

Office of the Mayor
Tony T. Yarber, Mayor



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April 30, 2015

Chief, Environmental Enforcement Section
Environment and National Resources Division
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-1-1-09841

Brad Ammons
Environmental Engineer
Clean Water Enforcement Branch
Municipal & Industrial Enforcement Section
U.S. EPA Region 4
61 Forsyth St., SW
Atlanta, GA 30303

Karl Fingerhood
Environmental Enforcement Section
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611

RE: City of Jackson, Mississippi, EPA Consent Decree
2nd Annual Report, March 2014 through February 2015
8th Quarterly Report, January 2015 through March 2015

Dear Gentlemen:

Attached please find Annual Report No. 2 for the period of March 2014 through February 2015 and Quarterly Report No. 8 for the period of January 2015 through March 2015. The reports were developed and submitted by the City in accordance with the EPA Consent Decree dated March 1, 2013 and your correspondence of May 31, 2013.

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 evaluated 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.

Sincerely,

Tony T. Yarber
Mayor

cc: Les Herrington, P.E., Mississippi Department of Environmental Quality
Gus McCoy, Chief Administrative Officer
Monica Joiner, City Attorney
Kishia L. Powell, P.E., Director, Department of Public Works
Mary D. Carter, Deputy Director of Public Works
Terry Williamson, Consent Decree Manager
Public Depository, Eudora Welty Public Library



QUARTERLY REPORT NO. 8

JANUARY 2015 THROUGH MARCH 2015

Department of Public Works
Wastewater Infrastructure Redevelopment Program



APRIL 30, 2015

City of Jackson
Wastewater Infrastructure Redevelopment
Program

Quarterly Report No. 8
January 2015 through March 2015

April 30, 2015

Prepared for:

City of Jackson
Department of Public Works
P.O. Box 17
Jackson, MS 39205-0017

Prepared by:

WEI/AJA LLC
143A LeFleurs Square
Jackson, MS 39211

City of Jackson, Mississippi

Annual Report No. 2

March 2014 through February 2015

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.



774/2015 GIM CAO 7/15/15
Tony T. Yarber
Mayor

4/30/15
Date

K. Powell
Kishia L. Powell, Director
Department of Public Works

28 April 15
Date

Quarterly Report No. 8

January 2015 through March 2015

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1.0 Introduction

1.1 Consent Decree Overview

On March 1, 2013, the U.S. District Court for the Southern District of Mississippi entered a Consent Decree (CD) agreed to by the City of Jackson, Mississippi (City), U.S. Environmental Protection Agency (EPA), and the Mississippi Department of Environmental Quality (MDEQ,) regarding the City's wastewater collection and treatment system. 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 (a) set forth in the CD.

1.3 Consent Decree Requirements for Quarterly Report

As stated in the Consent Decree Section IX ¶ 57 (a), the Quarterly Report shall be submitted beginning thirty (30) Days after the first full three (3)-month period following the Date of Entry of this Consent Decree, and thirty (30) Days after each subsequent three (3)-month period until termination of the Consent Decree and shall contain the following, at a minimum:

Quarterly Reports. Beginning thirty (30) Days after the first full three (3) month period following the Date of Entry of this Consent Decree, and thirty (30) Days after each subsequent three (3)-month period thereafter until termination of the Consent Decree, the City shall submit to EPA for review and approval a Quarterly Report that shall include the following:

- (i) the date, time, location, source, estimated duration, estimated volume, receiving water (if any), and cause of all SSOs occurring in the applicable three (3)-month period in a tabulated electronic format; and
- (ii) (ii) the date, time, estimated duration, estimated volume, and cause of all Prohibited Bypasses occurring in the applicable three (3)-month period in a tabulated electronic format.

The listing and graphical summaries of the SSOs and prohibited bypasses for October - December 2014 are presented in Section 2 of this report.

1.4 Other Requirements for Quarterly Report

EPA approved the CMOM Training Program, subject to comments, on April 25, 2014. One comment requested that the City include in its quarterly reports its efforts to fill the Training Coordinator position.

A status update for filling the Training Coordinator position is included in Section 3 of this report.

2.0 Summary of SSOs and Prohibited Bypasses

SSOs are divided into three elements of the wastewater system: the collection system, pump stations, and West Bank Interceptor. Prohibited bypasses at the Savanna Street Wastewater Treatment Facility (SSWWTF), in periods when they occur, are listed separately.

2.1 Collection System SSOs

Table 1 lists SSOs in the collection system for January through March 2015. Each day of a multiple day event is considered as a separate SSO, in accordance with penalties in the CD.

Figure 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

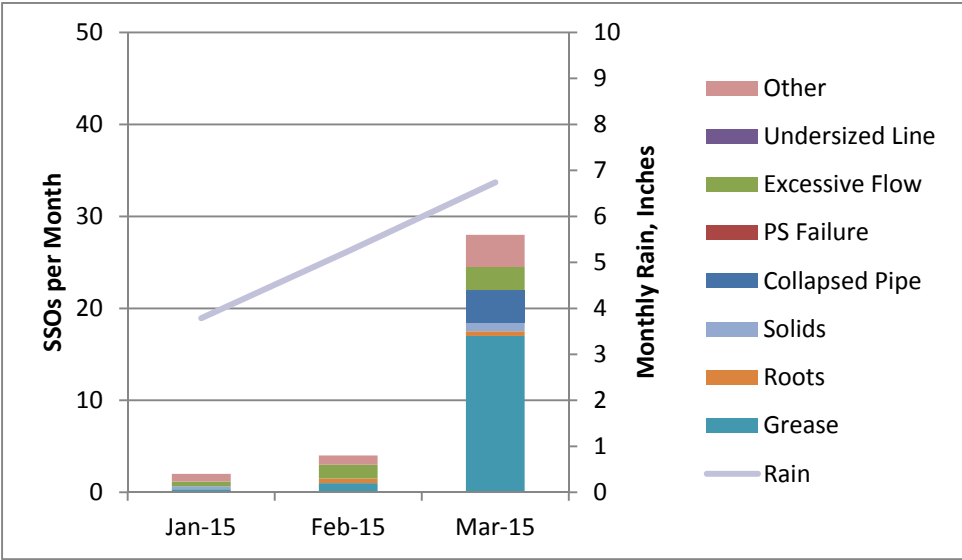
Some SSO events had multiple causes. In these instances, each cause was assigned a fractional value, adding up to a total of one cause for each event.

Figure 2 shows percentages of collection system SSOs for the quarter by cause. **Figure 3** shows total volume of SSOs for each month. Volumes are plotted on a logarithmic scale because of the large monthly variations. **Figure 4** shows total duration of SSOs for each month.

