The City of

JACKSON

QUARTERLY REPORT NO. 15

OCTOBER 2016 THROUGH DECEMBER 2016

Department of Public Works
Consent Decree Program

City of Jackson
Consent Decree Program

Quarterly Report No. 15
October 2016 through December 2016

April 7, 2016

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City of Jackson, Mississippi
Quarterly Report No. 15
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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 T. Yarber
Mayor

4.11.17
Date

Jerriot Smash, Interim Director
Department of Public Works

07.APR.17
Date

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Contents

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's Consent Decree Manager, Terry Williamson, compiled this Quarterly Report from information provided by the Sewer Maintenance Division of the Department of Public Works, and United Water Service of Mississippi, LLC, the City's former contract operator for its wastewater treatment facilities and lift stations through November 2016 and Veolia Water North America – South, LLC., 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) 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 through December 2016 are presented in Section 2 of this report.

2.0 Summary of SSOs and Prohibited Bypasses

SSOs are divided into three elements of the wastewater system: the collection system, West Bank Interceptor, and pump stations. Prohibited Bypasses can occur at any of the City's three wastewater treatment facilities.

2.1 Collection System SSOs

Table 1 lists SSOs in the collection system for October through December 2016. Each day of a multiple day event is considered as a separate SSO, in accordance with the determination of penalties according to the CD.

Figure 1 shows SSO events by month as a result of the following reported causes:

- Grease
- Roots
- Solids
- Collapsed Pipe
- Other

Previously, other causes of SSOs listed were "Pump Station Failure," "Excessive Flow," and "Undersized Line." Since none of these causes occurred during this period, they have been omitted from the graphical presentation.

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

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 or volume of SSOs.

Table 1
Collection System SSOs

Date Began	Time Began	Date Ended	Estimated Duration, hours	Location		Overflow Source	Est Vol., gallons	Waters of State	Sewershed	Rainfall, inches	Reported Cause
10/2/2016	12:19 AM	10/2/2016	1.50	5055	OLD CANTON RD.	Manhole	20	Yes	Hanging Moss	0.00	Solids
10/4/2016	3:07 PM	10/4/2016	0.36	2424	BAILEY AVE	Manhole	300	Yes	Town	0.00	Collapsed Pipe
10/4/2016	12:01 PM	10/4/2016	0.58	904	E. FORTIFICAITON ST	Ground Surface (defective pipe underground)	420	Yes	Town	0.00	Grease
10/9/2016	9:40 AM	10/9/2016	5.28	1734	CASTEEL DR.	Cleanout	160	No	Lynch	0.00	Collapsed Pipe
10/11/2016	7:00 AM	10/11/2016	2.30	544	WINWOOD DR.	Manhole	2,000	No	Caney	0.00	Grease & Roots
10/19/2016	10:28 AM	Cont.*	Cont.*	5866	KINDER DR.	Cleanout		No	Purple	0.00	Collapsed Pipe
10/19/2016	1:32 PM	Cont.*	Cont.*	1135	MARTINGALE RD.	Ground Surface (defective piple underground)		Yes	Eubanks	0.00	Collapsed Pipe
10/23/2016	11:11 AM	10/23/2016	0.45	5055	OLD CANTON RD.	Manhole	75	Yes	Hanging Moss	0.00	Soilds
10/28/2016	11:09 AM	Cont.*	Cont.*	5028	OLD CANTON RD.	Manhole		Yes	Hanging Moss	0.00	Soilds
10/25/2016	3:53 PM	Cont.*	Cont.*	1717	W. CAPITOL ST.	Ground Surface (defective pip undergroung)/Other		Yes	Town	0.00	Other (Undetermined)
10/25/2016	2:05 PM	10/25/2016	1.02	904	E. FORTIFICAITON ST	Ground Surface (defective pipe underground)/Other	320	Yes	Town	0.00	Other (Undetermined)
10/25/2016	6:15 PM	10/25/2016	2.06	964	COMBS ST.	Cleanout/Other	1,500	No	Hardy	0.00	Soilds
10/25/2016	11:50 AM	10/25/2016	0.40	228	FACTORY ST.	Other/Storm Drain	150	Yes	Unk	0.00	Grease/Other
10/26/2016	3:08 PM	10/26/2016	3.43	4265	N. STATE ST.	Ground Surface (defective pipe underground)	370	Yes	Town	0.00	Soilds
10/27/2016	12:00 PM	10/27/2016	1.45	1135	MARTINGALE RD.	Ground Surface (defective pipe underground)	600	No	Eubanks	0.00	Collapsed Pipe
10/27/2016	6:40 PM	10/27/2016	1.50	129	GLENSTONE CIR.	Manhole	500	No	Caney	0.00	Grease
10/28/2016	5:52 PM	10/28/2016	0.29	1502	COX ST.	Ground Surface (defective piple underground)	800	No	Lynch	0.00	Collapsed Pipe
10/30/2016	2:15 PM	10/30/2016	3.00	4607	CHURCHILL DR.	Ground Surface (defective piple underground)	480	Yes	Eubanks	0.00	Soilds
11/3/2016	10:13 AM	11/3/2016	2.19	847	WOODBURY RD	Cleanout	60	No	Hanging Moss	0.00	Soilds
11/4/2016	12:34 PM	11/4/2016	1.43	3845	DOGWOOD DR.	Cleanout	130	Yes	Eastover	0.00	Soilds

