering Consultant is responsible to certify that the proposed development will not overload the receiving sanitary sewer system. This includes (1) verifying the receiving trunk sewer was sized adequately according to the Kansas City Chapter of the American Public Works Association ("APWA") standards, and (2) verifying any receiving pump station has sufficient capacity to handle the additional flows.
2. For single taps, the City shall regulate sewer connections and inspect the connections for proper installation.

## **APPENDIX D**

### **Post Construction Monitoring Program Performance Criteria**

Kansas City, Missouri (“the City”) shall implement the Post Construction Monitoring Program (“PCMP”) as follows:

#### **I. INTRODUCTION TO THE POST CONSTRUCTION MONITORING PROGRAM**

The implementation of the PCMP shall provide the data necessary to assess the extent to which performance measures contained within Appendix “A” are being met. The PCMP will also identify and evaluate any improvements in receiving water quality that result from the implementation of the control measures set forth in Appendix “A.” All terms used in this Appendix shall have the meaning set forth below and in Section V (“Definitions”) and Appendix “A” of the Amended Consent Decree.

Implementation of the PCMP will allow the City to:

- Measure the effectiveness of Green Infrastructure projects in the combined sewer system (“CSS”).
- Measure the effectiveness of infiltration and inflow (“I/I”) reduction efforts, including voluntary private inflow source reduction projects in the separate sanitary sewer system (“SSS”) area.
- Measure the performance of the High-Rate Treatment (“HRT”) facilities in treating wet weather flows.
- Measure the effectiveness of the other Control Measures set forth in Appendix “A.”
- Update and enhance collection system computer models.
- Provide information to educate the public on the need for implementation of wet weather solutions, and the progress made in achieving program objectives.

Performance monitoring and sampling will occur at many of the monitoring stations identified and used during the development of the original September 30, 2009 Overflow Control Plan (“OCP”) and at additional selected locations to compile the data necessary to support the continuation of the Water Quality Monitoring Plan. The use of these locations will enable comparison of post-construction conditions with baseline conditions determined during the development of the OCP.

Short-term flow monitoring of approximately one to two years' duration before and after project completion and activation will be performed to collect data necessary to assess the performance of major Green Infrastructure improvements (capturing at least 30 green acres) and sewer system improvements for the reduction of wet weather flow volumes and peak flow rates. Sewer system improvements include I/I reduction projects in the SSS basins, relief sewer construction in the CSS and SSS basins, and Green Infrastructure and sewer separation projects in the CSS basins.

Long-term monitoring of major constructed facilities will be initiated upon the completion of construction and activation of such facilities. Major constructed facilities include, but are not limited to, pumping station improvements, wet weather storage, expansions and upgrades of existing wastewater treatment plants ("WWTPs"), and planned HRT facilities. Long-term monitoring of water quality in the receiving streams will be performed in accordance with the City's approved Water Quality Monitoring Plan ("WQMP") as described below.

Data collected will be used to continually update the hydraulic model to demonstrate progress toward achievement of the Performance Criteria. Based on such demonstrations, the City may propose modifications of the PCMP to EPA and shall make such modifications to the PCMP once approved by EPA in writing. Proposed modifications may include addition, elimination, or relocation of monitoring stations; addition or elimination of pollutant parameters; modification of rainfall and flow monitoring data collection techniques; and modification of data evaluation methods.

## **II. INTERIM EVALUATIONS OF PROGRESS TOWARDS ACHIEVING THE PERFORMANCE CRITERIA**

The City shall submit to EPA, with a copy to Missouri DNR, the Interim Evaluation of Progress Reports as required in Appendix "A."

## **III. WATER QUALITY MONITORING PLAN**

The City has been implementing its approved WQMP since 2011.

The monitoring plan focuses on water quality parameters identified as potential pollutants of concern from KCMO's combined sewer overflows ("CSO") discharges and upstream pollutant sources as follows:

- Indicator bacteria, notably E. coli;

- Dissolved oxygen concentrations; and
- Aesthetics as measured by observations of floatables, debris, odor, and nuisance algal blooms.

The primary objective of the monitoring plan is to measure changes in water quality during and after implementation of the control measures set forth in Appendix “A.”

The WQMP is also structured to permit an assessment of the impact of CSOs remaining after completion of the control measures listed in Appendix “A” in each basin on the water quality in that basin’s receiving stream.

Field measurements and collection of water quality samples are conducted at the sampling sites on a bi-weekly basis throughout the April 1 – October 31 recreation season. Monitoring began on April 1, 2011, and will continue to be conducted each year at approximately the same time of day, on the same day of the week, at each location, to obtain an appropriate representation of storm event and non-event conditions. Monitoring will be performed during wet weather conditions subject to sampling safety protocols. The monitoring frequency will provide data sufficient to calculate a geometric mean E. coli concentration consistent with applicable water quality standards and for tracking long-term trends.

