

Hydraulic Modeling Software Recommendation

PREPARED FOR: Greater New Haven Water

Pollution Control Authority

COPY TO: File

PREPARED BY: CH2M HILL

DATE: July 18, 2014

PROJECT NUMBER: 492601

This memorandum describes the review and screening process used to recommend the hydraulic and hydrologic (H&H) modeling software for the Greater New Haven Water Pollution Control Authority's (Authority) wastewater collection system modeling.

Background

The Authority's system-wide collection system H&H 1997 model was originally developed in DHI Mike Urban Mouse and calibrated in 1998 to support the combined sewer overflow (CSO) Long-Term Control Plan (LTCP). This planning-level model was initially delivered in December 1998 and documented in LTCP Technical Memorandum #3. Sewer plan maps and as-built drawings were used to construct the model. The planning-level model was calibrated using several data sources collected in the late 1990s, and then the 2007 model was verified with data presented in the 2008 Hydraulic Modeling Update.

During recent flow monitoring activities, it was found that the planning-level hydraulic modeling scenarios previously developed to support the Authority's long-term control plan (LTCP) using the 2007 model was over-predicting the combined sewer overflow under current condition. As a part of facilities plan update effort, the 2007 hydraulic model needs update and calibration with current flow monitoring data to refine prediction of hydraulic condition during wet weather as well as flows conveyed to the East Shore Water Pollution Abatement Facility (WPAF).

The Authority authorized CH2M HILL to updated and recalibrate the 2007 model in June 2014. As part of the model update tasks, CH2M HILL will recommend an Environmental Protection Agency (EPA) Storm Water Management Model (SWMM) based H&H modeling program to perform the future modeling tasks.

Model Platform Selection

As the needs of the modelers and other users of the system-model evolved, the software needed to progress as well. The proposed software package would combine robust data management capabilities with a user friendly graphic interface. The primary feature required from a software package is that it uses the EPA SWMM computation engine to power the model. Other key features required include the following:

- The ability to model real time controls,
- Version control and tracking of changes to the model input files for sizing and alternative evaluation,
- Ease of operation and updating of the model,
- Presentation of results,
- Low Impact Development (LID) control,
- · Green Infrastructure (GI) modeling, and
- Seamless interaction with EPA SWMM 5.0.

Software Packages

Several of the software packages on the market today were first screened to determine if they met the modeling needs of this task. This eliminated all steady state models, those that could not model real time controls and those that did not utilize SWMM as the model engine. CH2M Hill developed a list of five software packages (other than EPA SWMM) to be evaluated. The list included Mike Urban by Danish Hydraulic Institute (DHI), InfoSWMM by Innovyze (formerly MWH Soft), PCSWMM by CHI Software, SewerGEMS by Bentley and XPSWMM by XP Software. However, XPSWMM was developed based on EPA SWMM 4.0 with improvements and it cannot seamlessly interact with EPA SWMM 5.0. The resulting software packages that were chosen for evaluation are listed in Exhibit 1.

EXHIBIT 1
Software Packages

Joit Ware 1 descapes	
Software	Vendor
Mike Urban*	Danish Hydraulic Institute
InfoSWMM	Innovyze (MWH Soft)
PCSWMM	CHI Software
SewerGEMS*	Bentley
EPA SWMM 5.0	USEPA**

^{*}Using the SWMM 5 Engine

Evaluation Matrix

A matrix consisting of the model selection criteria was developed as shown in Appendix A. These criteria were chosen to identify the main features of each software package. They were grouped into categories that delved into specific details of the software in that area.

- 1. The matrix is divided into these main categories:
- 2. Hydraulic / Hydrologic Engine Criteria The Hydraulic/Hydrologic Engine Criteria evaluates the model engine and how this software calculates data.
- 3. User Interface Criteria The User Interface Criteria evaluates how the user will interact with the software and the ease of understanding the results, displaying these results and working with the software vendor to solve problems.
- 4. Database and Mapping Criteria- The Database and Mapping Criteria evaluates how the software interacts with external systems such as the GIS, Excel or Access.
- 5. Qualitative Criteria- The Qualitative Criteria evaluates how much training would be required to utilize the software package.
- 6. Vendor Support and Costs The Vendor Support and Costs criteria evaluates the costs associated with each software package and the support provided by each vendor.

Each of the criteria was given a weighting factor ranging from 1 to 5, with 5 representing those criteria that are most important. The criteria included in the categories above with a weighting of 5 are:

- Use of EPA SWMM 5.0 in the native format
- Presentation of results
- Pipe Network Graphics

^{**}EPA SWMM 5.0 is freeware available from USEPA

- Pipe Profile Graphics
- Track Changes

Evaluations

The model evaluation is based on the survey of a group of modelers experienced with each software package on the software matrix described above.

After the evaluation of the software packages, the modelers completed the software evaluation matrix for the first three evaluation categories for each software package. The modelers rated the hydraulic capabilities, user interface, graphics and the ease of use of the software based on their experience with the software package during the evaluation. The fourth and fifth category list criteria related to initial license costs, maintenance costs, customer service and technical support. These were evaluated by a team of CH2M Hill modelers consisting of experienced professionals with several years of experience with the software packages.

The process enabled the modelers to quantify the ability of each software package to meet the needs of the modeling tasks and the extent of customer service and vendor support available. Quality control was performed of the criteria rating process included a review of the scores by another senior modeler, within CH2M Hill, experienced with each software package. The scored criteria was weighted using the criteria weighting factors. The individual results of the weighted scoring are shown in Appendix B.

The cost of each software package was requested from the vendors and the packages were evaluated to gain an understanding of their cost-benefit. Even though the actual quote from each vendor may vary with customers, time, and number of licenses, the quotes from different vendors based on similar conditions are comparable. Based on the quotes received from their respective company representative for a two seat license, the general pricing information for the software packages is as follows:

- InfoSWMM (Innovyze) was the most expensive software in the study, priced at \$22,000.00 per year
 for a single license of the Executive suite, with additional \$5,250.00 annual maintenance and
 upgrading charges.
- 2. SewerGEMS (Bentley) was the second most costly, with an initial cost of \$14,000.00 per license, and an additional \$3,600.00 annual maintenance and upgrading charges.
- 3. Mike Urban (DHI) was the third most costly, with an initial cost of \$14,040.00 per license (additional \$2,000.00 for online database feature for concurrent multi-user capabilities), with an additional \$2,704.00 annual maintenance and upgrading charges.
- 4. PCSWWM (CHI Software) quoted a price of \$9995.95 for the initial purchase of an unlimited user license. Their maintenance fees included a payment of \$2,995.95 plus \$299.95 for each user.

Exhibit 2 shows the pricing information with discounts for the 2 seat floating license software package for the first year and the second year as per the quotations submitted by the vendors.

EXHIBIT 2
Pricing information with Discounts

Software	Mike Urban	InfoSWMM	SewerGEMS	PCSWMM
Price (Initial Purchase)	\$18,040	\$19,400	\$28,000	\$1,759
Price (2nd Year)	\$3,348	\$7,350	\$7,200	\$1,399

Results

The scores from the first three categories were totaled and ranked on a scale of 1-10. Qualitative Criteria, the fourth category and Vendor Support, were value ranked (score/cost). Overall, the PCSWMM was ranked as the most user friendly software with most of the functionalities desired in a software package. The InfoSWMM was ranked as the second choice. SewerGEMS was ranked third. Mike Urban was ranked fourth. Appendix C contained a short summary of each software package including strengths and weaknesses.

The rankings of the software packages were combined and the averaged results are shows in Exhibit 3. PCSWMM by CHI Software was evaluated as the overall best software package based on features and ease of use. Cost evaluation of each software indicated that PCSWMM was also the most economical software package available with an average cost (based on a 2 license quote) of \$880 for the first year and \$700 per year after that.

EXHIBIT 3					
Results Summary					
Software	Mike Urban	InfoSWMM	SewerGEMS	PCSWMM	EPA SWMM 5
Ranked Score (Performance) (1-10)	8.6	9.8	8.7	10.0	6.4
Value Rank	8.04	7.36	4.93	63.33	NA*

^{*}EPA SWMM5 is a free software and not applicable to give a value rank.

PCSWMM is the only software package, in the evaluation study, that enables the users to switch the SWMM engine version of the input file and the model run allowing the user to choose any version from 5.0.013 to 5.0.022 they wish. All other software packages are upgraded and maintained in accordance with the latest SWMM engine version.

Recommendations

(Score/Cost)

The conclusions drawn from this analysis reveal that all of the software packages meet the basic needs of this modeling task. PCSWMM is the most economical software package available that met the basic needs including ease of use, graphical features, GIS integration and EPA SWMM 5.0 integration. Based on the evaluation by a group of modelers, it is recommended that the Authority select PCSWMM for the wastewater collection system modeling.

Appendix A Model Evaluation Matrix

Evaluation Matrix - CH2M HILL Rankings GNHWPCA Hydraulic Model Systems Evaluation July 2014



July 2014		DHI	Innovyze	EPA	Bentley	CHI
	Weighting	Mike Urban SWMM 5	Info SWMM	EPA SWMM 5	-	PC SWMM
	Weighting	Dingfang Liu/BOS and Helen Lu/ATL	Shad Roundy/CVO	Dingfang Liu/BOS	Dingfang Liu/BOS	Dingfang Liu/BOS, Dar O'Leary/SEA and Hong Zhang/DSO
I. Hydraulic / Hydrologic Engine Criteria Area of Principal Application						
Open / natural channel conveyance	1	2	3	5	3	3
Urban systems	3	4	5	5	5	5
Hydraulics						
Computes hydraulic gradelines / water surface elevations	3 2	4	5	5	5	5
Parallel pipe systems (looped networks) Pipe surcharge	3	4	5 5	5 5	5 5	5 5
Pressurized flow and flow reversal	2	3	5	5	5	5
Accepts minor losses	1	4	3	4	4	4
Real time controls	3	3	3	3	4	4
Ability to model non custom pipe geometry Routing	2	4	5	3	4	5
Numerical stability	2	3	3	3	4	4
Time step control	1	4	4	4	4	4
Continuous and event simulation	3	4	5	5	5	5
Infrastructure Components				4		4
Pump stations Orifices, weirs, & diversions	3	4	4 4	4 4	4 4	4
BMPs	1	0	2	3	3	3
Irregular cross-sections / natural channels	1	4	4	3	3	3
Inline storage	2	4	5	4	4	4
Offline storage Hydrology	1	4	5	5	5	5
Runoff model	2	4	3	4	4	4
Infiltration (RDII and GWI)	3	4	4	4	4	4
Tide or river stage boundaries	3	4	0	5	4	5
LID/Green	2	0	0	4	3	4
Dry weather flow generation Model Engine	1	5	4	3	0	3
SWMM 5 - Native Format	5	4	5	5	3	5
Water Quality						
BMPs / Treatment	1	3	2	4	2	4
Pollutograph routing Sediment transport	1 1	4 0	2 2	4 2	2 2	4 2
2. User Interface Criteria	· · ·					
Input/Output						
Menu driven	1	3	4	2	4	5
Presentation of Results	5	3 2	3	2	3	5 5
Batch data can be loaded in input files Pipe network graphics	1 5	4	4 5	0	1	5
Pipe profile graphics	5	4	3	i	3	5
Ease of new model construction	1	3	5	1	4	5
Ability to edit existing system	3	3	5	1	4	4
Inference routines for missing data Background images	2	2	4 5	0	3	4 5
Computes design metrics (e.g. pipe capacity)	5	4	5	1	4	4
Generates statistics / objective functions	2	2	5	1	3	4
Documentation Support						
Complete & understandable documentation	2 2	2	4	2 1	2 2	2 2
Online help system Organizational Features			4	1		
Track Changes	5	4	4	0	1	1
Error Definition - Easy to understand	2	3	4	1	2	1
Ability to evaluate and compare alternatives	3	4	5	0	3	4
3. Database and Mapping Criteria Interface with other Systems						
Interface with other Systems Interface with MS Excel/Access	1	4	5	1	4	5
Interface with GIS	4	5	5	i	5	5
Can take advantage of networked/integrated environments	2	4	4	1	4	4
Total Score		153	180	128	159	186
4. Qualitative Criteria Performance						
Relative computational ease for identical networks	2	3	3	3	3	3
Estimated training effort required	3	3	4	3	2	2
5. Vendor Support and Cost	<u> </u>					
Vendor technical support	2	5	4	1	4	3
Training events / In-house training	2 2	4	4 4	1	4	5 4
Customer Service Weighting Factors		4	4	1	4	4

Customer Service
Weighting Factors
0 - Not Applicable
1- Applicable but not high priority
2-Medium Priority
3- High Priority

Rankings
0 - Does not Apply to this software
1 - Low
2 - Applies but does not perform well
3 - Applies and average performance
4 - Above average performance
5 - Excellent performance

Appendix B Weighted Matrix

Evaluation Matrix - CH2M HILL Weighted Rankings GNHWPCA Hydraulic Model Systems Evaluation July 2014



July 2014		DHI	MWH Soft	EPA	Bentley	CHI
	Weighting	Mike Urban SWMM 5	Info SWMM	EPA SWMM 5	SewerGEMS	PC SWMM
		Dingfang Liu/BOS and Helen Lu/ATL	Shad Roundy/CVO	Dingfang Liu/BOS	Dingfang Liu/BOS	Dingfang Liu/BOS, Dan O'Leary/SEA and Hong Zhang/DSO
Hydraulic / Hydrologic Engine Criteria Area of Principal Application						
Open / natural channel conveyance	1	2	3	5	3	3
Urban systems	3	12	15	15	15	15
Hydraulics						
Computes hydraulic gradelines / water surface elevations	3	12	15	15	15	15
Parallel pipe systems (looped networks) Pipe surcharge	2	8 12	10 15	10 15	10 15	10 15
Pressurized flow and flow reversal	2	6	10	10	10	10
Accepts minor losses	1	4	3	4	4	4
Real time controls	3 2	9	9	9	12	12
Ability to model non custom pipe geometry Routing		8	10	6	8	10
Numerical stability	2	6	6	6	8	8
Time step control	1	4	4	4	4	4
Continuous and event simulation	3	12	15	15	15	15
Infrastructure Components	3	10	12	40	12	10
Pump stations Orifices, weirs, & diversions	3	12 12	12 12	12 12	12 12	12 12
BMPs	1	0	2	3	3	3
Irregular cross-sections / natural channels	1	4	4	3	3	3
Inline storage	2	8	10	8	8	8
Offline storage Hydrology	1	4	5	5	5	5
Runoff model	2	8	6	8	8	8
Infiltration (RDII and GWI)	3	12	12	12	12	12
Tide or river stage boundaries	3	12	0	15	12	15
LID/Green Dry weather flow generation	2 1	0 5	0 4	8 3	6 0	8 3
Model Engine	'	5	4	3	0	<u> </u>
SWMM 5 - Native Format	5	20	25	25	15	25
Water Quality						
BMPs / Treatment	1 1	3 4	2	4 4	2	4 4
Pollutograph routing Sediment transport	1	0	2	2	2	2
2. User Interface Criteria	· · ·					
Input/Output						
Menu driven	1	3	4	2	4	5
Presentation of Results Batch data can be loaded in input files	5 1	15 2	15 4	10 0	15 0	25 5
Pipe network graphics	5	20	25	5	20	20
Pipe profile graphics	5	20	15	5	15	25
Ease of new model construction	1	3	5	1	4	5
Ability to edit existing system	3	9	15	3	12	12
Inference routines for missing data Background images	2	4 8	8 10	0 2	6 8	8 10
Computes design metrics (e.g. pipe capacity)	5	20	25	5	20	20
Generates statistics / objective functions	2	4	10	2	6	8
Documentation Support						
Complete & understandable documentation Online help system	2 2	4	8	4 2	4	4 4
Organizational Features		4	0		4	4
Track Changes	5	20	20	0	5	5
Error Definition - Easy to understand	2	6	8	2	4	2
Ability to evaluate and compare alternatives	3	12	15	0	9	12
3. Database and Mapping Criteria Interface with other Systems						
Interface with MS Excel/Access	1	4	5	1	4	5
Interface with GIS	4	20	20	4	20	20
Can take advantage of networked/integrated environments	2	8	8	2	8	8
Total Score		385	441	288	389	448
RANK 4. Qualitative Criteria		8.6	9.8	6.4	8.7	10.0
Performance						
Relative computational ease for identical networks	2	6	6	6	6	6
Estimated training effort required	3	9	12	9	6	6
5. Vendor Support and Cost						
Base package purchase cost (> 7000 nodes) - based on a 2			040 (00	000 5	
seat quote from the vendor Annual update costs		\$18,040.00 \$3,348.80	\$19,400.00 \$7,350.00	\$0.00 \$0.00	\$28,000.00 \$7,200.00	\$1,759.20 \$1,399.00
Vendor technical support	2	\$3,348.80 10	\$7,350.00 8	\$0.00	\$7,200.00 8	\$1,399.00 6
Training events / In-house training	2	8	8	2	8	10
Customer Service	2	8	8	2	8	8
VALUE SCORE		8.04	7.36	n/a	4.93	63.33
Weighting Factors						

Weighting Factors
0 - Not Applicable
1- Applicable but not high priority
2-Medium Priority
3- High Priority

Rankings
0 - Does not Apply to this software
1 - Low
2 - Applies but does not perform well
3 - Applies and average performance
4 - Above average performance
5 - Excellent performance

Appendix C Summary of Software Packages

InfoSWMM

InfoSWMM is a software package developed by MWH Soft which provides an interface for developing, running, and reviewing SWWM 5 models. InfoSWMM is fully integrated with ArcGIS and includes tools for model development, database management, scenario management, and results viewing. Add-on extensions are available for load allocation, calibration, design, subcatchment delineation, and other independent routines. The benefits of InfoSWMM include the ArcGIS integration, mapping, database management, and scenario management functionality. The facility and domain management tools allow for quick activation and inactivation of improvement options. The data exchange functionality between excel and access are excellent. Disadvantages include a profile viewer with limited flexibility and limited hydrologic calculation options.

Mike Urban

To summarize, comparing with other software with SWMM engines, Mike Urban SWMM has the following advantages:

- 1) Fully GIS integration with ESRI (InfoSWMM has the same feature though)
- 2) Better data management: taking advantage of the ACCESS database structure for direct data editing within the database (with extreme cautious though)
- 3) Data flag tracking changes (manual input, not automatic tracking as InfoWorks)

However, there are also major limitations:

- 1) The GIS integration caused significant overhead which may cause occasional model crush and slow down the calculation (XPSWMM and PCSWMM will have a better speed)
- 2) The interchange between Mike Urban SWMM and EPA SWMM is not seamless, still need manual check (PCSWMM is the best in this aspect). For example: When Mike Urban exports a dataset to run SWMM, it omits fields that are blank (null). It runs its export routine successfully, but the SWMM engine will generate an error. Esp. for RTK method, if there is a null value presented in the RTK data set, the exported SWMM inp file will ignore the entire set
- 3) No sediment transport feature
- 4) Limited result presentation options (PCSWMM is the best in this aspect, it provides very helpful statistics summary for model calibration in addition to flexible graphic display)
- 5) No options to switch between different SWMM versions like PC SWMM (it could cause problems considering the frequent update of EPA SWMM)

PCSWMM

PCSWMM 2010 is hydraulic model used primarily for the analysis of urban wastewater collection systems. The software vendor is Computational Hydraulics Institute (CHI) and can be contacted at www.chiwater.com.

PCSWMM is a cost-effective tool that has several benefits:

- The hydraulic engine of PCSWMM is EPA's SWMM 5.0 engine, a widely used and industry-accepted dynamic engine. The tool allows a toggle to select the engine version of 5.0.013 to the most current version, 5.0.021.
- The interface provides for relatively straightforward input/output functionality including copy/paste into and out of the model tables; very good import/export features with external data sources including Excel, ArcGIS shapefiles or geodatabases;
- The latest version of PCSWMM allows for full use of the SWMM 5.0.021 improvements including a "Low Impact Development (LID)" module. The LID module allows for simulating the hydrological impact that employ LID practices including vegetative swells, porous pavement, infiltration trenches, rain barrels, and biorention cells. With PCSWMM's good ability to import from text or Excel files, external tools can be created to quickly evaluate the extent and appropriate LID best management practice (e.g., impact of 10 percent of private parcels using rain barrels versus 30 percent, or impact with or without infiltration trenches).

PCSWMM is an inexpensive dynamic model, but the tradeoff is limited support by CHI or in its documentation. Online manuals are not generally helpful and CHI is often unresponsive in support questions. Offsetting this is the wide availability of SWMM user groups on the web.

SewerGEMS

SewerGEMS was originally developed by Haestad Methods, which was later purchased by Bentley. The software vendor and can be contacted at www.bentley.com/en-US/.

The benefits of SewerGEMS include:

- It can be run using a stand-alone Windows interface or inside AutoCAD or ArcGIS.
- It includes EPA's SWMM computation engine and proprietary methods.
- Design functionality.

Disadvantages include:

- Limited results presentation for time series or profiles
- No options to switch between different SWMM versions.
- The interchange between SewerGEMS and EPA SWMM is not seamless, still need manual check

Appendix C Flow Monitoring Program-Meter Installation Reports

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY TEMPORARY FLOWMETER RIM ELEVATIONS SEPTEMBER 2014

Site	Address	Elevation (NAVD 88)	Northing	Easting	Final Meter Location - MH ID
FM-1	On East Rock Park Road between East Rock Road and Whitney Ave	28.49	N.A.	N.A.	HWV01M0115
FM-2	920 Winchester Ave in middle of street	55.70	682629.22	951971.27	HWP03M0253
FM-3	Outside 809 Dixwell Ave	61.12	683007.49	949160.89	HDX07M0582
FM-4	Across from 351 Sherman Ave	47.04	676788.03	947437.01	NBU08M0623
FM-5	1456 Ella T Grasso Blvd	49.10	676838.21	945243.71	NBU09M0676
FM-6	Whalley Ave 50 yards past Lily Pond Ave	79.35	684425.68	937677.34	NWR01M0614
FM-7	Across from 149 Derby Ave (Across from Broadway Pizza)	24.45	673823.32	944381.12	NBU10M1021
FM-8	152 Fitch St	18.21	679996.29	943928.28	NBU07M0255
FM-9	On North Frontage Road in middle right turn lane at Ella T Grasso Blvd	13.72	672487.11	944445.11	NBU12M1036
FM-10	Across from 408 Davenport Ave	19.16	669629.44	946043.88	NBM02M0347
FM-11	188 Lamberton Street	23.29	666515.04	947756.49	NBM05M0144
FM-12	761 Orchard Street in middle of street	49.40	678068.36	949007.34	NBU06M1371
FM-13	On Canal St. between Henry St. and Gregory St.	39.56	677551.51	950723.72	NHU07M1120
FM-14	Across from 50 Derby Ave in front of church	37.29	674211.11	945807.42	NBU10M1054
FM-15	Mitchell Ave. and Willow Ave., in the school parking lot	18.06	677089.85	956935.82	NHU05M0733
FM-16	James St. between State St. and Humphrey St. (at RR overpass)	11.08	675423.91	957670.77	NFH01M0001
FM-17	554 Woodward Ave (in rear of parking lot)	7.62	664206.65	959449.54	NES03M0768
FM-18	Water St. between Hamilton St. and East St.	9.72	670416.68	955550.42	NEA03M0250
FM-19	In middle of James St. between 230 and 238 James	23.40	673334.67	957893.46	NFH03M0160

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY TEMPORARY FLOWMETER RIM ELEVATIONS SEPTEMBER 2014

Site	Address	Elevation (NAVD 88)	Northing	Easting	Final Meter Location - MH ID
FM-20	On River St. close to Poplar St., in middle of street	8.20	671291.53	960009.11	NFH07M0761
FM-21	Outside of 69 Poplar St. in middle of street	8.74	671431.55	959802.83	NFH07M0742
FM-22	Across from 315 Front St. on sidewalk	8.61	675493.45	962231.26	NFH04M0797
FM-23	80 E Ferry Street (in parking lot of Buchanan Marine)	13.67	670435.34	960767.60	NQL05M0399

Site Name / Manhole # FM-1

Investigation Date: 4/23/14 Time: 12:00 Crew Members: KE/BR Installation Date: 5/2/14 Time: 9:45 Crew Members: KE/ME

Address/Location: On East Rock Park Road, between E. Rock Road & Whitney Avenue

Latitude: N 41°19.926' Longitude: W 72°54.667'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity 2.90 ft/sec

Depth 29.25 in ± 0.50 "

Turbulence Amplitude:

Less than 0.25"

0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	30"		30"
Width	30"		30"
Material	RCP		RCP
Shape	Round		Round

Sediment Present:

Yes Hard packed: ______ in. deep No Soft: _____ in. deep

Surcharge / Backwater Influence:

No evidence visible
Remains in pipe

___ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:

Good

20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhala	Intormat	tion'
Manhole 1	minut illa	ион

Elevated Manhole: Yes (No)

Height above ground ____ Manhole depth 5'

Structural Integrity of Manhole:

Good Fair Poor

Pipe Bends: None within camera view
Influent Effluent Manhole
Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole
Approx Distance to change:_____ft
(detail is comments)

Crew Member: Can you maintain this site?

(Yes) No Maybe

Sensor Configuration:

(Please include Serial Numbers when possible)

Level Primary: 0813-1083

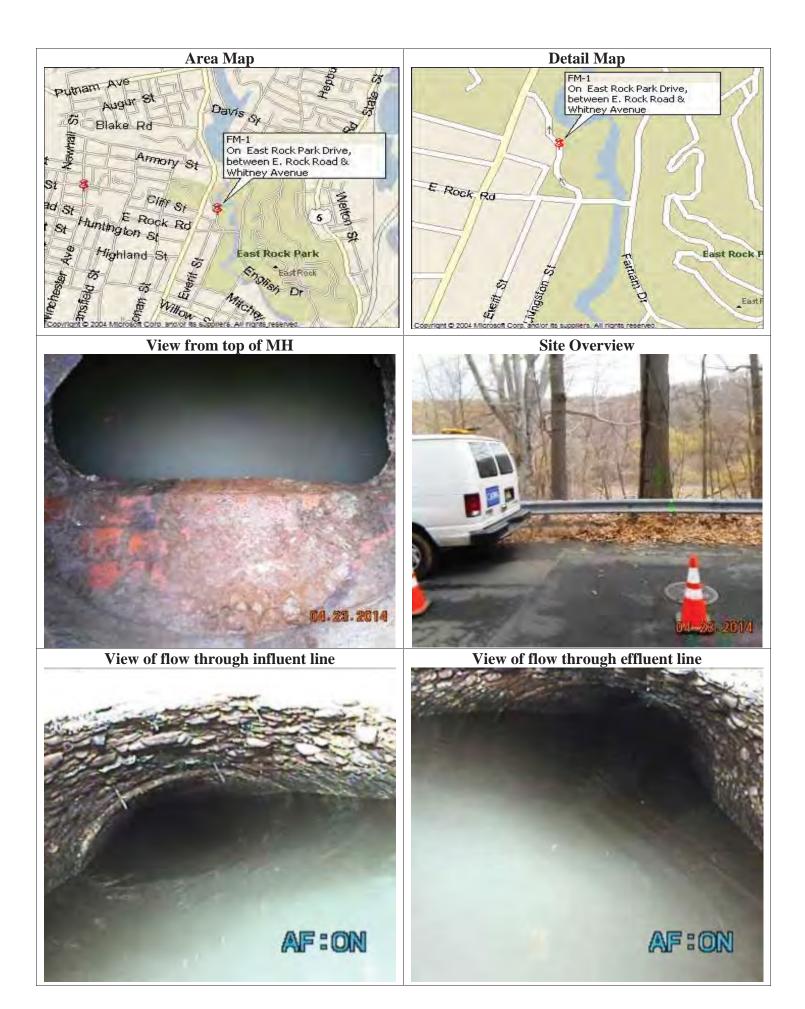
Redundant:

Velocity Primary: 0813-1083

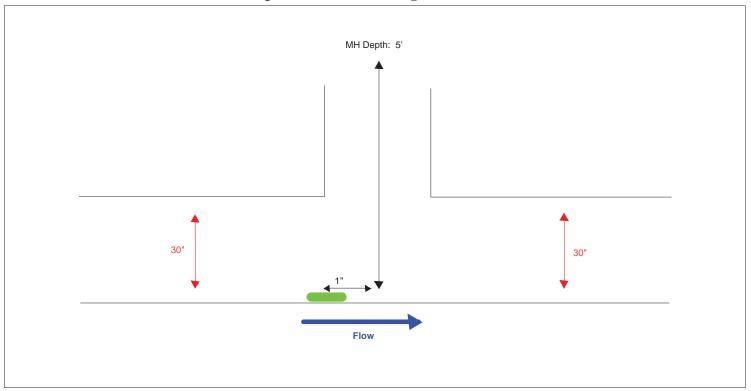
Redundant:

Meter Logger FloWay 293452

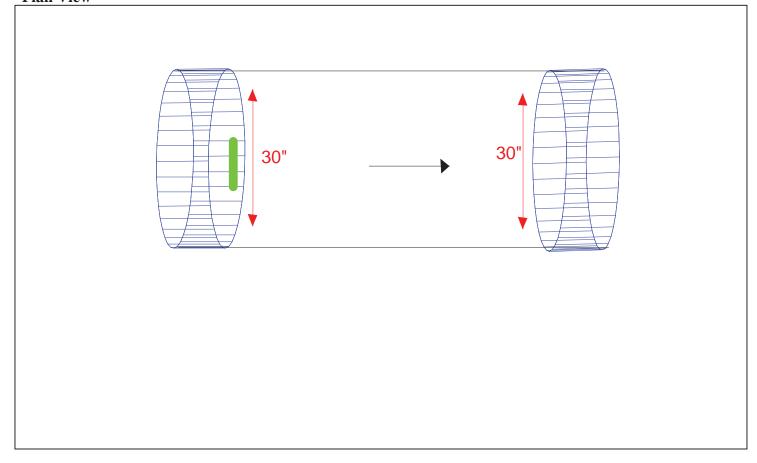
Comments: *MH is offset from pipe*



Dimensional Structure Profile View (profile sketch showing location of sensors)



Plan View



Site Location Plan ViewSketch or plat showing upstream and downstream manholes, connections, and bends.



Site Name / Manhole # FM-2

Time: 11:00 Investigation Date: 4/23/14 Crew Members: KE/BR

Installation Date: 4/30/14 Time: 12:35 Crew Members: KE/ME/JS/LR

Address/Location: 920 Winchester Avenue (in the middle of the street)

Latitude: N 41°20.074' Longitude: W 72°55.490'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity 0.98 ft/sec

Depth 10.0 in

Turbulence Amplitude:

Less than 0.25"

①.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	24"		24"
Width	24"		24"
Material	RCP		RCP
Shape	Round		Round

Sediment Present:

_____ in. deep Hard packed: _ No Soft: 1.0 in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:

Good 20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

74 T 1	T	4 •
Manhole	Intorma	tion
Mannot		

Elevated Manhole: Yes

Height above ground

Manhole depth 10' 5" Structural Integrity of Manhole:

> Good (Fair) Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

Crew Member: Can you maintain this site?

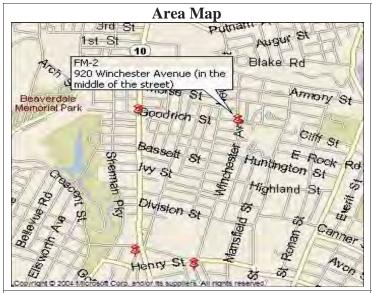
(Yes) No Maybe

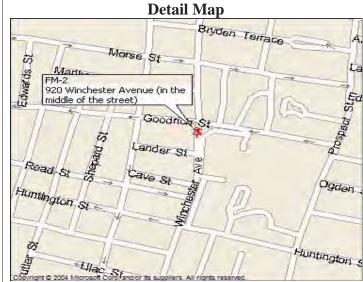
Sensor Configuration:

(Please include Serial Numbers when possible)

Primary: 0713-1055 Level Redundant: Primary: 0713-1055 Velocity Redundant: Meter Logger FloWav 294529

Comments: Requires blocking 1 lane of a 2-way street





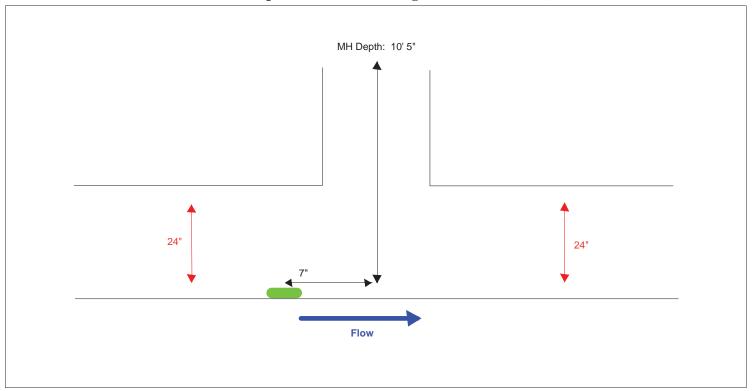




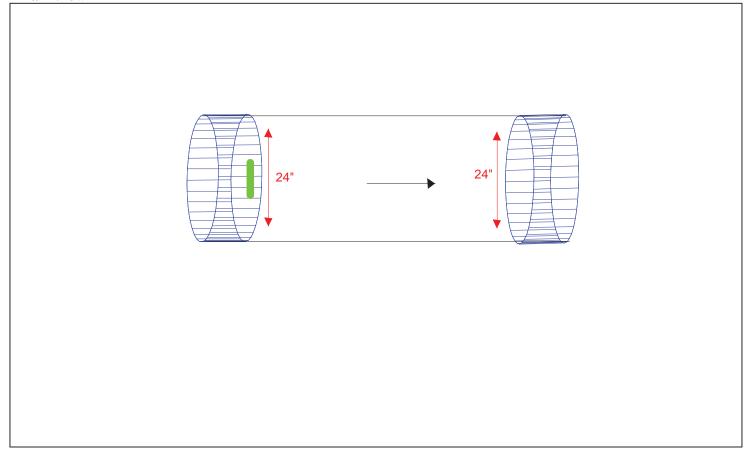




Dimensional Structure Profile View (profile sketch showing location of sensors)



Plan View



Site Location Plan ViewSketch or plat showing upstream and downstream manholes, connections, and bends.



Site Name / Manhole # FM-3

Time: 10:13 Investigation Date: 4/23/14 Crew Members: KE/BR

Installation Date: 4/30/14 Time: 11:22 Crew Members: LR/JS/KE/ME

Address/Location: Outside of 809 Dixwell Avenue (on Dixwell Ave at Cherry Ann St.)

Latitude: N 41°20.135' Longitude: W 72°56.113'

Wet (Dry Weather Conditions:



Hydraulic Conditions

Influent Flow:

Velocity 1.0 ft/sec

1.75 in Depth

Turbulence Amplitude:

Less than 0.25"

0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	12"		12"
Width	12"		12"
Material	Concrete		Concrete
Shape	Round		Round

Sediment Present:

Hard packed: _____ in. deep Yes No Soft:

_____ in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

3.0 ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:

Good

20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes

Height above ground

Manhole depth 12' 9"

Structural Integrity of Manhole:

Good (Fair) Poor

Pipe Bends:

Effluent (Manhole) Influent Approx Distance to bend:____ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

Crew Member: Can you maintain this site?

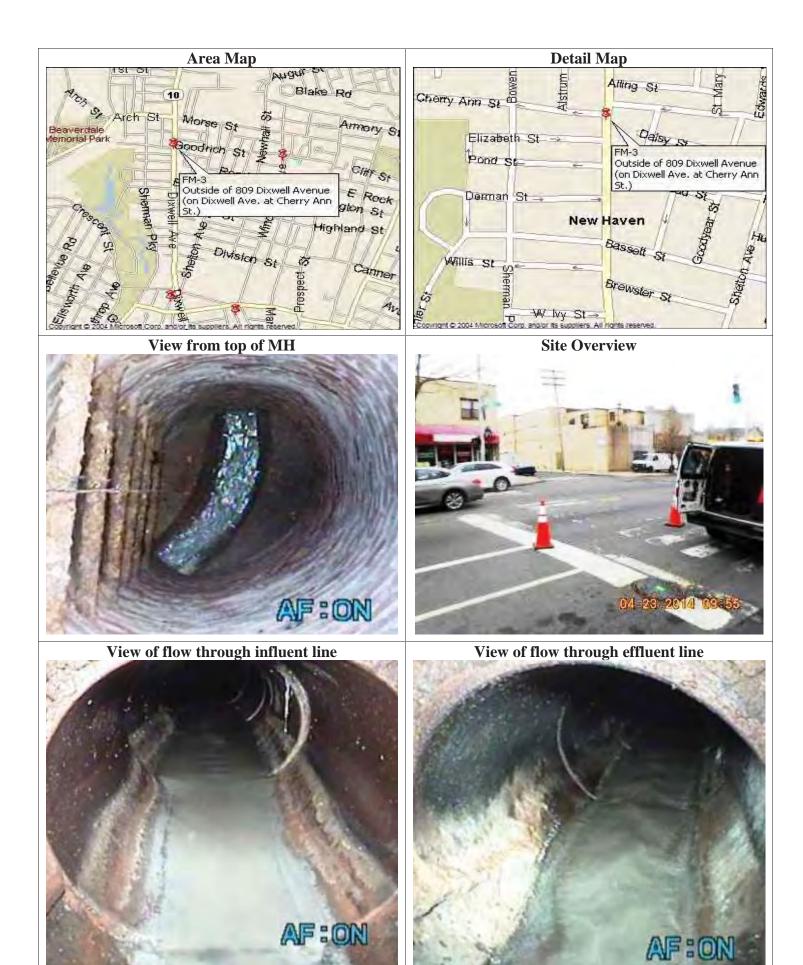
(Yes) No Maybe

Sensor Configuration:

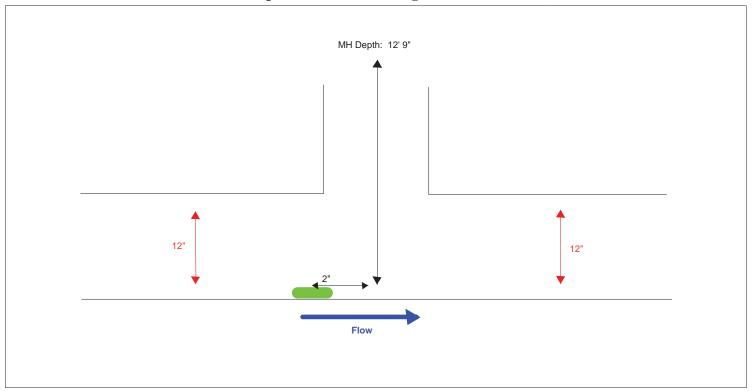
(Please include Serial Numbers when possible)

Primary: 713-1057 Level Redundant: Primary: Velocity Redundant: Meter Logger | FloWav 294535

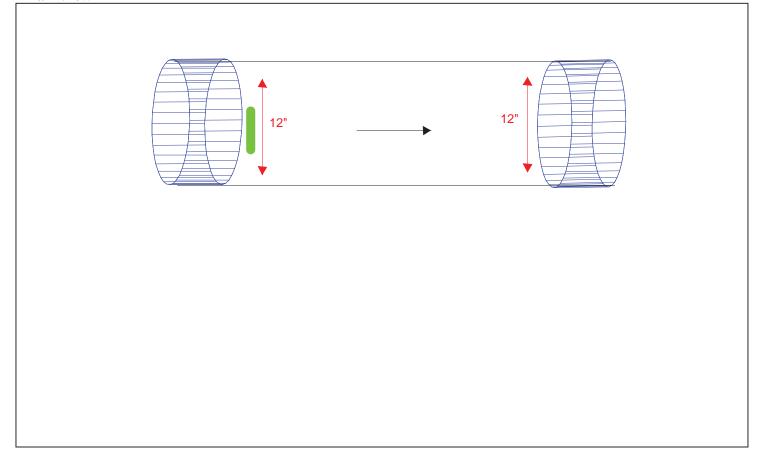
Comments:



Dimensional Structure Profile View (profile sketch showing location of sensors)

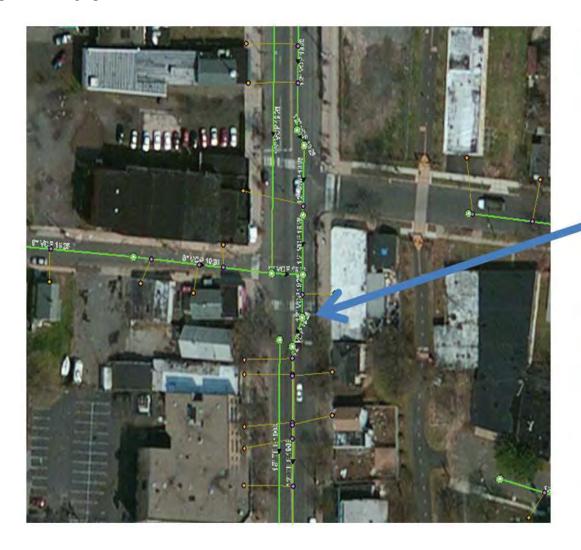


Plan View



Site Location Plan View

Sketch or plat showing upstream and downstream manholes, connections, and bends.



Site Name / Manhole # FM-4

Investigation Date: 4/22/14 Time: 14:41 Crew Members: KE/BR Installation Date: 5/1/14 Time: 14:28 Crew Members: LR/JS

Address/Location: Across from 351 Sherman Avenue

Latitude: N 41°219.093' Longitude: W 72°56.485'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity 2.15 ft/sec

Depth 10.5 in

Turbulence Amplitude:

Less than 0.25"

0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	48"		48"
Width	48"		48"
Material	Brick		Brick
Shape	Round		Round

Sediment Present:

Yes Hard packed: _____ in. deep No Soft: _____ in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

3.0 ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: _____ft from rim

Gas Investigation:

(Good)

20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

74 T 1	T	4 •
Manhole	Intorma	tion
Mannot		

Elevated Manhole: Yes (No)

Height above ground ___

Manhole depth 25'

Structural Integrity of Manhole:

Good (Fair) Poor

Pipe Bends: None within camera view
Influent Effluent Manhole
Approx Distance to bend:____ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole
Approx Distance to change:_____ft
(detail is comments)

Crew Member: Can you maintain this site?

Yes No Maybe

Sensor Configuration:

(Please include Serial Numbers when possible)

Level Primary: 813-1087

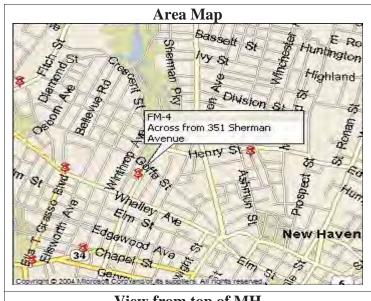
Redundant:

Velocity Primary:

Redundant:

Meter Logger Flowav 294552

Comments:



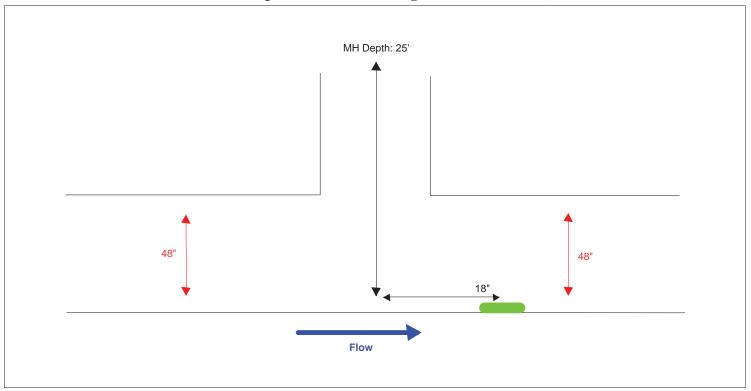


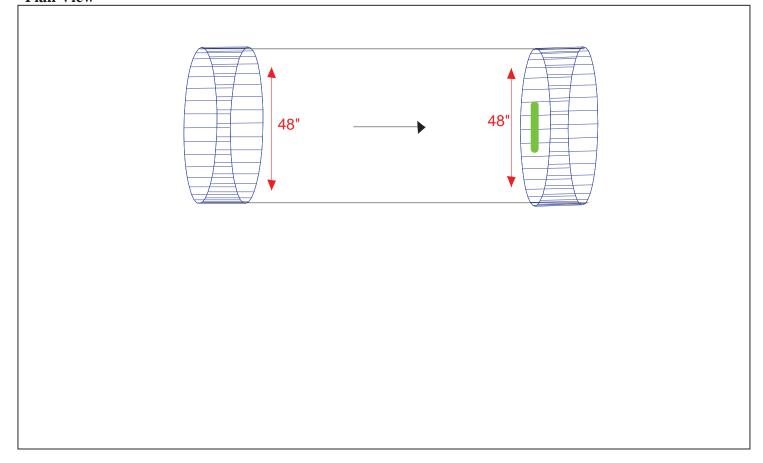














Investigation Date: 4/25/14 Time: 10:26 Crew Members: KE/BR Installation Date: 5/3/14 Time: 13:30 Crew Members: LR/JS

Address/Location: 1456 Ella T. Grasso Boulevard

Latitude: N 41°19.095' Longitude: W 72°56.965'

Weather Conditions: Wet (Dry)



Hydraulic Conditions

Influent Flow:

Velocity 2.68 ft/sec

Depth 27.0 in

Turbulence Amplitude:

Less than 0.25" \bigcirc 0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	64"		64"
Width	66.5"		66.5"
Material	Brick		Brick
Shape	Round		Round

Sediment Present:

<	Yes	\supset
	No	

Hard packed: _____ in. deep Soft: ______ in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: _____ft from rim

Gas Investigation:

Good)

20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

74 T 1	T	4 •
Manhole	Intorma	tion
Mannot		

Elevated Manhole:

Yes

Height above ground

Manhole depth

Structural Integrity of Manhole:

Good (Fair) Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend:____ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

Crew Member: Can you maintain this site?

