MSD
Metropolitan Sewer District

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January 30, 2015

Chief, NPDES Permitting & Enforcement Branch
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U.S. Department of Justice
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Jeff Cummins, Director
Division of Enforcement
Department of Environmental Protection
300 Fair Oaks Lane
Frankfort, KY 40601

Subject: Quarterly Report 37
Civil Action No. 3:08-cv-00608-CRS

Attention Chief:

Please find attached our Quarterly Report, prepared in accordance with Paragraph 29 of our Amended Consent Decree. This report is for the period October 1, 2014 – December 31, 2014, pertaining to Consent Decree compliance activities. Included are sections on Project WIN activities related to: NMC, SORP, Discharge Abatement Plans, Public Outreach, Education, Notification and Participation, CMOM and Performance Overview.

I certify under penalty of law that this document and all attachments were prepared under our 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.

If you have questions or need additional information, please contact me at (502) 540-6136.

Sincerely,

Angela Akridge, PE.
Regulatory Services Director

cc: Greg Heitzman, PE Paula Purifoy Steve Emly

Louisville and Jefferson County Wet Weather Consent Decree Quarterly Report #37

Reporting Period:

October 1, 2014 through December 31, 2014

Submitted To:

Kentucky Department of Environmental Protection

United States Environmental Protection Agency

United States Department of Justice

Submitted By:

Louisville and Jefferson County Metropolitan Sewer District
700 W. Liberty Street
Louisville, Kentucky 40203-1911

Submittal Date:

January 30, 2015

TABLE OF CONTENTS

ATTACHMENTS

APPENDIX A-1 DISCHARGE WORK ORDERS-DRY WEATHER CSOS

APPENDIX A-2 DISCHARGE WORK ORDERS-BYPASS

APPENDIX A-3 DISCHARGE WORK ORDERS-BLENDING

APPENDIX B - CSO FLOW MONITORING DATA

APPENDIX C - ACRONYMS

APPENDIX D - SCAP BALANCE

APPENDIX E - CSO STORM FREQUENCY TABLE

APPENDIX F – IOAP PROJECT CROSS WALK

INTRODUCTION

The Louisville and Jefferson County Metropolitan Sewer District (MSD) is currently under an Amended Consent Decree with the Kentucky Department of Environmental Protection (KDEP), the United States Environmental Protection Agency (EPA), and the United States Department of Justice. The Amended Consent Decree was signed by United States District Judge Simpson on April 10, 2009, and filed in United States District Court, Western Division of Kentucky, Louisville Division, on April 15, 2009.

Quarterly Reporting Period

This is the thirty-seventh Quarterly Report submitted in accordance with Paragraph 29 of the Amended Consent Decree. This report covers the time period from October 1, 2014, through December 31, 2014. **The structure for this report is outlined as follows:**

Section 1: Program Activities for Nine Minimum Controls (NMC) - This section describes the data collected for NMC 2 – Maximization of Storage in the Collection System, and NMC 4 – Maximization of Flow at the Morris Forman Water Quality Treatment Center (WQTC) that were active during the reporting period (October 1, 2014, through December 31, 2014).

Section 2: Program Activities for Sewer Overflow Response Protocol (SORP) - This section describes the training attendance records, overflow data, and overflow reconnaissance inspection routes related to SORP that were active during the reporting period (October 1, 2014, through December 31, 2014).

Section 3: Program Activities for Discharge Abatement Plans (DAP) - This section describes the schedule and status for projects related to the DAP by means of an updated Gantt chart for active DAP projects during the reporting period, and the anticipated projects and activities that are scheduled for continued compliance with the Amended Consent Decree.

Section 4: Program Activities for Public Outreach, Education, Notification and Participation - This section describes the activities related to public outreach that were active during the reporting period (October 1, 2014, through December 31, 2014).

Section 5: Capacity Management, Operations and Maintenance Report - The CMOM program activities and programmatic activities for WQTCs generating capital projects will be reported in a Gantt chart for the reporting period (October 1, 2014, through December 31, 2014), and include the schedule for activities planned for the next two reporting periods (January 1, 2015, through June 30, 2015), are included in this section for continued compliance with the Amended Consent Decree.

Section 6: Performance Overview - This section provides an accounting of unauthorized discharge occurrences from the separate sanitary sewer and combined sewer system and the estimated volumes of each. A discussion of the probable reductions in both unauthorized discharge points and the discharges from MSD's Combined Sewer Overflow (CSO) locations, identified in the Morris Forman Water Quality Treatment Center (WQTC) Kentucky Pollutant Discharge Elimination System (KPDES) permit, that are expected to result from MSD's projects and activities during the reporting period are also contained in this section.

Performance information on Jeffersontown WQTC blending events, bypasses at WQTCs, DMR information, and phosphorus monitoring at WQTCs is included in this section.

SECTION 1: Program Activities for Nine Minimum Controls

1.1 Nine Minimum Controls Program Background

Per Paragraph 24.a. of the Amended Consent Decree, the Nine Minimum Controls (NMC) Compliance Report was initially submitted to EPA and KDEP on February 10, 2006. MSD received an approval letter, dated February 22, 2007, for the NMC Compliance Report. The approved NMC Compliance document can be viewed on the MSD Project WIN website http://www.msdprojectwin.org. Highlights of the NMC program implementation over this reporting period are outlined below.

1.2 NMC 2: Maximization of Storage in the Collection System

MSD has continued operation of Phase 1 and Phase 2 of the Real Time Control system. During this reporting period, approximately 201.3 MG were stored in the system during rain events and routed to the Morris Forman Water Quality Treatment Center (WQTC) once the system was able to handle the flow. See the figure at the end of this section for a detailed report.

The gates at SWOR2 have been placed in manual control due to what was diagnosed as a failure of the gate level sensors that are integral to the integration of this site in the RTC schema. The sensors were replaced in the last quarter of 2013, but the problem could not be resolved at that time due to the gate-closed proximity switches also being diagnosed as defective. A description of corrective action progress is included in the Section 1.3 activities associated with Morris Forman WQTC performance.

1.3 NMC 4: Maximization of Flow at the Morris Forman Water Quality Treatment Center (WQTC)

The following charts illustrate performance in maximizing flow to the Morris Forman WQTC. The top of the chart shows rainfall inches per day. The middle part of the chart shows Morris Forman WQTC effluent flow and secondary treatment flow. The difference between these is the secondary bypass flow. The bottom of the chart shows days with a CSO activation at the five CSOs in the vicinity of the Morris Forman WQTC (CSOs 015, 016, 191, 210, and 211). Note that the flow meter downstream from CSO 211 is known to be affected by backwater effects of the Ohio River and the ultrasonic signal is sometimes blocked by mist and condensation when air and sewage temperatures are significantly different, so CSO activations at CSO 211 are keyed to water levels upstream and downstream of the inflatable dam in the Main Diversion Structure. The other CSO activations are tied to flow measurement downstream of the respective CSOs. At times, “blips” representing very small volumes of overflow are indicated by flow meters even though an overflow cannot be verified by level measurements or other indicators. These blips are not reported as overflows, but are noted in the CSO monitoring data reported on elsewhere. There are occasions in which a communications failure with telemetry has led to short-term gaps in the data. In addition, indications of rainfall and CSO activations are shown on the day they happened, but are not aligned with the exact time, so the effluent flow graph (which is tied to actual time) may show peaks that are offset from the indicated rain or CSO events by as much as 24 hours.

There were a few outages in the Headworks and Primary Sedimentation that impacted plant capacity during this period. Sedimentation Basin #2 was taken out of service for most of the month of October for a scheduled rehabilitation and preventative maintenance taking the plant capacity down to 270 MGD. During this time East Headworks Grit Chamber #2, East Headworks Grit Chamber #3 and West Headworks Grit Chamber #2 were also taken out of service in shorter spans due to equipment failure, but these outages did not affect the wet weather capacity which remained at 270 MGD due to the sedimentation basin outage. Rain events occurred during this time and overflows were likely impacted by the reduced plant capacity. By the end of October, Sedimentation Basin #2 was placed back in service. Sedimentation Basins #3 and #4 are scheduled to be taken out of service for similar rehabilitation and preventative maintenance in the near future. These outages are necessary to maintain the reliability of the Basins.

On October 31, 2014, at 9:30 PM a 10 inch diameter pressurized Process Water Line broke in the Dissolved Air Flotation Thickener (DAFT) area. The break filled the 2nd level of the Main Equipment Building, the connecting tunnel to the Aeration Services Building (ASB), the lowest level of the ASB, the connection tunnel to the Secondary Building, and the lowest level of that building. An estimated 250,000 – 500,000 gallons of water filled those portions of the buildings. As a result Morris Forman WQTC lost the ability to return and waste secondary solids. All process water removed from the buildings was returned to the Morris Forman WQTC process for treatment. The liquid treatment in secondary was controlled in manual in the field by Morris Forman WQTC operations staff. Partial solids processing and liquid control was returned by November 2, 2014, with full solids processing capacity returned by November 4,2014, utilizing alternate control methods. As a result, multiple electrical, instrumentation, and control systems are being replaced. Although the secondary capacity was not limited during the outage, due to the inability to process solids, the impact resulted in higher than normal solids in secondary, and elevated Total Suspended Solids (TSS) and Biochemical Oxygen Demand (BOD) effluent values. As a result of this incident the plant exceeded its KPDES limits for weekly TSS, monthly TSS, and monthly BOD in the month of November 2014.

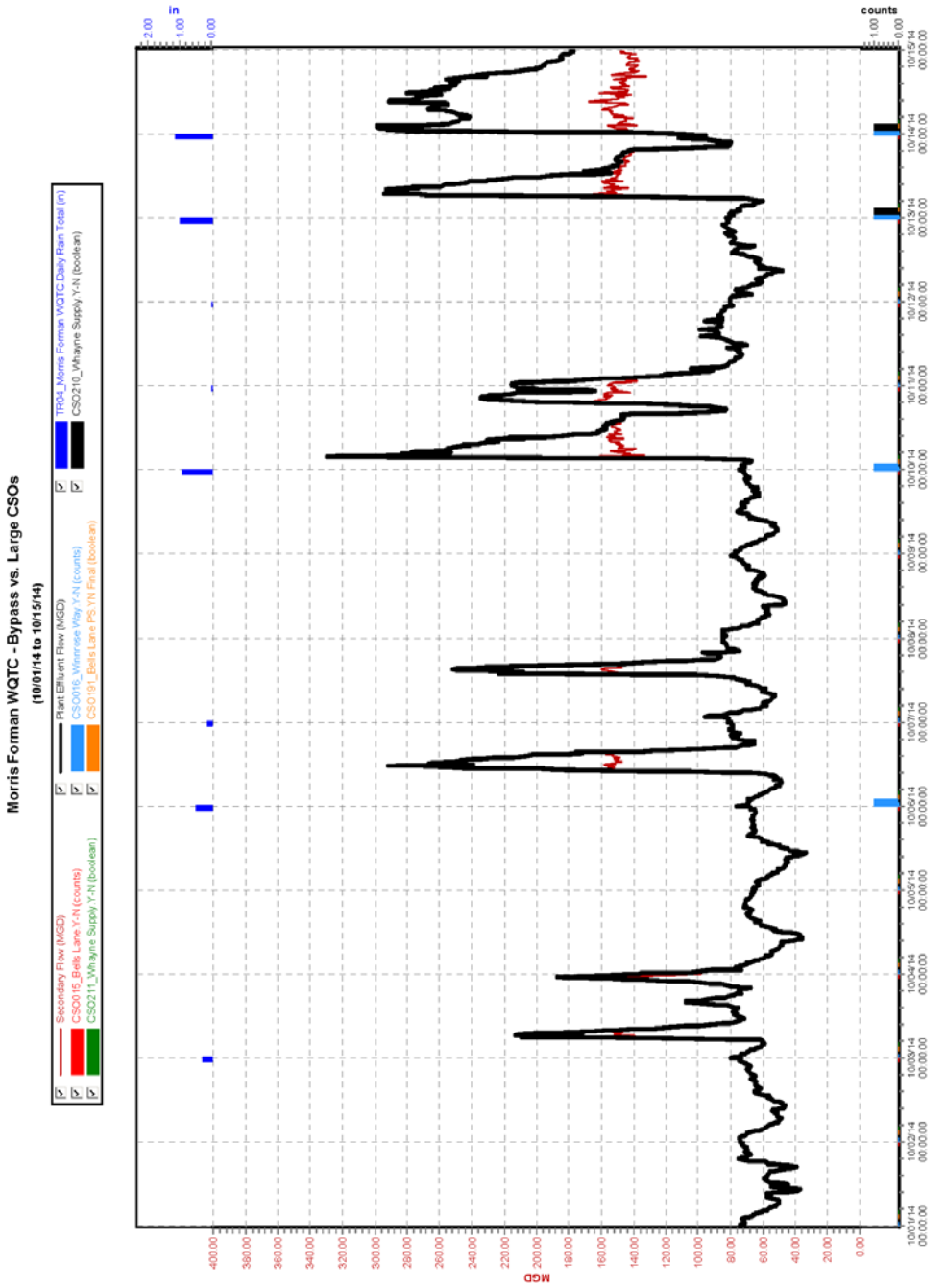
There were no equipment outages in Secondary except as noted in the previous paragraph. During rain events in this quarter Morris Forman WQTC was able to maintain flows of 120 MGD to 140 MGD and above through the secondary process.

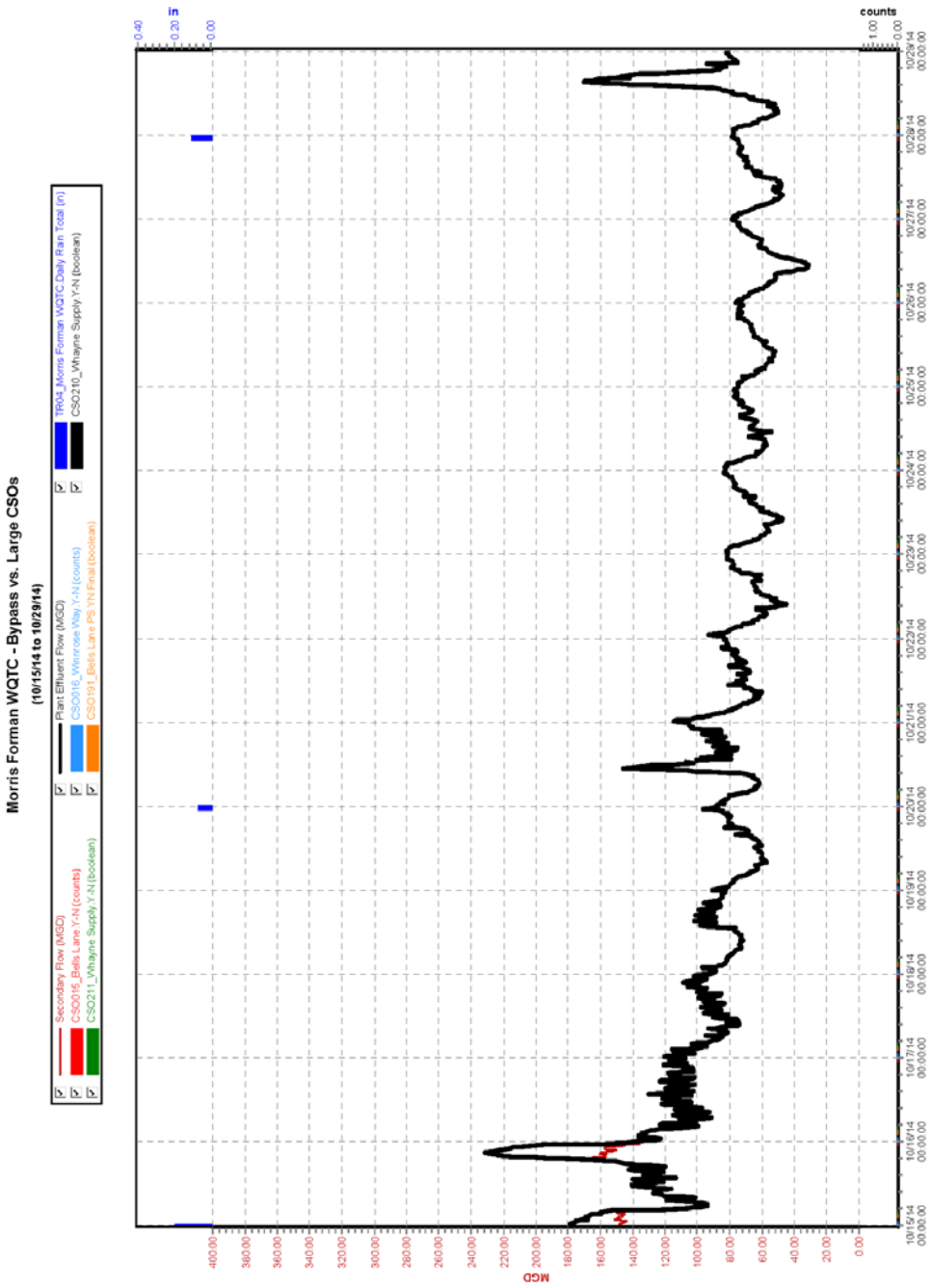
Design continues on the Headworks Upgrade Project. The design of the project is near completion with the project advertisement that is scheduled for the next reporting period.

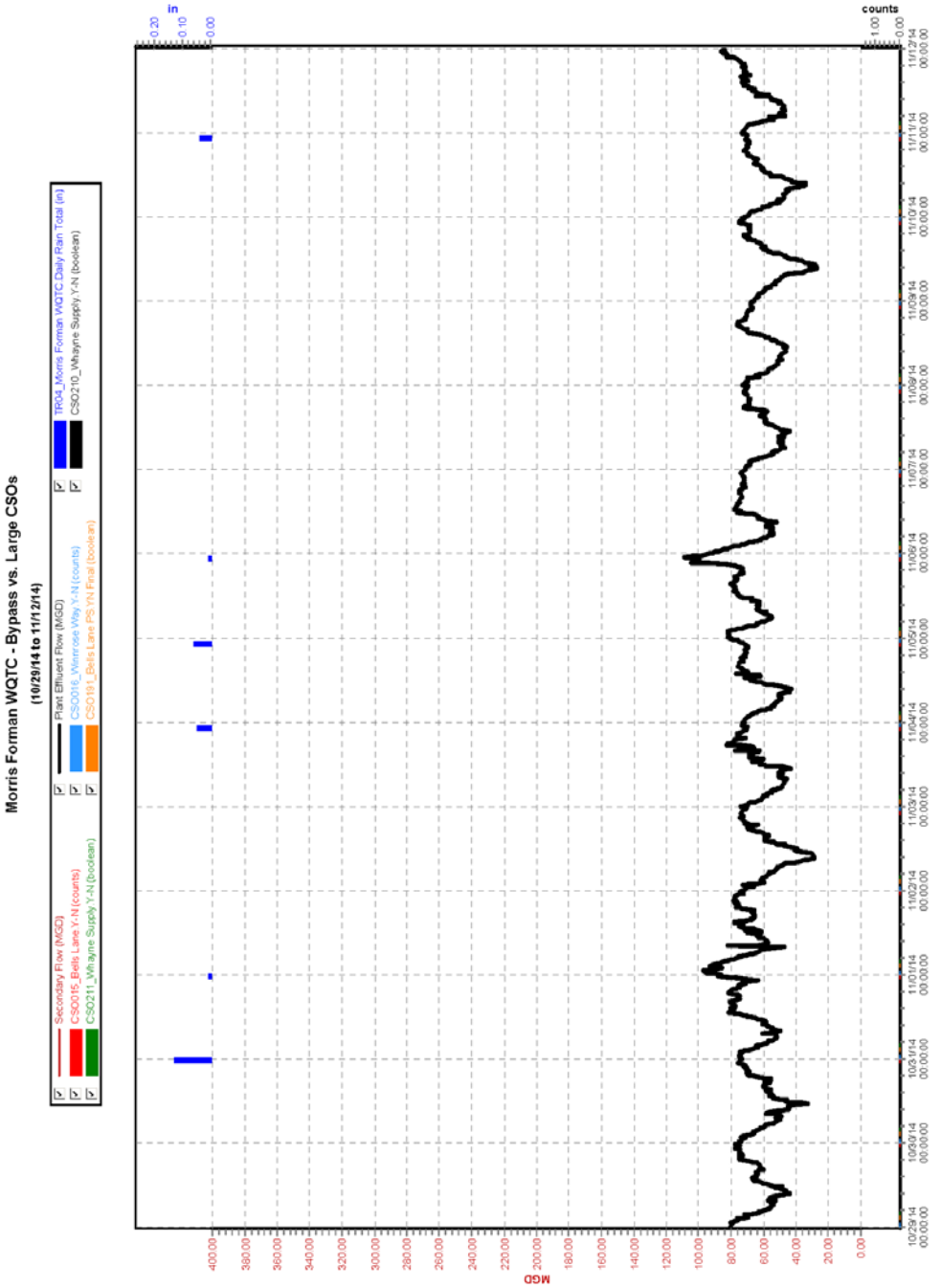
Design is underway for a replacement Morris Forman WQTC High-Yard Substation and Final Effluent Pump Stations Emergency Generator. While these projects will not affect plant capacity, brief shutdowns will be required to make electrical connections during construction. The shutdowns will be scheduled during dry weather with the intent of using in-line storage to avoid a dry weather CSO. These projects are scheduled to advertise early in 2015.

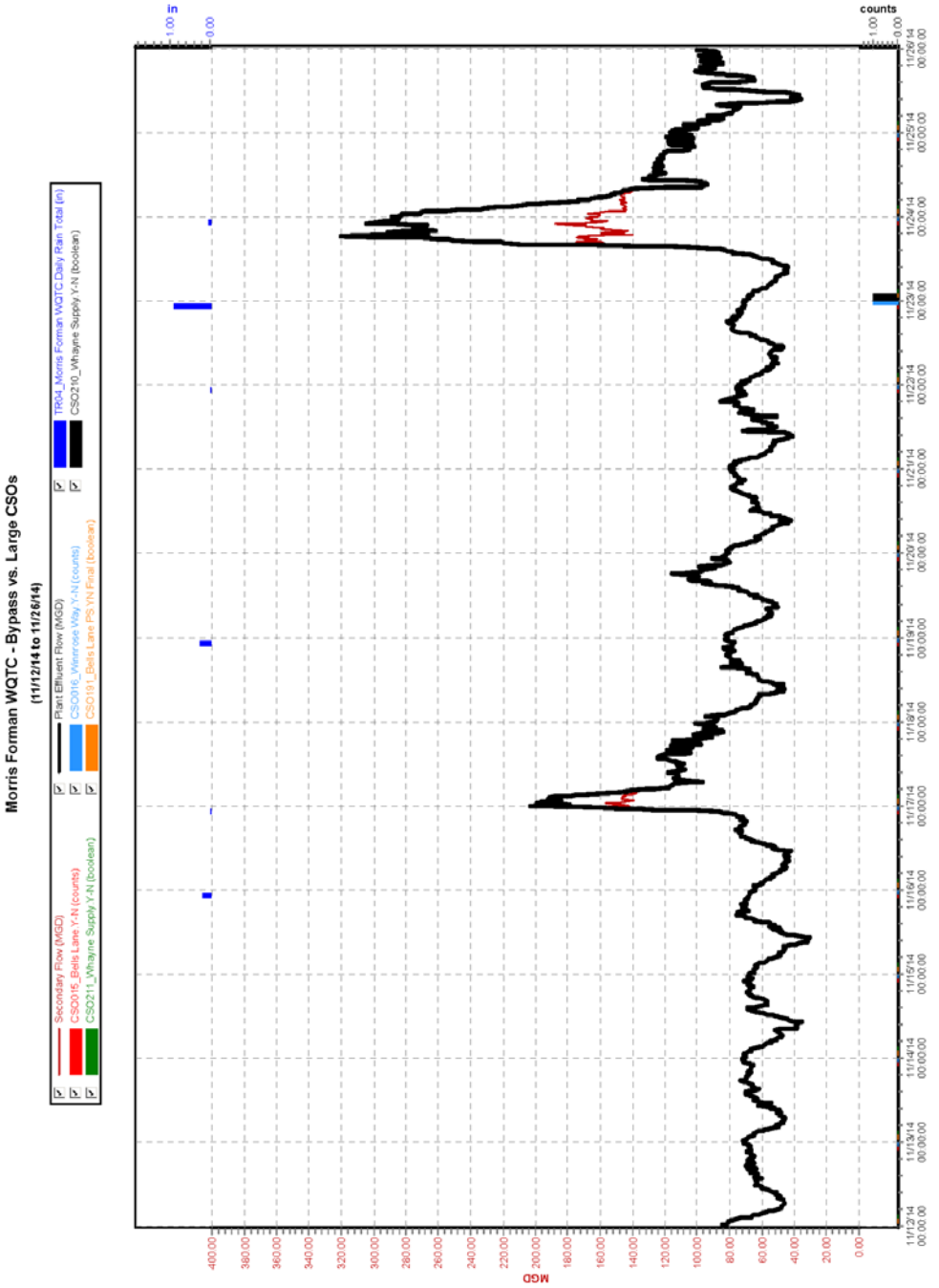
None of the other design or construction projects underway at Morris Forman WQTC will

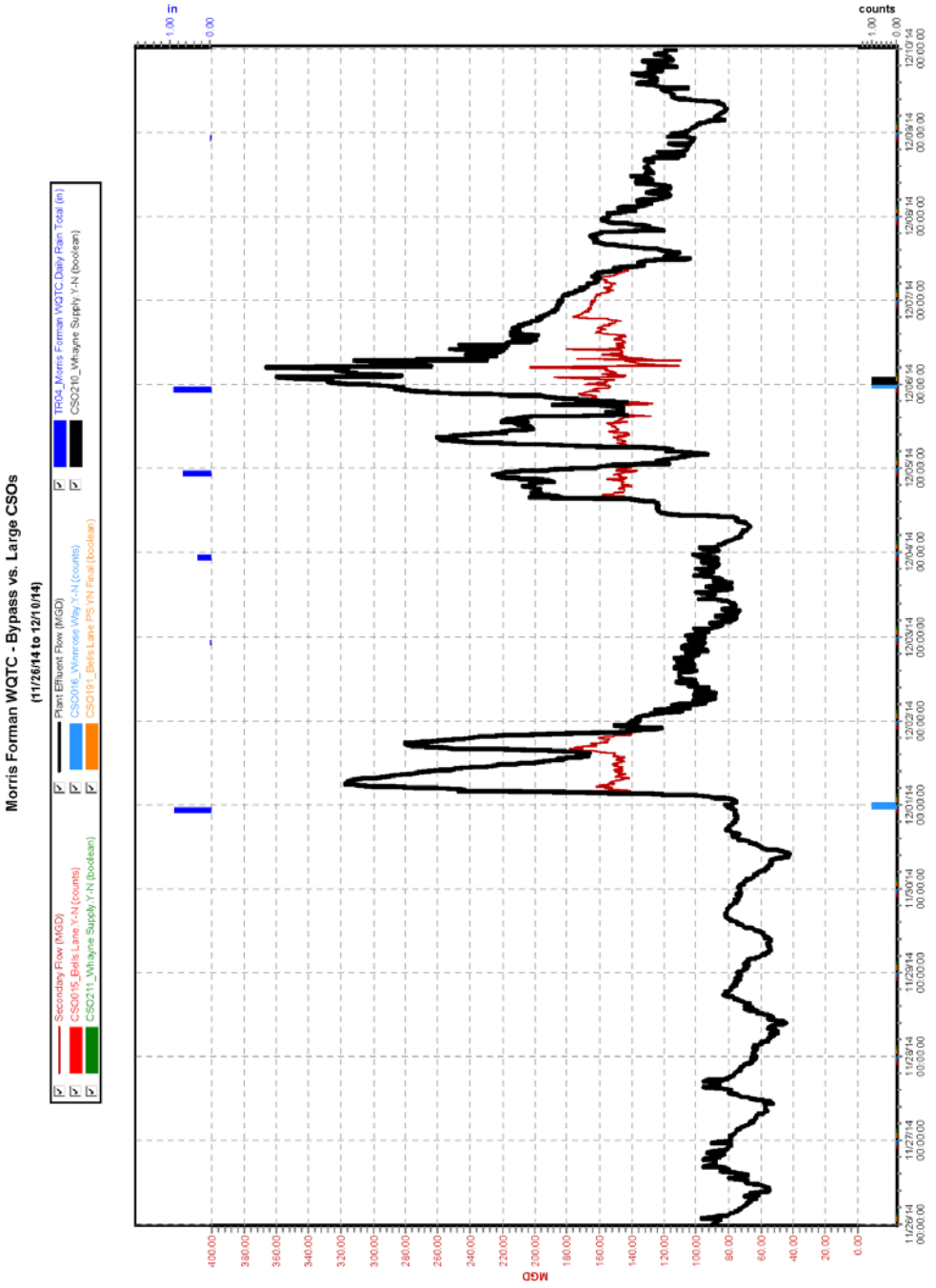
impact treatment capacity.

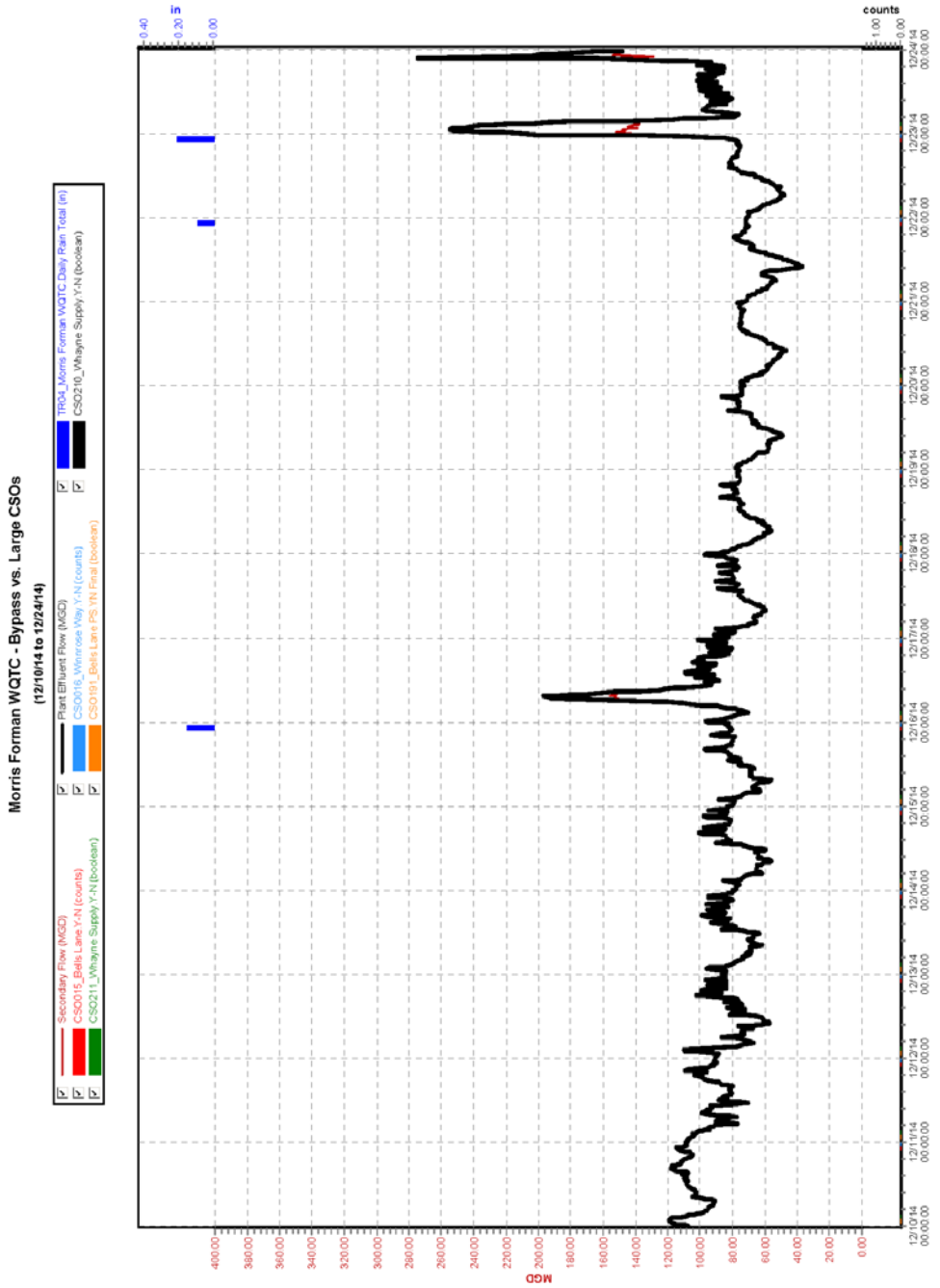

Morris Forman WQTC - Bypass vs. Large CSOs
(10/01/14 to 10/15/14)
Secondary Flow (MGD)
CSO015_Bells Lane Y-N (counts)
CSO211_Whayne Supply Y-N (boolean)
Plant Effluent Flow (MGD)
CSO016_Wenrose Way Y-N (counts)
CSO191_Bells Lane PS_Y-N Final (boolean)
TR04_Morris Forman WQTC Daily Rain Total (in)
CSO210_Whayne Supply Y-N (boolean)
in
counts
MGD

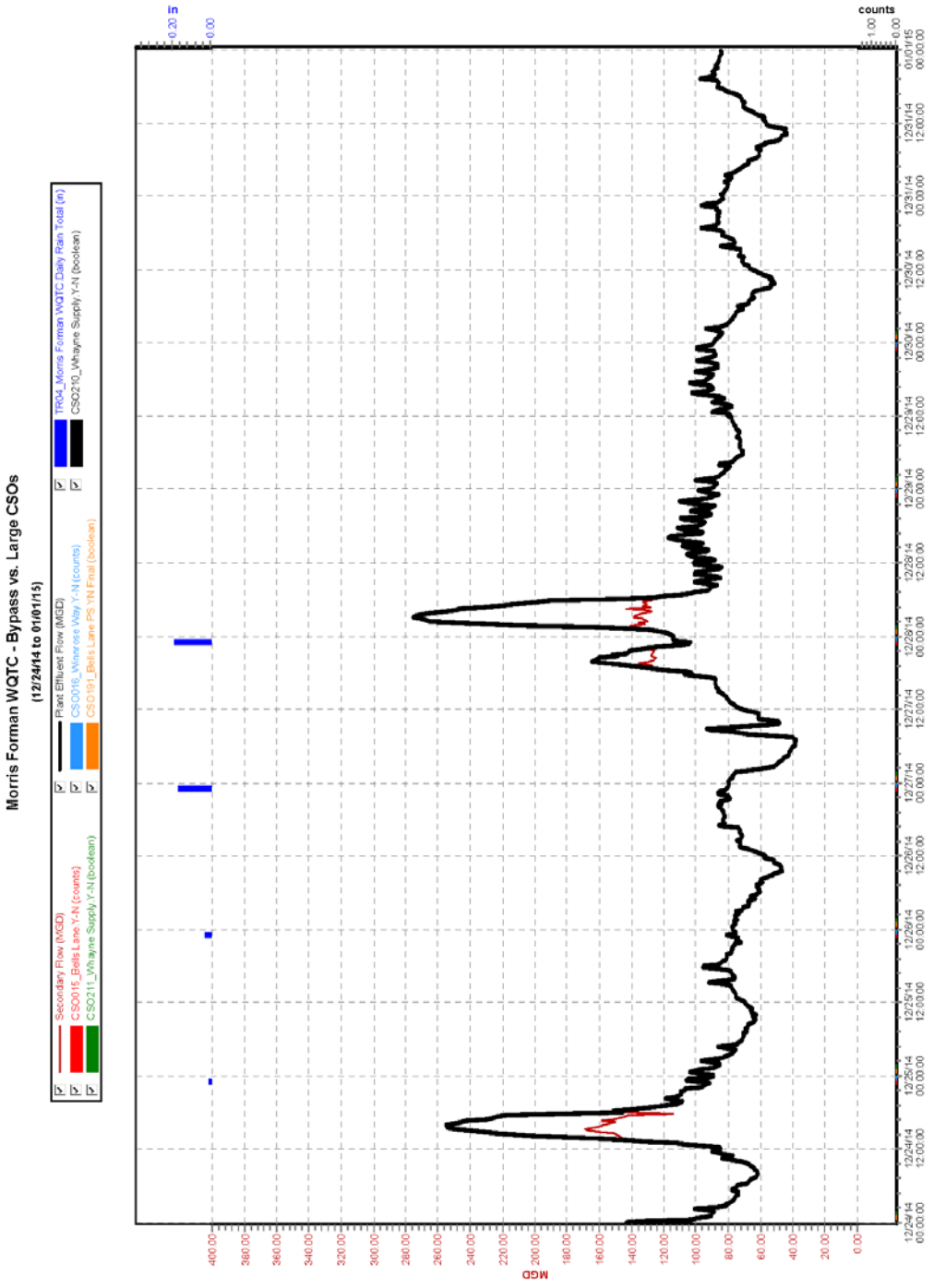

Morris Forman WQTC - Bypass vs. Large CSOs
(10/15/14 to 10/29/14)
Secondary Flow (MGD)
CSO015_Bells Lane Y-N (counts)
CSO211_Whayne Supply Y-N (boolean)
Plant Effluent Flow (MGD)
CSO016_Winnrose Way Y-N (counts)
CSO161_Bells Lane PS Y/N Final (boolean)
TR04_Morris Forman WQTC Daily Rain Total (in)
CSO210_Whayne Supply Y-N (boolean)
in
counts
MGD


Morris Forman WQTC - Bypass vs. Large CSOs
(10/29/14 to 11/12/14)
Secondary Flow (MGD)
CSO015_Bells Lane Y-N (counts)
CSO211_Whayne Supply Y-N (boolean)
Plant Effluent Flow (MGD)
CSO016_Primrose Way Y-N (counts)
CSO191_Bells Lane PS Y-N Final (boolean)
TR04_Morris Forman WQTC Daily Rain Total (in)
CSO210_Whayne Supply Y-N (boolean)
in
counts
MGD


Morris Forman WQTC - Bypass vs. Large CSOs
(11/12/14 to 11/26/14)
Secondary Flow (MGD)
CSO015_Bells Lane Y-N (counts)
CSO211_Whayne Supply Y-N (boolean)
Plant Effluent Flow (MGD)
CSO016_Primrose Way Y-N (counts)
CSO191_Bells Lane PS Y-N Final (boolean)
TRG4_Morris Forman WQTC Daily Rain Total (in)
CSO210_Whayne Supply Y-N (boolean)
in
counts
MGD


Morris Forman WQTC - Bypass vs. Large CSOs
(11/26/14 to 12/10/14)
Secondary Flow (MGD)
CSO015_Bells Lane Y-N (counts)
CSO211_Whayne Supply Y-N (boolean)
Plant Effluent Flow (MGD)
CSO016_Wimmore Whay Y-N (counts)
CSO191_Bells Lane PS Y-N Pass (boolean)
TRG4_Morris Forman WQTC Daily Rain Total (in)
CSO210_Whayne Supply Y-N (boolean)
in
counts
MGD


Morris Forman WQTC - Bypass vs. Large CSOs
(12/10/14 to 12/24/14)
Secondary Flow (MGD)
CSO015_Balls Lane Y-N (counts)
CSO211_Whayne Supply Y-N (boolean)
Plant Effluent Flow (MGD)
CSO016_Winnrose Way Y-N (counts)
CSO191_Balls Lane PS Y/N Final (boolean)
TR04_Morris Forman WQTC Daily Rain Total (in)
CSO210_Whayne Supply Y-N (boolean)
in
counts
MGD


Morris Forman WQTC - Bypass vs. Large CSOs
(12/24/14 to 01/01/15)
Secondary Flow (MGD)
CSO015_Bells Lane Y-N (counts)
CSO211_Whayne Supply Y-N (boolean)
Plant Effluent Flow (MGD)
CSO016_Winnrose Way Y-N (counts)
CSO191_Bells Lane PS Y/N Final (boolean)
TR04_Morris Forman WQTC Daily Rain Total (in)
CSO210_Whayne Supply Y-N (boolean)
0.20 in
0.00
counts
MGD

There were no KPDES permit violations at Morris Forman WQTC during October or December 2014. In November the plant exceeded KPDES limits for weekly TSS, monthly TSS, and monthly BOD as noted previously.

During this reporting period, the following activities were continued and/or completed:

- RTC Integration – Staff is working with the RTC consultant to review, revise and begin implementing the draft wet weather SOP for the system that also includes the Southeast Diversion Structure, Buechel Basin, Northern Ditch Diversion, and the Derek R Guthrie WQTC Wet Weather treatment facility. Full integration in an automated mode will not be achieved until the RTC software (CSOFT) is upgraded to the most current version and the hydraulic engine is converted to use MSD's InfoWorks ICM hydraulic model. While this work is being done, the SOP is being implemented incrementally, starting with a period of manual operation to validate the control assumptions, followed by increasing levels of system automation as the automated controls for individual components are implemented, validated, and then incorporated into the overall RTC system. During this reporting period, MSD completed the InfoWorks ICM hydraulic software purchases and finalized the CSOFT and InfoWorks ICM hydraulic model integration scope. Staff continued to review SOPs for the Southeast Diversion Structure, Buechel Basin, Northern Ditch Diversion, and the Derek R Guthrie WQTC Wet Weather treatment facilities. During next reporting period, MSD will begin the implementation of the CSOFT and InfoWorks ICM hydraulic model integration. A workshop will be held to review drafted SOPs and operational improvements for the RTC Phase II sites. Based on the outcomes of the workshop, it is anticipated that staff will begin implementing revised SOPs for the Southeast Diversion Structure, Buechel Basin, Northern Ditch Diversion, and the Derek R Guthrie WQTC Wet Weather treatment facilities. Full implementation of the revised SOPs will be completed after the CSOFT and InfoWorks ICM hydraulic model integration is complete. The anticipated completion date for this integration is fall 2015.
- RTC Performance Assessment – The main objective of the RTC Performance Assessment is to determine whether the available flow and storage capacities within the system are being utilized to their full potential. MSD staff continued to review and prioritize for implementation strategies for performance improvement. During the next reporting period, MSD staff and the RTC consultant will continue to work to implement the hardware, software and set-point changes as applicable on a site-by-site basis. Work on implementing these improvements will continue through the next reporting period.
- Headworks Replacement Project – Design efforts continued to replace the existing headworks to improve reliability and plant hydraulics. MSD staff received and reviewed the 90% design submittal. During the next reporting period, it is anticipated that final design documents will be completed and the project will be advertised for construction. Construction is scheduled to start spring 2015.
- SWOR2 Modifications – The project was awarded for construction on August 25, 2014, and construction activities have begun. Construction will continue through the next reporting period.

WET WEATHER STORAGE IN THE MORRIS FORMAN SEWER SYSTEM VIA REAL TIME CONTROL

Louisville/Jefferson County
Metropolitan Sewer District

CSO VOLUME SAVED IN THE MORRIS FORMAN SEWER SYSTEM VIA THE RTC SYSTEM

Period	
From :	10/01/2014
To :	12/31/2014

Event Number	Wet Weather Event			Rainfall			CSO Saved Volume (MG)								High River Levels	Comments
	Start Date	End Date	Duration	Average* TRFD (in)	Max** TRFD (in)	Max** Rain Gauge	SWPS SG Chamber (14.5)	SWOR2 (7.5)	Brady Lake and Executive Inn Storage (13.4)	Southern Outfall (3.5)	Ashland (1.0)	Ohio River Interceptor (4.1)	Sneads Branch (2.5)	Total (46.5)		
2014-077	10-03-2014 3:10	10-04-2014 3:40	24:30:00	0.26	0.44	TR15	0.30	0.00	0.05	0.85	0.00	2.65	0.00	3.85	No	Moderate storm cells homogeneously distributed over the service area. SWOR2 was manually controlled, with its gates in the open position and minimal utilization of the available storage. Also, Ashland and Brady Lake were not optimally managed due to the SWOR2 gate positioning status.
2014-078	10-05-2014 23:10	10-06-2014 23:30	24:20:00	0.32	0.49	TR04	0.70	0.40	0.60	2.65	0.00	2.35	0.00	6.70	No	Moderate storm cells unevenly distributed over the service area. SWOR2 was manually controlled, with its gates in the open position and minimal utilization of the available storage. Also, Ashland and Brady Lake were not optimally managed due to the SWOR2 gate positioning status.
2014-079	10-07-2014 11:10	10-07-2014 19:40	8:30:00	0.17	0.19	TR15	0.40	0.00	0.05	0.45	0.00	1.65	0.00	2.55	No	Small storm cells homogeneously distributed over the service area. SWOR2 was manually controlled, with its gates in the open position and minimal utilization of the available storage. Also, Ashland and Brady Lake were not optimally managed due to the SWOR2 gate positioning status.
2014-080	10-10-2014 1:15	10-11-2014 5:00	27:45:00	0.82	1.11	TR05	14.05	2.95	2.30	3.50	0.20	4.35	1.00	28.35	No	Large storm cells homogeneously distributed over the service area. SWOR2 was manually controlled, with its gates in the open position and minimal utilization of the available storage. However, storage occurred at this site, due to backflow at SWSG and/or inflows greater than the gate's capacity.
2014-081	10-13-2014 3:55	10-15-2014 3:40	47:45:00	1.61	2.07	TR04	24.30	6.25	9.55	8.45	1.45	5.05	1.40	56.45	No	Very large storm cells homogeneously distributed over the service area. Back-to-back storm cells with dewatering of storage sites between cells. SWOR2 was manually controlled, with its gates in the open position and minimal available storage utilization. However, storage occurred at this site, either due to backflow at SWSG and inflows greater than its gate's capacity.
2014-090	11-23-2014 12:15	11-24-2014 15:55	27:40:00	0.85	0.94	TR04	15.80	0.60	1.40	3.45	0.70	4.00	0.20	26.15	No	Large storm cells homogeneously distributed over the service area. SWOR2 was manually controlled, with its gates in the open position and minimal utilization of the available storage.
2014-092	11-30-2014 23:40	12-01-2014 23:45	24:05:00	0.74	0.86	TR04	5.25	0.00	0.90	4.00	0.45	4.40	0.30	15.30	No	Moderate storm cells homogeneously distributed over the service area. Back-to-back storm cells with light dewatering of storage sites between cells. SWOR2 was manually controlled, with its gates in the open position and minimal utilization of the available storage.
2014-093	12-04-2014 8:45	12-09-2014 11:00	122:15:00	1.88	2.05	TR13	25.10	4.85	6.50	4.15	1.20	5.45	2.00	49.25	No	Very large storm cells homogeneously distributed over the service area. Back-to-back storm cells with dewatering of storage sites between cells. SWOR2 was manually controlled, with its gates in the open position and minimal available storage utilization. However, storage occurred at this site, either due to backflow at SWSG and inflows greater than its gate's capacity. .
2014-095	12-22-2014 20:55	12-24-2014 21:05	48:10:00	0.53	0.75	TR15	0.80	0.10	0.45	0.95	0.00	4.35	0.05	6.70	No	Moderate storm cells heterogeneously distributed over the service area. SWOR2 was manually controlled, with its gates in the open position and minimal utilization of the available storage.
2014-096	12-27-2014 15:25	12-28-2014 8:20	16:55:00	0.30	0.36	TR15	1.95	0.00	0.35	1.35	0.00	2.35	0.00	6.00	No	Moderate storm cells heterogeneously distributed over the service area. SWOR2 was manually controlled, with its gates in the open position and minimal utilization of the available storage.
TOTAL							**88.65**	**15.15**	**22.15**	**29.80**	**4.00**	**36.60**	**4.95**	**201.30**		

SECTION 2: Program Activities for Sewer Overflow Response Protocol

2.1 SORP Program Background

Per Paragraph 24.d. of the Amended Consent Decree, MSD initially submitted the Sewer Overflow Response Protocol (SORP) to EPA and KDEP on February 10, 2006, and received comments on March 13, 2006.

MSD completely revised the SORP documentation in 2011. The draft of this revised document was submitted for comment on August 22, 2011. Comments from the EPA and KDEP were received and addressed, and the document was resubmitted October 28, 2011. Final approval of the updated SORP document was received February 21, 2012. A hard copy of the approved document has been distributed to each division throughout MSD and a viewable, downloadable electronic version has been posted to the MSD Project WIN website www.msdprojectwin.org.

The current approved SORP document is now dated February 21, 2012, and can be viewed on the MSD Project WIN website www.msdprojectwin.org. Updates to the SORP document were submitted in August 2012, with confirmation of approvals on October 25, 2012. These updates are posted on the Project WIN website. The following activities were performed during this reporting period.

2.2 Overflow Management and Field Documentation

- Monitored approximately 137 sanitary sewer overflow (SSO) sites, which have been grouped into routes based on the range of rainfall rates necessary to cause a SSO. These routes are monitored during rain events depending on the magnitude and location of the storm. If an overflow is observed, a Discharge Work Order is created to document the event. During this quarter, Engineering staff documented 18 suspected or unauthorized discharges through route reconnaissance. Inspection routes were run during rain events as described in the following table:

Route Description	10/05/14	11/23/14	12/06/14
ENGINEERING RAIN EVENT SSO INSPECTION ROUTE			X
RS JEFFERSONTOWN RAIN EVENT SSO INSPECTION ROUTE	X	X	X
RS JEFFERSONTOWN/FERN CREEK RAIN EVENT SSO INSPECTION ROUTE	X	X	X
RS HIKES POINT RAIN EVENT INSPECTION ROUTE	X		X
RS MIDDLE MUDDY FORK RAIN EVENT SSO INSPECTION ROUTE	X		X

- Due to Capacity related issues, during this reporting period, MSD Metro Operations staff hauled 144,901 gallons of sewage. MSD also hauled due to other issues as indicated in the following table:

MSD Hauled Volumes In Gallons (October 1, 2014 - December 31, 2014)				
Problem	**October**	**November**	**December**	**Total**
LACK OF SYSTEM CAPACITY	53,501	5,000	86,400	144,901
MECHANICAL FAILURE	5,000	-	-	5,000
STRUCTURAL FAILURE	-	-	17,600	17,600
UTILITY DAMAGE	-	-	90,000	90,000
Grand Total	**58,501**	**5,000**	**194,000**	**257,501**

2.3 Staff Training and Communication

- Reviewed and updated the training documentation for the 2014 fourth quarter SORP training that included the Annual Overview, Completing the Overflow Reporting Form, Reporting Requirements and Data Entry.
- Commenced planning for the 2015 first quarter SORP training that will focus on Preparing, Monitoring and Response to Overflows.
- Conducted the following SORP Quarterly training sessions which were attended by 558 employees.

Staff Training Participation - October 1, 2014 - December 31, 2014				
Date	**Dept./Area**	**Location**	**Module**	**Attendees**
11/25/2014	MOFO Ops. & Maint.	MFWQTC	Annual Overview, Documentation & Reporting	7
11/26/2014	MOFO Ops. & Maint.	MFWQTC	Annual Overview, Documentation & Reporting	24
11/26/2014	MOFO Ops. & Maint.	MFWQTC	Annual Overview, Documentation & Reporting	6
12/1/2014	CMF Admin & IFP Unit	CMF	Annual Overview	40
12/2/2014	Administrative Staff	Main Office	Annual Overview	25
12/2/2014	MOFO Ops. & Maint.	MFWQTC	Annual Overview, Documentation & Reporting	8
12/3/2014	MOFO Ops. & Maint.	MFWQTC	Annual Overview, Documentation & Reporting	25
12/3/2014	MOFO Ops. & Maint.	MFWQTC	Annual Overview, Documentation & Reporting	11
12/4/2014	Eng/RMS	CMF	Annual Overview, Documentation & Reporting	39
12/5/2014	IFP SORP Sups.	CMF	Annual Overview, Documentation & Reporting	14
12/5/2014	Fleet & CMF Admin.	CMF	Annual Overview	13
12/8/2014	CMF Admin & IFP Unit	CMF	Annual Overview	47
12/9/2014	CMF Admin & IFP Unit	CMF	Annual Overview	69
12/9/2014	Administrative Staff	Main Office	Annual Overview	20
12/10/2014	Metro Ops. & Maint.	CCWQTC	Annual Overview, Documentation & Reporting	16
12/10/2014	Metro Ops. & Maint.	FFWQTC	Annual Overview, Documentation & Reporting	22
12/11/2014	CMF Admin & IFP Unit	CMF	Annual Overview	5
12/11/2014	Eng/RMS	CMF	Annual Overview, Documentation & Reporting	50
12/12/2014	IFP SORP Sups.	CMF	Annual Overview, Documentation & Reporting	18
12/12/2014	Fleet & CMF Admin.	CMF	Annual Overview	23
12/16/2014	Administrative Staff	Main Office	Annual Overview	25
12/17/2014	Metro Ops. & Maint.	DRGWQTC	Annual Overview, Documentation & Reporting	18
12/19/2014	Administrative Staff	Main Office	Annual Overview	33
Total				**558**

SECTION 3: Program Activities for Discharge Abatement Plans

3.1 Integrated Overflow Abatement Plan (IOAP)

As a requirement of the Amended Consent Decree, per Paragraph 25, MSD is to prepare and submit for review and approval discharge abatement plans for the elimination of unauthorized discharges from the separate sanitary sewer system and the combined sewer system, the reduction and control of discharges from the CSO locations identified in the Morris Forman WQTC KPDES permit, and the improvement of water quality in the receiving waters.

The Final Sanitary Sewer Discharge Plan and the Final CSO Long Term Control Plan were submitted concurrently and certified on December 19, 2008, under the title of the Integrated Overflow Abatement Plan (IOAP). The IOAP was accepted by the Federal Court and incorporated by reference into the Amended Consent Decree by an Order signed February 12, 2010, that was entered into public record February 15, 2010.

MSD submitted an IOAP modification request to EPA/KDEP on September 20, 2012, with partial approval granted via certified letter on October 25, 2012. The modified project package, including program descriptions, progress, and updated supporting text, was submitted to EPA/KDEP for approval on June 14, 2013. On June 19, 2014, MSD received approval of the 2012 IOAP Modification from EPA/KDEP. The project and program modifications proposed within this submittal resulted from additional information gathered from ongoing system monitoring, hydraulic modeling, and best professional judgment. MSD's adaptive management approach to overflow abatement has justified modifications which will result in a higher level of overflow control to be completed faster than originally proposed for approximately the same overall budget.

3.2 Sanitary Sewer Discharge Plan (SSDP)

The Sanitary Sewer Discharge Plan (SSDP) addresses the overflows and unauthorized discharges from the separate sanitary sewer system. Three separate plans have been submitted under this program as described below and outlined in Paragraph 25.a. of the Amended Consent Decree.

3.2.1 Updated Sanitary Sewer Overflow Plan Implementation

MSD prepared and submitted the Updated Sanitary Sewer Overflow Plan (SSOP) on February 10, 2006. This plan included an overview of the MSD sanitary sewer overflow abatement program and specific actions taken to reduce/eliminate overflows from the sanitary sewer system. This document included a list of the proposed improvements to be accomplished by December 31, 2008. Activities required under the Updated SSOP have been completed.

3.2.2 Interim Sanitary Sewer Discharge Plan

MSD submitted an Interim Sanitary Sewer Discharge Plan (ISSDP) for approval on September 30, 2007. Comments were received on January 8, 2008. MSD resubmitted the revised ISSDP on March 7, 2008, and received an approval letter for the ISSDP on July 24, 2008. The approved ISSDP document can be viewed on the MSD Project WIN website www.msdprojectwin.org.

All projects required by the ISSDP have been completed and certified, with the exception of

the Derek R. Guthrie WQTC expansion. The Derek R. Guthrie WQTC was operational in accordance with information previously submitted. The project has achieved overflow reduction performance as planned and designed. No treatment capacity related sanitary sewer overflows have occurred with the exception of the discharges related to the bar screen failure previously reported in the February 20, 2013, DMR (January – March 2013 reporting period) for Derek R. Guthrie WQTC, and one discharge October 6, 2013 related to a grit system problem that reduced plant capacity to 150 MGD for a short time. MSD is currently working with KDEP to finalize this certification issue and a letter is being drafted to clarify and resolve remaining issues.

3.2.3 Final Sanitary Sewer Discharge Plan

MSD submitted for approval a Final Sanitary Sewer Discharge Plan (SSDP) on December 19, 2008, as Volume 3 of the Integrated Overflow Abatement Plan (IOAP). The IOAP was accepted by the Federal Court and incorporated by reference into the Amended Consent Decree by an Order signed February 12, 2010, that was entered into public record February 15, 2010. A revised SSDP was included in the IOAP revision, submitted June 14, 2013. On June 19, 2014, MSD received approval of the 2012 IOAP Modification from EPA/KDEP. The following is a summary of activities that support elimination of the Prospect WQTCs.

- Prospect WQTC Elimination Projects Easement Status - A total of 54 easements have been identified, and all 54 easements have been acquired.
- Project Status Details:
  - River Road Interceptor – project complete.
  - River Road Interceptor Phase 1A – project complete
  - Harrods Creek Pump Station – project under construction.
  - Harrods Creek Interceptor and Force Main Phase 1 – project complete.
  - Harrods Creek Interceptor and Force Main Phase 2 – project complete.
  - Harrods Creek Force Main Phase 3A – project complete.
  - Harrods Creek Force Main Phase 3B – project complete.
  - Shadow Wood WQTC Elimination – project under construction
  - Hunting Creek North WQTC Elimination - project under construction.
  - Timberlake and Hunting Creek South WQTC Elimination – project has been awarded and construction will start in February 2015.
  - Ken Carla WQTC Elimination – project has been awarded and construction will start January 2015.

3.3 CSO Long Term Control Plan

The CSO Long Term Control Plan (LTCP) addresses the overflows and unauthorized discharges from the CSS. Two separate plans have been submitted under this program as described below and outlined in Paragraph 25.b. of the Amended Consent Decree.

3.3.1 Interim CSO Long Term Control Plan

The Interim CSO LTCP was initially submitted to EPA and KDEP on February 10, 2006. MSD received an approval letter dated February 22, 2007, for the Interim LTCP. The approved Interim LTCP can be viewed on the MSD Project WIN website www.msdprojectwin.org.

This plan includes an overview of the MSD program, efforts taken to reduce/eliminate discharges from the CSS and the list of proposed improvements to be accomplished by December 31, 2008. All projects associated with this plan have been completed.

3.3.2 Final CSO Long Term Control Plan

MSD submitted for approval the Final CSO LTCP on December 19, 2008, as Volume 2 of the Integrated Overflow Abatement Plan (IOAP). The IOAP was accepted by the Federal Court and incorporated by reference into the Amended Consent Decree by an Order signed February 12, 2010, that was entered into public record February 15, 2010. A revised LTCP was included in the IOAP revision, submitted June 14, 2013. On June 19, 2014, MSD received approval of the 2012 IOAP Modification from EPA/KDEP.

3.3.3 Green Program Update

MSD continued program activities to provide incentives to private property owners to reduce the amount of impervious surface that drains to the combined sewer system.

During the reporting period, MSD updated the green infrastructure website - http://www.msdgreen.org. Through this website, information on high profile projects, program activities, forms and documents outlining participation in incentive programs (green infrastructure, downspout disconnection, urban reforestation) is provided in an accessible format.

The green program incentives are being applied to reflect the values of green projects in CSO areas or regions based on the latest modeling results. This change in application ties incentives directly to overflow reductions in various CSO regions to promote green projects in the areas that provide the most value. Project opportunities are now optimized to best use available funding.

Qualified Post Construction Inspector (QPCI) training for property owners with green infrastructure was administered during the reporting period, and will continue to be administered in the next reporting period.

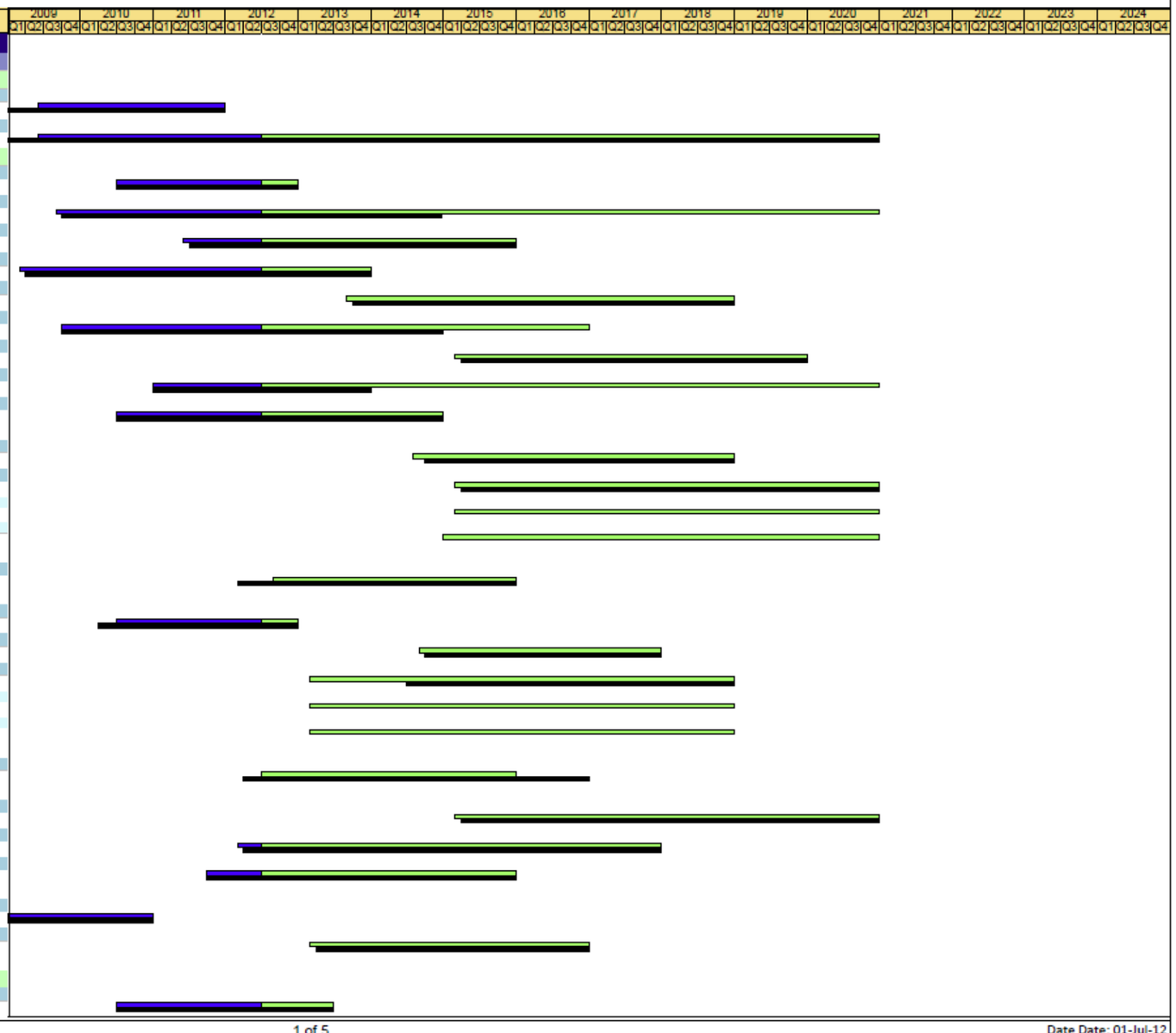
Continued coordination with the green and MS4 program is on-going to optimize resources and regulations to improve water quality.

3.4 Activity Progress Chart

A Gantt chart showing the previous and Proposed IOAP Modification schedules (Refer to IOAP, Volume 1 – Figure 6.3.1 for the previous) for the entire program is provided below.

MSD Integrated Overflow Abatement Plan Implementation Schedule (01 Jan 2009- 31 Dec 2024)

Activity Name	Scheduled Finish	2009 IOAP Completion	2012 IOAP Modification
MSD IOAP SCHEDULE	31-Dec-24	31-Dec-24	31-Dec-24
LONG TERM CONTROL PLAN	01-Jan-21	31-Dec-20	31-Dec-20
GREEN DEMONSTRATION PROJECTS	31-Dec-20	31-Dec-20	31-Dec-20
GREEN INFRASTRUCTURE DEMONSTRATION PROJECTS	31-Dec-11 A	31-Dec-11	31-Dec-11
GREEN INFRASTRUCTURE DEMONSTRATION PROJE(	31-Dec-11 A	31-Dec-11	31-Dec-11
GREEN INFRASTRUCTURE PROGRAM	31-Dec-20	31-Dec-20	31-Dec-20
GREEN INFRASTRUCTURE PROGRAM	31-Dec-20	31-Dec-20	31-Dec-20
GRAY INFRASTRUCTURE PROJECTS	01-Jan-21	31-Dec-20	31-Dec-20
CSO 123 DOWNSPOUT DISCONNECTION	31-Dec-12	31-Dec-12	31-Dec-12
CSO 123 DOWNSPOUT DISCONNECTION	31-Dec-12	31-Dec-12	31-Dec-12
I-64 AND GRINSTEAD DRIVE STORAGE BASIN	31-Dec-20	21-Dec-14	31-Dec-20
I-64 AND GRINSTEAD DRIVE STORAGE BASIN	31-Dec-20	21-Dec-14	31-Dec-20
CSO 140 INCREASE PIPE CONVEYANCE	31-Dec-15	31-Dec-15	31-Dec-15
CSO 140 INCREASE PIPE CONVEYANCE	31-Dec-15	31-Dec-15	31-Dec-15
CSO 206 SEWER SEPARATION	30-Dec-13	31-Dec-13	30-Dec-13
CSO 206 SEWER SEPARATION	30-Dec-13	31-Dec-13	30-Dec-13
CLIFTON HEIGHTS STORAGE BASIN	31-Dec-18	31-Dec-18	31-Dec-18
CLIFTON HEIGHTS STORAGE BASIN	31-Dec-18	31-Dec-18	31-Dec-18
PADDY'S RUN WET WEATHER TREATMENT FACILITY AND OFF LINE S	31-Dec-16	31-Dec-14	31-Dec-16
PADDY'S RUN WET WEATHER TREATMENT FACILITY	31-Dec-16	31-Dec-14	31-Dec-16
PORTLAND WHARF STORAGE BASIN	31-Dec-19	31-Dec-19	31-Dec-19
PORTLAND WHARF STORAGE BASIN	31-Dec-19	31-Dec-19	31-Dec-19
STORY AVENUE AND MAIN STREET STORAGE BASIN	31-Dec-20	31-Dec-13	31-Dec-20
STORY AVENUE AND MAIN STREET STORAGE BASIN	31-Dec-20	31-Dec-13	31-Dec-20
CSO 058 IN-LINE STORAGE AND GREEN INFRASTRUCTURE CONTRO	31-Dec-14	31-Dec-14	31-Dec-14
CSO 058 IN-LINE STORAGE AND GREEN INFRASTRUCTURE CONTROLS	31-Dec-14	31-Dec-14	31-Dec-14
SOUTHWESTERN PARKWAY STORAGE BASIN	31-Dec-18	31-Dec-18	31-Dec-18
SOUTHWESTERN PARKWAY STORAGE BASIN	31-Dec-18	31-Dec-18	31-Dec-18
13TH STREET AND ROWAN STREET STORAGE BASIN	01-Jan-21	31-Dec-20	31-Dec-20
13TH STREET AND ROWAN STREET STORAGE BASIN	31-Dec-20	31-Dec-20	
13TH STREET AND ROWAN STREET STORAGE BASIN	31-Dec-20		31-Dec-20
13TH STREET AND ROWAN STREET STORAGE BASIN	31-Dec-20		31-Dec-20
CENTRAL RELIEF DRAIN IN-LINE STORAGE, GREEN INFRASTRUCTURE AND DISTRIBUTED STORAGE	01-Jan-21		31-Dec-18
CENTRAL RELIEF DRAIN IN-LINE STORAGE, GREEN INFRASTRUCTURE AND DISTRIBUTED STORAGE	01-Jan-21		31-Dec-18
CSO 160 IN-LINE STORAGE AND GREEN INFRASTRUCTURE CONTRO	31-Dec-15	31-Dec-15	31-Dec-15
CSO 160 IN-LINE STORAGE AND GREEN INFRASTRUCTURE CONTROLS	31-Dec-15	31-Dec-15	31-Dec-15
ADAMS STREET SEWER SEPARATION	31-Dec-12	31-Dec-12	31-Dec-12
ADAMS STREET SEWER SEPARATION	31-Dec-12	31-Dec-12	31-Dec-12
18TH AND NORTHWESTERN PKY STORAGE BASIN	31-Dec-17	31-Dec-17	31-Dec-17
18TH AND NORTHWESTERN PKY STORAGE BASIN	31-Dec-17	31-Dec-17	31-Dec-17
ALGONQUIN PARKWAY STORAGE BASIN	01-Jan-19	31-Dec-18	31-Dec-18
ALGONQUIN PARKWAY STORAGE BASIN	31-Dec-18	31-Dec-18	
SOUTHERN OUTFALL IN-LINE STORAGE (SOR 1)	31-Dec-18		31-Dec-18
SOUTHERN OUTFALL IN-LINE STORAGE AT 43RD ST.	31-Dec-18		31-Dec-18
SOUTHERN OUTFALL IN-LINE RETENTION (SOR 2)	01-Jan-19		31-Dec-18
SOUTHERN OUTFALL IN-LINE RETENTION AT 13TH AND WILSON AVE. (SOR 2)	01-Jan-19		31-Dec-18
NIGHTINGALE PUMP STATION REPLACEMENT AND STORAGE	31-Dec-15	31-Dec-16	31-Dec-15
NIGHTINGALE PUMP STATION REPLACEMENT AND STORAGE	31-Dec-15	31-Dec-16	31-Dec-15
LEXINGTON ROAD AND PAYNE STREET STORAGE BASIN	31-Dec-20	31-Dec-20	31-Dec-20
LEXINGTON ROAD AND PAYNE STREET STORAGE BA!	31-Dec-20	31-Dec-20	31-Dec-20
LOGAN STREET AND BRECKENRIDGE ST STORAGE BASIN	31-Dec-17	31-Dec-17	31-Dec-17
LOGAN STREET AND BRECKENRIDGE ST STORAGE B	31-Dec-17	31-Dec-17	31-Dec-17
CSO 093 STRUCTURAL MODIFICATIONS AND GREEN INFRASTRUCTU	31-Dec-15	31-Dec-15	31-Dec-15
CSO 093 STRUCTURAL MODIFICATIONS AND GREEN INFRASTRUCTURE CONTROLS	31-Dec-15	31-Dec-15	31-Dec-15
CSO 108 DAM MODIFICATIONS	31-Dec-10 A	31-Dec-10	31-Dec-10
CSO 108 DAM MODIFICATIONS	31-Dec-10 A	31-Dec-10	31-Dec-10
STORY AVENUE AND SPRING STREET GREEN INFRASTRUCTURE CC	31-Dec-16	31-Dec-16	31-Dec-16
STORY AVENUE AND SPRING STREET GREEN INFRASTRUCTURE CONTROLS	31-Dec-16	31-Dec-16	31-Dec-16
FLOOD PUMP STATION PROJECTS	31-Dec-14	31-Dec-14	31-Dec-14
27TH STREET FLOOD PUMP STATION	30-Jun-13	30-Jun-13	30-Jun-13
27TH STREET FLOOD PUMP STATION	30-Jun-13	30-Jun-13	30-Jun-13



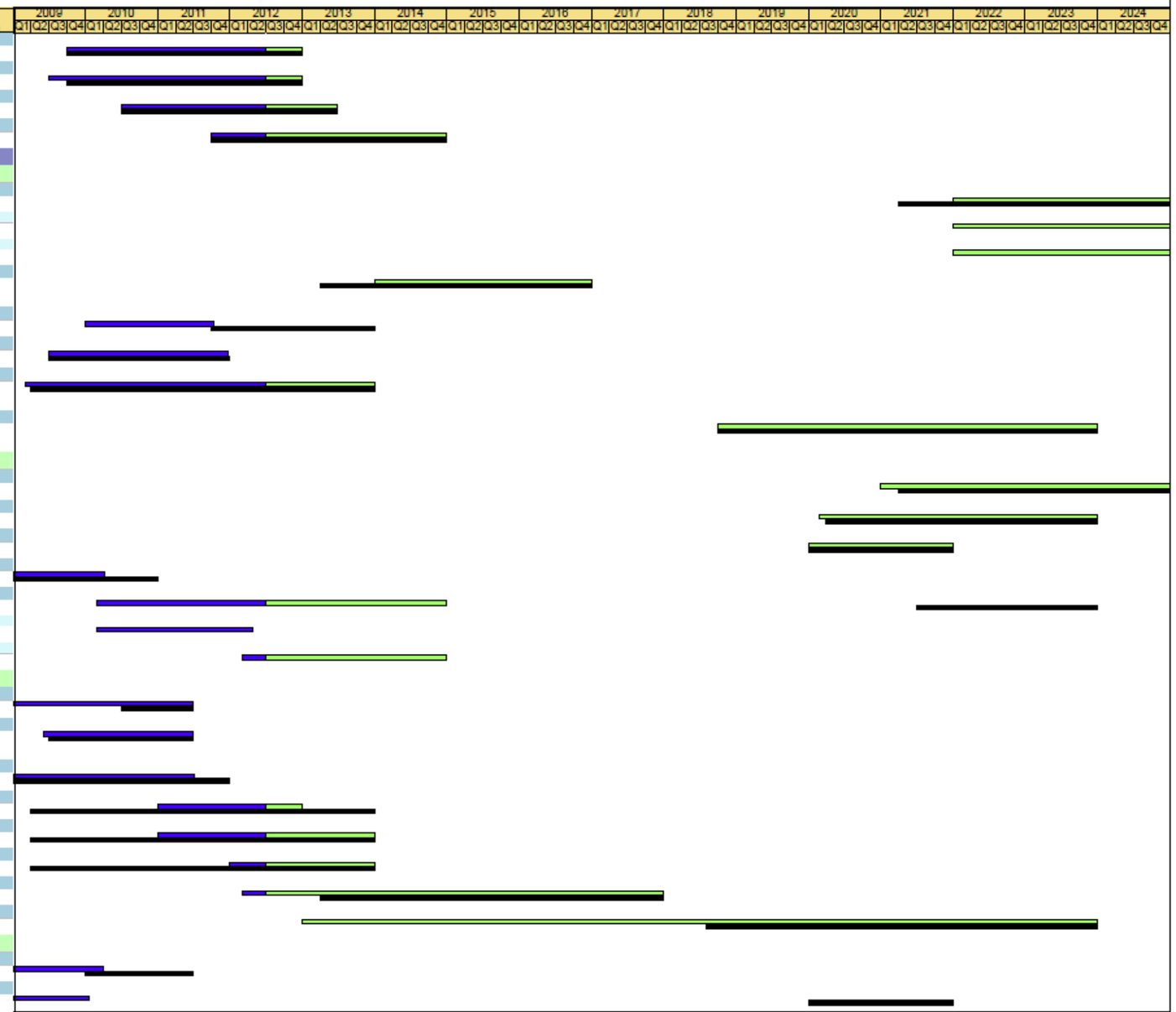
Approved 2009 IOAP Remaining Work
Completed Work

1 of 5

Date Date: 01-Jul-12

MSD Integrated Overflow Abatement Plan Implementation Schedule (01 Jan 2009- 31 Dec 2024)

Activity Name	Scheduled Finish	2009 IOAP Completion	2012 IOAP Modification
34TH STREET FLOOD PUMP STATION	31-Dec-12	31-Dec-12	31-Dec-12
34TH STREET FLOOD PUMP STATION	31-Dec-12	31-Dec-12	31-Dec-12
4TH STREET FLOOD PUMP STATION	31-Dec-12	31-Dec-12	31-Dec-12
4TH STREET FLOOD PUMP STATION	31-Dec-12	31-Dec-12	31-Dec-12
SHAWNEE FLOOD PUMP STATION	30-Jun-13	30-Jun-13	30-Jun-13
SHAWNEE FLOOD PUMP STATION	30-Jun-13	30-Jun-13	30-Jun-13
17TH STREET FLOOD PUMP STATION	31-Dec-14	31-Dec-14	31-Dec-14
17TH STREET FLOOD PUMP STATION	31-Dec-14	31-Dec-14	31-Dec-14
SANITARY SEWER DISCHARGE PLAN	31-Dec-24	31-Dec-24	31-Dec-24
BEARGRASS CREEK MIDDLE FORK AREA	31-Dec-24	31-Dec-24	31-Dec-24
GOOSE CREEK PUMP STATION	31-Dec-24	31-Dec-24	31-Dec-24
GOOSE CREEK PUMP STATION	31-Dec-24	31-Dec-24	
GOOSE CREEK PS PH1 - DEVONDALE PS WW STORAGE	31-Dec-24		31-Dec-24
GOOSE CREEK PS PH1 - DEVONDALE PS WW STOR/	31-Dec-24		31-Dec-24
GOOSE CRK PS PH2 - PS & WET WEATHER STORAGE	31-Dec-24		31-Dec-24
GOOSE CRK PS PH2 - PS & WET WEATHER STORAGE	31-Dec-24		31-Dec-24
ANCHOR ESTATES- ANCHOR ESTS PS 1 & 2 PS ELIMINATIONS	31-Dec-16	31-Dec-16	31-Dec-16
ANCHOR ESTATES- ANCHOR ESTS PS 1 & 2 PS ELIMINATIONS	31-Dec-16	31-Dec-16	31-Dec-16
ANCHOR ESTATES- VANNAH PS ELIMINATION	15-Oct-11 A	31-Dec-13	31-Dec-13
ANCHOR ESTATES- VANNAH PS ELIMINATION	15-Oct-11 A	31-Dec-13	31-Dec-13
HURSTBOURNE I&I INVESTIGATION & REHABILITATION	27-Dec-11 A	31-Dec-11	31-Dec-11
HURSTBOURNE I&I INVESTIGATION & REHABILITATION	27-Dec-11 A	31-Dec-11	31-Dec-11
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE, AN	31-Dec-13	31-Dec-13	31-Dec-13
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE, AND UMFLS DIVERSION 1 - BUECHEL BASIN	31-Dec-13	31-Dec-13	31-Dec-13
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE, AN	31-Dec-23	31-Dec-23	31-Dec-23
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE, AND UMFLS DIVERSION 2 PS & WET	31-Dec-23	31-Dec-23	31-Dec-23
CEDAR CREEK AREA	31-Dec-24	31-Dec-24	31-Dec-24
LITTLE CEDAR CREEK INTRECEPTOR IMPROVEMENTS	31-Dec-24	31-Dec-24	31-Dec-24
LITTLE CEDAR CREEK INTRECEPTOR IMPROVEMENTS	31-Dec-24	31-Dec-24	31-Dec-24
IDLEWOOD INLINE STORAGE	31-Dec-23	31-Dec-23	31-Dec-23
IDLEWOOD INLINE STORAGE	31-Dec-23	31-Dec-23	31-Dec-23
BARDSTOWN RD PS IMPROVEMENTS	31-Dec-21	31-Dec-21	31-Dec-21
BARDSTOWN RD PS IMPROVEMENTS	31-Dec-21	31-Dec-21	31-Dec-21
RUNNING FOX PS ELIMINATION	05-Apr-10 A	31-Dec-10	31-Dec-10
RUNNING FOX PS ELIMINATION	05-Apr-10 A	31-Dec-10	31-Dec-10
FAIRMOUNT RD PS IMPROVMENTS	01-Jan-15	31-Dec-23	31-Dec-23
FAIRMOUNT RD PS IMPROVMENTS	31-Dec-14	31-Dec-23	
FAIRMOUNT RD PS IMPROVEMENTS	24-Apr-12 A		31-Dec-23
FAIRMOUNT RD PS IMPROVEMENTS	24-Apr-12 A		31-Dec-23
FAIRMOUNT STORAGE BASIN	01-Jan-15		31-Dec-15
FAIRMOUNT STORAGE BASIN	01-Jan-15		31-Dec-15
COMBINED SEWER SYSTEM AREA	31-Dec-23	31-Dec-23	31-Dec-23
HAZELWOOD PS I&I INVESTIGATION & REHABILITATION	30-Jun-11 A	30-Jun-11	30-Jun-11
HAZELWOOD PS I&I INVESTIGATION & REHABILITATIO	30-Jun-11 A	30-Jun-11	30-Jun-11
SONNE PUMP STATION I&I INVESTIGATION & REHABILITATION	30-Jun-11 A	30-Jun-11	30-Jun-11
SONNE PUMP STATION I&I INVESTIGATION & REHABILITATION	30-Jun-11 A	30-Jun-11	30-Jun-11
CAMP TAYLOR SSES	08-Jul-11 A	31-Dec-11	31-Dec-13
CAMP TAYLOR SSES	08-Jul-11 A	31-Dec-11	31-Dec-13
CAMP TAYLOR SANITARY SEWER #1A	31-Dec-12	31-Dec-13	31-Dec-13
CAMP TAYLOR SANITARY SEWER #1A	31-Dec-12	31-Dec-13	31-Dec-13
CAMP TAYLOR SANITARY SEWER #1B	31-Dec-13	31-Dec-13	31-Dec-13
CAMP TAYLOR SANITARY SEWER #1B	31-Dec-13	31-Dec-13	31-Dec-13
CAMP TAYLOR SANITARY SEWER #2	31-Dec-13	31-Dec-13	31-Dec-13
CAMP TAYLOR SANITARY SEWER #2	31-Dec-13	31-Dec-13	31-Dec-13
CAMP TAYLOR #3- SEWER REHABILITATION	31-Dec-17	31-Dec-17	31-Dec-17
CAMP TAYLOR #3- SEWER REHABILITATION	31-Dec-17	31-Dec-17	31-Dec-17
CAMP TAYLOR #4-SEWER REHABILITATION & REPLACEMENT	31-Dec-23	31-Dec-23	31-Dec-23
CAMP TAYLOR #4-SEWER REHABILITATION & REPLACI	31-Dec-23	31-Dec-23	31-Dec-23
FLOYDS FORK AREA	01-Apr-10 A	31-Dec-21	01-Apr-10
WOODLAND HILL PS DIVERSION	01-Apr-10 A	30-Jun-11	01-Apr-10
WOODLAND HILL PS DIVERSION	01-Apr-10 A	30-Jun-11	01-Apr-10
ASHBURTON PS IMPROVEMENTS AND DIVERSION	22-Jan-10 A	31-Dec-21	22-Jan-10
ASHBURTON PS IMPROVEMENTS AND DIVERSION	22-Jan-10 A	31-Dec-21	22-Jan-10



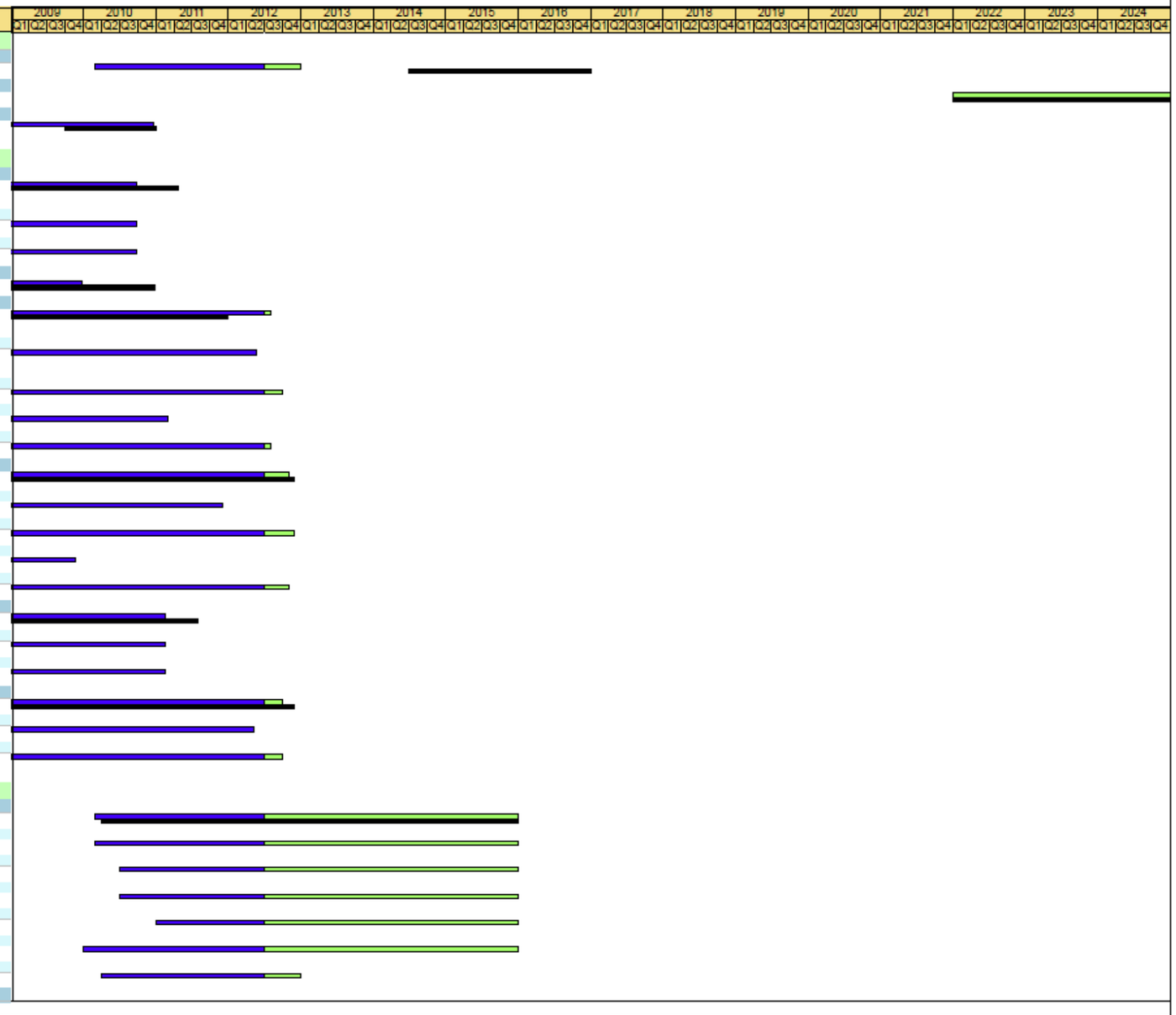
Approved 2009 IOAP
Remaining Work
Completed Work

2 of 5

Date Date: 01-Jul-12

MSD Integrated Overflow Abatement Plan Implementation Schedule (01 Jan 2009- 31 Dec 2024)

Activity Name	Scheduled Finish	2009 IOAP Completion	2012 IOAP Modification
HITE CREEK AREA	31-Dec-24	31-Dec-24	31-Dec-24
MEADOW STREAM PS AND FORCE MAIN	31-Dec-12	31-Dec-16	31-Dec-16
MEADOW STREAM PS AND FORCE MAIN	31-Dec-12	31-Dec-16	31-Dec-16
KAVANAUGH RD PS IMPROVEMENTS	31-Dec-24	31-Dec-24	31-Dec-24
KAVANAUGH RD PS IMPROVEMENTS	31-Dec-24	31-Dec-24	31-Dec-24
FLOYDSBURG RD SSES, REHAB AND PUMP STATION UPGRADE	17-Dec-10 A	31-Dec-10	31-Dec-10
FLOYDSBURG RD SSES, REHAB AND PUMP STATION UPGRADE	17-Dec-10 A	31-Dec-10	31-Dec-10
INTERIM SSDP PROJECTS	27-Nov-12	27-Nov-12	27-Nov-12
ISSDP BEECHWOOD VILLAGE SANITARY SEWER REPLACEMENT	29-Sep-10 A	27-Apr-11	27-Apr-11
ISSDP BEECHWOOD VILLAGE SANITARY SEWER REPLACEMENT	29-Sep-10 A	27-Apr-11	
BEECHWOOD VILLAGE SANITARY SEWER REPLACEMENT [WEST]	29-Sep-10 A		27-Apr-11
BEECHWOOD VILLAGE SANITARY SEWER REPLACEI	29-Sep-10 A		27-Apr-11
BEECHWOOD VILLAGE SANITARY SEWER REPLACEMENT [EAST]	29-Sep-10 A		27-Apr-11
BEECHWOOD VILLAGE SANITARY SEWER REPLACEI	29-Sep-10 A		27-Apr-11
SINKING FORK RELIEF SEWER	23-Dec-09 A	30-Dec-10	23-Dec-09
SINKING FORK RELIEF SEWER	23-Dec-09 A	30-Dec-10	23-Dec-09
ISSDP DEREK R GUTHRIE WATER QUALITY TREATMENT CENTER	30-Sep-12	31-Dec-11	31-Oct-12
ISSDP DEREK R GUTHRIE WATER QUALITY TREATMENT CENTER	30-Jul-12	31-Dec-11	
DEREK R GUTHRIE WQTC WET WEATHER TREATMENT FACILITY	20-May-12 A		31-Oct-12
DEREK R GUTHRIE WQTC WET WEATHER TREATMENT FACILITY	20-May-12 A		31-Oct-12
WCWTP: WW FLOW EQU & TMT	30-Sep-12		31-Oct-12
WCWTP: WW FLOW EQU & TMT	30-Sep-12		31-Oct-12
DRGWQTC: BLOWER PACKAGE	03-Mar-11 A		31-Oct-12
DRGWQTC: BLOWER PACKAGE	03-Mar-11 A		31-Oct-12
DRGWQTC: WET WEATHER EQUALIZATION BASIN	31-Jul-12		31-Oct-12
DRGWQTC: WET WEATHER EQUALIZATION BASIN	31-Jul-12		31-Oct-12
ISSDP HIKES LANE INTERCEPTOR /HIGHGATE SPRINGS PS	27-Nov-12	27-Nov-12	27-Nov-12
ISSDP HIKES LANE INTERCEPTOR /HIGHGATE SPRINC	30-Oct-12	27-Nov-12	
HIKES POINT INTERCEPTOR	30-Nov-11 A		27-Nov-12
HIKES POINT INTERCEPTOR	30-Nov-11 A		27-Nov-12
HIKES POINT INTERCEPTOR PHASE 2	27-Nov-12		27-Nov-12
HIKES POINT INTERCEPTOR PHASE 2	27-Nov-12		27-Nov-12
CARSON & RIBBLE RELIEF	20-Nov-09 A		27-Nov-12
CARSON & RIBBLE RELIEF	20-Nov-09 A		27-Nov-12
HIKES POINT RELIEF EFFORT	31-Oct-12		27-Nov-12
HIKES POINT RELIEF EFFORT	31-Oct-12		27-Nov-12
ISSDP NORTHERN DITCH DIVERSION INTERCEPTOR	16-Feb-11 A	31-Jul-11	31-Jul-11
ISSDP NORTHERN DITCH DIVERSION INTERCEPTOR	16-Feb-11 A	31-Jul-11	
NORTHERN DITCH DIVERSION INTERCEPTOR	16-Feb-11 A		31-Jul-11
NORTHERN DITCH DIVERSION INTERCEPTOR	16-Feb-11 A		31-Jul-11
NORTHERN DITCH DIVERSION INTERCEPTOR PH 2	16-Feb-11 A		31-Jul-11
NORTHERN DITCH DIVERSION INTERCEPTOR PH 2	16-Feb-11 A		31-Jul-11
ISSDP SOUTHEAST DIVERSION STRUCTURE & INTERCEPTOR	30-Sep-12	27-Nov-12	30-Sep-12
ISSDP SOUTHEAST DIVERSION STRUCTURE & INTERI	28-Sep-12	27-Nov-12	
SOUTHEAST DIVERSION STRUCTURE & INTERCEPTOR	12-May-12 A		12-May-12
SOUTHEAST DIVERSION STRUCTURE & INTERCEPT	12-May-12 A		12-May-12
SOUTHEAST DIVERSION STRUCTURE & INTERCEPTOR Phase 2	30-Sep-12		30-Sep-12
SOUTHEAST DIVERSION STRUCTURE & INTERCEPTOR Phase 2	30-Sep-12		30-Sep-12
JEFFERSONTOWN AREA	31-Dec-22	31-Dec-22	31-Dec-22
JEFFERSONTOWN WQTC ELIMINATION	01-Jan-16	31-Dec-15	31-Dec-15
JEFFERSONTOWN WQTC ELIMINATION	31-Dec-15	31-Dec-15	
JEFFERSONTOWN WQTC ELIMINATION	31-Dec-15		31-Dec-15
JEFFERSONTOWN WQTC ELIMINATION	31-Dec-15		31-Dec-15
JEFFERSONTOWN FORCE MAIN	31-Dec-15		31-Dec-15
JEFFERSONTOWN FORCE MAIN	31-Dec-15		31-Dec-15
GRAND AVENUE PUMP STATION	31-Dec-15		31-Dec-15
GRAND AVENUE PUMP STATION	31-Dec-15		31-Dec-15
UPPER BILLTOWN RD INTERCEPTOR	31-Dec-15		31-Dec-15
UPPER BILLTOWN RD INTERCEPTOR	31-Dec-15		31-Dec-15
BILLTOWN RD INTERCEPTOR SS	01-Jan-16		31-Dec-15
BILLTOWN RD INTERCEPTOR SS	01-Jan-16		31-Dec-15
BILLTOWN RD PS, FM & INT	31-Dec-12		31-Dec-12
BILLTOWN RD PS, FM & INT	31-Dec-12		31-Dec-12
CHENOWETH HILLS WQTC ELIMINATION & PS IMPROVEMENTS	31-Dec-15	31-Dec-15	31-Dec-15



