

A large, dynamic splash of water dominates the left side of the page, extending from the top to the bottom. The water is captured in mid-air, with many bubbles and droplets visible, creating a sense of movement and freshness. The background is a light, hazy blue, suggesting a bright, outdoor setting.

The City *of*
jACKSON

**ANNUAL
REPORT NO. 3**

MARCH 2015 THROUGH FEBRUARY 2016

Department of Public Works
Wastewater Infrastructure Redevelopment Program



APRIL 30, 2016

City of Jackson
Wastewater Infrastructure Redevelopment
Program

Annual Report No. 3
March 2015 through February 2016

April 30, 2016

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City of Jackson, Mississippi

Annual Report No. 3

March 2015 through February 2016

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

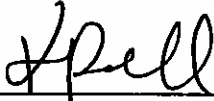




Tony F. Yarbger
Mayor



Date



Kishia L. Powell, Director
Department of Public Works



Date

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March 2015 through February 2016

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1.0 Introduction

1.1 Consent Decree Overview

On March 1, 2013, the Consent Decree (CD) agreed to by the City of Jackson, Mississippi, U.S. Environmental Protection Agency (EPA), and the Mississippi Department of Environmental Quality (MDEQ) regarding the wastewater collection and treatment system was entered by the U.S. Court, Southern District of Mississippi. Over a 17½ year timeline, the Consent Decree requires the City to:

- Develop, submit, finalize, and implement plans for the continued improvement of the Wastewater Collection and Transportation System (WCTS) and Wastewater Treatment Plants (WWTPs);
- Eliminate Sanitary Sewer Overflows (SSOs), effluent limit violations (including any violations of the new effluent limits for nutrients), and reporting violations, and
- Minimize Prohibited Bypasses.

One of the ongoing requirements of the EPA Consent Decree is to submit periodic reports to demonstrate continuing compliance. The specific reporting requirements of the CD are described below.

1.2 Authority to Promulgate

The City of Jackson Public Works Department (JPWD) established the Wastewater Infrastructure Redevelopment Program in 2004. The Waggoner Engineering/AJA Management and Technical Services joint venture company, WEI/AJA LLC, was retained to assist the City in addressing the requirements of the Consent Decree under the existing Program Management contract for the Wastewater Infrastructure Redevelopment Program. Accordingly, the Program Management team compiled this Quarterly Report from information provided by the City and its contractors to fulfill the requirements of Section IX ¶ 57 (b) set forth in the CD.

1.3 Consent Decree Requirements for Annual Report

As stated in the Consent Decree Section IX ¶ 57 (b), the Quarterly Report shall be submitted beginning sixty (60) Days after the first full twelve (12)-month period following the Date of Entry of the CD, and sixty (60) Days after each subsequent twelve (12)-month period until termination of the Consent Decree, and shall include, at a minimum:

(i) A summary of the CMOM Programs implemented or modified pursuant to this Consent Decree, including a comparison of actual performance with any performance measures that have been established.

(ii) A trends analysis of the number, volume, duration, and cause of the City's SSOs for a twenty-four (24)-month period updated to reflect the SSOs that occurred during the previous twelve (12)-month period except that the first Annual Report shall only include the first twelve (12) months.

(iii) A trends analysis of the number, volume, duration, and cause of all Prohibited Bypasses for a twenty-four (24)-month period updated to reflect the Prohibited Bypasses that occurred during the previous twelve (12)-month period except that the first Annual Report shall only include the first twelve (12) months.

2.0 Capacity, Management, Operations and Maintenance Programs

The Consent Decree Section VI, D ¶¶ 31 through 43 requires the City to implement various programs in order to properly manage, operate and maintain sanitary wastewater collection, transmission and treatment systems, investigate capacity-constrained areas of these systems, and respond to SSO events.

Each section below recounts Consent Decree requirements for capacity, management, operations, and maintenance (CMOM) programs. Milestones achieved within the last period and milestones anticipated for the next reporting period are then listed.

2.1 Training Program

Within twelve (12) months after the Date of Entry of this Consent Decree, February 28, 2014, the City shall submit to EPA for review and approval a Training Program, including a schedule for full implementation of the program not to exceed twelve (12) months after its approval by EPA. The Training Program shall include, at a minimum, the following:

- (a) Technical Training. The technical training component shall include, at a minimum, the following:
 - (i) employee technical training and refresher technical training requirements (curriculum) that ensure that each City employee has a level of knowledge, commensurate with duties, of the overall functions of the City's Infrastructure;
 - (ii) a description of outside technical training and networking opportunities, such as conferences and seminars, that are made available to City employees;
 - (iii) a description of the extent to which employee certification, at the State or at the City level, is required as a basis for obtaining or maintaining a position;
 - (iv) records of technical training, including on-the-job training, which shall be maintained in an information management system and shall describe the degree to which completed technical training and on-the-job training is tied to promotion and pay; and

(v) a description of the technical training required before an employee can undertake specific work assignments or tasks.

(b) Skills Training. The skills training component shall include, at a minimum, the following:

(i) employee skills training and refresher skills training requirements (curriculum) that ensure that each City employee has a level of knowledge, commensurate with duties, of the specific equipment to be used and the procedures to be followed in carrying out duties;

(ii) a description of outside skills training opportunities, such as manufacturers' training, that are made available to employees;

(iii) a description of the extent to which employee certification, at the State or at the City level, is required as a basis for obtaining or maintaining a position;

(iv) records of skills training, including on-the-job training, which shall be maintained in an information management system) and shall describe the degree to which completed skills training and on-the-job training is tied to promotion and pay; and

(v) a description of the skills and on-the-job training required before an employee can undertake specific work assignments or tasks.

(c) Safety Training. The safety training component shall include, at a minimum, the following:

(i) employee safety training and refresher safety training requirements (curriculum) that ensure that each City employee has level of knowledge regarding on-the-job safety that is commensurate with the employee's equipment and work environment;

(ii) a description of the extent to which employee safety certification at the State or at the City level is required as a basis for obtaining or maintaining a position;

(iii) records of safety training, including on-the-job training, which shall be maintained in an information management system and shall describe the degree to which completed safety training and on-the-job training is tied to promotion and pay; and

(iv) a description of the safety training required before an employee can undertake specific work assignments or tasks.

Significant milestones reached this period for this activity:

- **Training Coordinator was hired on September 21, 2015**
- **Six (6) employees received their NASSCO certification**
- **Eight (8) employees took the Wastewater Certification Exam in February**
- **Training topics completed during the reporting period are summarized in the following table;**

Department of Public Works Training Report			
Consent Decree Training Topics			
Subject	Summary	Date	Status
NASSCO Pipeline Assessment and Certification Program	Training in Pipeline, Manhole and Lateral assessment and Certification examination	03/09/2016-03/11/2015	Complete
How to read the Markings on a Tape Measure	Reading the markings on a tape measure	9/21/2015	Complete
Vehicle Cleaning Policy	Maintaining and cleaning department assigned vehicles and equipment	10/5/2015	Complete
Cellular Phone Safety	Helpful safety tips for those who choose to use a cellular phone while driving	10/15/2015	Complete
Make Sure your Truck and Equipment Safety Devices are Working	Avoiding accidents and damage to other vehicle by ensuring equipment safety devices are working	10/19/2015	Complete
Collection System Operators Training	Administered by Michael Switzer. This class is design to prepare employees for the upcoming Collection System Operators test in February	10/27/2015 - 10/30/2015	Complete
Confined Space Training	Covered under Michael Switzer's Collection System Operator's Training	10/27/2015 - 10/30/2015	Complete
Utility Protection - Safe Digging	Covered under Michael Switzer's Collection System Operator's Training	10/27/2015 - 10/30/2015	Complete
Water and Wastewater Technical Terminology	Covered under Michael Switzer's Collection System Operator's Training	10/27/2015 - 10/30/2015	Complete
Trench Shoring	Covered under Michael Switzer's Collection System Operator's Training	10/27/2015 - 10/30/2015	Complete
Setting Goals	American Water Works Accident Prevention Committee	11/2/2015	Complete
Smoking In the Workplace	Studies on smoking in the workplace	11/30/2015	Complete
CCTV Training	Samson Equipment Company is providing this training to sewer maintenance of part of their purchase contract	12/8/2015 - 12/9/2015	Complete
Jet Truck Training	Samson Equipment Company is providing this training to sewer maintenance of part of their purchase contract	12/8/2015 - 12/9/2015	Complete
Safety Belts - Friends for Live	Facts and Myths about wearing your Safety Belt	12/14/2015	Complete
The De-Stressing Power of Self-Talk	Controlling stress through your thoughts	12/28/2015	Complete
Make Sure your Truck and Equipment Safety Devices are Working	Avoiding accidents and damage to other vehicle by ensuring equipment safety devices are working	2/1/2016	Complete
Identiy Thieves Don't Take a Holiday	Safety training on Identy theft	2/8/2016	Complete
Wastewater CEU Class	Administered by MWPCOA for certified operators. 16 CEU credits earned	2/15/2016 - 2/19/2016	Complete
Collection System Operators Training Review	Refresher training for those who will be taking the Operators Class I & II Exams In February. Administered by MsRWA	2/18/2016	Complete
Pole Camera Sewer Inspection Training	Samson Equipment Company is providing this training to sewer maintenance of part of their purchase contract	12/8/2015 - 12/9/2015	Complete
Cellular Phone Safety	Helpful safety tips for those who choose to use a cellular phone while driving	1/4/2016	Complete
Alcohol and Marijuana	The dangers of driving while under the influence of alcohol and marijuana	3/7/2016	Complete
Smoking In the Workplace	Studies on smoking in the workplace	3/14/2016	Complete
Backhoe Loader Training	Administered by MDOT Training to learn how to safely operate and maintain Backhoe Loader	4/5/2016	Complete
Work Zone Safety Training	Administered by MDOT during National Work Zone Awareness Week	4/12/2016	Complete

Significant milestones anticipated during the next reporting period:

- **Continue to develop training objectives for each employee**
- **Review Training program objectives and propose amendment as necessary**
- **Training topics anticipated to be covered during the next reporting period are summarized in the following table;**

**Department of Public Works Training Report
Consent Decree Future Training List**

Subject	Date	Duration
Backhoe Loader Training	4/5/2016	Complete
Work Zone Safety Training	4/12/2016	Complete
Advanced WW Training & Disinfection	5/5/2016	1 day
Nutrient Removal Workshop	7/16/2016	1 day
Nutrient Removal Workshop	9/20/2016	1 day
Consent Decree 101	TBD	1 day
SSO Training	TBD	TBD
SORP Training	TBD	TBD
Force Mains	TBD	TBD
Pressure Testing Training	TBD	TBD
Air/Vac Valves O & M	TBD	TBD
ARV installation and Maintenance	TBD	TBD
Cavity/Sinkholes Repair	TBD	TBD
Contracts	TBD	TBD
City Ordinances	TBD	TBD
City Specifications	TBD	TBD
City Constuction Standards	TBD	TBD
Field Customer Service	TBD	TBD
Billing Rates/Process	TBD	TBD
Dye Testing	TBD	TBD
Smoke Testing	TBD	TBD
Concrete Grouting	TBD	TBD
Emergency Response Protocol	TBD	TBD
EPA Clean Water Act	TBD	TBD
External Sewer Inspection	TBD	TBD
Flow Meters: Installation and Operation	TBD	TBD
GIS Training	TBD	TBD
Chemical safety	TBD	TBD
Compressed Air and Explosive Gas	TBD	TBD
Confined Space	TBD	TBD
Electrical Safety	TBD	TBD
Flagging	TBD	TBD
Fall Protection and heights	TBD	TBD
Forklift Safety	TBD	TBD
Harzard Communication	TBD	TBD
Heat Stress	TBD	TBD
Heavy Equipment Safety	TBD	TBD
Lock Out/Tag Out	TBD	TBD
Material Handling and Storage	TBD	TBD
Night Work	TBD	TBD
Noise and hearing Conservation	TBD	TBD
Personal Protection Equipment	TBD	TBD
Personal Sanitation	TBD	TBD
Power Tools	TBD	TBD
Rotating Equipment	TBD	TBD
Spills and Secondary Containment	TBD	TBD
Traffic Control	TBD	TBD
Walking and Working Surfaces	TBD	TBD
Water Safety	TBD	TBD
Working Outdoors	TBD	TBD

2.2 Sewer Overflow Response Plan

The City submitted to MDEQ a SORP on September 28, 2011, pursuant to the MDEQ Agreed Order I. MDEQ approved the SORP on October 10, 2011. A copy of the SORP is Appendix E to the Consent Decree. The City shall continue to implement the SORP as an enforceable obligation under the Consent Decree. Key elements in the SORP are:

- Overflow identification and Response Procedures
- Building Backups Procedure
- Public Advisory Procedure
- Regulatory Agency Notification Procedure
- Long Term Corrective Action Procedure
- Personnel Training

Significant milestones reached this period for this activity:

- **Continued remotely monitoring high water alarms on all lift stations**
- **Continued to map SSO locations for follow up inspections**
- **Continued Regulatory Agency notifications**
- **Submitted Quarterly Reports #8, #9, # 10 and #11**

Significant milestones anticipated during the next reporting period:

- **Review SSO locations with multiple occurrences and determine needs**
- **Submit Quarterly Reports as required**
- **Conduct annual Program review**
- **Conduct Training sessions**

2.3 Interjurisdictional Agreement Program

Within twenty-four (24) months after the Date of Entry of this Consent Decree, February 28, 2015, the City shall submit to EPA for review and approval an Inter-Jurisdictional Agreement Program for when the City reopens or renews existing agreements or enters into new agreements that cover the collection, conveyance, and treatment of sewage by the City from municipal satellite sewer systems

and/or large volume sewer customers. The program shall delineate the minimum provisions to be set forth in these agreements. Such provisions shall include requirements on the contracting party to properly manage, operate, and maintain its sewage collection and conveyance systems including, without limitation, the management of FOG and the minimization of peak flows into the City's Sewer System by excluding, to the maximum reasonable extent, I/I. In addition, such provisions shall include requirements on the contracting party to ensure that any of its municipal satellite sewer systems and/or large volume sewer customers also properly manage, operate, and maintain their sewage collection and conveyance systems. The program shall also delineate provisions addressing the term or life of these agreements; mechanisms for appropriate modification of the agreements; and mechanisms for enforcement of the agreements (including a description of the legal support necessary to develop, oversee and enforce the agreements) which may include provisions permitting termination of the agreement and physical disconnection from the City's Sewer System within a reasonable time not exceeding two (2) years upon the failure of the contracting party to comply with its management, operations, and maintenance obligations.

Significant milestones reached this period for this activity:

- **Submitted Inter-Jurisdictional Agreement Program documents to EPA on February 27, 2015**

Significant milestones anticipated during the next reporting period:

- **Address any review comments**
- **Receive approval of Program documents**
- **Begin program implementation**

2.4 Private Lateral Program

Within twenty-four (24) months after the Date of Entry of this Consent Decree, February 28, 2015, the City shall submit to EPA for review and approval Private Lateral Program, including a schedule for full implementation of the program not to exceed twelve (12) months after its approval by EPA. The Private Lateral Program shall include, at a minimum, the following:

- (a) A legal review of the City's sewer use ordinance to ensure that the City has the authority to require customers to repair or replace Private Laterals that may contain defects and/or improper connections that:
 - (i) are potential sources of I/I to the WCTS that may cause or contribute to SSOs or other violations of the NPDES Permits;
 - (ii) allow for the possible exfiltration of wastewater onto or below the surface of the ground that could then enter the stormwater system; or
 - (iii) allow roots and/or debris to enter the WCTS through cracks, holes, or poorly sealed joints, thus restricting flow and increasing the likelihood of SSOs.
- (b) If the legal review indicates a need to amend the legal authority in order to assume better control over problems with capacity on the Private Laterals, the Plan shall include the proposed revisions to the ordinance with a schedule for proposing the draft ordinance to the City Council for adoption.
- (c) An enforcement response guide to address Private Laterals that contain defects and/or improper connections. The enforcement response guide shall:
 - (i) identify the process that the City will follow to require customers to repair or replace the identified Private Laterals;
 - (ii) set forth a series of graduated enforcement responses by the City, which may include termination of services, in the event a customer fails to repair or replace the identified Private Laterals;
 - (iii) describe the notice the City provides to customers to require repair or replacement of identified Private Laterals and the process a customer must follow in order to challenge the City's determination that repair or replacement is necessary or the City's enforcement response, such as termination of services; and
 - (iv) identify the process a customer must follow to request a waiver of any of the obligations to properly operate and maintain Private Laterals imposed by the City's sewer use ordinance and the process the City will use to consider granting and revoking such waivers.
- (d) Establishment of technical and legal staffing to ensure effective implementation of the enforcement response guide.
- (e) An information management system.

Significant milestones reached this period for this activity:

- **Submitted Private Lateral Program documents to EPA on February 27, 2015**

Significant milestones anticipated during the next reporting period:

- **Address any review comments**
- **Receive approval of Program documents**
- **Begin program implementation**

2.5 Water Quality Monitoring Program

Within twenty-four (24) months after the Date of Entry of this Consent Decree, February 28, 2015, the City shall submit to EPA for review and approval a Water Quality Monitoring Program, including a schedule for full implementation of the program not to exceed twelve (12) months after its approval by EPA. Water Quality Monitoring Program described below shall identify SSOs originating at sewer pipe creek crossings and other isolated or remote sewer locations adjacent or in proximity to waterways; locate the source or sources of such SSOs; and assess the impact upon the environment and public health of such SSOs. The Water Quality Monitoring Program shall also include standard sampling and quality assurance procedures and an information management system. The Water Quality Monitoring Program is in addition to any other sampling required by the NPDES Permits. The Water Quality Monitoring Program shall include, at a minimum, the following:

- (a) **Routine Water Quality Monitoring Component.** The City shall develop and implement a Routine Water Quality Monitoring component to detect SSOs originating at or in proximity to stream crossings or other isolated and remote sewer locations. This component shall provide for scheduled sampling during both dry and wet weather periods from a network of monitoring stations located in each of the City's Sewersheds. The Routine Water Quality Monitoring component shall propose the exact number and location of monitoring points depending upon drainage configuration and other factors, but in no event shall the number of monitoring points be less than twelve (12) monitoring points. The Routine Water Quality Monitoring component shall include a map of all sampling locations, and shall specify sampling frequency and sampling parameters, including pH, dissolved

oxygen, and fecal coliform and/or E. coli bacteria. The City may elect to specify one or both of fecal coliform and E. coli bacteria as a sampling parameter.

(b) Investigative Water Quality Monitoring Component. The City shall develop and implement an Investigative Water Quality Monitoring component to determine whether the WCTS and/or any WWTP is a source of pollution identified as a result of complaints, routine water quality monitoring pursuant to Paragraph 37.(a) above, or by other means. This component shall specify the conditions under which the City will initiate an investigation under this Paragraph 37.(b). The Investigative Water Quality Monitoring component shall include a requirement for development of a map of all actual sampling locations, and shall specify a protocol for determining sampling parameters to be used depending on the type of pollution identified or suspected. The Investigative Water Quality Monitoring component shall include the following:

(i) Dry Weather Monitoring. The purpose of dry weather monitoring shall be to detect chronic line leaks. Dry weather sampling shall be conducted for a definite period of time, e.g., one week ("Testing Period"). During the Testing Period, the City shall collect fecal coliform and/or E. Coli bacteria samples at least once a day at locations to be investigated.

(ii) Wet Weather Monitoring. The purpose of wet weather monitoring shall be to detect capacity problems. The wet weather sampling period shall be defined using rainfall and stream stage data or sewer flow data. During the sampling period, the City shall collect fecal coliform and/or E. Coli bacteria samples at least two (2) times a day at locations to be investigated.

(iii) Location of Source of Release. If necessary, the isolated stream segment shall be sampled at defined intervals to identify the source of the release. Fecal coliform and/or E. Coli bacteria samples shall be taken in each of the monitoring locations. After repair of the source, the City shall take additional samples to ensure that the repair has been successful.

c) Spill Impact Water Quality Monitoring Component. The City shall develop and implement a Spill Impact Water Quality Monitoring component to assess any impact upon public health and the environment of pollution resulting from SSOs, and to assist in assessing the need for any environmental and/or public health response. The City shall consult with EPA, MDEQ, and public health authorities during development and implementation of the Spill Impact Water Quality

Monitoring component. As part of the Spill Impact Water Quality Monitoring component, the City shall develop protocols for mapping all actual sampling locations, for determining the frequency and duration of sampling (depending upon the potential impact of the spill on public health and the environment), and for sampling for pH, dissolved oxygen, and fecal coliform and/or E. coli bacteria. The sampling protocol shall include sampling upstream (control) and downstream of the spill. The sampling protocol also shall identify the circumstances under which the City shall sample for those Priority Pollutants known to be present in the wastewater of any Significant Industrial User that discharges into the portion of the WCTS upsewer of the SSO. The Water Quality Monitoring information management system shall contain a list of the Priority Pollutants, if any, in wastewater discharged by any Significant Industrial User to the WCTS, and the lines affected by any such discharge.

(d) Quality Assurance, Sampling, Data Analysis. The City shall use analytical procedures, sample containers, preservation techniques, and sample holding times that are specified in 40 C.F.R. Part 136. Upon request, the City shall allow split or duplicate samples to be taken by EPA, MDEQ, or their authorized representatives. In addition, EPA and MDEQ shall have the right to take any additional samples that EPA or MDEQ may deem necessary.

(e) Water Quality Reporting. The City shall report, pursuant to the requirements of Section IX (Reporting Requirements), the following information:

- (i) the actions which have been taken under the Water Quality Monitoring Program during the previous Calendar Quarter, including the dates and times of all sampling;
- (ii) a summary of all results of sampling during the previous Calendar Quarter; and
- (iii) all actions including, but not limited to, data collection, which are scheduled for the next Calendar Quarter.

Significant milestones reached this period for this activity:

- **Submitted Private Lateral Program documents to EPA on February 27, 2015**

Significant milestones anticipated during the next reporting period:

- **Address any review comments**
- **Receive approval of Program documents**
- **Begin program implementation**

2.6 Pump Station Operations Program

Within twelve (12) months after the Date of Entry of this Consent Decree, February 28, 2014, the City shall submit to EPA for review and approval Pump Station Operations Programs, including a schedule for full implementation of the programs not to exceed twelve (12) months after their approval by EPA. The Pump Station Operations Programs shall include, at a minimum, the following:

(a) Routine Pump Station Operations Program. The Routine Pump Station Operations Program shall be developed to ensure proper Pump Station operations that will necessitate prevention of Pump Station failure. This program shall include, at a minimum, the following:

- (i) procedures for reading and recording information appropriate to each Pump Station including, as applicable, pump run-time meter readings, start counters, amperage readings, checking and resetting conditions, wet-well points, grease accumulations, and any other information that is necessary for the proper operation of a Pump Station;
- (ii) development of standard inspection routes and schedules; and
- (iii) provisions for needs determination, establishing priorities and scheduling, number of crews and personnel (including, where appropriate, contract crews), standard forms, records and performance measures, and an information management system.

(b) Emergency Pump Station Operations Program. The Emergency Pump Station Operations Program shall be developed to necessitate emergency operations in the event of Pump Station failure. This program shall provide guidance and ensure timely response to atypical situations in the WCTS through the use of written standard emergency operating procedures for each type of Pump Station and shall include, at a minimum, the following:

- (i) emergency contact information;

- (ii) location(s) of auxiliary power including portable or fixed emergency generators applicable to each Pump Station;
- (iii) location(s) of portable pumping equipment;
- (iv) guidance for initiating auxiliary power with portable or fixed generators;
- (v) guidance for installing portable pumps during high flow;
- (vi) applicable contingency plans; and
- (vii) standard forms, records and performance measures and an information management system.