(Yes)

No

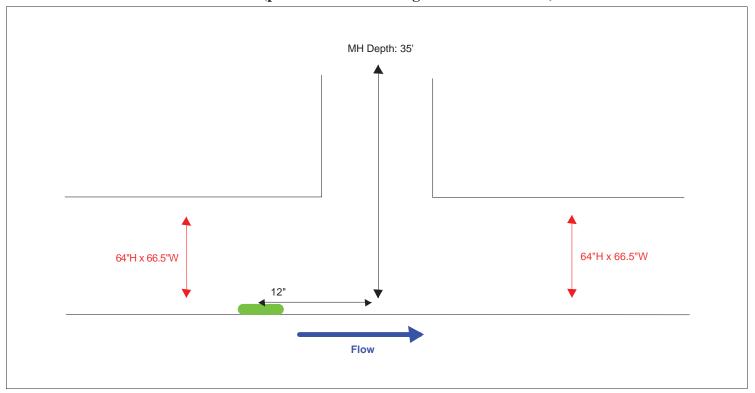
Maybe

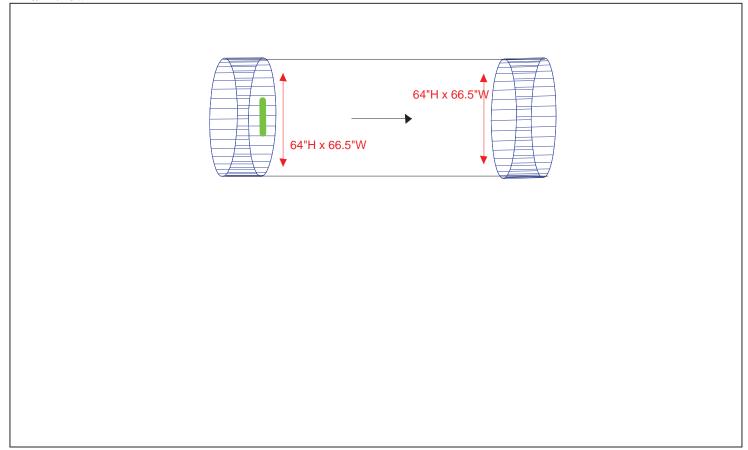
Sensor Configuration:

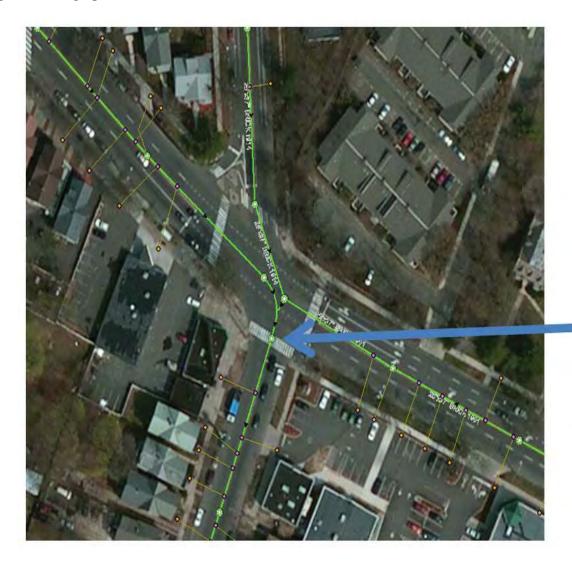
(Please include Serial Numbers when possible)

Primary: 713-1033 Level Redundant: Primary: Velocity Redundant: Meter Logger | FloWav 294539









Investigation Date: 4/25/14 Time: 12:28 Crew Members: KE/BR Installation Date: 5/1/14 Time: 9:43 Crew Members: KE/ME

Address/Location: On Whalley Avenue, 50 yards past Pond Lily Avenue (in left turn lane)

Latitude: N 41°20.835' Longitude: W 72°58.616'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity 2.60 ft/sec

Depth 8.75 to 9.5 in

Turbulence Amplitude:

Less than 0.25"

 \bigcirc 0.25" to 0.75" 0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	24"		24"
Width	24"		24"
Material	Clay		Clay
Shape	Round		Round

Sediment Present:

	Yes	
($\widehat{\text{No}}$	

Hard packed: _____ in. deep

_____ in. deep

Surcharge / Backwater Influence:

Soft:

No evidence visible

Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:



20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole:

Yes

Height above ground

Manhole depth

Structural Integrity of Manhole:

Good (Fair) Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

Crew Member: Can you maintain this site?

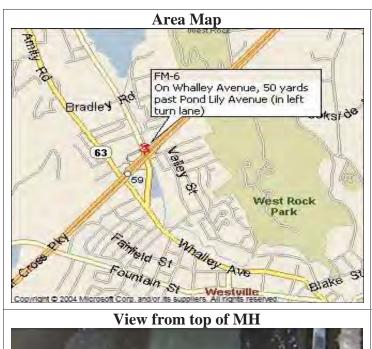
(Yes) No Maybe

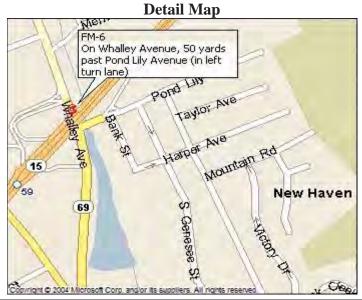
Sensor Configuration:

(Please include Serial Numbers when possible)

Primary: 0613-1012 Level Redundant: 0613-1020 Primary: 0613-1012 Velocity Redundant: 0613-1020 Meter Logger | FloWav 294538

Comments: Access after 10:00, before 14:00



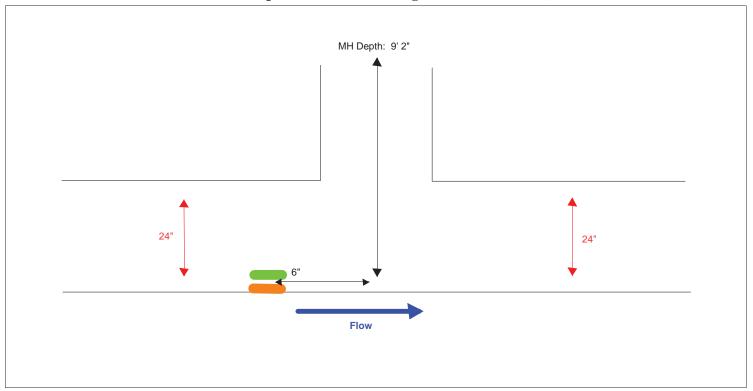


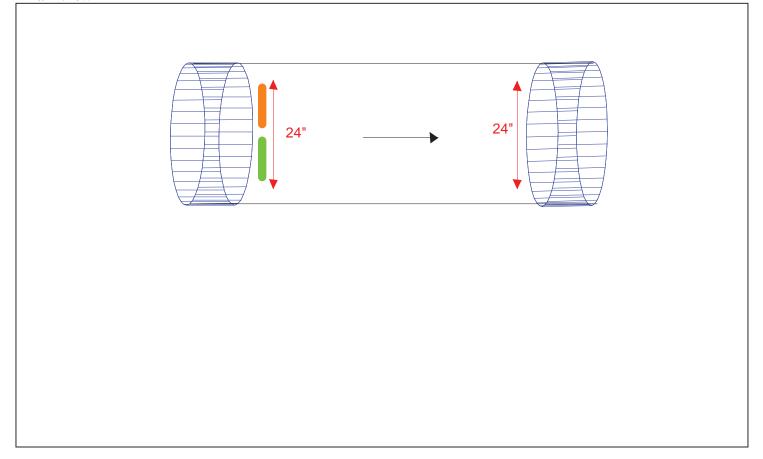


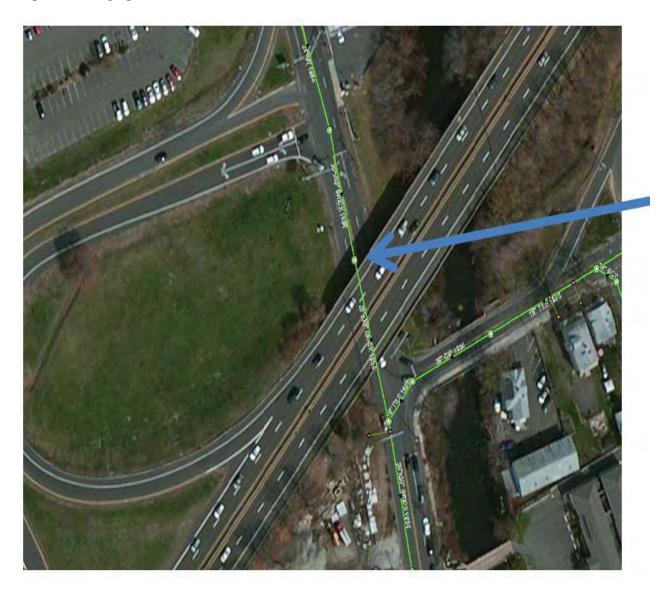












Investigation Date: 4/24/14 Time: 12:21 Crew Members: KE/BR Installation Date: 5/3/14 Time: 9:30 Crew Members: KE/ME

Address/Location: Across from Broadway Pizza at 185 Derby Avenue

Latitude: N 41°18.612' Longitude: W 72°57.148'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity 3.33 ft/sec

Depth 9.50 in

Turbulence Amplitude:

Less than 0.25" 0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	49"		49"
Width	52"		52"
Material	Brick		Brick
Shape	Egg		Egg

Sediment Present:

	Yes	
($\widehat{\text{No}}$	\supset

Hard packed: _____ in. deep Soft: ____ in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: _____ft from rim

Gas Investigation:



20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole:

Yes

No

Height above ground ___

Manhole depth 13' 6"

Structural Integrity of Manhole:

Good (Fair) Poor

Pipe Bends: None within camera view
Influent Effluent Manhole
Approx Distance to bend:____ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole
Approx Distance to change:_____ft
(detail is comments)

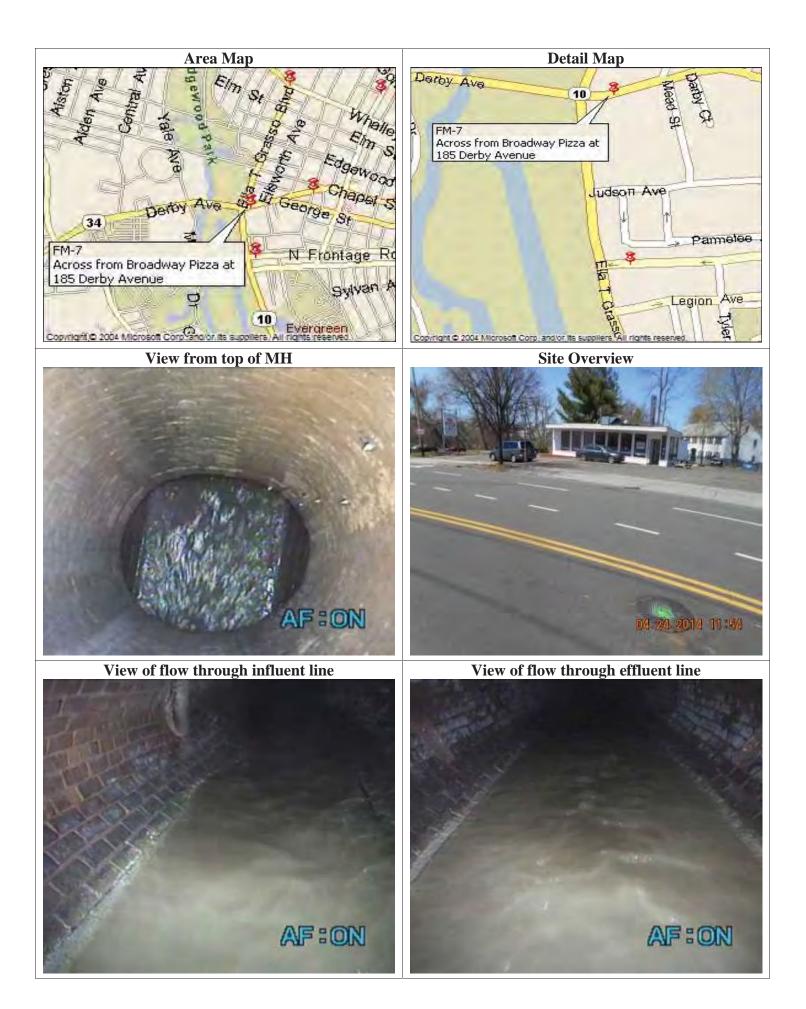
Crew Member: Can you maintain this site?

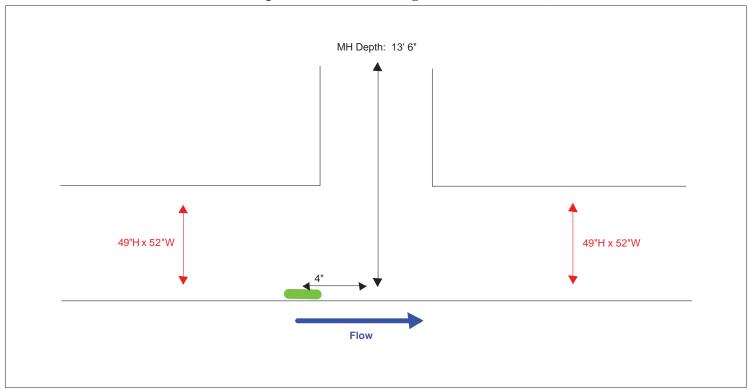
Yes No Maybe

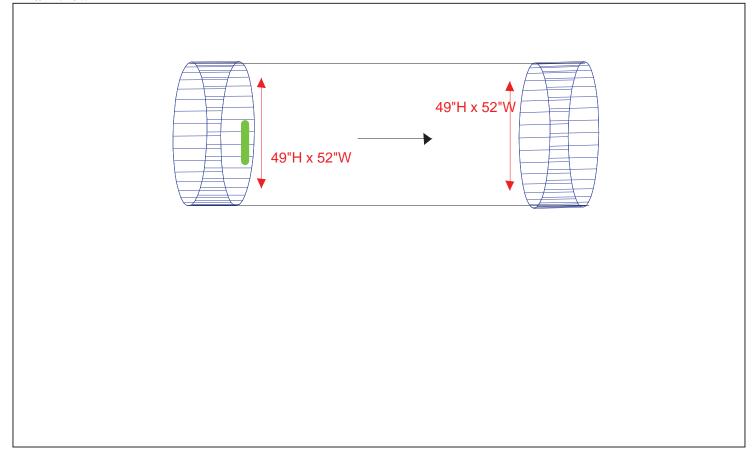
Sensor Configuration:

(Please include Serial Numbers when possible)

Level	Primary: 0613-1021	
Level	Redundant:	
Velocity	Primary: 0613-1021	
Velocity	Redundant:	
Meter Logger FloWav 293667		







Site Location Plan View

Sketch or plat showing upstream and downstream manholes, connections, and bends.



Investigation Date: 4/25/14 Time: 11:44 Crew Members: KE/BR Installation Date: 5/2/14 Time: 12:50 Crew Members: KE/ME

Address/Location: 152 Fitch Street

Latitude: N 41°19.629' Longitude: W 72°57.244'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity 1.63 ft/sec

Depth 20.5 in

Turbulence Amplitude:

Less than 0.25"

0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	42"		42"
Width	42"		42"
Material	RCP		RCP
Shape	Round		Round

Sediment Present:

Yes No	Hard packed: Soft:	in. deep in. deep
-----------	-----------------------	-------------------

Surcharge / Backwater Influence:

No evidence visible		
Remains in pipe		
ft from rim		
Reaches Rim (potential meter damage)		
Evidence unclear:	_ft from rim	

Gas Investigation:

(Good)	<u>20.9</u>	(condition)
--------	-------------	-------------

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole	Informa	tion

Elevated Manhole:	Yes	(No)
Height above amound		

Height above ground	
Manhole depth	<u>10' 2"</u>
Structural Integrity of	Manhole
Good Fair	Poor

Pipe Bends: None within camera view
Influent Effluent Manhole
Approx Distance to bend:____ft

Pipe Size/Geometry/Material Change:

Influent	Effluent	Manhole	
Approx Dista	nce to chang	ge:	_f
(detail is com	iments)		

Crew Member: Can you maintain this site?

rew Member.	Can	ou mamam uns site:	
(Yes)	No	Maybe	

Sensor Configuration:

(Please include Serial Numbers when possible)

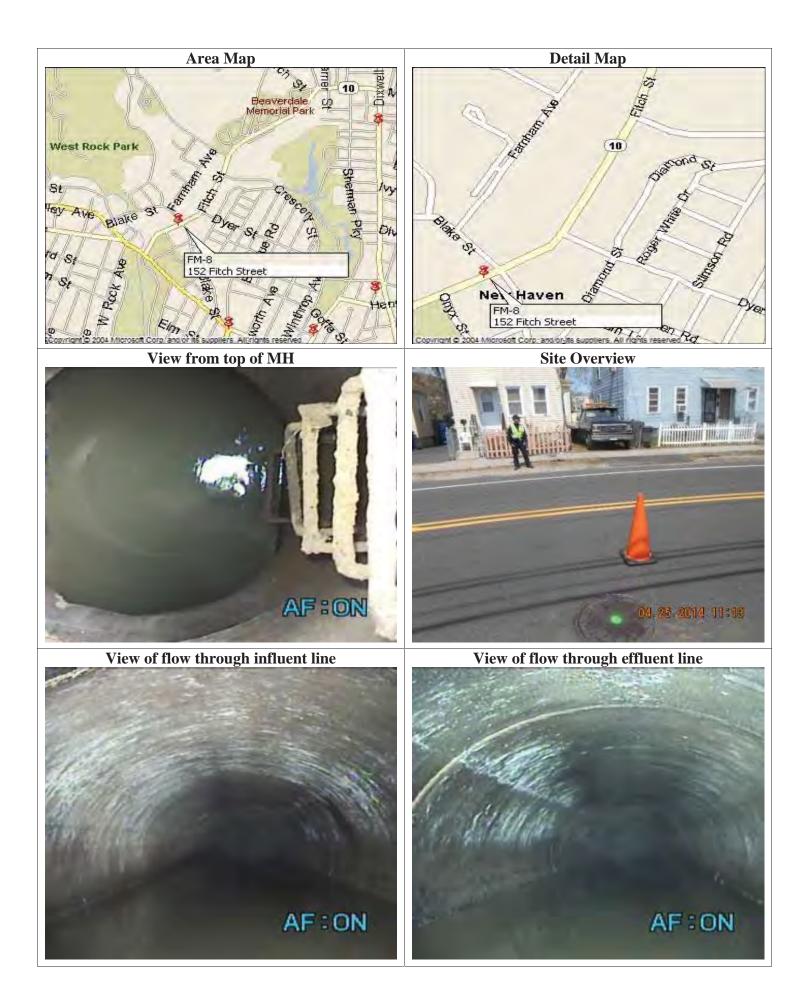
Level Primary: 0713-1045

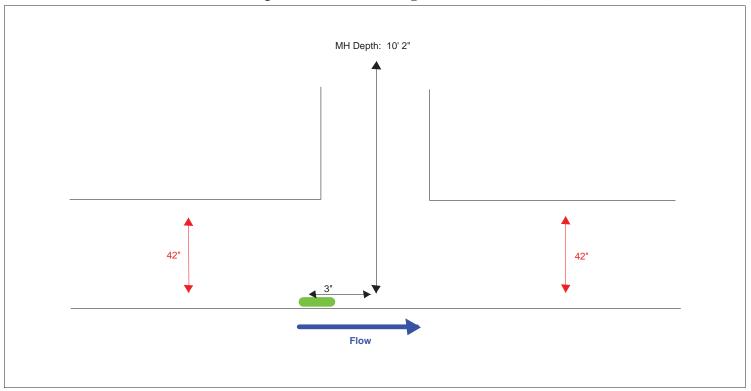
Redundant:

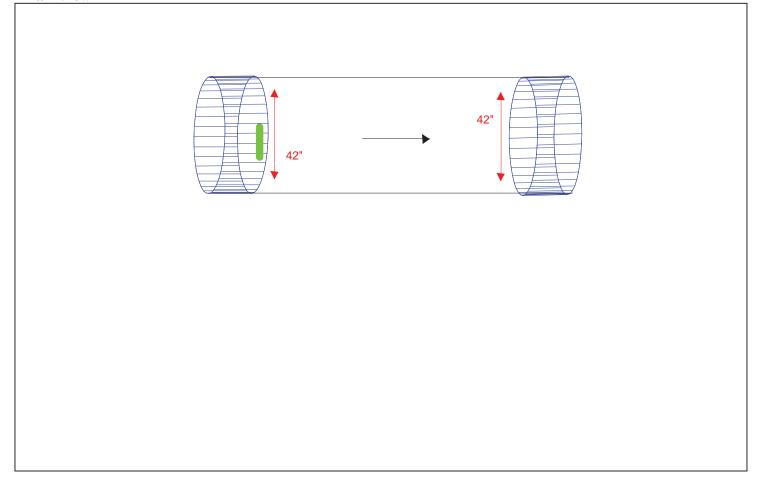
Velocity Primary: 0713-1045

Redundant:

Meter Logger FloWay 291181









Investigation Date: 4/22/14 Time: 11:14 Crew Members: KE/BR

Installation Date: Time: Crew Members:

Address/Location: On N. Frontage Road, in the right left turning lane at Ella T. Grasso Blvd.

Latitude: N 41°19.392' Longitude: W 72°57.138'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity <u>0.76</u> ft/sec

Depth 4.75 in

Turbulence Amplitude:

Less than 0.25"

0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	29"	15"	35"
Width	45"	15"	35"
Material	Concrete	Brick	Concrete
Shape	Elliptical	Round	Round

Sediment Present:

Yes Hard packed: _____ in. deep
No Soft: _____ in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:

(Good)

20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

74 T 1	T	4 •
Manhole	Intorma	tion
Mannot		

Elevated Manhole: Yes (No)

Height above ground __

Manhole depth <u>8' 3"</u> Structural Integrity of Manhole:

Good (Fair) Poor

Pipe Bends:None within camera viewInfluentEffluentManhole

Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole
Approx Distance to change: ft
(detail is comments)

Crew Member: Can you maintain this site?

Yes No Maybe

Sensor Configuration:

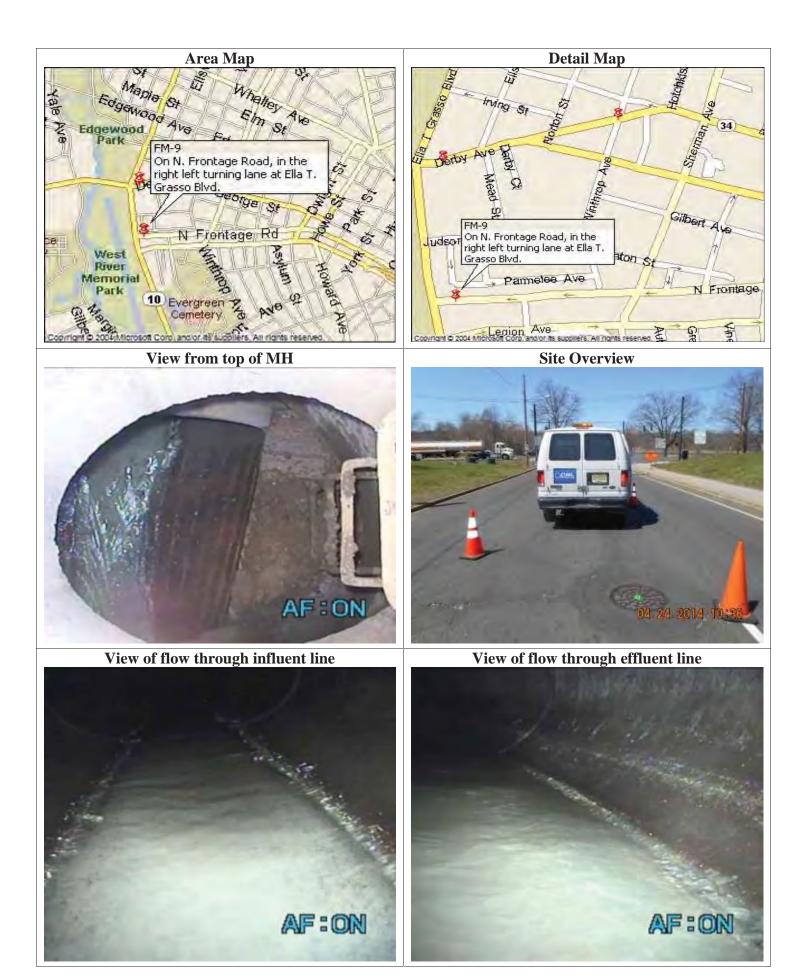
(Please include Serial Numbers when possible)

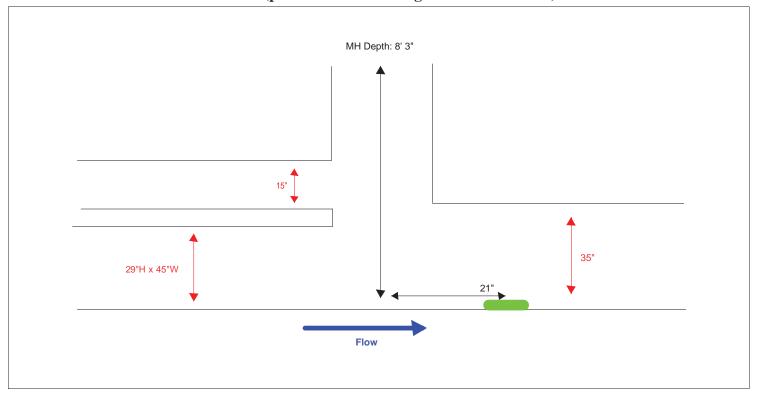
Level
Primary: 613-1013
Redundant:

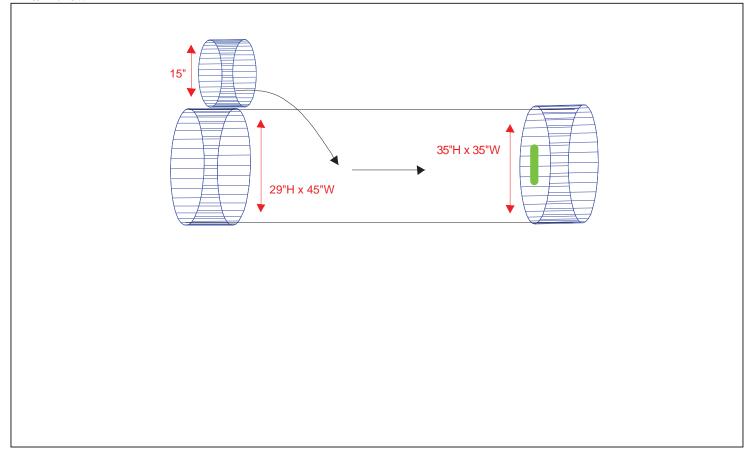
Velocity
Primary:
Redundant:

Meter Logger FloWav 291689

Comments: *Material changes at the MH from RCP to brick and back to RCP*









Time: 10:22 Investigation Date: 4/23/14 Crew Members: KE/BR Installation Date: 5/2/14 Time: 10:50 Crew Members: LR/JS

Address/Location: Across from 408 Davenport Avenue (in the middle of the street)

Latitude: N 41°17.920' Longitude: W 72°56.782'

Weather Conditions: Wet (Dry



Hydraulic Conditions

Influent Flow:

Velocity 2.53 ft/sec

Depth 2.50 in

Turbulence Amplitude:

Less than 0.25" (0.25" to 0.75" 0.75" to 1.5" 1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	30"		30"
Width	45"		45"
Material	Brick		Brick
Shape	Egg		Egg

Sediment Present:

Yes	Hard packed:	 in. deep
No	Soft:	 in. deep

Surcharge / Backwater Influence:

No evidence visible Remains in pipe ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:



20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole	Informa	ation

Elevated	Manhole:	Yes	(No.	

Height above ground Manhole depth Structural Integrity of Manhole: Good Fair Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend:____ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

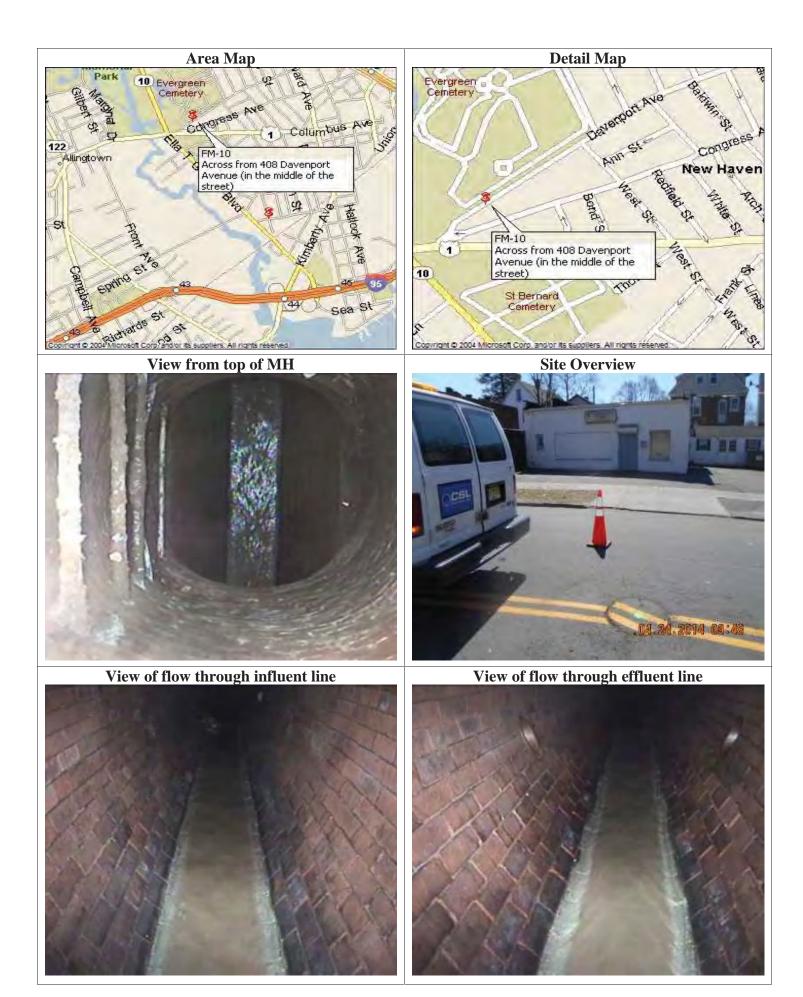
Crew Member: Can you maintain this site?

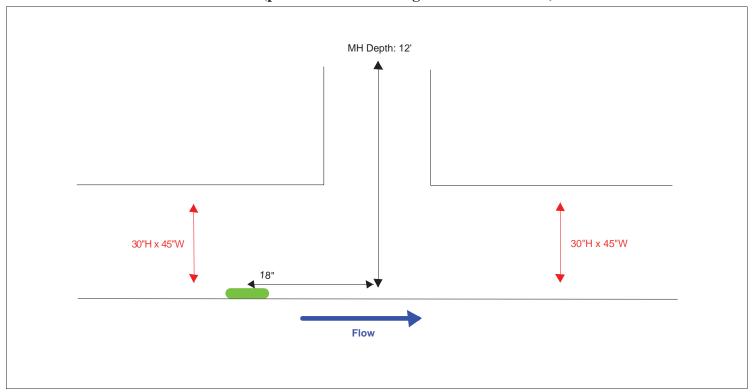
(Yes) No Maybe

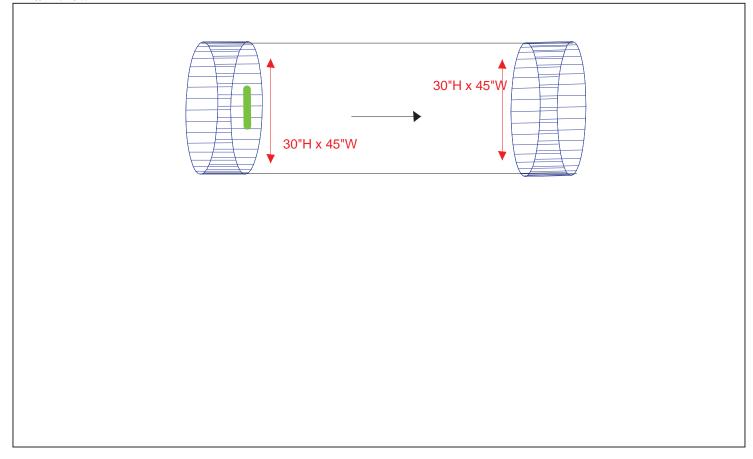
Sensor Configuration:

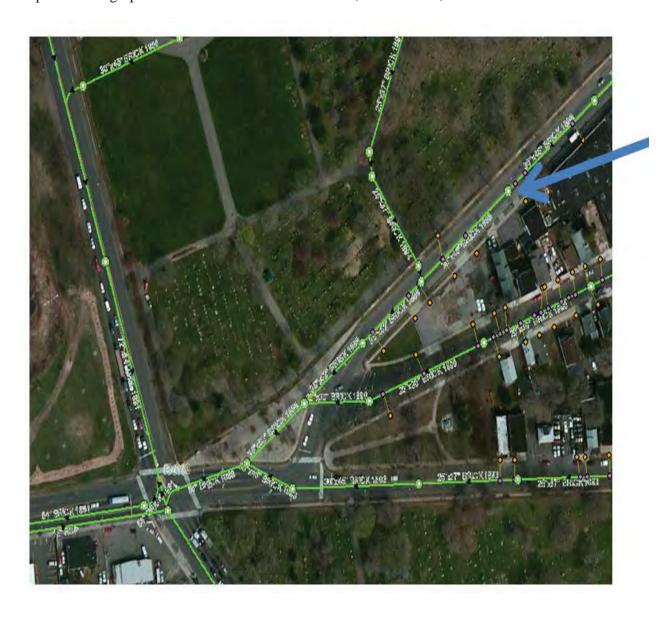
(Please include Serial Numbers when possible)

Level	Primary: 713-1044
Level	Redundant:
Velocity	Primary:
Velocity	Redundant:
Meter Log	ger FloWav 294532









Time: 13:05 Investigation Date: 5/1/14 Crew Members: KE/ME Time: 13:40 Installation Date: 5/1/14 Crew Members: KE/ME

Address/Location: 215 Lamberton Street

Longitude: W 72°56.407' Latitude: N 41°17.409'

(Dry) Weather Conditions: Wet



Hydraulic Conditions

Influent Flow:

Velocity 0.15 ft/sec

Depth 15.0 in

Turbulence Amplitude:

Less than 0.25"

0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	45.5"	54"	54"
Width	29"	54"	54"
Material	Brick	RCP	RCP
Shape	Egg	Round	Round

deep

deep

Sediment Present:

Yes	Hard packed: _	in.
No	Soft: _	in.

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:



20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH > 3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

7 AT	1 1	TC		4 •
Man	hole	e Into	rma	tion

Elevated	Manhole:	Yes	(No)

Height above ground Manhole depth Structural Integrity of Manhole: Good (Fair) Poor

Pipe Bends: None within camera view Effluent Influent Manhole Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Effluent (Manhole) Influent Approx Distance to change:_____ft (detail is comments)

Crew Member: Can you maintain this site?

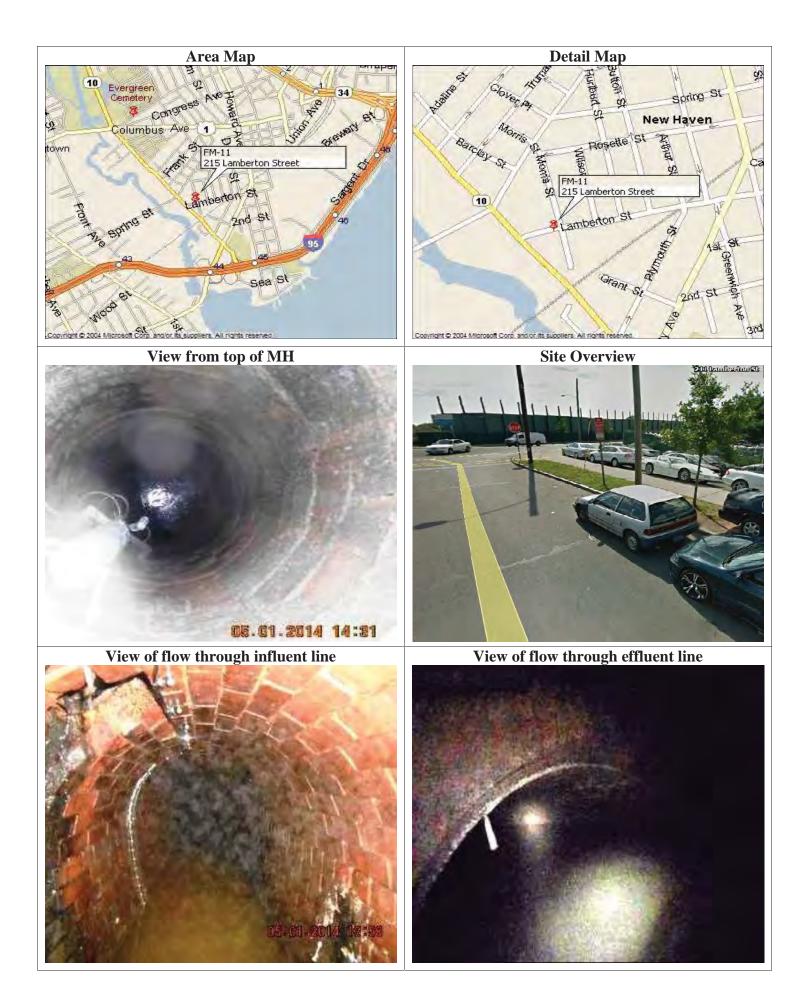
Yes) No Maybe

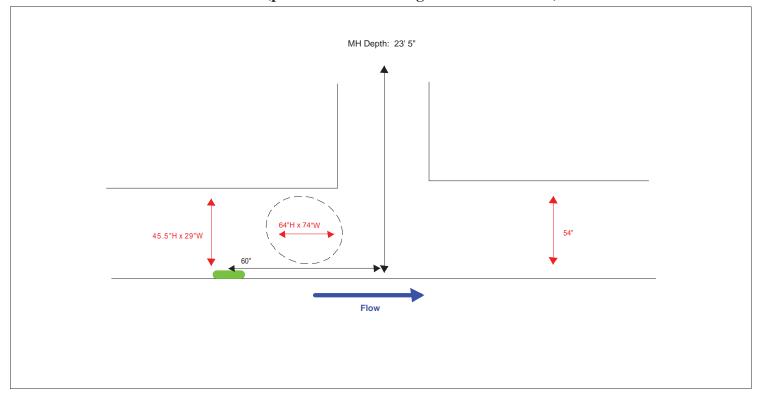
Sensor Configuration:

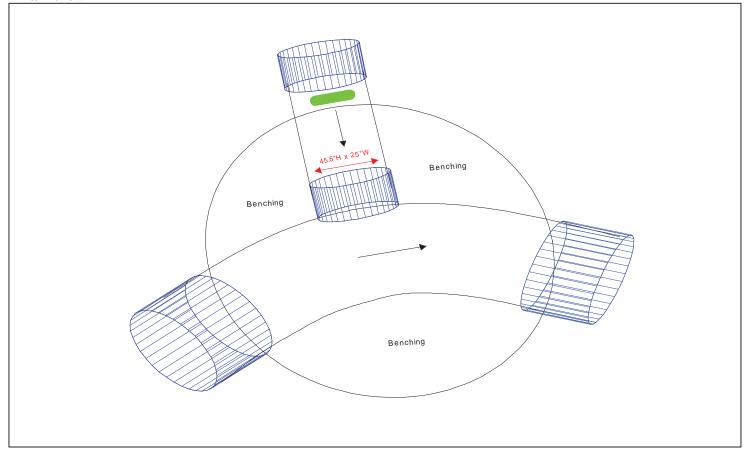
(Please include Serial Numbers when possible)

(I Icase Illeraac	benui (tumbers when possible)
Level	Primary:
20,01	Redundant:
Velocity	Primary:
Verseity	Redundant:
Meter Log	ger

Comments: *Material changes at the MH from RCP to* brick and back to RCP









Investigation Date: 4/23/14 Time: 13:34 Crew Members: KE/BR Installation Date: 4/30/14 Time: 14:49 Crew Members: KE/ME

Address/Location: 781 Orchard Street (in the middle of the street)

Latitude: N 41°19.315' Longitude: W 72°56.137

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity 1.72 ft/sec

Depth 13.5 in

Turbulence Amplitude:

Less than 0.25"

0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	40"		40"
Width	25"		25"
Material	Brick		Brick
Shape	Egg		Egg

Sediment Present:

Yes	Hard packed:	 in. deep
No	Soft:	 in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:



Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

74 T 1	T	4 •
Manhole	Intorma	tion
Mannot		

Elevated Manhole:	Yes	(No)
Lievated Mainote.	1 68	(INU)

Height above ground

Manhole depth

Structural Integrity of Manhole:

Good

Fair

Poor

Pipe Bends: None within camera view
Influent Effluent Manhole
Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole
Approx Distance to change:_____ft
(detail is comments)

Crew Member: Can you maintain this site?

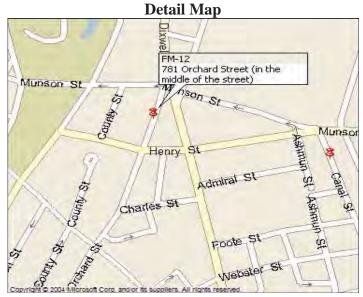
Yes No Maybe

Sensor Configuration:

(Please include Serial Numbers when possible)

Level	Primary: 0713-1053	
Ec ver	Redundant:	
Velocity	Primary: 0713-1053	
Velocity	Redundant:	
Meter Log	gger FloWav 294533	



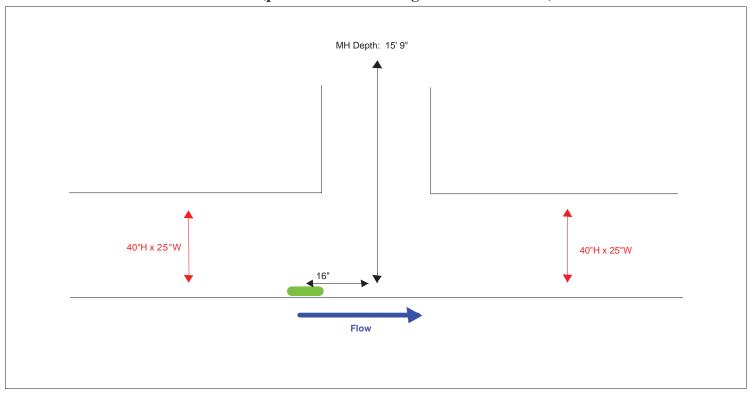


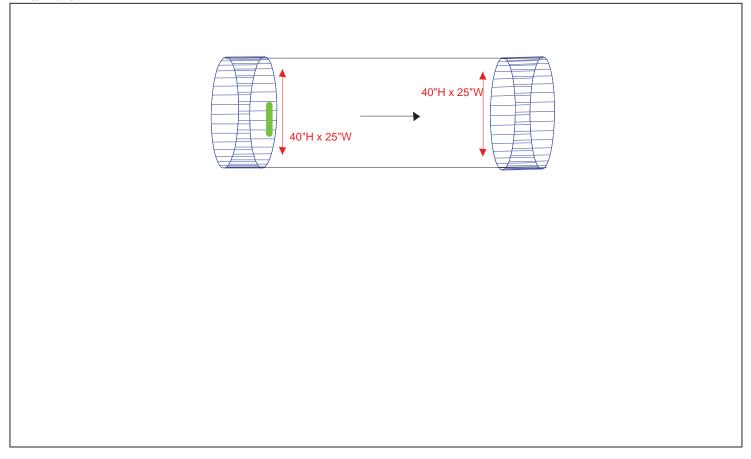


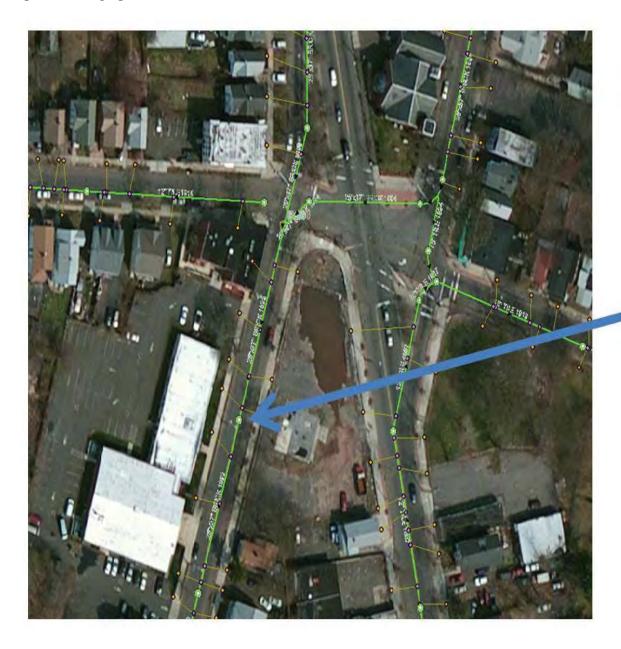












Time: 12:46 Investigation Date: 4/23/14 Crew Members: KE/BR Installation Date: 5/1/14 Time: 16:50 Crew Members: LR/JS

Address/Location: On Canal Street, between Henry & Gregory Streets

Longitude: W 72°55.762' Latitude: N 41°19.232'

Weather Conditions: Wet Dry)



Hydraulic Conditions

Influent Flow:

Velocity 3.08 ft/sec

Depth 8.25 in

Turbulence Amplitude:

Less than 0.25" \bigcirc 0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	55"		55"
Width	57"		57"
Material	Brick		Brick
Shape	Egg		Egg

Sediment Present:

	Yes	3
($\widehat{\text{No}}$)

Hard packed: _____ in. deep Soft:

_____ in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:



20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

74 T 1	T	4 •
Manhole	Intorma	tion
Mannot		

Elevated Manhole: Yes

Height above ground

Manhole depth 13' 9"

Structural Integrity of Manhole:

Good (Fair) Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

Crew Member: Can you maintain this site?

