

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

UNITED STATES OF AMERICA,)

and)

THE STATE OF MISSOURI,)

Plaintiffs,)

and)

MISSOURI COALITION FOR THE)
ENVIRONMENT FOUNDATION,)

Plaintiff/Intervenor,)

v.)

THE METROPOLITAN ST. LOUIS)
SEWER DISTRICT,)

Defendant.)

No. 4:07-CV-1120 (CEJ)

CONSENT DECREE

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WHEREAS, Plaintiffs, the United States of America, by the authority of the Attorney General of the United States and through the undersigned attorney, acting at the request and on behalf of the Administrator of the United States Environmental Protection Agency (“EPA”), and the State of Missouri, by the authority of the Attorney General of Missouri, acting at the request and on behalf of the Missouri Department of Natural Resources (“MDNR”), jointly filed a Complaint on June 11, 2007, seeking injunctive relief and civil penalties against the Metropolitan St. Louis Sewer District (“MSD”), pursuant to Sections 309(b) and (d) of the federal Clean Water Act (“CWA”), 33 U.S.C. §§ 1319(b) and (d), for MSD’s alleged discharges of pollutants in violation of Section 301(a) of the CWA, 33 U.S.C. § 1311(a), including those discharges of untreated sewage from its Combined Sewer Overflows and at least 300 Constructed Sanitary Sewer Overflows, and for alleged violations of conditions established in the National Pollutant Discharge Elimination System (“NPDES”) permits issued to MSD by MDNR, as authorized by the EPA under Section 402(b) of the CWA, 33 U.S.C. § 1342(b). In addition, the United States also alleged a claim under Section 504(a) of the CWA, 33 U.S.C. § 1364(a), requiring MSD to take such actions as may be necessary to abate the imminent and substantial endangerment to the health of persons presented by MSD’s sewer system, resulting from discharges of untreated sewage to homes, yards, parks, playgrounds, and streets.

WHEREAS, the State of Missouri is a Plaintiff to this action pursuant to Section 309(e) of the CWA, 33 U.S.C. § 1319(e).

WHEREAS, Plaintiff-Intervenor Missouri Coalition for the Environment Foundation (“Coalition”) filed a motion to intervene, and when its motion was granted by the Court on August 29, 2007, filed its Complaint in Intervention against MSD for its alleged violations of

Sections 301(a) and 308 of the CWA, 33 U.S.C. §§ 1311(a) and 1318, and certain NPDES Permits, following its issuance on April 12, 2007 of a 60-day notice of intent to sue pursuant to Section 505 of the CWA, 33 U.S.C. § 1365.

WHEREAS, Defendant MSD is a municipal corporation and political subdivision of the State of Missouri established under the Constitution of Missouri.

WHEREAS, MSD is responsible for wastewater collection and treatment, and stormwater management, throughout all of St. Louis City and 90 percent of St. Louis County - - a service area of 93 municipalities covering approximately 525 square miles and a population of approximately 1.4 million.

WHEREAS, MSD was created by operation of the Missouri Constitution and by area voters in 1954 to coordinate regional, watershed-based management of the area's sewer and stormwater handling and treatment demands. Since MSD's formation, it has consolidated over 79 different public and private sewer collection systems, and assumed control of over 35 treatment facilities. MSD consolidated the operations of these treatment facilities into the seven treatment plants that it operates today. Portions of these sewer collection systems are over 150 years old. MSD operates these treatment plants under authorization of Missouri State Operating Permits issued by MDNR.

WHEREAS, MSD has developed a Long Term Control Plan to address Combined Sewer Overflows based upon current water quality standards.

WHEREAS, on October 29, 2009, EPA issued a determination that new or revised water quality standards are needed to protect for recreational uses for the segment of the Mississippi River flowing from river mile 189.2 to river mile 160.6 to which MSD's CSO Outfalls

discharge.

WHEREAS, MSD has spent \$2.1 billion over the last twenty years in upgrading its Combined and Separate Sewer Systems, including, but not limited to, Eliminating Constructed Sanitary Sewer Overflows which MSD inherited or constructed prior to 1990s in an effort to prevent Building Backups. MSD's work to eliminate all overflow points is continuing with funding from \$775 million in revenue bonds in the first phases of a multi-billion dollar capital improvement program.

WHEREAS, infrastructure improvements and upgrades as required by law and this Consent Decree are designed to eliminate or reduce overflows from the Combined and Separate Sewer Systems in order to improve water quality and protect human health and the environment. These improvements and upgrades will require significant capital expenditures. While MSD relies primarily on user fees, it plans to pursue a combination of additional available funding sources, including, but not limited to, State assistance, federal assistance, bonding, and any other public and private financing to assist in implementation of such improvements. The Parties have agreed to a program that MSD will implement to eliminate or reduce its overflow sources, on a schedule that recognizes the financial capabilities of its ratepayers as well as the engineering demands required for this substantial capital investment.

WHEREAS, MSD's Long Term Control Plan includes a \$100 million commitment to implementing green infrastructure – constructed projects that re-direct stormwater from reaching sewers by capturing and diverting it to locations where it is detained, infiltrated into the ground, evaporated, taken up by plants, or reused. The overall objective for MSD's green infrastructure program is to identify and implement projects and programs that will significantly reduce CSOs.

Green infrastructure can supplement redevelopment efforts, add green space to cities, increase recreational opportunities, increase groundwater recharge, improve air quality, increase property values, enhance urban quality of life, and improve human health. MSD's program focuses on combined sewer areas within St. Louis County and City. These same areas represent some of the most economically-distressed portions of the St. Louis community.

WHEREAS, Defendant MSD does not admit any liability to the United States, State, or Coalition arising out of the transactions or occurrences alleged in their Complaints.

WHEREAS, the Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation between the Parties and this Consent Decree is fair, reasonable, and in the public interest, and that there is no just reason for delay.

NOW THEREFORE, with the consent of the Parties, **IT IS HEREBY ADJUDGED, ORDERED, AND DECREED** as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to Sections 309(b), 504(a), and 505(a) of the CWA, 33 U.S.C. §§ 1319(b), 1364(a), and 1365(a), and 28 U.S.C. §§ 1331, 1345 and 1355, and over the Parties. Venue lies in this District, pursuant to Sections 309(b) and 505(c) of the CWA, 33 U.S.C. §§ 1319(b) and 1365(c), and 28 U.S.C. § 1391(b), because it is the judicial district where MSD is located and where the alleged violations occurred. For purposes of this Decree, or any action to enforce this Decree, MSD consents to the Court's jurisdiction over MSD, this Decree, and any such action, and further consents to venue in this judicial district.

II. APPLICABILITY

2. The provisions of this Consent Decree shall apply to, and be binding upon MSD and its officers, directors, employees, agents, servants, successors, assigns, and all persons, firms and corporations under contract with MSD to perform obligations of this Consent Decree; upon the United States and its agencies, departments, representatives, employees, successors, and assigns; and upon the Coalition and its affiliated organizations, employees, successors, and assigns.

3. No transfer of ownership or operation of any portion of its publicly owned treatment works, including any portion of its Sewer System, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve MSD of its obligation to ensure that the provisions of this Decree are implemented. At least thirty (30) days prior to any transfer of ownership or operation of its publicly owned treatment works and/or Sewer System, MSD shall provide a copy of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer, together with a copy of the proposed written agreement, to the United States, the State, and the Coalition, in accordance with Section XVII ("Notices").

4. MSD shall provide a copy of this Consent Decree to the Board of Trustees and their successors, and managers. MSD shall post the Consent Decree on its website and intranet website and direct all current employees and new employees to read the Consent Decree. MSD shall direct any contractor or consultant retained to perform work required under this Consent Decree to its website and direct them to read the Consent Decree. Any action taken by an entity retained by MSD to implement MSD's duties under this Consent Decree shall be considered an action of MSD for purposes of determining compliance with this Consent Decree. This Consent Decree shall not limit MSD's rights to take all appropriate action against any such person or

entity that causes or contributed to MSD's act or failure to act.

III. PURPOSE

5. The express purpose of the Parties entering into this Consent Decree is for MSD to take all necessary measures to meet the goals and objectives of the CWA; to achieve and maintain compliance with the CWA and the Missouri Clean Water Law and the regulations promulgated thereunder, and the terms and conditions of MSD's Missouri State Operating Permits; to meet the objectives of the EPA's April 19, 1994 CSO Control Policy, 59 Fed. Reg. 18688 ("CSO Policy"), which is incorporated by reference into Mo. Code Regs. Ann. Tit. 10, § 20-7.015(10); to Eliminate all Constructed SSO Outfalls; and to achieve the goal of eliminating all known SSOs.

IV. DEFINITIONS

6. Terms used in this Consent Decree that are defined in the CWA, the Missouri Clean Water Law, the implementing regulations promulgated under these laws, or MSD's Missouri State Operating Permits shall have the meanings assigned to them in the CWA, the Missouri Clean Water Law, implementing regulations, or MSD's Missouri State Operating Permits unless otherwise provided in this Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

a. "Achievement of Full Operation" shall mean completion of construction and installation of equipment or infrastructure, and completion of contractually required acceptance testing, such that the equipment or infrastructure has been placed in full operation, and is expected to both function and perform as designed.

b. "Appendix D" shall mean the attached Appendix entitled "CSO Control Measures,

Design Criteria, Performance Criteria, and Critical Milestones” and any modifications and/or extensions approved by EPA pursuant to Paragraphs 55, 58-63 of this Consent Decree.

c. “Approved Supplemental Remedial Measures Plan” shall mean any Supplemental Remedial Measures Plan approved in accordance with Section VI.E, or established through Dispute Resolution pursuant to Section XIV of this Consent Decree.

d. “Asset Management” shall mean a continuous process of managing infrastructure, capital assets, and operation to deliver optimized customer service and to protect health and the environment while minimizing costs over the assets’ lifetimes.

e. “Bid Year” shall mean the date that a notice to proceed with construction has been issued and remains in effect for the CSO Control Measure. For CSO Control Measures with multiple phases or packages, the Bid Year shall mean the date the notice to proceed has been issued and remains in effect for the first construction phase or package.

f. “Building Backup” shall mean a wastewater backup occurring into a building which is caused by blockages, flow conditions, or malfunctions within the Sewer System. Building Backup does not include wastewater backups resulting from (i) flow conditions caused by overland flooding or (ii) blockages, flow conditions, or malfunctions of a Private Lateral.

g. “Bypass” shall mean the intentional diversion of waste streams from any portion of a Wastewater Treatment Facility, as defined by 40 C.F.R. § 122.41(m).

h. “Coalition” shall refer to the Plaintiff-Intervenor in this action, Missouri Coalition for the Environment Foundation and its affiliated organizations.

i. “Combined Sewer Overflow” or “CSO” shall mean any discharge from the Combined Sewer System at a point prior to the headworks of a Wastewater Treatment Facility.

j. "CSO Control Measure" shall mean the construction, control measures, actions, and other activities set forth in Appendix D.

k. "CSO Outfall" shall mean the outfall from which a CSO is discharged. MSD's known CSO Outfalls are identified in MSD's Missouri State Operating Permits.

l. "Combined Sewer System" or "CSS" shall mean the portion of MSD's Sewer System designed to convey municipal sewage (i.e. domestic, commercial and industrial wastewaters) and stormwater runoff through a single-pipe system to a Wastewater Treatment Facility and/or to a CSO Outfall.

m. "Complaint" shall mean the complaint filed by the United States and the State in this action on June 11, 2007.

n. "Complaint in Intervention" shall mean the complaint filed by the Coalition in this action.

o. "Consent Decree" or "Decree" shall mean this Consent Decree and all appendices attached hereto (listed in Section XXV).

p. "Constructed SSO" shall mean any discharge from a Constructed SSO Outfall.

q. "Constructed SSO Outfall" shall mean any pipe, conduit, or other conveyance that has been constructed within the Sanitary Sewer System to purposefully convey sewage, or a combination of sewage and rainwater, to any Receiving Stream, either natural or man-made, or to any portion of the Drainage System.

r. "Cross Connection" shall mean any constructed connection, whether by pipe or any other means, between any part of the Sanitary Sewer System and any part of the Drainage System that is capable of conveying flow between the two systems.

s. "Date of Lodging" 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 Eastern District of Missouri.

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

u. "Design" shall include the completion of detailed plans and specifications as needed to begin construction.

v. "Design Criteria" shall mean the Design Criteria specified in Appendix D.

w. "Drainage System" shall mean pipes, conduits, channels, stormwater pump stations, canals and other appurtenances operated by MSD and designed and used for conveying only storm water runoff, Surface Water runoff, and other drainage water.

x. "Effective Date" shall have the definition provided in Section XIX.

y. "Elimination" or "Eliminate" or "Eliminating" or "Eliminated" shall mean the complete and permanent removal or permanent abandonment of a Constructed SSO Outfall such that it can no longer discharge. In no case shall the complete and permanent removal or permanent abandonment of a Constructed SSO Outfall be designed to create a new Constructed SSO Outfall, require the physical modification of an existing Constructed SSO Outfall, or increase the frequency or volume of discharges from an existing Constructed SSO Outfall, known SSO, or CSO.

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

aa. "Excessive Infiltration/Inflow" or "Excessive I/I" shall have the meaning set forth in the definition at 40 C.F.R. § 35.2005(b)(16).

bb. "Force Main" shall mean a pipe that receives and conveys under pressure, wastewater from the discharge side of a pump within the Sewer System.

cc. "Gravity Sewer Line" or "Gravity Sewer Pipe" shall mean a pipe that receives, contains and conveys wastewater not normally under pressure, that is intended to flow unassisted under the influence of gravity.

dd. "Infiltration" shall mean water other than wastewater that enters the Sewer System, as defined by 40 CFR § 35.2005(b)(20).

ee. "Inflow" shall mean water other than wastewater that enters the Sewer System, as defined by 40 CFR § 35.2005(b)(21).

ff. "I/I" shall mean the total quantity of water from Inflow and Infiltration without distinguishing the source.

gg. "MSD" shall mean the defendant Metropolitan St. Louis Sewer District.

hh. "MSD's Missouri State Operating Permits" shall mean the following operating permits issued to MSD by the State of Missouri pursuant to its authority to administer the NPDES program as an approved State program under Section 402(b) of the CWA: Nos. MO-0025178, effective December 30, 2005 and revised January 27, 2006; MO-0025151, effective date December 30, 2005 and revised January 27, 2006; MO-0004391, effective date December 30, 2005 and revised March 31, 2006; MO-0086126, effective date March 23, 2001 and revised November 10, 2005; MO-0025160, effective date December 30, 2005; MO-0101362, effective date January 26, 2007; MO-0127949, effective date February 28, 2007; and any such operating

permit which succeeds Permit Nos. MO-0025178, MO-0025151, MO-0004391, MO-0086126, MO-0025160, MO-0101362, and MO-0127949 issued by the State of Missouri to MSD, or extended, modified or reissued operating permit by the State, as well as any future federally approved, or extended, modified or issued operating permit.

ii. "MGD" or "mgd" means million gallons per day.

jj. "MDNR" shall mean the State of Missouri Department of Natural Resources, a part of the executive branch of the State of Missouri, subject to supervisory, rulemaking, and adjudicative authority of the Missouri Clean Water Commission as described in Chapter 644 RSMo.

kk. "Non-Capacity Related SSO" shall mean any discharge from any portion of MSD's Sanitary Sewer System that is the result of the inability of that portion(s) of the Sewer System to convey or treat flows due to a blockage, structural failure, or other maintenance related defect as well as any third party actions or naturally occurring events related to or resulting in an overflow from the Sanitary Sewer System.

ll. "Paragraph" shall mean a portion of this Consent Decree identified by Arabic numerals.

mm. "Parties" shall mean the United States, the Coalition, and MSD.

nn. "Performance Criteria" shall mean the Performance Criteria specified in Appendix D.

oo. "Post-Construction Monitoring Program" shall mean the Post-Construction Monitoring Program set forth in Appendix E, as well as any additional post-construction monitoring or modeling activities included in any Approved Supplemental Remedial Measures Plan, and any modification approved by EPA pursuant to Paragraph 60 of this Decree.

pp. "Private Lateral" shall mean any portion of the Sewer System, not owned by MSD, used

to convey wastewater from a building or buildings to that portion of the Sewer System owned by MSD.

qq. "Pumping Station" or "Pump Station" shall mean MSD-owned facilities that contain pumps that lift wastewater from a lower to a higher hydraulic elevation, including all related electrical, mechanical, and structural systems necessary to the operation of that pumping station within the Sewer System.

rr. "Receiving Stream" or "Receiving Water" shall mean surface water body that receives discharge from the Wastewater Treatment Facilities and/or Sewer System, including but not limited to the Mississippi River, Missouri River, Meramec River, River Des Peres, and their tributaries.

ss. "Sanitary Sewer Overflow" or "SSO" shall mean any overflow, spill, diversion, or release of wastewater from or caused by MSD's Sanitary Sewer System. This term shall include: (i) discharges to surface waters of the State or United States from MSD's Sanitary Sewer System and (ii) any release of wastewater from MSD's Sanitary Sewer System to public or private property that does not reach waters of the United States or the State.

tt. "Sanitary Sewer System" shall mean the portion of the Sewer System designed to convey only sewage, and not stormwater, from residences, commercial buildings, industrial plants and institutions for treatment at a Wastewater Treatment Facility.

uu. "Section" shall mean a portion of this Consent Decree identified by a Roman numeral and/or upper case letter.

vv. "Sewer System" shall mean the wastewater collection and transmission system owned or operated by MSD, including all pipes, Force Mains, Gravity Sewer Lines, Pumping Stations, lift

stations, interceptors, diversion structures, manholes and components thereto, designed to collect and convey municipal sewage (domestic, commercial and industrial) to MSD's Wastewater Treatment Facilities or to a Combined Sewer Outfall or Constructed SSO Outfall. The Sewer System includes both the Sanitary Sewer System and the Combined Sewer System.

ww. "State" shall mean the State of Missouri.

xx. "Subsection" shall mean a portion of this Consent Decree identified by capital letters.

yy. "Surface Water(s)" shall mean water(s) of the United States as defined by 40 C.F.R.

§ 122.2.

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

aaa. "Wastewater Treatment Facilities" and "WWTFs" shall mean the wastewater treatment facilities (or water reclamation facilities) and all components of any such wastewater treatment facilities operated by MSD, including, but not limited to:

(1) Bissell Point Wastewater Treatment Plant, Missouri State Operating Permit MO-0025178, located in the City of St. Louis, at 10 East Grand Avenue, St. Louis, Missouri 63147;

(2) Lemay Wastewater Treatment Plant, Missouri State Operating Permit MO-0025151, located in St. Louis County, at 201 Hoffmeister Avenue, St. Louis, Missouri 63125;

(3) Missouri River Wastewater Treatment Facility, Missouri State Operating Permit MO-0004391, located in St. Louis County, at 3455 Creve Coeur Mill Road, St. Louis, Missouri 63146;

(4) Fenton Wastewater Treatment Facility, Missouri State Operating Permit MO-0086126, located in St. Louis County, at 75 Opps Lane, Fenton, Missouri 63026;

(5) Coldwater Creek Wastewater Treatment Facility, Missouri State Operating Permit MO-

0025160, located in St. Louis County, at 13798 Old Halls Ferry Road, Blackjack, Missouri 63034;

(6) Grand Glaize Wastewater Treatment Plant, Missouri State Operating Permit MO-0101362, located in St. Louis County, at 1000 Grand Glaize Parkway, St. Louis, Missouri 63088; and

(7) New Lower Meramec Wastewater Treatment Facility, Missouri State Operating Permit MO-0127949, located in St. Louis County, 7981 Fine Road, St. Louis, Missouri 63129.

bbb. “Watershed” shall mean a section of MSD’s Sewer System that is a distinct drainage or wastewater collection area and designated as such by MSD.

V. REMEDIAL MEASURES AND SCHEDULES FOR SANITARY SEWER SYSTEM

7. MSD shall continue to carry out assessments and engineering analyses necessary to identify all measures needed to ensure that MSD’s POTW complies with the requirements of the Clean Water Act and the Missouri Clean Water Law and the regulations and policies promulgated thereunder, and MSD’s Missouri State Operating Permits issued by the MDNR, and then shall implement engineered measures to Eliminate all Constructed SSO Outfalls and with the goal of Eliminating all known SSOs.

8. MSD’s plans, programs, and other submittals shall be based upon good engineering practices and industry standards, using the following documents as guidance, as applicable:

a. EPA’s Handbook: Sewer System Infrastructure Analysis and Rehabilitation, EPA/625/6-91/030, 1991 (hereafter “EPA Handbook”);

b. National Association of Sewer Service Companies Sewerage Rehabilitation Manual; and

c. Water Environment Federation Manual of Practice FD-6 – Existing Sewer Evaluation and Rehabilitation, Third Edition.

