



July 30, 2020

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

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

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

Diane Schober
Office of Pollution Control
Environmental Compliance & Enforcement Div.
P.O. Box 2261
Jackson, MS 39225-2261

Re: City of Jackson, Mississippi - EPA Consent Decree
Quarterly Report No. 29

Dear Lady and Sirs:

On behalf of the City of Jackson, please find enclosed the Jackson Consent Decree Quarterly Report # 29. Should you have any questions, please contact me.

Sincerely,

A handwritten signature in blue ink that reads "David Hauser".

David Hauser, P.E.
Program Manager

Enclosure

cc: Honorable Chokwe Antar Lumumba, Mayor, City of Jackson
Timothy C. Howard, City Attorney, City of Jackson
Dr. Charles Williams, P.E. Interim Director of Public Works, City of Jackson
Terry Williamson, Legal Counsel, City of Jackson
Public Depository, Eudora Welty Public Library



The City of
JACKSON

**QUARTERLY
REPORT NO. 29**

APRIL 2020 THROUGH JUNE 2020

Department of Public Works
Consent Decree Program

City of Jackson
Wastewater Infrastructure Redevelopment
Program

Quarterly Report No. 29
April 2020 through June 2020

July 30, 2020

Prepared for:

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

Prepared by:

Burns & McDonnell
9400 Ward Parkway
Kansas City, MO 64114

City of Jackson, Mississippi

Quarterly Report No. 29

April 2020 through June 2020

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.



Chokwe Antar Lumumba

Chokwe Antar Lumumba
Mayor

7/29/2020

Date

Charles E. Williams, Jr.

Charles E. Williams, Jr., PhD, P.E., Interim Director
Department of Public Works

7/28/20

Date

Quarterly Report No. 29

April 2020 through June 2020

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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.

One of the ongoing requirements of the EPA Consent Decree is to submit periodic reports to demonstrate continuing compliance. The specific reporting requirements can be found in Section IX ¶ 57 of the Consent Decree. A copy of the Consent Decree, as well as previous reports, can be found on the City of Jackson website, <http://www.jacksonms.gov/>, under the Public Works Department "Waste Water Consent Decree" link in the Document Library. The website can also be accessed directly at <http://www.cojcd.org/>.

1.2 Authority to Promulgate

Burns & McDonnell Engineering Company, Inc. was retained to assist the City in addressing the requirements of the Consent Decree under a Program Management contract. 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.

The listing and graphical summaries of the SSOs and prohibited bypasses for April 2020 – June 2020 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, pump stations, and West Bank Interceptor. Prohibited bypasses at the Savanna Street Wastewater Treatment Facility (SSWWTF), in periods when they occur, are listed in Section 2.4 of this report.

2.1 Collection System SSOs

Table 1 lists SSOs in the collection system for April through June 2020. Each day of a multiple day event is considered as a separate SSO, in accordance with the Consent Decree.

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

Grease Roots Solids Collapsed Pipe PS Failure Excessive flow Other

Some SSO events had multiple causes. In these instances, each cause was assigned a fractional value, adding up to one (1) 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.

Figure 4 shows total duration of SSOs for each month.

There are thirteen (13) events which occurred in previous reporting periods included in this report.

One (1) event occurred at one (1) location on private property reported this period. The cause of this event was determined to be a problem on the private lateral and the crews notified owner. This event has been reported to MDEQ.

Twelve (12) events occurred at cleanouts on private property this period. All events were caused by problems in the City's sewer system and are included in this report.

There were five (5) events for which the duration was not determined because the cause, such as collapsed pipe, has not been resolved or no SSO was ongoing but there was evidence of a previous overflow. The cause for these events was reported as "Other" in the graphs. One event was caused by a damaged bypass pump hose and one (1) event was caused by uncapped abandoned service lateral. These events were also reported as "Other" in the graph on Figure 1. "Previous SSO Follow up" is an SSO for which the cause, i.e. collapsed pipe, excessive flow, etc., was not resolved at the time of the first report and a crew was following up to see if an SSO was occurring until a repair could be made. Once the cause has been resolved, the total durations can be determined and reported. Volumes reported for these events are determined from periodic follow up inspections until the cause has been resolved.

There were four (4) reports that the volume was not reported. Proper reporting will be covered in future training sessions as restrictions due to COVID 19 are relaxed.

Table 1
City of Jackson, Mississippi
Quarterly Report No. 29 – April 2020 through June 2020
Collection System SSOs

Date Began	Time Began	Location	Source	Estimated Duration, Hours	Estimated Volume, Gallons	Reached Waters of the State	Receiving Water	Rainfall, Inches	Reported Cause
10/26/2019	5:35 PM	250 Brae Burn Dr	Cleanout	4,121.25	51,900	Yes	Purple	1.37	Roots / Solids
11/21/2019	6:53 AM	1523 Westhaven Blvd	Other	Ongoing Unresolved	19,300	Yes	Lynch	NA	Collapsed Pipe
1/9/2020	10:42 AM	319 Queen Julianna Ln	Manhole	2,183.80	21,100	Yes	Lynch	0.00	Collapsed Pipe
1/15/2020	3:15 PM	200 Rebel Woods	Manhole	2,377.42	5,000	Yes	Hardy	0.00	Grease / Solids
1/21/2020	3:44 PM	Prosperity St \ Denson St	Manhole	2,280.77	116,700	Yes	Town	0.00	Collapsed Pipe / Grease / Solids
1/30/2020	2:34 PM	212 Primico Pl	Constructed Bypass	1,632.27	1,725	No	NA	0.02	Roots / Solids
1/31/2020	12:08 PM	533 Glendale St	Ground Surface (defective pipe underground)	Not Reported	Not Reported	Yes	Town	0.01	Not reported
2/3/2020	1:35 PM	240 Livingston St	Manhole	1,849.92	23,400	Yes	Town	0.00	Collapsed Pipe
2/26/2020	8:38 AM	2345 Magnolia Ln	Manhole	1,709.62	36,000	Yes	Cany	0.20	Grease / Solids
3/5/2020	9:38 AM	Wooddell Dr \ Cliffwood Dr	Manhole	824.87	14,000	Yes	Cany	0.46	Collapsed Pipe
3/16/2020	11:46 AM	3003 Downing St	Cleanout	385.23	5,100	Yes	Town	0.00	Collapsed Pipe
3/20/2020	10:22 AM	5864 Old Canton Rd	Manhole	Ongoing Unresolved	14,600	No	NA	0.99	Collapsed Pipe
3/26/2020	11:53 AM	3909 Phewood Dr	Manhole	292.03	2,600	Yes	Eastover	0.00	Roots / Solids