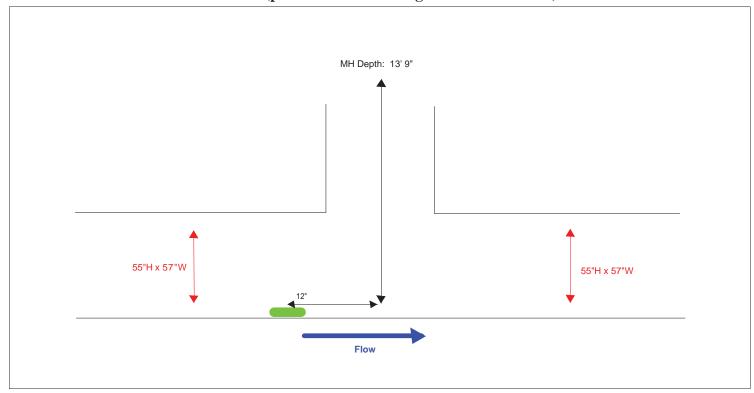
(Yes) No Maybe

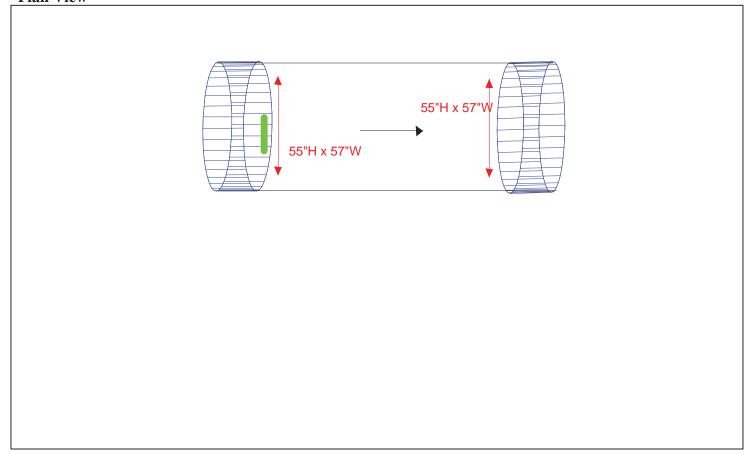
Sensor Configuration:

(Please include Serial Numbers when possible)

Primary: 613-1018 Level Redundant: Primary: Velocity Redundant: Meter Logger | FloWav 294498









Time: 13:35 Investigation Date: 4/23/14 Crew Members: KE/BR Installation Date: 5/3/14 Time: 11:34 Crew Members: ME/KE

Address/Location: Across from 50 Derby Avenue (crosswalk in front of the church)

Latitude: N 41°18.677' Longitude: W 72°56.833'

Weather Conditions: Wet (Dry)



Hydraulic Conditions

Influent Flow:

Velocity 3.31 ft/sec

Depth 11.0 in

Turbulence Amplitude:

Less than 0.25"

0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	54"		54"
Width	54"		54"
Material	Brick		Brick
Shape	Round		Round

Sediment Present:

_ in. deep _ in. deep

Surcharge / Backwater Influence:

No evidence visible	
Remains in pipe	
ft from rim	
Reaches Rim (potential meter damage)	
Evidence unclear:	_ft from rim

Gas Investigation:

Good	20.9	(condition)
------	------	-------------

Site Conditions

Site Access:

Good (no problems accessing site)

 $Fair \ ({\rm minor}\ {\rm traffic\ control}, \ {\rm truck\ accessible\ off-road}$ site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH > 3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole	Informa	ation

Height above ground Manhole depth 21' 5" Structural Integrity of Manhole:

Good (Fair) Poor

Pipe Bends:

Influent (Effluent) Manhole Approx Distance to bend: 10 ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

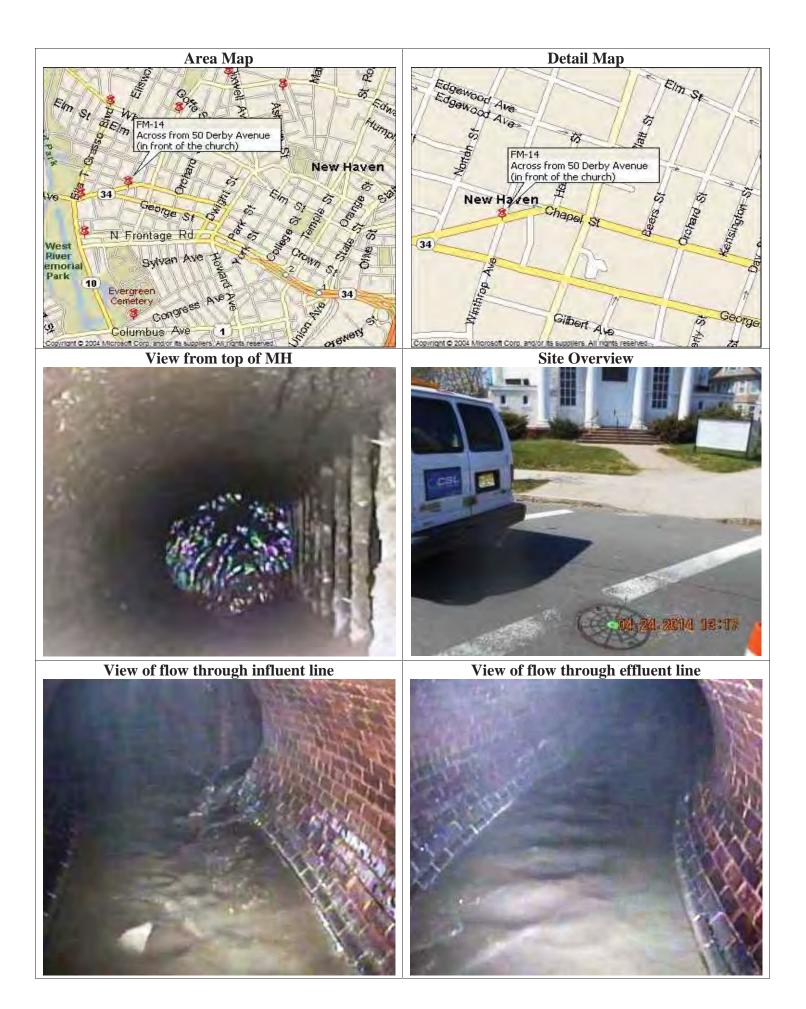
Crew Member: Can you maintain this site?

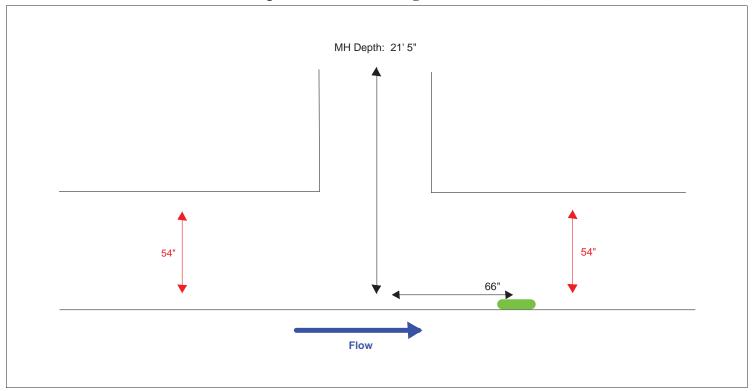
(Yes) No Maybe

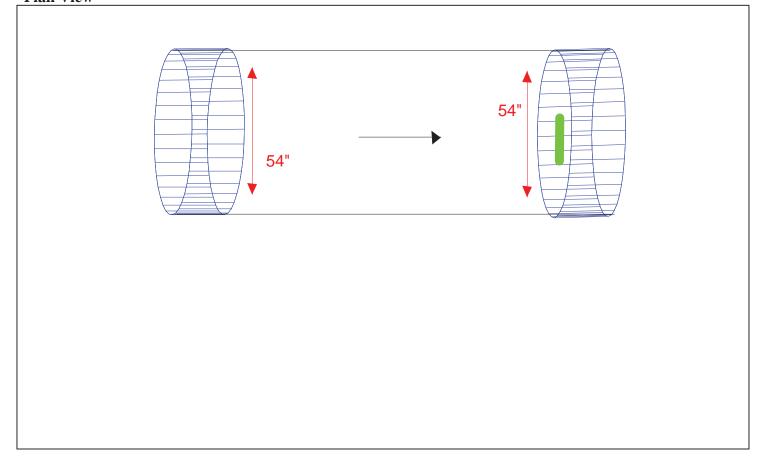
Sensor Configuration:

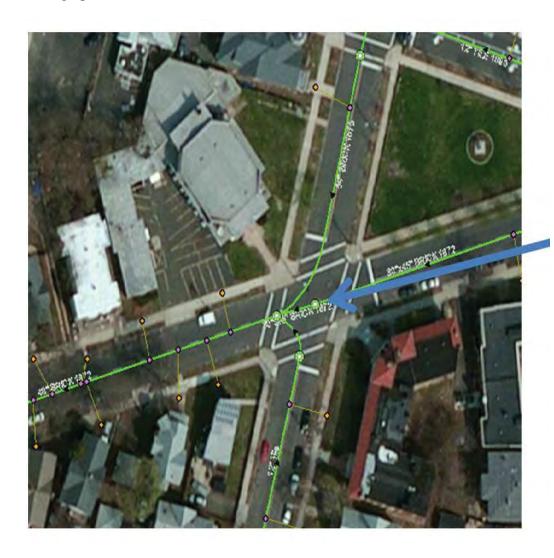
(Please include Serial Numbers when possible)

Level	Primary: 0813-1084
	Redundant:
Velocity	Primary: 0813-1084
	Redundant:
Meter Log	ger FloWav 293632









Time: 10:29 Investigation Date: 4/21/14 Crew Members: KE/BR/GM

Installation Date: 4/28/14 Time: 16:59 Crew Members: KE/ME/JS/LR

Address/Location: Willow Street & Mitchell Drive (in the driveway of the East Rock School)

Latitude: N 41°19.151' Longitude: W 72°54.416'

(Dry) Weather Conditions: Wet



Hydraulic Conditions

Influent Flow:

Velocity 2.75 ft/sec

23.75 in Depth

Turbulence Amplitude:

Less than 0.25"

0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	50"		50"
Width	37"		37"
Material	PVC-lined		PVC-lined
Shape	Egg		Egg

Sediment Present:

Hard packed: _____ in. deep Soft:

_____ in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:

Good)

20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments, No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole:

Yes

Height above ground

Manhole depth 8' 4"

Structural Integrity of Manhole:

Good (Fair) Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

Crew Member: Can you maintain this site?

(Yes) No

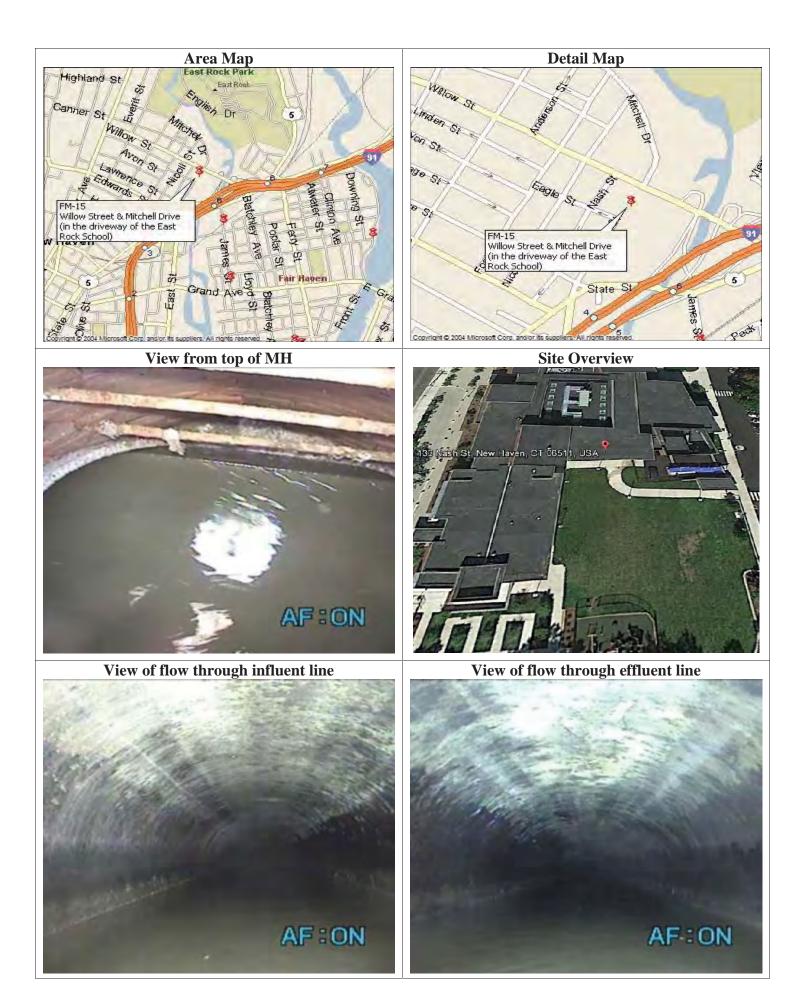
Sensor Configuration:

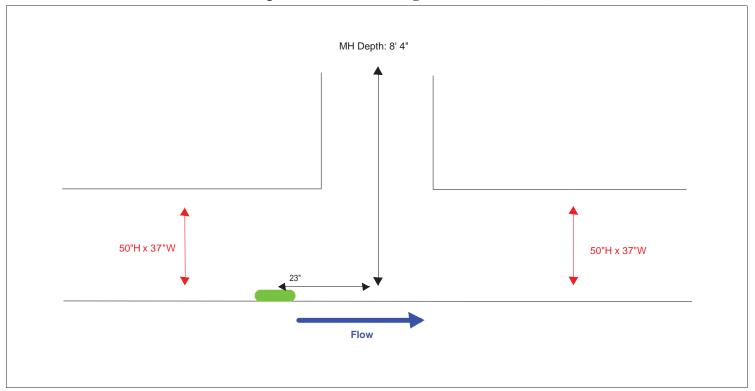
(Please include Serial Numbers when possible)

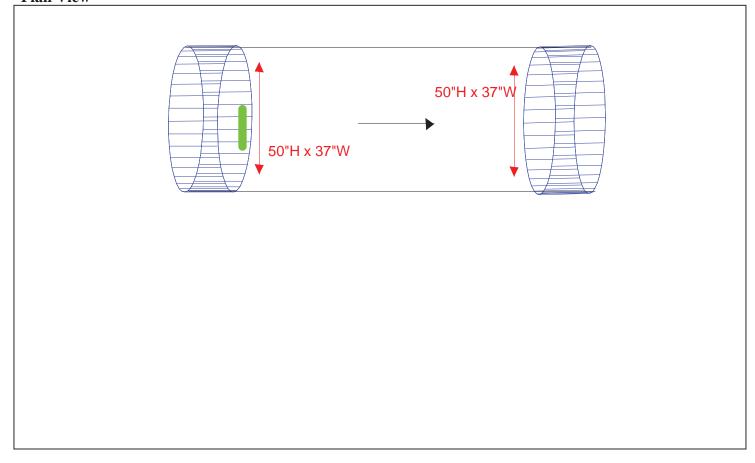
Primary: 0713-1066 Level Redundant: Primary: 0713-1066 Velocity Redundant: FloWav Meter Logger 294542

Maybe

Comments: *Located in the driveway of a school*









Time: 12:28 Investigation Date: 4/21/14 Crew Members: KE/BR/GM

Installation Date: Time: Crew Members:

Address/Location: On James Street (between State & Humphrey Streets, before the RR overpass)

Latitude: N 41°18.880' Longitude: W 72°54.243'

Weather Conditions: (Dry Wet



Hydraulic Conditions

Influent Flow:

Velocity 2.22 ft/sec

Depth 13.5 in

Turbulence Amplitude:

Less than 0.25"

0.25" to 0.75" 0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	25"		?
Width	37"		?
Material	Brick		Brick
Shape	Egg		Egg

Sediment Present:

No Soft:

Hard packed: _____ in. deep <u>.50</u> in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:

Bad 19.5 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

74 T 1	T	4 •
Manhole	Intorma	tion
Mannot		

Elevated Manhole: Yes

Height above ground

Manhole depth 5' 4"

Structural Integrity of Manhole:

Good (Fair) Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

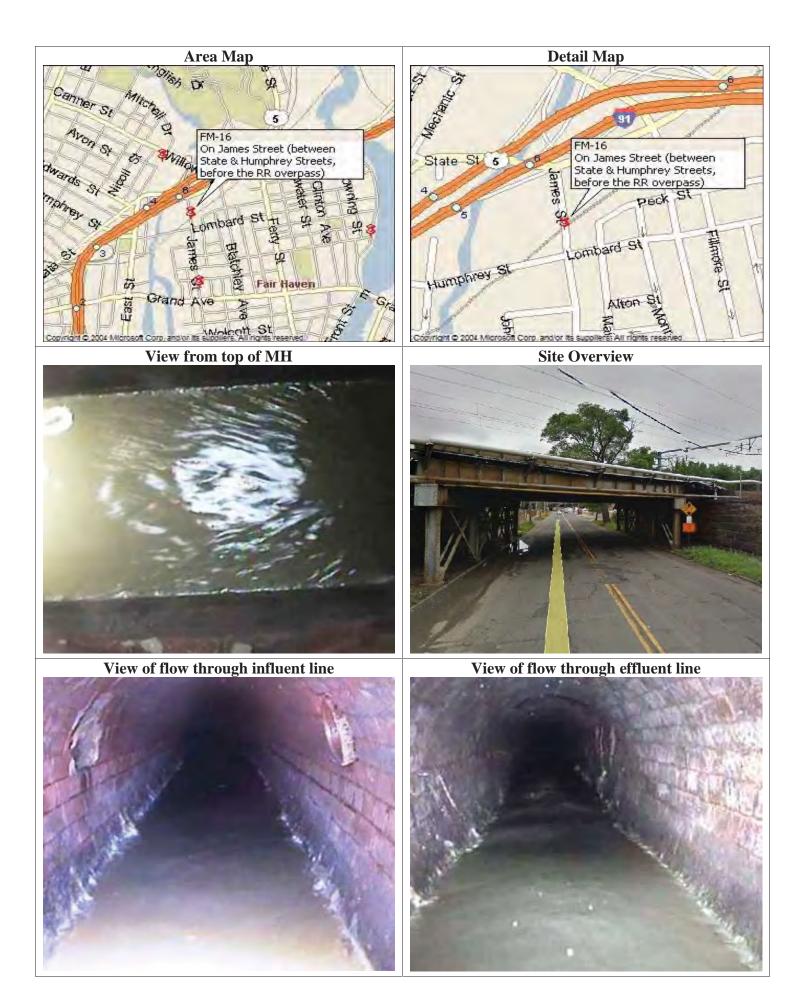
Crew Member: Can you maintain this site?

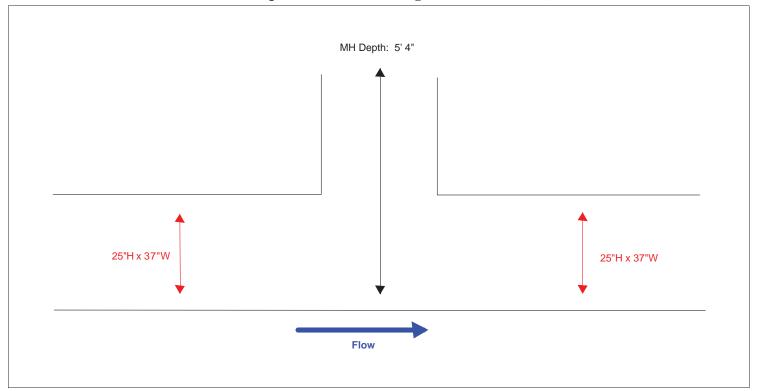
(Yes) No Maybe

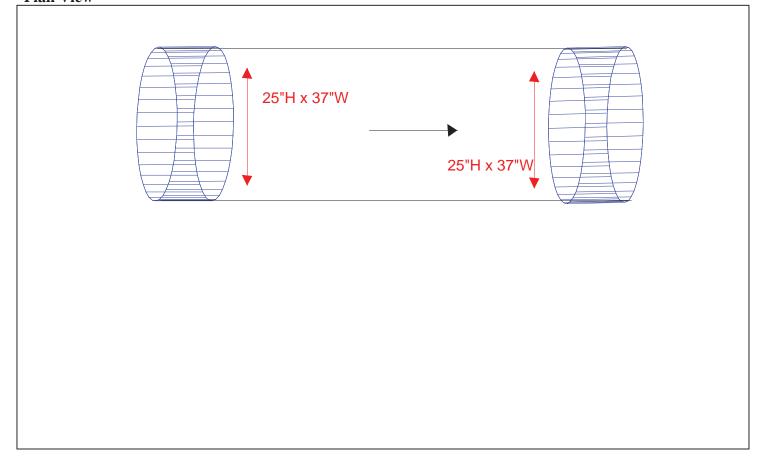
Sensor Configuration:

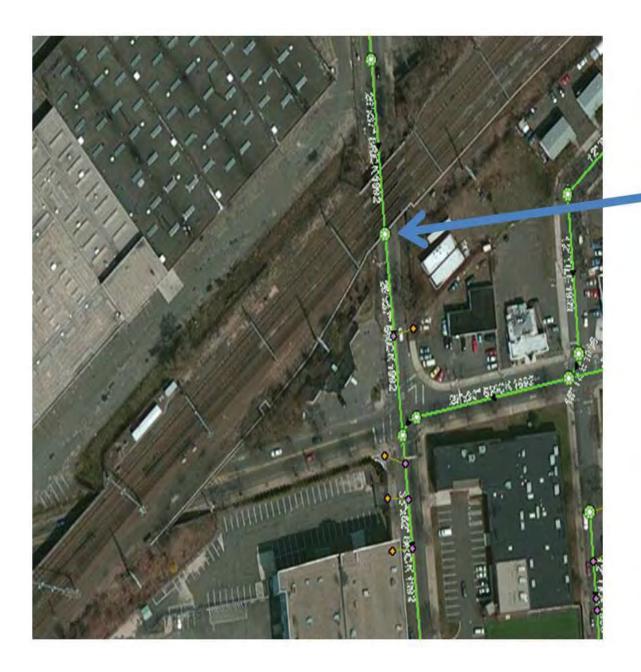
(Please include Serial Numbers when possible)

Level	Primary:
	Redundant:
Velocity	Primary:
	Redundant:
Meter Log	ger









Time: 13:50 Investigation Date: 4/29/14 Crew Members: JS/LR

Time: 5:28 Installation Date: 5/2/14 Crew Members: KE/ME/LR/JS

Address/Location: 554 Woodward Avenue (in the rear of the parking lot)

Latitude: N 41°17.041' Longitude: W 72°53.846'

Weather Conditions: (Dry Wet



Influent Flow:

Velocity 16.33 ft/sec

Depth $7.5 \text{ in } \pm 0.50$

Turbulence Amplitude:

Less than 0.25" 0.25" to 0.75" 0.75" to 1.5" \bigcirc 1.5" to 3" \bigcirc

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	42"		42"
Width	42"		42"
Material	PVC		PVC
Shape	Round		Round

Sediment Present:

Yes No

Hard packed: _____ in. deep

Soft: _____ in. deep

Surcharge Backwater Influence:

No evidence visible

Remains in pipe ___ ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: _____ft from rim

Gas Investigation:

Good)

20.9 (condition)

Site Conditions

Site Acc	ess:	
Good	(no problems	accessing site)

Cita A agagge

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments, No safe place to park, elevated MH > 3 ft)

Traffic Control only (Requires extra traffic control Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes

Height above ground 9' 9" Manhole depth

Structural Integrity of Manhole:

Good (Fair) Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend:____ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

Crew Member: Can you maintain this site?

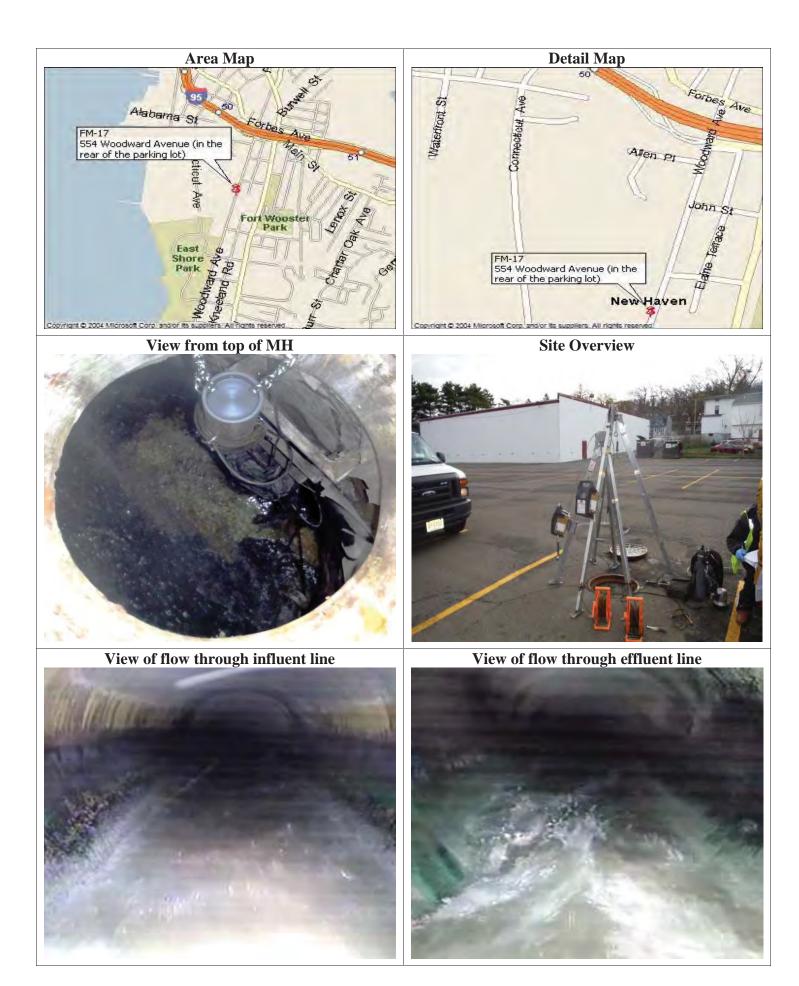
(Yes) No Maybe

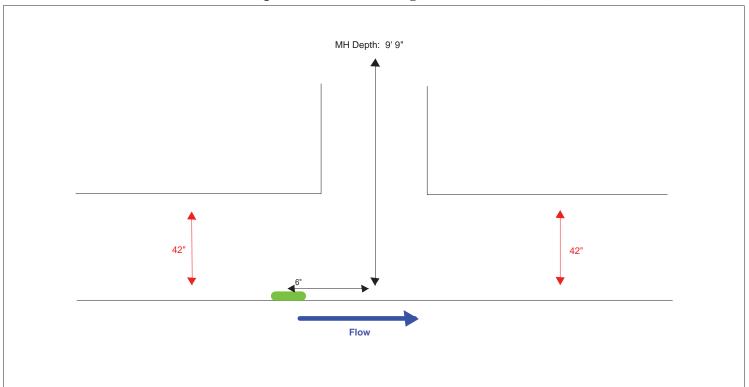
Sensor Configuration:

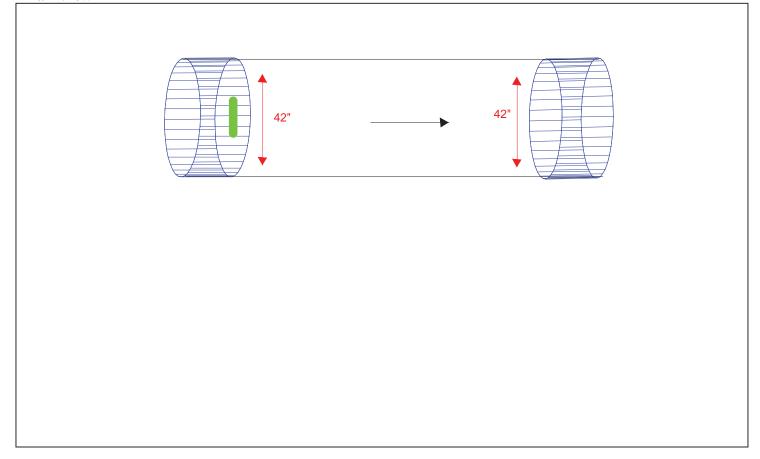
(Please include Serial Numbers when possible)

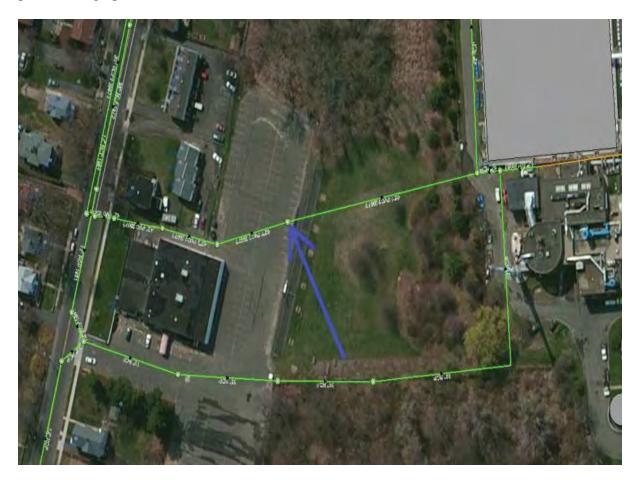
Level	Primary: Sigma	
20,01	Redundant:	
Velocity	Primary:	
, crocity	Redundant:	
Meter Log	ger Telog 294508	

Comments: Must use 2 crews for sensor changes









Investigation Date: 4/22/14 Time: 11:37 Crew Members: KE/BR Time: 14:00 Installation Date: 5/2/14 Crew Members: LR/JS

Address/Location: On Water Street under the overpass between East & Hamilton Streets

Latitude: N 41°19.049' Longitude: W 72°54.714'

Weather Conditions: Wet (Dry



Hydraulic Conditions

Influent Flow:

Velocity 0.85 ft/sec

Depth 33.25 in

Turbulence Amplitude:

Less than 0.25"

 \bigcirc 0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	52"		52"
Width	52"		55"
Material	Concrete		Concrete
Shape	Round		Round

Sediment Present:

Hard packed: _____ in. deep No Soft: 8.75 in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

4 ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: _____ft from rim

Gas Investigation:

(Good)

20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes

Height above ground

Manhole depth 10' 6"

Structural Integrity of Manhole:

Good (Fair) Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

Crew Member: Can you maintain this site?

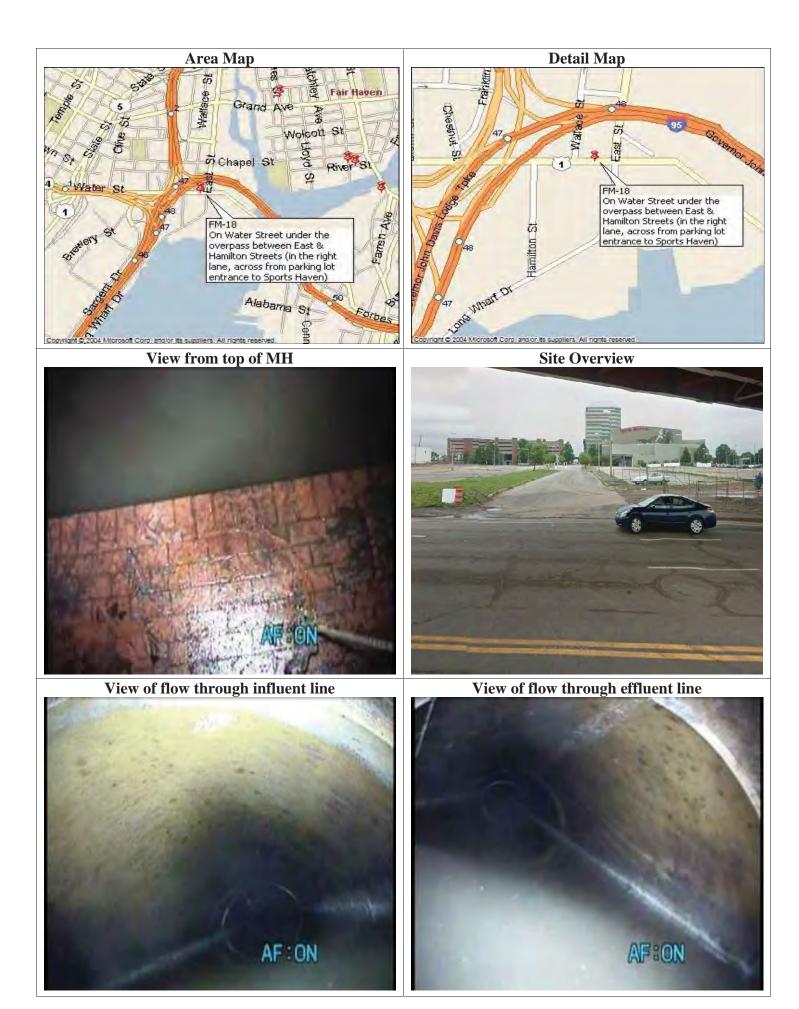
(Yes) No Maybe

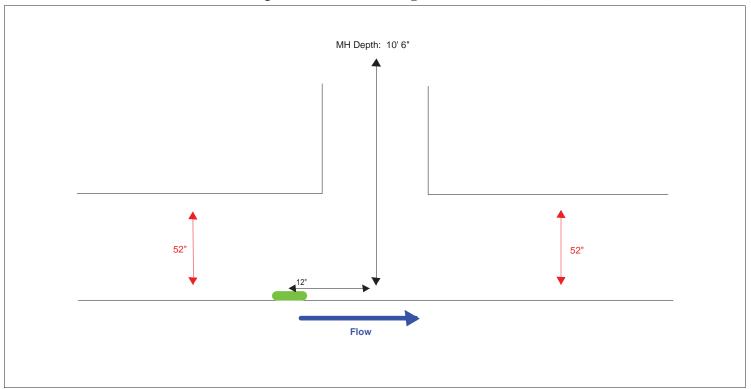
Sensor Configuration:

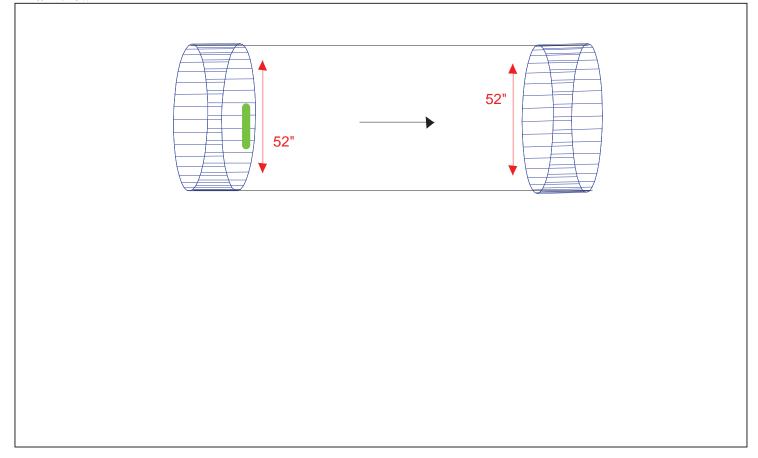
(Please include Serial Numbers when possible)

Primary: 813-1086 Level Redundant: Primary: Velocity Redundant: Meter Logger FloWav 293462

Comments: *Pipe is offset from MH*









Time: 12:30 Investigation Date: 4/22/14 Crew Members: KE/BR Installation Date: 4/29/14 Time: 9:21 Crew Members: KE/ME

Address/Location: Between 230 & 238 James Street (in the middle of street)

Longitude: W 72°54.195' Latitude: N 41°18.541'

Wet (Dry Weather Conditions:



Hydraulic Conditions

Influent Flow:

Velocity 0.90 ft/sec

Depth 19.0 in

Turbulence Amplitude:

Less than 0.25" 0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	54"		54"
Width	36"		36"
Material	Brick		Brick
Shape	Egg		Egg

Sediment Present: Trace

Yes Hard packed: _____ in. deep No Soft: in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: _____ft from rim

Gas Investigation:

(Good)

20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

 $Fair \ ({\rm minor}\ {\rm traffic\ control}, \ {\rm truck\ accessible\ off-road}$ site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes

Height above ground

21' 3" Manhole depth

Structural Integrity of Manhole:

Good (Fair) Poor

Pipe Bends: None within camera view Influent Effluent Manhole Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

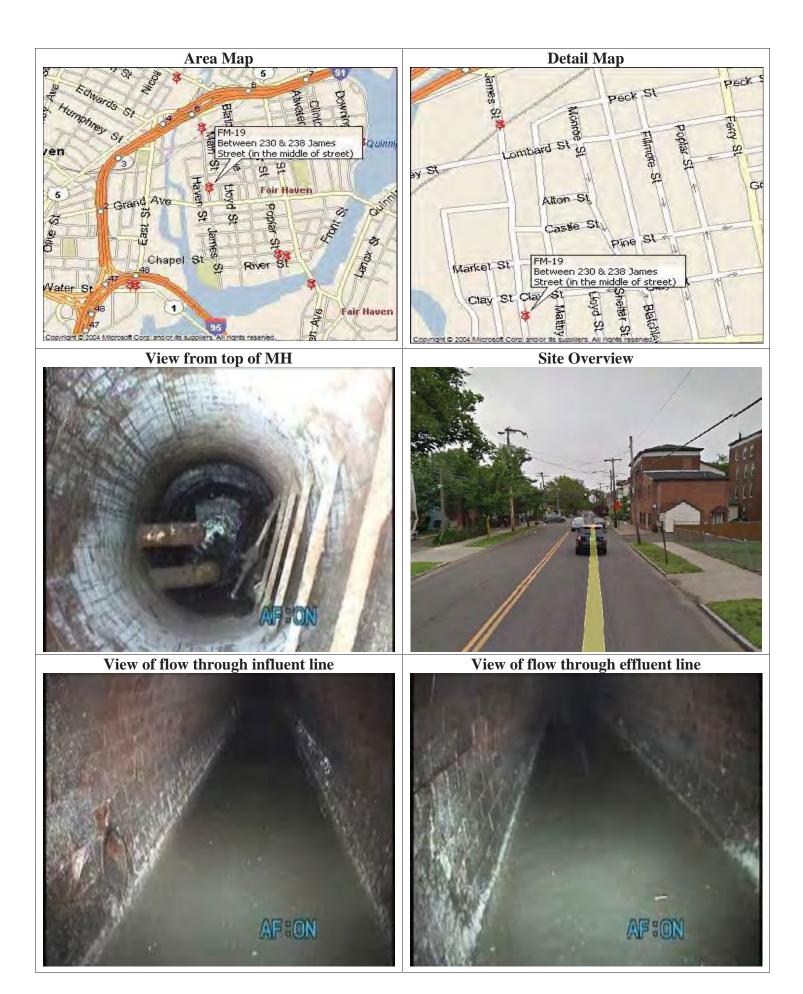
Crew Member: Can you maintain this site?

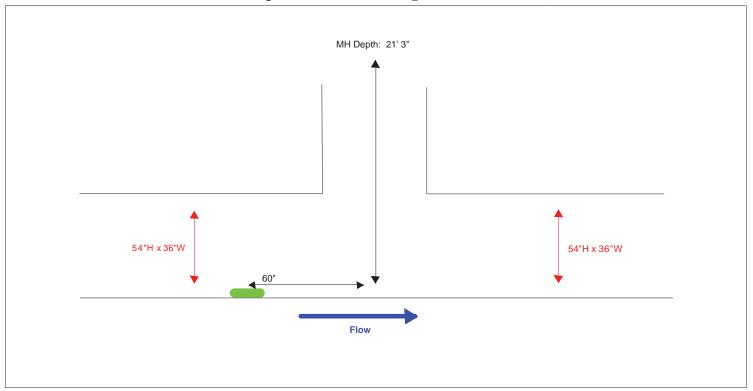
(Yes) No Maybe

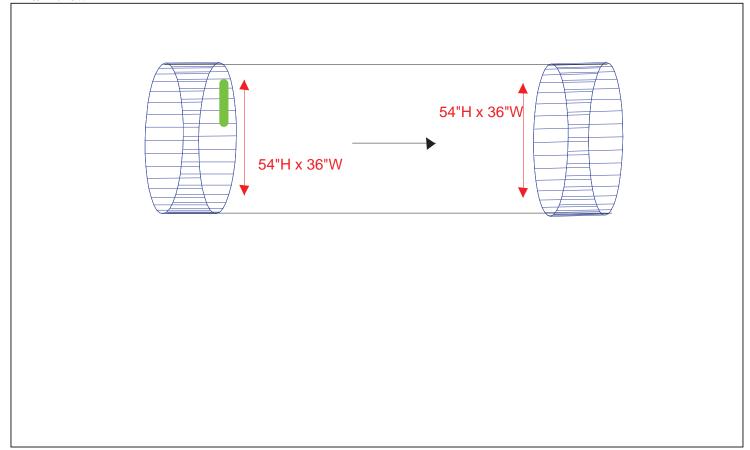
Sensor Configuration:

(Please include Serial Numbers when possible)

Primary: 0613-1008 Level Redundant: 0613-1016 Primary: 0613-1008 Velocity Redundant: 0613-1016 Meter Logger FloWav 294527









Time: 14:32 Investigation Date: 4/22/14 Crew Members: KE/BR Time: 13:52 Installation Date: 4/29/14 Crew Members: KE/ME

Address/Location: On River Street, close to Poplar Street (driveway of scrap yard, in the street)

Latitude: N 41°18.197' Longitude: W 72°53.761'

Weather Conditions: Wet (Dry



Hydraulic Conditions

Influent Flow:

Velocity 0.54 ft/sec

Depth 17.0 in

Turbulence Amplitude:

Less than 0.25" (0.25" to 0.75" 0.75" to 1.5"

Greater than 3"

1.5" to 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	36"		36"
Width	36"		36"
Material	Brick		Brick
Shape	Round		Round

Sediment Present:

Hard packed: 16 in. deep No Soft: ___ in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:

Good 20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

74 T 1	T	4 •
Manhole	Intorma	tion
Mannot		

Elevated Manhole: Yes

Height above ground Manhole depth

Structural Integrity of Manhole: Good (Fair) Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

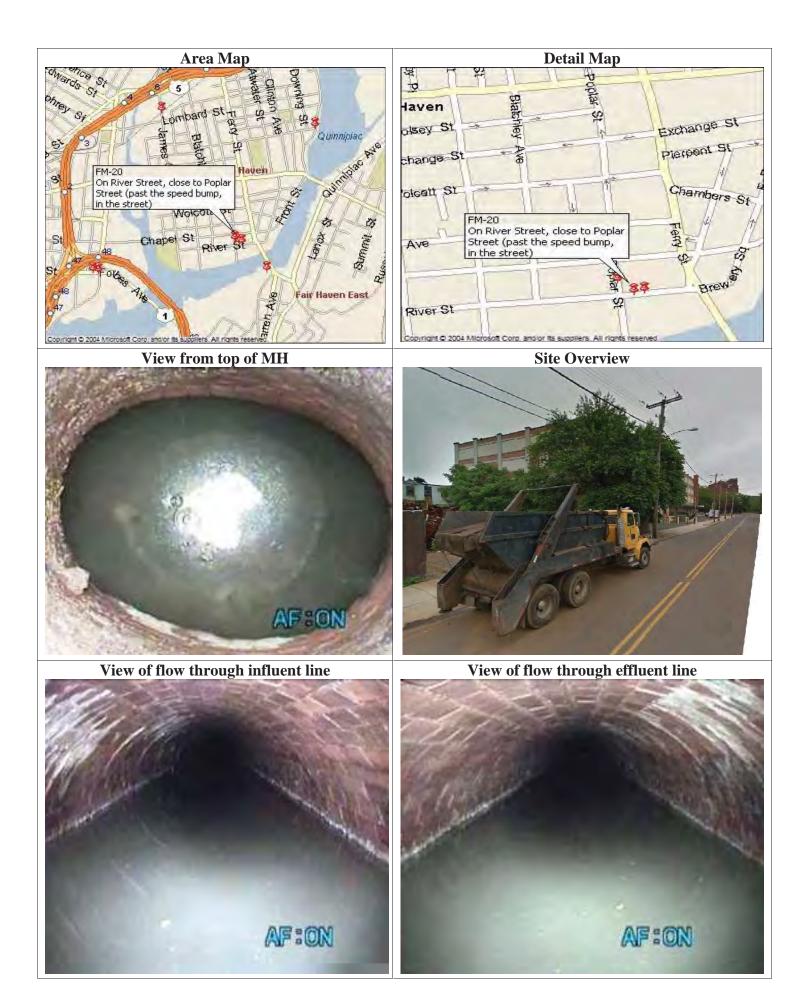
Crew Member: Can you maintain this site?

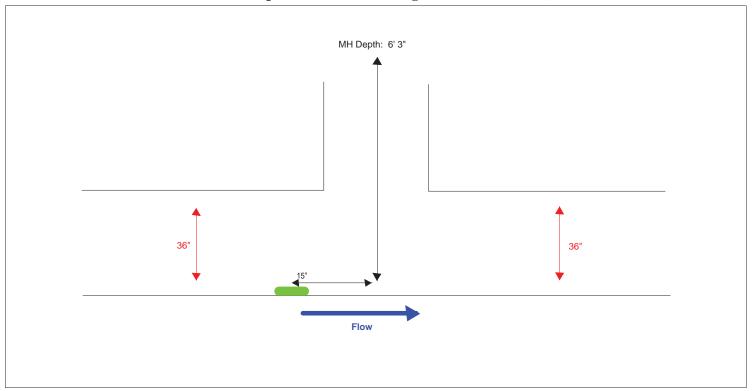
(Yes) No Maybe

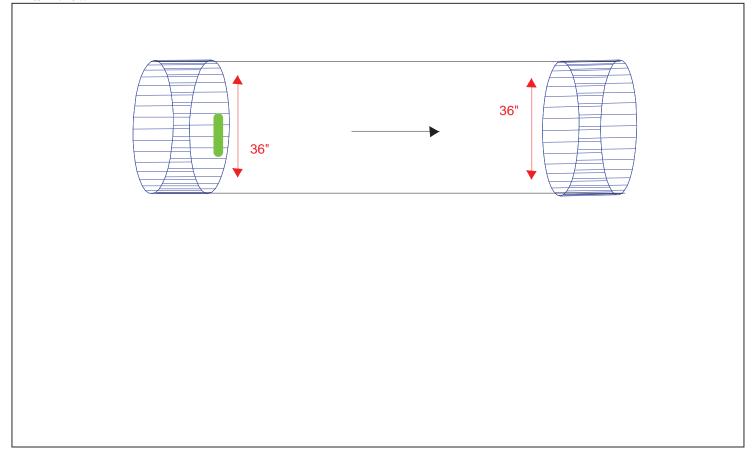
Sensor Configuration:

(Please include Serial Numbers when possible)

Primary: 0613-1024 Level Redundant: Primary: 0613-1024 Velocity Redundant: Meter Logger | FloWav 294558









Investigation Date: 4/22/14 Time: 13:53 Crew Members: KE/BR Installation Date: 5/1/14 Time: 17:29 Crew Members: KE/ME

Address/Location: 69 Poplar Street (in the middle of the street)

Latitude: N 41°18.223' Longitude: W 72°53.776'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity <u>0.20</u> ft/sec

Depth $\underline{24.0}$ in

Turbulence Amplitude:

Less than 0.25" 0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	50.5"		50.5"
Width	48"		48"
Material	Brick		Brick
Shape	Round		Round

Sediment Present:

Yes Hard packed: ____ in. deep No Soft: 2.0 in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

___ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:

Good 2

20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

74 T 1	T	4 •
Manhole	Intorma	tion
Mannot		

Elevated Manhole: Yes (No)

Height above ground

Manhole depth 8' 7"

Structural Integrity of Manhole:

Good Fair Poor

Pipe Bends: None within camera view
Influent Effluent Manhole
Approx Distance to bend:____ft

Pipe Size/Geometry/Material Change:

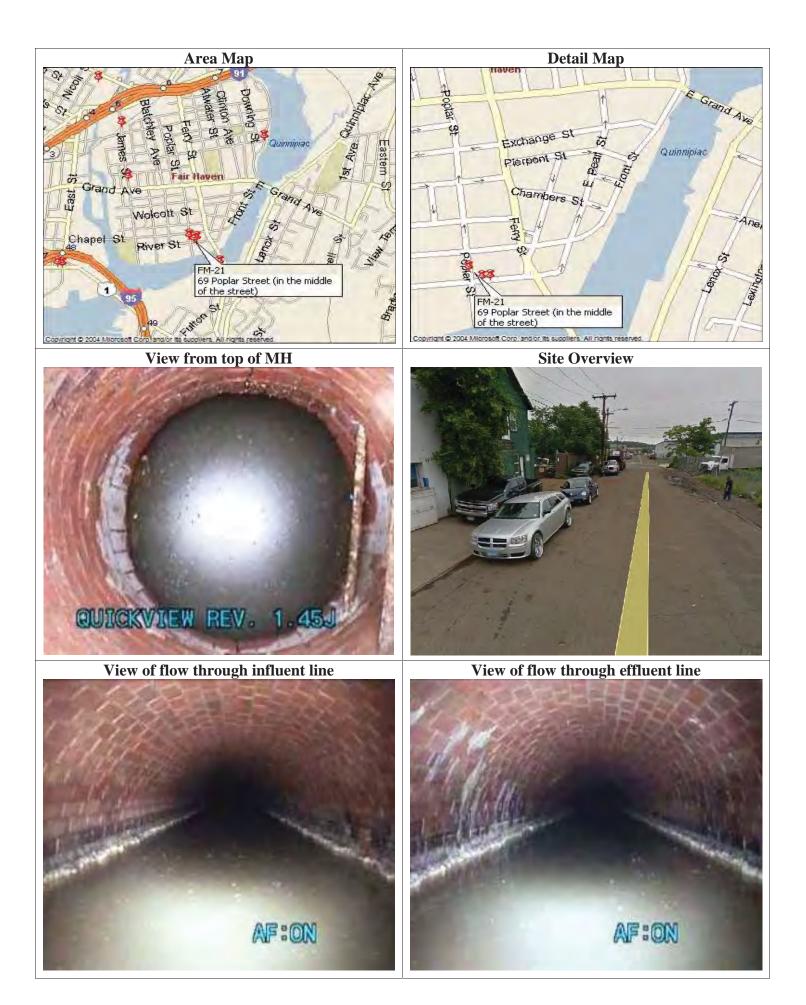
Influent Effluent Manhole
Approx Distance to change:_____ft
(detail is comments)

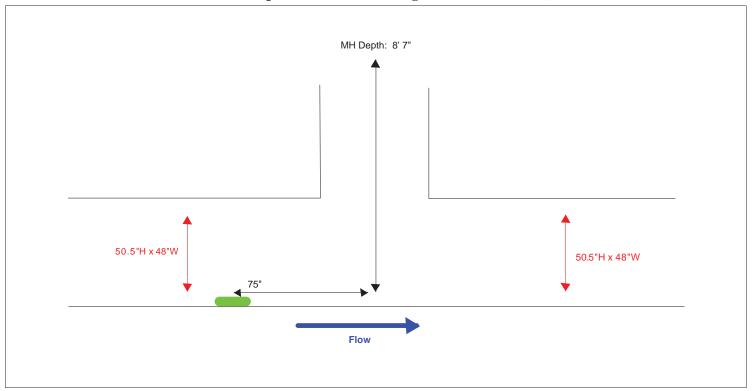
Crew Member: Can you maintain this site?