A. Sanitary Sewer System Characterization Report

9. No later than one month from the Effective Date, MSD shall submit to EPA and the State, with a copy to the Coalition, a report updating the characterization of MSD's existing Sanitary Sewer System. To the extent that data and information are available, the Sanitary Sewer System Characterization Report shall include the following information:

a. A Constructed SSO Outfall Inventory identifying all Constructed SSO Outfalls that are known within the Sanitary Sewer System. MSD shall create the Constructed SSO Inventory by updating MSD's May 5, 2009 "Bypass Database" spreadsheet with current information including, but not limited to, any new or previously unknown Constructed SSO Outfalls, changes in the physical attributes of Constructed SSO Outfalls, changes in Constructed SSO Outfall status using either the term 'Existing' or 'Eliminated,' and all known project elimination numbers and names. In no case shall MSD alter the number of Constructed SSO Outfalls by deleting an individual Constructed SSO Outfall or otherwise reduce the overall combined number of existing and Eliminated Constructed SSO Outfalls from the Constructed SSO Outfall Inventory. However, Constructed SSO Outfalls that were listed in the May 5, 2009 bypass database, but are not Constructed SSO Outfalls based upon current information or were mislabeled will be identified as such with an explanation in the Constructed SSO Outfall Inventory.

b. GIS layers of the Sewer System that identify the locations of all Constructed SSO Outfalls, Watersheds, WWTFs, Pumping Stations, Force Mains, wastewater storage facilities,

tunnels, known gravity lines, as well as an excel list of the locational information of all known SSOs and Building Backups, that occurred during the preceding five years identifying the cause(s), if determined, of the known SSOs and Building Backups.

c. Identification of the date and duration, if known, of each Constructed SSO during the two years preceding the Date of Lodging. For the purposes of this Sanitary Sewer Characterization Report, MSD shall summarize discharge events previously submitted within MSD's "Quarterly Constructed SSO Bypass Reports" identifying events required pursuant to Paragraph 25 of EPA's Amended Administrative Order, issued May 22, 2007, and amended again on July 2, 2008. MSD shall summarize the events by grouping all past discharge events by specific location (i.e. BP number) such that cumulative number of discharges from individual locations are evident.

d. Pursuant to the above-referenced EPA's Amended Administrative Order, MSD shall continue to perform the following measures until a Constructed SSO Outfall is eliminated:

i. MSD shall post signs as depicted in Appendix A on all streams, creeks, drainage ditches, and swales receiving Constructed SSO discharges. Postings must be at all surface discharge locations and within one hundred (100) feet downstream of all discharge locations. Signs must also be posted at approximately one hundred (100) yard intervals at public access points located within two (2) miles downstream from the discharge. Signs must be placed on both sides of stream and must be placed so as to be visible to the public from both banks. The signs must be visible to the public approaching the stream from land. Any parks, golf courses or other recreation areas within the posting area must have signs permanently displayed.

ii. MSD shall perform monthly inspections of Constructed SSO locations to

ensure each sign is in place, unobstructed, and in good condition.

iii. Inspection of all downstream signs shall be at least three (3) times during the recreation season in March, June, and September.

iv. Missing, damaged, or obstructed signs must be replaced or corrected within 24 hours of discovery. The signs must be a minimum of 18" by 24".

v. A copy of the sign must be included annually (near the beginning of the recreation season) in customer bill inserts with an explanation of why the signs have been installed.

e. The EPA agrees to terminate its above-referenced Amended Administrative Order by issuing a notice of termination to MSD within thirty (30) days of the Effective Date of this Consent Decree.

B. Early Elimination Projects for Constructed SSOs

10. No later than December 31, 2012, MSD shall Eliminate all Constructed SSO Outfalls identified in Appendix B.

11. Each year as part of its Annual Report required by Paragraph 73, MSD shall submit to the EPA and the State, with a copy to the Coalition, a schedule that identifies Constructed SSO Outfalls (excluding those associated with the early Elimination projects referenced in Paragraph 10 above) which may be Eliminated prior to MSD's submission of the Sanitary Sewer Overflow Control Master Plan as required by Section V.F. Any Constructed SSO Outfalls that are Eliminated prior to MSD's submission of the Sanitary Sewer Overflow Control Master Plan will be not be identified in the Master Plan.

12. Starting in January 2011 until December 31, 2013, MSD shall expend at least \$30

million to construct applicable and accepted engineering methods for reducing Inflow and Infiltration, including, but not limited to, sewer pipelining and/or replacement projects. All of the \$30 million shall be spent in the following areas:

a. Areas identified to have Constructed SSOs which will be scheduled for Elimination between 2023-2033. The following areas are initially identified as the areas in which the last Constructed SSOs will be Eliminated: Gravois Creek, Deer Creek, and the University City Watersheds;

b. The following areas which contain a high concentration of low-income customers experiencing high occurrences of Building Backups: Watkins Creek, Spanish Lake, Baden, Harlem, University City, and Maline Watersheds; and

c. Following the completion of known cost effective controls in areas identified in subparagraphs 12(a) and (b) above, MSD shall prioritize I/I reduction projects that will reduce Building Backups and/or sewer system overflows. MSD shall annually evaluate projects that are in areas identified in subparagraphs 12(a) and (b) above before prioritizing projects in accordance with this subparagraph 12(c).

13. MSD shall submit as part of its Annual Report pursuant to Paragraph 73, a description of the methods used for reducing Inflow and Infiltration, the number of miles of sewer pipelining and replacement projects, if applicable, as well as the specific locations and costs for each project undertaken in those areas identified in Paragraph 12(a), (b), and (c) above for the preceding calendar year.

C. Sewer System Evaluation Survey

14. MSD shall perform a Sewer System Evaluation Survey (“SSES”) of its Sanitary Sewer

System in accordance with the requirements of Paragraphs 14-18 below, and consistent with good engineering practices, industry standards, and the standard references listed in Paragraph 8 above. The results of this SSES shall accompany the Sanitary Sewer Overflow Control Master Plan required by Section V.F. The SSES shall be used to develop the remedial measures in that Sanitary Sewer Overflow Control Master Plan. The SSES shall:

- a. identify study areas with Excessive I/I, which are causing and/or contributing to SSOs and Building Backups;
- b. identify and quantify sources of I/I within the study areas determined to have Excessive I/I rates.
- c. identify known SSOs within each Watershed;
- d. identify storm water Cross Connections and found unauthorized direct connections;
- e. identify physical and/or structural conditions of pipes, manholes and structures of the Sanitary Sewer System that contribute to SSOs and Building Backups; and
- f. identify the physical conditions and design constraints of Force Mains and Pumping Stations, including failure of individual pumps, lack of redundant pumps, and lack of alternative power sources that contribute to SSOs and Building Backups.

15. The SSES shall include the following elements:

- a. Data Management: A description of the data management approach that MSD will use to organize, analyze, and report all known data to be used and all of the data that MSD will be collecting in accordance with this Paragraph;
- b. Quality Control/Quality Assurance: A description of the quality assurance and quality control methodology MSD will follow to ensure the accuracy and reliability of data

collected in accordance with this Paragraph;

c. Data Review: MSD shall review known data concerning SSOs, Building Backups, sewage flows, WWTFs flows and capacity, and Sewer System attributes for purposes of supporting the SSES and identifying any additional data needed to conduct the SSES in accordance with this Section V.C.;

d. Rainfall Gauges: MSD shall use a network of rain gauge stations in accordance with good engineering practices and the applicable standard references listed in Paragraph 8 above;

e. Flow Monitoring Equipment: Flow data shall be collected using a system of permanent and/or temporary flow monitors placed at locations in the Sewer System necessary to allow the characterization of flow from each Watershed service area. All temporary flow monitors and all new permanent flow monitors installed after the Effective Date of the Consent Decree shall concurrently measure flow level and velocity from which system flow rates shall be calculated. Where feasible and as part of MSD's long-term flow monitoring equipment maintenance/replacement activities, existing permanent flow monitors that measure flow level only shall be replaced with monitors that measure flow level and flow velocity simultaneously unless the Constructed SSO Outfall is scheduled to be eliminated within two years of the equipment maintenance/replacement. In the event MSD cannot obtain accurate velocity data within six months of installation, the equipment will revert to the level-only monitoring setup.

f. Rainfall and Flow Monitoring: MSD shall carry out dry and wet weather rainfall and flow monitoring as needed to satisfy the requirements of this Paragraph. Dry weather monitoring shall be carried out so as to allow the characterization of base flows and Infiltration

rates. Wet weather monitoring shall be carried out following flow events of sufficient duration and intensity to understand system response due to wet weather events and identify if and where Excessive I/I exists within specific areas of its Sewer System.

16. The locations, types and rationale for placement of rain gauges, flow monitors, and any other equipment required by this Section and a discussion of how Doppler radar will be employed (if appropriate) shall be included in the SSES. MSD's flow and rainfall monitoring network required in Paragraph 15(d), (e), and (f) shall be designed, installed, operated and maintained to provide representative data of sufficient quality for use in the development of the Hydraulic Model as required by Section V.D. and the Capacity Assurance Evaluation as required by Section V.E. Monitoring site selection, equipment selection and installation, calibration, maintenance, and data quality assurance checks shall be carried out to optimize monitoring accuracy, and shall conform with good engineering practices, using the appropriate references listed in Paragraph 8 above. The flow monitoring and rainfall data shall be used to investigate Watersheds for further flow monitoring and physical investigation activities, as described below.

17. As part of its SSES, MSD shall also perform further investigative activities in those specific areas of its Sewer System determined to have Excessive I/I and any areas determined to contribute to known SSOs, Building Backups, and WWTF capacity limitations. The investigative activities shall locate and allow estimation of the wet weather flows associated with individual sources of I/I, or shall identify all physical conditions and/or design constraints of the Sewer System, including Force Mains and Pump Stations, that cause or contribute to known SSOs, Building Backups, and WWTF capacity limitations. Based on the results of the rainfall and flow monitoring, the investigative activities shall include as appropriate:

- a. Further flow monitoring to isolate sources of I/I;
- b. Smoke testing;
- c. Visual inspections of pipes and manholes;
- d. Dye testing;
- e. Night flow isolation;
- f. CCTV inspection to identify sewers in need of repair, rehabilitation, or

replacement; and

- g. External building inspections.

18. The further investigative activities required by Paragraph 17 shall be sufficient to allow characterizations of material defects that allow inflow, infiltration, or exfiltration in study areas with Excessive I/I, SSOs, Building Backups, and WWTF capacity limitations. The further investigative activities required by Paragraph 17 shall also support the development of the Capacity Assurance Evaluation required by Subsection V.E. and the identification of remedial measures necessary to satisfy the objectives of the Capacity Assurance Evaluation.

D. Hydraulic Model

19. MSD shall continue to use the most current software version of the computerized hydraulic model of its Sanitary Sewer System (“Model”) that has been tested and verified by MSD to produce accurate results. MSD shall continue to use and develop the Model in the assessment of the hydraulic capacity of the Sanitary Sewer System, and in the identification of appropriate remedial measures to address all capacity and condition limitations identified in its Sanitary Sewer System, including the impacts of Force Mains and Pumping Stations. MSD shall continue to develop the Model to provide a detailed understanding of the response of its Sanitary

Sewer System to wet weather events and an evaluation of the impacts of proposed remedial measures and removal or reduction of I/I flow, as follows:

a. MSD shall use its best efforts to configure the Model to accurately represent MSD's Sanitary Sewer System, including the impacts of Force Mains and Pumping Stations, in accordance with currently accepted engineering practices. MSD may model its Sanitary Sewer System in different levels of detail, and on various schedules as necessary to identify hydraulic restrictions within the system. MSD's Model shall include (i) gravity sewers twelve inches in diameter or greater and (ii) all gravity sewers that go to known Constructed SSO Outfalls.

b. MSD shall configure the Model using adequate, accurate, and sufficiently current physical data for its Sanitary Sewer System.

c. MSD shall calibrate using two data sets and verify the Model with one additional independent event, including rainfall data, metered hydrographs and Sanitary Sewer System flow data, to the extent data is available and reliable, as outlined in Section 6.2.2.2 of the USEPA report, EPA/600/R-07/111, "Computer Tools for Sanitary Sewer System Capacity Analysis and Planning," October 2007.

20. MSD shall develop and submit as part of its Sanitary Sewer Overflow Control Master Plan required in Section V.F., documentation of the Hydraulic Model for each Watershed, which shall include:

a. A description of the Hydraulic Model, including the brand name of the Model and its capabilities;

b. Digitized map(s) and schematics that identify and characterize the portions (including the specific gravity sewer lines, Pumping Stations, and Force Mains) of the Sanitary

Sewer System included in the Hydraulic Model;

- c. Identification of input parameters, constants, assumed values, and outputs; and
- d. A summary of activities undertaken to configure, calibrate, and verify the

Hydraulic Model.

E. Capacity Assurance Evaluation

21. MSD shall submit as part of its Sanitary Sewer Overflow Control Master Plan required by Section V.F., a Capacity Assurance Evaluation which shall include the following information:

a. Determination of existing flows for each Watershed within the Sanitary Sewer System;

b. Average and peak daily dry weather flow;

c. Peak wet weather flow and peaking factors (the ratio of peak flow to average dry weather flow);

d. Identification of portions of the Sanitary Sewer System experiencing levels of Excessive I/I that cause or contribute to SSOs, Building Backups, Bypasses, and/or overloading of the WWTFs;

e. Identification of the estimated peak flow capacities of modeled portions of the Sanitary Sewer System with inadequate capacity to convey peak wet weather flows, and identification of the nominal peak flow capacities of unmodeled portions of the Sanitary Sewer System suspected of having inadequate capacity to convey peak wet weather flows. In the case of the Sanitary Sewer System, adequate capacity is the ability of the sewer, Force Main, Pumping Station, or structure to convey peak wet weather flows without experiencing surcharging sufficient to cause SSOs, including failure of the largest pump in any Pumping

Station and/or primary power failure to any Pumping Station, pursuant to MSD's current methodology as of the Date of Lodging. In case of inadequate capacity, and the Sewer System is being replaced, the replacement sewer shall be designed to a 10-year design storm condition;

f. Identification of any inadequate capacity in the WWTFs. In the case of the WWTFs, inadequate capacity is the inability to provide full treatment, without bypass, to all flow reaching the WWTF, and to discharge those flows in full compliance with the applicable MSD's Missouri State Operating Permits in effect at the time of Capacity Assurance Evaluation is conducted;

g. Capacity Assurance Evaluation shall account for projected population and flow rate growth through 2035; and

h. Summaries of the number and length of sewer segments surcharged due to inadequate capacity or backwater conditions, and the number of structures that the model estimates will overflow (including Constructed SSO Outfalls) under each condition investigated.

22. The Capacity Assurance Evaluation shall assess existing and future capacity of the Sanitary Sewer System to ensure the ability to convey predicted peak flows. MSD shall give priority in this Capacity Assurance Evaluation to the elimination of Constructed SSO Outfalls and known SSOs.

F. Sanitary Sewer Overflow Control Master Plan

23. No later than December 31, 2013, MSD shall submit to EPA and the State for review and for EPA's approval, with a copy to the Coalition, in accordance with the requirements of Section VII, a Sanitary Sewer Overflow Control Master Plan ("Master Plan") describing (1) the results of the SSES in accordance with the requirements of Section V.C., Hydraulic Model in

accordance with the requirements of Section V.D., and the Capacity Assurance Evaluation in accordance with the requirements of Section V.E., and (2) the specific measures that will result in the Elimination of all Constructed SSOs Outfalls, all known SSOs, and Building Backups, and/or that are necessary to ensure that there is adequate capacity in the Sanitary Sewer System to collect, convey, and treat anticipated peak wet weather flows under current and projected future conditions as defined in Paragraphs 21(e) and (g) above.

24. In its Master Plan, MSD shall also include remedial measures to address capacity limitations and to eliminate bypassing within its Sanitary Sewer System, which may include removal of I/I sources (identifying the anticipated I/I removal rates used in the development of Master Plan); increases in the capacities of sewer pipes, Force Mains, and Pumping Stations (including redundant pumps and/or alternative power supplies) in both Sanitary Sewer System and Combined Sewer System; construction of storage or equalization basin facilities; increases in wastewater treatment capacity; and WWTF upgrades and repair measures.

25. MSD shall also provide in its Master Plan a flow metering plan and a list of locations of flow meters to be installed on the sanitary trunk sewers which convey major flow into the Combined Sewer System.

26. The Master Plan shall provide a schedule of specific projects for the Elimination of all Constructed SSO Outfalls and the goal of eliminating all other known SSOs as expeditiously as possible. The schedule shall provide for the Elimination of at least 85% of the Constructed SSO Outfalls and the goal of eliminating all other known SSOs no later than December 31, 2023. The calculation of the 85% figure shall be based upon the May 5, 2009 bypass database and any additional Constructed SSOs Outfalls subsequently discovered by MSD. Included within the

85% figure shall be the eleven Constructed SSO Outfalls: BP-591; BP-155; BP-170; BP-348; BP-349; BP-198; BP-443; BP-545; BP-008; BP-451; and BP-621 which must be Eliminated by the construction of at least 2 holding tanks, linear storage, and/or other appropriate solutions no later than December 31, 2023. MSD shall identify dates for initial design, commence construction, complete construction, and placement in service for each remedial measure and Elimination project. In proposing the timing and order of Elimination projects, MSD shall set priorities among projects based upon (i) potential for human health and environmental impact risks; (ii) frequencies of activation; (iii) estimated volumes; and (iv) technical engineering judgment.

27. In its Master Plan, MSD may propose, subject to EPA approval, to schedule the Elimination of no more than 15% of the Constructed SSO Outfalls (excluding the eleven Constructed SSO Outfalls identified in preceding paragraph) later than December 31, 2023, but only if based upon a demonstration of technical need to delay the specific Elimination project, but in no event shall the Elimination project be completed later than December 31, 2033. Technical need shall refer to project sequencing, acquisition of property rights and other legal requirements, utility coordination and relocation of capital projects by other municipal entities, unknown soil or other conditions, natural unknown impediments, and other similar issues, but shall not include financial feasibility.

28. The Master Plan shall provide estimated capital, O&M (if applicable), and present value costs for each identified remedial measure and Elimination project. Such costs shall be provided in consistent, year-specific dollars.

29. Upon approval by EPA, MSD shall implement the remedial measures and Elimination

projects in the approved Master Plan in accordance with a schedule in a format set forth in Appendix C, and Paragraphs 26 and 27 of this Consent Decree. The approved schedule shall become an enforceable part of this Consent Decree.

30. In accordance with the format of Appendix C and Paragraphs 26 and 27 of this Consent Decree, MSD may request that a numbered SSO(s) be rescheduled from the 5-year designated grouping in the approved Master Plan, Appendix C, to a later or earlier designated 5-year grouping, provided that the total cumulative number of SSOs to be removed as of any date in the Master Plan Appendix C does not decrease.

a. Any request made pursuant to this Paragraph shall be made in writing pursuant to Paragraph 71 with copies to the State and Coalition and all documentation necessary to support the request for modification. Such request shall include the specific SSO project(s) to be moved to earlier/later years, an explanation for the proposed modification, anticipated schedule for such modification, and the identification of the specific SSO projects to be substituted with an explanation of how the proposed modification will ensure that the total cumulative number of SSOs to be removed by any date as required in the Master Plan Appendix C does not decrease.

b. If EPA disapproves MSD's proposal, MSD may invoke Informal Dispute Resolution in accordance with Paragraph 113. The Formal Dispute Resolution and judicial review procedure set forth in Paragraphs 114 to 120 shall not apply to Paragraphs 30(a)-(d).

c. If the dispute is not resolved by Informal Dispute Resolution, then the position advanced by the United States shall be considered binding; provided that MSD may, within 30 days after the conclusion of the Informal Dispute Resolution period, appeal the decision to the Director, Water, Wetlands, and Pesticides Division, EPA Region 7.

d. EPA's Region 7 Division Director may approve or disapprove, or approve upon conditions or in a revised form, the proposed modification of the Master Plan, Appendix C. The determination of EPA's Region 7 Division Director shall be in her/his discretion and shall be final. MSD reserves the right to file a motion seeking relief in accordance with the Federal Rules of Civil Procedure 60(b).