Table 1 cont.
 City of Jackson, Mississippi
 Quarterly Report No. 29 – April 2020 through June 2020
 Collection System SSOs

Date Began	Time Began	Location	Source	Estimated Duration, Hours	Estimated Volume, Gallons	Reached Waters of the State	Receiving Water	Rainfall, Inches	Reported Cause
4/1/2020	4:25 PM	319 Queen Julianna Ln	Manhole	See 1/9/20 report	See 1/9/20 report	No	NA	0.00	Follow up
4/1/2020	4:10 PM	Prosperity St \ Denson St	Manhole	See 1/21/20 report	See 1/21/20 report	No	NA	0.00	Follow up
4/1/2020	5:05 PM	355 Woodrow Wilson Ave	Manhole	0.92	50	No	NA	0.00	Follow up
4/1/2020	7:28 PM	2906 Sheila Dr	Cleanout	0.87	50	No	NA	0.00	Grease / Solids
4/3/2020	4:45 PM	727 Deer Park St	Cleanout	1.67	50	No	NA	0.00	Collapsed Pipe
4/3/2020	6:35 PM	200 Rebel Woods	Manhole	See 1/15/20 report	See 1/15/20 report	No	NA	0.00	Follow up
4/4/2020	5:35 PM	5389 Wynyndyke Rd	Manhole	0.92	50	No	NA	0.00	Grease / Solids
4/4/2020	6:40 PM	5077 Cabaniss Cir	Manhole	1.00	50	No	NA	0.00	Grease / Solids
4/7/2020	11:00 PM	242 Pimlico Pl	Manhole	14.00	50	No	NA	0.02	Roots / Solids
4/10/2020	2:33 PM	5077 Cabaniss Cir	Manhole	1,105.45	14,100	Yes	Lynch	0.00	Undetermined
4/14/2020	9:00 AM	243 Livingston St	Manhole	2.50	100	Yes	Town	0.03	Grease / Solids
4/14/2020	1:45 PM	147 Livingston St	Manhole	0.50	100	Yes	Town	0.03	Grease / Solids
4/15/2020	6:00 PM	209 Parcel Dr	Manhole	See 4/23/20 report	See 4/23/20 report	No	NA	0.00	Initial Report
4/15/2020	4:30 PM	534 Ellis Ave	Manhole	1.17	50	No	NA	0.00	Grease / Solids
4/21/2020	9:11 AM	Belvedere Dr \ Freemont St	Manhole	76.32	1,600	Yes	Hardy	0.00	Grease
4/22/2020	4:20 PM	3612 Northhaven Dr	Manhole	0.67	50	No	NA	0.57	Grease / Solids

Table 1 cont.
City of Jackson, Mississippi
Quarterly Report No. 29 – April 2020 through June 2020
Collection System SSOs

Date Began	Time Began	Location	Source	Estimated Duration, Hours	Estimated Volume, Gallons	Reached Waters of the State	Receiving Water	Rainfall, Inches	Reported Cause
4/22/2020	10:25 PM	38 Robinwood Pl	Manhole	0.50	50	No	NA	0.00	Grease / Solids
4/23/2020	12:58 PM	2260 Monaco St	Cleanout	0.95	50	No	NA	1.96	Excessive Flow / Grease / Solids
4/23/2020	5:45 PM	209 Parcel Dr	Manhole	192.17	450	No	NA	3.37	Grease / Solids
4/23/2020	2:20 PM	1515 Maria Dr	Manhole	1.00	50	No	NA	3.37	Grease / Solids
4/23/2020	6:45 PM	3618 Marlendo Dr	Manhole	0.58	50	No	NA	3.37	Grease / Solids
4/24/2020	8:00 PM	Lawrence Rd / Manhattan Rd	Ground Surface (defective pipe underground)	663.00	Not Reported	Yes	Hanging Moss	0.00	Collapsed Pipe
4/27/2020	3:25 PM	Clubview St	Cleanout	0.08	50	No	NA	0.00	Grease / Solids
4/27/2020	1:20 PM	4658 Katherine Blvd	Ditch	Ongoing Unresolved	200	No	NA	0.00	Grease / Solids
4/28/2020	1:50 PM	156 S Denver St	Manhole	0.50	50	No	NA	0.00	Grease / Solids
4/29/2020	5:05 PM	270 Cherokee Dr	Manhole	0.42	50	No	NA	0.00	Grease / Solids
4/29/2020	6:30 PM	354 Pine Hill Dr	Manhole	Ongoing Unresolved	100	No	NA	0.00	Collapsed Pipe / Grease / Solids
5/2/2020	12:00 PM	4781 E Massena Dr	Ground Surface (defective pipe underground)	172.25	2,400	Yes	Hanging Moss	0.00	Roots
5/4/2020	9:44 AM	5346 Jamaica Dr	Manhole	Ongoing Unresolved	5,600	Yes	Hanging Moss	0.00	Collapsed Pipe
5/7/2020	4:35 PM	2251 Forest Glen Dr	Cleanout	1.75	50	No	NA	0.00	Grease / Solids
5/8/2020	7:58 AM	103 St Andrews Dr	Ground Surface (defective pipe underground)	316.28	4,200	Yes	Purple	0.50	Grease
5/8/2020	7:40 PM	2345 Magnolia Ln	Manhole	258.58	600	No	NA	0.20	Grease / Solids