Significant milestones reached this period for this activity:

- **Pump station SSOs occurrences decreased by 72% to a total of 5 for the period March 2015 through February 2016. This compares to a total of 18 for the previous reporting period**
- **No pump station SSOs were reported from July 2015 through February 2016**
- **Installed pump around connections at LS 24 - Forest Hills #2 and LS 62 - Scottsdale #2. Pump around connections installed at 17 of 98 pump stations.**

Significant milestones anticipated during the next reporting period:

- **Continue plan development for adding emergency generator connections and transfer switches to pump stations where this capability is required.**
- **Continue plan develop for adding bypass pumping connections to allow use of portable pumps to pump stations where this capability is required.**
- **Conduct Program review to identify areas of improvement and, if necessary, request Program amendment approval from USEPA.**

2.7 Fats, Oil and Grease Program

Within twenty-four (24) months after the Date on Entry of this Consent Decree, the City shall submit to EPA for review and approval a FOG Control Program, including a schedule for full

implementation of the program not to exceed twelve (12) months after its approval by EPA. The FOG Control Program shall include, at a minimum, the following:

- (a) The legal authority to control the discharge of FOG into the WCTS, including the ability to implement a permit and enforcement program.
- (b) Specification of accepted devices to control the discharge of FOG into the WCTS.
- (c) Establishment of standards for the design and construction of FOG control devices including standards for capacity and accessibility, site map, design documents, and as-built drawings.
- (d) Establishment of FOG control device management, operations, and maintenance standards, or best management practices, that address onsite record keeping requirements, cleaning frequency, cleaning standards, use of additives, and ultimate disposal.
- (e) Establishment of construction inspection protocols, including scheduling, inspection report forms, and inspection record keeping requirements, to assure that FOG control devices are constructed in accordance with established design and construction standards.
- (f) Establishment of compliance inspection protocols, including scheduling, inspection report forms, and inspection record keeping requirements to assure that FOG control devices are being managed, operated, and maintained in accordance with the established management, operations, and maintenance standards or best management practices.
- (g) Establishment of a FOG disposal manifest system.
- (h) Establishment of an enforcement program, including specific enforcement mechanisms, to ensure compliance with the FOG Control Program.
- (i) Establishment of a compliance assistance program to facilitate training of FOG generators and their employees.

- (j) Establishment of a public education program directed at reducing the amount of FOG entering the WCTS from private residences.
- (k) Establishment of staffing (technical and legal) and equipment requirements to ensure effective implementation of the FOG Control Program.
- (l) A FOG characterization study that shall identify the sources of FOG causing problems in the WCTS and the best method or mechanism for addressing those sources.
- (m) A list of current commercial establishment FOG generators including a description of their FOG generating processes and average daily discharge volume.
- (n) Establishment of performance indicators to be used by the City to measure the effectiveness of the FOG Control Program.

Significant milestones reached this period for this activity:

- **Submitted Fats, Oil and Grease Control Program documents to EPA on February 27, 2015**

Significant milestones anticipated during the next reporting period:

- **Receive approval for Program from EPA**
- **Begin Implementation of Program**

2.8 Pump Station Preventive Maintenance Program

Within twelve (12) months after the Date of Entry of this Consent Decree, February 28, 2014, the City shall submit to EPA for review and approval Pump Station Preventive Maintenance Programs, including a schedule for full implementation of the programs not to exceed twelve (12) months after their approval by EPA. The Pump Station Preventive Maintenance Programs shall include, at a minimum, the following:

- (a) An electrical maintenance component which shall provide guidance to managers and field personnel responsible for electrical maintenance to

ensure that preventive maintenance on Pump Station electrical components are performed on a routine basis. This component shall include meter calibration schedules for any meter used to record data collected at or from a Pump Station.

- (b) A mechanical maintenance component that shall provide guidance to managers and field personnel responsible for mechanical maintenance to ensure that preventive maintenance on Pump Station mechanical components are performed on a routine basis.
- (c) A physical maintenance component that shall provide guidance to managers and field personnel responsible for physical maintenance (pipes, walls, inverts, covers, etc.) to ensure that preventive maintenance on Pump Station physical components are performed on a routine basis.
- (d) A Pump Station repair component that shall serve as a reactive maintenance system to repair Pump Stations that are currently in a state of disrepair but still cost-effective to service. This component shall provide for the identification, prioritization, scheduling, and repair of Pump Stations on a timely basis once a Pump Station has deteriorated beyond the scope of the preventive maintenance programs. This component shall include, at a minimum, the following:
 - (i) guidance outlining when a Pump Station is to be placed in the Pump Station Repair Program;
 - (ii) a prioritized inventory of Pump Stations in need of repair;
 - (iii) an ongoing inventory of completed repairs;
 - (iv) a work schedule for repairs; and
 - (v) standard forms, records and performance measures, and an information management system.

Significant milestones reached this period for this activity:

See table below;

PS Number	New Asset Number	Name	Description of Work
PS 45	LS 48	Mule Jail	Replaced guide railing system, pump base elbows and well entrance doors.
PS 85	LS 93	Whitestone	Repaired access road to station.
PS 88	LS 96	Yarbrough	Repaired access road to station.
PS 42	LS 45	McRaven # 4	Replaced pump discharge line from well to outside of station.
PS 02	LS 01	Amanda Lane	Repaired damaged discharge line and installed a bypass connection.
PS 21	LS 24	Forest Hills # 2	Repaired discharge line and installed a bypass connection with protective cover.
PS 24	LS 27	Hickory Dr.	Replaced guide railing system
PS 70	LS 76	Sylvan Trails # 4	Restored the power service pole to its upright position and remounted control panel.
PS 93	LS 56	Presidential Hills	Relocated the SSO monitor from the abandoned station to the new facility wet well.
PS 76	LS 84	Westside # 1	Repaired the power line to service pole and removed tree prevent interference with power line.
PS 37	LS 40	McCluer # 4	Replaced the rotating element for the # 2 pump.
PS 33	LS 36	Mayfair # 3	Installed new guide railing system was installed to eliminate "confined space" entry to retrieve pump from well.
PS 81	LS 89	Westside # 6	Repaired access road to station.
PS 75	LS 83	Western Hills	Installed deodorant fogger and reodorant to combat odors. Constructed wooden fencing for security and beautification of area
PS 26	LS 30	Lakeshore B	Replaced guide railing system.
PS 4	LS 04	Brookhollow # 3	Replaced isolation and check valves to prevent back siphoning
PS 68	LS 74	Sylvan Trails # 2	Repaired the discharge line.
PS 66B	LS 72	Summer Park	Replaced the rotating element for the # 2 pump.
PS 19	LS 22	Forest Ave.	Met with vendor (Hemphill) to discuss rehab of site to include the installation of valve box with bypass connection.
PS 75	LS 83	Western Hills	Met with engineering firm (Civiltech) to view site for reconstruction purposes.
PS 25	LS 28	Hillandale	Spare pump was purchased for site.
PS 27	LS 31	Lakeshore C	Purchased replacement pump for site
PS 78	LS 86	Westside # 3	Purchased new replacement/spare pump for site.
PS 15A	LS 29	I-55 Frontage Rd.	Repaired spare pump.
PS 83	LS 91	Westside # 8	Repaired the discharge line and replaced the check valve for the # 2 pump.
NA	LS 82	Valley Park	Replaced damaged pump control boards due to power surge during lighting storm in area.
PS 32	LS 35	Mayfair # 1	Repaired discharge line for the # 2 pump.
PS 6B	LS 07	Brookwood Place	Replaced culvert at service entrance. Also received approval to have the control panel replaced.
PS 7	LS 10	Cedar Hills # 1	Reconstructed service road
PS 58	LS 62	Scottsdale #2	Replaced well components including the installation of pump around piping and protective cover
PS 99	LS 02	Belle Chase	Repaired erosion around valve box

Significant milestones anticipated during the next reporting period:

- **See Table below;**

PS No.	New Asset Number	Name	Repairs Required	Comments
PS 03	LS 03	Brookhollow #2	Replace control panel	
PS 19	LS 22	Forest Avenue	Rehabilitate entire station	Bidding underway
PS 75	LS 83	Western Hills	Rehabilitate entire station	Design underway, right of way requirements being evaluated
PS 79	LS 87	Westside #4	Repair erosion at site	
PS 85	LS 93	Whitestone	Replace wet well components including the installation of a valve box with pump around connection	Design Complete, Final review underway
PS 86	LS 94	Windsor Forest #1	Rehabilitate entire station	Design underway

2.9 Gravity Line Preventative Maintenance Program

Within fifteen (15) months after the Date of Entry of this Consent Decree, May 31, 2014, the City shall submit to EPA for review and approval a Gravity Line Preventive Maintenance Program, including a schedule for full implementation of the program not to exceed twelve (12) months after its approval by EPA. The Gravity Line Preventive Maintenance Program shall include, at a minimum, the following:

- (a) A preventive hydraulic cleaning component which shall include protocols for implementing routine hydraulic cleaning component of the preventive maintenance program for Gravity Sewer Lines. This component shall include provisions for needs determination, establishing priorities and scheduling, number of crews and personnel (including, where appropriate, contract crews), hydraulic cleaning equipment to be used, standard hydraulic cleaning maintenance procedures, standard forms, records and performance measures, and an information management.
- (b) A preventive mechanical cleaning component which shall include protocols for implementing routine mechanical cleaning component of the preventive maintenance program for Gravity Sewer Lines. This component shall include provisions for needs determination, establishing priorities and scheduling, number of crews and personnel (including, where appropriate, contract crews), mechanical cleaning equipment to be used, standard mechanical cleaning maintenance procedures, standard forms, records and performance measures, and an information management system.

(c) A root control component which shall include protocols, methods, and approaches for implementing a root control component of the preventive maintenance program for Gravity Sewer Lines. This component shall include provisions for needs determination, establishing priorities and scheduling, number of crews and personnel (including, where appropriate, contract crews), root control methods and approaches, root control maintenance procedures, standard forms, records and performance measures, and an information management system.

(d) A manhole preventive maintenance component which shall include protocols, methods, and approaches for implementing a routine inspection and maintenance component of the preventive maintenance program for Gravity Sewer Lines. This component shall include provisions for needs determination, establishing priorities and scheduling, number of crews and personnel (including, where appropriate, contract crews), inspection methods and approaches, standard maintenance procedures, standard forms, records and performance measures, and an information management system.

(e) A prioritized and expedited schedule for implementation of the Program for the West Bank Interceptor.

Significant milestones reached this period for this activity:

- **Received program approval from USEPA on April 21, 2015**
- **Preventative Cleaning- 199,990 l.f.**
- **Root Control- 2,400 l.f.**
- **Maintenance Staffing – 52 of 80 positions filled**
- **Current Major Equipment -**
 - **7 of 9 Jet trucks**
 - **1 of 2 rod trucks**
 - **2 of 3 TV trucks**
- **FY 2016 Equipment loan not approved in budget due to lagging revenue collections**

Significant milestones anticipated during the next reporting period:

- **Begin West Bank Interceptor Cleaning Contract I**
- **Continue WCTS Preventative Cleaning Program**

- **Increase root control efforts**
- **Conduct Program review to identify areas of improvement and, if necessary, request Program amendment approval from USEPA.**

2.10 WWTP Operations and Maintenance Program

Within fifteen (15) months after the Date of Entry of this Consent Decree, May 31, 2014, the City shall submit to EPA for review and approval a WWTP Operations and Maintenance Program, including a schedule for full implementation of the program not to exceed twelve (12) months after its approval by EPA. The WWTP Operations and Maintenance Program shall include, at a minimum, the following:

- (a) Equipment, Parts, and Material Inventory. The City shall inventory its WWTPs' operating equipment and materials and evaluate the impacts of the loss of use or failure of each major system component. The City shall develop an inventory control system which shall have the capability of tracking spare parts use and inventory, as well as generating inventory replenishment needs reports. The City's inventory control system shall also include the following elements:
 - (i) prioritization of WWTP components as critical, semi-critical, or non-critical which shall allow the City to focus its maintenance capabilities and spare parts inventories on the WWTP components and potential failures that would have the greatest impact on treatment capacity, Prohibited Bypassing, and NPDES Permit compliance;
 - (ii) identification of critical spare parts and materials, and procedures to ensure that these parts and materials are stored and maintained in inventory at the WWTP;
 - (iii) a list of where the remaining spare parts may be secured to enable the repair or replacement of such equipment in a minimum amount of time and to ensure proper operation of the WWTP; and

(iv) tracking of spare parts use and inventory, as well as generating inventory replenishment needs reports

(b) Sludge Processing and Removal. Not inconsistent with the requirements of the MDEQ Agreed Order I, the maintenance program shall include sludge removal procedures, schedules, and standard practices for the WWTPs and from any storage lagoons, wet weather storage cells, equalization ponds, or any other wet weather storage facility that is, or is planned for use by, a WWTP.

(c) Preventive Maintenance. The City develop and implement a preventive maintenance system for the WWTPs to ensure that preventive and corrective maintenance is conducted and that equipment integral to proper operation and maintenance, treatment units, and tanks are maintained so as to achieve compliance with the NPDES permit. The preventive maintenance system shall include, at a minimum, the following:

- (i) identification of equipment used in the treatment of wastewater liquids and biosolids;
- (ii) identification of the standard procedures to conduct preventive maintenance of such WWTP equipment;
- (iii) identification of the frequency and duration of preventive maintenance necessary to ensure that all WWTP equipment is maintained in such a way so as to achieve compliance with the NPDES permit;
- (iv) identification of the training and education required for maintenance personnel to perform the standard preventive maintenance procedures;
- (v) procedures for recognition of indicators that corrective maintenance on WWTP equipment is necessary;
- (vi) procedures for the generation of work orders for preventive and corrective maintenance of WWTP equipment;
- (vii) procedures for the generation of purchase orders associated with preventive and corrective maintenance of WWTP equipment;
- (viii) examples of the types of reports and forms which will be used in implementing the preventive maintenance system;

- (ix) a system for tracking preventive and corrective maintenance activities and histories including the generation of summary reports each month that identify major equipment failures occurring in the previous month and the end-of-month status of preventive and corrective maintenance work orders issued or outstanding in the previous month for equipment; and
- (x) procedures to ensure that failures of equipment and/or loss of power supply during abnormal and emergency conditions are corrected in a timely fashion so as to limit the downtime of the facility or component.

Significant milestones reached this period for this activity:

- **Program approved by USEPA on April 21, 2015**
- **Completed 8714 of 9799 Preventative/Predictive Work Orders**
- **Completed 949 of 1052 Corrective Work Orders**
- **Prohibited bypasses decreased by 27% to a total of 10 for the period March 2015 through February 2016. This compares to a total of 13 for the previous reporting period**

Significant milestones anticipated during the next reporting period:

- **Conduct Program review to identify areas of improvement and, if necessary, request Program amendment approval from USEPA.**
- **Continue implementation of Program as approved**

2.11 Financing and Cost Analysis Program

Within eighteen (18) months after the Date of Entry of this Consent Decree, August 31, 2014, the City shall submit to EPA for review and approval a Financing and Cost Analysis Program. The Financing and Cost Analysis Program shall include, at a minimum, the following:

(a) A process (including a schedule of implementation) that regularly analyzes, projects, plans, and finances management, operating, and maintenance costs of its Sewer System, including those management, operating, and maintenance costs associated with labor and equipment needed to properly implement the CMOM programs required pursuant to this Consent Decree.

(b) A process (including a schedule of implementation) that regularly analyzes, projects, plans, and finances capital improvements to its Sewer System, including those capital improvements required pursuant to this Consent Decree. Capital improvement financing shall be planned using, at a minimum, a five (5)-year planning horizon followed by annual updates.

(c) A process, including a schedule of implementation, to ensure that life cycle cost analysis is incorporated into its operations cost analyses, maintenance cost analyses, and management cost analyses for all Sewer System equipment and infrastructure.

(d) A process, including a schedule of implementation, to establish its annual budget and set customer rates that assures that the budget and rates are based on the programs referenced in Paragraph 43.(a) through (c) above.

Significant milestones reached this period for this activity:

- **Submitted Program documents to EPA on September 15, 2014**

Significant milestones anticipated during the next reporting period:

- **Address any review comments**
- **Receive approval of Program documents**
- **Continue/Begin program implementation**

3.0 Trend Analysis of SSOs and Prohibited Bypasses

The trend analysis for the first year of CD implementation includes data for SSOs and prohibited bypasses for March 2014 through February 2016. For each month, numbers of events, total volume, and total duration are plotted with rainfall for the month. Events per month are also plotted by cause.

SSOs are divided into three elements of the wastewater system: the collection system, West Bank Interceptor, and pump stations. Prohibited bypasses were observed only at the Savanna Street Wastewater Treatment Facility (SSWWTF).

SSOs and prohibited bypasses are listed in **Appendix A**. The events for March 2014 through December 2015 have been included in Quarterly Reports 5-11. The events for January and February 2016 are included in Quarterly Report No. 12, which is submitted concurrently with this report.

3.1 Collection System SSOs

Figure 3.1 shows SSO events by month as a result of the following reported causes:

- Grease
- Roots
- Solids
- Collapsed Pipe
- Pump Station Failure
- Excessive Flow
- Undersized Line
- Other

Some SSO events had multiple causes. In these instances, each cause was assigned a fractional value, adding up to a total of one cause for each event.

Figures 3.2 and **3.3** shows percentages of collection system SSOs for the year by cause for each year. Note that the percentage of SSOs caused by grease and collapsed pipes increased between years.

Figure 3.4 shows total volume of SSOs for each month. Volumes are plotted on a logarithmic scale because of the large monthly variations.

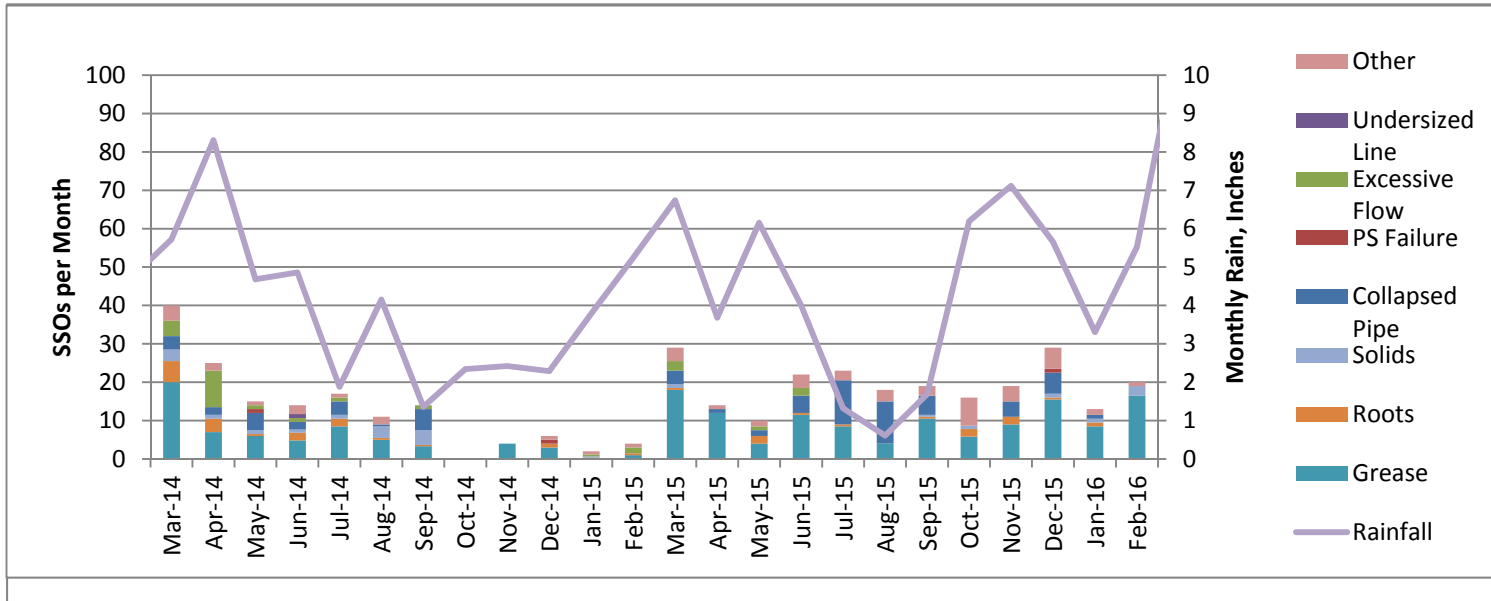
Figure 3.5 shows total duration of SSOs for each month.

Figure 3.6 shows the change in number of collection system SSOs for the same month in the previous year.

Monthly rainfall is plotted in each graph. It should be noted that there does not appear to be a correlation between rainfall and the number, volume, or duration of SSOs.

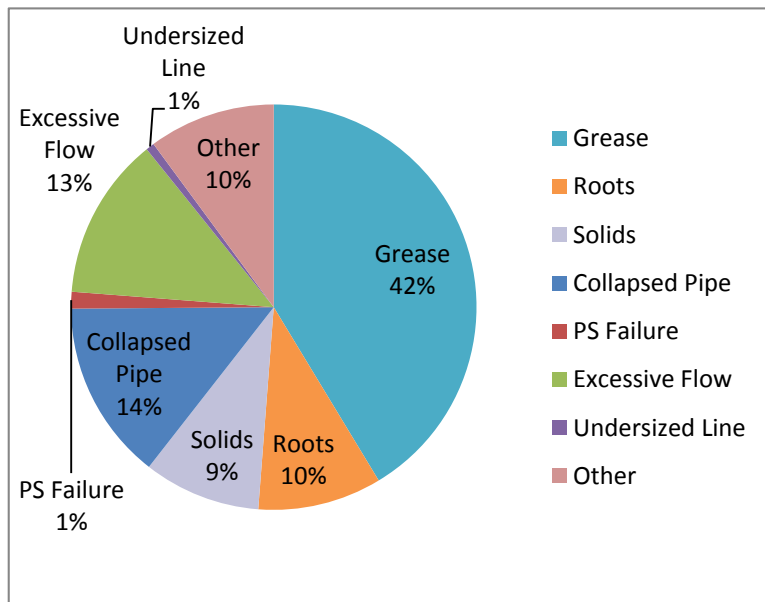
In March through May 2015, the number of collection system SSOs decreased from the same month the previous year. From June 2015 through March 2016, the number increased from the same month the previous year. The most significant increases were in the SSOs caused by grease and by collapsed pipes.