Table 1
Collection System SSOs

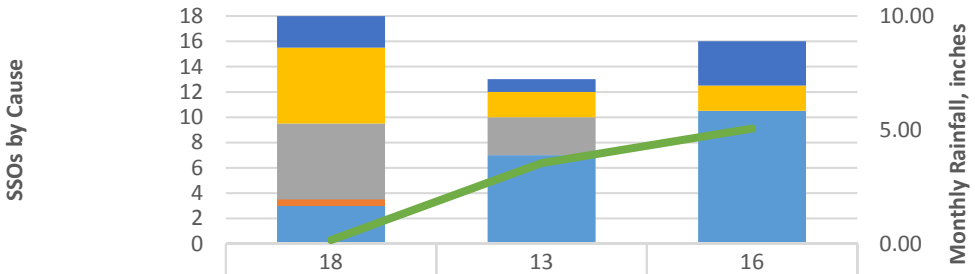
Date Began	Time Began	Date Ended	Estimated Duration, hours	Location		Overflow Source	Est Vol., gallons	Waters of State	Sewershed	Rainfall, inches	Reported Cause
11/4/2016	4:45 PM	11/4/2016	1.15	172	E. WOODCREST DR.	Ground Surface (defective piple underground)	210	Yes	Hardy	0.00	Grease
11/5/2016	9:13 AM	11/5/2016	1.05	844	COMBS ST.	Manhole	260	Yes	Hardy	0.00	Grease
11/8/2017	9:52 AM	11/8/2016	2.01	5028	Old Canton Road	Ground Surface (defective pipe underground)	360	Yes	Hanging Moss	0.19	Solids
11/8/2016	3:20 PM	11/8/2016	2.25	6130	I-55 FRONTAGE RD.	Manhole	540	Yes	Purple	0.19	Grease
11/12/2016	10:50 AM	11/12/2016	1.54	2250	MONACO ST.	Cleanout	50	No	Hardy	0.00	Grease
11/22/2016	4:31 PM	11/22/2016	0.53	1645	BLAIR ST.	Cleanout	160	Yes	Town	0.00	Grease
11/23/2016	12:02 PM	11/23/2016	3.52	904	E. FORTIFICAITON ST	Ground Surface (defective pipe underground)	560	Yes	Town	0.15	Collapsed Pipe
11/23/2016	5:32 PM	11/23/2016	0.53	2416	CULLEYWOOD RD.	Manhole	160	Yes	Hanging Moss	0.15	Grease
11/25/2016	1:25 PM	11/25/2016	1.25	251	PERKINS DR.	Cleanout	220	No	White Oak	0.00	Grease
11/26/2016	11:04 AM	11/26/2016	0.57	4612	BELMEDE PL.	Ground Surface (defective pipe underground)	180	Yes	Eubanks	0.00	Collapsed Pipe
11/30/2016	9:25 AM	12/1/2016	30.05	816	GALLATIN ST.	Manhole	1,500	Yes	Town	1.15	Other (Undetermined)
12/3/2016	11:13 AM	Cont.*	Cont.*	206	SAVANNA ST	Manhole		Yes	Caney	0.71	Other
12/3/2016	4:08 PM	12/3/2016	0.22	4459	MEADOWMONT DR.	Cleanout	160	Yes	Lynch	0.71	Grease
12/5/2016	11:45 AM	12/5/2016	8.00		BOLING ST /W.NORTHSIDE	Manhole	2,000	Yes	Town	1.29	Grease/Collapsed Pipe
12/6/2016	9:20 PM	12/7/2016	8.25		SAVANNA ST/EDDY ST	Manhole	2,000	Yes	Caney	0.00	Grease
12/9/2016	12:43 PM	12/9/2016	1.55	2045	SOUTHWOOD RD.	Manhole	380	Yes	White Oak	0.00	Other (Undetermined)
12/9/2016	2:39 PM	12/9/2016	0.45	1116	FOREST AVE.	Manhole	80	Yes	Hanging Moss	0.00	Grease
12/12/2016	11:17 AM	12/12/2016	4.02	325	MCTYERE AVE.	Manhole	1,500	Yes	Town	0.31	Grease
12/13/2016	10:00 AM	12/13/2016	3.00	1253	WOOD VILLAGE DR.	Manhole	100	No	Lynch	0.01	Grease/Other
12/13/2016	10:00 AM	12/13/2016	2.35	1521	W. HIGHLAND DR.	Ground Surface (defective pipe underground)/Manhole	50	Yes	Lynch	0.00	Collapsed Pipe/Grease