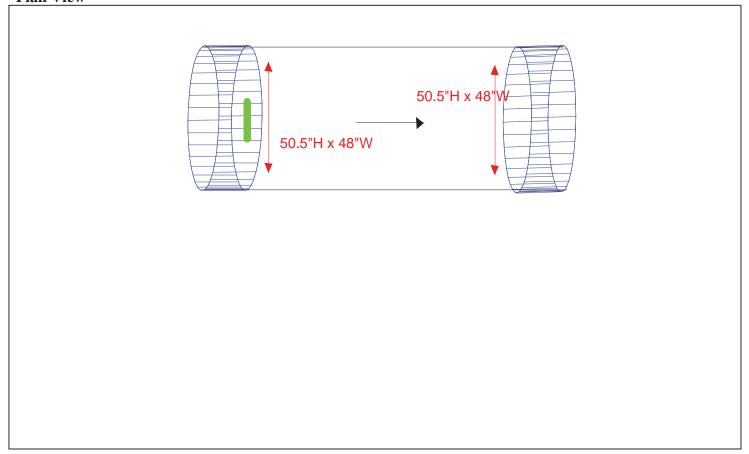
(Yes) No Maybe

Sensor Configuration:

(Please include Serial Numbers when possible)









Investigation Date: 4/24/14 Time: 15:07 Crew Members: KE/BR Installation Date: 4/29/14 Time: 16:16 Crew Members: LR/JS

Address/Location: On the sidewalk at 315 Front Street

Latitude: N 41°18.897' Longitude: W 72°53.242'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity 1.07 ft/sec

Depth 9.25 in

Turbulence Amplitude:

Less than 0.25"

0.25" to 0.75"

0.75" to 1.5"

Greater than 3"

1.5" to 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	30"		30"
Width	30"		30"
Material	Concrete		Concrete
Shape	Round		Round

Sediment Present:

Yes Hard packed: ____ in. deep No Soft: 7.0 in. deep

Surcharge / Backwater Influence:

No evidence visible
Remains in pipe
ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: _____ft from rim

Gas Investigation:

(Good)

20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments, No safe place to park, elevated MH >3 ft) Traffic Control only (Requires extra traffic control Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes (No)

Height above ground
Manhole depth

Structural Integrity of Manhole:
Good
Fair
Poor

Pipe Bends: None within camera view
Influent Effluent Manhole
Approx Distance to bend:____ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole
Approx Distance to change:_____ft
(detail is comments)

Crew Member: Can you maintain this site?

Yes No Maybe

Sensor Configuration:

(Please include Serial Numbers when possible)

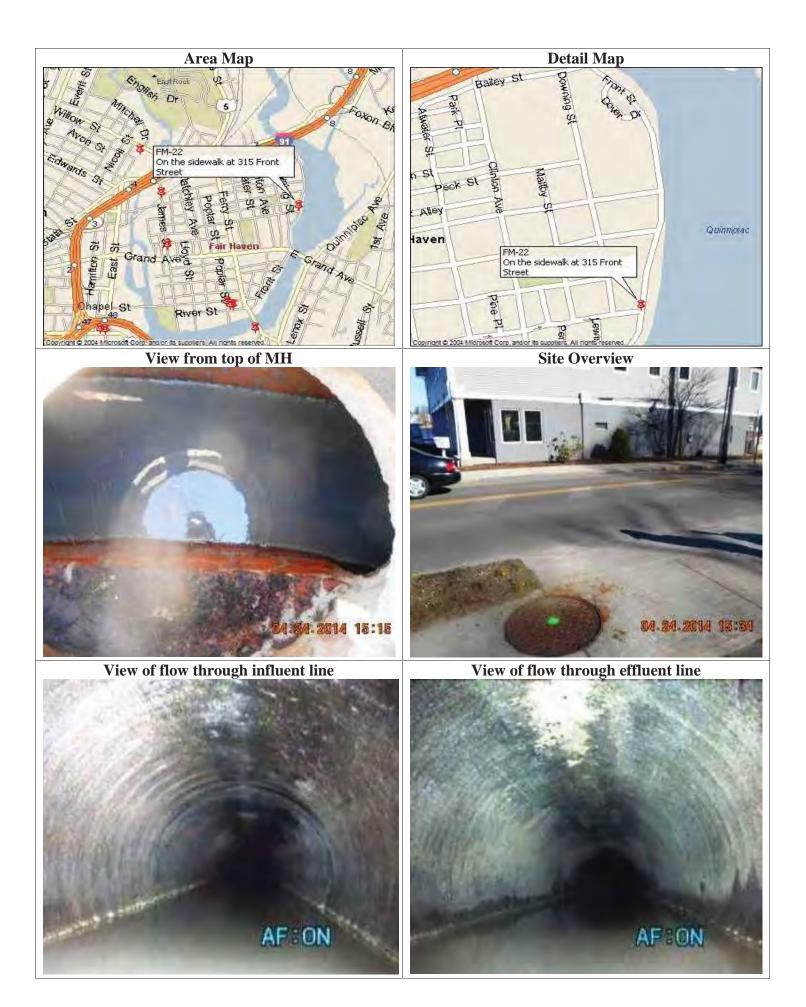
Level Primary: 713-1054

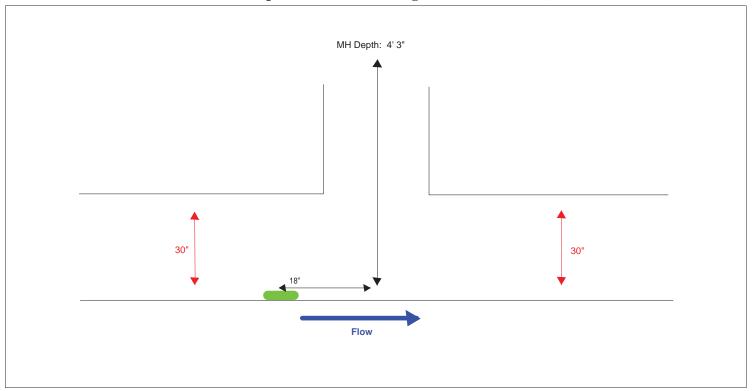
Redundant:

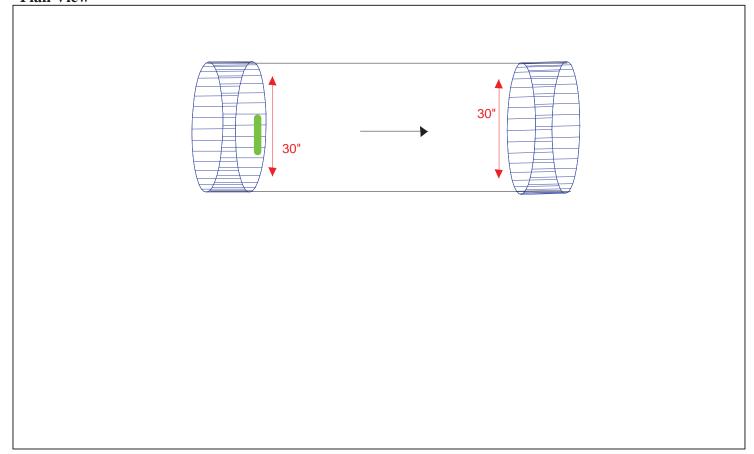
Velocity Primary: 713-1054

Redundant:

Meter Logger FloWav 294526







Site Location Plan ViewSketch or plat showing upstream and downstream manholes, connections, and bends.



Site Name / Manhole # FM-23

Time: 8:24 Crew Members: KE/BR Investigation Date: 4/25/14

Time: 8:25 Installation Date: 4/30/14 Crew Members: LR/JS/KE/ME

Address/Location: 80 E. Ferry Street (Buchanan Marine's Ferry Street Shipyard)

Longitude: W 72°53.538' Latitude: N 41°18.067'

Dry Weather Conditions: Wet

Hydraulic Conditions

Influent Flow:

Velocity 2.22 ft/sec

Depth 18.0 in

Turbulence Amplitude:

Less than 0.25" 0.25" to 0.75" 0.75" to 1.5" 1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	24"		24"
Width	24"		24"
Material	Concrete		Concrete
Shape	Round		Round

Sediment Present:

Hard packed: _____ in. deep No Soft: <u>5.0</u> in. deep

Surcharge / Backwater Influence:

No evidence visible Remains in pipe ft from rim Reaches Rim (potential meter damage) Evidence unclear: _____ft from rim

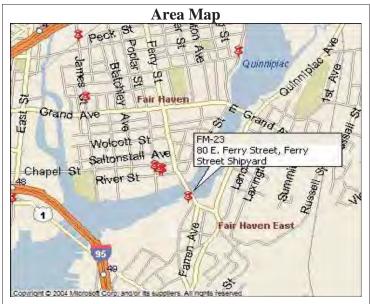
Gas Investigation:

Good 20.9 (condition)



	Site Conditions
Site Acces	s: *8a – 2p, see Comments
	o problems accessing site)
Fair (mir	nor traffic control, truck accessible off-road
	can safely carry equipment to site)
	mote areas, steel embankments,
	safe place to park, elevated MH >3 ft) Control only (Requires extra traffic control
	le (Document in Comments section)
	Information:
Elevated N	Ianhole: Yes No
Height abo	_
Manhole d	
	Integrity of Manhole:
Goo	od Fair Poor
Pipe Bend	s: None within camera view
_	Effluent Manhole
Approx Di	stance to bend:ft
Ding Size/	Geometry/Material Change:
Influent	•
	stance to change:ft
(detail is co	omments)
Crew Mem	lber: Can you maintain this site?
Yes) No Maybe
	ofiguration:
(Please Illeiuu	e Serial Numbers when possible) Primary:
Level	
	Redundant:
Velocity	Primary:
, 010011	Redundant:
Meter Log	ger

Comments: Access 8:00 to 14:00 only and no access to the site on any Friday



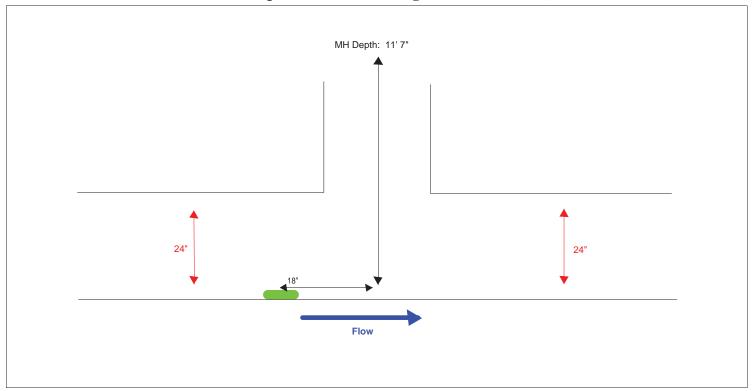


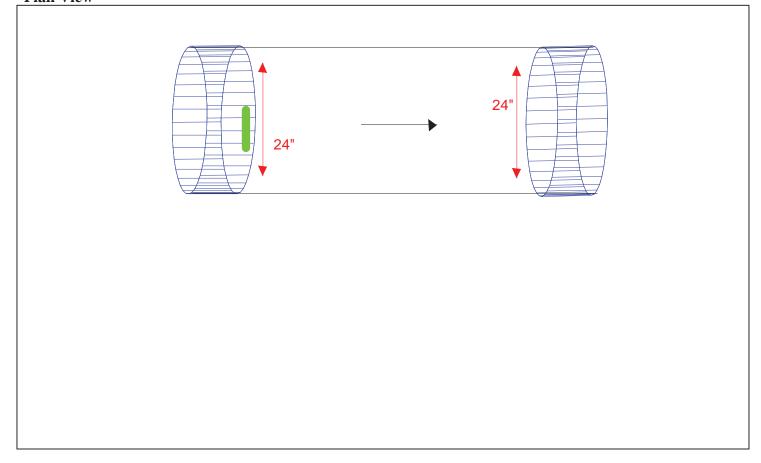












Site Location Plan ViewSketch or plat showing upstream and downstream manholes, connections, and bends.



Site Name / Manhole # East Street PS Sewer

Investigation Date: 9/12/12 Time: 14:00 Crew Members: LR/CL Installation Date: 9/12/12 Time: 14:00 Crew Members: LR/CL

Address/Location: 85 East Street

Latitude: N 41°18.000' Longitude: W 72°54.648'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity 1.54 ft/sec

Depth 32.0 in

Turbulence Amplitude:

Less than 0.25"

0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	60.5"		60.5"
Width	60.5"		60.5"
Material	Brick		Brick
Shape	Round		Round

Sediment Present:

Yes Hard packed: _____ in. deep No Soft: 1 to 2 in. deep

Surcharge / Backwater Influence:

No evidence visible Remains in pipe ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:

(Good)

20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes

(No)

Height above ground

Manhole depth 10' 1"

Structural Integrity of Manhole:

Good Fair Poor

Pipe Bends: None within camera view Influent Effluent Manhole

Approx Distance to bend:____ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole
Approx Distance to change:_____ft
(detail is comments)

Crew Member: Can you maintain this site?

Yes No Maybe

Sensor Configuration:

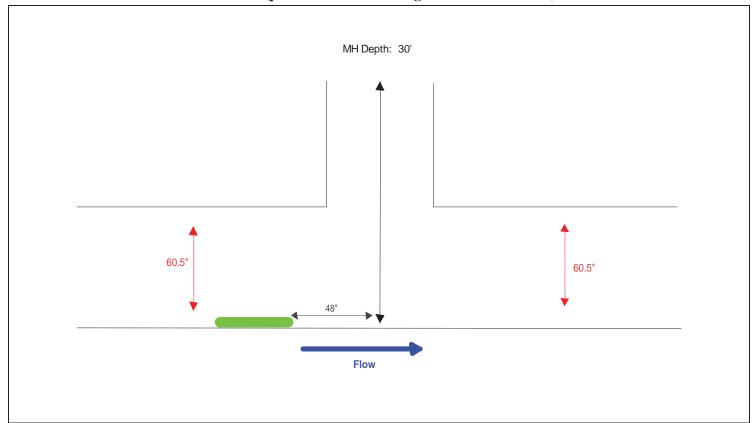
(Please include Serial Numbers when possible)

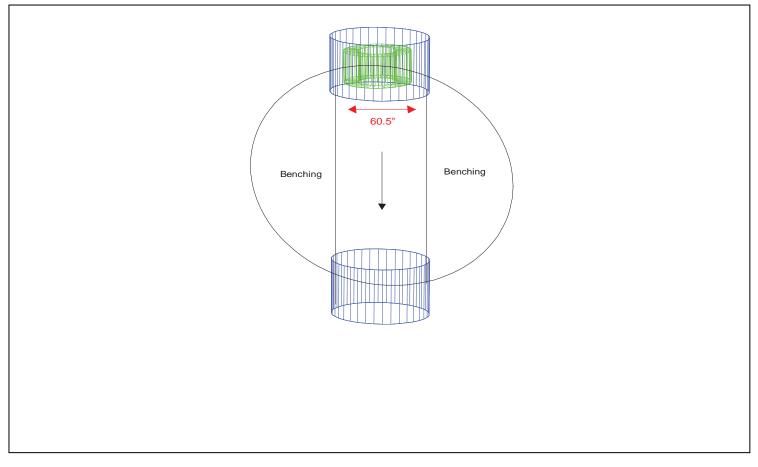
	Level	Primary: Pressure	
Level		Redundant: Pressure	
	Velocity	Primary: Doppler	
		Redu	ndant: Doppler
	Meter Logger		FloWav 293663

Comments: Sensors are 48" from mouth of the

pipe







Site Location Plan ViewSketch or plat showing upstream and downstream manholes, connections, and bends.



Site Name / Manhole # OF-003 Sewer

Investigation Date: 5/23/12 Time: 9:05 Crew Members: LR/RO/GW

Time: 7:50 Installation Date: 6/7/12 Crew Members: RD/LR

Address/Location: Intersection of Ella T Grasso Blvd. and Orange Ave.

Latitude: N 41°17.841' Longitude: W 72°56.933'

(Dry) Weather Conditions: Wet



Hydraulic Conditions

Influent Flow:

Velocity 1.09 ft/sec

Depth 33.50 to 33.75 in

Turbulence Amplitude:

Less than 0.25"

0.25" to 0.75" 0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	64.5"		64.5"
Width	74"		74"
Material	Brick		Brick
Shape	Oval		Oval

Sediment Present: Trace

Yes No

Hard packed: _____ in. deep _____ in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:

Good

20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

CTraffic Control only (Requires extra traffic control

Yes

Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole:

Height above ground

Manhole depth

Structural Integrity of Manhole:

Good Fair Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

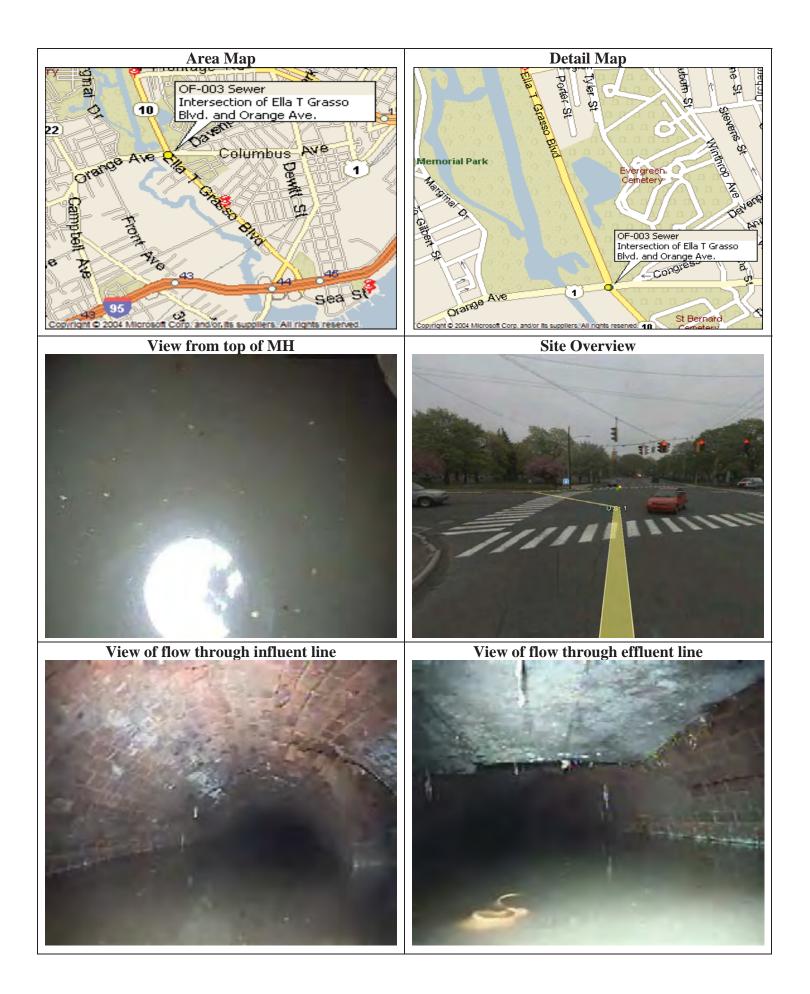
Crew Member: Can you maintain this site?

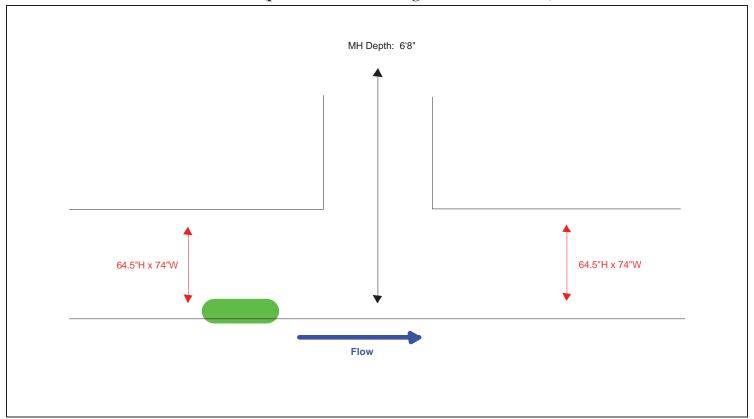
Yes No Maybe

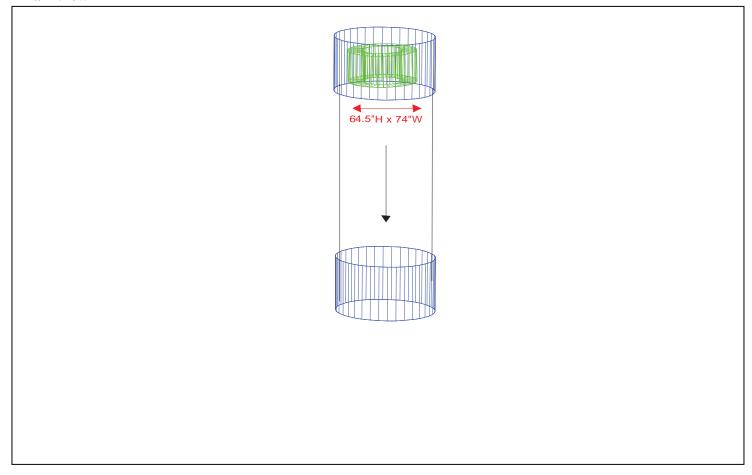
Sensor Configuration:

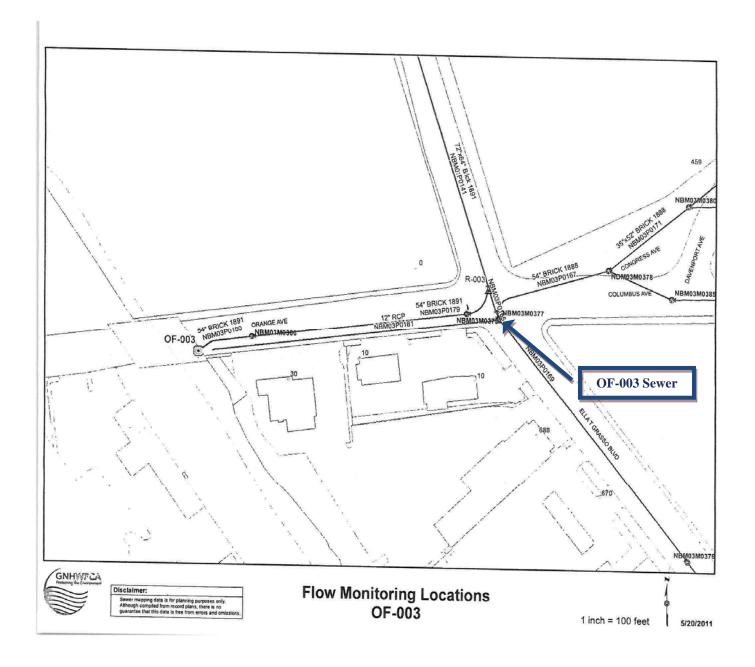
(Please include Serial Numbers when possible)

Meter Log	ger FloWav 293660		
Velocity	Primary: Doppler Redundant: Doppler		
Level	Primary: Pressure Redundant: Pressure		









Site Name / Manhole # OF-003 Overflow

Investigation Date: 5/23/12 Time: 11:40 Crew Members: LR/RO/GW

Installation Date: 6/5/12 Time: 9:30 Crew Members: RD/LR

Address/Location: On Orange Ave. at intersection of Ella T Grasso Blvd. (in crosswalk)

Latitude: N 41°17.847' Longitude: W 72°56.954'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow: Standing Velocity _____ ft/sec

Depth 2.0 in

Turbulence Amplitude: *Standing water*

Less than 0.25" 0.25" to 0.75" 0.75" to 1.5" 1.5" to 3" Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	55"		55"
Width	55"		55"
Material	Brick		Brick
Shape	Round		Round

Sediment Present:

(Yes)	Hard packed:		in. deep
No	Soft:	0.25	in. dee

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe
____ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ____ft from rim

Gas Investigation:

Good $\underline{20.9}$ (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes No

Good Fair Poor

Pipe Bends: None within camera view
Influent Effluent Manhole
Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole
Approx Distance to change:_____ft
(detail is comments)

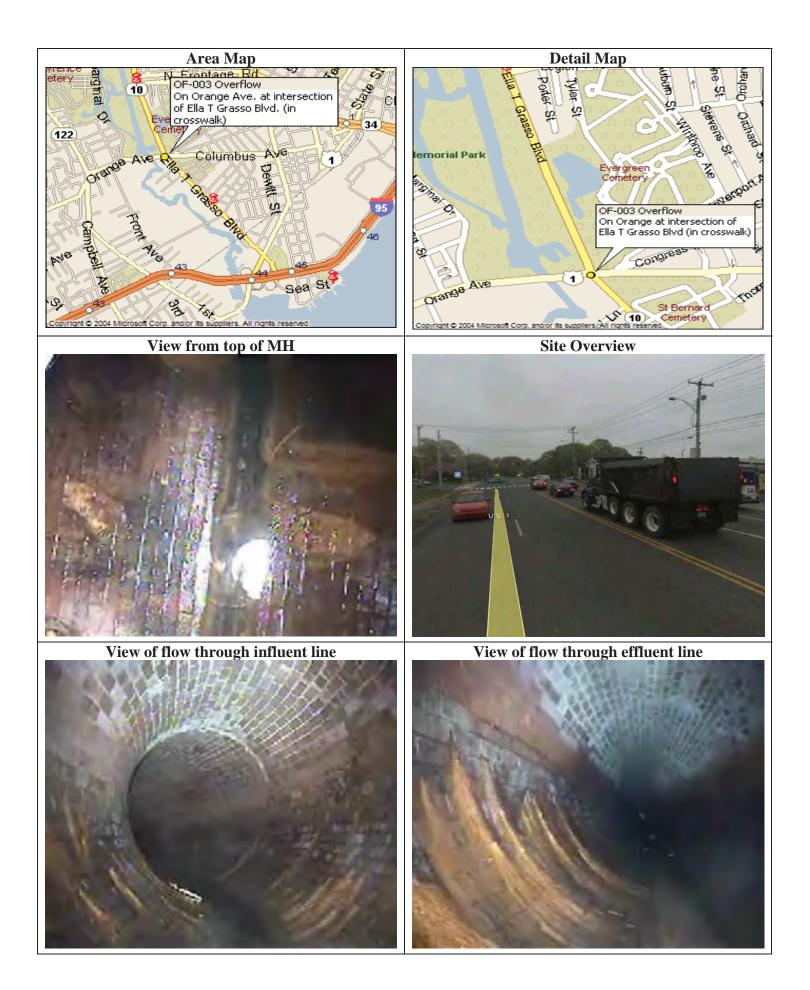
Crew Member: Can you maintain this site?

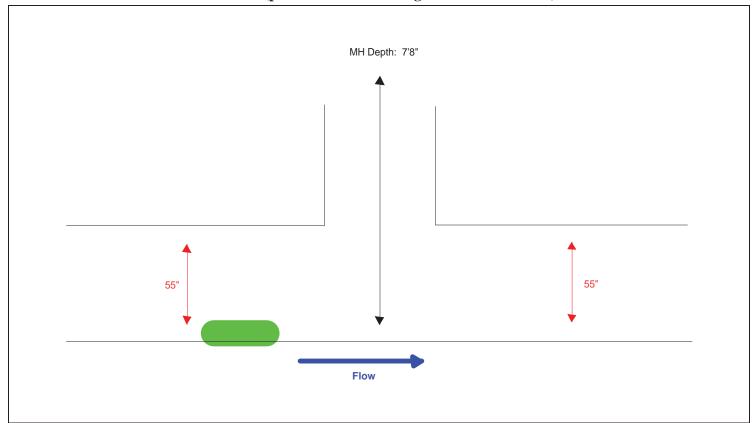
Yes No Maybe

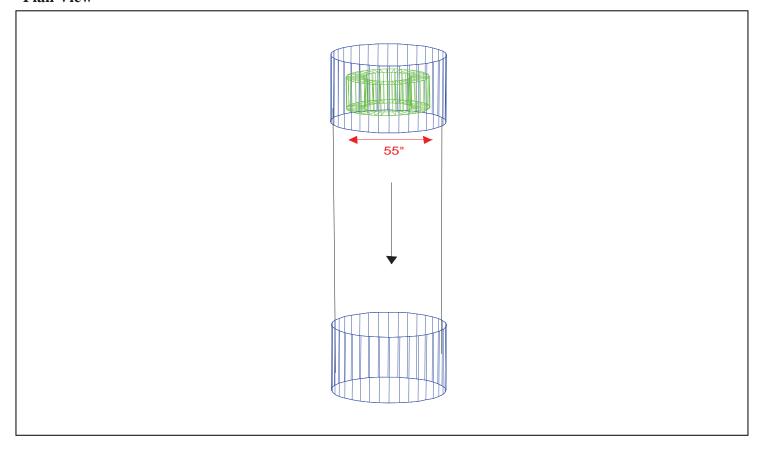
Sensor Configuration:

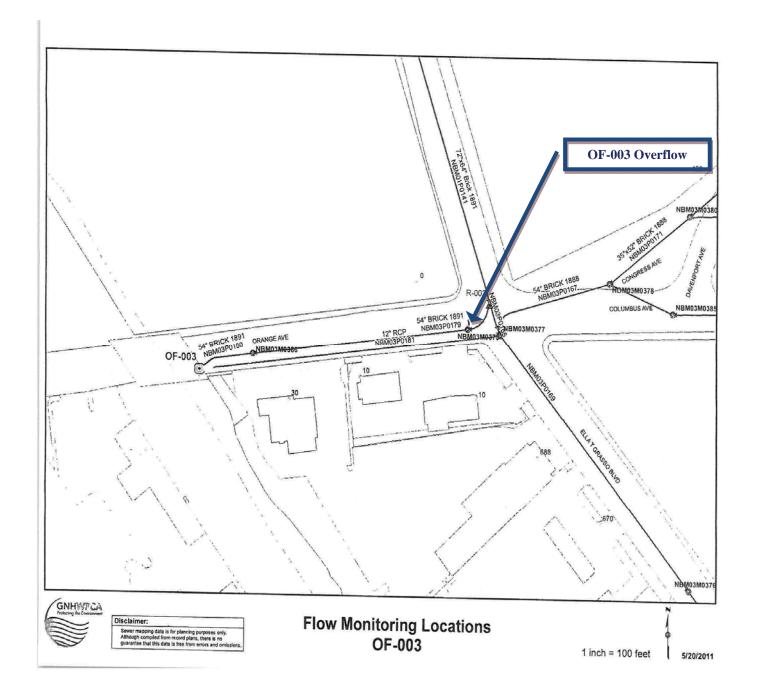
(Please include Serial Numbers when possible)

Level	Primary: Pressure	
	Redundant: Pressure	
Velocity	Primary: Doppler	
	Redundant: Doppler	
Meter Log	ger FloWav 293664	









Site Name / Manhole # OF-004 Sewer

Investigation Date: 5/24/12 Time: 12:15 Crew Members: LR/RO/GW

Installation Date: 6/6/12 Time: 11:15 Crew Members: RD/LR

Address/Location: Intersection of Ella T. Grasso Boulevard & Legion Avenue

Latitude: N 41°17.337' Longitude: W 72°57.154'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity 1.61 ft/sec

Depth 25.25 to 25.50 in

Turbulence Amplitude:

Less than 0.25"
0.25" to 0.75"
0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	63.5"		63.5"
Width	66.5"		66.5"
Material	Brick		Brick
Shape	Round		Round

Sediment Present:

Yes Hard packed: 4" in. deep No Soft: in. deep

Surcharge / Backwater Influence:

No evidence visible

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:

(Good) 20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes

(No

Height above ground

Manhole depth 10'9"

Structural Integrity of Manhole:

Good Fair Poor

Pipe Bends: None within camera view
Influent Effluent Manhole
Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole
Approx Distance to change:_____ft
(detail is comments)

Crew Member: Can you maintain this site?

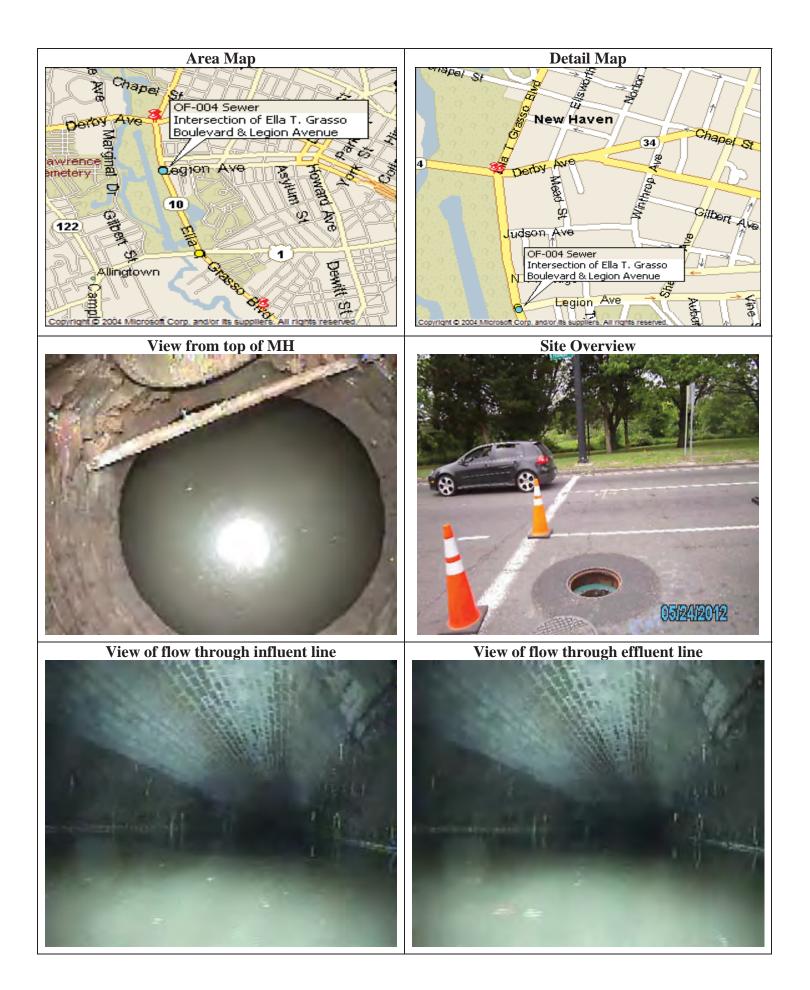
Yes No Maybe

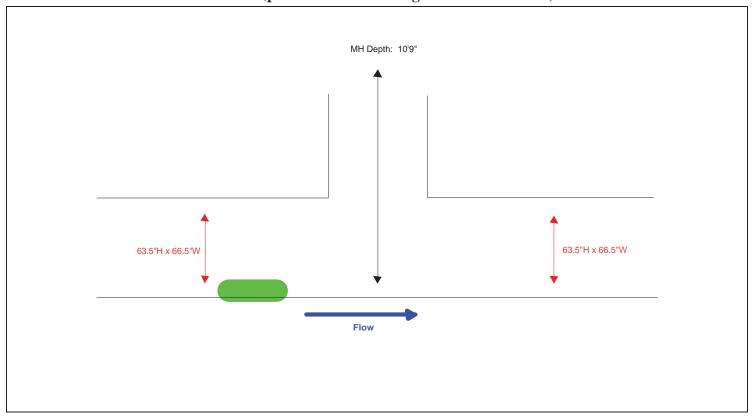
Sensor Configuration:

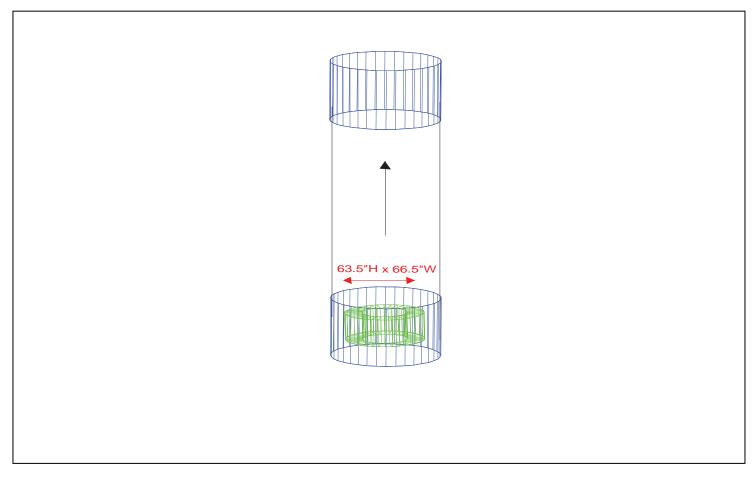
(Please include Serial Numbers when possible)

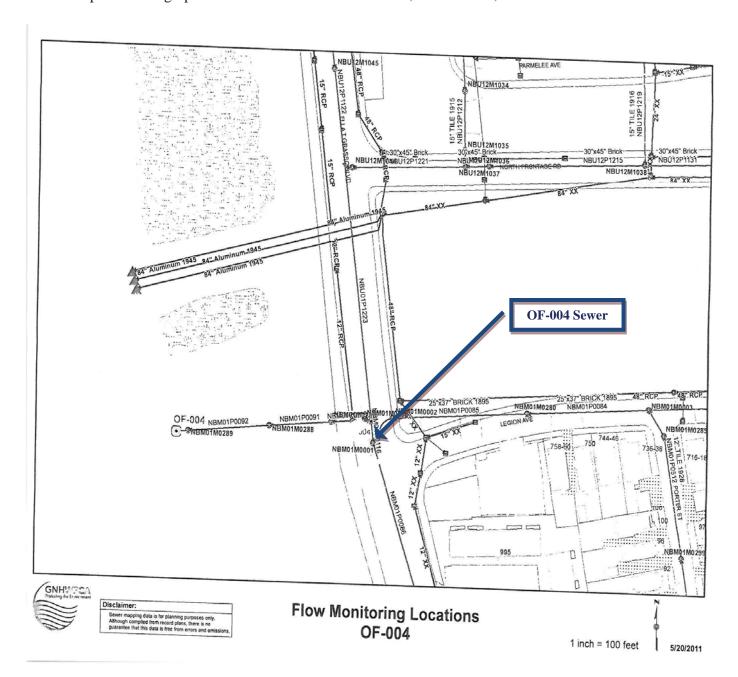
Level	Primary: Pressure Redundant: Pressure		
Velocity	Primary: Doppler		
, clocky	Re	dundant: Doppler	
Meter Logger FloWav 293665		FloWav 293665	

Comments: Chest waders needed









Site Name / Manhole # OF-004 Overflow

Investigation Date: 5/24/12 Time: 13:25 Crew Members: LR/RO/GW

(Dry

in. deep

in. deep

Installation Date: 6/6/12 Time: 9:22 Crew Members: RD/LR

Address/Location: On Ella T. Grasso Blvd., 20 yds. north of Legion Ave.

Latitude: N 41°18.332' Longitude: W 72°57.161'

Weather Conditions: Wet



Hydraulic Conditions

Influent Flow: *Dry Pipe* Velocity <u>0.00</u> ft/sec

Depth 0.00 in

Turbulence Amplitude: Dry pipe

Less than 0.25" 0.25" to 0.75" 0.75" to 1.5" 1.5" to 3" Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	36"		36"
Width	61"		61"
Material	Concrete		Concrete
Shape	Concrete		Concrete

Sediment Present:

Yes	Hard packed:
No	Soft:

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe
_____ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: _____ft from rim

Gas Investigation:

Good	20.9 (condition)
------	-----------------	---

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes



Height above ground $\underline{\hspace{1cm}}$ Manhole depth $\underline{\hspace{1cm}}$ 10'9"

Structural Integrity of Manhole:
Good Fair Poor

Pipe Bends: None within camera view
Influent Effluent Manhole
Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole
Approx Distance to change:_____ft
(detail is comments)

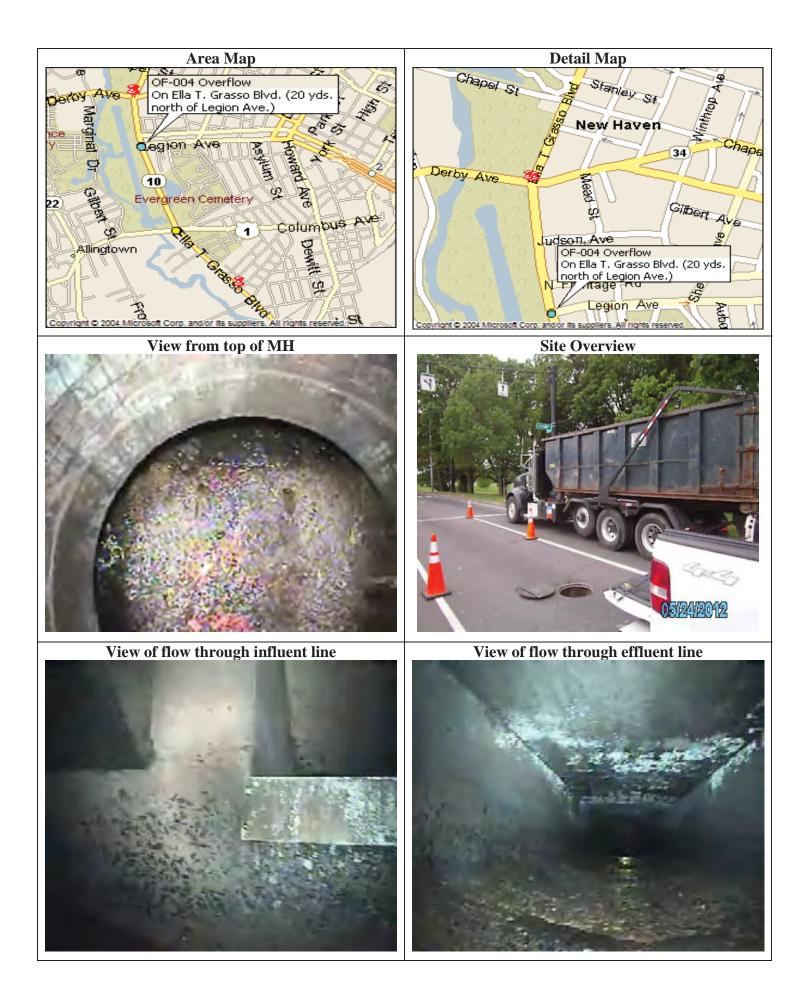
Crew Member: Can you maintain this site?