**Figure 3.1: Collection System SSOs by Cause
March 2014 – February 2016**

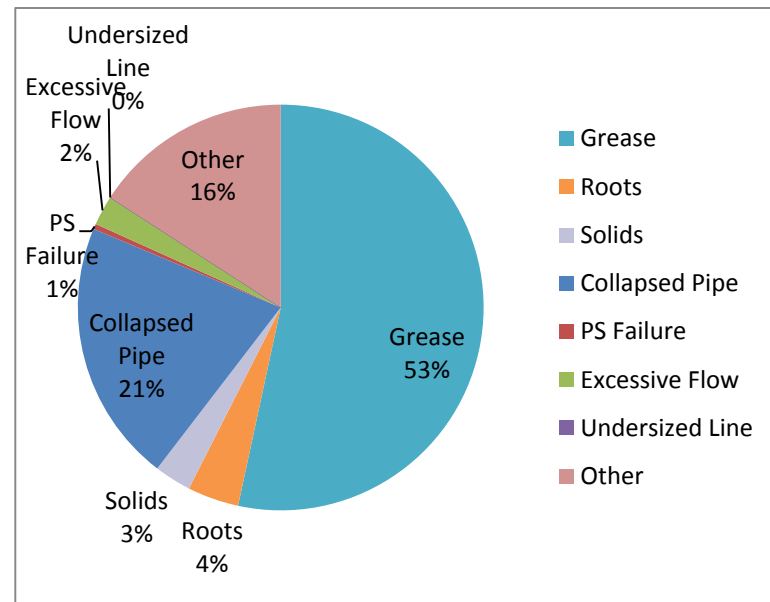


4	2	1	2	1	2	0	0	0	1	1	1	4	1	2	4	3	3	3	7	4	6	2	1	Other
0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Undersized Line
4	10	1	1	1	0	1	0	0	0	1	2	3	0	1	2	0	0	0	0	0	0	0	0	Excessive Flow
0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	PS Failure
4	2	5	2	4	1	6	0	0	0	0	0	4	1	2	5	12	11	5	0	4	6	1	0	Collapsed Pipe
3	1	1	1	1	3	4	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1	1	3	Solids
6	4	1	2	2	1	0	0	0	1	0	1	1	0	2	1	1	0	1	2	2	1	1	0	Roots
20	7	6	5	9	5	3	0	4	3	0	1	18	12	4	12	9	4	11	6	9	16	9	17	Grease
40	25	15	14	17	11	14	0	4	6	2	4	29	14	10	22	23	18	19	16	19	29	13	20	SSOs
5.7	8.3	4.7	4.9	1.9	4.2	1.4	2.3	2.4	2.3	3.8	5.2	6.7	3.7	6.2	4.0	1.3	0.6	1.7	6.2	7.1	5.7	3.3	5.5	Rainfall, inches

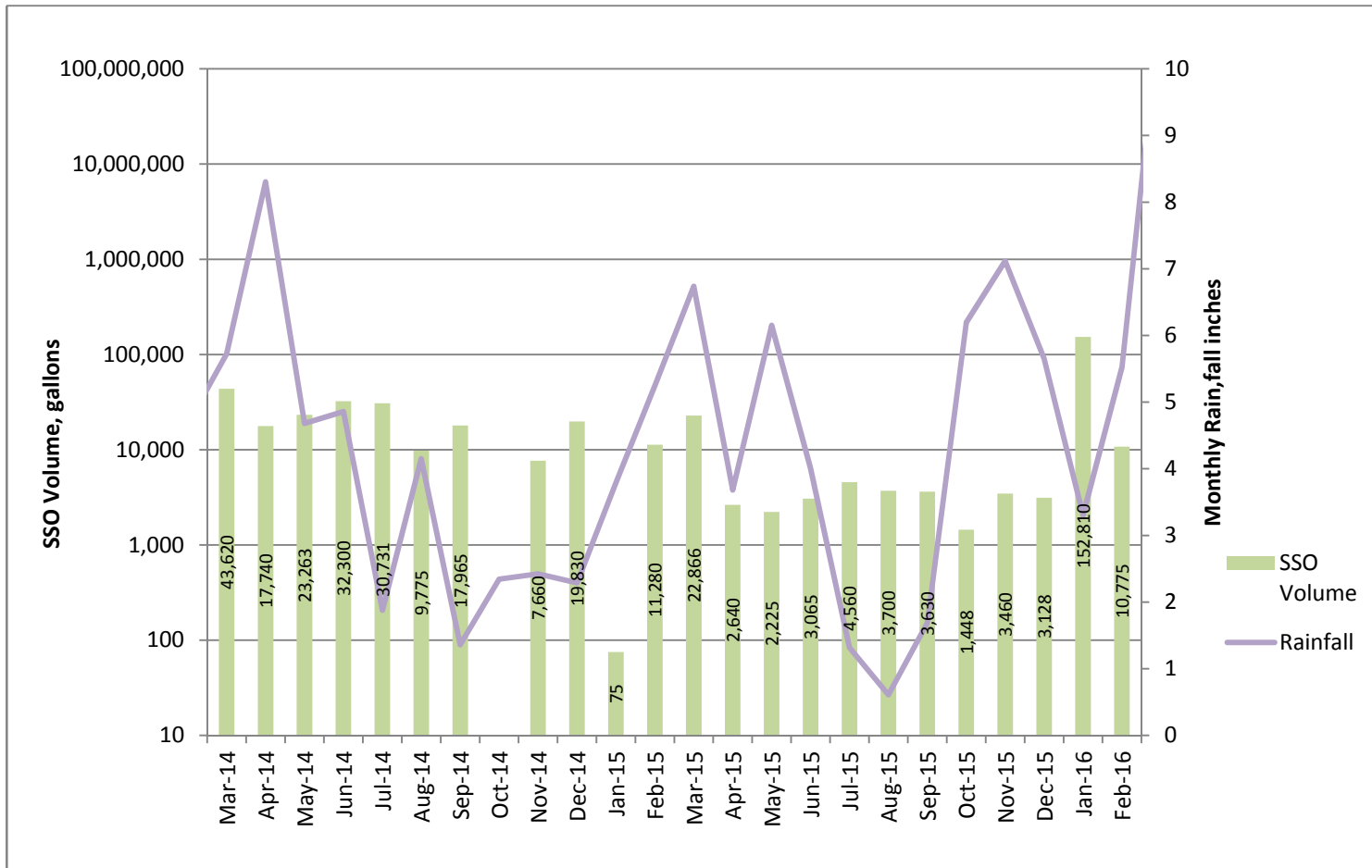
**Figure 3.2: Percentage of Collection System SSOs by Cause
March 2014 – February 2015**



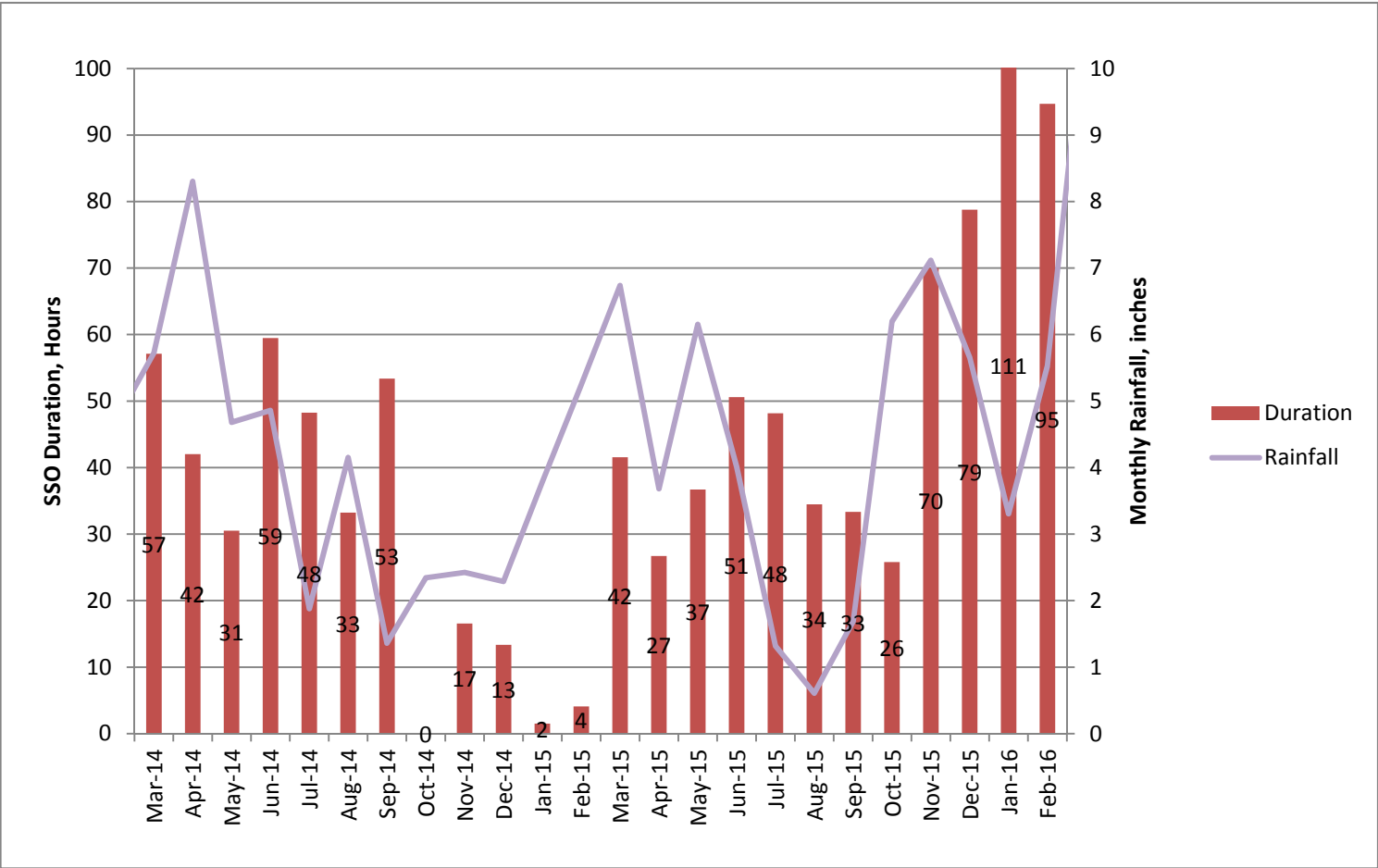
**Figure 3.3: Percentage of Collection System SSOs by Cause
March 2015 – February 2016**



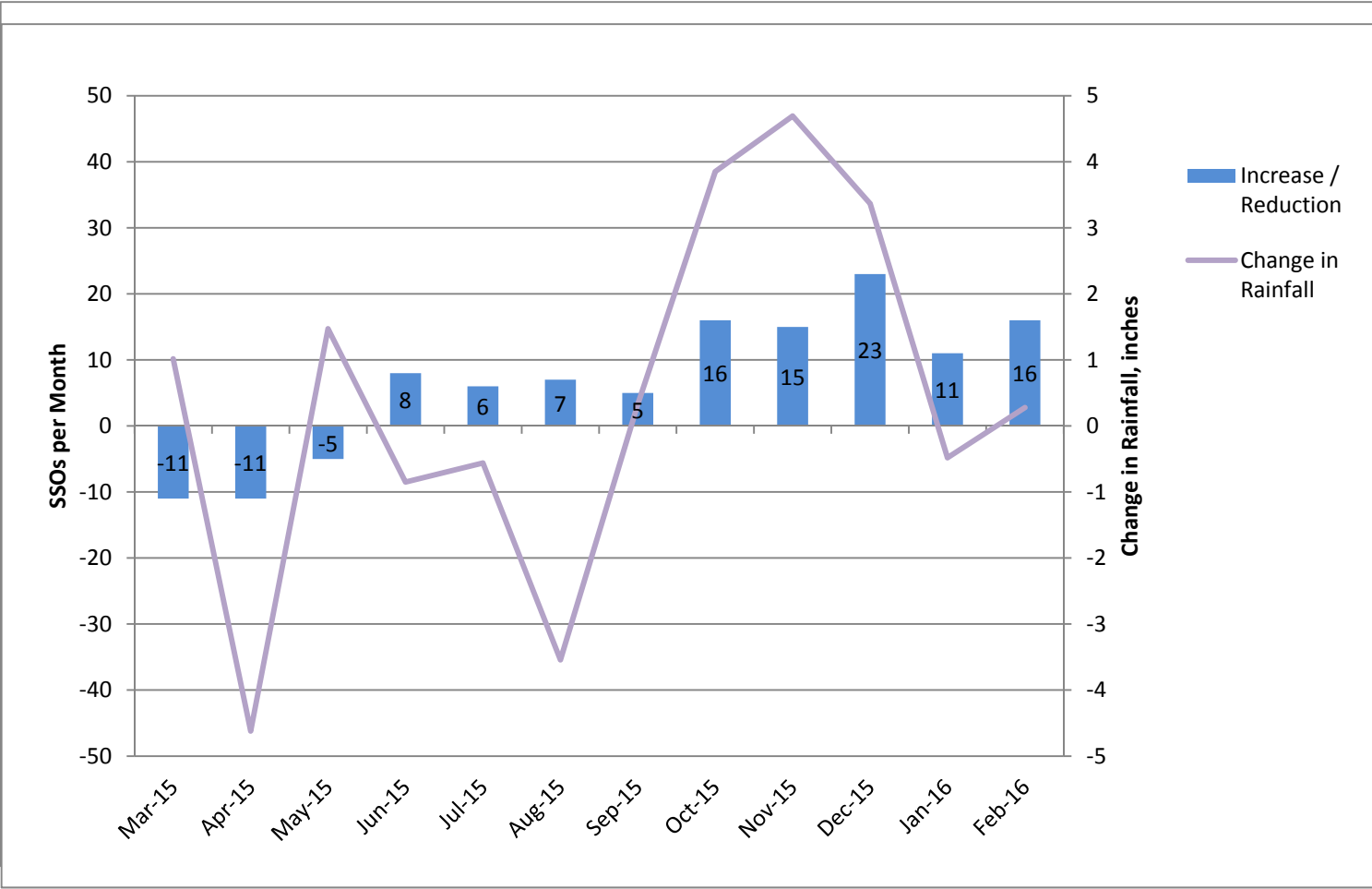
**Figure 3.4: Collection System SSO Volume
March 2014 – February 2016**



**Figure 3.5: Collection System SSO Duration
March 2014 – February 2016**



**Figure 3.6: Year-to-Year
Change in Number of Collection System SSOs from Previous Year
vs. Change in Rainfall**



3.2 Pump Station SSOs

Figure 3.7 shows pump station SSO events by month by reported cause, as listed above, as well as monthly rainfall. As above, multiple causes were assigned fractional values, adding up to a total of one cause for each event.

Figure 3.8 and **3.9** show percentage of SSOs by cause for each year.

Figure 3.10 logarithmically plots total volume of pump station SSOs for each month, along with monthly rainfall.

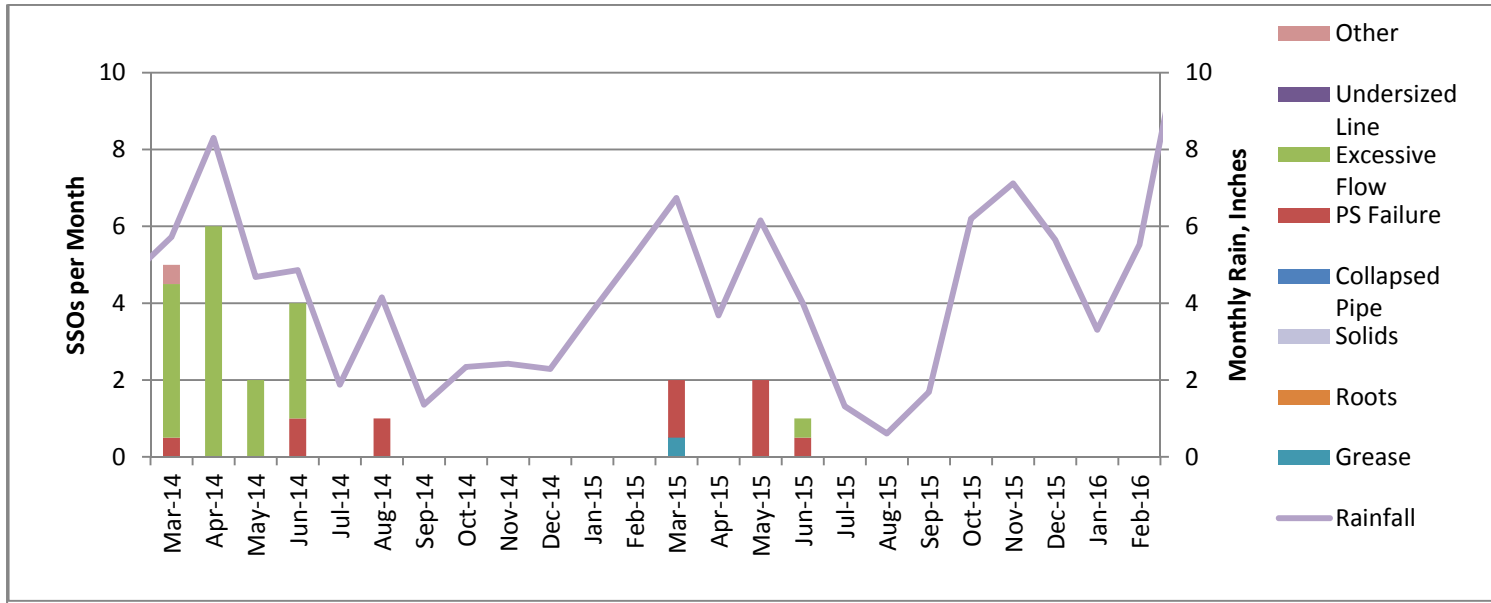
Figure 3.11 shows total duration of pump station SSOs for each month. It appears that there may be a slight correlation between rainfall and total monthly duration.

Figure 3.12 shows year-to-year change in the number of pump station SSOs from the same month the previous year.

The number of SSOs at pump stations has decreased as Pump Station Operation and Preventive Maintenance Programs have been implemented. There were only five (5) SSOs in 2015, the last one occurring in June.

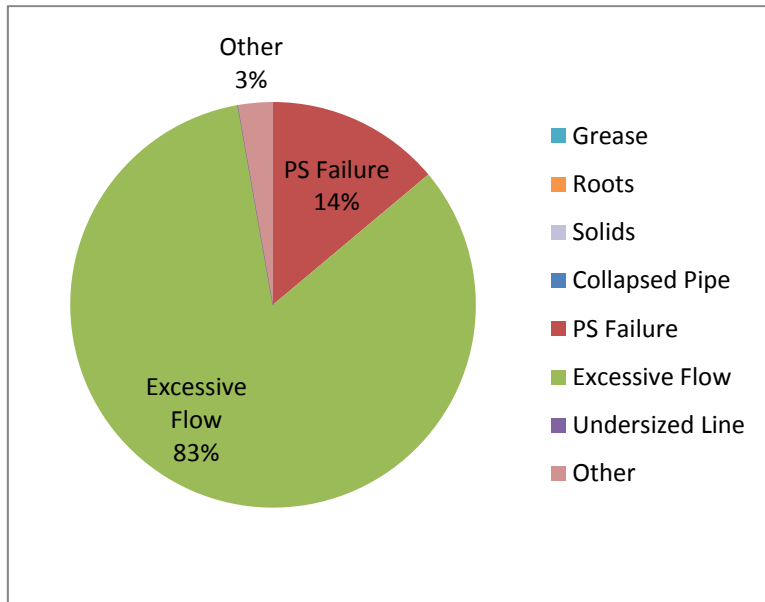
Most of the SSOs occurred during periods of high rainfall. However, as noted above, there have been no SSOs since June 2015.

**Figure 3.7: Pump Station SSOs by Cause
March 2014 – February 2016**



1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Other
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Undersized Line
4	6	2	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	Excessive Flow
1	0	0	1	0	1	0	0	0	0	0	0	2	0	2	1	0	0	0	0	0	0	0	0	PS Failure
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Collapsed Pipe
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Solids
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Roots
0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	Grease
5	6	2	4	0	1	0	0	0	0	0	0	2	0	2	1	0	0	0	0	0	0	0	0	SSOs
5.7	8.3	4.7	4.9	1.9	4.2	1.4	2.3	2.4	2.3	3.8	5.2	6.7	3.7	6.2	4.0	1.3	0.6	1.7	6.2	7.1	5.7	3.3	5.5	Rainfall

**Figure 3.8: Percentage of Pump Station SSOs by Cause
March 2014 – February 2015**



**Figure 3.9: Percentage of Pump Station SSOs by Cause
March 2015 – February 2016**

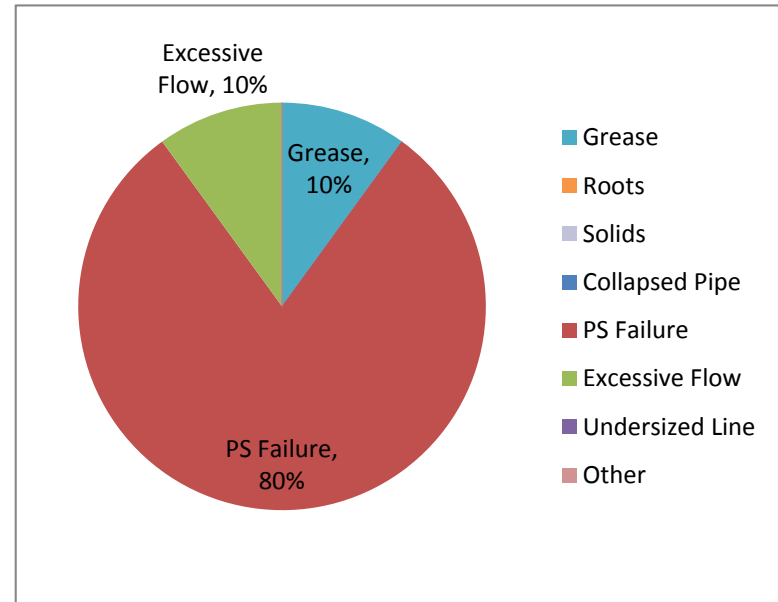
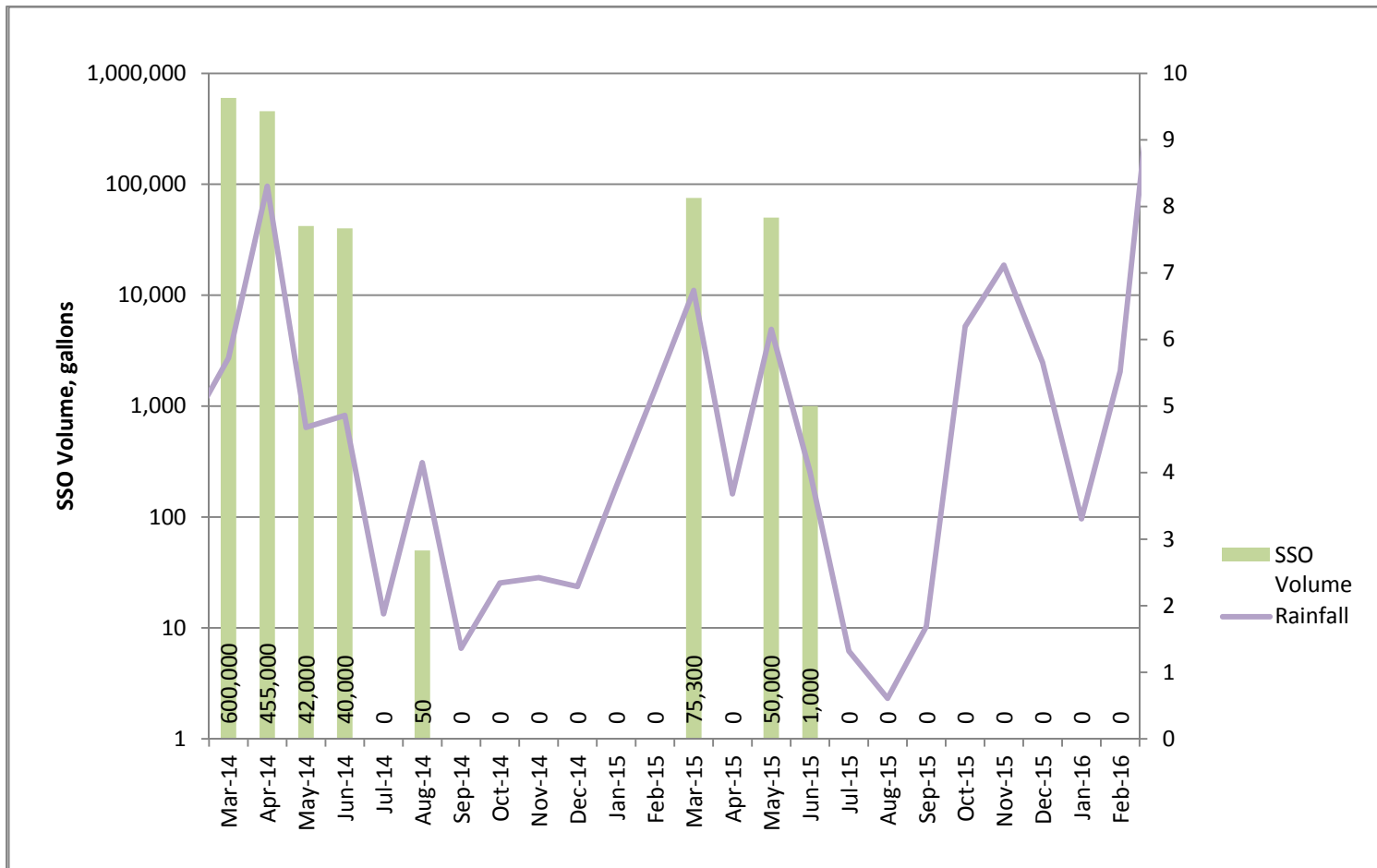
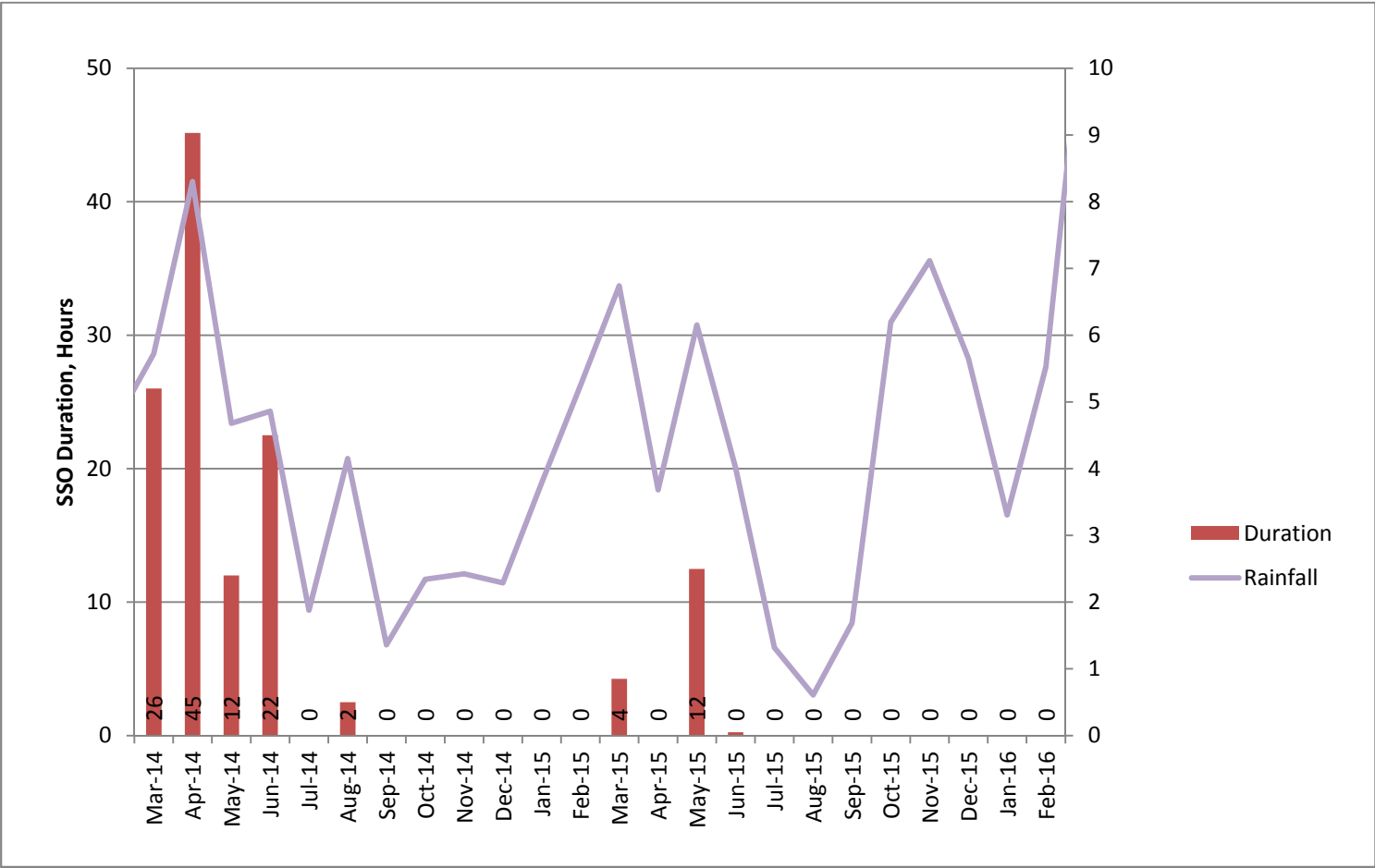