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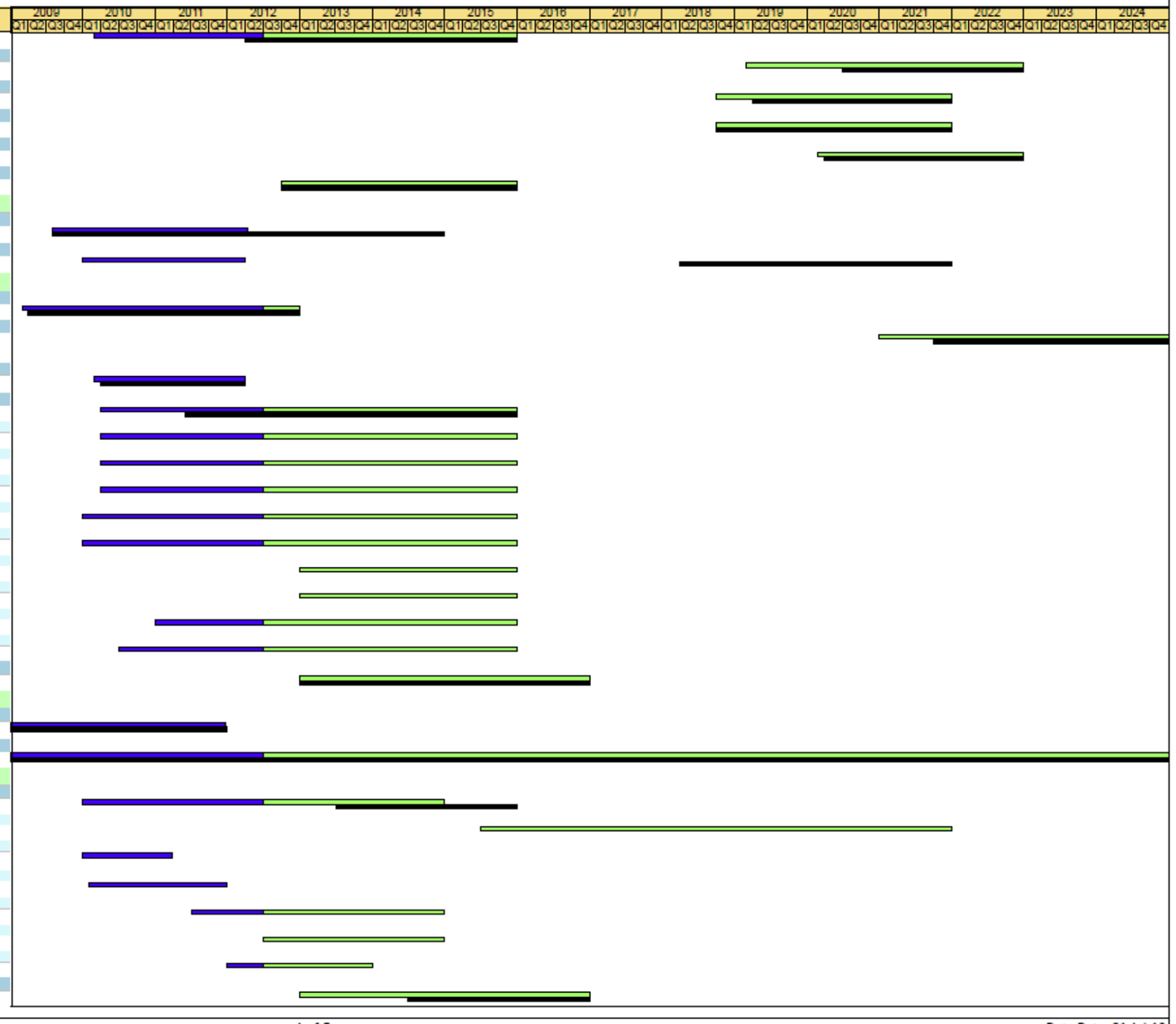
Remaining Work
Completed Work

3 of 5

Date Date: 01-Jul-12

MSD Integrated Overflow Abatement Plan Implementation Schedule (01 Jan 2009- 31 Dec 2024)

Activity Name	Scheduled Finish	2009 IOAP Completion	2012 IOAP Modification
CHENOWETH HILLS WQTC ELIMINATION & PS ELIMINA	31-Dec-15	31-Dec-15	31-Dec-15
DELL RD & CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	31-Dec-22	31-Dec-22	31-Dec-22
DELL RD & CHARLANE PKWY INTERCEPTOR IMPROVE	31-Dec-22	31-Dec-22	31-Dec-22
RAINTREE & MARIAN CT PH1 - PS ELIMINATION	31-Dec-21	31-Dec-21	31-Dec-21
RAINTREE & MARIAN CT PH1 - PS ELIMINATION	31-Dec-21	31-Dec-21	31-Dec-21
RAINTREE & MARIAN CT PS ELIMINATION	31-Dec-21	31-Dec-21	31-Dec-21
RAINTREE & MARIAN CT PS ELIMINATION	31-Dec-21	31-Dec-21	31-Dec-21
MONTICELLO PS ELIMINATION	31-Dec-22	31-Dec-22	31-Dec-22
MONTICELLO PS ELIMINATION	31-Dec-22	31-Dec-22	31-Dec-22
KLONDIKE INTERCEPTOR	31-Dec-15	31-Dec-15	31-Dec-15
KLONDIKE INTERCEPTOR	31-Dec-15	31-Dec-15	31-Dec-15
MILL CREEK AREA	13-Apr-12 A	31-Dec-21	31-Dec-21
SHIVELY INTERCEPTOR	13-Apr-12 A	31-Dec-14	31-Dec-14
SHIVELY INTERCEPTOR	13-Apr-12 A	31-Dec-14	31-Dec-14
EAST ROCKFORD LANE PS RELOCATION	30-Mar-12 A	31-Dec-21	31-Dec-21
EAST ROCKFORD LANE PS RELOCATION	30-Mar-12 A	31-Dec-21	31-Dec-21
OHIO RIVER FORCE MAIN AREA	31-Dec-24	31-Dec-24	31-Dec-24
MELLWOOD SYS 1 - MELLWOOD PS & FORCE MAIN	31-Dec-12	31-Dec-12	31-Dec-12
MELLWOOD SYS 1 - MELLWOOD PS & FORCE MAIN	31-Dec-12	31-Dec-12	31-Dec-12
MELLWOOD SYS 2 - WINTON & MOCKINGBIRD PS ELIM & PIPE UPGF	31-Dec-24	31-Dec-24	31-Dec-24
MELLWOOD SYS 2 - WINTON & MOCKINGBIRD PS ELIM & PIPE UPGRADES	31-Dec-24	31-Dec-24	31-Dec-24
DERINGTON CT PS I/I INVESTIGATION & REHABILITATION	30-Mar-12 A	31-Mar-12	31-Mar-12
DERINGTON CT PS I/I INVESTIGATION & REHABILITATI	30-Mar-12 A	31-Mar-12	31-Mar-12
PROSPECT WQTC ELIMINATIONS	31-Dec-15	31-Dec-15	31-Dec-15
PROSPECT WQTC ELIMINATIONS	31-Dec-15	31-Dec-15	
HARRODS CREEK PS & FM	31-Dec-15		31-Dec-15
HARRODS CREEK PS & FM	31-Dec-15		31-Dec-15
HARRODS CREEK INT	31-Dec-15		31-Dec-15
HARRODS CREEK INT	31-Dec-15		31-Dec-15
HARRODS CREEK INT PH 2	31-Dec-15		31-Dec-15
HARRODS CREEK INT PH 2	31-Dec-15		31-Dec-15
RIVER ROAD INT	31-Dec-15		31-Dec-15
RIVER ROAD INT	31-Dec-15		31-Dec-15
TIMBERLAKE & HUNTING CREEK S WQTC ELIM	31-Dec-15		31-Dec-15
TIMBERLAKE & HUNTING CREEK S WQTC ELIM	31-Dec-15		31-Dec-15
KEN CARLA WQTC ELIM	31-Dec-15		31-Dec-15
KEN CARLA WQTC ELIM	31-Dec-15		31-Dec-15
HARRODS CREEK INT PH 3	31-Dec-15		31-Dec-15
HARRODS CREEK INT PH 3	31-Dec-15		31-Dec-15
SHADOW WOOD WWTP ELIM	31-Dec-15		31-Dec-15
SHADOW WOOD WWTP ELIM	31-Dec-15		31-Dec-15
N HUNTING CREEK PS & FM	31-Dec-15		31-Dec-15
N HUNTING CREEK PS & FM	31-Dec-15		31-Dec-15
PROSPECT #3 - ORFM SYSTEM IMPROVEMENTS	31-Dec-16	31-Dec-16	31-Dec-16
PROSPECT #3 - ORFM SYSTEM IMPROVEMENTS	31-Dec-16	31-Dec-16	31-Dec-16
OTHER PROJECTS	30-Dec-24	31-Dec-24	30-Dec-24
CPE/CCP MODIFICATIONS TO WQTC	19-Dec-11 A	31-Dec-11	31-Dec-11
CPE/CCP MODIFICATIONS TO WQTC	19-Dec-11 A	31-Dec-11	31-Dec-11
I/I REDUCTION PROGRAM	30-Dec-24	31-Dec-24	30-Dec-24
I/I REDUCTION PROGRAM	30-Dec-24	31-Dec-24	30-Dec-24
POND CREEK AREA	31-Dec-24	31-Dec-24	31-Dec-24
LEE ANN WAY PUMP STATION IMPROVEMENTS	31-Dec-21	31-Dec-15	31-Dec-15
LEE ANN WAY PUMP STATION IMPROVEMENTS	31-Dec-14	31-Dec-15	
LEA ANN WAY SANITARY SEWER I/I REHAB	31-Dec-21		31-Dec-15
LEA ANN WAY SANITARY SEWER I/I REHAB	31-Dec-21		31-Dec-15
LEE ANN WAY PS SYSTEM SSES	30-Mar-11 A		31-Dec-15
LEE ANN WAY PS SYSTEM SSES	30-Mar-11 A		31-Dec-15
LEE ANN WAY PH 2 ICA	31-Dec-11 A		31-Dec-15
LEE ANN WAY PH 2 ICA	31-Dec-11 A		31-Dec-15
LEE ANN WAY SSR PH 1	31-Dec-14		31-Dec-15
LEE ANN WAY SSR PH 1	31-Dec-14		31-Dec-15
LEE ANN WAY SSR PH 2	01-Jan-15		31-Dec-15
LEE ANN WAY SSR PH 2	01-Jan-15		31-Dec-15
LEE ANN WAY INTERCEPTOR I/I REHAB	31-Dec-13		31-Dec-15
LEE ANN WAY INTERCEPTOR I/I REHAB	31-Dec-13		31-Dec-15
OUTER LOOP & CAVEN AREA PIPE UPGRADES	31-Dec-16	31-Dec-16	31-Dec-24
OUTER LOOP & CAVEN AREA PIPE UPGRADES	31-Dec-16	31-Dec-16	31-Dec-24



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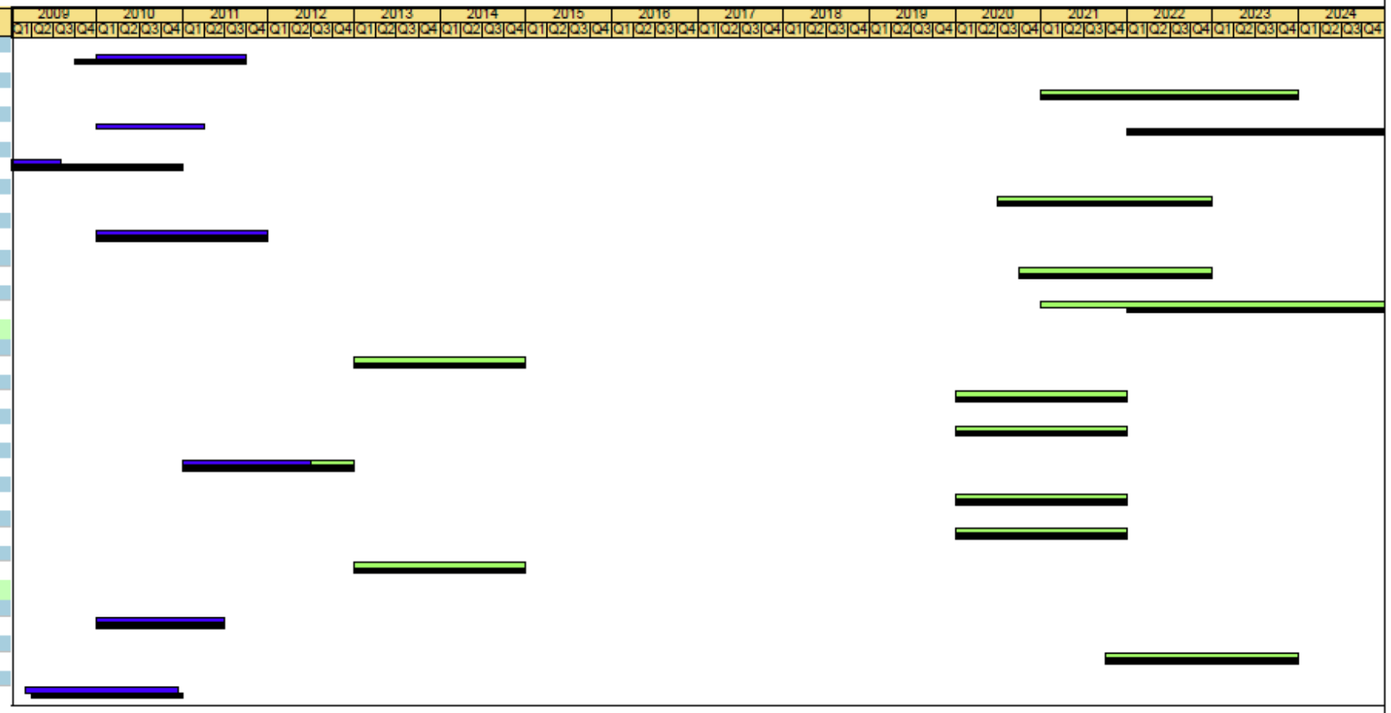
4 of 5

Date Date: 01-Jul-12

MSD Integrated Overflow Abatement Plan Implementation Schedule (01 Jan 2009- 31 Dec 2024)

Activity Name	Scheduled Finish	2009 IOAP Completion	2012 IOAP Modification
EDSEL PS I/I INVESTIGATION & REHABILITATION	27-Sep-11 A	30-Sep-11	30-Sep-11
EDSEL PS I/I INVESTIGATION & REHABILITATION	27-Sep-11 A	30-Sep-11	30-Sep-11
CINDERELLA PS ELIMINATION	31-Dec-23	31-Dec-23	31-Dec-23
CINDERELLA PS ELIMINATION	31-Dec-23	31-Dec-23	31-Dec-23
GOVERNMENT CENTER PS ELIMINATION	01-Apr-11 A	31-Dec-24	31-Dec-24
GOVERNMENT CENTER PS ELIMINATION	01-Apr-11 A	31-Dec-24	31-Dec-24
AVANTI PS ELIMINATION	28-Jul-09 A	31-Dec-10	31-Dec-10
AVANTI PS ELIMINATION	28-Jul-09 A	31-Dec-10	31-Dec-10
CHARLESWOOD INTERCEPTOR EXTENSION	31-Dec-22	31-Dec-22	31-Dec-22
CHARLESWOOD INTERCEPTOR EXTENSION	31-Dec-22	31-Dec-22	31-Dec-22
LANTANA PS I/I INVESTIGATION & REHABILITATION	29-Dec-11 A	31-Dec-11	29-Dec-11
LANTANA PS I/I INVESTIGATION & REHABILITATION	29-Dec-11 A	31-Dec-11	29-Dec-11
LEVEN PS ELIMINATION	31-Dec-22	31-Dec-22	31-Dec-22
LEVEN PS ELIMINATION	31-Dec-22	31-Dec-22	31-Dec-22
CAVEN AVENUE WW STORAGE	31-Dec-24	31-Dec-24	31-Dec-24
CAVEN AVENUE PS ELIMINATION	31-Dec-24	31-Dec-24	31-Dec-24
SMALL WWTP AREA	31-Dec-21	31-Dec-21	31-Dec-21
RIDING RIDGE PS IMPROVEMENTS	31-Dec-14	31-Dec-14	31-Dec-14
RIDING RIDGE PS IMPROVEMENTS	31-Dec-14	31-Dec-14	31-Dec-14
LUCAS LN PS INLINE STORAGE	31-Dec-21	31-Dec-21	31-Dec-21
LUCAS LN PS INLINE STORAGE	31-Dec-21	31-Dec-21	31-Dec-21
ST. RENE RD PS INLINE STORAGE	31-Dec-21	31-Dec-21	31-Dec-21
ST. RENE RD PS INLINE STORAGE	31-Dec-21	31-Dec-21	31-Dec-21
LAKE FOREST PS IMPROVEMENTS	31-Dec-12	31-Dec-12	31-Dec-12
LAKE FOREST PS IMPROVEMENTS	31-Dec-12	31-Dec-12	31-Dec-12
GUNPOWDER PS INLINE STORAGE	31-Dec-21	31-Dec-21	31-Dec-21
GUNPOWDER PS INLINE STORAGE	31-Dec-21	31-Dec-21	31-Dec-21
FOX HARBOR INLINE STORAGE	31-Dec-21	31-Dec-21	31-Dec-21
FOX HARBOR INLINE STORAGE	31-Dec-21	31-Dec-21	31-Dec-21
FAIRWAY VIEW PS IMPROVEMENTS	31-Dec-14	31-Dec-14	31-Dec-14
FAIRWAY VIEW PS IMPROVEMENTS	31-Dec-14	31-Dec-14	31-Dec-14
SOUTHEASTERN DIVERSION AREA	31-Dec-23	31-Dec-23	31-Dec-23
PARKVIEW ESTATES I/I INVESTIGATION & REHABILITATION	28-Jun-11 A	30-Jun-11	30-Jun-11
PARKVIEW ESTATES I/I INVESTIGATION & REHABILITA	28-Jun-11 A	30-Jun-11	30-Jun-11
SUTHERLAND INTERCEPTOR	31-Dec-23	31-Dec-23	31-Dec-23
SUTHERLAND INTERCEPTOR	31-Dec-23	31-Dec-23	31-Dec-23
BEARGRASS INTERCEPTOR REHABILITATION PH 2	14-Dec-10 A	31-Dec-10	31-Dec-10
BEARGRASS INTERCEPTOR REHABILITATION PH 2	14-Dec-10 A	31-Dec-10	31-Dec-10



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Completed Work

5 of 5

Date Date: 01-Jul-12

SECTION 4: Program Activities for Public Outreach, Education, Notification and Participation

4.1 Public Notification Program

MSD has developed a program aimed at notifying the community of the objectives of Project WIN and how to lessen the risks associated with coming into contact with sewage overflows.

4.2 Public Education Programs

MSD has developed a public education program aimed at disseminating information to the public on MSD's primary business functions with emphasis on wastewater, storm water and flood protection. Efforts continued to utilize various media outlets, including television, radio, magazines, and newspapers to serve as a conduit for circulating information to the public.

During the reporting period, MetroTV aired programs detailing the IOAP Public Input Meetings, and a rain barrel installation video.

4.3 Public Outreach Programs

MSD has developed a public education program aimed at expanding the public's knowledge on MSD's primary business functions of wastewater, storm water and flood protection, with an emphasis on Project WIN Program elements.

4.3.1 IOAP Project and Program Meetings

MSD facilitates meetings for the Wet Weather Team (WWT), and the public to review regulatory commitments, update progress on projects and initiatives, and to gather public input on efforts.

During this quarter, MSD has developed a partnership with Louisville Metro for providing project information and soliciting feedback from stakeholders using a Structured Public Involvement approach. Structured Public Involvement is meant to facilitate relevant input on the design process as MSD prepares to design and construct CSO basins. Our current IOAP outreach activities and public meetings are using this process to elicit qualitative and quantitative information and enhance our engagement with customers. The Structured Public Involvement approach assures anonymity for each participant using transceivers to compile data which can then be correlated on a customer-specific basis. The plan for Structured Public Involvement includes implementing a three-meeting process which will cover an IOAP overview, 10% Design input, and 30% Design input, respectively. Online surveys are also being made available to allow those not in attendance at public meetings to provide similar project-specific input. Creating this secondary online opportunity has been successful and generated responses that otherwise would not have been accounted for at the public meetings.

During the reporting period, MSD facilitated and planned for the following meetings:

- Facilitated a Wet Weather Team Stakeholder meeting on December 9, 2014, at the Metropolitan Sewer District (700 West Liberty Street) to provide updates on MSD's IOAP progress and activities to date, planned activities for 2015, and a schedule of activities for MSD's 20-year Comprehensive Facility Plan.
- Planned the next IOAP public meeting to incorporate Structured Public Involvement for the Portland Basin and CSO 190 Green Infrastructure projects, scheduled for February 9, 2015.

SECTION 5: Capacity Management Operations and Maintenance Report

Per Paragraph 24.c of the Amended Consent Decree, the Capacity Management Operations and Maintenance (CMOM) Self Assessment Report was submitted to EPA and KDEP on February 10, 2006. MSD received a letter of approval on August 22, 2006. The approved CMOM document can be viewed on the MSD Project WIN website www.msdprojectwin.org.

The primary objectives of CMOM are as follows:

Capacity – Ensuring that adequate wet and dry weather capacity is maintained in existing and new infrastructure.

Management – Implementing programs in support of operations and maintenance activities required to ensure KPDES permit compliance and promote public health by remedying design, construction and operational deficiencies; training staff; and performing activities in a safe manner.

Operations – Implementing written standard operating procedures to operate system components as designed to meet permit requirements.

Maintenance – Implementing systematic, comprehensive asset maintenance and rehabilitation programs to prevent overflows, maximize system reliability and ensure system sustainability.

Although the program implementation deadlines from the CMOM Self Assessment Report were previously met, MSD continued to enhance the activities listed below during this reporting period. Highlights of the CMOM program implementation over this reporting period are outlined below.

5.1 Management Programs

M-E-9 Infrastructure Rehabilitation

Activity details are provided in the CMOM schedule provided as **Section 5.4 – CMOM Activity Schedule**.

M-E-10 System Capacity Assurance Program

Included in the goals of the CMOM Self-Assessment Report, The System Capacity Assurance Plan (SCAP) is the basis for applying capacity decision criteria to support watershed community values. It provides a programmatic approach for confirming available capacity within MSD's sanitary sewer system, creating capacity credits through system improvement and rehabilitation, identifying hydraulic constrictions, and proposing capacity improvements that support interim and long-term performance objectives. SCAP revisions, including credit and balance projections and discussion of approach for multi-family residential unit populations were discussed with EPA and KDEP and submitted electronically for review on July 21, 2014. The final SCAP revision was submitted for approval in December 9, 2014. Once MSD has written approval, SCAP documentation will be distributed within the organization and posted to the Project WIN web site. A current copy of the SCAP Credit Balance is included as **Appendix D**.

5.2 Operations Programs

O-A-1 Pump Station Operations Programs (Routine Operating Programs)
Activity details are provided in the CMOM schedule provided as **Section 5.4 – CMOM Activity Schedule**.

O-A-2 Pump Station Operations Programs (Emergency Operating Programs)

Activity details are provided in the CMOM schedule provided as **Section 5.4 – CMOM Activity Schedule**.

5.3 Comprehensive Performance Evaluations and Composite Correction Plans (CPE/CCP)

Per requirements of MSD's 2009 Amended Consent Decree, MSD implemented a Comprehensive Performance Evaluation (CPE) and Composite Correction Plan (CCP) program for the District's water quality treatment centers (WQTCs). Although the IOAP CPE assessments defined specific WQTC improvements to be completed by December 31, 2011, MSD will continue to implement CPE/CCP activities as part of the District's CMOM Program. This section will list such activities per WQTC as they occur each reporting period and will be outlined below.

5.3.1 Hite Creek Water Quality Treatment Center

During this reporting period, the following Hite Creek WQTC activities occurred.

- In November 2014, MSD received the 100% design plans for the Hydraulic Improvements for the Hite Creek WQTC and advertised the project for construction.
- MSD selected a consultant to complete an alternative solids and tertiary filter replacement study. The study is to review options to improve plant operations and efficiency.

During the next reporting period, the following Hite Creek WQTC activities are planned.

- MSD expects to award the Hite Creek WQTC Hydraulic Improvements Project, and construction will begin.
- MSD anticipates receiving KDOW comments. Once received, MSD will address all comments and re-submit a final Hite Creek WQTC Facilities Plan Update.
- MSD staff will continue to work with the consultant to complete an alternative solids and tertiary filter replacement study.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule.**

5.3.2 Floyds Fork Water Quality Treatment Center

During this reporting period, the Floyds Fork WQTC expansion was in full operation, able to accept the additional flow from upstream customers. MSD has accepted and has officially closed the project. The expansion project provides an average daily design capacity of 6.5

MGD.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule.**

5.3.3 Derek R. Guthrie Water Quality Treatment Center

During this reporting period, MSD continued working on the Derek R. Guthrie WQTC Facilities Plan Update with the alternative analysis finalized and exhibits revised along with preparing an internal review of the document. There were substantial completion walk throughs for the Influent Pump Station Building along the continuing repairs on the Wet Weather Pump Station.

- MSD selected a consultant to complete a design for the Secondary Clarifiers 1, 2 & 3 collection mechanism replacement and removal and upgrade of Return Activated Sludge (RAS) Pumps 1 and 4 including replacement of pumps 1 through 4 variable frequency drives.
- During the next reporting period, the draft Facilities Plan document will be reviewed by MSD staff and project schedule will be updated for a draft KDOW submittal. Progress is expected to be made on the repairs to the Wet Weather Pumps in order to continue pump testing.
- Design will begin for the Secondary Clarifiers 1, 2 & 3 collection mechanism replacement and removal and upgrade of Return Activated Sludge (RAS) Pumps 1 and 4, including replacement of pumps 1 through 4 variable frequency drives. It is anticipated that construction will begin fall 2016.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.4 Cedar Creek Water Quality Treatment Center

During this reporting period, MSD selected a consultant to complete an alternative solids and tertiary filter replacement study. The study is to review options to improve plant operations and efficiency.

During the next reporting period, MSD staff will continue to work with the consultant to complete an alternative solids and tertiary filter replacement study.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.5 Prospect Area Water Quality Treatment Center Updates

Submitted the elimination plan for the five WQTCs serving Prospect (Timberlake, Hunting Creek North, Hunting Creek South, Ken Carla, and Shadow Wood), to EPA and KDEP on March 31, 2009. Received approval of this plan on September 24, 2009, and work is proceeding on the projects defined in the IOAP. See **Section 3 – Program Activities for Discharge Abatement Plans** for an update on the design and construction of the projects that make up the elimination plan for the Prospect Area WQTCs.

5.3.5.1 Timberlake Water Quality Treatment Center

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.5.2 Hunting Creek North Water Quality Treatment Center

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.5.3 Hunting Creek South Water Quality Treatment Center

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.5.4 Ken Carla Water Quality Treatment Center

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.5.5 Shadow Wood Water Quality Treatment Center

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.6 Jeffersontown Water Quality Treatment Center

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.7 Starview Water Quality Treatment Center

During this reporting period, MSD completed design plans for the Chenoweth Run Interceptor Section 2 Project (Budget ID E93353) for the elimination of the Starview WQTC. The plant flows will be diverted to the Floyds Fork WQTC. The gravity portion of this project is approximately 55% of the total length of gravity line required to eliminate the Starview WQTC. A private developer was responsible for the Chenoweth Run Interceptor Section 1 project, which was completed during the reporting period.

During the next reporting period, it is anticipated that the final portion of the Chenoweth Run Interceptor Section 2 project will be advertised for construction by MSD, with construction beginning early 2015. The Starview WQTC is scheduled to be off-line prior to December 31, 2015.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.8 Berrytown Water Quality Treatment Center

During this reporting period, MSD completed design plans for the Middletown Sanitary Recapture Phase II - Section D Project (Budget ID E93353) for the elimination of the Berrytown WQTC. The plant flows will be diverted to the Floyds Fork WQTC. The gravity portion of this project is approximately 25% of the total length of gravity line required to eliminate the Starview WQTC. A private developer was responsible for the Middletown Sanitary Recapture Phase I Project which was completed during the reporting period.

During the next reporting period, the Middletown Sanitary Recapture Phase II - Section D project will be advertised for construction with construction beginning early 2015. The Berrytown WQTC is scheduled to be off-line prior to December 31, 2015.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.9 Other Water Quality Treatment Centers

CMOM related capital projects will be provided in the schedule provided as **Section 5.4 – CMOM Activity Schedule**.

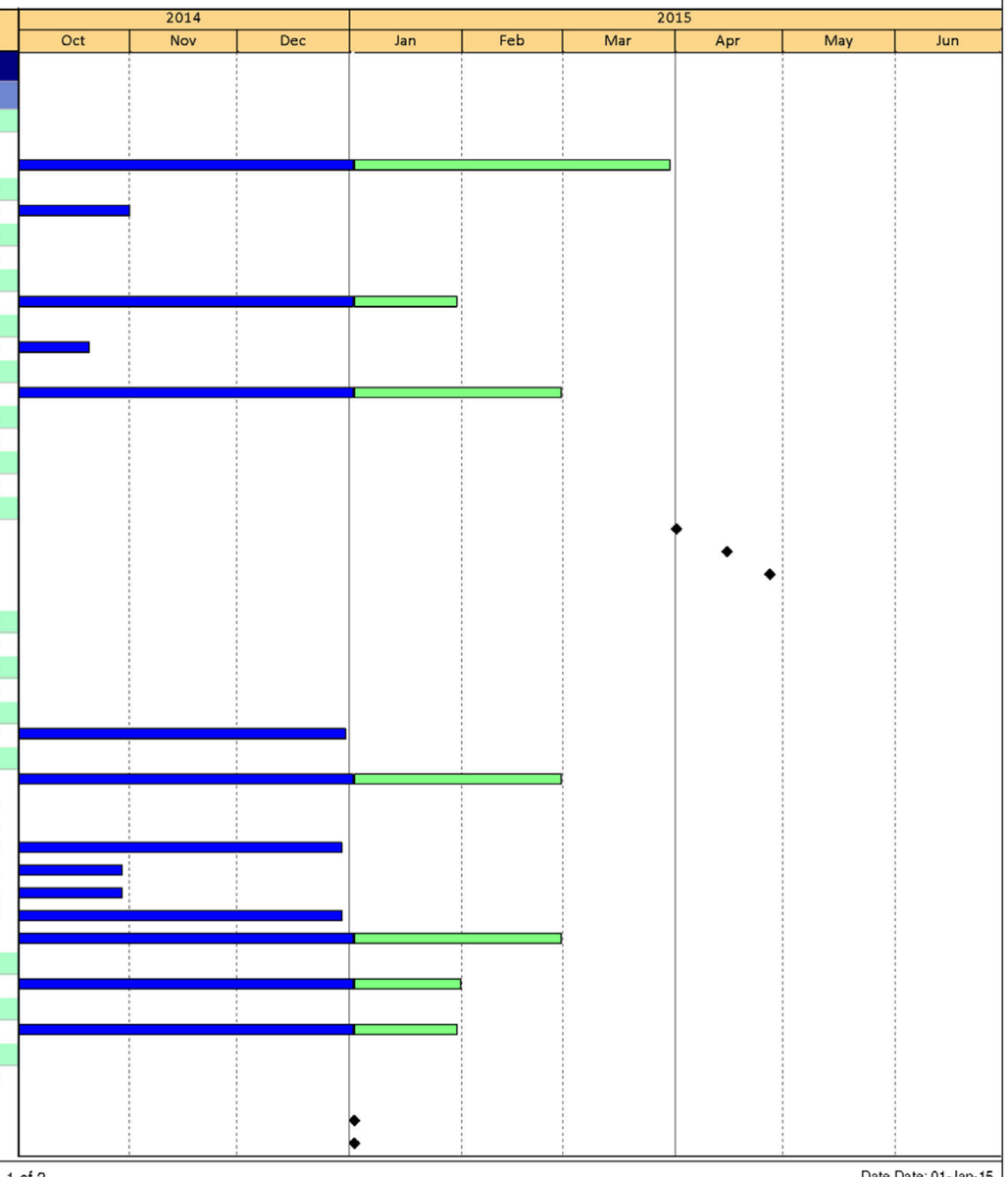
- McNeely Lake WQTC – The McNeely Lake Sanitary Sewer and Force Main project is currently in construction phase and is scheduled for completion in January 2015. This gravity portion is approximately 75% of the total length of gravity line required to eliminate the McNeely Lake WQTC. A private developer is responsible for extending the remaining gravity sewer through a future residential development to within 600 feet of the McNeely Lake WQTC. The design of the interceptor that will serve to eliminate the McNeely Lake WQTC and the Brookbend Way PS is approximately 50% complete. During the next reporting period, MSD should complete the design of the interceptor. MSD anticipates eliminating McNeely Lake WQTC by December 31, 2015, but is dependent on the private developer portion being completed.
- Bancroft WQTC – The scope of this project has been modified from storage at Devondale PS to eliminating the Devondale PS as part of the IOAP and conveying flow to a 0.33 MGD Pump Station and a 0.25 MG Storage Basin at the Bancroft site. Design of this project is complete. The project was advertised for construction and awarded in November, 2014. During the next reporting period, it is anticipated that construction will begin. The Bancroft WQTC and Devondale Pump Station are scheduled to be off-line by December 31, 2015.

5.4 CMOM Activity Schedule

CMOM capital project milestones for the period of October 1, 2014, through December, 2014, as well as a look-ahead for the period of January 1, 2015, through March 31, 2015, are provided in the schedule below.

MSD CMOM FY14 Annual Commitments Schedule (01 October 2014 - 30 June 2015) Date: 20-Jan-15

Activity ID	Activity Name	Physical % Complete	Start	Finish
CMOM FY ANNUAL REPORT COMMITMENTS FINAL			19-Nov-12 A	30-Jun-16
M-E-9 Infrastructure Rehabilitation			19-Nov-12 A	30-Jun-16
Annual I/I FY13 Project (H09206)			19-Nov-12 A	30-Mar-15
A5090	Contract Administration	100%	19-Nov-12 A	30-Jul-14 A
A5100	Warranty	75%	30-Mar-14 A	30-Mar-15
Lea Ann Way East - Stonybrook Rehabilitation Project (C08433)			01-Nov-13 A	01-Nov-14 A
A4020	Warranty	100%	01-Nov-13 A	01-Nov-14 A
Lake Forest Sanitary Sewer Rehabilitation Project (H11303)			31-Aug-13 A	31-Aug-14 A
A3370	Warrany	100%	31-Aug-13 A	31-Aug-14 A
Prospect Phase I Sanitary Sewer Rehabilitation Project (H11311)			20-Sep-13 A	30-Jan-15
A3240	Construction	95%	20-Sep-13 A	30-Jan-15
Meadow Stream Sanitary Sewer Rehabilitation Project (H11305)			21-Oct-13 A	21-Oct-14 A
A4910	Construction	100%	21-Oct-13 A	21-Oct-14 A
Lea Ann Way East - Fegenbush Rehabilitation Project (C08433)			28-Feb-14 A	28-Feb-15
A4010	Warranty	80%	28-Feb-14 A	28-Feb-15
Lea Ann Way East - Fern Creek Rehabilitation Project (C08433)			01-Oct-13 A	01-Oct-14 A
A5690	Warranty	100%	01-Oct-13 A	01-Oct-14 A
Caven Avenue Rehab Project (H11304)			03-Sep-13 A	15-Sep-14 A
A5290	Construction	100%	03-Sep-13 A	15-Sep-14 A
Beargrass Interceptor Rehab Project (H09207)			01-Apr-15	30-Jun-16
A5370	Ad	0%	01-Apr-15*	
A5380	Bid Open	0%	15-Apr-15*	
A5390	Award	0%	27-Apr-15*	
A5400	Construction	0%	01-Jun-15*	30-Jun-16
Berrytown Rehab Project (H11299)			15-Mar-14 A	30-Aug-14 A
A5500	Construction	100%	15-Mar-14 A	30-Aug-14 A
Starview Rehab Project (H11312)			15-Mar-14 A	30-Aug-14 A
A5550	Construction	100%	15-Mar-14 A	30-Aug-14 A
Camp Taylor Area 3 Rehab Project (H09218)			01-Dec-13 A	31-Dec-14 A
A5450	Construction	100%	01-Dec-13 A	31-Dec-14 A
Annual I/I FY14 Project (H14184)			28-Jan-14 A	28-Feb-15
A5730	Construction	75%	28-Jan-14 A	28-Feb-15
A5740	Berrytown	100%	28-Jan-14 A	30-Aug-14 A
A6140	Camp Taylor Tophats 4&5	100%	28-Jan-14 A	01-Sep-14 A
A6150	Hillridge	100%	28-Jan-14 A	30-Dec-14 A
A6160	Rosa Terrace	100%	28-Jan-14 A	30-Oct-14 A
A6170	Starview	100%	28-Jan-14 A	30-Oct-14 A
A6180	Goose Creek	100%	28-Jan-14 A	30-Dec-14 A
A6190	LAW Quad3 Whispering Hills Phase I	90%	28-Jan-14 A	28-Feb-15
Goose Creek PS SSES (H11407)			01-Apr-13 A	31-Jan-15
A4950	Planning	95%	01-Apr-13 A	31-Jan-15
Nightingale PS SSES (H11313)			15-Jul-13 A	30-Jan-15
A5110	Planning	95%	15-Jul-13 A	30-Jan-15
FY15 Annual Sewer Rehabilitation (H09208)			01-Aug-14 A	02-Jan-16
A5470	Design	100%	01-Aug-14 A	01-Sep-14 A
A5480	Ad	100%	15-Sep-14 A	
A5490	Bid Open	0%	02-Jan-15*	
A5520	Award	0%	02-Jan-15*	

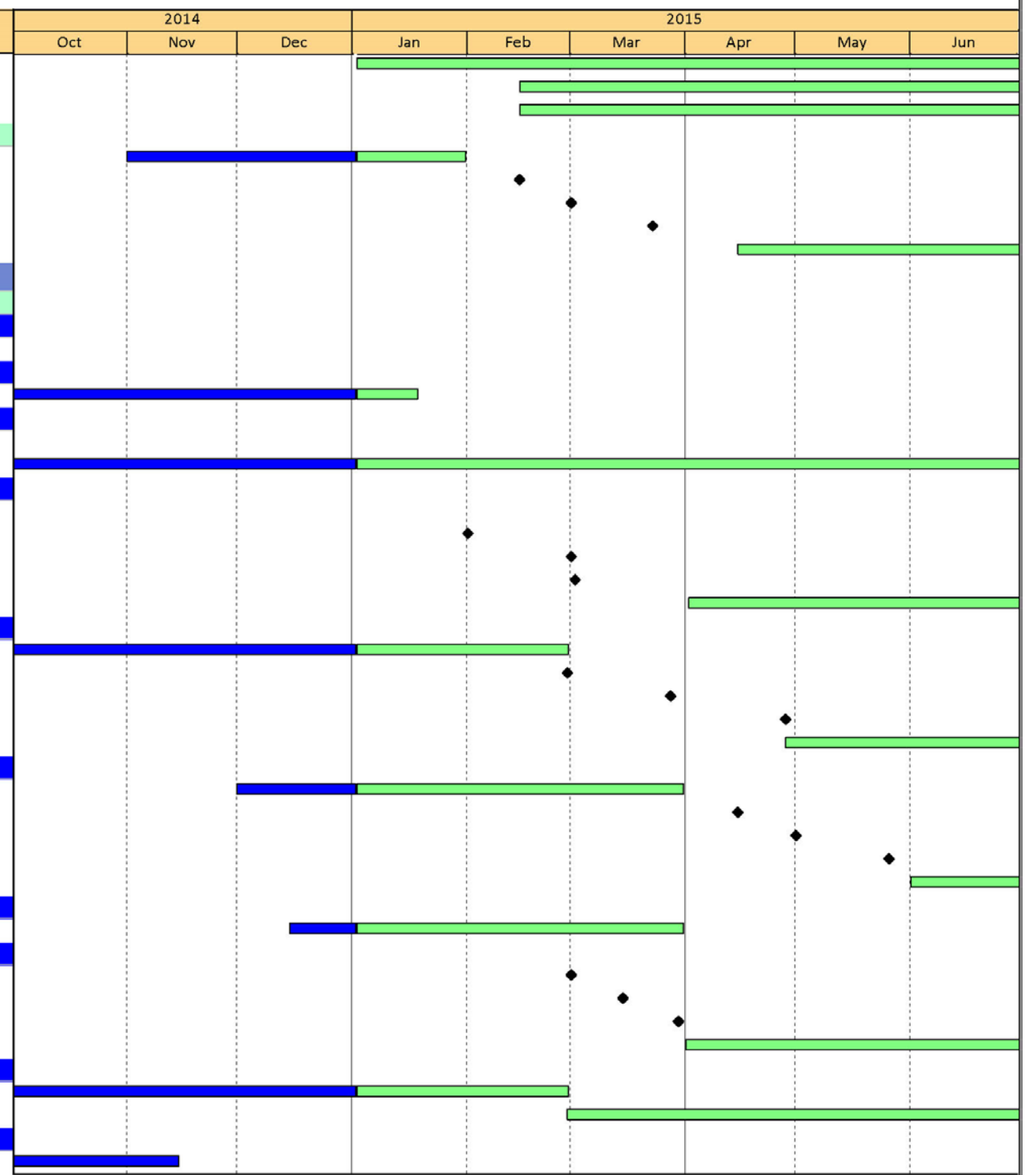


1 of 3 Date Date: 01-Jan-15

MSD CMOM FY14 Annual Commitments Schedule (01 October 2014 - 30 June 2015)

Date: 20-Jan-15

Activity ID	Activity Name	Physical % Complete	Start	Finish
A5530	Construction	0%	02-Jan-15*	02-Jan-16
A5540	LAW Quad 3 - Whispering Hills Phase3 2	0%	15-Feb-15*	31-Jul-15
A5650	LAW Quad 4	0%	15-Feb-15*	31-Jul-15
Melco Basin Tree Removal (F14171)			01-Nov-14 A	30-Sep-15
A6250	Design	40%	01-Nov-14 A	31-Jan-15
A6260	Ad	0%	15-Feb-15*	
A6270	Bid Open	0%	01-Mar-15*	
A6280	Award	0%	23-Mar-15*	
A6290	Construction	0%	15-Apr-15*	30-Sep-15
Pump Station Operations Programs			04-Jan-13 A	22-Mar-16
O-A-2 Emergency Operation Programs			04-Jan-13 A	22-Mar-16
Trinity Homes Pump Station Roof Hatch (H13154)			28-Aug-13 A	28-Aug-14 A
A5560	Warranty	100%	28-Aug-13 A	28-Aug-14 A
Royster Basin Generator Project (H12163)			28-Aug-14 A	18-Jan-15
A4840	Construction	90%	28-Aug-14 A	18-Jan-15
St. Matthews #4 Pump Station Modification Project (H14211)			29-May-14 A	29-Aug-15
A5820	Construction	100%	29-May-14 A	29-Aug-14 A
A5840	Warranty	35%	29-Aug-14 A	29-Aug-15
Gunpowder Pump Station FM Modification Project (H14211)			01-Sep-13 A	15-Sep-15
A6040	Design	100%	01-Sep-13 A	30-Sep-14 A
A6050	Ad	0%	01-Feb-15*	
A6060	Bid Open	0%	01-Mar-15*	
A6070	Award	0%	02-Mar-15*	
A6080	Construction	0%	02-Apr-15*	15-Sep-15
4th Street FPS Gate and Switch Gear Replacement Project (F12095)			04-Jan-13 A	30-Dec-15
A5150	Design	70%	04-Jan-13 A	28-Feb-15
A5160	Ad	0%	28-Feb-15*	
A5170	Bid Open	0%	28-Mar-15*	
A5180	Award	0%	28-Apr-15*	
A5190	Construction	0%	28-Apr-15*	30-Dec-15
Melco Basin Crane (F14170)			01-Dec-14 A	31-Dec-15
A6200	Design	10%	01-Dec-14 A	31-Mar-15
A6210	Ad	0%	15-Apr-15*	
A6220	Bid Open	0%	01-May-15*	
A6230	Award	0%	26-May-15*	
A6240	Construction	0%	01-Jun-15*	31-Dec-15
Starkey Flood Pump Station Rooftop A/C (F15006)			15-Dec-14 A	31-Mar-15
A5660	Construction	10%	15-Dec-14 A	31-Mar-15
Bridgepointe Pump Station Access Road			01-Mar-15	30-Jun-15
A6310	Ad	0%	01-Mar-15*	
A6320	Bid Open	0%	15-Mar-15*	
A6330	Award	0%	30-Mar-15*	
A6300	Construction	0%	01-Apr-15*	30-Jun-15
Fairway View Pump Station Upgrade (H09177)			22-Aug-14 A	28-Feb-16
A6340	Construction	90%	22-Aug-14 A	28-Feb-15
A6350	Warranty	0%	28-Feb-15*	28-Feb-16
Riding Ridge Pump Station Improvements (H09175)			23-Sep-14 A	15-Nov-15
A6360	Construction	100%	23-Sep-14 A	15-Nov-14 A



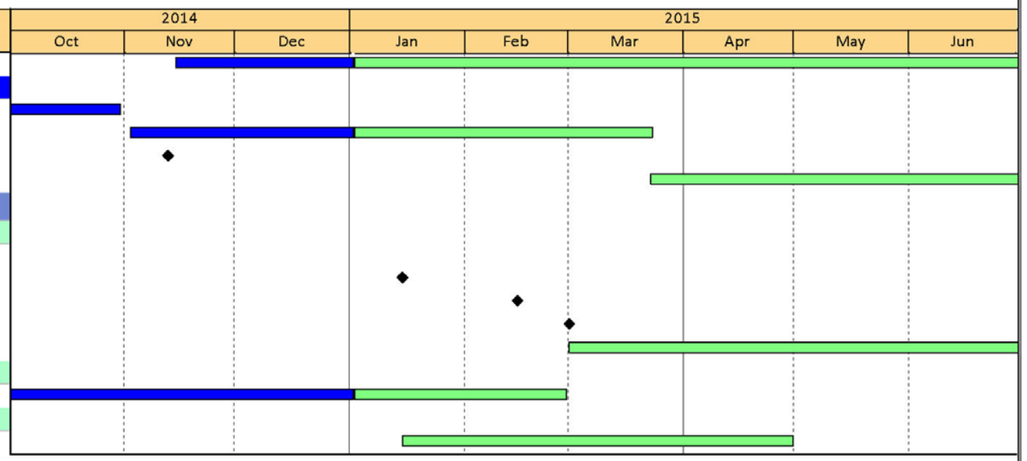
2 of 3

Date Date: 01-Jan-15

MSD CMOM FY14 Annual Commitments Schedule (01 October 2014 - 30 June 2015)

Date: 20-Jan-15

Activity ID	Activity Name	Physical % Complete	Start	Finish
A6370	Warranty	10%	15-Nov-14 A	15-Nov-15
Rosa Terrace Pump Station Improvement			01-Oct-14 A	22-Mar-16
A6440	Award	100%	01-Oct-14 A	31-Oct-14 A
A6450	Construction	5%	03-Nov-14 A	23-Mar-15
A6400	Design	100%		13-Nov-14 A
A6460	Warranty	0%	23-Mar-15	22-Mar-16
CPE/CPE Treatment Plant Activities			02-Sep-13 A	27-Aug-15
MFWQTP Rubbertown Sampling Manholes (H09374)			02-Sep-13 A	27-Aug-15
A6090	Design	100%	02-Sep-13 A	30-Aug-14 A
A6100	Ad	0%	15-Jan-15*	
A6130	Bid Open	0%	15-Feb-15*	
A6110	Award	0%	01-Mar-15*	
A6120	Construction	0%	01-Mar-15*	27-Aug-15
West County Force Main Assessment (H09519)			20-Jun-14 A	28-Feb-15
A5340	Planning	50%	20-Jun-14 A	28-Feb-15
West County Water Quality Treatment Center Gate 145 Electrical Service & Actuator (F14164)			15-Jan-15	30-Apr-15
A6380	Design	0%	15-Jan-15*	30-Apr-15



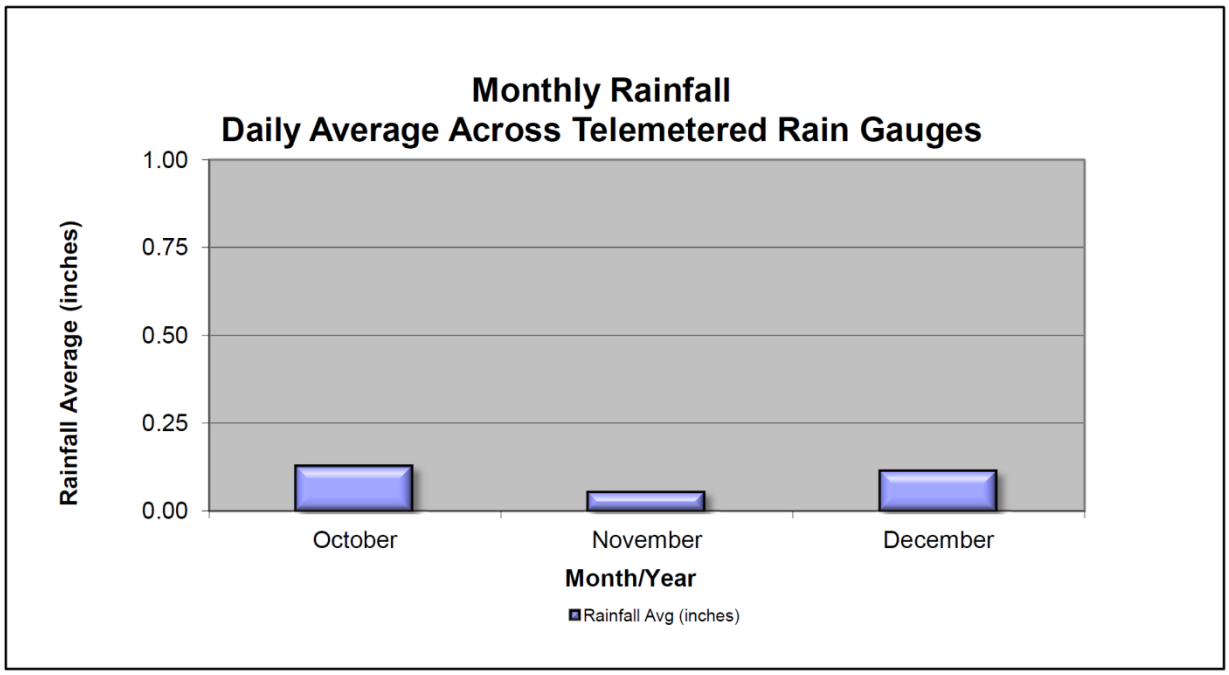
3 of 3

Date Date: 01-Jan-15

SECTION 6: Project WIN Performance Overview

6.1 Rainfall

The number and the volume of wet weather overflows are directly related to the amount of rain that has fallen during the reporting period. The following graph shows the Jefferson County average rainfall amounts for the last quarter. Data was pulled from MSD's Rain Gauge Network.



A storm frequency analysis for CSOs is included as **Appendix E**.

6.2 Collection System Unauthorized Discharges

6.2.1 Collection System Overflows to Waters of the United States (WUS)

MSD recorded information related to overflows reaching Waters of the United States (WUS) for the reporting period. This information is entered and maintained in Hansen utilizing procedures reviewed and improved through efforts associated with various components of the Amended Consent Decree. Details of these overflows will be included in the Annual Report for the period of July 1, 2014, through June 30, 2015, and will be posted on the Project WIN website. During this quarter, 46 unauthorized discharges to the Waters of the United States (WUS) have been reported.

Unauthorized Discharges (Waters of the United States)			
Problem	**Dry Weather**	**Wet Weather**	**Total**
Blending at Jtown WQTC	0	3	**3**
Bypass at WQTC	0	1	**1**
Grease Blockage	2	1	**3**
Lack of System Capacity	0	26	**26**
Mechanical Failure	0	1	**1**
Obstruction-Not Grease / Roots	3	1	**4**
Roots	0	1	**1**
Structural Failure	0	1	**1**
Utility Damaged MSD Asset	6	0	**6**
Total	**11**	**35**	**46**

Ohio River Force Main Break and Repair

The Ohio River Force Main (ORFM) is a 17 mile long, large diameter (16 to 24 inch pipe), dual barrel force main. The force main system consists of seven regional pump stations with design capacities ranging from 220 to 6,000 GPM. The ORFM serves a large portion of eastern Jefferson County and includes 238 miles of sewer, 5,746 manholes, 38 pump stations and more than 13,000 properties.

On Wednesday, December 10, 2014, at approximately 3:00 PM, MSD became aware that a contractor damaged the ORFM near the intersection of Frankfort Avenue and River Road. The contractor was working on a city-wide gas line replacement project. At that time, boring activities were underway to install gas utilities and the contractor bored through both barrels of the ORFM resulting in a dry weather overflow. Repairs were nearly complete and the overflow stopped by 5:00 PM Thursday, December 11, 2014. The following description includes event details as they occurred.

ORFM Discharge along Frankfort Avenue facing north.

On Wednesday, December 10, 2014, at approximately 3:00 PM, MSD became aware that a contractor damaged the ORFM near the intersection of Frankfort Avenue and River Road. MSD crews were on scene by 3:30 PM and began to assess the damage. At that time, it was believed that damage only occurred to a single, north barrel of the force main. MSD crews worked to divert flows to the south barrel and shut down the north barrel. By 5:30 PM the north barrel was shut down and MSD crews began mitigation activities while waiting for the north barrel to drain and the overflow to stop. During this time, the overflow was diverted to

catch basins along Frankfort Avenue within the Combined Sewer System (CSS). It was believed that these catch basins were connected to the CSS and that the overflow was being captured and treated.

Excavation showing break in south barrel of ORFM.

By 10:00 PM, MSD staff realized that mitigation activities on the north barrel had failed, and the overflow did not subside as anticipated. At that time, a contractor was brought on site with equipment to excavate around the suspected bore location. Excavation began around 12:00 AM Thursday, December 11, 2014. At that time, a vendor was also contacted to provide a pump-around system at the excavation site to dewater the excavation and mitigate the overflow. At approximately 2:00 AM, the excavation revealed that both the north and the south barrels of the force main were damaged. Once the extent of the damage was documented, the contractor and MSD staff began to identify inventory required to make the necessary repairs.

At approximately 8:00 AM Thursday, December 11, 2014, MSD staff were deployed to pump stations along the ORFM to assess flow conditions. At approximately 9:00 AM a decision was made to temporarily shut down the seven regional pump stations located along the ORFM to stop flows in order for repairs to take place at the excavation site. MSD temporarily shut down the following upstream ORFM pump stations:

- Barbour Lane
- Muddy Fork
- New Market
- Phoenix Hill
- West Goose Creek
- Hillsdale
- Glenview Hills

MSD utilized contractors and staff to haul sewage from most of these locations to protect homes from backups and to minimize the impact to the environment.

At approximately 10:00 AM Thursday, December 11, 2014, MSD reported the unauthorized discharge to Kentucky Department of Environmental Protection (KDEP) under KRS 224 provisions. The incident report number is 20147111. This communication was made based on two criteria. The first was that all pump stations along the ORFM were being shut down and that additional discharges might occur. The second was that MSD personnel learned that the catch basins being used to mitigate the discharge along Frankfort Avenue may in fact not be connected to the CSS.

By 12:00 PM Thursday, December 11, 2014, flows from the discharge had subsided and work to repair the north barrel began. By 5:00 PM Thursday, December 11, 2014, the north barrel was repaired. Staff began work to divert all flows in the ORFM back to the north barrel, and then isolate the south barrel for repairs. At that time, all of the ORFM pump stations were placed back in service and all of the overflows related to the event stopped.

Excavation showing north barrel of ORFM repaired.

During this event, 1.7 million gallons of overflow were reported. MSD staff and contractors hauled 132,000 gallons of sewage during the pump station outage to prevent basement backups and reduce impact to the environment. As a result, no basement backups were reported.

On Friday, December 12, 2014, repairs to the south barrel of the ORFM were completed and it was placed back into service.

MSD is currently working to confirm the connectivity of the catch basins impacted by the event.

6.2.2 Overflows to Ground (EXT)

MSD recorded information related to overflows to the ground that did not reach Waters of the United States for the reporting period. This information is entered and maintained in Hansen utilizing procedures reviewed and improved through efforts associated with various components of the Amended Consent Decree. These overflows will be included in the Annual Report for the period of July 1, 2014, through June 30, 2015.

6.2.3 Overflows to Interior (INT)

MSD recorded information related to overflows to building interiors for the reporting period. This information is entered and maintained in Hansen utilizing procedures reviewed and improved through efforts associated with various components of the Amended Consent Decree. These overflows, that are the result of an issue in the main line, will be included in the

Annual Report for the period of July 1, 2014, through June 30, 2015.

6.2.4 Dry Weather CSOs

MSD recorded information related to dry weather overflows from permitted combined sewer overflow outfalls. This information is entered and maintained in Hansen utilizing procedures reviewed and improved through efforts associated with various components of the Amended Consent Decree. A detailed report of these overflows will be included in the Annual Report for the period of July 1, 2014, through June 30, 2015. The table below summarizes dry weather CSOs that occurred during the quarter. **Appendix A-1** includes details on the dry weather overflows that occurred in the quarter.

Dry Weather CSO - October 1, 2014 - December 31, 2014					
CSO	Type of Discharge	Date/Time	Problem	Cause	Volume (GAL)
CSO106	DISDW	11/3/14 11:05 AM	OBSTRUCTION-NOT GREASE / ROOTS	LEAVES BLOCKING THE LOW FLOW LINE AT THE DAM	1,175

There was one dry weather overflow recorded at CSOs with a volume of 1,175 gallons.

6.3 CSO Reductions

Included in **Appendix B** is the CSO data for this quarter. A summary of any data anomalies and the CSO data for each monitored overflow has been graphed along with rainfall information from the nearest rain gauge to facilitate review of the overflows that occurred.

- 17th Street Flood PS DWO Elimination – Completed December 18, 2014 – Eliminated the following CSOs during dry weather: CSO190
- CSO058 Sewer Separation – Completed December 30, 2014 – Reduced Volume and Occurrence of the following CSOs: CSO058

6.4 SSO Reductions

Estimation of SSO volume is not available in the same manner as it is for the CSO locations. The SSO volume reductions are estimates based on actual observations or from flow monitoring information.

- Fairway View PS Improvements – Completed December 30, 2014 – Eliminated the following SSOs: MSD1065-PS
- Riding Ridge PS Improvements – Completed November 15, 2014 – Eliminated the following SSOs: MSD1060-LS
- Klondike Interceptor – Completed July 17, 2014 – Eliminated the following SSOs: 26651, 26650, 20644, 66232, 49513, 25676

6.5 Gravity Line Preventive Maintenance

Each quarter, data and statistics relating to the cleaning, inspection, and maintenance of

sewer assets performed under the Gravity Line Preventive Maintenance (GLPM) are reported. The following data was compiled for the period of October 1, 2014, through December 31, 2014. The first table includes data and targets. The second table includes unplanned maintenance and other maintenance activities that are performed in response to inspection.

Rolling quarterly GLPM performance is related to unplanned maintenance; therefore no targets have been developed.

Rolling Quarterly GLPM Performance With Targets							
	Jan-Mar	Apr-Jun	Jul-Sep	**Oct-Dec**	Total	Target/ qtr	% of Annual Target
Combined Sewer Area							
Catch Basins Cleaned CSO Area - PM	3,953	3,327	3,097	**6,741**	17,118	4,460	38%
CSO Inspections	1,316	1,293	1,288	**1,790**	5,687	1,272	35%
Sanitary Sewer Area							
Catch Basins Cleaned SSO Area - PM	1,519	796	685	**1,397**	4,397	1,144	31%
County Wide							
Sewer Main Inspections MSD Crews (LF)	322,297	353,379	334,927	**184,384**	1,194,987	198,000	23%
Sewer Main Inspections Contractor (LF)	327,271	95,460	124,237	**141,872**	688,840	198,000	18%
Total Inspections (LF)	649,568	448,839	459,164	**326,256**	1,883,827	396,000	21%

Rolling Quarterly GLPM Performance					
	Jan-Mar	Apr-Jun	Jul-Sep	**Oct-Dec**	Total
Combined Sewer Area					
Catch Basins Cleaned CSO Area - UM	191	341	256	**500**	1,288
CSO Debris Removal WO	90	175	168	**168**	601
Chemical Root Treatment CSO Area (LF)	0	0	0	**0**	0
Root Cutting CSO Area (LF)	28,878	6,420	15,758	**740**	51,795
Flushing and Cleaning of Sewer Mains CSO Area (LF)	11,442	3,999	457,624	**4,822**	477,887
Sanitary Sewer Area					
Catch Basins Cleaned SSO Area - UM	79	796	67	**71**	1,013
Chemical Root Treatment SSO Area (LF)	0	407	0	**48,803**	49,210
Root Cutting SSO Area (LF)	23,325	23,721	48,289	**24,253**	119,588
Flushing and Cleaning of Sewer Mains SSO Area (LF)	16,004	37,728	496,040	**53,352**	603,124

6.6 Water Quality Treatment Center Bypasses

6.6.1 Bypass Events

6.6.2 Bypass Corrective Actions

Each quarter, an assessment of bypasses will occur to determine the root cause of the bypass, the failure category, corrective actions to be taken, possible programmatic solutions, and corrective action completion date. Refer to the table below for causes of bypasses and respective corrective actions that occurred October 1, 2014, through December 31, 2014.

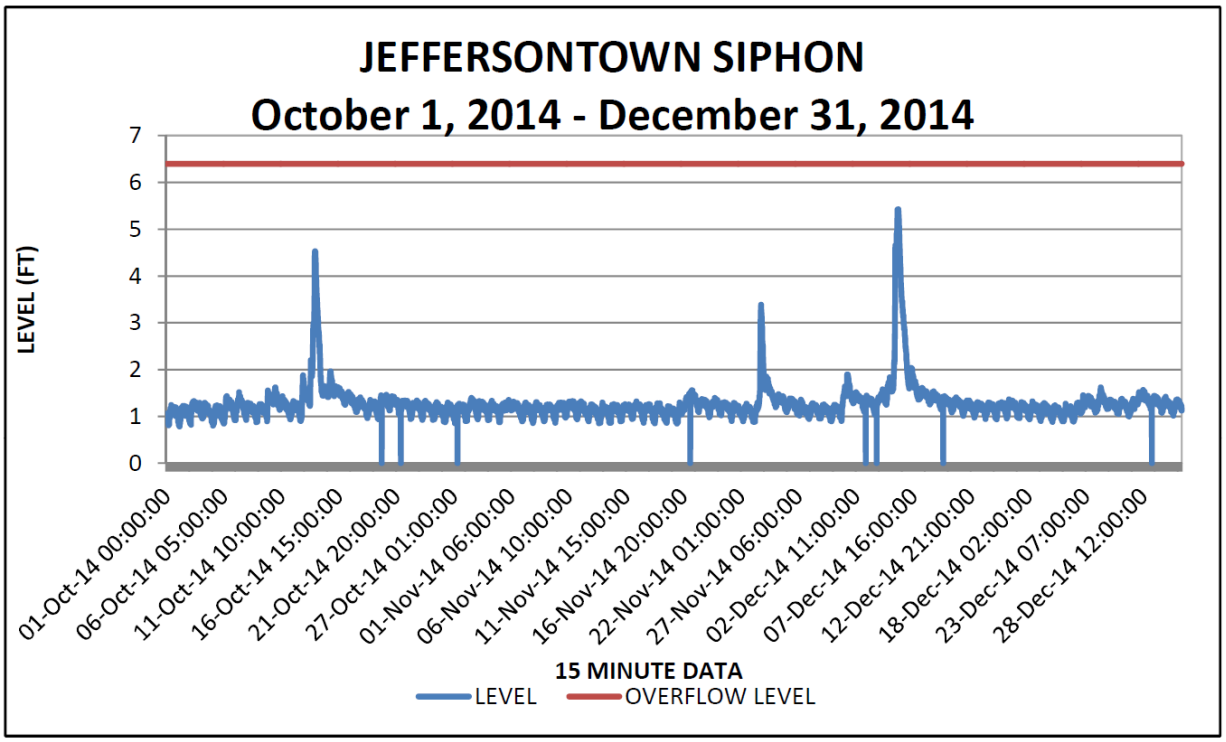
Bypass Summary - July 1, 2014 to September 30, 2014					
DATE	WQTC	WORK ORDER	FAILURE CODE	BYPASS DESCRIPTION	FAILURE RESOLUTION
Capacity (CAP)					
N/A	N/A	N/A	N/A	No bypasses of this category occurred during the reporting period.	N/A
Human Error (OPN)					
N/A	N/A	N/A	N/A	No bypasses of this category occurred during the reporting period.	N/A
Facility Failure (Mechanical - MCH, Electrical - ELE, Structural - SRT)					
November 6, 2014	KEN CARLA	2263290	STR	The chlorine contact tank developed a hole and fully treated wastewater leaked out onto the ground. Approximately 34 gallons of fully treated wastewater leaked. Total flow for the day was 1,887 gallons.	Chlorine contact tank was pumped down and contractor repaired hole in concrete. This plant is to be eliminated in 2015.
External Power failures (LGE Related-PWR)					
N/A	N/A	N/A	N/A	No bypasses of this category occurred during the reporting period.	N/A
Utility Damage					
N/A	N/A	N/A	N/A	No bypasses of this category occurred during the reporting period.	N/A

6.6.3 Jeffersontown Water Quality Treatment Center

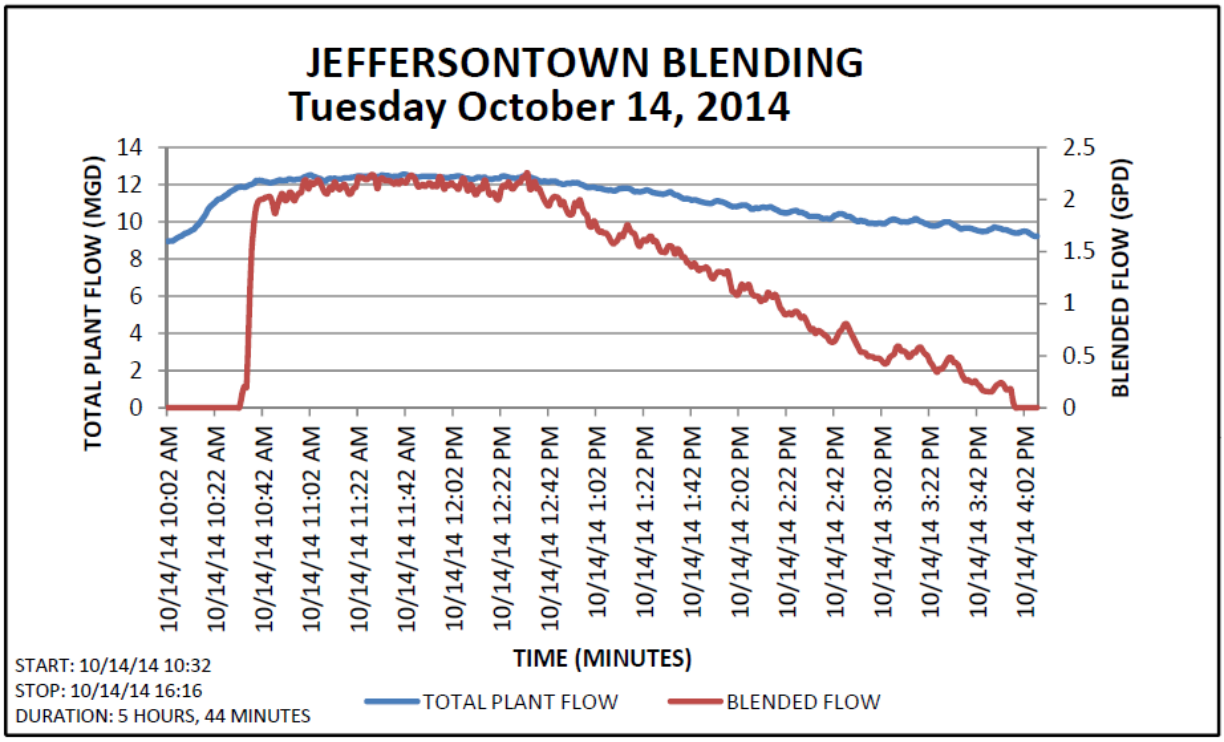
MSD submitted a Jeffersontown WQTC Process Control Plan on October 31, 2008, as required by paragraph 26.a of the Amended Consent Decree. MSD received comments on December 12, 2008, and resubmitted the plan January 16, 2009, and again on February 20, 2009. MSD received conditional approval of this document from EPA on April 1, 2009, pending finalization of the Amended Consent Decree that was under consideration by the Federal Court at the time the Process Control Plan was submitted. The Process Control Plan was accepted by the Federal Court and incorporated by reference into the Amended Consent Decree by an Order signed February 12, 2010, that was entered into public record February 15, 2010.

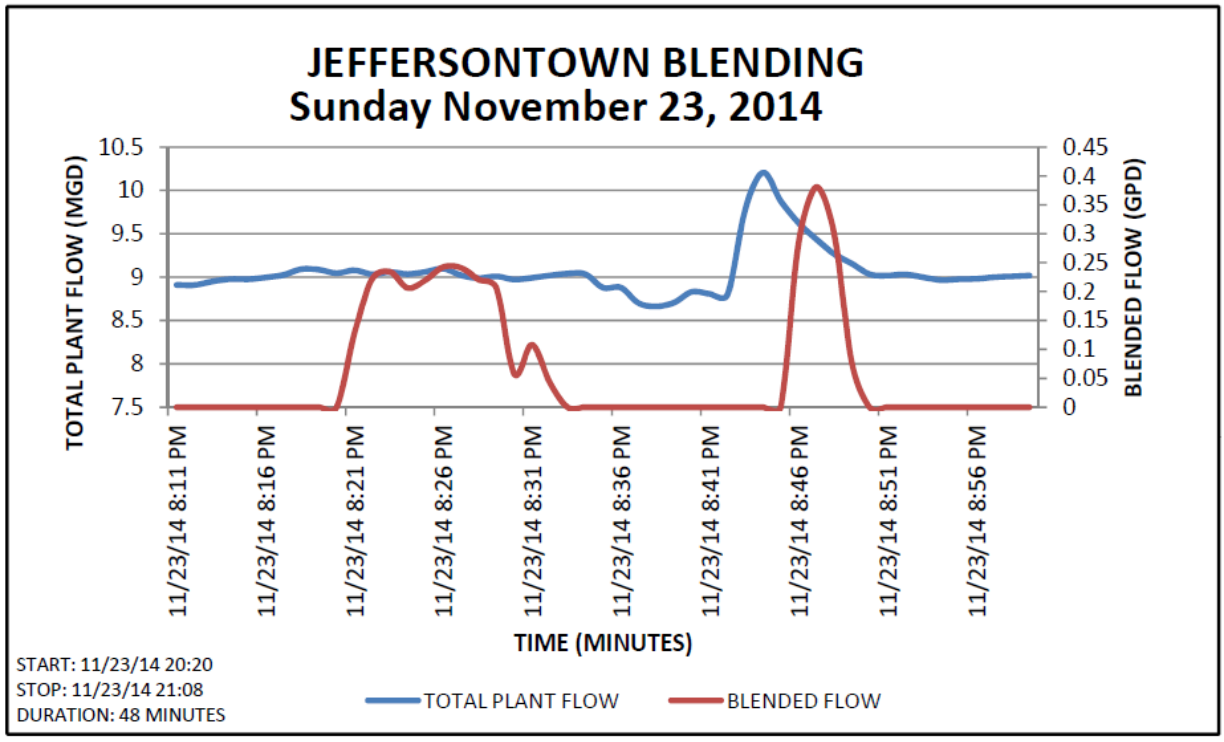
The following activities occurred at the Jeffersontown WQTC during the reporting period:

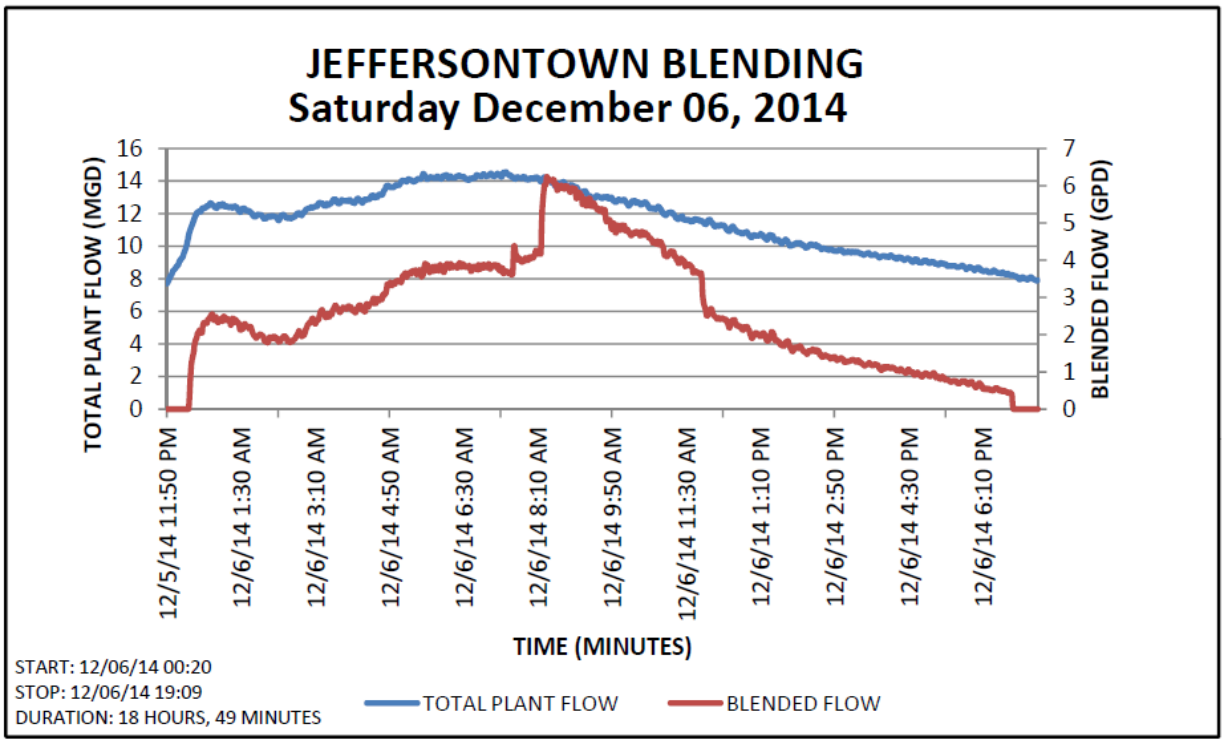
- Inspections were conducted upstream of the Jeffersontown WQTC Headworks three times (once each month). Refer to Section 2 for SSO Route information. Overflows were reported up stream of the siphon October 14, 2014 at manhole 28551 and December 6, 2014 at manholes 28551 and 28173.



- There were three blending events during the reporting period. Below are charts for each blending event that show total plant flow during the blending event.

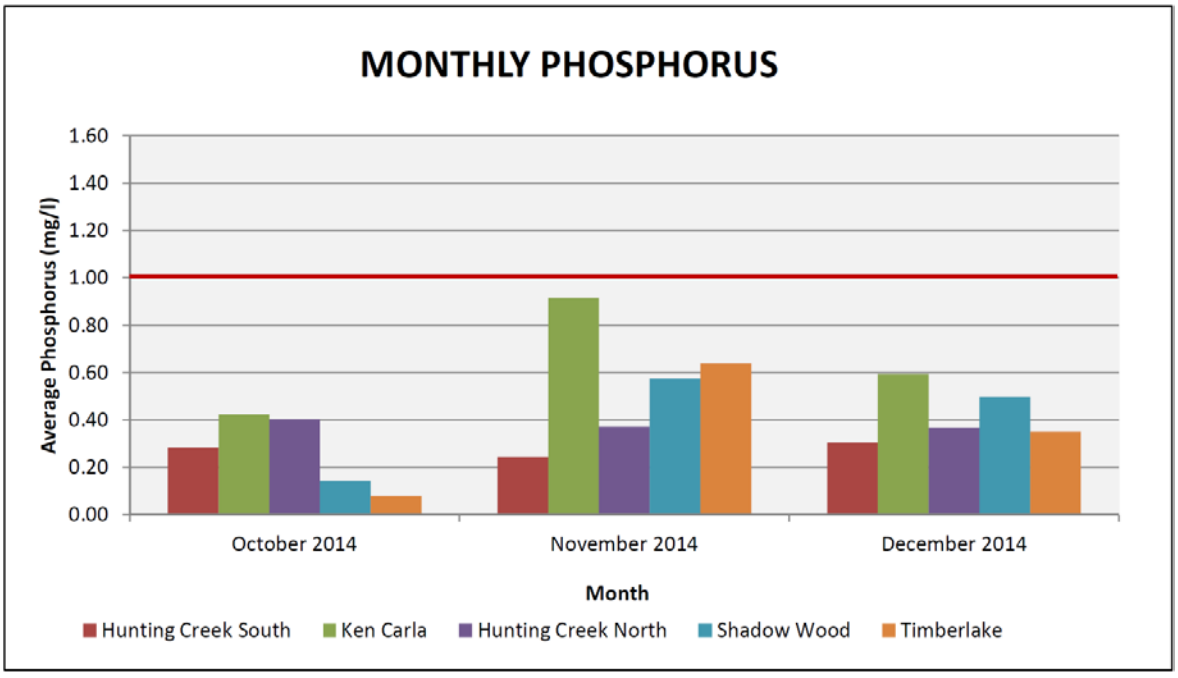

JEFFERSONTOWN BLENDING
Tuesday October 14, 2014
TOTAL PLANT FLOW (MGD)
BLENDED FLOW (GPD)
14
12
10
8
6
4
2
0
2.5
2
1.5
1
0.5
0
10/14/14 10:02 AM
10/14/14 10:22 AM
10/14/14 10:42 AM
10/14/14 11:02 AM
10/14/14 11:22 AM
10/14/14 11:42 AM
10/14/14 12:02 PM
10/14/14 12:22 PM
10/14/14 12:42 PM
10/14/14 1:02 PM
10/14/14 1:22 PM
10/14/14 1:42 PM
10/14/14 2:02 PM
10/14/14 2:22 PM
10/14/14 2:42 PM
10/14/14 3:02 PM
10/14/14 3:22 PM
10/14/14 3:42 PM
10/14/14 4:02 PM
TIME (MINUTES)
START: 10/14/14 10:32
STOP: 10/14/14 16:16
DURATION: 5 HOURS, 44 MINUTES
TOTAL PLANT FLOW
BLENDED FLOW


JEFFERSONTOWN BLENDING
Sunday November 23, 2014
TOTAL PLANT FLOW (MGD)
BLENDED FLOW (GPD)
10.5
10
9.5
9
8.5
8
7.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
11/23/14 8:11 PM
11/23/14 8:16 PM
11/23/14 8:21 PM
11/23/14 8:26 PM
11/23/14 8:31 PM
11/23/14 8:36 PM
11/23/14 8:41 PM
11/23/14 8:46 PM
11/23/14 8:51 PM
11/23/14 8:56 PM
TIME (MINUTES)
START: 11/23/14 20:20
STOP: 11/23/14 21:08
DURATION: 48 MINUTES
TOTAL PLANT FLOW
BLENDED FLOW



6.7 Phosphorus Monitoring at the Prospect WQTCs

As part of the Amended Consent Decree, MSD has agreed to submit phosphorus monitoring data including the calculations of monthly averages with the quarterly reports. MSD WQTCs were under the 1mg/l limit during the reporting period, per the Amended Consent Decree requirement. The following chart displays monthly average phosphorus results for the Prospect WQTCs.



Appendix A-1 - Discharge Work Orders – Dry Weather CSOs

APPENDIX A-1
UNAUTHORIZED DISCHARGES
TO WATERS OF UNITED STATES
OCTOBER 1, 2014 THROUGH DECEMBER 31, 2014

Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
MORRIS FORMAN	KY0022411	1212 ROYAL AVE	11/03/2014	11/03/14 12:25 PM	1175	Sewer Manhole	CSO106	STREAM	SOUTH FORK BEARGRASS CREEK	LEAVES BLOCKING THE LOW FLOW LINE AT THE DAM	OBSTRUCTION-NOT GREASE / ROOTS	2260454	NONE REQUIRED, DISCHARGE FLOWING DIRECTLY INTO THE CREEK	WORK ORDER 2260456; REMOVED LEAVES FROM LOW FLOW LINE

Appendix A-2 - Discharge Work Orders – Bypass

APPENDIX A-2
UNAUTHORIZED DISCHARGES
TO WATERS OF UNITED STATES
OCTOBER 1, 2014 THROUGH DECEMBER 31, 2014

Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
KEN CARLA	KY0022497	8701 LYNNHALL CT	11/06/14 8:44: AM	11/06/14 09:51 AM	34	Sewer Treatment Plant	MSD0208	STREAM	HARRODS CREEK	LEAKING OUT OF CHLORINE CONTACT TANK	BYPASS AT WQTC	2263290	LIME WAS SPREAD; NO DEBRIS OBSERVED	CONTRACTOR REPAIRED TANK

Appendix A-3 - Discharge Work Orders – Blending

APPENDIX A-3
UNAUTHORIZED DISCHARGES
TO WATERS OF UNITED STATES
OCTOBER 1, 2014 THROUGH DECEMBER 31, 2014

Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	10/14/14 10:32 AM	10/14/14 04:16 PM	320016	Sewer Treatment Plant	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY.	BLENDING AT JTOWN WQTC	2250349	PIPE DISCHARGE SUBMERGED- NO CLEAN UP.	PER ACD, WQTC TO BE ELIMINATED BY DEC 31, 2015.
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	11/23/14 8:20 PM	11/23/14 09:08 PM	2140	Sewer Treatment Plant	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY.	BLENDING AT JTOWN WQTC	2268282	PIPE DISCHARGE SUBMERGED- NO CLEAN UP.	PER ACD, WQTC TO BE ELIMINATED BY DEC 31, 2015.
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	12/06/14 12:20: AM	12/06/14 07:09 PM	2110538	Sewer Treatment Plant	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT.	BLENDING AT JTOWN WQTC	2273389	PIPE DISCHARGE SUBMERGED- NO CLEAN UP.	PER ACD, WQTC TO BE ELIMINATED BY DEC 31, 2015.

Appendix A-4 - Discharge Work Orders – Waters of the United States

APPENDIX A-4
UNAUTHORIZED DISCHARGES TO WATERS OF UNITED STATES
OCTOBER 1, 2014 THROUGH DECEMBER 31, 2014

Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
MORRIS FORMAN	KY0022411	804 N ARBOR DR	12/06/2014	12/06/14 12:12 PM	1815	Sewer Manhole	00746	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2273441	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
MORRIS FORMAN	KY0022411	806 PINE WAY	12/06/2014	12/06/14 11:20 AM	9200	Sewer Manhole	00817	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2273407	CONTRACTOR CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
MORRIS FORMAN	KY0022411	1001 BRECKENRIDGE LN	10/14/2014	10/14/14 01:31 PM	136383	Sewer Manhole	08935-SM	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2250389	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM.	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
MORRIS FORMAN	KY0022411	1001 BRECKENRIDGE LN	12/06/2014	12/06/14 08:00 PM	2443790	Sewer Manhole	08935-SM	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2273396	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
HITE CREEK	KY0022420	7302 FLOYDSBURG RD	12/06/2014	12/06/14 06:15 PM	4150	Sewer Manhole	108958	CATCH BASIN	FLOYDS FORK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2273434	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
MORRIS FORMAN	KY0022411	1726 FRASER DR	10/14/2014	10/14/14 01:00 PM	11446	Sewer Manhole	16649	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2250396	DISCLN WO #2250576	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
MORRIS FORMAN	KY0022411	1726 FRASER DR	11/23/2014	11/23/14 08:00 PM	178	Sewer Manhole	16649	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2268593	WO# 2268593	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
MORRIS FORMAN	KY0022411	1726 FRASER DR	12/05/2014	12/06/14 08:00 PM	13600	Sewer Manhole	16649	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2273388	WO# 2273591	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
DEREK R. GUTHRIE	KY0078956	6102 COOPER CHAPEL RD	12/06/2014	12/06/14 10:30 AM	13500	Sewer Manhole	25479	CATCH BASIN	PENNSYLVANIA RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2273406	CONTRACTOR CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
MORRIS FORMAN	KY0022411	1013 ALTA CIR	12/06/2014	12/06/14 11:26 AM	3000	Sewer Manhole	27007	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2273392	WO# 2273578	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
DEREK R. GUTHRIE	KY0078956	10304 CAVEN AVE	10/14/2014	10/14/14 03:00 PM	12000	Sewer Manhole	27116	STREAM	MUD CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT.	LACK OF SYSTEM CAPACITY	2250410	MSD TO CLEAN AND SANITIZE AFFECTED AREA.	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
DEREK R. GUTHRIE	KY0078956	10304 CAVEN AVE	12/06/2014	12/06/14 02:00 PM	21000	Sewer Manhole	27116	STREAM	MUD CREEK	HEAVY RAIN; EXCEEDED CAPACITY	LACK OF SYSTEM CAPACITY	2273390	MSD CLEANED AND SANITIZED AFFECTED AREA.	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
JEFFERSONTOWN	KY0025194	3258 RUCKRIEGEL PKY	12/06/2014	12/06/14 09:07 AM	25	Sewer Manhole	28173	GROUND	CHENOWETH RUN	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2273401	WO# 2273573	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
JEFFERSONTOWN	KY0025194	11401 GRAND AVE	10/14/2014	10/14/14 01:30 PM	1000	Sewer Manhole	28551	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2250393	DISCLN WO# 2250569	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
JEFFERSONTOWN	KY0025194	11401 GRAND AVE	12/06/2014	12/06/14 09:07 AM	100	Sewer Manhole	28551	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2273400	WO# 2273593	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
STARVIEW	KY0031712	423 BERMUDA WAY	10/24/2014	10/24/14 10:22 AM	1675	Sewer Manhole	31122	GROUND	CHENOWETH RUN	GREASE BLOCKAGE	OBSTRUCTION-NOT GREASE / ROOTS	2255431	MSD CLEANED & SANITIZED THE AREA.	MSD FLUSHED THE LINE, FLUSH WO# 2255757
STARVIEW	KY0031712	423 BERMUDA WAY	10/24/2014	10/24/14 10:22 AM	1675	Sewer Manhole	31123	DITCH	CHENOWETH RUN,UPPER	GREASE BLOCKAGE	GREASE BLOCKAGE	2255536	MSD CLEANED & SANITIZED THE AREA.	MSD FLUSHED THE LINE, FLUSH WO# 2255757.
STARVIEW	KY0031712	423 BERMUDA WAY	10/24/2014	10/24/14 10:22 AM	1675	Sewer Manhole	31124	GROUND	CHENOWETH RUN,UPPER	GREASE BLOCKAGE	GREASE BLOCKAGE	2255540	MSD CLEANED & SANITIZED THE AREA.	MSD FLUSHED THE LINE, FLUSH WO# 2255757.
MORRIS FORMAN	KY0022411	2120 INDIAN HILLS TRL	12/06/2014	12/06/14 09:05 PM	94950	Sewer Manhole	40871	DITCH	MUDDY FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2273425	CONTRACTOR CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.