Table 1
City of Jackson, Mississippi
Quarterly Report No. 8 - January 2015 through March 2015
Collection System SSOs

Date Began	Time Began	Location	Source	Estimated Duration, Hours	Estimated Volume, Gallons	Receiving Water	Reported Cause
1/20/2015	4:00 PM	654 SPRYFIELD ROAD	Cleanout	0.50	50	Cany	Grease. Solids. Choked main line.
1/22/2015	7:05 PM	1103 MCDOWELL CIR	Cleanout	0.62	25	Hardy	Excessive Flow. Rain water.
2/4/2014	8:30 AM	6013 MCRAVEN ROAD	Manhole	1.50	1,300	Bakers	Force main pipe break.
2/5/2015	9:30 AM	2390 GREENWAY DR	Manhole	1.50	1,100	Cany	Grease. Roots.
2/25/2015	3:53 PM	503 SPRINGFIELD CIR	Manhole	0.38	5,500	Lynch	Excessive Flow.
2/25/2015	4:19 PM	1231 CORINTH ST	Manhole	0.72	3,380	Lynch	Grease. Excessive Flow.
3/9/2015	11:35 AM	764 BROADMOOR DR	Other	0.58	1,180	Eubanks	Grease.
3/9/2015	2:15 PM	240 BRIARWOOD DR	Cleanout	0.42	9	Hanging Moss	Grease.
3/9/2015	1:05 PM	2227 E MANOR DR	Cleanout	0.32	50	Hanging Moss	Grease.
3/9/2015	4:05 PM	3826 REDBUD ROAD	Cleanout	0.35	75	Eastover	Grease.
3/9/2015	3:24 PM	207 HOUSTON AVE	Cleanout	3.17	75	Lynch	Choked main (Rain) water.
3/10/2015	8:54 AM	2014 EDWARD LANE	Manhole	2.85	5,560	Town	Collapsed Pipe. Main line is broke down at this location.
3/10/2015	2:47 PM	W NORTHSIDE DR BOLING ST	Manhole	1.47	100	Town	Grease.
3/11/2015	8:54 AM	2013 EDWARD LANE	Manhole	2.85	5,560	Town	Collapsed Pipe. City main line is broke down at this location.
3/13/2015	2:15 PM	I 55 N CULLEY DR	Ground Surface (defective pipe underground)	1.82	3,380	Hanging Moss	Grease. Collapsed Pipe.
3/13/2015	12:50 AM	BELL CT W BELL ST	Manhole	0.12	4,480	Town	Excessive Flow.
3/15/2015	1:15 PM	716 W MONUMENT ST	Manhole	1.13	100	Town	Grease.
3/16/2015	12:15 PM	475 BROWNING DR	Cleanout	1.75	50	Bakers	Grease.
3/18/2015	3:00 PM	1715 SAINT MARY ST	Cleanout		200	Belhaven	Collapsed Pipe.
3/20/2015	4:35 PM	1723 NORTHWOOD CIR	Cleanout	0.63	10	Hanging Moss	Grease.
3/21/2015	1:55 PM	1235 CORINTH ST	Manhole	1.60	200	Lynch	Excessive Flow. Rain Water.
3/21/2015	5:36 PM	5104 ANDOVER DR	Manhole	0.77	150	Lynch	Grease.
3/21/2015	5:52 PM	448 COOPER ROAD	Manhole	0.80	3	Cany	Solids.
3/21/2014	6:35 PM	5140 QUEEN ELEANOR LANE	Manhole	0.25	200	Lynch	Excessive Flow.
3/23/2015	6:09 PM	319 QUEEN JULIANNA LANE	Manhole	4.68	75	Lynch	Grease.
3/24/2015	1:16 PM	721 KIRKLEY DR	Manhole	0.73	150	Eubanks	Grease.
3/24/2015	5:22 PM	3841 CALIFORNIA AVE	Cleanout	1.07	20	Town	Grease.
3/25/2015	12:51 PM	362 RIDGEWAY ST	Ground Surface (defective pipe underground)	0.37	3	Town	Collapsed Pipe.
3/25/2015	7:20 PM	JEFFERSON ST BELLEVUE PL	Manhole	1.35	150	Belhaven	Grease.
3/26/2015	6:13 PM	429 PINE RIDGE ROAD	Cleanout	0.22	2	Eubanks	Grease. Roots.
3/27/2015	10:15 AM	4113 W CAPITOL ST	Cleanout	0.37	4	Lynch	Grease.
3/27/2015	12:52 PM	BOYD ST NORTH ST	Manhole	2.08	300	Town	Grease.
3/30/2015	9:00 AM	1765 SHADY LANE	Other	1.50	30	Lynch	(Human Error) Sewer main torn out by water main repair.
3/30/2015	12:37 PM	2315 TIMBER CROSSING ROAD	Manhole	1.38	150	Cany	Grease.

Figure 1: Collection System SSOs by Cause



0.8	1.0	3.5	Other
0.0	0.0	0.0	Undersized Line
0.5	1.5	2.5	Excessive Flow
0.0	0.0	0.0	PS Failure
0.0	0.0	3.5	Collapsed Pipe
0.3	0.0	1.0	Solids
0.0	0.5	0.5	Roots
0.3	1.0	17.0	Grease
2.0	4.0	28.0	Total