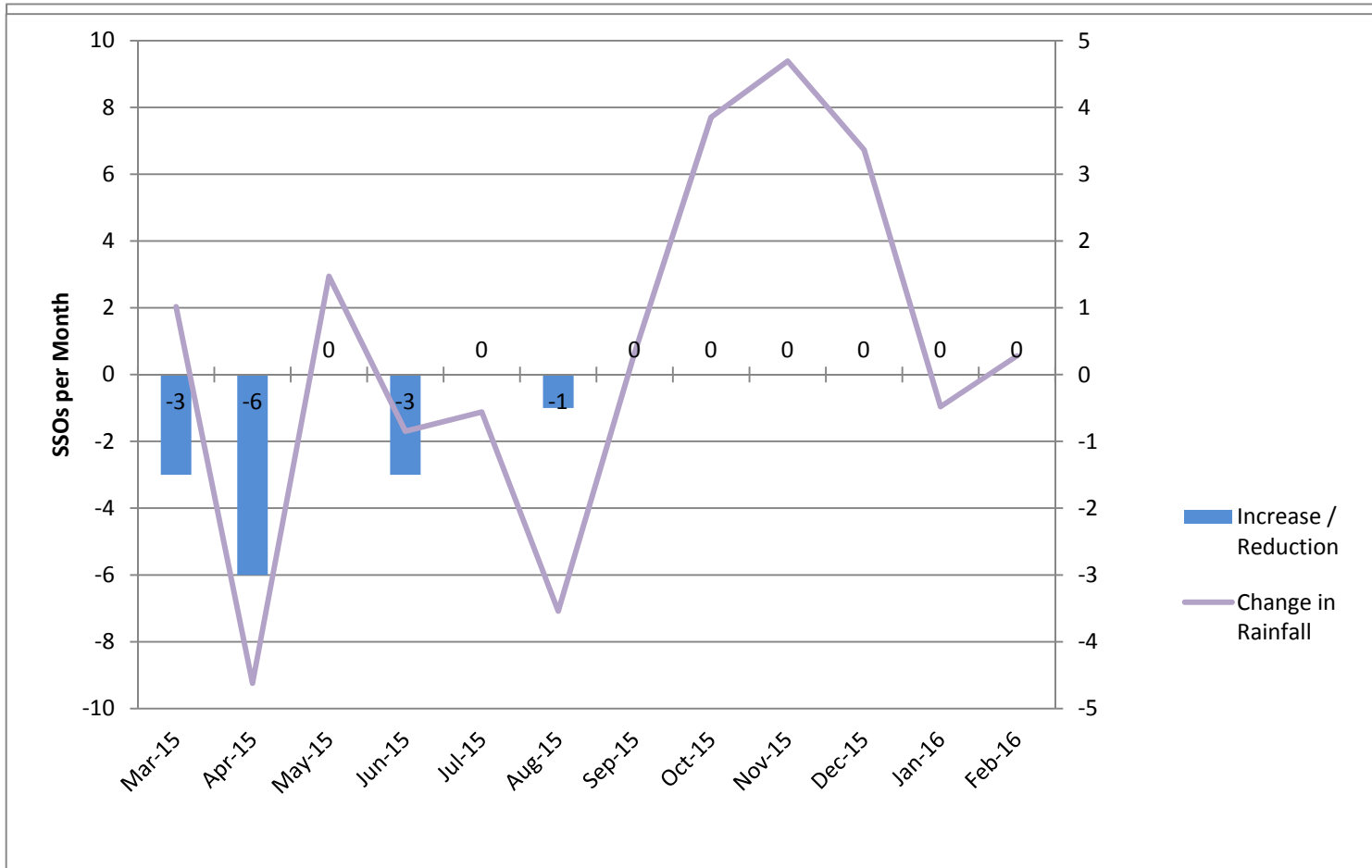
Figure 3.10: Pump Station SSO Volume
 March 2014 – February 2016



**Figure 3.11: Pump Station SSO Duration
March 2014 – February 2016**



**Figure 3.12: Year-to-Year
Change in Number of Pump Station SSOs from Previous Year
vs. Change in Rainfall**



3.3 West Bank Interceptor SSOs

Figure 3.13 shows SSO events each month by reported cause, as well as by monthly rainfall.

Figure 3.14 shows number of SSOs in the WBI, along with the average river stage and maximum river stage for each month. River stages are those reported by the USGS gage at U.S. Highway 80.

Figures 3.15 and **3.16** show percentages of collection system SSOs for the year by cause. Note that nearly three-fourths of the SSOs were caused by excessive flow. Most of these occurred at one low spot in the WBI.

Figure 3.17 shows total volume of SSOs for each month, along with rainfall. Because of the large variations in volume, these are plotted on a logarithmic scale.

Figure 3.18 shows total duration of SSOs for each month, and monthly rainfall.

Figure 3.19 shows the relationship between the year-to-year number of West Bank Interceptor SSOs and the change in river stages for the same month the previous year.

A contributing factor to SSOs in the West Bank Interceptor is the level of the Pearl River. For much of its 15 mile length, the WBI is located in the floodplain of the river. NOAA has defined an “action” level at a stage of 24 feet and “flood” stage at 28 feet for the river. At water levels in this range and higher, inflow into the WBI increases through sources such as open manholes with missing covers or aging deteriorating pipe under flood waters. A major location of SSOs is at an open manhole at 408 S. Jefferson St. Flow monitoring results of upstream and downstream gauges verify a significant loss of flow in this area as wastewater overflows from this manhole. This has been alleviated somewhat by the rehabilitation of the WBI under the ongoing project that was begun in 2013.

A compounding factor prior to the summer of 2014 was the lack of full pump capacity at the Savanna Street Wastewater Treatment Facility’s influent pump station. During periods of high flow, the plant’s operator would be forced to restrict flow from the WBI to prevent the influent pump station from overflowing. The Agreed Order signed in 2010 by the City of Jackson and the Mississippi Department of Environmental Quality had required that all influent pumps be operational. This mandate was completed on July 31, 2014, as the final 100 mgd pump was installed. Before that date, full pump capacity was sporadic. After this date, only three SSOs recorded in March 2015 can be attributed to excessive flow.

One SSO on the WBI was recorded in October 2014. THE SSO was caused by a malfunction of a bypass pump temporarily installed by the rehabilitation contractor.

**Figure 3.13: West Bank Interceptor SSOs by Cause
March 2014 – February 2016**

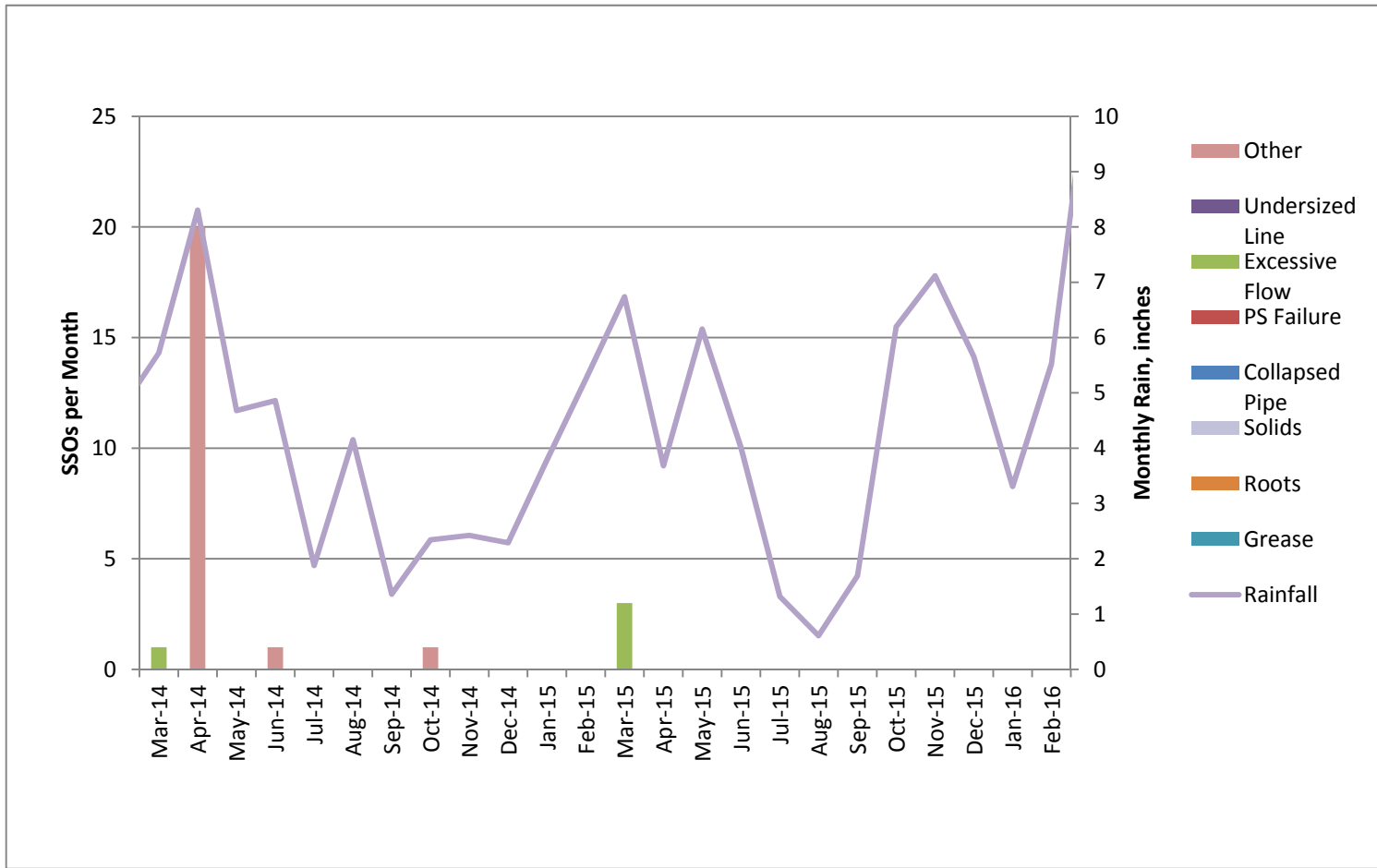
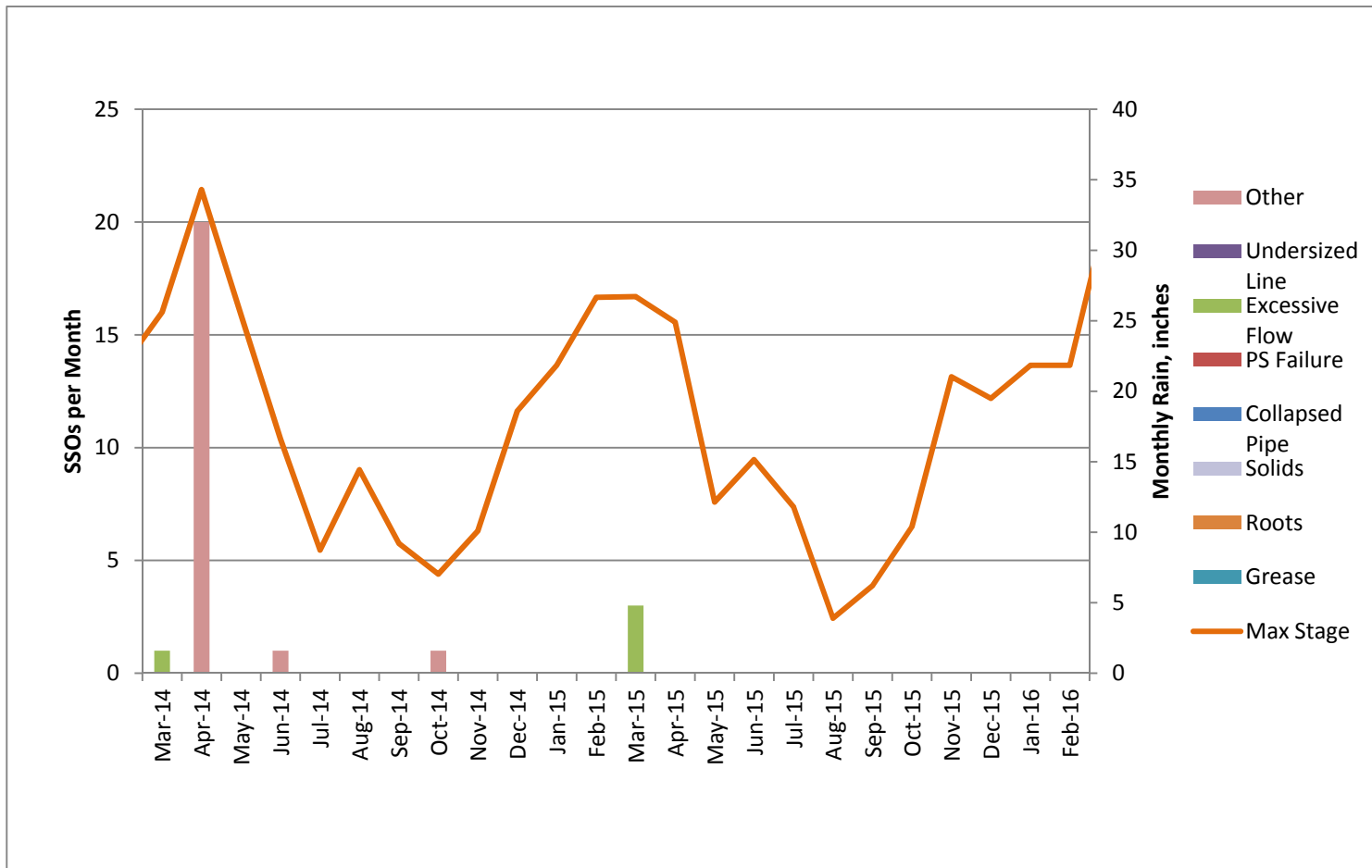
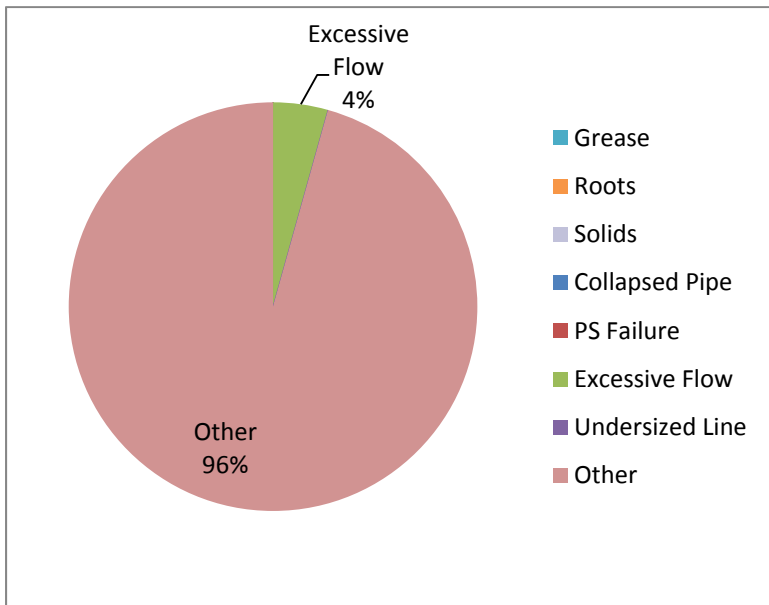