G. Capacity, Management, Operations, and Maintenance Program Plan

31. No later than six (6) months from the Effective Date, MSD shall submit to EPA and the State for review and for EPA's approval, with a copy to the Coalition, in accordance with the requirements of Section VII, a comprehensive Capacity, Management, Operations, and Maintenance ("CMOM") Program Plan for its Sewer System. MSD shall incorporate an Asset Management process into the CMOM program such that the program shall maintain a service level (e.g. X number of Building Backups per X number of customers during one year period) based upon an accepted industry standard. The CMOM program shall also categorize assets according to risk levels and respectively set maintenance, inspection, and rehabilitation/replacement levels according to the risk imposed to maintain the service level. The CMOM Program Plan shall contain an identified service level that MSD shall use its best efforts to obtain. The CMOM Program Plan shall include, at a minimum, the following Asset Management Performance Standards:

a. Procedures for inspecting Gravity Sewer Lines:

i. MSD shall conduct an internal inspection of each Gravity Sewer pipe that experiences a blockage resulting from a blocked main or dry weather SSO, using CCTV or other appropriate inspection methods (excluding lamping) as soon as is practicable and shall also

perform CCTV inspection in concert with the permanent repair, rehabilitation, and/or replacement of sewer pipes as required pursuant to Paragraph 31(d);

ii. MSD has CCTV'd approximately 1,340 miles of its Sewer System from 2005 to 2010, coupled with data analysis which identified 97% of all Building Backups are related to 12" or less diameter non-PVC sewer pipe;

iii. Until approval of the Master Plan required by Section V.F., MSD shall CCTV approximately 120 miles of 12" or less diameter non-PVC sewer pipe per year. MSD shall also CCTV an additional 280 miles per year until the entire Sewer System is televised. CCTV priority shall be non-PVC sewer pipes 12" or less diameter, non-PVC sewers greater than 12" diameter, and all other PVC and CIPP sewer pipes greater than 20 years old;

iv. MSD shall maintain inspection reports and video of sewer pipes exhibiting a class No. 4 and 5 defect(s), which represent the highest categories of risk, and a representative sampling of other inspection reports and logs of non-PVC sewer pipes for tracking long-term pipe wall deterioration; and

v. MSD shall submit as part of its Annual Report pursuant to Paragraph 73, the location and number of miles of sewer pipe inspected by CCTV during the preceding calendar year. If the Annual Report indicates that MSD has not achieved the required mileage of CCTV inspection, the Annual Report shall identify and discuss the reasons why the mileage requirement was not achieved.

b. Procedures for cleaning Gravity Sewer Lines:

i. MSD's program for prioritizing the cleaning of Gravity Sewer lines shall be based upon an Asset Management approach and risk categorization which shall consider at a

minimum: age, material, trouble history calls, location, and internal inspection results;

ii. MSD has cleaned over 6,000 miles of its Sewer System between 2005 and 2010 and has cleaned all of its 12” or less diameter non-PVC sewer pipe between 2008 and 2010.

MSD shall continue to clean all of its 21” or less diameter non-PVC sewer at a minimum of once every five years. For all PVC and CIPP sewer pipes and sewer pipes 21” or less diameter, MSD shall ensure that each sewer pipe is cleaned at least once every ten years. Sewer pipes with a diameter larger than 21” shall be routinely inspected and cleaned as necessary to prevent loss of hydraulic capacity;

iii. MSD shall continue to maintain computerized logs describing the techniques for each sewer cleaned and identifying the debris removed. Debris identification shall include, at a minimum, grease, roots, and grit. This identification process shall be used to identify risk of sewer blockage, and shall feed into other inspection programs; and

iv. MSD shall submit as part of its Annual Report pursuant to Paragraph 73, the number of miles and locations of sewer pipes that were cleaned during the preceding calendar year. If the Annual Report indicates that MSD has not achieved the required mileage of sewer pipe cleaning, the Annual Report shall identify and discuss the reasons why the mileage requirement was not achieved.

c. Procedures for inspection, repair, rehabilitation, and replacement of Sewer System manholes:

i. MSD’s program shall include routine inspections and incorporate the use of conventional dig and repair in place technologies;

ii. No later than three months from the Effective Date, MSD shall inspect 75,000

manholes, including the manholes inspected between 2008 through the Effective Date. MSD shall continue to inspect no less than 15,000 manholes annually thereafter with the goal of all manholes every 10 years. Inspection shall include the evaluation and repair as necessary of manhole frame-to-adjustment-to-manhole-barrel seals in its Sanitary Sewer System;

iii. MSD shall permanently repair, rehabilitate, and/or replace at least 1,500 manholes annually; and

iv. MSD shall submit as part of its Annual Report pursuant to Paragraph 73, the number of annual inspections, the number of manhole frame adjustments, and the number of manholes that were permanently repaired/rehabilitated/replaced during the preceding calendar year. If the Annual Report indicates that MSD has not achieved the required number of manholes inspected and/or repaired, rehabilitated, and replaced, the Annual Report shall identify and discuss the reasons why these requirements were not achieved.

d. Procedures for ensuring that permanent repair, rehabilitation, and/or replacement of sewer pipes are properly designed and constructed to prevent overflows and reduce sources of infiltration and inflow, including:

i. MSD has permanently repaired approximately 280 miles of non-PVC sewer pipes between 2005 and 2010. Pursuant to Paragraph 12, MSD shall permanently repair, rehabilitate, and/or replace at least \$15 million of sewer pipe in the Sewer System annually until the Master Plan is submitted. The sewer pipelining, repair and/or replacement projects required in Paragraph 12 shall count towards the requirements in this subparagraph and any sewer pipelining, repair, and/or replacement projects performed pursuant to this subparagraph shall count towards the requirements set forth in subparagraph 31(d)(ii) below;

ii. MSD shall continue to permanently repair, rehabilitate, and/or replace at least 90 miles of sewer pipe in the Sewer System annually for the first ten years after the Effective Date, and thereafter at least 65 miles annually;

iii. MSD shall permanently repair all acute defects (i.e., those defects that have caused or substantially increase the risk of a SSO, including conditions leading to imminent structural collapse or that would create repeated blockages) within one (1) year of discovery of the defect. MSD shall maintain a log listing discovered acute sewer line defects in need of expeditious repair or replacement, the date MSD discovered the acute defect, and the date of project completion. Permanent repair means the correction of a structural defect in a manhole to manhole pipe segment such that the repaired segment has the same or greater life expectancy as the remainder of the pipe segment; and

iv. MSD shall submit as part of its Annual Report pursuant to Paragraph 73, the locations and number of miles of sewer pipes that were repaired/rehabilitated/replaced, and a summary of all acute defects repaired during the preceding calendar year. If the Annual Report indicates that MSD has not achieved the required mileage of sewer pipe repair/replacement/rehabilitation, the Annual Report shall identify and discuss the reasons why the mileage requirement was not achieved.

e. MSD shall develop and periodically update a standard procedure flow diagram and training materials for maintaining a system documenting customer complaints, work orders, updates to equipment inventory, as well as including standard problem coding and response procedures.

f. MSD shall develop and periodically update a standard procedure flow diagram and

training materials to be followed by MSD personnel for the evaluation, operation, preventive and routine maintenance, and emergency response of MSD's Sewer System, including Force Mains and Pump Stations.

g. MSD shall continue to refine procedures for adequately training MSD collection system operators which currently is a two (2) year training program upon hiring. If outside contractors are hired, MSD shall ensure they have sufficient knowledge and ability to promptly identify and address problems in its Sewer System with priority given to those problems which could lead to Non-Capacity Related SSOs;

h. MSD shall develop and periodically update a standard procedure flow diagram and training materials for developing and implementing a root control program that addresses, at minimum, scheduling and performing corrective measures including both short-term mitigation of root intrusion (i.e., routine maintenance) and rehabilitation of the areas in which root intrusion has caused recurring blockages (i.e., sewer replacement or relining), and a proposal that includes scheduled inspection and/or increased cleaning of known problem areas;

i. MSD shall develop and periodically update a standard procedure flow diagram for developing and implementing routine and preventative maintenance program for Pump Stations that include:

i. MSD shall determine the criticality and risk of failure for each Pump Station based upon Asset Management principles, considering, at a minimum: daily flows, age, installed redundancy, alternate power supply, 5-year trouble and maintenance history, location, population affected, and environmental concerns;

ii. MSD shall conduct comprehensive inspections no less than monthly for all

Pump Stations, no less than twice per month for pump stations between 1 MGD to 5 MGD in peak hydraulic capacity, and no less than weekly for pump stations greater than 5 MGD in peak hydraulic capacity;

iii. MSD shall use SCADA to continuously monitor station performance; and

iv. MSD shall submit as part of its Annual Report pursuant to Paragraph 73, how many Pump Stations were inspected, as well as the location and capacity of those Pump Stations inspected during the preceding calendar year.

j. MSD shall develop and periodically update a standard procedure flow diagram for incorporating and implementing a method for corrective and emergency Pump Station response to operational failures that include:

i. Problem detection through continuous SCADA monitoring, including alarms transmitted to 24/7 occupied system control centers indicating SCADA malfunctions, high wet well, individual pump failure, primary power failure, and back-up power failure;

ii. MSD shall develop and maintain a Pump Station inventory listing, including, but not limited to, installed redundant pump capacity, provisions for quick connection of emergency pumps, on-site alternative power system, provisions for quick connection of emergency portable power systems, storage, pumping system controls and alarm systems, lightning protection, criticality rating, pump size, and hydraulic capacity; and

iii. MSD shall create and maintain a list of backup portable pumping equipment and portable generators available for Pump Stations that rely on redundant storage only to prevent overflows during periods of pumping equipment malfunction or primary power outage.

k. MSD shall develop and periodically update a standard procedure flow diagram for

maintaining a method for inspection and repair of Force Mains that include the following elements:

i. Incorporate an Asset Management approach and risk categorization scale that classifies each of the 125 miles of Force Main as either High, Medium, or Low risk that shall consider at a minimum: daily flows, age, material, size, maintenance history, location including population affected, and environmental concerns;

ii. Incorporate a defined and recurring visual and nondestructive inspection techniques (e.g., pressure testing, acoustic leak detection, external inspection via test pits, electrical resistivity and soil acidity testing, replacement of spent anode packs), critical part inventories, and emergency response procedures such that the following criteria are met:

Classification of Force Main	Frequency of Visual Inspection	Frequency of Non-Destructive Testing Inspection	Critical Parts Inventory and Emergency Response Procedures
High-Risk	Annually	Once every three years	Required
Medium-Risk	Once every two years	Once every six years	Required
Low-Risk	Once every five years	N/A	N/A

iii. MSD shall repair all defects identified during either the visual and/or nondestructive inspections within one (1) year of discovery of the defect; and

iv. MSD shall submit as part of its Annual Report pursuant to Paragraph 73, the locations and number of miles of Force Mains that were inspected and/or repaired during the preceding calendar year. If the Annual Report indicates that MSD has not achieved the required number of miles of Force Mains that were inspected and/or repaired, the Annual Report shall

identify and discuss the reasons why the mileage requirement was not achieved.

32. If, in any year, MSD CCTV inspects, cleans, repairs, rehabilitates, or replaces more pipes, manholes or Force Mains than stated above, MSD may bank the excess to be applied against a future year's requirement in the same category. As part of its Annual Report required by Paragraph 73, MSD shall identify the number of miles MSD proposes to bank for each category and document the basis for MSD's position that it has exceeded the mileage or activity requirements in this Consent Decree. The banking account for each individual category will constitute the immediate past three (3) years, provided that once banked miles have been used they cannot be used in any subsequent year.

33. CMOM Program Plan Implementation: MSD shall implement the revised CMOM Program Plan within 90 days of receipt of EPA's approval of the CMOM Program Plan. MSD shall annually review its CMOM Program Plan and update the program as necessary to ensure that the program is achieving the service levels contained in the approved CMOM Program Plan. In its Annual Report, MSD shall submit any proposed changes to the Asset Management Performance Standards (e.g., various mileage requirements), subject to EPA's approval. If MSD does not meet its service levels as set forth in its CMOM Program Plan, MSD shall submit in its Annual Report for EPA's approval proposed revisions to its CMOM Program Plan that are necessary to achieve the service levels. Upon approval of revised Asset Management Performance Standards, said approved, revised standards shall supersede previously approved standards.

H. Fats, Oil and Grease Control Program Plan

34. No later than three months from the Effective Date, MSD shall submit to EPA and the

State for review and for EPA's approval, with a copy to the Coalition, in accordance with the requirements of Section VII, a Fats Oil & Grease ("FOG") Control Program Plan to ensure that grease accumulations are not restricting the capacity of the Sewer System contributing to SSOs.

35. The FOG Control Program Plan shall include the following elements:

- a. Identification of the specific departments of MSD that will lead investigations associated with grease blockages;
- b. Development of appropriate sections for inclusion in the standard operating procedures in the FOG Program Plan for locating and preventing FOG accumulations;
- c. Development of maintenance guidance for FOG commercial establishments including best management practices. This guidance shall expressly state that the FOG commercial establishments shall comply with the applicable plumbing code requirements. MSD shall provide the FOG maintenance guidance to FOG commercial establishments when MSD conducts an inspection of these establishments;
- d. Development of performance guidelines for FOG control equipment at new and existing FOG commercial establishments. MSD shall provide the FOG performance guidelines to public entities who are responsible for the plumbing code requirements of these commercial establishments;
- e. Both periodic and random FOG equipment inspections, including scheduled inspections of known problem areas;
- f. Implementation of FOG best management practices;
- g. Development of FOG prevention measures including notification of pretreatment staff and/or FOG control staff, as appropriate, of recurring grease blockages;

- h. Implementation of Hauled Waste Receipt Program;
- i. Enforcement procedures for non-compliant facilities;
- j. Development of Residential and Commercial Establishments FOG Outreach and Education Program consisting, at a minimum, of the following elements:
 - i. MSD shall distribute informational FOG Door Hangers to residents living immediately upstream of each grease SSO after such an event;
 - ii. MSD shall annually prepare and distribute FOG information or inserts with sewer bills so that it is visible to reader;
 - iii. MSD shall prepare and maintain a FOG education information page on its web site; and
 - iv. MSD shall evaluate the most appropriate method of educating high density residential dwellings (i.e. apartment buildings and condominium and townhome complexes) of the impacts of FOG on the sewer system.
- k. A list of FOG commercial and industrial establishments;
- l. A list of enforcement actions taken against non-compliant facilities within the last 5 years;
- m. MSD's current schedule for periodic and random FOG equipment inspections and a listing of inspections that have taken place within the past 5 years;
- n. MSD shall review new commercial and industrial sewer connection permit applications to ensure applicant has adequate FOG removal or control equipment; and
- o. MSD shall submit as part of its Annual Report pursuant to Paragraph 73, summaries of FOG inspections and enforcement actions taken by MSD during the preceding

calendar year.

36. FOG Control Program Plan Implementation: MSD shall implement the revised FOG Control Program Plan within 90 days of receipt of EPA's approval of such Plan.

I. Certification of Legal Authority

37. MSD hereby certifies in accordance with Section of XVIII that as to the POTW, including the Sewer System, it has sufficient legal authority to:

- a. Control Excessive I/I from private and public sources;
- b. Require that sewers and connections be properly designed and constructed;
- c. Ensure that there is proper installation, testing and inspection of new and rehabilitated sewers;
- d. Allow and require implementation of the general and specific prohibitions of the pretreatment program as defined in 40 C.F.R. § 403.5;
- e. Prohibit Inflow and provide mechanisms for requiring its removal; and
- f. Control the introduction of fats, oil, and grease from commercial institutions and establishments.

38. The legal authority may be in the form of sewer use ordinances, service agreements, contracts or other legally binding mechanisms.

J. Private Infiltration and Inflow Reduction Program

39. No later than six months from the Effective Date, MSD shall submit to the EPA and the State, with a copy to the Coalition, a plan describing in detail the proposed remedial actions working in coordination with the public entities within MSD boundaries and the public regarding prohibited discharges of storm waters, Surface Waters, ground waters, roof runoff, Excessive I/I

to the Sanitary Sewer System.

40. Where a Private Lateral, or other connection to that lateral, is a major source of I/I that causes or contributes to a capacity-related SSO or Building Backup from the Sanitary Sewer System, MSD shall, within sixty days of the date of the identification of such a lateral, notify the owner(s) of the lateral(s) that the lateral(s) is a significant source of I/I and that the owner(s) shall take action consistent with MSD's legal authority to repair, rehabilitate, replace, terminate, or take other appropriate action with regard to the lateral. If the owner(s) of the lateral(s) fail to take appropriate steps to repair, rehabilitate, replace, terminate, or other appropriate action with regard to the lateral(s), MSD shall, within six months of the owner(s)' failure to remedy the problem, either take remedial action to repair, rehabilitate, replace, terminate the lateral(s), or other appropriate action.

41. MSD shall appropriately enforce the portions of its Sewer Ordinance (Ordinance No.12559) related to Section V.J. of this Consent Decree. The plan required in Paragraph 39 above shall also include a summary of the types of actions taken by MSD to ensure compliance with its Sewer Ordinance (Ordinance No.12559).

42. MSD shall evaluate its "Abandonment of Sanitary Sewer Services" in the document entitled MSD Rules and Regulations and Engineering Design Requirements, February, 2006, with regards to whether the regulation is sufficient to reduce effectively ongoing I/I following abandonment of a lateral that may cause or contribute to an SSO or Building Backup from the Sanitary Sewer System. The evaluation shall focus on the location at which lateral sewer lines should be plugged. The primary objective should be to eliminate I/I from abandoned sewer lines that are not properly maintained and may be damaged (due to age or modification of the existing

property). No later than six months from the Effective Date, MSD shall provide the results of the evaluation to the EPA and the State, with a copy to the Coalition.

K. Revised Non-Capacity Related SSO Response Plan

43. No later than three months from the Effective Date, MSD shall provide to EPA and the State for review and for EPA's approval, with a copy to the Coalition, a revised Non-Capacity Related SSO Response Plan that results in Non-Capacity Related SSOs being responded to and halted as rapidly as possible.

44. The Non-Capacity SSO Response Plan shall provide procedures for responding to Non-Capacity Related SSOs and minimizing the environmental impact and potential human health risk from contact with sewage. The Non-Capacity Related SSO Response Plan shall include, but not be limited to:

a. A detailed description of the actions MSD will undertake to provide required notice to the public, federal, state or local agencies/authorities of the SSO;

b. A detailed response plan to

i. provide an onsite response team, normally within four (4) hours of receiving notification,

ii. minimize wastewater volumes escaping from MSD's Sewer System,

iii. minimize environmental impacts and human health affects,

iv. provide clean-up procedures, and

vi. Receiving Stream monitoring, where appropriate, and data capture and documentation procedures.

45. MSD shall implement the revised Non-Capacity Related SSO Response Plan within 60

days of receipt of EPA's approval of such Plan. MSD shall provide notice and certify to EPA, with copies to the State and the Coalition, in accordance with Sections XVII and XVIII, that the Non-Capacity Related SSO Response Plan has been fully implemented. The Non-Capacity Related SSO Response Plan shall be updated and implemented as appropriate. Any substantive updates, changes or revisions to the Non-Capacity Related SSO Response Plan shall be subject to EPA's review and approval in accordance with Section VII.

L. Building Backup Response Plan

46. No later than three months from the Effective Date, MSD shall provide to EPA and the State for review and EPA's approval, with a copy to the Coalition, in accordance with the requirements of Section VII, a Building Backup Response Plan that (a) results in Building Backups being responded to and, if determined to be a Building Backup, halted as expeditiously as practicable, and (b) results in appropriate measures being implemented to address Building Backup recurrence.

47. The Building Backup Response Plan shall provide procedures for responding to Building Backup calls to minimize the potential human health risk from contact with sewage. The Building Backup Response Plan shall include, but not limited to:

a. Standard Operating Procedures to be followed by MSD personnel in responding to Building Backup calls shall include MSD personnel recording information and responding to the calls, generating a service request, and providing onsite response, if necessary. If determined to be a Building Backup, the backup will be eliminated within four (4) hours of receiving notice or as quickly as possible if extenuating circumstances exist. If onsite response is given then MSD shall provide building occupants and/or owners with the Building Backup clean-up guide as

required by Paragraph 47(c), as well as provide information on the prevention of Building Backups, backup prevention devices, and the possibility of monetary reimbursement if occupants and/or owners may be eligible as determined by MSD.

b. A description of the actions MSD shall undertake to educate the public through appropriate and current methods, including MSD website, brochures, door hangers, billing inserts or other methods regarding Building Backups, including how to report Building Backups to MSD, protection from contact with raw sewage during cleanup, potential health effects and safety issues related to contact with raw sewage, professional clean up assistance, the availability of MSD's Building Backup clean-up guide as required by Paragraph 47(c), and the availability of Building Backup monetary reimbursement and/or MSD's Sewer Separation Program ("SSP"), as appropriate.

c. A revised Building Backup clean-up guide produced in multiple languages to be made available on MSD website and distributed to property owners or residents if onsite response is given by MSD. This clean-up guide shall provide recommended clean-up procedures necessary to disinfect and/or remove items potentially contaminated by the Building Backup. The clean-up guide shall also provide descriptions of potential health affects and safety issues resulting from contact with sewage, as well as provide information on how to minimize exposure.

d. A Building Backup Prevention Program that describes MSD's activities and programs to prevent the occurrence of Building Backups through, for example, MSD's SSP which includes the installation and maintenance of individual grinders, pump stations and sewerage back-flow preventers and the referral of customers to local lateral repair programs to

address Building Backups. The Building Backup Prevention Program shall also provide:

- i. A summary of completed and ongoing SSP activities;
- ii. Annual inspection and maintenance of SSP projects;
- iii. An assessment of SSP effectiveness in reducing Building Backups on an

individual residential unit basis and its overall effectiveness in reducing the number of Building Backup events throughout MSD's jurisdictional boundary;

- iv. Anticipated changes regarding SSP use, availability to the public, ongoing maintenance activities and responsibilities, and type(s) of equipment; and

- v. A summary of how the SSP installation and maintenance procedures will be communicated to the customers.

48. MSD shall implement the Building Backup Response Plan within 60 days of receipt of EPA's approval of such Plan or resolution of a dispute concerning the Building Backup Response Plan pursuant to Section XIV. The Building Backup Response Plan shall be updated and implemented on a regular basis, as appropriate. Any substantive updates, changes or revisions to the Building Backup Response Plan shall be subject to EPA's review and approval in accordance with Section VII.

