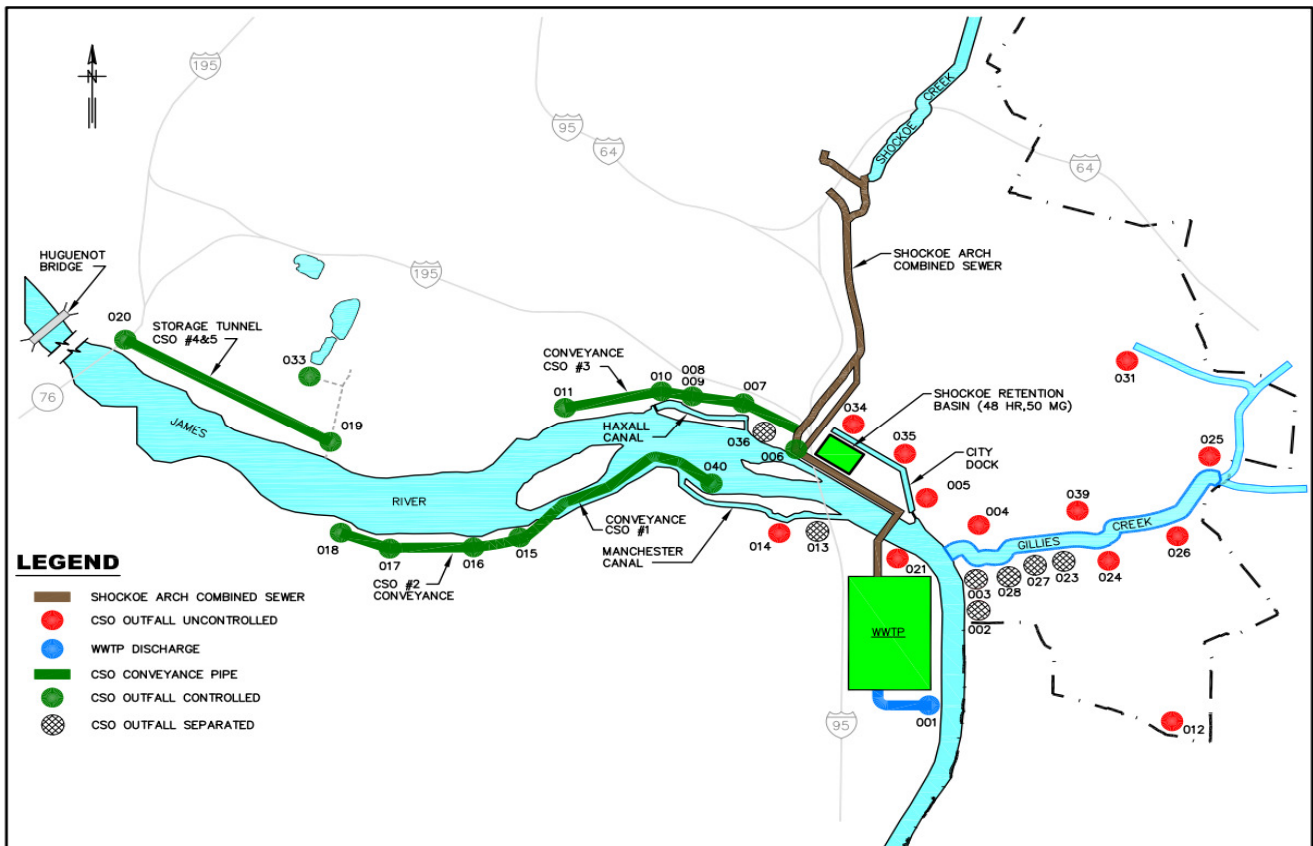


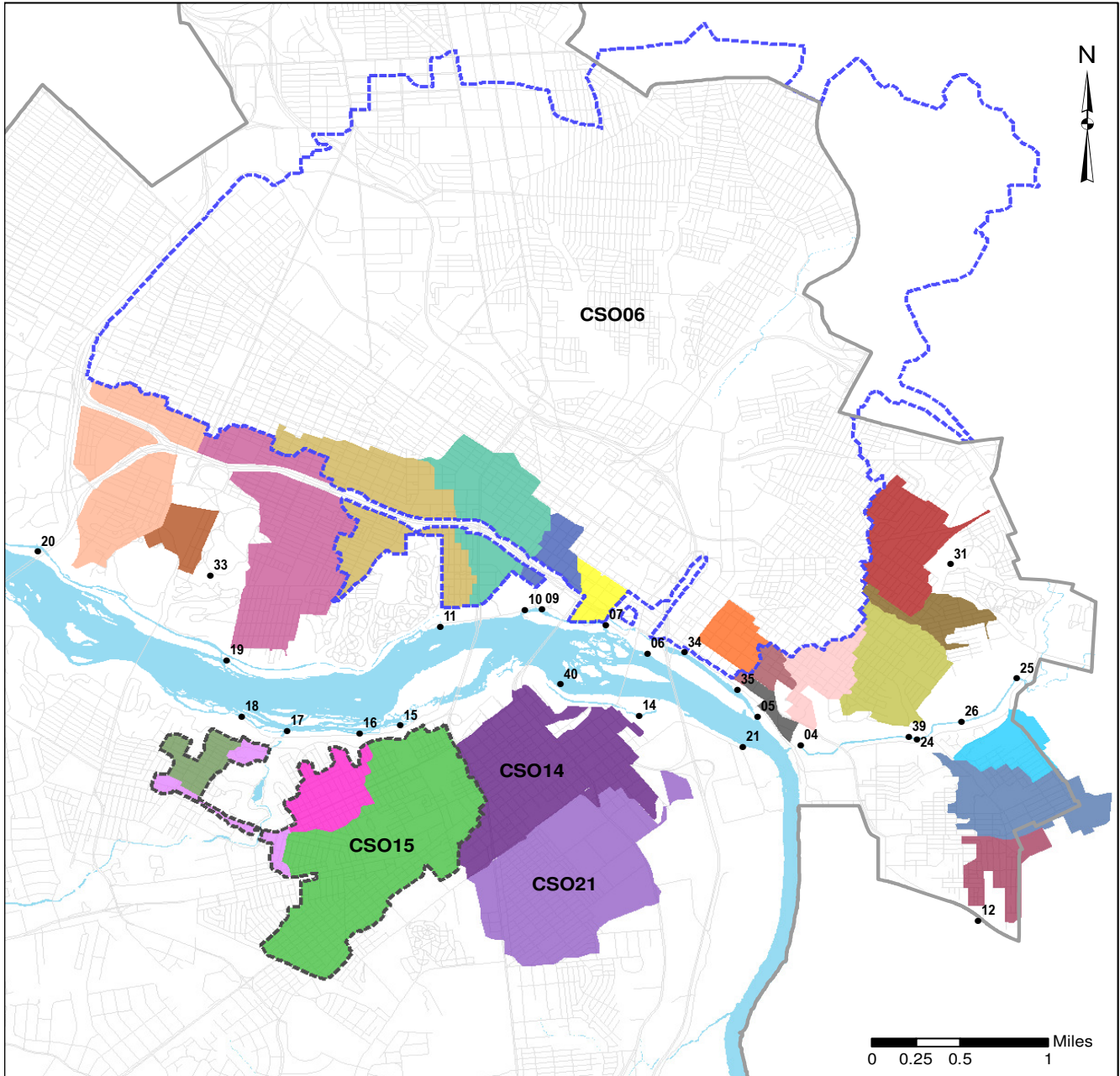
CITY OF RICHMOND, VIRGINIA
 DEPARTMENT OF PUBLIC UTILITIES

Combined Sewer Overflow Monthly Report

December, 2020



Combined Sewer System Drainage Area Map



Legend

City Limit	CSO04	CSO09	CSO14	CSO18	CSO24	CSO33	CSO40
CSO05	CSO10	CSO15	CSO19	CSO25	CSO34		
CSO06	CSO11	CSO16	CSO20	CSO26	CSO35		
CSO07	CSO12	CSO17	CSO21	CSO31	CSO39		

**CSO04 - Bloody Run
Overflow Model Summary
Current Month: December 2020**

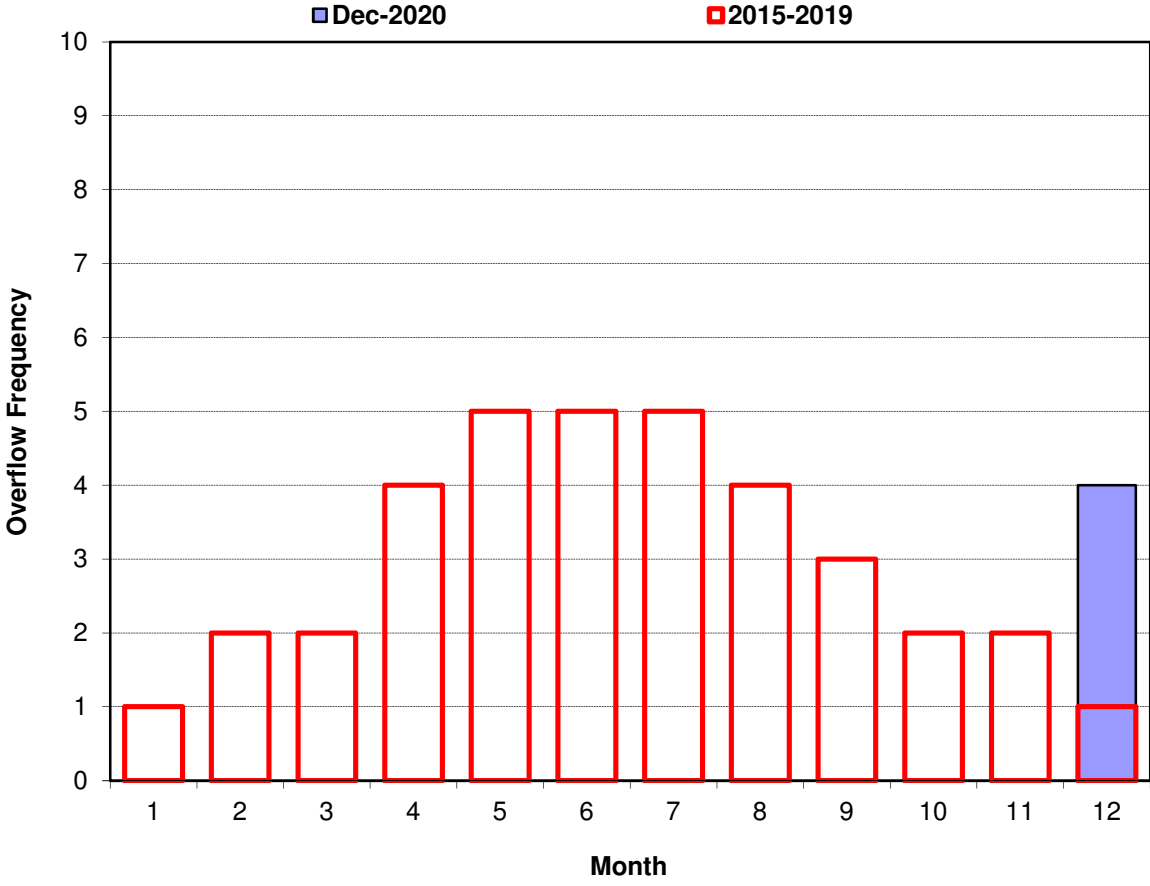
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.25	0.36		
12/5/20	1	2.08	4.25	2.28	1.9	3.83
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20	1	1.45	6.17	0.60	0.23	3.17
12/15/20						
12/16/20		0.98	5.75	0.48		
12/17/20	1				0.12	1.83
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.08	3.83	2.16		
12/25/20	1	0.02	0.17	0.12	0.19	1.33
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20		0.01	0.08	0.12		

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
4	6.26	24.50	2.28	2.500	10.17

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

City of Richmond, Virginia
Overflow Frequency by Month
CSO04 - Bloody Run



**CSO05 - Peach Street
Overflow Model Summary
Current Month: December 2020**

Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.25	0.36		
12/5/20	1	2.08	4.25	2.28	1.1	5.67
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20	1 ⁽³⁾	1.45	6.17	0.60	0.07	0.75
12/15/20					0.15	1.92
12/16/20		0.98	5.75	0.48		
12/17/20	1				0.14	1.50
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.08	3.83	2.16		
12/25/20		0.02	0.17	0.12		
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20		0.01	0.08	0.12		