APPENDIX A-4
UNAUTHORIZED DISCHARGES TO WATERS OF UNITED STATES
OCTOBER 1, 2014 THROUGH DECEMBER 31, 2014

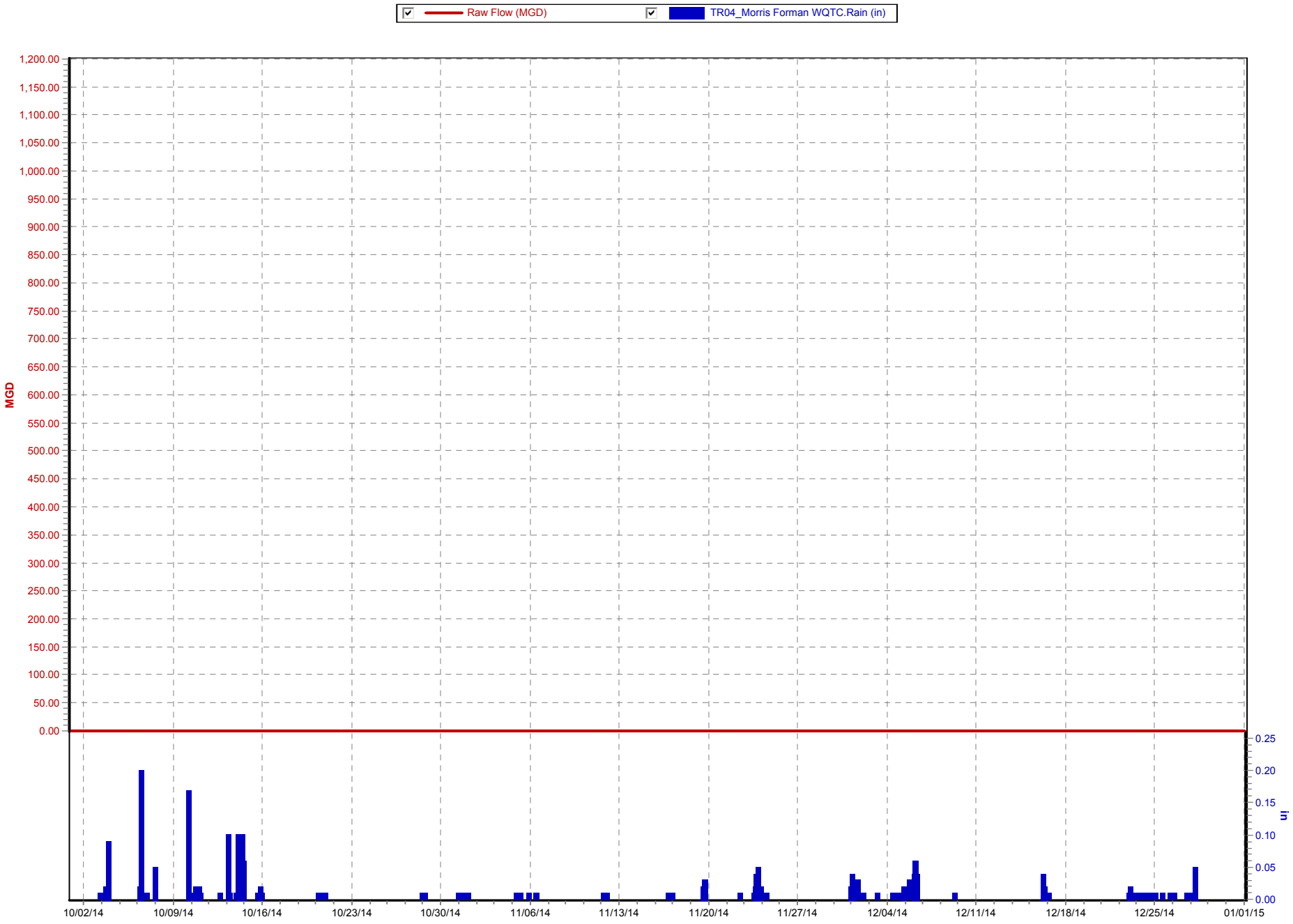
Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
MORRIS FORMAN	KY0022411	2105 INDIAN HILLS TRL	12/06/2014	12/06/14 09:05 PM	94950	Sewer Manhole	40872	GROUND	MUDDY FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2273424	CONTRACTOR CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
MORRIS FORMAN	KY0022411	4640 BARBOUR LN	12/07/2014	12/07/14 02:10 PM	300	Sewer Manhole	42680	STREAM	LITTLE GOOSE CREEK	#4 PUMP BLOCKAGE CAUSED DEBRIS FROM RAIN EVENT.	OBSTRUCTION-NOT GREASE / ROOTS	2273547	MSD CLEANED AND SANITIZED AREA.	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
MORRIS FORMAN	KY0022411	1011 ALTA CIR	12/06/2014	12/06/14 11:26 AM	3000	Sewer Manhole	45796	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2273393	WO# 2273393	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
MORRIS FORMAN	KY0022411	1132 ROSTREVOR CIR	12/06/2014	12/06/14 11:00 AM	3000	Sewer Manhole	45835	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2273394	WO# 2273575	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
MORRIS FORMAN	KY0022411	201 BULLITT LN	12/06/2014	12/06/14 11:30 AM	3000	Sewer Manhole	47582	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2273399	WO# 2273568	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
MORRIS FORMAN	KY0022411	202 OXMOOR LN	12/06/2014	12/06/14 05:25 AM	18000	Sewer Manhole	47583	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2273398	WO# 2273568	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
MORRIS FORMAN	KY0022411	3305 INDIAN CREEK CT	12/06/2014	12/06/14 09:10 AM	100	Sewer Manhole	51160	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2273571	WO# 2273572	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
MORRIS FORMAN	KY0022411	1418 TREVILIAN WAY	11/23/2014	11/24/14 08:50 PM	6000	Sewer Manhole	51594	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2268279	DISCLN WO# 2268279	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
MORRIS FORMAN	KY0022411	1418 TREVILIAN WAY	12/06/2014	12/06/14 06:05 AM	100	Sewer Manhole	51594	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2273402	WO# 2273569	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
DEREK R. GUTHRIE	KY0078956	6109 RICHIEWAYNE DR	11/24/2014	11/24/14 01:45 PM	2800	Sewer Manhole	57824	DITCH	SOUTHERN DITCH	ROOTS IN MAIN SEWER.	ROOTS	2268480	MSD CLEANED & SANITIZED THE IMPACTED AREA.	WORK ORDER 2268617; ROOT-CUT MAIN SEWER
MORRIS FORMAN	KY0022411	1449 FRANKFORT AVE	12/10/2014	12/11/14 05:15 PM	1507875	Sewer Main	67844B-AG	CATCH BASIN	SOUTH FORK BEARGRASS CREEK	UTILITY CONTRACTOR DRILLED THROUGH 24" OHIO RIVER FORCE MAIN.	UTILITY DAMAGED MSD ASSET	2274763	CONTRACTOR CLEANED & SANITIZED THE AREA. MSD PERSONNEL LIMED THE AREA.	CONTRACTOR HAS REPAIRED THE OHIO RIVER FORCE MAIN.
MORRIS FORMAN	KY0022411	346 S PETERSON AVE	11/04/2014	11/04/14 08:15 PM	675	Sewer Node	68345-CO	DITCH	MIDDLE FORK BEARGRASS CREEK	OBSTRUCTION IN THE MAIN SEWER CAUSED CLEANOUT TO DISCHARGE.	OBSTRUCTION-NOT GREASE / ROOTS	2261212	MSD CLEANED AND SANITIZED THE IMPACTED AREA.	WORK ORDER 2261211, FLUSHED 6" MAIN SEWER TO REMOVE THE OBSTRUCTION.
MORRIS FORMAN	KY0022411	1700 SULGRAVE RD	12/06/2014	12/06/14 11:30 AM	4500	Sewer Manhole	72289	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-RAIN.	LACK OF SYSTEM CAPACITY	2273391	WO# 2273579	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
HUNTING CREEK NORTH	KY0029106	6918 WYTHE HILL CIR	11/25/2014	11/26/14 04:36 PM	775	Sewer Main	73515N-V	DITCH	HUNTING CREEK	MSD CONTRACTOR DAMAGED WHILE DIRECTIONAL DRILLING.	STRUCTURAL FAILURE	2269010	MSD CONTRACTOR TO CLEAN AND SANITIZE AFFECTED.	CONTRACTOR HAS REPAIRED THE OHIO RIVER FORCE MAIN.
MORRIS FORMAN	KY0022411	4 RIVER BLUFF RD	12/11/2014	12/12/14 10:12 AM	9400	Sewer Manhole	89646	GROUND	MUDDY FORK BEARGRASS CREEK	CONTRACTOR BROKE THE OHIO RIVER FORCE MAIN CAUSING STATIONS TO BE SHUT DOWN RESULTING IN DISCHARGES.	UTILITY DAMAGED MSD ASSET	2277198	MSD CLEANED & SANITIZED THE AREA.	CONTRACTOR HAS REPAIRED THE OHIO RIVER FORCE MAIN.
MORRIS FORMAN	KY0022411	2515 WOODSIDE RD	10/15/2014	10/15/14 11:45 PM	750	Sewer Manhole	91781	GROUND	LONGVIEW CREEK	GREASE IN THE WET WELL CAUSED THE PUMP NOT TO KICK ON RESULTING IN A DISCHARGE.	GREASE BLOCKAGE	2250907	MSD CLEANED & SANITIZED THE AREA.	PLACED PUMP IN MANUAL MODE.
MORRIS FORMAN	KY0022411	1212 ROYAL AVE	11/03/2014	11/03/14 12:25 PM	1175	Sewer Manhole	CSO106	STREAM	SOUTH FORK BEARGRASS CREEK	LEAVES BLOCKING THE LOW FLOW LINE AT THE DAM	OBSTRUCTION-NOT GREASE / ROOTS	2260454	NONE REQUIRED, DISCHARGE FLOWING DIRECTLY INTO THE CREEK	WORK ORDER 2260456; REMOVED LEAVES FROM LOW FLOW LINE
MORRIS FORMAN	KY0022411	7404 ARROWWOOD RD	10/14/2014	10/14/14 11:25 AM	250	Sewer Lift Station	MSD0040-PS	DITCH	GOOSE CREEK	PUMPS KICKED OUT	MECHANICAL FAILURE	2250377	MSD CLEANED & SANITIZED THE AREA.	MSD RESET THE PUMPS.
MORRIS FORMAN	KY0022411	6600 SEMINARY WOODS PL	41984.45069	12/11/14 04:52 PM	18150	Sewer Lift Station	MSD0123-PS	DITCH	GOOSE CREEK	CONTRACTOR BROKE THE OHIO RIVER FORCE MAIN CAUSING THE STATION TO BE SHUT DOWN RESULTING IN A DISCHARGE.	UTILITY DAMAGED MSD ASSET	2274910	MSD CLEANED & SANITIZED THE AFFECTED AREA.	CONTRACTOR HAS REPAIRED THE OHIO RIVER FORCE MAIN.

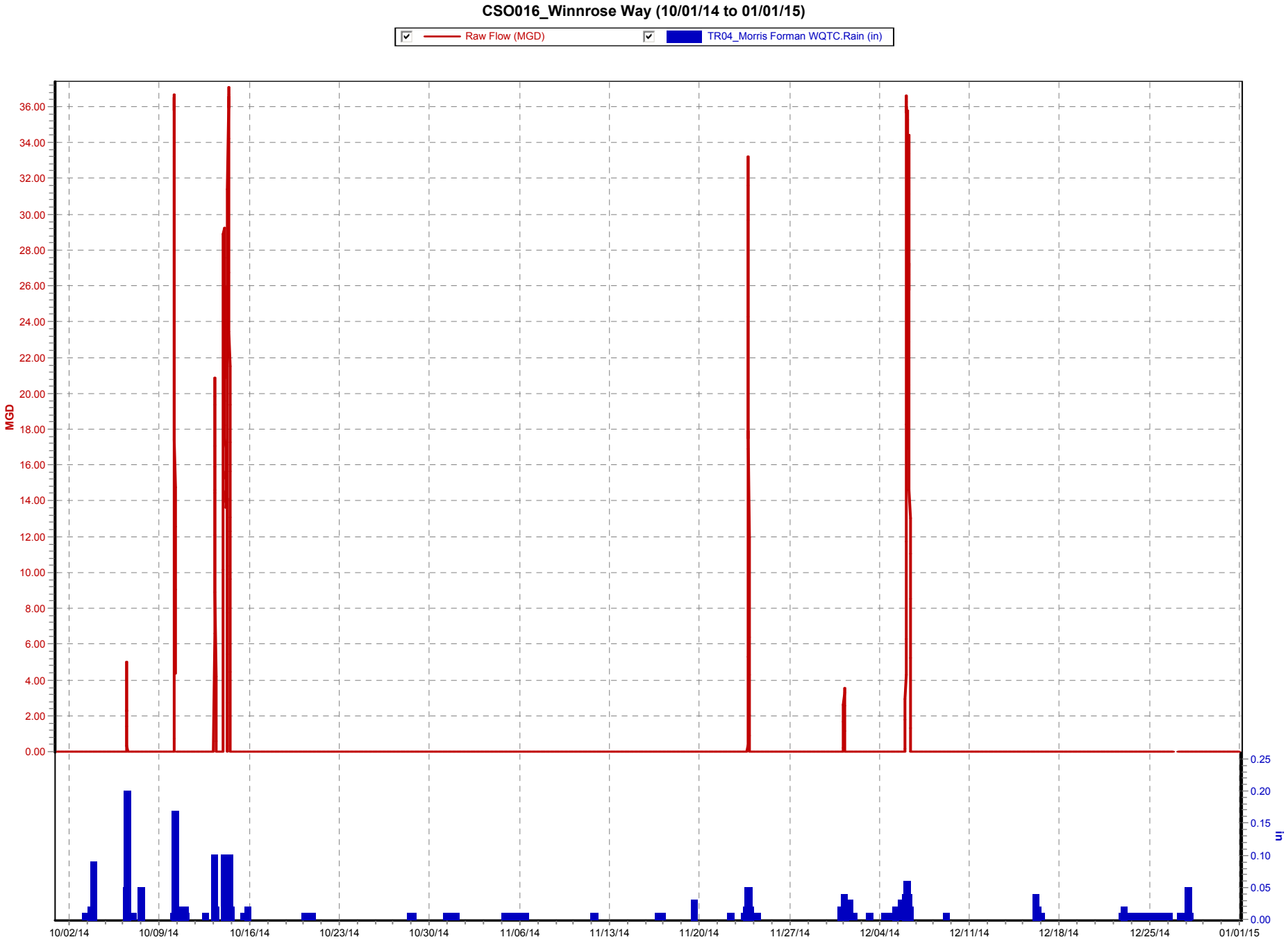
APPENDIX A-4
UNAUTHORIZED DISCHARGES TO WATERS OF UNITED STATES
OCTOBER 1, 2014 THROUGH DECEMBER 31, 2014

Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
MORRIS FORMAN	KY0022411	2120 INDIAN HILLS TRL	41979.43889	12/06/14 09:05 PM	31650	Sewer Lift Station	MSD0186-PS	DITCH	MUDDY FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2273426	CONTRACTOR CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP.
MORRIS FORMAN	KY0022411	2120 INDIAN HILLS TRL	41984.58819	12/11/14 05:28 PM	10050	Sewer Lift Station	MSD0186-PS	DITCH	MUDDY FORK BEARGRASS CREEK	CONTRACTOR BROKE THROUGH THE OHIO RIVER FORCE MAIN CAUSING THE STATION TO BE SHUT DOWN RESULTING IN DISCHARGE.	UTILITY DAMAGED MSD ASSET	2276088	MSD CLEANED & SANITIZED THE AREA.	CONTRACTOR HAS REPAIRED THE OHIO RIVER FORCE MAIN.
MORRIS FORMAN	KY0022411	4640 BARBOUR LN	41984.46181	12/11/14 05:08 PM	108900	Sewer Lift Station	MSD0192-PS	STREAM	LITTLE GOOSE CREEK	CONTRACTOR BROKE THE OHIO RIVER FORCE MAIN CAUSING THE STATION TO BE SHUT DOWN RESULTING IN DISCHARGE.	UTILITY DAMAGED MSD ASSET	2274930	MSD CLEANED & SANITIZED THE AFFECTED AREA.	CONTRACTOR HAS REPAIRED THE OHIO RIVER FORCE MAIN.
KEN CARLA	KY0022497	8701 LYNNHALL CT	41949.36389	11/06/14 09:51 AM	34	Sewer Treatment Plant	MSD0208	STREAM	HARRODS CREEK	LEAKING OUT OF CHLORINE CONTACT TANK	BYPASS AT WQTC	2263290	LIME WAS SPREAD; NO DEBRIS OBSERVED	CONTRACTOR REPAIRED TANK
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	41926.43889	10/14/14 04:16 PM	320016	Sewer Treatment Plant	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY	BLENDING AT JTOWN WQTC	2250349	PIPE DISCHARGE SUBMERGED- NO CLEAN UP	NEGOTIATIONS ARE UNDERWAY TO ALLOW TEMPORARY BLENDING AT THIS LOCATION
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	41966.84722	11/23/14 09:08 PM	2140	Sewer Treatment Plant	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY	BLENDING AT JTOWN WQTC	2268282	PIPE DISCHARGE SUBMERGED- NO CLEAN UP	NEGOTIATIONS ARE UNDERWAY TO ALLOW TEMPORARY BLENDING AT THIS LOCATION
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	41979.01389	12/06/14 07:09 PM	2110538	Sewer Treatment Plant	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BLENDING AT JTOWN WQTC	2273389	PIPE DISCHARGE SUBMERGED- NO CLEAN UP	TEMPORARY BLENDING HAS BEEN NEGOTIATED AT THIS LOCATION.
HUNTING CREEK SOUTH	KY0029114	6808 FAIRWAY VIEW CT	41976.33333	12/03/14 08:40 AM	50	Sewer Lift Station	MSD1065-PS	DITCH	HARRODS CREEK	MSD CONTRACTOR DAMAGED THE FORCE MAIN.	UTILITY DAMAGED MSD ASSET	2271775	MSD CONTRACTOR CLEANED & SANITIZED THE AREA.	CONTRACTOR HAS REPAIRED THE OHIO RIVER FORCE MAIN.

Appendix B – CSO Flow Monitoring Data

CSO015_Bells Lane (10/01/14 to 01/01/15)




CSO016_Winnrose Way (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR04_Morris Forman WQTC.Rain (in)
MGD
36.00
34.00
32.00
30.00
28.00
26.00
24.00
22.00
20.00
18.00
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
in
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
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12/18/14
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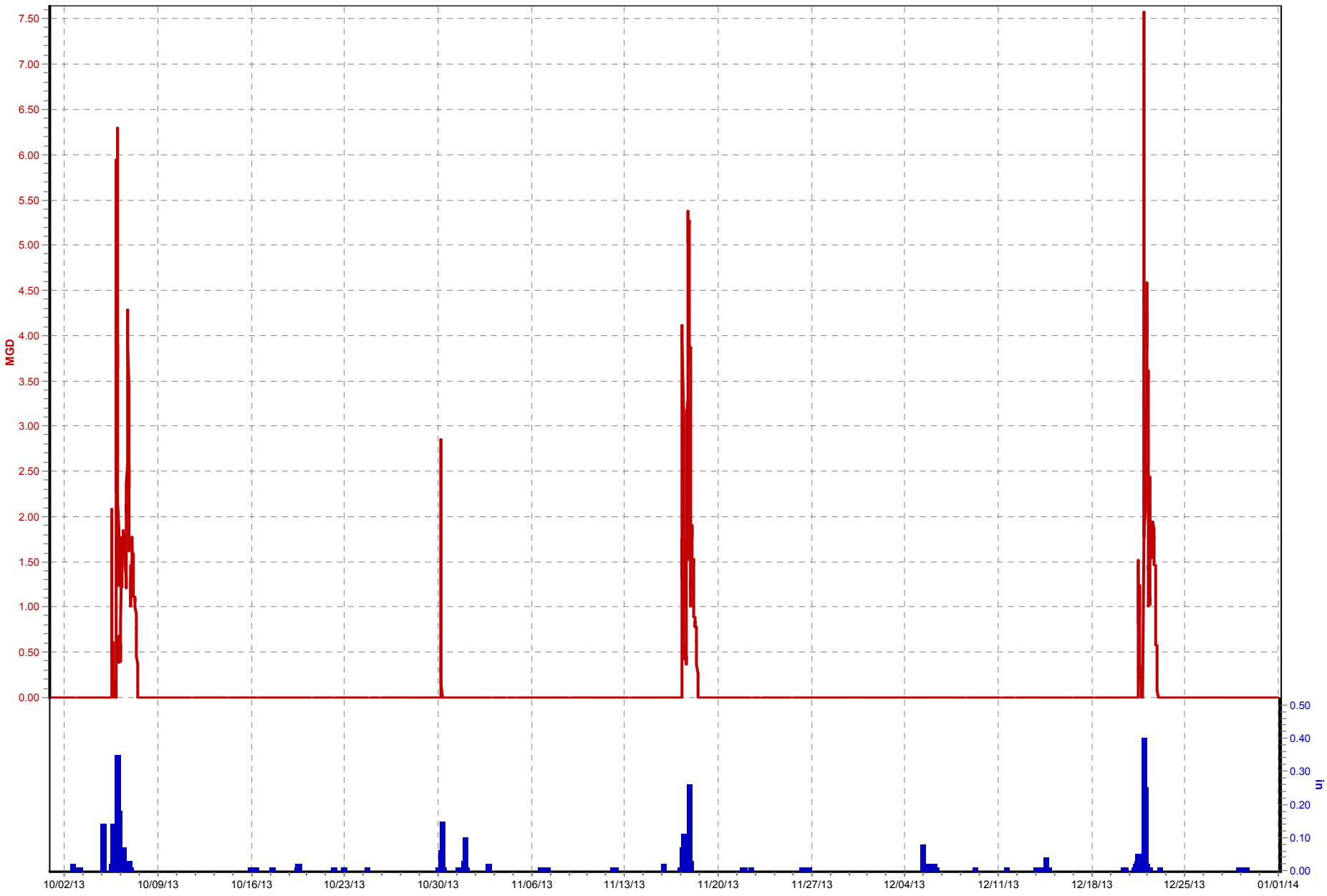
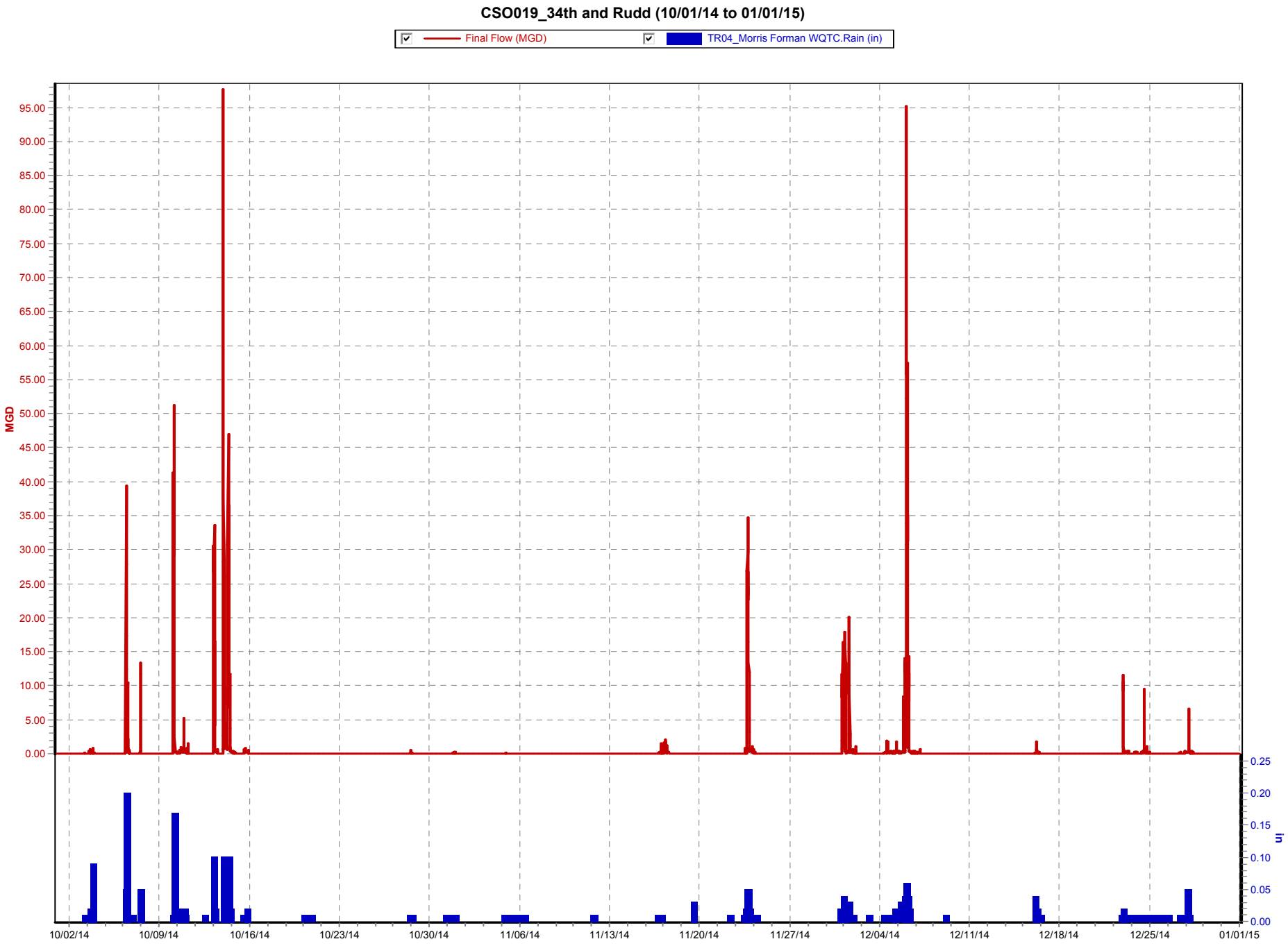
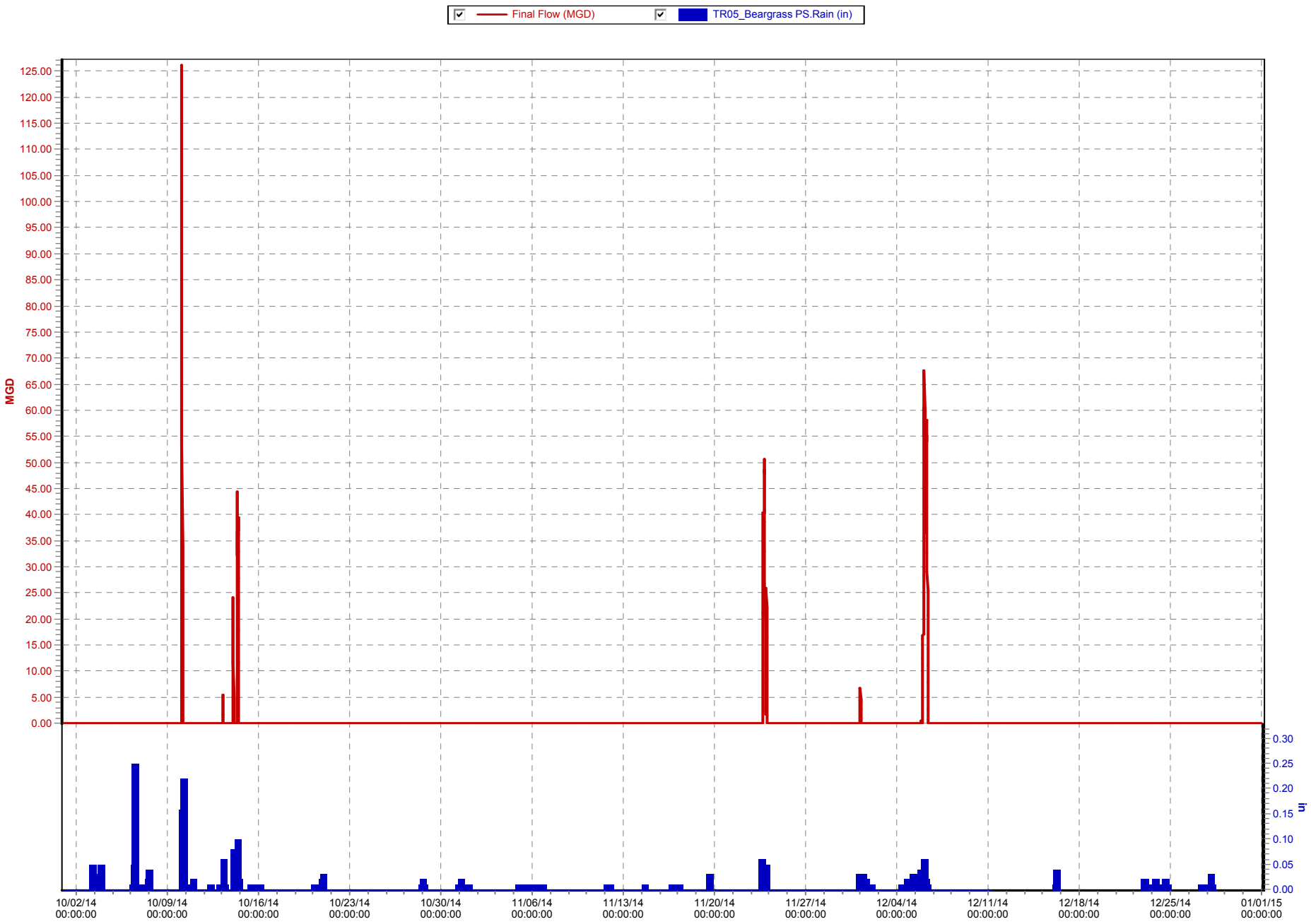
01/01/15

CSO018_Nightingale Rd (10/01/13 to 01/01/14)



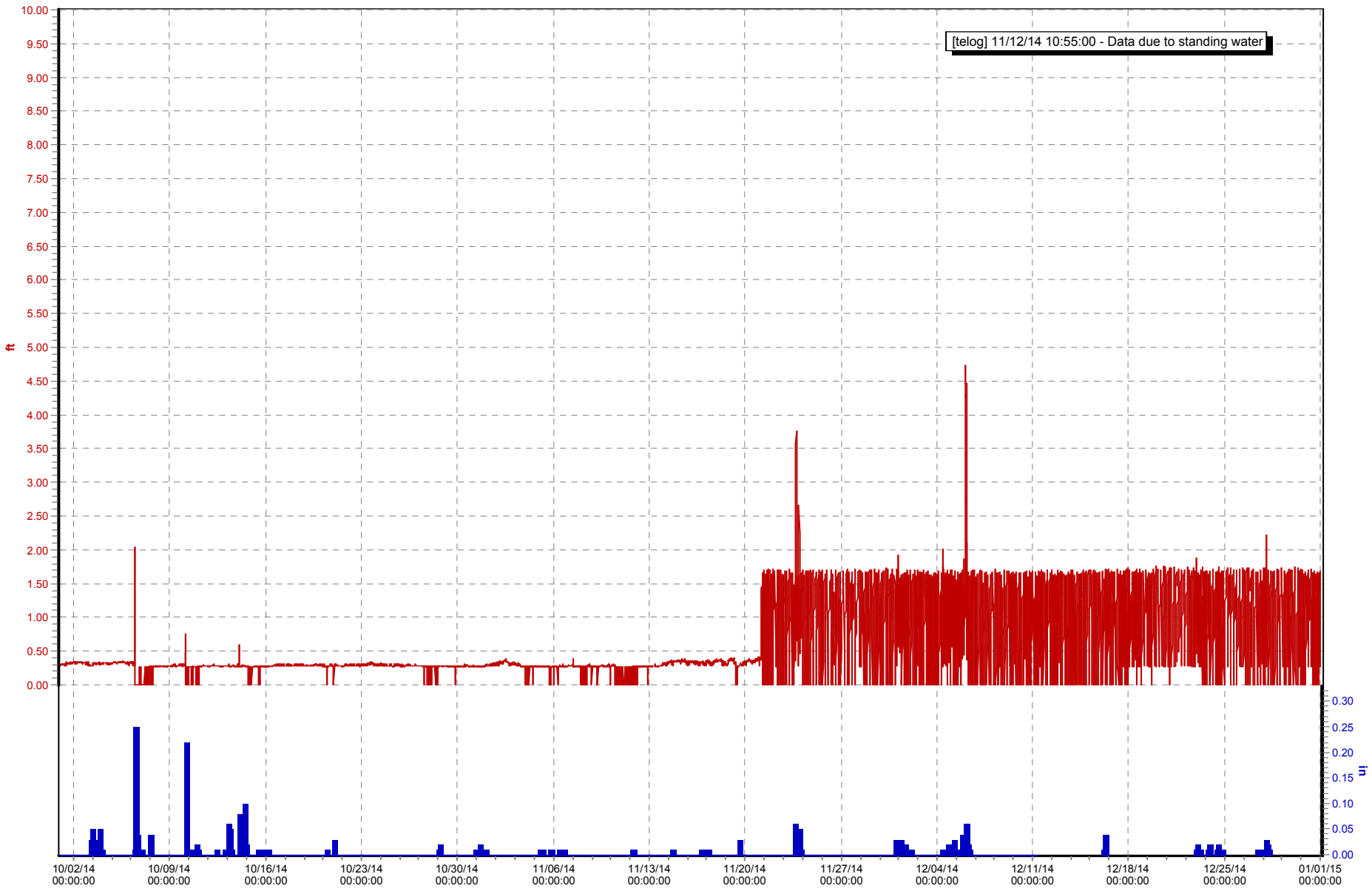

CSO019_34th and Rudd (10/01/14 to 01/01/15)
Final Flow (MGD)
TR04_Morris Forman WQTC.Rain (in)
MGD
95.00
90.00
85.00
80.00
75.00
70.00
65.00
60.00
55.00
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0.25
0.20
0.15
0.10
0.05
0.00
in
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15

CSO020_Buchanan St by Stark PS (10/01/14 to 01/01/15)



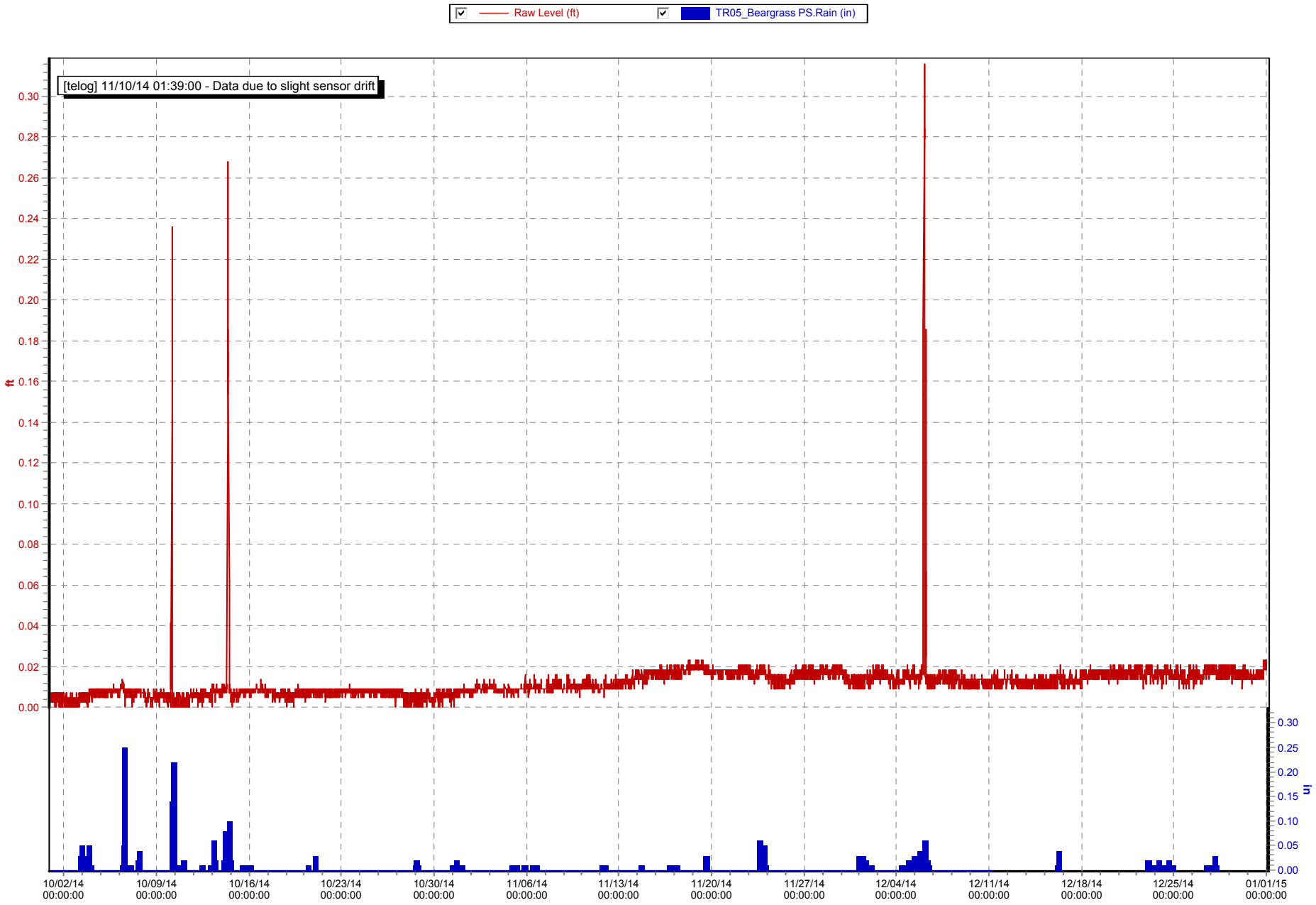
CSO022_4th St Pump Station (10/01/14 to 01/01/15)

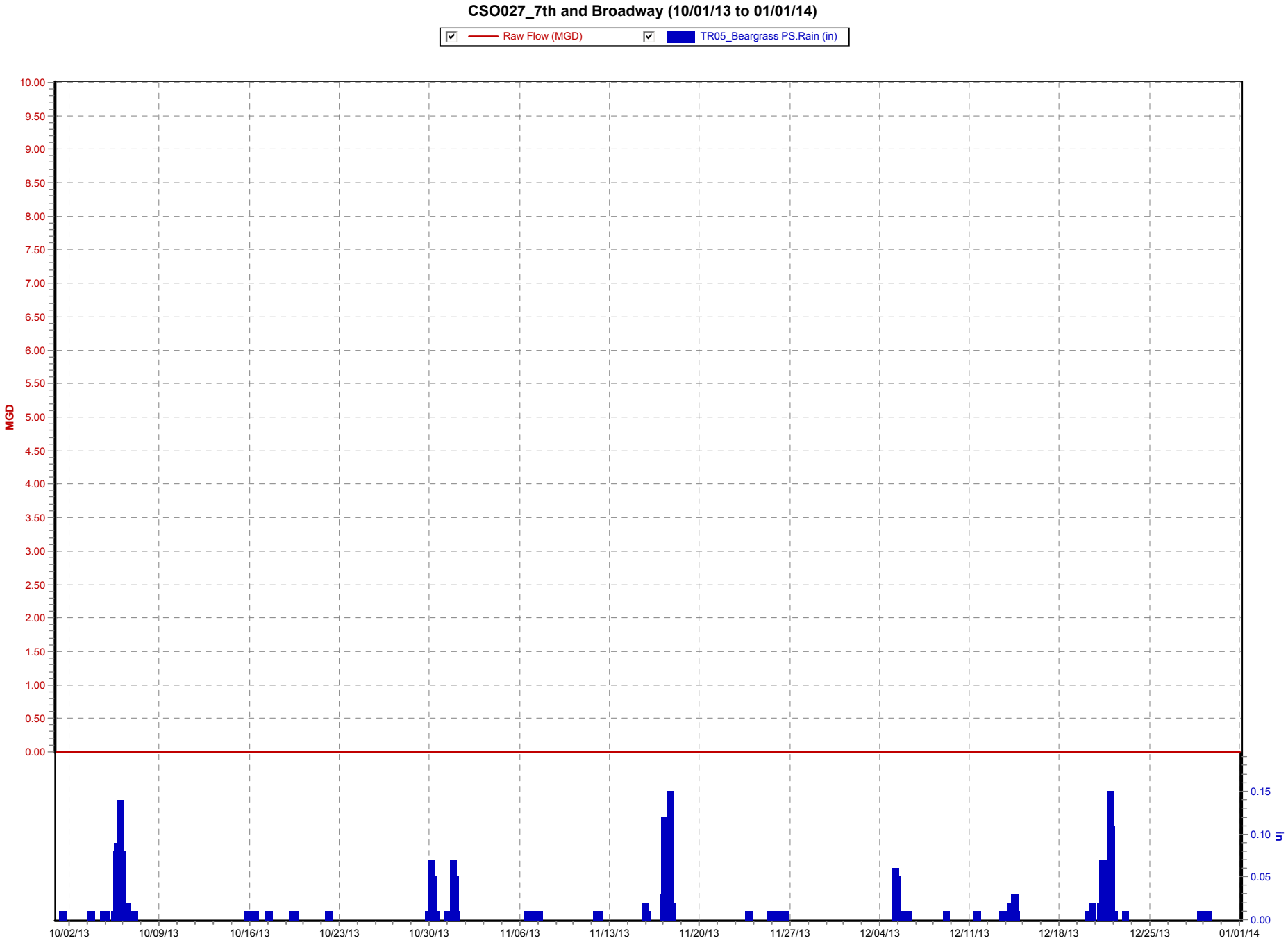
Overflows occur at 3.9 ft

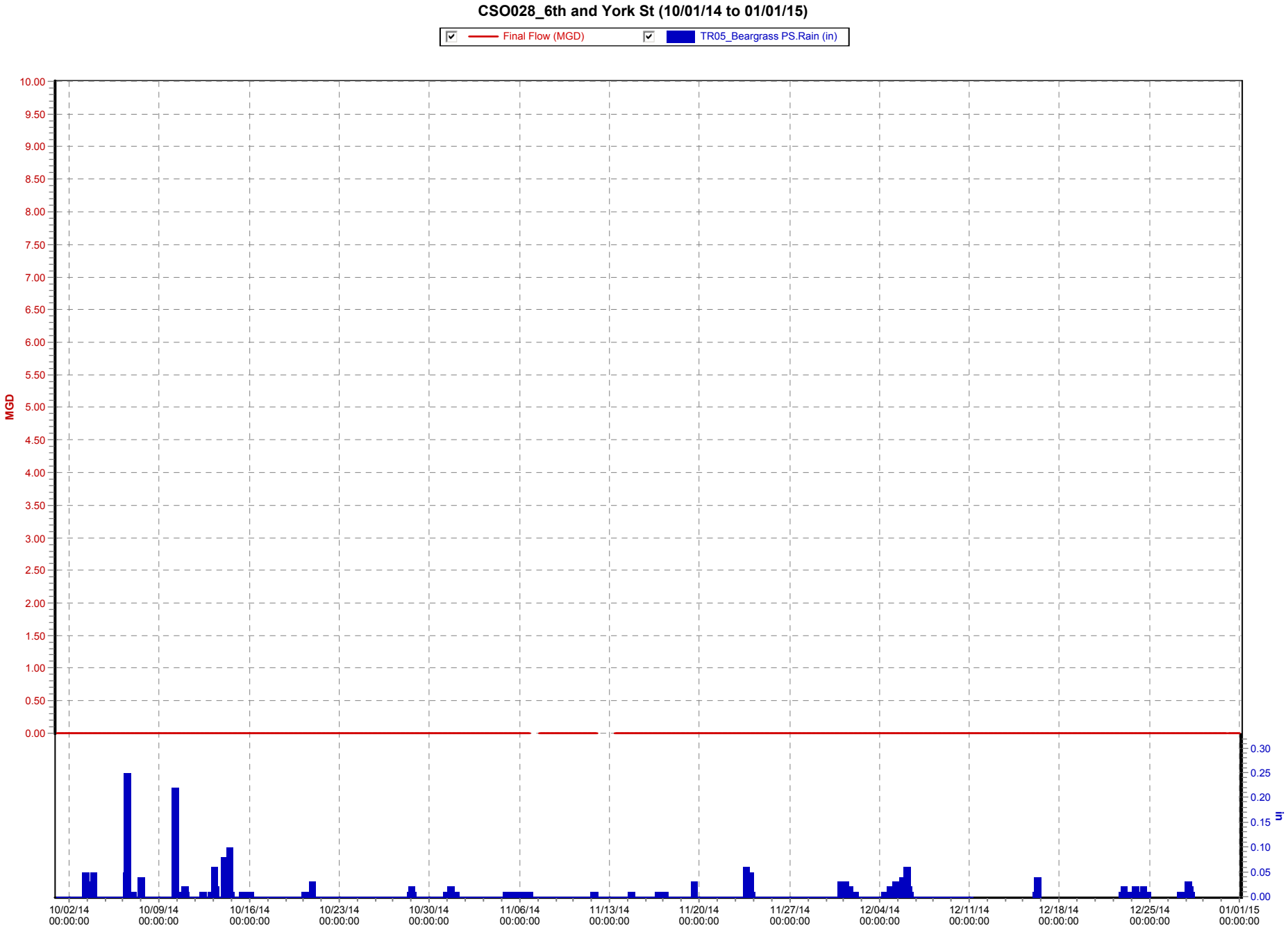


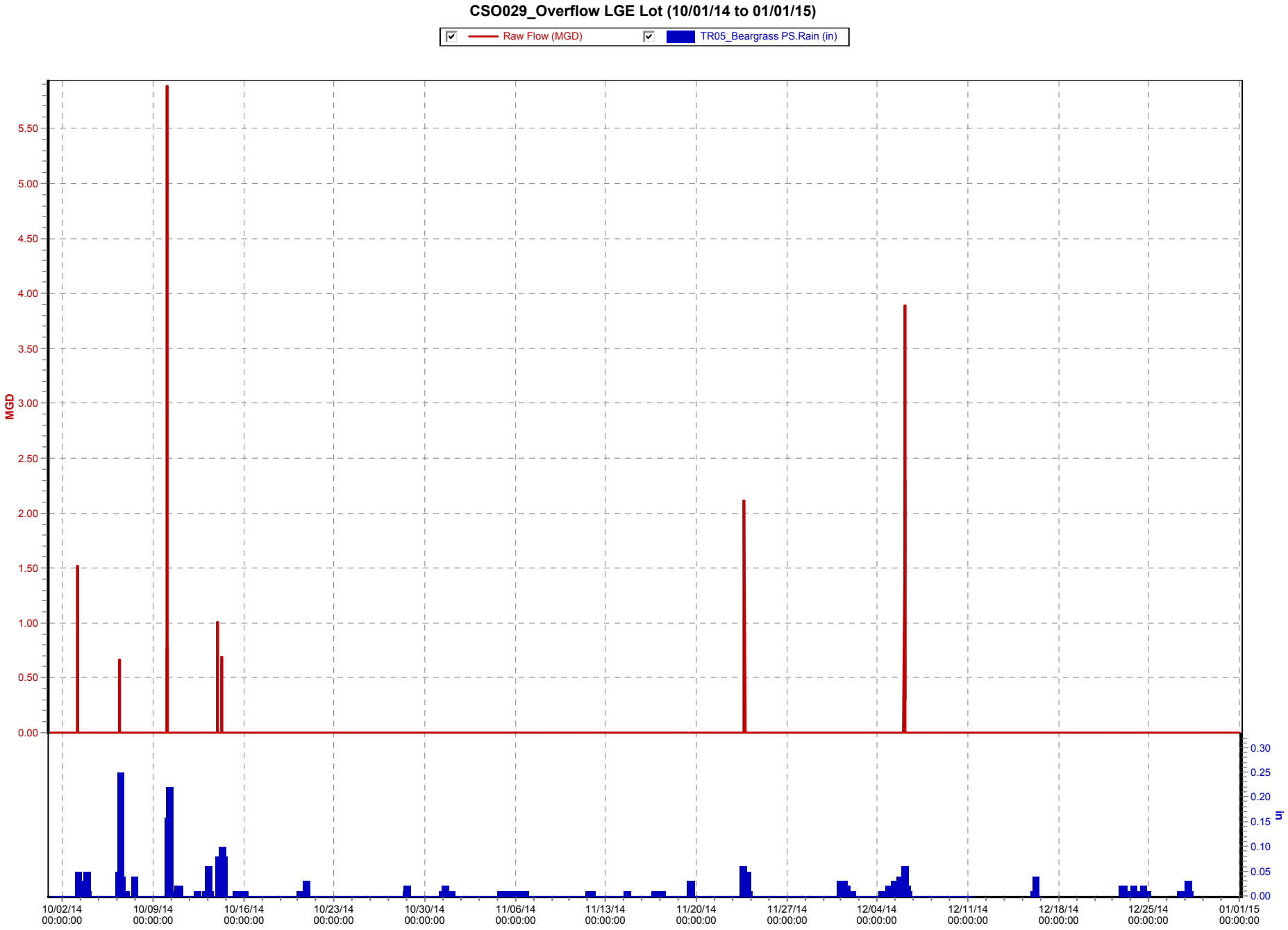
CSO023_4th St Pump Station (10/01/14 to 01/01/15)

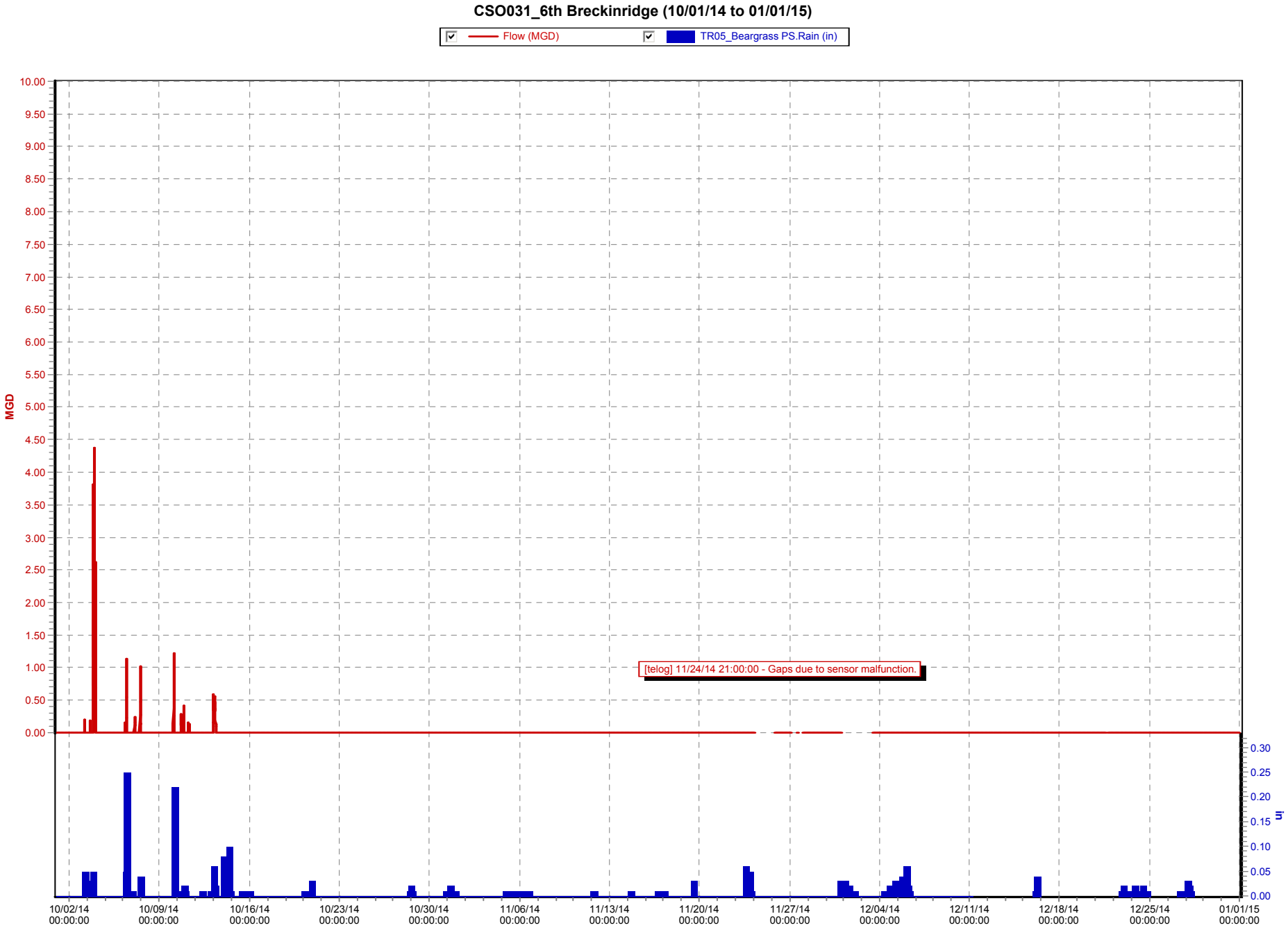
Overflows occur at 0.31 ft

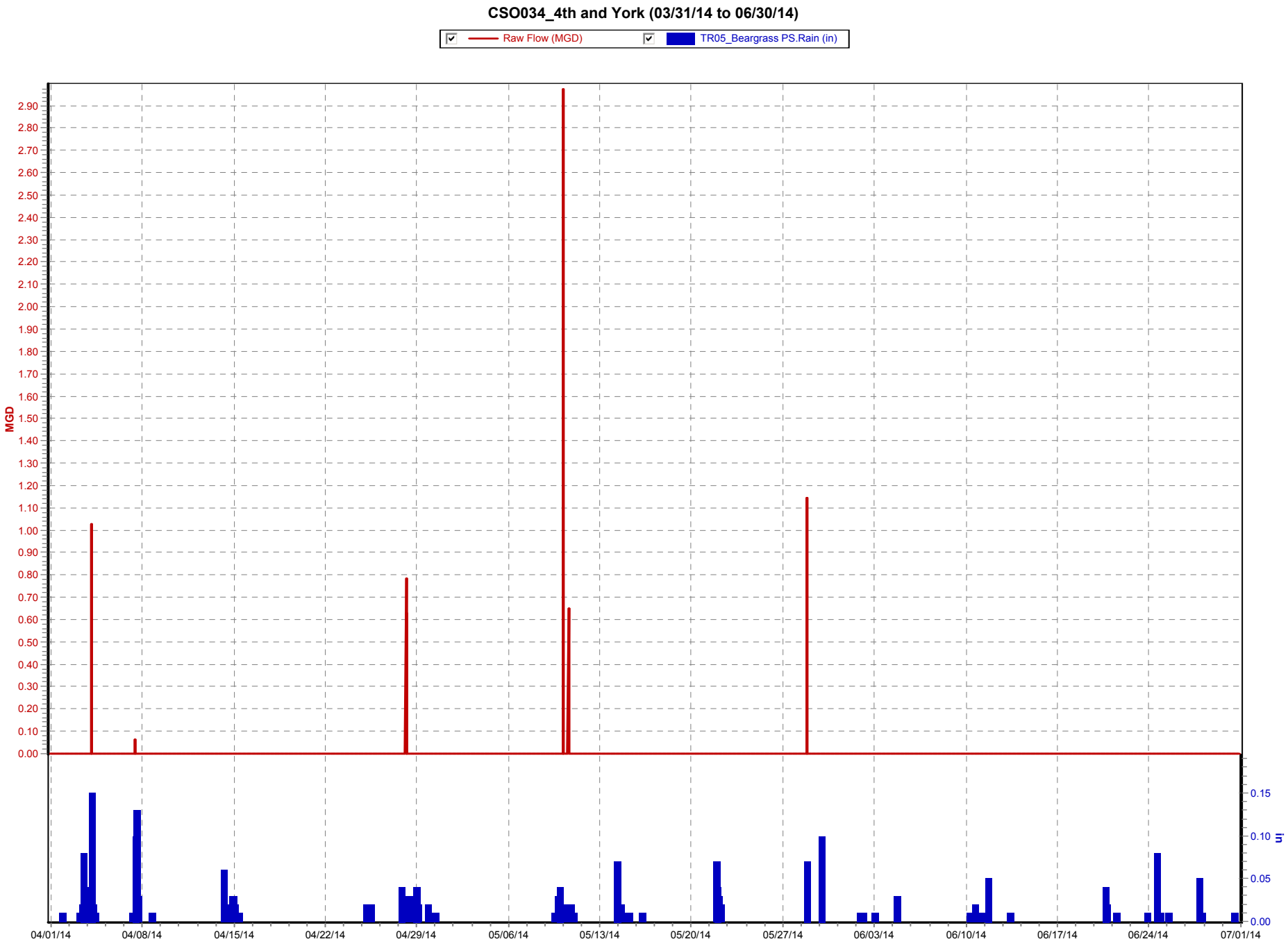


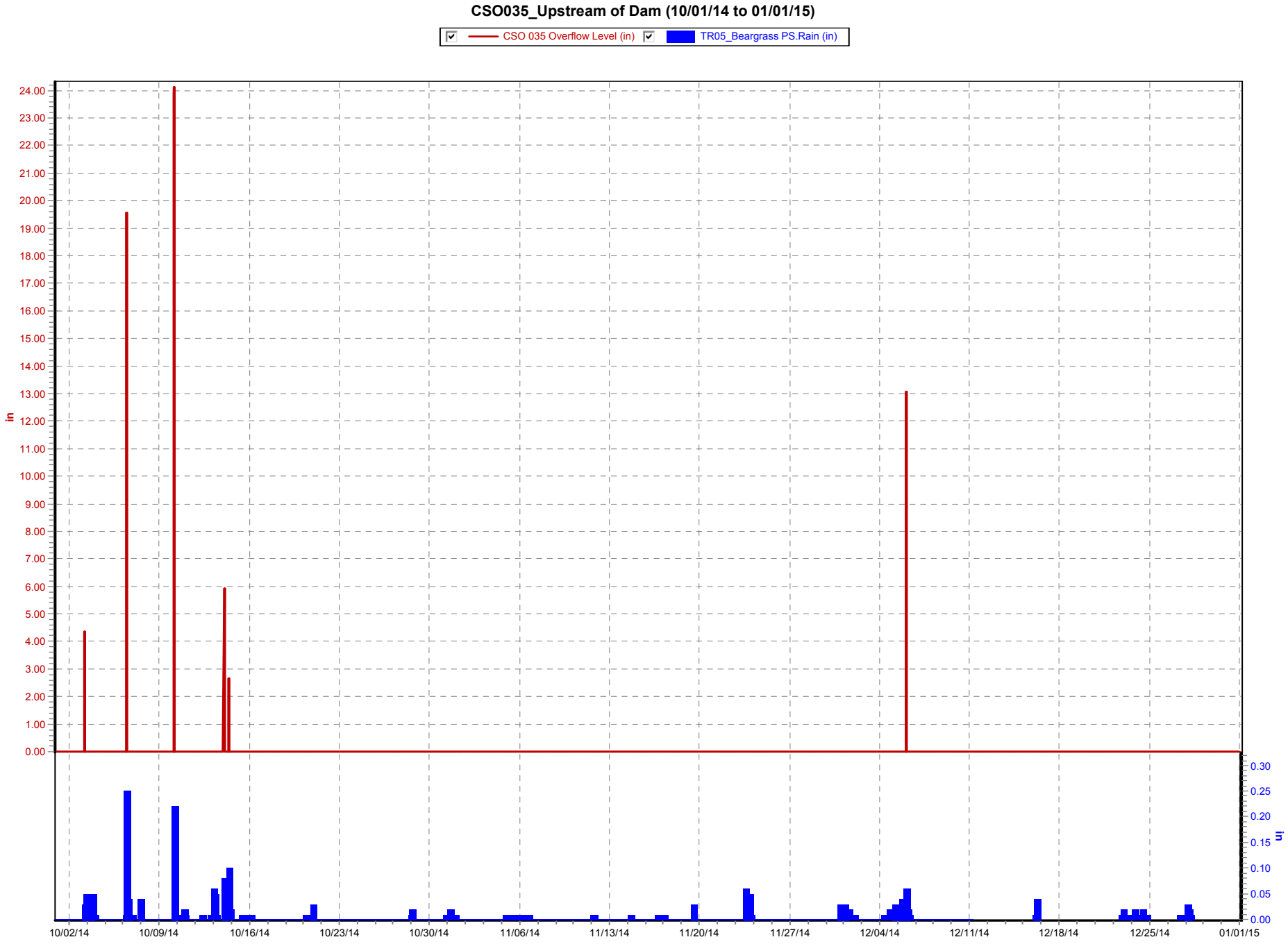

CSO027_7th and Broadway (10/01/13 to 01/01/14)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
in
0.15
0.10
0.05
0.00
10/02/13
10/09/13
10/16/13
10/23/13
10/30/13
11/06/13
11/13/13
11/20/13
11/27/13
12/04/13
12/11/13
12/18/13
12/25/13
01/01/14

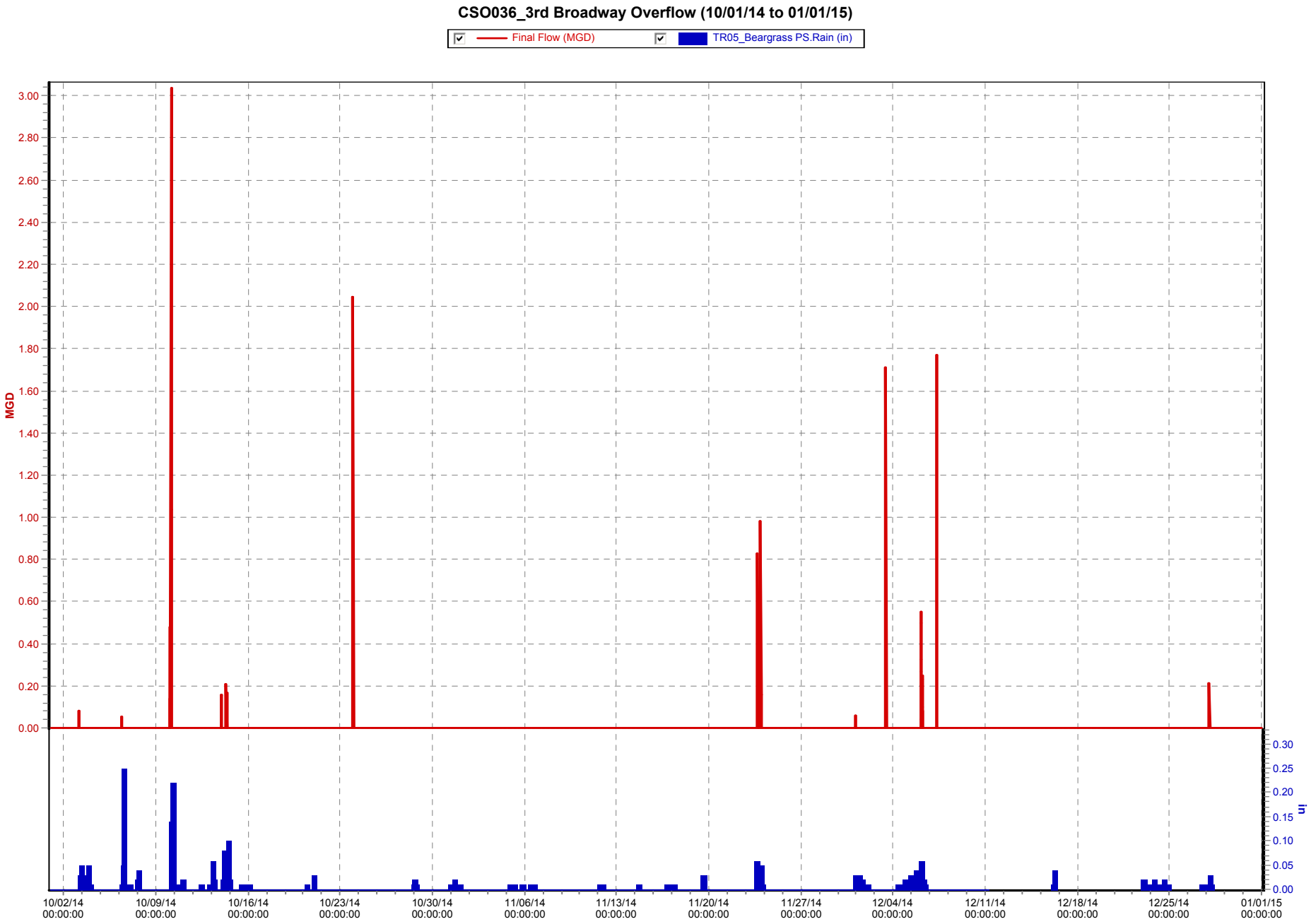

CSO028_6th and York St (10/01/14 to 01/01/15)
Final Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00


CSO029_Overflow LGE Lot (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

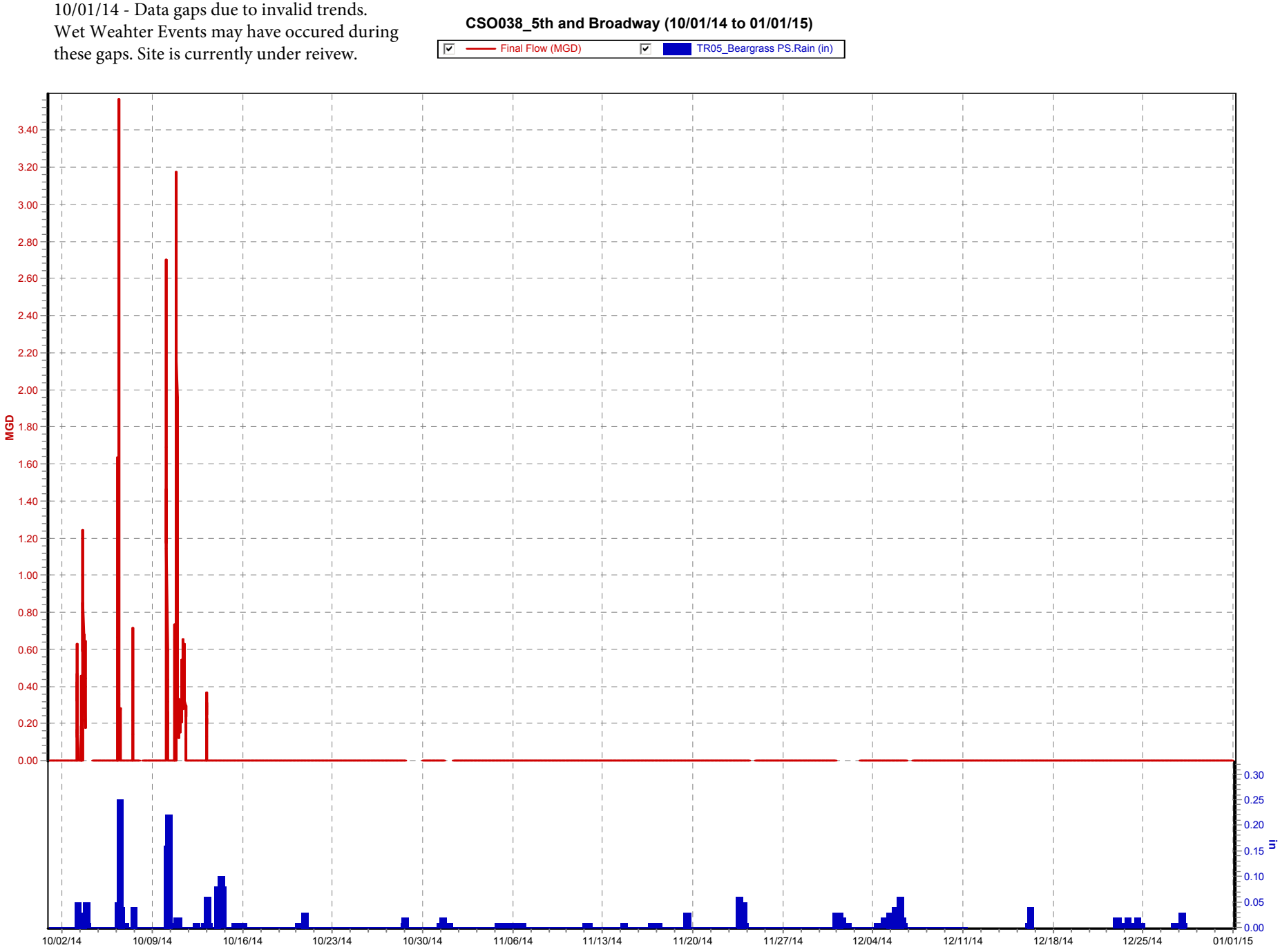

CSO031_6th Breckinridge (10/01/14 to 01/01/15)
Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
[telog] 11/24/14 21:00:00 - Gaps due to sensor malfunction.
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00


CSO034_4th and York (03/31/14 to 06/30/14)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
2.90
2.80
2.70
2.60
2.50
2.40
2.30
2.20
2.10
2.00
1.90
1.80
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.15
0.10
0.05
0.00
in
04/01/14
04/08/14
04/15/14
04/22/14
04/29/14
05/06/14
05/13/14
05/20/14
05/27/14
06/03/14
06/10/14
06/17/14
06/24/14
07/01/14

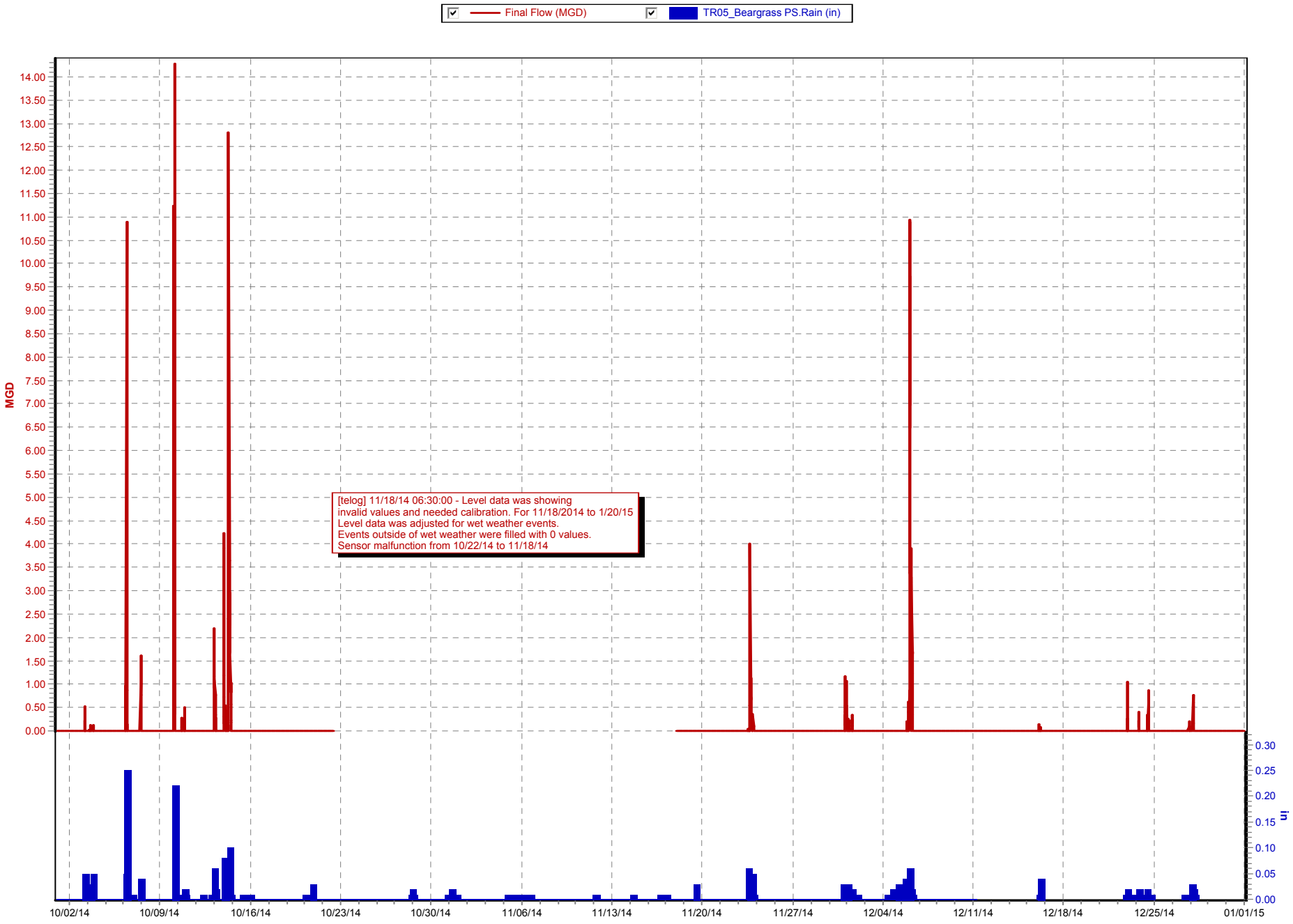

CSO035_Upstream of Dam (10/01/14 to 01/01/15)
CSO 035 Overflow Level (in)
TR05_Beargrass PS.Rain (in)
in
24.00
23.00
22.00
21.00
20.00
19.00
18.00
17.00
16.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
in
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15

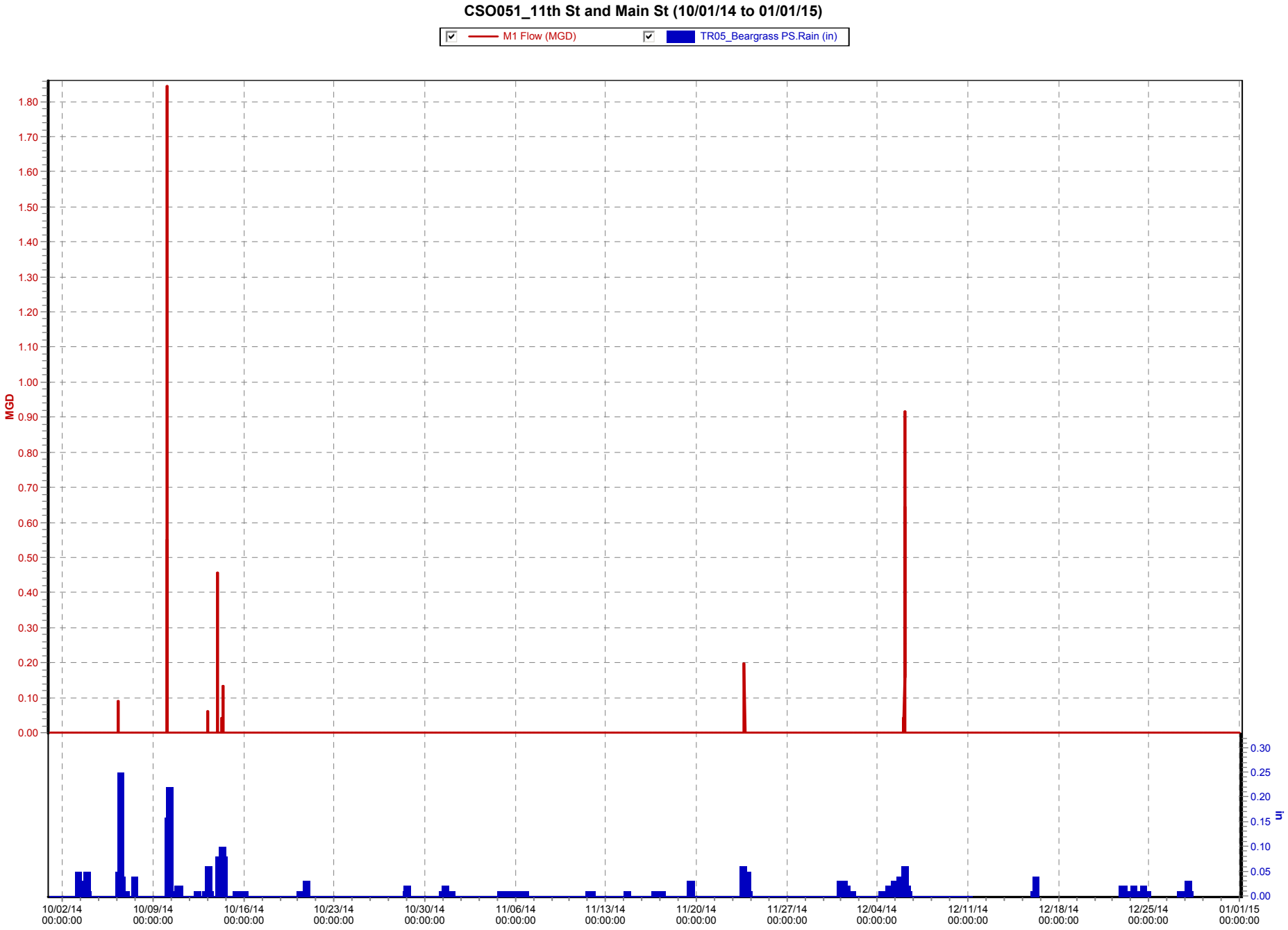

CSO036_3rd Broadway Overflow (10/01/14 to 01/01/15)
Final Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
IN
3.00
2.80
2.60
2.40
2.20
2.00
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

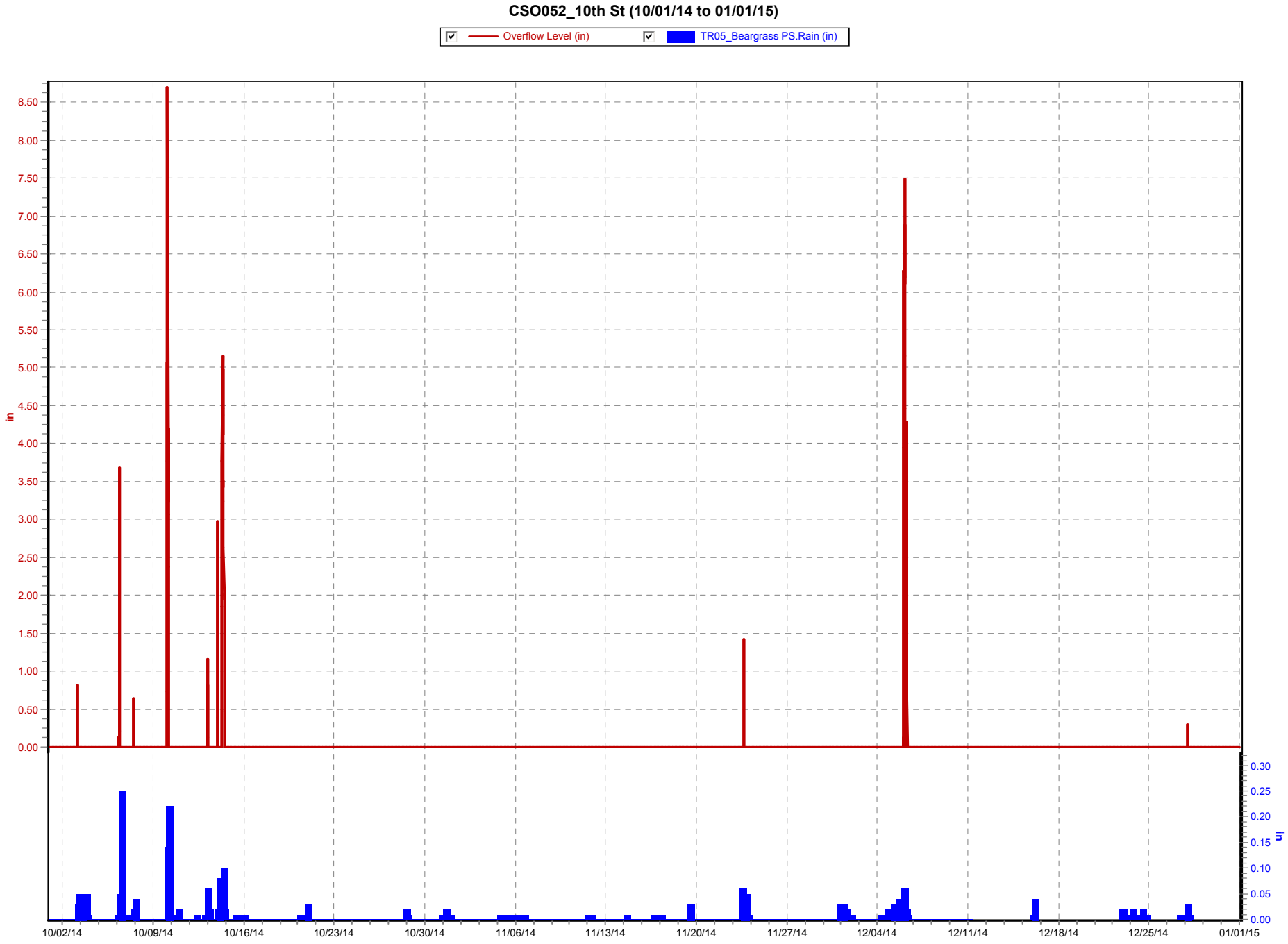
10/01/14 - Data gaps due to invalid trends. Wet Weahter Events may have occured during these gaps. Site is currently under reivew.