M. Cityshed Mitigation Program

49. MSD shall continue its Cityshed Mitigation Program to mitigate the effect of wet weather surcharging and overland flooding of the combined sewer system (Citysheds). This program may consist of but is not limited to sewer separation, relief sewers, sewer separation program ("SSP") for individual properties, control/detention of wet weather flows, relocation of existing residents, and mapping of flood prone areas. MSD shall maintain a regular annual

program with the goal of spending \$230 million over the life of the Consent Decree.

50. MSD shall submit as part of its Annual Report pursuant to Paragraph 73, a description of projects and project costs associated with the Cityshed Mitigation Program performed during the previous annual period, and provide a summary of accumulated annual costs toward the associated spending goal. Said projects shall be independent for financial accounting purposes from any other section of this Consent Decree, including appendices or any modifications thereof.

VI. IMPLEMENTATION OF CSO CONTROL MEASURES AND POST-CONSTRUCTION MONITORING

A. Implementation of CSO Control Measures

51. MSD shall construct and implement the CSO Control Measures in accordance with the descriptions, Design and Performance Criteria, and the dates for Bid Year and Achievement of Full Operation for each CSO Control Measure set forth in Appendix D.

B. Post-Construction Monitoring Program

52. MSD shall perform the Post-Construction Monitoring Program set forth in Appendix E in accordance with the provisions and schedule set forth therein.

C. Achievement of Performance Criteria

53. By the specified date for Achievement of Full Operation for each specified CSO Control Measure set forth in Appendix D, MSD shall achieve the Performance Criteria specified in Appendix D for the specific CSO Control Measure. The procedures set forth in the Post-Construction Monitoring Program at Appendix E shall be used to determine whether MSD has achieved the Performance Criteria specified in Appendix D.

D. Compliance with MSD's Missouri State Operating Permits

54. MSD shall at all times comply with the requirements set forth in EPA's CSO Policy to ensure that no discharges from Combined Sewer Overflows occur (i) during dry weather, (ii) anywhere other than at locations designated within MSD's Missouri State Operating Permits, or (iii) at any time when MSD is not in full compliance with the Nine Minimum Controls set forth in MSD's Missouri State Operating Permits.

E. Supplemental Remedial Measures Plan

55. If, following Achievement of Full Operation of any specific CSO Control Measure(s), information becomes available, including information developed as a result of the Post-Construction Monitoring Program, that MSD:

a. Did not construct all CSO Control Measures in accordance with the Design Criteria set forth in Appendix D;

b. Has not achieved the Performance Criteria pertaining to the specific CSO Control Measure(s) set forth in Appendix D; or

c. Is not complying with all requirements of MSD's Missouri State Operating Permits in effect pertaining to CSO discharges and secondary treatment bypasses;

then MSD shall, within 90 days of receipt of notice from EPA, submit to EPA and the State for review and for EPA's approval, with a copy to the Coalition, (1) a plan for performing supplemental remedial measures to achieve compliance and additional post-construction monitoring and modeling ("Supplemental Remedial Measures Plan") and (2) a request for the extension of the deadline for the Achievement of Full Operation for the CSO Control Measure at issue to allow for implementation of supplemental remedial measures. The Supplemental

Remedial Measures Plan shall include a description of the remedial measures that MSD will take to ensure that compliance will be achieved; a schedule that is as expeditious as possible for design, construction, and implementation of the measures; a description of additional post-construction monitoring and modeling needed to assess whether MSD has achieved compliance; and a schedule for performing such monitoring and modeling.

56. Upon demonstration by MSD that water quality standards for dissolved oxygen cannot be met solely due to reasons other than remaining CSO discharges (e.g., Mississippi River backwater effects), MSD shall not be required to propose supplemental remedial CSO Control Measure(s), provided that the Post-Construction Monitoring Program has demonstrated compliance of the constructed CSO Control Measure(s) with the Performance Criteria set forth in Appendix D.

57. Upon receipt of EPA's approval of the Supplemental Remedial Measures Plan, or upon resolution of any disputes in accordance with Section XIV (Dispute Resolution), MSD shall implement the Approved Supplemental Remedial Measures Plan (including additional monitoring and modeling) in accordance with the schedule and terms set forth therein.

58. a. Should MSD determine, following Achievement of Full Operation of all CSO Control Measures required under Paragraph 51, and upon completion of the Post-Construction Monitoring Program required under Paragraph 52 and set forth in Appendix E, that MSD has not achieved the Performance Criteria set forth in Appendix D, and cannot achieve the Performance Criteria in the absence of additional remedial measures that MSD maintains would be cost prohibitive, technically infeasible, or otherwise inappropriate, MSD may propose to the Director, Water, Wetlands, and Pesticides Division, EPA Region 7, a modification of the Performance

Criteria. The Performance Criteria review process set forth in this Paragraph shall be the exclusive means by which MSD may seek modification of Performance Criteria.

b. Any proposal by MSD to modify the Performance Criteria under this Paragraph shall be in writing and shall include:

i. a certification in accordance with Section XVIII that MSD has properly designed and constructed the CSO Control Measures to achieve the Performance Criteria consistent with accepted industry standards;

ii. a post-construction monitoring report prepared consistent with Appendix E which demonstrates that MSD has not achieved the Performance Criteria;

iii. a detailed description of additional remedial measures that would be required to achieve the Performance Criteria, including the projected costs of such measures;

iv. a detailed discussion of the reasons MSD believes that additional remedial measures would be cost prohibitive, technically infeasible, or otherwise inappropriate; and

v. the text of the proposed modification of the Performance Criteria.

c. If EPA disapproves MSD's proposal, MSD may invoke informal dispute resolution in accordance with Paragraph 113. The formal dispute resolution and judicial review procedures set forth in Paragraphs 114-120 shall not apply.

d. If a dispute is not resolved by informal dispute resolution, then the position advanced by the United States shall be considered binding; provided that MSD may, within 30 days after the conclusion of the informal dispute resolution period, request a meeting with the Director in person to review MSD's proposal. EPA may retain one or more independent consultants to assist it in its evaluation of MSD's proposal. The Coalition may submit a position

paper and attend the in-person meeting.

e. i. Following the meeting described in Paragraph 58(d), the Director shall issue a written initial determination recommending approval, disapproval, or approval subject to conditions or revisions of MSD's proposal, and shall immediately transmit such determination to the EPA Region 7 Regional Administrator and MSD.

ii. MSD may appeal the initial determination within 30 Days to the Regional Administrator by submitting any documents that MSD deems relevant and appropriate. During the pendency of any such appeal, the Parties shall seek to reach agreement on any issues upon which they disagree.

iii. The Regional Administrator may approve or disapprove, or approve upon conditions or in a revised form, the proposed modification of the Performance Criteria. The determination of the Regional Administrator shall be in her/his discretion and shall not be subject to judicial review, except that, if she/he approves a modification of Performance Criteria, the modification shall not be effective until a modification of the Consent Decree is approved by the Court in accordance with Paragraphs 59 and 136 of the Consent Decree.

59. Any proposed modification of the Consent Decree resulting from a modification of Performance Criteria pursuant to Paragraph 58 shall be subject to public notice and comment pursuant to 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent to any such proposed modification of the Consent Decree if public comments received disclose facts or considerations which indicate that the modified Consent Decree would be inappropriate, improper, or inadequate.

60. The approved LTCP and CSO Control Measures in Appendix D address all permitted

known CSOs in MSD's Bissell Point and Lemay Missouri State Operating Permits. If water quality standards for indicator bacteria for the 28.3 mile segment of the Mississippi River water body between the Meramec River and North Riverfront Park in St. Louis change and are incorporated into MSD's Missouri State Operating Permits for Lemay and Bissell Point, MSD shall submit to EPA and the State for review and for EPA's approval, with a copy to the Coalition, an update to its Long Term Control Plan that shows existing controls meet the new water quality standards or proposes additional controls that are anticipated to meet the new water quality standards. MSD shall also submit to EPA and the State for review and for EPA's approval, with a copy to the Coalition, proposed changes to the Design and Performance Criteria and Critical Milestones for the CSO Control Measures in Appendix D as necessitated by the revised LTCP, and proposed changes to the Post-Construction Monitoring Program in Appendix E as necessitated by the revised LTCP. MSD may invoke dispute resolution if it disagrees with EPA. MSD shall implement the approved, revised LTCP.

61. MSD may request that the Design Criteria for the CSO Control Measures listed in Appendix D be revised if it can demonstrate that the requested revision (1) reflects good engineering practice and (2) will continue to achieve the Performance Criteria specified in Appendix D. The Design Criteria review process set forth in this Paragraph shall be the exclusive means by which MSD may seek modification of Design Criteria:

a. Any request by MSD for modification made pursuant to this Paragraph shall be made in writing to EPA pursuant to Paragraph 71, with copies to the State and the Coalition, with all documentation necessary to support the request for modification, including all information relevant to the two criteria set forth above.

b. If EPA disapproves MSD's proposal, MSD may invoke Informal Dispute Resolution in accordance with Paragraph 113. The Formal Dispute Resolution and judicial review procedure set forth in Paragraphs 114 to 120 shall not apply to Paragraph 61(a)-(f).

c. If the dispute is not resolved by Informal Dispute Resolution, then the position advanced by the United States shall be considered binding; provided that MSD may, within 30 days after the conclusion of the Informal Dispute Resolution Period, appeal the decision to the Director, Water, Wetlands, and Pesticides Division, EPA Region 7.

d. EPA's Region 7 Division Director may approve or disapprove, or approve upon conditions or in a revised form, the proposed modification of the Design Criteria. The determination of EPA's Region 7 Division Director shall be in her/his discretion and shall be final. MSD reserves the right to file a motion seeking relief in accordance with the Federal Rules of Civil Procedure 60(b).

e. If EPA approves a greater than 20% revision of Design Criteria, the modification shall not be effective until a modification of the Consent Decree is approved by the Court in accordance with Paragraph 136 of the Consent Decree.

f. Any proposed modification of the Consent Decree resulting from a greater than 20% modification of Design Criteria pursuant to Paragraph 61 shall be subject to public notice and comment pursuant to 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent to any such proposed modification of the Consent Decree if public comments received disclose facts or considerations which indicate that the modified Consent Decree would be inappropriate, improper, or inadequate.

62. If MSD experiences significant adverse changes to its financial circumstances or other

financial or budgetary issues, MSD may request a modification of a CSO Control Measure and/or CSO Critical Milestone in this Consent Decree and Appendix D. The request for modification shall be made in writing to the United States, with copies to the State and the Coalition, and shall:

- a. Provide a detailed discussion of the significant adverse change to MSD's financial circumstances or other financial or budgetary issues;
- b. Specify which CSO Control Measure and/or CSO Critical Milestone cannot be complied with;
- c. Propose a revised CSO Control Measure and/or CSO Critical Milestones that are expeditious as possible; and
- d. Include all documents and information supporting the request.

MSD shall provide such additional information requested by the United States as is reasonably necessary to assist in evaluating the modification request. If the Parties agree on a proposed modification to the Consent Decree, the modification shall be incorporated into an amended consent decree that shall be subject to court approval after public notice and comment in accordance with Section XXIII.

63. If the Parties do not agree that a modification proposal under Paragraph 62 above is warranted, and MSD believes modification is appropriate, MSD reserves its rights to file a motion pursuant to FRCP 60(b) seeking modification of a CSO Control Measure and/or CSO Critical Milestone in this Consent Decree and Appendix D; provided, however, that the United States reserves its rights to oppose any such motion and to argue that such modification is unwarranted. Such a motion by MSD shall not relieve MSD of its obligations pursuant to

Sections V and VI, unless the Court orders otherwise, and MSD shall continue with timely implementation of the CSO Control Measures until the Court rules on any motion described in this Paragraph in a manner that modifies MSD's obligations under this Decree.

VII. REVIEW AND APPROVAL PROCEDURES

64. After review of any plan, report or other item that MSD is required to submit for approval to EPA pursuant to this 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 MSD 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 MSD in writing of those portions of the submission that EPA disapproves or approves upon specified conditions. The State and the Coalition shall have forty-five (45) days from the date of MSD's submission to provide EPA with any written comments. If a time constraint imposed by this Consent Decree does not allow forty-five (45) days for the State and the Coalition to provide written comments to EPA, EPA shall notify the State and the Coalition of the reasonable time period in which they may provide written comments to EPA, and the State and Coalition shall provide any written comments within that reasonable time period. EPA agrees to consider any written comments by the State and Coalition that are received by EPA within the time frames described in this Paragraph.

65. In the event of approval, or approval upon conditions by EPA, MSD shall proceed to take any action required by the plan or other item as approved by EPA, except as provided in Paragraph 68.

66. Upon receipt of notice of disapproval, partial approval, or conditional approval of a submission pursuant to Paragraph 64 above, MSD 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 MSD's right to dispute resolution pursuant to Section XIV.

67. EPA may take any of the actions described in Paragraph 64 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 MSD to address the disapproved portions and resubmit the plan within sixty (60) days of receipt of the disapproval. If MSD fails to timely submit the plan or again does not address the disapproved portions, MSD shall be deemed out of compliance with this Consent Decree. MSD 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 MSD may initiate dispute resolution in accordance with Section XIV of the Consent Decree. 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.

68. MSD shall proceed, if directed by EPA, to take any action required by any approved portion of MSD's submission or resubmission, unless such action is directly dependent upon any unapproved portion of the submission or resubmission and MSD invokes its right to dispute resolution pursuant to Section XIV of the Consent Decree. Implementation of any approved portion of a submission shall not relieve MSD of any liability for stipulated penalties for not implementing the unapproved and/or conditionally approved portion(s).

69. Any stipulated penalties applicable to the original submission shall not be payable unless the first resubmission, as set forth in Paragraph 67 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 MSD's obligations under this Consent Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmissions.

70. All plans, reports, and other items required to be submitted to EPA under this Consent Decree shall, upon approval by EPA pursuant to Section VII, be enforceable under this 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 Consent Decree, the approved portion shall be enforceable under this Consent Decree, unless such action is directly dependent upon an unapproved portion of the submission or resubmission and MSD invokes its right to dispute resolution pursuant to Section XIV.

71. EPA agrees to use its best efforts to expeditiously review and comment on submittals that MSD is required to submit to EPA for approval pursuant to the terms and provisions of this 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 Consent Decree, EPA shall so notify MSD 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 Consent Decree, MSD 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.

VIII. REPORTING REQUIREMENTS

72. **Semi-Annual Reports.** For semi-annual period January 1st - June 30th, MSD shall submit a report on August 15, and for the semi-annual period July 1st - December 31st, MSD shall submit a report on February 15th of each year until termination of the Decree. MSD shall submit this Semi-Annual Report to the United States and the State, with a copy to the Coalition, containing the following information:

a. Constructed SSO Overflow Report identifying activation data from the Constructed SSO Outfalls that occurred during the preceding six months. MSD shall include (i) Constructed SSO Outfall number, (ii) address, (iii) the start date of the event, (iv) the event duration, and (v) estimated volume, if known.

b. Data for each Building Backup that occurred during the preceding six months that shall include: (i) street address (or location) at which the Building Backup occurred; (ii) identification of the Watershed in which the Building Backup occurred; (iii) cause or causes of the Building Backup, if known; (iv) list by call date of any Building Backup that has previously occurred at same address (or location) since the Effective Date; and (v) list of those Building Backups that have resulted in a discharge to waters of the United States.

c. Data for each known SSO (other than the Constructed SSOs and Building Backups) that occurred in the Sewer System (i.e., combined or separate) during the preceding six months, that shall include: (i) watershed; (ii) location description; (iii) facility type; (iv) volume (if known); (v) reason (i.e., blockage, broken pipe, weather conditions, power outages, vandalism, third-party cause, Mississippi River backflow); (vi) cause (i.e., debris, grit, grease, high river flow); (vii) the amount of time to commence investigation of each SSO (as reported), if known;

and (viii) the amount of time to correct and/or cleanup each SSO, as necessary. This data shall be provided in a format to allow for sorting and analysis.

73. **Annual Reports.** No later than October 31st of each year, starting October 31, 2012, and continuing each year until this Consent Decree is terminated, MSD shall submit to the United States and the State, with a copy to the Coalition, an Annual Report for the preceding calendar year, providing:

- a. Updated GIS layers of the Sewer System that identify the locations of the Constructed SSO Outfalls, Watersheds, WWTFs, Pumping Stations, Force Mains, wastewater storage facilities, outfalls, and Gravity Lines;
- b. Updated Constructed SSO Inventory in which any changes from the preceding year are highlighted and explained;
- c. A schedule that identifies Constructed SSO Outfalls (excluding those associated with the early Elimination projects referenced in Paragraph 10 above) which may be Eliminated prior to MSD's implementation of the Sanitary Sewer Overflow Control Master Plan, as required by Section V.F.;
- d. A summary of the status and progress of implementation of Elimination projects and remedial measures required by Sections V ("Remedial Measures and Schedules for Sanitary Sewer System") of this Decree, including a statement as to whether specific scheduled milestone dates were met during that annual period. Upon completion of Elimination projects and remedial measures, MSD shall submit to EPA and the State with a copy to the Coalition a certification as provided in Section XVIII that the specified work has been completed. When the Sanitary Sewer Overflow Control Master Plan is approved, the schedule approved therein shall be

addressed in this Annual Report pursuant to Paragraph 73 and Appendix C;

e. A summary of the status and progress toward achievement of the Performance Criteria set forth in Appendix D within the previous calendar year, and a projection of the work to be performed pursuant to Appendix D during the current calendar year. Notification to EPA of any anticipated delay in performance shall not, by itself, excuse the delay;

f. A report summarizing the results and progress of the Post-Construction Monitoring Program in accordance with the specific requirements set forth in Appendix E;

g. A description of the enhanced I/I source elimination projects, the number of miles of sewer pipelining and replacement projects, as well as the specific locations and costs for each project for the preceding calendar year, as required by Paragraphs 12-13;

h. Development and status of implementation of Section V.G. (Capacity, Management, Operations and Maintenance Program) and Section V.H. (Fats, Oil and Grease Control Program Plan);

i. A progress report summarizing the results and progress of the implementation of the Supplemental Environmental Project in accordance with the specific requirements set forth in Section X;

j. Copies of all unpermitted CSO discharge reports submitted to MDNR during the previous calendar year;

k. Copy of the Nine Minimum Control Annual Report required to be submitted under its NPDES Permits; and

l. Description of projects and project costs associated with Cityshed Mitigation Program performed during the previous annual period, and provide a summary of accumulated

annual costs toward the associated spending goal, as required by Section V.M.

74. All reports required to be submitted in this Section shall contain a certification signed by a responsible official of MSD in accordance with Section XVIII.

75. MSD shall maintain copies of all written submissions required pursuant to this Section until five years after the date of termination of this Consent Decree.

76. MSD shall post on its website all written submissions required pursuant to this Section upon submission of report to EPA, State, and the Coalition. The GIS layers shall not be placed on the website. Each submission shall remain on the website or by link or other accepted method for three (3) years.

77. Any information provided pursuant to this Consent Decree may be admissible evidence in any proceeding to enforce the provisions of this Consent Decree as permitted by law.

IX. CIVIL PENALTY

78. Within thirty (30) Days after the Effective Date of this Consent Decree, MSD shall pay to the United States a sum of \$1,200,000.00 as a civil penalty, together with interest accruing from the 31st day after the Effective Date at the rate specified in 28 U.S.C. § 1961 as of the Effective Date. This payment to the United States shall be made by FedWire Electronic Funds Transfer (“EFT”) to the U.S. Department of Justice in accordance with written instructions to be provided to MSD, following the Effective Date, by the Financial Litigation Unit of the U.S. Attorney’s Office for the Eastern District of Missouri, 111 S. 10th Street, 20th Floor, St. Louis, Missouri 63102 (phone number 314-539-2200). At the time of payment, MSD shall send a copy of the EFT authorization form and the EFT transaction record, together with a transmittal letter, which shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in

United States of America and the State of Missouri v. Metropolitan St. Louis Sewer District, and shall reference the civil action number, 4:07-CV-1120 (CEJ), and DOJ case number 90-5-1-1-08111, to the United States in accordance with Section XVII of this Decree (Notices); by email to acctsreceivable.CINWD@epa.gov; and by mail to:

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

79. MSD shall not deduct any penalties paid under this Decree pursuant to this Section or Section XI ("Stipulated Penalties") in calculating its federal income tax.

X. SUPPLEMENTAL ENVIRONMENTAL PROJECT

80. MSD shall implement a Supplemental Environmental Project ("SEP") providing for the decommissioning of septic tanks and/or connection of residences to MSD's sewer system, as well as the repair or replacement of defective residential private laterals. The SEP shall be completed in accordance with the SEP Plan set forth in Appendix F and this Consent Decree, or any approved alternate SEP proposal in accordance with Appendix F. The purpose of the SEP is to secure significant environmental protection and improvements with the implementation of the project identified in the SEP Plan that are not otherwise required by law. MSD shall complete this SEP described in Appendix F no later than five (5) years from the Effective Date of this Consent Decree, or any approved extension of SEP completion date in accordance with Appendix F.