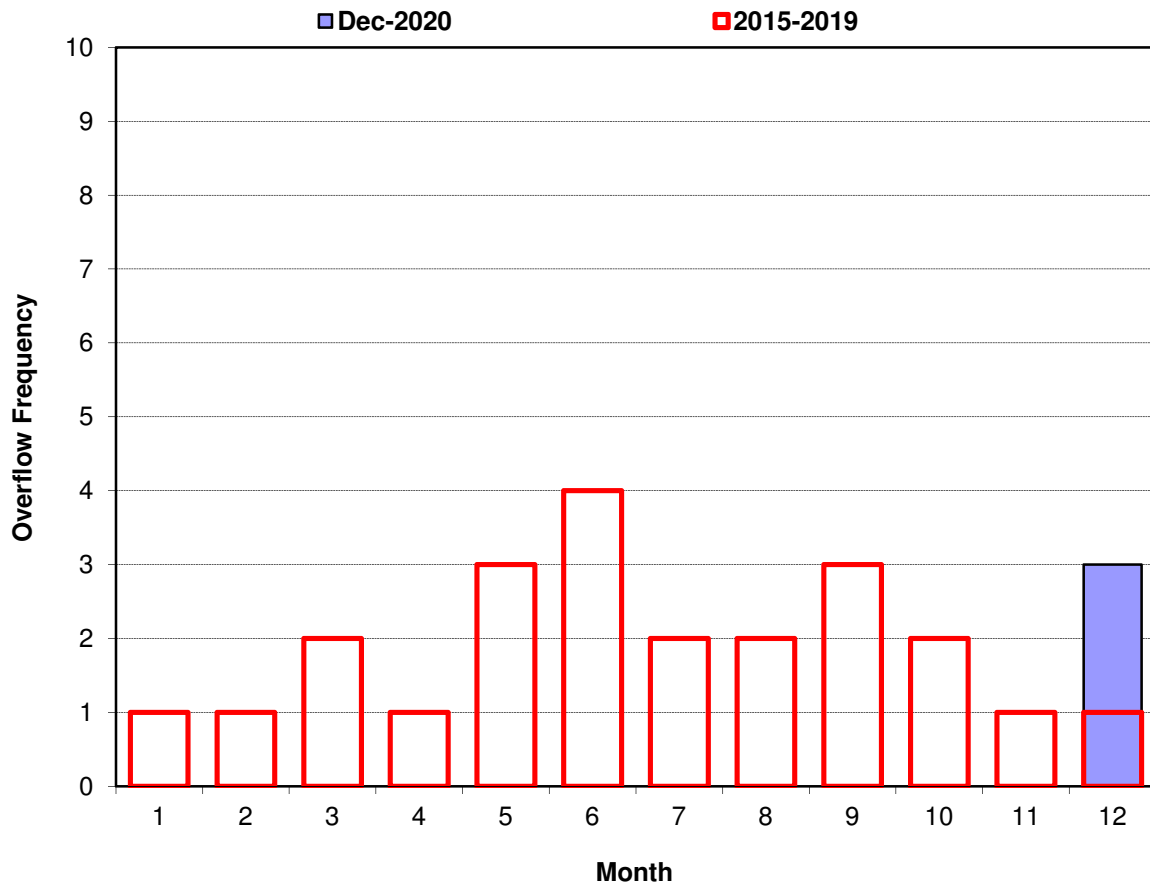
MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
3	6.26	24.50	2.28	1.500	9.83

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

⁽³⁾ Overflow event continued on the following day.

City of Richmond, Virginia
Overflow Frequency by Month
CSO05 - Peach Street



CSO06 - Shockoe
Overflow Model Summary[†]
Current Month: December 2020

Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.42	2.33	0.96		
12/5/20	1	2.05	4.14	2.88	215	9.50
12/6/20						
12/7/20		0.06	0.47	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20	1 ⁽³⁾	1.51	6.11	0.72	40.6	1.42
12/15/20					35.8	5.00
12/16/20		0.99	5.61	0.60		
12/17/20	1				68.2	10.83
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.24		
12/21/20		0.00	0.03	0.12		
12/22/20						
12/23/20						
12/24/20	1 ⁽³⁾	1.01	3.92	2.16	0.68	0.08
12/25/20		0.02	0.17	0.12	59.6	9.17
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.01	0.08	0.12		
12/31/20		0.00	0.03	0.12		

MONTH SUMMARY

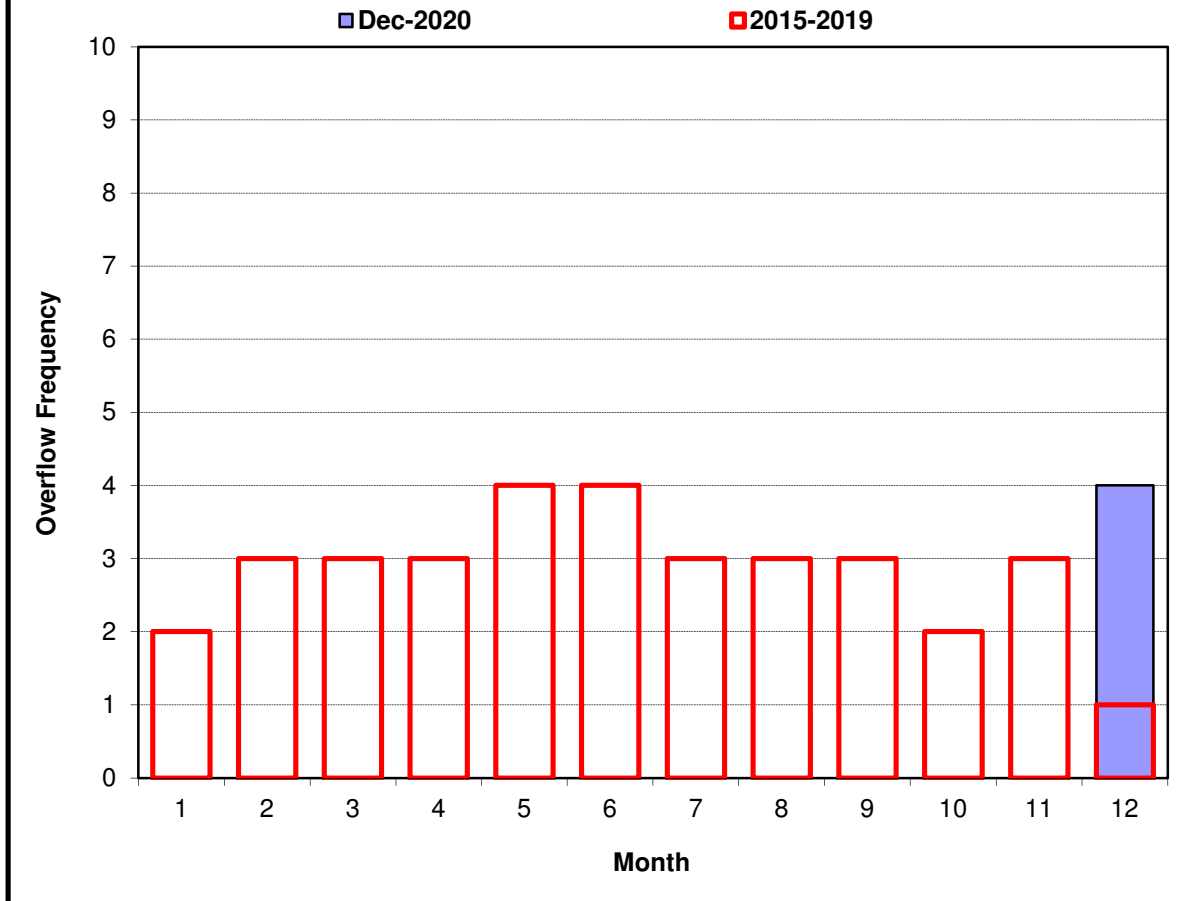
Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
4	6.22	24.22	2.88	420.000	36.00

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

[†] Overflow occurred after the Shockoe Retention Basin was full.

⁽³⁾ Overflow event continued on the following day.

City of Richmond, Virginia
Overflow Frequency by Month[†]
CSO06 - Shockoe



[†] Overflow occurred after the Shockoe Retention Basin was full.

CSO07 - Byrd
Overflow Model Summary
Current Month: December 2020

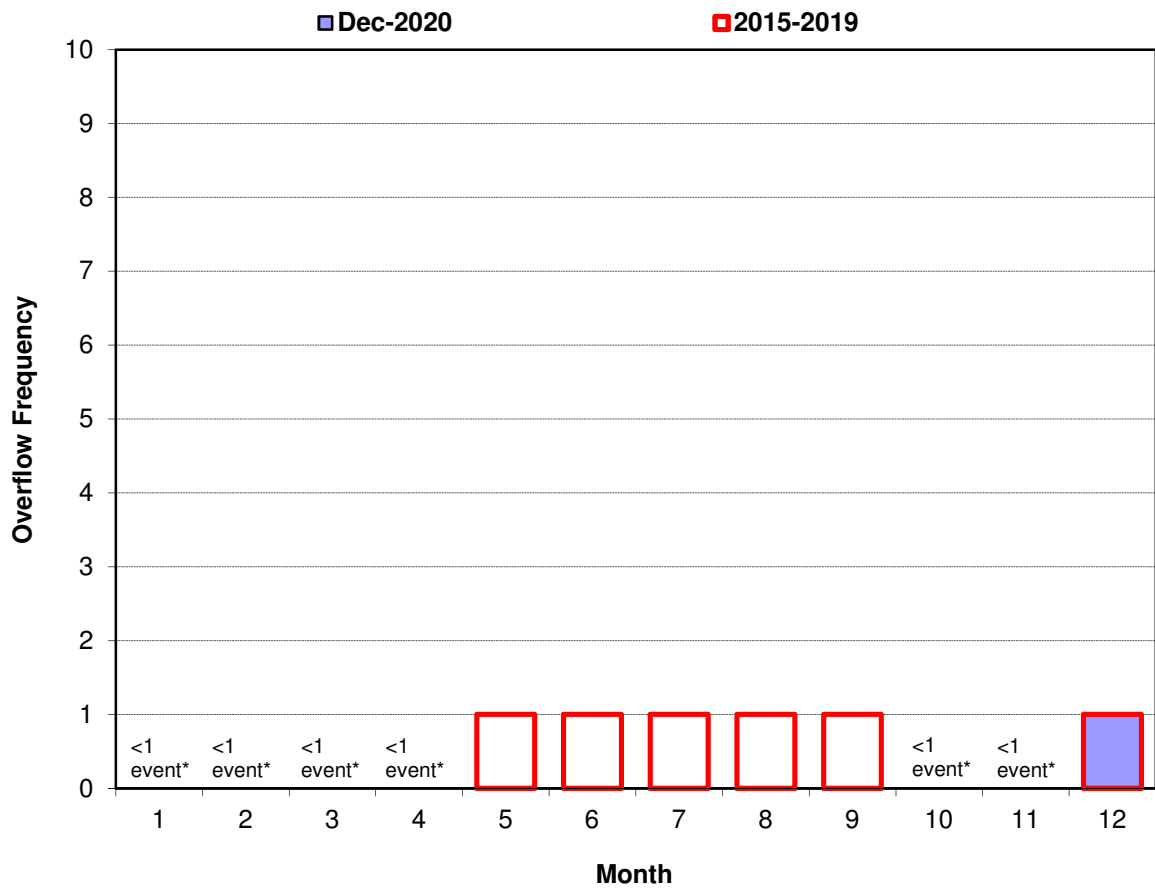
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.25	0.36		
12/5/20	1	2.08	4.25	2.28	0.43	1.92
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20		1.45	6.17	0.60		
12/15/20						
12/16/20		0.98	5.75	0.48		
12/17/20						
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.08	3.83	2.16		
12/25/20		0.02	0.17	0.12		
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20		0.01	0.08	0.12		

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
1	6.26	24.50	2.28	0.430	1.92

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

**City of Richmond, Virginia
Overflow Frequency by Month
CSO07 - Byrd**



* Average Overflow Frequency is less than once in the month.

**CSO09 - 7th Street
Overflow Model Summary
Current Month: December 2020**

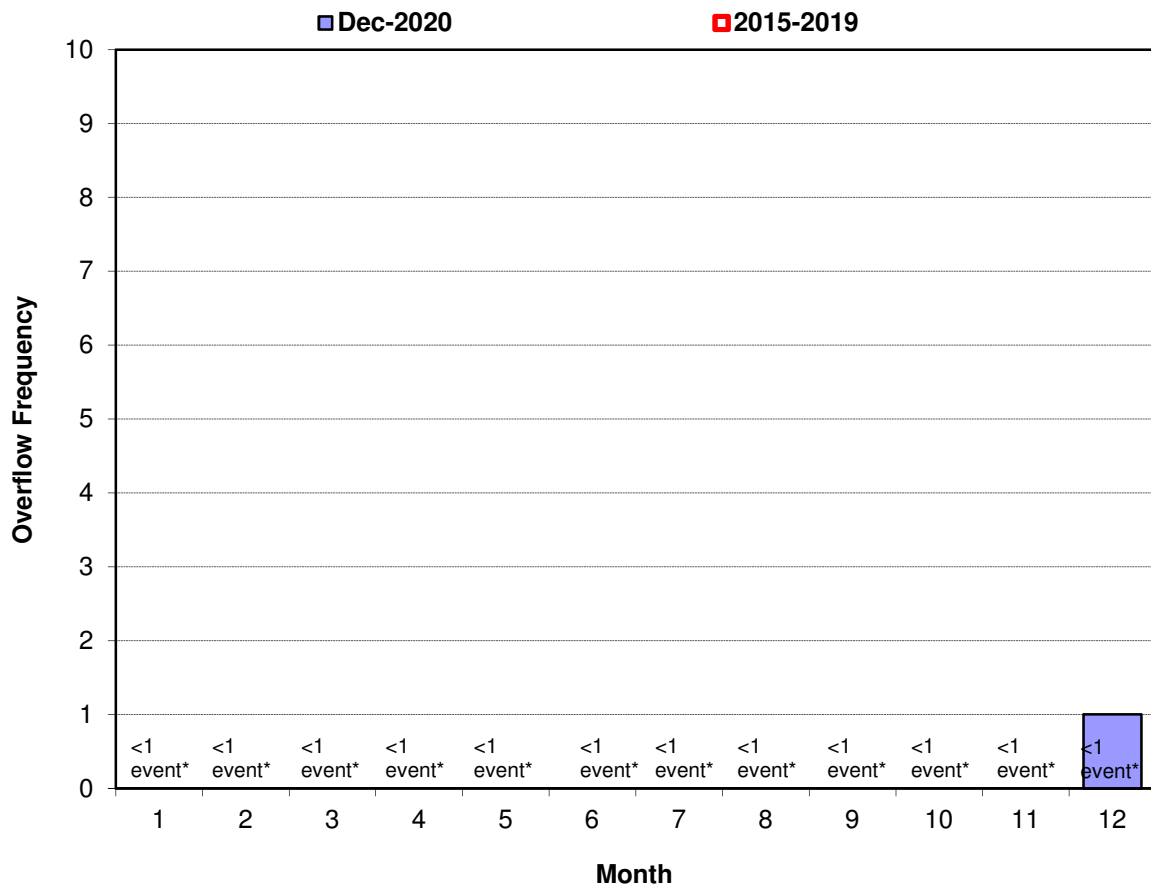
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.25	0.36		
12/5/20	1	2.08	4.25	2.28	0.003	0.17
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20		1.45	6.17	0.60		
12/15/20						
12/16/20		0.98	5.75	0.48		
12/17/20						
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.08	3.83	2.16		
12/25/20		0.02	0.17	0.12		
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20		0.01	0.08	0.12		

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
1	6.26	24.50	2.28	0.003	0.17

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

**City of Richmond, Virginia
 Overflow Frequency by Month
 CSO09 - 7th Street**



* Average Overflow Frequency is less than once in the month.