Field measurements recorded at each site consist of temperature, pH, and dissolved oxygen. Field observations are recorded for floating debris, submerged debris, algal growth, odor, and recreational use. Samples will be analyzed for conductivity, E. coli, and total suspended solids.

Sampling locations currently include:

- Seven sites on Brush Creek;
- Nine sites on the Blue River;
- One site on each Town Fork Creek, Penn Valley Lake, Indian Creek, and Mill Creek; and
- Two sites on the Missouri River and one site on the Kansas River, each with samples collected along both banks and center channel.

Updates to the WQMP may be made and submitted to EPA for approval, as needed, based on new information and understanding of the receiving waters and the impacts of CSOs and other sources. Specifically, updates to the WQMP may be made as necessary to evaluate

water quality in Brush Creek and Lower Town Fork Creek and to demonstrate compliance with the Percent Capture of Wet Weather Flows as calculated pursuant to the CSO Policy.

**Table 1 - Receiving Water Monitoring Locations**

<b>Site Identifier</b>	<b>Location Description</b>	<b>Rationale for Selection</b>
BC-1	Brush Creek at Belinder St., KS	Characterize upstream water quality
BC-2	Brush Creek at Ward Parkway	Characterize water quality at state line
BC-3	Brush Creek at Rockwell Lane	Characterize impact of CSO and storm water loads
BC-4	Brush Creek at Broadway Street	Characterize impact of CSO and storm water loads
BC-5	Brush Creek at Rockhill Road	Characterize impact of CSO and storm water loads
BC-6	Brush Creek at Prospect Avenue	Characterize impact of CSO and storm water loads
BC-7	Brush Creek at Elmwood Avenue	Characterize cumulative impacts to Brush Creek
TF-1	Town Fork Creek at 51 <sup>st</sup> Street	Characterize loads from Town Fork Creek
BR-1	Blue River at Bannister Road	Characterize conditions upstream of all Kansas City, Missouri CSOs
BR-2	Blue River at Hickman Mills Dr.	Characterize impact of CSO, storm water, and small tributary loads to Blue River
BR-3	Blue River at Gregory Blvd	Characterize impact of CSO, storm water, and small tributary loads to Blue River
BR-4	Blue River at Blue Parkway	Characterize impact of CSO, storm water, and small tributary loads to Blue River upstream of Brush Creek
BR-5	Blue River at Stadium Drive	Characterize impact of CSO, storm water, and small tributary loads to Blue River
BR-6	Blue River at 23 <sup>rd</sup> Street	Characterize impact of CSO, storm water, and small tributary loads to Blue River
BR-7	Blue River at 12 <sup>th</sup> Street	Characterize impact of CSO, storm water, and small tributary loads to Blue River
BR-8	Blue River at train bridge upstream of I-435	Characterize cumulative impacts to Blue River
BR-9	Blue River south of Kenneth Drive, and west of Missouri-Kansas border	Characterize pollutant loads from Johnson County, KS
PV-1	Penn Valley Lake at outlet	Characterize conditions in Penn Valley Lake
MC-1	Mill Creek south of Kenneth Drive, and north of border between Jackson County and Cass County	Characterize Mill Creek pollutant loads tributary to the Blue River

IC-1	Indian Creek north of US Highway 435 in the vicinity of 103 <sup>rd</sup> Street, and west of Missouri-Kansas border	Characterize pollutant loads from Johnson County, KS
	Kansas River Upstream of outfall WOO5	At center or east bank of river
390543094363800	Kansas River at Interstate 670	At center or east bank of river
390552094364301	Kansas River below outfall WOO5	At center or east bank of river
390636094361201	Missouri River downstream of Westside WWTP	At center or south bank of river
390642094351901	Missouri River at Hannibal Bridge	At center or south bank of river
39070094335201	Missouri River at Paseo Bridge	At center or south bank of river
390744094280401	Missouri River below Blue River	At center or south bank of river
390745094281000	Missouri River downstream of Kansas River	At center or south bank of river
390815094323101	Missouri River at Riverfront Park	At center or south bank of river
390843094291801	Missouri River downstream of Blue River WWTP	At center or south bank of river

#### **IV. PCMP FOR CSO CONTROLS AND MAJOR WET WEATHER FACILITIES**

The following describes the PCMP for CSO controls and major wet weather facilities included in Appendix “A.”