81. MSD is responsible for the satisfactory completion of the SEP in accordance with the requirements of this Consent Decree. MSD may use contractors or consultants in planning, designing, inspecting, and implementing this SEP.

82. With regard to the SEP, MSD certifies the truth and accuracy of each of the following:

- a. All cost information provided to EPA in connection with EPA's approval of the SEP is complete and accurate and that MSD in good faith estimates that the cost to implement the SEP is at least \$1,600,000.00;
- b. As of the date of executing this Decree, MSD is not required to perform or develop the SEP by any federal, state, or local law or regulation; and is not required to perform or develop the SEP by agreement, grant, or as injunctive relief in this or any other case in any forum.
- c. The SEP is not a project that MSD was planning or intending to construct, perform, or implement other than in settlement of the claims resolved in this Decree;
- d. MSD has not received, and will not receive credit for the SEP in any other enforcement action or proceeding; and
- e. MSD will not receive any reimbursement for any portion of the SEP from any other person.

83. Beginning with the first full year after the commencement of the implementation of the SEP, and continuing every year thereafter until the SEP is completed, MSD shall include in its Annual Report to EPA, as required under Section VIII herein, an update on the SEP implementation progress and those actions taken to complete the SEP in the preceding year, the actions planned to implement the SEP in the forthcoming year, any current foreseeable delays in implementing the SEP, the action being taken to address such delays, and an itemized accounting of the costs expended for the preceding period and to date.

84. Within one hundred and twenty (120) days after the SEP's date of completion as

required in Paragraph 80, MSD shall submit to EPA and the State with a copy to the Coalition a SEP Completion Report. The SEP Completion Report shall contain the following information for the SEP:

- a. A detailed description of the SEP as implemented;
- b. A description of any problems encountered in completing the SEP and the solutions thereto;
- c. An itemized list of all eligible SEP costs expended, along with documentation of such costs;
- d. Certification that the SEP has been fully implemented in accordance with the SEP Plan and the provisions of this Consent Decree; and
- e. A description of the environmental and public health benefits resulting from implementation of the SEP.

85. Following receipt of the SEP Completion Report, EPA shall notify MSD whether or not MSD has satisfactorily completed the SEP. If MSD has not completed the SEP in accordance with this Consent Decree, stipulated penalties may be assessed under Section XI of this Decree.

86. Disputes concerning the satisfactory performance of the SEP and the amount of eligible SEP costs may be resolved under the Dispute Resolution provisions in Section XIV. No other disputes arising under this Section shall be subject to Dispute Resolution.

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

88. Any public statement, oral or written, in print, film, or other media, made by MSD making reference to the SEP under this Decree shall include the following language: "This

project was undertaken in connection with the settlement of an enforcement action, United States, State of Missouri, and the Missouri Coalition for the Environment Foundation v. Metropolitan St. Louis Sewer District, No. 4:07-CV-01120-CEJ, taken on behalf of the U.S. Environmental Protection Agency, the State, and the Coalition under the Clean Water Act.”

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

XI. STIPULATED PENALTIES

90. Failure to Submit Timely and Complete Documents. MSD shall be liable to the United States for stipulated penalties, as set forth below, for each Day MSD fails to timely submit a report or other submittal required under Sections V, VI, VIII, X, and/or Appendices of this Consent Decree or fails to make any required material changes to those documents per EPA’s comments within the required time frames. “Timely submit” shall mean the report or submittal is made by the date specified in this Consent Decree, including Appendices. “Timely submit” shall further mean that the report or submittal includes all of the elements pertaining to the report or submittal as set forth in this Consent Decree, including Appendices.

<u>Period of Noncompliance</u>	<u>Penalty per Violation per Day</u>
1st to 30th day	Five Hundred Dollars (\$500.00)
31st to 60th day	One Thousand Dollars (1,000.00)
More than 60 days	Fifteen Hundred Dollars (\$1,500.00)

91. Remedial Requirements.

a. MSD shall be liable to the United States for stipulated penalties as set forth below for each Day for each violation MSD fails to satisfy any of the remedial requirements of Sections

V and VI and the Appendices B, C, D, and E of this Consent Decree. The stipulated penalties for failure to meet each such requirement shall be as follows:

<u>Period of Noncompliance</u>	<u>Penalty per Violation per Day</u>
1st to 30th day	One Thousand Dollars (1,000.00)
31st to 60th day	Two Thousand Dollars (2,000.00)
More than 60 days	Four Thousand Dollars (\$4,000.00)

b. If MSD is liable for a stipulated penalty pursuant to Paragraph 91(a), MSD shall also be liable for a stipulated penalty of \$2,000.00 for each Constructed SSO per day resulting from an uncompleted Constructed SSO Elimination project pursuant to Appendices B, C, and the approved Sanitary Sewer Overflow Control Master Plan.

c. If MSD is liable for a stipulated penalty pursuant to Paragraph 91(a), MSD shall also be liable for a stipulated penalty for each SSO, excluding Constructed SSOs and Building Backups, resulting from uncompleted remedial requirements of Sections V, VI, or Appendices B, C, and D, unless caused by acts of vandalism or Mississippi River backflow, as follows:

Unknown volume or less than 1,000 gallons	\$500.00
1,001 to 9,999 gallons	\$1,000.00
Greater than 10,000 gallons	\$2,000.00

d. If MSD is liable for a stipulated penalty pursuant to Paragraph 91(a), MSD shall also be liable for a stipulated penalty of One Thousand Dollars (\$1,000.00) per day for each Building Backup, resulting from uncompleted remedial requirements of Sections V, VI, or Appendices B, C, and D. MSD shall be allowed credit for any payments paid by MSD under its Wastewater Backup Insurance and Reimbursement Program against any stipulated penalty

assessed for Building Backup.

e. If MSD is liable for a stipulated penalty pursuant to Paragraph 91(a), MSD shall also be liable for a stipulated penalty of One Thousand Dollars (\$1,000.00) per day for each dry weather CSO (excluding Building Backups) resulting from uncompleted remedial requirements of Sections V, VI, or Appendix D, unless caused by acts of vandalism or Mississippi River backflow related issues.

92. Bypasses.

a. For any bypass at Coldwater Creek, Missouri River and New Lower Meramec Wastewater Treatment Facilities that is prohibited by MSD's State Operating Permits in effect on December 28, 2010, MSD shall be liable for a stipulated penalty of one thousand dollars (\$1,000) per bypass per day until MSD completes the remedial measures found in Section V, the approved Sanitary Sewer Overflow Control Master Plan, and Appendix C to upgrade treatment capacity at the above-referenced Wastewater Treatment Facilities..

b. For any bypass at Coldwater Creek, Missouri River and New Lower Meramec Wastewater Treatment Facilities that is prohibited by 40 CFR § 122.41(m) and occurs after MSD was required to complete the remedial measures found in Section V, the approved Sanitary Sewer Overflow Control Master Plan, and Appendix C to upgrade treatment capacity at the above-referenced Wastewater Treatment Facilities, MSD shall be liable for a stipulated penalty of one thousand dollars (\$1,000) per bypass per day only when the bypass results from MSD's failure to complete the remedial measures found in Section V, the approved Sanitary Sewer Overflow Control Master Plan, and Appendix C.

c. For any bypass at all other Wastewater Treatment Facilities that is prohibited by 40

CFR § 122.41(m) and MSD's State Operating Permits, MSD shall be liable for a stipulated penalty of five hundred dollars (\$500) per bypass per day.

93. MSD shall be liable to the United States for a stipulated penalty of \$3,500.00 for each day that MSD is late in paying the civil penalty required under Section IX.

94. Delays in Completion of SEP.

a. MSD shall be liable for stipulated penalties for failure to complete the SEP by the deadline set forth in Section X as follows:

<u>Period of Noncompliance</u>	<u>Penalty per Violation per Day</u>
1st to 30th day	Five Hundred Dollars (500.00)
31st to 60th day	Fifteen Hundred Dollars (1,500.00)
More than 60 days	Three Thousand Dollars (\$3,000.00)

b. In the event that the United States rejects the SEP Completion Report as required in Section X, MSD shall be subject to pay \$500.00 per day until an acceptable SEP Completion Report is submitted to EPA.

c. If the total amount expended on implementing the SEP is less than \$1,600,000.00, MSD shall be subject to a stipulated penalty equal to the difference between the amount spent and \$1,600,000.00.

95. Stipulated penalties shall automatically begin to accrue on the first day MSD fails to comply with the requirements of this Consent Decree which are subject to stipulated penalties under this Section XI, 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 this Section XI.

96. Stipulated penalties shall be paid within thirty (30) days of EPA's written demand for payment of stipulated penalties, or as provided in the resolution of a dispute in accordance with Paragraph 120. Stipulated penalties shall be paid to the United States in accordance with the payment procedures detailed above in Section IX. Copies of any checks, transmittal documents, and the transmittal letters shall be sent simultaneously to U.S. DOJ and EPA.

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

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

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

100. Subject to the provisions of Section XII of this Consent Decree ("Effect of Settlement/Reservation of Rights"), the stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States for MSD's violation of this Consent Decree or applicable law or permits. Where a violation of this Consent Decree is also a violation of Section 301 or 402 of the CWA, 33 U.S.C. §§ 1311 and 1342, and the regulations promulgated thereunder, MSD shall be allowed a credit, for any

stipulated penalties paid, against any statutory penalties imposed for such violation.

XII. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

101. This Consent Decree resolves the claims for civil penalties and injunctive relief for the violations alleged in the Complaint and for the violations and injunctive relief for the violations alleged in the Complaint-in-Intervention filed by the Coalition in this action through the Date of Lodging.

102. The United States and the Coalition further reserve all rights, as allowed by law, against MSD with respect to any violations by MSD that occur after the Date of Lodging, and/or for any violations of the CWA or Missouri Clean Water Law or other applicable state law not specifically alleged in the Complaint and Complaint in Intervention, whether they occurred before or after the Date of Lodging.

103. The United States further reserves all legal and equitable remedies that it has available to enforce the provisions of the Consent Decree, except as expressly stated in Paragraph 101. The Consent Decree shall not be construed to limit the rights of the United States to obtain penalties or injunctive relief under the CWA and the Missouri Clean Water Law or implementing regulations, or under other federal or state laws, regulations, or permit conditions, except as expressly specified in Paragraph 101. 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, MSD's Sewer System, whether related to the violations addressed in this Consent Decree or otherwise.

104. This Consent Decree is not and shall not be construed as a permit or a modification of any permit, under any federal, State, or local laws or regulations. MSD is responsible for

achieving and maintaining complete compliance with all applicable federal, State, and local laws, regulations, and permits; and MSD's compliance with this Consent Decree shall not be a defense to any action commenced pursuant to any such laws, regulations, or permits. The United States and the Coalition do not, by their consent to the entry of this Consent Decree, warrant or aver in any manner that MSD's compliance with any aspect of this Consent Decree will result in compliance with provisions of the CWA, the Missouri Clean Water Law, or with any other provisions of federal, State, or local laws, regulations, or permits.

105. MSD's duty to comply with the terms of this Consent Decree is not conditioned on the receipt of any federal, State or local funds. Failure to comply is not excused by lack of federal or state grant funds, or by the processing of any applications for the same. Application for construction grants, State revolving loan funds, or any other grants or loans, or delays in processing or receipt of federal, state or local funds caused by inadequate facility planning or plans and specifications on the part of MSD shall not be cause for extension of any required compliance date in this Consent Decree.

106. This Consent Decree does not limit or affect the rights of the Parties against any third parties not party to this Consent Decree, nor does it limit the rights of third parties not party to this Consent Decree, against MSD, except as otherwise provided by law. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree. For purposes of this Section XII only, the State is not a "third party." MSD reserves any and all claims and defenses to any claims it has not expressly waived or released in this Consent Decree.

XIII. FORCE MAJEURE

107. “Force majeure,” for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of MSD, of any entity controlled by MSD, or of MSD’s contractors, that delays or prevents the performance of any obligation under this Consent Decree despite MSD’s best efforts to fulfill the obligation. The requirement that MSD exercise “best efforts to fulfill the obligation” includes to identify reasonably foreseeable force majeure events and to use best efforts to address the effects of any such event (a) as it is occurring and (b) after it has occurred to prevent or minimize any resulting delay to the greatest extent possible. “Force Majeure” does not include unanticipated or increased expenses or costs associated with implementation of this Decree, changed financial circumstances, or other financial or budgetary issues.

108. Failure to apply for a required permit or approval, or to provide in a timely manner all information required to obtain a permit or approval necessary to meet the requirements of this Consent Decree, are not Force Majeure events. However, the failure to obtain a necessary permit in a timely fashion is an event of Force Majeure where the failure of the permitting authority to act is beyond the control of MSD, and MSD demonstrates that it has taken all steps available to it to obtain the necessary permit or approval.

109. MSD shall provide written notice to the EPA and the State, with a copy to the Coalition, in accordance with Section XVII (“Notices”), within thirty (30) days of the time MSD first knew of, or by the exercise of due diligence, should have known of, a claimed force majeure event. The written notice shall identify the obligation and any directly related obligation(s) that will be delayed, the anticipated duration of the delay, the causes for the delay, MSD’s past and

proposed actions to prevent or minimize any delay, a schedule for carrying out those actions, and MSD's rationale for attributing any delay to a force majeure event. Failure to comply with the above requirements shall preclude MSD 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.

110. If the United States after consultation with the Coalition determines that a force majeure event has occurred, the United States may agree to extend the time for MSD to perform the obligation(s) under this Consent Decree that are affected by the force majeure event for the time necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, by itself, extend the time for performance of any other obligation not related to the obligation for which the force majeure applied. Where the United States after consultation with the Coalition agrees to an extension of time necessitated by the force majeure event, the appropriate modification shall be made pursuant to Section XXI of this Consent Decree ("Modification").

111. If the United States after consultation with the Coalition determines that a force majeure event has not occurred, or does not agree to the extension of time sought by MSD, the United States' position shall be binding, unless MSD invokes Dispute Resolution under Section XIV ("Dispute Resolution"). In any such proceeding, MSD shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that MSD complied with the requirements of this Section

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

XIV. DISPUTE RESOLUTION

112. The 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 Consent Decree. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes among the Parties arising under or with respect to the terms of this Consent Decree.

113. **Informal Dispute Resolution.** Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations among the Parties. The dispute shall be considered to have arisen when MSD or the Coalition sends the other Parties 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 written agreement of the Parties. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States, after consultation with the State, shall be considered binding unless, within thirty (30) Days after the conclusion of the informal negotiation period, MSD or the Coalition 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.

114. **Formal Dispute Resolution.** MSD or the Coalition may invoke formal dispute

resolution procedures, within the time period provided in the preceding Paragraph, by serving on all other Parties a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting MSD or the Coalition's position and any supporting documentation relied upon by MSD or the Coalition.

115. A Party other than the Party that invoked the formal dispute resolution process of these Paragraphs 114-116 may also serve a Statement of Position within 30 days after service of the Statement of Position that invoked the formal dispute resolution process of these Paragraphs 114-116 unless the Parties agree in writing to a longer time period. A Statement of Position served pursuant to this Paragraph shall be accompanied by supporting materials, including but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the proponent of the statement.

116. The United States, after consultation with the State, shall serve its respective Statement of Position within 45 Days after service of the latter of MSD's or the Coalition's Statement of Position unless the Parties agree in writing to a longer time period. The United States' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States' Statement of Position shall be binding unless MSD or the Coalition files a motion for judicial review of the dispute in accordance with the following Paragraph.

117. MSD or the Coalition may seek judicial review of the dispute against the United States by filing with the Court and serving on the United States, in accordance with Section XVII of this Consent Decree ("Notices"), a motion requesting judicial resolution of the dispute.

The motion must be filed within sixty (60) days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of MSD's or the Coalition's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

118. The United States shall have sixty days in which to respond to MSD's or the Coalition's motion. MSD or the Coalition may file a reply memorandum, to the extent permitted by the Local Rules.

119. In any dispute brought under this Section XIV, MSD or the Coalition shall have the burden of proof, and the standard and scope of review shall be that provided by applicable law. The United States reserves the right to argue that its position is reviewable only on the administrative record and must be upheld unless arbitrary and capricious or otherwise not in accordance with law.

120. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of MSD under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute, as follows:

a. If the dispute is resolved by informal dispute resolution before appeal to this Court, MSD shall be subject to pay accrued penalties (and interest), if any, determined to be owing within sixty (60) days of the agreement or the receipt of the United States' final position in writing.

b. If the dispute is appealed to this Court and the United States prevails in whole or in part, MSD shall be subject to pay all accrued penalties (and interest) determined to be owed within sixty (60) days of a final decision or as decided by the court.

XV. RIGHT OF ENTRY AND RECORD RETENTION

121. The EPA and its representatives, including attorneys, governmentally authorized contractors, and governmentally authorized consultants, shall have the right of entry into the premises of any MSD property at all reasonable times, upon presentation of credentials, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States or the State in accordance with the terms of this Consent Decree;
- c. obtain samples and, upon request, splits of any samples taken by or on behalf of MSD. Upon request, EPA shall provide MSD splits of any samples taken by EPA, as well as copies of documents collected, photos taken, or other non-privileged information collected during any facility visit;
- d. observe performance tests;
- e. obtain documentary evidence, including photographs and similar data; and
- f. assess MSD's compliance with this Consent Decree.

122. MSD shall retain and shall instruct its contractors and consultants to retain copies of any reports, plans, permits, and documents submitted to EPA pursuant to this Consent Decree, as well as any underlying research and data used to develop said reports, for a period of five (5) years from the date of submission. Where a contractor or consultant fails to retain such documents, and MSD can demonstrate that the contractor's missing or destroyed documents

contained the same information as documents in the possession of MSD, MSD shall not be liable for the contractor's failure to retain such documents. This information-retention requirement shall apply regardless of any contrary MSD, corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States, MSD shall provide copies of any research and data underlying any of the reports, plans, permits, and documents submitted to EPA pursuant to this Consent Decree. Upon written request by the Coalition, MSD agrees to provide copies of research and data underlying the reports, plans, permits and documents submitted to the United States pursuant to this Consent Decree. The Coalition agrees to treat these documents as confidential.

123. At the conclusion of the information-retention period provided in the preceding Paragraph, MSD shall notify the United States and the Coalition at least ninety (90) Days prior to the destruction of documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States or upon the written request of the Coalition, MSD shall deliver any such documents, records, or other information to the EPA and Coalition. If MSD has not been contacted by any Party ninety (90) days after notification, then MSD may destroy said documents, records or information.

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

125. This Consent Decree in no way limits or affects the EPA or the State's right to enter or access the property of MSD, to conduct inspections, to require monitoring, and to obtain

information from MSD, as authorized by law, nor does it limit or affect any duty or obligation of MSD to maintain documents, records, or other information imposed by applicable law.

126. The Coalition agrees to keep confidential any and all documents, reports, information, notices, plans, data, summaries, proposals, and/or requests which require approval by the United States, until such time as the United States approves or disapproves the submission. Furthermore, the Coalition specifically agrees to keep confidential at all times any GIS layers it obtains from MSD pursuant to Sections V.A. and VIII or that are otherwise provided to it by MSD pursuant to this Consent Decree.

XVI. COSTS OF SUIT

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

128. In settlement of the Coalition's claim for costs of litigation, including attorneys' fees, MSD hereby agrees to pay \$116,050.00 as follows:

a. \$60,000.00 shall be paid to the River des Peres Watershed Coalition or as otherwise agreed to by MSD and the Coalition to be used in accordance with the terms of the Memorandum of Understanding signed between MSD and the River des Peres Watershed Coalition.

b. The remainder shall be paid to the Interdisciplinary Environmental Clinic ("the Clinic") to be used only for the payment of salaries and expenses of the engineering and/or science faculty, the students they supervise, and/or the summer student workers they supervise,

along with support activities related only to the science and engineering-related activities. An accounting of expenditures made by the Clinic pursuant to this Paragraph shall be provided to MSD by the Clinic. This accounting shall be provided to MSD on an annual basis within 90 days of the end of the fiscal year. The first accounting shall be provided within 90 days after the end of the fiscal year in which the monies are received by the Clinic and shall continue each year until the monies have been spent.