**CSO10 - Gambles Hill
Overflow Model Summary
Current Month: December 2020**

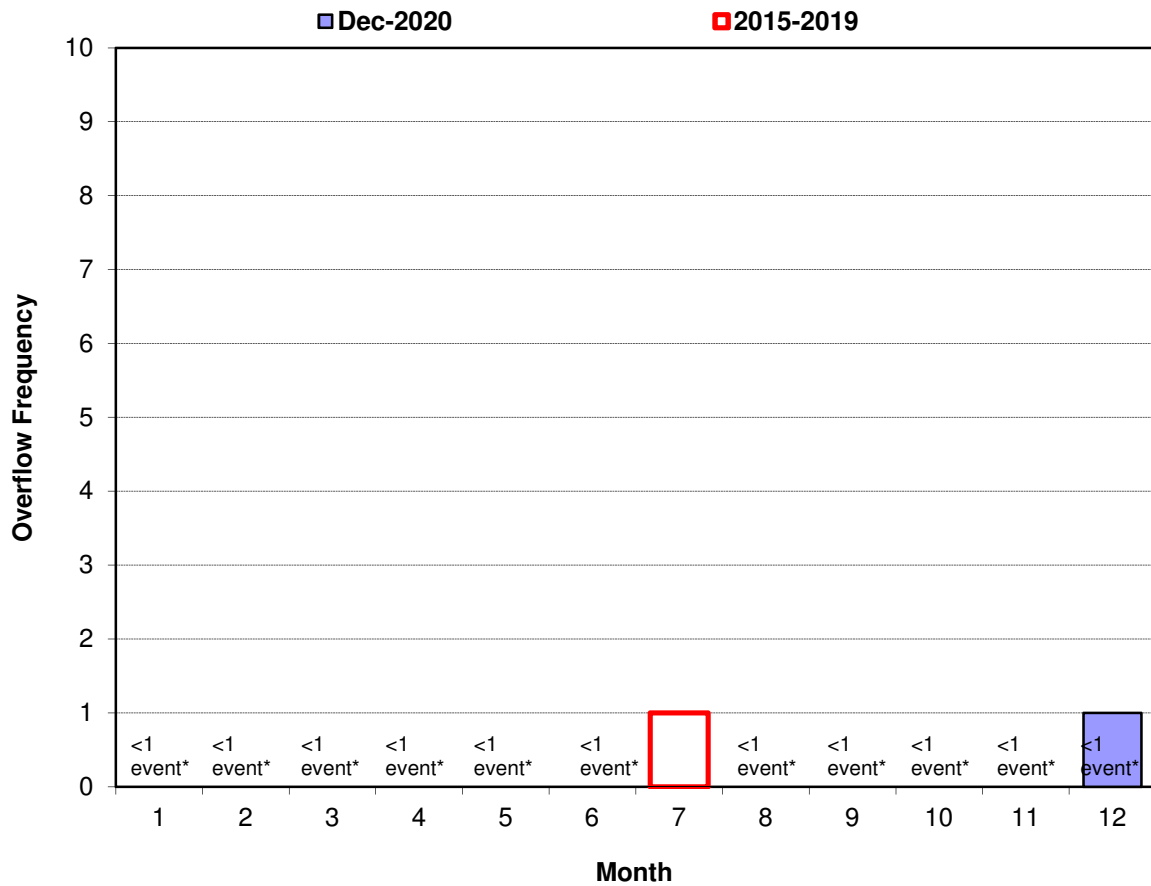
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.29	0.60		
12/5/20	1	2.03	4.17	2.28	0.05	0.08
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20		1.48	6.17	0.60		
12/15/20						
12/16/20		0.96	5.58	0.48		
12/17/20						
12/18/20						
12/19/20						
12/20/20		0.17	1.38	0.24		
12/21/20		0.01	0.04	0.12		
12/22/20						
12/23/20						
12/24/20		0.98	3.83	2.16		
12/25/20		0.02	0.13	0.12		
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.13	0.12		
12/31/20		0.01	0.04	0.12		

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
1	6.12	24.25	2.28	0.050	0.08

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

City of Richmond, Virginia
Overflow Frequency by Month
CSO10 - Gambles Hill



* Average Overflow Frequency is less than once in the month.

**CSO11 - Park Hydro
Overflow Model Summary
Current Month: December 2020**

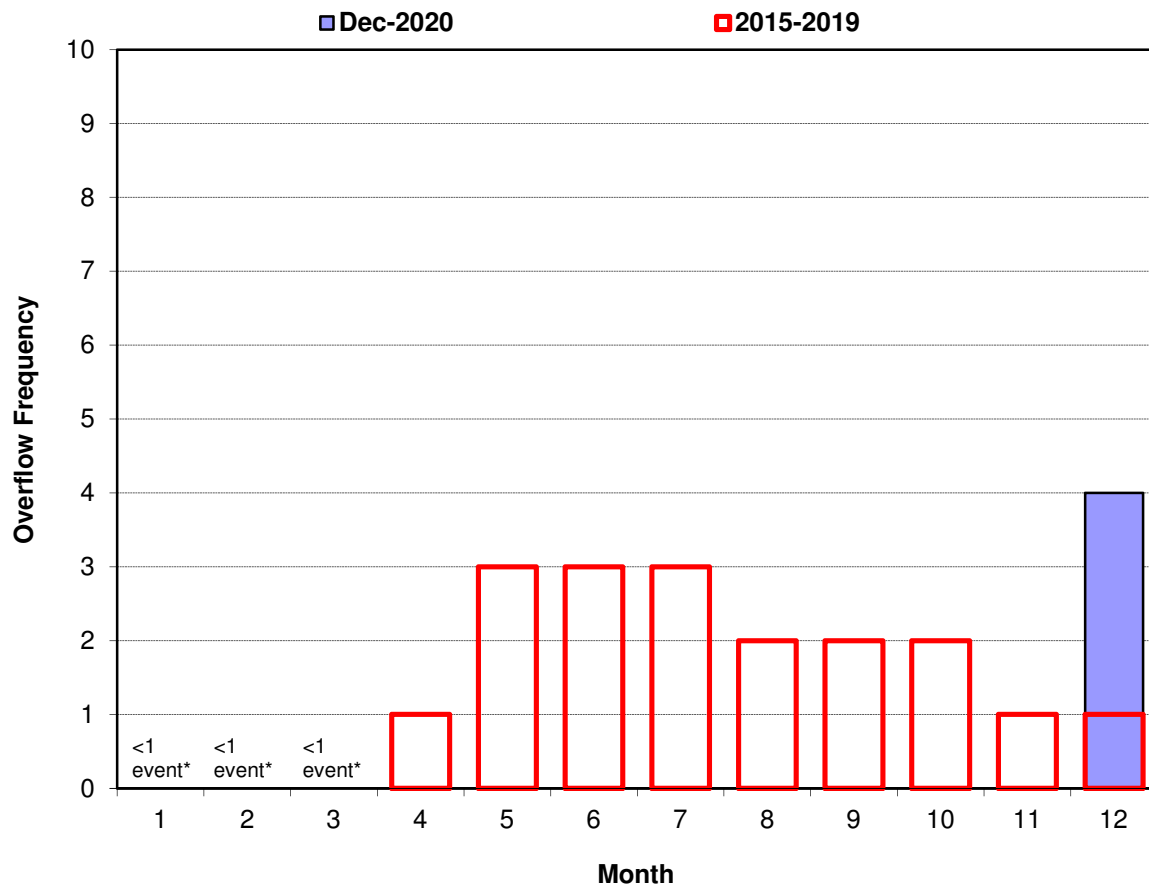
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.25	0.36		
12/5/20	1	2.08	4.25	2.28	9.7	3.25
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20	1	1.45	6.17	0.60	10.4	4.75
12/15/20						
12/16/20		0.98	5.75	0.48		
12/17/20	1				2.9	1.67
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.08	3.83	2.16		
12/25/20	1	0.02	0.17	0.12	2.3	1.33
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20		0.01	0.08	0.12		

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
4	6.26	24.50	2.28	25.300	11.00

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

**City of Richmond, Virginia
 Overflow Frequency by Month
 CSO11 - Park Hydro**



* Average Overflow Frequency is less than once in the month.

**CSO12 - Hilton Street
Overflow Model Summary
Current Month: December 2020**

Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.25	0.36		
12/5/20	1	2.08	4.25	2.28	1.5	5.25
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20	1 ⁽³⁾	1.45	6.17	0.60	0.33	4.25
12/15/20					0.001	0.17
12/16/20		0.98	5.75	0.48		
12/17/20	1				0.11	2.58
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.08	3.83	2.16		
12/25/20	1	0.02	0.17	0.12	0.17	1.00
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20		0.01	0.08	0.12		

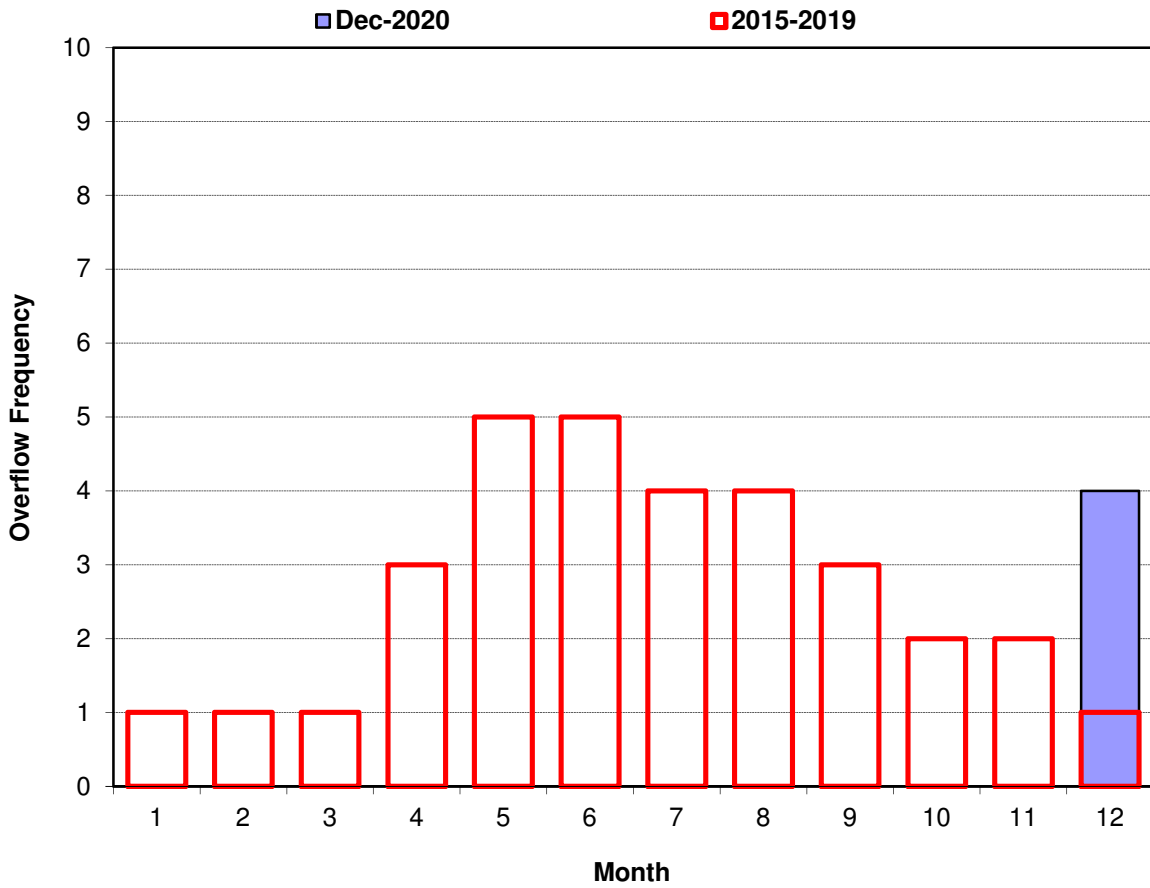
MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
4	6.26	24.50	2.28	2.100	13.25

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

⁽³⁾ Overflow event continued on the following day.