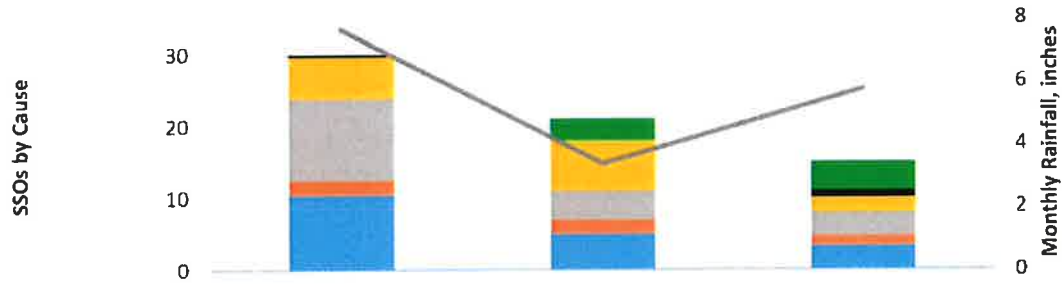
Table 1 cont.
City of Jackson, Mississippi
Quarterly Report No. 29 – April 2020 through June 2020
Collection System SSOs

Date Began	Time Began	Location	Source	Estimated Duration, Hours	Estimated Volume, Gallons	Reached Waters of the State	Receiving Water	Rainfall, Inches	Reported Cause
5/9/2020	12:00 PM	1032 Spengler St	Manhole	0.83	50	No	NA	0.00	Grease / Solids
5/9/2020	1:10 PM	827 Monterey St	Ground Surface (defective pipe underground)	0.83	50	No	NA	0.00	Collapsed Pipe
5/12/2020	1:30 PM	322 Spanish Ct	Cleanout	Ongoing Unresolved	1,000	No	NA	0.00	Collapsed Pipe
5/12/2020	3:15 PM	Poplar Blvd / Kentwood Dr	Manhole	3.50	50	No	NA	0.00	Grease / Solids
5/12/2020	11:05 AM	1254 Macon St	Cleanout	2.08	50	No	NA	0.00	Grease / Solids
5/13/2020	9:10 AM	W Pascagoula St	Ground Surface (defective pipe underground)	3.22	Not Reported	Yes	Town	0.00	Undetermined
5/14/2020	1:02 PM	714 Brookwood Rd	Ground Surface (defective pipe underground)	Ongoing Unresolved	10,800	Yes	Eubanks	0.00	Collapsed Pipe
5/16/2020	10:12 AM	5140 Queen Eleanor Ln	Manhole	149.63	Not Reported	Yes	Lynch	0.09	Roots
5/18/2020	2:04 PM	123 Ramada Cir	Manhole	526.27	11,500	Yes	Big Creek	0.07	Grease / Solids
5/20/2020	11:30 AM	Robinson Rd / Valley St	Constructed Bypass	1.00	50	No	NA	0.00	Damaged Bypass Pump Hose
5/30/2020	1:48 PM	2430 Paden St	Manhole	0.45	100	No	NA	0.00	Solids
5/30/2020	10:47 AM	126 Meadowell Park Cir	Manhole	1.20	2	No	NA	0.00	Grease
6/1/2020	5:05 PM	3874 Meadowlane Dr	Ground Surface (defective pipe underground)	1.07	225	Yes	Eubanks	0.00	Uncapped Abandoned Lateral
6/2/2020	8:20 AM	W Pascagoula St	Manhole	1.42	50	No	NA	0.00	Grease / Solids
6/2/2020	1:00 PM	357 Peter St	Manhole	1.00	50	No	NA	0.00	Grease / Solids
6/3/2020	8:00 PM	3618 Marleno Dr	Ground Surface (defective pipe underground)	Ongoing Unresolved	28,000	Yes	Cany	1.52	Grease / Roots / Solids

Table 1 cont.
 City of Jackson, Mississippi
 Quarterly Report No. 29 – April 2020 through June 2020
 Collection System SSOs

Date Began	Time Began	Location	Source	Estimated Duration, Hours	Estimated Volume, Gallons	Reached Waters of the State	Receiving Water	Rainfall, Inches	Reported Cause
6/4/2020	Not Reported	Raymond Rd / Scanlon Dr	Manhole	Not Reported	100	No	NA	0.00	Grease / Solids
6/5/2020	8:45 AM	415 Northside Dr	Cleanout	Ongoing Unresolved	13,000	Yes	Eubanks	0.01	Collapsed Pipe
6/9/2020	6:53 AM	4981 Cottonwood Ln	Manhole	2.37	50	Yes	Big Creek	0.00	Roots
6/15/2020	9:01 AM	4550 Manhattan Rd	Manhole	96.48	1,900	Yes	Eubanks	0.00	Grease / Solids
6/18/2020	10:30 AM	1503 E Northside Dr	Manhole	23.00	200	Yes	Eastover	0.00	Undetermined
6/19/2020	1:26 PM	1350 Eastover Dr	Cleanout	20.57	200	Yes	Eubanks	0.00	Undetermined
6/19/2020	3:01 PM	1745 Riverwood Dr	Manhole	Ongoing Unresolved	7,200	Yes	Lang Moss	0.00	Undetermined
6/23/2020	7:48 AM	6029 Brenner Dr	Manhole	100.45	1,000	Yes	Purple	0.00	Grease / Solids
6/24/2020	2:00 PM	5745 Gladewood Dr	Cleanout	Ongoing Unresolved	70,000	No	NA	0.02	Excessive Flow