XVII. NOTICES

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

To the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-1-1-08111

To EPA:

Chief, Water Enforcement and Compliance Assurance Branch
Water and Wetlands Protection Division
U.S. Environmental Protection Agency, Region 7
901 North 5th Street
Kansas City, Kansas 66101
fax number: 913-551-9544

and

David Cozad
Regional Counsel
Office of Regional Counsel
U.S. Environmental Protection Agency, Region 7

901 North 5th Street
Kansas City, Kansas 66101
fax number: 913-551-9246

To the State:

Chief Counsel
Agriculture and Environment Division
State of Missouri Office of Attorney General
207 W. High Street
Jefferson City, Missouri 65102

and

Chief, Water Pollution Compliance and Enforcement Section
Missouri Department of Natural Resources
P.O. Box 176
1101 Riverside Drive
Jefferson City, Missouri 65101

and

Director, St. Louis Regional Office
Missouri Department of Natural Resources
7523 South Lindbergh Blvd.
St. Louis, Missouri 63125

To the Coalition:

Kathleen Logan Smith
Executive Director
Missouri Coalition for the Environment
6267 Delmar Blvd. #2E
St. Louis, Missouri 63130

and

Maxine I. Lipeles
Elizabeth J. Hubertz
Interdisciplinary Environmental Clinic
Washington University School of Law
One Brookings Drive
Campus Box 1120
St. Louis, Missouri 63130

To MSD:

Executive Director
Metropolitan St. Louis Sewer District
2350 Market Street
St. Louis, Missouri 63103-2555

General Counsel
Metropolitan St. Louis Sewer District
2350 Market Street
St. Louis, Missouri 63103-2555

Director of Engineering
Metropolitan St. Louis Sewer District
2350 Market Street
St. Louis, Missouri 63103-2555

130. The United States, MSD, State, and Coalition, upon written notice to the others listed in preceding Paragraph, may change its designated notice recipient or notice address provided in preceding Paragraph. In the event that MSD and the Coalition reach a mutual agreement that MSD no longer has the obligation to provide the Coalition with copies of documents, information, notices, proposals or other items due to the Coalition under the terms of this Decree, MSD and the Coalition shall modify the Decree in accordance with Section XXI to reflect said mutual agreement.

131. Notices submitted pursuant to this Section shall be deemed submitted on the date they are postmarked and sent by first class mail, certified mail, or return receipt requested.

XVIII. CERTIFICATION

132. Each report, plan, or other document submitted by MSD pursuant to this Consent Decree or Appendices shall be signed by an official of MSD and include the following certification:

I certify under penalty of law that this document and all attachments were

prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. 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.

This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

133. MSD shall not object to the admissibility into evidence of any report, plan, notice, or any other document prepared in accordance with this Consent Decree or the information contained in said reports in any proceeding to enforce this Consent Decree.

XIX. EFFECTIVE DATE

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

XX. RETENTION OF JURISDICTION

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

XXI. MODIFICATION

136. The terms of this Consent Decree, including any attached appendices, may be modified only by a subsequent written agreement signed by all the Parties. Where the modification constitutes a material change to this Decree, it shall be effective only upon approval by the Court.

137. Unless otherwise provided herein, any disputes concerning modification of this

Decree shall be resolved pursuant to Section XIV of this Decree (“Dispute Resolution”), provided the Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

138. It is the intention of the Parties to this Consent Decree that MSD shall have the opportunity, consistent with applicable law, to conform compliance with this Consent Decree to any modification in EPA’s regulations or national policies governing SSOs, CSOs, or bypassing; to conform compliance with this 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. Section 1313(c) and 40 C.F.R. Sections 131.21 and 131.22; and to conform compliance with this Consent Decree to any new or more stringent requirements that are included in MSD’s Missouri State Operating Permits pertaining to MSD’s WWTF and Sewer System. Consequently, upon issuance of any new federal law or state law or regulation that is as or more stringent than current federal law or regulation 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. Section 1313(c) and 40 C.F.R. Section 131.21 and 131.22; or upon the issuance of a permit that contains new or more stringent requirements pertaining to MSD’s WWTF or Sewer System, MSD may request modification of this Consent Decree (including requests for extensions of time) from the United States to conform this Consent Decree to such regulation, national policy, new or revised water quality standard or permit. Upon MSD’s request, the United States and MSD shall discuss the matter. If the United States and MSD agree on the proposed modification to the Consent Decree, they shall prepare a joint motion to the Court requesting such modification.

139. If the United States and MSD do not agree, and MSD still believes that modification of this Consent Decree is appropriate, MSD may file a motion seeking such modification in accordance with Federal Rule of Civil Procedure 60(b); provided, however, that nothing in this subparagraph is intended to waive the United States' rights to oppose such motion and to argue that such modification is unwarranted.

140. Following the filing of a motion under Rule 60(b), stipulated penalties shall accrue due to MSD's failure, if any, to continue performance of obligations under the 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 MSD's favor, and MSD shall comply with the Consent Decree as modified.

XXII. TERMINATION

141. MSD may serve upon the United States, with a copy to the Coalition, a Request for Termination, together with all necessary supporting documentation, certifying that MSD has satisfied all of its obligations under the Decree including:

- a. Completion of all requirements of Sections V and VI (Remedial Measures for SSS and CSS) of this Decree, including Appendices B, C, D, and E and that it has achieved and maintained satisfactory compliance with this Consent Decree and MSD's Missouri State Operating Permits for a period of twelve (12) consecutive months following completion of its requirements under Sections V and VI;
- b. Compliance with all other requirements of this Consent Decree; and
- c. Payment in full of all civil penalties, costs of litigation, any accrued stipulated penalties, and any accrued interest as required by this Consent Decree.

142. After MSD submits a Request for Termination, if the United States after consultation with the Coalition determines that the Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Decree.

143. If the United States after consultation with the Coalition determines that the Consent Decree can not be terminated, MSD may invoke Dispute Resolution under Section XIV of this Decree. However, MSD shall not seek Dispute Resolution under Paragraph 114 (Formal Dispute Resolution) of Section XIV of any dispute regarding termination, until at least 120 days after service of its Request for Termination. This Consent Decree shall remain in effect pending resolution of the dispute by the Parties or the Court in accordance with the dispute resolution provisions under Section XIV of this Decree.

XXIII. PUBLIC PARTICIPATION

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

XXIV. SIGNATORIES/SERVICE

145. Each undersigned representative of MSD and the Coalition, and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of

Justice, on behalf of the United States, certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

146. This Consent Decree may be signed in counterparts.

147. MSD agrees to accept service of process by mail or courier service to the address set forth in Section XVII (“Notices”) with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

XXV. INTEGRATION/APPENDICES

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

149. The following appendices are attached to and incorporated into this Consent Decree:

“Appendix A” is Public Warning Sign Posted on Constructed SSO Outfalls;

“Appendix B” is a list of the Constructed SSO Outfalls to be eliminated no later than December 31, 2012;

“Appendix C” is the Schedule Template for the Sanitary Sewer Overflow Control Master Plan;

“Appendix D” is CSO Control Measures, Design Criteria, Performance Criteria, and Critical Milestones;

“Appendix E” is the Post-Construction Monitoring Program; and

“Appendix F” is the Supplemental Environmental Project Plan.

XXVI. FINAL JUDGMENT

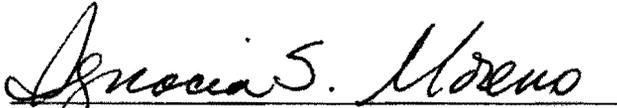
150. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States, MSD, and the Coalition, pursuant to Federal Rules of Civil Procedure 54(b).

Dated and entered this 27th day of April, 2012.


CAROL E. JACKSON
UNITED STATES DISTRICT JUDGE
Eastern District of Missouri
Eastern Division

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States of America and the State of Missouri, and Missouri Coalition for the Environment Foundation v. Metropolitan St. Louis Sewer District, No. 4:07-CV-1120 (E.D. Mo.).

FOR PLAINTIFF UNITED STATES OF AMERICA:



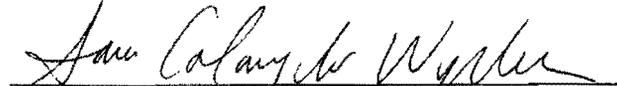
DATE: 7/29/11

IGNACIA S. MORENO
Assistant Attorney General
Environment and Natural Resources Division
United States Department of Justice
P.O. Box 7611
Washington, D.C. 20044



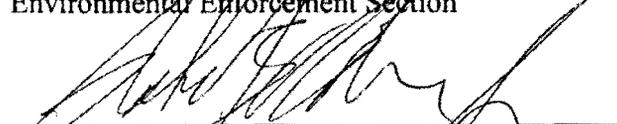
DATE: 8/1/2011

KATHRYN C. MACDONALD, Senior Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
United States Department of Justice
P.O. Box 7611
Washington, D.C. 20044



DATE: 8/1/11

SARA COLANGELO WYCHE, Trial Attorney
Environmental Enforcement Section



DATE: 8/1/11

ROBERT E. MAHER, JR., Assistant Section Chief
Environmental Enforcement Section

RICHARD G. CALLAHAN
United States Attorney
Eastern District of Missouri

By: _____

DATE: _____

SUZANNE J. MOORE
Assistant United States Attorney
Thomas F. Eagleton Courthouse
111 S. 10th Street, 20th Floor
St. Louis, Missouri 63102

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States of America and the State of Missouri, and Missouri Coalition for the Environment Foundation v. Metropolitan St. Louis Sewer District, No. 4:07-CV-1120 (E.D. Mo.).

FOR PLAINTIFF UNITED STATES OF AMERICA:

IGNACIA S. MORENO
Assistant Attorney General
Environment and Natural Resources Division
United States Department of Justice
P.O. Box 7611
Washington, D.C. 20044

DATE: _____

KATHRYN C. MACDONALD, Senior Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
United States Department of Justice
P.O. Box 7611
Washington, D.C. 20044

DATE: _____

SARA COLANGELO WYCHE, Trial Attorney
Environmental Enforcement Section

DATE: _____

ROBERT E. MAHER, JR., Assistant Section Chief
Environmental Enforcement Section

DATE: _____

RICHARD G. CALLAHAN
United States Attorney
Eastern District of Missouri

By: *Suzanne Moore*
SUZANNE J. MOORE
Assistant United States Attorney
Thomas F. Eagleton Courthouse
111 S. 10th Street, 20th Floor
St. Louis, Missouri 63102

DATE: *July 27, 2011*

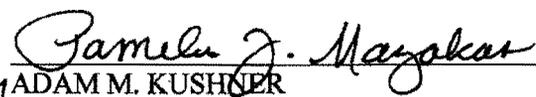
THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States of America and the State of Missouri, and Missouri Coalition for the Environment Foundation v. Metropolitan St. Louis Sewer District, No. 4:07-CV-1120 (E.D. Mo.).

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:



CYNTHIA GILES
Assistant Administrator
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

DATE: 7/7/11

for 

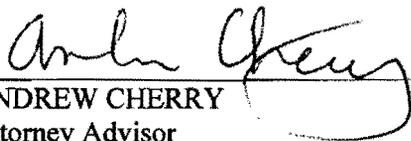
ADAM M. KUSHNER
Director, Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

DATE: 7/1/11



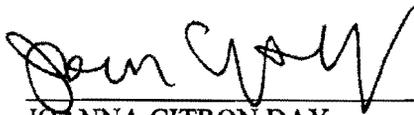
MARK POLLINS
Director, Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

DATE: 6-29-11



ANDREW CHERRY
Attorney Advisor
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

DATE: 6/28/11

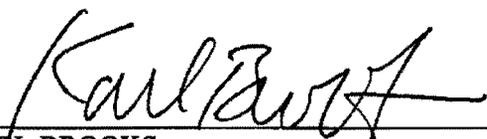


JOANNA CITRON DAY
Attorney Advisor
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

DATE: 6/28/11

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States of America and the State of Missouri, and Missouri Coalition for the Environment Foundation v. Metropolitan St. Louis Sewer District, No. 4:07-CV-1120 (E.D. Mo.).

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:



DATE: 7/7/11

KARL BROOKS
Regional Administrator
United States Environmental Protection Agency
Region 7
901 North 5th Street
Kansas City, Kansas 66101



DATE: 7/6/11

DAVID COZAD
Regional Counsel
United States Environmental Protection Agency
Region 7
901 North 5th Street
Kansas City, Kansas 66101



DATE: 7/5/2011

ELIZABETH HUSTON
Assistant Regional Counsel
United States Environmental Protection Agency
Region 7
901 North 5th Street
Kansas City, Kansas 66101

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States of America and the State of Missouri, and Missouri Coalition for the Environment Foundation v. Metropolitan St. Louis Sewer District, No. 4:07-CV-1120 (E.D. Mo.).

FOR THE MISSOURI COALITION FOR THE ENVIRONMENT FOUNDATION:


KATHLEEN LOGAN SMITH
Executive Director
Missouri Coalition for the Environment Foundation
6267 Delmar Blvd., Suite 2E
St. Louis, MO 63130

DATE: 6/23/11


ELIZABETH J. HUBERTZ
Clinic Attorney
Interdisciplinary Environmental Clinic
Washington University School of Law
Campus Box 1120
St. Louis, MO 63130

DATE: 6/25/11

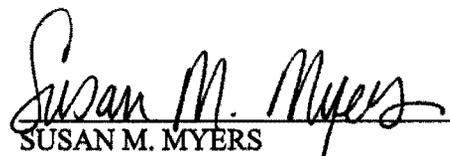
THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States of America and the State of Missouri, and Missouri Coalition for the Environment Foundation v. Metropolitan St. Louis Sewer District, No. 4:07-CV-1120 (E.D. Mo.).

FOR THE METROPOLITAN ST. LOUIS SEWER DISTRICT:



JEFFREY L. THEERMAN
Executive Director
Metropolitan St. Louis Sewer District
2350 Market Street
St. Louis, Missouri 63103

DATE: 7/15/11



SUSAN M. MYERS
General Counsel
Metropolitan St. Louis Sewer District
2350 Market Street
St. Louis, Missouri 63103

DATE: 7/15/11

WARNING

DO NOT PLAY, SWIM, OR FISH



**Possible Sewage Overflow
Exposure to Water May Cause Illness**

**PLEASE REPORT FOUL ODORS, UNUSUAL DISCOLORATION,
OR
FLOW FROM OUTFALL DURING DRY WEATHER.**



**St. Louis
Metropolitan
Sewer District
(314) 768-6260**

Sign #

For detailed information visit: www.stlmsd.com

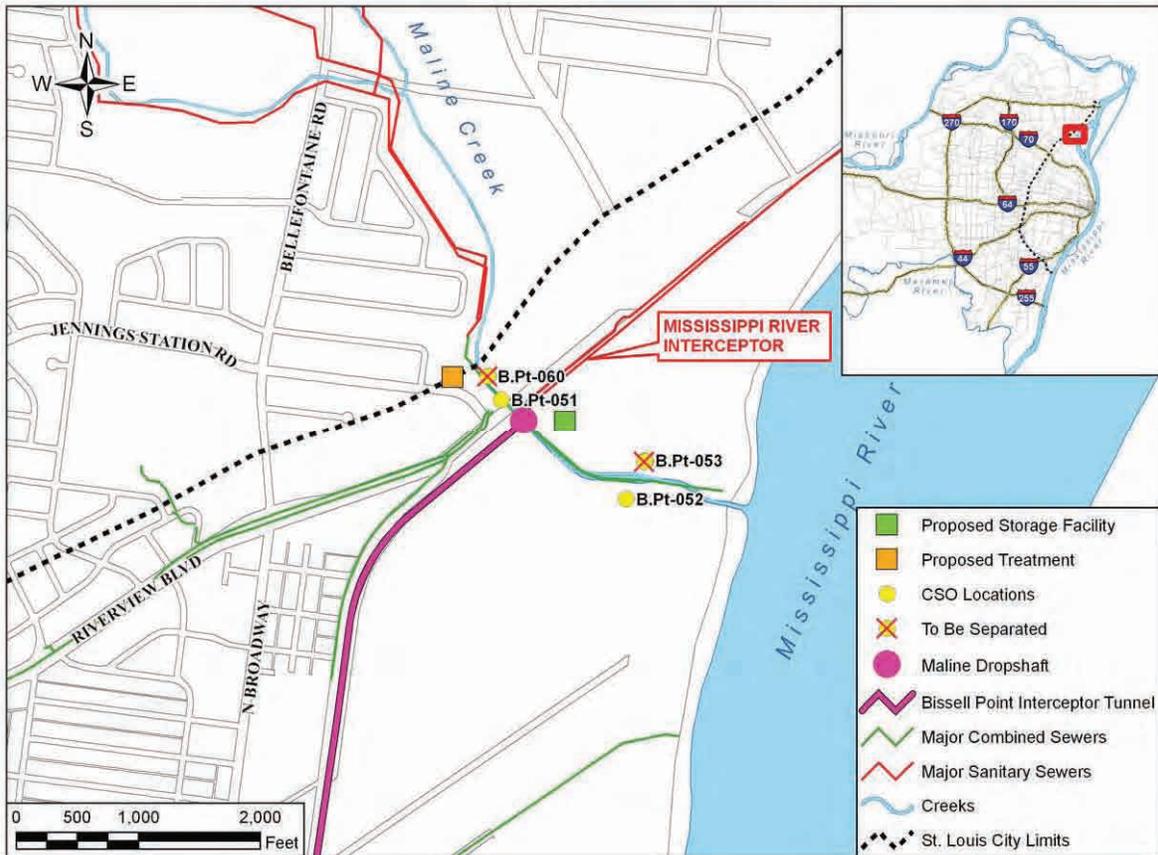
Appendix B - Constructed SSO Outfalls to be eliminated no later than December 31, 2012

	Constructed SSO Number	Address	Watershed
1	BP-023	9175 WRENWOOD LANE	BLACK CREEK
2	BP-026	15993 DOWNALL GREEN DRIVE	CAULKS CREEK
3	BP-035	7 CHASSELLE LANE	CREVE COEUR CREEK
4	BP-038	15428 GRANTLEY DRIVE	CREVE COEUR CREEK
5	BP-088	12479 ROTH HILL	FEE FEE CREEK
6	BP-092	1520 BURNING TREE DRIVE	COLDWATER CREEK
7	BP-105	8443 WABASH	COLDWATER CREEK
8	BP-106	8421 WABASH	COLDWATER CREEK
9	BP-107	9602 VENTURA DRIVE	MALINE CREEK
10	BP-111	41 ST. DENNIS	COLDWATER CREEK
11	BP-121	6269 HANLEY ROAD	COLDWATER CREEK
12	BP-122	6440 HANLEY ROAD	COLDWATER CREEK
13	BP-126	8216 JANUARY AVENUE	COLDWATER CREEK
14	BP-131	1400 LINDBERGH	COLDWATER CREEK
15	BP-132	1 LOUISE COURT	COLDWATER CREEK
16	BP-135	3183 NEW CASTLE ROAD	COLDWATER CREEK
17	BP-136	15245 NEW HALLS FERRY ROAD	COLDWATER CREEK
18	BP-139	1500 ORANGEDALE	COLDWATER CREEK
19	BP-206	233 WARSON ROAD	DEER CREEK
20	BP-209	302 BANFF CIRCLE	MISSISSIPPI RIVER
21	BP-263	2798 BARRETT STATION ROAD	GRAND GLAIZE CREEK
22	BP-268	13421 FEATHERSTONE DRIVE	GRAND GLAIZE CREEK
23	BP-274	MANCHESTER & BARRETT STA	GRAND GLAIZE CREEK
24	BP-275	1633 MASON VALLEY ROAD	GRAND GLAIZE CREEK
25	BP-290	10549 EWELL DRIVE	MALINE CREEK
26	BP-299	10191 HALLS FERRY ROAD	MALINE CREEK
27	BP-301	8707 KATHLYN DRIVE	MALINE CREEK
28	BP-307	1632 NOR LAKES DRIVE	MALINE CREEK
29	BP-311	3135 PICADOR COURT	MALINE CREEK
30	BP-318	4217 SPRINGDALE	MALINE CREEK
31	BP-323	2632 TYRRELL DRIVE	MALINE CREEK
32	BP-366	4320 BIG CHIEF DRIVE	GRAVOIS CREEK
33	BP-388	9001 KICKAPOO DRIVE	GRAVOIS CREEK
34	BP-393	572 LEFFINGWELL	GRAVOIS CREEK
35	BP-397	4436 MOHEGAN DRIVE	GRAVOIS CREEK
36	BP-431	9405 TRENTON	UNIVERSITY CITY
37	BP-434	8467 KEMPLAND PLACE	UNIVERSITY CITY
38	BP-478	20 YORK	BLACK CREEK
39	BP-481	1655 WOODSON	UNIVERSITY CITY
40	BP-524	2584 TYRRELL	MALINE CREEK
41	BP-525	8443 WABASH	COLDWATER CREEK
42	BP-528	232 GRAHAM	COLDWATER CREEK
43	BP-571	515 NEW FLORISSANT	COLDWATER CREEK
44	BP-572	515 NEW FLORISSANT	COLDWATER CREEK
45	BP-582	21 TEALBROOK	DEER CREEK
46	BP-584	7 LADUE FOREST	BLACK CREEK
47	BP-590	7760 MACKENZIE ROAD	MACKENZIE CREEK
48	BP-608	8550 FROST	COLDWATER CREEK
49	BP-611	13357 PRIMWOOD	CREVE COEUR CREEK
50	BP-628	955 GROVENA	GRAVOIS CREEK

Appendix D CSO Control Measures, Design Criteria, Performance Criteria, and Critical Milestones