Table 1
Collection System SSOs

Date Began	Time Began	Date Ended	Estimated Duration, hours		Location	Overflow Source	Est Vol., gallons	Waters of State	Sewershed	Rainfall, inches	Reported Cause
12/13/2016	1:45 AM	12/13/2016	0.15		SAVANNA ST. WWTP	Other/RAS Pump Replacement	200	No	Pearl	0.00	Other
12/14/2016	10:33 AM	12/14/2016	0.58	1620	ASHDOWN ST.	Manhole	270	Yes	Town	0.00	Grease
12/20/2016	11:38 AM	12/20/2016	11.10	4911	OLD CANTON RD.	Cleanout	70	No	Hanging Moss	0.00	Grease
12/20/2016	2:35 PM	12/21/2016	23.25	153	WINGED FOOT CIR	Manhole	1,500	Yes	Purple	0.00	Grease
12/24/2016	4:07 PM	12/24/2016	0.24	3324	NASHVILLE ST	Manhole	110	Yes	Eubanks	0.00	Grease
12/27/2016	Cont.*	Cont.*	25.00	Exxon	BAILEY AVE	Ground Surface (defective pipe underground)/Manhole		No	Town	0.00	Collapsed Pipe
12/28/2016	12:52 PM	12/28/2016	0.30	417	WINDSOR DR.	Manhole	230	Yes	Lynch	0.00	Grease
12/31/2016	1:21 PM	Cont.*	Cont.*	1519	E. NORTHSIDE DR	Cleanout		Yes	Hanging Moss	0.67	Excessive Flow

***These SSOs are still under investigation as to their resolution, which affects the duration and volume**

Figure 1: Collection System SSOs by Cause



	18 Oct-16	13 Nov-16	16 Dec-16
Other	2.5	1	3.5
Collapsed Pipe	6	2	2
Solids	6	3	0
Roots	0.5	0	0
Grease	3.0	7	10.5
Rainfall	0.16	3.54	5.06