Figure 1: Collection System SSOs by Cause



	Apr-20	May-20	Jun-20
Other	0.00	3.00	4.00
Excessive Flow	0.33	0.00	1.00
Collapsed Pipe	5.67	7.00	2.00
Solids	11.50	4.00	3.33
Roots	2.00	2.00	1.33
Grease	10.50	5.00	3.33
Rainfall	7.65	3.37	5.76

Figure 2: Percentage of Collection System SSOs by Cause

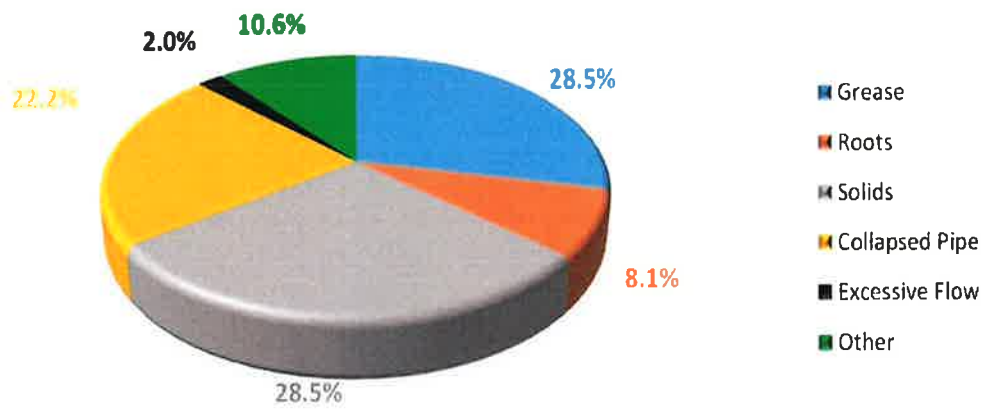
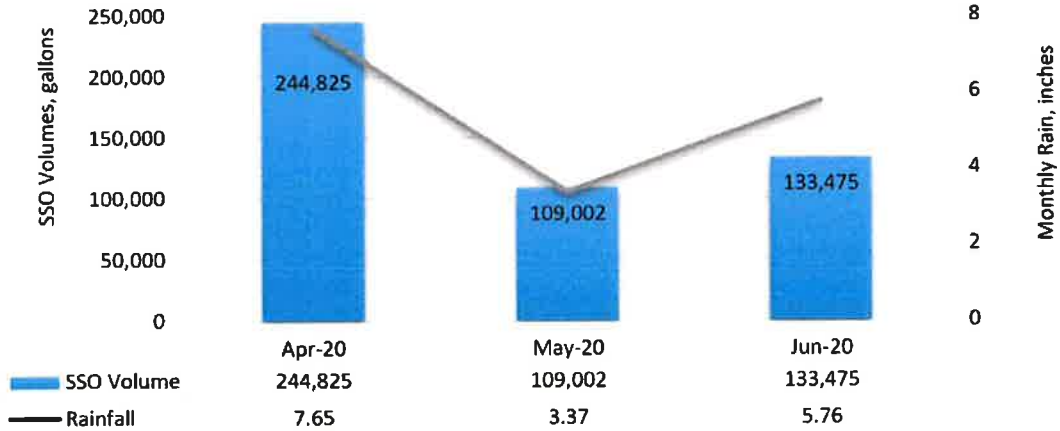
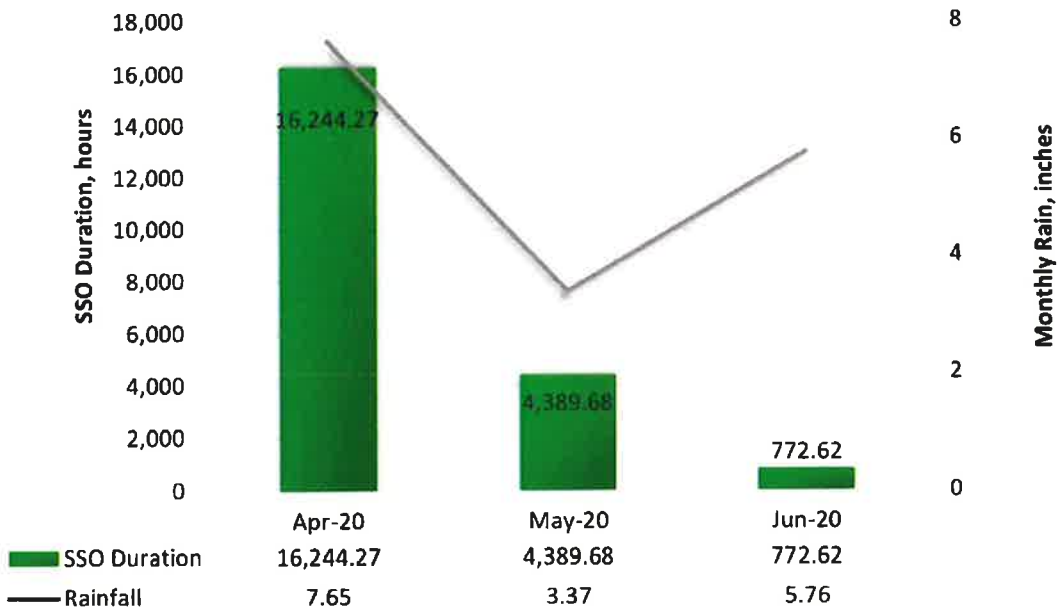


Figure 3: Collection System SSO Volume



* Volume is high due to several SSO reports from prior report period submitted in April.