##### Effectiveness of Green Infrastructure Projects

Monitoring of major green infrastructure projects (capturing at least 30 green acres) will be performed to evaluate their effectiveness in reducing wet weather overflows in the CSS. This monitoring will include both pre- and post-construction flow monitoring and field observations. Post-construction monitoring and modeling shall be conducted to demonstrate that the Green Infrastructure Project contributes toward meeting the Performance Criteria of Appendix “A.” In addition, the City must demonstrate that the Green Infrastructure Project has suitable perpetual operation and maintenance measures in place.



## Effectiveness of Sewer System Improvements Projects

Project specific short-term flow metering will be performed as part of the sewer system improvements listed in Appendix “A” to update and recalibrate hydraulic models to determine progress made toward achievement of the Performance Criteria contained in Appendix “A.” Specific details for monitoring programs will be developed as part of the planning for sewer system improvements.

## CSS, CSO Outfalls, and Major Wet Weather Facilities

Data collected through flow monitoring of selected CSO outfalls, selected collection system locations, and major wet weather facilities, such as pumping station improvements, in-line storage facilities, storage tanks, expansions and upgrades of existing wastewater treatment plants (“WWTPs”), HRT facilities planned shall enable the determination of the progress made toward achievement of the Performance Criteria and will also support:

- Characterization of sewer flow data for evaluation of long-term collection system performance.
- Collection of information on overflows at critical CSS diversion structures.
- Collection of additional data, such as discharge rates at new pumping facilities and gate positions at the Blue River WWTP, which would assist in optimizing sewer system operations.
- Development of a database of flow data for use in future design efforts related to controlling both CSOs and Sanitary Sewer Overflows (“SSOs”).
- Enhanced operation and maintenance actions to further control wet weather discharges and achieve NPDES permit compliance.

Table 2, set forth below, presents the planned suite of flow monitoring locations for selected CSO outfalls and CSS collection system locations and target dates for start of flow monitoring prior to project completion and after project completion. Post-construction flow monitoring identified in Table 2 shall commence within six months of Achievement of Full Operation of that facility to demonstrate Consent Decree compliance. The monitoring locations were selected with an emphasis on the CSS areas for assessment of sewer system improvements, facilities performance, system operational characteristics, and dry-weather flows in the CSS areas. No reduction of sites listed in Table 2 will be made without prior written approval from EPA.

A detailed monitoring plan for each of the following major wet weather facilities projects or CSS basins will be prepared approximately one year prior to the scheduled substantial completion of construction of that facility as listed in Appendix “A,” or as indicated herein, and submitted to the EPA:

- High Rate Treatment (“HRT”) or storage facilities.
- Modifications at Blue River WWTP for diversion of up to 40 MGD of primary-plant effluent directly to 40 mgd disinfection facilities for treatment and discharge to the Blue River during wet-weather events.
- Construction of a 30 MGD wet weather treatment facility with 30 MGD of additional disinfection at Blue River WWTP.
- Approximately 3 MG open storage basin near outfall 068 in the Middle Blue River Basin.
- In-line storage gates at the lower end of the existing OK Creek sewer.
- In-line storage gates and new 4 MGD pumping station at the lower end of the Gooseneck Creek arch.
- Construction of approximately 30 MGD enhancement of peak treatment capacity at Westside WWTP.
- A Sewer System Improvement Flow Monitoring Plan shall be submitted for the Northeast Industrial District Basin by 12-31-2020
- A Sewer System Improvement Flow Monitoring Plan shall be submitted for the Lower Blue River Basin by 12-31-2022
- Sewer System Improvement Flow Monitoring Plans shall be submitted for the Turkey Creek, Brush Creek, and Town Fork Creek Basins by 12-31-2039

Table 2 - CSS Flow Metering Sites

<b>Project Area</b>	<b>Area Type</b>	<b>Site ID or Other Designation</b>	<b>Manhole Number *</b>	<b>Manhole Number for Monitor Installation Prior to Design **</b>	<b>Target Monitoring Start Date Prior to AFO Date**</b>	<b>Target Monitoring Suspension Date **</b>	<b>Target Monitor Reinstallation Date Following AFO Date**</b>
Middle Blue River	CSS	BR056	S097-061	S097-095	4-1-2015	4-1-2017	8-1-2018
Middle Blue River	CSS	BR059	S124-011	New MH to be constructed	4-1-2011	Dec 2013	9-1-2017