City of Richmond, Virginia
Overflow Frequency by Month
CSO12 - Hilton Street



CSO14 - Stockton
Overflow Model Summary
Current Month: December 2020

Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.25	0.36		
12/5/20	1	2.08	4.25	2.28	9.1	4.25
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20	1 ⁽³⁾	1.45	6.17	0.60	2.9	4.08
12/15/20					0.05	0.58
12/16/20		0.98	5.75	0.48		
12/17/20	1				1.2	3.08
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.08	3.83	2.16		
12/25/20	1	0.02	0.17	0.12	1.3	1.33
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20		0.01	0.08	0.12		

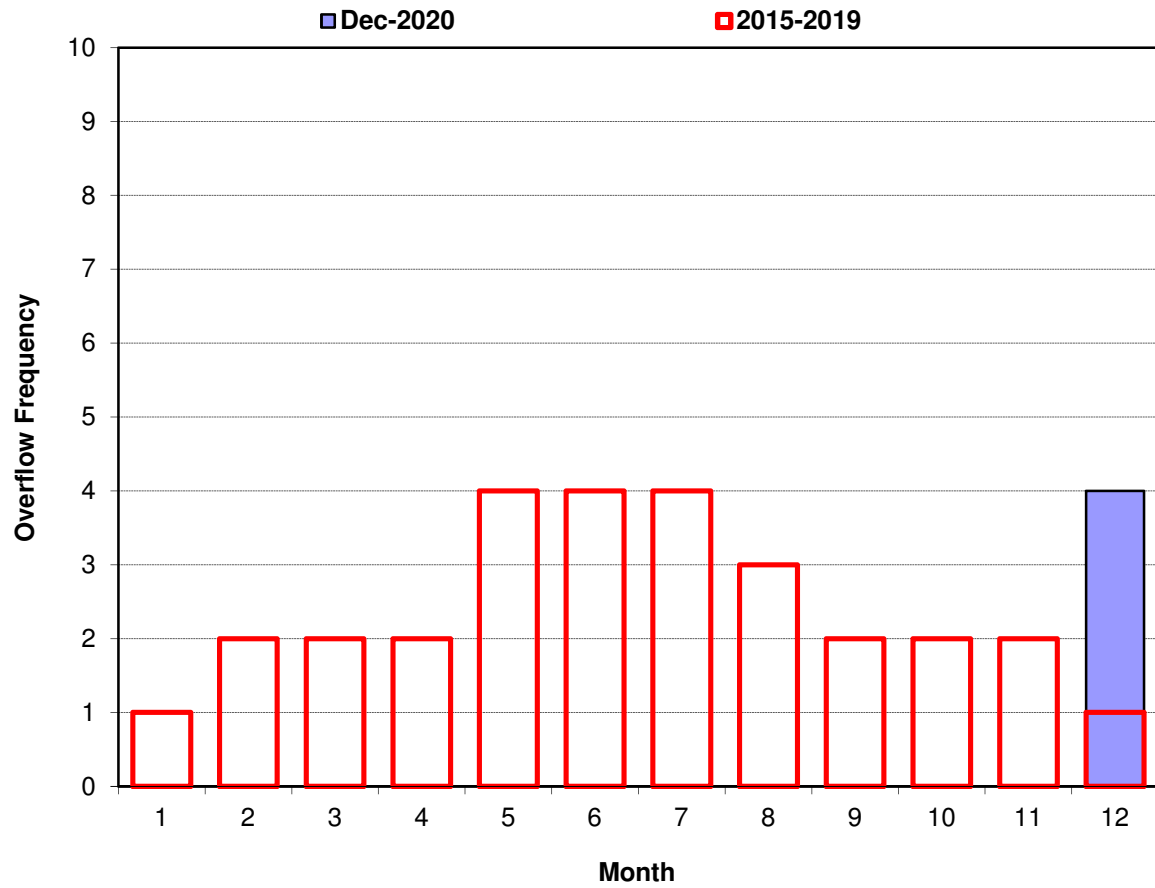
MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
4	6.26	24.50	2.28	14.600	13.33

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

⁽³⁾ Overflow event continued on the following day.

City of Richmond, Virginia
Overflow Frequency by Month
CSO14 - Stockton



**CSO15 - Canoe Run
Overflow Model Summary
Current Month: December 2020**

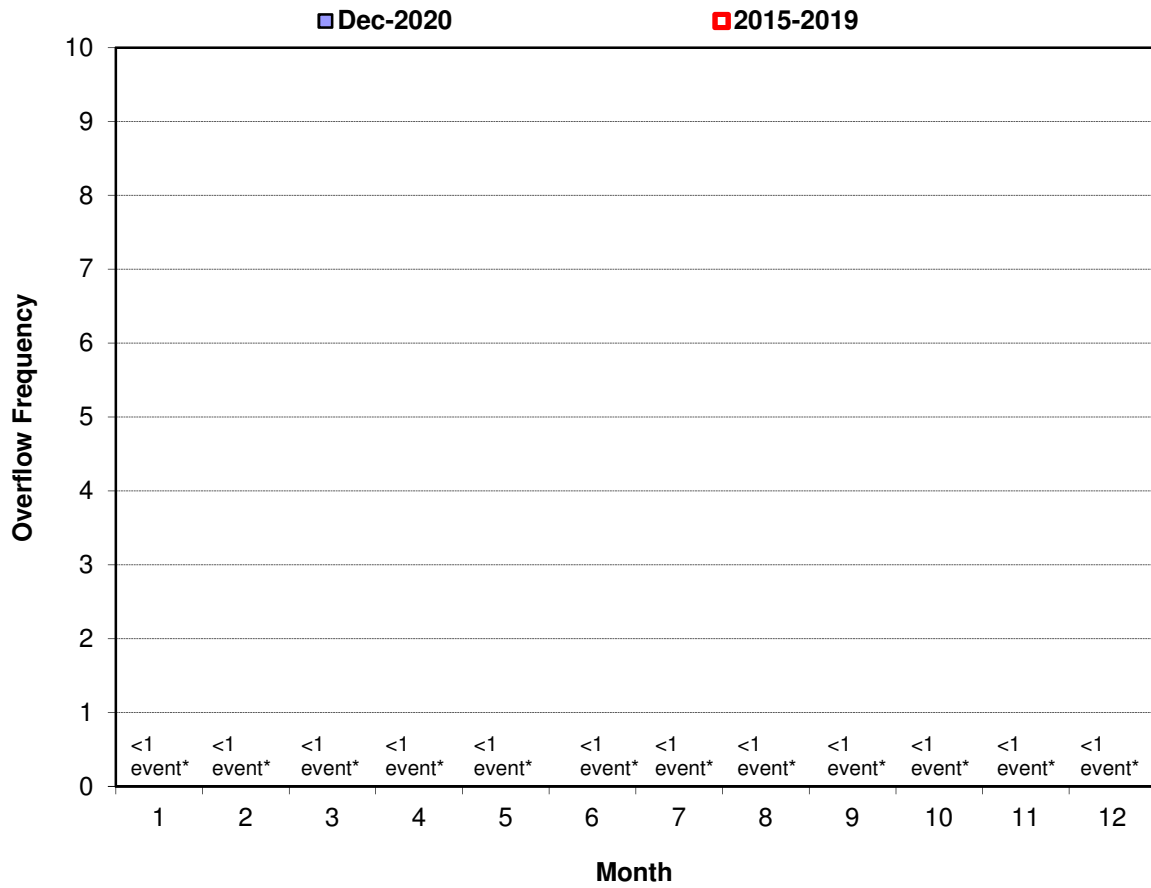
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.29	0.60		
12/5/20		2.03	4.17	2.28		
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20		1.48	6.17	0.60		
12/15/20						
12/16/20		0.96	5.58	0.48		
12/17/20						
12/18/20						
12/19/20						
12/20/20		0.17	1.38	0.24		
12/21/20		0.01	0.04	0.12		
12/22/20						
12/23/20						
12/24/20		0.98	3.83	2.16		
12/25/20		0.02	0.13	0.12		
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.13	0.12		
12/31/20		0.01	0.04	0.12		

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
0	6.12	24.25	2.28	0.000	0.00

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

City of Richmond, Virginia
Overflow Frequency by Month
CSO15 - Canoe Run



* Average Overflow Frequency is less than once in the month.

**CSO16 - Woodland
Overflow Model Summary
Current Month: December 2020**

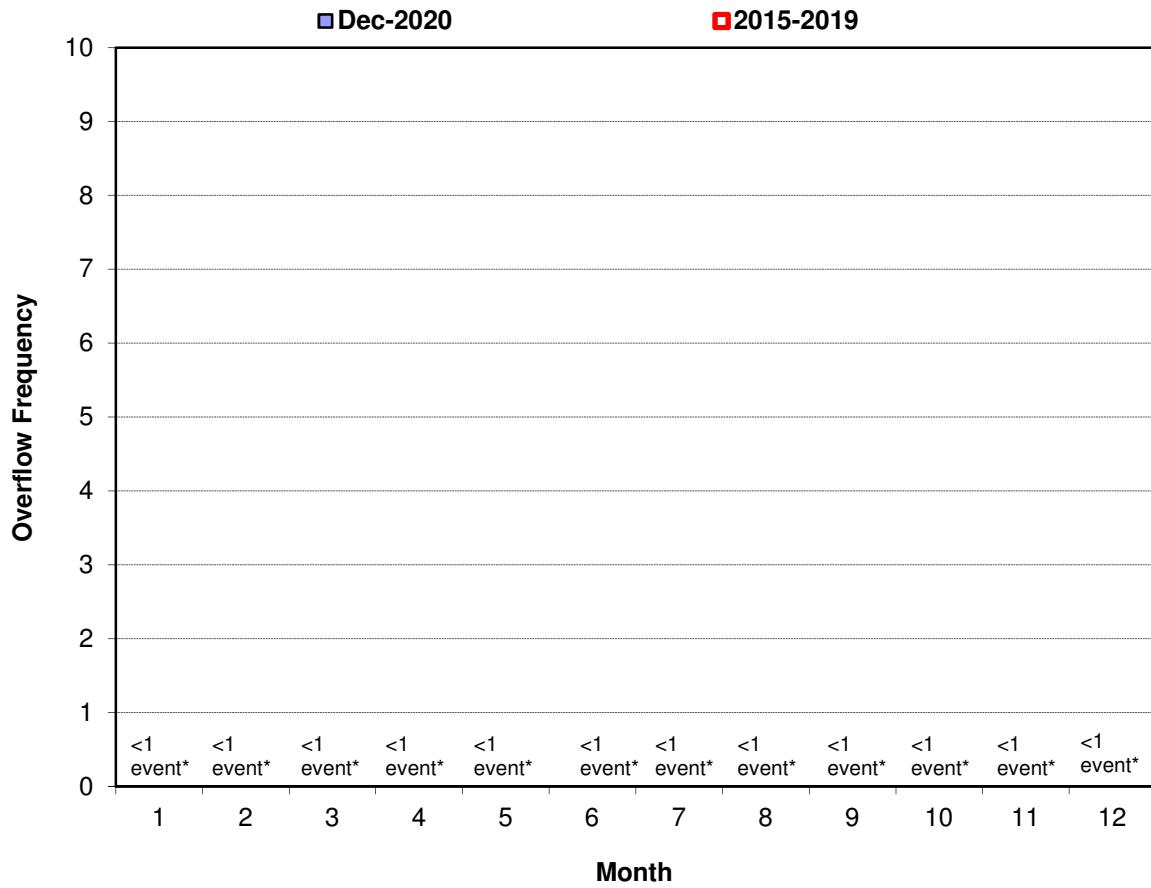
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.47	2.33	1.20		
12/5/20		2.09	4.25	2.28		
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20		1.45	6.08	0.60		
12/15/20						
12/16/20		1.01	5.71	0.48		
12/17/20		0.01	0.04	0.12		
12/18/20						
12/19/20						
12/20/20		0.17	1.38	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.03	3.88	2.16		
12/25/20		0.03	0.25	0.12		
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20		0.01	0.04	0.12		

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
0	6.33	24.63	2.28	0.000	0.00

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

City of Richmond, Virginia
Overflow Frequency by Month
CSO16 - Woodland



* Average Overflow Frequency is less than once in the month.