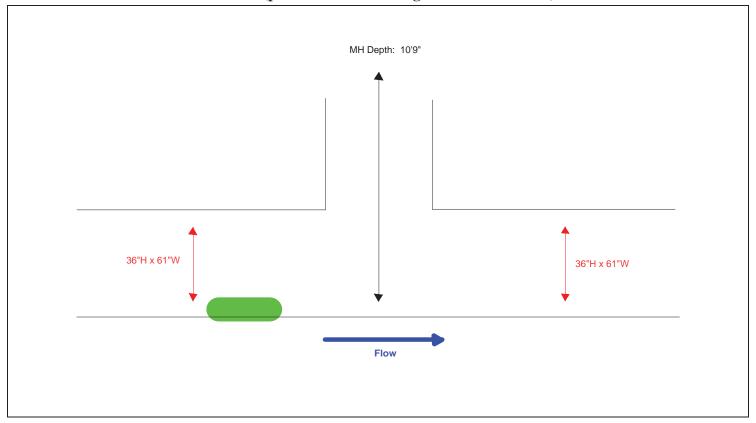
Yes No Maybe

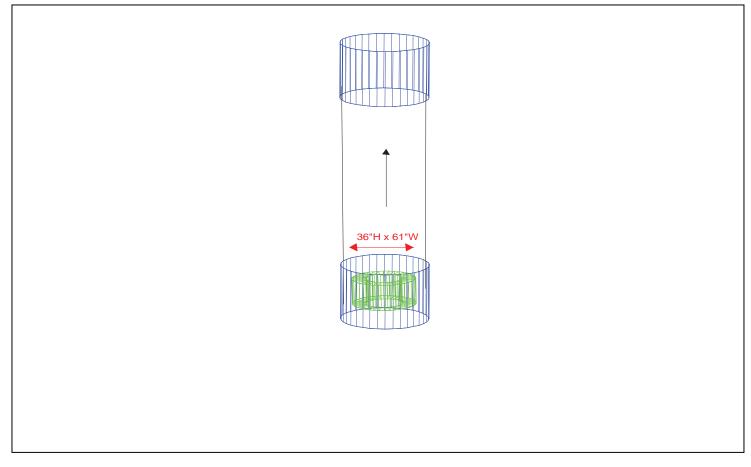
Sensor Configuration:

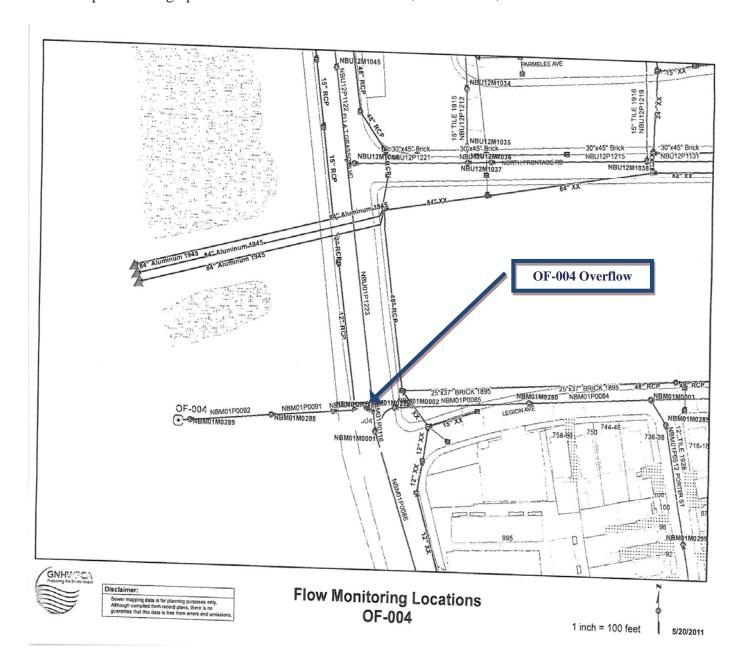
(Please include Serial Numbers when possible)

Level	Primary: Pressure		
Level	Redundant: Pressure		
Velocity	Primary: Velocity		
Velocity	Redundant: Velocity		
Meter Log	gger FloWav 293661		









Site Name / Manhole # OF-005 Sewer

Investigation Date: 5/23/12 Time: 13:35 Crew Members: LR/RO/GW

(Dry

Installation Date: 6/7/12 Time: 11:50 Crew Members: RD/LR

Address/Location: Intersection of Derby Ave. & Ella T. Grasso Blvd.

Latitude: N 41°18.604' Longitude: W 72°57.196'

Weather Conditions: Wet



Hydraulic Conditions

Influent Flow:

Velocity 1.13 ft/sec

Depth 24.75 in

Turbulence Amplitude:

Less than 0.25" 0.25" to 0.75" to 1.5" 1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	60"		60"
Width	63.5"		63.5"
Material	Brick & Concrete		Brick & Concrete
Shape	Oval		Oval

Sediment Present:

Yes Hard packed: 4.0 in. deep
No Soft: in. deep

Surcharge / Backwater Influence:

No evidence visible Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:

Good 20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes

(No

Height above ground __

Manhole depth 14'

Structural Integrity of Manhole:

Good Fair Poor

Pipe Bends:

Influent Effluent Manhole Approx Distance to bend: 15 ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole
Approx Distance to change:_____ft
(detail is comments)

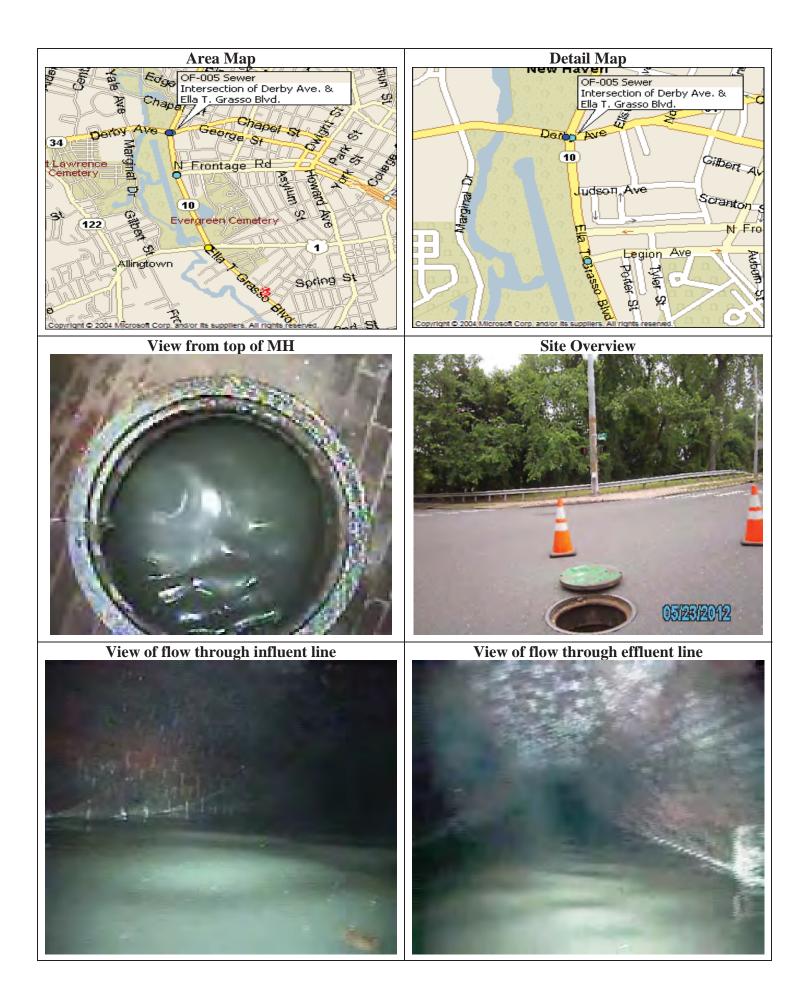
Crew Member: Can you maintain this site?

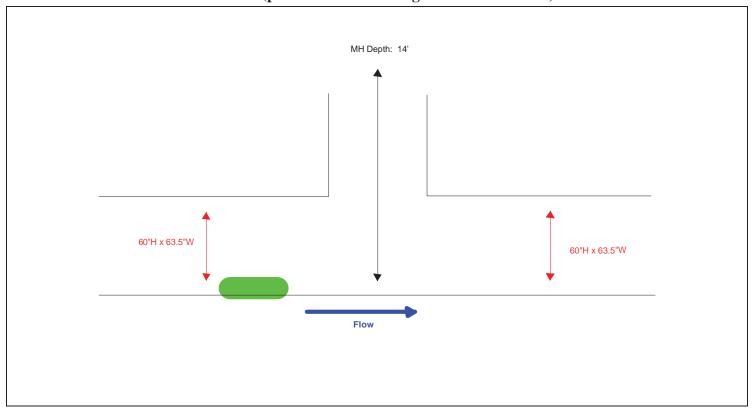
Yes No Maybe

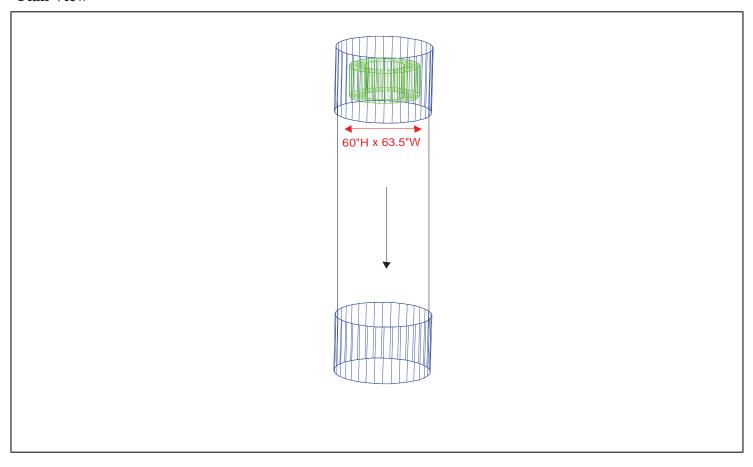
Sensor Configuration:

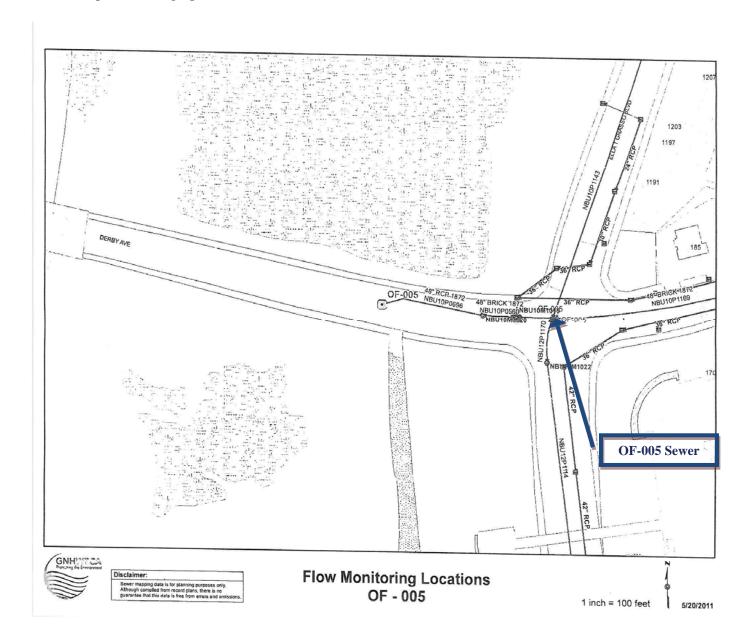
(Please include Serial Numbers when possible)

Level	Primary: Pressure		
Level	Redundant: Pressure		
Velocity	Primary: Doppler		
I		dundant: Doppler	
Meter Log	ger FloWav 293659		









Site Name / Manhole # OF-005 Overflow

Investigation Date: 5/24/12 Time: 9:25 Crew Members: LR/RO/GW

Time: 13:47 Installation Date: 6/7/12 Crew Members: RD/LR

Address/Location: On Derby Ave., 20 yds. east of Ella T. Grasso Blvd.

Latitude: N 41°18.612' Longitude: W 72°57.238'

Weather Conditions: Wet (Dry



Hydraulic Conditions

Influent Flow: *Dry pipe* Velocity 0.0 ft/sec

Depth 0.0 in

Turbulence Amplitude: *Dry pipe*

Less than 0.25" 0.25" to 0.75" 0.75" to 1.5" 1.5" to 3" Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	48"		48"
Width	48"		48"
Material	Brick		Brick
Shape	Round		Round

Sediment Present:

Yes	Hard packed:	 in. deep
No	Soft:	 in. deep

Surcharge / Backwater Influence:

No evidence visible Remains in pipe ft from rim Reaches Rim (potential meter damage) Evidence unclear: ft from rim

Gas Investigation:

Good)	20.9	(condition)
		,

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes



Height above ground Manhole depth

Structural Integrity of Manhole:

Good Fair

Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

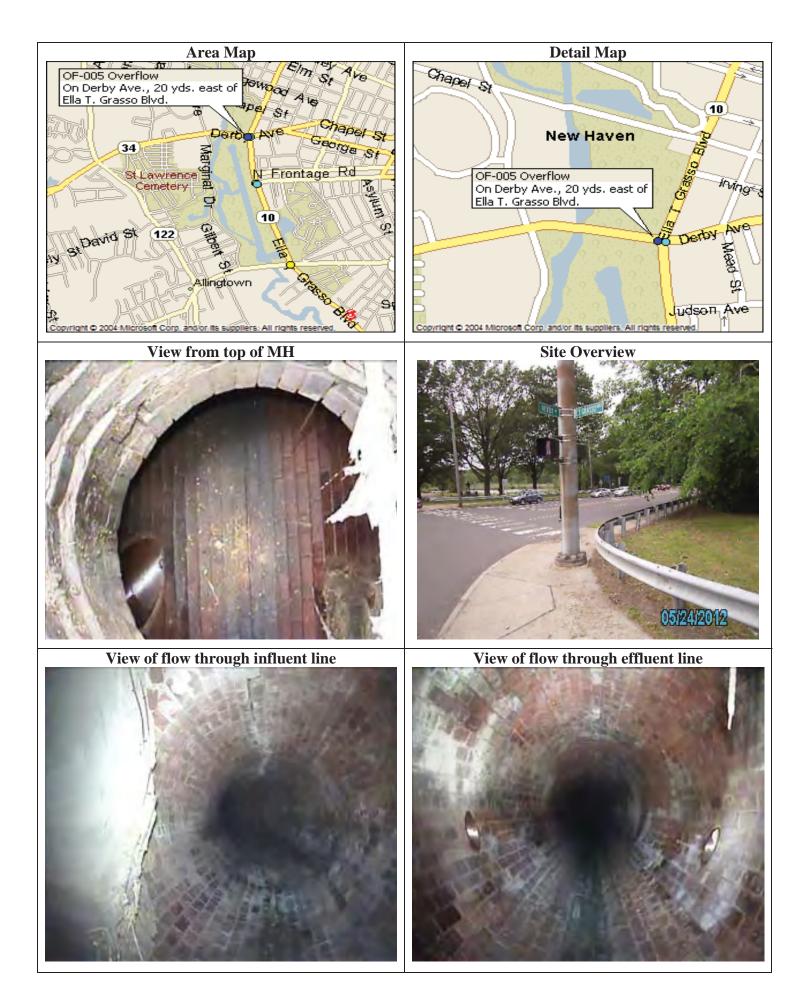
Crew Member: Can you maintain this site?

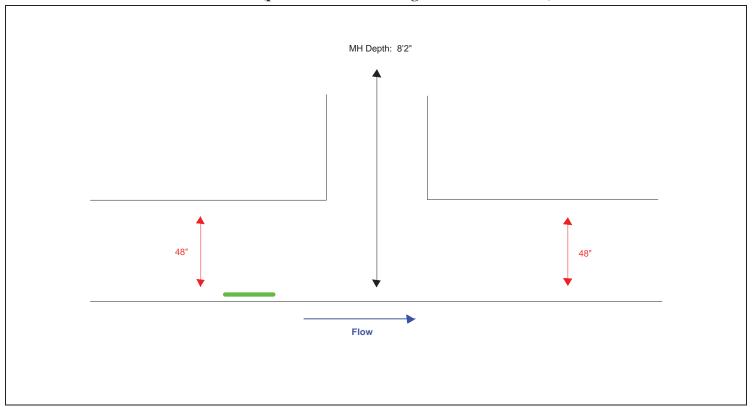
Yes Maybe No

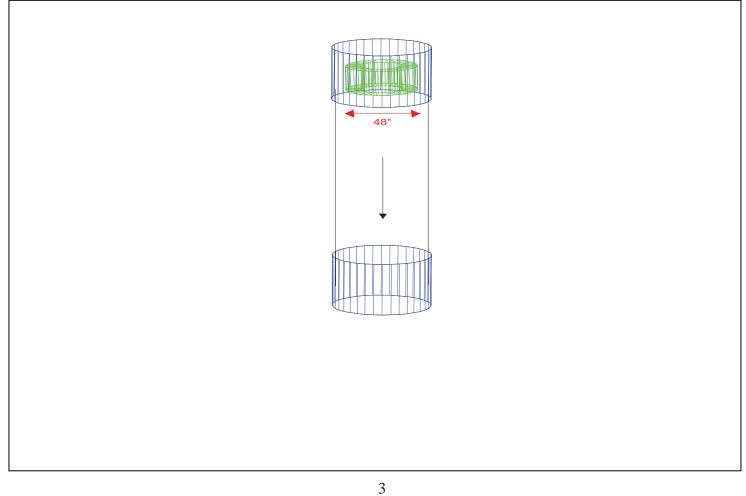
Sensor Configuration:

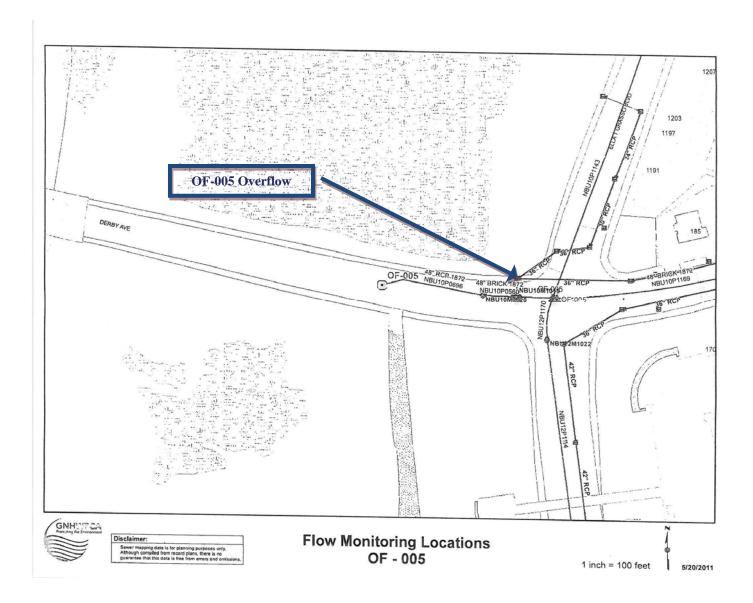
(Please include Serial Numbers when possible)

Level	Primary: Pressure	
Ec voi	Redundant: Pressure	
Velocity	Primary: Doppler	
Velocity	Redundant: Doppler	
Meter Log	gger FloWav 293658	









Site Name / Manhole # OF-006 Sewer

Investigation Date: 5/24/12 Time: 9:25 Crew Members: LR/RO/GW

Installation Date: 6/4/12 Time: 13:47 Crew Members: RD/LR

Address/Location: On Whalley Ave., 30 yds from Fitch St. Latitude: N 41°19.504" Longitude: W 72°57.433'

Weather Conditions: Wet (Dry



Hydraulic Conditions

Influent Flow:

Velocity 1.55 ft/sec

Depth 18.50 to 18.75 in

Turbulence Amplitude:

Less than 0.25"

 \bigcirc 0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	36"		36"
Width	36"		36"
Material	Wood-lined Brick		Wood-lined Brick
Shape	Round		Round

Sediment Present:

Hard packed: _____ in. deep Yes _____ in. deep No

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:

Good

20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Caraffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes

Height above ground Manhole depth

Structural Integrity of Manhole:

Good Fair Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend:____ft

Pipe Size/Geometry/Material Change:

Effluent Influent Manhole Approx Distance to change:_____ft (detail is comments)

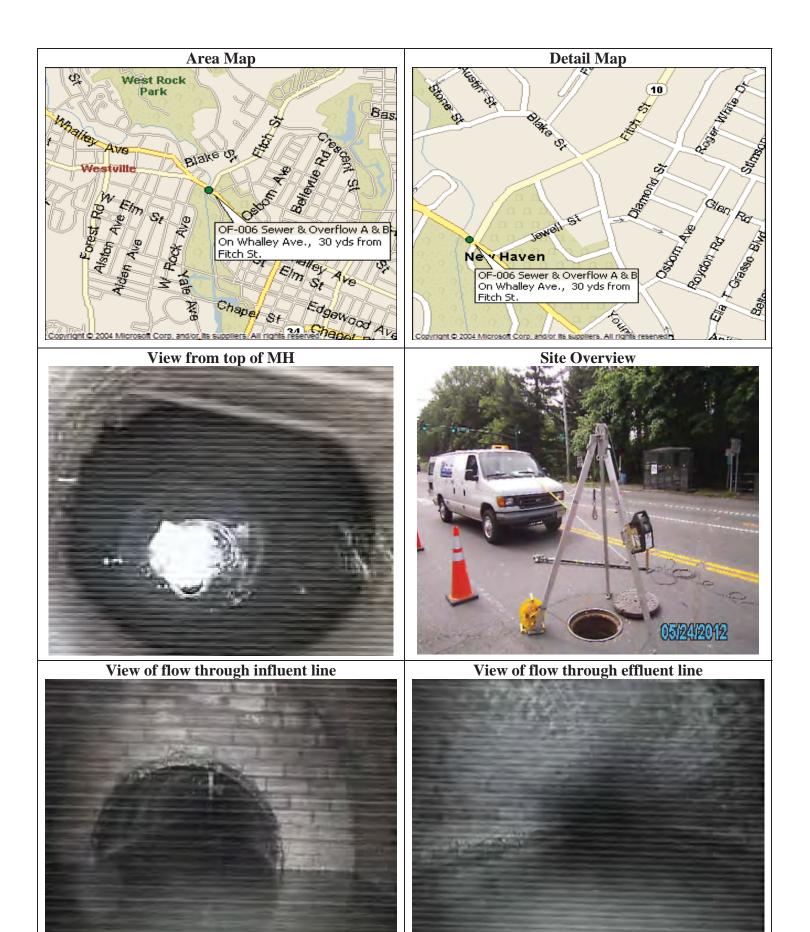
Crew Member: Can you maintain this site?

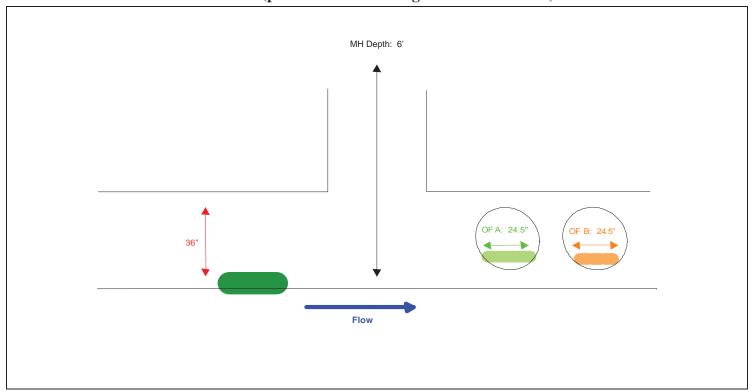
Yes No Maybe

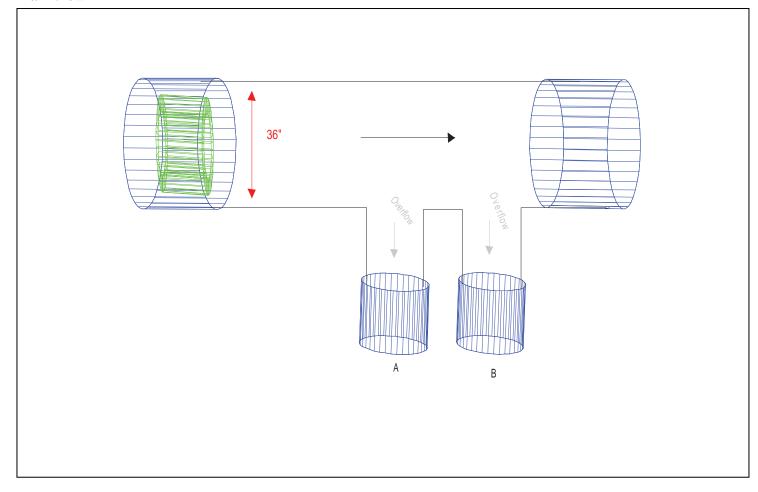
Sensor Configuration:

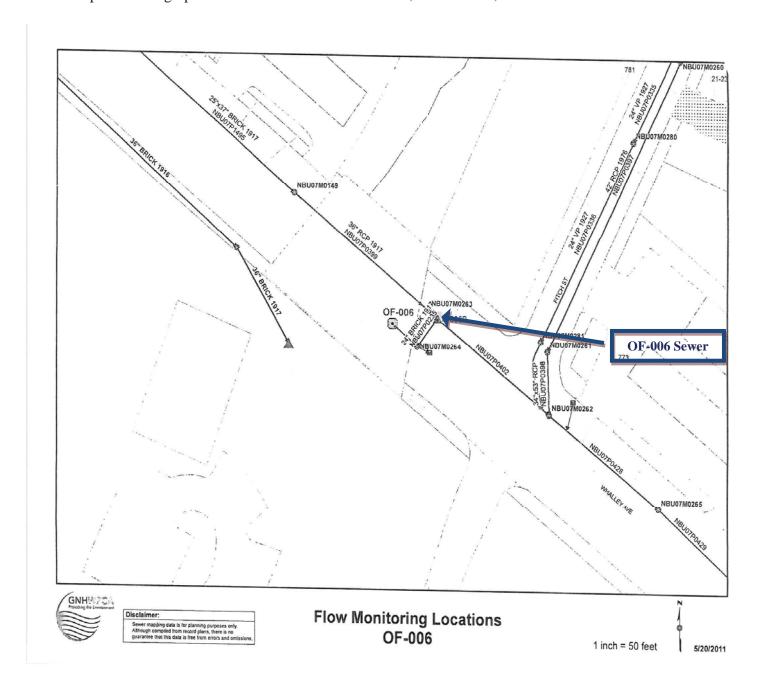
(Please include Serial Numbers when possible)

Primary: Pressure Level Redundant: Pressure Primary: Doppler Velocity Redundant: Doppler Meter Logger | FloWav 293655









Site Name / Manhole # OF-006 AA

Investigation Date: 8/3/12 Time: 8:00 Crew Members: RD/GM/AP Installation Date: 8/3/12 Time: 10:00 Crew Members: RD/GM/AP

Address/Location: On Whalley Ave. & Fitch St., in the creek Latitude: N 41°19.458'' Longitude: W 72°57.465'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity <u>0.00</u> ft/sec

Depth 00.0 in

Turbulence Amplitude:

Less than 0.25"
0.25" to 0.75"
0.75" to 1.5"
1.5" to 3"
Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	24"		34"
Width	24"		37"
Material	Concrete/Steel		Brick
Shape	Round		Chamber

Sediment Present: *Trace*

Yes	Hard packed:	 in. deep
No	Soft:	 in. deep

Surcharge / Backwater Influence:

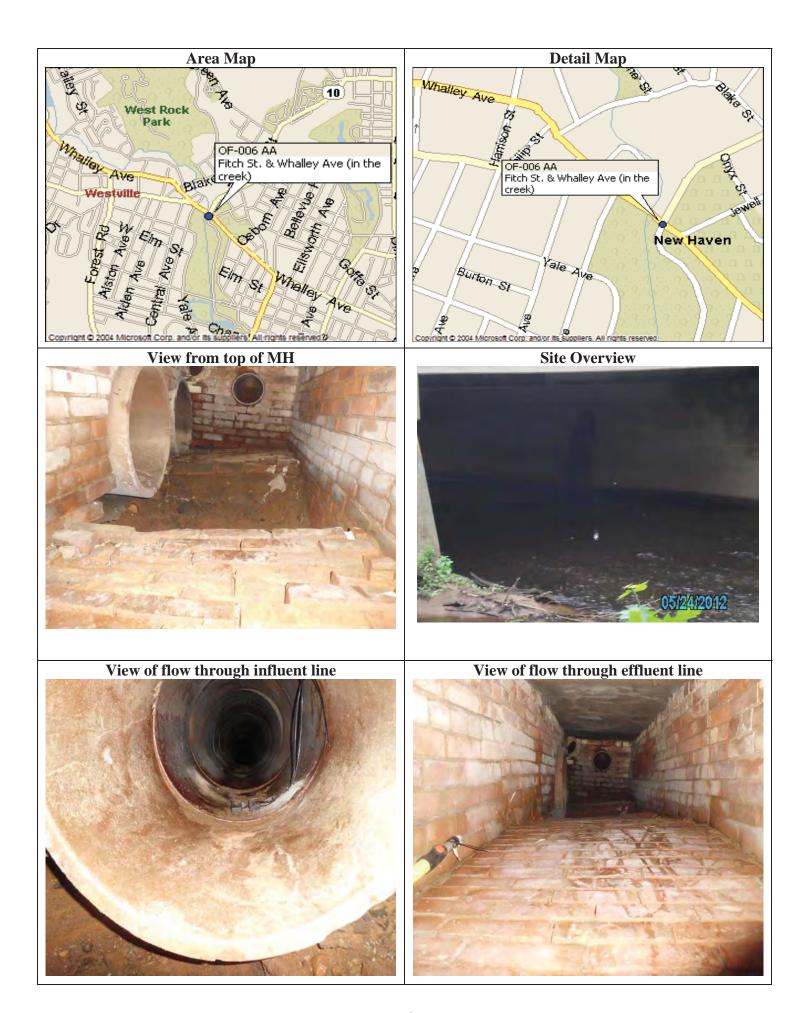
No evidence visible
Remains in pipe
____ft from rim
Reaches Rim (potential meter damage)
Evidence unclear: ____ft from rim

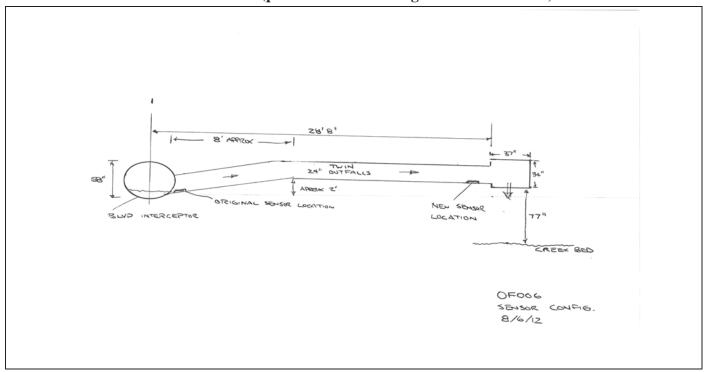
Gas Investigation:

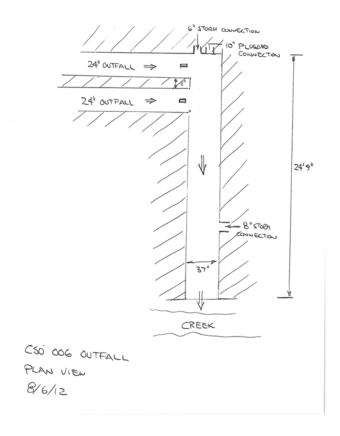
Good		(condition)
------	--	-------------

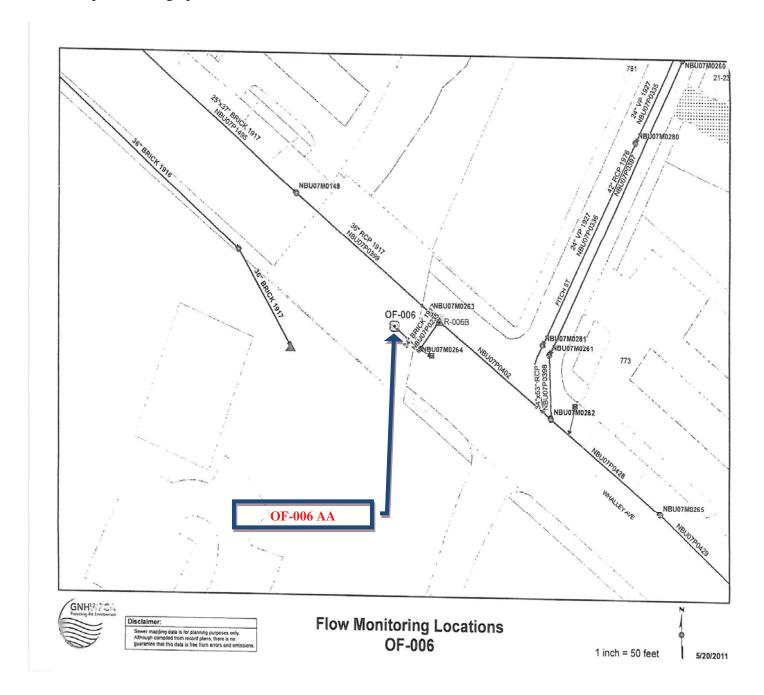
Site Conditions

Site Acces	s:
Good (n	o problems accessing site)
	nor traffic control, truck accessible off-road can safely carry equipment to site)
	emote areas, steel embankments,
	safe place to park, elevated MH >3 ft)
	Control only (Requires extra traffic control ble (Document in Comments section)
	To (Boedment in Comments section)
Manhole l	Information: Chamber
Elevated N	
_	ove ground
Manhole d	
	Integrity of Manhole:
Goo	od Fair Poor
Pine Rend	s: None within camera view
Influen	
	stance to bend:ft
трргох Бі	stance to bendit
Pipe Size/	Geometry/Material Change:
Influen	•
Approx Di	stance to change:ft
(detail is c	_
~ 15	
	ber: Can you maintain this site?
Yes	No Maybe
Sensor Cor	nfiguration:
	e Serial Numbers when possible)
T 1	Primary: Pressure
Level	Redundant: Pressure
	1 Redundant. 1 ressure
Velocity	Primary: Doppler
Velocity	









Site Name / Manhole # OF-006 BB

Investigation Date: 8/3/12 Time: 8:00 Crew Members: RD/GM/AP Installation Date: 8/3/12 Time: 11:00 Crew Members: RD/GM/AP

Address/Location: On Whalley Ave. & Fitch St., in the creek area

Latitude: N 41°19.458'' Longitude: W 72°57.465'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow: Standing water

Velocity <u>0.00</u> ft/sec

Depth 00.0 in

Turbulence Amplitude:

Less than 0.25" 0.25" to 0.75" 0.75" to 1.5" 1.5" to 3" Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	24"		34"
Width	24"		37"
Material	Concrete/Steel		Brick
Shape	Round		Chamber

Sediment Present: *Trace*

Yes	Hard packed:	 in.	deep
No	Soft:	 in.	deep

Surcharge / Backwater Influence:

No evidence visible
Remains in pipe
____ft from rim
Reaches Rim (potential meter damage)

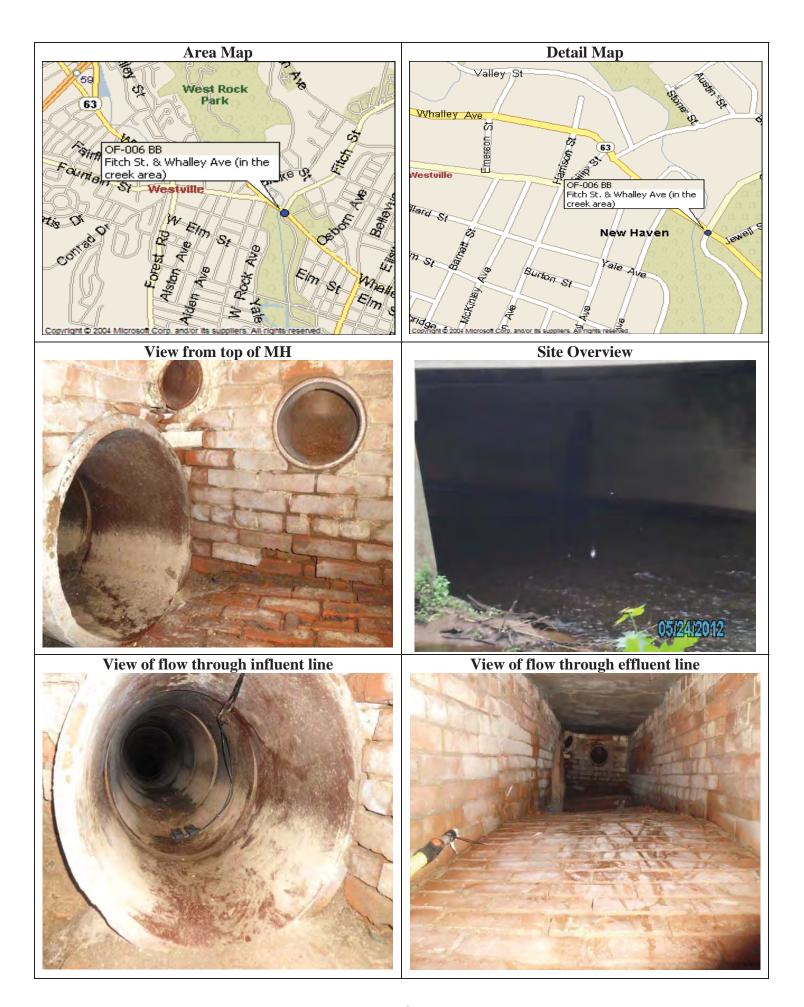
Evidence unclear: _____ft from rim

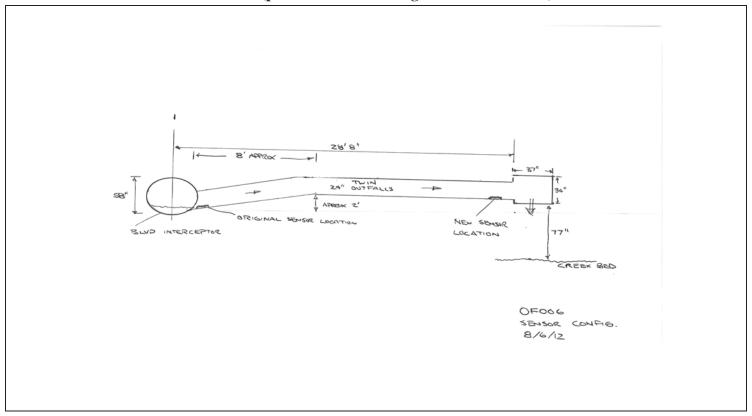
Gas Investigation:

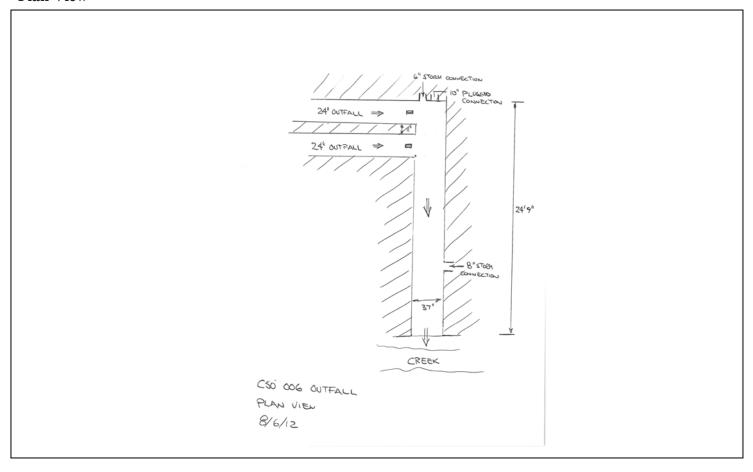
Good	(c	ondition)
_		

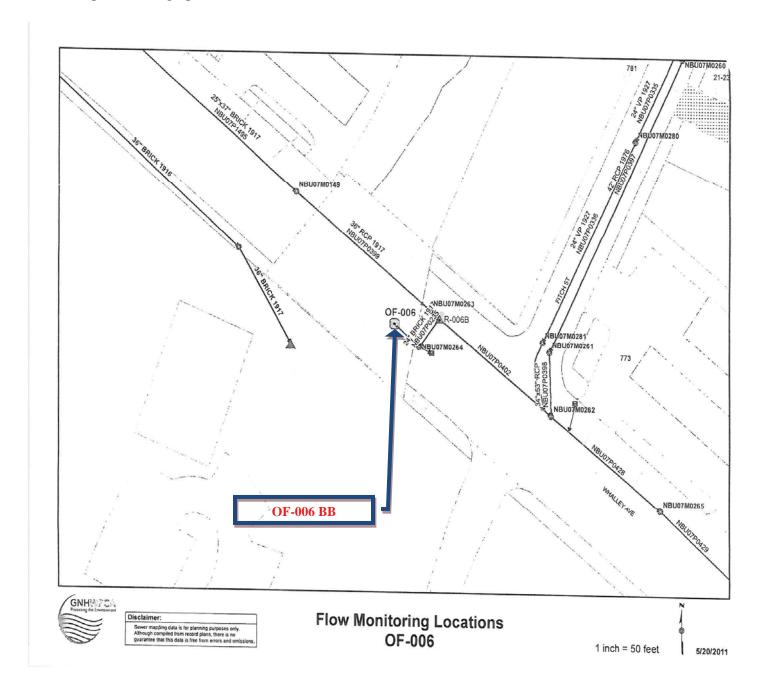
Site Conditions

(2004)	s:
	o problems accessing site)
Fair (min	nor traffic control, truck accessible off-road
	can safely carry equipment to site)
	emote areas, steel embankments,
	safe place to park, elevated MH >3 ft)
	Control only (Requires extra traffic control
Unusal	ble (Document in Comments section)
Manhole l	Information: Chamber
Elevated N	
Lievated iv	ramiole. Tes
TT 1 1 . 1	1
Height abo	_
Manhole d	lepth <u>6'5"</u>
Structural	Integrity of Manhole:
Goo	od Fair Poor
Dina Rand	ls: None within camera view
	t Effluent Manhole
Approx Di	stance to bend:ft
Pipe Size/	Geometry/Material Change:
Influen	· ·
	stance to change:ft
(detail is c	omments)
-	
Crew Mem	iber: Can you maintain this site?
Yes	No Maybe
	•
~	- C*
Sensor Cor	mguration:
	e Serial Numbers when possible)
(Please includ	
Sensor Cor (Please includ Level	e Serial Numbers when possible)
(Please includ	e Serial Numbers when possible) Primary: Pressure Redundant: Pressure
(Please includ	e Serial Numbers when possible) Primary: Pressure
(Please includ	e Serial Numbers when possible) Primary: Pressure Redundant: Pressure Primary: Doppler
(Please includ	e Serial Numbers when possible) Primary: Pressure Redundant: Pressure
(Please includ	e Serial Numbers when possible) Primary: Pressure Redundant: Pressure Primary: Doppler Redundant: Doppler









Site Name / Manhole # OF-09

Investigation Date: 10/3/12 Time: 9:51 Crew Members: RD/LR/BW Installation Date: 10/3/12 Time: 9:51 Crew Members: RD/LR/BW

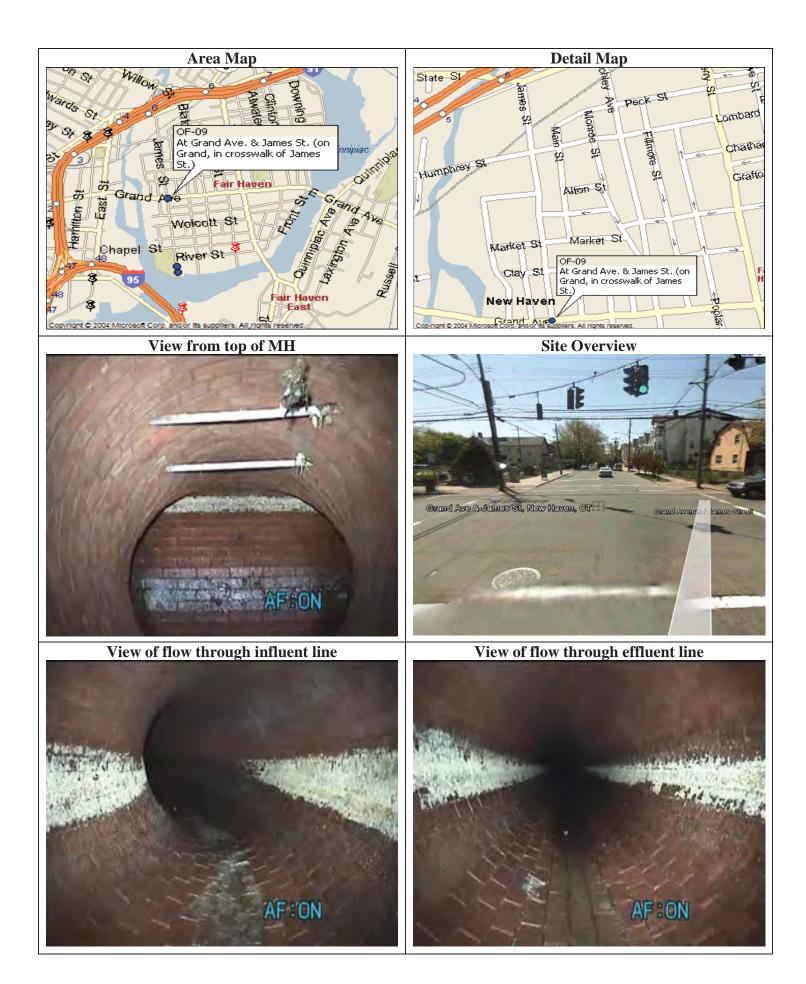
Address/Location: Grand Avenue and James Street

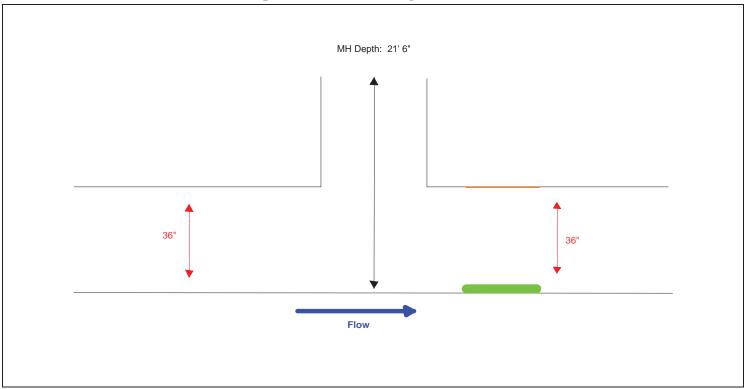
Longitude: W 72°54.229' Latitude: N 41°18.503'

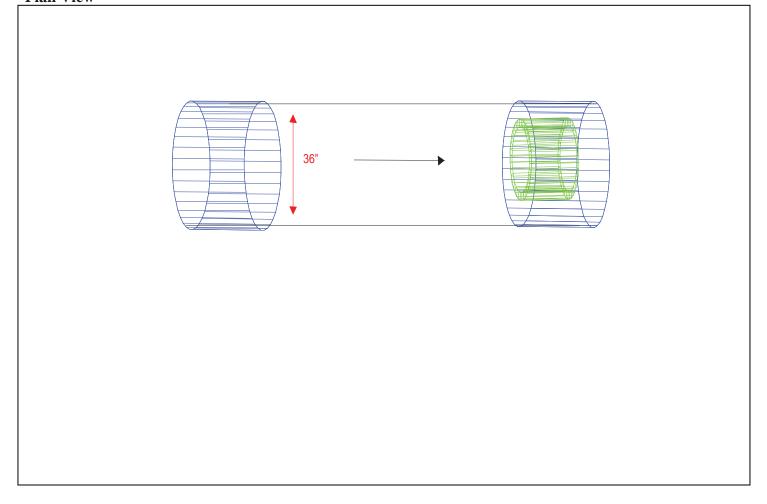


Weather Co	onditions:	Wet <	Dry		Services, In
	Hydrauli	c Conditions			Site Conditions
Velocity	low: Dry Pip ft/sec	De			p problems accessing site)
•	0.75" 1.5"	: Dry Pipe		site, c Poor (rer No Traffic (nor traffic control, truck accessible off-road an safely carry equipment to site) mote areas, steel embankments, safe place to park, elevated MH >3 ft) Control only (Requires extra traffic control le (Document in Comments section)
	e Characteris	stics: Influent 2	Effluent	Manhole I Elevated M Height abo Manhole de	ve ground
Height	36"	Imruent 2	36"	Structural 1	Integrity of Manhole:
Width	36"		36"	Goo	od Fair Poor
Material Shape	Brick Round		Round		Effluent Manhole stance to bend: 5 ft
Sediment P Yes No		ed:		Influent	stance to change:ft
	/ Backwater Ir	nfluence:		Crew Mem Yes	ber: Can you maintain this site? No Maybe
Remains	in pipe from rim			Sensor Con (Please include	e Serial Numbers when possible)
Reaches	Rim (potential me unclear:		from rim	Level	Primary: Flo Wav 0912-625 Redundant: Flo Wav 0812-631
				Velocity	Primary: Flo Wav 0912-625
Gas Investi	gation:				Redundant: Flo Wav 0812-631
Good	<u>20.9</u> (con	dition)		Meter Log	ger 293723