Figure 2: Percentage of Collection System SSOs by Cause

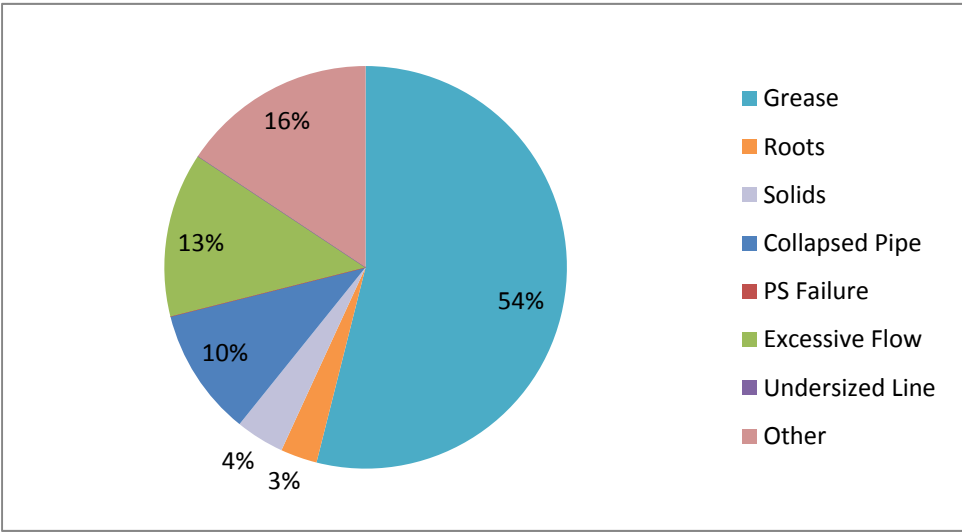


Figure 3: Collection System SSO Volume

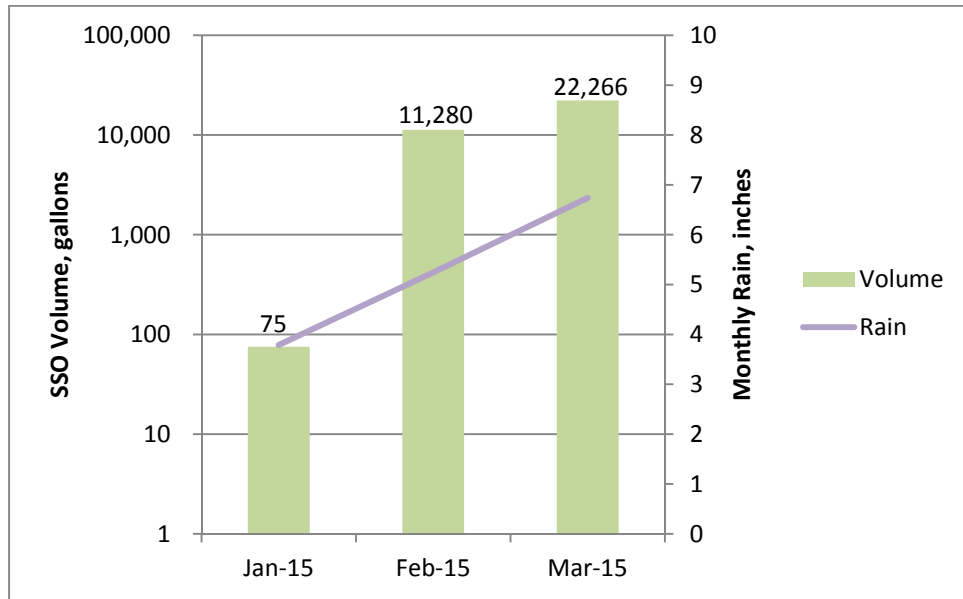
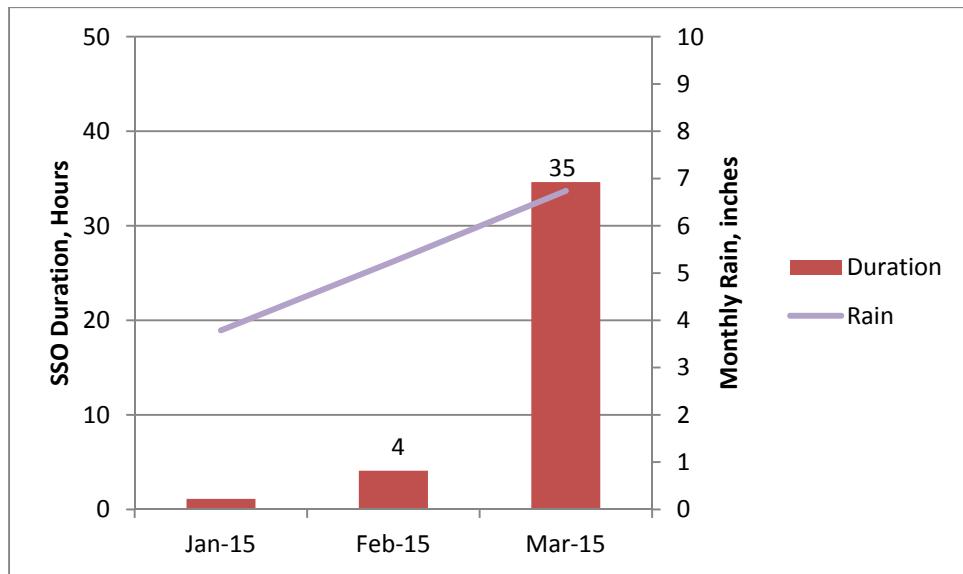


Figure 4: Collection System SSO Duration



2.2 Pump Station SSOs

Table 2 lists pump station SSOs for the quarter. No SSOs were reported in January or February.

Figure 5 shows pump station SSO events by month by reported cause, as listed above, as well as monthly rainfall.

Figure 6 shows percentage of SSOs by cause for the quarter. Note that one SSO had two causes; each cause was computed as one-half to determine the percentage.

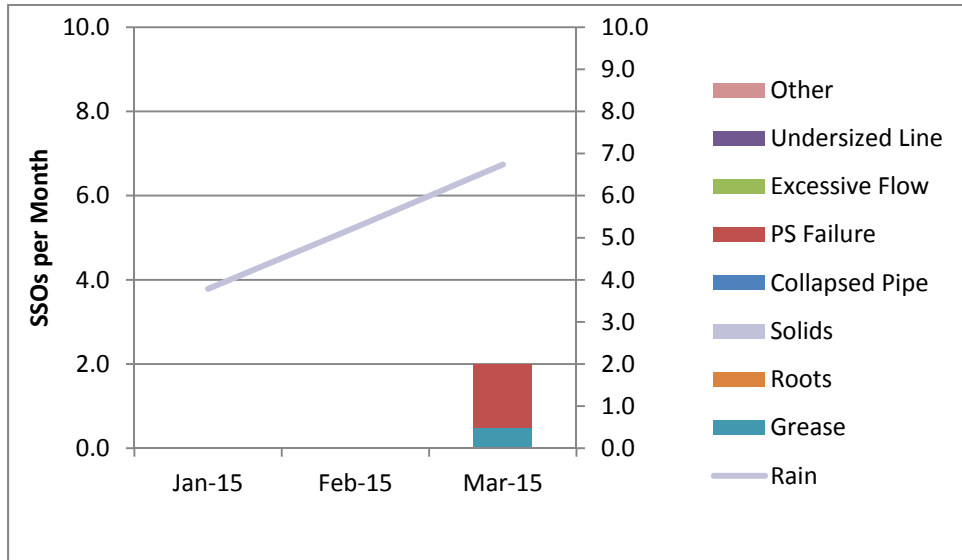
Figure 7 logarithmically plots total volume of pump station SSOs for each month, along with monthly rainfall.

Figure 8 shows total duration of pump station SSOs for each month.