**CSO17 - Reedy Creek
Overflow Model Summary
Current Month: December 2020**

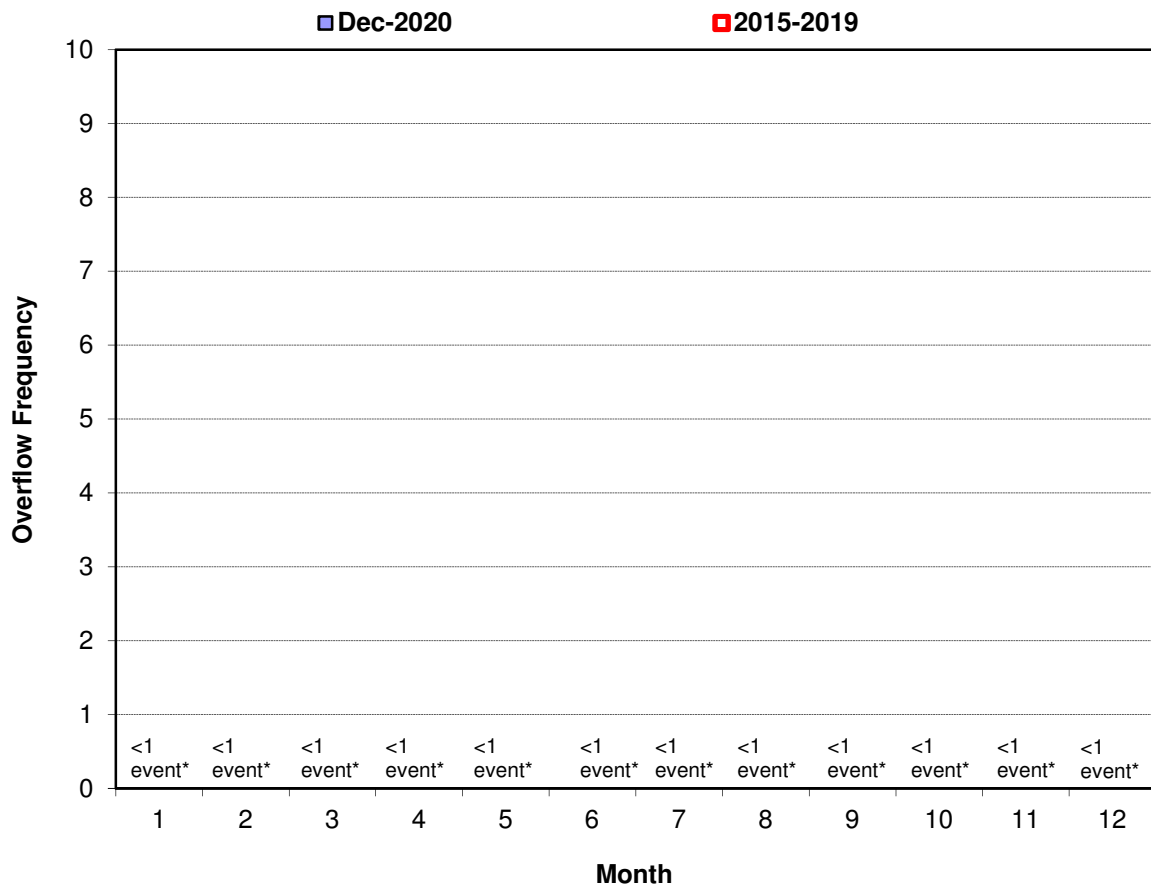
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.54	2.42	1.20		
12/5/20		2.11	4.25	2.28		
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20		1.45	6.00	0.48		
12/15/20						
12/16/20		1.03	5.67	0.48		
12/17/20		0.01	0.08	0.12		
12/18/20						
12/19/20						
12/20/20		0.17	1.42	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		0.98	3.92	1.92		
12/25/20		0.04	0.33	0.12		
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20						

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
0	6.41	24.75	2.28	0.000	0.00

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

City of Richmond, Virginia
Overflow Frequency by Month
CSO17 - Reedy Creek



* Average Overflow Frequency is less than once in the month.

**CSO18 - 42nd Street
Overflow Model Summary
Current Month: December 2020**

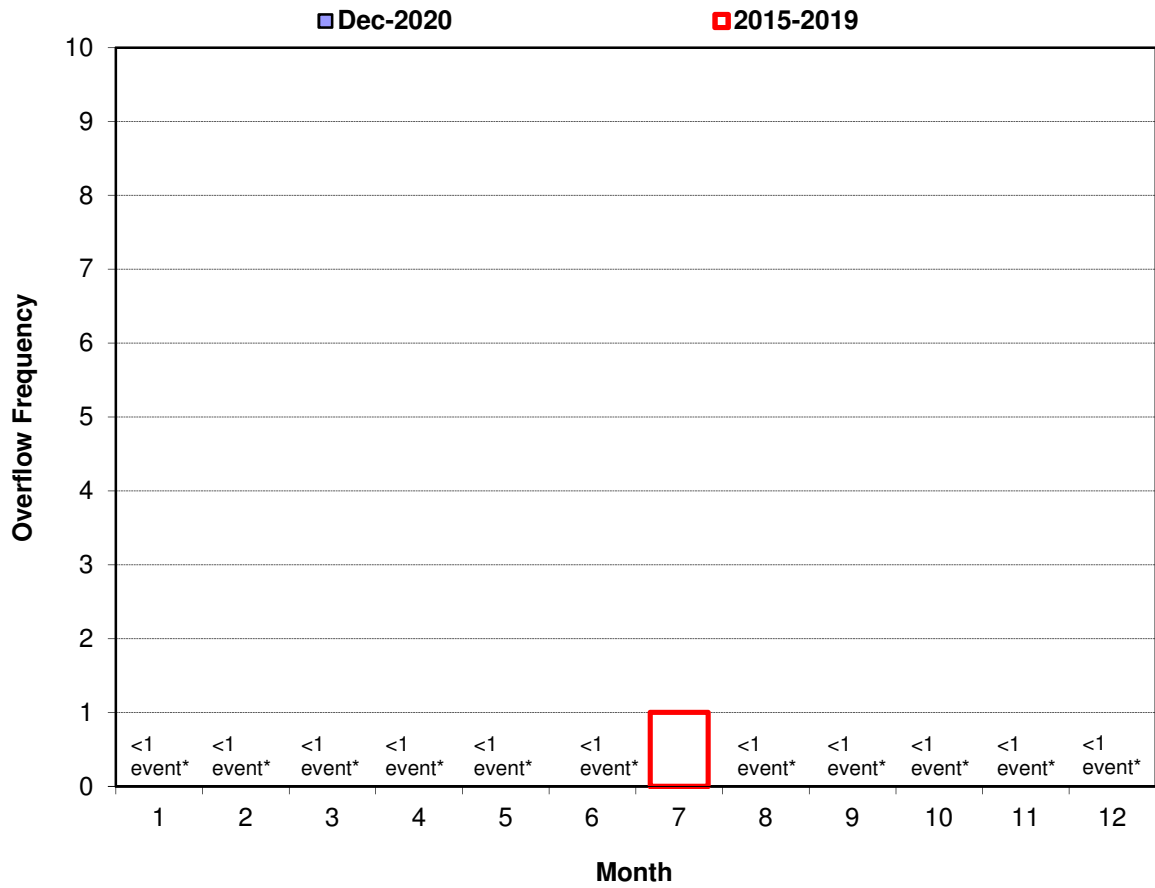
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.54	2.42	1.20		
12/5/20		2.11	4.25	2.28		
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20		1.45	6.00	0.48		
12/15/20						
12/16/20		1.03	5.67	0.48		
12/17/20		0.01	0.08	0.12		
12/18/20						
12/19/20						
12/20/20		0.17	1.42	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		0.98	3.92	1.92		
12/25/20		0.04	0.33	0.12		
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20						

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
0	6.41	24.75	2.28	0.000	0.00

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

**City of Richmond, Virginia
 Overflow Frequency by Month
 CSO18 - 42nd Street**



* Average Overflow Frequency is less than once in the month.

**CSO19 - Hampton
Overflow Model Summary
Current Month: December 2020**

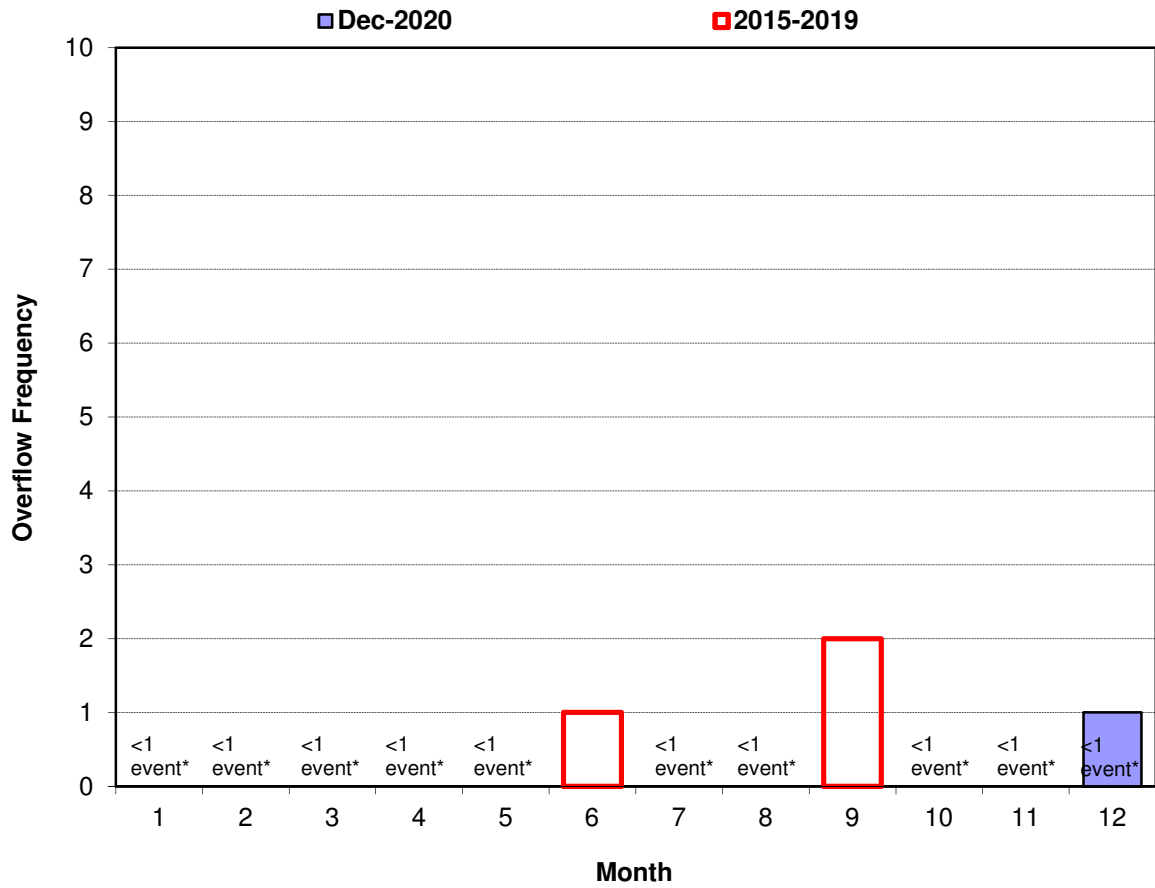
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.46	2.36	1.20		
12/5/20	1	2.09	4.19	2.88	1.4	3.25
12/6/20						
12/7/20		0.06	0.47	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20		1.49	6.06	0.72		
12/15/20						
12/16/20		1.02	5.69	0.60		
12/17/20		0.00	0.03	0.12		
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.04	3.94	2.16		
12/25/20		0.03	0.25	0.12		
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.01	0.11	0.12		
12/31/20		0.00	0.03	0.12		

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
1	6.36	24.47	2.88	1.400	3.25

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

City of Richmond, Virginia Overflow Frequency by Month CSO19 - Hampton



* Average Overflow Frequency is less than once in the month.

CSO20 - McCloy
Overflow Model Summary
Current Month: December 2020

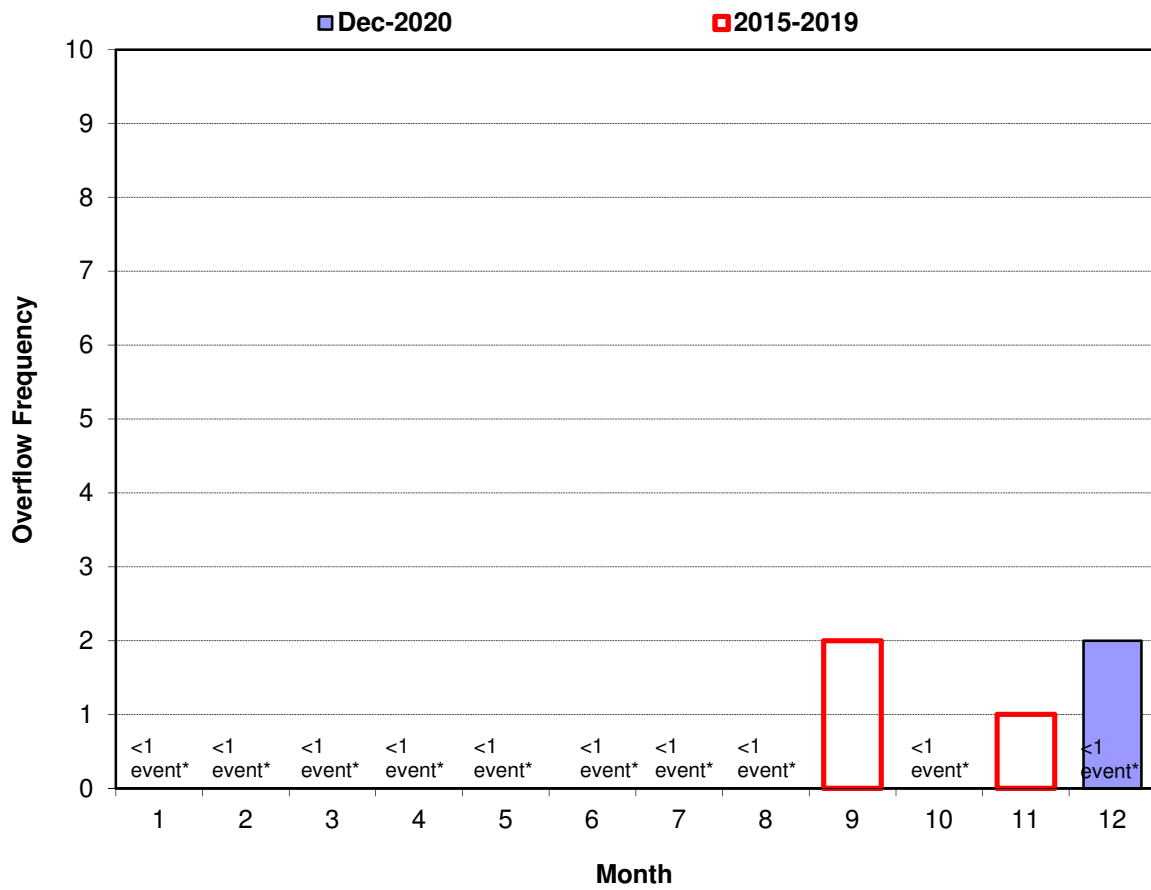
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.49	2.42	1.20		
12/5/20	1	2.09	4.17	2.88	1	2.33
12/6/20						
12/7/20	1	0.06	0.46	0.12	0.02	0.08
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20		1.51	6.00	0.72		
12/15/20						
12/16/20		1.04	5.67	0.60		
12/17/20		0.01	0.04	0.12		
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.02	4.00	1.92		
12/25/20		0.04	0.29	0.12		
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.01	0.08	0.12		
12/31/20						

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
2	6.41	24.46	2.88	1.000	2.42

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

**City of Richmond, Virginia
 Overflow Frequency by Month
 CSO20 - McCloy**



* Average Overflow Frequency is less than once in the month.