Comments:







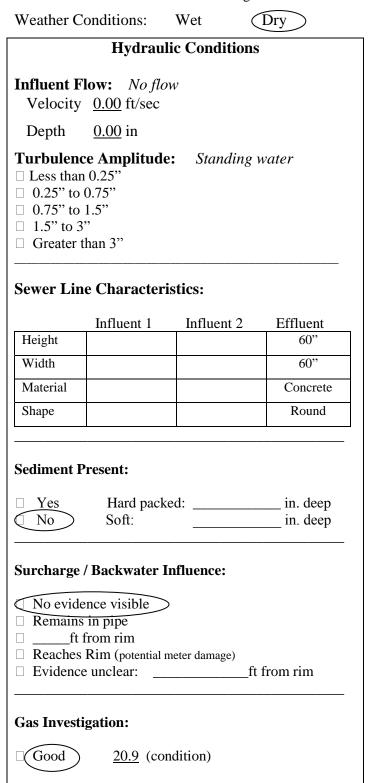


Site Name / Manhole # OF-010A Sewer

Investigation Date: 8/1/12 Time: 13:00 Crew Members: RD/GM Installation Date: 9/12/12 Time: 10:00 Crew Members: LR/CL

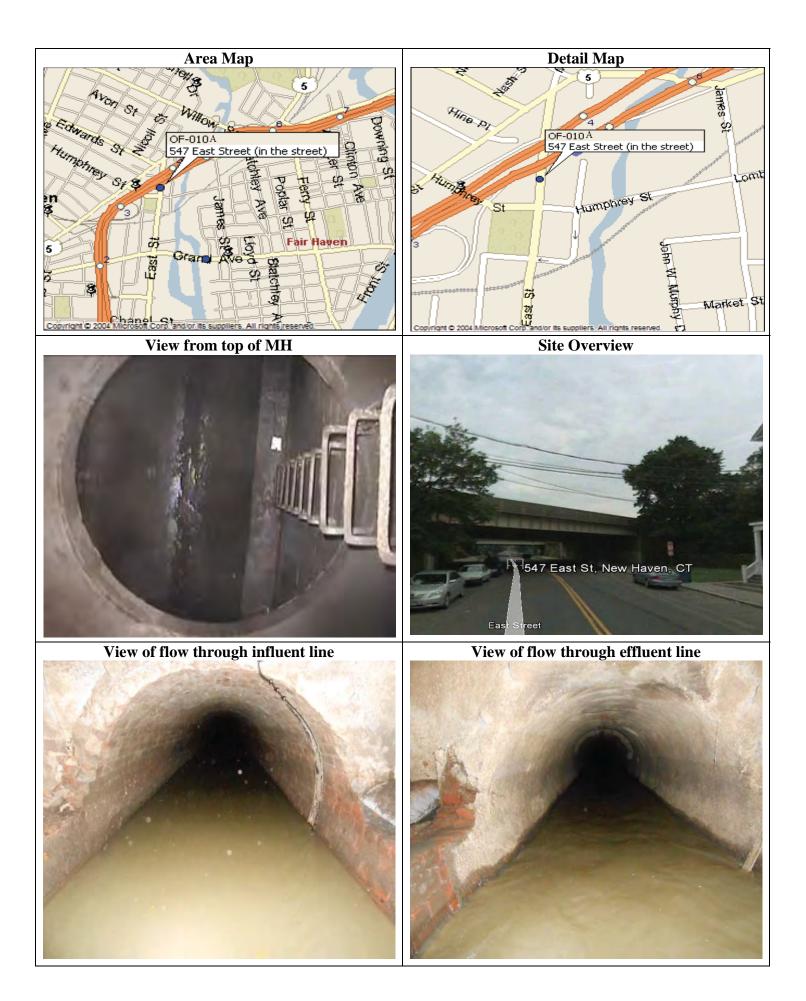
Address/Location: 547 East St. (under the overpass)

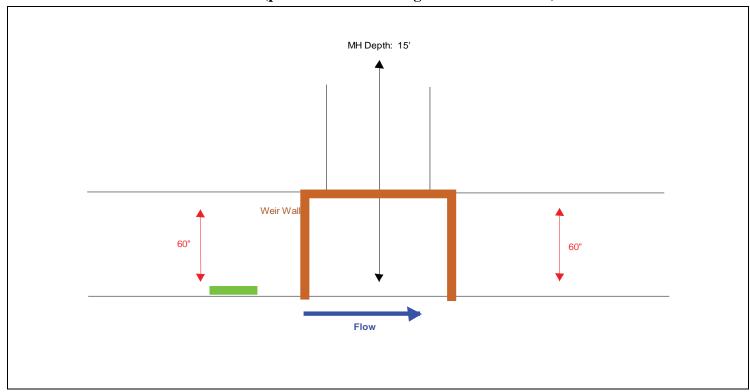
Latitude: N 41°18.846' Longitude: W 72°54.549'

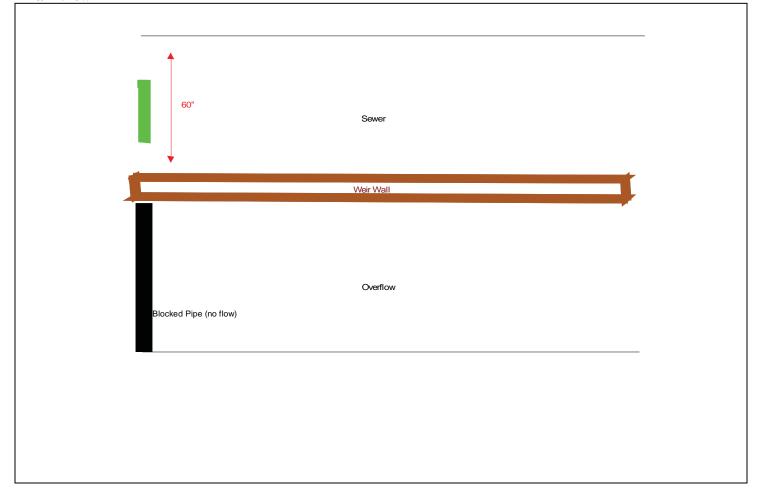




	Site Conditions		
☐ Fair (min site, c. ☐ Poor (rer	problems accessing site) for traffic control, truck accessible off-road an safely carry equipment to site) mote areas, steel embankments, safe place to park, elevated MH >3 ft) Control only (Requires extra traffic control to the Comment in Comments section)		
	nformation: Ianhole: □ Yes □No		
	e e e e e e e e e e e e e e e e e e e		
☐ Influent Approx Dis Pipe Size/(☐ Influent	S: None within camera view ☐ Effluent ☐ Manhole stance to bend:ft Geometry/Material Change: ☐ Effluent ☐ Manhole stance to change:ft		
(detail is co	ber: Can you maintain this site?		
Sensor Con	figuration:		
Level	Serial Numbers when possible) Primary: Pressure Redundant: Pressure		
Velocity	Primary: Doppler Redundant: Doppler		
Meter Log	ger FloWav 293667		
Comments:	:		







Site Location Plan ViewSketch or plat showing upstream and downstream manholes, connections, and bends.



Site Name / Manhole # OF-11-631

Investigation Date: 12/4/12 Time: 11:33 Crew Members: LR/RW/RD Installation Date: 12/4/12 Time: 11:33 Crew Members: LR/RW/RD

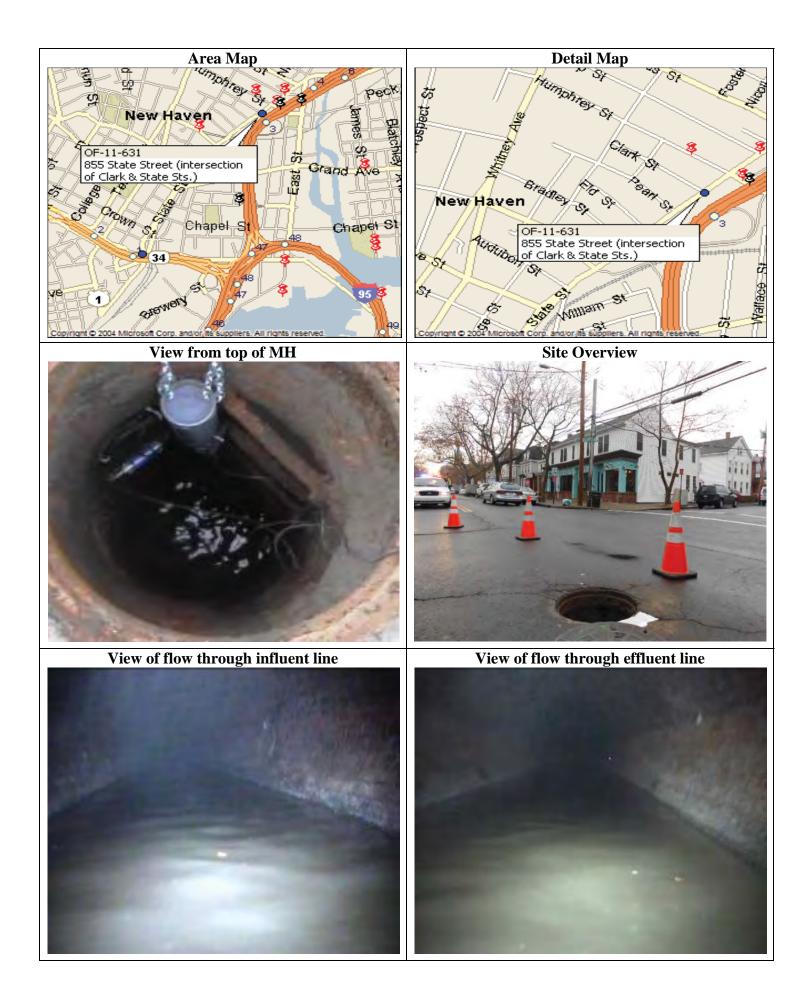
Address/Location: 855 State Street (intersection of Clark & State Sts.)

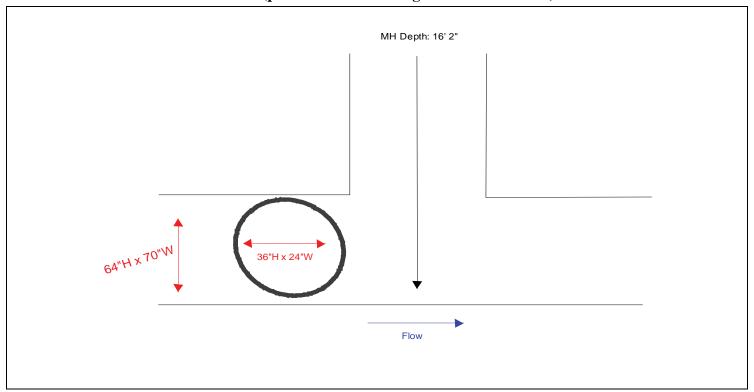
Longitude: W 72°54.784' Latitude: N 41°18.808'

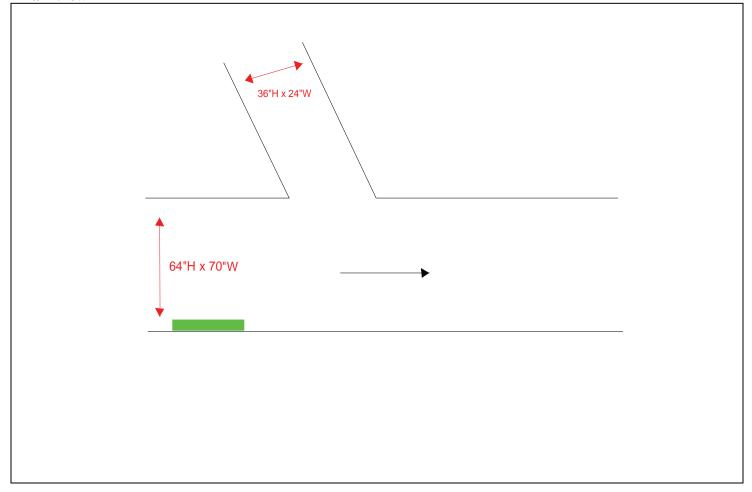
Wat Waathan Canditia



weather C	onaitions:	wet	Dry	Services, Inc.
	Hydrauli	ic Conditions		Site Conditions
Influent F				Site Access:
velocity	1.90 ft/sec			☐ Good (no problems accessing site)
Depth $12.0 \text{ in } \pm .25$ "			□ Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site) □ Poor (remote areas, steel embankments, No safe place to park, elevated MH >3 ft) □ Traffic Control only (Requires extra traffic control □ Unusable (Document in Comments section)	
Turbulence Amplitude: ☐ Less than 0.25" ☐ 0.25" to 0.75" ☐ 0.75" to 1.5" ☐ 1.5" to 3" ☐ Constant then 3"				
☐ Greater t	than 3"			Manhole Information:
				Elevated Manhole: Yes No
	Influent 1	Influent 2	Effluent	Height above ground Manhole depth Structural Integrity of Manhole
Height	36"	64"	64"	Structural Integrity of Manhole: Good Fair Poor
Width	24"	70"	70"	Good a run g root
Material	Brick	Brick	Brick	Pipe Bends: None within camera view
Shape	Egg	Odd	Odd	☐ Influent ☐ Effluent ☐ Manhole
				Approx Distance to bend:ft
Sediment P		ed: <u>3</u>	in. deep _ in. deep	Pipe Size/Geometry/Material Change: ☐ Influent ☐ Effluent ☐ Manhole Approx Distance to change:ft (detail is comments)
Surcharge	/ Backwater Ir	nfluence:		Crew Member: Can you maintain this site? ☐ Yes ☐ No ☐ Maybe
☐ Remains	from rim Rim (potential m		from rim	Sensor Configuration: (Please include Serial Numbers when possible) Primary: 0812-613 Redundant: Primary: 0812-643
a +				Velocity Redundant:
Gas Investi	gation:			
\square Good	<u>20.9</u> (cond	dition)		Meter Logger 293733
				Comments:









Site Name / Manhole # OF-11-819

Investigation Date: 12/4/12 Time: 15:42 Crew Members: LR/RW/RD Installation Date: 12/4/12 Time: 15:42 Crew Members: LR/RW/RD

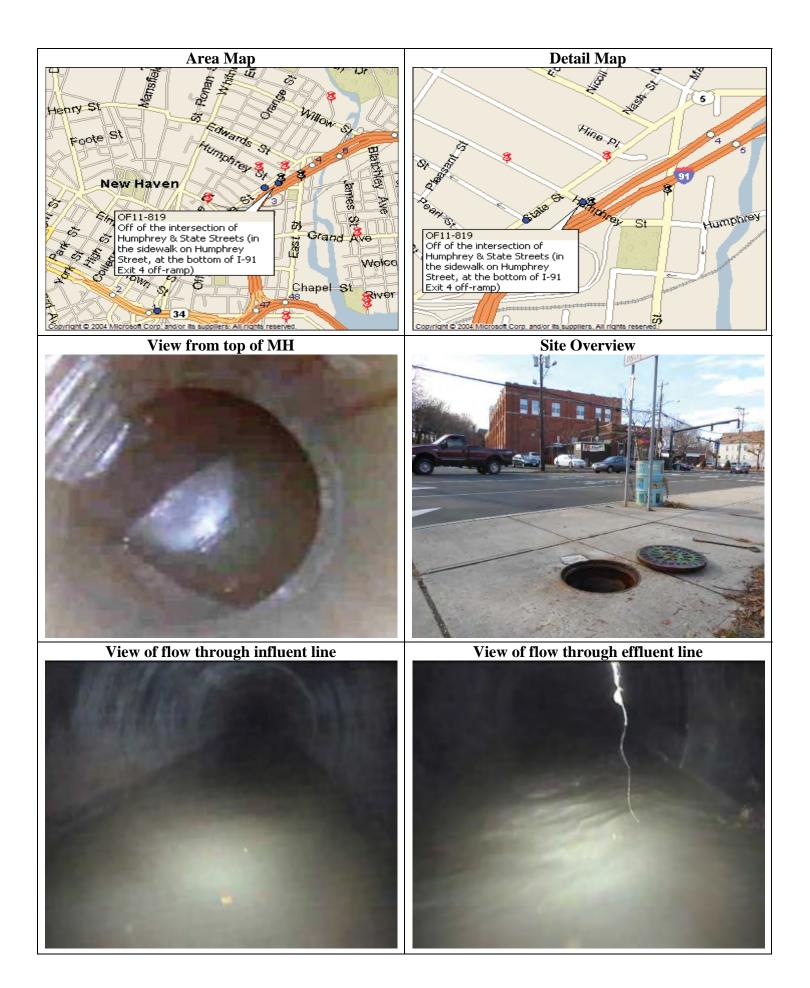
Address/Location: In the sidewalk on Humphrey Street, at the bottom of I-91 Exit 4 off-ramp

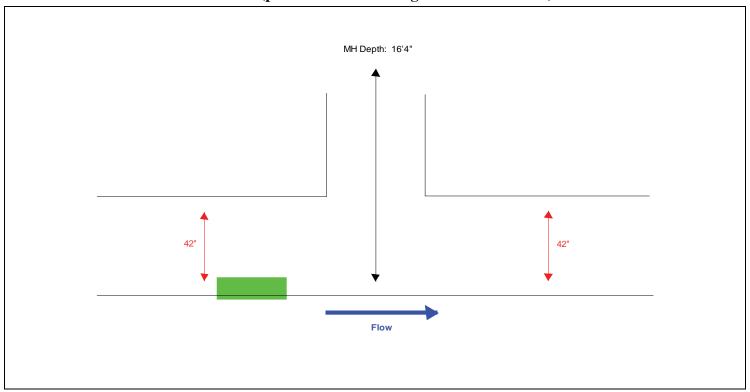
Latitude: N 41°18.838' Longitude: W 72°54.705'

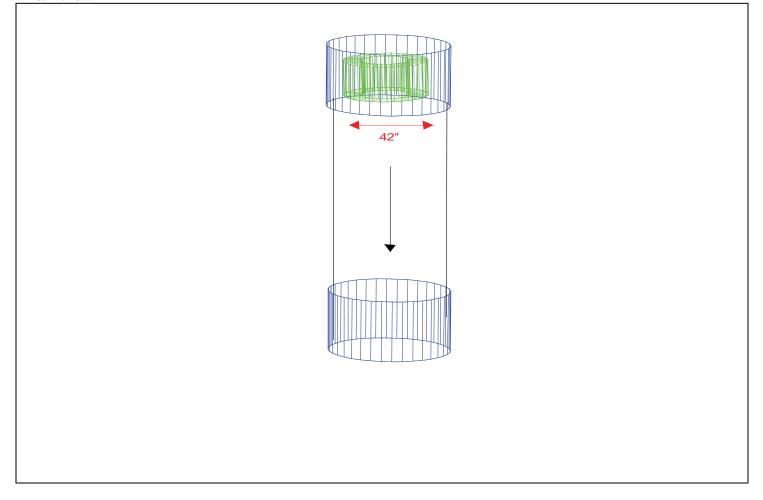
Weather Conditions: Wet Dry



Hydraulic Conditions				Site Conditions
Influent Flow:				
Velocity 2.13 ft/sec				Site Access:
Depth	,			Good (no problems accessing site) Fair (minor traffic control, truck accessible off-road
Turbulenc	ce Amplitude	. •		site, can safely carry equipment to site) Poor (remote areas, steel embankments,
☐ Less than		•		No safe place to park, elevated MH >3 ft)
0.25" to	0.75"			☐ Traffic Control only (Requires extra traffic control
\Box 0.75" to				☐ Unusable (Document in Comments section)
☐ 1.5" to 3				
☐ Greater t	than 3"			Manhole Information:
				Elevated Manhole: Yes No
Sewer Lin	e Character	istics:		.
				Height above ground
TT 1 1	Influent 1	Influent 2	Effluent	Manhole depth 16'4" Structural Integrity of Manhole
Height	42"		42"	Structural Integrity of Manhole: Good Fair Depor
Width	42"		42"	Good Fran 2 1001
Material	RCP		RCP	Pipe Bends:
Shape Round Round		Round	Influent □ Effluent □ Manhole	
				Approx Distance to bend: 0 ft
Sediment P	Dungamt.			Pipe Size/Geometry/Material Change:
Seulment I	resent.			☐ Influent ☐ Effluent ☐ Manhole
Yes	Hard pack	ed:2	in. deep	Approx Distance to change:ft
\square No	Soft:			(detail is comments)
Cumahamaa	/ Doolywatan I	mfly on oo.		Crew Member: Can you maintain this site?
Surcharge	/ Backwater 1	imiuence.		☐ Yes ☐ No ☐ Maybe
√No evide	ence visible	>		Sensor Configuration:
☐ Remains	in pipe			(Please include Serial Numbers when possible)
	from rim			Primary: 1012-724
☐ Reaches☐ Evidence	Rim (potential in e unclear:		from rim	Level Redundant:
				Valority Primary: 1012 -724
Gas Investi	igation:			Velocity Redundant:
				Meter Logger 293726
\square Good	<u>20.9</u> (co	ondition)		
				Comments:









Site Name / Manhole # OF 012A

Time: 15:58 Investigation Date: 7/11/12 Crew Members: RD/LR/KE Installation Date: 8/13/12 Time: 15:00 Crew Members: RD/LR/KE

Address/Location: 75 Mitchell Drive (across from Wilbur Cross Field)

Latitude: N 41°19.254' Longitude: W 72°54.350'

(Dry Weather Conditions: Wet



Hydraulic Conditions

Influent Flow:	Dry pipe
Velocity	ft/sec
Depth	in

Turbulence Amplitude: NA

Less than 0.25" 0.25" to 0.75" 0.75" to 1.5" 1.5" to 3" Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	24"		36"
Width	24"		36"
Material	Concrete		Brick
Shape	Round		Round

Sediment Present:

Yes	Hard packed:	in. deep
No	Soft:	in. deep

Surcharge / Backwater Influence:

No evidence visible	
Remains in pipe	
ft from rim	
Reaches Rim (potential meter damage)	
Evidence unclear:	_ft from rim
ne Invectigation	

Gas Investigation:

Good 20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments, No safe place to park, elevated MH >3 ft) Traffic Control only (Requires extra traffic control Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole:	Yes	No

Height above ground Manhole depth 7'6" Structural Integrity of Manhole: Good) Fair Poor

Pipe Bends: Drop-in (2 tiers) Influent Effluent Manhole Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

Crew Member: Can you maintain this site?

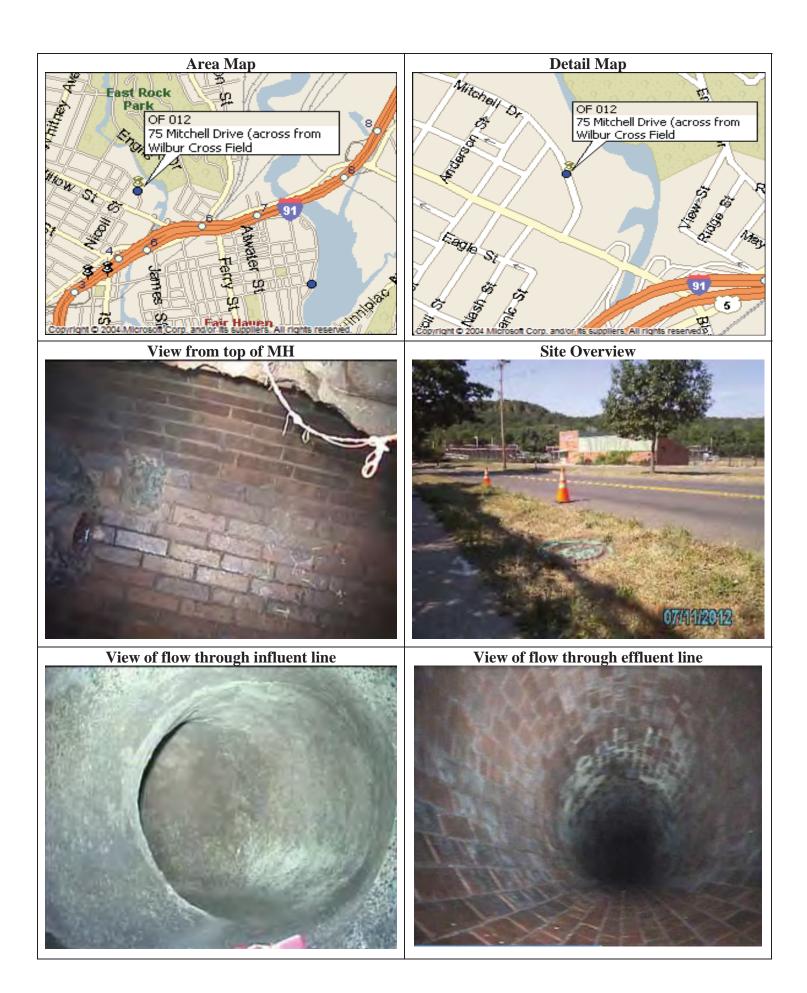
Yes No Maybe

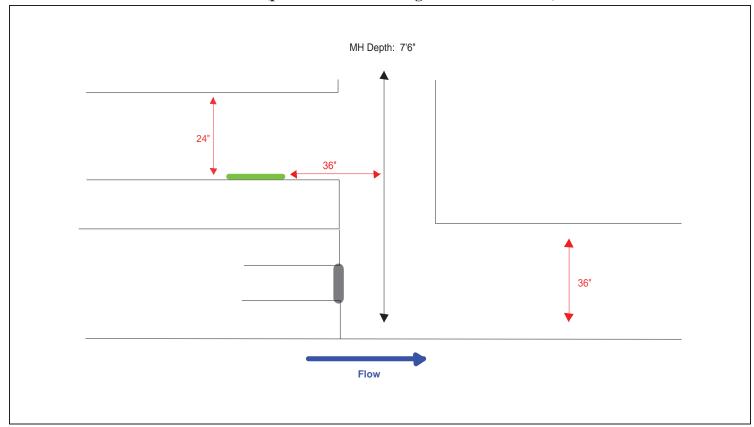
Sensor Configuration:

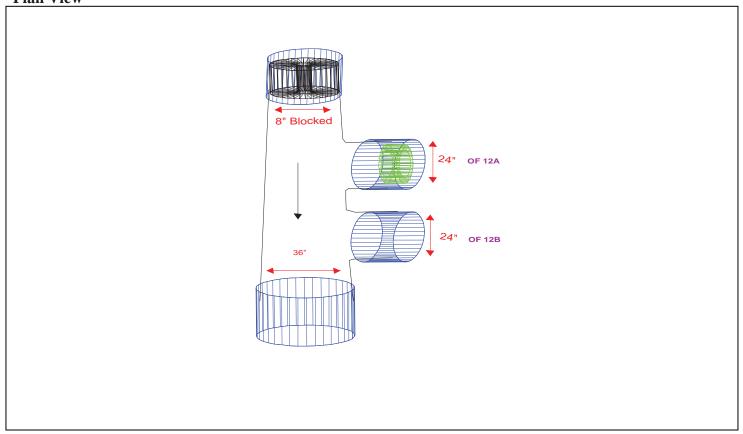
(Please include Serial Numbers when possible)

Level		mary: Pressure
Lever	Redundant: Pressure	
Velocity	Pri	mary: Doppler
Verseity	Re	dundant: Doppler
Meter Logger		FloWav 293698

Comments: *MH* is located in the grass next to the sidewalk







Site Name / Manhole # OF-012B

Investigation Date: 7/11/12 Time: 15:58 Crew Members: RD/LR/KE Installation Date: 8/13/12 Time: 15:00 Crew Members: RD/LR/KE

Address/Location: 75 Mitchell Drive (across from Wilbur Cross Field)

Latitude: N 41°19.254' Longitude: W 72°54.350'

Weather Conditions: Wet Dry



H	vdra	ulic	Con	dif	ions
11	y ui a	unc	CUI	ull	

Influent Flow: Velocity	Ci /
Depth	_ in

Turbulence Amplitude: *NA*

Less than 0.25" 0.25" to 0.75" 0.75" to 1.5" 1.5" to 3" Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	24"		36"
Width	24"		36"
Material	Concrete		Concrete
Shape	Round		Brick

Sediment Present:

Yes	Hard packed:	in. deep
No	Soft:	in. deep
Surcharge /	Backwater Influence:	

Surcharge / Dackwater Influence

<	No evidence visible
	Remains in pipe
	ft from rim
	Reaches Rim (potential meter damage)
	Evidence unclear:ft from rim
_	
G	as Investigation:
(Good (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments, No safe place to park, elevated MH >3 ft) Traffic Control only (Requires extra traffic control Unusable (Document in Comments section)

Manhole Information:

Elevated	Manhole:	Yes	

No

Height above ground
Manhole depth

Structural Integrity of Manhole:

Good
Fair

Poor

Pipe Bends: Drop-in (2 tiers)
Influent Effluent Manhole
Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole
Approx Distance to change:_____ft
(detail is comments)

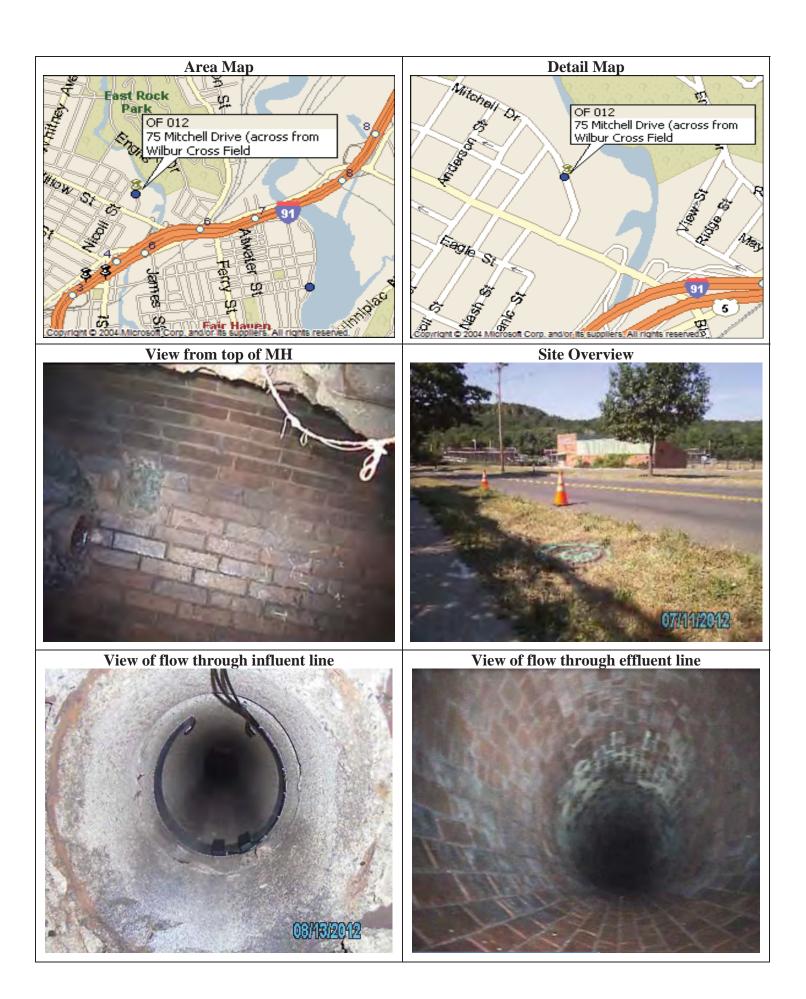
Crew Member: Can you maintain this site?
Yes No Maybe

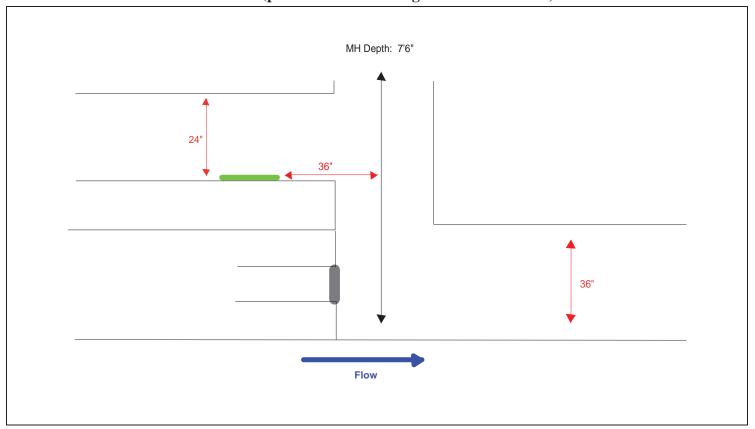
Sensor Configuration:

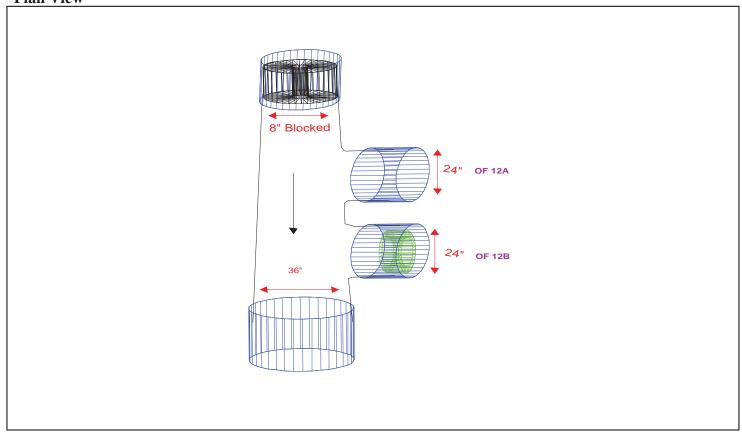
(Please include Serial Numbers when possible)

Level	Primary: Pressure	
Redundant: Pressure		dundant: Pressure
Velocity	Primary: Doppler	
Redundant: Dopple		dundant: Doppler
Meter Logger FloWav 293702		

Comments: *MH* is located in the grass next to the sidewalk







Site Name / Manhole # OF-15 DS

Investigation Date: 10/3/12 Time: 15:30 Crew Members: RD/LR/RW Installation Date: 10/3/12 Time: 15:30 Crew Members: RD/LR/RW

Address/Location: End of James Street

Latitude: N 41°18.123' Longitude: W 72°54.135'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity <u>0.74</u> ft/sec

Depth 18.0 in

Turbulence Amplitude:

Less than 0.25"
0.25" to 0.75"
0.75" to 1.5"

Greater than 3"

1.5" to 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	46"		48"
Width	46"		48"
Material	Brick		Concrete
Shape	Round		Round

Sediment Present:

Yes Hard packed: ______ in. deep
No Soft: _____ in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe
ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: _____ft from rim

Gas Investigation:

(Good) $\underline{20.9}$ (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

 $Fair \ \, \mbox{(minor traffic control, truck accessible off-road site, can safely carry equipment to site)} \\ Poor \ \, \mbox{(remote areas, steel embankments,} \\$

No safe place to park, elevated MH >3 ft)
Traffic Control only (Requires extra traffic control
Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes (No)

Height above ground ____ Manhole depth 9'4"

Structural Integrity of Manhole:

Good Fair Poor

Pipe Bends: None within camera view
Influent Effluent Manhole

Pipe Size/Geometry/Material Change:

Approx Distance to bend:____ft

Influent Effluent Manhole
Approx Distance to change: _____ft
(detail is comments)

Crew Member: Can you maintain this site?

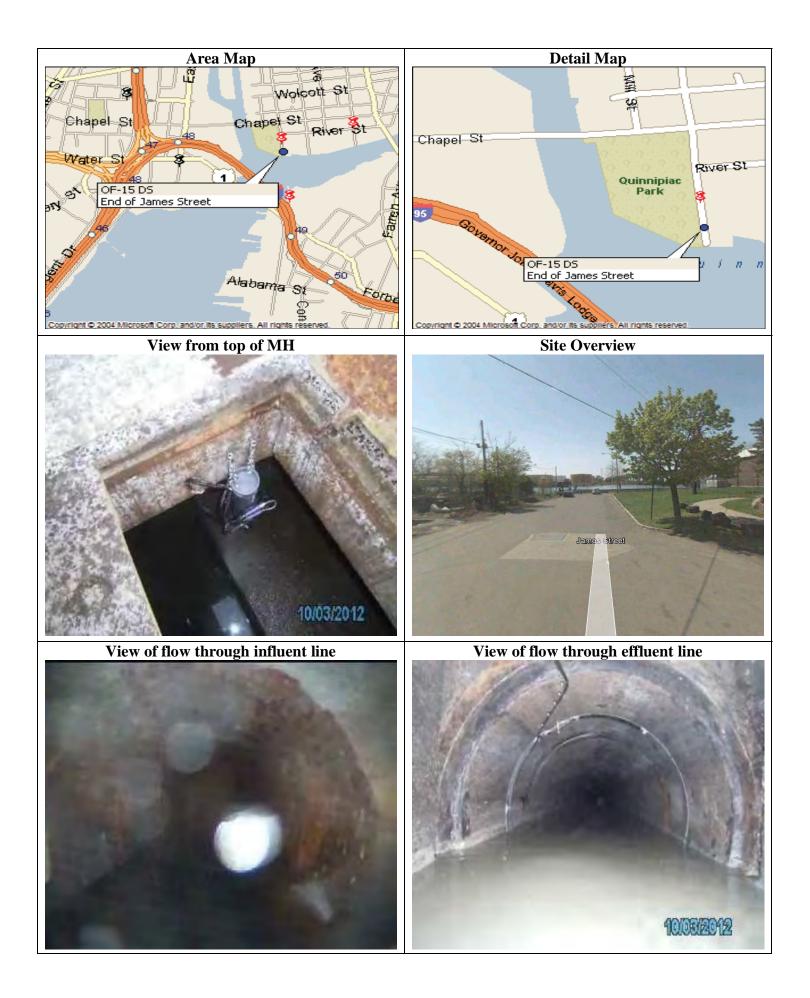
Yes No Maybe

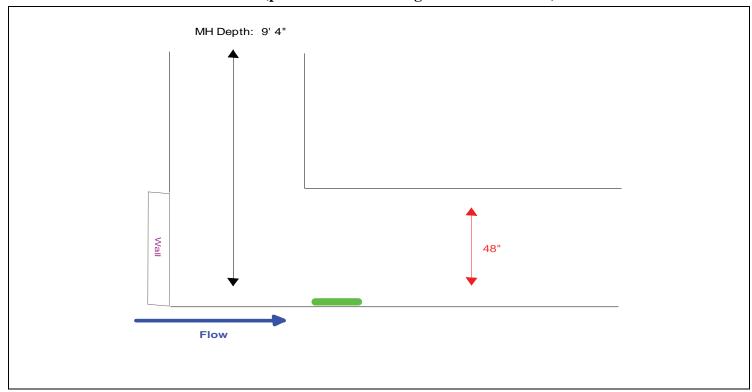
Sensor Configuration:

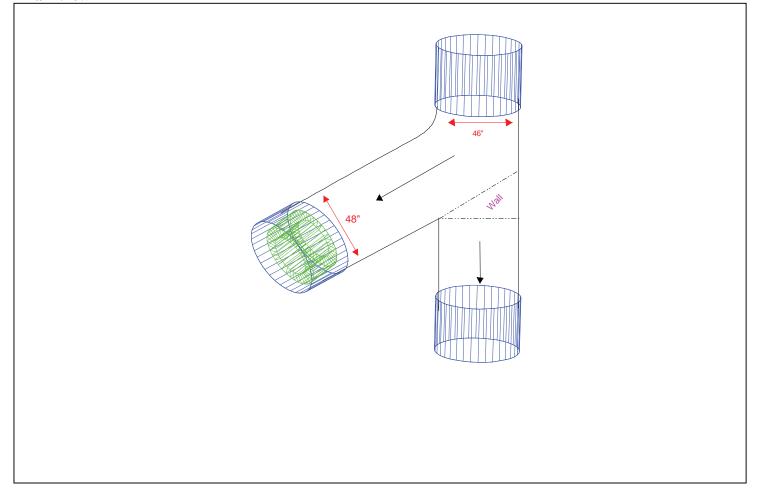
(Please include Serial Numbers when possible)

Level	Pri	Primary: 0812-629	
Level	Redundant: 0812-637		
Velocity	Primary: 0812-629		
		dundant: 0812-637	
Meter Logger Triton 293721			

Comments:







Site Name / Manhole # OF-15 US

Investigation Date: 10/3/12 Time: 12:30 Crew Members: RD/LR/RW Installation Date: 10/3/12 Time: 12:30 Crew Members: RD/LR/RW

Address/Location: 15 James Street

Latitude: N 41°18.123' Longitude: W 72°54.135'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity <u>0.94</u> ft/sec

Depth 23.5 in

Turbulence Amplitude:

Less than 0.25"

0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	46"		
Width	46"		
Material	Brick		
Shape	Round		

Sediment Present:

Yes	Hard packed:		in. deep
No	Soft:	trace	in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: _____ft from rim

Gas Investigation:

(Good)	<u>20.9</u>	(condition)
--------	-------------	-------------

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments, No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole Information:

Elevated Mannole: Yes (No	ole: Yes (No.)	Elevated Manhole:
---------------------------	----------------	-------------------

Height above ground ___ Manhole depth <u>9'4"</u> Structural Integrity of Manhole: Good Fair Poor

Pipe Bends: None within camera view

Influent Effluent Manhole Approx Distance to bend:____ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole
Approx Distance to change:_____ft
(detail is comments)

Crew Member: Can you maintain this site?

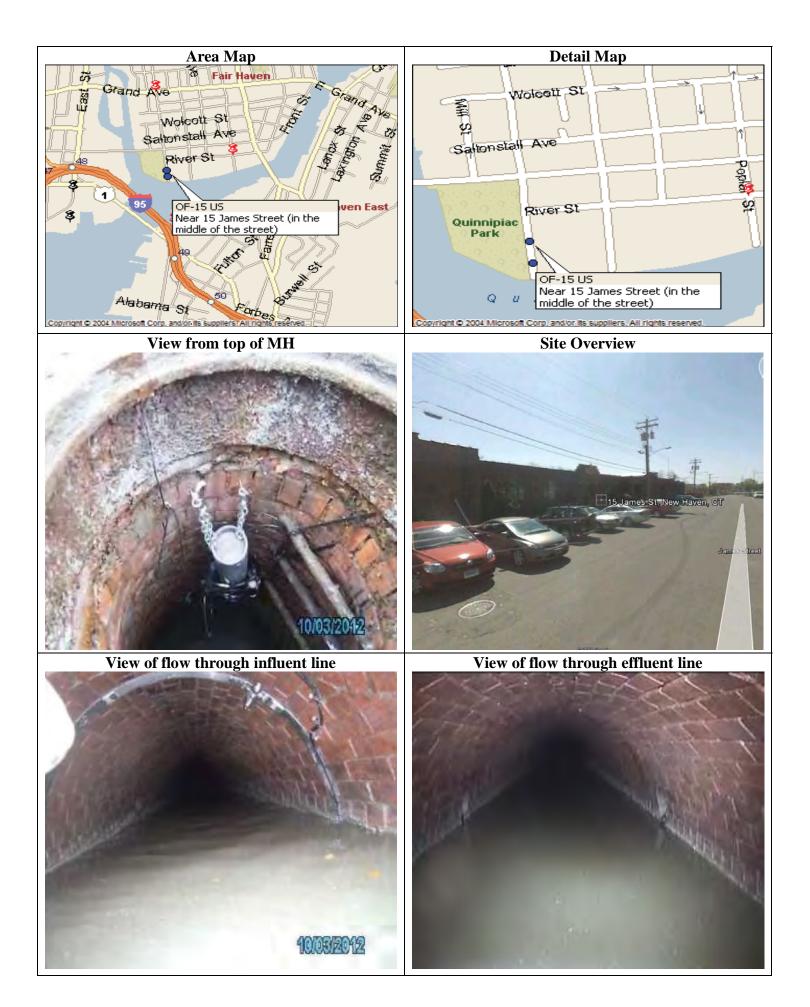
Yes No Maybe

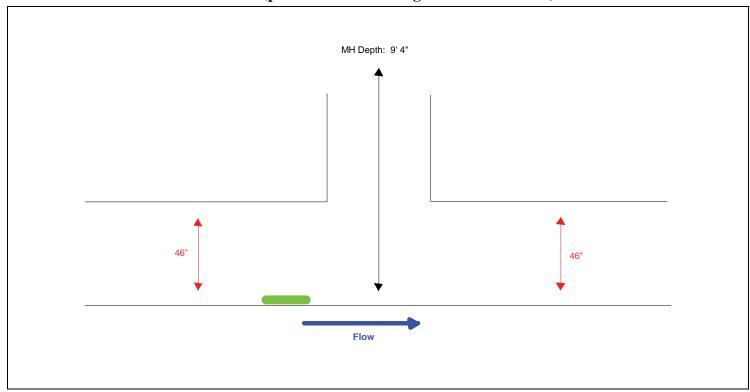
Sensor Configuration:

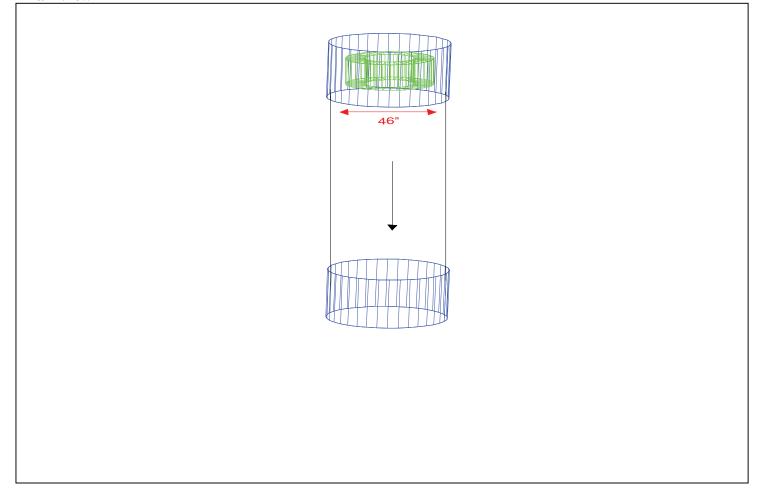
(Please include Serial Numbers when possible)

Level	Primary: 0912-624		Primary: 0912-624	
Level	Redundant: 0812-633			
Velocity	Primary: 0912-624			
		dundant: 0812-633		
Meter Logger Triton 293722				

Comments:







Site Name / Manhole # OF-016

Investigation Date: 8/1/12 Time: 12:00 Crew Members: RD/GM
Installation Date: 8/30/12 Time: 14:00 Crew Members: RD/LR/KE

Address/Location: Intersection of Poplar & River Sts. (in the crosswalk of Poplar St.)