CSO Control Measures – Maline Creek

CSO Control Measure	Description	Design Criteria	Performance Criteria	Critical Milestones
Elimination of Bissell Point CSO Outfalls 053 and 060	Sewer separation to allow elimination of CSO Outfalls	MSD’s Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities	Elimination of Bissell Point CSO Outfalls 053 and 060	<ul style="list-style-type: none"> • Achievement of Full Operation – 01/01/2011
CSO Treatment Unit at Bissell Point Outfall 051	Enhanced High Rate Clarification facility	94 MGD capacity providing equivalent of primary clarification, solids/floatables disposal, and disinfection	Reduce overflows to 4 events or less, and 6 million gallons of untreated overflow volume in the typical year ⁽¹⁾ . Comply with applicable Missouri Operating Permit.	<ul style="list-style-type: none"> • Bid Year – 2017 • Achievement of Full Operation – 12/31/2020
Bissell Point Outfall 052 Storage Tank	Local storage facility	Provide storage volume of one million gallons, expandable to accommodate storage requirements, if any, as determined in SSO Control Master Plan	Reduce overflows to 4 events or less, and 20 million gallons of untreated overflow volume in the typical year ⁽¹⁾	<ul style="list-style-type: none"> • Bid Year – 2017 • Achievement of Full Operation – 12/31/2020

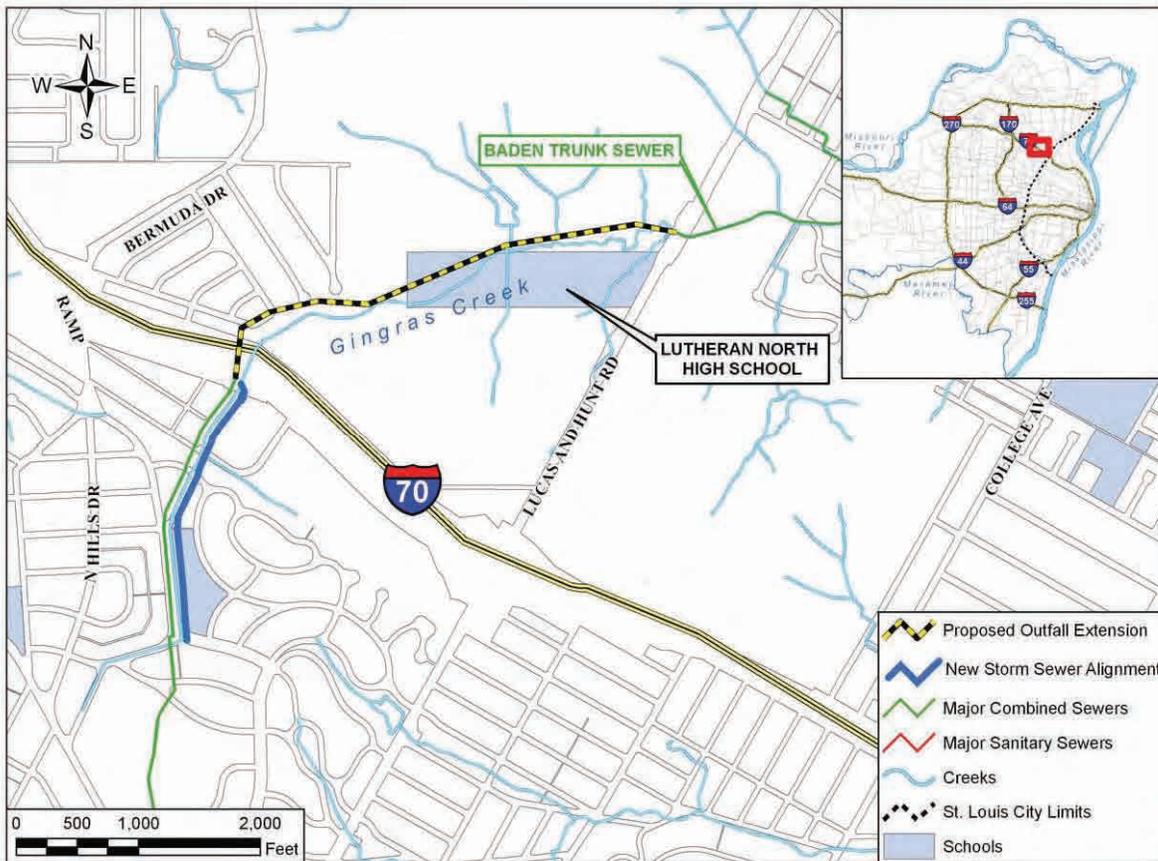


Maline Creek CSO Controls

Appendix D CSO Control Measures, Design Criteria, Performance Criteria, and Critical Milestones

CSO Control Measures – Gingras Creek

CSO Control Measure	Description	Design Criteria	Performance Criteria	Critical Milestones
Sewer Separation	Separation of sewers to reduce stormwater flow	MSD’s Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities	When incorporated with other Gingras Creek CSO controls, eliminates Outfall 059 to Gingras Creek	<ul style="list-style-type: none"> • Achievement of Full Operation – 06/30/2017
Bissell Point CSO Outfall 059 Relocation	Relocation of Outfall 059 from Gingras Creek to branch of Baden Trunk Sewer	MSD’s Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities	When incorporated with other Gingras Creek CSO controls, eliminates CSO Outfall 059 to Gingras Creek	<ul style="list-style-type: none"> • Achievement of Full Operation – 06/30/2017

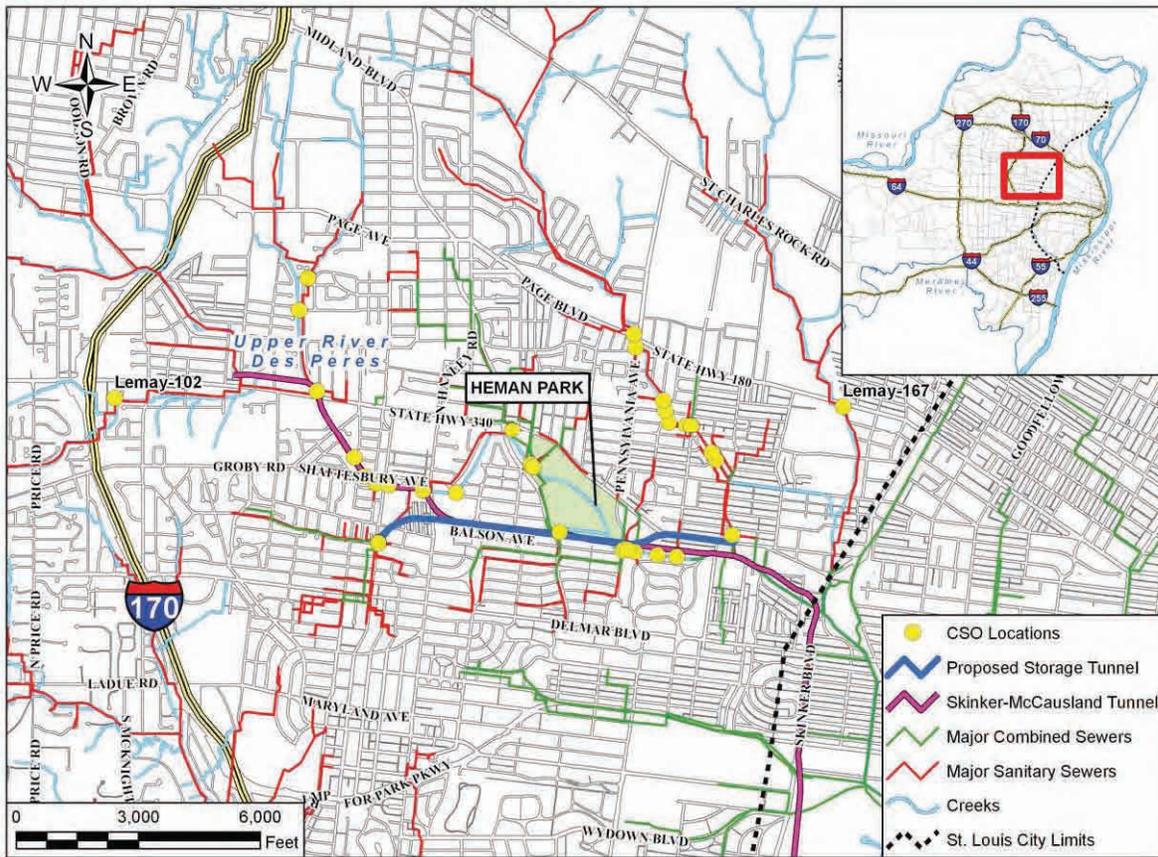


Gingras Creek CSO Controls

Appendix D CSO Control Measures, Design Criteria, Performance Criteria, and Critical Milestones

CSO Control Measures – Upper River Des Peres

CSO Control Measure	Description	Design Criteria	Performance Criteria	Critical Milestones
Upper River Des Peres Storage Tunnel serving Lemay Outfalls 064, 066 to 096, 099 to 102, 167, 178 and 180	Deep storage tunnel, near-surface facilities, pump station, sewer separation and consolidation sewers	Provide storage volume of 30 million gallons in deep tunnel system to capture flows from Lemay CSO Outfalls 064, 066 to 096, 099 to 102, 167, 178 and 180	When incorporated with other River Des Peres CSO controls, reduce overflows to 4 events or less, and 94 million gallons of untreated overflow volume in the typical year ⁽¹⁾	<ul style="list-style-type: none"> Bid Year – 2028 Achievement of Full Operation – 06/30/2034



Upper River Des Peres CSO Controls

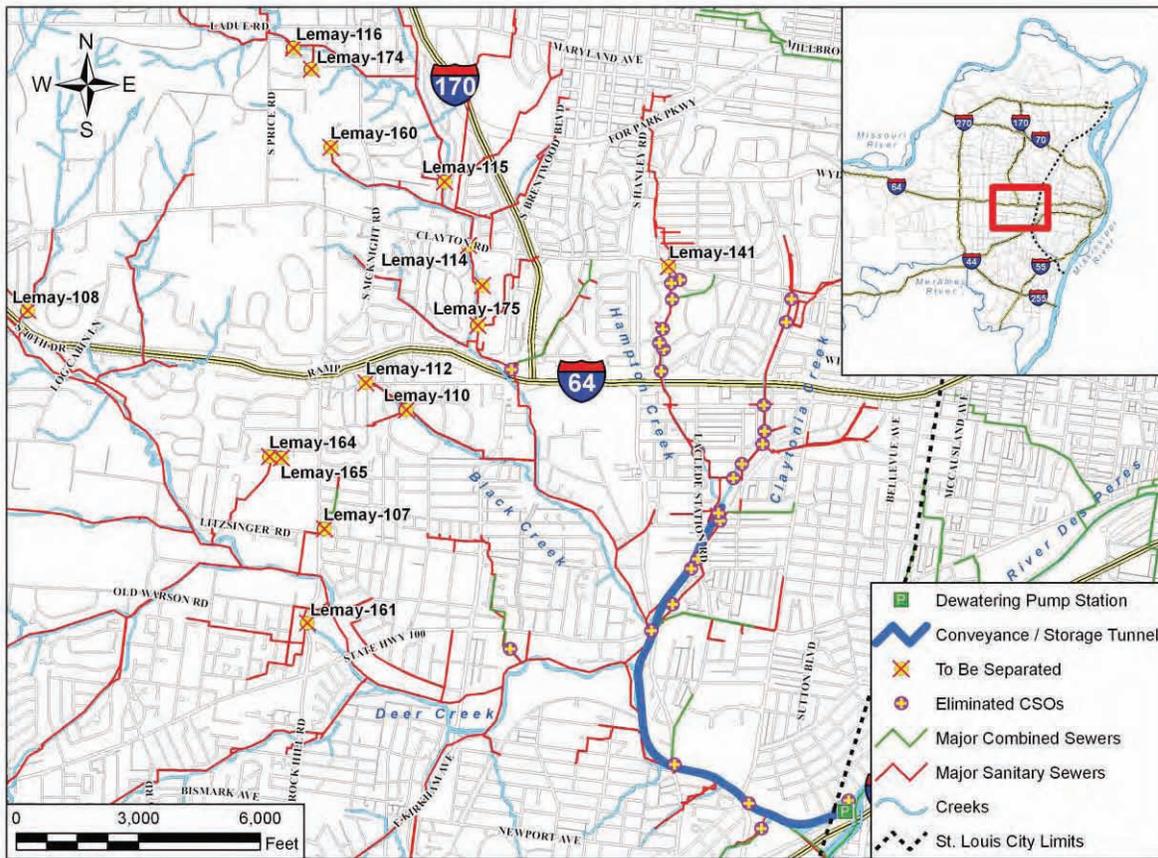
Appendix D
CSO Control Measures, Design Criteria, Performance Criteria, and Critical Milestones

CSO Control Measures – River Des Peres Tributaries

CSO Control Measure	Description	Design Criteria	Performance Criteria	Critical Milestones
Elimination of Lemay CSO Outfalls 108, 110, 114, 115, 157, 164 and 165	Sewer separation to allow elimination of CSO Outfalls	MSD's Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities	Elimination of Lemay CSO Outfalls 108, 110, 114, 115, 157, 164 and 165	<ul style="list-style-type: none"> • Achievement of Full Operation – 01/01/2011
Lemay CSO Outfall 107 Elimination	Sewer separation to allow elimination of Lemay Outfall 107	MSD's Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities	Elimination of Lemay CSO Outfall 107	<ul style="list-style-type: none"> • Achievement of Full Operation – 12/31/2012
Lemay CSO Outfall 112 Elimination	Sewer separation to allow elimination of Lemay Outfall 112	MSD's Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities	Elimination of Lemay CSO Outfall 112	<ul style="list-style-type: none"> • Achievement of Full Operation – 12/31/2012
Lemay CSO Outfall 116 Elimination	Sewer separation to allow elimination of Lemay Outfall 116	MSD's Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities	Elimination of Lemay CSO Outfall 116	<ul style="list-style-type: none"> • Achievement of Full Operation – 12/31/2012
Lemay CSO Outfall 141 Elimination	Sewer separation to allow elimination of Lemay Outfall 141	MSD's Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities	Elimination of Lemay CSO Outfall 141	<ul style="list-style-type: none"> • Achievement of Full Operation – 12/31/2012
Lemay CSO Outfall 160 Elimination	Sewer separation to allow elimination of Lemay Outfall 160	MSD's Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities	Elimination of Lemay CSO Outfall 160	<ul style="list-style-type: none"> • Achievement of Full Operation – 12/31/2012
Lemay CSO Outfall 161 Elimination	Sewer separation to allow elimination of Lemay Outfall 161	MSD's Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities	Elimination of Lemay CSO Outfall 161	<ul style="list-style-type: none"> • Achievement of Full Operation – 06/30/2021
Lemay CSO Outfall 174 Elimination	Sewer separation to allow elimination of Lemay Outfall 174	MSD's Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities	Elimination of Lemay CSO Outfall 174	<ul style="list-style-type: none"> • Achievement of Full Operation – 12/31/2012
Lemay CSO Outfall 175 Elimination	Sewer separation to allow elimination of Lemay Outfall 175	MSD's Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities	Elimination of Lemay CSO Outfall 175	<ul style="list-style-type: none"> • Achievement of Full Operation – 12/31/2012

Appendix D CSO Control Measures, Design Criteria, Performance Criteria, and Critical Milestones

CSO Control Measure	Description	Design Criteria	Performance Criteria	Critical Milestones
River Des Peres Tributaries Storage Tunnel serving Lemay CSO Outfalls 103, 104, 105, 106, 111, 117 to 128, 130, 131, 134, 136 to 140, 166 and 176	Storage / conveyance tunnel, near-surface facilities, pump station, sewer separation and consolidation sewers	Conveyance tunnel with storage volume of 28 million gallons to capture flows from Lemay CSO Outfalls 103, 104, 105, 106, 111, 117 to 128, 130, 131, 134, 136 to 140, 166 and 176	When incorporated with other River Des Peres CSO controls, reduce overflows to 4 events or less to River Des Peres main channel in the typical year ⁽¹⁾	<ul style="list-style-type: none"> Bid Year – 2024 Achievement of Full Operation – 06/30/2030



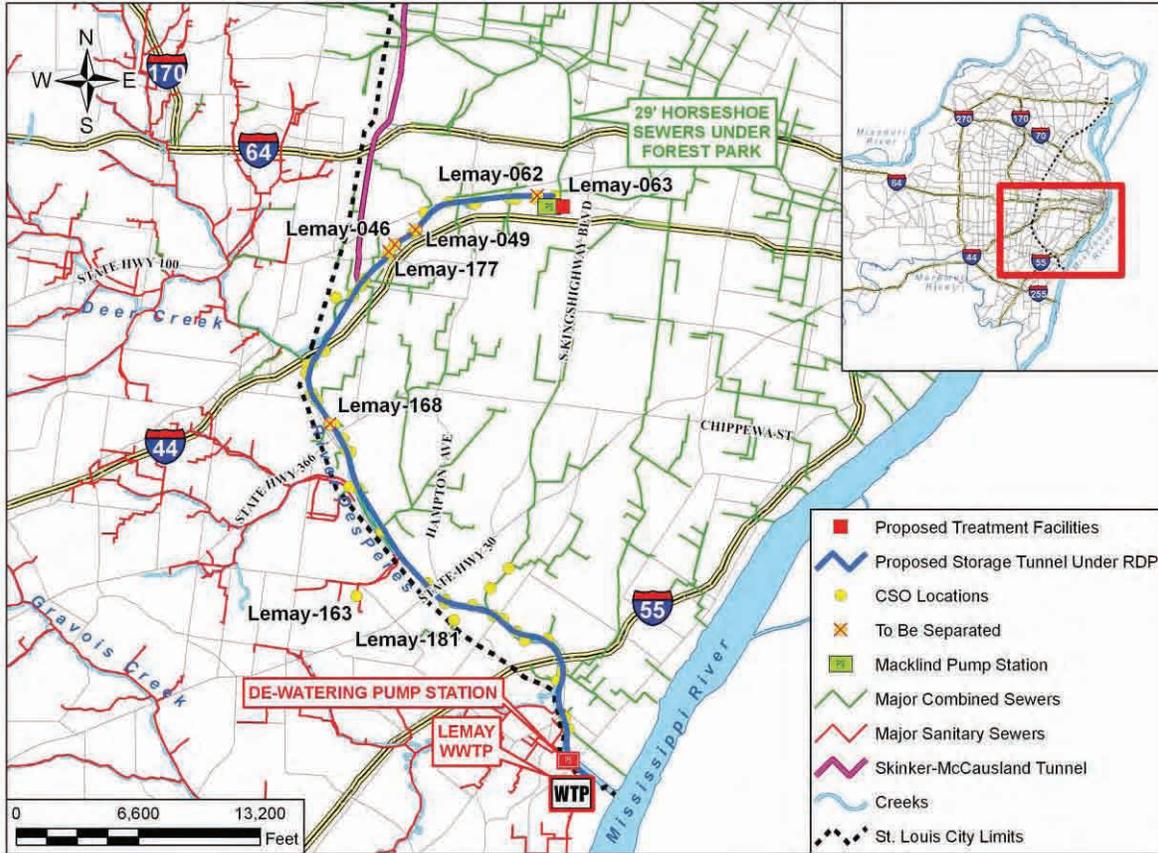
River Des Peres Tributaries CSO Controls

Appendix D
CSO Control Measures, Design Criteria, Performance Criteria, and Critical Milestones

CSO Control Measures – Lower & Middle River Des Peres

CSO Control Measure	Description	Design Criteria	Performance Criteria	Critical Milestones
Elimination of Lemay CSO Outfalls 046, 049, 168 and 177	Sewer separation to allow elimination of CSO Outfalls	MSD's Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities	Elimination of Lemay CSO Outfalls 046, 049, 168 and 177	<ul style="list-style-type: none"> • Achievement of Full Operation – 01/01/2011
Lemay CSO Outfall 062 Elimination	Sewer separation to allow elimination of Lemay CSO Outfall 062	MSD's Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities	Elimination of Lemay CSO Outfall 062	<ul style="list-style-type: none"> • Achievement of Full Operation – 12/31/2015
CSO Treatment Unit at Lemay CSO Outfall 063	Enhanced High Rate Clarification facility	100 MGD capacity providing equivalent of primary clarification, solids/floatables disposal, and disinfection	When incorporated with other River Des Peres CSO controls, reduce overflows to 4 events or less in the typical year ⁽¹⁾ . Comply with applicable Missouri Operating Permit.	<ul style="list-style-type: none"> • Bid Year – 2027 • Achievement of Full Operation – 12/31/2030
In-sewer Storage Upstream of Lemay CSO Outfall 063	Inflatable or moveable dam system to allow flow storage in upstream 29-ft horseshoe sewers	Provide 25 million gallons storage capacity within existing sewer system to capture flows from Lemay CSO Outfall 063	When incorporated with other River Des Peres CSO controls, reduce overflows to 4 events or less in the typical year ⁽¹⁾	<ul style="list-style-type: none"> • Achievement of Full Operation – 12/31/2030
Lower & Middle River Des Peres Storage Tunnel serving Lemay CSO Outfalls 008 to 032, 036, 037, 039, 041 to 044, 048, 050, 052, 053, 054, 057, 058, 061, 063, 163, 170 to 173, and 181	Deep storage tunnel, near-surface facilities, pump station, sewer separation and consolidation sewers	Provide storage volume of 206 million gallons in deep tunnel system to capture flows from Lemay CSO Outfalls 008 to 032, 036, 037, 039, 041 to 044, 048, 050, 052, 053, 054, 057, 058, 061, 063, 163, 170 to 173, and 181	When incorporated with other River Des Peres CSO controls, reduce overflows to 4 events or less in the typical year ⁽¹⁾ , and untreated overflow volume to the River Des Peres of 1,412 million gallons from the Lower & Middle River Des Peres Storage Tunnel and the River Des Peres Tributaries Storage Tunnel combined.	<ul style="list-style-type: none"> • Bid Year – 2021 • Achievement of Full Operation – 12/31/2030