Figure 3.14: WBI SSOs vs. River Stage
 March 2014 – February 2016



**Figure 3.15: Percentage of WBI SSOs by Cause
March 2013 – February 2014**



**Figure 3.16: Percentage of WBI SSOs by Cause
March 2014 – February 2015**

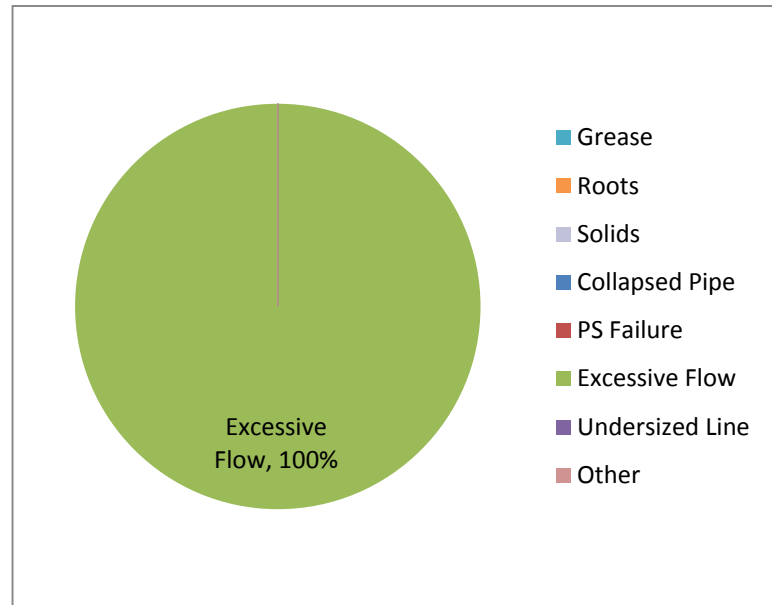


Figure 3.17: WBI SSO Volume vs. River Stage
March 2014 – February 2016

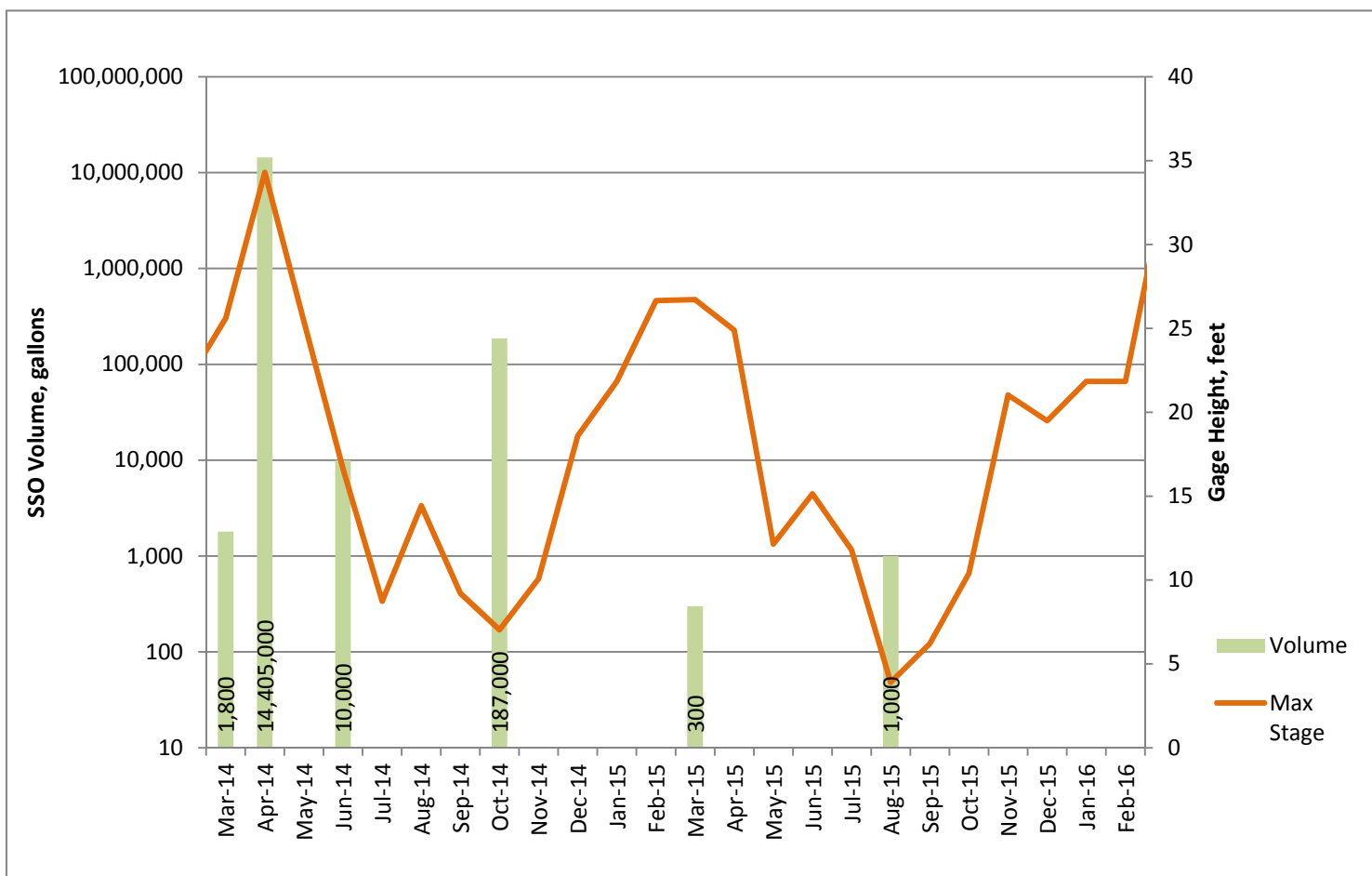
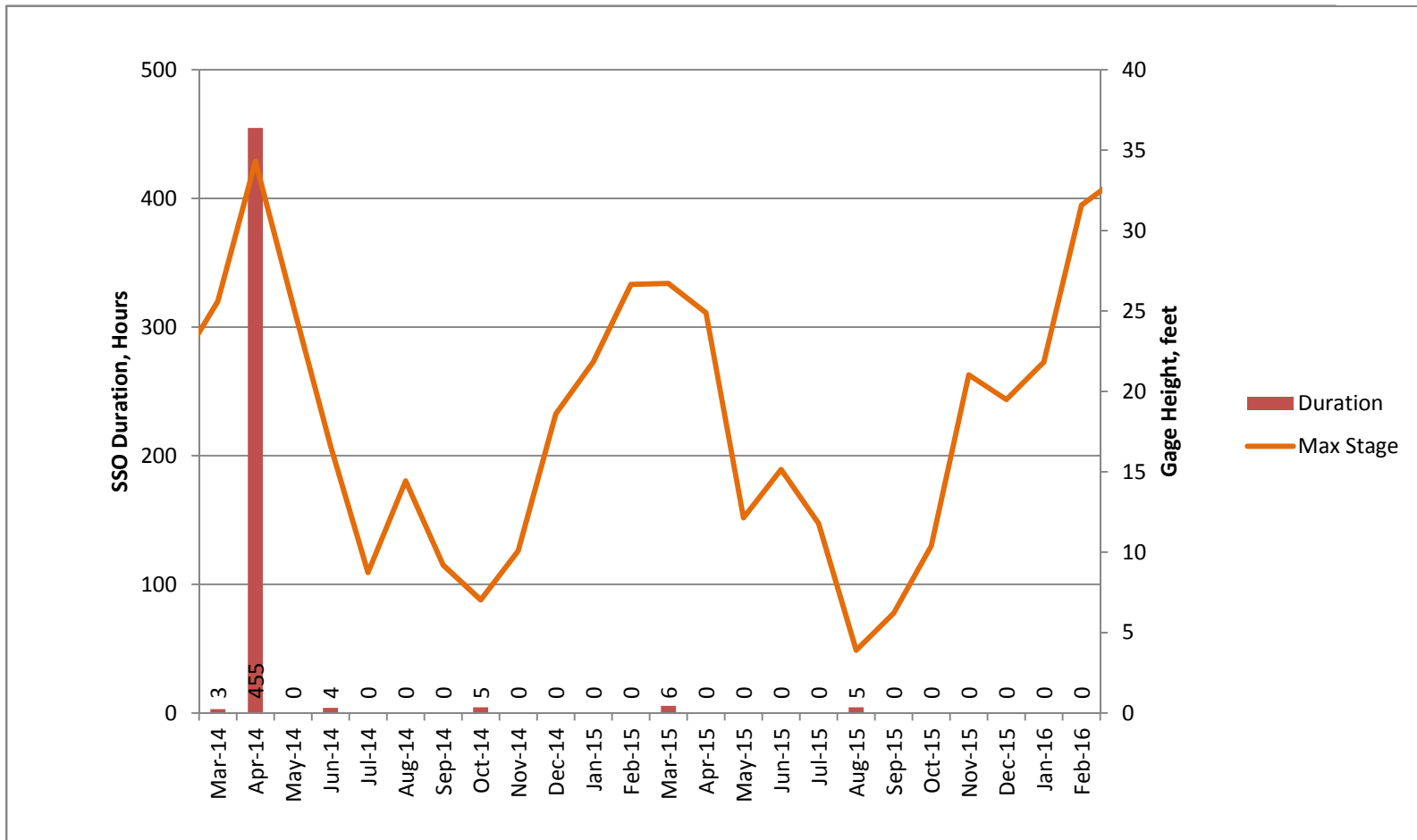
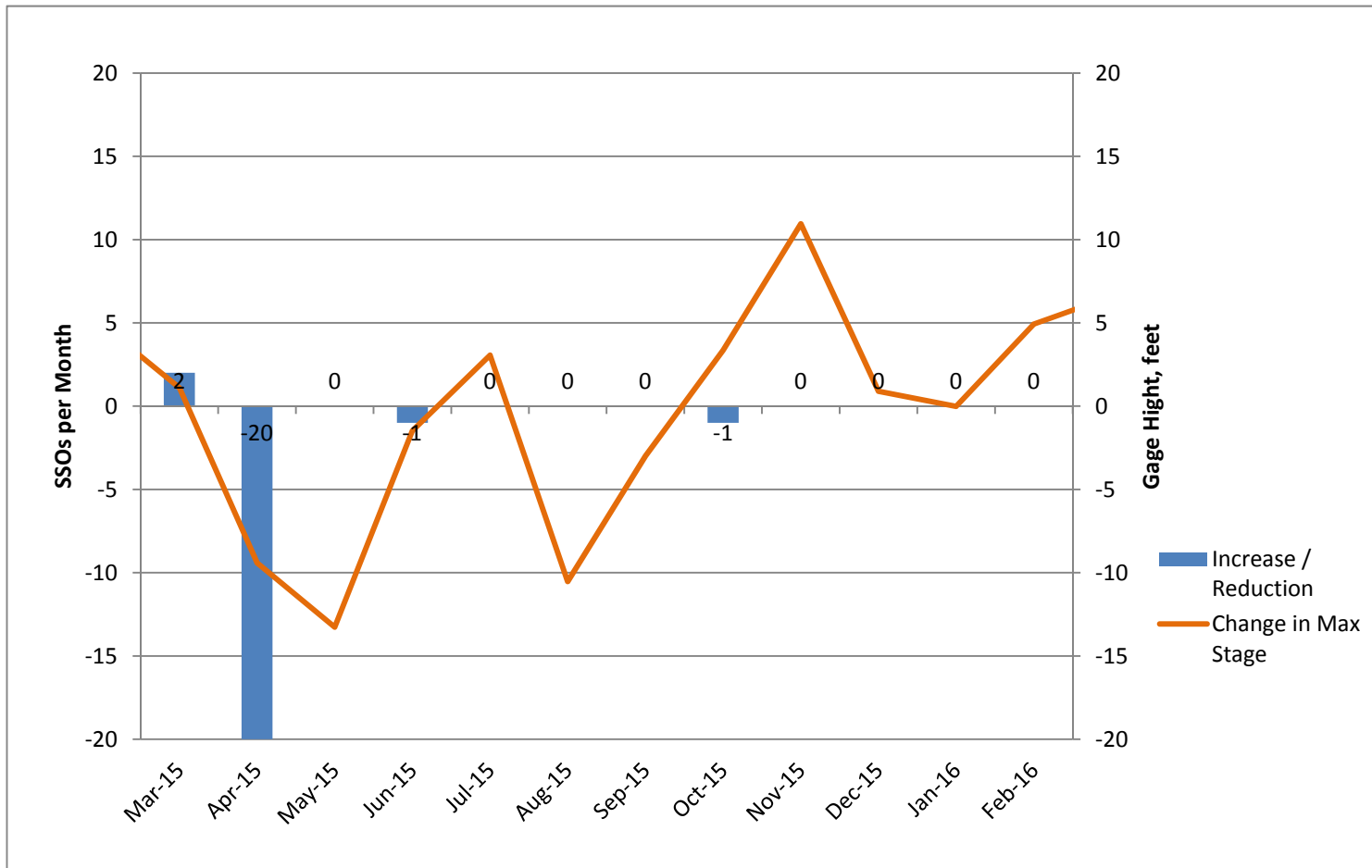


Figure 3.18: WBI SSO Duration vs. River Stage
 March 2014 – February 2016



**Figure 3.19: Year-to Year
Change in Number of WBI SSOs from Previous Year
vs. Change in Pearl River Stage**



3.4 Prohibited Bypasses

Figure 3.20 shows prohibited bypass events by month by reported cause, as listed above, as well as monthly rainfall.

Figure 3.21 shows prohibited bypass events and average and maximum river stage levels for each month.

Figure 3.22 and 3.23 shows annual percentage by reported cause. 68 percent of the prohibited bypasses were attributed to excessive flow.

Figure 3.24 shows total volume of prohibited bypasses for each month plotted logarithmically, along with river stages.

Figure 3.25 shows total duration for the month. Note that duration of prohibited bypasses is plotted in days.

Figure 3.26 shows year-to-year change in duration of prohibited bypasses for each month with change in river stages for the same month in the previous year.

For prohibited bypasses, there appears to be more of a correlation with river levels than with rainfall. As discussed with the West Bank Interceptor, this is due to inflow in the WBI during high water levels. However, rehabilitation of the WBI is a contributing factor to the reduction in prohibited bypasses.

The number of prohibited bypasses was reduced after completion of the influent pump station repairs in July 2014. However, because of hydraulic limitations of piping, storm cells, and the influent pumping station, wastewater cannot always be recovered from the storm cells and must be discharged. These conditions will be addressed in the Composite Correction Program (CCP).

**Figure 3.20: Prohibited Bypasses by Cause
March 2013 – February 2015**

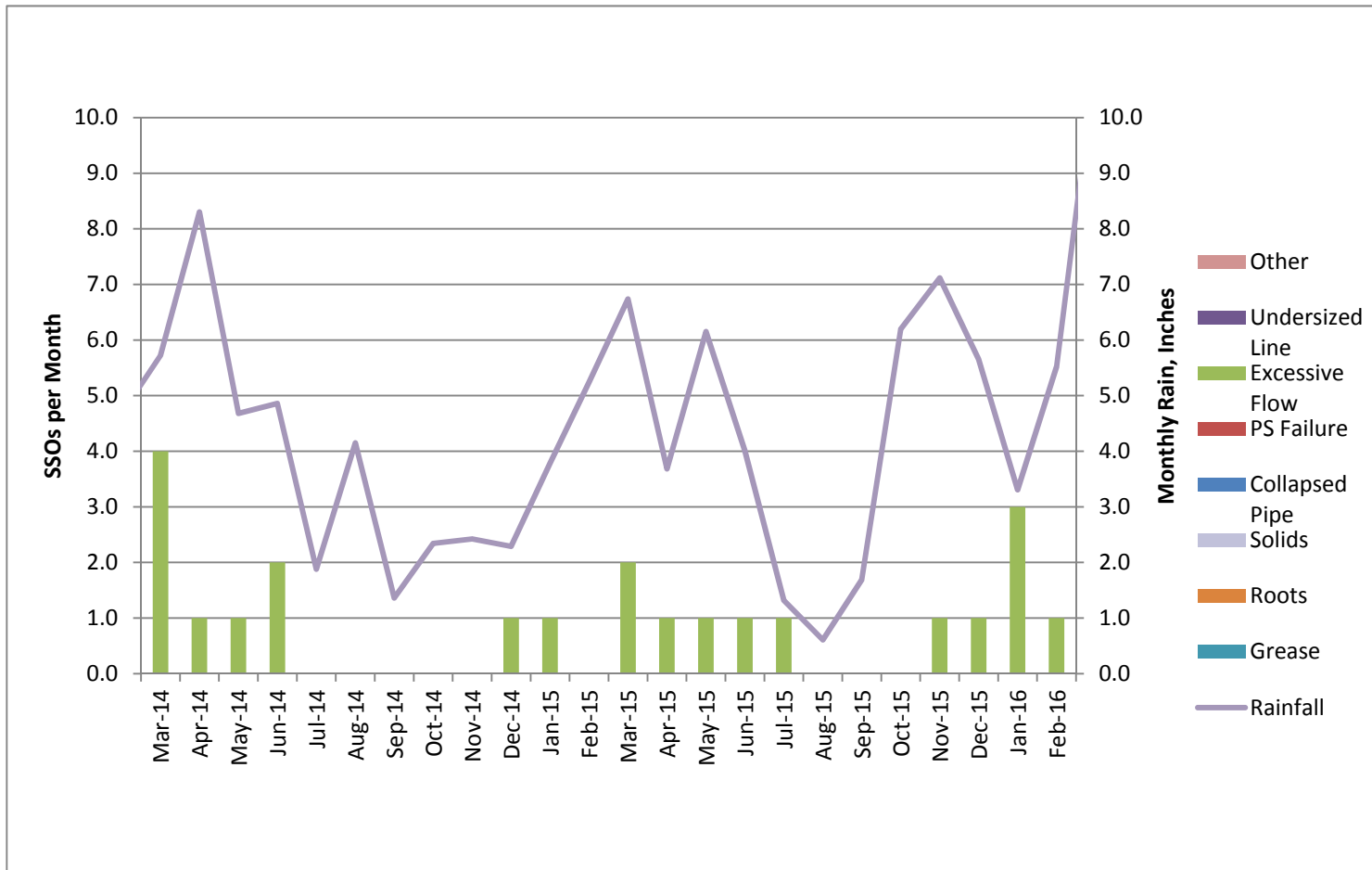
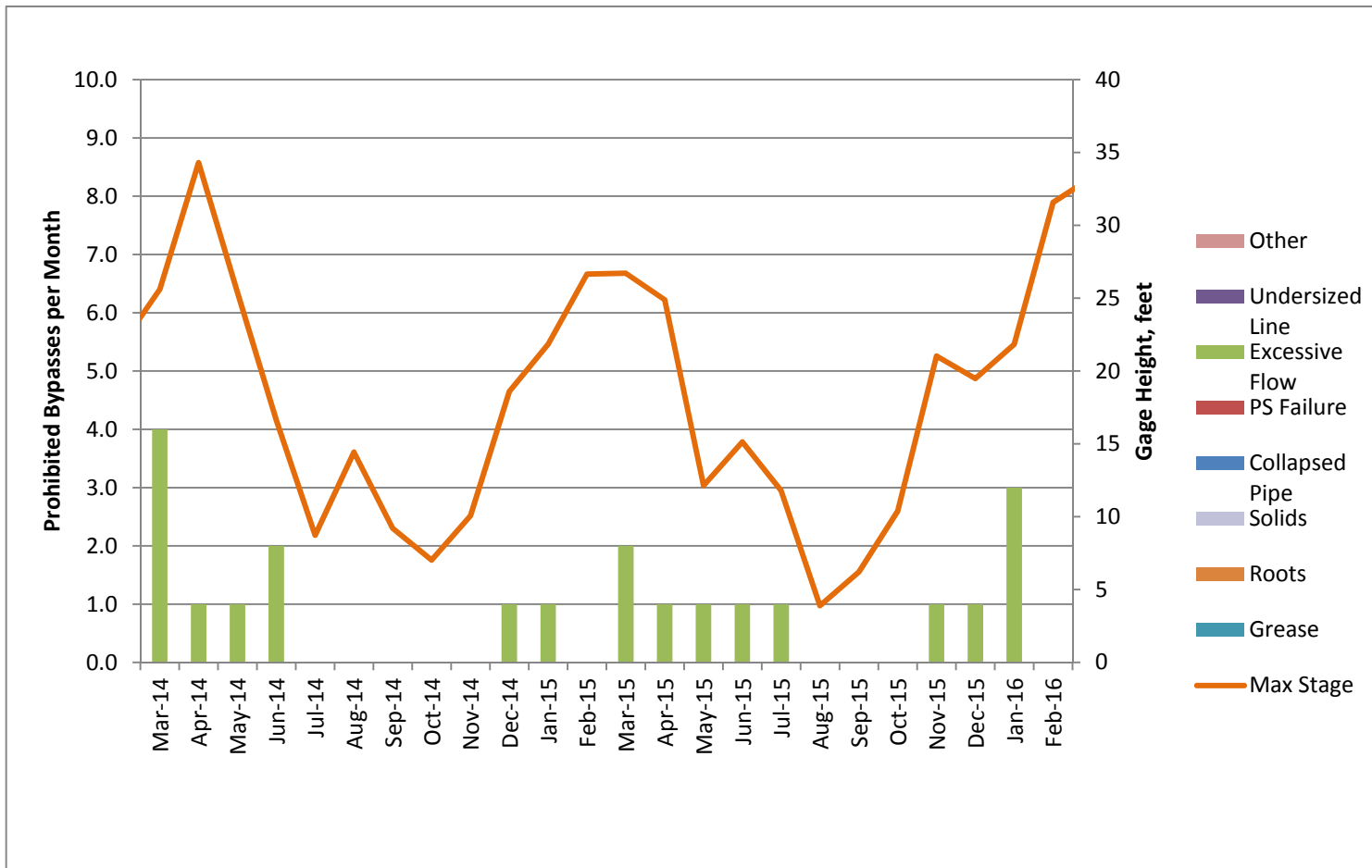
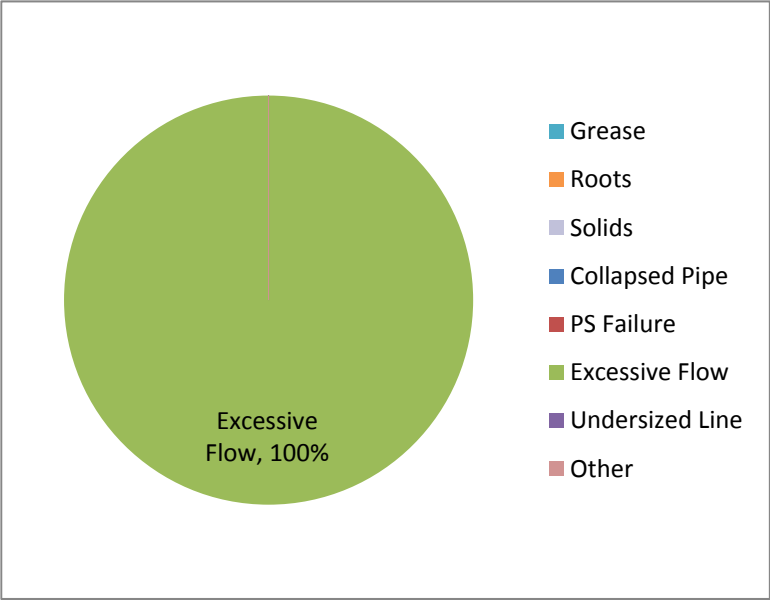


Figure 3.21: Prohibited Bypasses vs. River Stage
March 2013 – February 2015



**Figure 3.22: Percentage of Prohibited Bypasses by Cause
March 2014 – February 2015**



**Figure 3.23: Percentage of Prohibited Bypasses by Cause
March 2015 – February 2016**

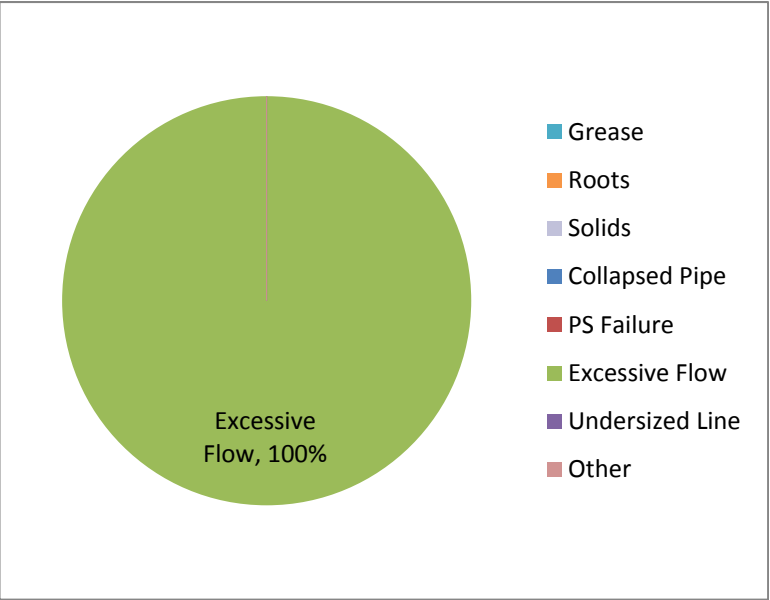


Figure 3.24: Prohibited Bypass Volume vs. River Stage
March 2013 – February 2015

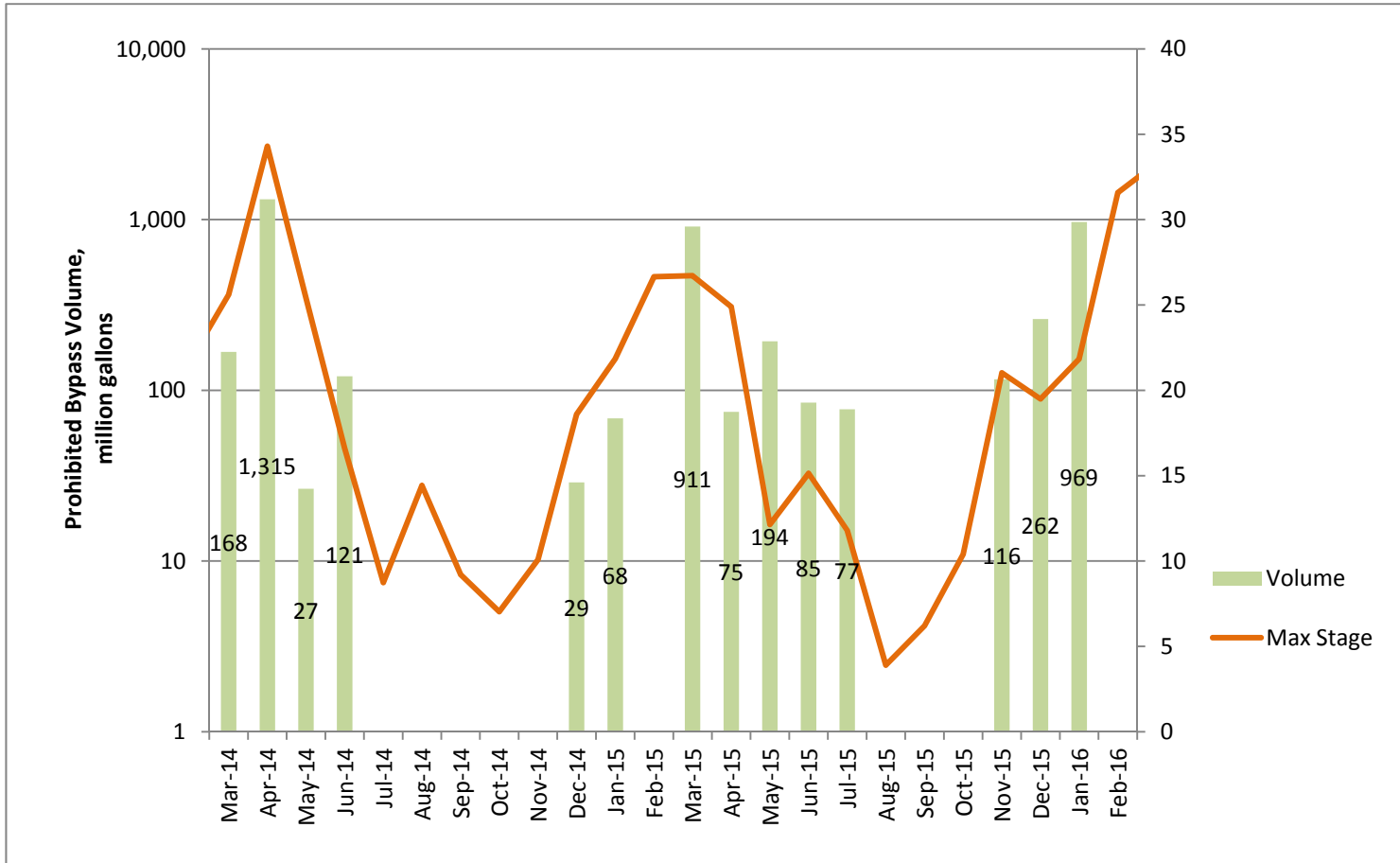
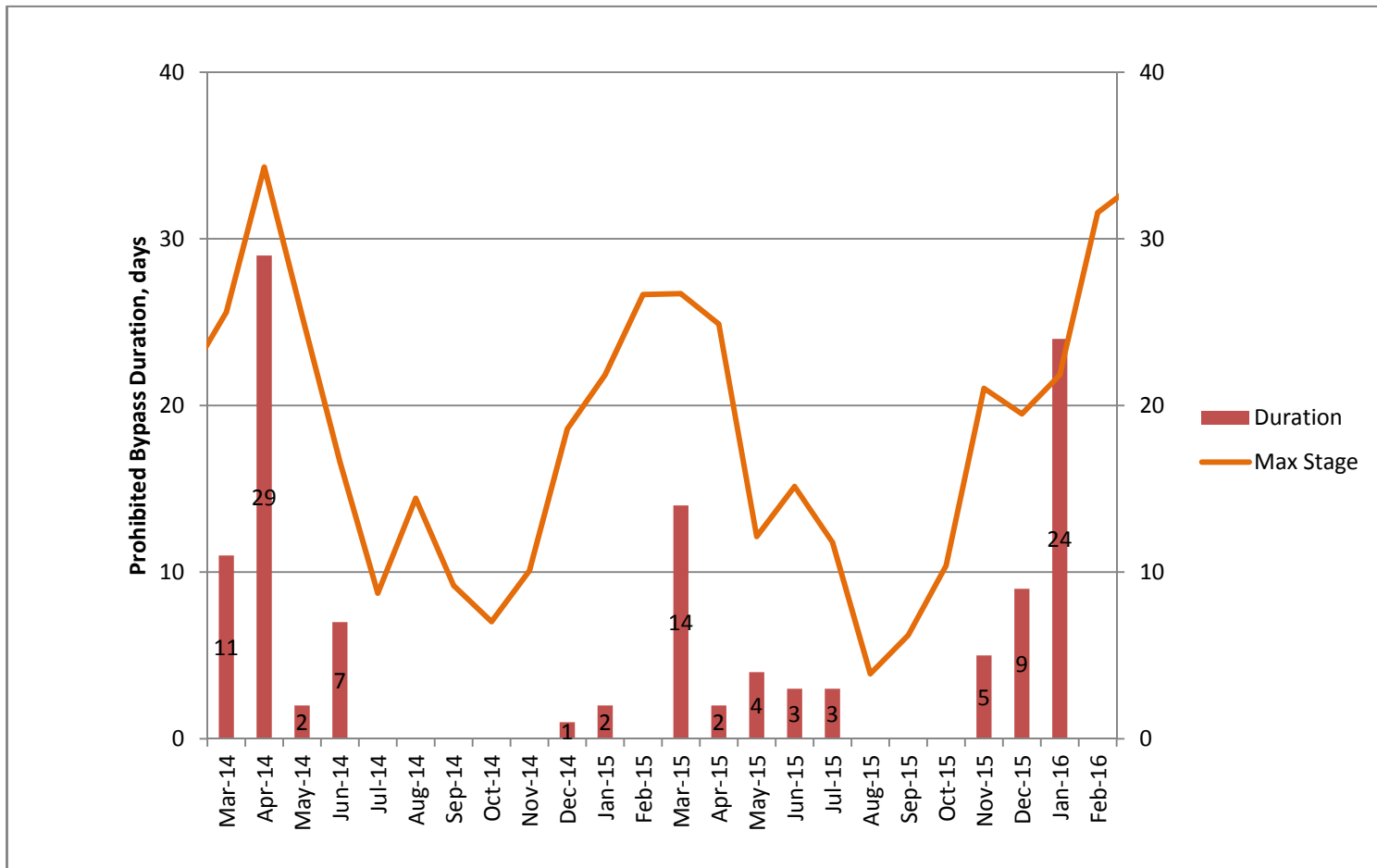