Figure 2: Percentage of Collection System SSOs by Cause

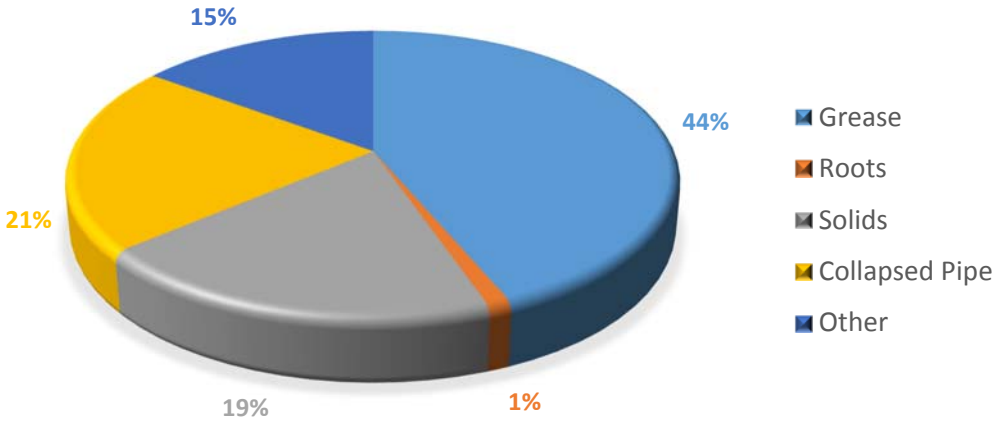
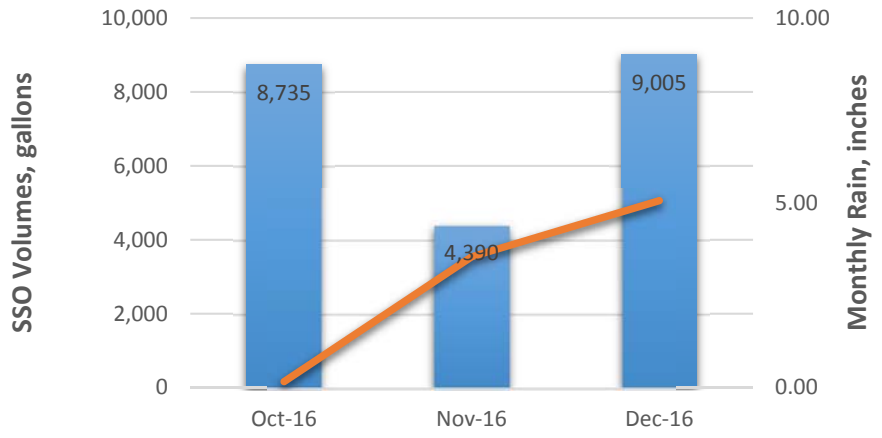
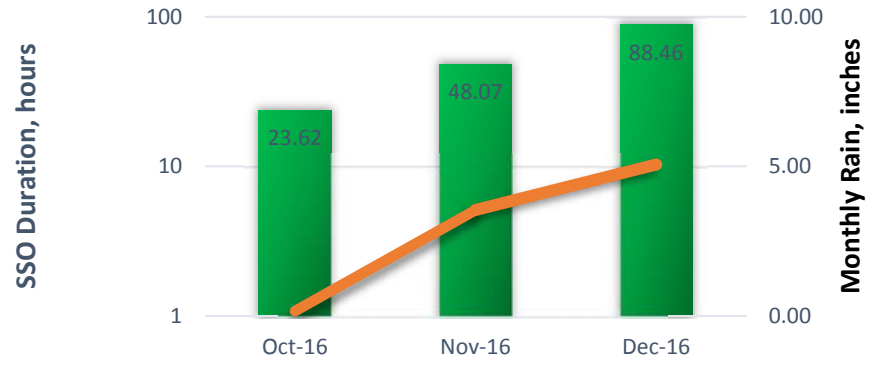


Figure 3: Collection System SSO Volume



	Oct-16	Nov-16	Dec-16
SSO Volume	8,735	4,390	9,005
Rainfall	0.16	3.54	5.06

Figure 4: Collection System SSO Duration



	Oct-16	Nov-16	Dec-16
SSO Duration	23.62	48.07	88.46
Rainfall	0.16	3.54	5.06

2.2 West Bank Interceptor SSOs

No SSOs were reported in the West Bank Interceptor from October through December 2016.