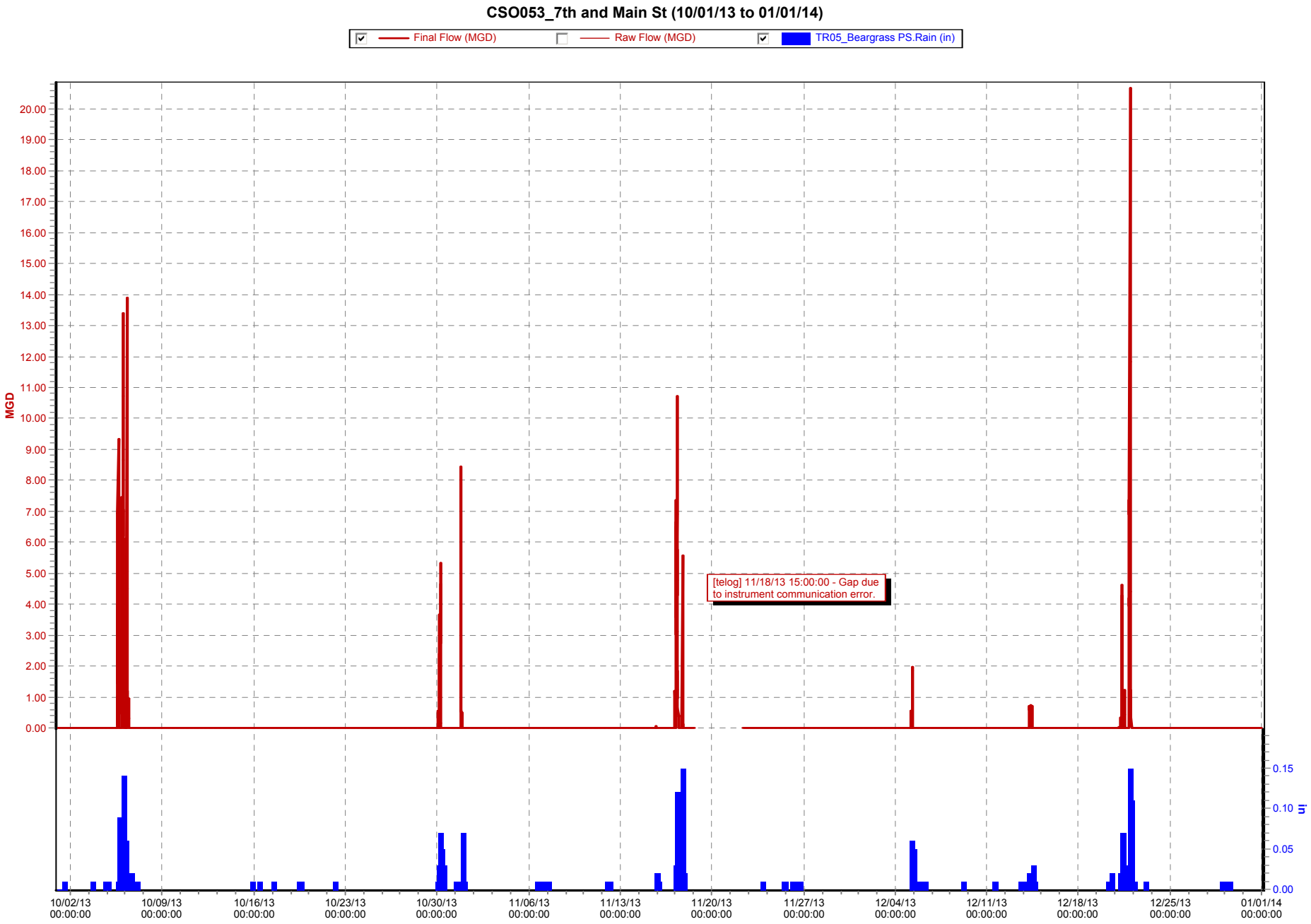


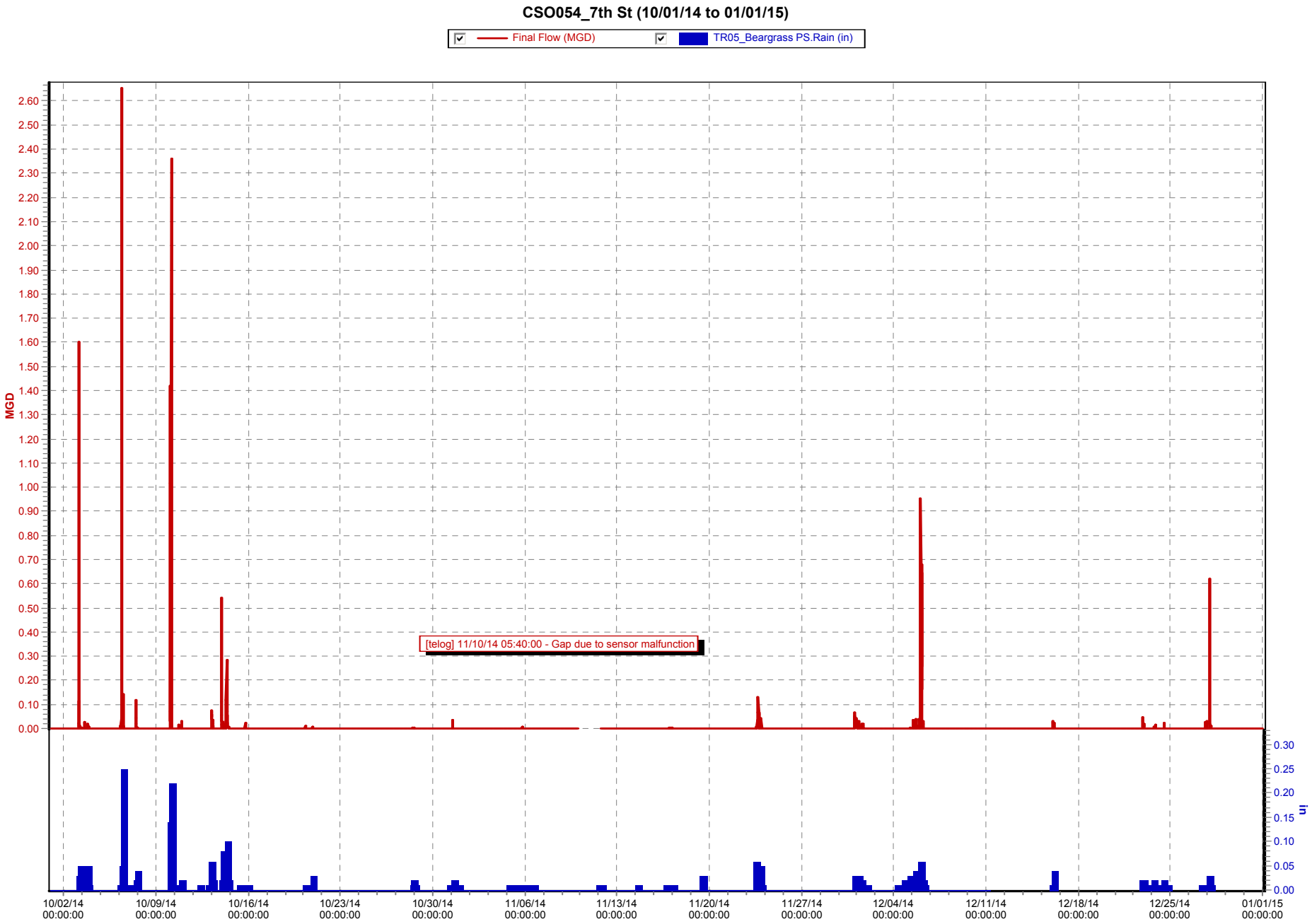
CSO050_12th and Rowan (10/01/14 to 01/01/15)




CSO051_11th St and Main St (10/01/14 to 01/01/15)
M1 Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
1.80
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
in
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

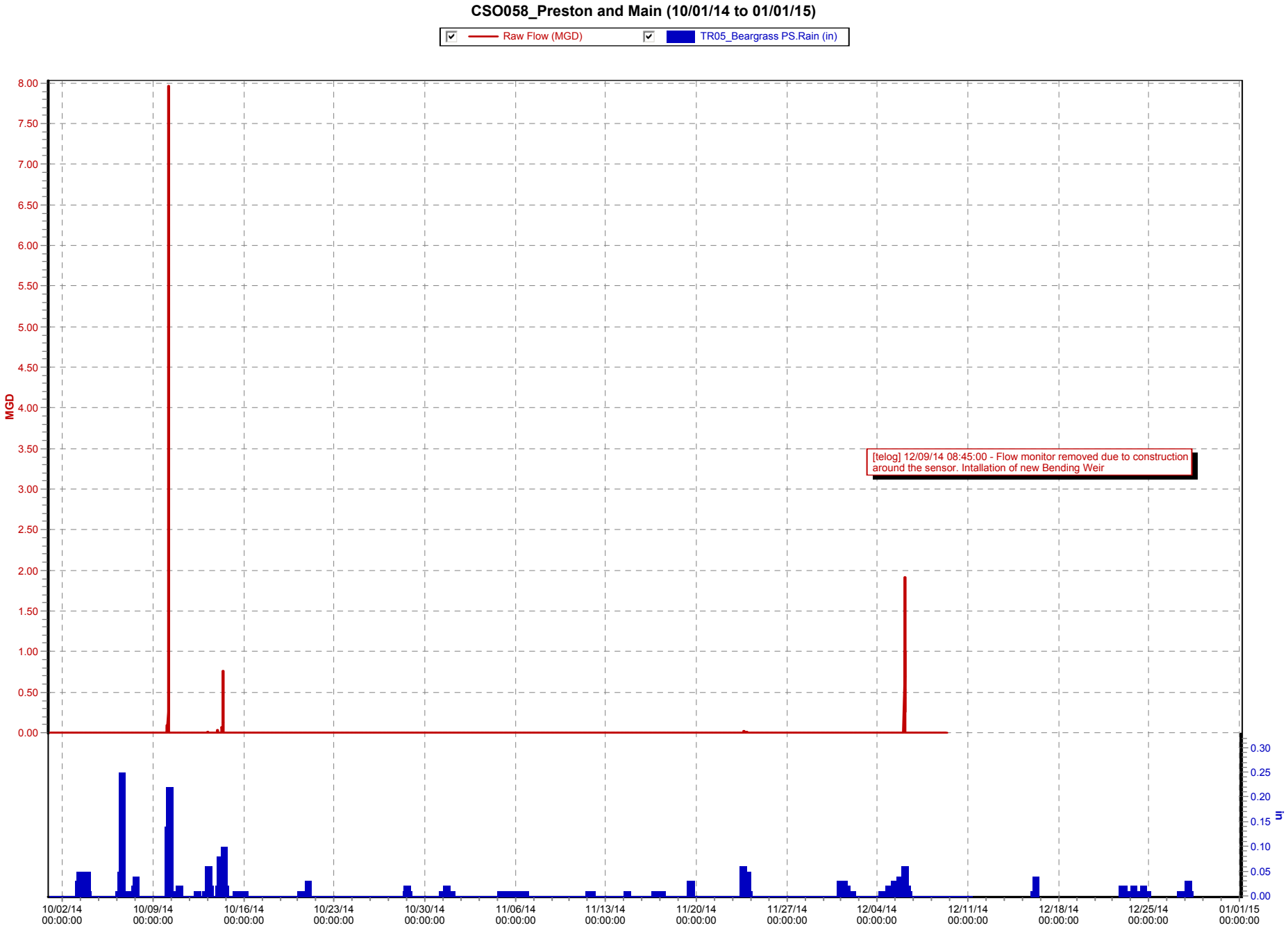

CSO052_10th St (10/01/14 to 01/01/15)
Overflow Level (in)
TR05_Beargrass PS.Rain (in)
in
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15


CSO053_7th and Main St (10/01/13 to 01/01/14)
Final Flow (MGD)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
IN
[telog] 11/18/13 15:00:00 - Gap due to instrument communication error.
20.00
19.00
18.00
17.00
16.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.15
0.10
0.05
0.00
10/02/13 00:00:00
10/09/13 00:00:00
10/16/13 00:00:00
10/23/13 00:00:00
10/30/13 00:00:00
11/06/13 00:00:00
11/13/13 00:00:00
11/20/13 00:00:00
11/27/13 00:00:00
12/04/13 00:00:00
12/11/13 00:00:00
12/18/13 00:00:00
12/25/13 00:00:00
01/01/14 00:00:00

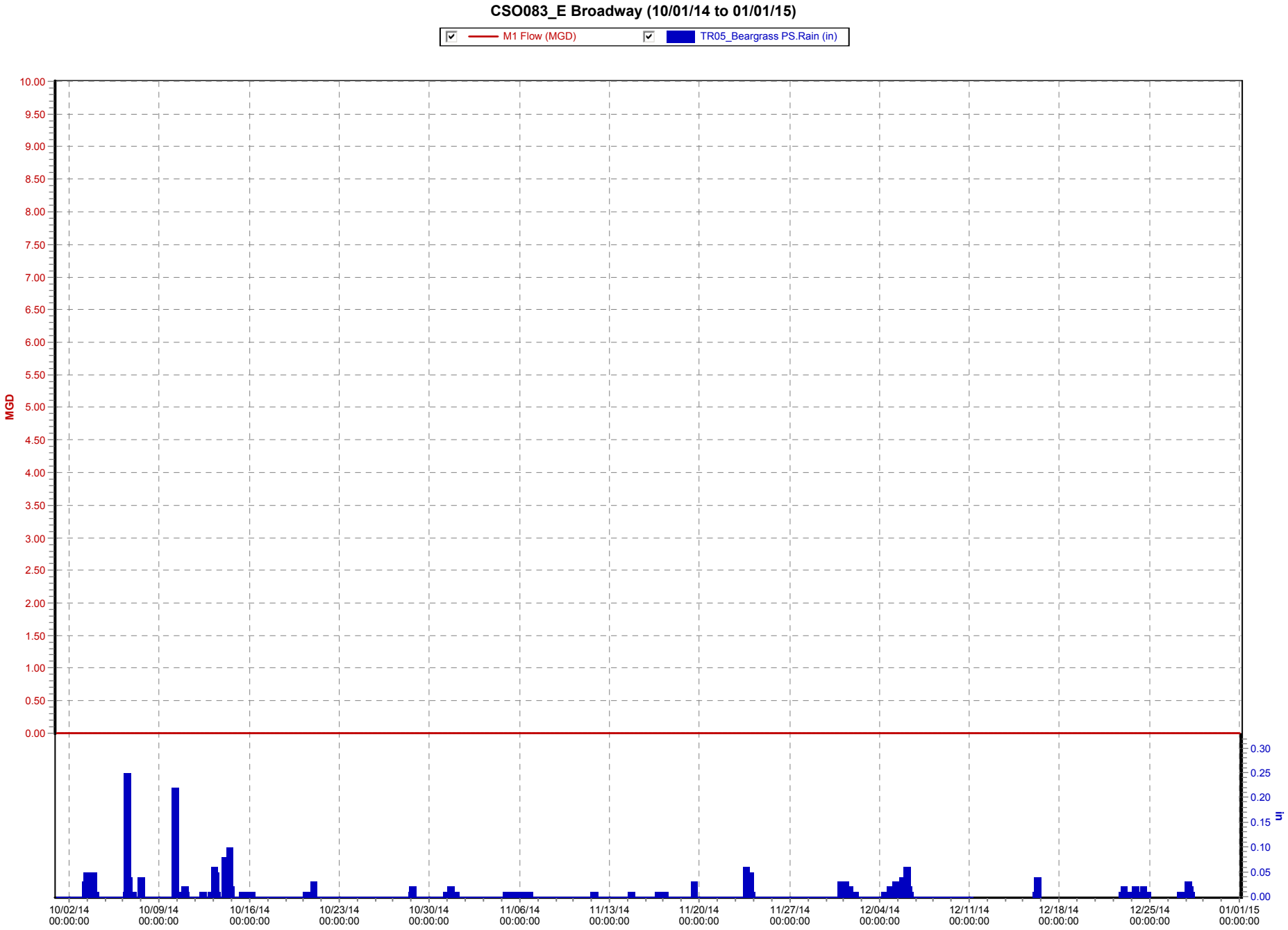

CSO054_7th St (10/01/14 to 01/01/15)
Final Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
IN
[telog] 11/10/14 05:40:00 - Gap due to sensor malfunction
2.60
2.50
2.40
2.30
2.20
2.10
2.00
1.90
1.80
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

CSO055_6th St (10/01/14 to 01/01/15)

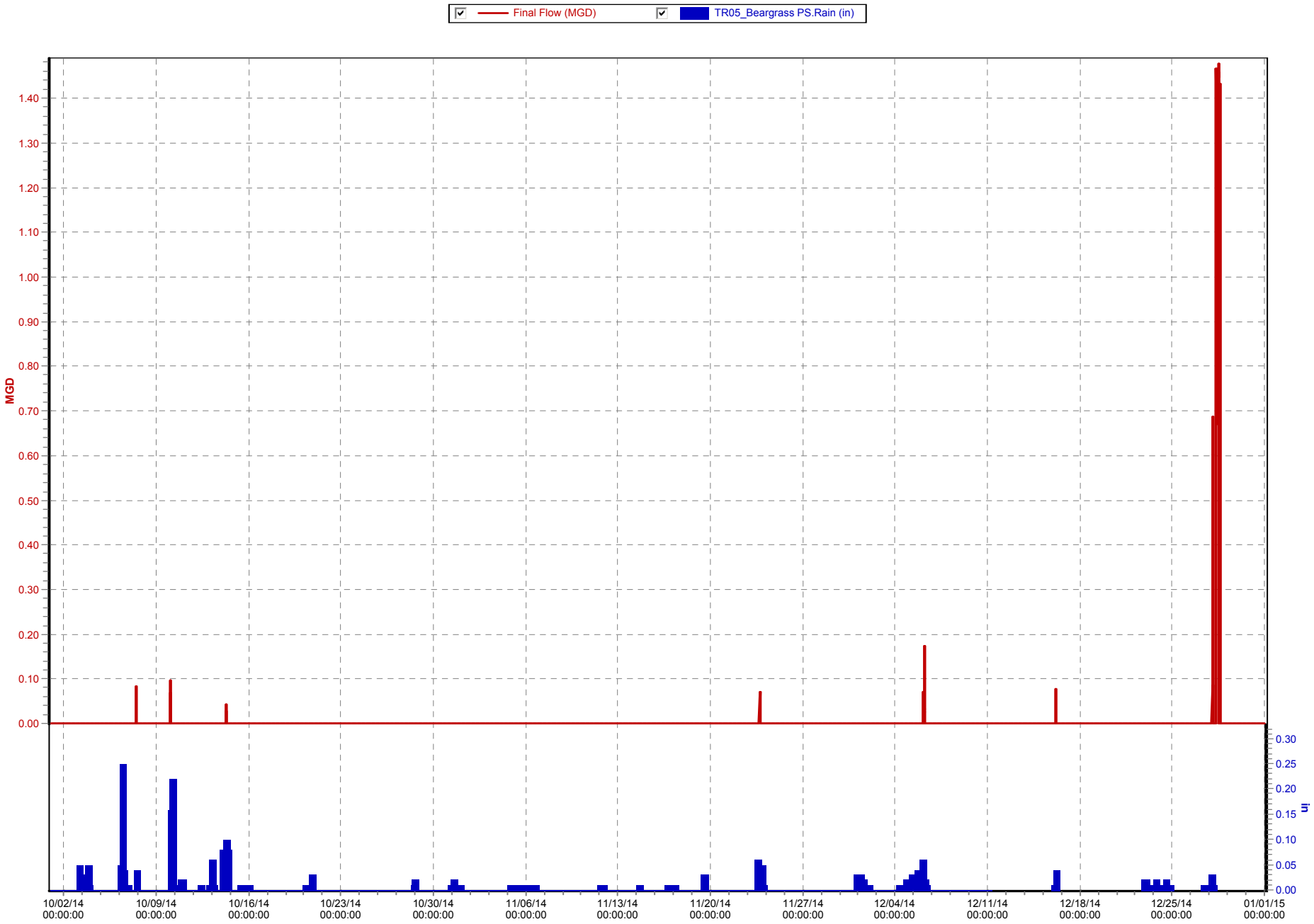

CSO057_1st and Main (10/01/14 to 01/01/15)
M1 Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

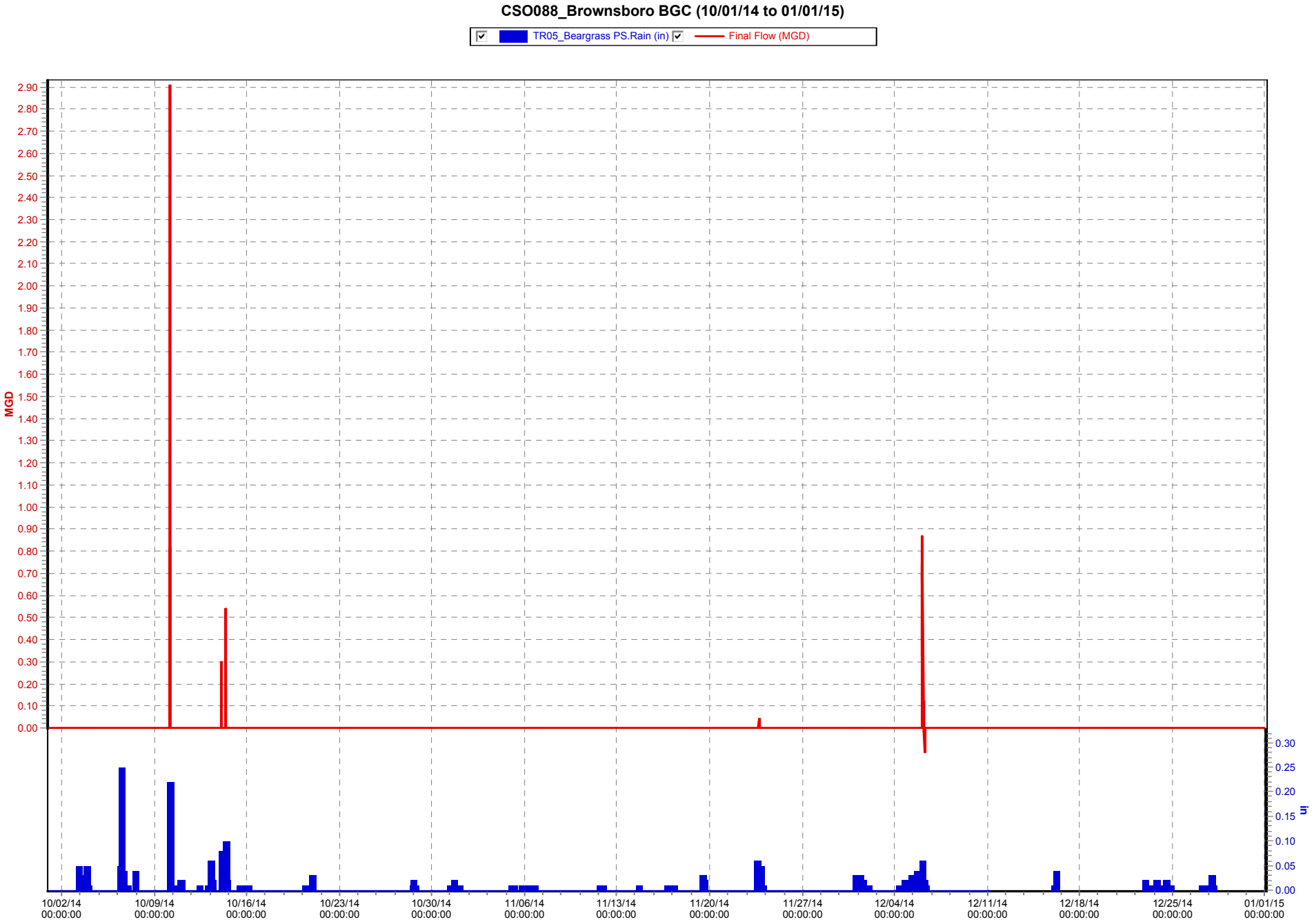

CSO058_Preston and Main (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
[telog] 12/09/14 08:45:00 - Flow monitor removed due to construction around the sensor. Intallation of new Bending Weir
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

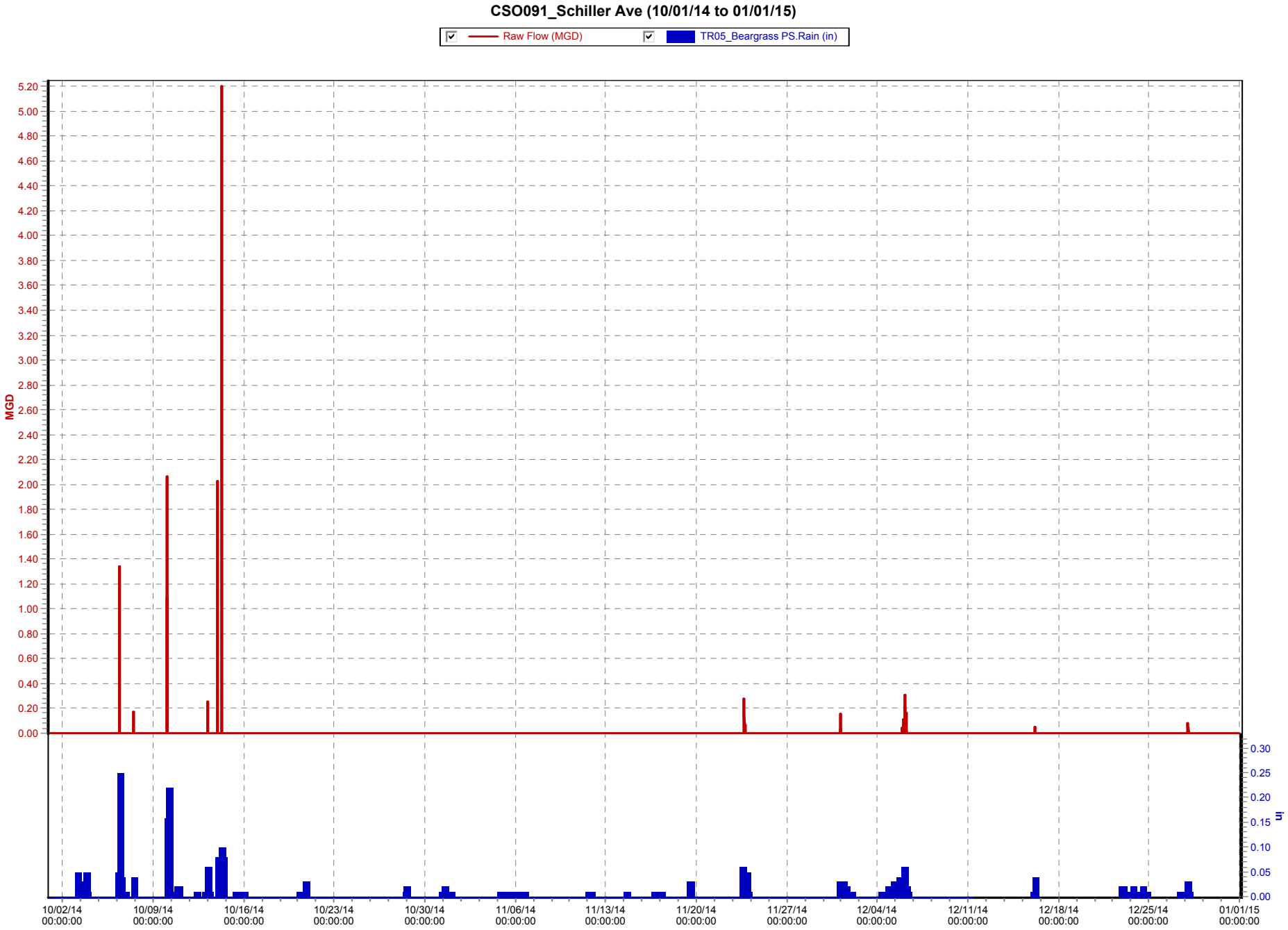

CSO082_Lex Rd (10/01/14 to 01/01/15)
Overflow Level (in)
TR05_Beargrass PS.Rain (in)
in
17.00
16.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

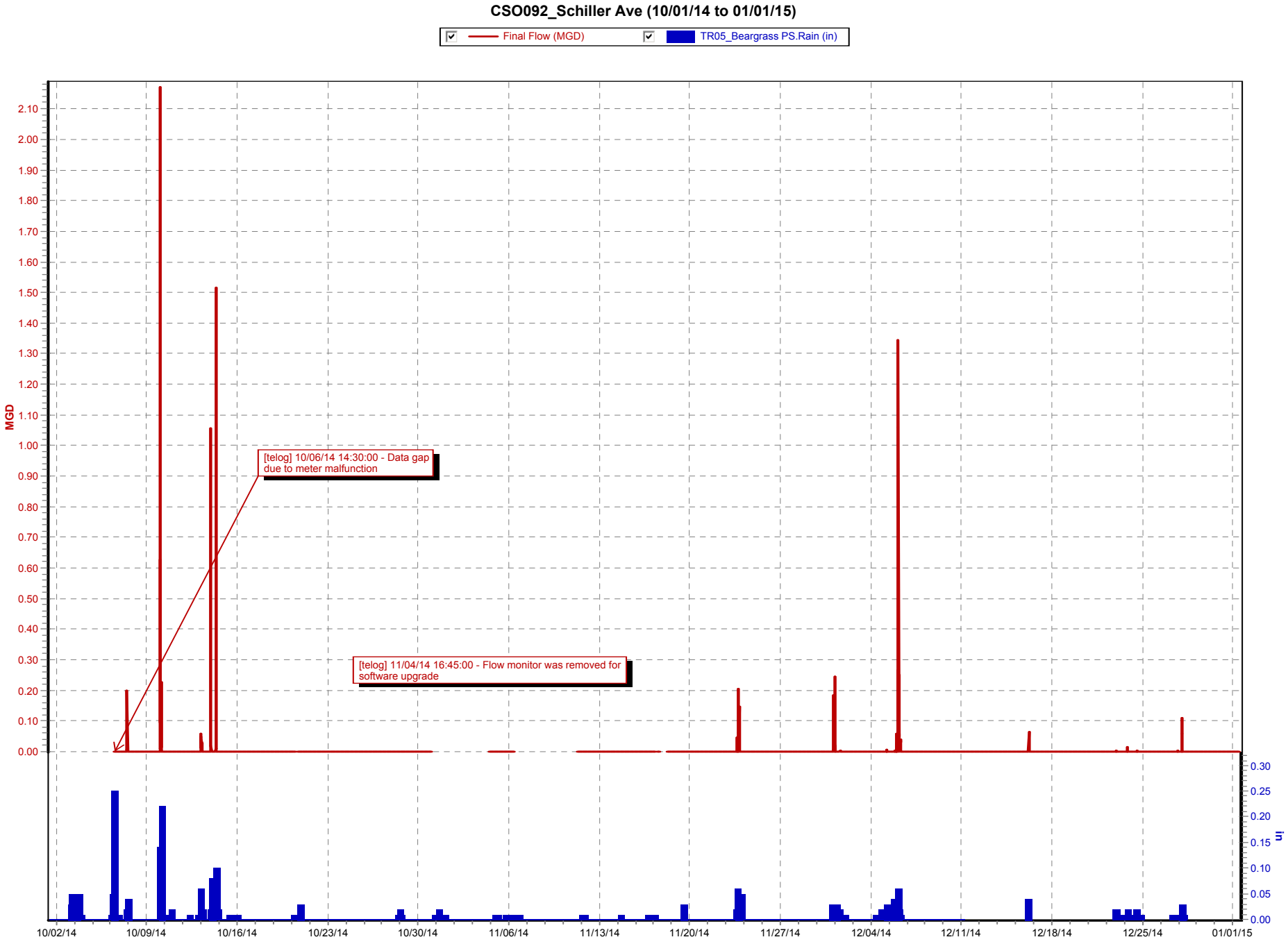

CSO083_E Broadway (10/01/14 to 01/01/15)
M1 Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

CSO084_Brent St and BGC (10/01/14 to 01/01/15)

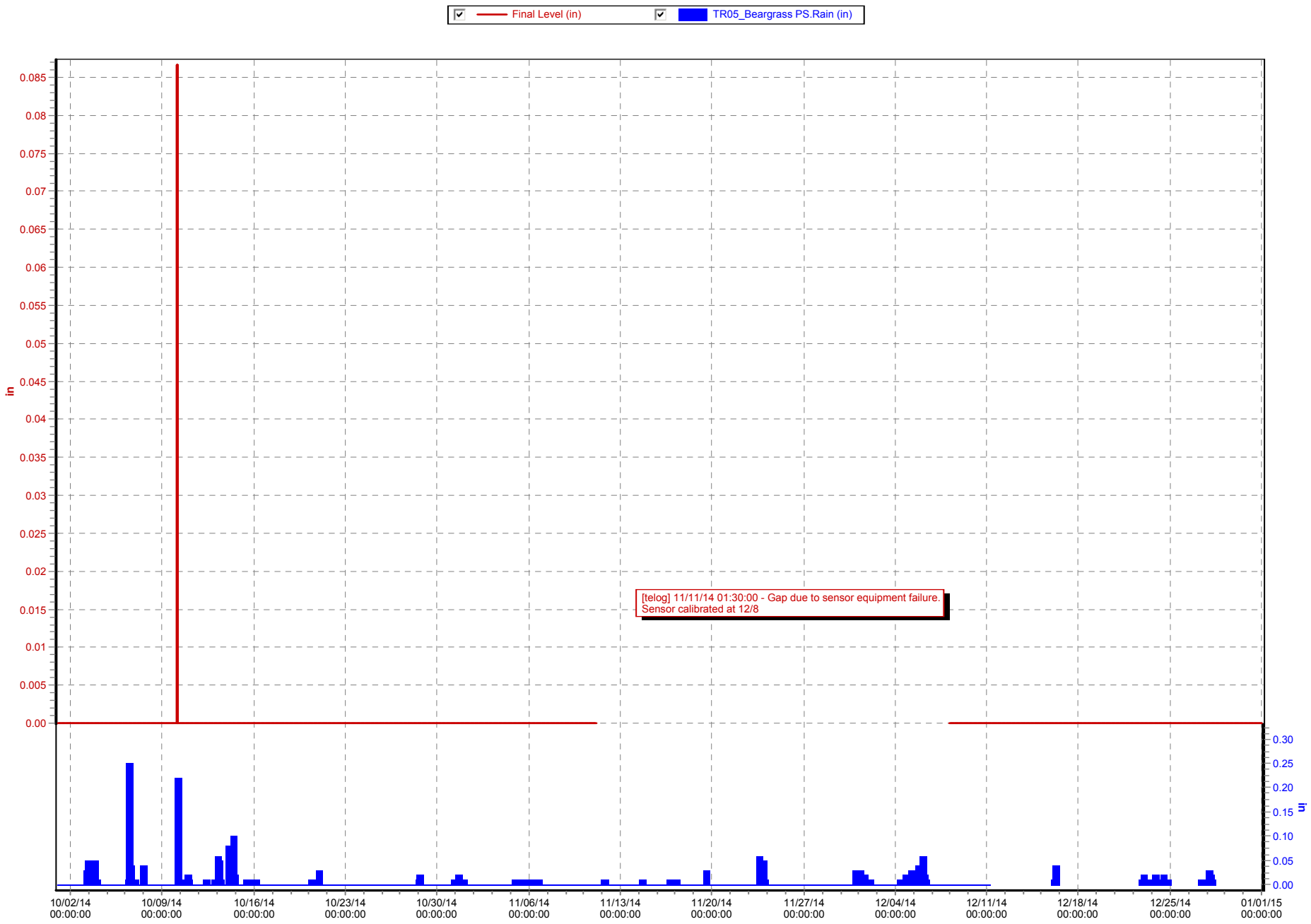


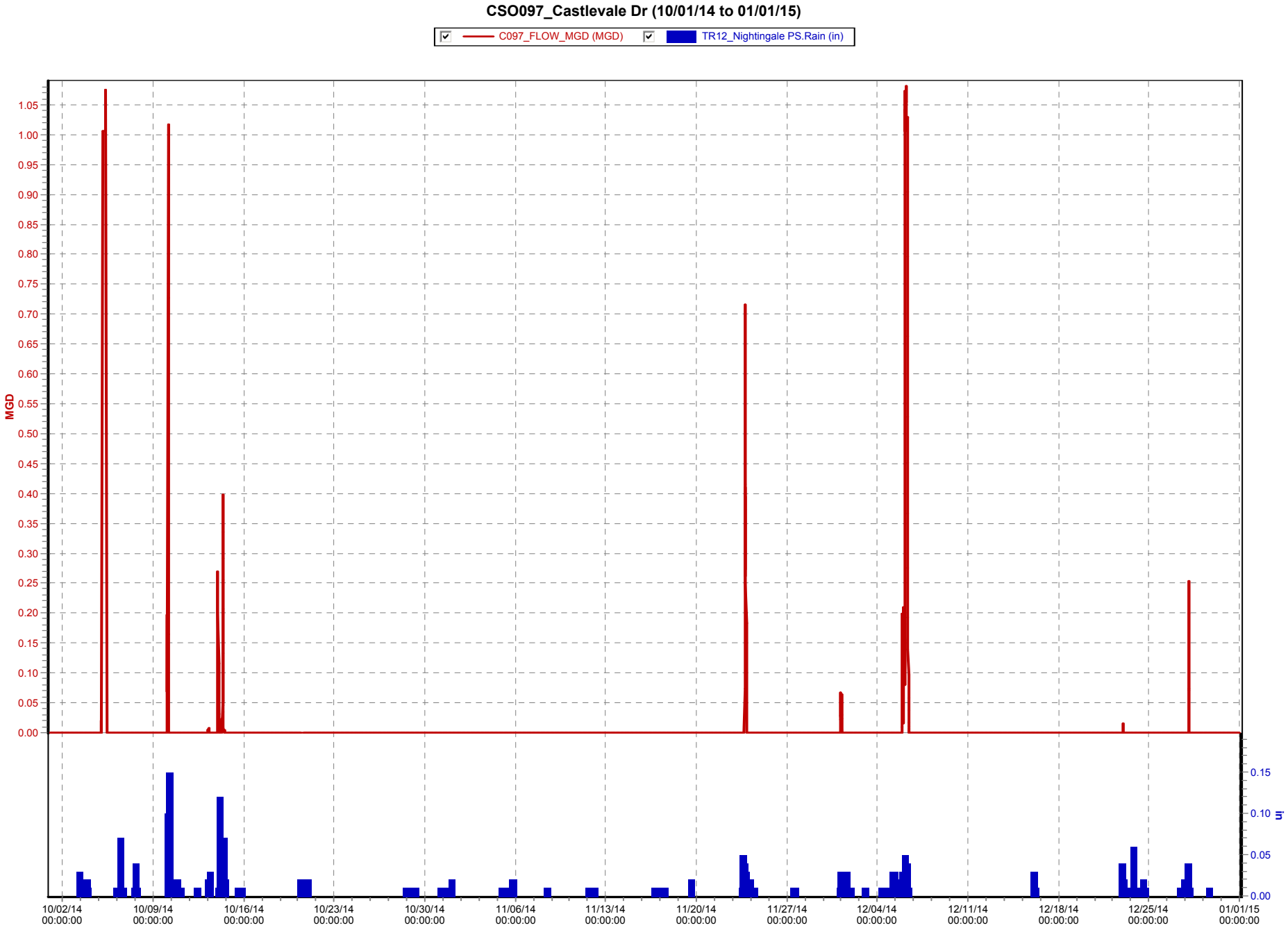

CSO088_Brownsboro BGC (10/01/14 to 01/01/15)
TR05_Beargrass PS.Rain (in)
Final Flow (MGD)
MGD
2.90
2.80
2.70
2.60
2.50
2.40
2.30
2.20
2.10
2.00
1.90
1.80
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
in
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00


CSO091_Schiller Ave (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
5.20
5.00
4.80
4.60
4.40
4.20
4.00
3.80
3.60
3.40
3.20
3.00
2.80
2.60
2.40
2.20
2.00
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

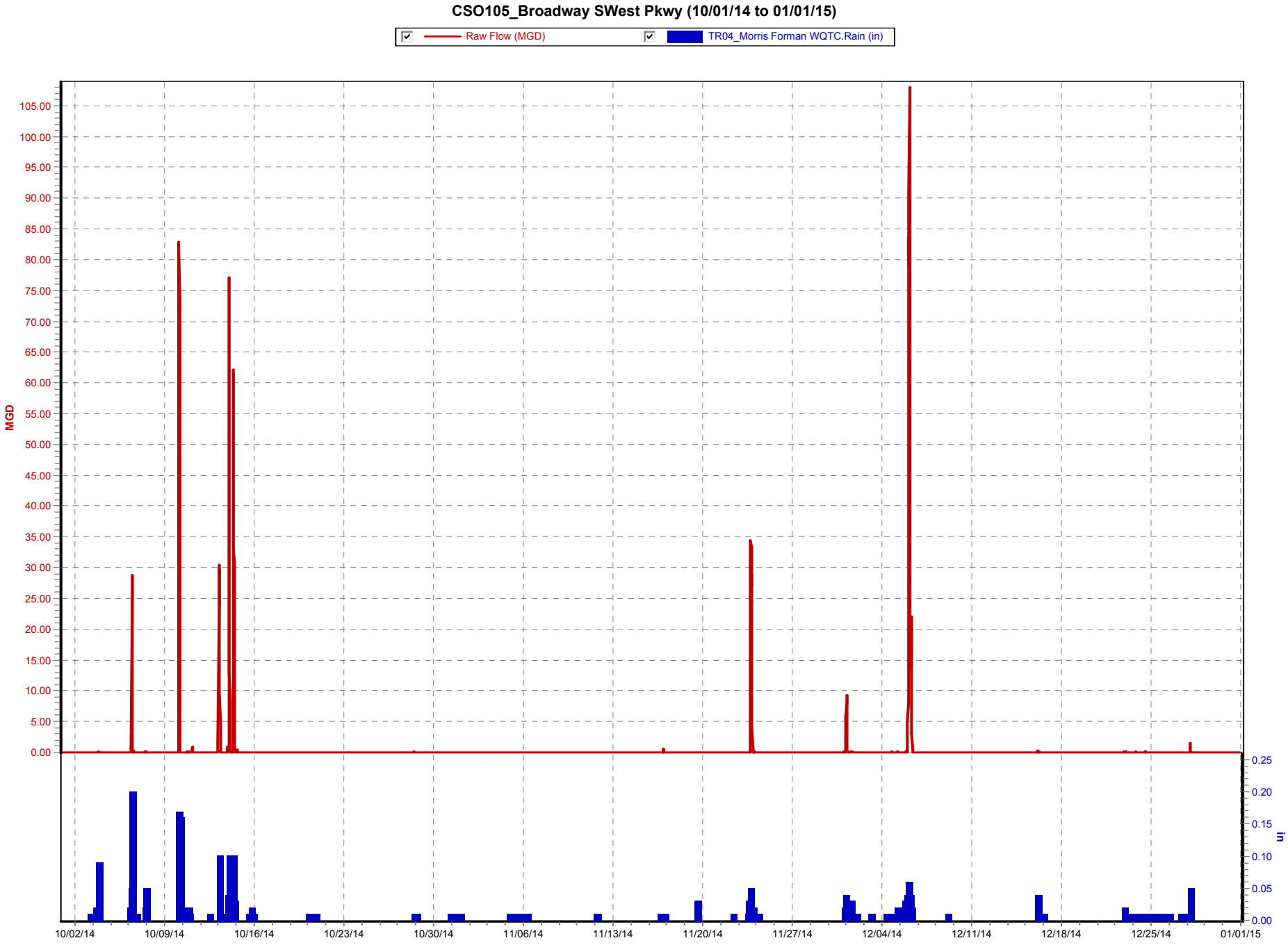

CSO092_Schiller Ave (10/01/14 to 01/01/15)
Final Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
[telog] 10/06/14 14:30:00 - Data gap due to meter malfunction
[telog] 11/04/14 16:45:00 - Flow monitor was removed for software upgrade
2.10
2.00
1.90
1.80
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15

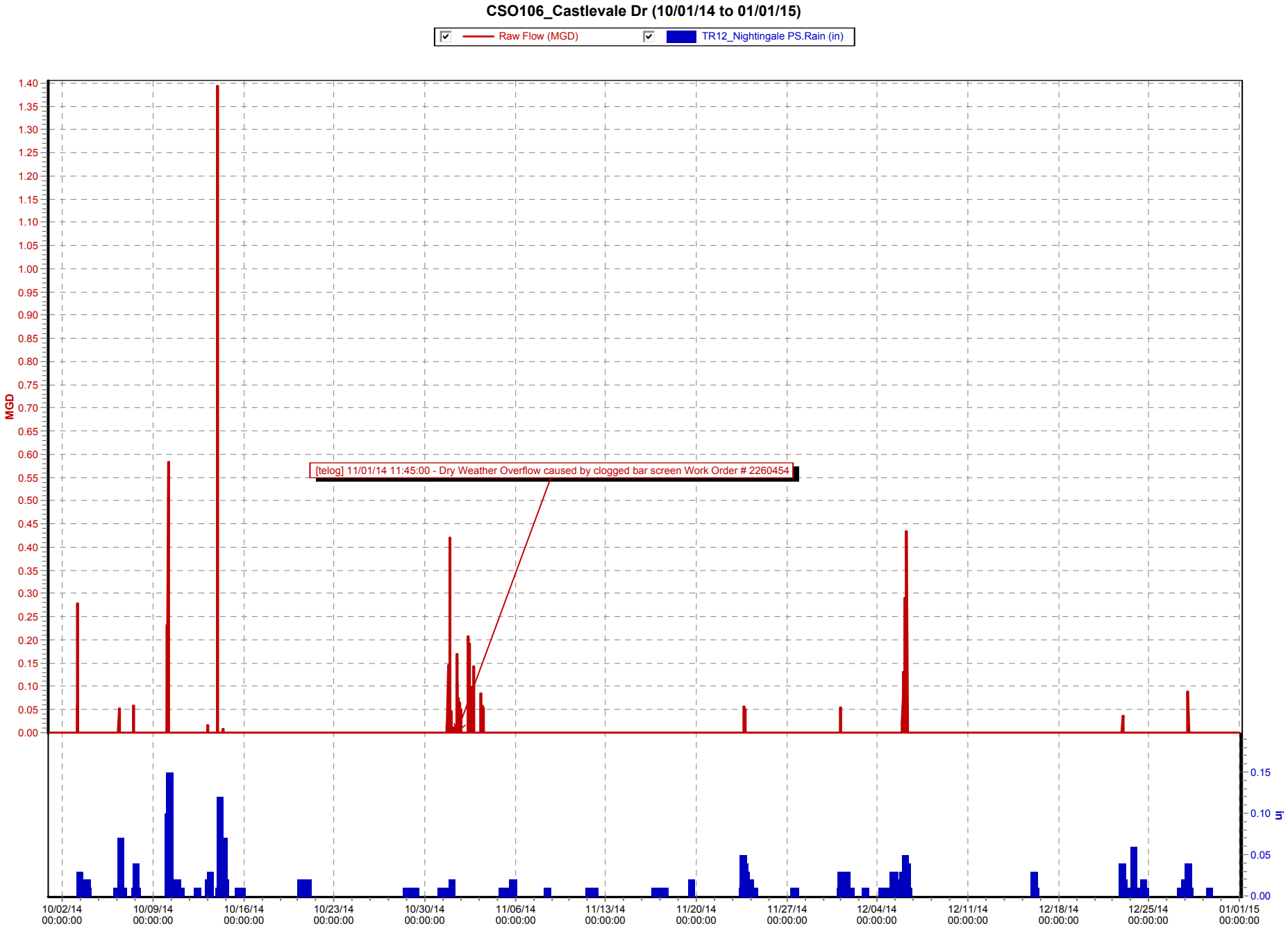
CSO093 Level Sensor (10/01/14 to 01/01/15)

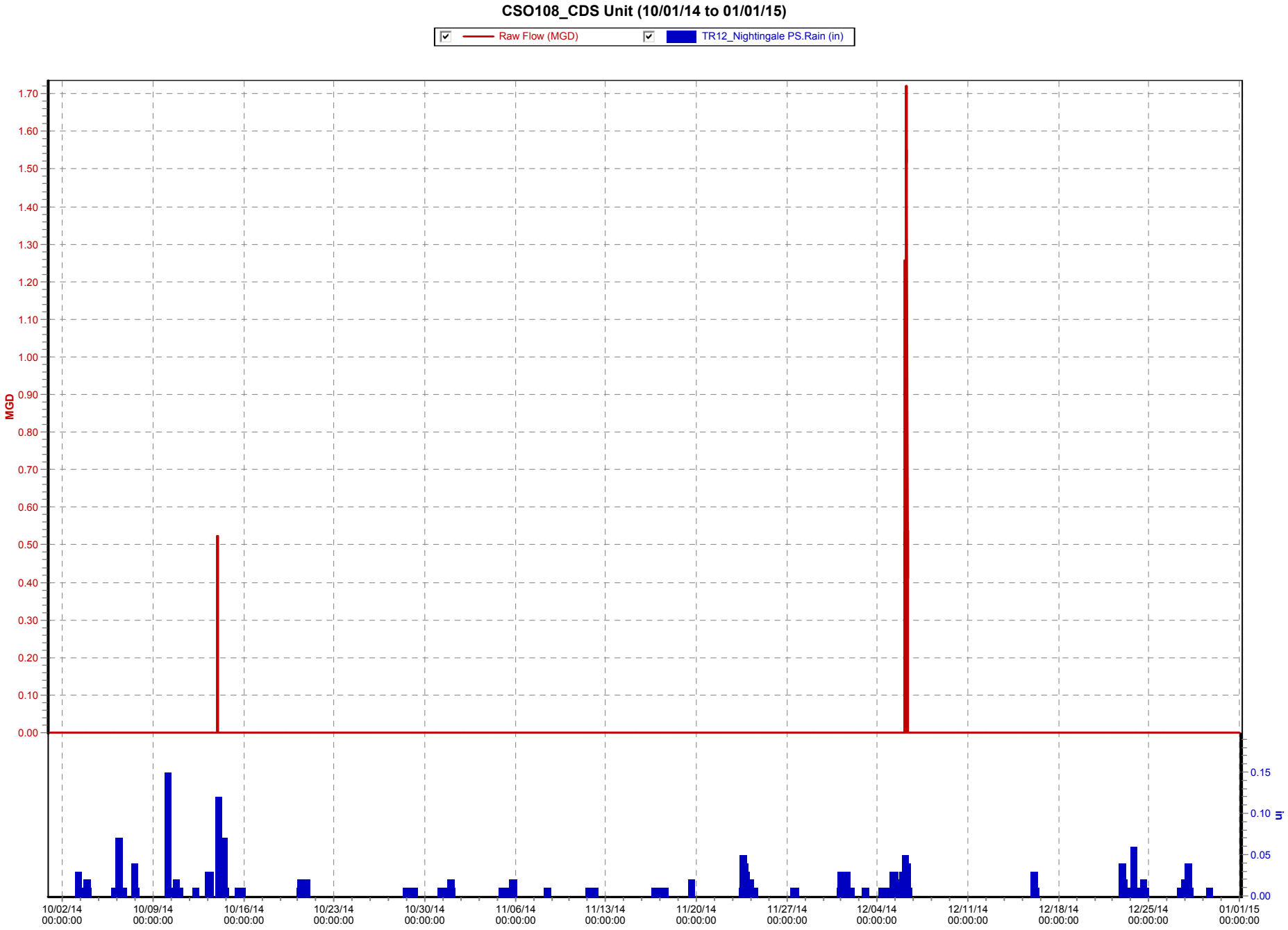


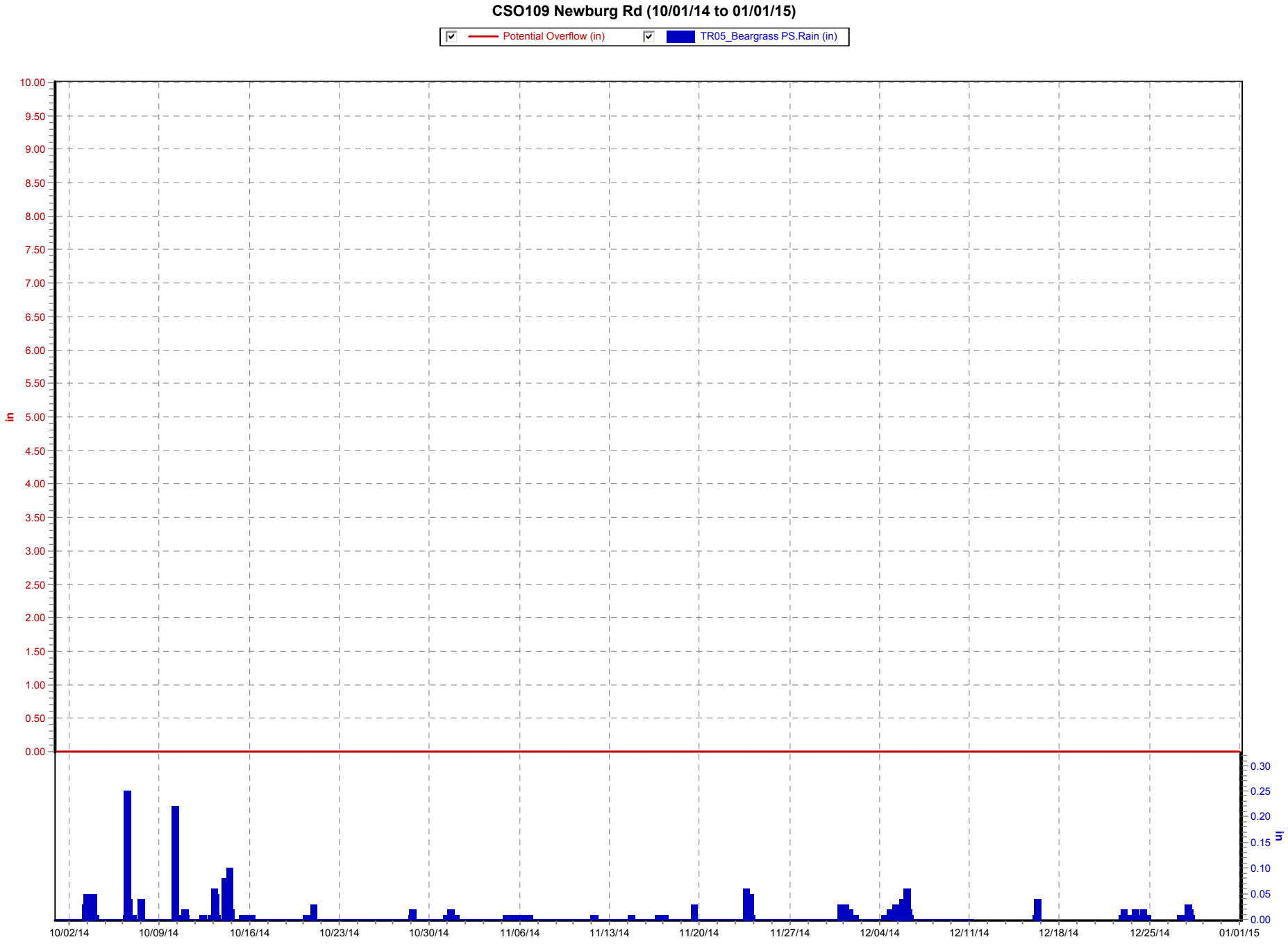

CSO097_Castlevale Dr (10/01/14 to 01/01/15)
C097_FLOW_MGD (MGD)
TR12_Nightingale PS.Rain (in)
MGD
IN
1.05
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

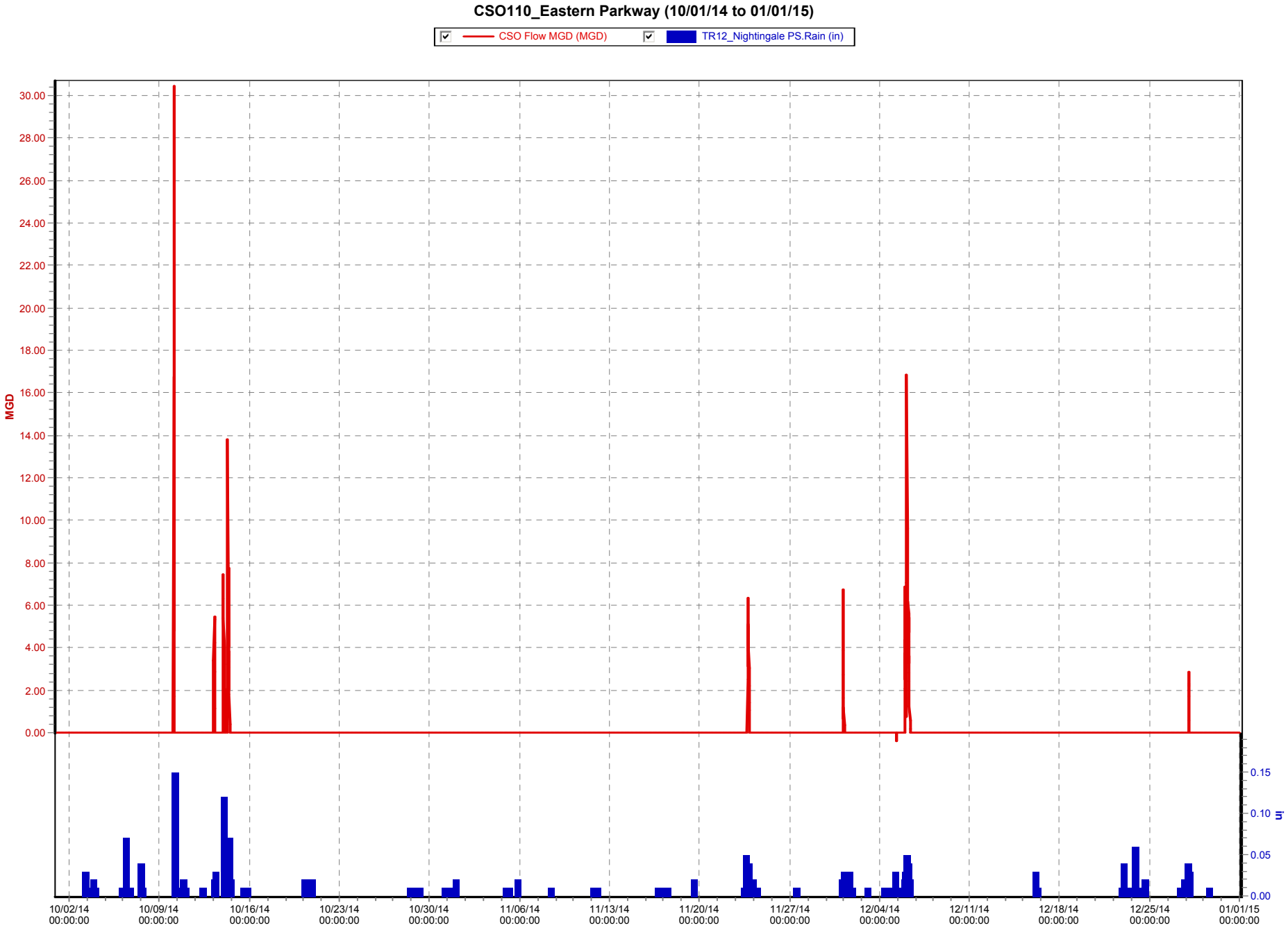
CSO104_SWest Pkwy and Broadway (10/01/14 to 01/01/15)

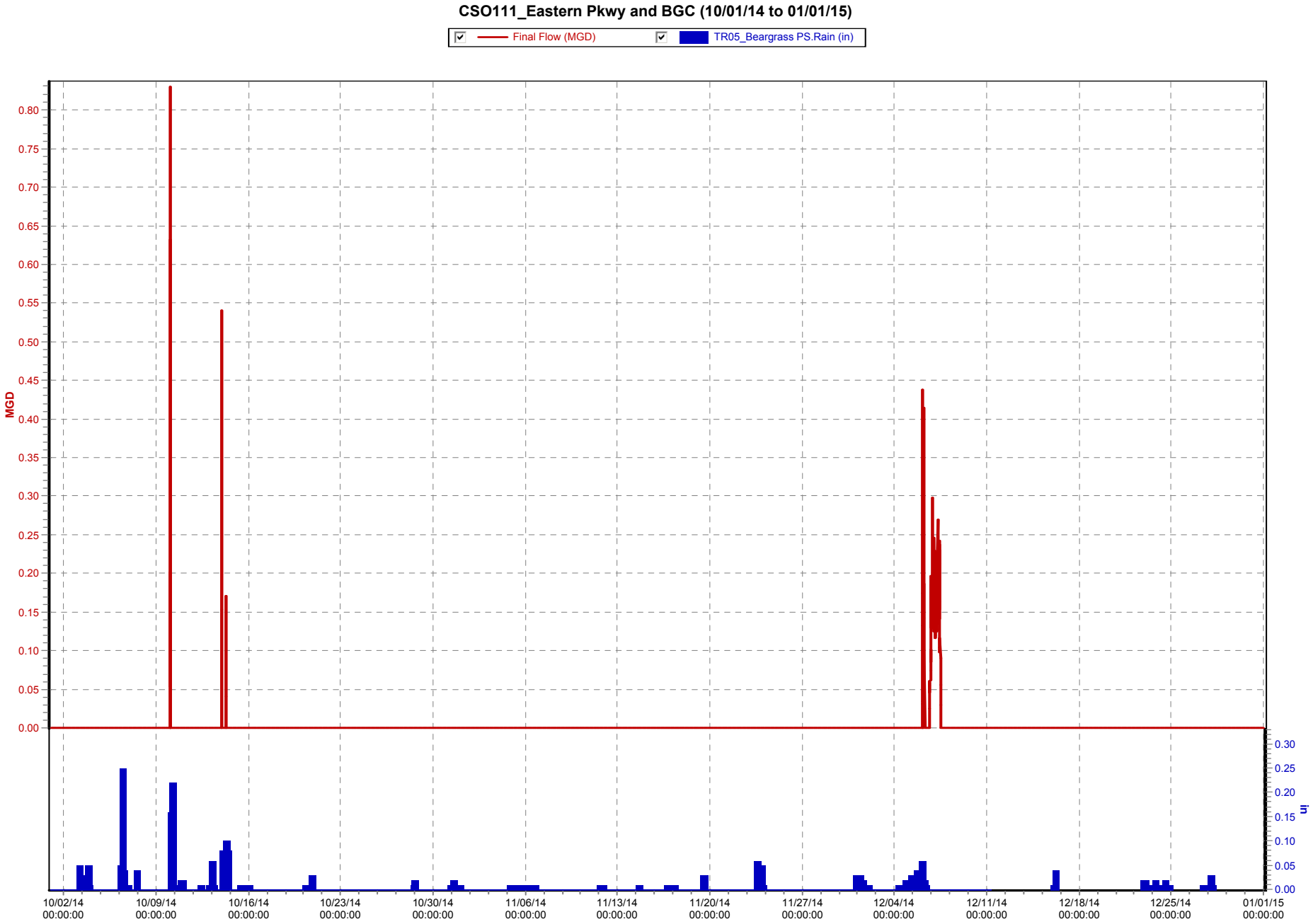

CSO105_Broadway SWest Pkwy (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR04_Morris Forman WQTC.Rain (in)
MGD
105.00
100.00
95.00
90.00
85.00
80.00
75.00
70.00
65.00
60.00
55.00
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0.25
0.20
0.15
0.10
0.05
0.00
in
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15


CSO106_Castlevale Dr (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR12_Nightingale PS.Rain (in)
MGD
IN
[telog] 11/01/14 11:45:00 - Dry Weather Overflow caused by clogged bar screen Work Order # 2260454
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

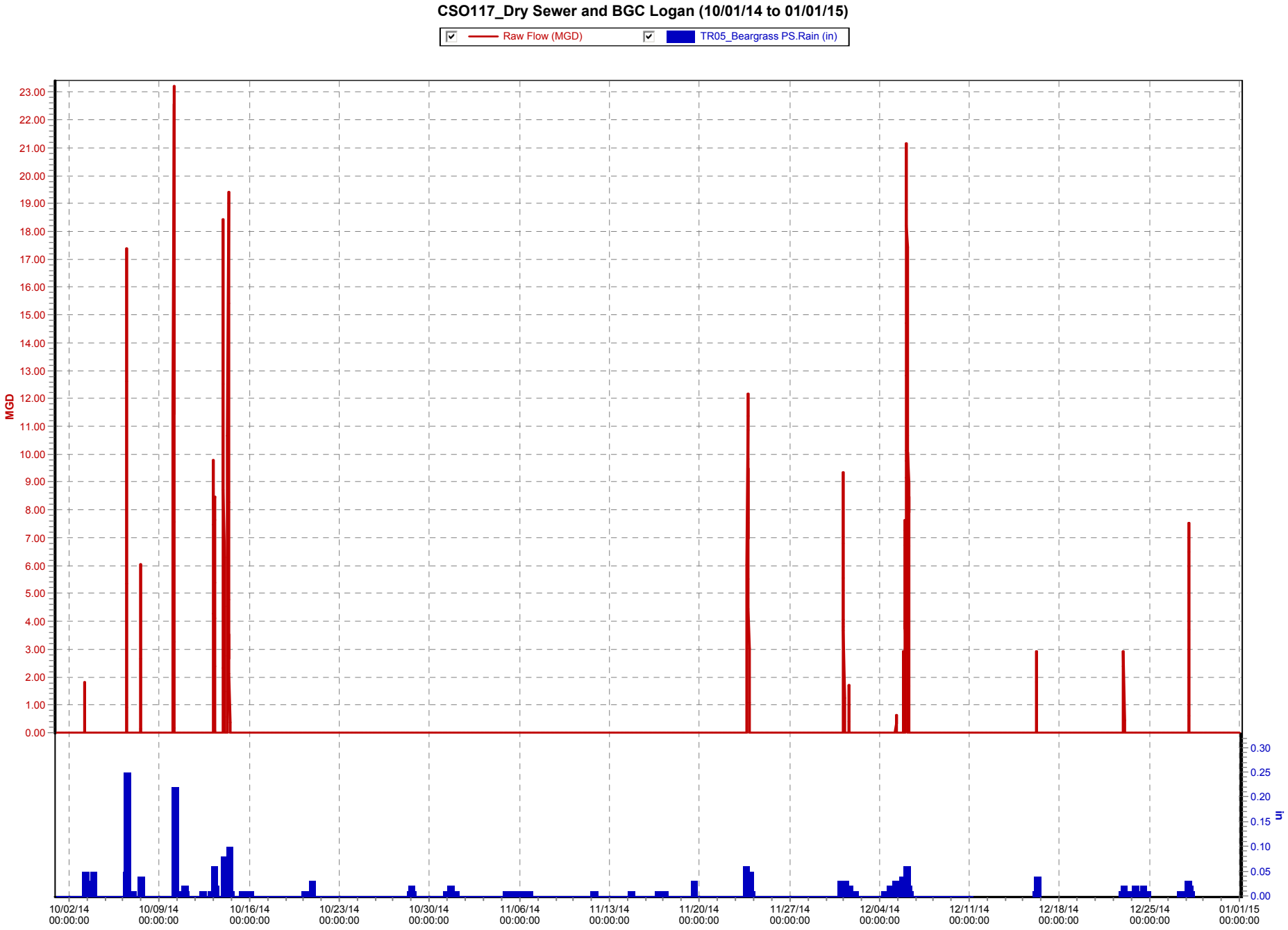

CSO108_CDS Unit (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR12_Nightingale PS.Rain (in)
MGD
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

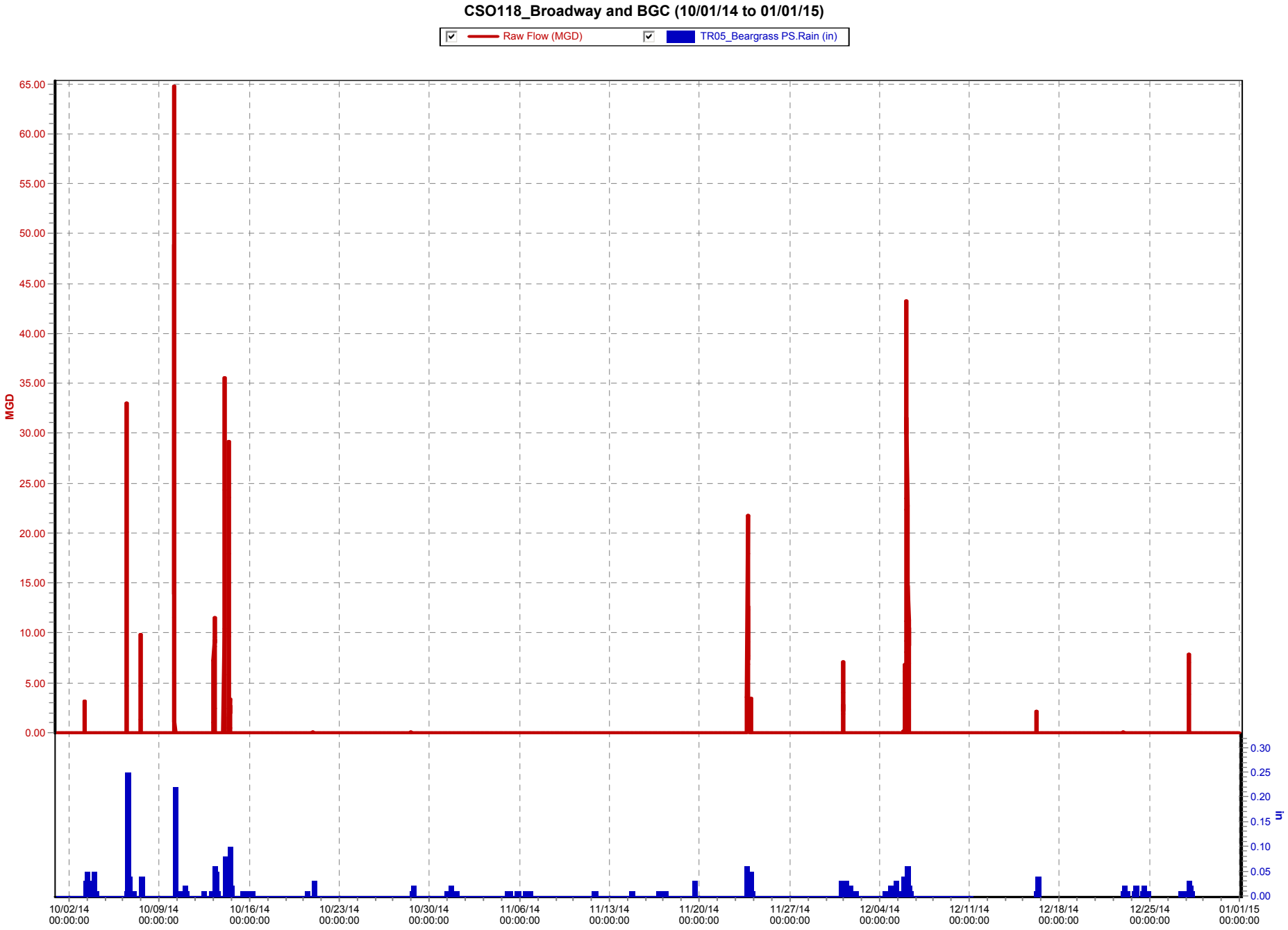

CSO109 Newburg Rd (10/01/14 to 01/01/15)
Potential Overflow (in)
TR05_Beargrass PS.Rain (in)
in
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
in
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15

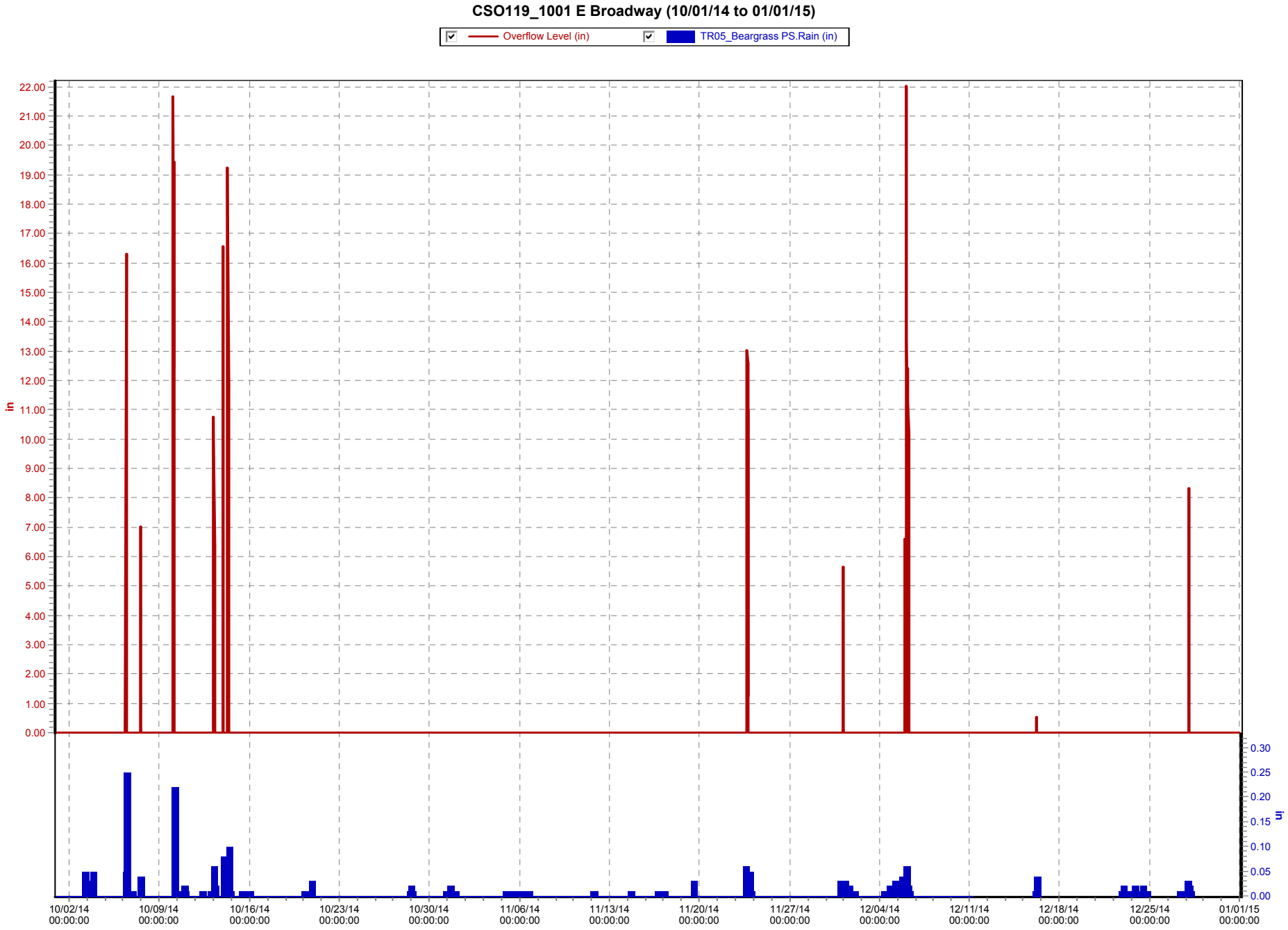

CSO110_Eastern Parkway (10/01/14 to 01/01/15)
CSO Flow MGD (MGD)
TR12_Nightingale PS.Rain (in)
MGD
IN
30.00
28.00
26.00
24.00
22.00
20.00
18.00
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

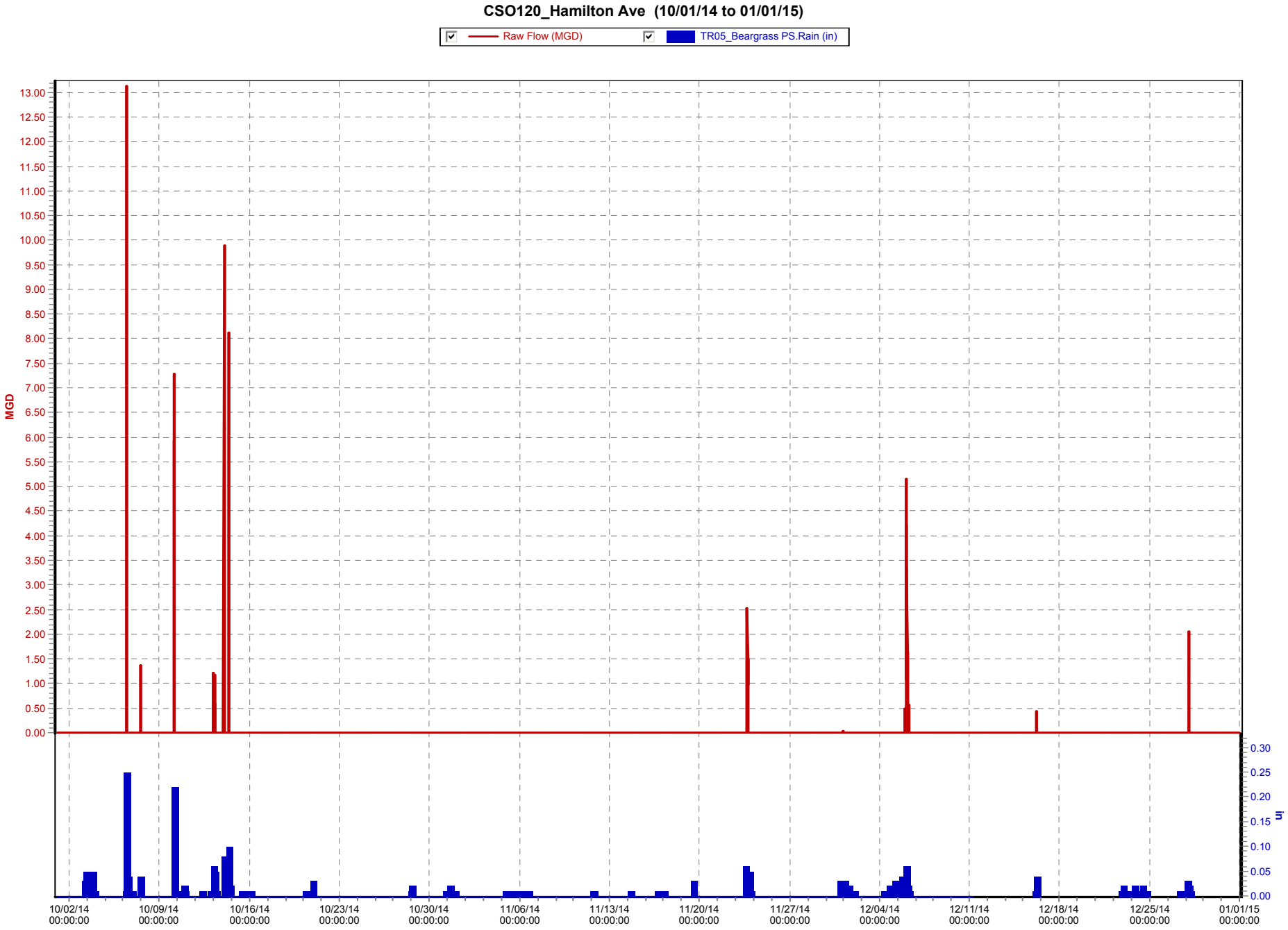

CSO111_Eastern Pkwy and BGC (10/01/14 to 01/01/15)
Final Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

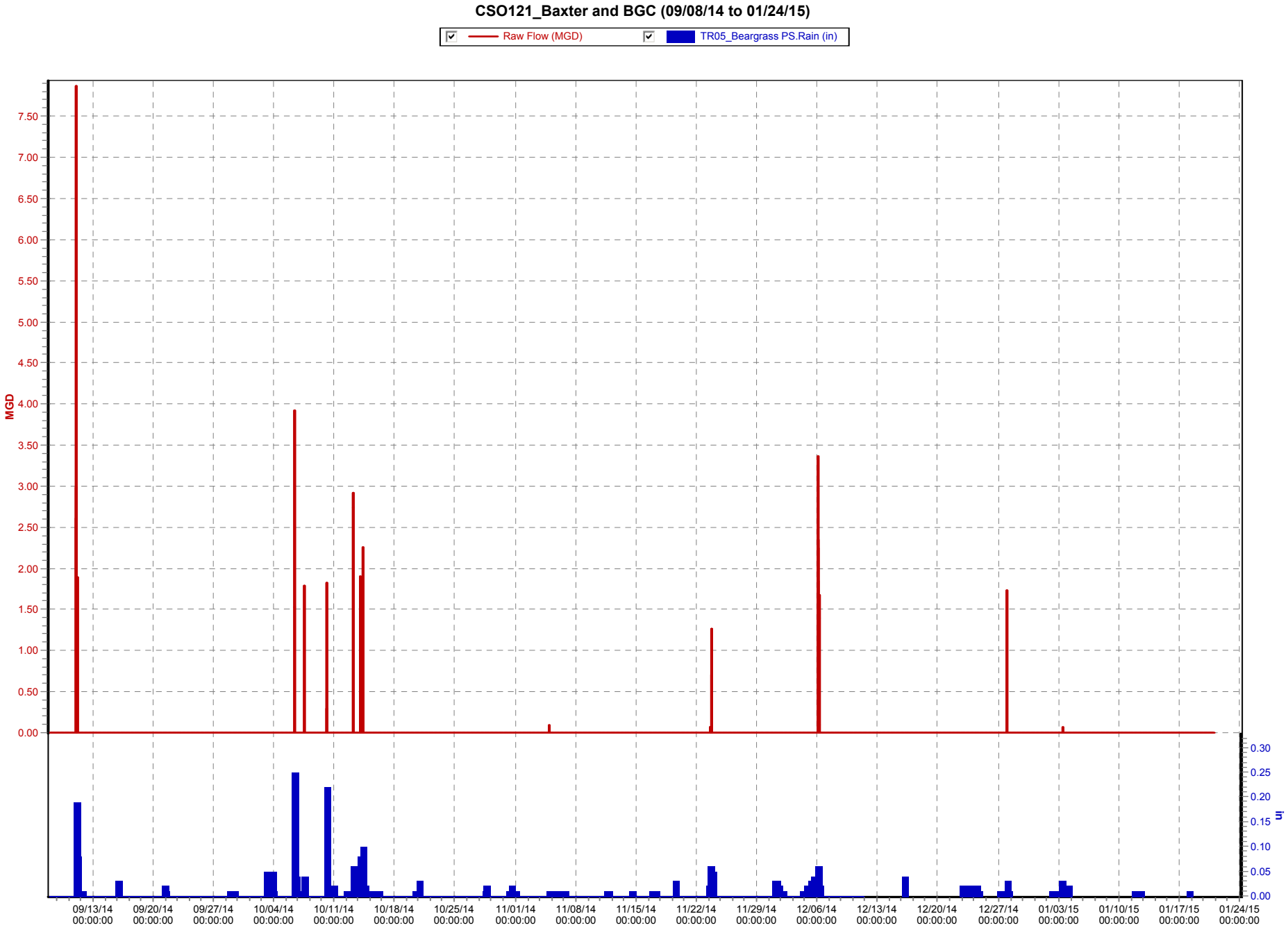
CSO113_Ellison Av Schiller Av (10/01/14 to 01/01/15)

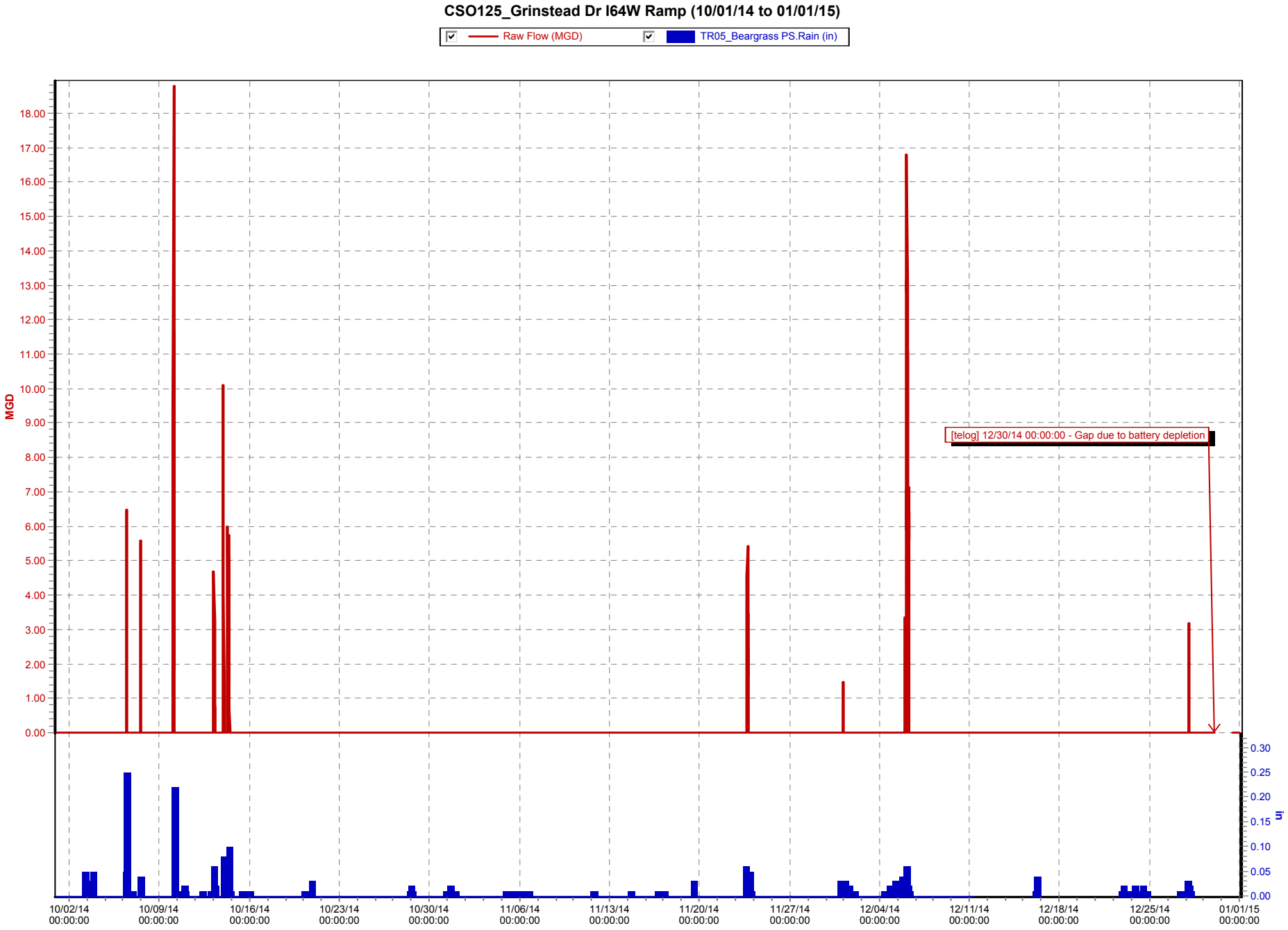

CSO117_Dry Sewer and BGC Logan (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
23.00
22.00
21.00
20.00
19.00
18.00
17.00
16.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

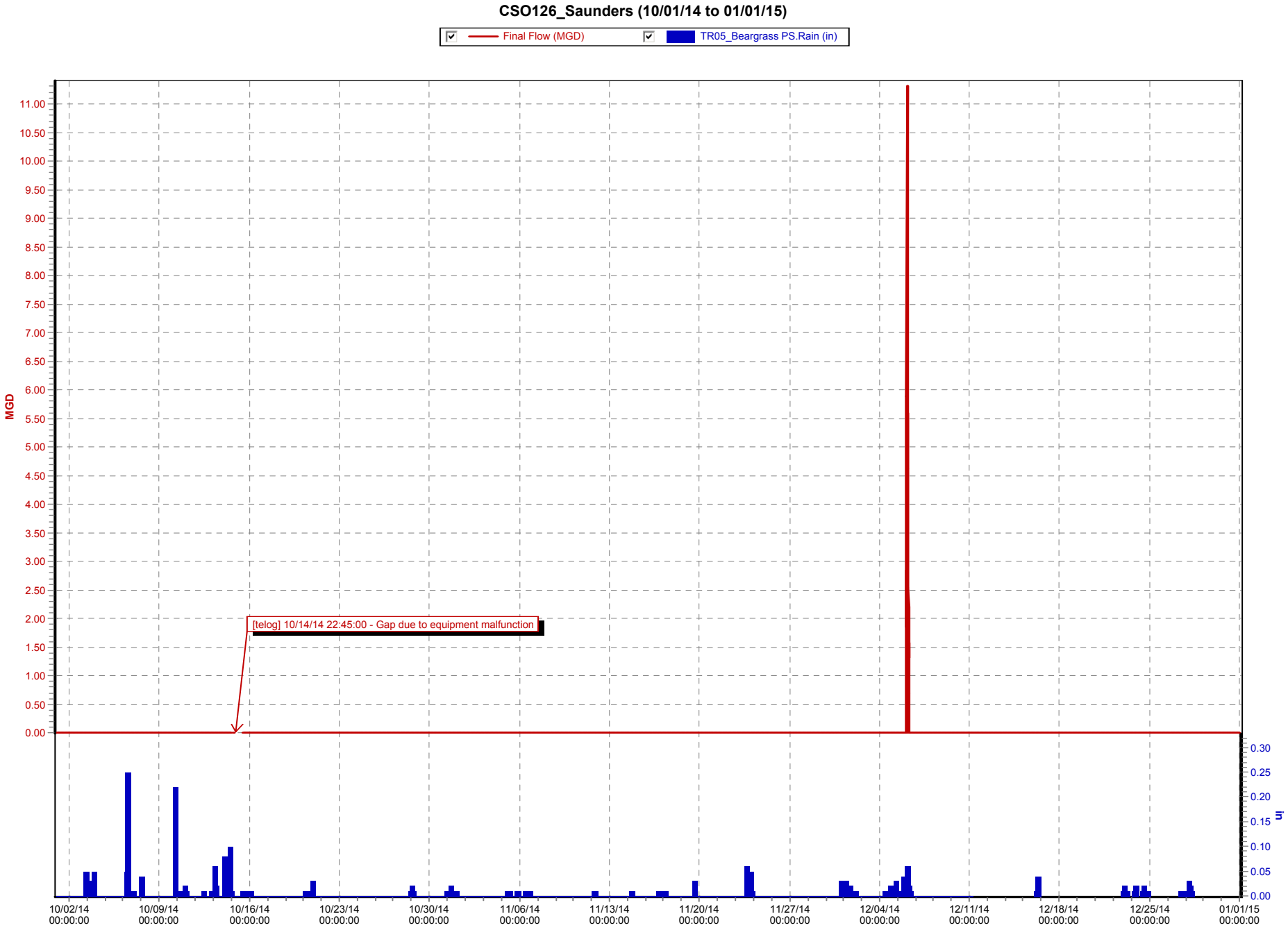

CSO118_Broadway and BGC (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
65.00
60.00
55.00
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
in
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00


CSO119_1001 E Broadway (10/01/14 to 01/01/15)
Overflow Level (in)
TR05_Beargrass PS.Rain (in)
in
22.00
21.00
20.00
19.00
18.00
17.00
16.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
in
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

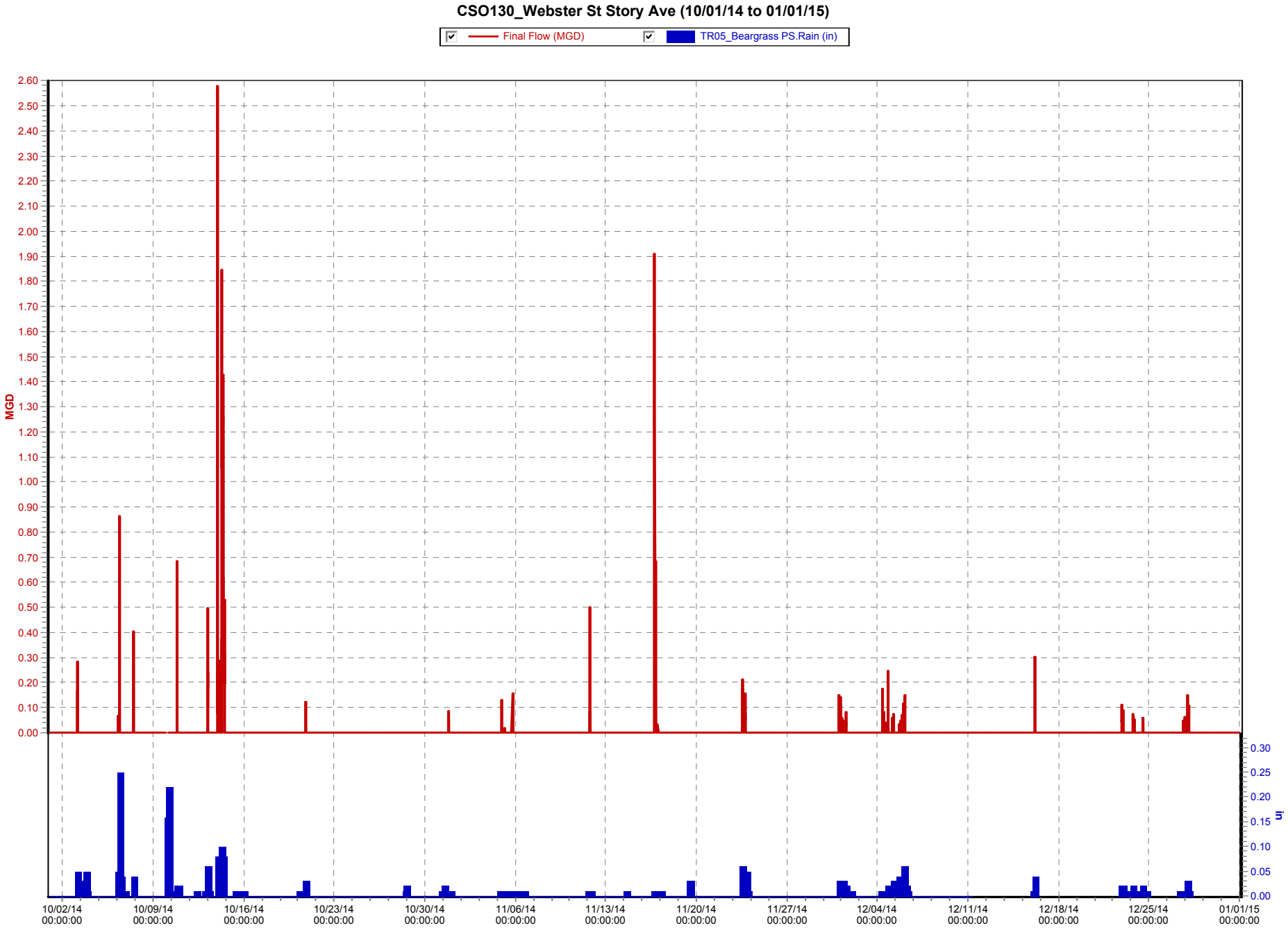

CSO120_Hamilton Ave (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
13.00
12.50
12.00
11.50
11.00
10.50
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

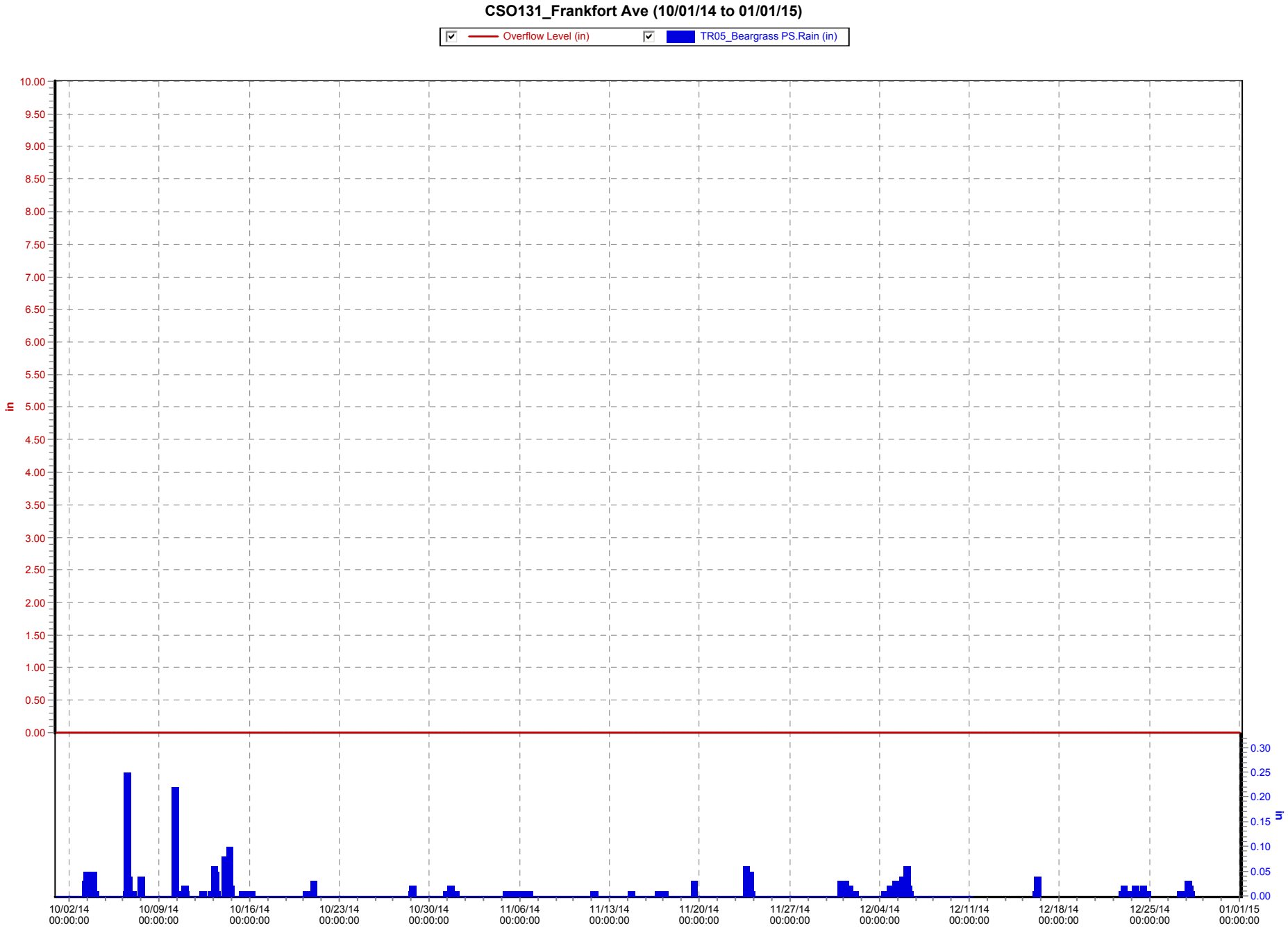

CSO121_Baxter and BGC (09/08/14 to 01/24/15)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
09/13/14 00:00:00
09/20/14 00:00:00
09/27/14 00:00:00
10/04/14 00:00:00
10/11/14 00:00:00
10/18/14 00:00:00
10/25/14 00:00:00
11/01/14 00:00:00
11/08/14 00:00:00
11/15/14 00:00:00
11/22/14 00:00:00
11/29/14 00:00:00
12/06/14 00:00:00
12/13/14 00:00:00
12/20/14 00:00:00
12/27/14 00:00:00
01/03/15 00:00:00
01/10/15 00:00:00
01/17/15 00:00:00
01/24/15 00:00:00