Middle Blue River	CSS	BR063	S122-397 S122-420	S122-397 S122-420	4-1-2014	January 2015	9-1-2017
Middle Blue River	CSS	BR064	S122-206	S122-206	Fall 2012	January 2015	9-1-2017
Middle Blue River	CSS	BR069	S128-356	S128-356 and S128-056	4-1-2011	Dec 2013	8-1-2017
Brush Creek	CSS	BR008	S078-174	TBD	TBD	TBD	12-31-2040
Brush Creek	CSS	BR026	S082-010	TBD	TBD	TBD	12-31-2040
Brush Creek	CSS	BR030	S082-053	TBD	TBD	TBD	12-31-2040
Brush Creek	CSS	BR017	S079-219	TBD	TBD	TBD	12-31-2040
Brush Creek	CSS	BR018	S079-640	TBD	TBD	TBD	12-31-2040
Brush Creek	CSS	BR021	S080-620	TBD	TBD	TBD	12-31-2040
Town Fork Creek	CSS	BR090	S104-351	TBD	TBD	TBD	12-31-2040
Town Fork Creek	CSS	BR090	S104-264	TBD	TBD	TBD	12-31-2040
Lower Blue River	CSS	BR036	S048-800	TBD	TBD	TBD	12-31-2040
Lower Blue River	CSS	BR037	S059-009	TBD	TBD	TBD	12-31-2040
Lower Blue River	CSS	BR039	S059-001	TBD	4-1-2017	7-1-2019	12-1-2021
Lower Blue River	CSS	BR040	S073-037	TBD	4-1-2017	7-1-2019	12-1-2021
Lower Blue River	CSS	BR034	S035-431	TBD	TBD	TBD	12-31-2040
Lower Blue River	CSS	BR039	S058-077	TBD	4-1-2017	7-1-2019	12-1-2021
Lower Blue River	CSS	BR037	S082-166	TBD	TBD	TBD	12-31-2040
Lower Blue River	CSS	BR055	S059-030	TBD	12-31-2018	1-1-2020	12-1-2021
Lower Blue River	CSS	BR036	S048-120	TBD	TBD	TBD	12-31-2040
Gooseneck Creek	CSS	BR032	S024-209	TBD	9-1-2015	7-1-2016	12-31-2020
Gooseneck Creek	CSS	BR033	S024-091	TBD	9-1-2015	7-1-2016	12-31-2020
Gooseneck Creek	CSS	BR033	S024-087	TBD	9-1-2015	7-1-2016	12-31-2020
Turkey Creek/CID	CSS	W005	S053-127	TBD	TBD	TBD	12-31-2040

Turkey Creek/CID	CSS	W005	S053-127	TBD	TBD	TBD	12-31-2040
Turkey Creek/CID	CSS	W005	S053-018Sa	TBD	TBD	TBD	12-31-2040
Turkey Creek/CID	CSS	W005	S053-018Sa	TBD	TBD	TBD	12-31-2040
Turkey Creek/CID	CSS	W003	S029-820	S029-820	4-1-2014	January 2015	2-1-2017
NEID	CSS	BR100	S024-807	TBD	TBD	TBD	12-31-2040
NEID	CSS	BR031	S012-047	TBD	TBD	TBD	12-31-2040

\* The designated manhole locations are for post-construction monitoring purposes.

\*\*CSS Flow Metering Sites. Prior to project design, the monitoring locations are to be determined by KCMO to obtain data best suited for use in the design of each project and approved by EPA . Flow monitoring sites have been indicated only where known. If shown as TBD, the sites will be located within a project’s boundary prior to the start of design. Target dates are for planning purposes only and subject to change based on the Achievement of Full Operation date of upstream control measure(s).

Following implementation of the CSO control measures listed in Appendix “A” and/or as approved by EPA, the City shall conduct activation monitoring at all CSO outfalls in the CSS and submit the activation information to EPA in the Annual Reports. The City shall use the collected data to calibrate the hydraulic model and run a continuous simulation inputting the "Typical Year" design storms used to assess the extent to which performance measures contained within Appendix “A” are being met.

## V. OTHER MONITORING

The PCMP for CSO controls and other major wet weather facilities will augment the City’s existing wastewater system monitoring. The City shall implement the following additional monitoring:

### Satellite Communities

Flow meter data collected from satellite communities that contribute substantial discharges to the City’s wastewater collection systems will be used to improve and maintain calibration of the City’s collection system hydraulic models and to develop I/I removal goals for excessive discharges to the SSS. Those models will be used in the assessment of compliance with the performance measures, particularly but not limited to I/I reduction initiatives and sewer system improvements in SSS basins. At present, the majority of wastewater flows received from

the City of North Kansas City, Missouri, the City of Gladstone, Missouri, the City of Raytown, Missouri and Johnson County, Kansas are metered.