Figure 4: Collection System SSO Duration



* Duration is high due to several SSO reports from prior report period submitted in April.

2.2 Pump Station SSOs

Table 2 lists pump station SSOs for April through June 2020.

Figures 5 through 7 are not used in this report because **no** SSOs were reported at pump stations this quarter.

Table 2
City of Jackson, Mississippi
Quarterly Report No. 29 – April 2020 through June 2020
Pump Station SSOs

Date Began	Time Began	Location	Source	Estimated Duration, Hours	Estimated Volume, Gallons	Reached Waterway	Receiving Water	Rainfall, Inches	Reported Cause
NO PUMP STATION SSOs REPORTED - April 2020									
NO PUMP STATION SSOs REPORTED - May 2020									
NO PUMP STATION SSOs REPORTED - June 2020									

2.3 West Bank Interceptor SSOs

West Bank Interceptor SSOs at the Jefferson Street location are generally caused when flow to the Savanna WWTP exceeds the facility's pumping capacity. This creates the need to restrict influent flow to the facility in order to protect the facility from flooding and catastrophic damage. Insufficient pumping capacity can be caused by equipment failures at the facility, excessive flow caused by rain events, high river levels or a combination of all the above.

Table 3 lists West Bank Interceptor SSOs for April through June 2020.

Figure 9 shows West Bank Interceptor SSO events by month by reported cause, as listed in Table 3, as well as monthly rainfall.

Figure 10 shows percentage of West Bank Interceptor SSOs by cause for the quarter.

Figure 11 shows total volume of West Bank Interceptor SSOs for each month, as well as monthly rainfall.

Figure 11a shows total volume of West Bank Interceptor SSOs for each month, as well as monthly maximum river stage to show the relationship between river stage and SSO volume.

Figure 12 shows total duration of West Bank Interceptor SSOs for each month, as well as rainfall.

Figure 12a shows total duration of West Bank Interceptor SSOs for each month, as well as monthly maximum river stage to show the relationship between river stage and SSO duration.

There were four (4) SSO events on the West Bank Interceptor in this reporting period. All events were caused by excessive flow due to rainfall and high river levels with the exception of the April 29, 2020 event. This event was caused by contractor damage to the electrical system at the Influent Pump Station at the Savanna WWTP that resulted in a plant wide power outage.

Table 3
City of Jackson, Mississippi
Quarterly Report No. 29 – April 2020 through June 2020
West Bank Interceptor SSOs

Date Began	Time Began	Location	Source	Estimated Duration, Hours	Estimated Volume, Gallons	Reached Waterway	Receiving Water	Rainfall, Inches	Reported Cause
4/19/2020	5:12 PM	408 S Jefferson St	Manhole	7.87	5,831,211	Yes	Pearl	2.56	Excessive Rainfall
4/23/2020	2:26 AM	408 S Jefferson St	Manhole	86.37	33,067,224	Yes	Pearl	1.88	Excessive Rainfall
4/29/2020	9:57 AM	408 S Jefferson St	Manhole	0.20	42,271	Yes	Pearl	NA	Extended Power Outage and North Gate restricted
06/08/20	3:56 AM	408 S Jefferson St	Manhole	7.05	5,177	Yes	Pearl	2.74	Excessive Rainfall