Latitude: N 41°18.189' Longitude: W 72°53.772'

Weather Conditions: Wet



Hydraulic Conditions

Influent Flow: *Standing water*

Velocity <u>0.00</u> ft/sec

Depth ____ in

Turbulence Amplitude:

Less than 0.25" 0.25" to 0.75" 0.75" to 1.5" 1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	48"		48"
Width	60.5"		60.5"
Material	Brick		Brick
Shape	Odd		Odd

Sediment Present: *not measurable*

<	Yes	\geq
	No	

Hard packed: _____ in. deep Soft: ____ in. deep

Surcharge / Backwater Influence:

No evidence visible
Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Evidence unclear. _____nt from thin

Gas Investigation:

Good

____(condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments, No safe place to park, elevated MH >3 ft) Traffic Control only (Requires extra traffic control Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes

(No

Height above ground ___

Manhole depth 7'7"
Structural Integrity of Manhole:

Good Fair Poor

Pipe Bends: None within camera view
Influent Effluent Manhole
Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole
Approx Distance to change:_____ft
(detail is comments)

Crew Member: Can you maintain this site?

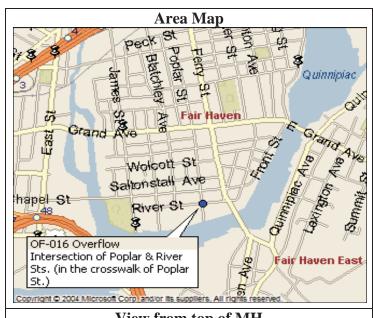
Yes No Maybe

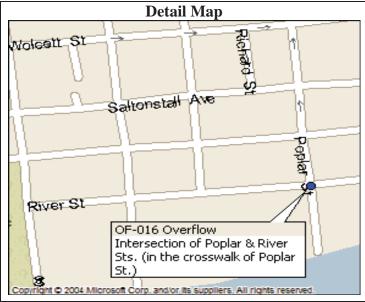
Sensor Configuration:

(Please include Serial Numbers when possible)

Level	Primary: Pressure
	Redundant: Pressure
Velocity	Primary: Doppler
	Redundant: Doppler
Meter Log	ger FloWav 293706

Comments: Sensors 5' down pipe, 15' DS from weir wall facing upstream 1) 5:50 2) 6:10



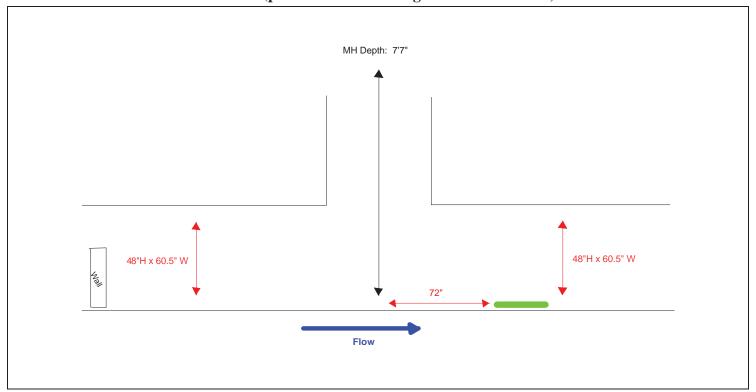


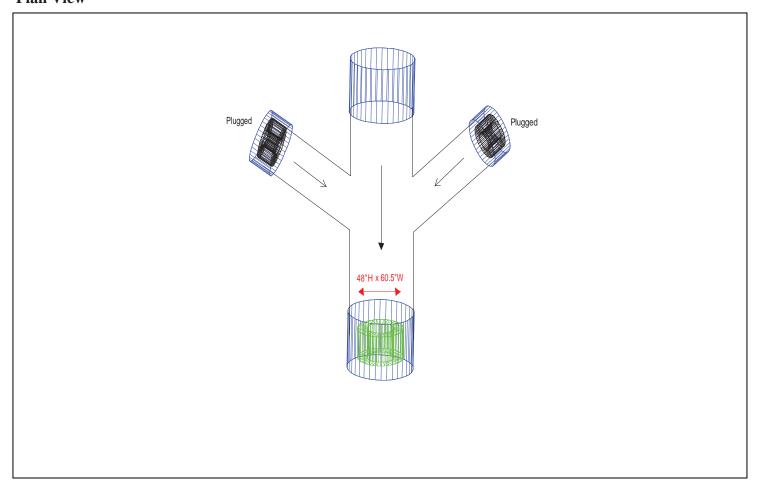


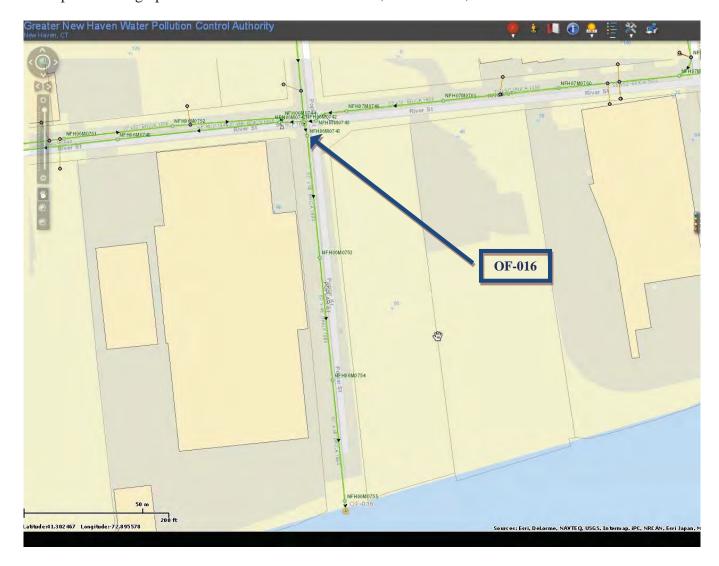












Site Name / Manhole # OF-019

Investigation Date: 7/12/12 Time: 15:14 Crew Members: RD/LR/KE Installation Date: 8/13/12 Time: 10:25 Crew Members: RD/LR/KE

Address/Location: 279 Front Street (in front of Waucoma Yacht Club)

Latitude: N 41°18.801' Longitude: W 72°53.265'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow: Dry Pipe
Velocity 0.0 ft/sec

Depth 0.0 in

Turbulence Amplitude: Dry Pipe

Less than 0.25" 0.25" to 0.75" 0.75" to 1.5" 1.5" to 3" Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	24"		24"
Width	24"		24"
Material	Clay		Clay
Shape	Round		Round

Sediment Present:

Yes Hard packed: in. deep No Soft: in. deep	
---	--

Surcharge / Backwater Influence:

_ft from rim

Gas Investigation:

Good	20.9 (condition)
------	------------------

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments, No safe place to park, elevated MH >3 ft) Traffic Control only (Requires extra traffic control Unusable (Document in Comments section)

Manhole Information:

Height above ground	ft.
Manhole depth	<u>6'7"</u>
Structural Integrity of	Manhole:
Good Fair	Poor

Pipe Bends: None within camera view
Influent Effluent Manhole
Approx Distance to bend: 0.0 ft

Pipe Size/Geometry/Material Change:

Influent	Effluent	Manhole
Approx Dista	ince to chang	ge: ft
(detail is com	iments)	

Crew Member: Can you maintain this site?

Yes No Maybe

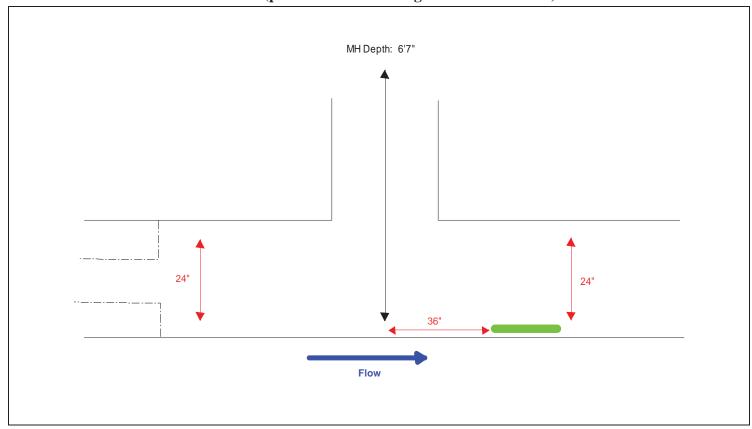
Sensor Configuration:

(Please include Serial Numbers when possible)

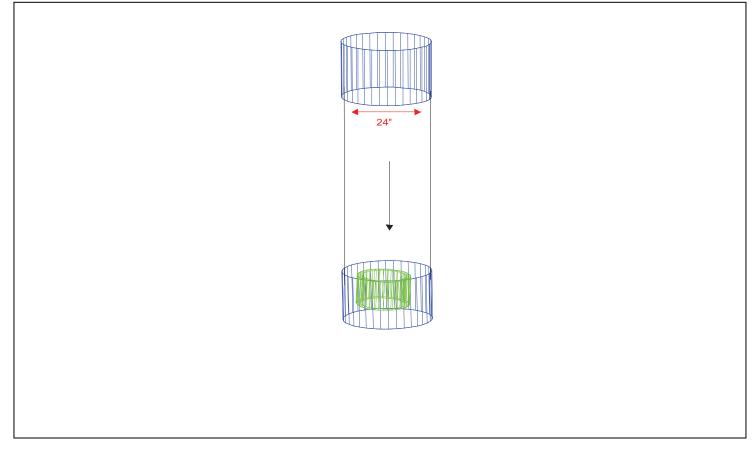
	Level	Pri	mary:
		Re	dundant:
	Velocity	Pri	mary:
	, 515 5169	Re	dundant:
	Meter Logger		FloWav 293701

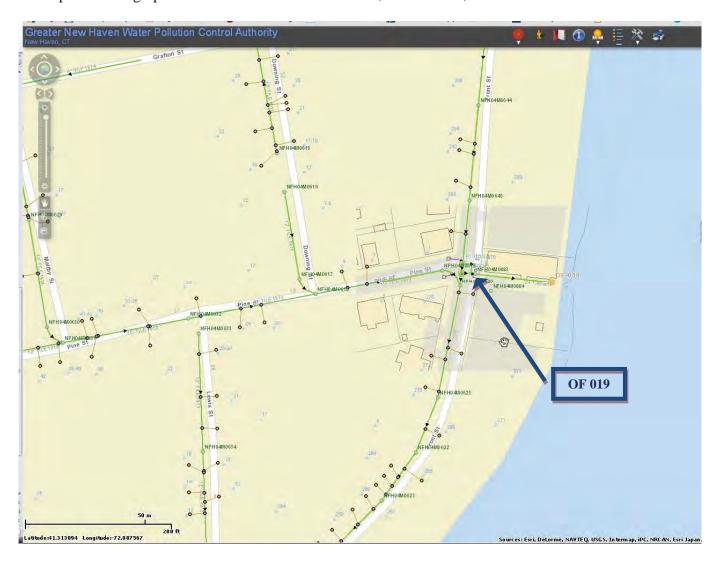
Comments:











Site Name / Manhole # OF-20

Investigation Date: 3/6/13 Time: 11:00 Crew Members: GM/LL/RW

Installation Date: 3/27/13 Time: 12:20 Crew Members: LR/LL/KE

Address/Location: Intersection of Clifton Street & Quinnipiac Avenue

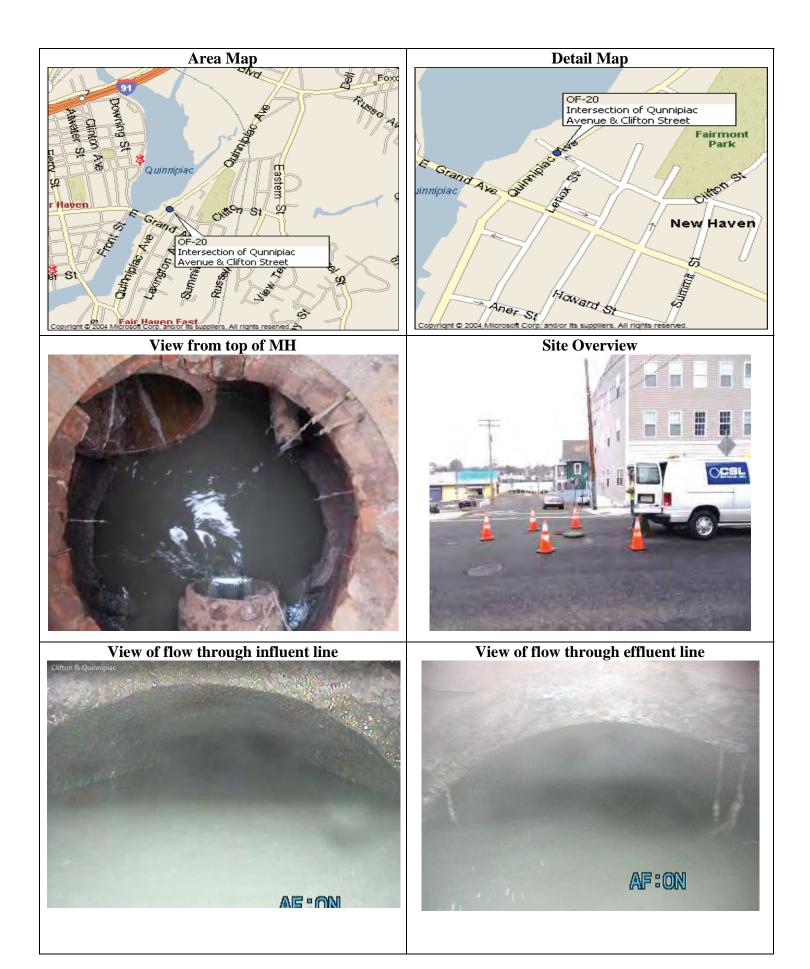
Latitude: N 41°19.564' Longitude: W 72°53.089'

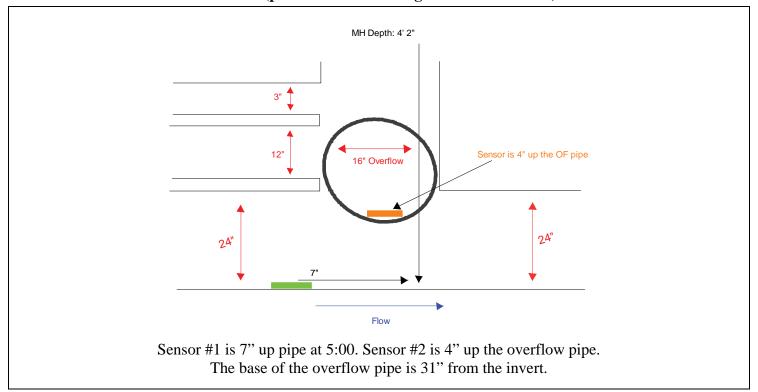
Weather Conditions: Wet Dry

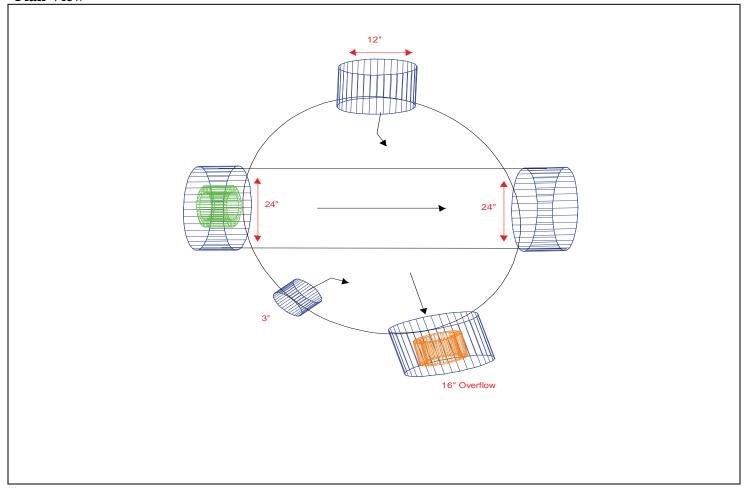


Wedner Conditions. Wet Diy			
Hydraulic Conditions	Site Conditions		
Influent Flow: Velocity 1.75 ft/sec Depth 18.0 in Turbulence Amplitude: Less than 0.25" □ 0.25" to 0.75" □ 0.75" to 1.5" □ 1.5" to 3" □ Greater than 3"	Site Access: Good (no problems accessing site) Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site) Poor (remote areas, steel embankments, No safe place to park, elevated MH >3 ft) Traffic Control only (Requires extra traffic control Unusable (Document in Comments section) Manhole Information:		
	Elevated Manhole: Yes No		
Sewer Line Characteristics: Influent 1 Influent 2 Influent 3 Effluent Overflow Height 24" 12" 3" 24" 16" Width 24" 12" 3" 24" 16"	Height above ground Manhole depth <u>4' 2"</u> Structural Integrity of Manhole: ☐ Good ☐ Fair ☐ Poor		
Material Concrete Cast Iron Steel Concrete Cast Iron	D' - D - L - W		
Shape Round Round Round Oval	Pipe Bends: None within camera view ☐ Influent ☐ Effluent ☐ Manhole Approx Distance to bend:ft		
Sediment Present: Yes Hard packed: in. deep No Soft: in. deep	Pipe Size/Geometry/Material Change: ☐ Influent ☐ Effluent ☐ Manhole Approx Distance to change:ft (detail is comments)		
Surcharge / Backwater Influence: No evidence visible	Crew Member: Can you maintain this site? ☐ Yes ☐ No ☐ Maybe		
 □ Remains in pipe □ft from rim □ Reaches Rim (potential meter damage) 	Sensor Configuration: (Please include Serial Numbers when possible) Primary: Pressure		
□ Evidence unclear:ft from rim	Level Redundant: Doppler		
Gas Investigation: 20.9 (condition)	Velocity Primary: Pressure Redundant: Doppler		
	Meter Logger Flowav 293468 Comments: 34.75" bottom of the pipe to the bottom of		

the connection

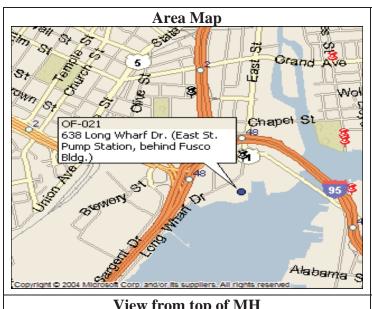


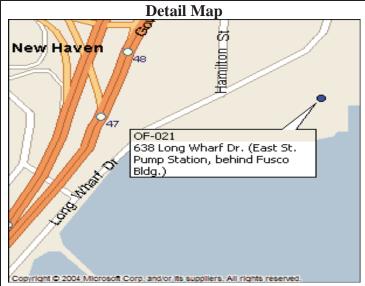






Site Name / Manhole # OF-021 Primary: X Alte	ernate: Grade: Grade:	
Investigation Date: 7/12/12 Time: 14:18 Crew Me	embers: RD/LR/KE	
Installation Date: 11/15/12 Time: 8:38 Crew Members: LR/KE/BW		
Address/Location: 638 Long Wharf Dr. (East St. Pump Statio	on)	
Latitude: N 41°17.845' Longitude: W 72°54.657'	(CSL	
Weather Conditions: Wet Dry	Services, Inc.	
Hydraulic Conditions	Site Conditions	
Influent Flow: Velocity 1.76 ft/sec Depth 46.50 in Turbulence Amplitude: Standing water Less than 0.25" 0.25" to 0.75" 0.75" to 1.5" 1.5" to 3" Greater than 3" Sewer Line Characteristics: Influent 1 Influent 2 Effluent Height 66" Width 66" Material Concrete Shape Round Sediment Present: Could not determine Yes Hard packed: in. deep No Soft: in. deep in. deep	Site Access: Good (no problems accessing site) Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site) Poor (remote areas, steel embankments, No safe place to park, elevated MH >3 ft) Traffic Control only (Requires extra traffic control Unusable (Document in Comments section) Manhole Information: Elevated Manhole: Yes No Height above ground Manhole depth 12'2" Structural Integrity of Manhole: Good Fair Poor Pipe Bends: Influent Effluent Manhole Approx Distance to bend: 3.0 ft Pipe Size/Geometry/Material Change: Influent Effluent Manhole Approx Distance to change: ft (detail is comments)	
Surcharge / Backwater Influence: No evidence visible Remains in pipeft from rim Reaches Rim (potential meter damage) Evidence unclear:ft from rim Gas Investigation: Good 20.9 (condition)	Crew Member: Can you maintain this site? Yes No Maybe Sensor Configuration: (Please include Serial Numbers when possible) Level Primary: 0812-592 Redundant: 0712-588 Velocity Redundant: 0712-588 Meter Logger Telog 293697 Comments: Key needed for access	





View from top of MH

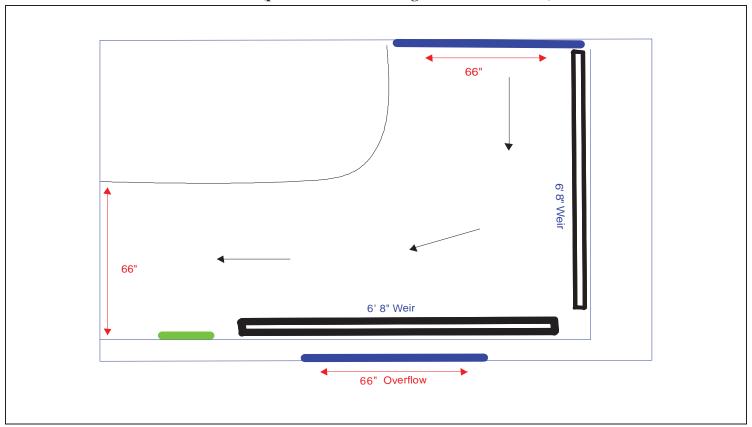


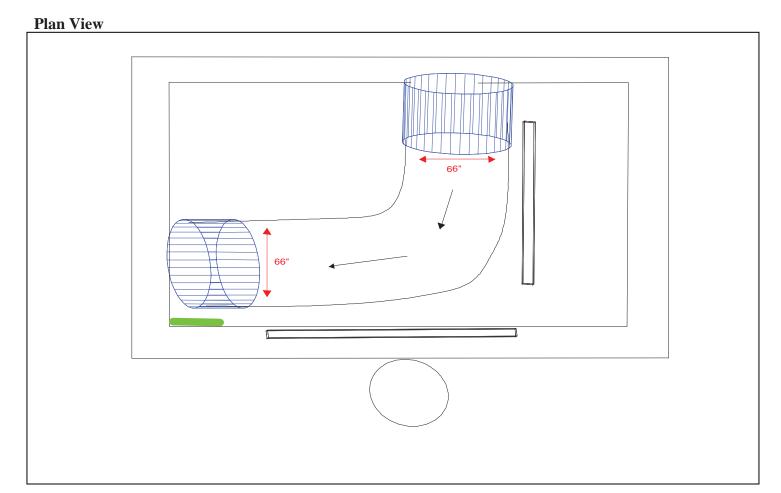


View of flow through influent



View of flow through effluent line







Site Name / Manhole # OF-024 DS

Investigation Date: 6/21/12 Time: 16:02 Crew Members: LR/CL/RO Installation Date: 7/31/12 Time: 14:30 Crew Members: RD/GM/EW

Address/Location: Between Sea St. & Blvd. Pump Station (tall fence between 2 baseball fields

Latitude: N 41°17.023' Longitude: W 72°55.612'

(Dry) Weather Conditions: Wet



Hydraulic Conditions

Influent Flow:

Velocity 2.82 ft/sec

18.0 in. Depth

Turbulence Amplitude:

Less than 0.25"

0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	48"		48"
Width	48"		48"
Material	Ductile Iron		Ductile Iron
Shape	Round		Round

Sediment Present:

Yes	
(N_0)	

Hard packed: _____in. deep

Soft: _____ in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: _____ ft from rim

Gas Investigation:

Good

(condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road) site, can safely carry equipment to site)

Poor (remote areas, steel embankments, No safe place to park, elevated MH >3 ft) Traffic Control only (Requires extra traffic control Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes (No

Height above ground ___ Manhole depth 11'1" Structural Integrity of Manhole: Good Fair Poor

Pipe Bends: None within camera view Influent Effluent Manhole

Approx Distance to bend: 8 ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

Crew Member: Can you maintain this site?

Yes) No Maybe

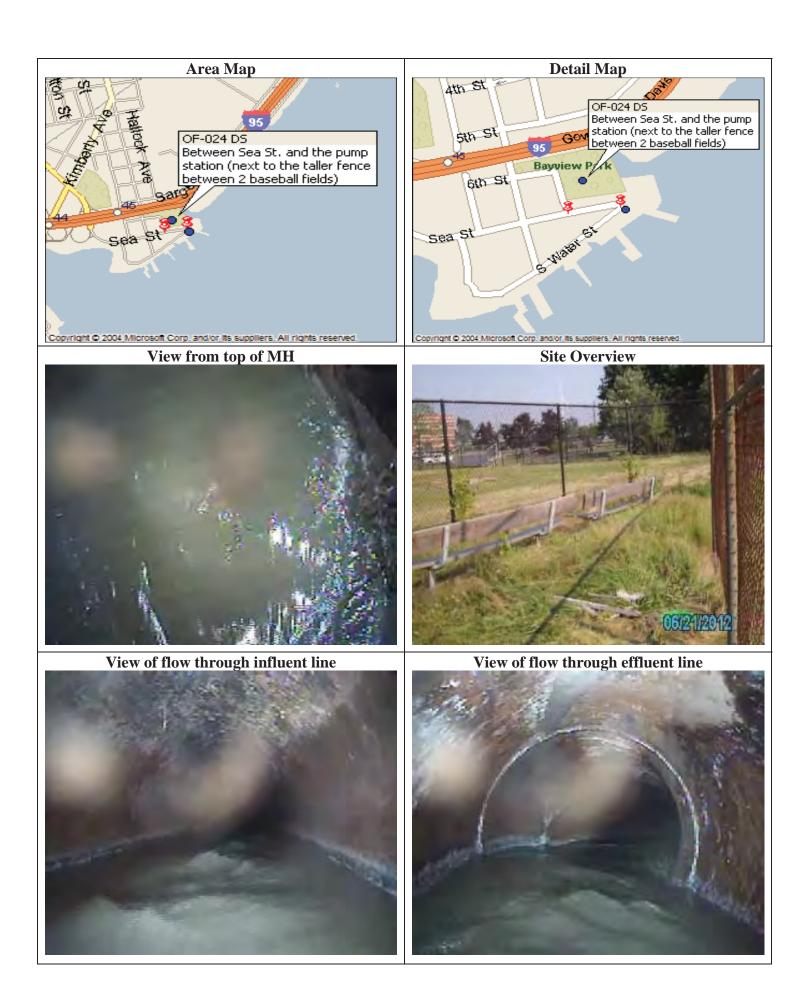
Sensor Configuration:

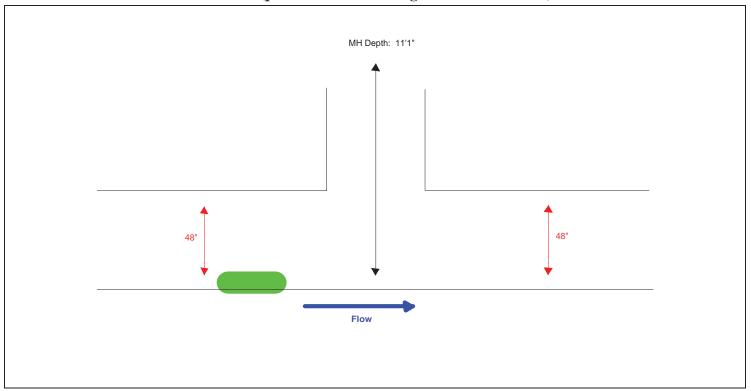
(Please include Serial Numbers when possible)

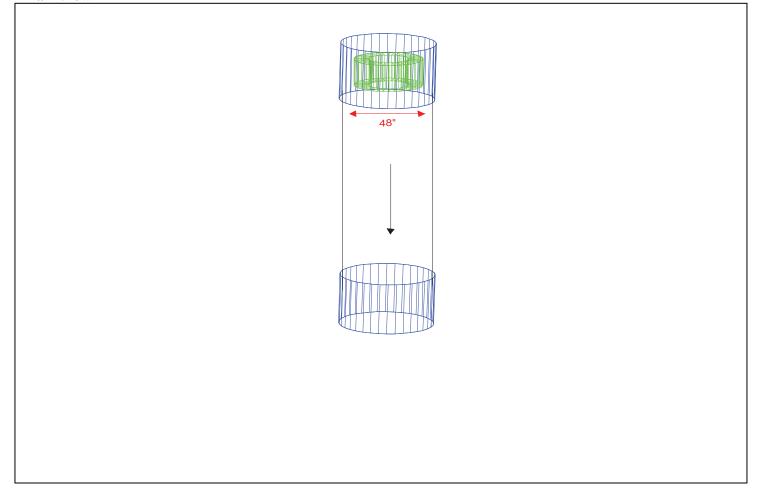
Level	Pri	mary: Pressure	
20,01	Redundant: Pressure		
Velocity	Primary: Doppler		
Velocity	Re	dundant: Doppler	
Meter Logs	gger FloWav 293657		

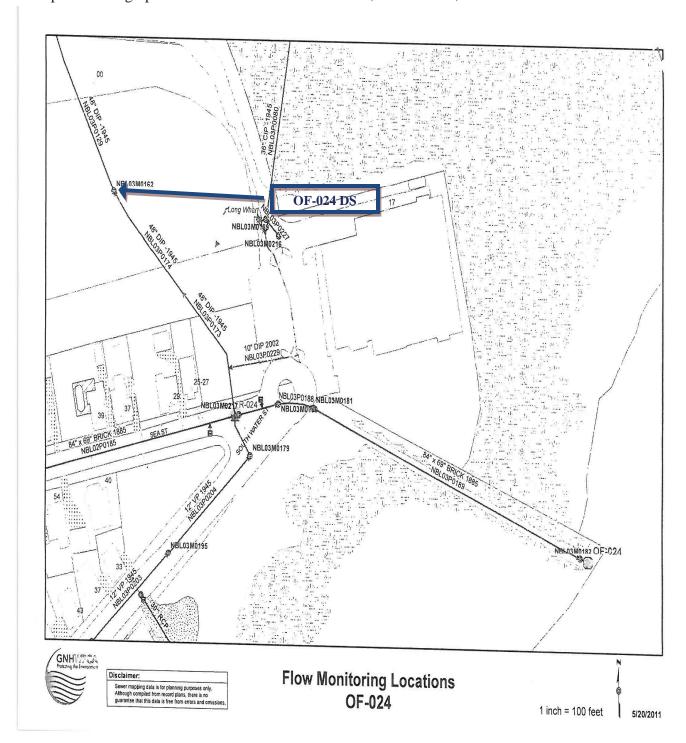
Comments: Next to the taller fence between 2

baseball fields









Site Name / Manhole # OF-024 US

Time: 16:42 Crew Members: LR/CL/RO Investigation Date: 6/21/12 Time: 10:00 Crew Members: RD/GM/EW Installation Date: 7/31/12

Address/Location: 75 Sea Street

Latitude: N 41°16.981' Longitude: W 72°55.706'

Dry Weather Conditions: Wet



Hydraulic Conditions

Influent Flow:

Velocity 2.52 ft/sec

Depth 18.25 in.

Turbulence Amplitude:

Less than 0.25" 0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	69"		69"
Width	84"		84"
Material	Brick		Brick
Shape	Oval		Oval

Sediment Present:

Yes No

Hard packed: _____ in. deep Soft: 3.0 in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

_ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: _____ft from rim

Gas Investigation:

Good

____ (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road) site, can safely carry equipment to site)

Poor (remote areas, steel embankments, No safe place to park, elevated MH >3 ft) Traffic Control only (Requires extra traffic control Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes



Height above ground ___

Manhole depth 13'2" Structural Integrity of Manhole:

Good Fair Poor

Pipe Bends: *None within camera view* Effluent Influent Manhole Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

Crew Member: Can you maintain this site?

Yes) No Maybe

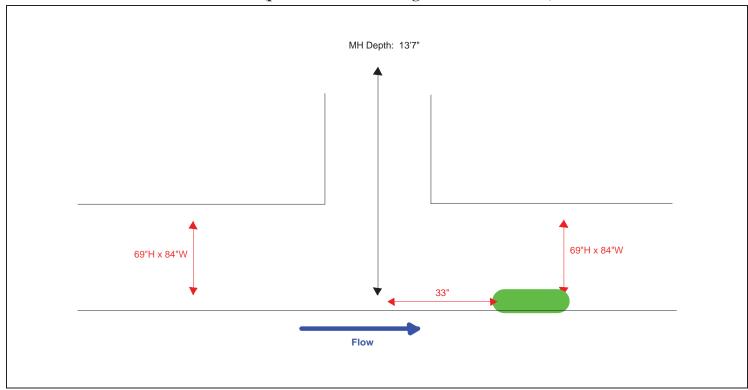
Sensor Configuration:

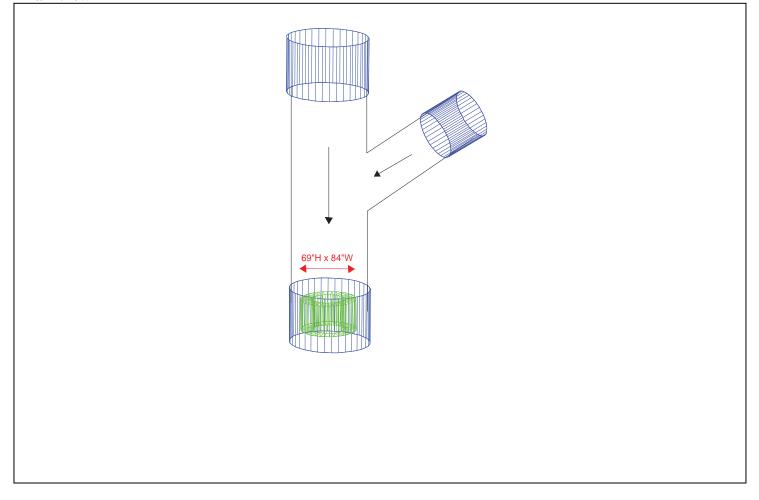
(Please include Serial Numbers when possible)

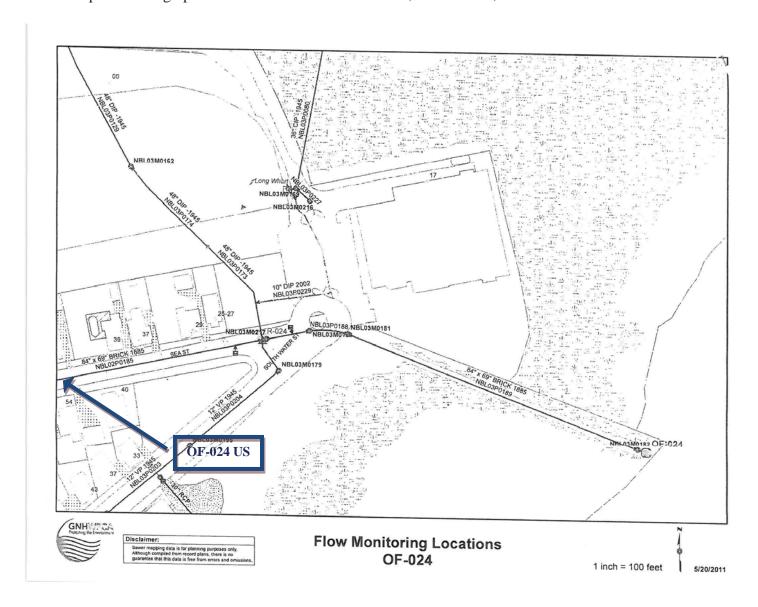
Level	Primary: Pressure		
Level	Redundant: Pressure		
Velocity	Primary: Doppler		
Velocity	Redundant: Doppler		
Meter Logger FloWav 293662			

Comments: Possible parked car









Site Name / Manhole # OF-025 - Weir

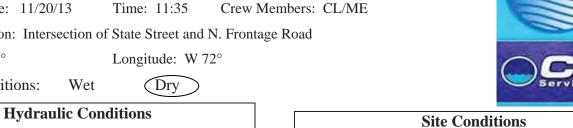
Investigation Date: Time: Crew Members:

Installation Date: 11/20/13 Time: 11:35

Address/Location: Intersection of State Street and N. Frontage Road

Latitude: N 41°

Weather Conditions: Wet



	Site Conditions
Fair (min site, c Poor (ren No Traffic (problems accessing site) for traffic control, truck accessible off-road an safely carry equipment to site) finote areas, steel embankments, final control only (Requires extra traffic control to the control only (Requires extra traffic control to the control to
Elevated M Height abo Manhole de Structural I	_
i ipe benu	s: None within camera view
Pipe Size/(Influent	Geometry/Material Change: Effluent Manhole stance to change:ft
Approx Dis Pipe Size/C Influent Approx Dis (detail is co	Geometry/Material Change: Effluent Manhole stance to change: comments) ber: Can you maintain this site? No Maybe
Approx Dis Pipe Size/C Influent Approx Dis (detail is co	Geometry/Material Change: Effluent Manhole stance to change: the property of the comments of t
Approx Dis Pipe Size/C Influent Approx Dis (detail is co	Geometry/Material Change: Effluent Manhole stance to change: change: Description: Every Can you maintain this site? No Maybe Giguration: Every Serial Numbers when possible) Primary:

Influent Flow: *Stagnant* Velocity <u>0.0</u> ft/sec Depth 4.0 in

Turbulence Amplitude:

Less than 0.25" 0.25" to 0.75" 0.75" to 1.5" 1.5" to 3" Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	47		
Width	61		
Material	Brick		
Shape	Weir Wall		

Sediment Present:

Yes	Hard packed:		in. deep
No	Soft:	·	in. deep

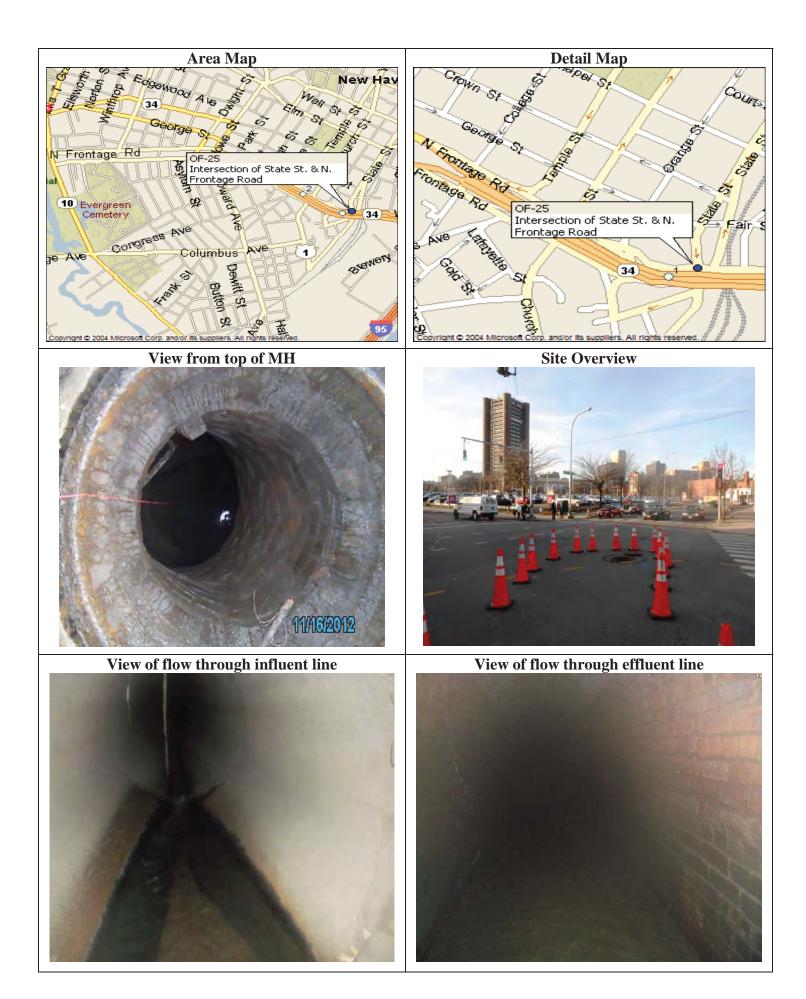
Surcharge / Backwater Influence:

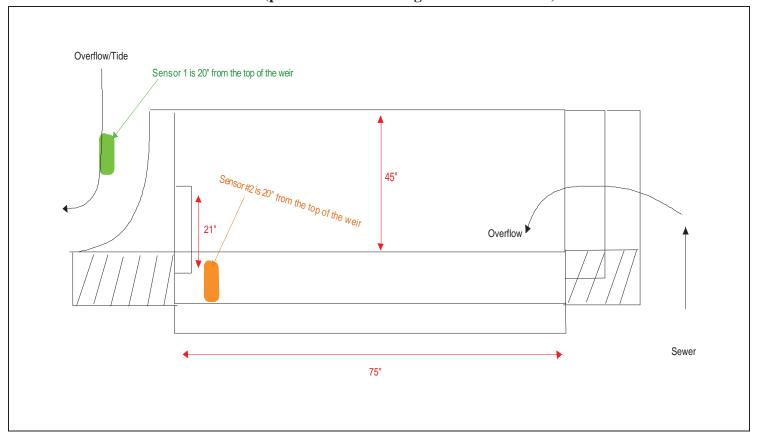
No evidence visible Remains in pipe ft from rim Reaches Rim (potential meter damage) Evidence unclear: ft from rim

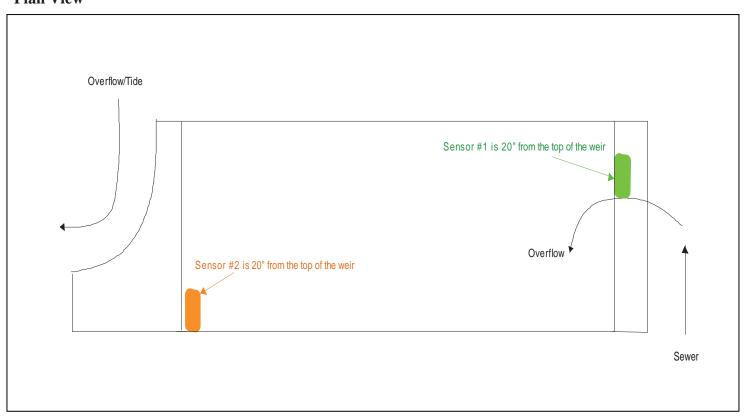
Gas Investigation:



20.9 (condition)







Site Location Plan View



Site Name / Manhole # OF-025_Columbus

Investigation Date: Time: Crew Members:

Installation Date: 11/20/13 Time: 15:00 Crew Members: CL/ME

Address/Location: End of Columbus Ave (on the pavement, MH in the middle)

Latitude: N 41°17.937' Longitude: W 72°55.679'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity 7 ft/sec

Depth 5 in

Turbulence Amplitude:

Less than 0.25" 0.25" to 0.75"

0.25 to 0.75 0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	30"	12"	32"
Width	30"	12"	32"
Material	Concrete	Concrete	Concrete
Shape	Round	Round	Round

Sediment Present:

Yes Hard packed: _____ in. deep No Soft: _____ in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: _____ft from rim

Gas Investigation:

Good

20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

74 1 1		T	4 •
Manhol	P	Intorn	ทิดโเกท
1410111101			nauvii

Elevated Manhole: Yes No

Height above ground

Manhole depth

Structural Integrity of Manhole:

Good Fair Poor

Pipe Bends:

Influent Effluent Manhole Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole
Approx Distance to change:_____ft
(detail is comments)

Crew Member: Can you maintain this site?

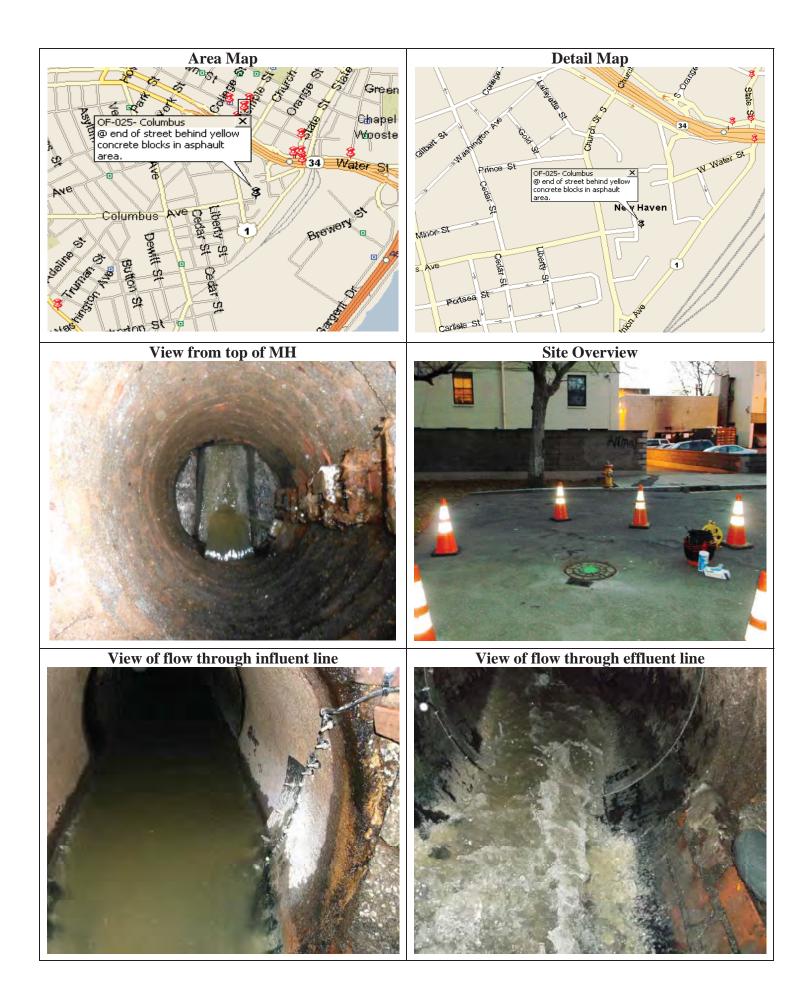
Yes No Maybe

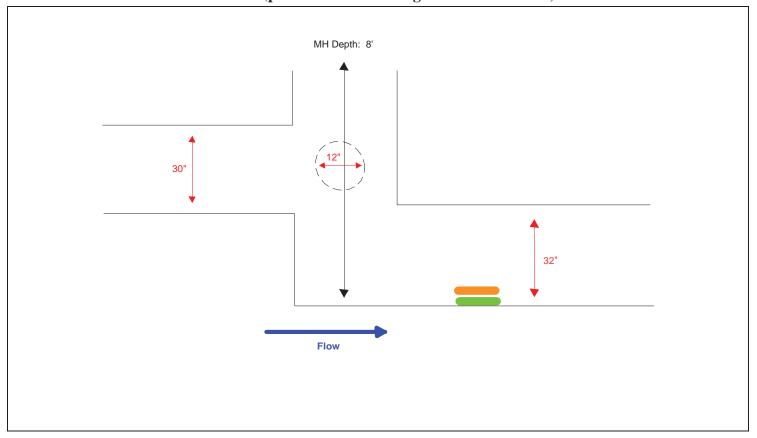
Sensor Configuration:

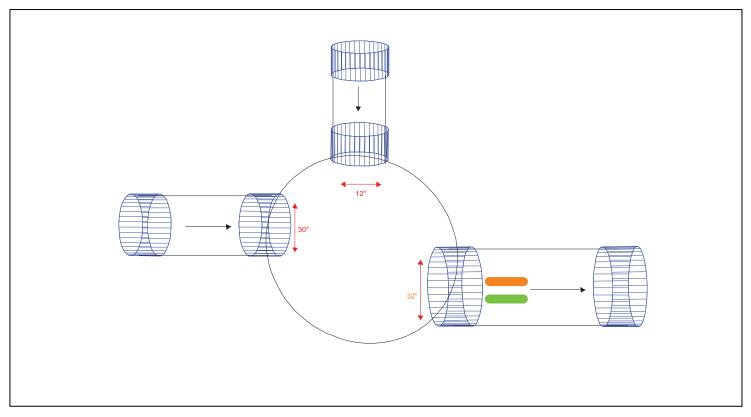
(Please include Serial Numbers when possible)

Level	Primary:		
	Redundant:		
Velocity	Primary:		
	Redundant:		
Meter Logger		FloWav 293699	

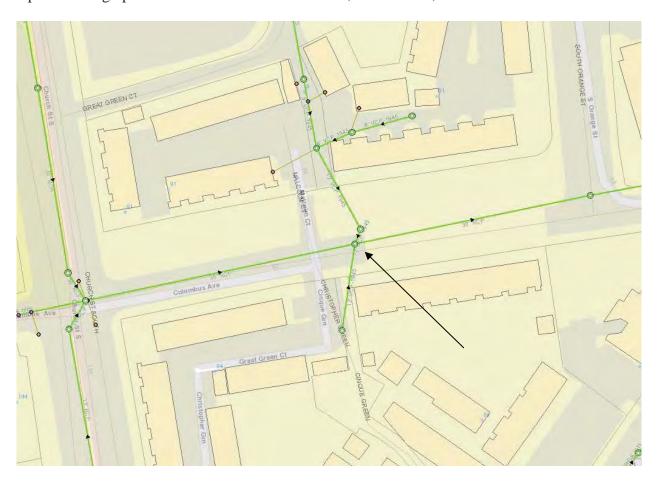
Comments:







Site Location Plan ViewSketch or plat showing upstream and downstream manholes, connections, and bends.