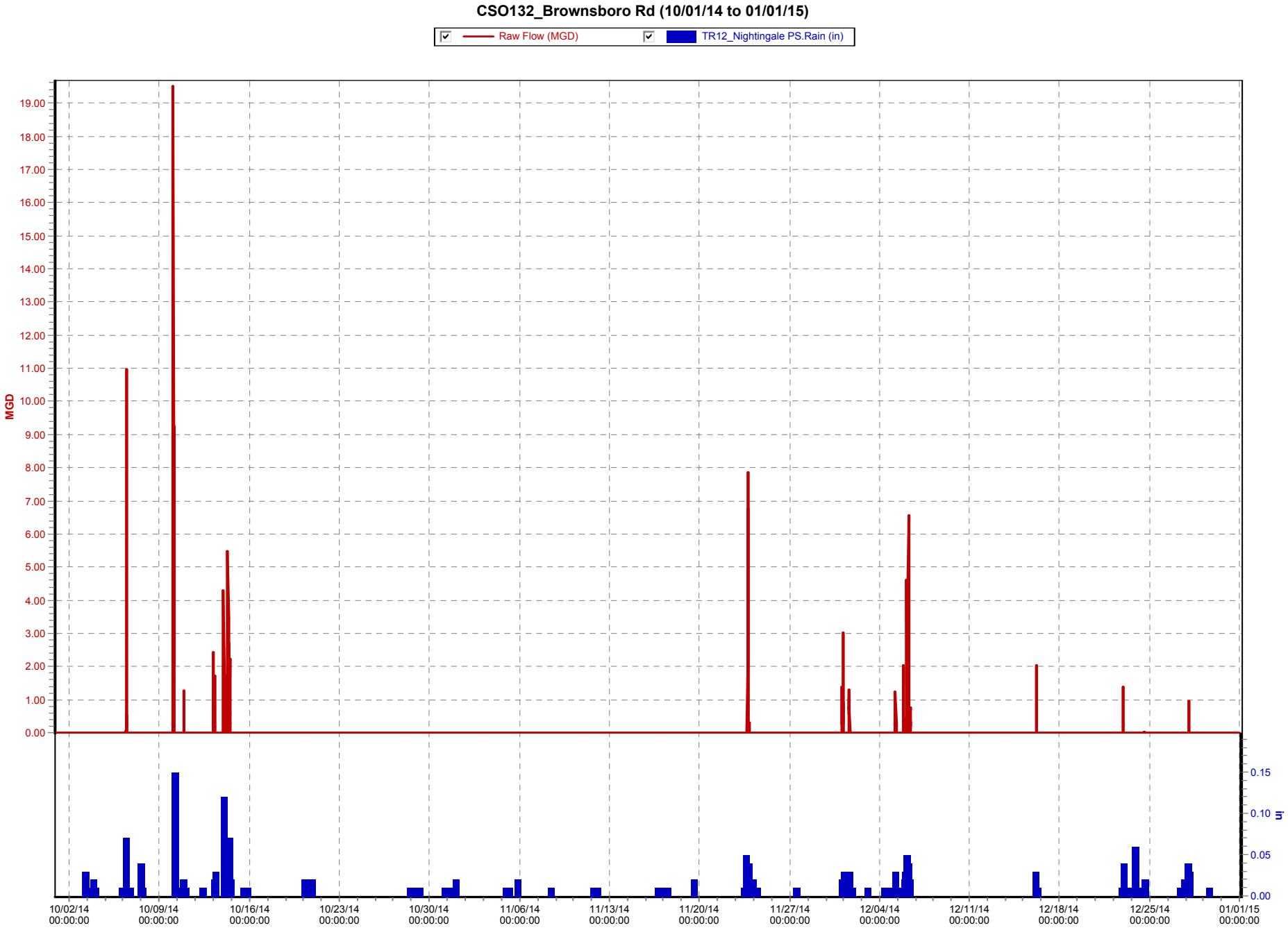

CSO125_Grinstead Dr I64W Ramp (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
[telog] 12/30/14 00:00:00 - Gap due to battery depletion
18.00
17.00
16.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

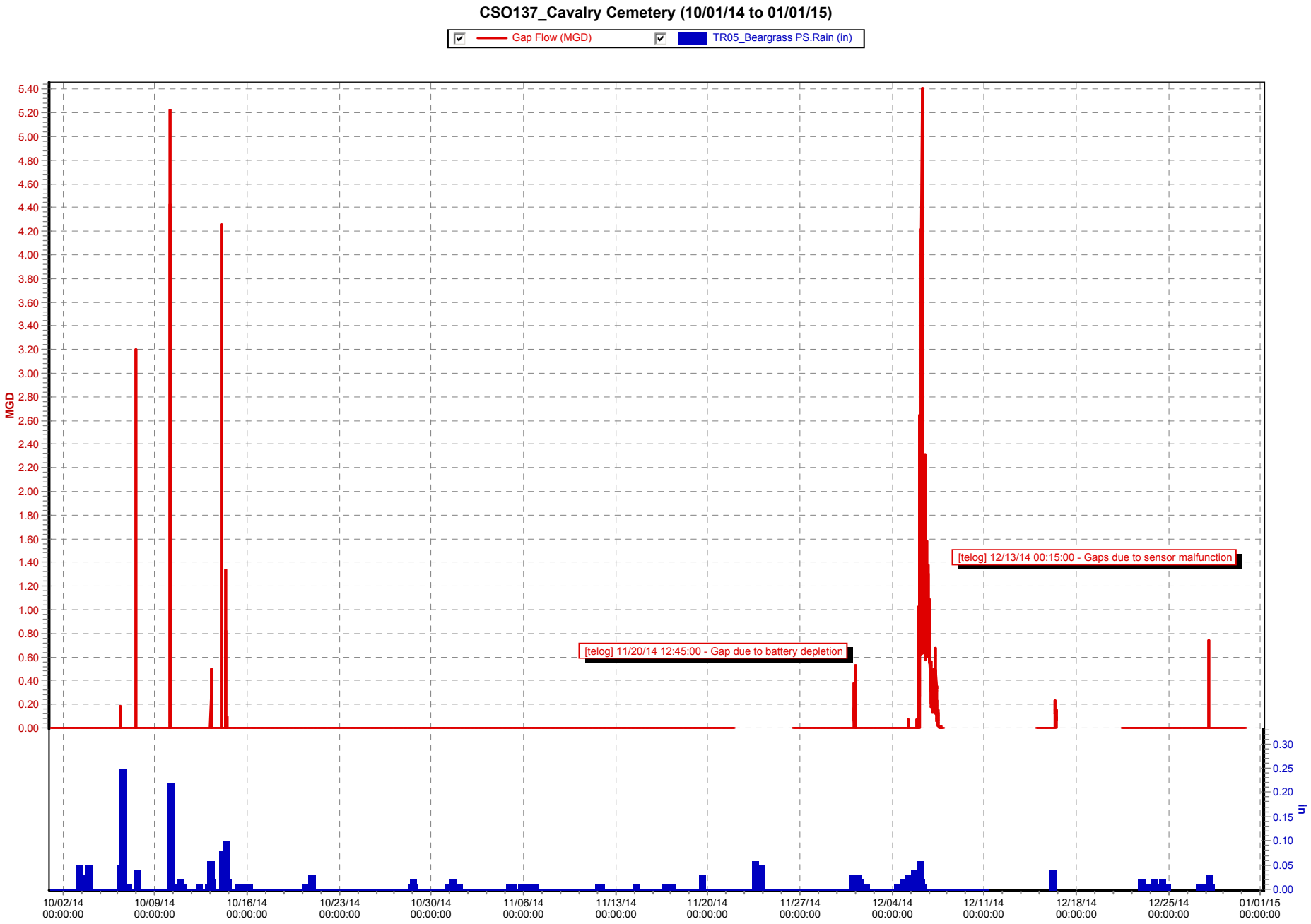

CSO126_Saunders (10/01/14 to 01/01/15)
Final Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
[telog] 10/14/14 22:45:00 - Gap due to equipment malfunction
11.00
10.50
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

CSO127_Etley and Lexington (10/01/14 to 01/01/15)

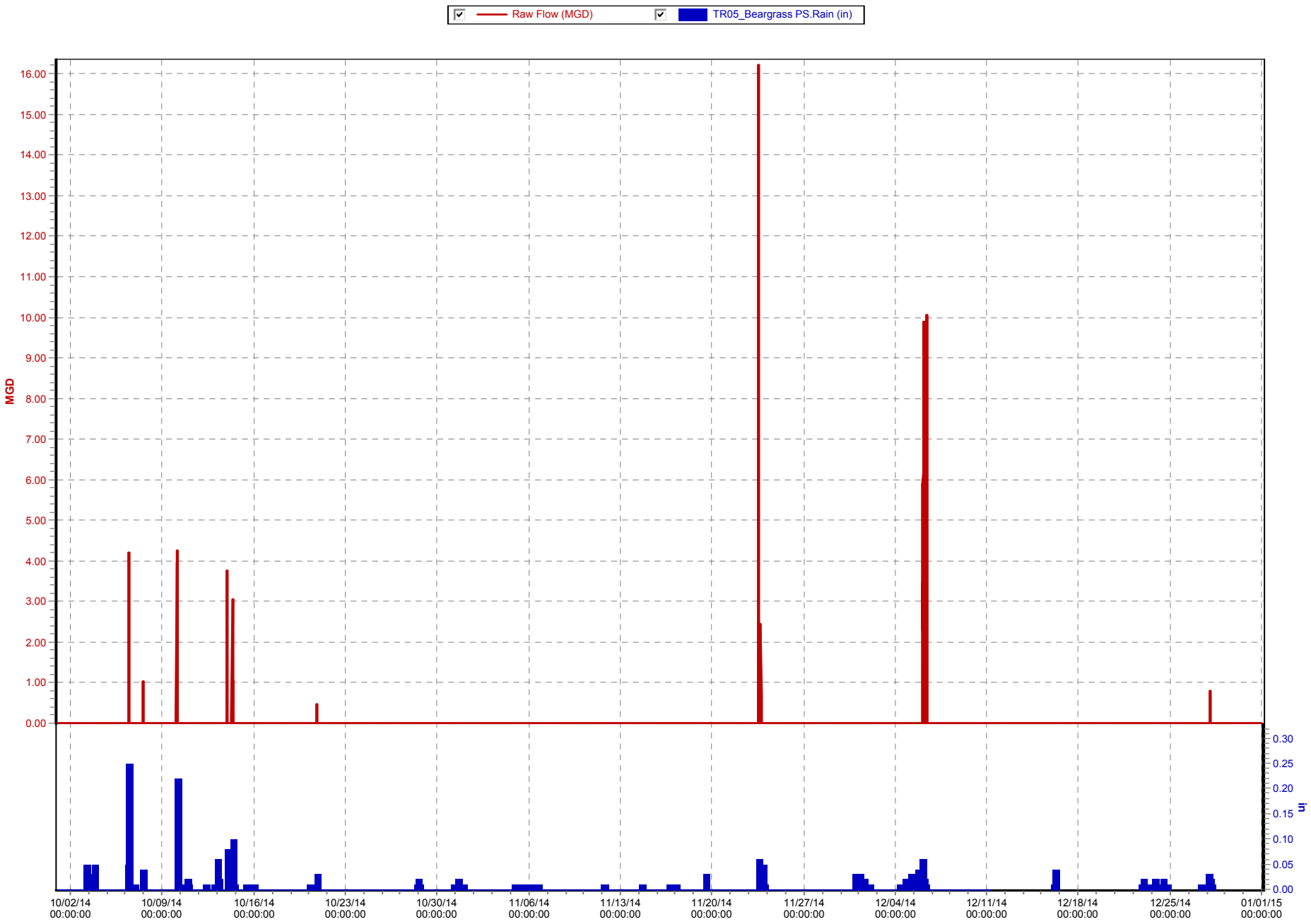

CSO130_Webster St Story Ave (10/01/14 to 01/01/15)
Final Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
2.60
2.50
2.40
2.30
2.20
2.10
2.00
1.90
1.80
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

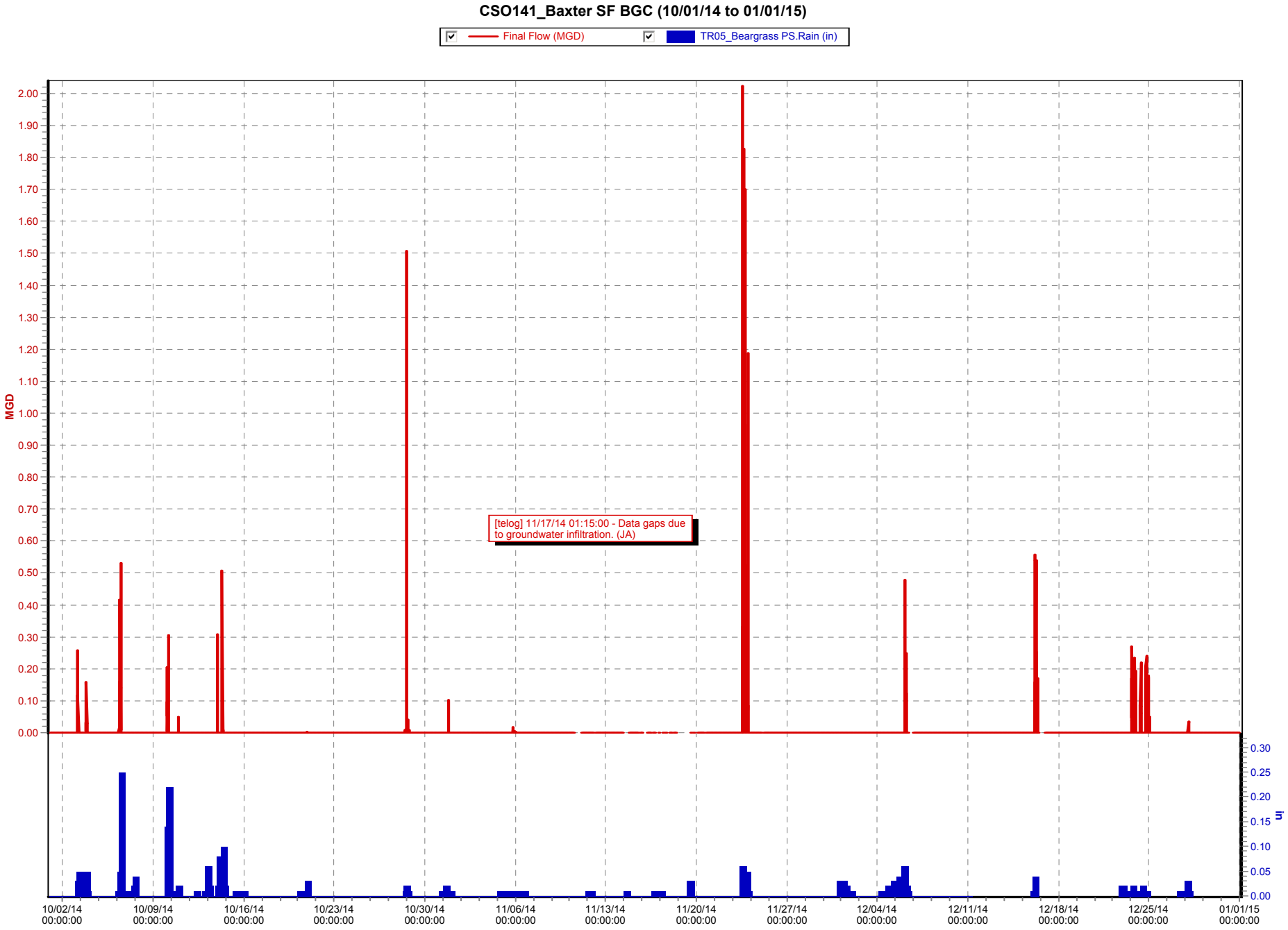

CSO131_Frankfort Ave (10/01/14 to 01/01/15)
Overflow Level (in)
TR05_Beargrass PS.Rain (in)
in
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00


CSO132_Brownsboro Rd (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR12_Nightingale PS.Rain (in)
MGD
IN
19.00
18.00
17.00
16.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

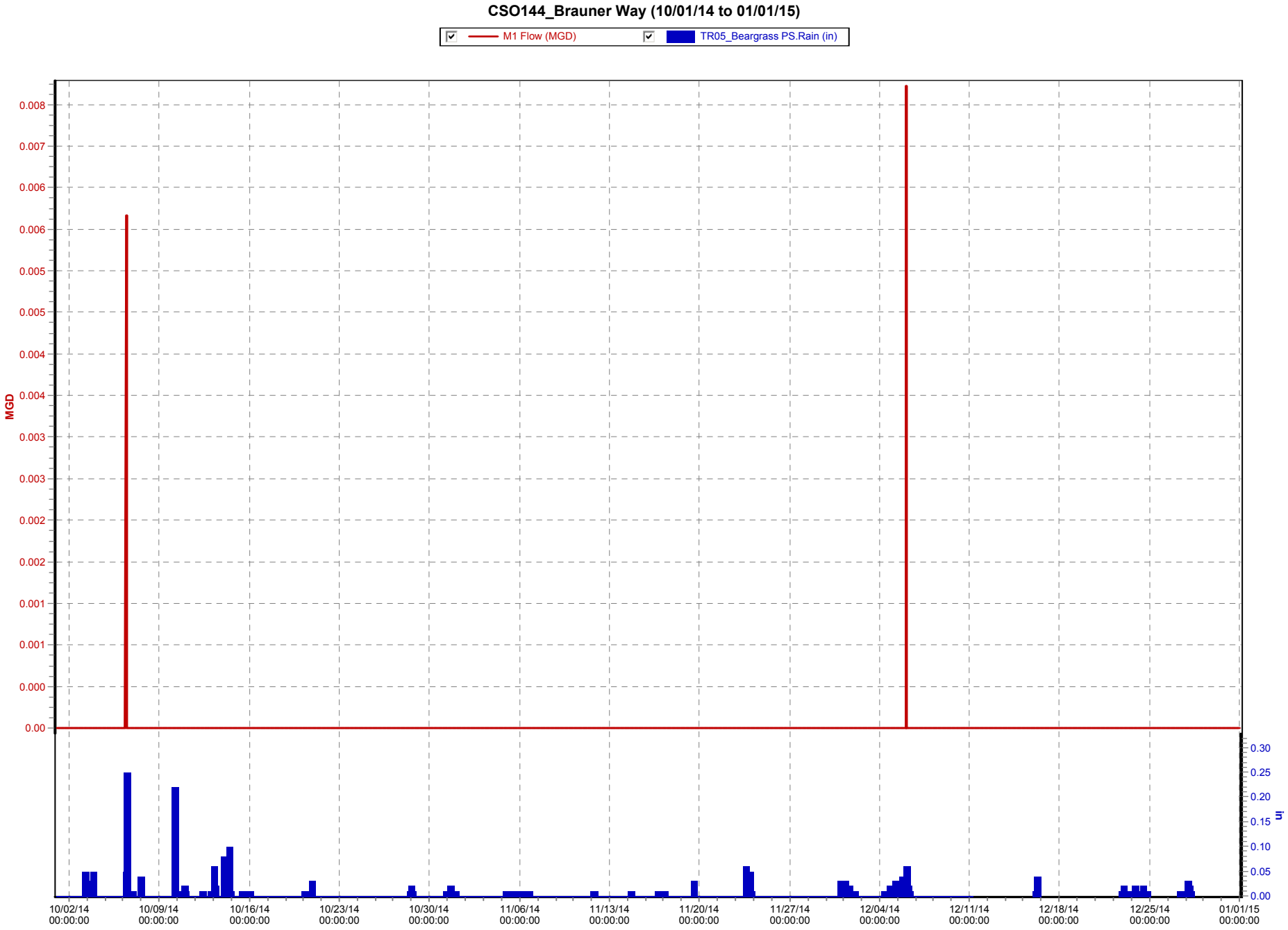

CSO137_Cavalry Cemetery (10/01/14 to 01/01/15)
Gap Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
IN
[telog] 12/13/14 00:15:00 - Gaps due to sensor malfunction
[telog] 11/20/14 12:45:00 - Gap due to battery depletion
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

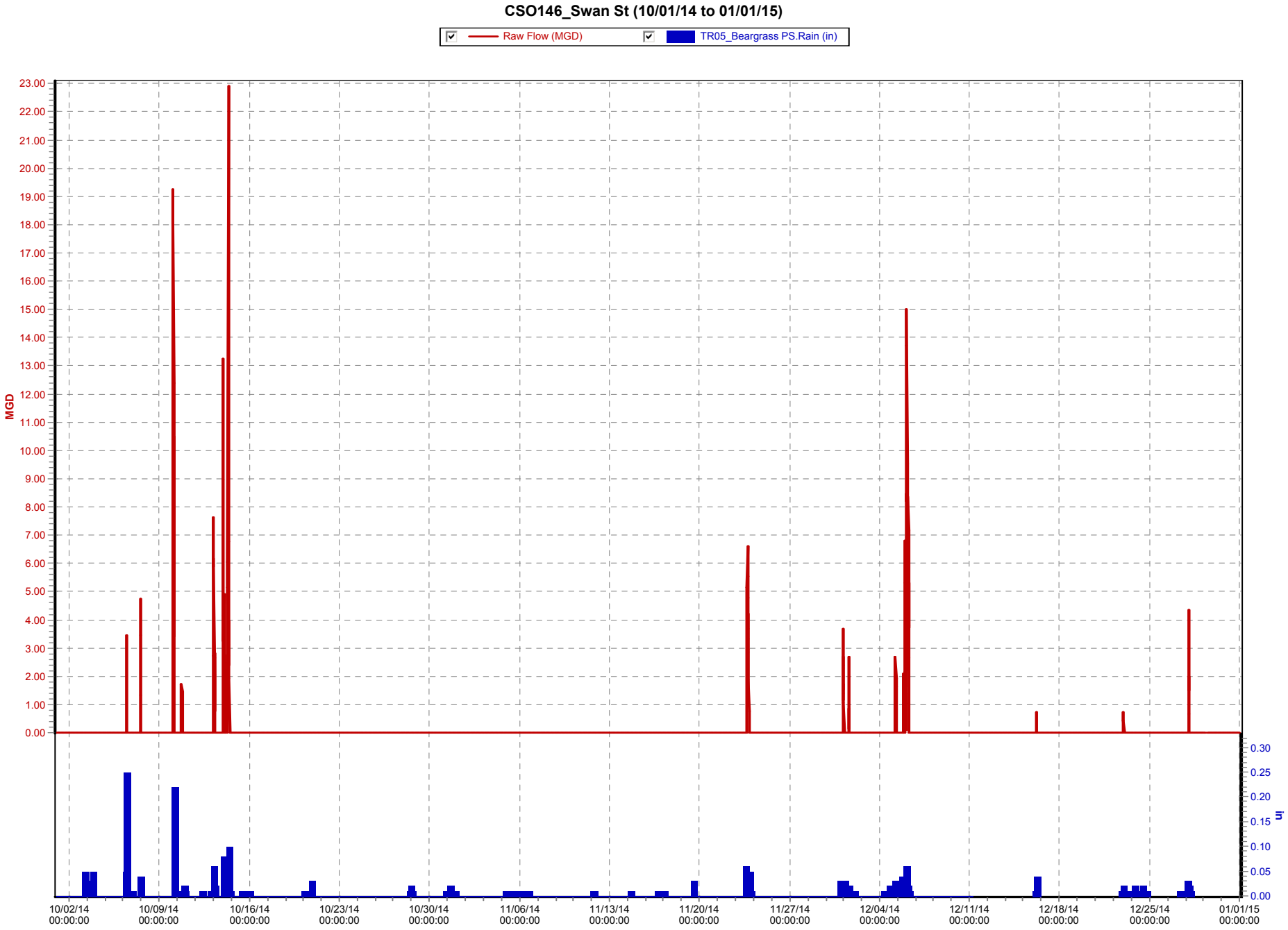
CSO140_Locust St Lobdell Alley (10/01/14 to 01/01/15)

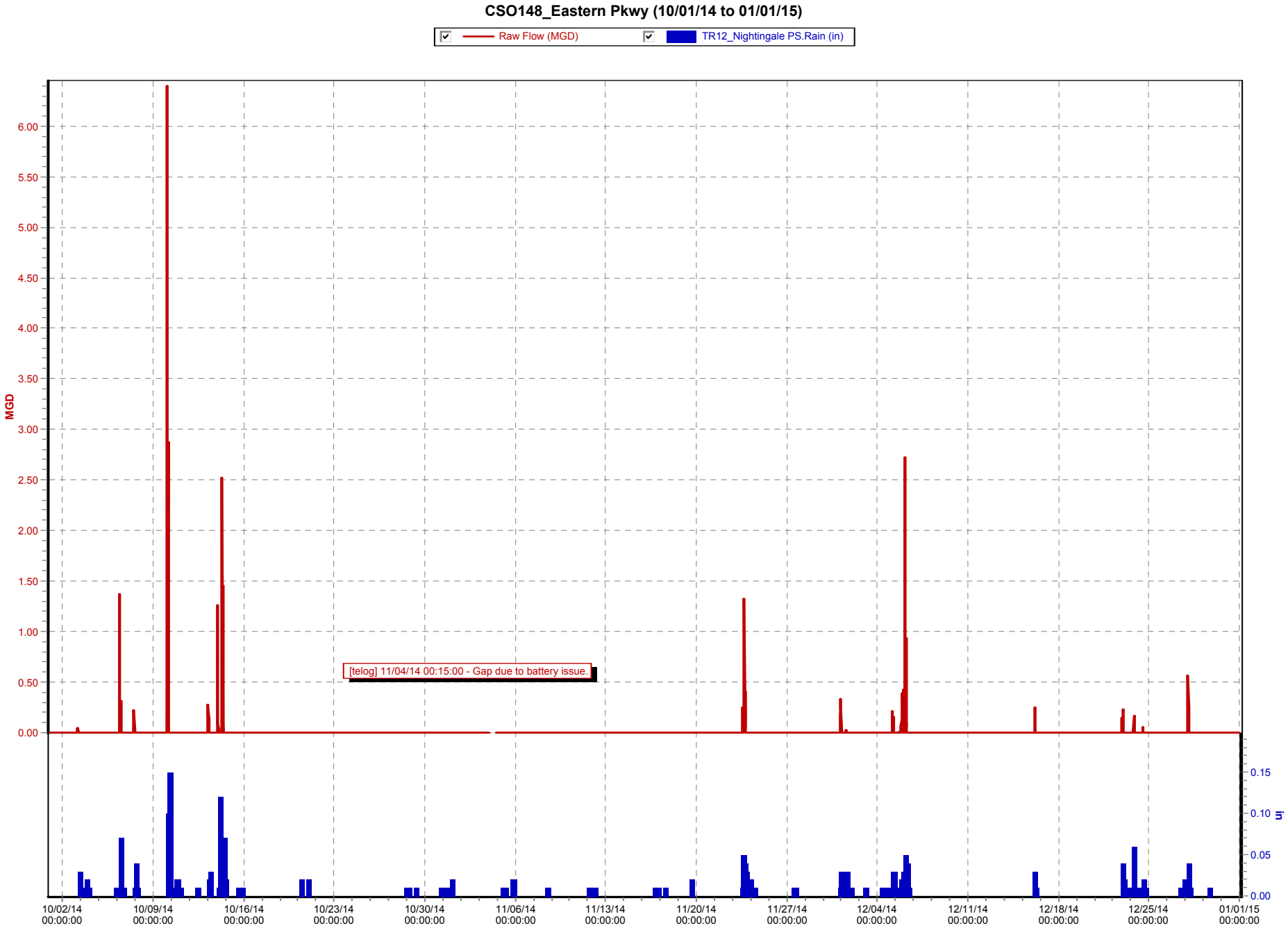



CSO141_Baxter SF BGC (10/01/14 to 01/01/15)
Final Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
[telog] 11/17/14 01:15:00 - Data gaps due to groundwater infiltration. (JA)
2.00
1.90
1.80
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

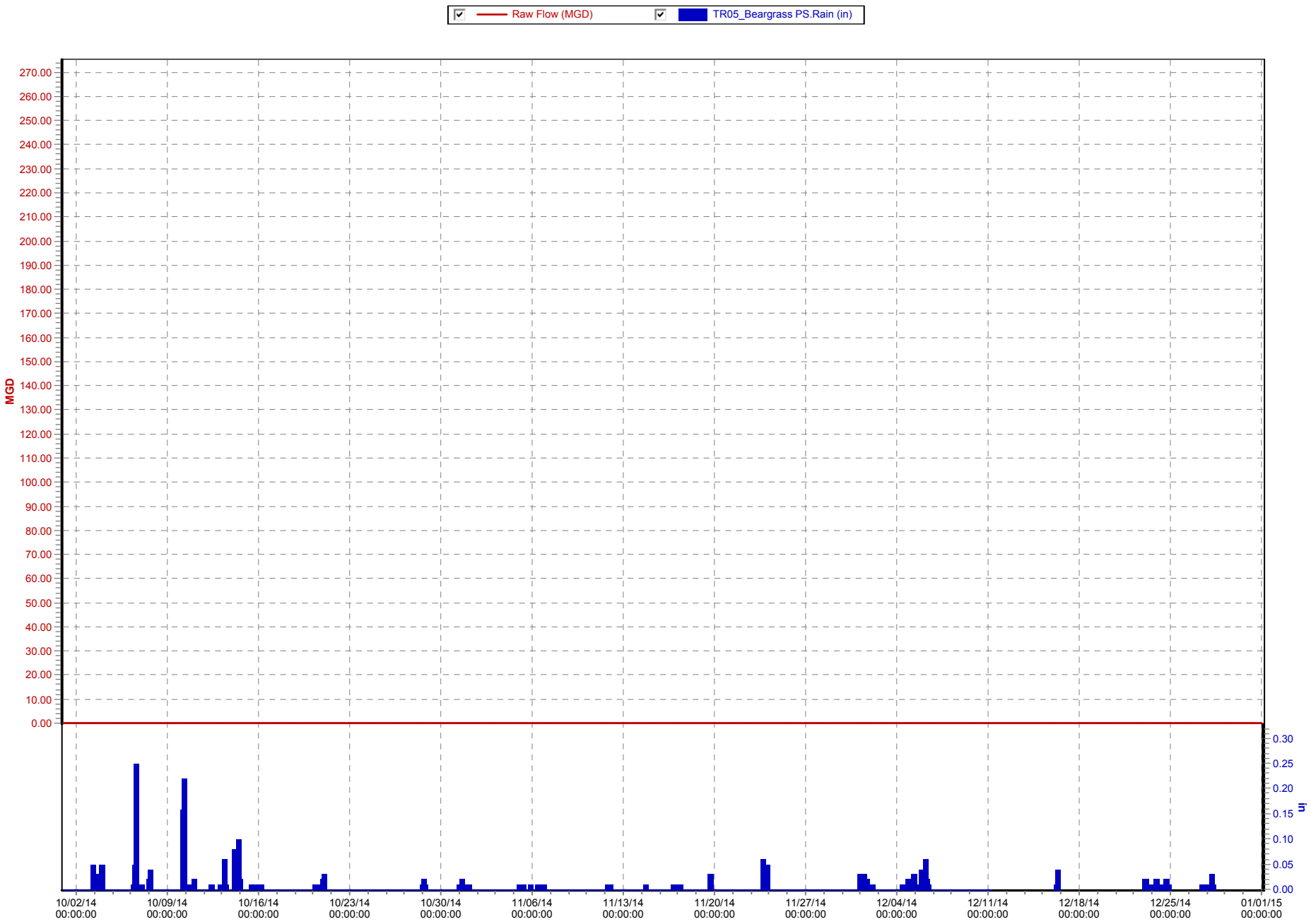
CSO142_Logan St Catherine (10/01/14 to 01/01/15)

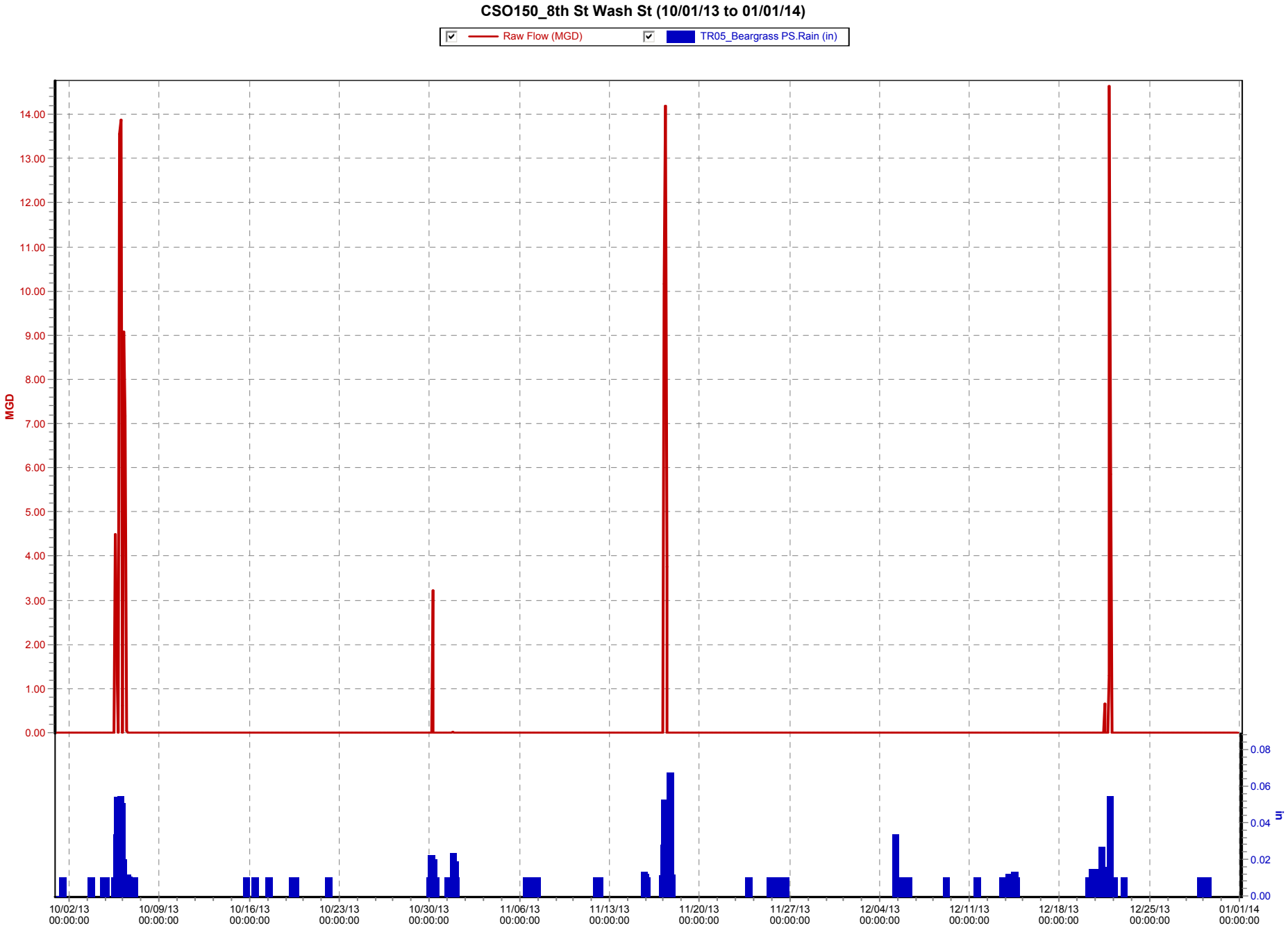

CSO144_Brauner Way (10/01/14 to 01/01/15)
M1 Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
0.008
0.007
0.006
0.006
0.005
0.005
0.004
0.004
0.003
0.003
0.002
0.002
0.001
0.001
0.000
0.00
in
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

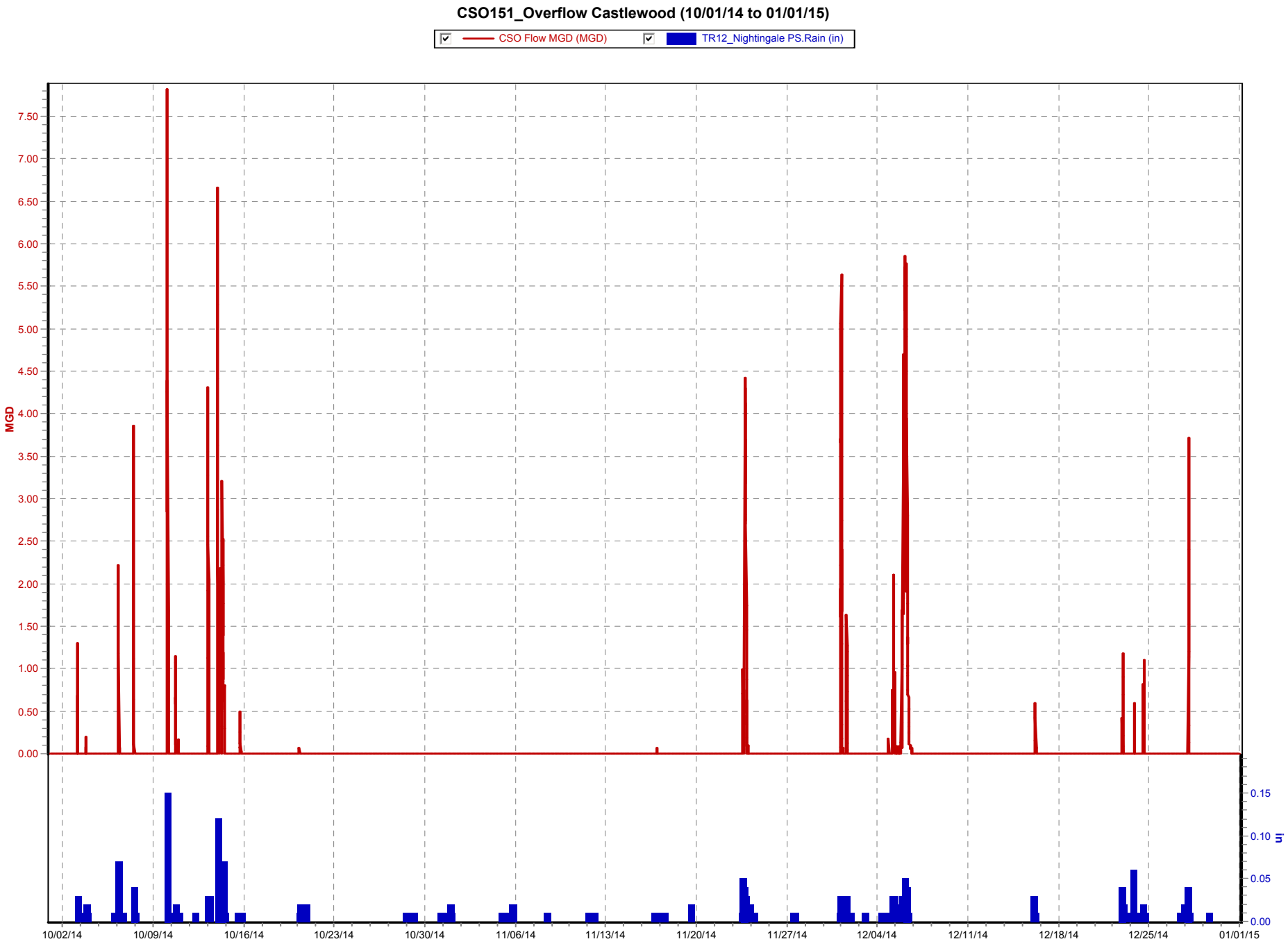

CSO146_Swan St (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
23.00
22.00
21.00
20.00
19.00
18.00
17.00
16.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

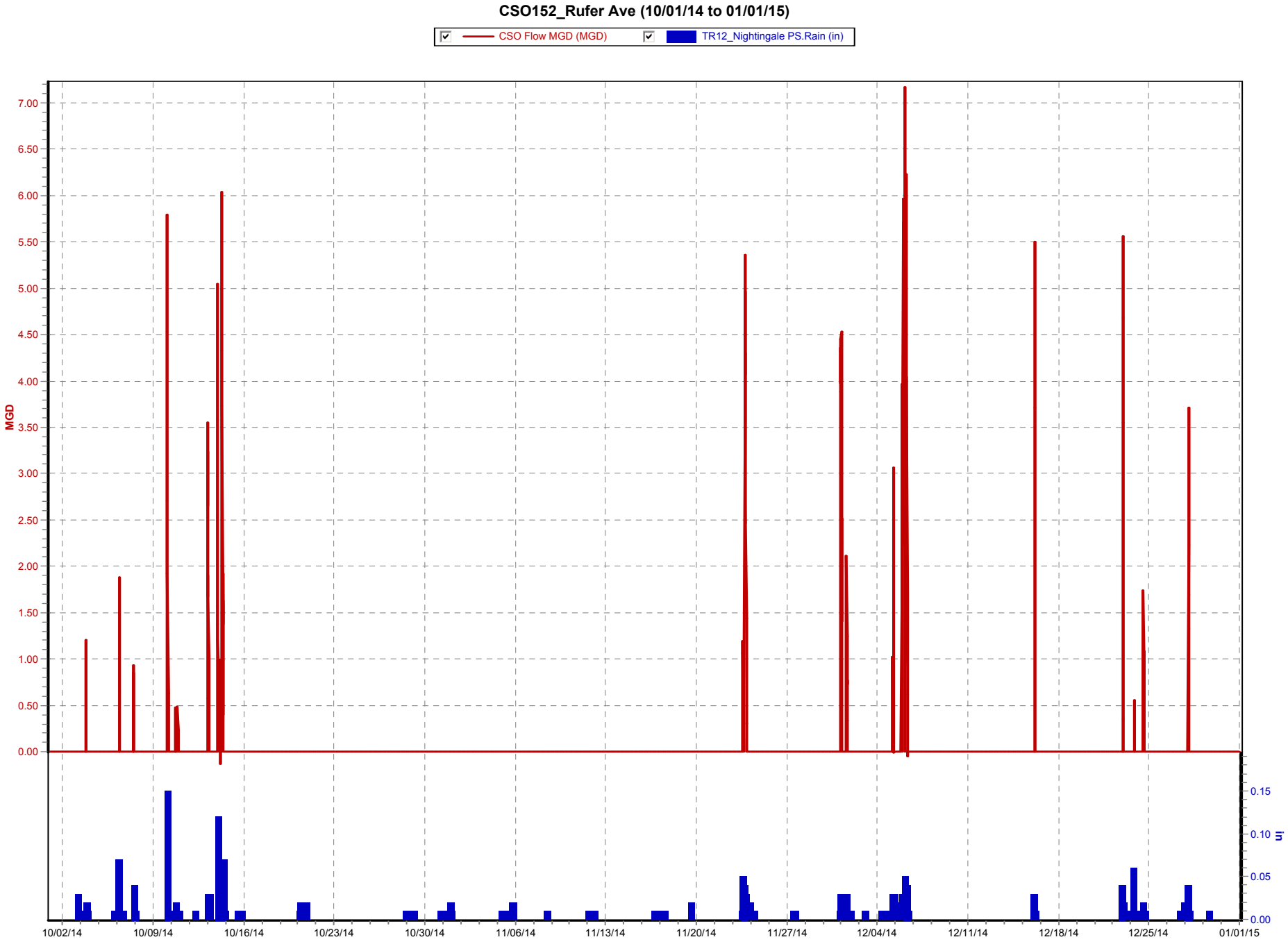

CSO148_Eastern Pkwy (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR12_Nightingale PS.Rain (in)
MGD
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
[telog] 11/04/14 00:15:00 - Gap due to battery issue.
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

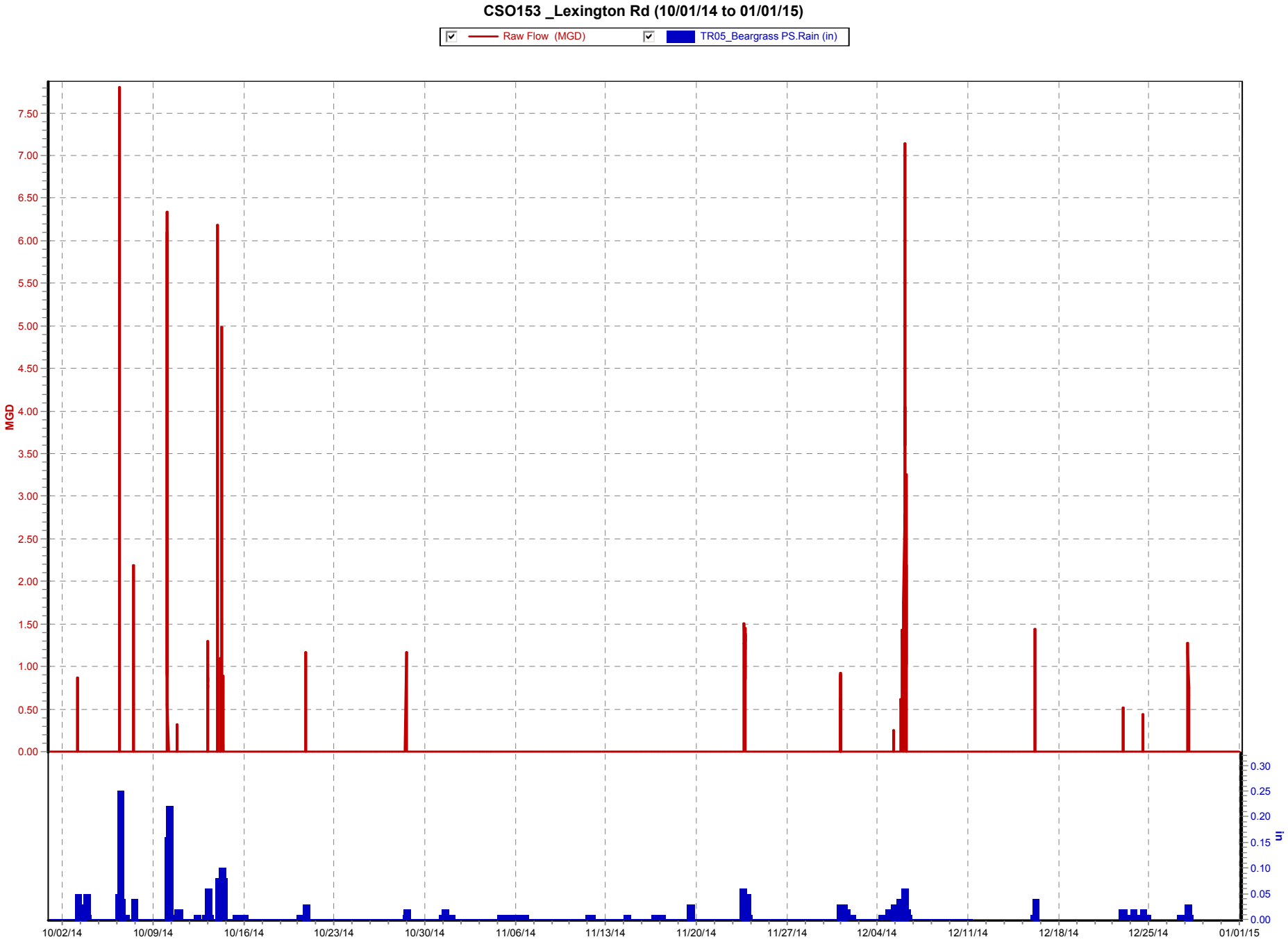
CSO149 KY St_St Paul Ct (10/01/14 to 01/01/15)

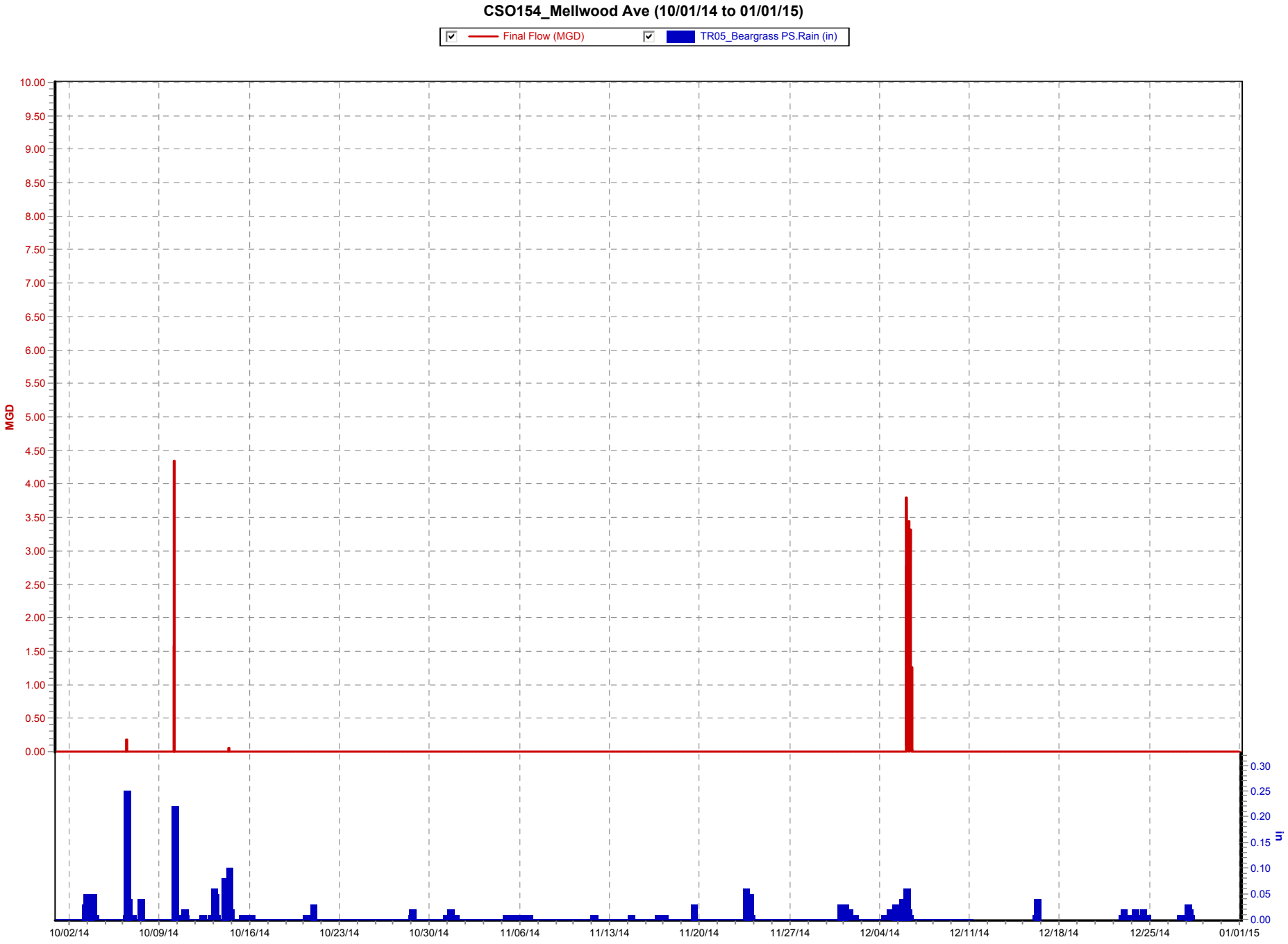


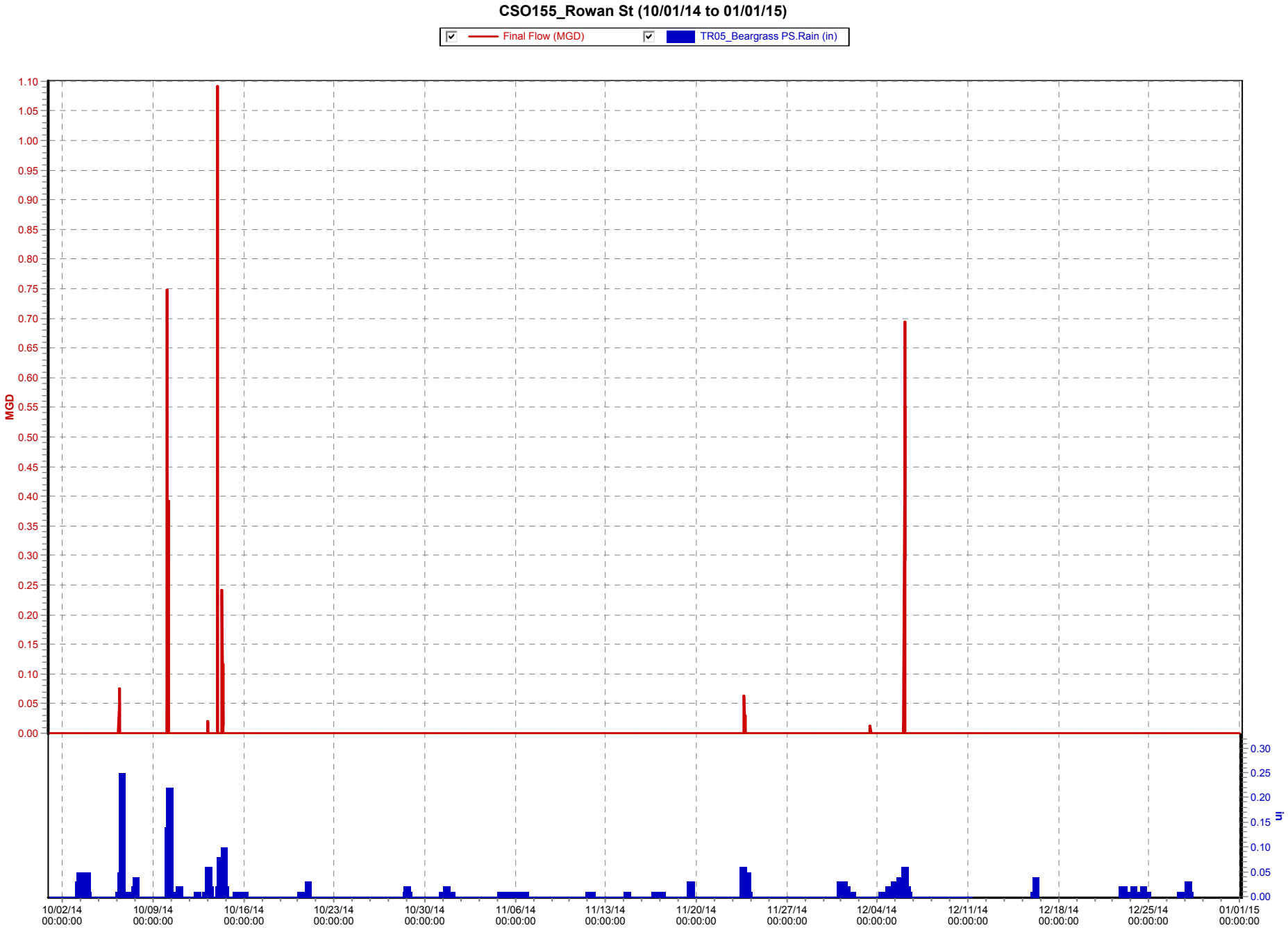

CSO150_8th St Wash St (10/01/13 to 01/01/14)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.08
0.06
0.04
0.02
0.00
10/02/13 00:00:00
10/09/13 00:00:00
10/16/13 00:00:00
10/23/13 00:00:00
10/30/13 00:00:00
11/06/13 00:00:00
11/13/13 00:00:00
11/20/13 00:00:00
11/27/13 00:00:00
12/04/13 00:00:00
12/11/13 00:00:00
12/18/13 00:00:00
12/25/13 00:00:00
01/01/14 00:00:00

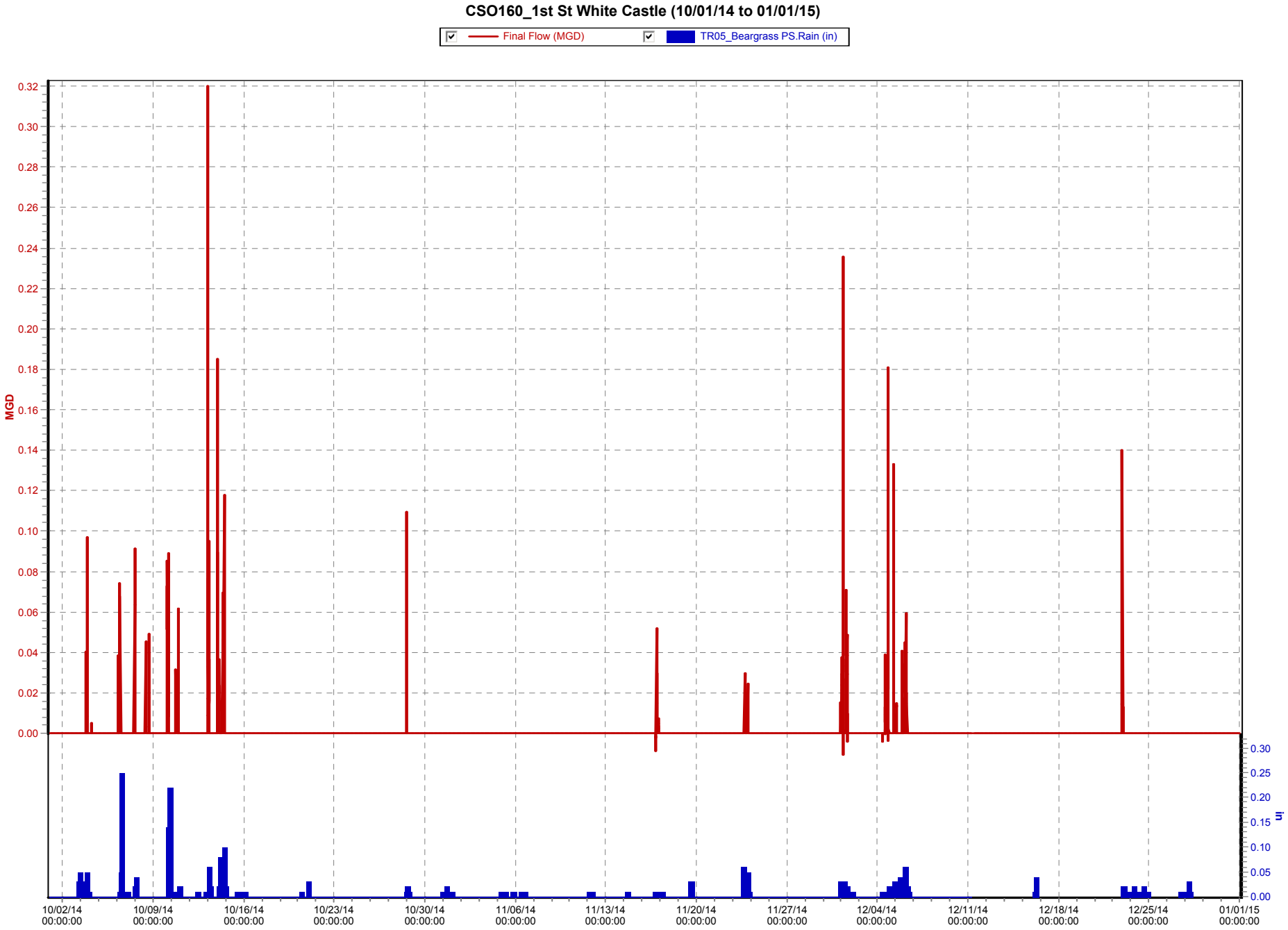

CSO151_Overflow Castlewood (10/01/14 to 01/01/15)
CSO Flow MGD (MGD)
TR12_Nightingale PS.Rain (in)
MGD
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.15
0.10
0.05
0.00
in
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15

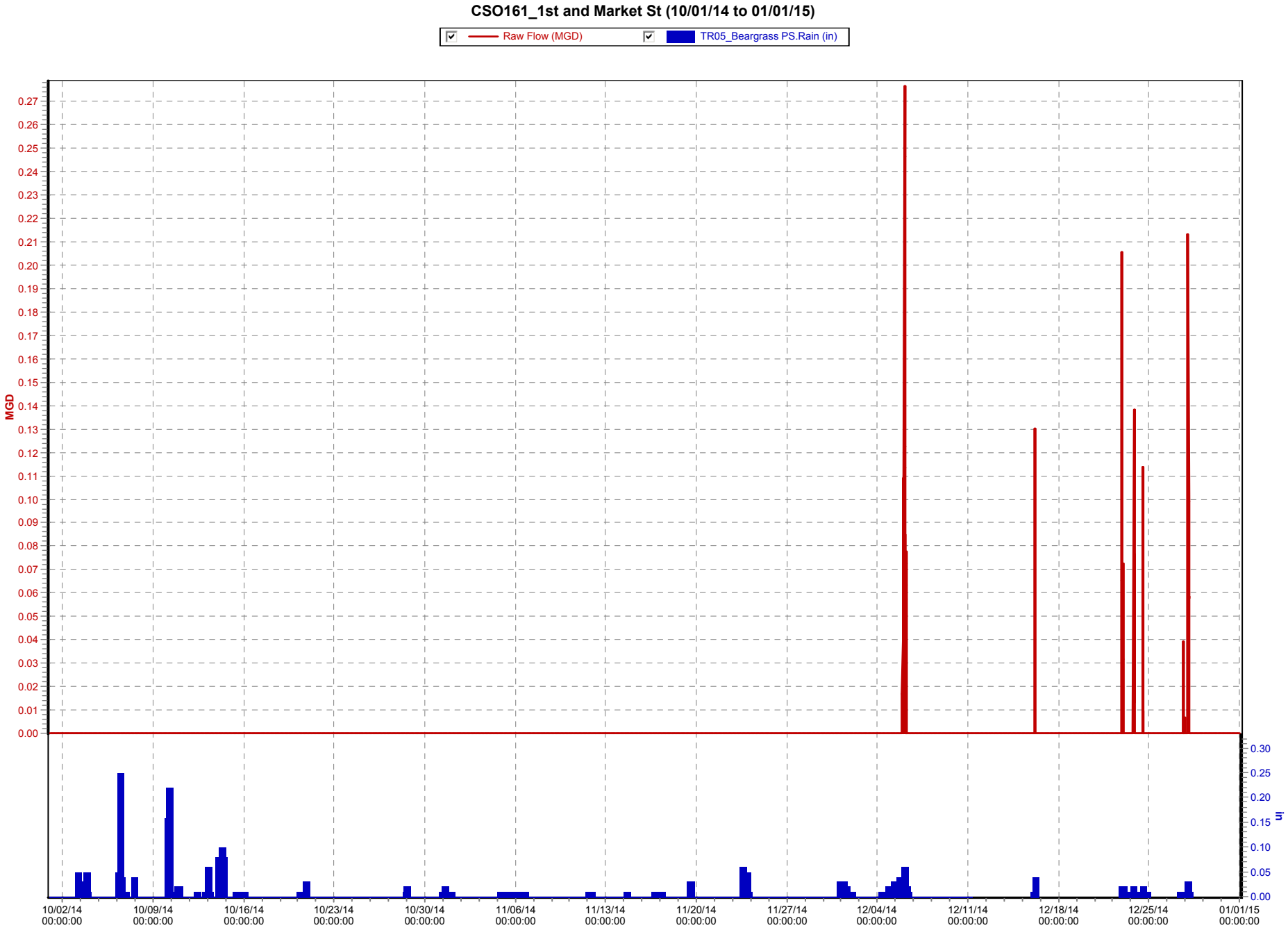

CSO152_Rufer Ave (10/01/14 to 01/01/15)
CSO Flow MGD (MGD)
TR12_Nightingale PS.Rain (in)
MGD
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
in
0.15
0.10
0.05
0.00
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15

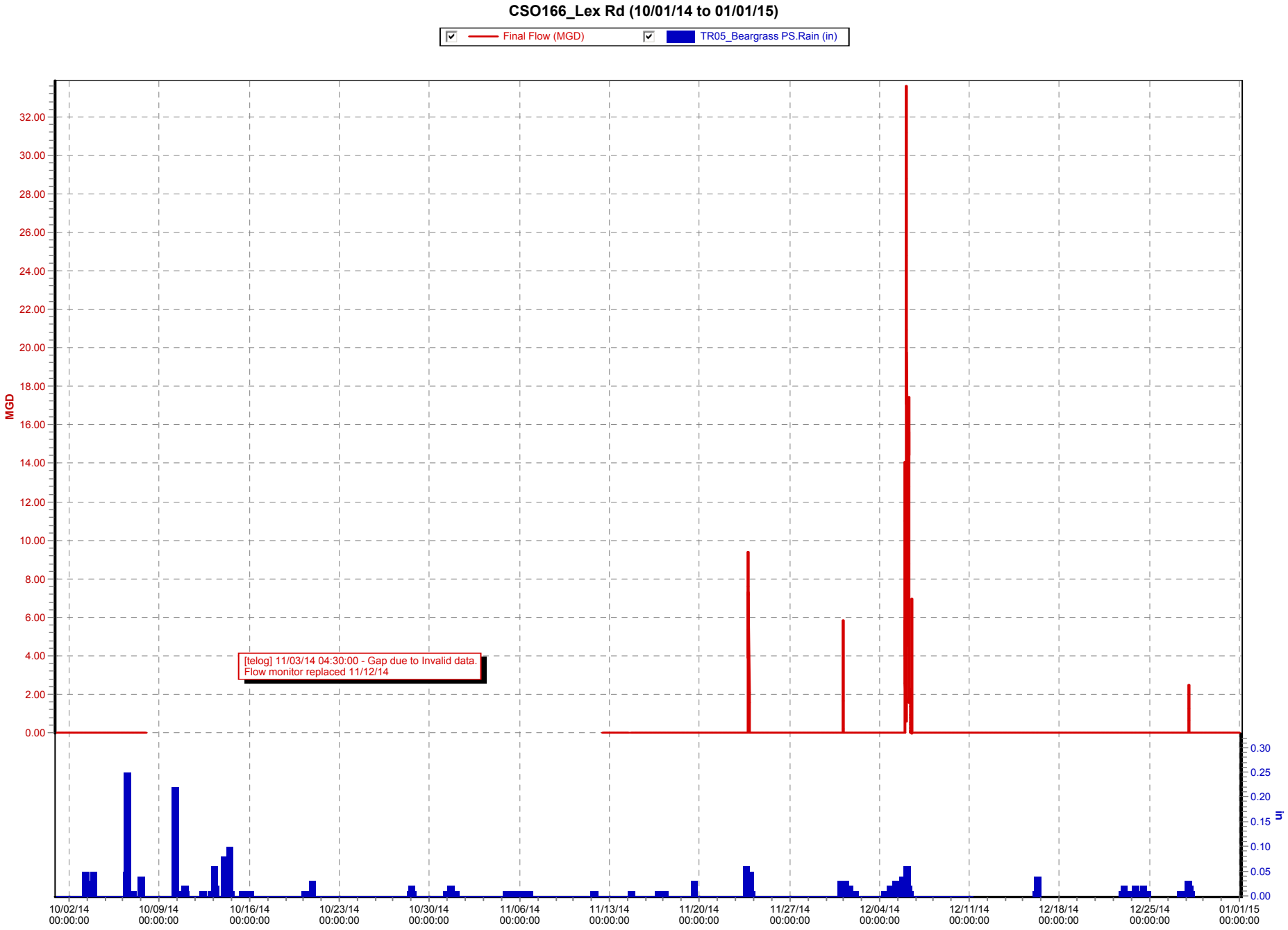

CSO153 _Lexington Rd (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15

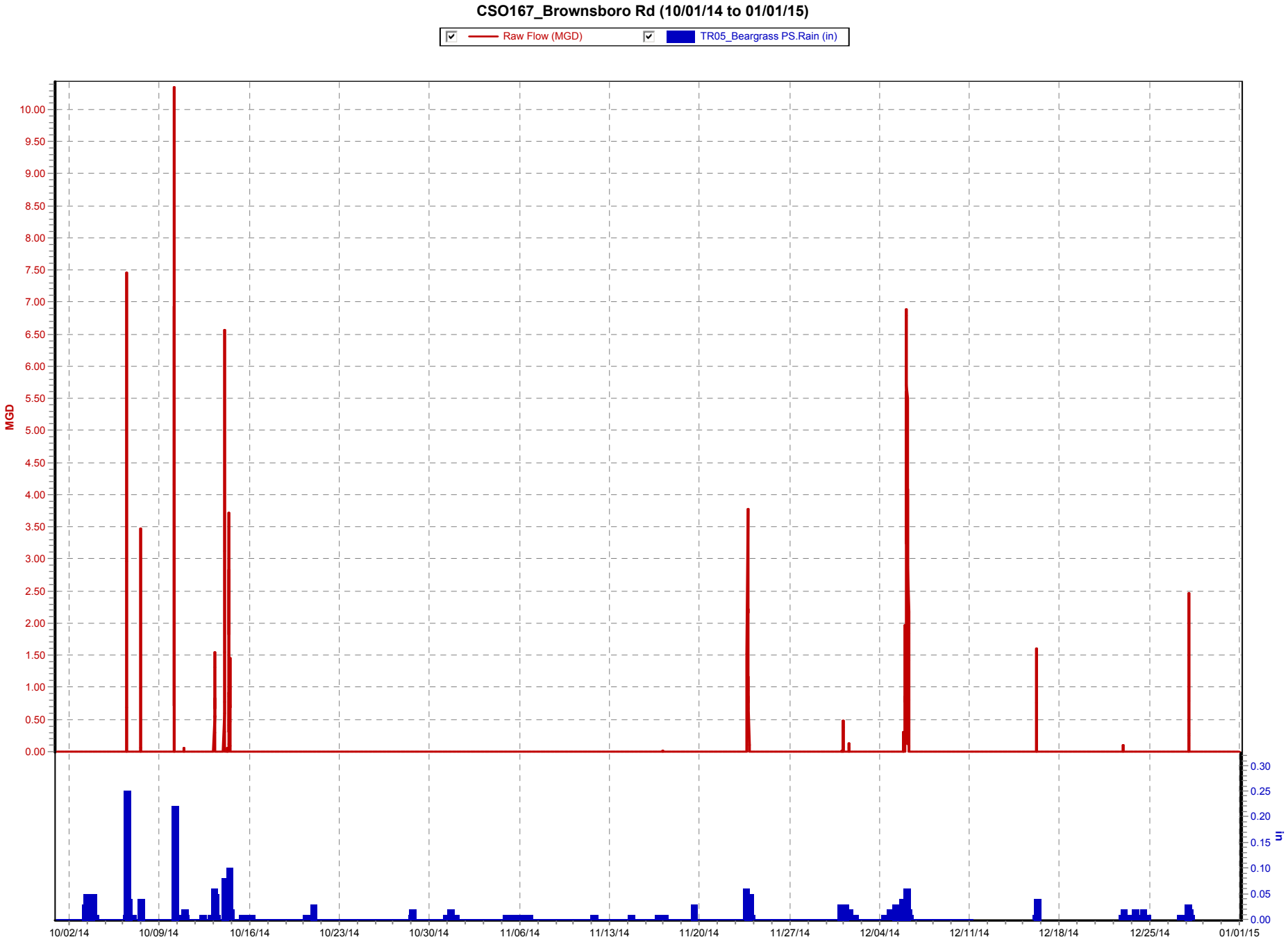

CSO154_Mellwood Ave (10/01/14 to 01/01/15)
Final Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15

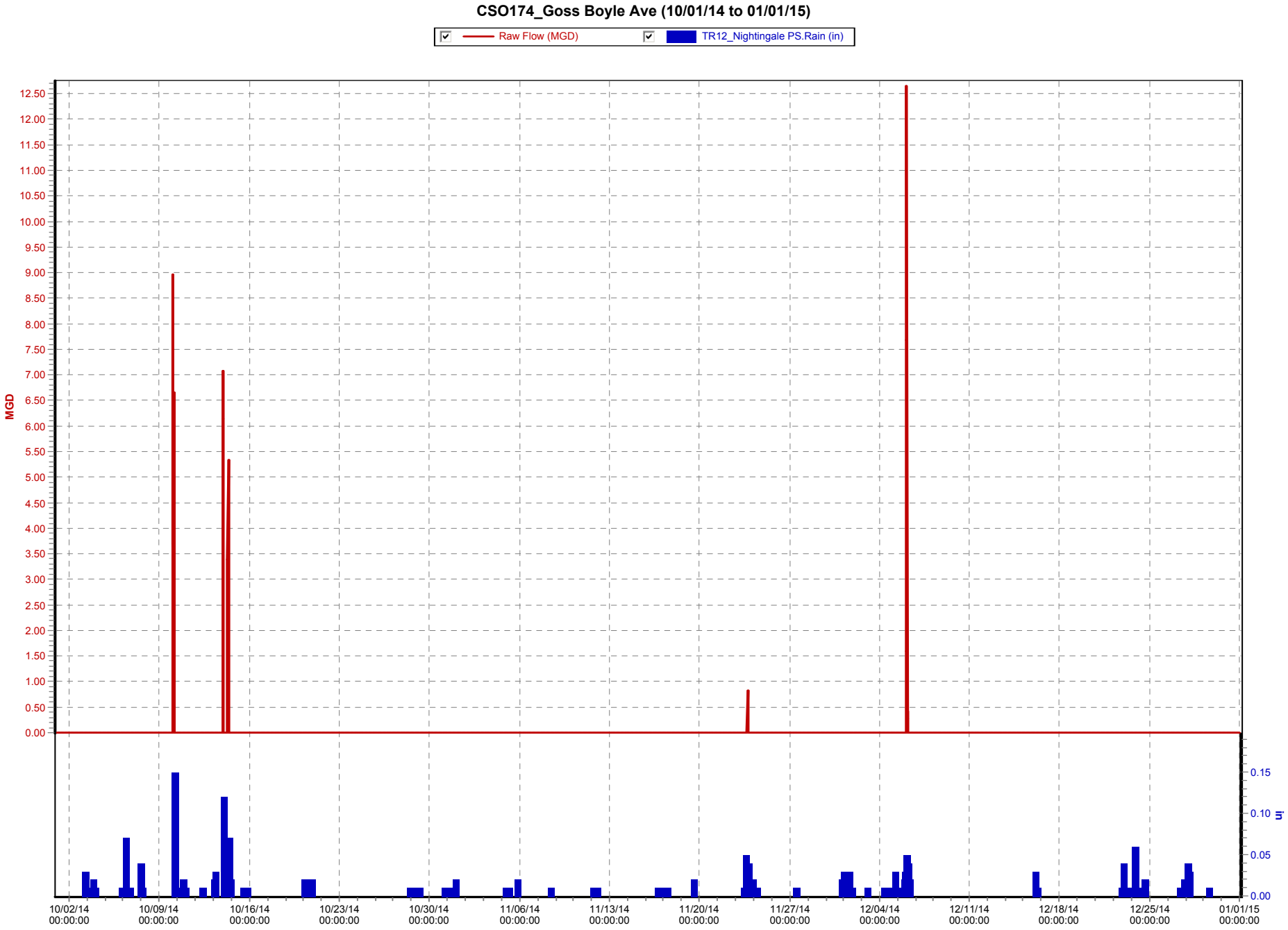

CSO155_Rowan St (10/01/14 to 01/01/15)
Final Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
1.10
1.05
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00


CSO160_1st St White Castle (10/01/14 to 01/01/15)
Final Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
0.32
0.30
0.28
0.26
0.24
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

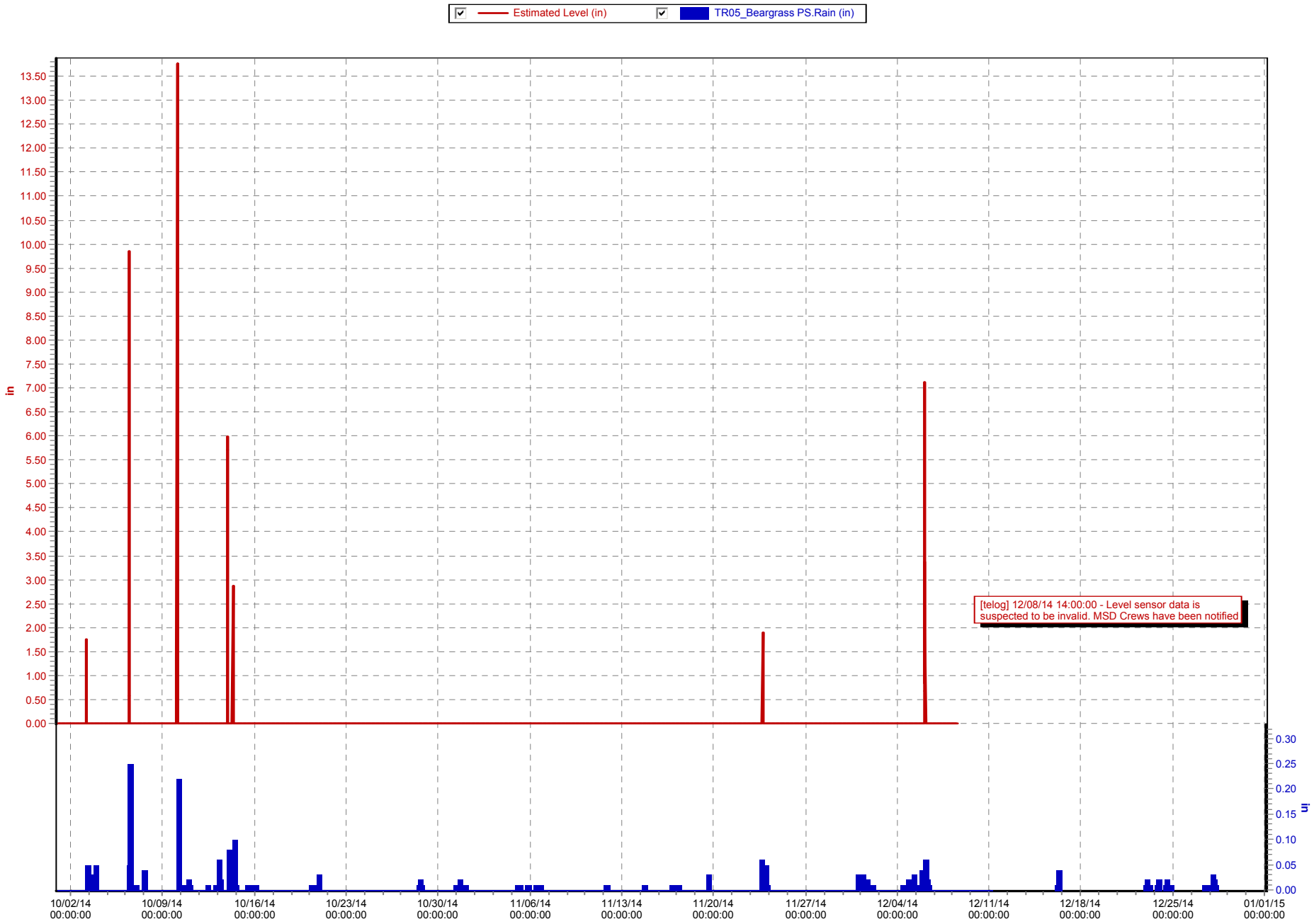

CSO161_1st and Market St (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
0.27
0.26
0.25
0.24
0.23
0.22
0.21
0.20
0.19
0.18
0.17
0.16
0.15
0.14
0.13
0.12
0.11
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
in
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

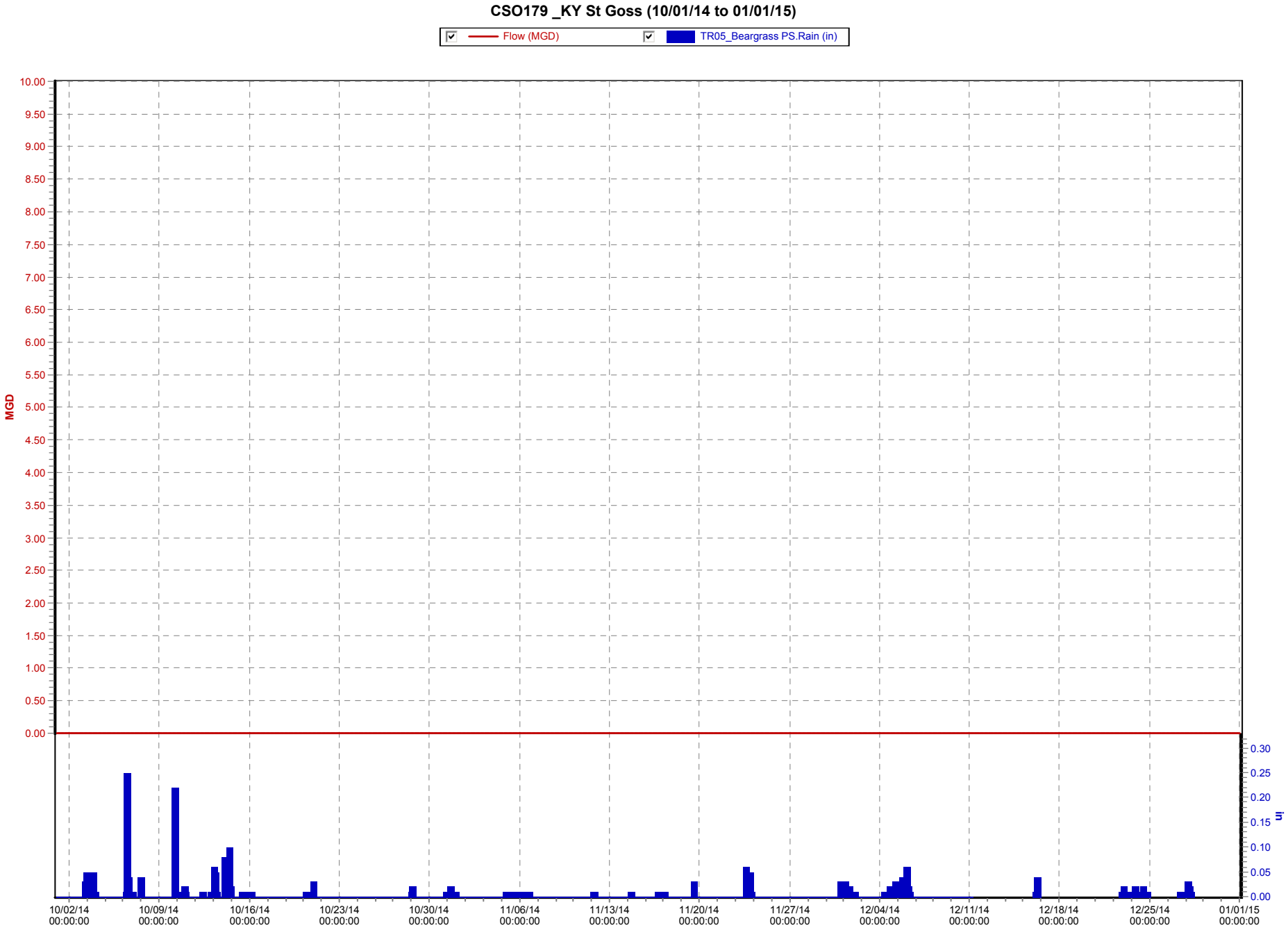

CSO166_Lex Rd (10/01/14 to 01/01/15)
Final Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
[telog] 11/03/14 04:30:00 - Gap due to Invalid data.
Flow monitor replaced 11/12/14
32.00
30.00
28.00
26.00
24.00
22.00
20.00
18.00
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

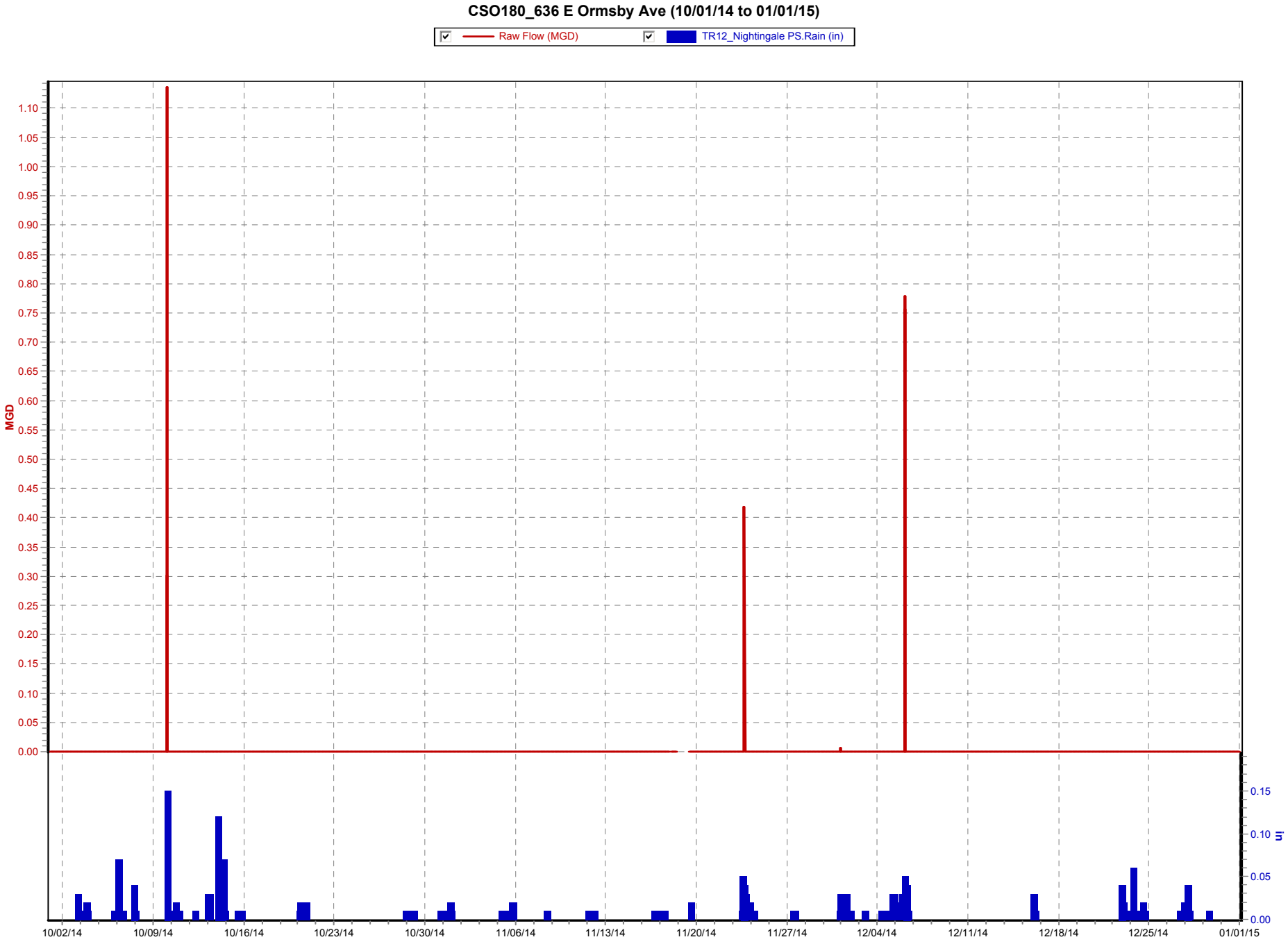

CSO167_Brownsboro Rd (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
in
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15


CSO174_Goss Boyle Ave (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR12_Nightingale PS.Rain (in)
MGD
IN
12.50
12.00
11.50
11.00
10.50
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

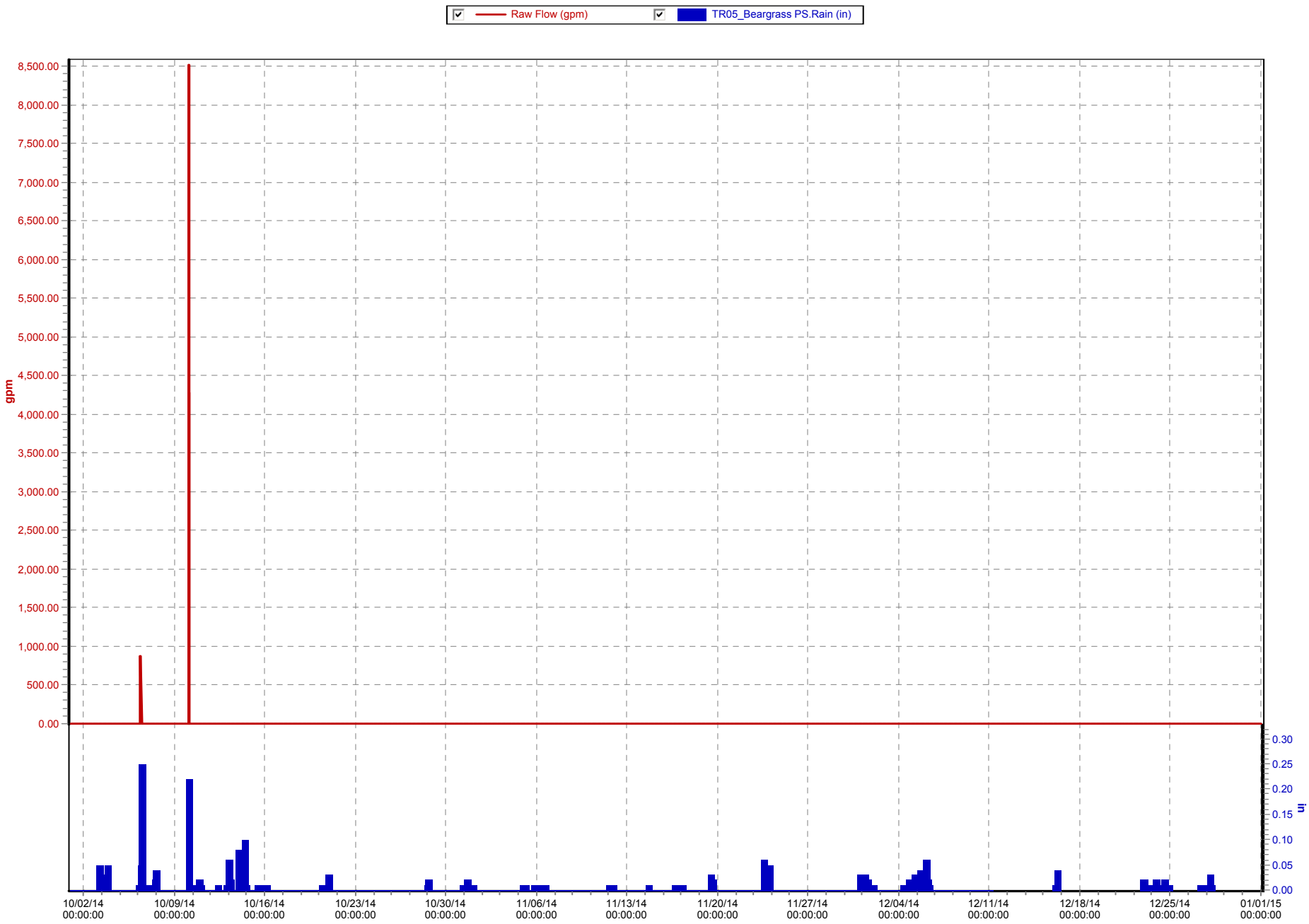
CSO178_CSO Upstream (10/01/14 to 01/01/15)