Appendix D CSO Control Measures, Design Criteria, Performance Criteria, and Critical Milestones



Lower & Middle River Des Peres CSO Controls

Appendix D
CSO Control Measures, Design Criteria, Performance Criteria, and Critical Milestones

Other CSO Control Measures

CSO Control Measure	Description	Design Criteria	Performance Criteria	Critical Milestones
Bissell Point CSO Outfall 055 Elimination	Sewer separation to allow elimination of Bissell Point CSO Outfall 055	MSD's Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities	Elimination of Bissell Point CSO Outfall 055	<ul style="list-style-type: none"> Achievement of Full Operation – 01/01/2011
Lemay Treatment Plant – Increase Secondary Treatment Capacity	Upgrade aeration tanks and ancillary systems to achieve peak wet-weather capacity of 210 MGD	<p>10 CSR 20-8 for new facilities</p> <p>Existing facilities Design Basis</p>	Provide peak wet-weather flow capacity of 210 MGD through secondary treatment. Operate treatment facilities to comply with Missouri State Operating Permit requirements. Upon completion of the stress test required by Appendix E, MSD shall operate the WWTP in accordance with the maximum treatable flow rate for each treatment step.	<ul style="list-style-type: none"> Achievement of Full Operation – 12/31/2015
Lemay Treatment Plant – Utilize Excess Primary Treatment Capacity – Phase I	Increase influent pumping, preliminary treatment and primary treatment capacity from 240 MGD to 290 MGD	<p>10 CSR 20-8 for new facilities</p> <p>Existing facilities Design Basis</p>	Provide peak wet weather flow capacity of 290 MGD through primary treatment when plant flows exceed secondary treatment capacity. Operate treatment facilities to comply with Missouri State Operating Permit requirements.	<ul style="list-style-type: none"> Achievement of Full Operation – 01/01/2011
Lemay Treatment Plant – Utilize Excess Primary Treatment Capacity – Phase II	Increase influent pumping, preliminary treatment and primary treatment capacity from 290 MGD to 340 MGD	<p>10 CSR 20-8 for new facilities</p> <p>Existing facilities Design Basis</p>	Provide peak wet weather flow capacity of 340 MGD through primary treatment when plant flows exceed secondary treatment capacity. Operate treatment facilities to comply with Missouri State Operating Permit requirements.	<ul style="list-style-type: none"> Achievement of Full Operation – 12/31/2015
Bissell Point Treatment Plant – Utilize Excess Primary Treatment Capacity	Utilize excess 100 MGD preliminary and primary treatment capacity to treat wet weather flows	<p>10 CSR 20-8 for new facilities</p> <p>Existing facilities Design Basis</p>	Provide peak wet weather flow capacity of 350 MGD through primary treatment when plant flows exceed secondary treatment capacity and when total plant flow is not limited by river flooding. Operate treatment facilities to comply with Missouri State Operating Permit requirements.	<ul style="list-style-type: none"> Achievement of Full Operation – 01/01/2011

**Appendix D
CSO Control Measures, Design Criteria, Performance Criteria, and Critical Milestones**

CSO Control Measure	Description	Design Criteria	Performance Criteria	Critical Milestones
Green Infrastructure Program – Pilot Program	Stormwater retrofitting of abandoned properties in Bissell Point and Lemay service areas	Capture runoff from existing or future impervious areas on properties and, if possible, adjacent impervious streets and alleys, in accordance with Section 12 of the Long-Term Control Plan.	Apply green infrastructure on 200 to 400 abandoned properties, encompassing 20 to 40 acres, with a total expenditure of at least \$3 million. MSD shall submit to EPA and the State for review and for EPA’s approval, with a copy to the Coalition, the Pilot Program Final Report.	<ul style="list-style-type: none"> • Achievement of Full Operation – 12/31/2015
Green Infrastructure Program	Stormwater retrofitting of abandoned properties in Bissell Point and Lemay service areas	Capture runoff from existing or future impervious areas on properties and, if possible, adjacent impervious streets and alleys, in accordance with Section 12 of the Long-Term Control Plan and the plan for full-scale implementation contained in the Pilot Program Final Report.	Performance Criteria to be identified in Pilot Program Final Report, with a minimum expenditure of \$100 million total which includes the pilot program.	<ul style="list-style-type: none"> • Achievement of Full Operation – 06/30/2034

¹ CSO Control Measures will be designed to reduce the number of overflows to Maline Creek and the River Des Peres to achieve a Performance Criteria of 4 overflow events or less in the “typical year.” The term “overflow event” means an overflow at one or more CSO Outfalls on a receiving stream segment, based on a 6-hour inter-event time, that does not receive the equivalent of primary clarification, solids and floatables disposal, and disinfection, if necessary to meet water quality standards. “Typical year” performance and achievement of Performance Criteria shall be assessed in accordance with the Post-Construction Monitoring Program using the annual statistics generated by the hydraulic model based on the Year 2000 hourly precipitation data from Lambert St. Louis International Airport.

APPENDIX E POST-CONSTRUCTION MONITORING PROGRAM

I. Purpose and Scope

No later than one year from Date of Entry, MSD shall submit to EPA and the State for review and for EPA's approval, with a copy to the Coalition, a plan for a Post-Construction Monitoring Program ("PCMP") that (1) demonstrates whether MSD has achieved the Performance Criteria for each CSO Control Measure set forth in Appendix D and (2) assesses and documents the impacts on receiving water quality that result from the implementation of the CSO Control Measures. MSD shall implement the PCMP upon receipt of EPA's written approval of the PCMP Plan. During implementation of the CSO Control Measures, MSD shall not reroute any flows in the Sewer System for the purpose of meeting the Performance Criteria other than those measures consistent with the Long Term Control Plan ("LTCP") or as otherwise approved in writing by EPA.

The PCMP shall include the following elements:

- Actions to evaluate and document the effectiveness of each CSO Control Measure set forth in Appendix D;
- Actions to assess and document the environmental benefits attributable to CSO Control Measures;
- A Water Quality Monitoring Plan that details the monitoring schedule, sampling locations, and monitoring procedures to collect data related to the Performance Criteria and the impacts from CSOs on receiving water quality;
- Updates and enhancement of the collection system computer models; and
- Mechanisms for providing public education and information on the need for implementation of the CSO Control Measures, any water quality improvements, and the progress made in achieving the Performance Criteria.

II. Performance Monitoring and Sampling

MSD shall conduct performance monitoring and sampling in order to demonstrate that the Performance Criteria for each CSO Control Measure has been satisfied. The monitoring and sampling data must enable comparison of post-construction conditions with baseline conditions determined during the development of the LTCP.

MSD shall initiate long-term monitoring of the performance of major constructed facilities upon Achievement of Full Operation of each facility and long-term monitoring of the receiving streams. Major constructed facilities, identified in Appendix D, include pumping station improvements, wet weather storage tanks and conveyance/storage tunnels, expansions and upgrades of existing wastewater treatment facilities, and any approved Enhanced High Rate Treatment facilities planned for the CSS. Long-term monitoring of water quality in the receiving streams must be performed in accordance with the Water Quality Monitoring Plan described below.

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MSD shall periodically evaluate the data it collects in order to document its compliance with the Performance Criteria. Based on such evaluations, MSD may propose modifications of the PCMP to EPA, and shall make such modifications to the PCMP once approved by EPA in writing.

MSD has established its baseline collection system conditions through flow and activation monitoring of selected CSO outfalls. MSD shall perform post-construction flow monitoring at approved locations to support analyses demonstrating compliance with the Performance Criteria for each CSO Control Measure.

Locations to be monitored in the Lemay service area include Outfall 063 and other outfalls that collectively represent a minimum of 75 percent of the overflow volume in the typical year, and major components of the CSO Control Measures including pump stations, conveyance/storage tunnels and treatment facilities. Locations to be monitored in the Bissell Point service area include remaining CSO outfalls to Maline Creek, and major components of the CSO Control Measures including pump stations, storage tanks and treatment facilities.

MSD will select monitoring locations that specifically provide system operational and flow data for calibrating the updated hydraulic models that include the constructed CSO Control Measures, and locations that provide data for evaluating CSO Control Measure performance. Specific locations to be monitored will be identified in the detailed monitoring plans to be developed for the CSO Control Measures as described below.

The data shall also support:

- Characterization of sewer flow for evaluation of long-term collection system performance.
- Collection of information on overflows at CSOs including overflow volume and duration.
- Development of a database of flow data for use in future design efforts related to controlling CSOs.
- Enhanced operation and maintenance actions to further control wet weather discharges and achieve NPDES permit compliance.
- Demonstration of maximum treatable flow rate through each treatment step following the secondary treatment upgrade at Lemay (stress test).

Performance monitoring of each CSO Control Measure shall commence within six months of Achievement of Full Operation of that CSO Control Measure.

MSD shall submit to EPA and the State for review and for EPA's approval, with a copy to the Coalition, a detailed monitoring plan for each of the following CSO Control Measures one year prior to the applicable Achievement of Full Operation date set forth in Appendix D:

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Maline Creek:

- Enhanced High Rate Treatment unit at Outfall 051
- Storage Tank at Outfall 052

Gingras Creek:

- Relocation of Outfall 059

Upper River Des Peres:

- Storage tunnel to store flows from CSO outfalls to the Upper River Des Peres

River Des Peres Tributaries:

- Tunnel to convey/store flows to Lemay WWTF

Lower and Middle River Des Peres:

- Flow storage in 29-ft horseshoe sewers under Forest Park
- Enhanced High Rate treatment unit near Outfall 063
- Removal of secondary treatment bottlenecks at WWTF
- Tunnel to convey/store flows to Lemay WWTF

Following Achievement of Full Operation of each CSO Control Measure listed in Appendix D, MSD shall conduct activation monitoring at all CSO outfalls addressed by that particular CSO Control Measure to determine the number of activation events at each CSO outfall, and submit the activation information in the Annual Report as set forth in Section VIII of the Consent Decree. Such activation information shall be submitted as an actual number of events.

III. Stress Testing of Lemay Treatment Plant

MSD shall construct the CSO Control Measure in accordance with the description, design criteria, performance criteria, and critical milestones contained in Appendix D to achieve a minimum secondary treatment design capacity of 210 million gallons per day (MGD) at the Lemay Treatment Plant. The existing preliminary and primary treatment facilities have a design capacity of 340 MGD. Effluent disinfection facilities are currently being designed with a capacity of 340 MGD.

MSD shall submit a stress test protocol to EPA and the State for review and for EPA's approval, with a copy to the Coalition, at least 30 days prior to Achievement of Full Operation of the upgraded wastewater treatment facilities. The protocol shall be designed to determine the maximum treatable wet-weather flow rates for each treatment step (preliminary, primary, secondary, and disinfection) at the Lemay Treatment Plant following the completion of the upgrades described above. EPA/MDNR shall review the stress test protocol pursuant to Section VII of this Consent Decree (Review and Approval Procedures).

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In accordance with that review, and by no later than 365 days after the Achievement of Full Operation of the treatment plant upgrades, MSD shall conduct the approved stress test. The stress test shall be performed to confirm that the peak wet-weather flow capacity of the preliminary treatment, primary treatment, and disinfection facilities is 340 MGD or higher, and that the peak wet-weather flow capacity of the secondary treatment facilities is 210 MGD or higher.

MSD shall submit the results of the stress test to EPA and the State for review and for EPA's approval, with a copy to the Coalition, by no later than 400 days after Achievement of Full Operation of the treatment plant upgrades. The results shall include the maximum treatable wet-weather flow rates for each treatment step (preliminary, primary, secondary, and disinfection). EPA/MDNR shall review the stress test results pursuant to Section VII of this Consent Decree (Review and Approval Procedures). Within 60 days after approval of the stress test results, MSD shall submit an application to modify its operating permit to include the approved maximum treatable wet-weather flow rates for each treatment step. Upon issuance of all necessary operating permit modifications, MSD shall operate the Lemay Treatment Plant in accordance with such maximum treatable wet-weather flow rates for each treatment step. MSD shall conduct post-construction monitoring of treatment plant performance to verify the suitability of the approved stress test results.

IV. Water Quality Monitoring Plan

No later than one year from the Date of Entry, MSD shall submit a Water Quality Monitoring Plan ("WQMP") to EPA and the State for review and for EPA's approval, with a copy to the Coalition. Sampling locations for receiving waters shall include at a minimum the sites used during the development of the LTCP. Data collected by the U.S. Geological Survey, Missouri Department of Natural Resources, Illinois Environment Protection Agency, or other agencies may be utilized for this monitoring if the data are considered by MSD to be of acceptable quality.

The WQMP, at a minimum, shall:

- Further characterize baseline water quality conditions prior to development and implementation of the CSO Control Measures set forth in Appendix D;
- Measure changes in water quality during and after implementation of the CSO Control Measures; and
- Assess the impacts of CSOs on the water quality of the receiving stream remaining after the Achievement of Full Operation of each CSO Control Measure.

The WQMP shall define the anticipated schedule for monitoring at each sampling location. MSD shall conduct field measurements and collect water quality samples at the approved sampling locations once every two weeks for all parameters except *E. coli* which shall be collected once every two weeks during the recreation season. Monitoring shall begin within ninety (90) days of EPA's approval of the PCMP and will be conducted 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 shall not be delayed because of weather, except for safety

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reasons. The monitoring frequency shall provide data sufficient to calculate a geometric mean *E. coli* concentration consistent with applicable water quality standards and for tracking long term trends.

MSD shall record field measurements for temperature, pH, and dissolved oxygen at each site. Field observations shall also be recorded for floating debris, submerged debris, algal growth/blooms, odor, and recreational use. Samples shall be collected and analyzed for, at a minimum, *E. coli*. Samples from receiving waters other than the Mississippi River shall also be analyzed for, at a minimum, BOD, ammonia, and total suspended solids.

At least 6 months prior to submitting the WQMP, MSD shall submit to EPA and the State for review and for MDNR's approval, with a copy to the Coalition, the Quality Assurance Project Plan (QAPP) to be used in the monitoring plan. The QAPP shall be developed based on the guidance in the following documents:

- United States Environmental Protection Agency (EPA), December 2002. Guidance for Quality Assurance Projects Plans, EPA QA/G-5, Washington, DC.
- United States Environmental Protection Agency (EPA), November 2002. Guidance on Environmental Data Verification and Data Validation, EPA QA/G-8, Washington, DC.

For data collected by the U.S. Geological Survey, Missouri Department of Natural Resources, Illinois Environment Protection Agency, or other agencies, MSD shall submit the applicable agency's QAPP (e.g., Quality-Assurance Plan for Surface-Water Activities of the U.S. Geological Survey, Missouri Water Science Center, October 2007) for MDNR review before that agency's data may be utilized in the monitoring program.

V. Rainfall Monitoring

MSD shall include rainfall monitoring as an essential component of the PCMP. Detailed analysis of precipitation is necessary to update MSD's hydraulic model as construction activities proceed to fully evaluate compliance with the Performance Criteria. Precipitation data shall consist of total rainfall depth, duration, intensity, and event distribution.

Rainfall data shall be compiled and analyzed as part of the PCMP. The source of rainfall data is MSD's network of long-term rain gauges spaced throughout MSD's service area. Rainfall data collected by MSD shall be used for analysis in connection with other post-construction monitoring data.

VI. Data Management

MSD shall use a Data Management System and associated protocols for the storage, management, retrieval, and analysis of all data used to assess the performance of MSD's CSO Control Measures.

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VII. Quality Control

Quality control and quality assurance procedures and protocols prepared as part of the development of the LTCP must continue to be used for the implementation of the PCMP. MSD 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.

VIII. Analysis, Progress Reporting, and Compliance Demonstration

MSD shall use the data from the PCMP to evaluate the performance and effectiveness of each CSO Control Measure in complying with the Performance Criteria set forth in Appendix D.

Data from the PCMP shall be used to update and improve calibration and verification of MSD's collection system models. The updated collection system models will be used to demonstrate compliance with Performance Criteria as set forth in Appendix D using the 2000 design year used in development of the LTCP. At this juncture, it is assumed that accepted engineering practice at the time the Post-Construction Monitoring Program is conducted will still rely on a hydraulic model similar to those in use today. In the event that accepted practice at the time the Post-Construction Monitoring Program is conducted has changed, MSD will submit an alternate method for approval.

MSD shall report the results and progress of the PCMP in the Annual Report as set forth in Section VIII of the Consent Decree. This progress report shall include a summary of CSS Watershed performance to-date, consisting of:

- CSO activation and flow monitoring data;
- Rainfall data;
- Receiving water monitoring results;
- Status in achieving the Performance Criteria for each CSO Control Measure;
- Updating of collection system hydraulic models to reflect implemented CSO Control Measures. Necessary model modifications, recalibration, and reverification will be indicated and documented;
- Identification and documentation of CSO Control Measure deficiencies and performance limitations; and
- Identification and documentation of any proposed supplemental remedial CSO Control Measures.

Appendix F

Supplemental Environmental Project Plan

This Appendix F describes the Supplemental Environmental Project (“SEP”) to be performed and funded by MSD as required by the Consent Decree. MSD shall spend at least One Million Six Hundred Thousand Dollars (\$1,600,000) and perform certain additional functions as set forth herein to implement this SEP. No part of this SEP expenditure shall include federal or state funds, including federal or state low interest loans, contracts, or grants.

SEP Overview:

Inadequate or failing septic systems present both public health and environmental risks that can be avoided by connection to public sewers. Many homeowners do not want to connect because of the upfront capital costs associated with public sewer. This financial obstacle is particularly acute for low income residents. Leaking private laterals contribute inflow and infiltration to the sewer system that may contribute to sewer overflows and bypasses at the wastewater treatment facilities.

The SEP shall include the implementation of a Sewer Connection & Septic Tank Closure Program (“Program”) for homeowners that qualify for MSD’s Low Income Assistance program. The Program shall include 1) the installation of a sewer service line (i.e. lateral) and public sewer line if needed to the homes of participating property owners, removal as needed of their septic tank from operation by capping, filling, or other means as determined and approved by MSD and consistent with local ordinances, and 2) the replacement, rehabilitation or repair as necessary of private lateral lines. The Program is a no cost construction program for only low-income eligible residential property owners (1) who elect to close their septic tank and connect to a public sewer, or (2) where MSD finds contributions of I/I to the sewer system for a defective private lateral.

The Program is voluntary and will be available to low-income eligible residents of owner-occupied, single family homes that are on properties not connected to a public sewer or for those who are connected to a public sewer and have a defective private lateral. In MSD’s service area, it is estimated that 8,000 – 10,000 homes are still on septic systems.

SEP Budget

Based on a one million six hundred thousand dollar (\$1,600,000.00) budget, at an average cost of three thousand dollars (\$3,000.00) per home, the Program is anticipated to assist five hundred and thirty-three (533) residents; however, this number may vary depending on the cost of construction. This Program provides no cost construction to households that would qualify for MSD’s low income assistance program as if they are connected to the public sewer

system. The construction costs at the outset will range from approximately \$2,000 - \$15,000,^{1/2} based on the construction and repair needs. SEP funds shall not be used for MSD's administrative expenses.

Project Processing

MSD will use a streamlined project approach to enhance implementation, while providing appropriate management oversight. The processes shall include:

1. MSD to verify applicant's income, property ownership, occupancy, and current billing status;
2. Upon approval of eligibility, owners required to sign a waiver allowing MSD to work on owner's private property;
3. MSD will contract directly to have all work performed;
4. MSD will inspect all work and be responsible for all permitting and inspections required by other authorities; and
5. Acceptable Program costs shall include the costs of equipment and materials, labor costs for Repair/Replacement/Removal Services and/or services associated with the same, but shall not include administrative costs.

Alternative SEP

To the extent MSD is unable to complete the SEP Program described in this SEP Plan due to lack of homeowner participation, MSD may submit the following requests to EPA:

1. MSD may request additional time from EPA to complete the above described SEP. Such request shall be made at least sixty (60) days prior to the final completion date as set forth above. However, if EPA denies the request for additional time, then MSD shall continue to implement the SEP and be subject to stipulated penalties as set forth in Section XI of this Consent Decree. If MSD is granted additional time to complete the SEP, the SEP shall be deemed in compliance as described above.

2. MSD may propose an alternate and similar SEP proposal and schedule to EPA equal in cost to the difference in the amount MSD has expended on the SEP as described above to date, and \$1,600,000.00. Such request shall be made no later than four (4) years from the Effective Date of the Consent Decree. EPA may approve the alternate SEP proposal and schedule for immediate implementation. If EPA approves an alternate SEP and schedule, the SEP shall be deemed in compliance upon completion of the alternate SEP. If EPA does not approve the alternate SEP proposal, MSD shall be subject to stipulated penalties as set forth in Section XI of this Consent Decree.

^{1/2}\$15,000 represents the approximate cost of installing public sewer line, if needed.