Figure 9: West Bank Interceptor SSOs by Cause

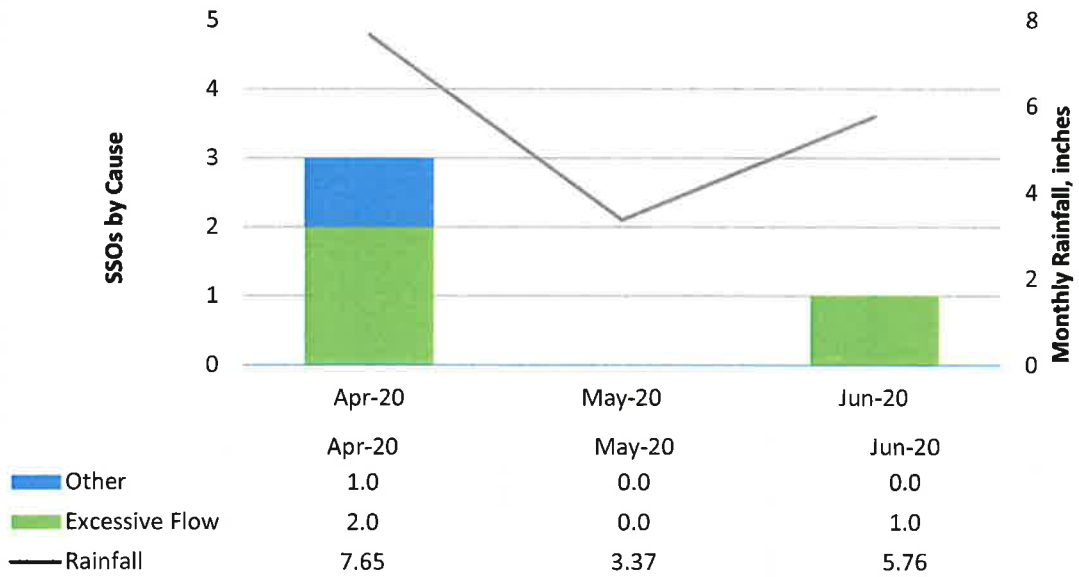


Figure 10: Percentage of West Bank Interceptor SSOs by Cause

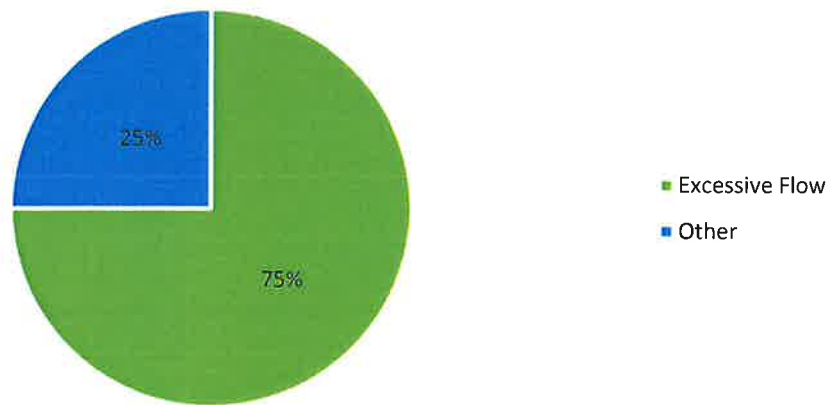


Figure 11: West Bank Interceptor SSO Volume

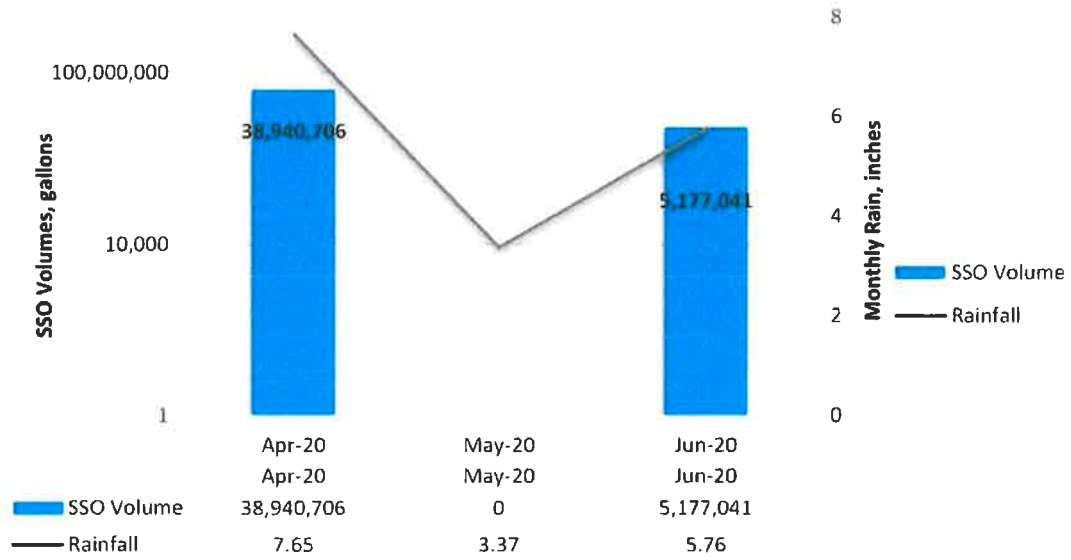


Figure 11a: West Bank Interceptor SSO Volume



Figure 12: West Bank Interceptor SSO Duration

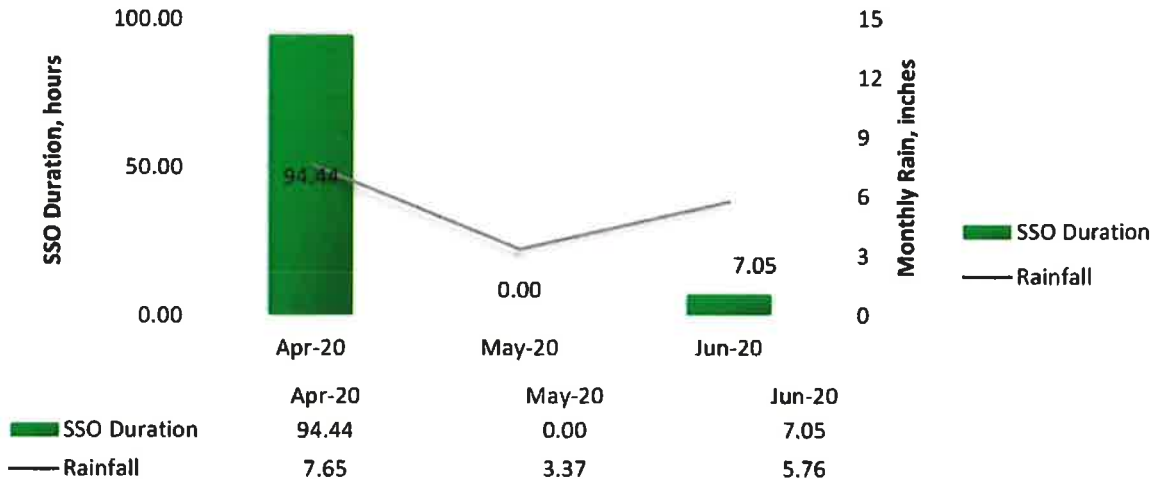
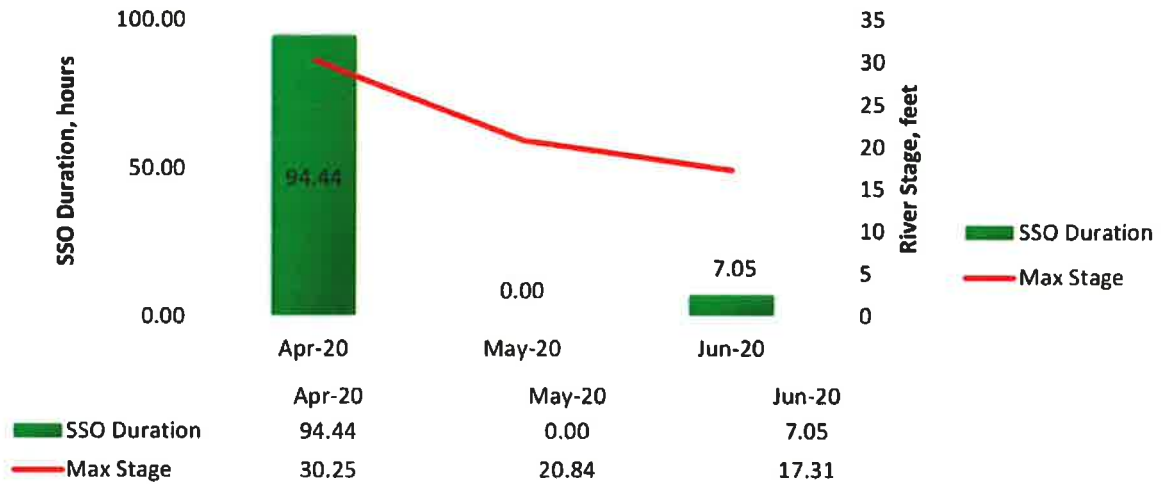