Table 2
City of Jackson, Mississippi
Quarterly Report No. 8 - January 2015 through March 2015
Pump Station SSOs

Date Began	Time Began	Location	Source	Estimated Duration, Hours	Estimated Volume, Gallons	Receiving Water	Reported Cause
3/14/2015	5:00 PM	2012 CHADWICK DR	Manhole	0.50	75,000	Cany	Grease. Pump Station Failure.
3/21/2015	5:00 PM	4058 VENUS AVE	Manhole	3.00	300	Trahon	Pump Station Failure.

Figure 5: Pump Station SSOs by Cause



0.0	0.0	0.0	Other
0.0	0.0	0.0	Undersized Line
0.0	0.0	0.0	Excessive Flow
0.0	0.0	1.5	PS Failure
0.0	0.0	0.0	Collapsed Pipe
0.0	0.0	0.0	Solids
0.0	0.0	0.0	Roots
0.0	0.0	0.5	Grease
0.0	0.0	2.0	Total

Figure 6: Percentage of PS SSOs by Cause

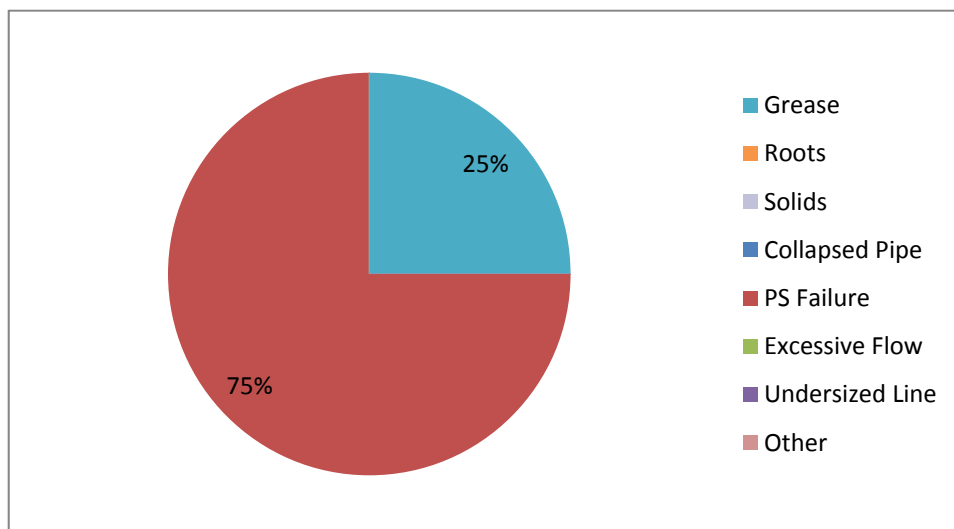


Figure 7: Pump Station SSO Volume

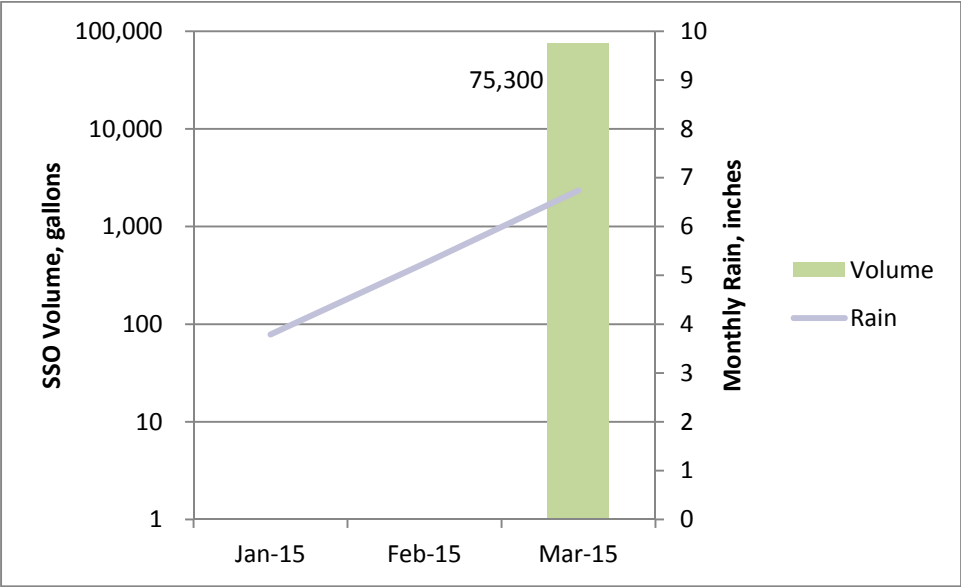
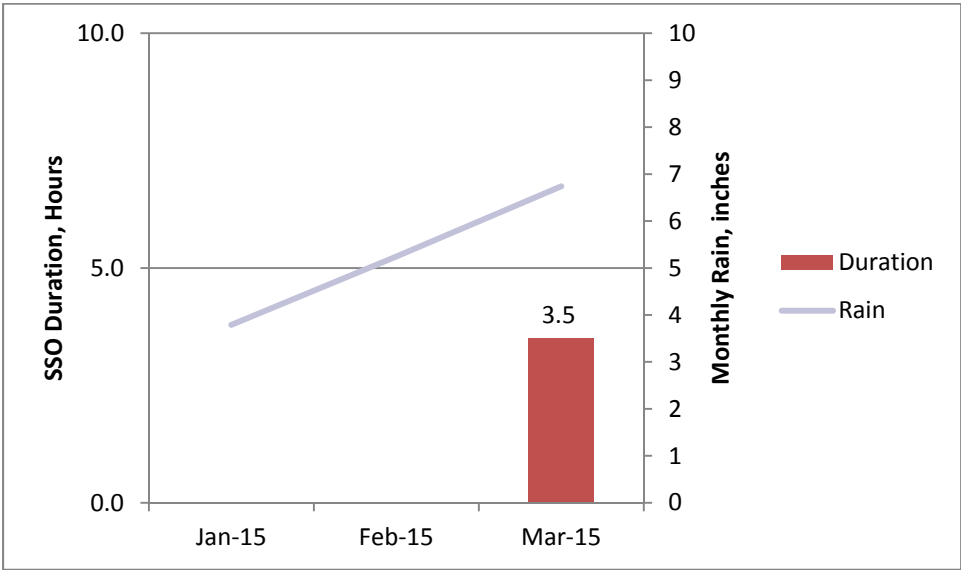


Figure 8: Pump Station SSO Duration



2.2 West Bank Interceptor SSOs

Table 3 lists SSOs in the West Bank Interceptor (WBI) for the quarter. No SSOs were reported in January or February.

Figure 9 shows WBI SSO events by month by reported cause, as listed above, as well as monthly rainfall. **Figure 10** plots SSOs against average and maximum stages of the Pearl River for each month. Gage measurement shown is from the USGS gage at US Highway 80.