**CSO21 - Gordon Ave
Overflow Model Summary
Current Month: December 2020**

Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.25	0.36		
12/5/20	1	2.08	4.25	2.28	18.70	5.83
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20	1 ⁽³⁾	1.45	6.17	0.60	4.20	4.67
12/15/20					0.59	0.92
12/16/20		0.98	5.75	0.48		
12/17/20	1				0.62	1.08
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.08	3.83	2.16		
12/25/20	1	0.02	0.17	0.12	2.00	1.67
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20		0.01	0.08	0.12		

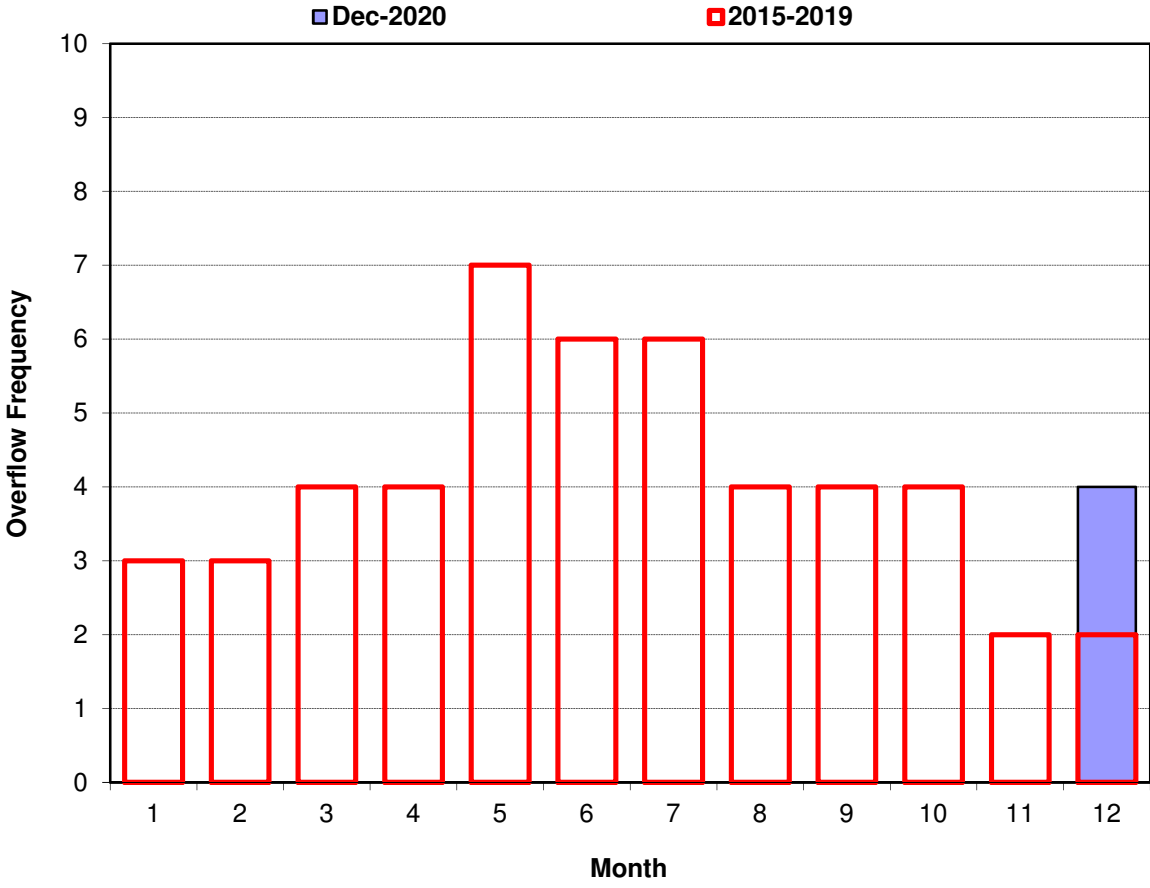
MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
4	6.26	24.50	2.28	26.100	14.17

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

⁽³⁾ Overflow event continued on the following day.

City of Richmond, Virginia
Overflow Frequency by Month
CSO21 - Gordon Ave



**CSO24 - Gillies & Varina
 Overflow Model Summary
 Current Month: December 2020**

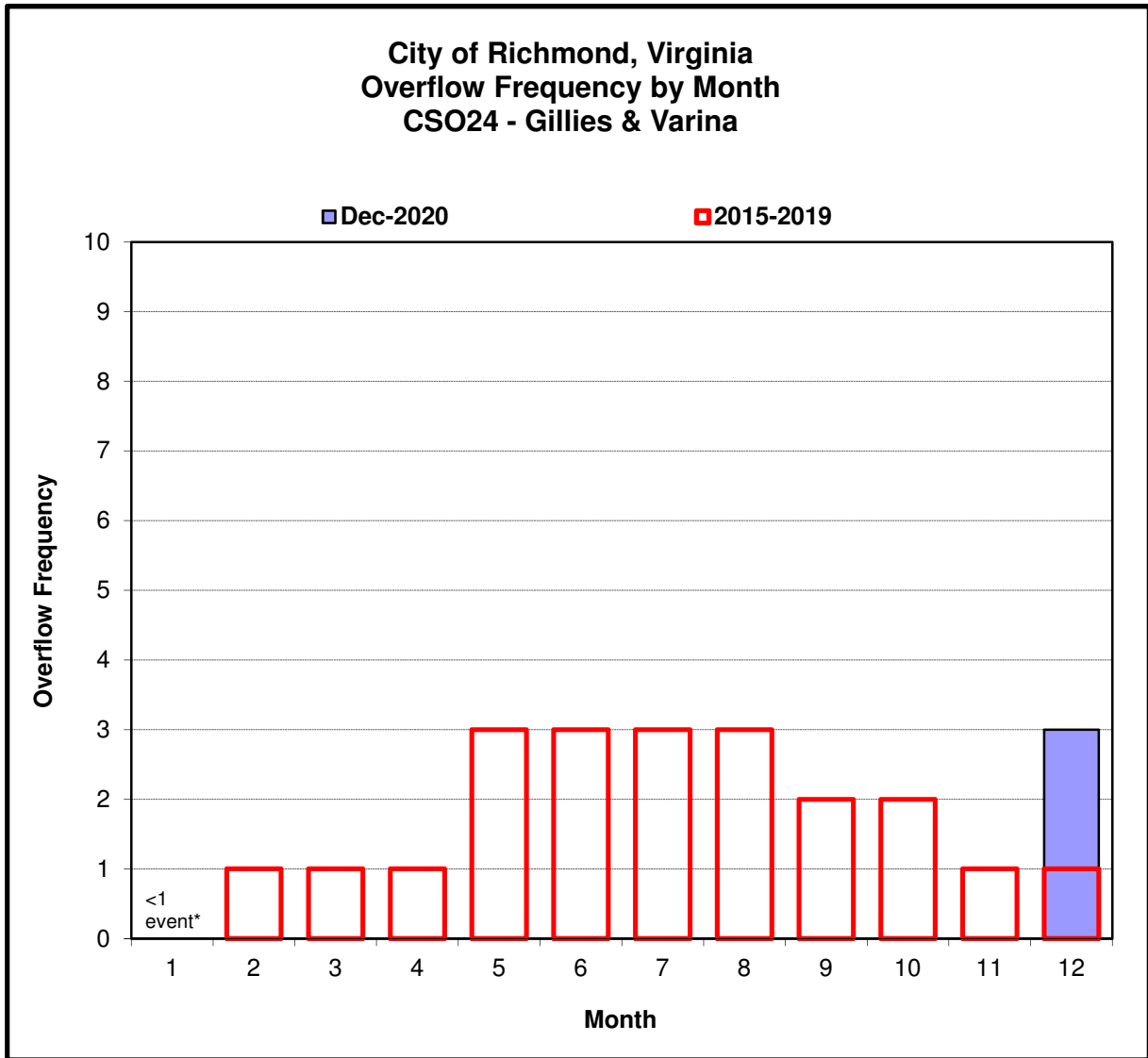
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.25	0.36		
12/5/20	1	2.08	4.25	2.28	1.5	5.25
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20	1	1.45	6.17	0.60	0.11	1.83
12/15/20						
12/16/20		0.98	5.75	0.48		
12/17/20						
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.08	3.83	2.16		
12/25/20	1	0.02	0.17	0.12	0.01	0.42
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20		0.01	0.08	0.12		

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
3	6.26	24.50	2.28	1.600	7.50

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

City of Richmond, Virginia
Overflow Frequency by Month
CSO24 - Gillies & Varina



* Average Overflow Frequency is less than once in the month.

**CSO25 - Briel & Gillies Cr
 Overflow Model Summary
 Current Month: December 2020**

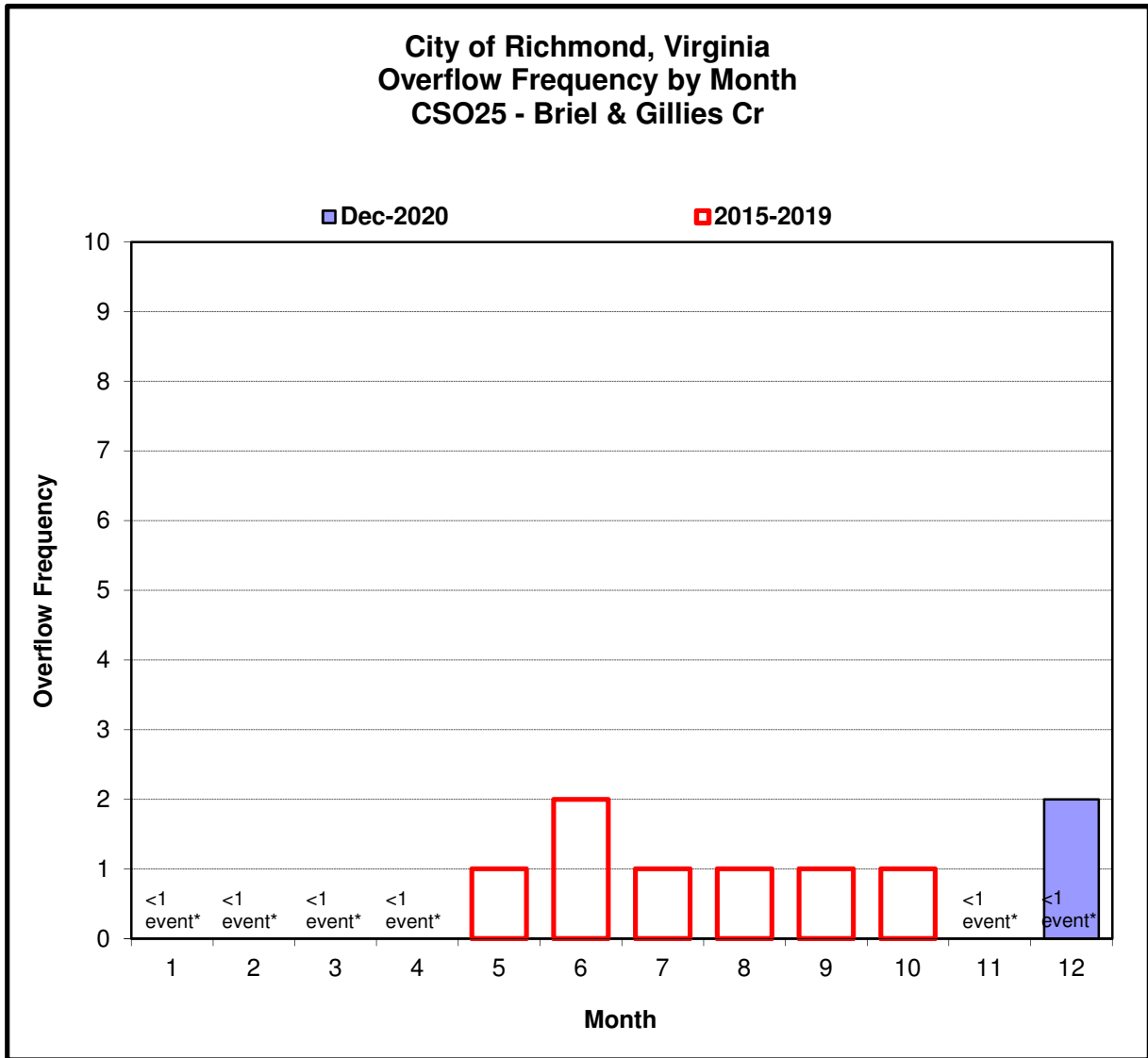
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.25	0.36		
12/5/20	1	2.08	4.25	2.28	0.4	2.42
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20	1	1.45	6.17	0.60	0.007	0.33
12/15/20						
12/16/20		0.98	5.75	0.48		
12/17/20						
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.08	3.83	2.16		
12/25/20		0.02	0.17	0.12		
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20		0.01	0.08	0.12		

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
2	6.26	24.50	2.28	0.410	2.75

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

**City of Richmond, Virginia
 Overflow Frequency by Month
 CSO25 - Briel & Gillies Cr**



* Average Overflow Frequency is less than once in the month.