Figure 12a: West Bank Interceptor SSO Duration



2.4 Prohibited Bypasses

This quarterly report does not include a graphical representation of the number of bypasses for each cause, since most bypasses at the Savanna Street WWTP are caused by excessive flow or specific causes explained below.

Table 4 lists prohibited bypasses at the wastewater treatment plant for the quarter. Unlike SSOs, each event is considered as one bypass from the day it begins to the day it ends. The event is reported in the month the bypass ends.

Figure 13 shows total volume of prohibited bypasses for each month plotted logarithmically, along with monthly rainfall.

Figure 14 shows volume and river stages.

Figures 15 and 16 plot total duration for the month, first compared to rainfall and then compared to river stages. River stages are shown as monthly average daily maximum river stage and as the monthly maximum day river stage. Note that duration of prohibited bypasses is plotted in days.

There were four (4) bypass events this reporting period. All events were reported to MDEQ as being caused by excessive flow due to rainfall and high river levels. The Jackson area received 15.39" of rainfall, or 14.34% above normal, during the reporting period. For the calendar year, Jackson area has received 43.68" of rainfall, or 54.73% above normal.

The following major equipment was unavailable for service during the reporting period;

- Aeration Blower #3
- Clarifier #2
- Effluent Screw Pump #2
- Return Activated Sludge Pump #3 (April)
- Return Activated Sludge Pump #6 (May-June)
- Raw Sewage Pump #4 Motor
- 54" Raw Sewage Isolation Valve
- West Rankin Force Main and Diversion valve

The current construction project and ongoing maintenance will address these issues.

All bypassed volume is chlorinated, de-chlorinated and required samples taken prior to blending with the mechanical plant effluent and subsequently discharged to the Pearl River.

Table 4
City of Jackson, Mississippi
Quarterly Report No. 29 – April 2020 through June 2020
Prohibited Bypasses

Date Began	Time Began	Location	Source	Estimated Duration, Days	Estimated Volume, Million Gallons	Reached Waterway	Receiving Water	Rainfall, Inches	Reported Cause
04/19/20	10:00 AM	3810 I 55 S	WWTP	14	648.59	Yes	Pearl	5.48*	Excessive flow / High River level
05/06/20	10:35 AM	3810 I 55 S	WWTP	7	103.83	Yes	Pearl	0.41*	Diverted WTP flow. Storm Cells full
05/27/20	5:05 PM	3810 I 55 S	WWTP	8	109.21	Yes	Pearl	1.47*	Excessive flow / Storm Cells full
06/08/20	4:50 PM	3810 I 55 S	WWTP	3	110.52	Yes	Pearl	3.24*	Excessive flow

The total duration and volume bypassed for each event is shown in the table above. The April 19, 2020 event ended on May 2, 2020. The May 6, 2020 event ended on May 13, 2020. The May 27, 2020 event ended on June 3, 2020. The June 8, 2020 event ended on June 10, 2020.

*Total rainfall is shown for the duration of each event.