2.3 Pump Station SSOs

Table 2 lists pump station SSOs for the quarter. No SSOs were reported in November and December.

Figure 5 shows pump station SSO events by month by reported cause, as listed in Table 2, as well as monthly rainfall.

Figure 6 shows percentage of SSOs by cause for the quarter.

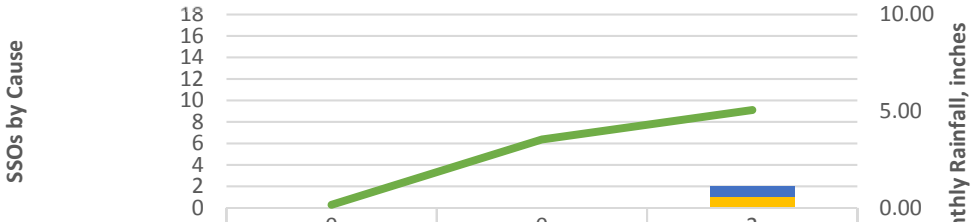
Figure 7 logarithmically plots total volume of pump station SSOs for each month, along with monthly rainfall.

Figure 8 shows total duration of pump station SSOs for each month, as well as rainfall.

Table 2
Pump Station SSOs

Date Began	Time Began	Date Ended	Estimated Duration, hours	Location		Overflow Source	Est Vol., gallons	Waters of State	Sewershed	Rainfall, inches	Reported Cause
12/16/2016	1:06 PM	12/16/2016	0.39	LS-86	Westside #3	Pump Station	100	Yes	Lynch	0.00	PS Failure
12/18/2016	4:20 PM	12/18/2016	3.36	LS-13	Country Club	Pump Station	800	Yes	Bogue Chitto	0.50	Excessive Flow

Figure 5: Pump Station SSOs by Cause



	Oct-16	Nov-16	Dec-16
Other	0	0	0
PS Failure	0	0	1
Excessive Flow	0	0	1
Solids	0	0	0
Roots	0	0	0
Grease	0	0	0
Rainfall	0.16	3.54	5.06