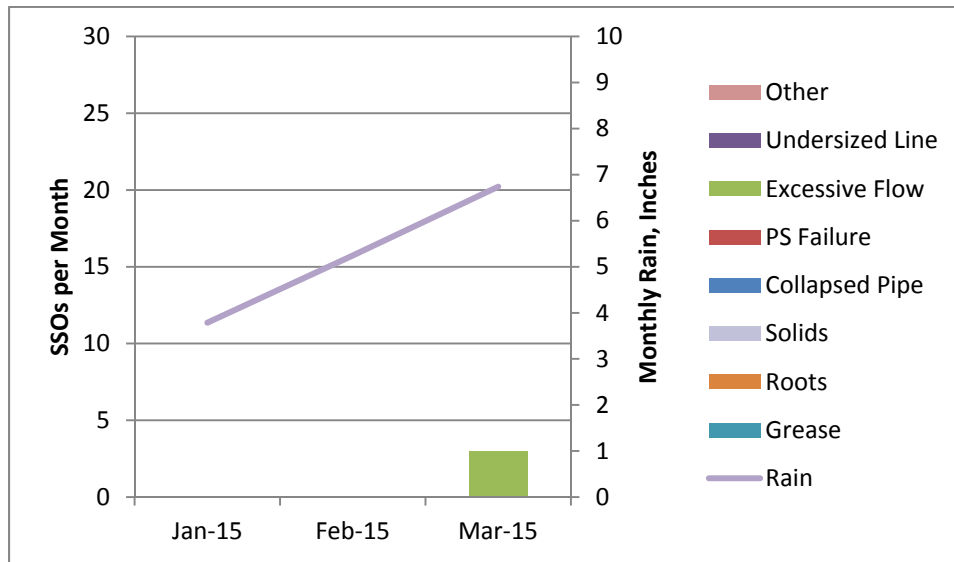
Figures 11 and 12 logarithmically plot total volume of SSOs for each month, along with monthly rainfall and river stages.

Figure 13 shows total duration of SSOs for each month with rainfall. **Figure 14** plots SSO duration and the average and maximum monthly river stages.

Table 3
City of Jackson, Mississippi
Quarterly Report No. 8 - January 2015 through March 2015
West Bank Interceptor SSOs

Date Began	Time Began	Location	Source	Estimated Duration, Hours	Estimated Volume, Gallons	Receiving Water	Reported Cause
3/21/2015	9:19 AM	1200 LAKELAND DR	Manhole	0.18	Undetermined	Eubanks	Excessive Flow.
3/21/2015	10:00 AM	2148 RIVERSIDE DR	Manhole	5.00	300	Eubanks	Excessive Flow.
3/23/2015	6:30 PM	408 S JEFFERSON ST	Manhole	0.33	Undetermined	Pearl	Excessive Flow.

Figure 9: West Bank Interceptor SSOs by Cause vs. Rainfall



0.0	0.0	0.0	Other
0.0	0.0	0.0	Undersized Line
0.0	0.0	3.0	Excessive Flow
0.0	0.0	0.0	PS Failure
0.0	0.0	0.0	Collapsed Pipe
0.0	0.0	0.0	Solids
0.0	0.0	0.0	Roots
0.0	0.0	0.0	Grease
0.0	0.0	3.0	Total