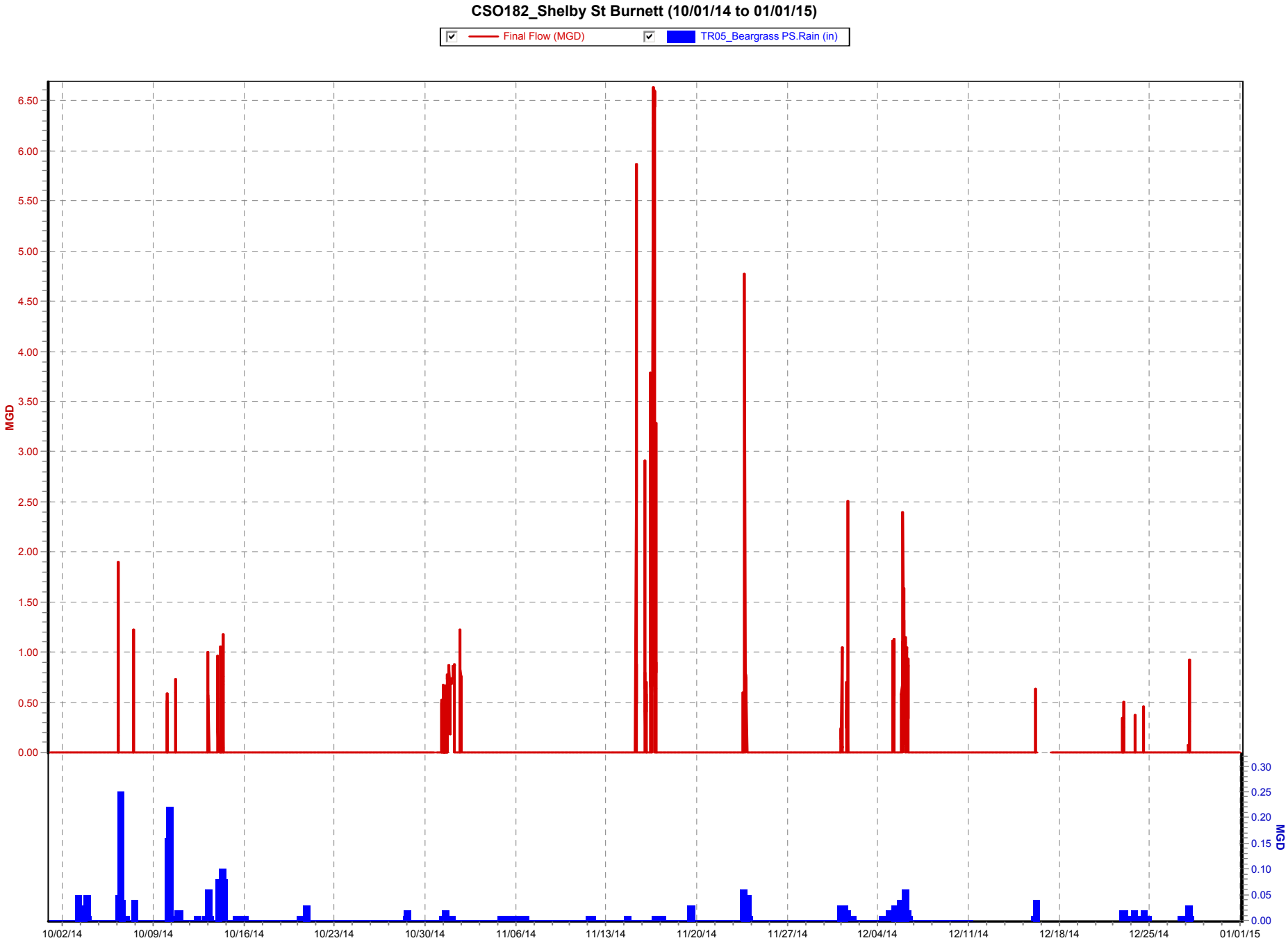


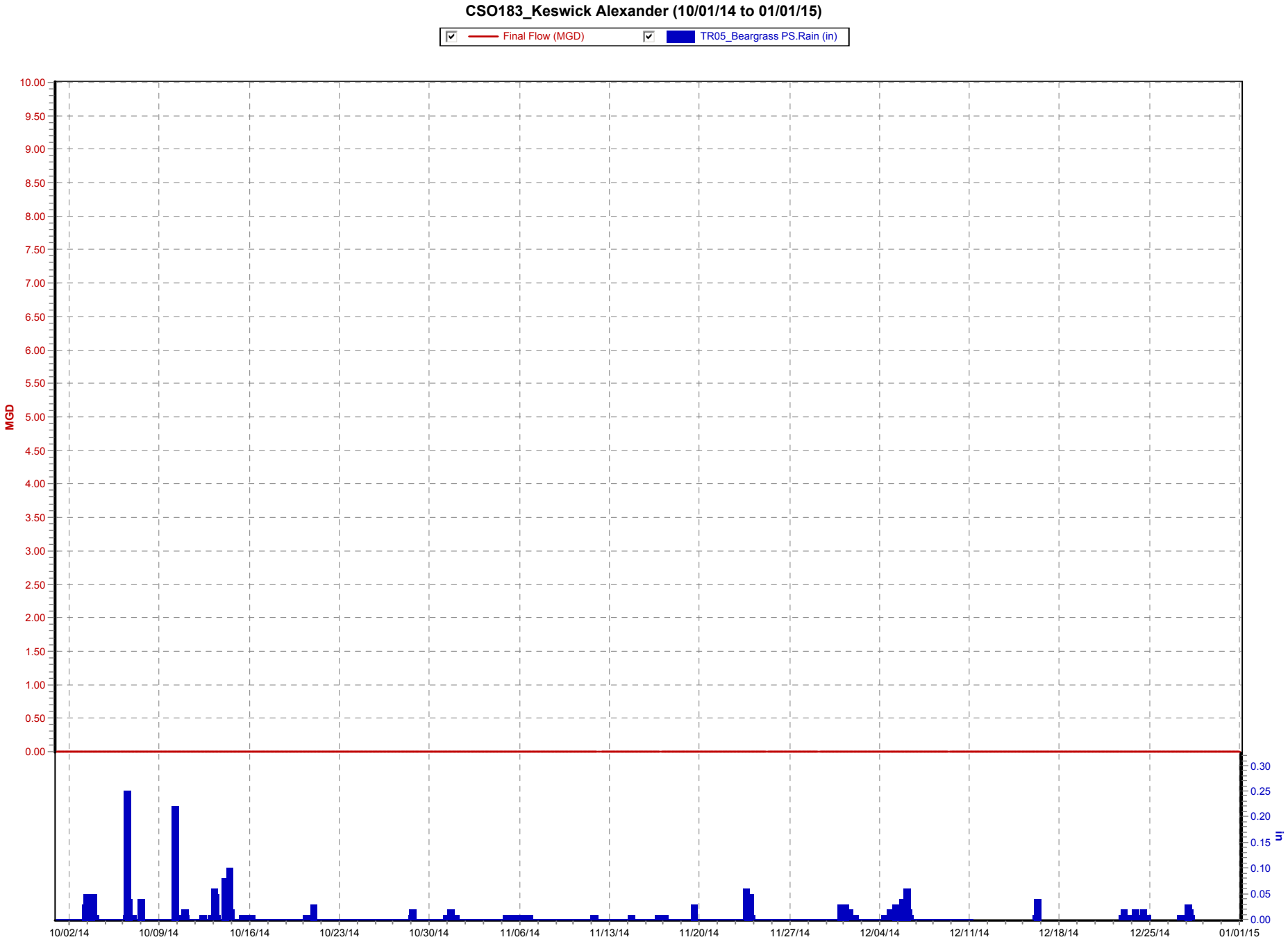

CSO179 _KY St Goss (10/01/14 to 01/01/15)
Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

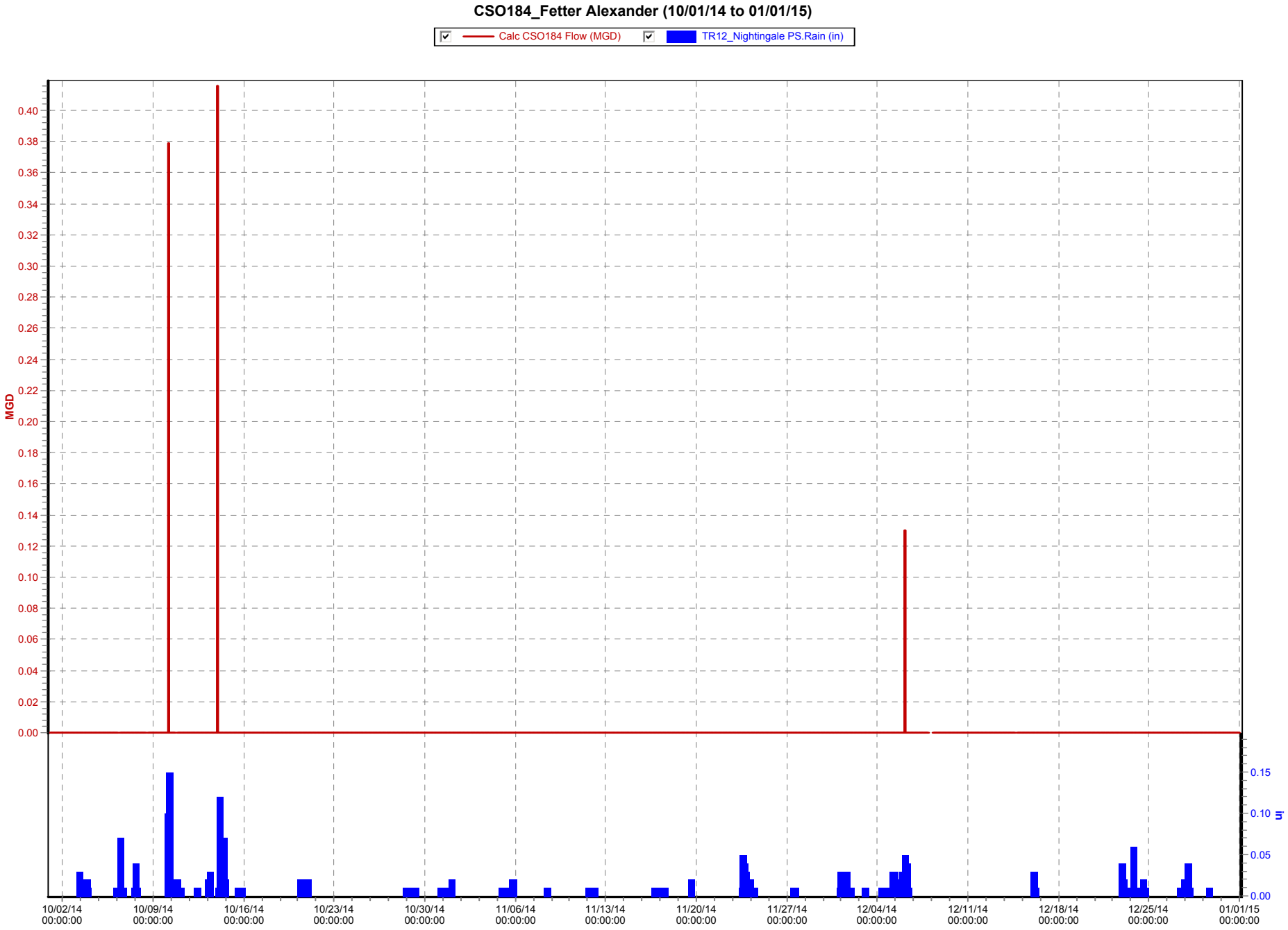

CSO180_636 E Ormsby Ave (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR12_Nightingale PS.Rain (in)
MGD
1.10
1.05
1.00
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.15
0.10
0.05
0.00
in
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15

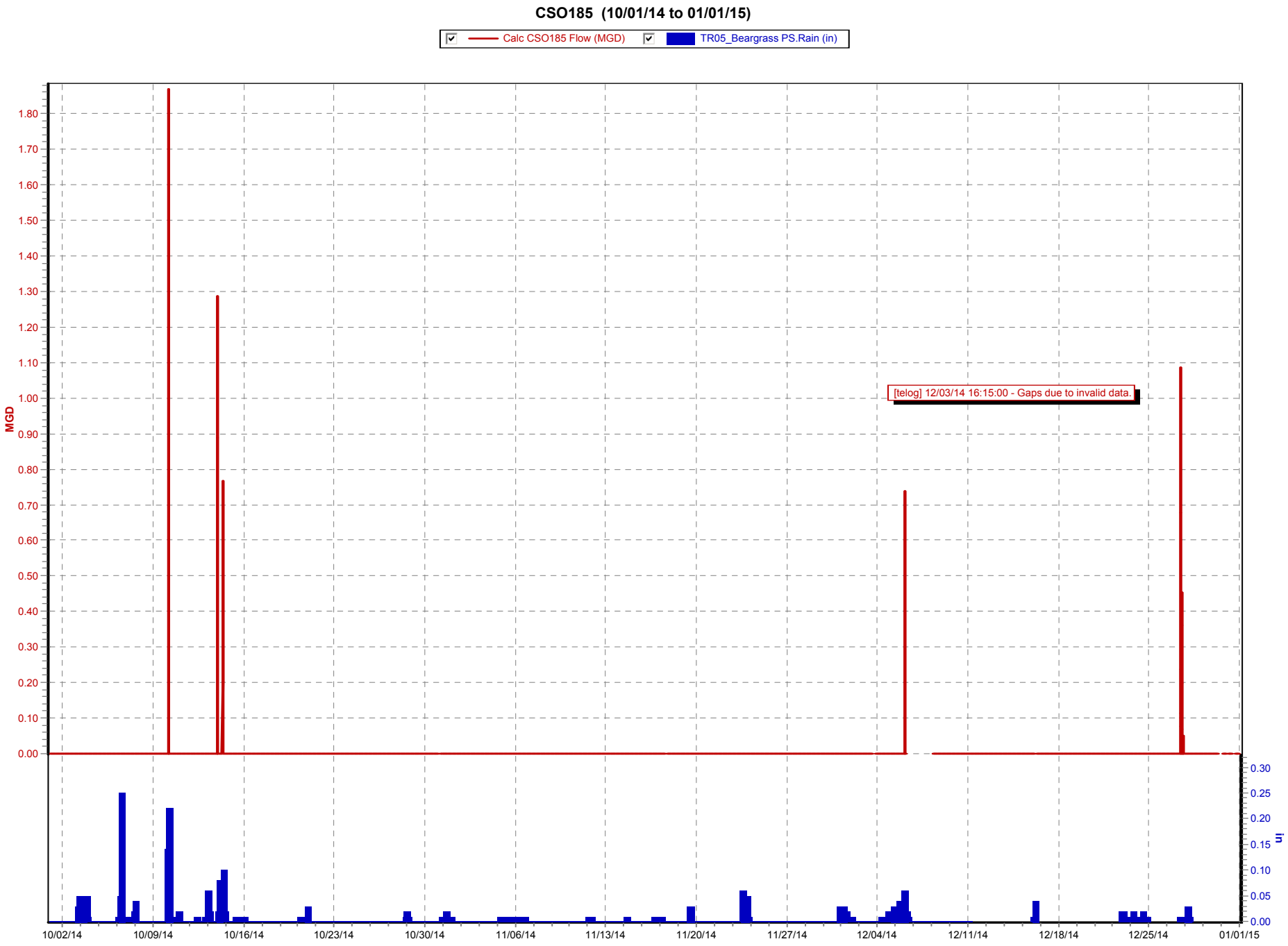
CSO181_2nd St Broadway (10/01/14 to 01/01/15)

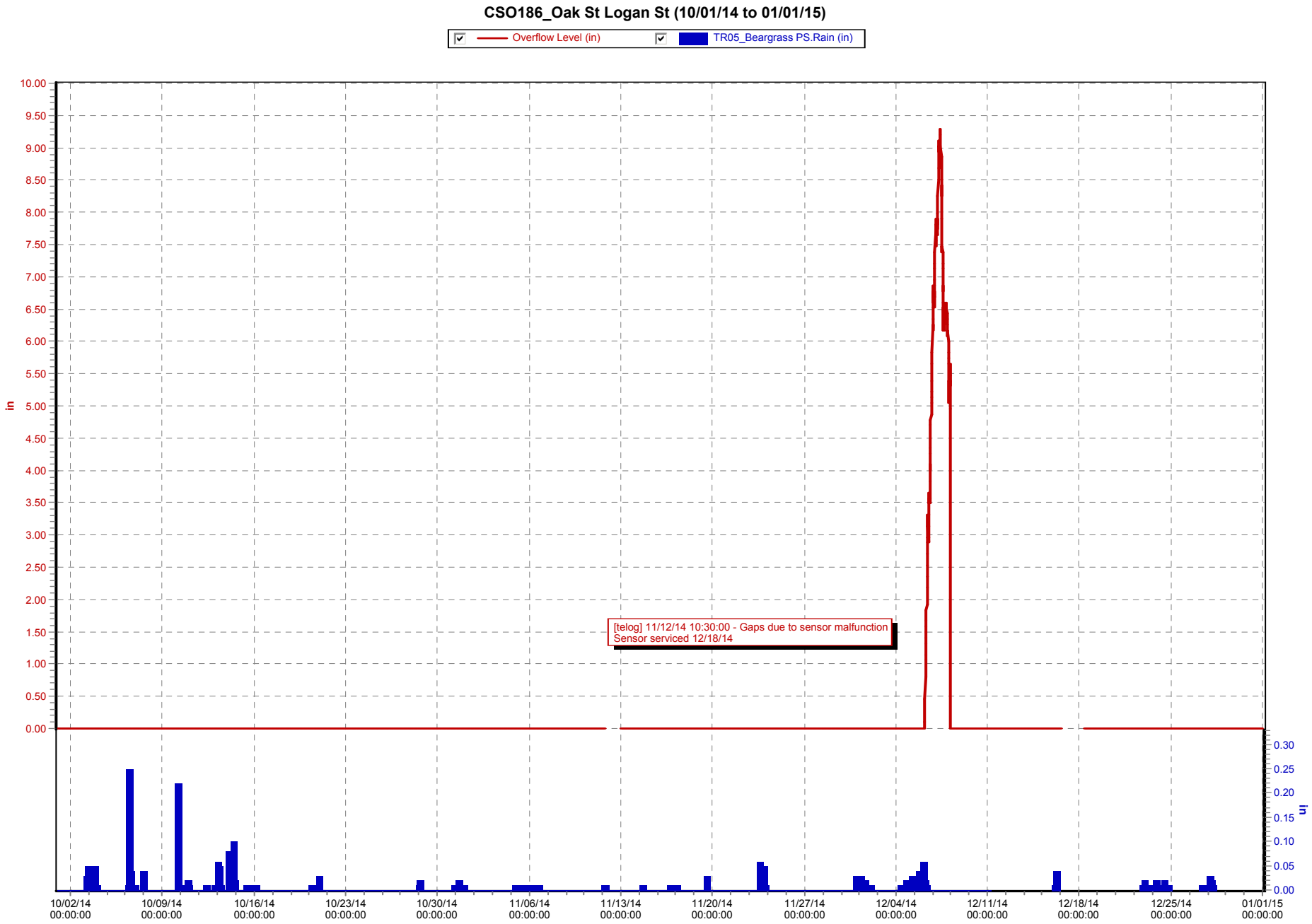


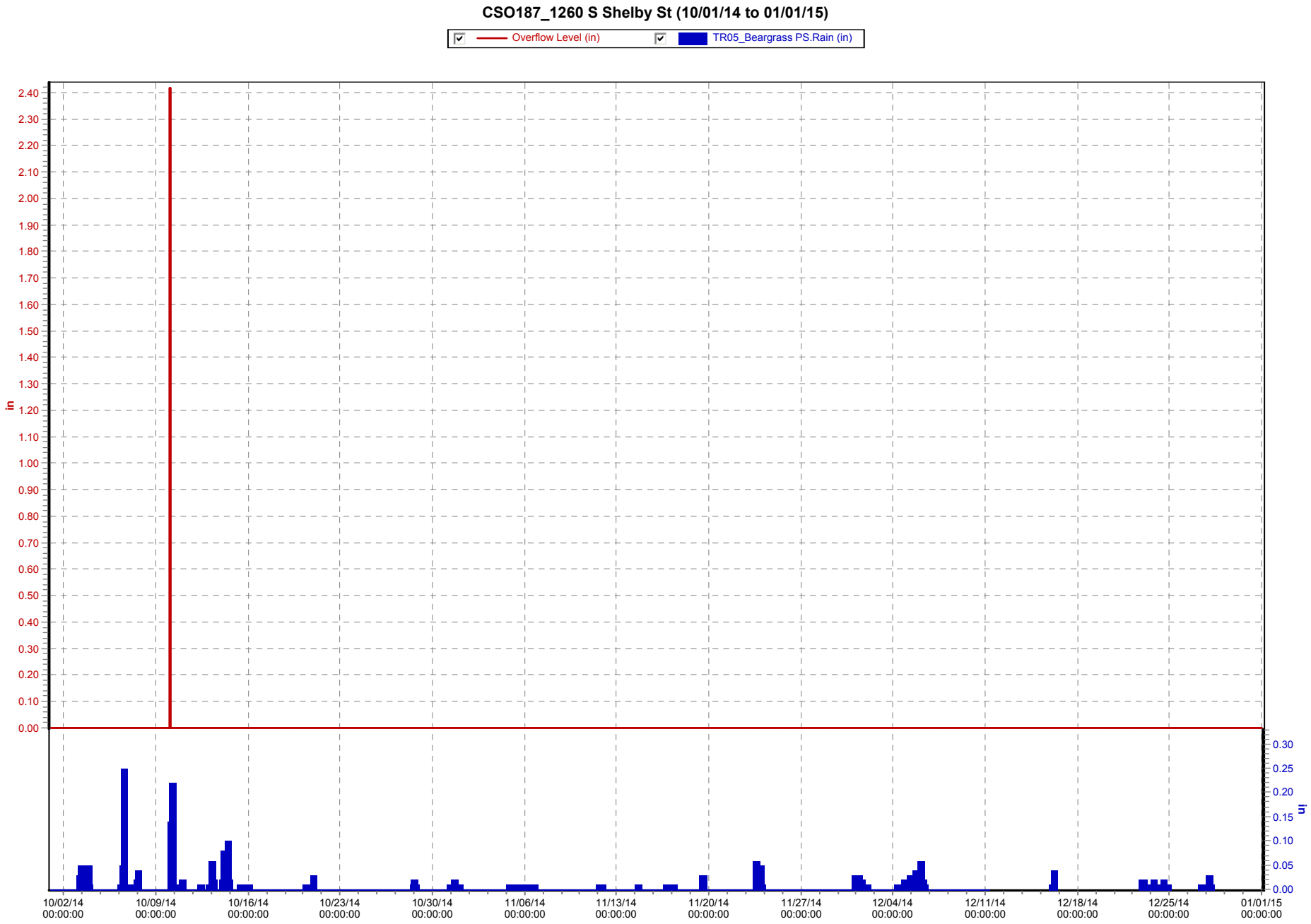

CSO182_Shelby St Burnett (10/01/14 to 01/01/15)
Final Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
MGD
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15

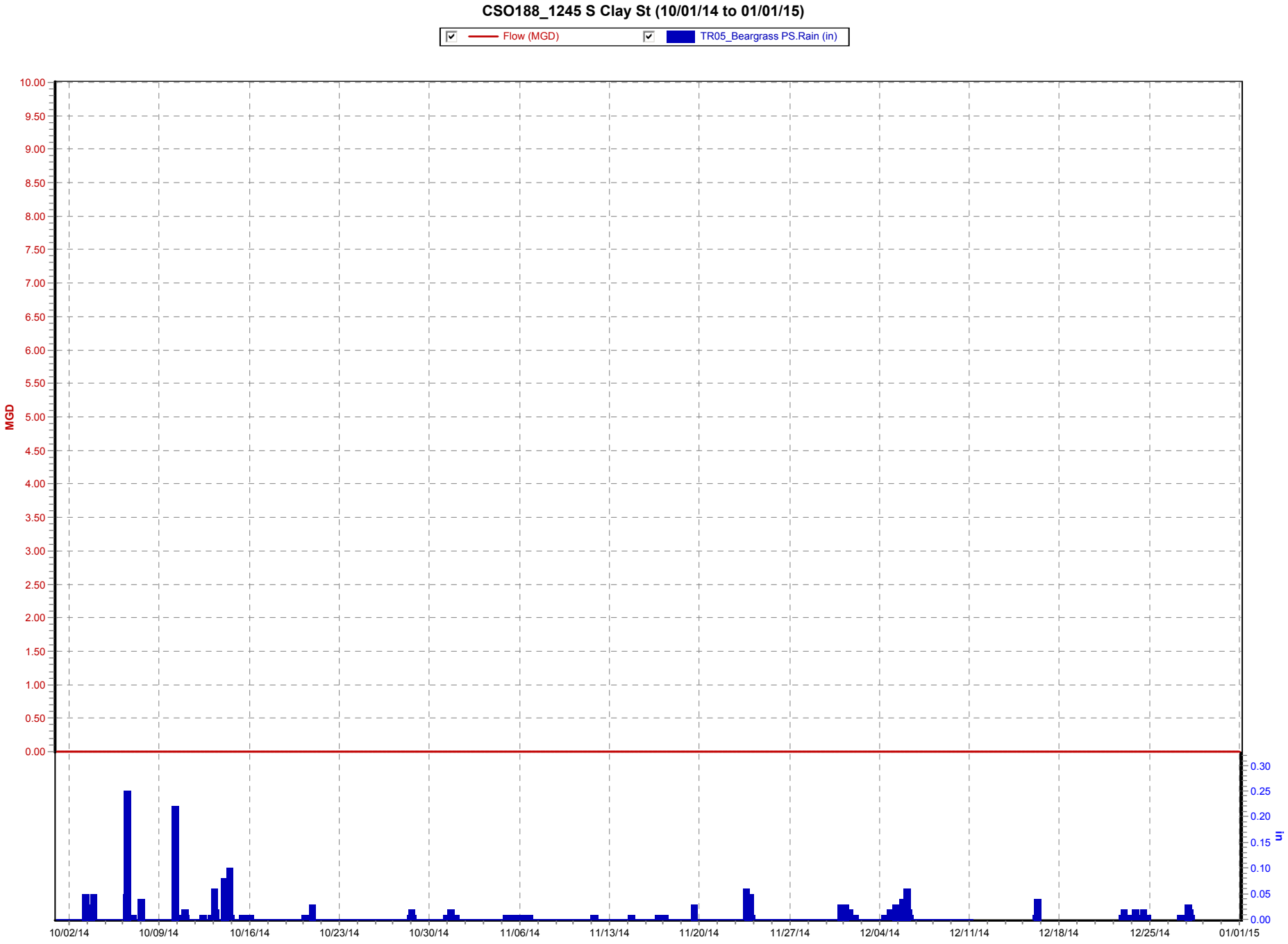

CSO183_Keswick Alexander (10/01/14 to 01/01/15)
Final Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15

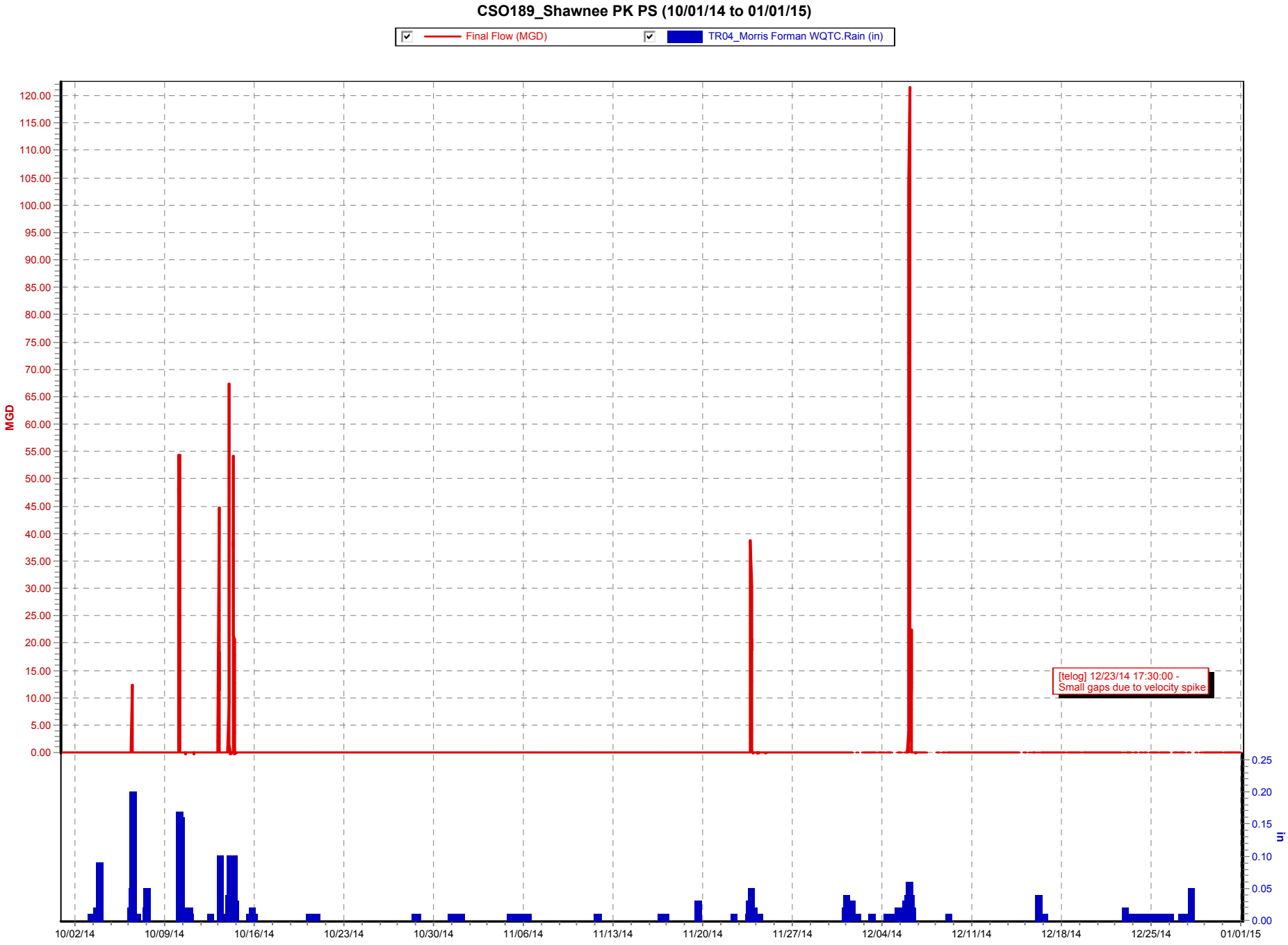

CSO184_Fetter Alexander (10/01/14 to 01/01/15)
Calc CSO184 Flow (MGD)
TR12_Nightingale PS.Rain (in)
MGD
IN
0.40
0.38
0.36
0.34
0.32
0.30
0.28
0.26
0.24
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00


CSO185 (10/01/14 to 01/01/15)
Calc CSO185 Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
[telog] 12/03/14 16:15:00 - Gaps due to invalid data.
1.80
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15


CSO186_Oak St Logan St (10/01/14 to 01/01/15)
Overflow Level (in)
TR05_Beargrass PS.Rain (in)
in
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
[telog] 11/12/14 10:30:00 - Gaps due to sensor malfunction
Sensor serviced 12/18/14
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

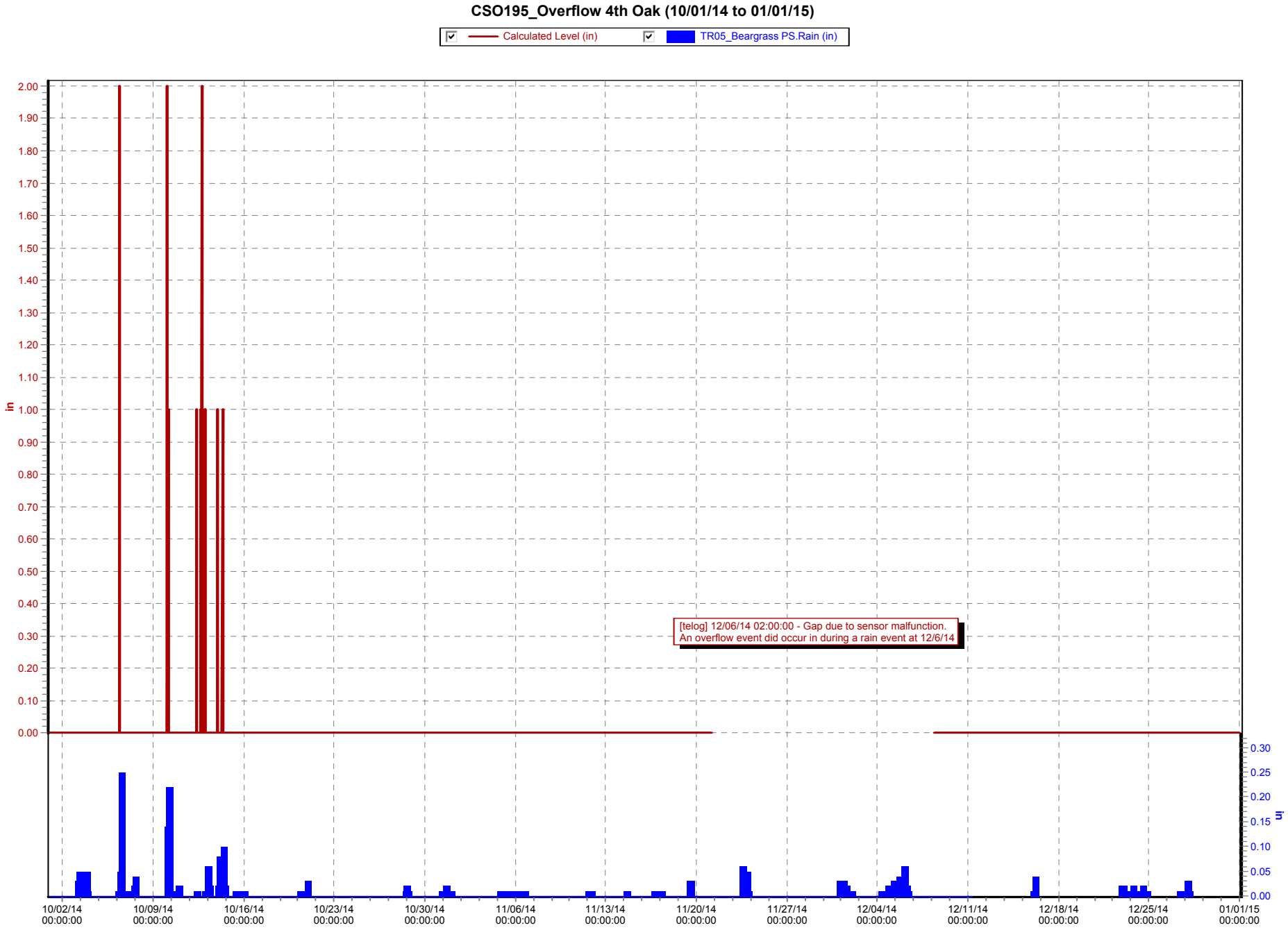

CSO187_1260 S Shelby St (10/01/14 to 01/01/15)
Overflow Level (in)
TR05_Beargrass PS.Rain (in)
in
2.40
2.30
2.20
2.10
2.00
1.90
1.80
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
in
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

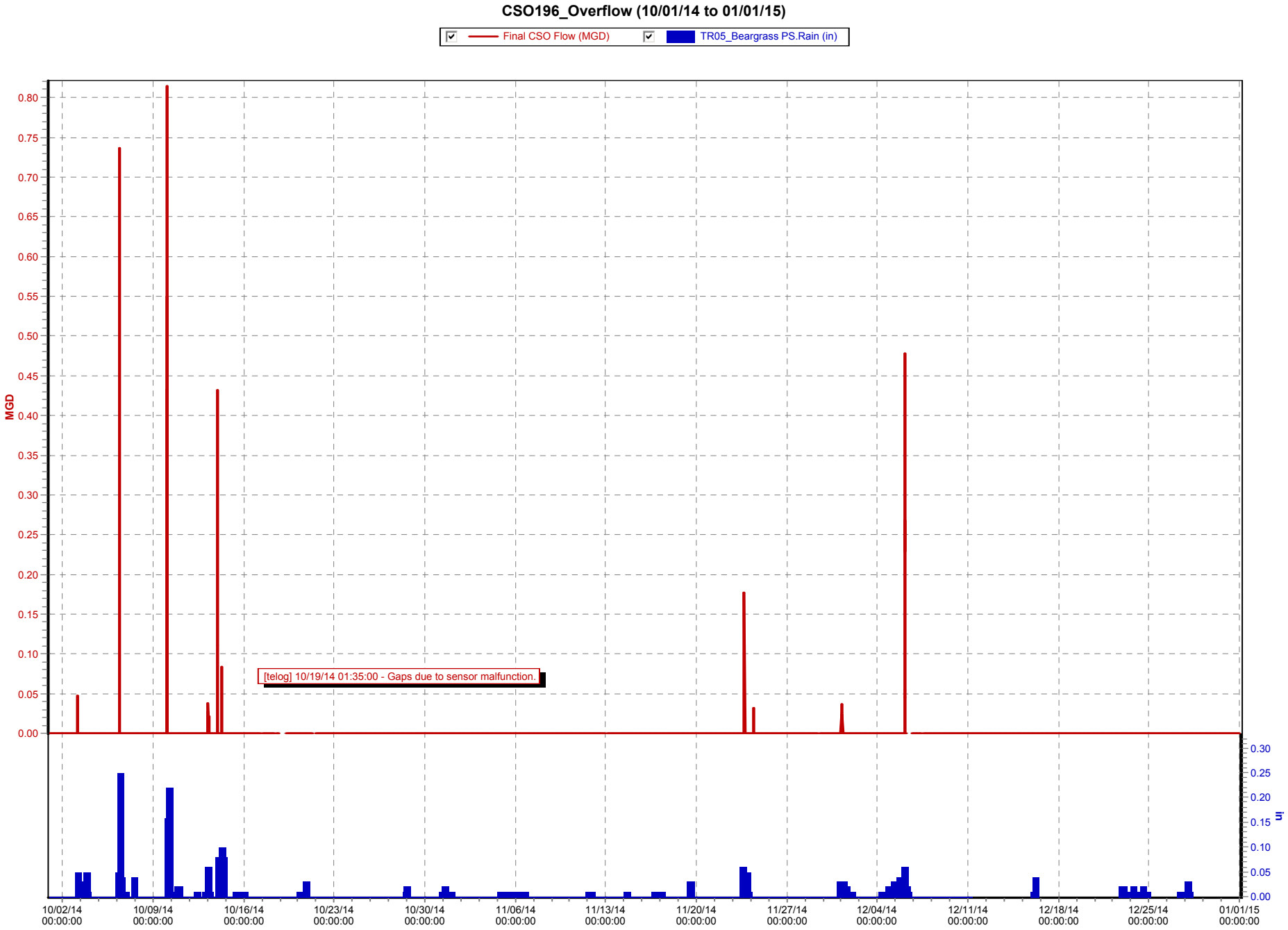

CSO188_1245 S Clay St (10/01/14 to 01/01/15)
Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15

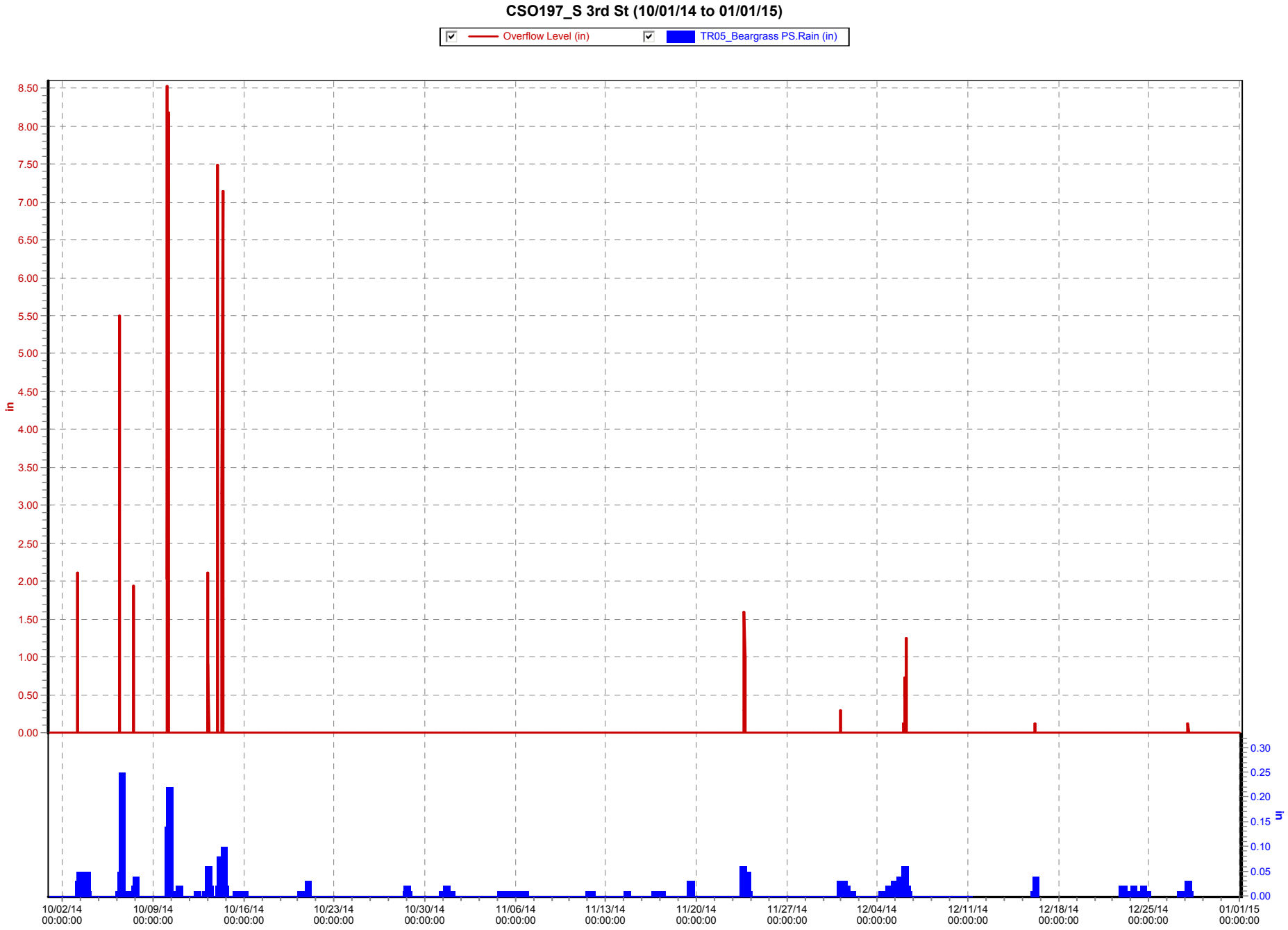

CSO189_Shawnee PK PS (10/01/14 to 01/01/15)
Final Flow (MGD)
TR04_Morris Forman WQTC.Rain (in)
MGD
in
[telog] 12/23/14 17:30:00 -
Small gaps due to velocity spike
120.00
115.00
110.00
105.00
100.00
95.00
90.00
85.00
80.00
75.00
70.00
65.00
60.00
55.00
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15

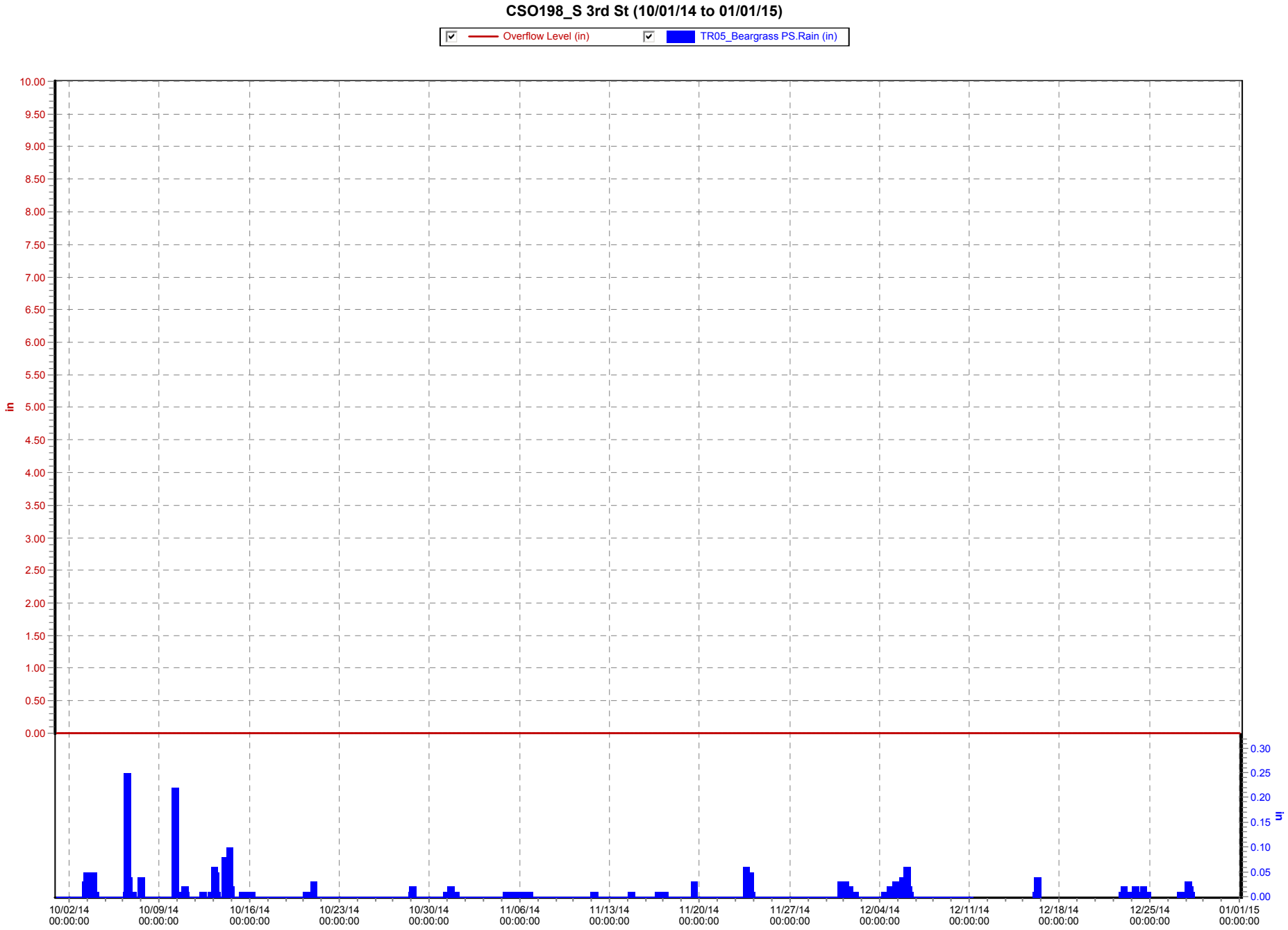

CSO191_Bells Lane PS (10/01/14 to 01/01/15)
Final Flow (MGD)
TR04_Morris Forman WQTC.Rain (in)
MGD
18.00
17.00
16.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

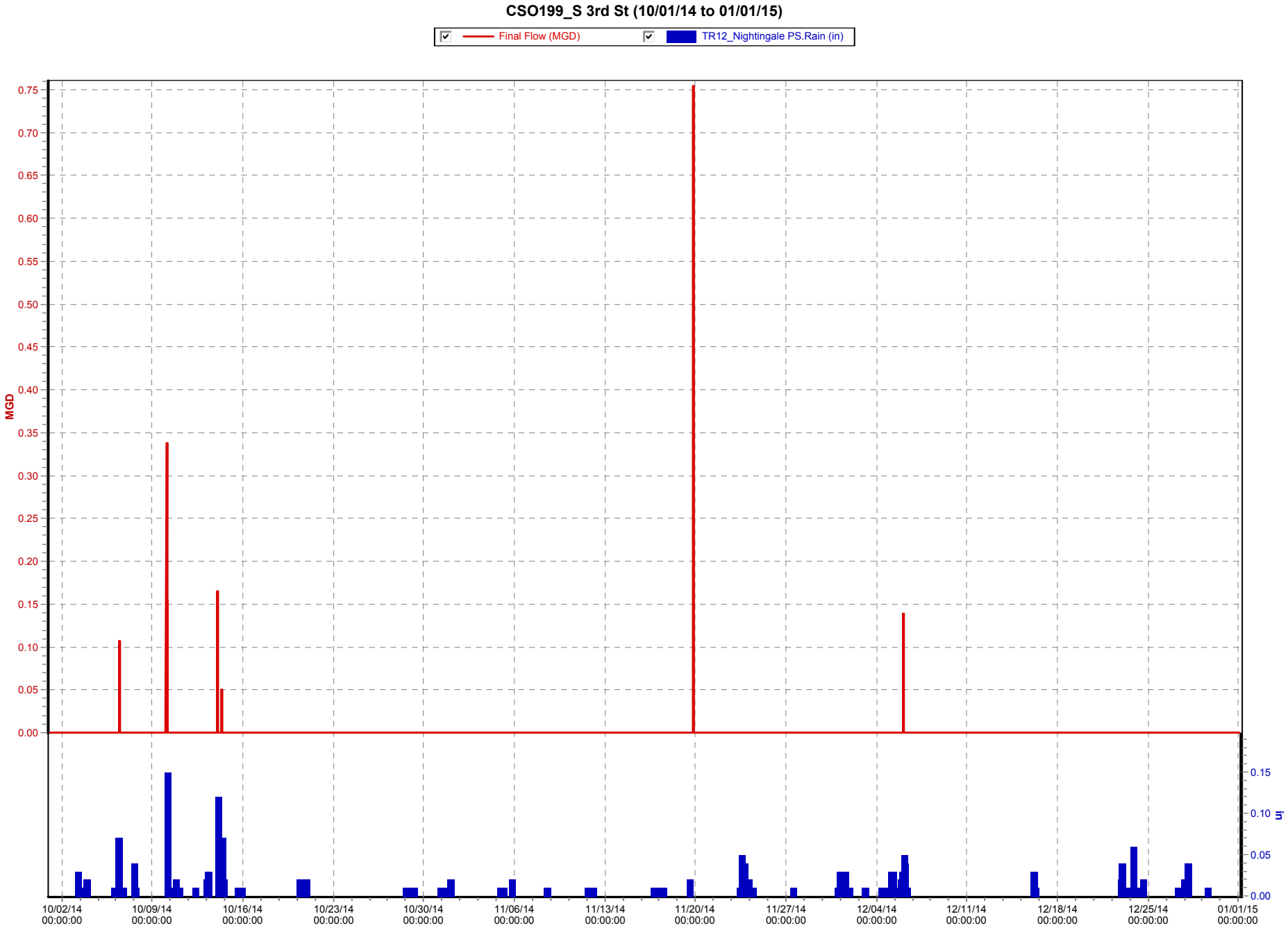
CSO193_6th and KY (10/01/14 to 01/01/15)


CSO195_Overflow 4th Oak (10/01/14 to 01/01/15)
Calculated Level (in)
TR05_Beargrass PS.Rain (in)
in
2.00
1.90
1.80
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
[telog] 12/06/14 02:00:00 - Gap due to sensor malfunction.
An overflow event did occur in during a rain event at 12/6/14
0.30
0.25
0.20
0.15
0.10
0.05
0.00
in
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00


CSO196_Overflow (10/01/14 to 01/01/15)
Final CSO Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
[telog] 10/19/14 01:35:00 - Gaps due to sensor malfunction.
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00


CSO197_S 3rd St (10/01/14 to 01/01/15)
Overflow Level (in)
TR05_Beargrass PS.Rain (in)
in
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00


CSO198_S 3rd St (10/01/14 to 01/01/15)
Overflow Level (in)
TR05_Beargrass PS.Rain (in)
in
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00


CSO199_S 3rd St (10/01/14 to 01/01/15)
Final Flow (MGD)
TR12_Nightingale PS.Rain (in)
MGD
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
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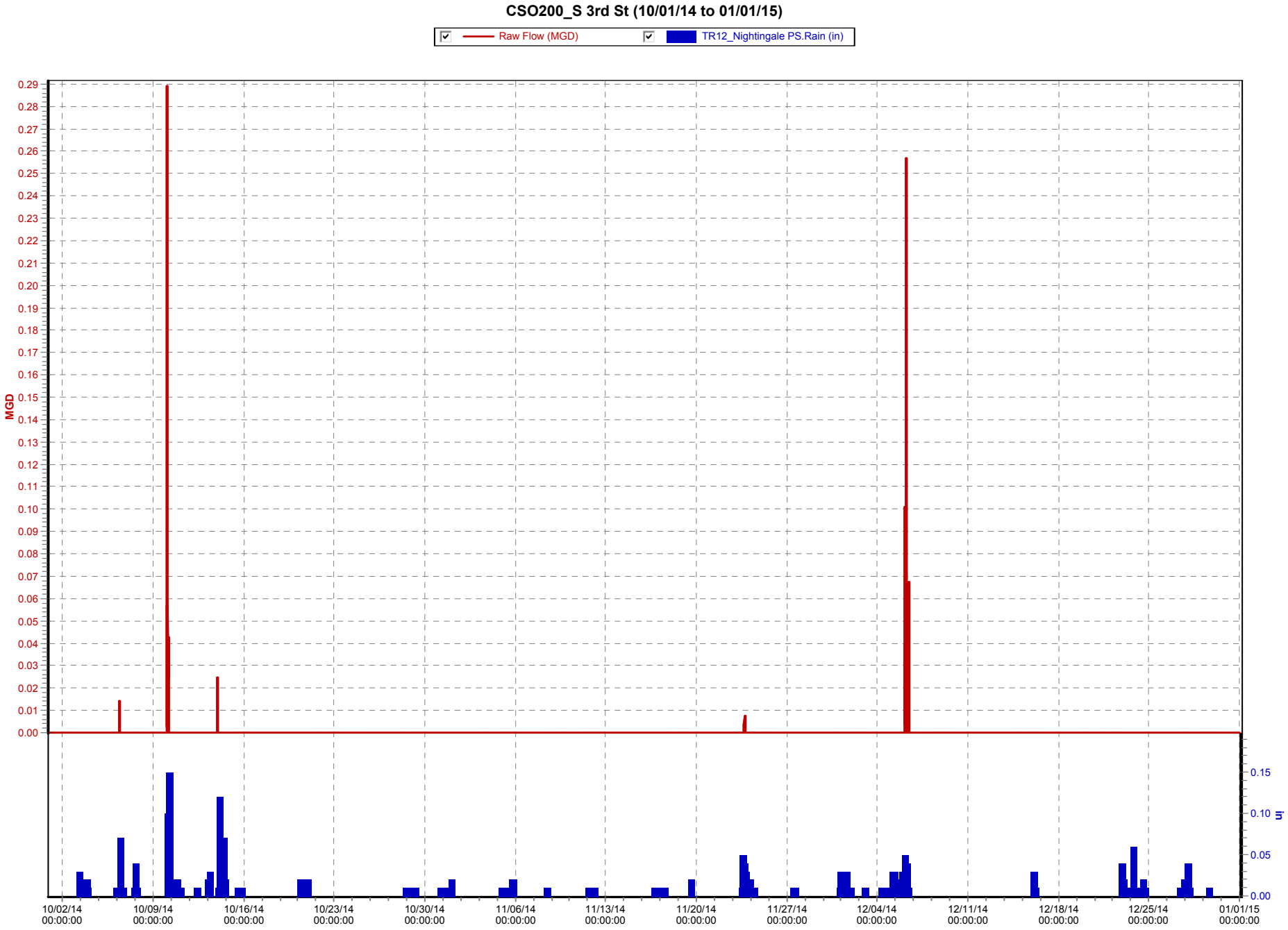
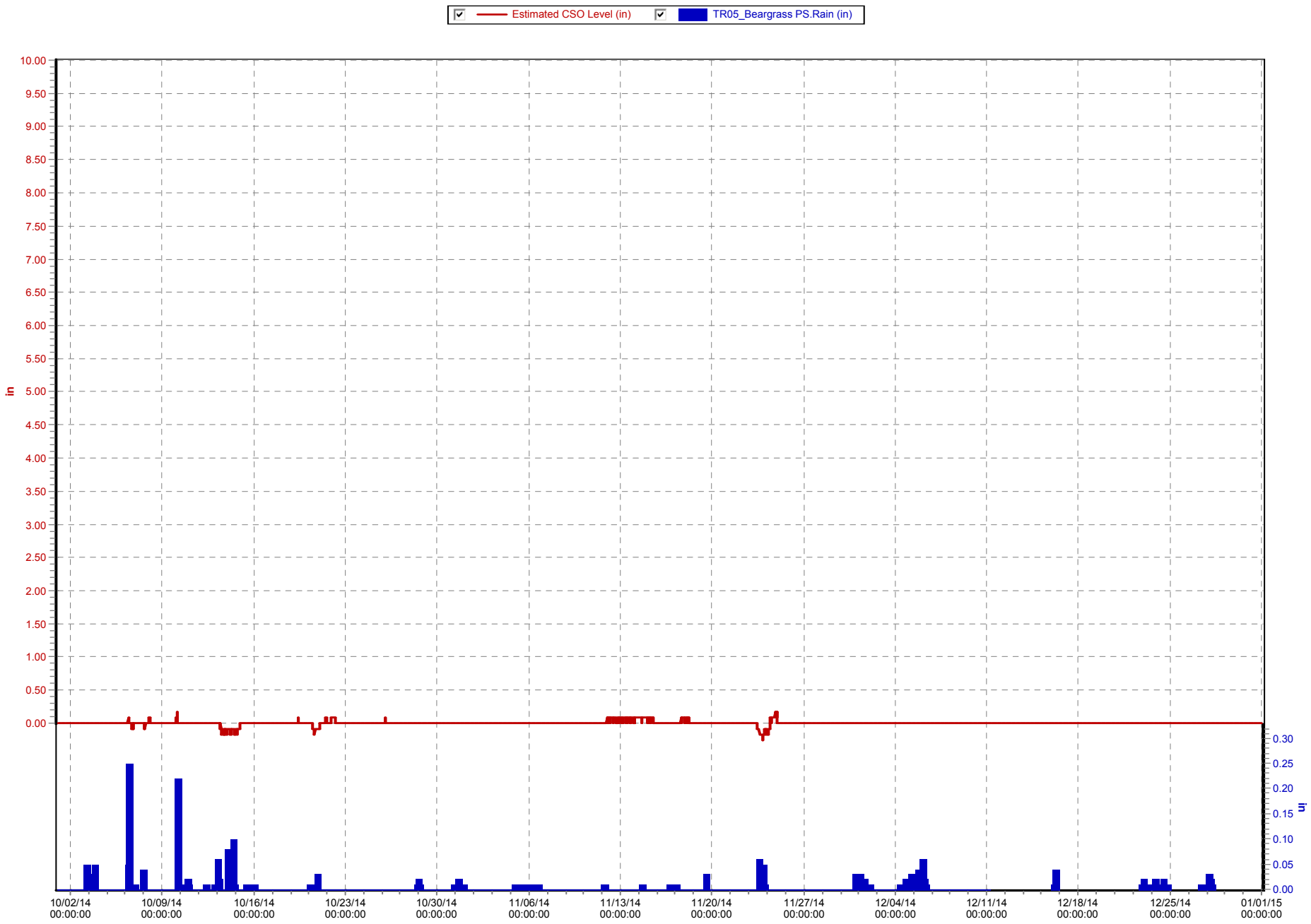
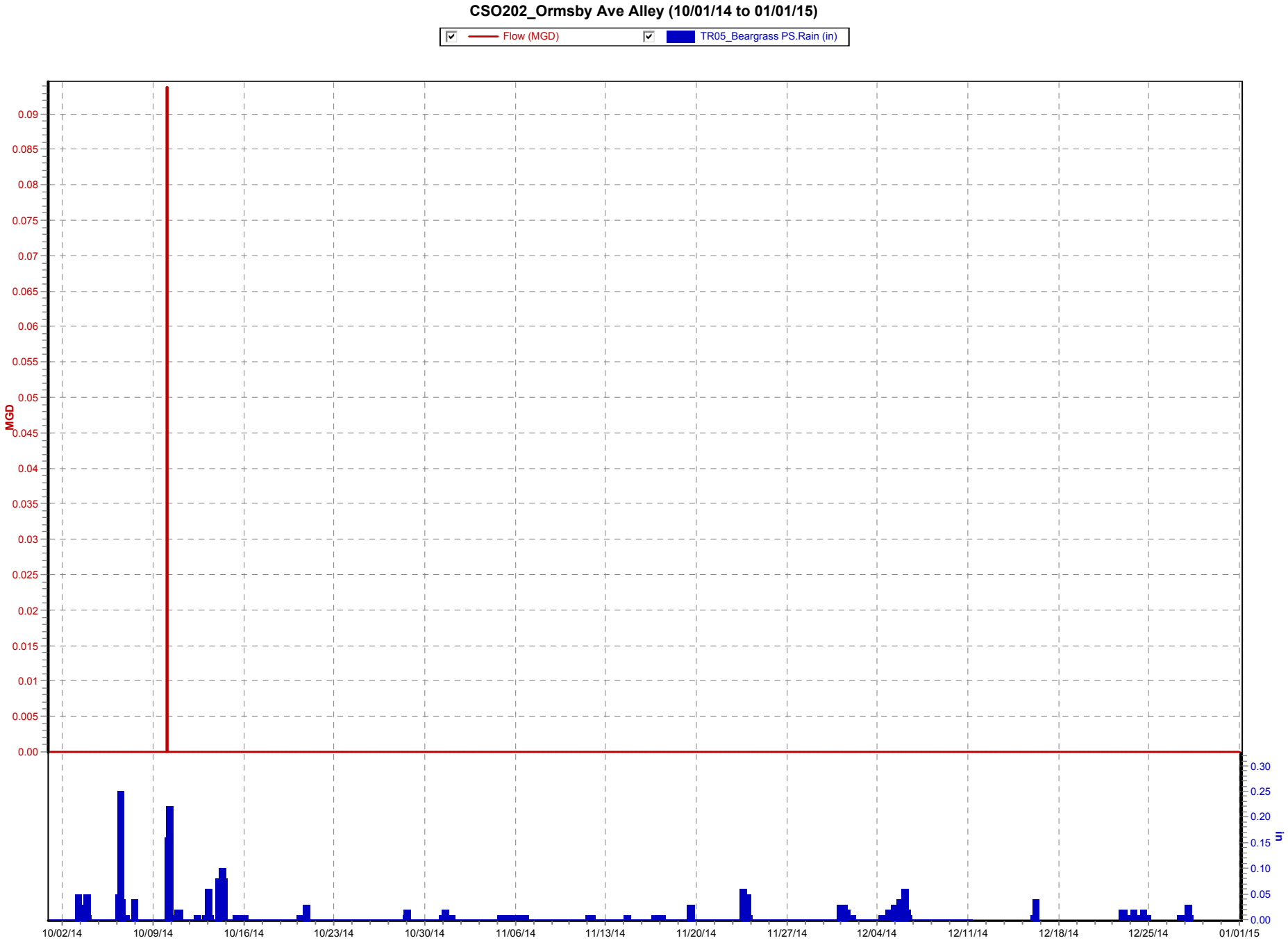
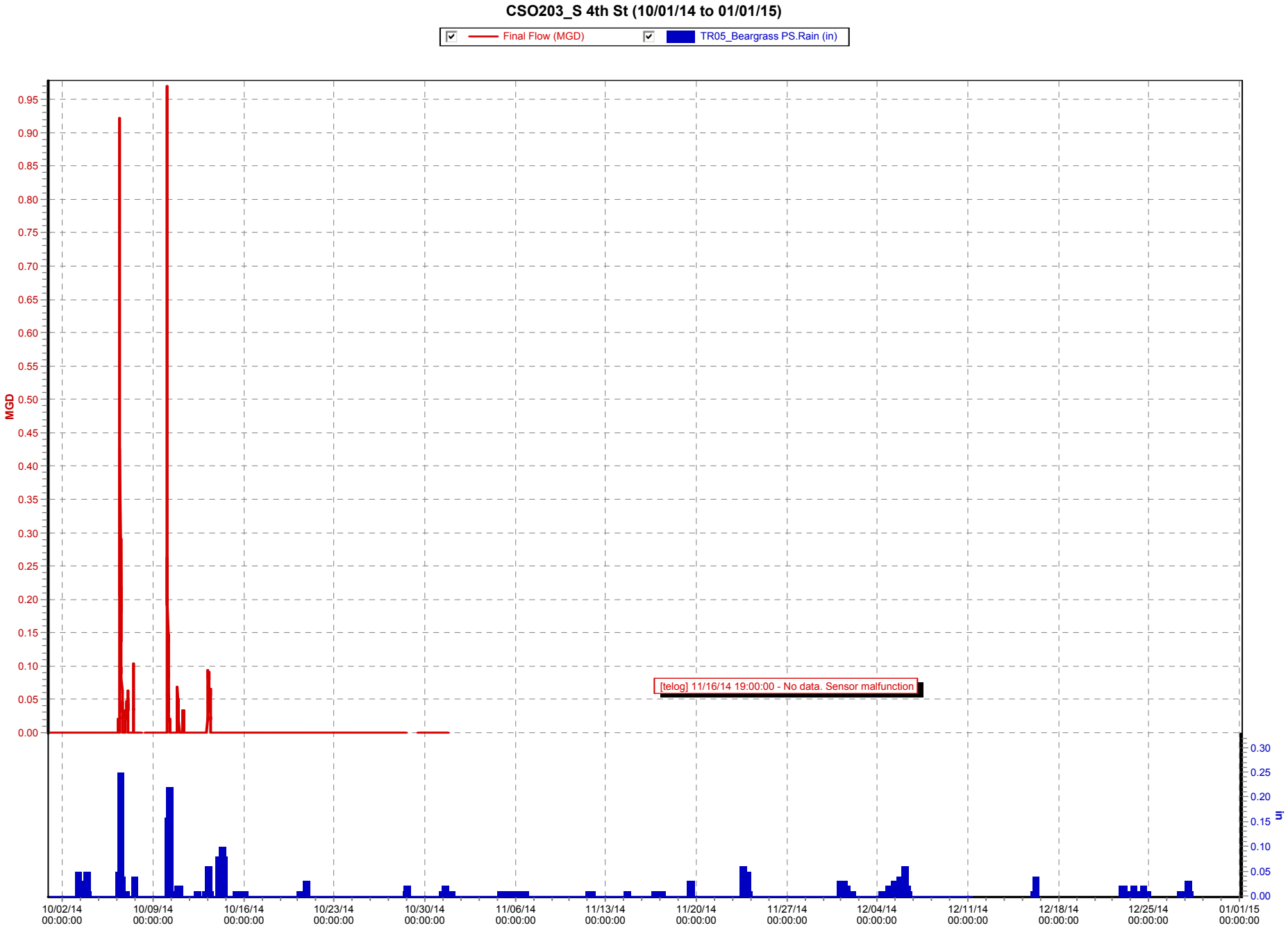
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00


CSO200_S 3rd St (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR12_Nightingale PS.Rain (in)
MGD
0.29
0.28
0.27
0.26
0.25
0.24
0.23
0.22
0.21
0.20
0.19
0.18
0.17
0.16
0.15
0.14
0.13
0.12
0.11
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

CSO201_5th and Kentucky (10/01/14 to 01/01/15)




CSO202_Ormsby Ave Alley (10/01/14 to 01/01/15)
Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
0.09
0.085
0.08
0.075
0.07
0.065
0.06
0.055
0.05
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0.00
in
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15


CSO203_S 4th St (10/01/14 to 01/01/15)
Final Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
in
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.30
0.25
0.20
0.15
0.10
0.05
0.00
[telog] 11/16/14 19:00:00 - No data. Sensor malfunction
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
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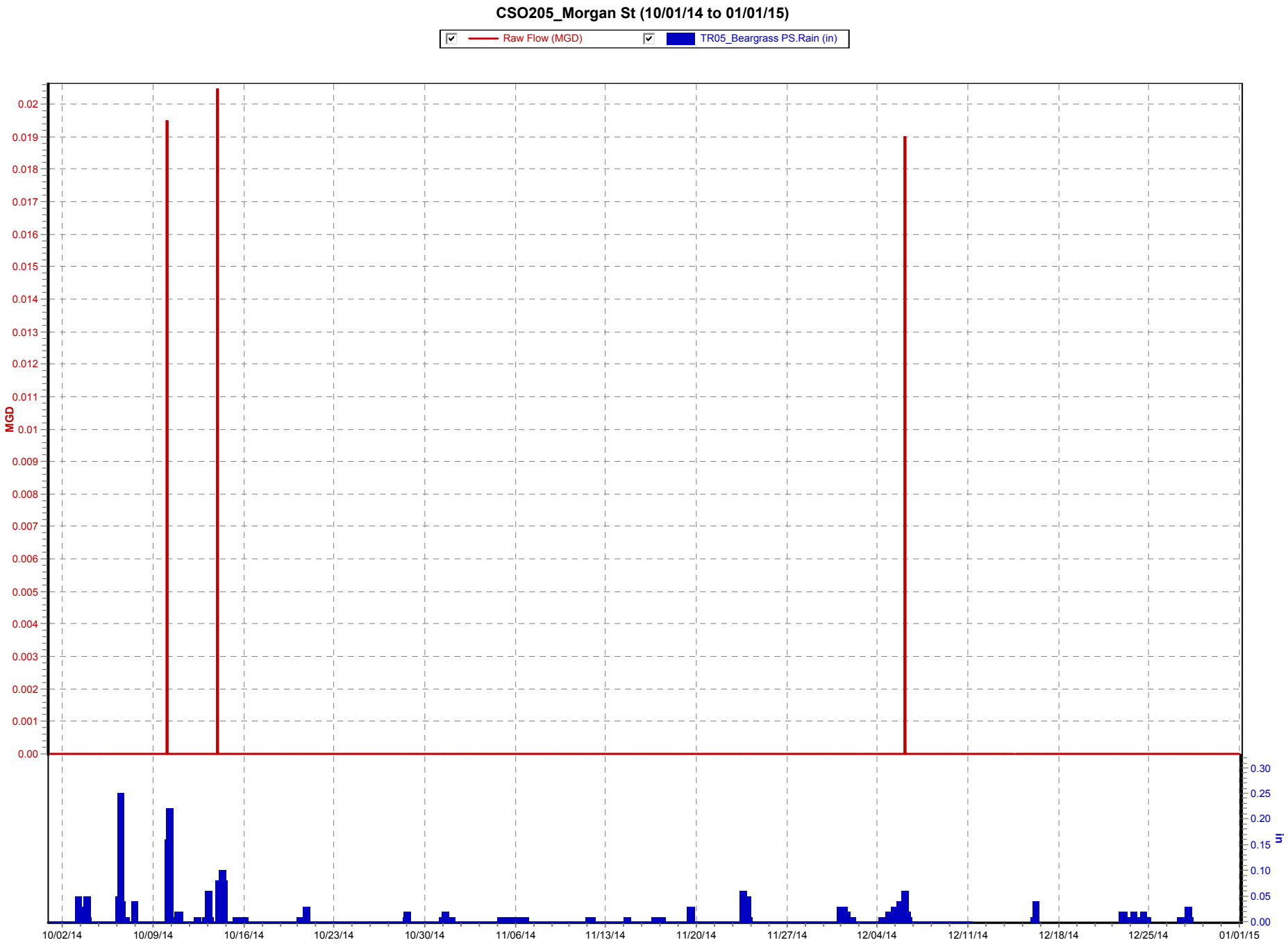
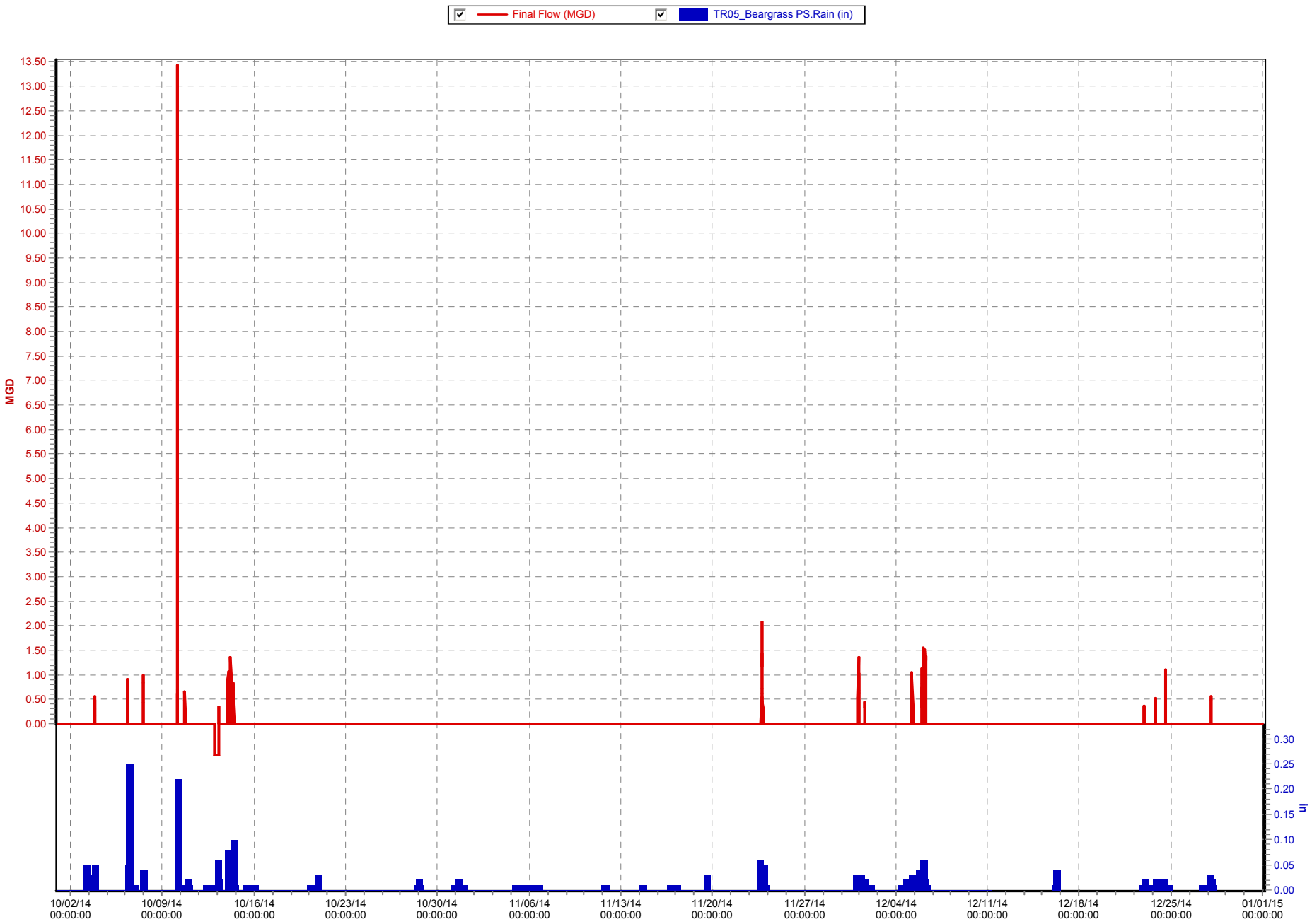
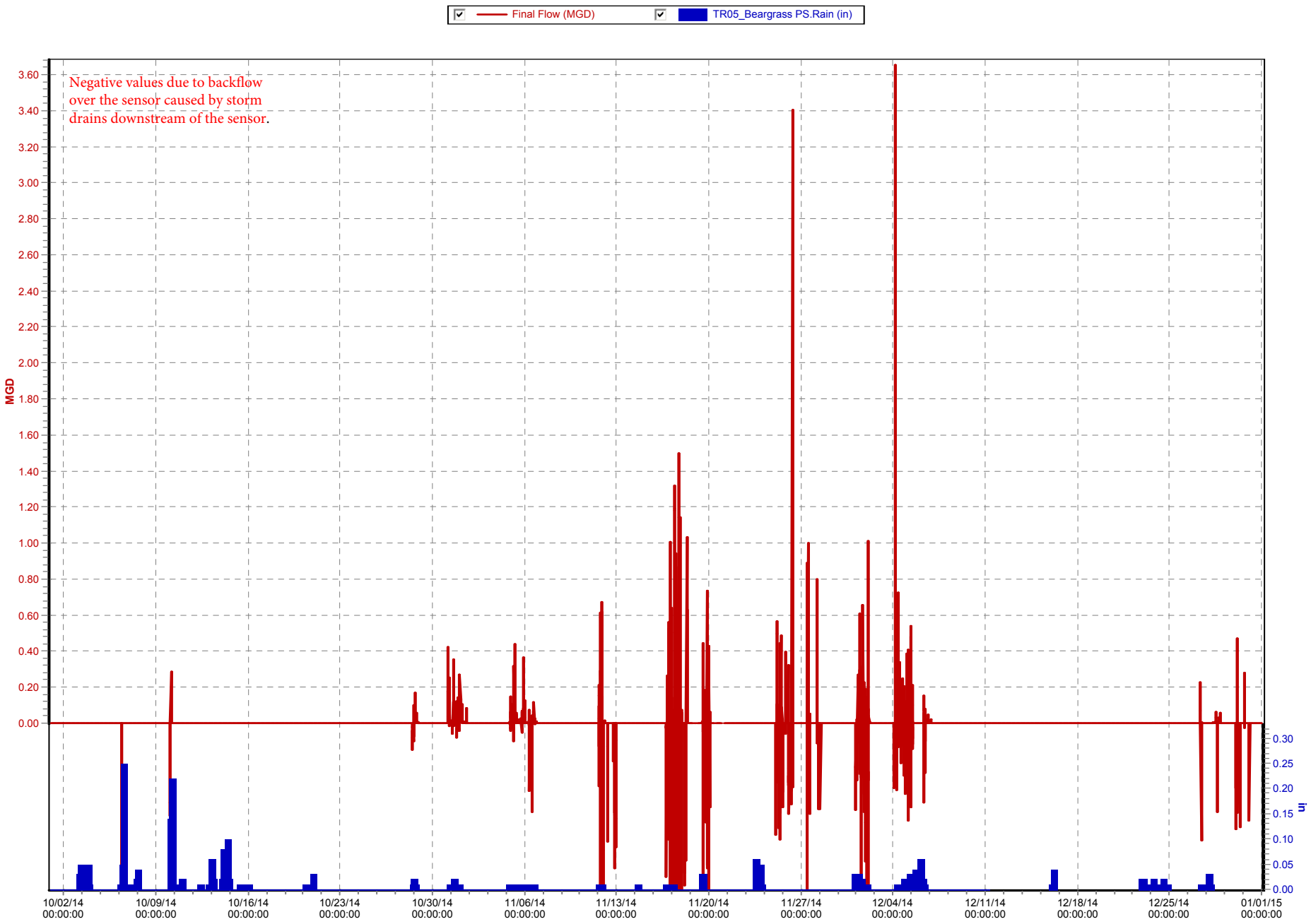
01/01/15 00:00:00


CSO205_Morgan St (10/01/14 to 01/01/15)
Raw Flow (MGD)
TR05_Beargrass PS.Rain (in)
MGD
0.02
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.01
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.00
in
0.30
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14
10/09/14
10/16/14
10/23/14
10/30/14
11/06/14
11/13/14
11/20/14
11/27/14
12/04/14
12/11/14
12/18/14
12/25/14
01/01/15

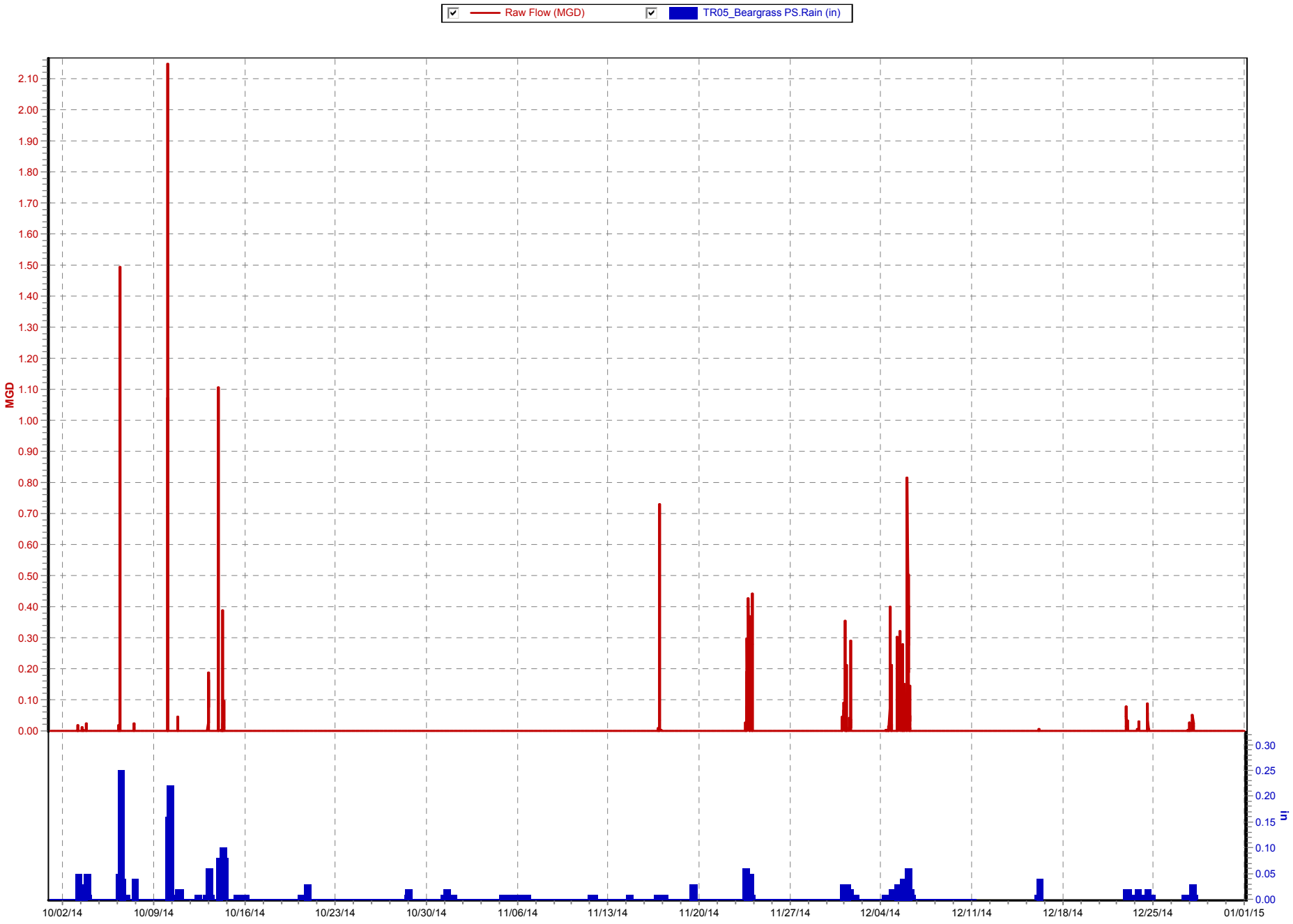
CSO206_Cherokee Park Spring St (10/01/14 to 01/01/15)

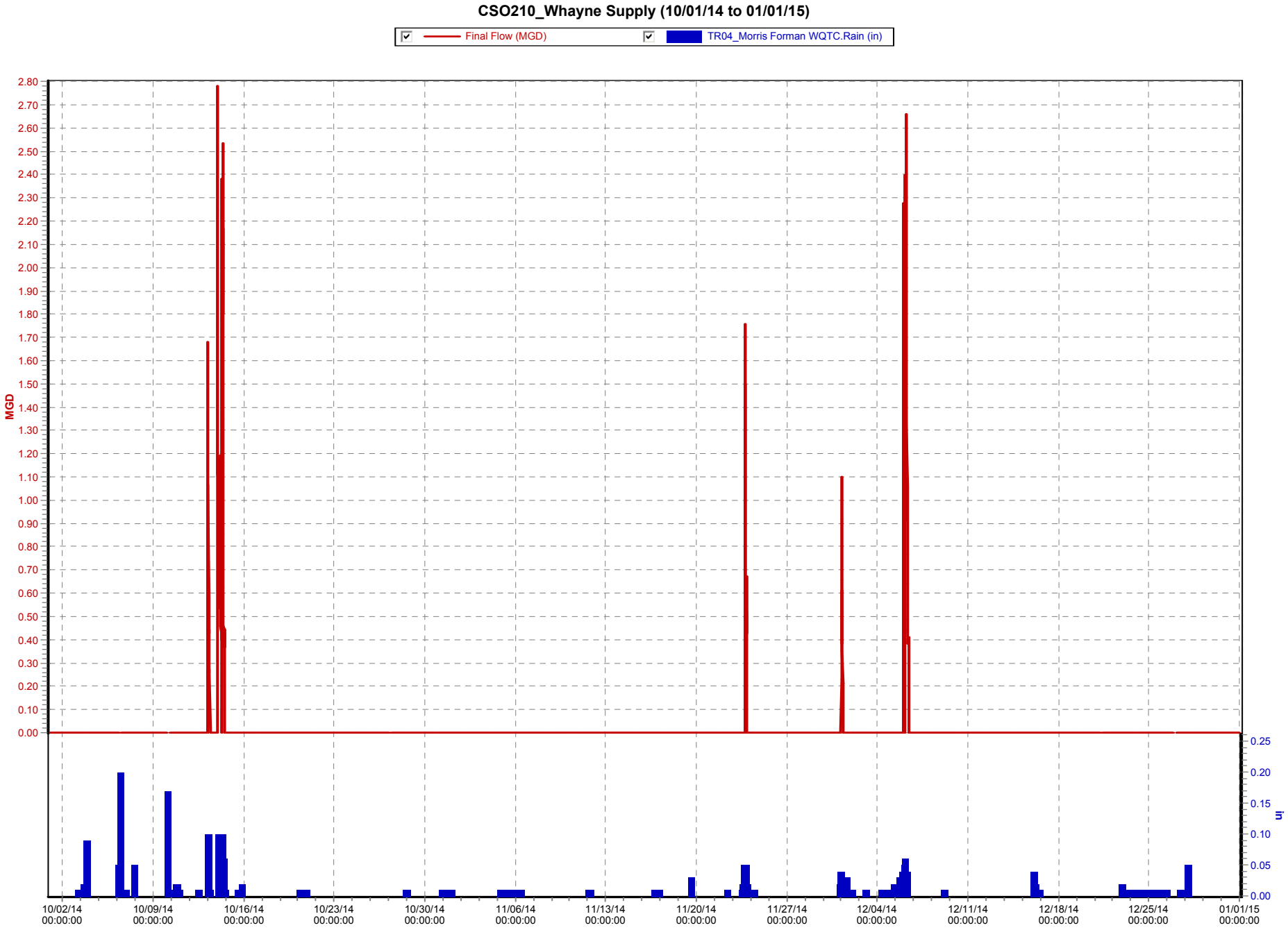


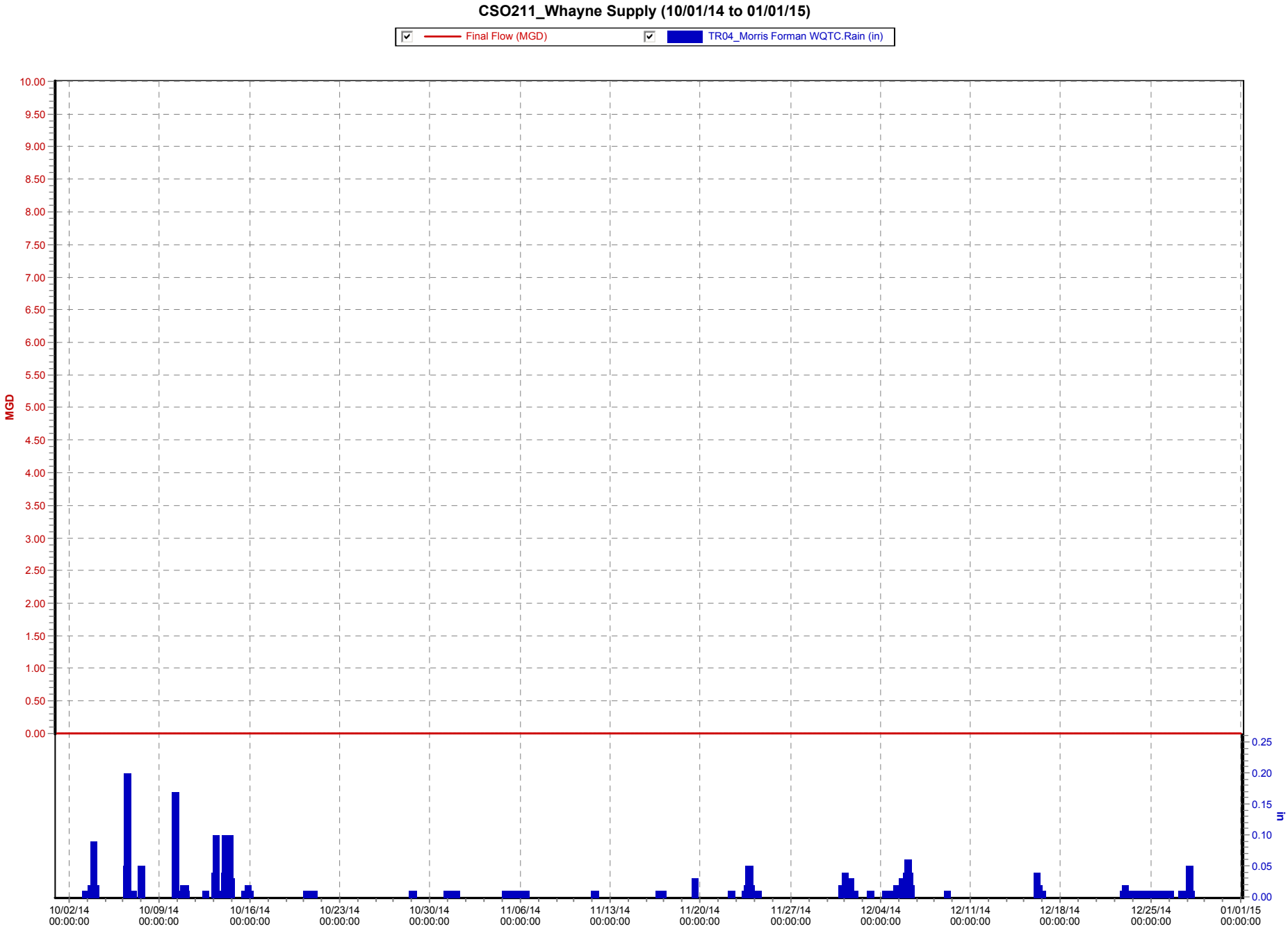
CSO207_W Jefferson St 2nd St (10/01/14 to 01/01/15)