In addition, the majority of flows discharged from the City's collection system to the Little Blue Valley Sewer District ("LBVSD") is metered by LBVSD. That meter data will also be used to assess performance of I/I reduction efforts in the City's Little Blue Valley Basin in the SSS.

If necessary, adjustments or additions to flow meter locations will be negotiated with the various satellite communities.

### Supervisory Control and Data Acquisition ("SCADA")

The wastewater utility capital improvement program includes expansion and enhancement of the wastewater SCADA system. That expansion will emphasize control and data acquisition at the various existing pumping stations and at the WWTPs.

### Flow Metering at Pumping Stations

The wastewater utility capital improvements program includes additional or significant improvement of flow metering capabilities at the following major pumping stations to provide key data for the long-term assessment of the Performance Criteria and overall system compliance with the Performance Criteria contained in Appendix "A." The following major pump stations currently have or are planned to have flow metering capabilities:

- 87<sup>th</sup> Street Pumping Station - existing
- Round Grove Pumping Station – planned as part of current expansion
- Santa Fe Pumping Station - planned
- NEID Pumping Station - existing
- Line Creek Pumping Station – existing
- Buckeye Creek Pumping Station – existing Parshall Flume
- Birmingham Pumping Station - existing at force main discharge to Birmingham WWTP

## **VI. RAINFALL MONITORING**

Rainfall monitoring is an essential component of the PCMP. Detailed analysis of precipitation data is necessary to fully evaluate compliance with the Performance Criteria contained in Appendix “A.” Precipitation data of interest consist of total rainfall depth, duration, intensity, and event distribution.

Rainfall data will be compiled and analyzed as part of the PCMP. The source of rainfall data is planned to be the City’s ALERT flood warning system (“FWS”), which presently consists of rain gauges spaced throughout the City’s service area. Rainfall data collected by the ALERT FWS will be used for analysis in connection with other post-construction monitoring data.

## **VII. DATA MANAGEMENT**

The City has developed data management systems and associated protocols for the storage, management, retrieval, and analysis of all data of importance in assessment of the performance of the City’s collection system and utility asset management.

## **VIII. QUALITY CONTROL**

Quality control and quality assurance procedures and protocols previously prepared as part of the development of the original OCP will continue to be used for the implementation of the PCMP. The relevant document is: Water Quality Monitoring Quality Assurance Project Plan; OCP; April 14, 2005.

The City shall update the quality control and quality assurance procedures and protocols from time to time as appropriate. All monitoring plans shall incorporate the procedures and protocols available at the time of submittal.

## **IX. ANALYSIS, PROGRESS REPORTING, AND COMPLIANCE DEMONSTRATION**

Data from the PCMP shall be used to update and improve calibration and verification of the City’s collection system models. The updated collection system models will be used to demonstrate compliance with the Performance Criteria as set forth in Appendix “A.”

The results and progress of the PCMP will be reported to the EPA in the three Interim Evaluation of Progress Report submittals required in Appendix “A.” Each Interim Evaluation of Progress Report will include a summary of the progress made toward achieving the Performance Criteria in Appendix “A” for the SSS and the CSS to date, consisting of:

- SSS and CSO and collection system sampling and flow monitoring data;
- Rainfall data;
- Flow monitoring for major Green Infrastructure solutions (capturing at least 30 green acres), sewer system improvements, and pilot facilities;
- Field observations and benefits quantification of Green Infrastructure in reducing flows in CSS and contribution to meeting the Performance Criteria of Appendix “A”;
- Flow monitoring and sampling results for major wet weather facilities;
- Re-evaluation of collection system hydraulic models to confirm continued acceptable calibration. Necessary model modifications, re-calibration, and re-verification will be indicated and documented;
- Modeling results demonstrating progress towards compliance with the Interim and Final Percent Capture of Wet Weather flows in the CSS and Level of Service in the SSS;
- Receiving water monitoring results and trends; and,
- Identification and documentation of deficiencies and performance limitations.

The City shall submit to EPA, with a copy to Missouri DNR, a report demonstrating compliance with the Final Percent Capture of Wet Weather Flows defined in Appendix “A,” no later than December 31, 2041. This report will include a summary of performance as described below, consisting of:

- Receiving water quality monitoring results and analysis with a comparison to baseline conditions;
- Results of collection system hydraulic models demonstrating compliance with the Final Percent Capture of Wet Weather Flows in the Typical Year, as calculated consistent with the CSO Policy and set forth in Appendix “A”;
- Identification and documentation of any performance deficiencies and/or practical limitations; and,

- If the City's report does not demonstrate compliance with the Final Percent Capture of Wet Weather Flows, recommendations for any additional remedial measures necessary to achieve compliance with the Final Percent Capture of Wet Weather Flows.