Figure 3.25: Prohibited Bypass Duration vs. River Stage
March 2013 – February 2015



Appendix

Table 1
City of Jackson, Mississippi
Annual Report No. 3 - March 2014 through February 2016
Collection System SSOs

Date Began	Time Began	Location	Source	Estimated Duration, Hours	Estimated Volume, Gallons	Reached Waterway	Receiving Water	Rainfall, Inches	Reported Cause
3/1/2014	9:40 AM	1515 MARIA DR	Manhole	1.00	850	NO	Hardy	0.00	Grease.
3/2/2014	9:50 AM	512 HOLDEN ST	Cleanout	0.75	30	YES	Lynch	0.11	Grease.
3/5/2014	11:10 AM	1605 DORGAN ST	Cleanout	0.50	15	NO	Hardy	0.00	Grease. Roots.
3/6/2014	8:20 AM	503 SPRINGFIELD CIR	Manhole	8.67		NO	Lynch	0.52	Rain water getting into sewer line.
3/7/2014	10:00 AM	2223 BELVEDERE DR	Manhole	0.50	1,300	YES	Three Mile	0.00	Grease.
3/7/2014	10:30 AM	3150 ROBINSON ROAD	Manhole	1.00	1,280	NO	Lynch	0.52	Grease.
3/9/2014	8:30 AM	2614 HILLSIDE DR	Cleanout	1.00	80	NO	Three Mile		Grease.
3/9/2014	10:10 AM	3449 SHANNON DALE DR	Other	0.58	5,570	YES	Trahon	0.00	Force Main Break.
3/9/2014	11:20 AM	512 HOLDEN ST	Cleanout	0.42	20	YES	Lynch	0.00	Grease.
3/10/2014	11:45 AM	1034 WYNWOOD DR	Ground Surface (defective pipe underground)	1.00	60	YES	Lynch	0.00	Solids.
3/10/2014	3:48 PM	325 QUEEN CATHERINE LANE	Cleanout	1.25	100	YES	Lynch	0.00	Roots.
3/11/2014	10:00 AM	LAMAR ST MCTYERE AVE	Manhole	2.00	800	NO	Town	0.57	Collapsed Pipe.
3/11/2014	2:05 PM	1253 WOOD VILLAGE DR	Ground Surface (defective pipe underground)	0.58	1,180	YES	Lynch	0.57	Grease. Sewer leaking from botton of manhole.
3/12/2014	4:00 PM	38 WATERSVIEW DR	Manhole	2.25	10	NO	Cany	0.00	Roots.
3/13/2014	10:10 AM	2840 ROBINSON ROAD	Manhole	1.25	1,180	YES	Lynch	0.00	Grease.
3/14/2014	12:30 PM	3010 LAKELAND DR GOLF COURSE	Manhole	4.00	900	NO	Eubanks	0.00	Roots.
3/15/2014	10:25 AM	5508 QUEEN ELIZABETH LANE	Manhole	1.08	1,280	NO	Lynch	0.26	Roots.
3/16/2014	8:00 AM	503 SPRINGFIELD CIR	Manhole	0.50	5,560	YES	Lynch	1.05	Excessive Flow.
3/16/2014	11:00 AM	5029 DECKARD DR	Manhole	0.67	3,380	YES	Lynch	1.05	Grease.
3/16/2014	12:25 PM	BELL CT W BELL ST	Manhole	1.08	2,260	YES	Town	1.05	Grease.
3/16/2014	3:30 PM	4938 ROSEHAVEN DR	Cleanout	1.17	800	NO	Lynch	1.05	Grease.
3/18/2014	2:50 PM	315 RAYMOND ROAD	Manhole	1.00	1,180	YES	Lynch	0.00	Grease. Roots.
3/19/2014	8:30 AM	439 BROADVIEW ST	Cleanout	2.83	50	NO	Town	0.00	Grease.
3/19/2014	8:45 AM	315 RAYMOND ROAD	Manhole	2.00	1,180	YES	Lynch	0.00	Grease. Roots.
3/19/2014	1:30 PM	HOUSTON AVE WILLING AVE	Cleanout	1.58	15	NO	Lynch	0.00	Grease. Solids.
3/19/2014	2:54 PM	6306 AMBLEWOOD CT	Manhole	0.83	2,240	YES	Hanging Moss	0.00	Grease.
3/20/2014	11:05 AM	J.R. LYNCH ST ROSE ST	Ground Surface (defective pipe underground)	1.33	600	YES	Town	0.00	Where contractor are lying fiber optic cable.
3/24/2014	10:00 AM	1209 LYNCREST DR	Cleanout	1.25	25	NO	Belhaven	0.13	Collapsed Pipe.

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3/25/2014	8:15 AM	2026 CHEROKEE DR.	Ground Surface (defective pipe underground)	3.62	3,100	NO	Eastover	0.00	Collapsed Pipe.
3/25/2014	8:25 AM	337 QUEEN CATHERINE LANE	Cleanout	1.58	40	NO	Lynch	0.00	Solids.
3/25/2014	11:35 AM	120 WILDWOOD CIR	Cleanout	0.67	15	NO	Cany	0.00	Grease.
3/26/2014	2:30 PM	1225 N STATE ST	Manhole	0.50	600	YES	Town	0.00	Grease.
3/27/2014	4:00 PM	4754 FRONTAGE ROAD	Ground Surface (defective pipe underground)	1.00	800	NO	Hanging Moss	0.95	Collapsed Pipe. Broke Down.
3/29/2014	8:00 AM	3538 EDMAR PL	Manhole	0.50	700	NO	Eubanks	2.99	Excessive Flow.
3/29/2014	12:30 PM	2856 BOOKER WASHINGTON ST	Ground Surface (defective pipe underground)	0.50		NO	Town	3.10	Excessive Flow.
3/29/2014	4:30 PM	1422 COOKS AVE	Manhole	1.50	1,500	NO	Trahon	3.50	Grease.
3/31/2014	10:55 PM	910 VALLEY FALLS ROAD	Ground Surface (defective pipe underground)	1.58	200	NO	Cany	0.00	Main line backed up.
3/31/2014	12:10 PM	4125 SUNSET DR	Manhole	0.67	3,340	NO	Town	0.00	Grease.
3/31/2014	1:10 PM	4126 PARKWAY AVE	Cleanout	1.17	1,180	YES	Town	0.00	Grease.
3/31/2014	5:00 PM	3237 ROBINSON ST	Cleanout	1.75	200	NO	Lynch	0.00	Grease. Solids.
4/3/2014	8:00 AM	3237 ROBINSON ROAD	Manhole	0.92	200	NO	Lynch	0.00	Grease. Solids.
4/5/2014	9:30 AM	2014 CHEROKEE DR	Cleanout	4.75	50	YES	Eastover	1.36	Roots.
4/6/2014	7:50 AM	503 SPRINGFIELD CIR	Manhole	0.17	Undetermined	YES	Lynch	4.64	Excessive Flow.
4/6/2014	9:30 AM	WHITESTONE ROAD WHITEGATE DR	Manhole	0.75	250	YES	Hanging Moss	1.30	Excessive Flow.
4/6/2014	12:40 PM	3638 CAVALIER DR	Manhole	0.92	Undetermined	YES	Eubanks	1.30	Excessive Flow.
4/6/2014	6:00 PM	3814 N STATE ST	Cleanout	3.75	100	YES	Eubanks	1.30	Collapsed Pipe.
4/7/2014	9:06 AM	2641 IDAHO ST	Cleanout	0.90	60	YES	Town	4.65	Heavy Rain Fall.
4/7/2014	1:42 PM	3535 EDMAR PL	Manhole	0.88	Undetermined	YES	Eubanks	1.42	Excessive Flow.
4/8/2014	8:25 AM	1106 MARINE ST	Cleanout	2.58	10	NO	Town	4.67	Solids. Cave-in over service line.
4/8/2014	12:50 PM	3208 LAKEWOOD CV DR	Cleanout	0.92	30	YES	Eastover	1.44	Excessive Flow. Heavy rain fall from the weekend of 4/6/2014.
4/9/2014	11:15 AM	2969 UNIVERSITY DR	Manhole	1.25	1,200	NO	Eubanks	1.45	Grease. Roots.
4/11/2014	8:50 AM	5535 QUEEN MARY LANE	Manhole	2.67	1,230	NO	Town	0.00	Grease. Roots.
4/11/2014	5:45 PM	760 N WEST ST	Manhole	1.00	300	NO	Town	0.00	Grease.
4/11/2014	6:45 PM	900 BLOCK BELLEVUE PL	Manhole	0.75	900	NO	Town	0.00	Grease.

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4/12/2014	8:30 AM	4620 ESTELLE DR	Manhole	1.50	200	NO	Eubanks	1.47	Collapsed Pipe.
4/14/2014	6:27 AM	4233 BRUSSELS DR	Manhole	3.30	3,380	YES	Eastover	0.02	Grease.
4/14/2014	7:13 AM	COLONIAL DR ATKINS BLVD	Manhole	3.20	5,560	YES	Purple	0.02	Excessive Flow.
4/14/2014	1:00 PM	4672 DIXIE DR	Manhole	0.75	2,000	NO	Lynch	2.60	Grease.
4/14/2014	2:53 AM	1695 HIGH ST	Manhole	0.53	Undetermined	YES	Pearl	2.80	Excessive Flow.
4/14/2014	4:23 PM	415 ARMOUR DR	Manhole	0.87	120	YES	Hanging Moss	0.02	Excessive Flow.
4/14/2014	5:26 PM	3638 CAVALIER DR	Manhole	2.90	Undetermined	YES	Eubanks	1.76	Excessive Flow.
4/14/2014	8:45 PM	2901 SHELIA DR	Manhole	0.25	Undetermined	YES	Lynch	2.60	Excessive Flow.
4/15/2014	12:55 PM	784 E NORTHSIDE DR	Manhole	0.33	950	NO	Eubanks	0.03	Grease.
4/21/2014	8:18 AM	724 RAYMOND ROAD	Manhole	3.70	1,000	NO	Three Mile	0.00	Grease. Roots.
4/27/2014	6:00 PM	338 HERITAGE PL	Manhole	2.50	200	YES	Trahon	0.00	Roots.
5/1/2014	8:30 PM	141 QUEEN ANNE LANE	Manhole	1.50	1,000	NO	Lynch	0.00	Grease.
5/4/2014	7:30 AM	2263 MCDOWELL ROAD	Cleanout	3.50	4,480	YES	Cany	0.00	Collapsed Pipe.
5/7/2014	10:40 AM	1155 JOANNE ST	Cleanout	6.50	100	NO	Hardy	0.00	Building drain - cleanout.
5/8/2014	5:30 PM	115 MASON BLVD	Manhole		5,580	YES	Cany	0.00	Grease.
5/9/2014	1:00 PM	503 SPRINGFIELD CIR	Manhole	1.27	2,000	NO	Lynch	1.86	Excessive Flow.
5/10/2014	5:00 PM	2279 FOREST PARK DR	Pump Station	1.00	200	NO	Trahon	1.94	Pump Station Failure.
5/12/2014	9:15 AM	3208 LAKEWOOD CV DR	Manhole	3.17	4,488	YES	Cany	0.00	Grease.
5/12/2014	6:00 PM	4051 N WEST ST	Manhole	0.75	100	YES		1.18	Grease.
5/14/2014	9:30 AM	2724 GENE DR	Cleanout	2.08	15	NO	Lynch	0.10	Solids.
5/14/2014	2:00 PM	1044 PARKWOOD PL	Ground Surface (defective pipe underground)		500	NO	Eubanks	1.21	Collapsed Pipe.
5/16/2014	2:15 PM	1321 N LAMAR ST	Manhole	3.50	500	YES	Town	0.00	Grease.
5/18/2014	8:20 AM	2649 KELLY AVE	Other	1.75	Undetermined	YES	Town	0.00	Collapsed Pipe.
5/22/2014	9:00 AM	1321 N LAMAR ST	Manhole	1.50	200	NO	Town	0.00	Roots. Collapsed Pipe.
5/27/2014	10:45 AM	2010 CHADWICK DR	Manhole	2.25	3,300	NO	Cany	0.00	Grease.
5/30/2014	5:30 PM	1615 PINEHURST ST	Manhole	1.75	800	NO	Belhaven	0.00	Collapsed Pipe.
6/3/2014	9:34 AM	1321 N LAMAR ST	Manhole	6.18	1,180	YES	Town	0.00	Grease. Roots.
6/4/2014	8:05 AM	1321 N LAMAR ST	Manhole	6.67	1,180	YES	Town	0.00	Grease. Roots.
6/10/2014	7:24 AM	420 SPRINGFIELD CIR	Manhole	5.60	5,000	YES	Lynch	2.66	Undersized Line. Rain water getting into sewer line.

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6/10/2014	9:08 AM	503 SPRINGFIELD CIR	Manhole	8.37	5,000	YES	Lynch	2.66	Undersized Line. Rain water getting into sewer line.
6/10/2014	9:08 AM	527 SPRINGFIELD CIR	Manhole	8.37	5,000	NO	Lynch	2.66	Rain water getting into sewer line.
6/10/2014	9:08 AM	702 MYRTLEWOOD DR	Ground Surface (defective pipe underground)	8.37	3,380	YES	Three Mile	2.97	Grease. Collapsed Pipe.
6/10/2014	8:15 PM	475 STILLWOOD DR	Cleanout	1.75	300	NO	Eubanks	1.94	Grease.
6/11/2014	10:10 AM	2028 WILLOW WAY	Manhole	1.67	25	NO	Three Mile	2.98	Grease. Solids.
6/15/2014	7:50 AM	5323 RIDGEWOOD ROAD	Ground Surface (defective pipe underground)	3.42	5,560	YES	Hanging Moss	0.00	Grease. Roots.
6/20/2014	8:45 AM	702 MYRTLEWOOD DR	Manhole	1.50	2,280	YES	Cany	0.13	Grease. Collapsed Pipe.
6/25/2014	6:00 PM	1215 GARDEN PARK DR	Other	0.75	50	NO	Hardy	1.53	Excessive Flow.
6/26/2014	1:59 PM	5547 MIMOSA DR	Manhole	1.52	15	YES	Hanging Moss	0.79	Grease. Roots.
6/29/2014	1:15 PM	CULLEY DR I 55 N	Manhole	2.25	3,300	YES	Hanging Moss	0.00	Collapsed Pipe.
6/30/2014	10:25 AM	FOREST AVE WATKINS DR	Manhole	3.08	30	NO	Eubanks	1.08	Grease. Solids. Cave-in.
7/3/2014	8:45 AM	5135 REDDOCH DR	Ground Surface (defective pipe underground)	7.75	50	NO	Hanging Moss	0.08	Collapsed Pipe.
7/3/2014	11:00 AM	4332 WILL O RUN DR	Cleanout	2.00	3,356	YES	Big Creek	0.00	Grease.
7/3/2014	3:39 PM	2301 FOREST GLEN DR	Cleanout	1.10	300	NO	Eubanks	0.08	Grease.
7/8/2014	6:40 PM	362 RIDGEWAY ST	Ground Surface (defective pipe underground)	1.33	900	NO	Town	0.00	Collapsed Pipe.
7/15/2014	7:46 AM	4332 WILL O RUN DR	Cleanout	3.65	30	NO	Big Creek	0.00	
7/17/2014	8:36 AM	3223 RICKAY DR	Ground Surface (defective pipe underground)	3.27	2,280	YES	Cany	0.00	Grease. Collapsed Pipe.
7/18/2014	9:12 AM	4704 HANGING MOSS CIR	Manhole	1.80	20	NO	Hanging Moss	0.32	Excessive Flow.
7/20/2014	6:32 AM	2416 CULLEY WOOD DR	Manhole	3.33	3,300	YES	Hanging Moss	0.00	Grease. Roots.
7/21/2014	6:08 PM	6125 BROWN ST	Cleanout	4.67	2,280	NO	Hanging Moss	0.32	Grease.
7/22/2014	10:49 AM	4704 HANGING MOSS ROAD	Manhole	1.88	4,450	YES	Hanging Moss	0.32	Grease. Roots.
7/22/2014	1:02 PM	4842 N STATE ST	Constructed Bypass	2.12	1,180	YES	Eubanks	0.32	Grease. Roots.
7/23/2014	10:04 AM	262 QUEEN ANNE LANE	Manhole	1.35	35	NO	Lynch	0.16	Grease. Solids.
7/23/2014	11:52 AM	3624 VALLEY ROAD	Cleanout	3.47	100	NO	Cany	0.00	Grease. Solids.

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7/25/2014	2:10 PM	NORMAN ST US HWY 80	Manhole	3.17	5,540	YES	Lynch	0.00	Grease.
7/26/2014	4:50 PM	4705 HANGING MOSS ROAD	Manhole	1.33	3,380	YES	Hanging Moss	0.00	Grease. Roots.
7/28/2014	4:30 PM	572 DRYDEN AVE	Ground Surface (defective pipe underground)	1.25	150	NO	Lynch	0.00	Collapsed Pipe.
7/31/2014	10:36 AM	3775 MEADOW LANE	Manhole	4.80	3,380	YES	Cany	0.00	Grease.
8/5/2014	8:24 AM	3900 PAMPAS CIR	Manhole	7.20	Undetermined	YES	Cany	0.00	Grease.
8/5/2014	1:56 PM	2419 MCDOWELL ROAD	Constructed Bypass	0.90	10	NO	Cany	0.00	Other.
8/8/2014	1:12 PM	NORMAN ST US HWY 80	Ground Surface (defective pipe underground)	4.53	4,430	YES	Bakers	0.00	Grease. Collapsed Pipe.
8/14/2014	6:58 PM	3629 B VALLEY DR	Storm Drain	1.03	80	YES	Cany	0.00	Solids.
8/19/2014	1:15 PM	4707 HANGING MOSS ROAD	Manhole	1.58	15	NO	Hanging Moss	0.97	Grease. Solids.
8/21/2014	7:20 AM	1003 N. VALLEY FALLS RD	Manhole	3.67	125	NO	Cany	0.00	Grease. Solids.
8/21/2014	10:33 AM	705 BELHAVEN ST	Manhole	1.87	3,360	YES	Belhaven	0.02	Grease.
8/25/2014	8:18 AM	787 E NORTHSIDE DR	Manhole	5.37	350	NO	Eubanks	0.00	Grease. Solids.
8/27/2014	10:06 AM	4704 HANGING MOSS ROAD	Manhole	1.40	75	NO	Hanging Moss	0.00	Grease. Solids.
8/28/2014	7:29 AM	1253 EASTOVER DR	Manhole	4.18	1,180	YES	Eubanks	0.00	Grease. Roots.
8/29/2014	8:10 AM	167 BRIARWOOD DR	Manhole	1.50	150	NO	Hanging Moss	0.00	Grease. Solids.
9/1/2014	8:30 AM	CULLEY DR I 55 S FRONTAGE RD	Manhole	2.25	4,430	YES	Hanging Moss	0.05	Collapsed Pipe.
9/2/2014	8:30 AM	4704 HANGING MOSS ROAD	Manhole	5.50	150	YES	Hanging Moss	0.07	Grease. Roots. Solids.
9/2/2014	10:06 AM	OLD CANTON RD NORTHSIDE DR	Manhole	1.73	420	YES	Eastover	0.19	Grease.
9/2/2014	8:00 PM	1080 COOPER ROAD	Other	1.00	55	NO	Cany	3.26	Excessive Flow.
9/5/2014	7:00 PM	5866 KINDER DR	Ground Surface (defective pipe underground)	16.58	1,200	NO	Purple	0.17	Collapsed Pipe.
9/6/2014	12:00 PM	141 QUEEN ANNE LANE	Cleanout	1.92	1,500	NO	Lynch	0.38	Collapsed Pipe.
9/8/2014	7:00 AM	5866 KINDER DR	Cleanout	5.00	2,200	YES	Purple	0.01	Collapsed Pipe.
9/8/2014	7:49 AM	660 HEATHER LANE	Manhole	2.60	250	NO	Hanging Moss	0.01	Solids.
9/8/2014	10:02 AM	1112 PECAN BLVD	Ground Surface (defective pipe underground)	3.47	300	YES	Lynch	0.00	Solids. Collapsed Pipe.
9/10/2014	5:00 PM	724 RAYMOND ROAD	Manhole	3.00	1,180	YES	Three Mile	0.00	Collapsed Pipe.
9/15/2014	8:22 AM	1253 EASTOVER DR	Manhole	2.72	500	NO	Eubanks	0.01	Grease. Solids.