Figure 6: Percentage of Pump Station SSOs by Cause

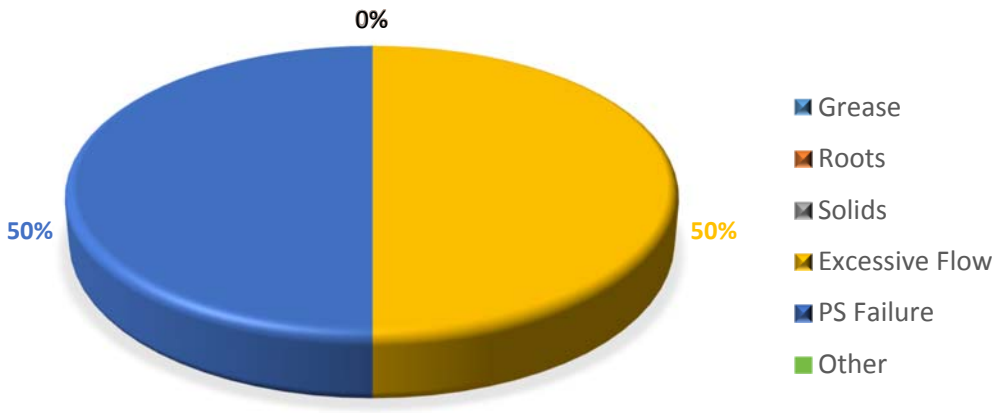
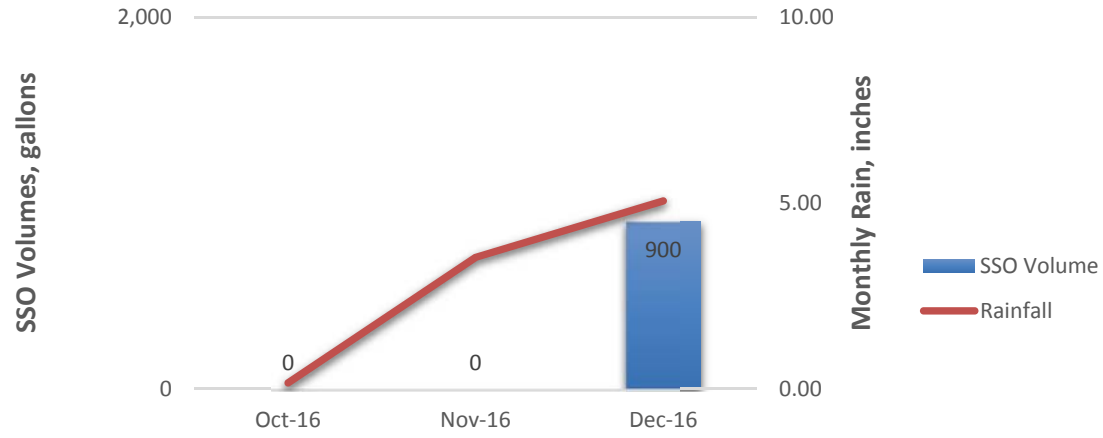
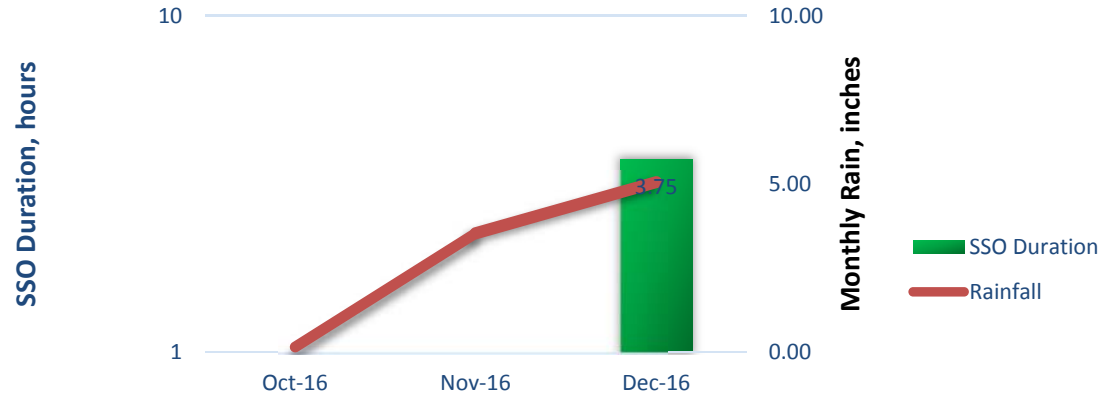


Figure 7: Pump Station SSO Volume



	Oct-16	Nov-16	Dec-16
SSO Volume	0	0	900
Rainfall	0.16	3.54	5.06

Figure 8: Pump Station SSO Duration



	Oct-16	Nov-16	Dec-16
SSO Duration	0.00	0.00	3.75
Rainfall	0.16	3.54	5.06

2.4 Prohibited Bypasses

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

This quarterly report does not include a graphical representation of the number of bypasses for each cause, since all bypasses at the Savanna Street WWTP have been caused by excessive flow. Future reports will include this graphical representation when it will be helpful.

Figure 9 shows total volume of prohibited bypasses for each month, along with monthly rainfall. **Figure 10** shows volume and river stages.