Figure 13: Monthly Prohibited Bypass Volume vs. Rainfall

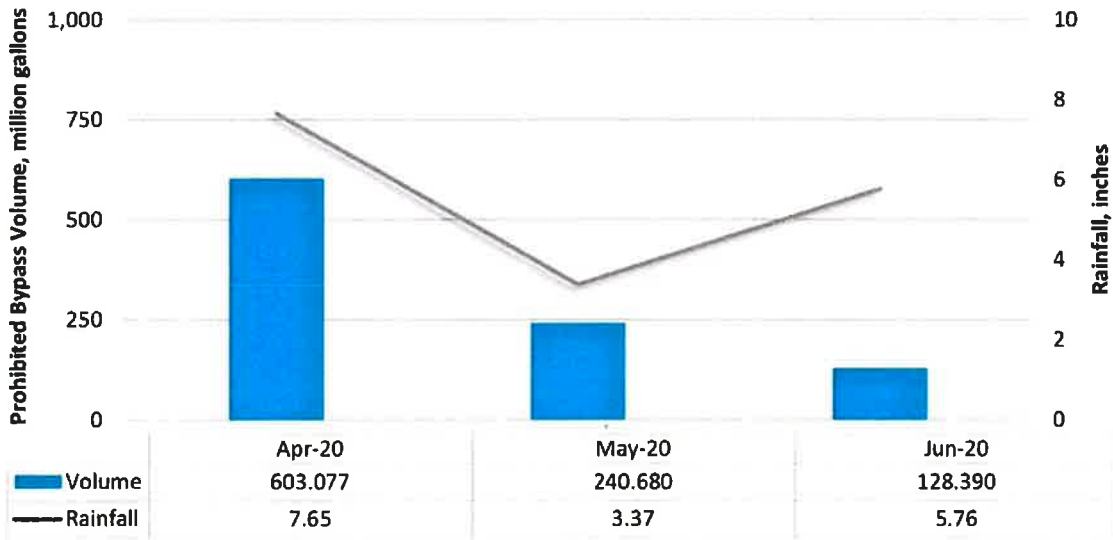


Figure 14: Monthly Prohibited Bypass Volume vs. River Stage

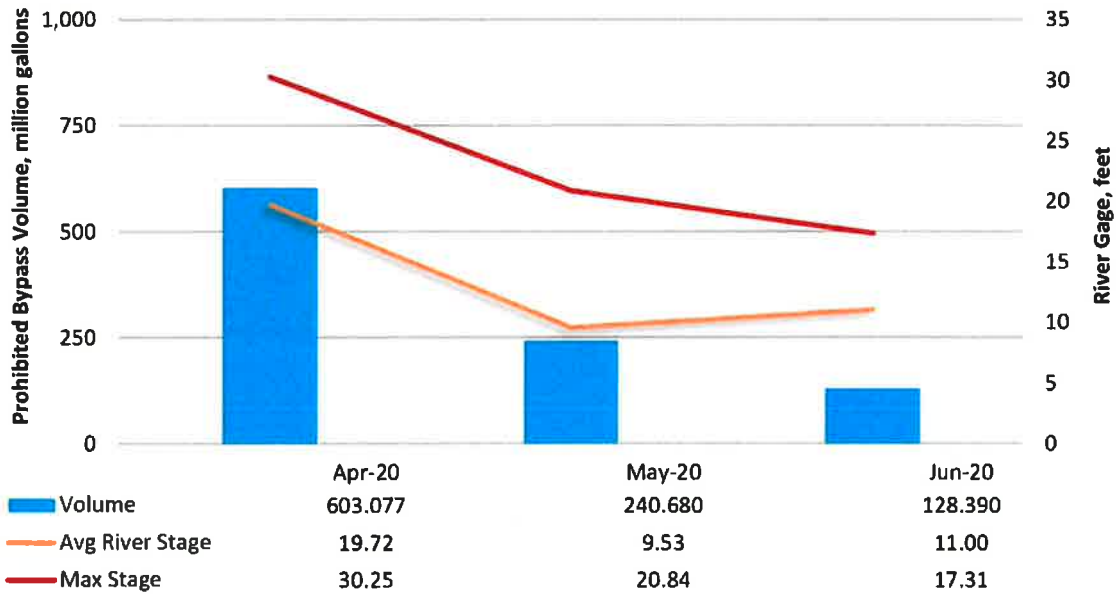


Figure 15: Monthly Prohibited Bypass Duration vs. Rainfall

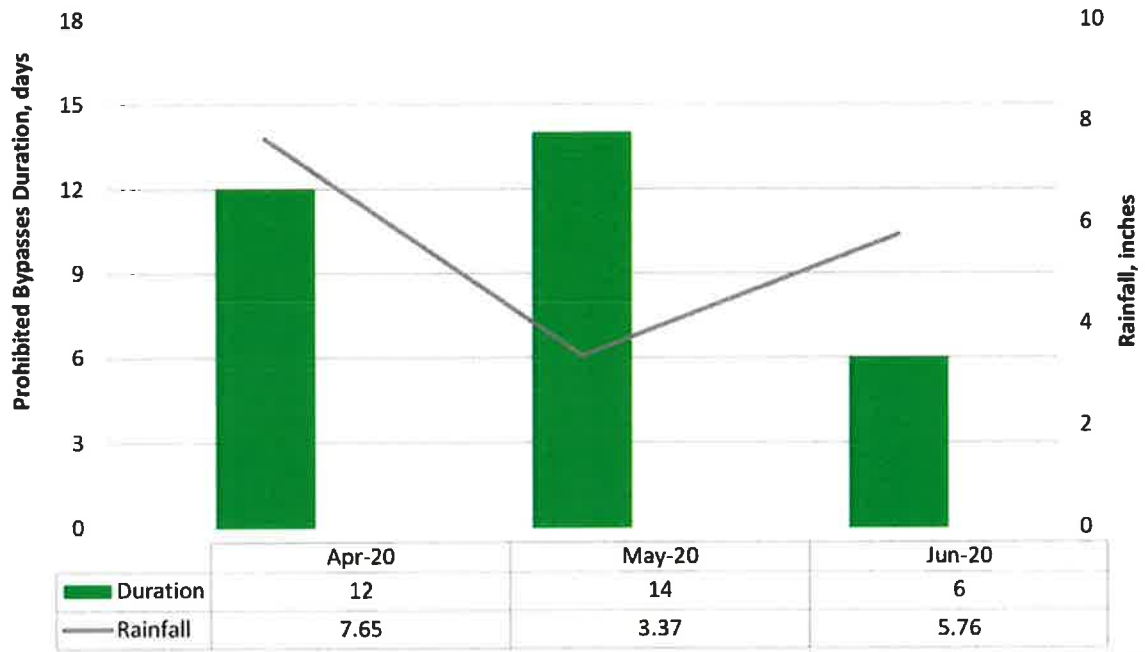


Figure 16: Monthly Prohibited Bypass Duration vs. River Stage