CSO208_W Jefferson St 12th St (10/01/14 to 01/01/15)




CSO210_Whayne Supply (10/01/14 to 01/01/15)
Final Flow (MGD)
TR04_Morris Forman WQTC.Rain (in)
MGD
IN
2.80
2.70
2.60
2.50
2.40
2.30
2.20
2.10
2.00
1.90
1.80
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00


CSO211_Whayne Supply (10/01/14 to 01/01/15)
Final Flow (MGD)
TR04_Morris Forman WQTC.Rain (in)
MGD
IN
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.25
0.20
0.15
0.10
0.05
0.00
10/02/14 00:00:00
10/09/14 00:00:00
10/16/14 00:00:00
10/23/14 00:00:00
10/30/14 00:00:00
11/06/14 00:00:00
11/13/14 00:00:00
11/20/14 00:00:00
11/27/14 00:00:00
12/04/14 00:00:00
12/11/14 00:00:00
12/18/14 00:00:00
12/25/14 00:00:00
01/01/15 00:00:00

Appendix C – Acronyms

Appendix C - Acronyms for Project WIN Quarterly Report

AAM	Advanced Asset Management
AAOV	Annual Average Overflow Volume
ADAPS	Automated Data Processing System
BGC	Beargrass Creek
BMP	Best Management Practices
CCP	Composite Correction Plan
CD	Consent Decree
CMF	Central Maintenance Facility
CMMS	Computerized Maintenance Management System
CMOM	Capacity Management Operations and Maintenance
CPE	Comprehensive Performance Evaluations
CSO	Combined Sewer Overflow
CSS	Combined Sewer System
CSSA	Continuing Sewer System Assessment
DAP	Discharge Abetement Plan (DAP)
DMR	Discharge Monitoring Report
eB	Enterprise Bridge (Spescom scanning software for document management)
EMC	Event Mean Concentration
EPA	Environmental Protection Agency
ERP	Enforcement Response Plan
FM	Force Main
FOG	Fats, Oil & Grease
FPS	Flood Pump Station
FSE	Food Service Establishment
FY	Fiscal Year
GCE	Grease Control Equipment
GIS	Geographical Information System
GLPM	Gravity Line Preventive Maintenance
HMI	Human Machine Interface
I&FP	Infrastructure & Flood Protection (MSD Division)
ICA	Interceptor Condition Assessment
ID	Identification
I&I	Inflow and Infiltration
IMS	Information Management System
IOAP	Integrated Overflow Abatement Plan
ISSDP	Interim Sanitary Sewer Discharge Plan
IT	Information Technology
IWD	Industrial Waste Department
JCPS	Jefferson County Public Schools
KDEP	Kentucky Department of Environmental Protection
KPDES	Kentucky Pollutant Discharge Elimination System
KY	Kentucky
LE	Lateral Extension
LID	Low Impact Development
LIMS	Laboratory Information Management System
LTC	Long Term Control
LTCP	Long Term Control Plan
LOJIC	Louisville and Jefferson County Information Consortium
MDS	Main Diversion Structure
MEB	Main Equipment Building

Appendix C - Acronyms for Project WIN Quarterly Report

MFWTP	Morris Forman Wastewater Treatment Plant
MG	Million Gallons
MGD	Million Gallons Per Day
MLK	Martin Luther King
MO	Metro Operations
MOA	Memorandum of Agreement
MOR	Monthly Operating Report
MOU	Memorandum of Understanding
MSD	Metropolitan Sewer District (Louisville and Jefferson County)
NDD	Non-Domestic Dischargers
NMC	Nine Minimum Controls
NPR	National Public Radio
ORSANCO	Ohio River Valley Water Sanitation Commission
PACP	Pipeline Assessment and Certification Program
PCM	Post Construction Monitoring
PI	Plant Information System
PM	Preventive Maintenance
POC	Pollutants of Concern
PP	Pumping Package
PS	Pump Station
PSC	Property Service Connection
RDII	Rainfall-Derived Infiltration and Inflow
RS	Regulatory Services
RTC	Real Time Control
SCADA	Supervisory Control And Data Acquisition
SCAP	System Capacity Assurance Plan
SIU	Significant Industrial User
SOP	Standard Operating Procedure
SORP	Sewer Overflow Response Protocol
SSDP	Sanitary Sewer Discharge Plan
SSES	Sanitary Sewer Evaluation Study
SSO	Sanitary Sewer Overflow
SSOP	Sanitary Sewer Overflow Plan
SWOR2	Southwestern Outfall Relief - Phase 2
SWPS	Southwestern Pump Station
TM	Technical Memorandum
TMDL	Total Maximum Daily Load
TV	Television
UIM	Utility Information Management
UK	University of Kentucky
USACE	US Army Corps of Engineers
USF&W	United States Fish and Wildlife
USGS	United States Geological Survey
WDR	Wastewater Discharge Regulators
WIN	Waterway Improvements Now
WQT	Water Quality Tool
WQTC	Water Quality Treatment Center
WW	Wet Weather
WWT	Wet Weather Team

Appendix D – SCAP Balance

MSD
Metropolitan Sewer District

Capacity Credit Balance Sheet per Credit Basin

APNO	APNAME	APTYPE	FLOW	Release Date	Approved Credit Required/ Flow Reduction	Running Total
CCREEK						
235533	CEDAR CK IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	6,521	6,521
236380	FAIRMOUNT ROAD MH REHAB	SCAPCREDIT		6/5/09	10,734	17,255
362688	CCRK IFP ACTIVITY NOV08-MAY12	SCAPCREDIT		5/1/12	2,161	19,416
362689	CCRK IFP ACTIVITY JUN12-AUG12	SCAPCREDIT		8/31/12	2,047	21,463
320989	LITTLE CEDAR CREEK I/I REHABIL	SCAPCREDIT		9/27/12	652,907	674,370
263934	ST JAMES CROSSINGS	LAT EXT	9,000	11/30/12	-19,575	654,795
196927	SONIC SPRINGS	LAT EXT	3,600	12/5/12	-7,830	646,965
14SC1000	FY13 IFP ACTIVITY FIRST HALF - CEDAR CREEK	SCAPCREDIT		12/31/13	2,048	649,013
13LE1155	RAISING CANE'S CEDARLOOK DRIVE	LAT EXT	1,175	5/23/14	-2,556	646,457
FFORK						
235557	FLOYDSFRK IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	14,540	14,540
362638	FY09 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/08	1	14,541
362647	FY09 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/09	4	14,545
362651	FY10 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/09	524	15,069
230379	SHAKES RUN SECTION 4	LAT EXT	3,770	1/5/10	-8,200	6,869
362655	FY10 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/10	81	6,950
362661	FY11 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/10	14,155	21,105
362669	FY11 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/11	22,707	43,812
242480	CLAIBOURNE CROSSINGS PHASE 2	LAT EXT	0	10/17/11	0	43,812
359320	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	4,000	47,812
362674	FY12 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/11	2	47,814
362678	FY12 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/12	331	48,145
332823	SINGLE FAMILY HOME	LAT EXT	400	7/13/12	-870	47,275

MSD
Metropolitan Sewer District

Capacity Credit Balance Sheet per Credit Basin

APNO	APNAME	APTYPE	FLOW	Release Date	Approved Credit Required/ Flow Reduction	Running Total
315945	BROOKFIELD SEC 3	LAT EXT	12,800	10/26/12	-27,840	19,435
361689	LAKE FOREST REHAB PH1	SCAPCREDIT		12/18/12	174,769	194,204
362683	FY13 IFP ACTIVITY FIRST HALF - FFORK	SCAPCREDIT		12/31/12	3	194,207
331397	BROOKFIELD SEC 2A	LAT EXT	14,400	5/8/13	-31,320	162,887
HCREEK						
235561	HITE CK IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	6,404	6,404
362641	FY09 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/08	2	6,406
362648	FY09 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/09	8	6,414
362652	FY10 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/09	8	6,422
362657	FY10 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/10	329	6,751
295322	FLOYDSBURG RD I/I INVEST/REHAB	SCAPCREDIT		12/17/10	28,437	35,188
320906	FLOYDSBURG ROAD I/I REHABILITA	SCAPCREDIT		12/17/10	28,437	63,625
362662	FY11 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/10	3	63,628
362670	FY11 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/11	5	63,633
246638	CHAPMAN COURT S/S	LAT EXT	800	9/28/11	-1,740	61,893
362675	FY12 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/11	332	62,225
362679	FY12 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/12	5,002	67,227
290181	CAMDEN WOOD APARTMENTS	LAT EXT	12,400	8/31/12	-26,970	40,257
304536	MAGNOLIA SPRINGS EAST PRIV P/S	LAT EXT	9,500	12/1/12	-20,663	19,595
335610	ROCK SPRINGS FARM SEC 4B	LAT EXT	6,400	12/7/12	-13,920	5,675
362684	FY13 IFP ACTIVITY FIRST HALF - HCREEK	SCAPCREDIT		12/31/12	3	5,678
JTOWN						
235563	J-TOWN IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	6,203	6,203
359323	CALENDAR 2008 SUMP PUMP CREDIT	SCAPCREDIT		12/31/08	4,000	10,203

APNO	APNAME	APTYPE	FLOW	Release Date	Approved Credit Required/ Flow Reduction	Running Total
254871	LAKESIDE BAPT CHURCH PRIV PS	LAT EXT	2,500	8/10/10	-5,438	4,766
340213	JEFFERSONTOWN ENG REHAB	SCAPCREDIT		8/11/11	997,448	1,002,214
359324	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	4,000	1,006,214
337261	SINGLE FAMILY 2909 PELHAM CT	LAT EXT	400	5/28/13	-870	1,005,344
13LE1010	SWOPE HR & TRAINING BLDG	LAT EXT	400	6/28/13	-870	1,004,474
13LE1092	BALE EQUIPMENT	LAT EXT	450	10/25/13	-979	1,003,495
14SC1002	FY13 IFP ACTIVITY FIRST HALF - JEFFERSONTC	SCAPCREDIT		12/31/13	3,458	1,006,953
13LE1098	UNIPAK	LAT EXT	720	2/27/14	-1,566	1,005,387
LE924043	Bluegrass Indoor Carting	LAT EXT	400	5/1/14	-870	1,004,517
13LE1067	PARK COMMUNITY	LAT EXT	2,220	12/31/14	-4,829	999,688
MCREEK						
359380	CALENDAR 2005 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/05	12,000	12,000
359381	CALENDAR 2007 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/07	24,000	36,000
235568	MILL CK IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	51,530	87,530
359382	CALENDAR 2008 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/08	16,000	103,530
362642	FY09 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/08	93	103,623
362649	FY09 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/09	1,507	105,130
236614	DEVEROES	LAT EXT	960	9/9/09	-2,088	103,042
362653	FY10 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/09	25,272	128,314
359383	CALENDAR 2009 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/09	32,000	160,314
253586	KINGSFORD RETAIL CENTER	LAT EXT	480	1/6/10	-1,044	159,270
238421	6840 DIXIE HWY OUTLOT	LAT EXT	2,100	4/28/10	-4,568	154,703
362658	FY10 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/10	6,213	160,916
259408	FAMILY DOLLAR 5105 DIXIE	LAT EXT	1,200	7/2/10	-2,610	158,306
264294	SAINT PETER THE APOSTLE CATHOL	LAT EXT	2,000	7/23/10	-4,350	153,956

MSD
Metropolitan Sewer District

Capacity Credit Balance Sheet per Credit Basin

APNO	APNAME	APTYPE	FLOW	Release Date	Approved Credit Required/ Flow Reduction	Running Total
276215	FAMILY DOLLAR - KRISTIN WAY	LAT EXT	400	10/12/10	-870	153,086
362664	FY11 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/10	22,740	175,826
359384	CALENDAR 2010 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/10	4,000	179,826
359325	CALENDAR 2010 SUMP PUMP CREDIT	SCAPCREDIT		12/31/10	8,000	187,826
320916	SONNE AVE PS REHABILITATION -	SCAPCREDIT		6/30/11	120,800	308,626
362671	FY11 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/11	11,615	320,241
299399	FAMILY DOLLAR - GREENWOOD RD	LAT EXT	800	10/4/11	-1,740	318,501
309018	PRP PERFORMING ARTS ADDITION	LAT EXT	1,134	11/9/11	-2,466	316,034
359385	CALENDAR 2011 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/11	12,000	328,034
362676	FY12 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/11	3,245	331,279
359326	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	12,000	343,279
318096	CRACKER BARREL OLD COUNTRY	LAT EXT	6,000	1/19/12	-13,050	330,229
262545	DIXIE MANOR SHOPPING CENTER	LAT EXT	965	5/21/12	-2,099	328,130
300374	FORT KNOX FEDERAL CREDIT UNION	LAT EXT	400	6/26/12	-870	327,260
362680	FY12 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/12	2,807	330,067
361693	FY12 MILL CREEK REHAB	SCAPCREDIT		6/30/12	81,675	411,742
231800	PIONEER MOBILE HOME PARK	LAT EXT	11,200	7/24/12	-24,360	387,382
237457	WAVERLY HILLS	LAT EXT	400	9/18/12	-870	386,512
341883	NHK SPRING PRECISION	LAT EXT	17,800	10/19/12	-38,715	347,797
334997	BEECHLAND BAPTIST CHURCH	LAT EXT	2,715	12/5/12	-5,905	341,892
359327	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	148,000	489,892
362685	FY13 IFP ACTIVITY FIRST HALF - MCREEK	SCAPCREDIT		12/31/12	3,458	493,350
359386	CALENDAR 2012 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/12	4,000	497,350
343763	SOUTHEAST CHRISTIAN CHURCH SW	LAT EXT	6,000	1/18/13	-13,050	484,300
224875	ASHBY GREEN APARTMENT HOMES	LAT EXT	36,400	3/20/13	-79,170	405,130
265944	RIVERPORT PHASE 4A - MICHELIN	LAT EXT	400	6/6/13	-870	404,260

APNO	APNAME	APTYPE	FLOW	Release Date	Approved Credit Required/ Flow Reduction	Running Total
314887	DAYTON FREIGHT	LAT EXT	1,200	9/10/13	-2,610	401,650
13LE1014	LOUISVILLE FREE PUBLIC LIBRARY SOUTHWES	LAT EXT	8,200	9/26/13	-17,835	383,815
357140	FAMILY DOLLAR CANE RUN ROAD	LAT EXT	832	10/3/13	-1,810	382,005
13LE1171	SINGLE FAMILY HOME 3700 ROMANIA DR	LAT EXT	400	1/29/14	-870	381,135
MFORK						
359400	CALENDAR 2007 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/07	84,000	84,000
359328	CALENDAR 2007 SUMP PUMP CREDIT	SCAPCREDIT		12/31/07	20,000	104,000
235566	MID FORK IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	43,779	147,779
359329	CALENDAR 2008 SUMP PUMP CREDIT	SCAPCREDIT		12/31/08	8,000	155,779
236517	ANCHOR ESTATES MH REHAB	SCAPCREDIT		1/16/09	15,552	171,331
217235	SINKING FORK ICA PHASE I REHAB	SCAPCREDIT		3/30/09	437,967	609,298
235376	MIDDLE FORK INT REHAB PH1	SCAPCREDIT		5/15/09	487,744	1,097,042
179246	SHADY GLEN OF LYNDON PERSONAL	LAT EXT	-500	5/26/09	1,088	1,098,130
250572	1316 WITAWANGA AVE	LAT EXT	400	11/4/09	-870	1,097,260
359331	CALENDAR 2009 SUMP PUMP CREDIT	SCAPCREDIT		12/31/09	24,000	1,121,260
359401	CALENDAR 2009 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/09	4,000	1,125,260
197432	ALMOST HOME KENNELS - ALL PET	LAT EXT	3,700	3/16/10	-8,048	1,117,212
260064	OXMOOR GOLF FRONT 9	LAT EXT	400	4/15/10	-870	1,116,342
260065	OXMOOR GOLF BACK 9	LAT EXT	400	4/15/10	-870	1,115,472
229834	THE BROOK HOS- DUPONT ADDITION	LAT EXT	1,763	4/27/10	-3,835	1,111,637
265723	Z-XPRESS CAR WASH	LAT EXT	5,449	7/2/10	-11,852	1,099,786
255793	HERR LANE APARTMENTS - 4 PLEX	LAT EXT	1,200	7/14/10	-2,610	1,097,176
255792	HERR LANE APARTMENTS - 8 PLEX	LAT EXT	2,400	7/14/10	-5,220	1,091,956
274303	FARM CREDIT SERVICES	LAT EXT	525	9/9/10	-1,142	1,090,814
278015	METROPOLITAN UROLOGY	LAT EXT	400	12/15/10	-870	1,089,944

MSD
Metropolitan Sewer District

Capacity Credit Balance Sheet per Credit Basin

APNO	APNAME	APTYPE	FLOW	Release Date	Approved Credit Required/ Flow Reduction	Running Total
359402	CALENDAR 2010 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/10	8,000	1,097,944
359333	CALENDAR 2010 SUMP PUMP CREDIT	SCAPCREDIT		12/31/10	12,000	1,109,944
285637	SHELBYHURST OFFICE BUILDING 1	LAT EXT	6,600	1/20/11	-14,355	1,095,589
313465	DORSEY POINTE/CODOMINIUMS 8-13	LAT EXT	2,400	1/27/11	-5,220	1,090,369
291263	BROWNS LANE BUILDING	LAT EXT	400	4/14/11	-870	1,089,499
293400	FOUR PLEX APARTMENTS	LAT EXT	1,200	6/14/11	-2,610	1,086,889
330019	FY11 ANCHOR ESTATES REHAB	SCAPCREDIT		8/11/11	1,359	1,088,248
310046	EL NAPEL - MCMAHAN CENTER	LAT EXT	3,100	10/31/11	-6,743	1,081,506
314591	CHOCOLATE MARTINI BAR/REST	LAT EXT	3,275	11/29/11	-7,123	1,074,382
320983	HURSTBOURNE I/I INVESTIGATION	SCAPCREDIT		12/27/11	1,408,279	2,482,661
359335	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	16,000	2,498,661
321228	SINGLE FAMILY UNIT	LAT EXT	400	2/15/12	-870	2,497,791
321647	SINGLE FAMILY	LAT EXT	400	3/27/12	-870	2,496,921
328074	SINGLE FAMILY-703 FOUNTAIN AVE	LAT EXT	400	6/22/12	-870	2,496,051
193195	CEDAR LAKE LODGE WASHBURN	LAT EXT	1,900	8/20/12	-4,133	2,491,919
320923	ST MATTHEWS I/I REHABILITATION	SCAPCREDIT		8/23/12	20,841	2,512,760
337796	CHAMPPS	LAT EXT	635	9/5/12	-1,381	2,511,379
347126	ADVANCE PRODUCTION SYSTEMS	LAT EXT	400	12/28/12	-870	2,510,509
359336	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	92,000	2,602,509
339367	BAPTIST RADIATION ONCOLOGY	LAT EXT	1,500	1/4/13	-3,263	2,599,246
340778	PANDA RESTAURANT	LAT EXT	1,725	1/16/13	-3,752	2,595,494
349044	BLAIRWOOD POOL ADDITION	LAT EXT	400	1/29/13	-870	2,594,624
328659	SINGLE FAMILY HOME - 6911 AMBR	LAT EXT	400	2/4/13	-870	2,593,754
352805	POOL HOUSE 9213 REIGATE COURT	LAT EXT	200	2/20/13	-435	2,593,319
14LE1001	MIRANDA LAGRANGE RD	LAT EXT	400	3/19/13	-870	2,592,449
350246	SINGLE FAMILY - 218 BLISS AVE	LAT EXT	400	3/20/13	-870	2,591,579

MSD
Metropolitan Sewer District

Capacity Credit Balance Sheet per Credit Basin

APNO	APNAME	APTYPE	FLOW	Release Date	Approved Credit Required/ Flow Reduction	Running Total
349974	SINGLE FAMILY 205 N WATTERSON	LAT EXT	400	3/26/13	-870	2,590,709
342433	SHELBYHURST 700 OFFICE BLDG	LAT EXT	7,500	4/15/13	-16,313	2,574,397
350340	JARED THE GALLERY OF JEWELRY	LAT EXT	770	4/16/13	-1,675	2,572,722
13LE1009	Single family 11716 Wetherby Ave	LAT EXT	400	6/7/13	-870	2,571,852
13SC1000	FY14 STARVIEW REHABILITATION	SCAPCREDIT		6/30/13	14,183	2,586,035
13LE1001	Single Family 835 Fountain Ave	LAT EXT	400	8/28/13	-870	2,585,165
355162	PROPOSED RESTAURANT	LAT EXT	7,540	9/10/13	-16,400	2,568,766
13LE1045	SINGLE FAMILY 8325 WHIPPS MILL RD	LAT EXT	400	9/30/13	-870	2,567,896
319292	WATERMARK ON HURSTBOURNE	LAT EXT	71,600	10/22/13	-155,730	2,412,166
331542	DENTAL/MEDICAL OFFICE BLDG	LAT EXT	400	10/28/13	-870	2,411,296
13LE1128	SINGLE FAMILY HOME 1327 ETAWAH AVE	LAT EXT	400	11/5/13	-870	2,410,426
13LE1144	SINGLE FAMILY 1329 ETAWAH AVE	LAT EXT	400	11/5/13	-870	2,409,556
13LE1165	SINGLE FAMILY 8504 LORE LANE	LAT EXT	400	11/25/13	-870	2,408,686
13LE1146	CITY OF ST MATTHEWS COMMUNITY CTR PARI	LAT EXT	1,500	11/26/13	-3,263	2,405,423
13LE1099	NICKLIES - ST MATTHEWS	LAT EXT	1,920	12/11/13	-4,176	2,401,247
353963	DORSEY COMMONS TRACTS 1.2.3	LAT EXT	4,335	12/18/13	-9,429	2,391,819
14SC1003	FY13 IFP ACTIVITY FIRST HALF - MIDDLE FORK	SCAPCREDIT		12/31/13	3,230	2,395,049
352026	MCMAHAN PLAZA PHASE II BLDG B	LAT EXT	766	12/31/13	-1,666	2,393,382
13LE1117	THE VININGS	LAT EXT	850	4/10/14	-1,849	2,391,534
14LE1021	KODA KENTUCKY ORGAN DONOR AFFILIATES	LAT EXT	400	6/18/14	-870	2,390,664
14LE1128	WALDORF SCHOOL OF LOUISVILLE	LAT EXT	400	6/30/14	-870	2,389,794
NDITCH						
359404	CALENDAR 2007 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/07	28,000	28,000
235569	N.DITCH IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	11,147	39,147
236363	NORTHERN DITCH INT REHAB PH1	SCAPCREDIT		11/25/08	108,760	147,907

Capacity Credit Balance Sheet per Credit Basin

APNO	APNAME	APTYPE	FLOW	Release Date	Approved Credit Required/ Flow Reduction	Running Total
359339	CALENDAR 2009 SUMP PUMP CREDIT	SCAPCREDIT		12/31/09	4,000	151,907
234678	THE LIGHTHOUSE PROMISE COMPLEX	LAT EXT	2,825	3/5/10	-6,144	145,763
284728	SUBWAY - NEW CUT RD	LAT EXT	1,314	12/21/10	-2,858	142,905
359340	CALENDAR 2010 SUMP PUMP CREDIT	SCAPCREDIT		12/31/10	4,000	146,905
320908	PARKVIEW ESTATES REHABILITATIO	SCAPCREDIT		6/28/11	36	146,941
312810	WILLOW PLACE APT COMMUNITY CEN	LAT EXT	400	11/11/11	-870	146,071
359341	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	24,000	170,071
359405	CALENDAR 2011 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/11	12,000	182,071
315723	JCPS EARLY CHILDHOOD DEVELOP	LAT EXT	6,000	1/26/12	-13,050	169,021
312057	DOLLAR GENERAL - MEDALLION CT	LAT EXT	400	3/21/12	-870	168,151
312659	KROGER L-350 FUEL STATION	LAT EXT	400	8/20/12	-870	167,281
359343	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	24,000	191,281
13LE1147	CARLON ROOFING	LAT EXT	992	12/5/13	-2,158	189,123
13LE1126	JENNINGS CROSSING TRACT 3	LAT EXT	2,100	12/12/13	-4,568	184,556
14SC1004	FY13 IFP ACTIVITY FIRST HALF - NORTHERN DI	SCAPCREDIT		12/31/13	329	184,885
ORFM						
359433	CALENDAR 2007 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/07	56,000	56,000
359344	CALENDAR 2007 SUMP PUMP CREDIT	SCAPCREDIT		12/31/07	4,000	60,000
235572	ORFM IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	19,826	79,826
362643	FY09 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/08	2	79,828
362650	FY09 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/09	3,836	83,664
362654	FY10 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/09	7,322	90,986
263548	SINGLE FAMILY CONNECTION	LAT EXT	400	5/18/10	-870	90,116
213488	NORTHEAST CHRISTIAN CHURCH	LAT EXT	10,000	6/28/10	-21,750	68,366
362660	FY10 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/10	6,630	74,996

MSD
Metropolitan Sewer District

Capacity Credit Balance Sheet per Credit Basin

APNO	APNAME	APTYPE	FLOW	Release Date	Approved Credit Required/ Flow Reduction	Running Total
362665	FY11 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/10	165	75,161
362672	FY11 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/11	4,124	79,285
280837	SPRINGHURST TOWNE CTR LOT C	LAT EXT	400	9/20/11	-870	78,415
320920	SHADOW WOOD I/I REHABILITATION	SCAPCREDIT		9/30/11	14,279	92,694
311412	SPRINGHURST CHEVROLET	LAT EXT	855	10/14/11	-1,860	90,834
359345	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	16,000	106,834
359434	CALENDAR 2011 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/11	16,000	122,834
362677	FY12 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/11	7,258	130,092
320921	DERINGTON COURT I/I REHABILITA	SCAPCREDIT		3/1/12	56,208	186,300
187028	GLENVIEW PARK SUBD SECTION 1	LAT EXT	4,400	3/5/12	-9,570	176,730
213450	GLENVIEW PARK SUB. SEC 2	LAT EXT	5,600	3/5/12	-12,180	164,550
322455	FIRST LADY NAILS	LAT EXT	400	3/12/12	-870	163,680
362681	FY12 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/12	18,220	181,900
292239	SPRINGHURST RESTAURANT/ RETAIL	LAT EXT	3,440	7/5/12	-7,482	174,418
323821	TIRE DISCOUNTERS WESTPORT RD	LAT EXT	400	12/11/12	-870	173,548
363238	FY13 PROSPECT MANHOLE REHAB	SCAPCREDIT		12/18/12	72,703	246,251
341319	RAISING CANES RETAIL CENTER	LAT EXT	1,225	12/18/12	-2,664	243,587
359346	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	24,000	267,587
363235	FY13 MUDDY FORK MH REHAB	SCAPCREDIT		12/31/12	41,653	309,240
362686	FY13 IFP ACTIVITY FIRST HALF - ORFM	SCAPCREDIT		12/31/12	1,148	310,388
360262	SINGLE FAMILY 3419 HILLVALE RD	LAT EXT	400	5/13/13	-870	309,518
343729	RETAIL & RESTAURANT	LAT EXT	3,500	6/21/13	-7,613	301,906
334154	GLENVIEW PARK SUBD SEC 4	LAT EXT	3,600	11/7/13	-7,830	294,076
352634	BAUER PROPERTY	LAT EXT	2,920	11/21/13	-6,351	287,725
13LE1024	Overlook at Beech Spring Farm Sec 4	LAT EXT	5,600	12/31/13	-12,180	275,545
199896	SPRINGDALE OFFICE BUILDING	LAT EXT	4,210	3/11/14	-9,157	266,388

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225863	SPRING FARM LAKES SEC 1	LAT EXT	4,800	5/16/14	-10,440	255,948
177756	SUMMIT GARDENS PHASE 1	LAT EXT	32,000	9/22/14	-69,600	186,348
14LE1121	Riverside Sewer Extension	LAT EXT	1,200	11/10/14	-2,610	183,738
PCREEK						
235574	POND CRK IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	71,782	71,782
359347	CALENDAR 2008 SUMP PUMP CREDIT	SCAPCREDIT		12/31/08	4,000	75,782
359438	CALENDAR 2008 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/08	4,000	79,782
359439	CALENDAR 2009 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/09	12,000	91,782
359348	CALENDAR 2009 SUMP PUMP CREDIT	SCAPCREDIT		12/31/09	4,000	95,782
192513	BANNON CROSSINGS SECTION 3A-1	LAT EXT	800	2/17/10	-1,740	94,042
261115	EMERGENCY RESTORATION	LAT EXT	400	4/27/10	-870	93,172
276977	DADISMAN BUILDERS-POPLAR TREE	LAT EXT	400	10/13/10	-870	92,302
266833	THORNTONS @ PRESTON HWY	LAT EXT	400	12/1/10	-870	91,432
280751	NOTTINGTON HILLS SEC 1	LAT EXT	4,400	12/29/10	-9,570	81,862
359350	CALENDAR 2010 SUMP PUMP CREDIT	SCAPCREDIT		12/31/10	12,000	93,862
187739	GLENGARRY INDUSTRIAL PARK	LAT EXT	4,300	1/13/11	-9,353	84,510
277777	TIRE DISCOUNTERS - BOERSTE WAY	LAT EXT	2,960	3/21/11	-6,438	78,072
304408	UPS SUPPLY CHAIN SOLUTIONS #7	LAT EXT	2,250	9/14/11	-4,894	73,178
320918	EDSEL I/I REHABILITATION - FY1	SCAPCREDIT		9/27/11	106,700	179,878
313444	PLANET FITNESS - JEFF BLVD	LAT EXT	1,600	11/4/11	-3,480	176,398
312391	LONGHORN STEAKHOUSE RESTAURANT	LAT EXT	4,840	11/29/11	-10,527	165,871
320919	LANTANA I/I REHABILITATION - F	SCAPCREDIT		12/29/11	5,000	170,871
359351	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	20,000	190,871
310845	ZAXBY'S RESTAURANT	LAT EXT	3,750	2/28/12	-8,156	182,715
255044	ISA-RECYCLING CENTER	LAT EXT	400	3/13/12	-870	181,845

MSD
Metropolitan Sewer District

Capacity Credit Balance Sheet per Credit Basin

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312814	MILLER TRANSPORTATION	LAT EXT	1,800	3/19/12	-3,915	177,930
324554	NORTONS TEMPORARY OFFICE	LAT EXT	900	4/16/12	-1,958	175,972
234102	ETHOS AT VALLEY FARM SR LIVING	LAT EXT	7,050	6/19/12	-15,334	160,638
322367	SHEPHERDS CARE MEMORY HOME	LAT EXT	2,000	6/21/12	-4,350	156,288
307332	LOUISVILLE INDUSTRIAL BLDG B	LAT EXT	2,520	8/6/12	-5,481	150,807
279860	BANNON CROSSINGS SEC 3B-2	LAT EXT	9,600	8/10/12	-20,880	129,927
312053	DOLLAR GENERAL - CLEARWATER FA	LAT EXT	400	8/13/12	-870	129,057
343455	SINGLE FAMILY 1812 GREYLING DR	LAT EXT	400	10/12/12	-870	128,187
243109	OVERBROOK APARTMENTS	LAT EXT	41,200	11/9/12	-89,610	38,577
359354	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	56,000	94,577
329624	COPART	LAT EXT	400	2/20/13	-870	93,707
346082	ZAXBYS	LAT EXT	2,065	5/2/13	-4,491	89,216
320924	LEA ANN WAY INTERCEPTOR I&I RE	SCAPCREDIT		6/30/13	1,017,423	1,106,639
335385	HARRISON LOW PRESSURE S/S	LAT EXT	1,600	7/2/13	-3,480	1,103,159
320940	4 RESIDENCE SFU 7821 MANSLICK	LAT EXT	400	8/16/13	-870	1,102,289
361336	RENAISSANCE SOUTH BUSINESS	LAT EXT	540	9/6/13	-1,175	1,101,114
324886	PNC BANK	LAT EXT	400	9/6/13	-870	1,100,244
13LE1083	SINGLE FAMILY HOME 5402 (H) E MANSLICK RD	LAT EXT	400	9/26/13	-870	1,099,374
353125	PEGASUS TRANSPORTATION	LAT EXT	250	12/9/13	-544	1,098,831
341439	PRESTON GARDENS APTS	LAT EXT	22,200	12/10/13	-48,285	1,050,546
308206	APPLEGATE FARMS	LAT EXT	57,200	12/10/13	-124,410	926,136
14SC1005	FY13 IFP ACTIVITY FIRST HALF - POND CREEK	SCAPCREDIT		12/31/13	21,344	947,480
13LE1179	TIMBERBEND SUBDIVISION SEC 5B	LAT EXT	6,400	2/14/14	-13,920	933,560
13LE1035	RENAISSANCE SOUTH BUSINESS PARK TRACT	LAT EXT	5,415	4/10/14	-11,778	921,782
13LE1115	VERIZON-OUTER LOOP	LAT EXT	400	4/22/14	-870	920,912
348014	ASHTON PARK TOWN HOMES	LAT EXT	9,000	4/24/14	-19,575	901,337

APNO	APNAME	APTYPE	FLOW	Release Date	Approved Credit Required/ Flow Reduction	Running Total
280180	LOUISVILLE INDUSTRIAL CTR F	LAT EXT	2,480	5/16/14	-5,394	895,943
14LE1085	Williams Properties - Self Storage Facility	LAT EXT	400	5/28/14	-870	895,073
13LE1034	6300 GEIL LANE WAREHOUSE	LAT EXT	720	6/9/14	-1,566	893,507
284215	HURSTBOURNE POINTE APTS	LAT EXT	9,600	7/7/14	-20,880	872,627
344230	AUSTIN PARK APARTMENTS PH6	LAT EXT	27,600	8/25/14	-60,030	812,597
13LE1105	JEFFERSON COMMONS	LAT EXT	17,075	11/13/14	-37,138	775,459
SEDIV						
359355	CALENDAR 2007 SUMP PUMP CREDIT	SCAPCREDIT		12/31/07	8,000	8,000
359440	CALENDAR 2007 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/07	128,000	136,000
235575	SE DIV IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	71,472	207,472
236214	GOLDSMITH BUECHB ICA PHI REHAB	SCAPCREDIT		12/22/08	314,808	522,280
236296	BEARGRASS INT REHAB PH1 SEDIV	SCAPCREDIT		12/22/08	122,688	644,968
359441	CALENDAR 2008 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/08	16,000	660,968
359356	CALENDAR 2008 SUMP PUMP CREDIT	SCAPCREDIT		12/31/08	4,000	664,968
229854	TINY HANDS DAYCARE	LAT EXT	1,225	10/20/09	-2,664	662,304
359357	CALENDAR 2009 SUMP PUMP CREDIT	SCAPCREDIT		12/31/09	12,000	674,304
359443	CALENDAR 2009 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/09	8,000	682,304
235291	SULLIVAN COLLEGE OF TECHNOLOGY	LAT EXT	900	2/11/10	-1,958	680,346
238328	LOUISVILLE COLLEGIATE SPORTS	LAT EXT	400	3/1/10	-870	679,476
241759	FRISCHS BIG BOY RESTAURANT	LAT EXT	2,400	3/5/10	-5,220	674,256
257275	LOUISVILLE JUNIOR ACADEMY	LAT EXT	520	4/16/10	-1,131	673,125
320993	BEARGRASS CREEK PHASE II - FY1	SCAPCREDIT		12/14/10	10,368	683,493
359358	CALENDAR 2010 SUMP PUMP CREDIT	SCAPCREDIT		12/31/10	4,000	687,493
359444	CALENDAR 2010 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/10	24,000	711,493
286513	GARDINER POINT RESIDENCE HALL	LAT EXT	10,800	2/16/11	-23,490	688,003

MSD
Metropolitan Sewer District

Capacity Credit Balance Sheet per Credit Basin

APNO	APNAME	APTYPE	FLOW	Release Date	Approved Credit Required/ Flow Reduction	Running Total
276378	TIRE DISCOUNTERS - BARDSTOWN	LAT EXT	1,500	5/6/11	-3,263	684,741
287888	BEVERAGE WAREHOUSE	LAT EXT	1,180	5/30/11	-2,567	682,174
296295	KEN TOWERY -3800 S HURSTBOURNE	LAT EXT	400	7/1/11	-870	681,304
359445	CALENDAR 2011 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/11	8,000	689,304
359359	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	64,000	753,304
307018	HOOK PROPERTY FAMILY DOLLAR	LAT EXT	400	8/10/12	-870	752,434
359361	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	68,000	820,434
359446	CALENDAR 2012 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/12	4,000	824,434
187741	BROOKSTONE SENIOR APARTMENTS	LAT EXT	16,800	3/11/13	-36,540	787,894
232601	RAINTREE/MARIAN CT P/S ELIM	LAT EXT	105,800	6/14/13	-230,115	557,779
330437	COLLEGIATE ATHLETIC FIELD	LAT EXT	800	11/26/13	-1,740	556,039
14SC1006	FY13 IFP ACTIVITY FIRST HALF - SE DIVERSION	SCAPCREDIT		12/31/13	20,623	576,662

Appendix E – CSO Storm Frequency Data

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO016	10/6/14 10:45 AM	10/6/14 11:45 AM	117,432.29	0.04	0.46	255,287.60	0.67	0.25 yr	3 hr	Atlas14
CSO016	10/10/14 2:30 AM	10/10/14 5:45 AM	3,341,971.16	0.14	0.86	3,886,012.98	1.45	0.36 yr	3 hr	CloudBurst
CSO016	10/13/14 6:00 AM	10/13/14 9:00 AM	1,810,948.68	0.13	0.49	3,695,813.64	1.99	0.32 yr	3 hr	CloudBurst
CSO016	10/14/14 12:00 AM	10/14/14 12:30 PM	9,910,747.16	0.52	1.44	6,882,463.30	2.99	0.64 yr	12 hr	CloudBurst
CSO016	11/23/14 5:45 PM	11/23/14 9:15 PM	2,314,782.88	0.15	0.92	2,516,068.35	1.25	0.43 yr	6 hr	CloudBurst
CSO016	12/1/14 5:15 AM	12/1/14 6:45 AM	157,148.77	0.06	0.87	180,630.77	0.47	0.33 yr	24 hr	CloudBurst
CSO016	12/6/14 12:15 AM	12/6/14 9:45 AM	8,828,240.73	0.40	0.72	12,261,445.45	1.59	0.23 yr	48 hr	CloudBurst
CSO018	12/6/14 1:30 AM	12/6/14 12:15 PM	812,500.03	0.45	0.74	1,097,973.02	1.46	0.24 yr	48 hr	CloudBurst
CSO019	10/3/14 4:45 AM	10/3/14 9:15 PM	41,626.94	0.69	0.37	112,505.23	0.37	0.14 yr	3 hr	CloudBurst
CSO019	10/6/14 8:15 AM	10/6/14 4:30 PM	1,619,877.68	0.34	0.7	2,314,110.97	0.82	0.24 yr	6 hr	CloudBurst
CSO019	10/7/14 11:30 AM	10/7/14 1:45 PM	342,297.74	0.09	0.7	488,996.77	1.07	0.24 yr	6 hr	CloudBurst
CSO019	10/10/14 1:45 AM	10/11/14 6:15 AM	3,729,215.52	1.19	0.88	4,237,744.91	2.25	0.55 yr	3 hr	CloudBurst
CSO019	10/13/14 4:15 AM	10/13/14 1:15 PM	2,512,138.51	0.38	0.52	4,831,035.59	2.42	0.33 yr	1 hr	CloudBurst
CSO019	10/13/14 10:30 PM	10/14/14 9:15 PM	6,540,688.03	0.95	1.47	4,449,447.64	3.39	0.66 yr	12 hr	CloudBurst
CSO019	10/15/14 1:00 PM	10/15/14 10:30 PM	107,169.67	0.40	0.17	630,409.83	3.36	0.08 yr	12 hr	CloudBurst
CSO019	10/28/14 12:00 PM	10/28/14 2:45 PM	18,578.75	0.11	0.13	142,913.46	0.11	0.07 yr	3 hr	CloudBurst
CSO019	10/31/14 8:30 PM	11/1/14 1:15 AM	15,992.05	0.20	0.18	88,844.73	0.31	0.07 yr	24 hr	CloudBurst
CSO019	11/4/14 10:30 PM	11/5/14 6:15 AM	6,997.60	0.32	0.11	63,614.50	0.3	0.05 yr	12 hr	CloudBurst
CSO019	11/5/14 7:15 PM	11/5/14 9:00 PM	441.72	0.07	0.03	14,723.96	0.29	0.03 yr	0.25 hr	Atlas
CSO019	11/16/14 8:45 PM	11/17/14 4:15 PM	368,535.17	0.81	0.38	969,829.39	0.42	0.14 yr	24 hr	CloudBurst
CSO019	11/23/14 2:00 PM	11/24/14 8:15 AM	3,165,995.97	0.76	0.86	3,681,390.66	1.22	0.37 yr	12 hr	CloudBurst
CSO019	12/1/14 1:15 AM	12/2/14 4:45 AM	3,339,735.64	1.15	0.82	4,072,848.34	0.87	0.31 yr	24 hr	CloudBurst
CSO019	12/4/14 8:30 AM	12/7/14 3:00 AM	8,261,017.98	2.77	0.38	21,739,521.01	1.55	0.17 yr	12 hr	CloudBurst
CSO019	12/16/14 3:00 AM	12/16/14 10:15 AM	73,412.98	0.30	0.15	489,419.87	0	0.11 yr	3 hr	CloudBurst
CSO019	12/22/14 10:45 PM	12/23/14 9:00 AM	443,197.95	0.43	0.29	1,528,268.79	0	0.09 yr	1 hr	CloudBurst
CSO019	12/23/14 8:00 PM	12/24/14 12:00 AM	35,832.75	0.17	0.01	3,583,275.18	0	0.05 yr	1 hr	CloudBurst
CSO019	12/24/14 9:15 AM	12/25/14 1:30 AM	383,077.13	0.68	0.01	38,307,712.55	0	0.01 yr	0.25 hr	Atlas
CSO019	12/27/14 8:15 AM	12/28/14 8:45 AM	294,700.41	1.02	0.36	818,612.26	0	0.14 yr	1 hr	CloudBurst
CSO020	10/10/14 2:30 AM	10/10/14 4:00 AM	2,769,047.93	0.06	1.24	2,233,103.17	1.59	0.58 yr	3 hr	CloudBurst
CSO020	10/13/14 6:15 AM	10/13/14 7:00 AM	142,856.88	0.03	0.42	340,135.42	2.12	0.27 yr	3 hr	CloudBurst
CSO020	10/14/14 12:00 AM	10/14/14 11:45 AM	6,092,289.18	0.49	0.87	7,002,631.24	2.77	0.38 yr	12 hr	CloudBurst
CSO020	11/23/14 5:45 PM	11/24/14 12:30 AM	7,627,455.03	0.28	0.7	10,896,364.33	1.09	0.32 yr	12 hr	CloudBurst
CSO020	12/1/14 4:30 AM	12/1/14 5:45 AM	245,056.92	0.05	0.89	275,344.85	0.44	0.34 yr	24 hr	CloudBurst
CSO020	12/5/14 9:30 PM	12/6/14 10:30 AM	16,246,624.82	0.54	0.67	24,248,693.77	1.56	0.22 yr	48 hr	CloudBurst
CSO029	10/3/14 3:30 AM	10/3/14 3:30 AM	15,801.44	0.00	0.22	71,824.72	0.03	0.09 yr	24 hr	CloudBurst
CSO029	10/6/14 9:45 AM	10/6/14 9:45 AM	6,975.43	0.00	0.5	13,950.85	0.42	0.2 yr	1 hr	CloudBurst
CSO029	10/10/14 1:45 AM	10/10/14 3:00 AM	104,728.93	0.05	1.28	81,819.48	1.6	0.57 yr	3 hr	CloudBurst
CSO029	10/13/14 11:30 PM	10/13/14 11:45 PM	13,246.72	0.01	1.06	12,496.90	2.45	0.47 yr	12 hr	CloudBurst
CSO029	10/14/14 8:15 AM	10/14/14 8:15 AM	7,156.36	0.00	1.06	6,751.29	3.02	0.47 yr	12 hr	CloudBurst
CSO029	11/23/14 5:30 PM	11/23/14 5:30 PM	22,036.82	0.00	0.68	32,407.09	0.7	0.28 yr	12 hr	CloudBurst
CSO029	12/6/14 2:00 AM	12/6/14 3:00 AM	102,825.02	0.04	0.65	158,192.34	1.56	0.21 yr	48 hr	CloudBurst

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO031	10/3/14 3:30 AM	10/3/14 3:30 AM	2,076.05	0.00	0.22	9,436.60	0.03	0.09 yr	24 hr	CloudBurst
CSO031	10/3/14 2:45 PM	10/4/14 12:15 AM	544,221.44	0.40	0.22	2,473,733.82	0.23	0.09 yr	24 hr	CloudBurst
CSO031	10/6/14 8:00 AM	10/6/14 10:15 AM	21,615.38	0.09	0.5	43,230.77	0.42	0.2 yr	1 hr	CloudBurst
CSO031	10/7/14 1:15 AM	10/7/14 2:00 AM	6,647.83	0.03	0.5	13,295.67	0.48	0.2 yr	1 hr	CloudBurst
CSO031	10/7/14 11:30 AM	10/7/14 12:45 PM	31,609.56	0.05	0.5	63,219.12	0.72	0.2 yr	1 hr	CloudBurst
CSO031	10/10/14 2:00 AM	10/10/14 3:30 AM	36,341.02	0.06	1.28	28,391.42	1.62	0.57 yr	3 hr	CloudBurst
CSO031	10/10/14 5:15 PM	10/11/14 7:45 AM	34,397.73	0.60	1.28	26,873.23	1.91	0.57 yr	3 hr	CloudBurst
CSO031	10/13/14 4:30 AM	10/13/14 9:00 AM	72,891.48	0.19	0.52	140,175.92	2.33	0.34 yr	3 hr	CloudBurst
CSO034	10/10/14 2:45 AM	10/10/14 2:45 AM	28,265.41	0.00	1.28	22,082.35	1.58	0.57 yr	3 hr	CloudBurst
CSO036	10/3/14 3:30 AM	10/3/14 3:30 AM	868.36	0.00	0.24	3,618.19	0.05	0.09 yr	24 hr	CloudBurst
CSO036	10/6/14 9:45 AM	10/6/14 9:45 AM	549.88	0.00	0.18	3,054.86	0.38	0.08 yr	6 hr	CloudBurst
CSO036	10/10/14 1:45 AM	10/10/14 3:00 AM	48,888.14	0.05	1.2	40,740.12	1.45	0.54 yr	3 hr	CloudBurst
CSO036	10/13/14 11:30 PM	10/14/14 8:15 AM	7,142.00	0.36	0.99	7,214.14	2.84	0.44 yr	12 hr	CloudBurst
CSO036	11/23/14 5:30 PM	11/23/14 11:00 PM	26,616.33	0.23	0.64	41,588.02	0.99	0.27 yr	12 hr	CloudBurst
CSO036	12/1/14 4:30 AM	12/1/14 4:30 AM	624.15	0.00	0.9	693.50	0.42	0.34 yr	24 hr	CloudBurst
CSO036	12/6/14 2:15 AM	12/6/14 6:30 AM	24,344.64	0.18	0.66	36,885.81	1.56	0.21 yr	48 hr	CloudBurst
CSO036	12/28/14 1:00 AM	12/28/14 1:00 AM	2,213.68	0.00	0.32	6,917.74	0	0.27 yr	1 hr	CloudBurst
CSO038	10/6/14 7:45 AM	10/6/14 11:15 AM	89,779.16	0.15	0.5	179,558.32	0.43	0.2 yr	1 hr	CloudBurst
CSO038	10/7/14 11:30 AM	10/7/14 12:15 PM	15,620.80	0.03	0.5	31,241.60	0.72	0.2 yr	1 hr	CloudBurst
CSO038	10/10/14 2:15 AM	10/10/14 4:45 AM	116,002.94	0.10	1.28	90,627.30	1.63	0.57 yr	3 hr	CloudBurst
CSO038	10/10/14 5:00 PM	10/11/14 3:30 PM	379,178.52	0.94	1.28	296,233.22	1.91	0.57 yr	3 hr	CloudBurst
CSO038	10/13/14 4:45 AM	10/13/14 6:30 AM	20,600.52	0.07	0.52	39,616.39	2.32	0.34 yr	3 hr	CloudBurst
CSO050	10/3/14 3:30 AM	10/3/14 4:15 AM	7,748.45	0.03	0.28	27,673.03	0.09	0.11 yr	24 hr	CloudBurst
CSO050	10/3/14 12:45 PM	10/3/14 7:15 PM	2,673.59	0.27	0.28	9,548.55	0.21	0.11 yr	24 hr	CloudBurst
CSO050	10/6/14 7:45 AM	10/6/14 11:15 AM	136,664.81	0.15	0.55	248,481.48	0.58	0.18 yr	48 hr	CloudBurst
CSO050	10/7/14 11:30 AM	10/7/14 12:00 PM	35,287.65	0.02	0.55	64,159.36	0.83	0.18 yr	48 hr	CloudBurst
CSO050	10/10/14 1:45 AM	10/10/14 4:15 AM	509,454.41	0.10	1	509,454.41	1.52	0.44 yr	3 hr	CloudBurst
CSO050	10/10/14 5:15 PM	10/10/14 9:30 PM	12,567.45	0.18	1	12,567.45	1.64	0.44 yr	3 hr	CloudBurst
CSO050	10/13/14 4:15 AM	10/13/14 7:30 AM	100,682.36	0.14	0.37	272,114.49	1.93	0.23 yr	3 hr	CloudBurst
CSO050	10/13/14 11:00 PM	10/14/14 11:45 AM	584,281.26	0.53	1.08	541,001.16	2.68	0.49 yr	12 hr	CloudBurst
CSO050	10/28/14 1:00 PM	10/28/14 1:00 PM	1,785.92	0.00	0.16	11,161.98	0.13	0.09 yr	3 hr	CloudBurst
CSO050	11/16/14 9:45 PM	11/17/14 3:00 AM	60,270.53	0.22	0.38	158,606.65	0.29	0.16 yr	12 hr	CloudBurst
CSO050	11/23/14 1:45 PM	11/23/14 11:30 PM	180,042.06	0.41	0.6	300,070.09	0.97	0.26 yr	12 hr	CloudBurst
CSO050	12/1/14 1:00 AM	12/1/14 4:15 PM	187,643.44	0.64	1.01	185,785.58	0.97	0.39 yr	24 hr	CloudBurst
CSO050	12/4/14 7:15 PM	12/4/14 8:30 PM	5,993.74	0.05	0.64	9,365.22	1.32	0.21 yr	48 hr	CloudBurst
CSO050	12/5/14 6:00 AM	12/5/14 11:15 AM	4,145.41	0.22	0.64	6,477.20	1.57	0.21 yr	48 hr	CloudBurst
CSO050	12/5/14 7:45 PM	12/6/14 7:45 AM	1,099,469.52	0.50	0.64	1,717,921.12	1.65	0.21 yr	48 hr	CloudBurst
CSO050	12/16/14 3:00 AM	12/16/14 5:15 AM	9,721.71	0.09	0.09	108,018.98	0	0.05 yr	3 hr	CloudBurst
CSO050	12/22/14 10:15 PM	12/23/14 12:00 AM	38,109.41	0.07	0.22	173,224.57	0	0.14 yr	3 hr	CloudBurst
CSO050	12/23/14 7:45 PM	12/23/14 8:30 PM	19,270.29	0.03	0.1	192,702.91	0	0.05 yr	1 hr	CloudBurst
CSO050	12/24/14 12:15 PM	12/24/14 2:15 PM	42,740.18	0.08	0.19	224,948.30	0	0.17 yr	3 hr	Atlas14

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO050	12/27/14 4:45 PM	12/28/14 1:45 AM	40,200.37	0.38	0.32	125,626.17	0	0.27 yr	1 hr	CloudBurst
CSO051	10/6/14 7:45 AM	10/6/14 7:45 AM	953.70	0.00	0.55	1,734.00	0.39	0.18 yr	48 hr	CloudBurst
CSO051	10/10/14 1:45 AM	10/10/14 2:45 AM	24,939.69	0.04	1	24,939.69	1.44	0.44 yr	3 hr	CloudBurst
CSO051	10/13/14 5:15 AM	10/13/14 5:15 AM	639.55	0.00	0.37	1,728.52	1.83	0.23 yr	3 hr	CloudBurst
CSO051	10/13/14 11:30 PM	10/13/14 11:30 PM	4,753.10	0.00	1.08	4,401.02	1.94	0.49 yr	12 hr	CloudBurst
CSO051	10/14/14 7:45 AM	10/14/14 9:15 AM	1,831.10	0.06	1.08	1,695.47	2.64	0.49 yr	12 hr	CloudBurst
CSO051	11/23/14 5:30 PM	11/23/14 5:30 PM	2,050.16	0.00	0.6	3,416.93	0.68	0.26 yr	12 hr	CloudBurst
CSO051	12/6/14 1:00 AM	12/6/14 3:00 AM	22,739.42	0.08	0.64	35,530.34	1.65	0.21 yr	48 hr	CloudBurst
CSO053	10/3/14 3:30 AM	10/3/14 3:30 AM	5,914.95	0.00	0.34	17,396.91	0.04	0.13 yr	24 hr	CloudBurst
CSO053	10/6/14 7:45 AM	10/6/14 9:45 AM	76,608.55	0.08	0.35	218,881.58	0.64	0.18 yr	3 hr	CloudBurst
CSO053	10/7/14 11:45 AM	10/7/14 12:00 PM	15,483.33	0.01	0.18	86,018.52	0.88	0.14 yr	1 hr	CloudBurst
CSO053	10/10/14 1:45 AM	10/10/14 3:00 AM	363,662.23	0.05	1.18	308,188.33	1.69	0.54 yr	3 hr	Atlas14
CSO053	10/10/14 9:15 PM	10/10/14 9:15 PM	412.51	0.00	1.18	349.59	1.7	0.54 yr	3 hr	Atlas14
CSO053	10/13/14 4:15 AM	10/13/14 6:00 AM	57,418.54	0.07	0.33	173,995.56	2.02	0.21 yr	3 hr	Atlas14
CSO053	10/13/14 11:00 PM	10/14/14 10:00 AM	146,417.26	0.46	1.07	136,838.57	2.76	0.48 yr	12 hr	CloudBurst
CSO053	11/23/14 5:30 PM	11/23/14 11:00 PM	90,073.19	0.23	0.65	138,574.14	1.11	0.29 yr	12 hr	CloudBurst
CSO053	12/1/14 2:15 AM	12/1/14 4:30 AM	9,493.08	0.09	1.02	9,306.94	0.4	0.39 yr	24 hr	CloudBurst
CSO053	12/5/14 11:15 PM	12/6/14 6:00 AM	238,326.91	0.28	0.65	366,656.79	1.67	0.21 yr	48 hr	CloudBurst
CSO053	12/22/14 10:30 PM	12/22/14 10:30 PM	13,114.45	0.00	0.22	59,611.12	0	0.14 yr	3 hr	CloudBurst
CSO053	12/23/14 8:30 PM	12/23/14 8:30 PM	2,729.20	0.00	0.1	27,291.98	0	0.05 yr	1 hr	CloudBurst
CSO053	12/24/14 1:30 PM	12/24/14 1:30 PM	3,025.73	0.00	0.19	15,924.89	0	0.17 yr	3 hr	Atlas14
CSO053	12/28/14 1:00 AM	12/28/14 1:15 AM	8,996.57	0.01	0.32	28,114.29	0	0.27 yr	1 hr	CloudBurst
CSO054	10/3/14 2:45 AM	10/3/14 8:15 PM	19,458.69	0.73	0.32	60808.40767	0.34	0.12 yr	24 hr	Atlas
CSO054	10/6/14 6:30 AM	10/6/14 12:00 PM	30,446.48	0.23	0.35	86,989.95	0.66	0.18 yr	3 hr	CloudBurst
CSO054	10/7/14 11:15 AM	10/7/14 12:30 PM	2,059.90	0.05	0.18	11,443.87	0.88	0.14 yr	1 hr	CloudBurst
CSO054	10/10/14 1:45 AM	10/10/14 4:30 AM	52,566.02	0.11	1.18	44,547.48	1.72	0.54 yr	3 hr	Atlas14
CSO054	10/10/14 5:00 PM	10/10/14 10:00 PM	983.81	0.21	1.18	833.74	1.81	0.54 yr	3 hr	Atlas14
CSO054	10/13/14 4:15 AM	10/13/14 7:45 AM	5,229.14	0.15	0.33	15,845.86	2.05	0.21 yr	3 hr	Atlas14
CSO054	10/13/14 11:00 PM	10/14/14 11:15 AM	17,571.70	0.51	1.07	16,422.15	2.77	0.48 yr	12 hr	CloudBurst
CSO054	10/15/14 5:45 PM	10/15/14 5:45 PM	234.59	0.00	0.15	1,563.96	2.72	0.07 yr	12 hr	CloudBurst
CSO054	10/20/14 6:45 AM	10/20/14 6:45 AM	139.50	0.00	0.07	1,992.86	1.3	0.06 yr	1 hr	CloudBurst
CSO054	10/20/14 7:45 PM	10/20/14 7:45 PM	68.55	0.00	0.06	1,142.53	1.35	0.05 yr	1 hr	CloudBurst
CSO054	10/28/14 12:00 PM	10/28/14 1:00 PM	89.98	0.04	0.12	749.83	0.11	0.07 yr	6 hr	CloudBurst
CSO054	10/31/14 12:30 PM	10/31/14 12:30 PM	359.83	0.00	0.12	2,998.61	0.17	0.05 yr	24 hr	CloudBurst
CSO054	11/5/14 6:45 PM	11/5/14 6:45 PM	82.73	0.00	0.01	8,272.92	0.26	0.01 yr	6 hr	CloudBurst
CSO054	11/16/14 11:30 PM	11/17/14 4:00 AM	133.52	0.19	0.46	290.26	0.38	0.19 yr	12 hr	CloudBurst
CSO054	11/23/14 1:45 PM	11/23/14 10:45 PM	6,122.40	0.38	0.65	9,419.07	1.1	0.29 yr	12 hr	CloudBurst
CSO054	12/1/14 12:45 AM	12/1/14 5:00 PM	7,543.82	0.68	1.02	7,395.91	0.97	0.39 yr	24 hr	CloudBurst
CSO054	12/5/14 5:45 AM	12/6/14 6:00 AM	36,210.79	1.01	0.65	55,708.91	1.67	0.21 yr	48 hr	CloudBurst
CSO054	12/16/14 2:45 AM	12/16/14 5:45 AM	978.71	0.13	0.09	10,874.54	0	0.11 yr	0.25 hr	Atlas
CSO054	12/22/14 10:15 PM	12/22/14 11:45 PM	1,392.99	0.06	0.22	6,331.77	0	0.14 yr	3 hr	CloudBurst

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO054	12/23/14 7:30 PM	12/23/14 8:15 PM	417.11	0.03	0.1	4,171.15	0	0.05 yr	1 hr	CloudBurst
CSO054	12/24/14 1:15 PM	12/24/14 1:30 PM	477.18	0.01	0.19	2,511.46	0	0.17 yr	3 hr	Atlas14
CSO054	12/27/14 4:45 PM	12/28/14 1:30 AM	7,859.95	0.36	0.32	24,562.34	0	0.27 yr	1 hr	CloudBurst
CSO055	10/6/14 9:30 AM	10/6/14 9:30 AM	1,459.07	0.00	0.35	4,168.78	0.63	0.18 yr	3 hr	CloudBurst
CSO055	10/10/14 1:45 AM	10/10/14 3:15 AM	16,456.42	0.06	1.18	13,946.12	1.71	0.54 yr	3 hr	Atlas14
CSO055	10/13/14 4:15 AM	10/13/14 4:15 AM	1,262.22	0.00	0.33	3,824.91	1.83	0.21 yr	3 hr	Atlas14
CSO055	10/13/14 11:30 PM	10/13/14 11:30 PM	2,794.19	0.00	1.07	2,611.39	1.98	0.48 yr	12 hr	CloudBurst
CSO055	10/14/14 8:15 AM	10/14/14 8:15 AM	880.31	0.00	1.07	822.72	2.66	0.48 yr	12 hr	CloudBurst
CSO055	12/6/14 2:00 AM	12/6/14 3:00 AM	18,580.37	0.04	0.65	28,585.19	1.67	0.21 yr	48 hr	CloudBurst
CSO055	12/22/14 10:30 PM	12/22/14 10:30 PM	1,139.18	0.00	0.22	5,178.08	0	0.14 yr	3 hr	CloudBurst
CSO057	10/7/14 11:45 AM	10/7/14 11:45 AM	71.45	0.00	0.25	285.79	0.71	0.21 yr	1 hr	CloudBurst
CSO057	10/10/14 1:45 AM	10/10/14 2:45 AM	5,302.56	0.04	1.17	4,532.10	1.47	0.52 yr	3 hr	CloudBurst
CSO057	10/13/14 11:30 PM	10/13/14 11:30 PM	17.12	0.00	1.01	16.96	2.16	0.45 yr	12 hr	CloudBurst
CSO057	10/14/14 7:45 AM	10/14/14 7:45 AM	816.47	0.00	1.01	808.38	2.74	0.45 yr	12 hr	CloudBurst
CSO057	12/6/14 1:45 AM	12/6/14 3:00 AM	7,140.56	0.05	0.69	10,348.64	1.57	0.22 yr	48 hr	CloudBurst
CSO058	10/6/14 7:45 AM	10/6/14 7:45 AM	43.80	0.00	0.18	243.34	0.35	0.08 yr	6 hr	CloudBurst
CSO058	10/10/14 1:45 AM	10/10/14 3:15 AM	87,285.53	0.06	1.2	72,737.94	1.51	0.54 yr	3 hr	CloudBurst
CSO058	10/13/14 4:15 AM	10/13/14 6:00 AM	485.15	0.07	0.44	1,102.60	2.05	0.28 yr	3 hr	CloudBurst
CSO058	10/13/14 11:30 PM	10/13/14 11:30 PM	354.61	0.00	0.95	373.28	2.16	0.42 yr	12 hr	CloudBurst
CSO058	10/14/14 7:45 AM	10/14/14 8:30 AM	10,030.49	0.03	0.95	10,558.41	2.77	0.42 yr	12 hr	CloudBurst
CSO058	11/23/14 5:30 PM	11/23/14 10:45 PM	301.97	0.22	0.7	431.38	1.05	0.3 yr	12 hr	CloudBurst
CSO058	12/6/14 2:00 AM	12/6/14 3:15 AM	50,262.02	0.05	0.68	73,914.73	1.56	0.22 yr	48 hr	CloudBurst
CSO084	10/7/14 12:00 PM	10/7/14 12:00 PM	874.24	0.00	0.18	4,856.89	0.82	0.16 yr	1 hr	CloudBurst
CSO084	10/10/14 1:45 AM	10/10/14 2:30 AM	1,706.48	0.03	1.17	1,458.53	1.5	0.54 yr	3 hr	CloudBurst
CSO084	10/14/14 8:00 AM	10/14/14 8:30 AM	723.07	0.02	0.96	753.20	2.71	0.43 yr	12 hr	CloudBurst
CSO084	11/23/14 5:45 PM	11/23/14 5:45 PM	725.34	0.00	0.68	1,066.68	0.78	0.31 yr	12 hr	CloudBurst
CSO084	12/6/14 3:30 AM	12/6/14 6:15 AM	3,157.25	0.11	1.84	1,715.90	1.4	0.2 yr	48 hr	CloudBurst
CSO084	12/16/14 5:15 AM	12/16/14 5:15 AM	812.09	0.00	0.09	9,023.26	0	0.05 yr	3 hr	CloudBurst
CSO084	12/28/14 1:15 AM	12/28/14 2:45 PM	257,606.54	0.56	0.32	805,020.44	0	0.27 yr	1 hr	CloudBurst
CSO088	10/10/14 2:15 AM	10/10/14 3:15 AM	51,458.81	0.04	0.83	61,998.57	1.62	0.53 yr	3 hr	CloudBurst
CSO088	10/13/14 11:45 PM	10/14/14 8:30 AM	12,162.83	0.36	0.95	12,802.97	2.63	0.43 yr	12 hr	CloudBurst
CSO088	11/23/14 5:45 PM	11/23/14 5:45 PM	442.94	0.00	0.81	546.84	0.86	0.37 yr	12 hr	CloudBurst
CSO088	12/6/14 2:15 AM	12/6/14 6:00 AM	46,837.13	0.16	0.65	72,057.12	1.51	0.21 yr	48 hr	CloudBurst
CSO091	10/6/14 9:30 AM	10/6/14 9:30 AM	13,972.89	0.00	0.31	45,073.82	0.46	0.18 yr	1 hr	CloudBurst
CSO091	10/7/14 11:45 AM	10/7/14 11:45 AM	1,810.08	0.00	0.16	11,313.02	0.67	0.14 yr	1 hr	CloudBurst
CSO091	10/10/14 1:45 AM	10/10/14 2:45 AM	34,989.45	0.04	0.93	37,623.06	1.24	0.38 yr	3 hr	CloudBurst
CSO091	10/13/14 5:00 AM	10/13/14 5:00 AM	2,702.46	0.00	0.42	6,434.42	1.69	0.27 yr	3 hr	CloudBurst
CSO091	10/13/14 11:15 PM	10/14/14 8:15 AM	98,981.29	0.38	1.1	89,982.99	2.54	0.49 yr	12 hr	CloudBurst
CSO091	11/23/14 5:15 PM	11/23/14 6:00 PM	5,297.03	0.03	0.71	7,460.61	0.88	0.34 yr	6 hr	CloudBurst
CSO091	12/1/14 3:00 AM	12/1/14 4:30 AM	1,978.75	0.06	0.79	2,504.75	0.36	0.3 yr	24 hr	CloudBurst
CSO091	12/5/14 11:00 PM	12/6/14 6:30 AM	14,386.99	0.31	0.69	20,850.71	1.48	0.22 yr	48 hr	CloudBurst

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO091	12/16/14 5:00 AM	12/16/14 5:00 AM	560.59	0.00	0.09	6,228.82	0	0.05 yr	3 hr	CloudBurst
CSO091	12/28/14 12:45 AM	12/28/14 1:00 AM	1,508.59	0.01	0.32	4,714.36	0	0.27 yr	1 hr	CloudBurst
CSO092	10/7/14 11:45 AM	10/7/14 12:00 PM	2,118.16	0.01	0.16	13,238.48	0.67	0.14 yr	1 hr	CloudBurst
CSO092	10/10/14 1:45 AM	10/10/14 4:15 AM	32,788.12	0.10	0.93	35,256.05	1.27	0.38 yr	3 hr	CloudBurst
CSO092	10/13/14 4:30 AM	10/13/14 7:00 AM	2,716.67	0.10	0.42	6,468.25	1.84	0.27 yr	3 hr	CloudBurst
CSO092	10/13/14 11:30 PM	10/14/14 10:00 AM	32,504.72	0.44	1.1	29,549.75	2.64	0.49 yr	12 hr	CloudBurst
CSO092	10/15/14 5:30 PM	10/15/14 7:45 PM	16.44	0.09	0.16	102.73	2.63	0.07 yr	12 hr	CloudBurst
CSO092	10/20/14 8:00 PM	10/20/14 8:00 PM	11.61	0.00	0.04	290.36	1.36	0.03 yr	3 hr	CloudBurst
CSO092	10/28/14 10:45 AM	10/28/14 10:45 AM	4.60	0.00	0.09	51.16	0.01	0.06 yr	3 hr	CloudBurst
CSO092	11/23/14 2:30 PM	11/23/14 11:00 PM	5,738.51	0.35	0.71	8,082.41	1.1	0.34 yr	6 hr	CloudBurst
CSO092	12/1/14 3:15 AM	12/1/14 3:00 PM	5,249.18	0.49	0.79	6,644.53	0.69	0.3 yr	24 hr	CloudBurst
CSO092	12/5/14 4:30 AM	12/5/14 7:15 AM	117.93	0.11	0.69	170.91	1.23	0.22 yr	48 hr	CloudBurst
CSO092	12/5/14 8:30 PM	12/6/14 7:15 AM	40,104.66	0.45	0.69	58,122.70	1.48	0.22 yr	48 hr	CloudBurst
CSO092	12/16/14 5:15 AM	12/16/14 5:15 AM	677.34	0.00	0.12	5,644.53	0	0.07 yr	1 hr	CloudBurst
CSO092	12/22/14 11:30 PM	12/23/14 12:15 AM	48.29	0.03	0.26	185.74	0	0.14 yr	3 hr	CloudBurst
CSO092	12/23/14 8:00 PM	12/23/14 8:00 PM	157.58	0.00	0.12	1,313.19	0	0.08 yr	1 hr	CloudBurst
CSO092	12/24/14 1:30 PM	12/24/14 1:30 PM	17.22	0.00	0.19	90.63	0	0.16 yr	3 hr	CloudBurst
CSO092	12/27/14 5:15 PM	12/28/14 1:45 AM	1,798.15	0.35	0.32	5,619.20	0	0.3 yr	1 hr	CloudBurst
CSO097	10/4/14 11:45 PM	10/5/14 8:00 AM	260,624.93	0.34	Discharge		0.25		Inconclusive Data	
CSO097	10/10/14 3:00 AM	10/10/14 3:15 AM	4,479.17	0.01	0.82	5,462.40	1.01	0.36 yr	3 hr	CloudBurst
CSO097	10/13/14 6:00 AM	10/13/14 6:00 AM	104.17	0.00	0.5	208.33	1.57	0.32 yr	3 hr	CloudBurst
CSO097	10/13/14 11:30 PM	10/14/14 10:45 AM	14,375.00	0.47	1.21	11,880.17	2.72	0.55 yr	12 hr	CloudBurst
CSO104	10/10/14 2:45 AM	10/10/14 3:30 AM	18,547.77	0.03	1.02	18,184.09	1.5	0.46 yr	3 hr	Atlas14
CSO104	10/13/14 11:45 PM	10/14/14 12:00 AM	5,860.24	0.01	1.56	3,756.56	2.4	0.7 yr	12 hr	CloudBurst
CSO104	12/6/14 2:15 AM	12/6/14 3:45 AM	47,051.29	0.06	0.75	62,735.05	1.66	0.24 yr	48 hr	CloudBurst
CSO105	10/3/14 12:45 PM	10/3/14 8:15 PM	5,928.81	0.31	0.22	26,949.15	0.22	0.09 yr	24 hr	CloudBurst
CSO105	10/6/14 7:30 AM	10/6/14 7:00 PM	1,296,198.74	0.48	0.56	2,314,640.61	0.55	0.18 yr	3 hr	CloudBurst
CSO105	10/7/14 11:15 AM	10/7/14 1:00 PM	7,562.98	0.07	0.56	13,505.32	0.77	0.18 yr	3 hr	CloudBurst
CSO105	10/10/14 1:30 AM	10/10/14 5:30 AM	5,547,573.97	0.17	1.02	5,438,798.01	1.53	0.46 yr	3 hr	Atlas14
CSO105	10/10/14 5:00 PM	10/11/14 3:00 AM	17,468.98	0.42	1.02	17,126.45	1.69	0.46 yr	3 hr	Atlas14
CSO105	10/13/14 4:00 AM	10/13/14 8:45 AM	2,749,685.55	0.20	0.45	6,110,412.33	2.07	0.29 yr	3 hr	CloudBurst
CSO105	10/13/14 10:15 PM	10/14/14 3:15 PM	8,792,567.45	0.71	1.56	5,636,261.19	3.29	0.7 yr	12 hr	CloudBurst
CSO105	10/15/14 6:15 PM	10/15/14 7:00 PM	1,861.79	0.03	0.19	9,798.90	3.26	0.09 yr	12 hr	CloudBurst
CSO105	10/28/14 11:45 AM	10/28/14 1:15 PM	2,164.55	0.06	0.09	24,050.58	0.09	0.06 yr	3 hr	CloudBurst
CSO105	11/5/14 6:45 PM	11/5/14 7:00 PM	863.84	0.01	0.01	86,384.38	0.27	0.01 yr	6 hr	CloudBurst
CSO105	11/16/14 9:30 PM	11/17/14 12:30 PM	29,263.53	0.63	0.41	71,374.47	0.43	0.15 yr	24 hr	CloudBurst
CSO105	11/23/14 2:30 PM	11/24/14 12:00 AM	3,218,208.34	0.40	0.86	3,742,102.73	1.26	0.39 yr	6 hr	CloudBurst
CSO105	12/1/14 1:15 AM	12/1/14 4:30 PM	563,513.42	0.64	0.91	619,245.52	0.88	0.35 yr	24 hr	CloudBurst
CSO105	12/4/14 9:00 AM	12/6/14 8:45 AM	11,203,127.09	1.99	0.75	14,937,502.79	1.66	0.24 yr	48 hr	CloudBurst
CSO105	12/16/14 3:00 AM	12/16/14 6:00 AM	6,952.98	0.13	0.15	46,353.19	0	0.11 yr	3 hr	CloudBurst
CSO105	12/22/14 10:30 PM	12/22/14 11:45 PM	6,907.16	0.05	0.29	23,817.78	0	0.09 yr	1 hr	CloudBurst

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO105	12/23/14 7:45 PM	12/23/14 8:45 PM	3,597.42	0.04	0.01	359,741.67	0	0.05 yr	1 hr	CloudBurst
CSO105	12/24/14 12:00 PM	12/24/14 2:30 PM	9,049.30	0.10	0.01	904,930.28	0	0.15 yr	3 hr	CloudBurst
CSO105	12/27/14 8:45 AM	12/28/14 2:45 AM	39,689.15	0.75	0.36	110,247.65	0	0.14 yr	1 hr	CloudBurst
CSO106	10/3/14 3:15 AM	10/3/14 4:00 AM	3,530.73	0.03	0.18	19,615.16	0.12	0.07 yr	24 hr	CloudBurst
CSO106	10/6/14 7:45 AM	10/6/14 7:45 AM	539.46	0.00	0.14	3,853.27	0.27	0.05 yr	48 hr	CloudBurst
CSO106	10/7/14 11:45 AM	10/7/14 11:45 AM	601.45	0.00	0.16	3,759.05	0.48	0.13 yr	1 hr	CloudBurst
CSO106	10/10/14 1:45 AM	10/10/14 2:45 AM	8,580.08	0.04	0.82	10,463.52	1.01	0.36 yr	3 hr	CloudBurst
CSO106	10/13/14 5:30 AM	10/13/14 5:30 AM	176.52	0.00	0.5	353.04	1.51	0.32 yr	3 hr	CloudBurst
CSO106	10/13/14 11:15 PM	10/13/14 11:30 PM	22,919.95	0.01	1.21	18,942.11	1.86	0.55 yr	12 hr	CloudBurst
CSO106	10/14/14 8:15 AM	10/14/14 8:15 AM	81.40	0.00	1.21	67.27	2.58	0.55 yr	12 hr	CloudBurst
CSO106	10/31/14 5:45 PM	11/1/14 5:30 PM	18,148.97	0.99	0.17	106,758.65	0.27	0.06 yr	48 hr	CloudBurst
CSO106	11/2/14 8:45 AM	11/2/14 6:30 PM	11,467.13	0.41	Discharge		0.27	DWO	Work Order # 2260454	
CSO106	11/3/14 8:00 AM	11/3/14 12:15 PM	2,129.84	0.18	Discharge		0.27	DWO	Work Order # 2260454	
CSO106	11/23/14 5:15 PM	11/23/14 6:00 PM	1,966.32	0.03	0.81	2,427.56	0.94	0.37 yr	6 hr	CloudBurst
CSO106	12/1/14 4:15 AM	12/1/14 4:30 AM	669.79	0.01	0.73	917.52	0.29	0.28 yr	24 hr	CloudBurst
CSO106	12/5/14 11:00 PM	12/6/14 8:45 AM	16,082.61	0.41	0.7	22,975.16	1.43	0.23 yr	48 hr	CloudBurst
CSO106	12/22/14 11:15 PM	12/22/14 11:15 PM	379.86	0.00	0.26	1,461.02	0	0.14 yr	3 hr	CloudBurst
CSO106	12/28/14 1:00 AM	12/28/14 1:00 AM	931.91	0.00	0.32	2,912.21	0	0.3 yr	1 hr	CloudBurst
CSO108	10/13/14 11:45 PM	10/14/14 12:00 AM	6,310.89	0.01	1.08	5,843.41	1.74	0.49 yr	12 hr	CloudBurst
CSO108	12/6/14 3:15 AM	12/6/14 7:30 AM	151,609.54	0.18	1.9	79,794.50	1.41	0.18 yr	48 hr	CloudBurst
CSO110	10/10/14 2:15 AM	10/10/14 3:45 AM	789,525.40	0.06	0.75	1,052,700.54	0.98	0.29 yr	24 hr	CloudBurst
CSO110	10/13/14 5:45 AM	10/13/14 7:00 AM	233,444.90	0.05	0.42	555,821.20	1.48	0.27 yr	3 hr	CloudBurst
CSO110	10/13/14 11:45 PM	10/14/14 10:45 AM	889,484.65	0.46	1.24	717,326.33	2.62	0.56 yr	12 hr	CloudBurst
CSO110	11/23/14 5:45 PM	11/23/14 9:00 PM	517,491.34	0.14	0.81	638,878.20	1.15	0.38 yr	6 hr	CloudBurst
CSO110	12/1/14 4:15 AM	12/1/14 6:00 AM	188,493.27	0.07	0.82	229,869.84	0.37	0.31 yr	24 hr	CloudBurst
CSO110	12/5/14 11:15 PM	12/6/14 9:00 AM	1,788,920.42	0.41	0.67	2,670,030.48	1.49	0.22 yr	48 hr	CloudBurst
CSO110	12/28/14 1:30 AM	12/28/14 2:30 AM	100,434.77	0.04	0.32	313,858.67	0	0.3 yr	1 hr	CloudBurst
CSO111	10/10/14 1:45 AM	10/10/14 3:00 AM	17,872.57	0.05	0.75	23,830.10	0.96	0.29 yr	24 hr	CloudBurst
CSO111	10/13/14 11:30 PM	10/13/14 11:45 PM	7,238.07	0.01	1.24	5,837.16	1.75	0.56 yr	12 hr	CloudBurst
CSO111	10/14/14 8:00 AM	10/14/14 8:15 AM	2,203.64	0.01	1.24	1,777.13	2.49	0.56 yr	12 hr	CloudBurst
CSO111	12/6/14 2:45 AM	12/6/14 7:00 AM	19,071.19	0.18	1.9	10,037.47	1.49	0.18 yr	48 hr	CloudBurst
CSO113	10/7/14 12:00 PM	10/7/14 12:15 PM	4,264.42	0.01	0.16	26,652.60	0.67	0.14 yr	1 hr	CloudBurst
CSO113	10/10/14 1:45 AM	10/10/14 3:00 AM	57,445.90	0.05	0.93	61,769.79	1.26	0.38 yr	3 hr	CloudBurst
CSO113	10/13/14 5:00 AM	10/13/14 6:00 AM	8,179.94	0.04	0.42	19,476.04	1.82	0.27 yr	3 hr	CloudBurst
CSO113	10/13/14 11:30 PM	10/14/14 8:30 AM	79,676.53	0.38	1.1	72,433.21	2.54	0.49 yr	12 hr	CloudBurst
CSO113	11/23/14 5:45 PM	11/23/14 7:45 PM	16,211.20	0.08	0.71	22,832.67	1.04	0.34 yr	6 hr	CloudBurst
CSO113	12/1/14 4:00 AM	12/1/14 5:00 AM	15,476.16	0.04	0.79	19,590.07	0.39	0.3 yr	24 hr	CloudBurst
CSO113	12/5/14 11:15 PM	12/6/14 7:00 AM	115,652.42	0.32	0.69	167,612.21	1.48	0.22 yr	48 hr	CloudBurst
CSO113	12/28/14 1:15 AM	12/28/14 1:30 AM	4,139.29	0.01	0.32	12,935.29	0	0.3 yr	1 hr	CloudBurst
CSO117	10/3/14 3:45 AM	10/3/14 4:00 AM	19,240.71	0.01	0.24	80,169.62	0.07	0.09 yr	24 hr	CloudBurst
CSO117	10/6/14 9:45 AM	10/6/14 10:30 AM	377,818.97	0.03	0.26	1,453,149.90	0.46	0.12 yr	6 hr	CloudBurst

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO117	10/7/14 12:15 PM	10/7/14 12:45 PM	92,363.39	0.02	0.2	461,816.94	0.71	0.17 yr	1 hr	CloudBurst
CSO117	10/10/14 2:00 AM	10/10/14 4:00 AM	1,187,273.03	0.08	1.2	989,394.19	1.56	0.54 yr	3 hr	CloudBurst
CSO117	10/13/14 4:45 AM	10/13/14 7:15 AM	691,240.51	0.10	0.49	1,410,694.93	2.18	0.32 yr	3 hr	CloudBurst
CSO117	10/13/14 11:30 PM	10/14/14 10:45 AM	1,395,670.52	0.47	0.94	1,484,755.87	2.86	0.42 yr	12 hr	CloudBurst
CSO117	11/23/14 5:30 PM	11/23/14 11:30 PM	999,933.94	0.25	0.64	1,562,396.79	1	0.27 yr	12 hr	CloudBurst
CSO117	12/1/14 3:30 AM	12/1/14 6:15 AM	569,447.34	0.11	0.88	647,099.25	0.46	0.34 yr	24 hr	CloudBurst
CSO117	12/1/14 3:15 PM	12/1/14 4:15 PM	50,538.22	0.04	0.88	57,429.79	0.81	0.34 yr	24 hr	CloudBurst
CSO117	12/5/14 6:45 AM	12/5/14 7:15 AM	10,285.48	0.02	0.63	16,326.16	1.25	0.2 yr	48 hr	CloudBurst
CSO117	12/5/14 9:00 PM	12/6/14 7:45 AM	2,769,667.89	0.45	0.63	4,396,298.24	1.51	0.2 yr	48 hr	CloudBurst
CSO117	12/16/14 5:30 AM	12/16/14 6:00 AM	49,602.16	0.02	0.09	551,135.09	0	0.05 yr	3 hr	CloudBurst
CSO117	12/23/14 12:00 AM	12/23/14 12:30 AM	59,806.61	0.02	0.22	271,848.22	0	0.14 yr	3 hr	CloudBurst
CSO117	12/28/14 1:15 AM	12/28/14 2:15 AM	253,145.24	0.04	0.32	791,078.87	0	0.27 yr	1 hr	CloudBurst
CSO118	10/3/14 3:30 AM	10/3/14 4:15 AM	34,568.74	0.03	0.25	138,274.94	0.09	0.1 yr	1 hr	CloudBurst
CSO118	10/3/14 7:15 PM	10/3/14 8:15 PM	684.24	0.04	0.25	2,736.96	0.26	0.1 yr	1 hr	CloudBurst
CSO118	10/6/14 7:45 AM	10/6/14 11:00 AM	603,014.69	0.14	0.39	1,546,191.52	0.6	0.23 yr	1 hr	CloudBurst
CSO118	10/7/14 11:30 AM	10/7/14 12:30 PM	165,722.23	0.04	0.18	920,679.07	0.82	0.16 yr	1 hr	CloudBurst
CSO118	10/10/14 1:45 AM	10/10/14 3:45 AM	2,145,153.66	0.08	1.17	1,833,464.67	1.66	0.54 yr	3 hr	CloudBurst
CSO118	10/10/14 5:15 PM	10/10/14 9:00 PM	1,263.71	0.16	1.17	1,080.09	1.85	0.54 yr	3 hr	CloudBurst
CSO118	10/13/14 4:30 AM	10/13/14 7:00 AM	768,085.35	0.10	0.48	1,600,177.81	2.22	0.3 yr	3 hr	CloudBurst
CSO118	10/13/14 11:30 PM	10/14/14 10:30 AM	1,892,918.37	0.46	0.96	1,971,789.96	2.81	0.43 yr	12 hr	CloudBurst
CSO118	10/20/14 7:15 AM	10/20/14 7:15 AM	140.50	0.00	0.05	2,810.00	1.19	0.04 yr	1 hr	CloudBurst
CSO118	10/20/14 8:00 PM	10/20/14 8:00 PM	940.66	0.00	0.08	11,758.20	1.26	0.07 yr	1 hr	CloudBurst
CSO118	10/28/14 1:00 PM	10/28/14 1:00 PM	612.36	0.00	0.12	5,103.04	0.11	0.07 yr	6 hr	CloudBurst
CSO118	11/23/14 5:30 PM	11/23/14 11:30 PM	1,339,982.98	0.25	0.68	1,970,563.21	1.05	0.31 yr	12 hr	CloudBurst
CSO118	11/24/14 11:30 AM	11/24/14 11:30 AM	36.61	0.00	0.02	1,830.73	0.74	0.02 yr	1 hr	CloudBurst
CSO118	12/1/14 3:45 AM	12/1/14 4:15 PM	213,240.88	0.52	0.81	263,260.34	0.76	0.31 yr	24 hr	CloudBurst
CSO118	12/4/14 2:30 PM	12/5/14 6:15 AM	1,251.02	0.66	0.59	2,120.37	1.18	0.19 yr	48 hr	CloudBurst
CSO118	12/5/14 8:30 PM	12/6/14 7:30 AM	3,248,571.70	0.46	0.59	5,506,053.73	1.4	0.19 yr	48 hr	CloudBurst
CSO118	12/16/14 5:00 AM	12/16/14 5:45 AM	23,887.07	0.03	0.09	265,411.84	0	0.05 yr	3 hr	CloudBurst
CSO118	12/22/14 10:30 PM	12/23/14 12:15 AM	2,080.78	0.07	0.22	9,458.10	0	0.14 yr	3 hr	CloudBurst
CSO118	12/23/14 8:00 PM	12/23/14 8:15 PM	410.11	0.01	0.1	4,101.15	0	0.05 yr	1 hr	CloudBurst
CSO118	12/24/14 12:45 PM	12/24/14 2:15 PM	641.47	0.06	0.19	3,376.15	0	0.17 yr	3 hr	Atlas14
CSO118	12/27/14 5:00 PM	12/28/14 2:00 AM	198,640.05	0.38	0.32	620,750.15	0	0.27 yr	1 hr	CloudBurst
CSO120	10/6/14 9:45 AM	10/6/14 9:45 AM	136,739.75	0.00	0.22	621,544.32	0.42	0.09 yr	12 hr	CloudBurst
CSO120	10/7/14 12:00 PM	10/7/14 12:00 PM	14,221.82	0.00	0.22	64,644.65	0.7	0.18 yr	1 hr	CloudBurst
CSO120	10/10/14 2:00 AM	10/10/14 3:00 AM	155,707.36	0.04	1.19	130,846.52	1.5	0.55 yr	1 hr	CloudBurst
CSO120	10/13/14 4:30 AM	10/13/14 6:00 AM	31,184.53	0.06	0.42	74,248.87	2.03	0.27 yr	3 hr	CloudBurst
CSO120	10/13/14 11:30 PM	10/13/14 11:45 PM	167,414.02	0.01	0.88	190,243.21	2.14	0.39 yr	12 hr	CloudBurst
CSO120	10/14/14 8:00 AM	10/14/14 8:15 AM	99,503.64	0.01	0.88	113,072.32	2.65	0.39 yr	12 hr	CloudBurst
CSO120	11/23/14 5:30 PM	11/23/14 7:30 PM	66,518.36	0.08	0.74	89,889.67	1	0.32 yr	12 hr	CloudBurst
CSO120	12/1/14 3:15 AM	12/1/14 3:15 AM	315.05	0.00	0.87	362.13	0.22	0.33 yr	24 hr	CloudBurst