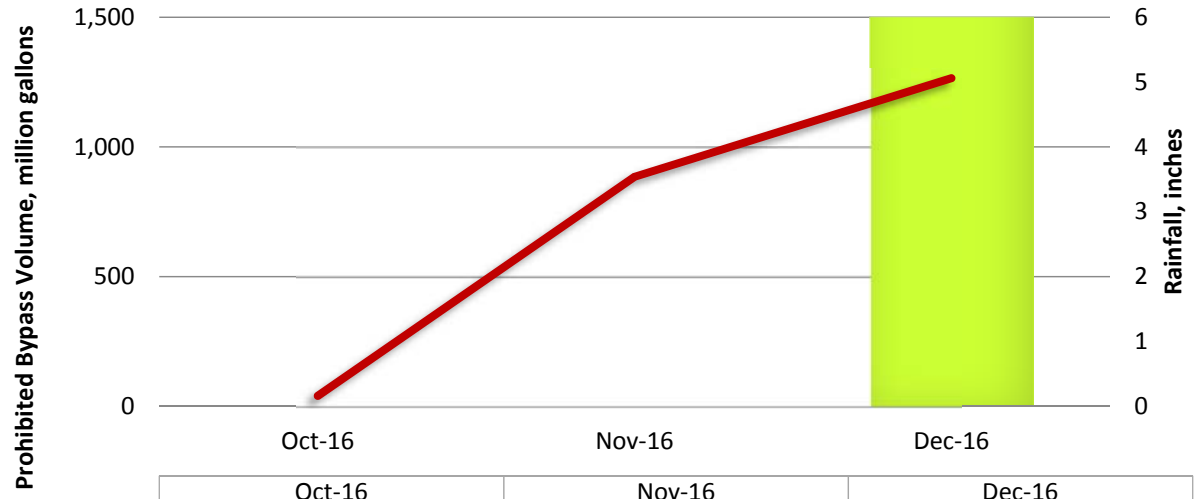
Figures 11 and 12 plot total duration for the month, first compared to rainfall and then compared to river stages. Note that duration of prohibited bypasses is plotted in days.

Table 3

Prohibited Bypasses

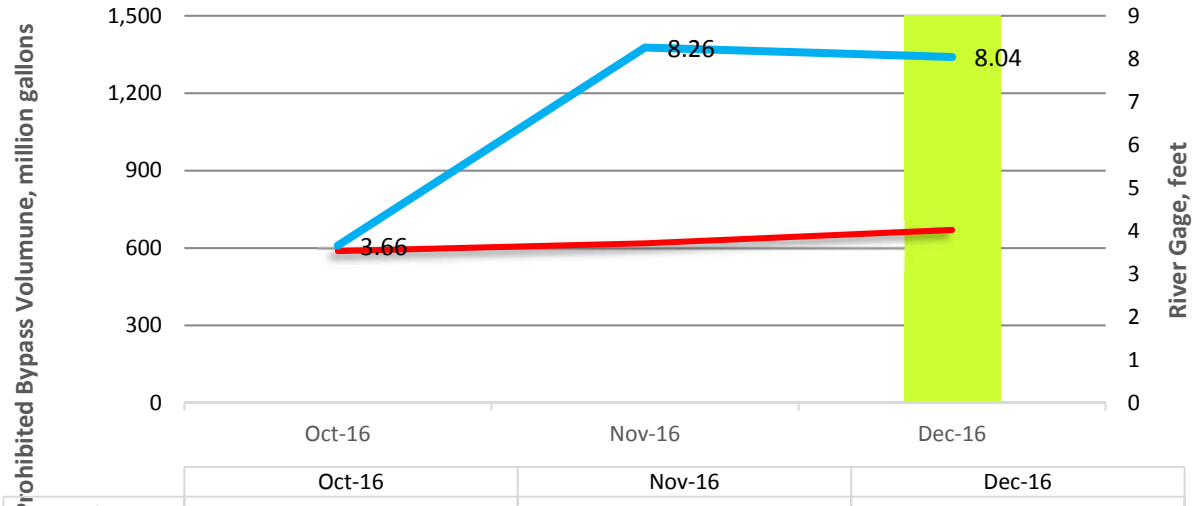
Source	Est. Duration, days	Est. Volume, million gallons	Reached Waterway	Receiving Water	Rainfall, inches	Reported Cause
Savanna Street WWTP	**5**	**104,020,000**	**Yes**	**Pearl River**	**2.21**	**The storm cells were full, had excessive rainfall amount. After the plant flow decreased from the rain, stopped bypass and started recovering**