**CSO26 - Govt Road & NSRR
 Overflow Model Summary
 Current Month: December 2020**

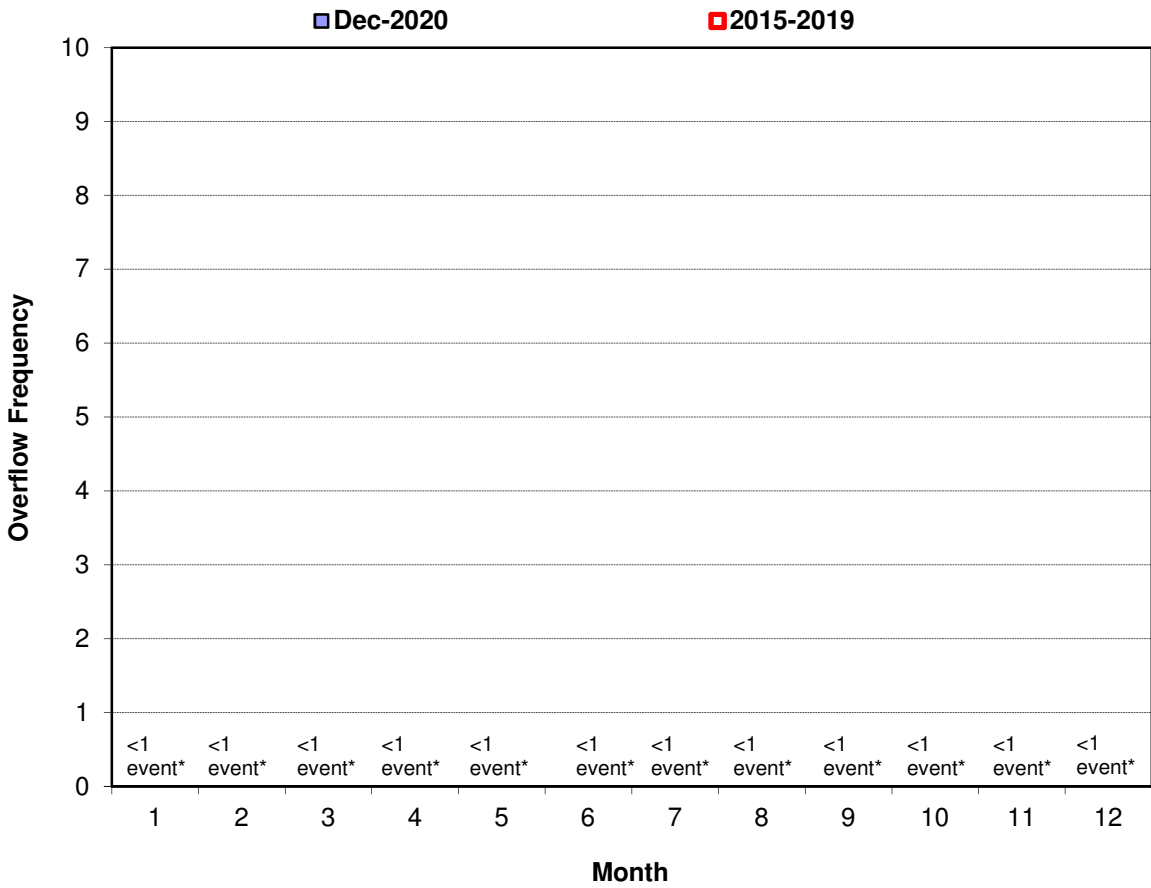
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.25	0.36		
12/5/20		2.08	4.25	2.28		
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20		1.45	6.17	0.60		
12/15/20						
12/16/20		0.98	5.75	0.48		
12/17/20						
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.08	3.83	2.16		
12/25/20		0.02	0.17	0.12		
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20		0.01	0.08	0.12		

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
0	6.26	24.50	2.28	0.000	0.00

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

**City of Richmond, Virginia
Overflow Frequency by Month
CSO26 - Govt Road & NSRR**



* Average Overflow Frequency is less than once in the month.

**CSO31 - Oakwood Cem
Overflow Model Summary
Current Month: December 2020**

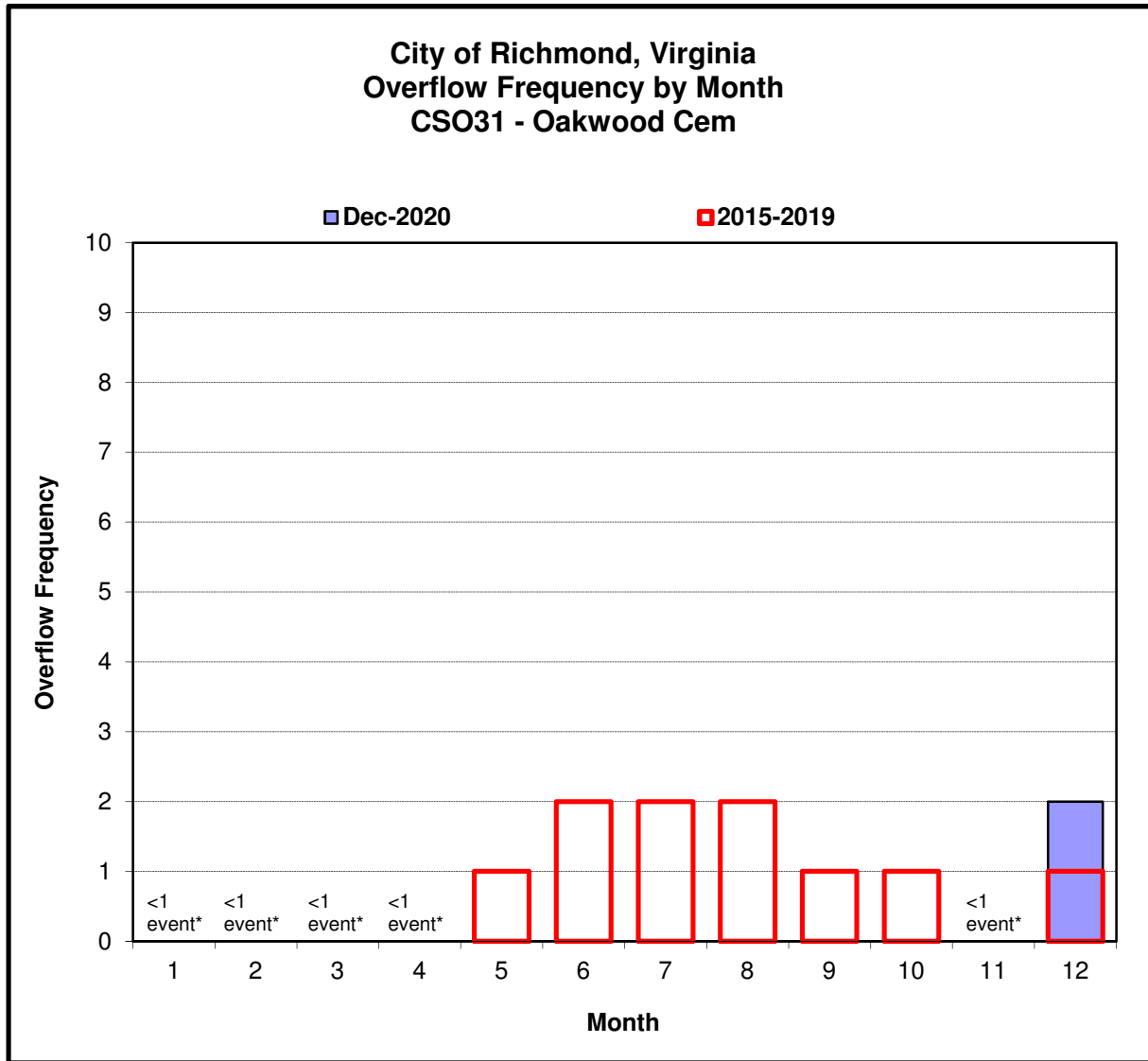
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.29	0.60		
12/5/20	1	2.03	4.17	2.28	1.1	2.42
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20		1.48	6.17	0.60		
12/15/20						
12/16/20		0.96	5.58	0.48		
12/17/20						
12/18/20						
12/19/20						
12/20/20		0.17	1.38	0.24		
12/21/20		0.01	0.04	0.12		
12/22/20						
12/23/20						
12/24/20		0.98	3.83	2.16		
12/25/20	1	0.02	0.13	0.12	0.01	0.17
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.13	0.12		
12/31/20		0.01	0.04	0.12		

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
2	6.12	24.25	2.28	1.200	2.58

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

City of Richmond, Virginia
Overflow Frequency by Month
CSO31 - Oakwood Cem



* Average Overflow Frequency is less than once in the month.

**CSO33 - Shields Lake
Overflow Model Summary
Current Month: December 2020**

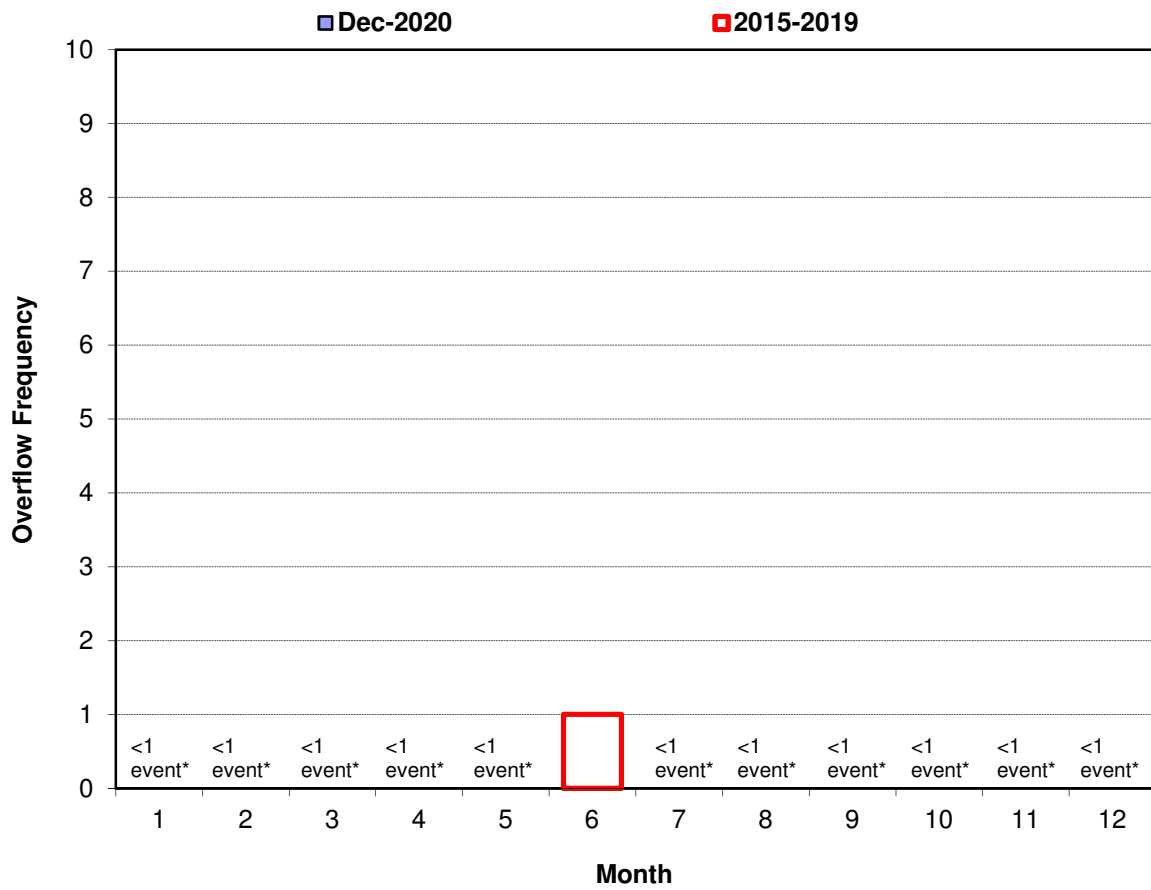
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.54	2.42	1.20		
12/5/20		2.11	4.25	2.28		
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20		1.45	6.00	0.48		
12/15/20						
12/16/20		1.03	5.67	0.48		
12/17/20		0.01	0.08	0.12		
12/18/20						
12/19/20						
12/20/20		0.17	1.42	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		0.98	3.92	1.92		
12/25/20		0.04	0.33	0.12		
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20						

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
0	6.41	24.75	2.28	0.000	0.00

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

City of Richmond, Virginia
Overflow Frequency by Month
CSO33 - Shields Lake



* Average Overflow Frequency is less than once in the month.