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO120	12/5/14 11:15 PM	12/6/14 6:45 AM	265,029.68	0.31	0.64	414,108.88	1.51	0.21 yr	48 hr	CloudBurst
CSO120	12/16/14 5:15 AM	12/16/14 5:15 AM	4,468.59	0.00	0.09	49,651.04	0	0.05 yr	3 hr	CloudBurst
CSO120	12/28/14 1:00 AM	12/28/14 1:15 AM	34,111.47	0.01	0.32	106,598.34	0	0.27 yr	1 hr	CloudBurst
CSO121	10/6/14 9:30 AM	10/6/14 9:45 AM	56,794.50	0.01	0.22	258,156.81	0.42	0.09 yr	12 hr	CloudBurst
CSO121	10/7/14 11:45 AM	10/7/14 11:45 AM	18,680.94	0.00	0.22	84,913.35	0.7	0.18 yr	1 hr	CloudBurst
CSO121	10/10/14 1:45 AM	10/10/14 2:15 AM	22,160.43	0.02	1.19	18,622.21	1.1	0.55 yr	1 hr	CloudBurst
CSO121	10/13/14 4:15 AM	10/13/14 4:30 AM	58,886.78	0.01	0.42	140,206.63	1.78	0.27 yr	3 hr	CloudBurst
CSO121	10/13/14 11:15 PM	10/13/14 11:45 PM	33,832.36	0.02	0.88	38,445.87	2.14	0.39 yr	12 hr	CloudBurst
CSO121	10/14/14 8:00 AM	10/14/14 8:15 AM	37,016.29	0.01	0.88	42,063.96	2.65	0.39 yr	12 hr	CloudBurst
CSO121	11/5/14 12:15 AM	11/5/14 12:15 AM	975.66	0.00	0.1	9,756.56	0.23	0.05 yr	3 hr	CloudBurst
CSO121	11/23/14 1:30 PM	11/23/14 7:00 PM	39,313.55	0.23	0.74	53,126.42	0.97	0.32 yr	12 hr	CloudBurst
CSO121	12/6/14 1:45 AM	12/6/14 6:00 AM	177,815.35	0.18	0.64	277,836.49	1.51	0.21 yr	48 hr	CloudBurst
CSO121	12/28/14 1:00 AM	12/28/14 1:00 AM	18,078.70	0.00	0.32	56,495.94	0	0.27 yr	1 hr	CloudBurst
CSO125	10/6/14 9:45 AM	10/6/14 10:00 AM	78,585.00	0.01	0.37	212,391.90	0.56	0.19 yr	3 hr	CloudBurst
CSO125	10/7/14 12:00 PM	10/7/14 12:00 PM	58,044.30	0.00	0.18	322,468.36	0.79	0.15 yr	1 hr	CloudBurst
CSO125	10/10/14 2:00 AM	10/10/14 3:15 AM	546,005.34	0.05	1.06	515,099.37	1.58	0.52 yr	3 hr	Atlas14
CSO125	10/13/14 5:30 AM	10/13/14 6:30 AM	99,212.20	0.04	0.5	198,424.40	2.12	0.32 yr	3 hr	CloudBurst
CSO125	10/13/14 11:30 PM	10/14/14 10:30 AM	699,796.02	0.46	1.19	588,063.88	2.95	0.54 yr	12 hr	CloudBurst
CSO125	11/23/14 5:30 PM	11/23/14 7:45 PM	248,245.03	0.09	0.77	322,396.15	1.05	0.35 yr	6 hr	CloudBurst
CSO125	12/1/14 3:30 AM	12/1/14 3:30 AM	15,455.79	0.00	0.76	20,336.57	0.22	0.29 yr	24 hr	CloudBurst
CSO125	12/5/14 11:15 PM	12/6/14 7:15 AM	1,754,835.33	0.33	0.64	2,741,930.21	1.4	0.21 yr	48 hr	CloudBurst
CSO125	12/28/14 1:15 AM	12/28/14 1:30 AM	42,052.45	0.01	0.32	131,413.90	0	0.27 yr	1 hr	CloudBurst
CSO126	12/6/14 2:45 AM	12/6/14 7:00 AM	432,379.57	0.18	1.84	234,988.90	1.4	0.2 yr	48 hr	CloudBurst
CSO127	10/3/14 4:15 AM	10/3/14 4:30 AM	4,494.30	0.01	0.18	24,968.35	0.18	0.07 yr	3 hr	CloudBurst
CSO127	10/3/14 7:30 PM	10/3/14 7:30 PM	128.09	0.00	0.18	711.63	0.26	0.07 yr	3 hr	CloudBurst
CSO127	10/6/14 8:00 AM	10/6/14 10:00 AM	29,931.80	0.08	0.19	157,535.80	0.33	0.09 yr	6 hr	CloudBurst
CSO127	10/7/14 11:45 AM	10/7/14 12:15 PM	129,285.56	0.02	0.17	760,503.30	0.55	0.14 yr	1 hr	CloudBurst
CSO127	10/10/14 5:30 PM	10/10/14 9:30 PM	17,703.55	0.17	1.15	15,394.39	1.61	0.57 yr	3 hr	CloudBurst
CSO127	10/13/14 4:45 AM	10/13/14 6:45 AM	347,271.40	0.08	0.5	694,542.81	2.03	0.32 yr	3 hr	CloudBurst
CSO127	10/13/14 11:30 PM	10/14/14 10:30 AM	682,231.60	0.46	1.26	541,453.65	3.09	0.56 yr	12 hr	CloudBurst
CSO127	11/23/14 2:45 PM	11/23/14 8:15 PM	400,528.70	0.23	0.79	506,998.36	1.07	0.36 yr	6 hr	CloudBurst
CSO127	12/1/14 3:30 AM	12/1/14 5:45 AM	136,602.64	0.09	0.71	192,398.08	0.37	0.27 yr	24 hr	CloudBurst
CSO127	12/1/14 2:45 PM	12/1/14 3:30 PM	25,674.19	0.03	0.71	36,160.84	0.64	0.27 yr	24 hr	CloudBurst
CSO127	12/5/14 4:45 AM	12/5/14 7:00 AM	33,712.89	0.09	0.64	52,676.39	1.18	0.21 yr	48 hr	CloudBurst
CSO127	12/5/14 8:45 PM	12/6/14 7:45 AM	961,152.71	0.46	0.64	1,501,801.10	1.35	0.21 yr	48 hr	CloudBurst
CSO127	12/16/14 5:30 AM	12/16/14 5:45 AM	5,831.05	0.01	0.09	64,789.46	0	0.05 yr	3 hr	CloudBurst
CSO127	12/22/14 11:00 PM	12/23/14 12:15 AM	25,916.74	0.05	0.22	117,803.38	0	0.14 yr	3 hr	CloudBurst
CSO127	12/23/14 8:15 PM	12/23/14 8:30 PM	10,855.36	0.01	0.1	108,553.64	0	0.05 yr	1 hr	CloudBurst
CSO127	12/24/14 1:45 PM	12/24/14 2:00 PM	10,055.35	0.01	0.19	52,922.92	0	0.17 yr	3 hr	Atlas14
CSO127	12/28/14 1:15 AM	12/28/14 2:00 AM	149,155.74	0.03	0.32	466,111.69	0	0.27 yr	1 hr	CloudBurst
CSO130	10/3/14 3:30 AM	10/3/14 4:30 AM	5,594.26	0.04	0.23	24,322.87	0.1	0.09 yr	24 hr	CloudBurst

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO130	10/6/14 8:00 AM	10/6/14 10:00 AM	10,346.66	0.08	0.38	27,228.04	0.55	0.2 yr	1 hr	CloudBurst
CSO130	10/7/14 11:45 AM	10/7/14 12:15 PM	5,592.59	0.02	0.23	24,315.63	0.83	0.18 yr	1 hr	CloudBurst
CSO130	10/10/14 2:00 AM	10/10/14 3:45 AM	114,879.48	0.07	0.83	138,409.01	1.64	0.53 yr	3 hr	CloudBurst
CSO130	10/10/14 9:15 PM	10/10/14 9:15 PM	7,109.67	0.00	0.27	26,332.10	1.69	0.12 yr	12 hr	CloudBurst
CSO130	10/13/14 4:30 AM	10/13/14 6:15 AM	17,558.40	0.07	0.41	42,825.36	2.11	0.26 yr	3 hr	CloudBurst
CSO130	10/13/14 11:30 PM	10/14/14 12:00 PM	199,895.66	0.52	0.95	210,416.48	2.71	0.43 yr	12 hr	CloudBurst
CSO130	10/20/14 8:00 PM	10/20/14 8:00 PM	1,273.22	0.00	0.03	42,440.63	1.21	0.03 yr	1 hr	CloudBurst
CSO130	10/31/14 8:15 PM	10/31/14 9:15 PM	2,509.71	0.04	0.17	14,762.99	0.27	0.06 yr	48 hr	CloudBurst
CSO130	11/4/14 10:45 PM	11/5/14 4:30 AM	2,249.22	0.24	0.11	20,447.44	0.28	0.05 yr	12 hr	CloudBurst
CSO130	11/5/14 6:45 PM	11/5/14 7:15 PM	2,717.39	0.02	0.01	271,738.55	0.29	0.01 yr	6 hr	CloudBurst
CSO130	11/11/14 6:00 PM	11/11/14 7:00 PM	6,507.45	0.04	0.05	130,148.96	0.15	0.02 yr	48 hr	CloudBurst
CSO130	11/16/14 6:45 PM	11/17/14 12:30 AM	57,222.80	0.24	0.16	357,642.52	0.19	0.14 yr	6 hr	CloudBurst
CSO130	11/23/14 1:30 PM	11/23/14 7:30 PM	12,351.90	0.25	0.81	15,249.26	1.07	0.37 yr	12 hr	CloudBurst
CSO130	12/1/14 1:00 AM	12/1/14 3:00 PM	14,679.87	0.58	0.86	17,069.62	0.74	0.33 yr	24 hr	CloudBurst
CSO130	12/4/14 8:30 AM	12/5/14 6:45 AM	14,862.33	0.93	0.65	22,865.13	1.28	0.21 yr	48 hr	CloudBurst
CSO130	12/5/14 5:30 PM	12/6/14 2:00 AM	7,355.57	0.35	0.65	11,316.27	1.51	0.21 yr	48 hr	CloudBurst
CSO130	12/16/14 5:00 AM	12/16/14 5:00 AM	3,163.21	0.00	0.09	35,146.76	0	0.05 yr	3 hr	CloudBurst
CSO130	12/22/14 10:15 PM	12/23/14 12:00 AM	4,245.25	0.07	0.22	19,296.59	0	0.14 yr	3 hr	CloudBurst
CSO130	12/23/14 7:45 PM	12/23/14 8:15 PM	1,639.16	0.02	0.1	16,391.56	0	0.05 yr	1 hr	CloudBurst
CSO130	12/24/14 12:30 PM	12/24/14 1:30 PM	1,381.68	0.04	0.19	7,271.98	0	0.17 yr	3 hr	Atlas14
CSO130	12/27/14 5:00 PM	12/28/14 1:30 AM	5,323.29	0.35	0.32	16,635.29	0	0.27 yr	1 hr	CloudBurst
CSO132	10/6/14 9:30 AM	10/6/14 10:15 AM	121,319.32	0.03	0.45	269,598.48	0.63	0.28 yr	1 hr	CloudBurst
CSO132	10/10/14 2:00 AM	10/10/14 3:45 AM	453,510.01	0.07	1.02	444,617.65	1.65	0.48 yr	3 hr	CloudBurst
CSO132	10/10/14 9:30 PM	10/10/14 9:45 PM	14,240.51	0.01	1.02	13,961.28	1.69	0.48 yr	3 hr	CloudBurst
CSO132	10/13/14 4:45 AM	10/13/14 7:00 AM	64,177.55	0.09	0.46	139,516.42	2.16	0.29 yr	3 hr	CloudBurst
CSO132	10/14/14 12:15 AM	10/14/14 11:15 AM	311,485.60	0.46	1.04	299,505.38	2.77	0.47 yr	12 hr	CloudBurst
CSO132	11/23/14 5:45 PM	11/23/14 8:30 PM	274,808.83	0.11	0.85	323,304.50	1.12	0.39 yr	6 hr	CloudBurst
CSO132	12/1/14 2:30 AM	12/1/14 5:00 AM	97,080.24	0.10	0.8	121,350.30	0.38	0.31 yr	24 hr	CloudBurst
CSO132	12/1/14 2:45 PM	12/1/14 4:15 PM	69,412.91	0.06	0.8	86,766.14	0.74	0.31 yr	24 hr	CloudBurst
CSO132	12/5/14 6:15 AM	12/5/14 6:45 AM	18,881.39	0.02	0.65	29,048.29	1.21	0.21 yr	48 hr	CloudBurst
CSO132	12/5/14 8:45 PM	12/6/14 10:30 AM	478,143.38	0.57	0.65	735,605.20	1.45	0.21 yr	48 hr	CloudBurst
CSO132	12/16/14 5:15 AM	12/16/14 5:30 AM	36,874.62	0.01	0.09	409,718.05	0	0.05 yr	3 hr	CloudBurst
CSO132	12/22/14 11:45 PM	12/23/14 12:00 AM	16,913.15	0.01	0.22	76,877.96	0	0.14 yr	3 hr	CloudBurst
CSO132	12/24/14 1:45 PM	12/24/14 2:15 PM	616.69	0.02	0.19	3,245.72	0	0.17 yr	3 hr	Atlas14
CSO132	12/28/14 1:45 AM	12/28/14 2:00 AM	10,972.81	0.01	0.32	34,290.04	0	0.27 yr	1 hr	CloudBurst
CSO137	10/6/14 8:00 AM	10/6/14 8:00 AM	1,911.50	0.00	0.14	13,653.57	0.27	0.05 yr	48 hr	CloudBurst
CSO137	10/7/14 12:00 PM	10/7/14 12:00 PM	33,385.22	0.00	0.16	208,657.62	0.48	0.13 yr	1 hr	CloudBurst
CSO137	10/10/14 2:00 AM	10/10/14 3:15 AM	124,984.98	0.05	0.82	152,420.70	1.02	0.36 yr	3 hr	CloudBurst
CSO137	10/13/14 5:15 AM	10/13/14 6:00 AM	10,753.09	0.03	0.5	21,506.19	1.57	0.32 yr	3 hr	CloudBurst
CSO137	10/13/14 11:30 PM	10/14/14 10:15 AM	121,272.85	0.45	1.21	100,225.50	2.71	0.55 yr	12 hr	CloudBurst
CSO137	12/1/14 3:15 AM	12/1/14 4:45 AM	14,634.98	0.06	0.73	20,047.92	0.31	0.28 yr	24 hr	CloudBurst

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO137	12/5/14 6:15 AM	12/5/14 6:30 AM	1,354.65	0.01	0.7	1,935.21	1.23	0.23 yr	48 hr	CloudBurst
CSO137	12/5/14 8:45 PM	12/7/14 6:00 PM	1,319,724.60	1.89	0.7	1,885,320.85	1.43	0.23 yr	48 hr	CloudBurst
CSO137	12/16/14 9:30 AM	12/16/14 11:15 AM	11,173.63	0.07	0.12	93,113.55	0	0.07 yr	1 hr	CloudBurst
CSO137	12/28/14 1:15 AM	12/28/14 1:15 AM	7,699.33	0.00	0.32	24,060.42	0	0.3 yr	1 hr	CloudBurst
CSO140	10/6/14 9:45 AM	10/6/14 9:45 AM	43,713.63	0.00	0.31	141,011.69	0.48	0.17 yr	1 hr	CloudBurst
CSO140	10/7/14 12:00 PM	10/7/14 12:00 PM	10,888.80	0.00	0.21	51,851.44	0.75	0.17 yr	1 hr	CloudBurst
CSO140	10/10/14 2:15 AM	10/10/14 3:00 AM	85,655.09	0.03	1.09	78,582.65	1.48	0.49 yr	3 hr	CloudBurst
CSO140	10/13/14 11:30 PM	10/14/14 12:00 AM	81,929.50	0.02	1.08	75,860.65	2.02	0.49 yr	12 hr	CloudBurst
CSO140	10/14/14 8:15 AM	10/14/14 10:00 AM	45,830.72	0.07	1.08	42,435.85	2.78	0.49 yr	12 hr	CloudBurst
CSO140	10/20/14 8:00 PM	10/20/14 8:00 PM	4,936.43	0.00	0.04	123,410.69	1.35	0.03 yr	3 hr	CloudBurst
CSO140	11/23/14 2:30 PM	11/23/14 5:45 PM	201,224.21	0.14	0.85	236,734.37	0.89	0.38 yr	6 hr	CloudBurst
CSO140	12/6/14 2:45 AM	12/6/14 10:30 AM	811,570.09	0.32	1.84	441,070.70	1.45	0.2 yr	48 hr	CloudBurst
CSO140	12/28/14 1:00 AM	12/28/14 1:00 AM	8,303.84	0.00	0.32	25,949.51	0	0.27 yr	1 hr	CloudBurst
CSO141	10/3/14 3:30 AM	10/3/14 5:00 AM	3,976.70	0.06	0.26	15,294.99	0.11	0.1 yr	24 hr	CloudBurst
CSO141	10/3/14 7:15 PM	10/3/14 8:15 PM	2,394.44	0.04	0.26	9,209.37	0.26	0.1 yr	24 hr	CloudBurst
CSO141	10/6/14 7:45 AM	10/6/14 11:15 AM	16,416.02	0.15	0.22	74,618.28	0.44	0.09 yr	12 hr	CloudBurst
CSO141	10/10/14 1:45 AM	10/10/14 3:00 AM	8,686.14	0.05	1.19	7,299.27	1.51	0.55 yr	1 hr	CloudBurst
CSO141	10/10/14 9:15 PM	10/10/14 9:30 PM	517.02	0.01	1.19	434.47	1.61	0.55 yr	1 hr	CloudBurst
CSO141	10/13/14 6:00 AM	10/13/14 6:00 AM	11.98	0.00	0.42	28.52	2.03	0.27 yr	3 hr	CloudBurst
CSO141	10/13/14 11:30 PM	10/13/14 11:30 PM	3,210.69	0.00	0.88	3,648.51	2.1	0.39 yr	12 hr	CloudBurst
CSO141	10/14/14 7:45 AM	10/14/14 8:15 AM	5,363.95	0.02	0.88	6,095.40	2.65	0.39 yr	12 hr	CloudBurst
CSO141	10/20/14 8:00 PM	10/20/14 8:00 PM	27.09	0.00	0.04	677.34	1.14	0.03 yr	3 hr	CloudBurst
CSO141	10/28/14 10:45 AM	10/28/14 6:30 PM	16,719.77	0.32	0.13	128,613.58	0.12	0.07 yr	6 hr	CloudBurst
CSO141	10/31/14 8:15 PM	10/31/14 8:15 PM	1,072.75	0.00	0.16	6,704.69	0.26	0.06 yr	24 hr	CloudBurst
CSO141	11/5/14 6:45 PM	11/6/14 1:30 AM	514.97	0.28	0.01	51,496.87	0.27	0.01 yr	6 hr	CloudBurst
CSO141	11/23/14 1:45 PM	11/23/14 11:30 PM	128,725.26	0.41	0.74	173,953.05	1.09	0.32 yr	12 hr	CloudBurst
CSO141	12/6/14 2:30 AM	12/6/14 6:45 AM	10,212.25	0.18	1.84	5,550.14	1.51	0.2 yr	48 hr	CloudBurst
CSO141	12/16/14 5:00 AM	12/16/14 9:15 AM	25,751.77	0.18	0.09	286,130.78	0	0.05 yr	3 hr	CloudBurst
CSO141	12/23/14 4:15 PM	12/23/14 11:00 PM	17,118.66	0.28	0.1	171,186.56	0	0.08 yr	0.25 hr	Atlas
CSO141	12/24/14 8:45 AM	12/24/14 9:30 AM	4,696.48	0.03	0.19	24,718.31	0	0.17 yr	3 hr	Atlas14
CSO141	12/24/14 6:15 PM	12/25/14 12:30 AM	18,904.15	0.26	0.19	99,495.52	0	0.17 yr	3 hr	Atlas14
CSO141	12/28/14 1:00 AM	12/28/14 1:30 AM	744.50	0.02	0.32	2,326.56	0	0.27 yr	1 hr	CloudBurst
CSO144	10/6/14 9:30 AM	10/6/14 9:30 AM	64.24	0.00	0.33	194.67	0.49	0.17 yr	3 hr	Atlas14
CSO144	12/6/14 2:30 AM	12/6/14 2:30 AM	80.42	0.00	0.64	125.65	1.42	0.21 yr	48 hr	CloudBurst
CSO146	10/6/14 9:45 AM	10/6/14 9:45 AM	35,893.57	0.00	0.37	97,009.65	0.56	0.22 yr	1 hr	CloudBurst
CSO146	10/7/14 12:00 PM	10/7/14 12:30 PM	99,199.30	0.02	0.17	583,525.29	0.78	0.14 yr	1 hr	CloudBurst
CSO146	10/10/14 1:45 AM	10/10/14 3:30 AM	826,109.09	0.07	1.09	757,898.25	1.51	0.47 yr	3 hr	CloudBurst
CSO146	10/10/14 5:45 PM	10/10/14 6:00 PM	33,188.28	0.01	1.09	30,447.97	1.6	0.47 yr	3 hr	CloudBurst
CSO146	10/13/14 5:00 AM	10/13/14 7:00 AM	331,730.16	0.08	0.42	789,833.72	2.05	0.26 yr	3 hr	CloudBurst
CSO146	10/13/14 11:30 PM	10/14/14 10:30 AM	1,155,937.89	0.46	1	1,155,937.89	2.7	0.45 yr	12 hr	CloudBurst
CSO146	11/23/14 5:30 PM	11/23/14 8:15 PM	447,517.58	0.11	0.66	678,056.94	1.01	0.31 yr	6 hr	CloudBurst

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO146	12/1/14 3:30 AM	12/1/14 5:45 AM	199,024.43	0.09	0.88	226,164.13	0.46	0.34 yr	24 hr	CloudBurst
CSO146	12/1/14 3:00 PM	12/1/14 3:30 PM	38,348.82	0.02	0.88	43,578.21	0.79	0.34 yr	24 hr	CloudBurst
CSO146	12/5/14 6:30 AM	12/5/14 7:00 AM	65,065.46	0.02	0.63	103,278.51	1.27	0.2 yr	48 hr	CloudBurst
CSO146	12/5/14 8:45 PM	12/6/14 7:30 AM	1,624,638.25	0.45	0.63	2,578,790.88	1.51	0.2 yr	48 hr	CloudBurst
CSO146	12/16/14 5:30 AM	12/16/14 5:30 AM	7,676.46	0.00	0.09	85,293.98	0	0.05 yr	3 hr	CloudBurst
CSO146	12/23/14 12:00 AM	12/23/14 12:15 AM	12,140.08	0.01	0.22	55,182.20	0	0.14 yr	3 hr	CloudBurst
CSO146	12/28/14 1:15 AM	12/28/14 2:00 AM	88,736.75	0.03	0.32	277,302.34	0	0.27 yr	1 hr	CloudBurst
CSO148	10/3/14 3:30 AM	10/3/14 4:15 AM	871.80	0.03	0.18	4,843.34	0.13	0.07 yr	24 hr	CloudBurst
CSO148	10/6/14 8:00 AM	10/6/14 11:00 AM	17,742.05	0.13	0.14	126,728.94	0.29	0.05 yr	48 hr	CloudBurst
CSO148	10/7/14 11:45 AM	10/7/14 12:00 PM	4,538.08	0.01	0.16	28,363.02	0.48	0.13 yr	1 hr	CloudBurst
CSO148	10/10/14 1:45 AM	10/10/14 3:00 AM	127,091.14	0.05	0.82	154,989.20	1.02	0.36 yr	3 hr	CloudBurst
CSO148	10/13/14 4:30 AM	10/13/14 6:30 AM	14,898.52	0.08	0.5	29,797.05	1.6	0.32 yr	3 hr	CloudBurst
CSO148	10/13/14 11:30 PM	10/14/14 10:00 AM	64,892.46	0.44	1.21	53,630.13	2.71	0.55 yr	12 hr	CloudBurst
CSO148	11/23/14 2:30 PM	11/23/14 7:45 PM	33,078.75	0.22	0.81	40,837.97	1.13	0.37 yr	6 hr	CloudBurst
CSO148	12/1/14 3:15 AM	12/1/14 4:45 AM	11,679.93	0.06	0.73	15,999.90	0.31	0.28 yr	24 hr	CloudBurst
CSO148	12/1/14 2:30 PM	12/1/14 3:00 PM	622.43	0.02	0.73	852.64	0.63	0.28 yr	24 hr	CloudBurst
CSO148	12/5/14 4:30 AM	12/5/14 6:30 AM	5,017.75	0.08	0.7	7,168.21	1.23	0.23 yr	48 hr	CloudBurst
CSO148	12/5/14 5:30 PM	12/6/14 6:45 AM	94,379.67	0.55	0.7	134,828.10	1.43	0.23 yr	48 hr	CloudBurst
CSO148	12/16/14 5:15 AM	12/16/14 5:15 AM	2,654.03	0.00	0.12	22,116.93	0	0.07 yr	1 hr	CloudBurst
CSO148	12/22/14 10:30 PM	12/22/14 11:45 PM	5,015.31	0.05	0.26	19,289.66	0	0.14 yr	3 hr	CloudBurst
CSO148	12/23/14 8:00 PM	12/23/14 8:00 PM	1,765.13	0.00	0.12	14,709.38	0	0.08 yr	1 hr	CloudBurst
CSO148	12/24/14 1:30 PM	12/24/14 1:30 PM	599.93	0.00	0.19	3,157.51	0	0.16 yr	3 hr	CloudBurst
CSO148	12/28/14 1:00 AM	12/28/14 1:30 AM	8,751.88	0.02	0.32	27,349.61	0	0.3 yr	1 hr	CloudBurst
CSO150	10/10/14 2:45 AM	10/10/14 4:00 AM	73,959.49	0.05	1.18	62,677.53	1.72	0.54 yr	3 hr	Atlas14
CSO150	10/14/14 8:00 AM	10/14/14 11:00 AM	155,195.25	0.13	1.07	145,042.29	2.77	0.48 yr	12 hr	CloudBurst
CSO150	12/6/14 1:45 AM	12/6/14 7:15 AM	218,043.56	0.23	0.65	335,451.63	1.67	0.21 yr	48 hr	CloudBurst
CSO151	10/3/14 3:45 AM	10/3/14 4:30 AM	20,676.94	0.03	0.2	103,384.71	0.15	0.09 yr	1 hr	CloudBurst
CSO151	10/3/14 7:30 PM	10/3/14 8:30 PM	4,083.50	0.04	0.2	20,417.52	0.29	0.09 yr	1 hr	CloudBurst
CSO151	10/6/14 8:15 AM	10/6/14 10:00 AM	36,802.88	0.07	0.12	306,690.67	0.28	0.05 yr	24 hr	CloudBurst
CSO151	10/7/14 12:00 PM	10/7/14 1:00 PM	75,847.23	0.04	0.16	474,045.19	0.49	0.14 yr	1 hr	CloudBurst
CSO151	10/10/14 2:00 AM	10/10/14 4:30 AM	330,010.70	0.10	0.82	402,452.08	1.01	0.34 yr	3 hr	CloudBurst
CSO151	10/10/14 5:30 PM	10/10/14 10:00 PM	47,778.74	0.19	0.82	58,266.76	1.21	0.34 yr	3 hr	CloudBurst
CSO151	10/13/14 4:45 AM	10/13/14 8:00 AM	300,659.26	0.14	0.47	639,700.55	1.58	0.3 yr	3 hr	CloudBurst
CSO151	10/13/14 11:45 PM	10/14/14 11:45 AM	749,274.16	0.50	1.13	663,074.47	2.6	0.5 yr	12 hr	CloudBurst
CSO151	10/15/14 5:15 PM	10/15/14 7:00 PM	12,327.14	0.07	0.17	72,512.59	2.59	0.08 yr	12 hr	CloudBurst
CSO151	10/20/14 7:30 AM	10/20/14 7:30 AM	722.97	0.00	0.06	12,049.51	1.37	0.04 yr	3 hr	CloudBurst
CSO151	11/16/14 10:30 PM	11/16/14 10:30 PM	648.23	0.00	0.32	2,025.71	0.14	0.13 yr	12 hr	CloudBurst
CSO151	11/23/14 2:45 PM	11/23/14 11:45 PM	520,841.61	0.38	0.8	651,052.01	1.14	0.38 yr	6 hr	CloudBurst
CSO151	12/1/14 3:15 AM	12/1/14 5:00 PM	446,235.97	0.57	0.72	619,772.19	0.68	0.27 yr	24 hr	CloudBurst
CSO151	12/4/14 8:15 PM	12/6/14 4:15 PM	1,539,287.77	1.83	0.69	2,230,851.83	1.41	0.22 yr	48 hr	CloudBurst
CSO151	12/16/14 5:30 AM	12/16/14 6:15 AM	12,877.20	0.03	0.12	107,310.03	0	0.07 yr	1 hr	CloudBurst

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO151	12/22/14 11:00 PM	12/23/14 1:00 AM	41,982.89	0.08	0.26	161,472.66	0	0.14 yr	3 hr	CloudBurst
CSO151	12/23/14 8:15 PM	12/23/14 8:45 PM	13,013.13	0.02	0.12	108,442.76	0	0.08 yr	1 hr	CloudBurst
CSO151	12/24/14 1:45 PM	12/24/14 3:30 PM	47,982.24	0.07	0.19	252,538.11	0	0.16 yr	3 hr	CloudBurst
CSO151	12/28/14 1:15 AM	12/28/14 2:45 AM	108,766.18	0.06	0.32	339,894.31	0	0.3 yr	1 hr	CloudBurst
CSO152	10/3/14 7:30 PM	10/3/14 7:30 PM	12,520.20	0.00	0.19	65,895.78	0.18	0.07 yr	3 hr	CloudBurst
CSO152	10/6/14 10:00 AM	10/6/14 10:15 AM	26,292.90	0.01	0.31	84,815.80	0.46	0.18 yr	1 hr	CloudBurst
CSO152	10/7/14 12:00 PM	10/7/14 12:30 PM	18,590.89	0.02	0.16	116,193.05	0.67	0.14 yr	1 hr	CloudBurst
CSO152	10/10/14 2:45 AM	10/10/14 3:45 AM	162,420.34	0.04	0.93	174,645.53	1.27	0.38 yr	3 hr	CloudBurst
CSO152	10/10/14 5:45 PM	10/10/14 9:45 PM	19,813.68	0.17	0.93	21,305.03	1.51	0.38 yr	3 hr	CloudBurst
CSO152	10/13/14 4:45 AM	10/13/14 7:15 AM	214,372.84	0.10	0.42	510,411.53	1.85	0.27 yr	3 hr	CloudBurst
CSO152	10/13/14 11:45 PM	10/14/14 10:45 AM	503,417.06	0.46	1.1	457,651.87	2.65	0.49 yr	12 hr	CloudBurst
CSO152	11/23/14 2:45 PM	11/23/14 8:45 PM	470,737.11	0.25	0.71	663,010.02	1.05	0.34 yr	6 hr	CloudBurst
CSO152	12/1/14 3:30 AM	12/1/14 6:00 AM	389,557.05	0.10	0.79	493,110.19	0.4	0.3 yr	24 hr	CloudBurst
CSO152	12/1/14 3:00 PM	12/1/14 4:15 PM	69,496.60	0.05	0.79	87,970.38	0.73	0.3 yr	24 hr	CloudBurst
CSO152	12/5/14 5:00 AM	12/5/14 7:15 AM	115,138.19	0.09	0.69	166,866.94	1.23	0.22 yr	48 hr	CloudBurst
CSO152	12/5/14 8:45 PM	12/6/14 7:45 AM	1,330,717.37	0.46	0.69	1,928,575.90	1.48	0.22 yr	48 hr	CloudBurst
CSO152	12/16/14 5:30 AM	12/16/14 5:45 AM	95,995.72	0.01	0.12	799,964.30	0	0.07 yr	1 hr	CloudBurst
CSO152	12/22/14 11:45 PM	12/23/14 12:30 AM	147,443.97	0.03	0.26	567,092.20	0	0.14 yr	3 hr	CloudBurst
CSO152	12/23/14 8:30 PM	12/23/14 8:30 PM	5,846.79	0.00	0.12	48,723.23	0	0.08 yr	1 hr	CloudBurst
CSO152	12/24/14 1:45 PM	12/24/14 2:45 PM	54,284.82	0.04	0.19	285,709.58	0	0.16 yr	3 hr	CloudBurst
CSO152	12/28/14 1:15 AM	12/28/14 2:15 AM	98,379.92	0.04	0.32	307,437.26	0	0.3 yr	1 hr	CloudBurst
CSO153	10/3/14 4:15 AM	10/3/14 4:15 AM	9,091.16	0.00	0.26	34,965.99	0.09	0.1 yr	24 hr	CloudBurst
CSO153	10/6/14 9:45 AM	10/6/14 10:00 AM	90,325.67	0.01	0.22	410,571.25	0.42	0.09 yr	12 hr	CloudBurst
CSO153	10/7/14 11:45 AM	10/7/14 12:00 PM	28,442.02	0.01	0.22	129,281.91	0.7	0.18 yr	1 hr	CloudBurst
CSO153	10/10/14 2:00 AM	10/10/14 3:30 AM	185,584.18	0.06	1.19	155,953.09	1.53	0.55 yr	1 hr	CloudBurst
CSO153	10/10/14 9:15 PM	10/10/14 9:15 PM	3,287.72	0.00	1.19	2,762.79	1.6	0.55 yr	1 hr	CloudBurst
CSO153	10/13/14 4:30 AM	10/13/14 6:30 AM	88,781.86	0.08	0.42	211,385.38	2.05	0.27 yr	3 hr	CloudBurst
CSO153	10/13/14 11:30 PM	10/14/14 10:30 AM	285,250.51	0.46	0.88	324,148.31	2.73	0.39 yr	12 hr	CloudBurst
CSO153	10/20/14 8:00 PM	10/20/14 8:00 PM	12,136.52	0.00	0.04	303,413.04	1.14	0.03 yr	3 hr	CloudBurst
CSO153	10/28/14 1:15 PM	10/28/14 1:15 PM	12,102.94	0.00	0.13	93,099.52	0.11	0.07 yr	6 hr	CloudBurst
CSO153	11/23/14 5:15 PM	11/23/14 8:00 PM	146,584.03	0.11	0.74	198,086.53	1.01	0.32 yr	12 hr	CloudBurst
CSO153	12/1/14 3:15 AM	12/1/14 4:30 AM	29,055.12	0.05	0.87	33,396.68	0.36	0.33 yr	24 hr	CloudBurst
CSO153	12/5/14 6:00 AM	12/5/14 6:00 AM	2,619.45	0.00	0.64	4,092.89	1.26	0.21 yr	48 hr	CloudBurst
CSO153	12/5/14 8:30 PM	12/6/14 6:00 AM	423,728.56	0.40	0.64	662,075.88	1.51	0.21 yr	48 hr	CloudBurst
CSO153	12/16/14 5:00 AM	12/16/14 5:00 AM	14,974.80	0.00	0.09	166,386.69	0	0.05 yr	3 hr	CloudBurst
CSO153	12/22/14 11:30 PM	12/22/14 11:45 PM	10,215.95	0.01	0.22	46,436.13	0	0.14 yr	3 hr	CloudBurst
CSO153	12/24/14 1:15 PM	12/24/14 1:15 PM	4,619.66	0.00	0.19	24,313.98	0	0.17 yr	3 hr	Atlas14
CSO153	12/28/14 12:45 AM	12/28/14 1:30 AM	40,018.21	0.03	0.32	125,056.90	0	0.27 yr	1 hr	CloudBurst
CSO154	10/6/14 9:45 AM	10/6/14 9:45 AM	1,884.04	0.00	0.45	4,186.76	0.63	0.28 yr	1 hr	CloudBurst
CSO154	10/10/14 2:15 AM	10/10/14 3:15 AM	66,015.13	0.04	1.02	64,720.71	1.64	0.48 yr	3 hr	CloudBurst
CSO154	10/14/14 8:30 AM	10/14/14 8:30 AM	540.74	0.00	1.04	519.94	2.65	0.47 yr	12 hr	CloudBurst

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO154	10/15/14 9:00 AM	10/15/14 9:00 AM	1.57	0.00	0.17	9.25	2.55	0.08 yr	3 hr	CloudBurst
CSO154	12/6/14 2:00 AM	12/6/14 12:30 PM	376,382.04	0.44	0.65	579,049.28	1.45	0.21 yr	48 hr	CloudBurst
CSO155	10/6/14 7:45 AM	10/6/14 9:45 AM	1,316.29	0.08	0.55	2,393.26	0.54	0.18 yr	48 hr	CloudBurst
CSO155	10/10/14 1:45 AM	10/10/14 3:00 AM	13,342.20	0.05	1	13,342.20	1.49	0.44 yr	3 hr	CloudBurst
CSO155	10/13/14 4:30 AM	10/13/14 5:15 AM	417.45	0.03	0.37	1,128.24	1.83	0.23 yr	3 hr	CloudBurst
CSO155	10/13/14 11:30 PM	10/14/14 8:15 AM	16,033.32	0.36	1.08	14,845.67	2.57	0.49 yr	12 hr	CloudBurst
CSO155	11/23/14 5:30 PM	11/23/14 6:15 PM	978.23	0.03	0.6	1,630.38	0.78	0.26 yr	12 hr	CloudBurst
CSO155	12/6/14 1:00 AM	12/6/14 3:00 AM	24,347.97	0.08	0.64	38,043.70	1.65	0.21 yr	48 hr	CloudBurst
CSO160	10/3/14 7:30 PM	10/4/14 4:15 AM	1,570.70	0.36	0.25	6,282.80	0.26	0.1 yr	24 hr	CloudBurst
CSO160	10/6/14 7:00 AM	10/6/14 10:00 AM	2,317.99	0.13	0.21	11,038.03	0.4	0.09 yr	6 hr	CloudBurst
CSO160	10/7/14 12:15 PM	10/7/14 12:30 PM	1,615.90	0.01	0.25	6,463.62	0.71	0.21 yr	1 hr	CloudBurst
CSO160	10/10/14 2:00 AM	10/10/14 3:30 AM	3,730.04	0.06	1.17	3,188.07	1.52	0.52 yr	3 hr	CloudBurst
CSO160	10/10/14 6:00 PM	10/10/14 10:15 PM	1,719.89	0.18	1.17	1,469.99	1.75	0.52 yr	3 hr	CloudBurst
CSO160	10/13/14 4:30 AM	10/13/14 7:00 AM	7,152.33	0.10	0.44	16,255.30	2.08	0.28 yr	3 hr	CloudBurst
CSO160	10/13/14 11:15 PM	10/14/14 10:30 AM	8,329.05	0.47	1.01	8,246.59	2.9	0.45 yr	12 hr	CloudBurst
CSO160	10/28/14 1:15 PM	10/28/14 1:15 PM	1,139.97	0.00	0.15	7,599.82	0.14	0.09 yr	3 hr	CloudBurst
CSO160	11/16/14 10:15 PM	11/17/14 2:00 AM	1,310.47	0.16	0.37	3,541.80	0.24	0.15 yr	12 hr	CloudBurst
CSO160	11/23/14 5:45 PM	11/23/14 11:00 PM	568.78	0.22	0.72	789.97	1.06	0.31 yr	12 hr	CloudBurst
CSO160	12/1/14 4:15 AM	12/1/14 4:45 PM	8,460.77	0.52	0.88	9,614.51	0.84	0.34 yr	24 hr	CloudBurst
CSO160	12/4/14 2:30 PM	12/4/14 9:15 PM	5,987.61	0.28	0.69	8,677.69	1.23	0.22 yr	48 hr	CloudBurst
CSO160	12/5/14 6:15 AM	12/5/14 12:00 PM	2,437.43	0.24	0.69	3,532.51	1.49	0.22 yr	48 hr	CloudBurst
CSO160	12/5/14 9:00 PM	12/6/14 7:00 AM	3,716.08	0.42	0.69	5,385.62	1.57	0.22 yr	48 hr	CloudBurst
CSO160	12/22/14 10:45 PM	12/23/14 12:00 AM	1,749.49	0.05	0.22	7,952.23	0	0.14 yr	3 hr	CloudBurst
CSO161	12/5/14 11:15 PM	12/6/14 6:15 AM	15,253.87	0.29	0.69	22,107.05	1.57	0.22 yr	48 hr	CloudBurst
CSO161	12/16/14 5:15 AM	12/16/14 5:15 AM	1,356.48	0.00	0.09	15,071.99	0	0.05 yr	3 hr	CloudBurst
CSO161	12/22/14 10:30 PM	12/23/14 12:00 AM	3,909.24	0.06	0.22	17,769.27	0	0.14 yr	3 hr	CloudBurst
CSO161	12/23/14 8:00 PM	12/23/14 8:45 PM	2,551.72	0.03	0.1	25,517.19	0	0.05 yr	1 hr	CloudBurst
CSO161	12/24/14 12:30 PM	12/24/14 1:45 PM	1,591.45	0.05	0.19	8,376.04	0	0.17 yr	3 hr	Atlas14
CSO161	12/27/14 5:00 PM	12/28/14 1:45 AM	5,053.73	0.36	0.32	15,792.91	0	0.27 yr	1 hr	CloudBurst
CSO166	11/23/14 6:00 PM	11/23/14 8:30 PM	675,924.84	0.10	0.79	855,601.06	1.06	0.36 yr	6 hr	CloudBurst
CSO166	12/1/14 3:45 AM	12/1/14 4:15 AM	79,661.69	0.02	0.71	112,199.57	0.3	0.27 yr	24 hr	CloudBurst
CSO166	12/5/14 11:30 PM	12/6/14 11:30 AM	4,477,470.03	0.50	0.64	6,996,046.93	1.35	0.21 yr	48 hr	CloudBurst
CSO166	12/28/14 1:30 AM	12/28/14 2:00 AM	45,575.85	0.02	0.32	142,424.54	0	0.27 yr	1 hr	CloudBurst
CSO167	10/6/14 9:45 AM	10/6/14 10:15 AM	115,785.68	0.02	0.45	257,301.50	0.63	0.28 yr	1 hr	CloudBurst
CSO167	10/7/14 11:45 AM	10/7/14 12:15 PM	47,188.48	0.02	0.22	214,493.07	0.9	0.18 yr	1 hr	CloudBurst
CSO167	10/10/14 2:00 AM	10/10/14 3:30 AM	318,022.94	0.06	1.02	311,787.20	1.65	0.48 yr	3 hr	CloudBurst
CSO167	10/10/14 9:30 PM	10/10/14 9:30 PM	586.68	0.00	1.02	575.17	1.69	0.48 yr	3 hr	CloudBurst
CSO167	10/13/14 5:00 AM	10/13/14 6:45 AM	65,017.99	0.07	0.46	141,343.45	2.16	0.29 yr	3 hr	CloudBurst
CSO167	10/13/14 11:30 PM	10/14/14 10:45 AM	288,852.73	0.47	1.04	277,743.01	2.77	0.47 yr	12 hr	CloudBurst
CSO167	11/17/14 4:15 AM	11/17/14 4:15 AM	222.19	0.00	0.34	653.49	0.28	0.13 yr	12 hr	CloudBurst
CSO167	11/23/14 5:30 PM	11/23/14 8:15 PM	166,073.42	0.11	0.85	195,380.50	1.12	0.39 yr	6 hr	CloudBurst

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO167	12/1/14 2:45 AM	12/1/14 5:00 AM	19,900.33	0.09	0.8	24,875.42	0.38	0.31 yr	24 hr	CloudBurst
CSO167	12/1/14 3:00 PM	12/1/14 4:00 PM	2,114.11	0.04	0.8	2,642.64	0.74	0.31 yr	24 hr	CloudBurst
CSO167	12/5/14 8:45 PM	12/6/14 8:15 AM	704,592.83	0.48	0.65	1,083,988.96	1.45	0.21 yr	48 hr	CloudBurst
CSO167	12/16/14 5:15 AM	12/16/14 5:30 AM	24,613.76	0.01	0.09	273,486.22	0	0.05 yr	3 hr	CloudBurst
CSO167	12/23/14 12:00 AM	12/23/14 12:00 AM	1,085.07	0.00	0.22	4,932.15	0	0.14 yr	3 hr	CloudBurst
CSO167	12/28/14 1:00 AM	12/28/14 1:45 AM	39,353.42	0.03	0.32	122,979.44	0	0.27 yr	1 hr	CloudBurst
CSO174	10/10/14 1:45 AM	10/10/14 3:00 AM	211,466.11	0.05	1.09	194,005.61	1.5	0.47 yr	3 hr	CloudBurst
CSO174	10/13/14 11:30 PM	10/13/14 11:45 PM	137,604.28	0.01	1	137,604.28	1.99	0.45 yr	12 hr	CloudBurst
CSO174	10/14/14 8:00 AM	10/14/14 8:30 AM	90,956.09	0.02	1	90,956.09	2.6	0.45 yr	12 hr	CloudBurst
CSO174	11/23/14 5:45 PM	11/23/14 5:45 PM	8,614.16	0.00	0.66	13,051.75	0.82	0.31 yr	6 hr	CloudBurst
CSO174	12/6/14 2:45 AM	12/6/14 5:45 AM	235,513.10	0.13	1.9	123,954.26	1.51	0.18 yr	48 hr	CloudBurst
CSO180	10/10/14 1:45 AM	10/10/14 2:45 AM	14,977.56	0.04	1.09	13,740.88	1.47	0.47 yr	3 hr	CloudBurst
CSO180	11/23/14 5:30 PM	11/23/14 5:30 PM	4,354.63	0.00	0.66	6,597.92	0.78	0.31 yr	6 hr	CloudBurst
CSO180	12/1/14 4:30 AM	12/1/14 4:30 AM	59.23	0.00	0.88	67.31	0.41	0.34 yr	24 hr	CloudBurst
CSO180	12/6/14 2:30 AM	12/6/14 3:15 AM	22,945.72	0.03	0.63	36,421.78	1.51	0.2 yr	48 hr	CloudBurst
CSO181	10/6/14 9:45 AM	10/6/14 9:45 AM	13,179.25	0.00	0.18	73,218.06	0.38	0.08 yr	6 hr	CloudBurst
CSO181	10/10/14 2:15 AM	10/10/14 3:00 AM	191,902.43	0.03	1.2	159,918.69	1.45	0.54 yr	3 hr	CloudBurst
CSO182	10/6/14 8:00 AM	10/6/14 8:15 AM	21,524.55	0.01	0.13	165,573.48	0.3	0.05 yr	3 hr	CloudBurst
CSO182	10/7/14 12:15 PM	10/7/14 12:15 PM	12,722.89	0.00	0.17	74,840.50	0.51	0.14 yr	1 hr	CloudBurst
CSO182	10/10/14 2:30 AM	10/10/14 3:15 AM	11,507.11	0.03	1.06	10,855.77	1.24	0.5 yr	1 hr	CloudBurst
CSO182	10/10/14 5:30 PM	10/10/14 5:45 PM	13,758.73	0.01	1.06	12,979.93	1.37	0.5 yr	1 hr	CloudBurst
CSO182	10/13/14 4:45 AM	10/13/14 6:45 AM	40,929.01	0.08	0.4	102,322.51	1.75	0.26 yr	3 hr	CloudBurst
CSO182	10/14/14 12:15 AM	10/14/14 10:30 AM	84,319.15	0.43	1.12	75,284.95	2.77	0.5 yr	12 hr	CloudBurst
CSO182	10/31/14 7:00 AM	11/1/14 7:15 AM	544,286.25	1.01	0.14	3,887,758.91	0.28	0.05 yr	48 hr	CloudBurst
CSO182	11/13/14 7:45 AM	11/13/14 7:45 AM	6,047.42	0.00	Discharge		0.08		Snowmelt	
CSO182	11/15/14 7:15 AM	11/15/14 8:15 AM	108,682.08	0.04	Discharge		0.06		Snowmelt	
CSO182	11/16/14 12:15 AM	11/16/14 9:45 PM	1,051,227.61	0.90	Discharge		0.15		Snowmelt	
CSO182	11/23/14 2:45 PM	11/23/14 8:15 PM	96,920.81	0.23	0.79	122,684.57	1.15	0.36 yr	6 hr	CloudBurst
CSO182	12/1/14 3:15 AM	12/1/14 5:30 AM	21,670.09	0.09	0.85	25,494.22	0.43	0.33 yr	24 hr	CloudBurst
CSO182	12/1/14 2:45 PM	12/1/14 3:45 PM	40,389.08	0.04	0.85	47,516.57	0.78	0.33 yr	24 hr	CloudBurst
CSO182	12/5/14 4:45 AM	12/5/14 7:00 AM	58,629.37	0.09	0.64	91,608.39	1.29	0.21 yr	48 hr	CloudBurst
CSO182	12/5/14 8:30 PM	12/6/14 7:45 AM	237,629.90	0.47	0.64	371,296.71	1.49	0.21 yr	48 hr	CloudBurst
CSO182	12/16/14 5:30 AM	12/16/14 5:30 AM	6,663.30	0.00	0.12	55,527.51	0	0.07 yr	1 hr	CloudBurst
CSO182	12/22/14 10:45 PM	12/23/14 12:15 AM	14,967.79	0.06	0.26	57,568.43	0	0.14 yr	3 hr	CloudBurst
CSO182	12/23/14 8:15 PM	12/23/14 8:15 PM	3,885.89	0.00	0.12	32,382.38	0	0.08 yr	1 hr	CloudBurst
CSO182	12/24/14 1:30 PM	12/24/14 1:45 PM	6,070.42	0.01	0.19	31,949.56	0	0.16 yr	3 hr	CloudBurst
CSO182	12/28/14 1:00 AM	12/28/14 1:45 AM	13,681.69	0.03	0.32	42,755.28	0	0.3 yr	1 hr	CloudBurst
CSO184	10/10/14 3:00 AM	10/10/14 3:00 AM	3,947.59	0.00	1.02	3,870.19	1.21	0.46 yr	3 hr	CloudBurst
CSO184	10/13/14 11:30 PM	10/13/14 11:45 PM	5,750.26	0.01	1.33	4,323.50	2.07	0.61 yr	12 hr	CloudBurst
CSO184	12/6/14 3:15 AM	12/6/14 3:15 AM	1,356.88	0.00	1.9	714.14	1.56	0.18 yr	48 hr	CloudBurst
CSO185	10/10/14 3:00 AM	10/10/14 3:00 AM	19,475.91	0.00	1.02	19,094.03	1.21	0.46 yr	3 hr	CloudBurst

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO185	10/13/14 11:30 PM	10/13/14 11:45 PM	22,678.32	0.01	1.33	17,051.37	2.07	0.61 yr	12 hr	CloudBurst
CSO185	10/14/14 8:00 AM	10/14/14 8:15 AM	10,103.29	0.01	1.33	7,596.46	2.89	0.61 yr	12 hr	CloudBurst
CSO185	12/6/14 3:15 AM	12/6/14 3:15 AM	7,691.47	0.00	1.9	4,048.14	1.56	0.18 yr	48 hr	CloudBurst
CSO185	12/27/14 10:30 AM	12/27/14 4:30 PM	35,683.84	0.25	0.01	3,568,383.68	0	0.01 yr	0.25 hr	Atlas
CSO189	10/6/14 10:00 AM	10/6/14 10:30 AM	241,207.69	0.02	0.56	430,728.02	0.51	0.18 yr	3 hr	CloudBurst
CSO189	10/10/14 2:00 AM	10/10/14 4:15 AM	3,760,143.53	0.09	1.02	3,686,415.23	1.51	0.46 yr	3 hr	Atlas14
CSO189	10/13/14 4:30 AM	10/13/14 7:00 AM	2,245,530.81	0.10	0.45	4,990,068.48	2.07	0.29 yr	3 hr	CloudBurst
CSO189	10/13/14 11:15 PM	10/14/14 11:00 AM	6,957,639.56	0.49	1.56	4,460,025.36	3.28	0.7 yr	12 hr	CloudBurst
CSO189	11/23/14 5:30 PM	11/23/14 8:30 PM	2,572,267.11	0.13	0.86	2,991,008.27	1.19	0.39 yr	6 hr	CloudBurst
CSO189	12/6/14 12:00 AM	12/6/14 7:45 AM	9,911,391.27	0.32	0.75	13,215,188.36	1.66	0.24 yr	48 hr	CloudBurst
CSO193	10/10/14 2:15 AM	10/10/14 3:00 AM	5,800.24	0.03	1.28	4,531.44	1.6	0.57 yr	3 hr	CloudBurst
CSO193	12/5/14 11:15 PM	12/5/14 11:15 PM	510.56	0.00	0.65	785.48	1.56	0.21 yr	48 hr	CloudBurst
CSO196	10/3/14 3:30 AM	10/3/14 3:30 AM	486.78	0.00	0.25	1,947.13	0.11	0.1 yr	24 hr	CloudBurst
CSO196	10/6/14 9:45 AM	10/6/14 9:45 AM	7,674.52	0.00	0.2	38,372.60	0.4	0.08 yr	24 hr	CloudBurst
CSO196	10/10/14 1:45 AM	10/10/14 3:00 AM	18,722.97	0.05	1.26	14,859.50	1.52	0.57 yr	3 hr	CloudBurst
CSO196	10/13/14 5:15 AM	10/13/14 7:15 AM	1,143.19	0.08	0.51	2,241.54	2.18	0.33 yr	3 hr	CloudBurst
CSO196	10/13/14 11:30 PM	10/13/14 11:45 PM	5,664.98	0.01	1.03	5,499.98	2.32	0.46 yr	12 hr	CloudBurst
CSO196	10/14/14 8:15 AM	10/14/14 8:15 AM	871.34	0.00	1.03	845.96	2.92	0.46 yr	12 hr	CloudBurst
CSO196	11/23/14 5:30 PM	11/23/14 5:30 PM	1,849.05	0.00	0.63	2,935.00	0.75	0.28 yr	12 hr	CloudBurst
CSO196	11/24/14 10:00 AM	11/24/14 10:00 AM	327.43	0.00	0.01	32,742.71	0.67	0.01 yr	6 hr	CloudBurst
CSO196	12/1/14 5:00 AM	12/1/14 7:30 AM	1,570.56	0.10	0.95	1,653.22	0.57	0.36 yr	24 hr	CloudBurst
CSO196	12/6/14 2:45 AM	12/6/14 4:00 AM	11,650.95	0.05	1.84	6,332.04	1.55	0.2 yr	48 hr	CloudBurst
CSO199	10/6/14 9:45 AM	10/6/14 9:45 AM	1,119.00	0.00	0.2	5,595.00	0.4	0.08 yr	24 hr	CloudBurst
CSO199	10/10/14 1:45 AM	10/10/14 2:15 AM	5,130.69	0.02	1.26	4,071.97	1.15	0.57 yr	3 hr	CloudBurst
CSO199	10/13/14 11:30 PM	10/13/14 11:45 PM	2,266.77	0.01	1.03	2,200.75	2.32	0.46 yr	12 hr	CloudBurst
CSO199	10/14/14 8:15 AM	10/14/14 8:15 AM	526.00	0.00	1.03	510.68	2.92	0.46 yr	12 hr	CloudBurst
CSO199	11/19/14 7:45 PM	11/19/14 7:45 PM	7,857.19	0.00	0.16	49,107.42	0.43	0.14 yr	1 hr	Atlas
CSO199	12/6/14 3:00 AM	12/6/14 3:15 AM	2,162.28	0.01	1.9	1,138.04	1.55	0.18 yr	48 hr	CloudBurst
CSO200	10/6/14 9:45 AM	10/6/14 9:45 AM	146.74	0.00	0.2	733.70	0.4	0.08 yr	24 hr	CloudBurst
CSO200	10/10/14 1:45 AM	10/10/14 3:00 AM	4,361.25	0.05	1.26	3,461.31	1.52	0.57 yr	3 hr	CloudBurst
CSO200	10/13/14 11:30 PM	10/13/14 11:30 PM	256.35	0.00	1.03	248.89	2.28	0.46 yr	12 hr	CloudBurst
CSO200	11/23/14 5:30 PM	11/23/14 6:00 PM	140.88	0.02	0.63	223.61	0.82	0.28 yr	12 hr	CloudBurst
CSO200	12/6/14 2:30 AM	12/6/14 12:00 PM	7,706.97	0.40	1.9	4,056.30	1.55	0.18 yr	48 hr	CloudBurst
CSO202	10/10/14 1:45 AM	10/10/14 1:45 AM	977.01	0.00	1.26	775.41	0.93	0.57 yr	3 hr	CloudBurst
CSO203	10/6/14 7:45 AM	10/7/14 2:30 AM	63,124.31	0.78	0.2	315,621.56	0.45	0.08 yr	24 hr	CloudBurst
CSO203	10/7/14 11:45 AM	10/7/14 12:30 PM	2,494.79	0.03	0.2	12,473.96	0.64	0.16 yr	1 hr	CloudBurst
CSO203	10/10/14 1:45 AM	10/10/14 7:30 AM	34,111.55	0.24	1.26	27,072.66	1.56	0.57 yr	3 hr	CloudBurst
CSO203	10/10/14 9:00 PM	10/11/14 8:15 AM	6,264.12	0.47	1.26	4,971.53	1.66	0.57 yr	3 hr	CloudBurst
CSO203	10/13/14 4:15 AM	10/13/14 10:15 AM	15,154.65	0.25	0.51	29,714.99	2.18	0.33 yr	3 hr	CloudBurst
CSO205	10/10/14 1:45 AM	10/10/14 1:45 AM	202.83	0.00	1.06	191.35	0.78	0.5 yr	1 hr	CloudBurst
CSO205	10/13/14 11:30 PM	10/13/14 11:30 PM	213.17	0.00	1.12	190.33	1.93	0.5 yr	12 hr	CloudBurst

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO205	12/6/14 3:00 AM	12/6/14 3:00 AM	197.85	0.00	1.9	104.13	1.49	0.18 yr	48 hr	CloudBurst
CSO206	10/3/14 7:15 PM	10/3/14 8:45 PM	23,544.52	0.06	0.18	130,802.89	0.34	0.07 yr	3 hr	CloudBurst
CSO206	10/6/14 8:00 AM	10/6/14 8:15 AM	14,258.16	0.01	0.15	95,054.38	0.27	0.06 yr	24 hr	CloudBurst
CSO206	10/7/14 11:45 AM	10/7/14 12:15 PM	23,646.69	0.02	0.16	147,791.82	0.5	0.13 yr	1 hr	CloudBurst
CSO206	10/10/14 2:30 AM	10/10/14 3:15 AM	153,746.73	0.03	0.9	170,829.70	1.13	0.42 yr	3 hr	Atlas14
CSO206	10/10/14 5:15 PM	10/10/14 5:45 PM	17,553.14	0.02	0.9	19,503.48	1.22	0.42 yr	3 hr	Atlas14
CSO206	10/13/14 4:45 AM	10/13/14 6:45 AM	70,188.04	0.08	0.51	137,623.62	1.73	0.32 yr	3 hr	CloudBurst
CSO206	10/13/14 11:45 PM	10/14/14 10:30 AM	143,450.59	0.45	1.35	106,259.70	2.94	0.61 yr	12 hr	CloudBurst
CSO206	11/23/14 5:45 PM	11/23/14 8:15 PM	85,819.44	0.10	0.83	103,396.92	1.13	0.39 yr	6 hr	CloudBurst
CSO206	12/1/14 3:00 AM	12/1/14 5:00 AM	67,100.97	0.08	0.72	93,195.79	0.35	0.28 yr	24 hr	CloudBurst
CSO206	12/1/14 2:30 PM	12/1/14 3:15 PM	15,968.76	0.03	0.72	22,178.83	0.65	0.28 yr	24 hr	CloudBurst
CSO206	12/5/14 6:15 AM	12/5/14 6:45 AM	24,218.74	0.02	0.68	35,615.79	1.23	0.22 yr	48 hr	CloudBurst
CSO206	12/5/14 11:15 PM	12/6/14 6:45 AM	240,258.14	0.31	0.68	353,320.79	1.4	0.22 yr	48 hr	CloudBurst
CSO206	12/22/14 10:30 PM	12/23/14 12:00 AM	7,643.57	0.06	0.26	29,398.36	0	0.14 yr	3 hr	CloudBurst
CSO206	12/23/14 8:15 PM	12/23/14 8:15 PM	5,419.27	0.00	0.12	45,160.59	0	0.08 yr	1 hr	CloudBurst
CSO206	12/24/14 1:30 PM	12/24/14 1:45 PM	17,924.27	0.01	0.19	94,338.26	0	0.16 yr	3 hr	CloudBurst
CSO206	12/28/14 1:15 AM	12/28/14 1:30 AM	10,893.40	0.01	0.32	34,041.86	0	0.3 yr	1 hr	CloudBurst
CSO207	10/6/14 7:00 AM	10/8/14 11:30 PM	35,407.50	2.69	0.21	168,607.14	0.71	0.09 yr	6 hr	CloudBurst
CSO207	10/10/14 1:30 AM	10/11/14 12:15 PM	39,782.66	1.45	1.17	34,002.27	1.89	0.52 yr	3 hr	CloudBurst
CSO207	10/11/14 9:45 PM	10/12/14 9:15 AM	253.96	0.48	0.01	25,395.83	1.66	0.01 yr	6 hr	CloudBurst
CSO207	10/13/14 4:00 AM	10/16/14 12:15 PM	98,376.91	3.34	0.44	223,583.89	3.28	0.28 yr	3 hr	CloudBurst
CSO207	10/20/14 7:30 AM	10/21/14 1:45 PM	14,845.74	1.26	0.08	185,571.76	1.3	0.06 yr	1 hr	CloudBurst
CSO207	10/28/14 10:30 AM	10/28/14 10:00 PM	5,801.87	0.48	0.15	38,679.17	0.15	0.09 yr	3 hr	CloudBurst
CSO207	10/31/14 4:00 AM	11/1/14 1:30 PM	38,428.70	1.40	0.17	226,051.16	0.32	0.06 yr	48 hr	CloudBurst
CSO207	11/4/14 8:45 PM	11/6/14 10:30 PM	34,918.04	2.07	0.12	290,983.69	0.31	0.06 yr	12 hr	CloudBurst
CSO207	11/11/14 4:15 PM	11/12/14 3:00 AM	51,540.71	0.45	0.07	736,295.84	0.2	0.03 yr	24 hr	CloudBurst
CSO207	11/16/14 7:30 PM	11/17/14 11:45 PM	199,627.81	1.18	0.16	1,247,673.80	0.45	0.14 yr	6 hr	CloudBurst
CSO207	11/19/14 12:30 PM	11/20/14 2:00 AM	38,184.22	0.56	0.12	318,201.82	0.38	0.14 yr	0.25 hr	Atlas
CSO207	11/22/14 5:00 AM	11/22/14 10:15 PM	94,058.39	0.72	0.01	9,405,838.73	0.39	0.01 yr	6 hr	CloudBurst
CSO207	11/23/14 5:15 PM	11/24/14 2:00 PM	67,737.93	0.86	0.72	94,080.46	1.1	0.31 yr	12 hr	CloudBurst
CSO207	12/1/14 1:45 AM	12/2/14 1:00 PM	77,154.33	1.47	0.88	87,675.38	0.93	0.34 yr	24 hr	CloudBurst
CSO207	12/4/2014 8:15	12/6/2014 18:30	113,715.18	2.43	0.69	164,804.61	1.57	0.22 yr	48 hr	Atlas
CSO207	12/16/14 3:15 AM	12/16/14 3:30 PM	16,811.40	0.51	0.09	186,793.31	0	0.05 yr	3 hr	CloudBurst
CSO207	12/22/14 11:15 PM	12/25/14 2:45 PM	102,502.54	2.65	0.22	465,920.64	0	0.14 yr	3 hr	CloudBurst
CSO207	12/27/14 8:00 AM	12/28/14 8:00 PM	53,318.75	1.50	0.32	166,621.10	0	0.27 yr	1 hr	CloudBurst
CSO208	10/3/14 3:15 AM	10/3/14 4:00 AM	215.47	0.03	0.27	798.03	0.07	0.1 yr	24 hr	CloudBurst
CSO208	10/3/14 12:45 PM	10/3/14 7:00 PM	398.03	0.26	0.27	1,474.19	0.21	0.1 yr	24 hr	CloudBurst
CSO208	10/6/14 6:30 AM	10/6/14 9:30 AM	15,755.40	0.13	0.4	39,388.49	0.61	0.2 yr	3 hr	CloudBurst
CSO208	10/7/14 11:15 AM	10/7/14 11:45 AM	549.46	0.02	0.16	3,434.11	0.83	0.12 yr	1 hr	CloudBurst
CSO208	10/10/14 1:45 AM	10/10/14 3:15 AM	41,157.89	0.06	0.67	61,429.68	1.46	0.4 yr	3 hr	Atlas14
CSO208	10/10/14 5:00 PM	10/10/14 9:15 PM	570.23	0.18	0.31	1,839.45	1.62	0.14 yr	12 hr	CloudBurst

CSO	Start Date-Time	End Date-Time	Total Volume (MG)	Duration (days)	Rain Total (in)	Volume per Inch	Antecedent Rain (in)	Frequency (Years)	Period	Standard
CSO208	10/13/14 4:15 AM	10/13/14 6:30 AM	6,220.75	0.09	0.42	14,811.31	1.95	0.26 yr	3 hr	CloudBurst
CSO208	10/13/14 11:15 PM	10/14/14 10:00 AM	19,685.75	0.45	1.11	17,734.91	2.69	0.5 yr	12 hr	CloudBurst
CSO208	11/16/14 9:45 PM	11/17/14 12:45 AM	8,143.75	0.13	0.35	23,267.86	0.19	0.14 yr	12 hr	CloudBurst
CSO208	11/23/14 1:45 PM	11/24/14 2:45 AM	29,488.25	0.54	0.54	54,607.87	0.89	0.24 yr	12 hr	CloudBurst
CSO208	12/1/14 12:45 AM	12/1/14 4:15 PM	17,295.62	0.65	0.94	18,399.60	0.88	0.36 yr	24 hr	CloudBurst
CSO208	12/4/14 9:15 AM	12/4/14 9:00 PM	10,518.67	0.49	0.63	16,696.30	1.23	0.2 yr	48 hr	CloudBurst
CSO208	12/5/14 5:30 AM	12/6/14 6:45 AM	50,413.05	1.05	0.63	80,020.72	1.57	0.2 yr	48 hr	CloudBurst
CSO208	12/16/14 5:00 AM	12/16/14 5:15 AM	128.59	0.01	0.09	1,428.82	0	0.05 yr	3 hr	CloudBurst
CSO208	12/22/14 10:15 PM	12/22/14 11:45 PM	2,273.16	0.06	0.22	10,332.53	0	0.14 yr	3 hr	CloudBurst
CSO208	12/23/14 7:30 PM	12/23/14 8:30 PM	631.94	0.04	0.1	6,319.38	0	0.05 yr	1 hr	CloudBurst
CSO208	12/24/14 12:00 PM	12/24/14 2:30 PM	2,512.27	0.10	0.19	13,222.48	0	0.17 yr	3 hr	Atlas14
CSO208	12/27/14 4:45 PM	12/28/14 1:45 AM	1,917.40	0.38	0.32	5,991.86	0	0.27 yr	1 hr	CloudBurst
CSO210	10/13/14 4:30 AM	10/13/14 9:15 AM	121,751.83	0.20	0.49	248,473.12	2	0.32 yr	3 hr	CloudBurst
CSO210	10/13/14 11:30 PM	10/14/14 12:45 PM	581,229.84	0.55	1.44	403,631.83	2.99	0.64 yr	12 hr	CloudBurst
CSO210	11/23/14 6:30 PM	11/23/14 9:45 PM	112,668.35	0.14	0.92	122,465.59	1.24	0.43 yr	6 hr	CloudBurst
CSO210	12/1/14 5:00 AM	12/1/14 7:45 AM	65,568.93	0.11	0.87	75,366.58	0.5	0.33 yr	24 hr	CloudBurst
CSO210	12/6/14 12:15 AM	12/6/14 10:00 AM	549,155.55	0.41	0.72	762,716.05	1.59	0.23 yr	48 hr	CloudBurst

Appendix F – IOAP Project Crosswalk

Appendix F
IOAP Project Crosswalk

Project Name	PROGRAM	ASSET ID	PROJECT ID
Avanti PS Elimination	IOAP	21229-W	S_PO_WC_PC07_M_01_A
Sinking Fork Relief Sewer	ISSDP	21103	SFRS
Sinking Fork Relief Sewer	ISSDP	63319	SFRS
Sinking Fork Relief Sewer	ISSDP	25012	SFRS
Beargrass Interceptor Rehab Ph. 2	IOAP	51594	S_SD_MF_NB06_S_13_C
Floydsburg Rd. I/I Investigation & Rehabilitation	IOAP	108958	S_HC_HC_MSD1086_M_07_C_A
Floydsburg Rd. I/I Investigation & Rehabilitation	IOAP	108956	S_HC_HC_MSD1086_M_07_C_A
Floydsburg Rd. I/I Investigation & Rehabilitation	IOAP	MSD1086-PS	S_HC_HC_MSD1086_M_07_C_A
Floydsburg Rd. I/I Investigation & Rehabilitation	IOAP	90776	S_HC_HC_MSD1086_M_07_C_A
Floydsburg Rd. I/I Investigation & Rehabilitation	IOAP	108957	S_HC_HC_MSD1086_M_07_C_A
Floydsburg Rd. I/I Investigation & Rehabilitation	IOAP	108953	S_HC_HC_MSD1086_M_07_C_A
Running Fox PS Elimination	IOAP	MSD1080-LS	S_CC_CC_MSD1080_S_01_C
Beechwood Village Sanitary Sewer Replacement	ISSDP	21153	BVSSR
Beechwood Village Sanitary Sewer Replacement	ISSDP	21101	BVSSR
Beechwood Village Sanitary Sewer Replacement	ISSDP	21156	BVSSR
Beechwood Village Sanitary Sewer Replacement	ISSDP	21061	BVSSR
Hazelwood PS I/I Investigation & Rehabilitation	IOAP	55667	S_MC_MF_55665_S_07_C
Hazelwood PS I/I Investigation & Rehabilitation	IOAP	55665	S_MC_MF_55665_S_07_C
Parkview Estates I/I Investigation & Rehabilitation	IOAP	47250	S_SD_MF_NB03_S_07_C
Sonne PS I/I Investigation & Rehabilitation	IOAP	MSD0042-PS	S_OR_MF_42007_S_07_C
Woodland Hills PS Diversion	IOAP	33003	S_FF_FF_NB01_S_01_C_A
Anchor Estates- Anchor Ests PS 1 & 2 PS Eliminations	IOAP	0057-W	S_MI_MF_NB06_M_01_A_A - 1
Northern Ditch Diversion Interceptor	ISSDP	MSD0271	NDDI
Edsel PS I/I Investigation & Rehabilitation	IOAP	MSD1048-PS	S_PO_WC_PC11_M_07_C
Edsel PS I/I Investigation & Rehabilitation	IOAP	94009	S_PO_WC_PC11_M_07_C
Edsel PS I/I Investigation & Rehabilitation	IOAP	92098	S_PO_WC_PC11_M_07_C
Edsel PS I/I Investigation & Rehabilitation	IOAP	92099	S_PO_WC_PC11_M_07_C
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	13946	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	44396	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	66349	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	51301	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	36763	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	8717	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	44397	S_SF_MF_30917_M_09_A

Appendix F
IOAP Project Crosswalk

Project Name	PROGRAM	ASSET ID	PROJECT ID
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	13931	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	99259	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	104223	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	13943	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	104231	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	44397	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	104223	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	104231	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	13946	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	13931	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	66349	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	51301	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	99259	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	36763	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	13943	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	44396	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	8717	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	13943	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	13931	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	66349	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	8717	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	13946	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	99259	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	51301	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	36763	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	104223	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	104231	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	44397	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	44396	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	44397	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	51301	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	99259	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	13943	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	8717	S_SF_MF_30917_M_09_A

Appendix F
IOAP Project Crosswalk

Project Name	PROGRAM	ASSET ID	PROJECT ID
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	13946	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	13931	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	44396	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	104223	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	36763	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	66349	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	104231	S_SF_MF_30917_M_09_A
Hurstbourne I/I Investigation & Rehabilitation	IOAP	67535	S_MI_MF_NB07_S_07_C
Hurstbourne I/I Investigation & Rehabilitation	IOAP	47650	S_MI_MF_NB07_S_07_C
Hurstbourne I/I Investigation & Rehabilitation	IOAP	47656	S_MI_MF_NB07_S_07_C
Hurstbourne I/I Investigation & Rehabilitation	IOAP	1793	S_MI_MF_NB07_S_07_C
Lantana PS #1 I/I Investigation and Rehabilitation	IOAP	25484	S_PO_WC_PC05_M_07_C
Lantana PS #1 I/I Investigation and Rehabilitation	IOAP	MSD0101-PS	S_PO_WC_PC05_M_07_C
Lantana PS #1 I/I Investigation and Rehabilitation	IOAP	93719	S_PO_WC_PC05_M_07_C
Derington Ct. PS I/I Investigation & Rehabilitation	IOAP	MSD0095-PS	S_OR_MF_NB03_S_07_C
Derington Ct. PS I/I Investigation & Rehabilitation	IOAP	20155	S_OR_MF_NB03_S_07_C
Southeastern Diversion Structure and Interceptor	ISSDP	72571-X	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	30704	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	30702	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	63779	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	8426	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	8427	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	8431	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	49647	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	8430	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	18654	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	30701	SDSI
Derek R. Guthrie WQTC Wet Weather Facility	ISSDP	MSD0277	DRGWQTC
Derek R. Guthrie WQTC Wet Weather Facility	ISSDP	32688	DRGWQTC
Derek R. Guthrie WQTC Wet Weather Facility	ISSDP	59169	DRGWQTC
Derek R. Guthrie WQTC Wet Weather Facility	ISSDP	22307	DRGWQTC
Derek R. Guthrie WQTC Wet Weather Facility	ISSDP	22385	DRGWQTC
Derek R. Guthrie WQTC Wet Weather Facility	ISSDP	22370	DRGWQTC
Derek R. Guthrie WQTC Wet Weather Facility	ISSDP	32682	DRGWQTC

Project Name	PROGRAM	ASSET ID	PROJECT ID
Hikes Lane Interceptor and Highgate Springs	ISSDP	18370	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18434	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	30681	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	MSD0012-PS	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	49673	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	49236	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18483	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	49224	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18134	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18471	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18318-W	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18505	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18595	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	73111	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	49672	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	17571	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18302	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18297	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18299	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	30680	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	48886	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	48888	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	48885	HLIHSPS
Lake Forest PS SSO Investigation	IOAP	MSD1169-LS	S_FF_LF_NB01_S_13_C_A
Meadow Stream Pump Station & Force Main Upgrade	IOAP	MSD1082-PS	S_HC_HC_MSD1082_S_09A_C
Meadow Stream Pump Station & Force Main Upgrade	IOAP	91087	S_HC_HC_MSD1082_S_09A_C
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	41374	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	MSD0007-PS	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	MSD0024-PS	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	26752	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	MSD0023-PS	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	MSD0010-PS	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	24472	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	MSD0006-PS	S_OR_MF_NB01_M_01_B

Project Name	PROGRAM	ASSET ID	PROJECT ID
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	24152-W	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	MSD0007-PS	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	24472	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	41374	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	26752	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	MSD0023-PS	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	MSD0024-PS	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	24152-W	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	MSD0010-PS	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	MSD0006-PS	S_OR_MF_NB01_M_01_B
Anchor Estates PS Elimination 1 - Vannah PS Elimination	IOAP	MSD0057-LS	S_MI_MF_NB06_M_01_A_A - 2
Anchor Estates PS Elimination 1 - Vannah PS Elimination	IOAP	00056-W	S_MI_MF_NB06_M_01_A_A - 2
Anchor Estates PS Elimination 1 - Vannah PS Elimination	IOAP	817	S_MI_MF_NB06_M_01_A_A - 2
Anchor Estates PS Elimination 1 - Vannah PS Elimination	IOAP	0057-W	S_MI_MF_NB06_M_01_A_A - 2
Anchor Estates PS Elimination 1 - Vannah PS Elimination	IOAP	746	S_MI_MF_NB06_M_01_A_A - 2
Anchor Estates PS Elimination 1 - Vannah PS Elimination	IOAP	1106	S_MI_MF_NB06_M_01_A_A - 2
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	47583	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	47604	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	47603	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	2933	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	2935	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	8537	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	72289	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	30376	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	45796	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	115183	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	84155	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	23211	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	40559	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	51160	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	51180	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	47582	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	47034	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	72288	S_MISF_MF_NB01_M_01_C_A1

Project Name	PROGRAM	ASSET ID	PROJECT ID
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	115184	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	115185	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	08935-SM	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	45835	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	51161	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	IS021A-SI	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	23212	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	47593	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	27005	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	15194	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	2932	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	27007	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	90700	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	47583	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	115184	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	45796	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	47582	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	72289	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	40559	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	23211	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	27007	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	08935-SM	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	15194	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	IS021A-SI	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	51180	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	2933	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	51161	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	51160	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	47604	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	115185	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	23212	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	47603	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	27005	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	2935	S_MISF_MF_NB01_M_01_C_A1

Project Name	PROGRAM	ASSET ID	PROJECT ID
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	8537	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	90700	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	2932	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	47034	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	72288	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	47593	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	30376	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	84155	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	115183	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	45835	S_MISF_MF_NB01_M_01_C_A1
Fairway View PS Improvements	IOAP	MSD1065-PS	S_HC_HS_NB01_S_03_C_A
Riding Ridge PS Improvements	IOAP	MSD1060-LS	S_HC_HN_NB01_S_03_C_A
Shively Interceptor	IOAP	MSD0047-PS	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	4498	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	MSD0049-PS	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	4542	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	81814-W	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	MSD0016-PS	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	MSD0044-PS	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	MSD0048-PS	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	MSD0050-PS	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	MSD0043-PS	S_MC_WC_NB01_M_01_A
Chenoweth Hills WQTC Elimination & PS Improvements	IOAP	92061	S_JT_JT_NB01A_M_03_C
Chenoweth Hills WQTC Elimination & PS Improvements	IOAP	86052	S_JT_JT_NB01A_M_03_C
Chenoweth Hills WQTC Elimination & PS Improvements	IOAP	MSD0263	S_JT_JT_NB01A_M_03_C
Chenoweth Hills WQTC Elimination & PS Improvements	IOAP	MSD1043-PS	S_JT_JT_NB01A_M_03_C
Chenoweth Hills WQTC Elimination & PS Improvements	IOAP	MSD0196-PS	S_JT_JT_NB01A_M_03_C
Chenoweth Hills WQTC Elimination & PS Improvements	IOAP	64096	S_JT_JT_NB01A_M_03_C
Chenoweth Hills WQTC Elimination & PS Improvements	IOAP	MSD0263A-PS	S_JT_JT_NB01A_M_03_C
Fairmount Road Pump Station Off-Line Storage	IOAP	81316	S_FF_CC_81316_M_03_C_A
Fairmount Road Pump Station Off-Line Storage	IOAP	97362	S_FF_CC_81316_M_03_C_A
Jeffersontown WQTC Elimination	IOAP	28391	S_JT_JT_NB01_M_01_C_A
Jeffersontown WQTC Elimination	IOAP	64505	S_JT_JT_NB01_M_01_C_A
Jeffersontown WQTC Elimination	IOAP	28392	S_JT_JT_NB01_M_01_C_A

Project Name	PROGRAM	ASSET ID	PROJECT ID
Jeffersontown WQTC Elimination	IOAP	28395	S_JT_JT_NB01_M_01_C_A
Jeffersontown WQTC Elimination	IOAP	IS028-SI	S_JT_JT_NB01_M_01_C_A
Jeffersontown WQTC Elimination	IOAP	31733	S_JT_JT_NB01_M_01_C_A
Jeffersontown WQTC Elimination	IOAP	28551	S_JT_JT_NB01_M_01_C_A
Jeffersontown WQTC Elimination	IOAP	MSD0255	S_JT_JT_NB01_M_01_C_A
Jeffersontown WQTC Elimination	IOAP	28173	S_JT_JT_NB01_M_01_C_A
Klondike Interceptor	IOAP	26651	S_SD_MF_NB04_S_01_B_A
Klondike Interceptor	IOAP	26650	S_SD_MF_NB04_S_01_B_A
Klondike Interceptor	IOAP	20644	S_SD_MF_NB04_S_01_B_A
Klondike Interceptor	IOAP	66232	S_SD_MF_NB04_S_01_B_A
Klondike Interceptor	IOAP	49513	S_SD_MF_NB04_S_01_B_A
Klondike Interceptor	IOAP	25676	S_SD_MF_NB04_S_01_B_A
Lea Ann Way System Improvements	IOAP	MSD1200-PS	S_PO_WC_PC08_M_01_C
Lea Ann Way System Improvements	IOAP	29933	S_PO_WC_PC08_M_01_C
Lea Ann Way System Improvements	IOAP	31074	S_PO_WC_PC08_M_01_C
Lea Ann Way System Improvements	IOAP	31073	S_PO_WC_PC08_M_01_C
Lea Ann Way System Improvements	IOAP	57874	S_PO_WC_PC08_M_01_C
Lea Ann Way System Improvements	IOAP	29948	S_PO_WC_PC08_M_01_C
Lea Ann Way System Improvements	IOAP	MSD1010-PS	S_PO_WC_PC08_M_01_C
Prospect #1 - WQTC Eliminations	IOAP	MSD0192-PS	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	MSD1063-PS	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	MSD0123-PS	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	MSD0193-PS	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	40870	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	MSD1044-PS	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	MSD0183-PS	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	22436	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	40872	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	40871	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	65635	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	42680	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	89791	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	89646	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	40879	S_OR_MF_NB04_M_03_B_B

Appendix F
IOAP Project Crosswalk

Project Name	PROGRAM	ASSET ID	PROJECT ID
Prospect #1 - WQTC Eliminations	IOAP	42675	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	40880	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	MSD0186-PS	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	65633	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	65623	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	40870	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	89791	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	65623	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	MSD0123-PS	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	MSD1044-PS	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	89646	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	40879	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	40880	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	MSD0186-PS	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	MSD1063-PS	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	MSD0192-PS	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	MSD0183-PS	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	65633	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	22436	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	42675	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	40872	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	65635	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	MSD0193-PS	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	40871	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	42680	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	40871	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	65635	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	22436	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	89646	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	40879	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	40880	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	MSD0193-PS	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	MSD0183-PS	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	MSD1063-PS	S_OR_MF_NB04_M_03_B_B

Project Name	PROGRAM	ASSET ID	PROJECT ID
Prospect #3 - ORFM System Improvemetns	IOAP	MSD0192-PS	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	42675	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	40872	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	65633	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	MSD1044-PS	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	MSD0186-PS	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	MSD0123-PS	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	40870	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	65623	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	42680	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	89791	S_OR_MF_NB04_M_03_B_B
Anchor Estates PS Elimination 2 - Anchor Estates #1 and #2 PS Elimination	IOAP	1106	S_MI_MF_NB06_M_01_A_A - 1
Anchor Estates PS Elimination 2 - Anchor Estates #1 and #2 PS Elimination	IOAP	MSD0057-LS	S_MI_MF_NB06_M_01_A_A - 1
Anchor Estates PS Elimination 2 - Anchor Estates #1 and #2 PS Elimination	IOAP	817	S_MI_MF_NB06_M_01_A_A - 1
Anchor Estates PS Elimination 2 - Anchor Estates #1 and #2 PS Elimination	IOAP	00056-W	S_MI_MF_NB06_M_01_A_A - 1
Anchor Estates PS Elimination 2 - Anchor Estates #1 and #2 PS Elimination	IOAP	746	S_MI_MF_NB06_M_01_A_A - 1
Caven Ave Pump Station Elimination	IOAP	70212	S_PO_WC_PC09_M_09B_C
Caven Ave Pump Station Elimination	IOAP	61667	S_PO_WC_PC09_M_09B_C
Caven Ave Pump Station Elimination	IOAP	MSD0133-PS	S_PO_WC_PC09_M_09B_C
Caven Ave Pump Station Elimination	IOAP	17724	S_PO_WC_PC09_M_09B_C
Caven Ave Pump Station Elimination	IOAP	61687	S_PO_WC_PC09_M_09B_C
Caven Ave Pump Station Elimination	IOAP	27116	S_PO_WC_PC09_M_09B_C
Ashburton PS Improvements & Diversion	IOAP	MSD0165-PS	S_FF_FF_NB03_M_01_C_A
Bardstown Rd. PS Improvements	IOAP	88545	S_CC_CC_MSD1025_S_03_B
East Rockford PS Relocation	IOAP	04699-W	S_MC_WC_NB02_S_03_C
Fox Harbor Inline Storage	IOAP	62769	S_HC_HN_NB03_S_09A_A_A
Gunpowder PS Inline Storage	IOAP	MSD1055-LS	S_HC_HN_NB02_S_09A_C_B
Lucas Lane PS Inline Storage	IOAP	MSD0199-LS	S_FF_BT_NB01_S_09A_C_A
Raintree and Marian Ct 1 - PS Elimination	IOAP	28395A	S_JT_JT_NB03_M_01_C
Raintree and Marian Ct 1 - PS Elimination	IOAP	28719	S_JT_JT_NB03_M_01_C
Raintree and Marian Ct 1 - PS Elimination	IOAP	28729-W	S_JT_JT_NB03_M_01_C
Raintree and Marian Ct 1 - PS Elimination	IOAP	MSD0149-PS	S_JT_JT_NB03_M_01_C
Raintree and Marian Ct 2 - Pipe Upgrades	IOAP	MSD0149-PS	S_JT_JT_NB03_M_01_C
Raintree and Marian Ct 2 - Pipe Upgrades	IOAP	28395A	S_JT_JT_NB03_M_01_C

Appendix F
IOAP Project Crosswalk

Project Name	PROGRAM	ASSET ID	PROJECT ID
Raintree and Marian Ct 2 - Pipe Upgrades	IOAP	28719	S_JT_JT_NB03_M_01_C
Raintree and Marian Ct 2 - Pipe Upgrades	IOAP	28729-W	S_JT_JT_NB03_M_01_C
St. Rene Rd. PS Inline Storage	IOAP	94187	S_FF_CH_NB01_S_09A_C_A
Charleswood Interceptor Extension	IOAP	25480	S_PO_WC_PC03_M_01_C
Charleswood Interceptor Extension	IOAP	25479	S_PO_WC_PC03_M_01_C
Charleswood Interceptor Extension	IOAP	25477	S_PO_WC_PC03_M_01_C
Charleswood Interceptor Extension	IOAP	MSD0130-PS	S_PO_WC_PC03_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28415	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	98564	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28250	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	99649	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28416	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28340	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	104289	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28414	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28417	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28413	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28249	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28336	S_JT_JT_NB02_M_01_C
Leven PS Elimination	IOAP	36419	S_PO_WC_PC10_M_01_C
Monticello PS Elimination	IOAP	27969	S_JT_JT_NB04_M_01_A
Monticello PS Elimination	IOAP	MSD0151-PS	S_JT_JT_NB04_M_01_A
Cinderella PS Elimination	IOAP	MSD1013-PS	S_PO_WC_PC04_M_01_C
Cinderella PS Elimination	IOAP	60679	S_PO_WC_PC04_M_01_C
Cinderella PS Elimination	IOAP	35309	S_PO_WC_PC04_M_01_C
Idlewood Inline Storage	IOAP	63094	S_CC_CC_70158_M_09A_C
Idlewood Inline Storage	IOAP	63095	S_CC_CC_70158_M_09A_C
Idlewood Inline Storage	IOAP	70158	S_CC_CC_70158_M_09A_C
Idlewood Inline Storage	IOAP	28984	S_CC_CC_70158_M_09A_C
Idlewood Inline Storage	IOAP	28998	S_CC_CC_70158_M_09A_C
Sutherland Interceptor	IOAP	16649	S_SD_MF_NB05_M_01_A
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	43472	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	MSD1024-PS	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	105936	S_MI_MF_NB04_M_03_B

Project Name	PROGRAM	ASSET ID	PROJECT ID
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	62418	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	62420	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	21628-W	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	91630	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	46891	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	91629	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	62420	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	91629	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	46891	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	MSD1024-PS	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	62418	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	43472	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	91630	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	105936	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	21628-W	S_MI_MF_NB04_M_03_B
Government Center PS Elimination	IOAP	94541	S_PO_WC_PC06_M_01_C
Government Center PS Elimination	IOAP	MSD0180-PS	S_PO_WC_PC06_M_01_C
Government Center PS Elimination	IOAP	94542	S_PO_WC_PC06_M_01_C
Kavanaugh Rd. PS Improvements	IOAP	MSD1085-PS	S_HC_HC_MSD1085_S_03_A
Little Cedar Creek Interceptor Improvements	IOAP	67997	S_CC_CC_67997_M_01_C
Little Cedar Creek Interceptor Improvements	IOAP	89197	S_CC_CC_67997_M_01_C
Little Cedar Creek Interceptor Improvements	IOAP	89196	S_CC_CC_67997_M_01_C
Little Cedar Creek Interceptor Improvements	IOAP	86423	S_CC_CC_67997_M_01_C
Little Cedar Creek Interceptor Improvements	IOAP	89195	S_CC_CC_67997_M_01_C
Little Cedar Creek Interceptor Improvements	IOAP	86424	S_CC_CC_67997_M_01_C
Eden Care PS SSO Investigation	IOAP	MSD1105-PS	S_FF_FF_NB02_S_13_C
Leland Road SSO Investigation	IOAP	96020	S_OR_MF_NB02_S_13_C