Figure 9: Prohibited Bypass Volume vs. Rainfall



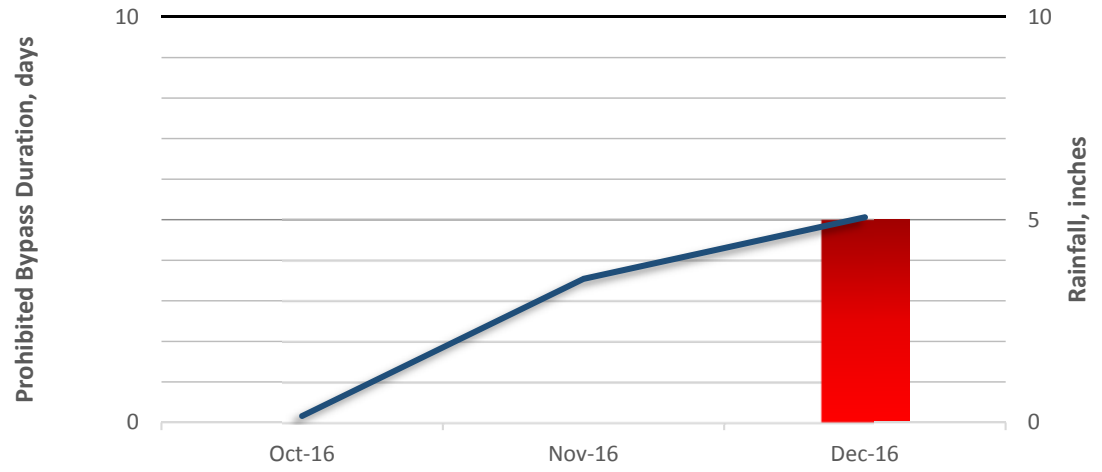
	Oct-16	Nov-16	Dec-16
Volume	0	0	104,020,000
Rainfall	0.16	3.54	5.06

Figure 10: Prohibited Bypass Volume vs. River Stage



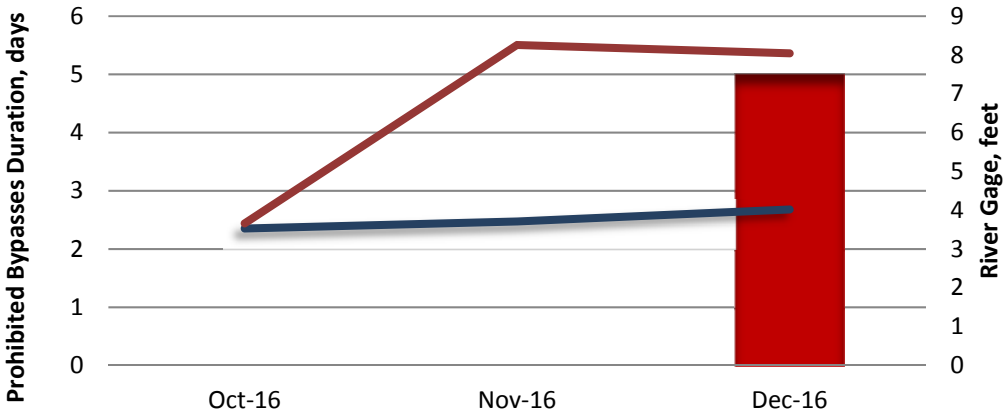
	Oct-16	Nov-16	Dec-16
Volume	0	0	104,020,000
River Stage	3.53	3.71	4.02
Max Stage	3.66	8.26	8.04

Figure 11: Prohibited Bypass Duration vs. Rainfall



	Oct-16	Nov-16	Dec-16
Duration	0	0	5
Rainfall	0.16	3.54	5.06

Figure 12: Prohibited Bypasses Duration vs. River Stage



	Oct-16	Nov-16	Dec-16
Duration	0	0	5
River Stage	3.53	3.71	4.02
Max Stage	3.66	8.26	8.04