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9/16/2014	9:23 AM	3811 TROY AVE	Ground Surface (defective pipe underground)	1.95	200	YES	Town	0.00	Solids.
9/19/2014	9:38 AM	1405 E NORTHSIDE DR	Manhole	4.05	3,300	YES	Eastover	0.01	Grease.
9/22/2014	10:10 AM	346 Fredrica St	Manhole	1.60	2,280	YES	Lynch	0.00	Grease.
11/3/2014	8:52 AM	3930 OLD CANTON RD	Manhole	7.13	1,180	YES	Eubanks	0.00	Grease.
11/4/2014	8:23 AM	308 LIVINGSTON ST	Cleanout	5.28	900	YES	Town	0.20	Grease.
11/4/2014	2:52 PM	3956 OLD CANTON RD	Manhole	1.88	1,180	YES	Eubanks	0.00	Grease.
11/19/2014	7:45 AM	386 RAYMOND ROAD	Manhole	2.25	4,400	YES	Lynch	0.00	Grease.
12/1/2014	9:32 AM	904 E FORTIFICATION ST	Manhole	5.38	130	YES	Belhaven	0.00	Grease.
12/9/2014	9:30 AM	BAY ST LIVINGSTON ROAD	Manhole	2.00	5,000	NO	Town	0.00	Roots.
12/11/2014	9:45 AM	MITCHELL ST DOWNING ST	Manhole	0.83	3,300	YES	Town	0.00	Grease.
12/19/2014	2:05 PM	6013 MCRAVEN ROAD	Manhole	1.58	400	NO	Lynch	0.03	Manhole rings knocked off.
12/28/2014	6:45 AM	1976 EDWARD LANE JO ANN DR	Manhole	1.58	5,500	YES	Town	2.00	Grease.
12/28/2014	7:27 AM	6548 FRANKLIN D ROOSEVELT DR	Manhole	1.97	5,500	YES	Bogue Chitto	0.51	Pump Station Failure.
1/20/2015	4:00 PM	654 SPRYFIELD ROAD	Cleanout	0.50	50	NO	Cany	1.57	Grease. Solids. Choked main line.
1/22/2015	6:41 PM	1103 MCDOWELL CIR	Cleanout	1.02	25	NO	Hardy	1.57	Excessive Flow. Rain water.
2/4/2015	8:30 AM	6013 MCRAVEN ROAD	Manhole	1.50	1,300	NO	Bakers		Force main pipe break.
2/5/2015	9:30 AM	2390 GREENWAY DR	Manhole	1.50	1,100	YES	Cany	0.00	Grease. Roots.
2/25/2015	3:53 PM	503 SPRINGFIELD CIR	Manhole	0.38	5,500	YES	Lynch	1.00	Excessive Flow.
2/25/2015	4:19 PM	1231 CORINTH ST	Manhole	0.72	3,380	YES	Lynch	1.00	Grease. Excessive Flow.
3/9/2015	11:35 AM	764 BROADMOOR DR	Other	0.58	1,180	YES	Eubanks	0.28	Grease.
3/9/2015	12:15 PM	2227 E MANOR DR	Cleanout	2.42	50	NO	Hanging Moss	0.28	Grease.
3/9/2015	1:05 PM	240 BRIARWOOD DR	Cleanout	0.32	9	NO	Hanging Moss	0.28	Grease.
3/9/2015	2:49 PM	207 HOUSTON AVE	Cleanout	1.62	75	NO	Lynch	0.22	Choked main (Rain) water.
3/9/2015	3:24 PM	3826 REDBUD ROAD	Cleanout	3.17	75	NO	Eastover	0.28	Grease.
3/10/2015	8:54 AM	2014 EDWARD LANE	Manhole	2.85	5,560	YES	Town	1.07	Collapsed Pipe. Main line is broke down at this location.
3/10/2015	1:30 PM	540 FORD AVE	Cleanout	1.07	50	NO	Cany	1.07	Grease. Solids. Choked main line.

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Date Began	Time Began	Location	Source	Estimated Duration, Hours	Estimated Volume, Gallons	Reached Waterway	Receiving Water	Rainfall, Inches	Reported Cause
3/10/2015	2:47 PM	W NORTHSIDE DR BOLING ST	Manhole	1.47	100	YES	Town	1.07	Grease.
3/11/2015	8:54 AM	2013 EDWARD LANE	Manhole	2.85	5,560	YES	Town	1.13	Collapsed Pipe. City main line is broke down at this location.
3/13/2015	12:50 AM	BELL CT W BELL ST	Manhole	0.12	4,480	YES	Town	2.20	Excessive Flow.
3/13/2015	2:15 PM	155 N CULLEY DR	Ground Surface (defective pipe underground)	1.82	3,380	YES	Hanging Moss	2.54	Grease. Collapsed Pipe.
3/15/2015	1:15 PM	716 W MONUMENT ST	Manhole	1.13	100	YES	Town	0.00	Grease.
3/16/2015	12:00 PM	475 BROWNING DR	Cleanout	2.00	50	NO	Bakers	0.00	Grease.
3/18/2015	3:00 PM	1715 SAINT MARY ST	Cleanout		200	NO	Belhaven	1.09	Collapsed Pipe.
3/20/2015	4:35 PM	1723 NORTHWOOD CIR	Cleanout	0.63	10	NO	Hanging Moss	0.52	Grease.
3/21/2015	1:55 PM	1235 CORINTH ST	Manhole	1.60	200	YES	Lynch	1.70	Excessive Flow. Rain Water.
3/21/2015	5:16 PM	5104 ANDOVER DR	Manhole	1.10	150	YES	Lynch	1.70	Grease.
3/21/2015	5:34 PM	448 COOPER ROAD	Manhole	1.10	3	NO	Cany	2.16	Solids.
3/21/2015	6:22 PM	5140 QUEEN ELEANOR LANE	Manhole	0.47	200	YES	Lynch	1.70	Excessive Flow.
3/23/2015	6:09 PM	319 QUEEN JULIANNA LANE	Manhole	4.68	75	NO	Lynch	2.06	Grease.
3/24/2015	1:16 PM	721 KIRKLEY DR	Manhole	0.73	150	YES	Eubanks	2.42	Grease.
3/24/2015	5:22 PM	3841 CALIFORNIA AVE	Cleanout	1.07	20	NO	Town	2.06	Grease.
3/25/2015	12:51 PM	362 RIDGEWAY ST	Ground Surface (defective pipe underground)	0.37	3	YES	Town	0.00	Collapsed Pipe.
3/25/2015	7:04 PM	JEFFERSON ST BELLEVUE PL	Manhole	1.62	150	YES	Belhaven	0.00	Grease.
3/26/2015	5:55 PM	429 PINE RIDGE ROAD	Cleanout	0.52	2	NO	Eubanks	0.19	Grease. Roots.
3/27/2015	10:15 AM	4113 W CAPITOL ST	Cleanout	0.37	4	YES	Lynch	0.00	Grease.
3/27/2015	11:56 AM	BOYD ST NORTH ST	Manhole	3.02	300	YES	Town	0.00	Grease.
3/30/2015	9:00 AM	1765 SHADY LANE	Other	1.50	30	NO	Lynch	0.00	(Human Error) Sewer main torn out by water main repair.
3/30/2015	12:37 PM	2315 TIMBER CROSSING ROAD	Manhole	1.38	150	YES	Cany	0.00	Grease.
4/3/2015	9:20 AM	145 LORENZ BLVD	Manhole	2.67	800	YES	Town	0.54	Grease.
4/3/2015	2:00 PM	LORENZ BLVD MILL ST	Manhole	1.17	120	YES	Town	0.54	Grease.
4/8/2015	10:15 AM	5554 DECKARD DR	Cleanout	2.20	20	YES	Lynch	0.00	Grease.
4/9/2015	11:37 AM	4044 W CAPITOL ST	Cleanout	0.88	20	YES	Lynch	0.00	Grease.

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4/9/2015	4:10 PM	205 MAYWOOD CIR	Other	2.07	20	NO	Eastover	0.00	Grease.
4/9/2015	6:14 PM	316 COLONIAL CIR	Ground Surface (defective pipe underground)	1.03	40	YES	White Oak	0.00	Collapsed Pipe. Defective Pipes.
4/13/2015	11:33 AM	2117 OAKHURST DR	Manhole	1.45	750	YES	Three Mile	0.36	Grease.
4/14/2015	9:00 AM	936 SUMMER ST	Cleanout	3.42	200	YES	Lynch	0.30	Grease.
4/17/2015	4:20 PM	301 MCTYERE AVE	Manhole	2.23	400	YES	Town	1.54	Grease.
4/21/2015	12:41 PM	3704 N STATE ST	Manhole	1.47	90	NO	Eubanks	0.00	Grease.
4/21/2015	2:08 PM	2050 LONDON AVE	Manhole	2.38	500	NO	Eastover	0.00	Grease.
4/23/2015	10:37 AM	3704 N STATE ST	Manhole	2.23	40	NO	Eubanks	0.05	Grease.
4/27/2015	3:05 PM	749 MONTCLAIR PL	Cleanout	0.95	200	NO	Eubanks	0.00	Grease.
4/28/2015	8:10 AM	1404 WINCHESTER ST	Ground Surface (defective pipe underground)	2.57	50	NO	Hanging Moss	0.00	Collapsed Pipe. Cave-in over main line.
5/1/2015	9:32 AM	4150 CRANE BLVD	Ground Surface (defective pipe underground)	2.23	40	YES	Eubanks	0.00	Grease.
5/3/2015	12:55 PM	4625 HERITAGE PL	Manhole	0.67	200	YES	Trahon	0.00	Grease.
5/4/2015	10:35 AM	5406 I 55 N	Manhole	1.23	400	YES	Hanging Moss	0.00	Roots.
5/5/2015	9:49 AM	3611 N STATE ST	Manhole	0.93	100	YES	Eubanks	0.00	Main Line is broken down.
5/5/2015	10:54 AM	222 MCTYERE AVE	Cleanout	0.23	70	NO	Town	0.00	Grease.
5/6/2015	12:54 PM	330 NORTHPOINTE PKWY	Manhole	1.23	85	NO	Purple	0.00	Roots.
5/13/2015	11:00 AM	3220 OLD CANTON RD	Cleanout	3.00	50	NO	Eastover	0.36	sewer tap failure.
5/14/2015	8:40 AM	933 CENTRAL ST	Other	2.52	100	NO	Town	0.00	gas company hit the main (broke).
5/14/2015	12:23 PM	1046 GREYMONT AVE	Cleanout	1.12	20	NO	Belhaven	0.00	Grease.
5/14/2015	5:30 PM	1960 W NORTHSIDE DR	Other	6.48	300	NO	Eubanks	0.00	Pump Station Failure.
5/19/2015	8:00 AM	1004 NORTH ST	Other	2.00	25	NO	Belhaven	1.64	sewer service crossing inside storm drian.
5/24/2015	9:24 AM	3929 ARCHER AVE	Cleanout	0.90	250	NO	Cany	1.38	Excessive Flow.
5/27/2015	1:48 PM	535 INDUSTRIAL DR	Ground Surface (defective pipe underground)	10.18	400	YES	Town	0.00	Collapsed Pipe. Pipe crack at the bottom 1 ft outside manhole.
5/27/2015	3:47 PM	5754 I 55 N	Manhole	1.85	125	YES	Hanging Moss	2.33	Grease.

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5/31/2015	10:02 AM	4634 TENNYSON ST	Ground Surface (defective pipe underground)	2.12	60	YES	Eubanks	1.11	Collapsed Pipe.
6/2/2015	3:54 PM	MEADOW HEIGHTS DR	Manhole	2.13	250	YES	Eubanks	0.00	Grease. Rags.
6/3/2015	9:18 AM	4380 BROOK DR	Manhole	0.65	250	YES	Eubanks	0.00	Grease. Rags.
6/4/2015	10:55 AM	316 COLONIAL CIR	Manhole	6.27	75	YES	White Oak	0.00	Grease. Rags.
6/4/2015	2:45 PM	448 CAMBRIDGE LANE	Manhole	3.75		NO	Trahan	0.00	Grease. Roots.
6/4/2015	5:44 PM	805 HICKORY RIDGE DR	Ground Surface (defective pipe underground)	1.42	40	YES	Eubanks	0.00	Grease.
6/12/2015	8:20 AM	202 E RIDGEWAY ST	Ground Surface (defective pipe underground)	5.17	340	NO	Town	0.22	Collapsed Pipe.
6/12/2015	2:17 PM	MEADOWBROOK ROAD WEST ST	Manhole	2.37	40	NO	Eubanks	0.10	Grease. Rags.
6/18/2015	12:34 PM	134 IRIS AVE	Manhole	0.73	10	NO	Eubanks	0.00	Grease.
6/18/2015	3:18 PM	132 HICKORY CV	Manhole	2.03	130	NO	Big Creek	0.00	Grease.
6/18/2015	3:58 PM	761 KENSINGTON PL	Ground Surface (defective pipe underground)	2.78	75	YES	Eubanks	0.00	Collapsed Pipe.
6/19/2015	11:13 AM	308 MELBA ST	Manhole	1.67	250	YES	Lynch	0.00	Grease.
6/19/2015	3:37 PM	1951 WINGFIELD CIR	Manhole	2.35	100	NO	Lynch	0.00	Grease.
6/20/2015	3:04 PM	202 E RIDGEWAY ST	Manhole	1.72	220	YES	Town	0.00	Grease.
6/21/2015	10:20 AM	212 PIMLICO PL	Manhole	2.27	120	NO	Hanging Moss	0.00	Excessive Flow.
6/23/2015	2:55 PM	1317 COLLIER AVE	Cleanout	0.93	35	NO	Town	0.00	Owner states that it's a broke service line..
6/23/2015	4:55 PM	105 ELCREST ST	Ground Surface (defective pipe underground)	0.38	40	NO	Lynch	0.00	Collapsed Pipe.
6/26/2015	1:01 PM	114 WAYLAWN CT	Cleanout	1.63	20	NO	Hanging Moss	0.33	Collapsed Pipe. Service Line.
6/27/2015	2:45 PM	1114 LYNCREST AVE	Ground Surface (defective pipe underground)	4.25	750	YES	Belhaven	0.00	Collapsed Pipe.
6/28/2015	6:30 PM	316 ELM ST	Manhole	1.85	60	NO	Town	0.00	Grease.
6/30/2015	10:32 AM	837 BROOKWOOD DR	Cleanout	2.28	80	NO	Eubanks	0.00	Excessive Flow.
6/30/2015	1:21 PM	2124 EASTOVER DR	Manhole	2.28	180	YES	Eastover	0.00	Grease.
6/30/2015	4:16 PM	3430 ALBERMARLE ROAD	Manhole	1.68	300	NO	Town	1.09	Grease.

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7/1/2015	9:13 AM	332 QUEEN ISABELLA LANE	Manhole	3.62	260	NO	Lynch	1.09	Grease.
7/3/2015	11:31 AM	2027 CAMELLIA DR	Manhole	0.48	800	YES	Three Mile	0.00	Roots. Collapsed Pipe.
7/6/2015	9:16 AM	202 E RIDGEWAY ST	Manhole	3.37	200	YES	Town	1.11	Collapsed Pipe.
7/6/2015	5:33 PM	4202 OAKMONT DR	Manhole	0.67	40	YES	Lynch	1.26	Grease.
7/7/2015	1:05 PM	5874 KINDER DR	Cleanout	4.13	120	NO	Purple	0.00	Grease.
7/9/2015	11:45 AM	4005 N WEST ST	Manhole	0.58	50	YES	Eubanks	0.00	Grease.
7/9/2015	12:00 PM	5915 I 55 N	Manhole	1.25	75	YES	White Oak	0.00	Grease.
7/13/2015	11:16 AM	1439 W CAPITOL ST	Manhole	1.13	110	NO	Town	0.00	Collapsed Pipe.
7/13/2015	5:33 PM	1439 W CAPITOL ST	Manhole	0.53	50	YES	Town	0.00	Collapsed Pipe.
7/14/2015	12:35 PM	1500 PEACHTREE ST	Cleanout	1.17	125	YES	Belhaven	0.00	Grease.
7/16/2015	12:01 PM	426 PARKWAY AVE	Manhole	3.98	600	YES	Town	0.00	Collapsed Pipe.
7/22/2015	2:08 PM	4068 BOXWOOD CIR	Manhole	2.12	100	YES	Eastover	0.00	Unknown
7/22/2015	5:28 PM	3670 LIBERTY ST	Cleanout	1.30	80	NO	Town	0.00	Grease. Rags.
7/24/2015	5:33 PM	5135 REDDOCH DR	Manhole	3.13	70	YES	Hanging Moss	0.00	Collapsed Pipe.
7/24/2015	9:27 PM	4072 BOXWOOD CIR	Manhole	1.15	90	YES	Eastover	0.00	Collapsed Pipe.
7/27/2015	12:28 PM	417 N FLAG CHAPEL ROAD	Manhole	1.47	400	NO	Lynch	0.00	Collapsed Pipe.
7/27/2015	5:24 PM	219 DUNBAR ST	Cleanout	2.38	120	NO	Town	0.00	Grease. Rags.
7/28/2015	3:44 PM	120 WACKER DR	Manhole	0.85	60	YES	Eubanks	0.00	Grease.
7/28/2015	4:33 PM	1116 FOREST AVE	Manhole	4.37	160	NO	Eubanks	0.00	Grease. Rags.
7/29/2015	10:14 AM	296 UNIVERSITY DR	Manhole	4.23	500	YES	Belhaven	0.00	Collapsed Pipe.
7/30/2015	5:02 PM	4065 BOXWOOD CIR	Manhole	1.43	30	NO	Eastover	0.03	Collapsed Pipe.
7/31/2015	10:31 AM	3611 N STATE ST	Manhole	0.73	20	NO	Eubanks	0.00	Collapsed Pipe.
7/31/2015	3:23 PM	2424 BAILEY AVE	Manhole	4.08	500	YES	Town	0.00	Collapsed Pipe.
8/2/2015	4:51 PM	4753 SOUTH DR	Cleanout	1.18	30	NO	Lynch	0.00	Collapsed Pipe.
8/3/2015	12:08 PM	3827 EASTOVER DR	Manhole	3.68	60	NO	Eastover	0.00	Collapsed Pipe.
8/3/2015	3:54 PM	1643 PEAR ORCHARD PL	Ground Surface (defective pipe underground)	2.50	180	YES	Purple	0.00	Collapsed Pipe.
8/4/2015	10:07 AM	1643 PEAR ORCHARD PL	Ground Surface (defective pipe underground)	1.23	180	YES	Purple	0.00	Collapsed Pipe.
8/4/2015	11:22 AM	2424 BAILEY AVE	Manhole	0.80	80	YES	Town	0.00	Collapsed Pipe.
8/6/2015	4:45 PM	4725 I 55 N	Manhole	3.10	120	NO	Hanging Moss	0.00	Grease.

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8/10/2015	8:38 AM	152 SEGURA AVE	Cleanout	1.03	30	NO	Lynch	0.00	Collapsed Pipe. Private service line.
8/10/2015	10:51 AM	3611 N STATE ST	Manhole	1.20	40	NO	Eubanks	0.00	Collapsed Pipe.
8/10/2015	12:38 PM	2974 GREENWOOD AVE	Manhole	1.35	120	YES	Hardy	0.00	Grease.
8/10/2015	3:20 PM	136 SHADOWLAWN DR	Cleanout	1.28	20	YES	Three Mile	0.00	Collapsed Pipe. Private service line.
8/11/2015	5:00 PM	787 E NORTHSIDE DR	Manhole	5.67	350	NO	Eubanks	0.00	Grease. Rags.
8/13/2015	8:00 AM	3611 N STATE ST	Manhole	1.18	40	NO	Eubanks	0.00	Collapsed Pipe.
8/15/2015	3:38 PM	3237 ROBINSON ROAD	Cleanout	2.35	375	YES	Lynch	0.00	Collapsed Pipe.
8/16/2015	6:44 PM	1121 RIDGEWAY ST	Cleanout	0.93	20	NO	Town	0.00	Private line running over.
8/20/2015	4:50 PM	850 LINDBERGH AVE	Manhole	1.87	240	YES	Lynch	0.07	Grease. Rags.
8/25/2015	2:05 PM	4052 RAINEY ROAD	Manhole	1.28	1,500	NO	Trahan	0.00	Grease.
8/26/2015	10:46 AM	COLLIER AVE NEWMAN AVE	Ground Surface (defective pipe underground)	1.02	300	YES	Eubanks	0.00	Collapsed Pipe.
8/31/2015	11:00 AM	4025 DOGWOOD DR	Ground Surface (defective pipe underground)	2.80	15	NO	Eastover	0.00	Collapsed Pipe.
9/1/2015	11:00 AM	2900 METER ROAD	Other	4.50	1,000	NO	Three Mile	0.00	Abandoned Main (Inflow).
9/3/2015	12:20 PM	3540 SUNSET DR	Cleanout	1.93	30	YES	Town	0.00	Collapsed Pipe.
9/11/2015	4:00 PM	141 RAMADA CIR	Manhole	1.00	35	YES	Big Creek	0.76	Grease.
9/15/2015	9:27 AM	MADISON ST HARDING ST	Manhole	2.15	180	YES	Town	0.00	Grease.
9/15/2015	12:51 PM	GLENMONT DR MEADOWMONT DR	Manhole	1.83	120	YES	Lynch	0.00	Grease.
9/15/2015	2:41 PM	MADISON ST HARDING ST	Manhole	0.57	180	NO	Belhaven	0.00	Grease.
9/15/2015	3:00 PM	188 DENSON ST	Cleanout	0.78	10	NO	Town	0.00	Collapsed Pipe.
9/16/2015	11:43 AM	3611 N STATE ST	Ground Surface (defective pipe underground)	0.53	20	YES	Eubanks	0.00	Collapsed Pipe.
9/16/2015	2:53 PM	4469 AZALEA DR	Manhole	2.22	300	NO	Eubanks	0.00	Grease.
9/17/2015	5:40 PM	4821 N STATE ST	Ground Surface (defective pipe underground)	1.42	60	NO	Eubanks	0.00	Collapsed Pipe. Private Line.

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9/21/2015	10:03 AM	3611 N STATE ST	Ground Surface (defective pipe underground)	0.65	10	YES	Eubanks	0.03	Collapsed Pipe.
9/21/2015	5:14 PM	224 E NORTHSIDE DR	Manhole	1.77	150	NO	Eubanks	0.03	Grease.
9/21/2015	8:21 PM	3442 BAILEY AVE	Cleanout	1.65	20	NO	Town	0.06	Grease.
9/22/2015	11:50 AM	148 BROWN ST	Manhole	2.33	600	YES	White Oak	0.06	Grease.
9/23/2015	10:15 AM	2010 CHADWICK DR	Pump Station	3.25	100	YES	Cany	0.00	Grease.
9/24/2015	1:25 PM	528 FLAG CHAPEL CIR	Manhole	0.92	45	YES	Lynch	0.00	Grease. Solids.
9/24/2015	4:31 PM	5115 HARROW DR	Cleanout	2.38	600	NO	Hanging Moss	0.00	Grease. Roots.
9/28/2015	2:21 PM	1636 PLEASANT AVE	Cleanout	0.65	10	YES	Town	0.12	Collapsed Pipe. Private Service Line.
9/30/2015	11:46 AM	DOUGLAS AVE DR CADILLAC	Manhole	2.82	160	YES	Town	0.16	Grease. Rags.
10/14/2015	9:02 AM	LIVINGSTON ST ST WILSON	Manhole	1.27	175	YES	Town	0.00	Grease.
10/16/2015	2:35 PM	5055 OLD CANTON RD	Manhole	1.42	30	YES	Hanging Moss	0.00	Rags.
10/19/2015	11:40 AM	PLEASANT AVE Bell ST	Manhole	1.87	220	NO	Town	0.00	Grease. Rags.
10/19/2015	2:36 PM	148 BROWN ST	Manhole	1.05	280	NO	Hanging Moss	0.00	Grease. Rags.
10/20/2015	4:21 PM	315 MAGNOLIA ROAD	Cleanout	1.82	10	NO	Lynch	0.00	Grease.
10/21/2015	9:30 AM	126 MCCLUER ROAD	Cleanout	1.50	25	NO	Cany	0.00	Grease. Solids. Main line (8") & service line choked.
10/21/2015	1:32 PM	1915 MOBILE AVE	Cleanout	1.75	10	NO	Town	0.00	Tissue & Rags.
10/22/2015	1:04 PM	5139 PARKWAY AVE	Cleanout	1.25	10	NO	White Oak	0.00	Tissue.
10/22/2015	2:17 PM	5009 ASHLEY DR	Manhole	0.53	30	NO	Hanging Moss	0.00	Grease. Rags.
10/22/2015	6:49 PM	5044 ASHLEY DR	Cleanout	1.25	10	NO	Hanging Moss	0.00	Roots.
10/23/2015	1:06 PM	5874 Kinder Dr	Cleanout	3.00	80	YES	Purple	0.00	Roots.
10/24/2015	1:00 PM	4207 OAKMONT DR	Manhole	1.53	220	NO	Lynch	0.08	Grease. Rags.
10/26/2015	11:46 AM	1033 WESTWAY ROAD	Other	0.17	10	YES	Cany	4.72	Grease.
10/29/2015	5:23 PM	415 E. Northside Drive	Cleanout	6.60	3	YES	Eubanks	4.53	cleanout.
10/29/2015	6:17 PM	167 BRIARWOOD DR	Manhole	0.78	210	YES	Hanging Moss	4.61	Grease. Solids.
10/31/2015	12:40 PM	503 SPRINGFIELD CIR	Manhole		125	YES	Hanging Moss	1.75	Rain water.
11/5/2015	8:45 AM	550 HOUSTON AVE	Manhole	7.42	75	NO	Lynch	0.01	Roots.
11/13/2015	2:32 PM	4754 I 55	Manhole	2.03	80	NO	Hanging Moss	0.08	Grease.
11/16/2015	7:42 PM	137 ADELLE ST	Manhole	0.00	130	YES	Town	0.00	Grease.
11/17/2015	3:10 PM	2306 BRECKENRIDGE RD	Manhole	1.33	80	NO	Hardy	1.74	Grease.