Figure 10: West Bank Interceptor SSOs by Cause vs. River Stages

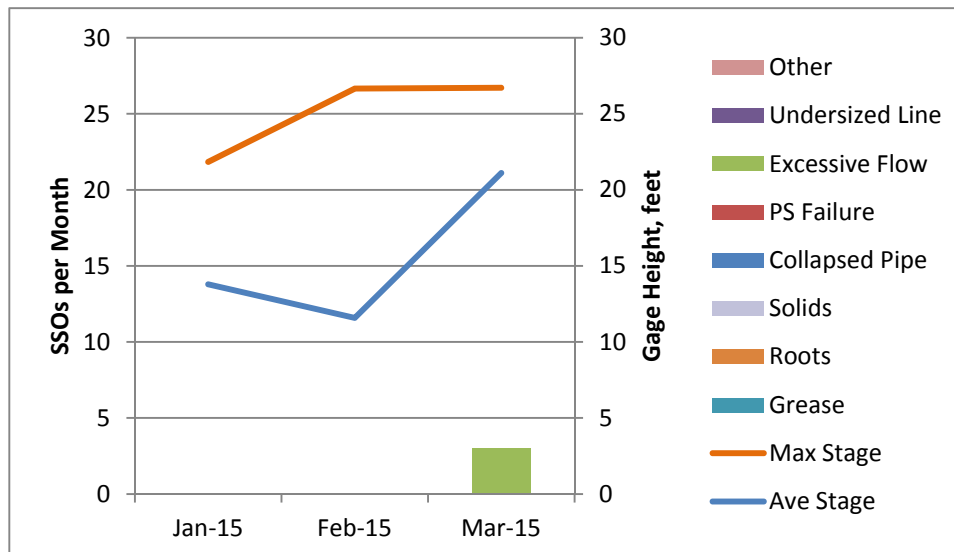


Figure 11: West Bank Interceptor SSO Volume vs. Rainfall

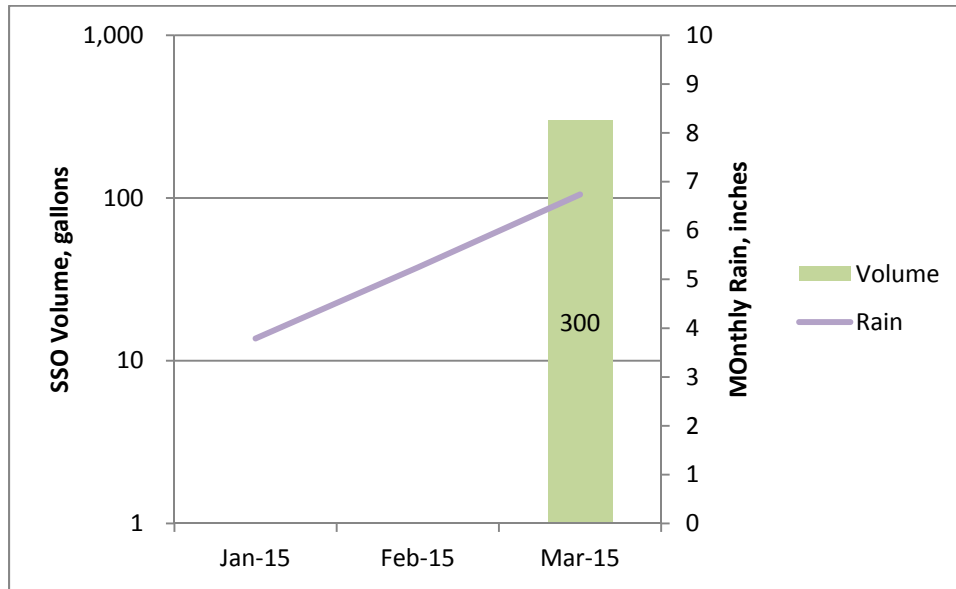


Figure 12: West Bank Interceptor SSO Volume vs. River Stages

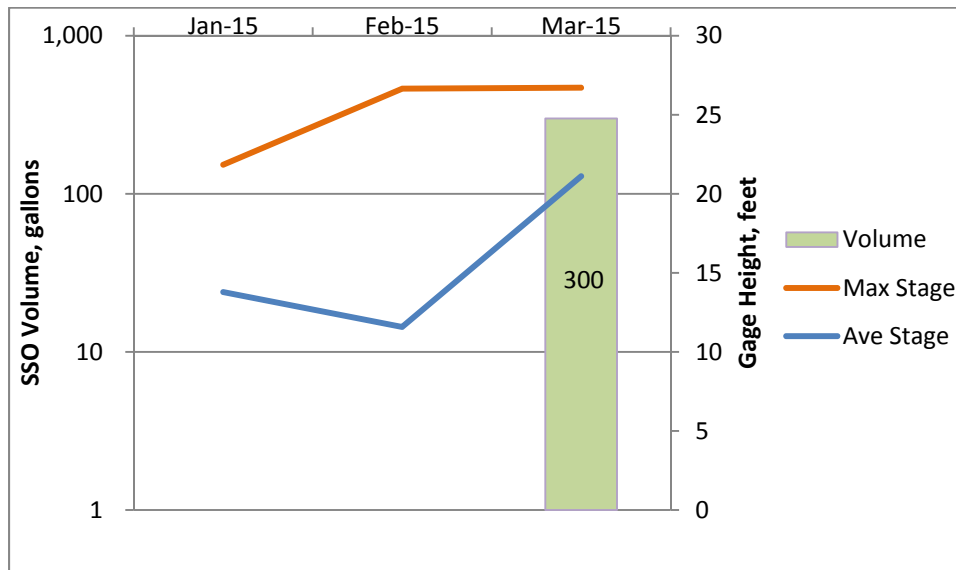


Figure 13: West Bank Interceptor SSO Duration vs. Rainfall

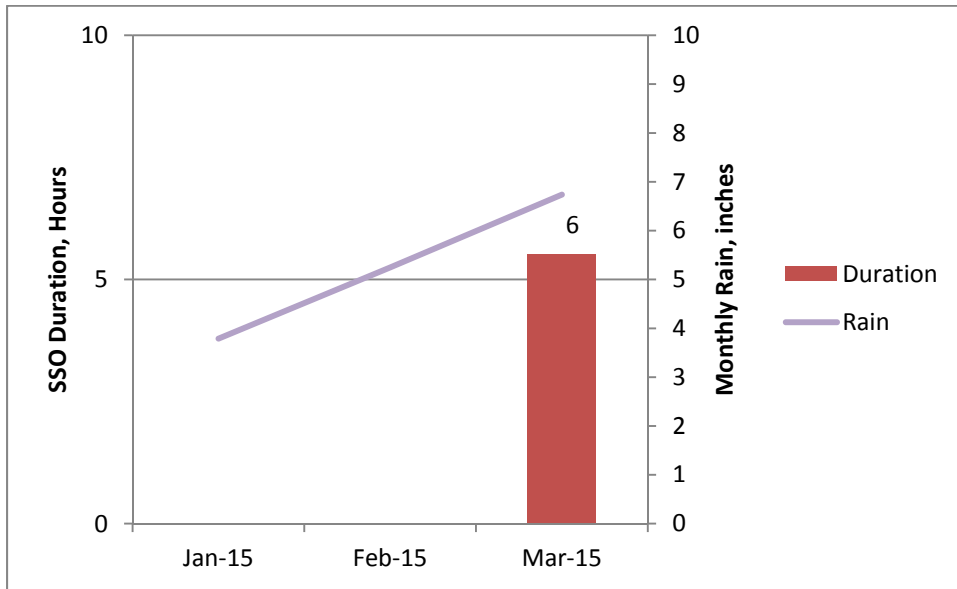
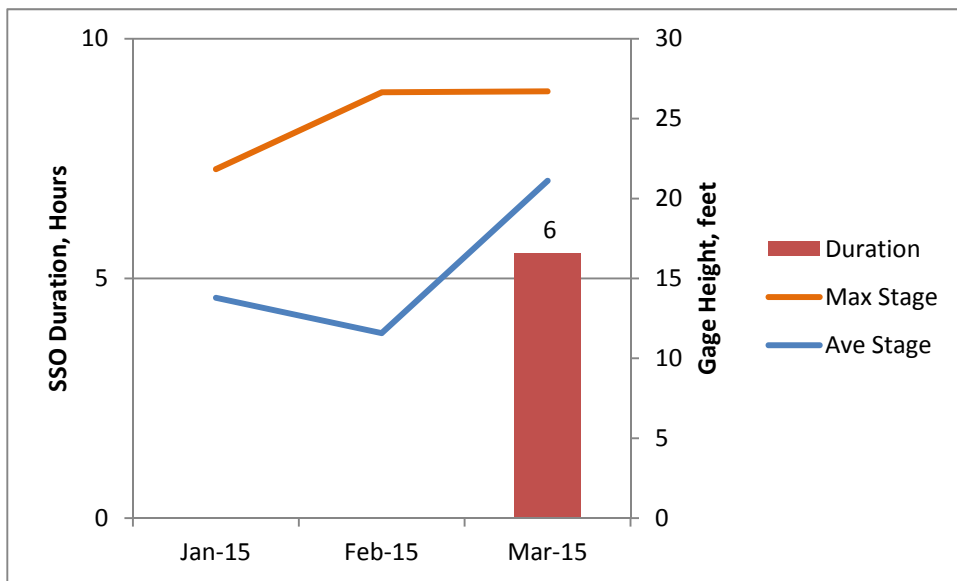


Figure 14: West Bank Interceptor SSO Duration vs. River Stages



2.4 Prohibited Bypasses

Table 3 lists prohibited bypasses at the wastewater treatment plants for the quarter. Unlike SSOs, each event is considered as one bypass from the day it begins to the day it ends. Only the Savanna Street plant had prohibited bypasses.