**CSO34 - 19th & Dock
 Overflow Model Summary
 Current Month: December 2020**

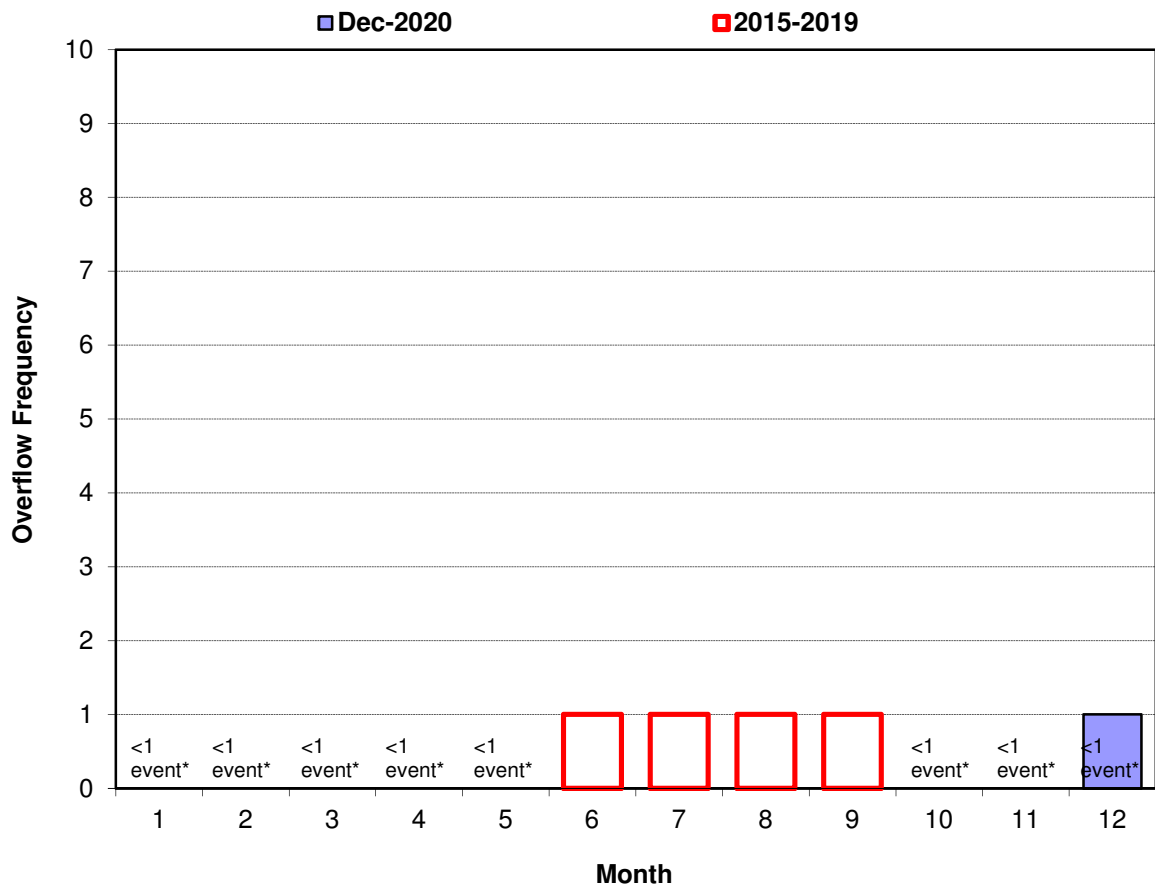
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.25	0.36		
12/5/20	1	2.08	4.25	2.28	0.03	0.42
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20		1.45	6.17	0.60		
12/15/20						
12/16/20		0.98	5.75	0.48		
12/17/20						
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.08	3.83	2.16		
12/25/20		0.02	0.17	0.12		
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20		0.01	0.08	0.12		

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
1	6.26	24.50	2.28	0.030	0.42

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

**City of Richmond, Virginia
 Overflow Frequency by Month
 CSO34 - 19th & Dock**



* Average Overflow Frequency is less than once in the month.

**CSO35 - 29th & Dock
 Overflow Model Summary
 Current Month: December 2020**

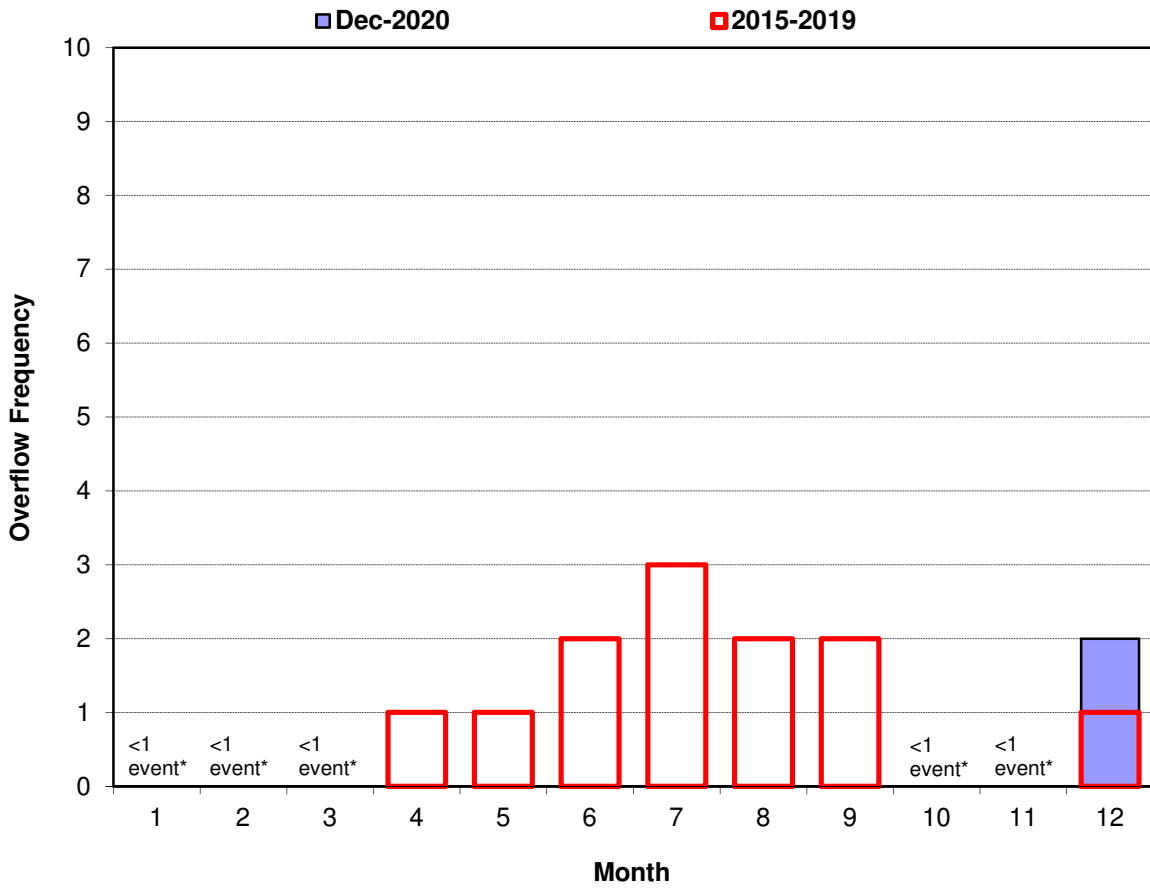
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.25	0.36		
12/5/20	1	2.08	4.25	2.28	0.11	1.50
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20		1.45	6.17	0.60		
12/15/20						
12/16/20		0.98	5.75	0.48		
12/17/20						
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.08	3.83	2.16		
12/25/20	1	0.02	0.17	0.12	0.005	0.17
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20		0.01	0.08	0.12		

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
2	6.26	24.50	2.28	0.120	1.67

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

**City of Richmond, Virginia
 Overflow Frequency by Month
 CSO35 - 29th & Dock**



* Average Overflow Frequency is less than once in the month.

**CSO39 - Govt Road & Gillies
 Overflow Model Summary
 Current Month: December 2020**

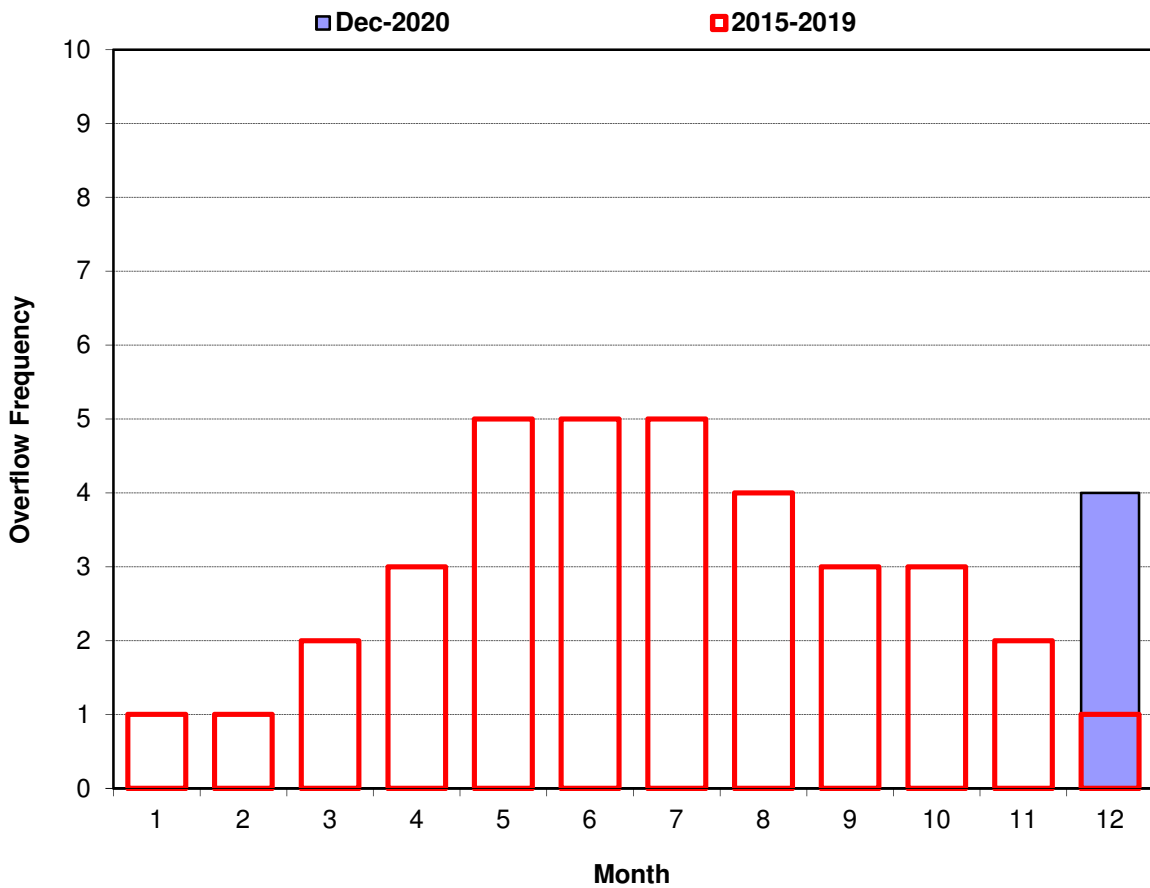
Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.40	2.25	0.36		
12/5/20	1	2.08	4.25	2.28	1.6	4.08
12/6/20						
12/7/20		0.06	0.50	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20	1	1.45	6.17	0.60	0.42	4.08
12/15/20						
12/16/20		0.98	5.75	0.48		
12/17/20	1				0.11	2.08
12/18/20						
12/19/20						
12/20/20		0.16	1.33	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.08	3.83	2.16		
12/25/20	1	0.02	0.17	0.12	0.14	0.67
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.17	0.12		
12/31/20		0.01	0.08	0.12		

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
4	6.26	24.50	2.28	2.300	10.92

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

City of Richmond, Virginia
Overflow Frequency by Month
CSO39 - Govt Road & Gillies



**CSO40 - Diffuser
Overflow Model Summary
Current Month: December 2020**

Date	Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hr)
12/1/20						
12/2/20						
12/3/20						
12/4/20		0.42	2.28	1.20		
12/5/20	1	2.06	4.19	2.28	10.8	8.42
12/6/20						
12/7/20		0.06	0.53	0.12		
12/8/20						
12/9/20						
12/10/20						
12/11/20						
12/12/20						
12/13/20						
12/14/20	1 ⁽³⁾	1.48	6.17	0.72	0.82	2.92
12/15/20					0.46	2.00
12/16/20		1.05	5.92	0.60		
12/17/20	1	0.00	0.03	0.12	0.11	0.75
12/18/20						
12/19/20						
12/20/20		0.19	1.56	0.12		
12/21/20						
12/22/20						
12/23/20						
12/24/20		1.06	3.92	2.16		
12/25/20	1	0.04	0.31	0.12	0.86	2.58
12/26/20						
12/27/20						
12/28/20						
12/29/20						
12/30/20		0.02	0.14	0.12		
12/31/20		0.03	0.19	0.24		

MONTH SUMMARY

Num of Overflow	Rainfall ⁽¹⁾ Total (in)	Hours of ⁽¹⁾ Rainfall	Max. Rainfall ⁽¹⁾ Intensity (in/hr)	Volume of Overflow (MG)	Duration of Overflow (hrs)
4	6.41	25.22	2.28	13.000	16.67

⁽¹⁾ Based on the NWS Station at Richmond Airport (KRIC ASOS) rainfall data.

⁽³⁾ Overflow event continued on the following day.

City of Richmond, Virginia
Overflow Frequency by Month
CSO40 - Diffuser