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11/17/2015	4:40 PM	GREENWOOD AVE SANTA CLAIR CIR	Manhole	7.32	450	NO	Hardy	1.74	Water main break getting into main line.
11/19/2015	8:30 AM	237 STOKES ROBERTSON ROAD	Manhole	1.75	800	NO	Cany	3.08	Collapsed Pipe.
11/19/2015	3:55 PM	5055 OLD CANTON RD	Manhole	3.18	40	YES	Hanging Moss	0.00	Brick.
11/20/2015	9:46 AM	49 NORTHTOWN DR	Manhole	2.43	320	YES	Pearl	0.00	Grease.
11/20/2015	10:00 AM	2570 CRESTLEIGH MANOR	Manhole	1.88	200	YES	Cany	0.00	Grease.
11/20/2015	5:30 PM	JEFFERSON ST BELLEVUE ST	Cleanout	0.68	80	YES	Town	0.00	Tissue.
11/22/2015	4:16 PM	ALVAREDO ST	Other	0.50	20	YES	Three Mile	0.00	Choked city main line.
11/23/2015	11:31 AM	700 N STATE ST	Ground Surface (defective pipe underground)	12.47	300	YES	Town	0.00	Collapsed Pipe.
11/24/2015	11:30 AM	568 N PARK LANE	Ground Surface (defective pipe underground)	1.28	80	YES	Eubanks	0.00	Grease.
11/25/2015	4:30 PM	3101 J.R. LYNCH ST	Manhole	1.27	30	YES	Lynch	0.00	Collapsed Pipe.
11/27/2015	10:32 AM	1205 JOANNE ST	Manhole	1.10	160	NO	Hardy	0.00	Grease.
11/28/2015	8:58 AM	4126 PARKWAY DR	Manhole	2.87	320	YES	Town	0.14	Roots.
11/28/2015	10:30 AM	PALMYRA ST ELM ST	Manhole	0.75	25	YES	Town	0.00	Grease.
11/30/2015	8:55 AM	2573 E LAKE CIR	Manhole	15.07	50	YES	Hanging Moss	0.21	Collapsed Pipe.
11/30/2015	6:38 PM	KIMWOOD DR	Manhole	0.37	220	NO	Eastover	0.21	Grease.
12/1/2015	9:58 AM	191 PARKSIDE PL	Cleanout	0.95	10	NO	Hanging Moss	0.35	Grease.
12/1/2015	12:22 PM	792 AVALON ROAD	Cleanout	0.98	13	NO	Eubanks	0.46	Solids.
12/2/2015	1:33 PM	325 SAVANNA AVE	Cleanout	2.53	10	YES	Cany	0.47	Grease.
12/3/2015	1:00 PM	346 AUDUBON PL	Manhole	2.58	80	YES	Eubanks	0.55	Grease.
12/4/2015	8:31 PM	1135 MARTINGALE DR	Cleanout	3.47	90	NO	Eubanks	0.00	Collapsed Pipe.
12/5/2015	5:17 PM	1831 SHAMROCK DR	Manhole	0.17	300	YES	Three Mile	0.00	Grease.
12/6/2015	7:15 AM	255 MCDOWELL ROAD	Other	1.20	160	NO	Hardy	0.00	Bellsouth hit main line.
12/6/2015	12:00 PM	TRAHON WWTP	Pump Station	0.50	360	YES	Big Creek	0.00	Pump Station Failure.
12/6/2015	2:10 PM	2059 CAMELLIA LANE	Manhole	1.43	40	YES	Three Mile	0.00	Grease.
12/7/2015	2:15 PM	GREYMONT ST MOODY ST	Manhole	3.00	35	NO	Belhaven	0.00	Grease.
12/8/2015	7:40 PM	4049 N WEST ST	Manhole	1.13	50	NO	Eubanks	0.00	Grease.
12/9/2015	3:46 PM	319 QUEEN JULIANNA LANE	Manhole	1.30	40	NO	Lynch	0.00	Grease.

Table 1
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Collection System SSOs

Date Began	Time Began	Location	Source	Estimated Duration, Hours	Estimated Volume, Gallons	Reached Waterway	Receiving Water	Rainfall, Inches	Reported Cause
12/9/2015	4:58 PM	N JEFFERSON ST HIGH ST	Manhole	0.42	50	NO	Town	0.00	Grease.
12/10/2015	9:25 PM	409 WINDSOR DR	Manhole	1.50	250	NO	Lynch	0.00	Grease.
12/11/2015	12:00 PM	1131 MARTINGALE DR	Cleanout	3.00	50	NO	Eubanks	0.00	Water leak (1131 Druid Hill Dr) leaking into manhole & main line.
12/11/2015	5:29 PM	5471 I 55 N	Manhole	0.67	10	NO	Hanging Moss	0.01	Grease.
12/13/2015	8:00 AM	255 MCDOWELL ROAD	Other	2.55	160	YES	Hardy	1.10	Collapsed Pipe.
12/13/2015	12:25 PM	EDDY ST CAMERON ST	Other	0.67	160	NO	Cany	0.95	Grease. Rags.
12/14/2015	8:59 PM	GREYMONT AVE MOODY ST	Manhole	0.67	25	NO	Belhaven	0.99	Grease.
12/15/2015	5:30 PM	1808 SAINT CHARLES ST	Cleanout	6.08	50	YES	Lynch	0.99	Collapsed Pipe.
12/18/2015	9:54 AM	347 MAGNOLIA DR	Manhole	3.77	140	YES	Lynch	0.02	Grease.
12/20/2015	10:28 AM	2616 SKYLINE DR	Other	1.17	10	NO	Town	0.00	Collapsed Pipe.
12/21/2015	6:12 PM	152 ARCHER AVE	Cleanout	0.43	50	NO	Hardy	1.90	Rain water.
12/22/2015	9:38 AM	439 BROADVIEW ST	Cleanout	14.35	10	YES	Town	1.79	Choked service line on home owner.
12/22/2015	9:49 AM	4554 I 55 N	Cleanout	3.07	80	NO	Hanging Moss	0.67	Grease.
12/26/2015	8:39 AM	3554 SUNSET DR	Ground Surface (defective pipe underground)	0.78	60	YES	Town	2.95	Collapsed Pipe.
12/27/2015	11:41 AM	4607 CHURCHILL DR	Ground Surface (defective pipe underground)	1.08	275	NO	Eubanks	3.73	Collapsed Pipe. Choked main line.
12/29/2015	8:22 AM	WILHURST ST	Cleanout	6.50	140	YES	Hanging Moss	1.12	Roots. Roots in main line.
12/30/2015	11:10 AM	4125 SUNSET DR	Manhole	12.82	420	NO	Town	1.00	Grease.
1/3/2016	6:42 PM	5147 RIDGEWOOD ROAD	Manhole	21.55	450	NO	Hanging Moss	0.00	Roots.
1/4/2016	1:29 PM	4710 I 55 FRONTAGE ROAD	Manhole	0.87	580	YES	Hanging Moss	0.00	Grease.
1/7/2016	11:30 AM	115 FRIARS COVE	Manhole	25.50	200	YES	Cany	0.27	Grease.
1/8/2016	8:57 AM	275 ELM ST	Ground Surface (defective pipe underground)	1.63	160	YES	Town	0.35	Grease.
1/11/2016	10:07 AM	111 BRIARWOOD DR	Cleanout	26.38	620	YES	Hanging Moss	0.92	Grease.
1/11/2016	12:11 PM	361 FLAG CHAPEL CIR	Cleanout	8.18	120	NO	Lynch	0.75	Grease.
1/15/2016	10:41 AM	4110 HANGING MOSS CIR	Cleanout	13.30	80	YES	Eubanks	0.00	Collapsed Pipe.
1/17/2016	4:30 PM	1200 E. NORTHSIDE DR	Manhole	1.87	320	YES	Eastover	0.00	Grease.
1/21/2016	1:09 PM	1870 TEAKWOOD DR	Cleanout		10	NO	Cany	0.87	Solids.

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Date Began	Time Began	Location	Source	Estimated Duration, Hours	Estimated Volume, Gallons	Reached Waterway	Receiving Water	Rainfall, Inches	Reported Cause
1/21/2016	6:15 PM	NORTHSIDE DR KIMWOOD CIR	Manhole	0.85	50	YES	Eastover	0.94	Grease.
1/26/2016	9:33 AM	111 BRIARWOOD DR	Cleanout	5.08	140	NO	Hanging Moss	0.69	Grease. Rags.
1/27/2016	7:30 AM	3810 I 55 S	WWTP	4.00	150,000	NO	Pearl	1.11	storm cell full.
1/31/2016	9:52 AM	345 SAINT ANDREWS DR	Other	1.45	80	NO	Purple	0.00	Grease.
2/3/2016	8:37 AM	STATE ST	Manhole	1.13	35	YES	Town	3.52	Grease.
2/4/2016	9:27 AM	STONEWALL ST BAILEY AVE	Manhole	3.83	280	YES	Town	2.79	Grease.
2/5/2016	3:01 PM	1060 MEADOW HEIGHTS DR	Manhole	1.47	540	NO	Eubanks	2.92	Grease.
2/7/2016	9:24 AM	730 BENNING ROAD	Manhole	5.48	280	YES	Eastover	0.00	Grease. Solids.
2/8/2016	4:33 PM	787 E NORTHSIDE DR	Manhole	1.13	80	NO	Eubanks	0.00	Solids.
2/11/2016	7:00 AM	1741 WAYCONA DR	Manhole	1.78	280	YES	Lynch	0.00	Grease.
2/11/2016	8:10 AM	2318 BRECKENRIDGE RD	Manhole	4.50	1,250	YES	Hardy	0.00	Grease.
2/12/2016	4:04 PM	1572 MCDOWELL ROAD	Manhole	1.25	180	YES	Cany	0.00	Grease.
2/16/2016	3:13 PM	137 CLOVER LEAF CIR	Manhole	43.23	410	YES	Town	0.00	Grease.
2/16/2016	4:07 PM	2525 LAKEWARD DR	Manhole	3.38	140	YES	Eubanks	1.72	Grease.
2/17/2016	4:08 PM	160 WINDSOR DR	Ground Surface (defective pipe underground)	1.37	25	NO	Lynch	1.10	Grease.
2/19/2016	10:03 AM	223 DECELLE ST	Cleanout	2.68	420	NO	Town	0.00	Grease.
2/19/2016	2:45 PM	868 NORTH ST	Manhole	2.50	680	YES	Town	0.00	Grease.
2/20/2016	11:26 AM	2928 LAKEWOOD DR	Manhole	2.62	720	YES	Hardy	0.00	Grease.
2/23/2016	8:37 AM	4625 N STATE ST	Manhole	2.77	3,600	YES	Eubanks	1.24	Solids.
2/24/2016	10:23 AM	1039 WOODDELL DR	Manhole	8.80	1,250	YES	Cany	1.43	Grease.
2/27/2016	7:00 PM	4625 N STATE ST	Manhole	1.00	75	YES	Eubanks	0.00	Bye-Pass pump malfunction.
2/28/2016	12:25 PM	868 NORTH ST	Manhole	1.13	360	YES	Town	0.00	Grease.
2/28/2016	1:37 PM	724 RAYMOND ROAD	Manhole	2.00	120	YES	Three Mile	0.00	Grease.
2/29/2016	11:28 AM	200 E AMITE ST	Manhole	2.62	50	YES	Town	0.00	Grease. Rags.

Table 2
City of Jackson, Mississippi
Annual Report No. 3 - March 2014 through February 2016
Pump Station SSOs

Date Began	Time Began	Location	Source	Estimated Duration, Hours	Estimated Volume, Gallons	Reached Waterway	Receiving Water	Rainfall, Inches	Reported Cause
3/16/2014	1:30 AM	4210 CHURCH CIR	Manhole	8.00	150,000	YES	Lynch	8.00	Excessive Flow.
3/17/2014	3:00 PM	6510 OLD CANTON RD COUNTY LINE ROAD	Manhole	3.00	100,000	NO	Pearl	3.00	Pump Station Failure. SSO monitor failure.
3/27/2014	11:30 PM	4210 CHURCH CIR	Manhole	12.00	150,000	YES	Lynch	11.00	Excessive Flow.
3/28/2014	10:00 AM	FRANKLIN D ROOSEVELT DR	Manhole	0.50	100,000	YES	Bogue Chitto	0.50	Excessive Flow.
3/29/2014	1:30 AM	4210 CHURCH CIR	Manhole	2.50	100,000	YES	Lynch	2.50	Excessive Flow.
4/4/2014	7:45 AM	4210 CHURCH CIR	Manhole	4.25	80,000	YES	Lynch	1.12	Excessive Flow.
4/6/2014	7:15 AM	4210 CHURCH CIR	Manhole	21.25	150,000	YES	Lynch	4.64	Excessive Flow.
4/14/2014	5:30 PM	FRANKLIN D ROOSEVELT DR	Manhole	6.48	100,000	YES	Bogue Chitto	2.60	Excessive Flow.
4/14/2014	7:30 PM	4210 CHURCH CIR	Manhole	3.50	100,000	YES	Lynch	2.60	Excessive Flow.
4/28/2014	6:50 PM	4210 CHURCH CIR	Pump Station	4.17	15,000	YES	Lynch	2.00	Excessive Flow.
4/28/2014	7:30 PM	PRESIDENTIAL DR	Manhole	5.50	10,000	YES	Bogue Chitto	2.37	Excessive Flow.
5/28/2014	12:30 AM	1465 SHORT AVE	Manhole	4.00	12,000	YES	Trahon	3.00	Excessive Flow.
5/28/2014	1:00 AM	4210 CHURCH CIR	Manhole	8.00	30,000	NO	Lynch	3.00	Excessive Flow.
6/10/2014	9:30 AM	FRANKLIN D ROOSEVELT DR	Manhole	16.00	25,000	YES	Bogue Chitto	3.00	Excessive Flow.
6/10/2014	10:00 AM	4210 CHURCH CIR	Manhole	3.50	8,000	YES	Lynch	3.00	Excessive Flow.
6/25/2014	6:00 PM	4210 CHURCH CIR	Manhole	2.50	5,000	YES	Lynch	3.00	Excessive Flow.
6/30/2014	12:30 PM	BROADWAY BLVD	Manhole	0.50	2,000	NO	Lynch	0.00	Portable pump discharge like broke at pump fitting.
8/22/2014	3:30 AM	2130 HICKORY DR	Pump Station	2.50	50	YES	Cany	0.00	Power Company (Power Failure).
3/14/2015	5:00 PM	2012 CHADWICK DR	Manhole	0.50	75,000	YES	Cany	2.00	Grease. Pump Station Failure.
3/21/2015	4:15 PM	4058 VENUS AVE	Manhole	3.75	300	NO	Trahon	5.00	Pump Station Failure.
5/24/2015	1:00 PM	1851 FOREST AVE	Pump Station	10.98	42,000	NO	Eubanks	2.50	Pump Station Failure.
5/25/2015	12:00 AM	1851 FOREST AVE	Pump Station	1.50	8,000	NO	Eubanks	2.50	Pump Station Failure.
6/30/2015	11:30 AM	4210 CHURCH CIR	Pump Station	0.25	1,000	YES	Lynch	0.50	Pump Station Failure.

Table 3
City of Jackson, Mississippi
Annual Report No. 3 - March 2014 through February 2016
West Bank Interceptor SSOs

Date Began	Time Began	Location	Source	Estimated Duration, Hours	Estimated Volume, Gallons	Reached Waterway	Receiving Water	Rainfall, Inches	Reported Cause
3/28/2014	1:00 PM	1200 LAKELAND DR	Manhole	3.00	1,800	YES	Pearl	2.03	Excessive Flow.
4/4/2014	7:45 AM	408 S JEFFERSON ST	Manhole	16.25	55,000	YES	Pearl	5.51	Pear River water level is up.
4/5/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	250,000	YES	Pearl	5.51	Pear River water level is up.
4/6/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	250,000	YES	Pearl	5.51	Pear River water level is up.
4/7/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	250,000	YES	Pearl	5.51	Pear River water level is up.
4/8/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	850,000	YES	Pearl	5.51	Pear River water level is up.
4/9/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	850,000	YES	Pearl	5.51	Pear River water level is up.
4/10/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	850,000	YES	Pearl	5.51	Pear River water level is up.
4/11/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	850,000	YES	Pearl	5.51	Pear River water level is up.
4/12/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	850,000	YES	Pearl	5.51	Pear River water level is up.
4/13/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	850,000	YES	Pearl	5.51	Pear River water level is up.
4/14/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	850,000	YES	Pearl	5.51	Pear River water level is up.
4/15/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	850,000	YES	Pearl	5.51	Pear River water level is up.
4/16/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	850,000	YES	Pearl	5.51	Pear River water level is up.
4/17/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	850,000	YES	Pearl	5.51	Pear River water level is up.
4/18/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	850,000	YES	Pearl	5.51	Pear River water level is up.
4/19/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	850,000	YES	Pearl	5.51	Pear River water level is up.
4/20/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	850,000	YES	Pearl	5.51	Pear River water level is up.
4/21/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	850,000	YES	Pearl	5.51	Pear River water level is up.
4/22/2014	12:00 AM	408 S JEFFERSON ST	Manhole	24.00	850,000	YES	Pearl	5.51	Pear River water level is up.
4/23/2014	12:00 AM	408 S JEFFERSON ST	Manhole	6.50	850,000	YES	Pearl	5.51	Pear River water level is up.
6/10/2014	11:07 AM	408 S JEFFERSON ST	Manhole	4.02	10,000	YES	Pearl	2.97	Pear River water level is up.
10/31/2014	3:00:00 AM	2145 HIGHLAND DR	Manhole	4.50	187,000	NO	Pearl	0.00	Bypass Pump failure.
3/21/2015	9:19 AM	1200 LAKELAND DR	Manhole	0.18	Undetermined	NO	Eubanks	2.42	Excessive Flow.
3/21/2015	10:00 AM	2148 RIVERSIDE DR	Manhole	5.00	300	NO	Eubanks	2.42	Excessive Flow.
3/23/2015	6:30 PM	408 S JEFFERSON ST	Manhole	0.33	Undetermined	YES	Pearl	2.72	Excessive Flow.

Table 4
City of Jackson, Mississippi
Annual Report No. 3- March 2014 through February 2016
Prohibited Bypasses

Date Began	Time Began	Location	Source	Estimated Duration, Days	Estimated Volume, Million Gallons	Reached Waterway	Receiving Water	Rainfall, Inches	Reported Cause
03/03/14	11:11 AM	Savanna St WWTP	WWTP	1	16.04	YES	Pearl	0.00	Temporary pumps for West Rankin inflow were unable to keep up. Excess flow entered the storm cell.
03/06/14	2:45 PM	Savanna St WWTP	WWTP	1	21.89	YES	Pearl	0.00	Temporary pumps for West Rankin inflow were unable to keep up. Excess flow entered the storm cell.
03/11/14	10:00 PM	Savanna St WWTP	WWTP	2	13.69	YES	Pearl	0.00	Temporary pumps for West Rankin inflow were unable to keep up. Excess flow entered the storm cell.
03/15/14	9:00 PM	Savanna St WWTP	WWTP	7	116.17	YES	Pearl	1.05	Temporary pumps for West Rankin inflow were unable to keep up. Excess flow entered the storm cell.
03/19/14	6:10 PM	Savanna St WWTP	WWTP	2	5.69	YES	Pearl	0.00	Temporary pumps for West Rankin inflow were unable to keep up. Excess flow entered the storm cell.
03/21/14	7:45 PM	Savanna St WWTP	WWTP	2	9.39	YES	Pearl	0.00	West Rankin pumps unable to keep up with pumping from lagoon to the plant
03/27/14	1:40 AM	Savanna St WWTP	WWTP	29	1,314.85	YES	Pearl	14.12	Heavy rainfall generated influent flows in excess of the mechanical plant's capacity.
05/09/14	3:10 PM	Savanna St WWTP	WWTP	2	26.53	YES	Pearl	2.00	Excessive Flow.
05/30/14	3:00 AM	Savanna St WWTP	WWTP	5	66.78	YES	Pearl	0.23	Excessive Flow.
06/11/14	6:15 AM	Savanna St WWTP	WWTP	2	54.00	YES	Pearl	2.05	Excessive Flow.
12/29/14	12:04 PM	Savanna St WWTP	WWTP	1	28.89	YES	Pearl	1.58	Excessive Flow.
01/04/15	6:45 AM	Savanna St WWTP	WWTP	2	68.47	YES	Pearl	2.10	Heavy rainfall generated influent flow in excess of mechanical plant's capacity.
02/23/15	12:40 PM	Savanna St WWTP	WWTP	13	489.78	YES	Pearl	1.75	Heavy rainfall generated influent flow in excess of mechanical plant's capacity.
03/10/15	11:30 PM	Savanna St WWTP	WWTP	1	421.54	YES	Pearl	4.77	Heavy rainfall generated influent flow in excess of mechanical plant's capacity.
04/19/15	9:45 AM	Savanna St WWTP	WWTP	2	74.86	YES	Pearl	1.24	Heavy rainfall generated influent flow in excess of mechanical plant's capacity.
05/25/15	7:29 AM	Savanna St WWTP	WWTP	4	193.64	YES	Pearl	2.36	Heavy rainfall generated influent flow in excess of mechanical plant's capacity.

Table 4
City of Jackson, Mississippi
Annual Report No. 3- March 2014 through February 2016
Prohibited Bypasses

Date Began	Time Began	Location	Source	Estimated Duration, Days	Estimated Volume, Million Gallons	Reached Waterway	Receiving Water	Rainfall, Inches	Reported Cause
05/31/15	5:05 PM	Savanna St WWTP	WWTP	3	84.65	YES	Pearl	1.96	Heavy rainfall generated influent flow in excess of mechanical plant's capacity.
07/05/15	7:45 PM	3810 I 55 S	WWTP	3	77.48	YES	Pearl	1.23	Heavy rainfall generated influent flow in excess of mechanical plant's capacity.
11/07/15	10:00 AM	3810 I 55 S	WWTP	5	115.95	YES	Pearl	5.50	Heavy rainfall generated influent flow in excess of mechanical plant's capacity.
12/22/15	7:00 AM	3810 I 55 S	WWTP	9	261.81	YES	Pearl	1.30	Heavy rainfall generated influent flow in excess of mechanical plant's capacity.
01/09/16	11:45 AM	3810 I 55 S	WWTP	3	42.02	YES	Pearl	1.31	Heavy rainfall generated influent flow in excess of mechanical plant's capacity.
01/22/16	6:00 AM	3810 I 55 S	WWTP	3	95.33	YES	Pearl	2.00	Heavy rainfall generated influent flow in excess of mechanical plant's capacity.
01/27/16	10:50 AM	3810 I 55 S	WWTP	24	873.27	YES	Pearl	7.70	Heavy rainfall generated influent flow in excess of mechanical plant's capacity.