Figure 9 shows prohibited bypass events by month by reported cause, as listed above, as well as monthly rainfall. **Figure 10** plots prohibited bypasses against average and monthly Pearl River stages. One bypass began in February and continued until March. This bypass is included in the month it ended, March.

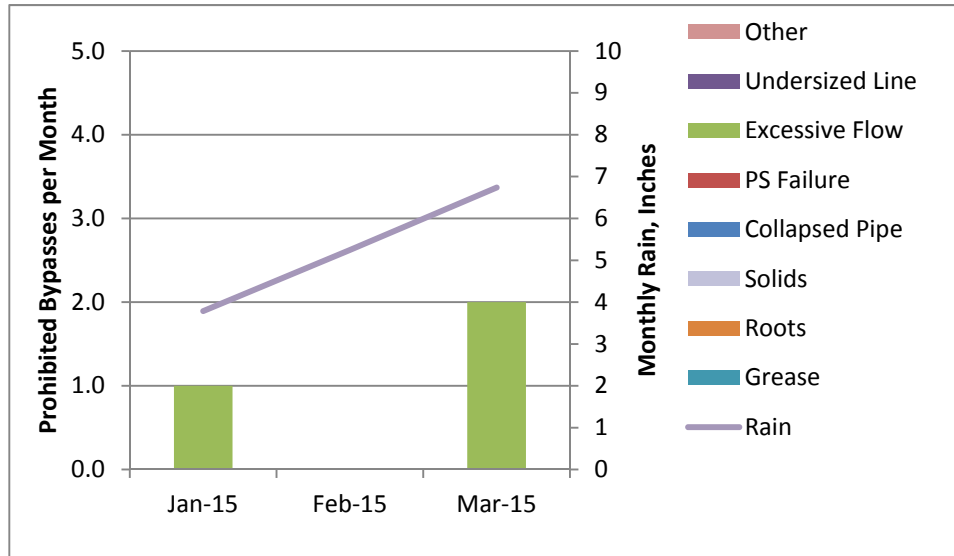
Figure 11 shows total volume of prohibited bypasses for each month plotted logarithmically, along with monthly rainfall. **Figure 12** shows volume and river stages.

Figures 13 and 14 plot total duration for the month. Note that duration of prohibited bypasses is plotted in days.

Table 4
City of Jackson, Mississippi
Quarterly Report No. 8 - January 2015 through March 2015
Prohibited Bypasses

Date Began	Time Began	Location	Source	Estimated Duration, Days	Estimated Volume, Million Gallons	Receiving Water	Reported Cause
01/04/15	6:45 AM	Savanna St WWTP	WWTP	2	68.47	Pearl	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	Pearl	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	Pearl	Heavy rainfall generated influent flow in excess of mechanical plant's capacity.

Figure 9: Prohibited Bypasses by Cause vs. Rainfall



0	0	0	Other
0	0	0	Undersized Line
1	0	2	Excessive Flow
0	0	0	PS Failure
0	0	0	Collapsed Pipe
0	0	0	Solids
0	0	0	Roots
0	0	0	Grease
1	0	2	Total

Figure 10: Percentage of Prohibited Bypasses by Cause vs. River Stage

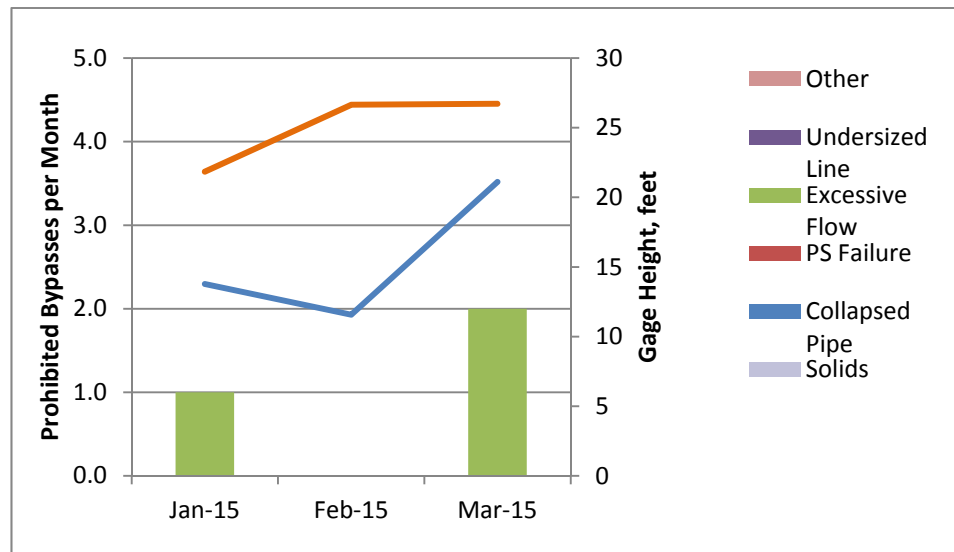


Figure 11: Prohibited Bypass Volume vs. Rainfall

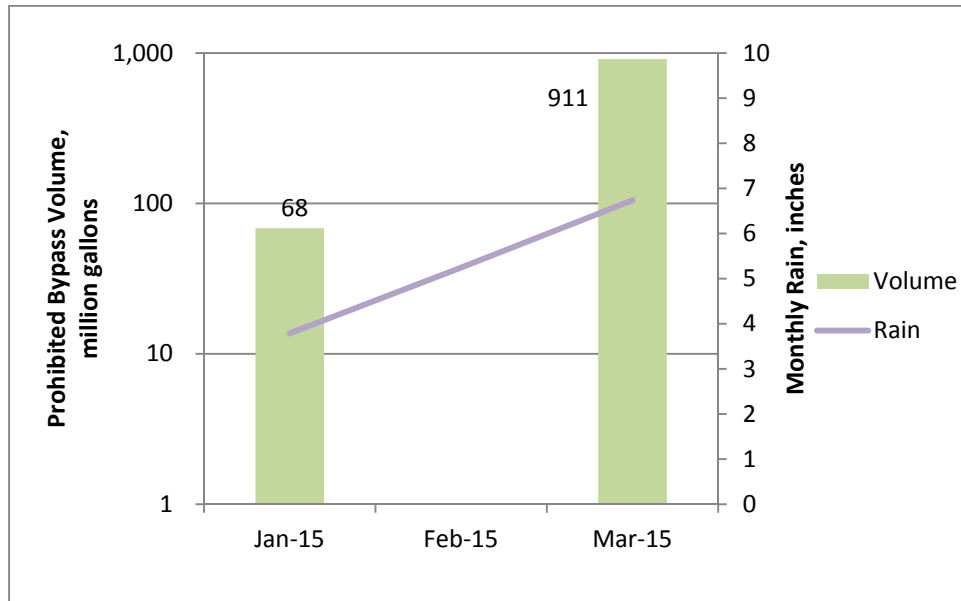


Figure 12: Prohibited Bypass Volume vs. River Stage

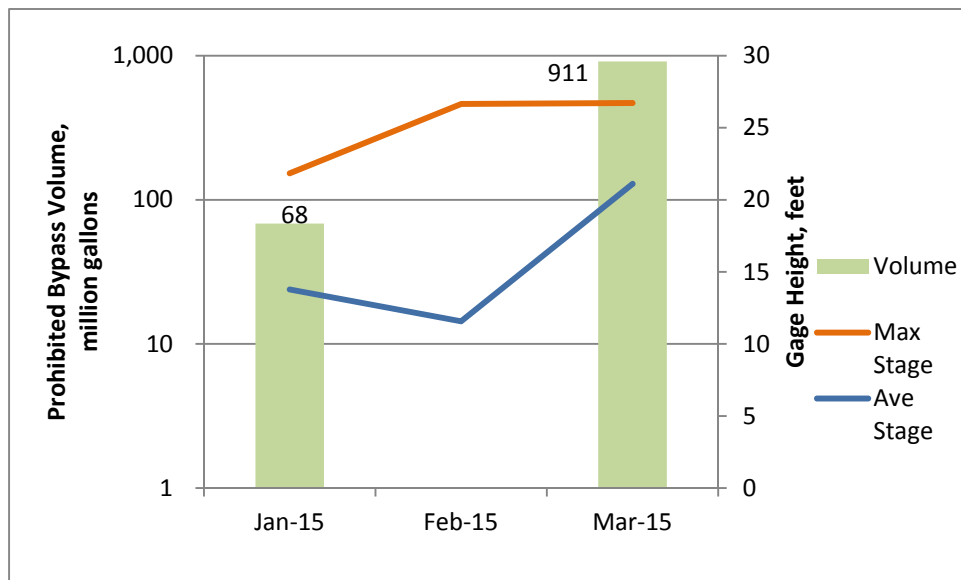


Figure 13: Prohibited Bypass Duration vs. Rainfall

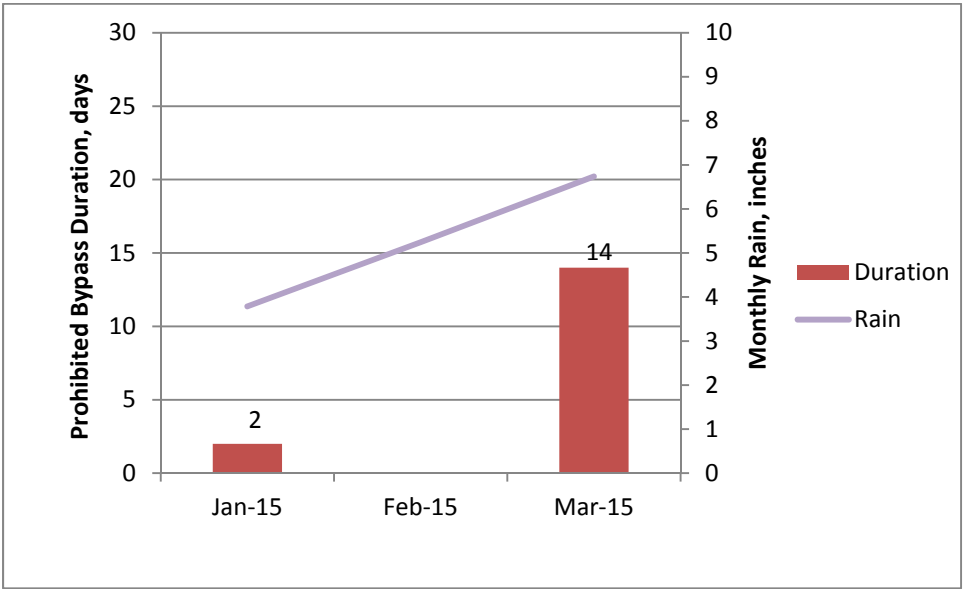
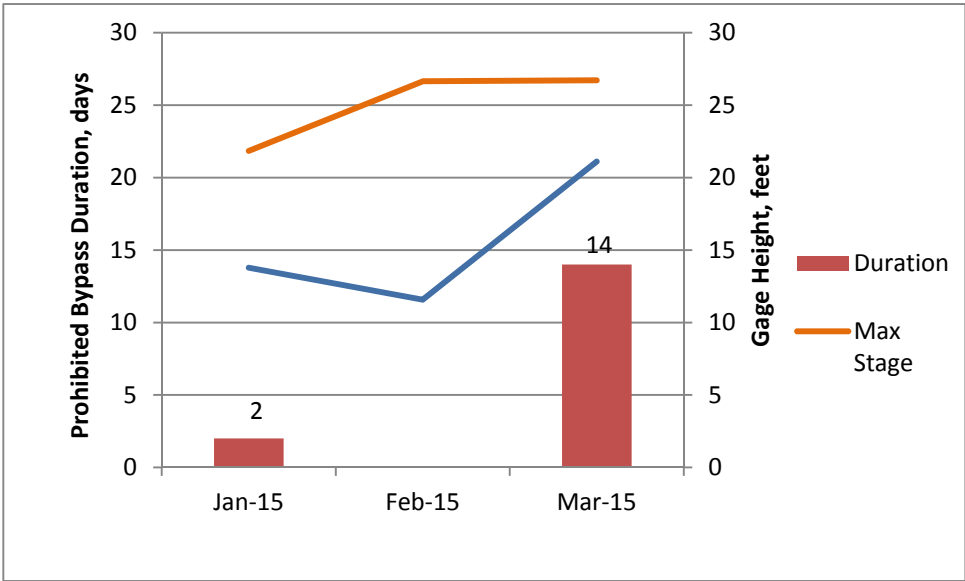


Figure 14: Prohibited Bypass Volume vs. River Stage



3.0 Training Coordinator

3.1 Progress Update

After reviewing the qualifications and duties for the Training Coordinator position, the Department of Public Works has determined that the qualifications and duties of a training coordinator should be combined with a Department of Human Resources position to provide human resources support and department-wide training, in addition to the training coordination required by the City's approved Training Plan. Until the Department of Public Works identifies a viable candidate to serve as the Training Coordinator, a member of the Consent Decree program management team will serve in this capacity to move the program forward.

3.2 Next steps

- The Department of Public Works will confirm the salary range and all responsibilities for this position.
- The Department of Public Works will move forward with the City hiring process to fill the position.