Site Name / Manhole # OF-025_Frontage

Investigation Date: 8/27/13 Time: 11:44 Crew Members: KE/MH

Installation Date: Time: Crew Members:

Address/Location: On N. Frontage Road, above State Street (across from the bus stop)

Latitude: N 41°18.154' Longitude: W 72°55.488'

Weather Conditions: Wet Dry



Hydraulic Conditions

Influent Flow:

Velocity 2.05 ft/sec Depth 11.25 in

Turbulence Amplitude:

Less than 0.25"
0.25" to 0.75"
0.75" to 1.5"
1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	30"		30"
Width	30"		30"
Material	RCP		RCP
Shape	Round		Round

Sediment Present:

Yes Hard packed: _____ in. deep No Soft: 3.0 in. deep

Surcharge / Backwater Influence:

No evidence visible
Remains in pipe
_____ft from rim
Reaches Rim (potential meter damage)
Evidence unclear: _____ft from rim

Gas Investigation:

Good

20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes No

Height above ground ____ Manhole depth _____ Structural Integrity of Manhole: Good Fair Poor

Pipe Bends: None within camera view
Influent Effluent Manhole
Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole
Approx Distance to change:_____ft
(detail is comments)

Crew Member: Can you maintain this site?

Yes No Maybe

Sensor Configuration:

(Please include Serial Numbers when possible)

Level Primary: 222 (Flowav)

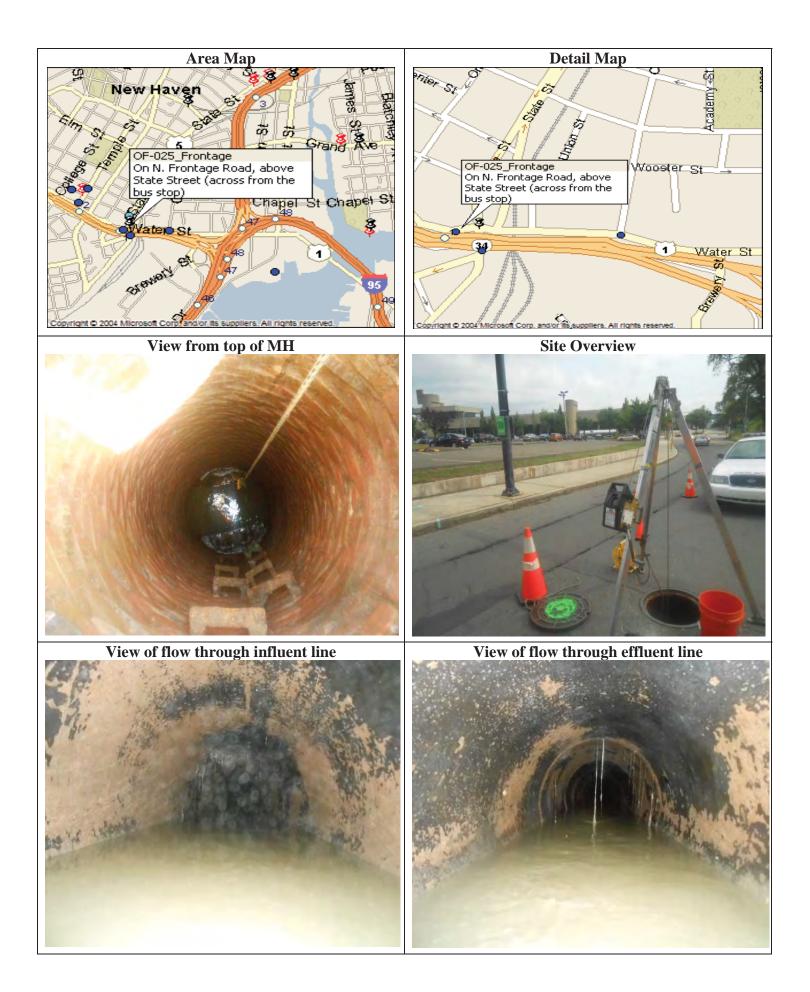
Redundant: 678 (Flowav)

Velocity Primary: 222 (Flowav)

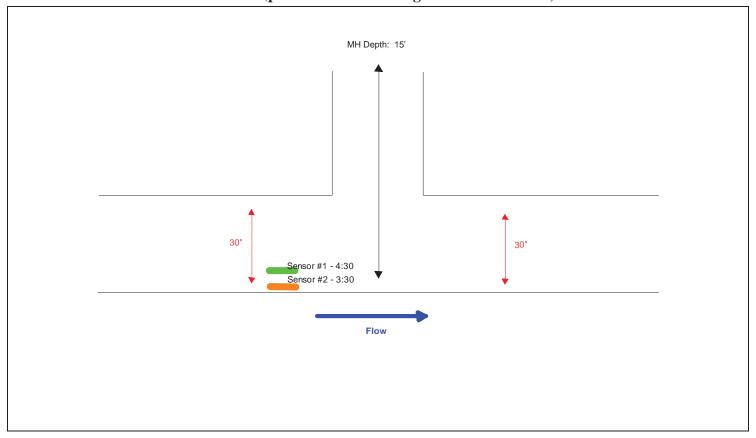
Redundant: 678 (Flowav)

Meter Logger Telog 291630

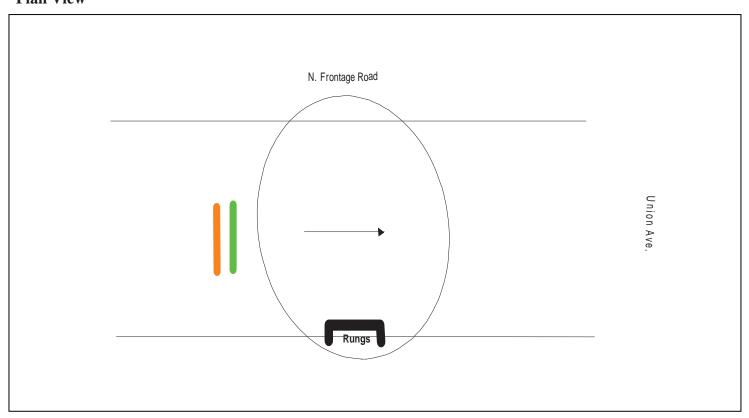
Comments:



Dimensional Structure Profile View (profile sketch showing location of sensors)



Plan View



Site Location Plan ViewSketch or plat showing upstream and downstream manholes, connections, and bends.



Site Name / Manhole # OF-025 State

Time: 12:40 Crew Members: KE/MH Investigation Date: 8/27/13

Installation Date: Time: Crew Members:

Address/Location: Intersection of George &State Streets (on sidewalk, close to the parking lot)

Latitude: N 41°18.154' Longitude: W 72°55.488'

Weather Conditions: Dry Wet



Hydraulic Conditions

Influent Flow:

Velocity 3.02 ft/sec 6.25 in Depth

Turbulence Amplitude:

Less than 0.25" 0.25" to 0.75" 0.75" to 1.5" 1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	59.5"		59.5"
Width	46"		46"
Material	Brick		Brick
Shape	Elliptical		Elliptical

Sediment Present:

Hard packed: _____ in. deep Yes _____ in. deep No

Surcharge / Backwater Influence:

No evidence visible Remains in pipe ft from rim Reaches Rim (potential meter damage) Evidence unclear: ft from rim

Gas Investigation:

20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

MI ANNAIA IN	itarmatia	m
Manhole In	uvimauv	ш

Elevated Manhole:	Yes	(No)
-------------------	-----	------

Height above ground Manhole depth Structural Integrity of Manhole:

Good (Fair) Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend:____ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

Crew Member: Can you maintain this site?

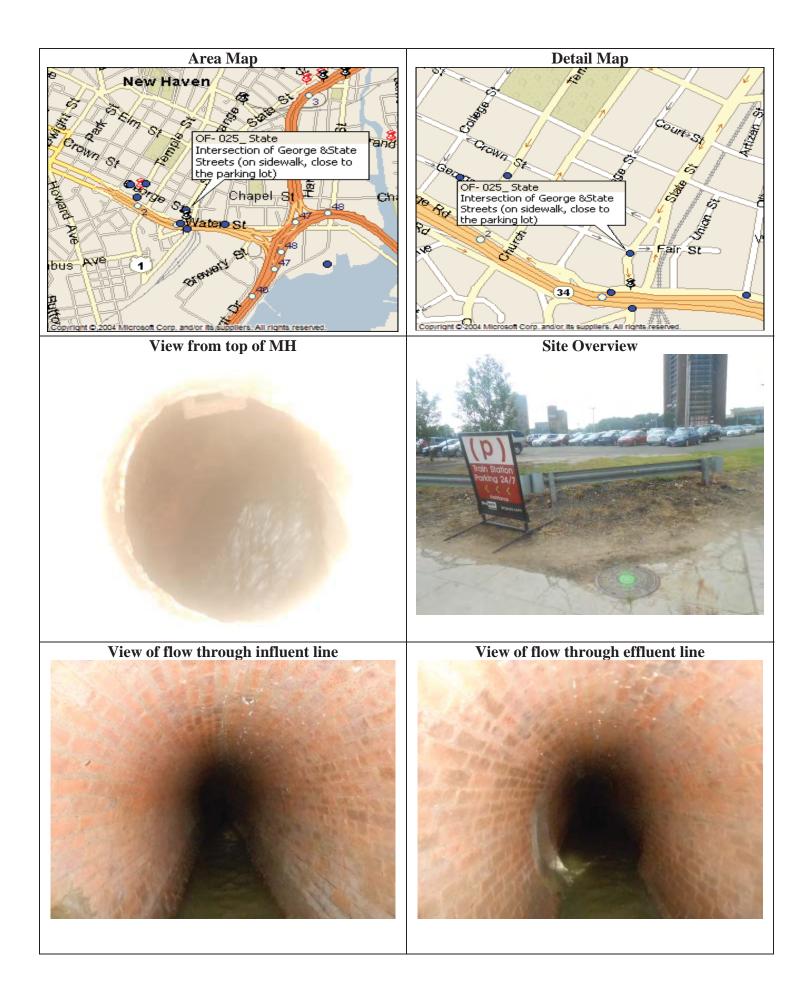
(Yes) No Maybe

Sensor Configuration:

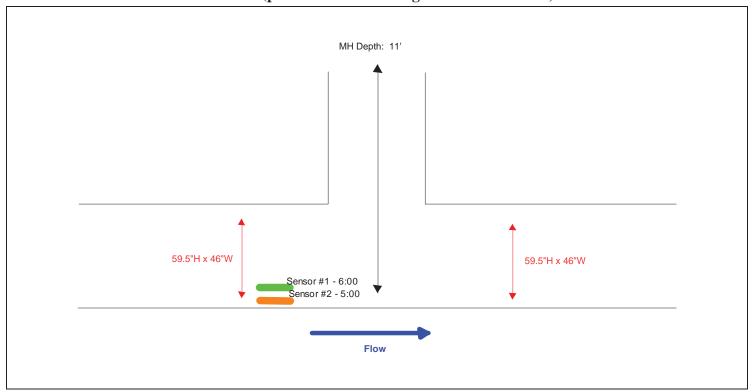
(Please include Serial Numbers when possible)

Level	Pri	mary: 489 (Flowav)
Level	Re	dundant: 184 (Flowav)
Velocity	Pri	mary: 489 (Flowav)
Velocity	Re	dundant: 184 (Flowav)
Meter Logger		293662

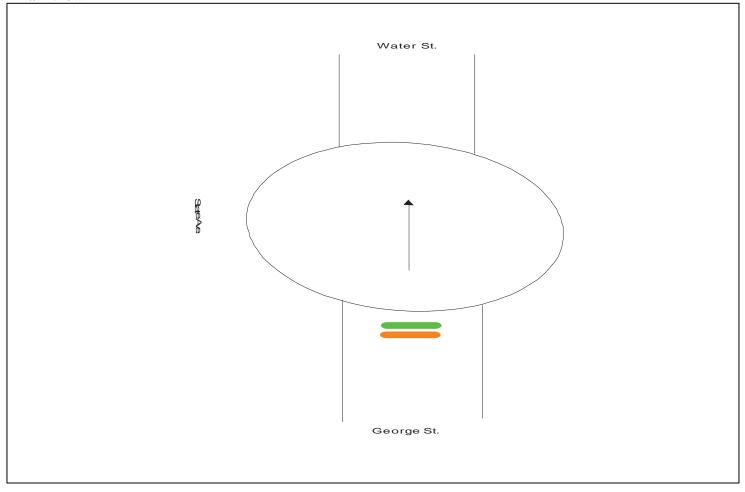
Comments:



Dimensional Structure Profile View (profile sketch showing location of sensors)



Plan View



Site Location Plan ViewSketch or plat showing upstream and downstream manholes, connections, and bends.



Site Name / Manhole # Regulator 34-Weir

Investigation Date: Time: Crew Members:

Installation Date: 11/20/13 Time: 12:54 Crew Members: CL/ME

Address/Location: On Temple Street at George Street, in the crosswalk

Latitude: N 41° Longitude: W 72°

Weather Conditions: Wet (Dry



Hydraulic Conditions

Influent Flow:

Velocity N/A ft/sec Depth N/A in

Turbulence Amplitude:

Less than 0.25" 0.25" to 0.75" 0.75" to 1.5" 1.5" to 3" Greater than 3"

Sewer Line Characteristics:

	Sewer	Sewer	Storm	Storm	
	Influent	Effluent	Influent	Influent	Overflow
	1		1	2	Effluent
Height	48"	24"	48"	15"	48"
Width	48"	24"	48"	15"	48"
Material	RCP	RCP	RCP	RCP	RCP
Shape	Round	Round	Round	Round	Round

Sediment Present: in downstream

Yes	Hard packed:	·	in. deep
No	Soft:		in. deep

Su

Good

rim

(condition)

Site Conditions

Site Access:

Good (no problems accessing site)

 $Fair \ ({\rm minor}\ {\rm traffic\ control}, \ {\rm truck\ accessible\ off-road}$ site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole 1	Informat	tion
Flavoted N	Inhola.	-

Elevated Mailiole.	168	110
Height above ground		
Manhole depth	11'5"	

Structural Integrity of Manhole: Good (Fair) Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend:____ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

Crew Member: Can you maintain this site?

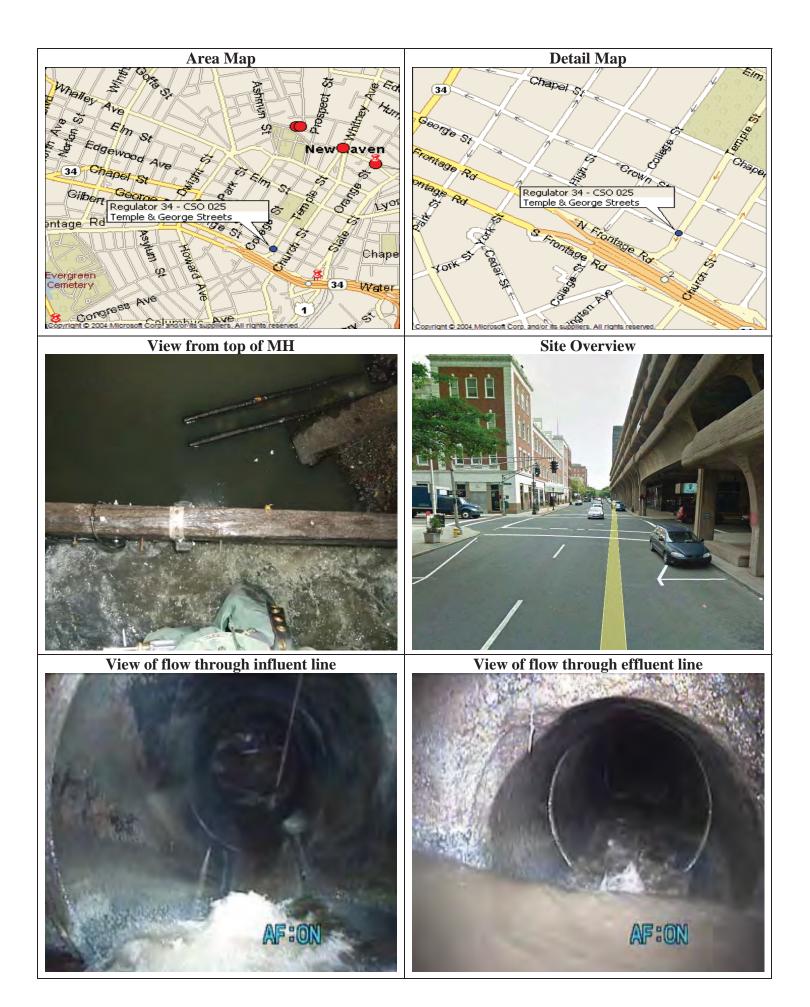
(Yes) No Maybe

Sensor Configuration:

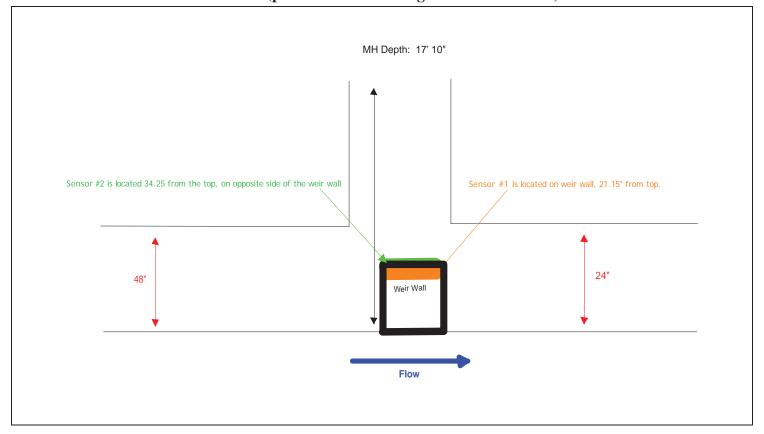
(Please include Serial Numbers when possible)

Level	Pri	mary:
Lever	Re	dundant:
Velocity	Pri	mary:
	Re	dundant:
Meter Logger		FloWav 293305

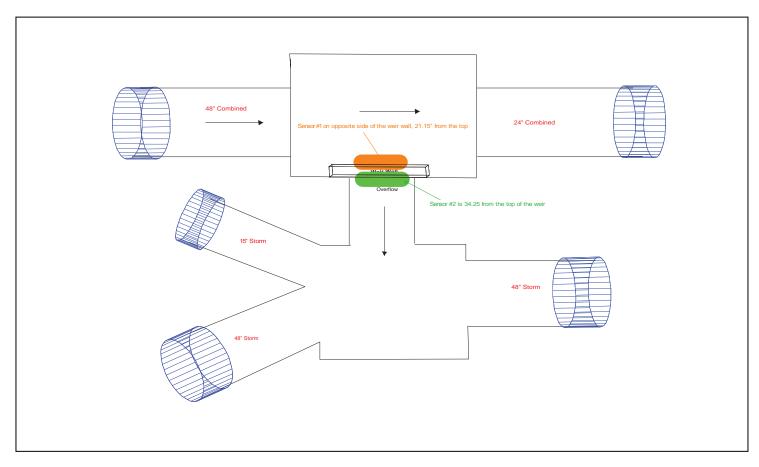
Comments: *Effluent has silt coming from Influent 2.* Effluent is the larger pipe.



Dimensional Structure Profile View (profile sketch showing location of sensors)

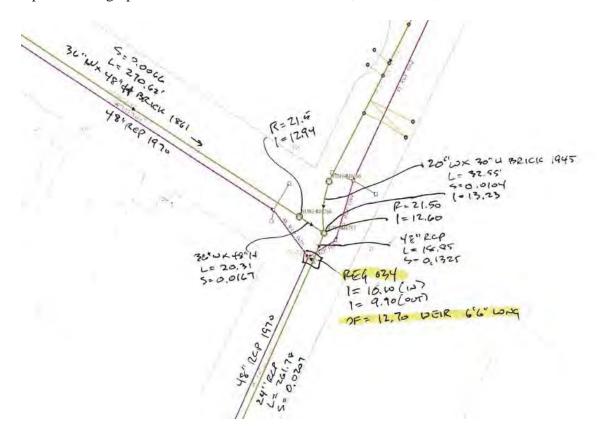


Plan View



Site Location Plan View

Sketch or plat showing upstream and downstream manholes, connections, and bends.



Site Name / Manhole # Regulator 34_George

Investigation Date: 8/27/13 Time: 116:58 Crew Members: KE/MH

Installation Date: Time: Crew Members:

Address/Location: 229 George Street (across from New Haven Hotel, middle lane)

Latitude: N 41°18.283' Longitude: W 72°55.767'

Weather Conditions: Wet (Dry



Hydraulic Conditions

Influent Flow:

Velocity 2.30 ft/sec

Depth 5.75 in

Turbulence Amplitude:

Less than 0.25" 0.25" to 0.75"

0.75" to 1.5"

1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	48.25"		48.25"
Width	37"		37"
Material	Brick		Brick
Shape	Egg		Egg

Sediment Present:

Hard packed: _____ in. deep _____ in. deep

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:



20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes

Height above ground

Manhole depth 8'6"

Structural Integrity of Manhole:

Good Fair Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

Crew Member: Can you maintain this site?

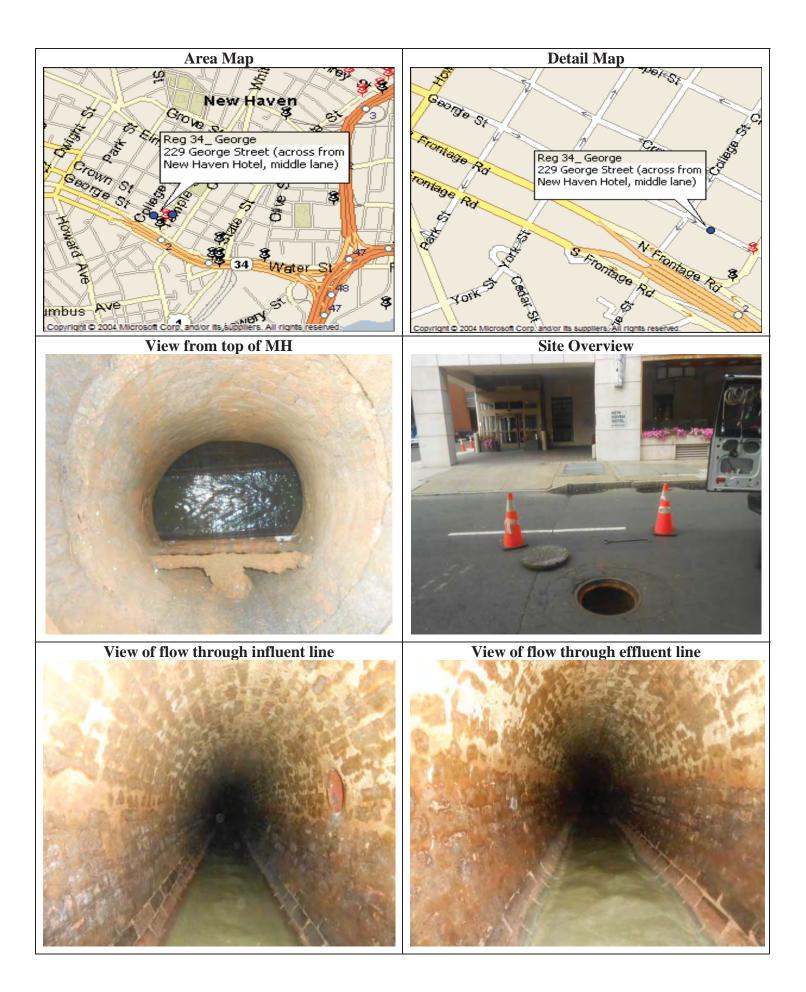
(Yes) No Maybe

Sensor Configuration:

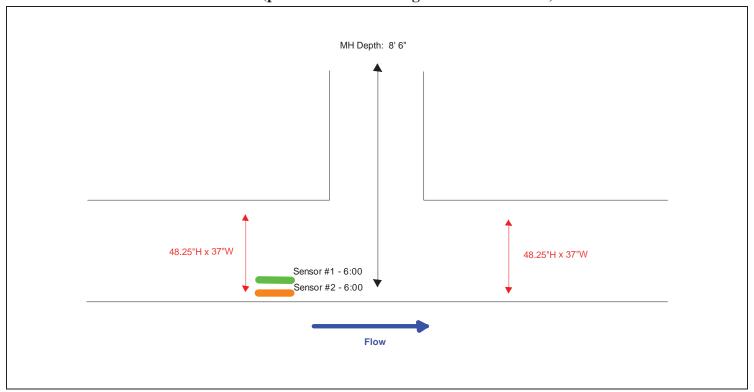
(Please include Serial Numbers when possible)

Level	Pri	mary: 878 (Flowav)
Level	Re	dundant:
Velocity	Pri	mary: 878 (Flowav)
	Re	dundant:
Meter Logger		Flowav 293662

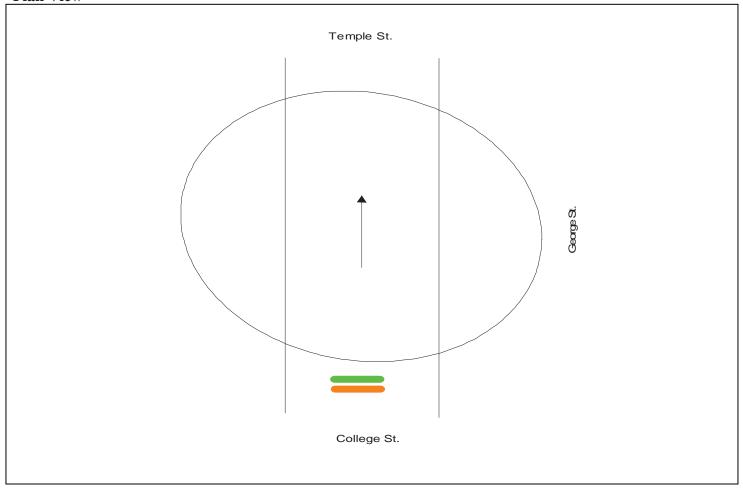
Comments:



Dimensional Structure Profile View (profile sketch showing location of sensors)



Plan View



Site Location Plan ViewSketch or plat showing upstream and downstream manholes, connections, and bends.



Site Name / Manhole # Regulator 34_Temple

Time: 17:56 Investigation Date: 8/27/13 Crew Members: KE/MH Time: 9:00 Installation Date: 8/30/13 Crew Members: KE/MH

Address/Location: 100 Temple Street

Latitude: N 41°18.292' Longitude: W 72°55.698'

Dry Weather Conditions: Wet



Hydraulic Conditions

Influent Flow:

Velocity 1.01 ft/sec

Depth 10.75 in

Turbulence Amplitude:

Less than 0.25" 0.25" to 0.75"

0.75" to 1.5" 1.5" to 3"

Greater than 3"

Sewer Line Characteristics:

	Influent 1	Influent 2	Effluent
Height	38.75"		38.75"
Width	24.75"		24.75"
Material	Brick		Brick
Shape	Egg		Egg

Sediment Present:

Yes No

Hard packed: _____ in. deep

Approx. 5.0 in. deep Soft:

Surcharge / Backwater Influence:

No evidence visible

Remains in pipe

ft from rim

Reaches Rim (potential meter damage)

Evidence unclear: ft from rim

Gas Investigation:



20.9 (condition)

Site Conditions

Site Access:

Good (no problems accessing site)

Fair (minor traffic control, truck accessible off-road site, can safely carry equipment to site)

Poor (remote areas, steel embankments,

No safe place to park, elevated MH >3 ft)

Traffic Control only (Requires extra traffic control

Unusable (Document in Comments section)

Manhole Information:

Elevated Manhole: Yes

Height above ground

Manhole depth

Structural Integrity of Manhole:

Good (Fair) Poor

Pipe Bends: *None within camera view* Influent Effluent Manhole Approx Distance to bend: ft

Pipe Size/Geometry/Material Change:

Influent Effluent Manhole Approx Distance to change:_____ft (detail is comments)

Crew Member: Can you maintain this site?

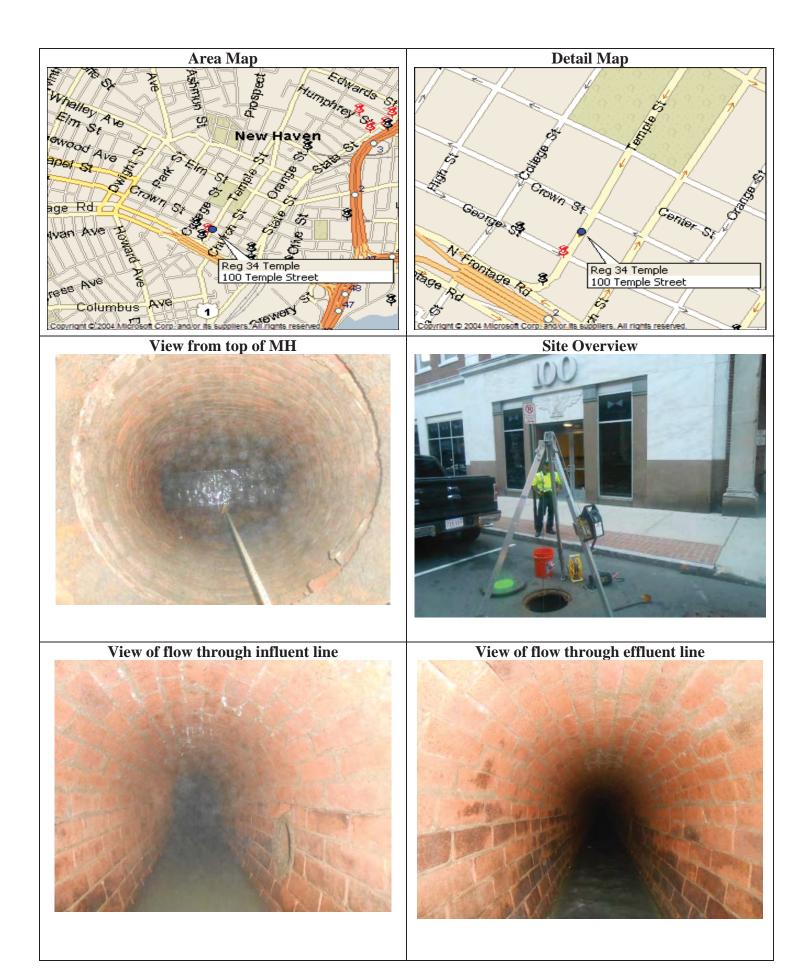
(Yes) No Maybe

Sensor Configuration:

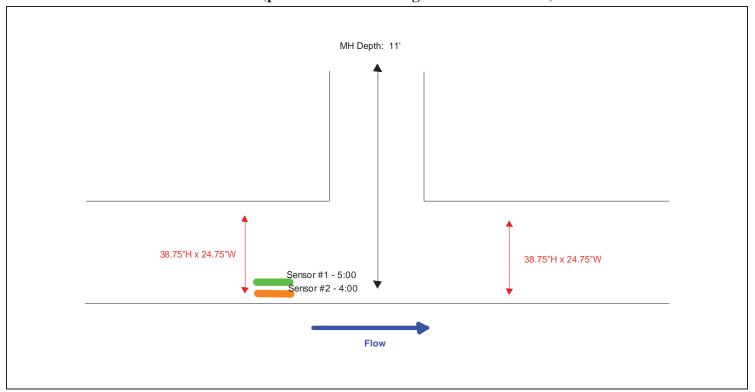
(Please include Serial Numbers when possible)

Primary: 159 (Floway) Level Redundant: 757 (Floway) Primary: 159 (Floway) Velocity Redundant: 757 (Floway) Meter Logger | Telog 293377

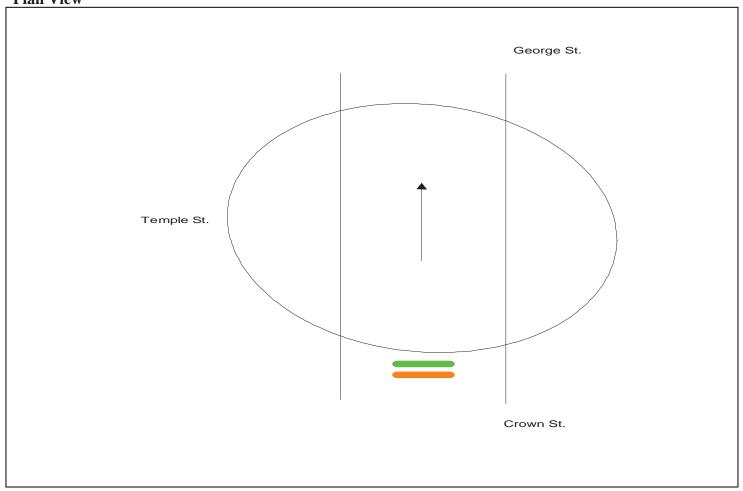
Comments:



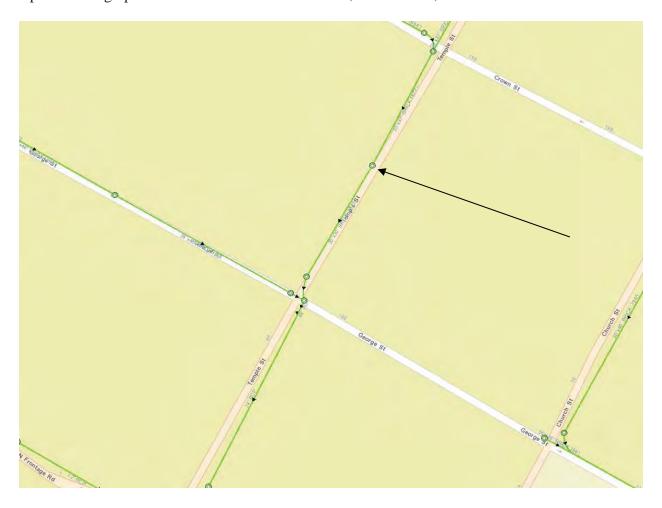
Dimensional Structure Profile View (profile sketch showing location of sensors)



Plan View



Site Location Plan ViewSketch or plat showing upstream and downstream manholes, connections, and bends.



Appendix D Monthly CSO Reports for May, June and July, 2014

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
CSO FLOW MONITORING PROGRAM
METER DATA SUMMARY - THROUGH MAY 2014

SO NUMBER	REGULATOR NUMBERS	CSO EVENTS	CSO VOLUME (MG)	RAINFALL (IN)	METER MONTHS
CSO 006	REGS 006 A, 006 B	30	9.276	86.80	24
CSO 005	REG 005	25	5.483	86.80	24
CSO 004	REG 004	88	40.963	86.80	24
CSO 003	REG 003	99	31.645	86.80	24
CSO 024	REG 024	22	24.344	81.20	22
CSO 009	REG 009	40	2.866	69.46	20
CSO 019	REG 019	26	1.451	81.20	22
CSO 016	REG 016	51	25.994	71.49	22
CSO 015	REG 015	34	5.678	69,46	20
CSO 010	REG 010	14	3.125	70.16	19
CSO 011	REGS 010A, 011, 014, 026	16	10.515	62.09	18
CSO 012	REGS 012A, 012B, 028	35	11.659	81.20	22
CSO 025	REGS 025, 034	m	0.486	24.71	9
CSO 021	REG 021	27	25.608	60.99	19
CSO 020	REG 020	Ŋ	0.233	49.54	14
TOTAL		482	199,326		

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY METER DATA SUMMARY - TYPICAL YEAR ESTIMATES CSO FLOW MONITORING PROGRAM

SO NUMBER	REGULATOR NUMBERS	ANNUAL CSO EVENTS BASED ON RAINFALL ⁽¹⁾	ANNUAL CSO VOLUME (MG) BASED ON RAINFALL ⁽²⁾	ANNUAL CSO EVENTS BASED ON MONTHS ⁽³⁾	ANNUAL CSO VOLUME (MG) BASED ON MONTHS ⁽⁴⁾	MODEL CSO EVENTS	MODEL CSO VOLUME (MG)
CSO 006	REGS 006 A, 006 B	14	4,410	15	4,638	27	27.0
CSO 005	REG 005	12	2.607	13	2.742	39	22.0
CSO 004	REG 004	42	19.476	44	20.482	44	65.3
CSO 003	REG 003	31	15.046	33	15.823	28	12.5
CSO 024	REG 024	11	12,373	12	13.279	0	1.9
CSO 009	REG 009	.24	1,703	24	1.720	27	8.1
CSO 019	REG 019	13	0.737	14	0.791	2	2.4
CSO 016	REG 016	29	15.005	28	14.179	45	20.4
CSO 015	REG 015	20	3.374	20	3.407	ō	4.1
CSO 010	REG 010	00	1,838	Ď)	1,974	9	2.4
CSO 011	REGS 010A, 011, 014, 026	10	6,667	11	7.010	15	26.6
CSO 012	REGS 012A, 012B, 028	18	5,926	19	6,359	00	2.9
CSO 025	REGS 025, 034	ın	0.812	40	0,972	9	9.0
CSO 021	REG 021	17	15,991	17	16.173	23	35.1
CSO 020	REG 020	4	0.194	4	0,200	80	1.4
TOTAL		255	105.965	265	109.547	292	241.1

⁽¹⁾ Annual CSO Events Based on Rainfall = Annual Rainfall (3.44 In x 12 = 41.28 in) x CSO Events to Date (MG) Based on Rainfall = Annual Rainfall (3.44 in x 12 = 41.28 in) x CSO Volume (MG) to Date / Rainfall to Date (3) Annual CSO Events Based on Months = 12 x CSO Events to Date / Meter Months to Date (4) Annual CSO Events Based on Months = 12 x CSO Events to Date / Meter Months to Date (4) Annual CSO Volume (MG) Based on Months = 12 x CSO Volume (MG) to Date / Meter Months to Date

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY CSO FLOW MONITORING PROGRAM METER DATA SUMMARY - MAY 2014

MONTHLY RAINFALL SUMMARY

4.22 inches of rain (3.44 inches of rain in a typical month)

No snow

12 rain events (10 rain events in a typical month)

One 2 year storm, one 1 year storm, all other storms less than 1 month return frequency

CSO VOLUME (MG)	0.431	0.402	1,961	0.155	0.174	0.102	0.008	0.184	0.076	0.296	1.280	0.064	0.486	0.898	0.005	6.522	(20.358 MG of CSO volume in a typical month)
CSO EVENTS	2	2	8	co	-	2	H	2	m	÷	1	н	m	H	Ħ	32	(22 CSO events in a typical month)
REGULATOR NUMBERS	REGS 006 A, 006 B	REG 005	REG 004	REG 003	REG 024	REG 009	REG 019	REG 016	REG 015	REG 010	REGS 010A, 011, 014, 026	REGS 012A, 012B, 028	REGS 025, 034	REG 021	REG 020		(22
CSO NUMBER	CSO 006	CSO 005	CSO 004	CSO 003	CSO 024	CSO 009	CSO 019	CSO 016	CSO 015	CSO 010	È	CSO 012	CSO 025	CSO 021	CSO 020	TOTAL	

O:\GNHWPCA FLOW MONITORING DATA\2012 CSO Flow Monitoring Program\140701 May 2014 Meter Data Summary.xlsx

Contract Con	In the tal St. A contract	Pull Graces T cl
CSO EVENIS LOG	Orange Ave. (a) Int. of cita 1. of asso bivo.	la I. Grasso BIVG.
LOCATION:	003	
NPDES Permit Outfall #:		
MONTH:	May YEAR:	2014
Average Low Temp:	51	
Average High Temp:	69	
Measured Rainfall:	4.22	
Measured Snowfall:		The state of the s

				RAINFALL EVENT	TN				CSO EVENT			
EVENT NO.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL OUTFALL Qavg (MGD) (MG)	OUTFALL Q volume (MG)
1	5/2/2014	0:40	0:45	0.08	0.01 ***	***						
7	5/4/2014	16:20		0.17	0.02 ***	***						
m	5/8/2014	6:45		9.67	0.20	***						
4	5/9/2014	4:20		2.58	0.11 ***	* * *						
i's	5/10/2014 -5/11/2014	5:15		22.25	0.13 ***	***						
9	5/15/2014	19:50	20:10	0.33	0.03 ***	***		R		Í		
7	5/16/2014 - 5/17/2014	5:55	4:20	22.42	1.62	1.62 1 YEAR	5/17/2014	0:55				0.103
00	5/22/2014 - 5/23/2014	4:25	1:40	21.25	0.46 ***	***	5/22/2014	12:20	13:40	1.33	0.068	0.004
6	5/23/20114 - 5/24/2014	21:45	7:30	9.75	0.19	***				N. A.		F
10	5/27/2014	20:10	21:25	1.25	1.33	1.33 2 YEAR	5/27/2014	20:35	22:15	T.67	0.691	0.048
11	5/28/2014	9:50	10:25	0.58	0.10 ***	***						
12	5/30/2014	21:35	21:50	0.25	0.02	*						

Overflow occurs when Interceptor level reaches 46"

0.155

CSO EVENTS LOG

LOCATION:

NPDES Permit Outfall #:

MONTH:

Average Low Temp:

Average High Temp:

Measured Rainfall:

Measured Snowfall:

Measured Snowfall:

	0.000		17	RAINFALL EVENT	TN			CS	CSO EVENT			
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	5/2/2014	0:40	0:45	80.0	0.01	***	5/2/2014	0:00	10:00	10.00	0.123	0.051
2	5/4/2014	16:20	16:30	0.17	0.02 ***	* * *		I				ì
m	5/8/2014	6:45	16:25	9.67	0.20	***	5/8/2014	10:40	12:25	1.75	0.626	0.046
4	5/9/2014	4:20	6:55	2.58	0.11 ***	***	5/9/2014	7:30	8:05	0.58	0.479	0.012
S	5/10/2014 -5/11/2014	5:15	3:30	22.25	0.13 ***	***						
9	5/15/2014	19:50	20:10	0.33	0.03 ***	***						
7	5/16/2014 - 5/17/2014	5:55	4:20	22.42	1.62	1.62 I YEAR	5/17/2014	0:55	5:40	4.75	5.599	1.108
00	5/22/2014 - 5/23/2014	4:25	1:40	21.25	0.46 ***	***	5/22/2014	12:15	20:15	8.00	0.595	0.198
6	5/23/20114 - 5/24/2014	21:45	7:30	9.75	0.19 ***	* *	5/23/2014 - 5/24/2014	23:15	0:30	1.25	0.403	0.021
10	5/27/2014	20:10	21:25	1.25	1.33	1.33 2 YEAR	5/27/2014	20:40	23:00	2.33	5.236	
11	5/28/2014	9:50	10:25	0.58	0.10	***	5/28/2014	10:40	11:20	0.67	0,569	0.016
12	5/30/2014	21:35	21:50	0.25	0.02 ***	***						
			I								ij	
			1									Ī

Overflow occurs when Interceptor level reaches 35"

Note:

1.961

CSO EVENTS LOG	Derby Ave. 20 yrds East of Ella T. Grasso Blvd.	of Ella T. Grasso Blvd.
LOCATION:	500	
NPDES Permit Outfall #:		
MONTH:	May YEAR:	2014
Average Low Temp:	51	
Average High Temp:	69	
Measured Rainfall:	4.22	
Measured Snowfall:		

				RAINFALL EVENT	ENT			,	CSO EVENT			
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)
1	5/2/2014	0:40	0:45	0.08		0.01 ***						
2	5/4/2014	16:20	16:30	0.17		0.02 ***						
m	5/8/2014	6:45	16:25	9.67		0.20 ***						
4	5/9/2014	4:20	6:55			0.11 ***						
un	5/10/2014-5/11/2014	5:15	3:30	22.25		0.13 ***						
9	5/15/2014	19:50	20:10	0.33		0.03 ***				0		
7	5/16/2014 - 5/17/2014	5:55	4:20	22.42		1.62 1 YEAR	5/17/2014	1:05	2:30	1.42	6.236	0.368
00	5/22/2014 - 5/23/2014	4:25	1:40	21.25		0,46 ***						
on	5/23/20114 - 5/24/2014	21:45	7:30			0.19 ***	- N. V.					
10	5/27/2014	20:10	21:25	1.25		1.33 2 YEAR	5/27/2014	20:50	21:35	0.75	1.094	0.034
11	5/28/2014	9:50	10:25	0.58		0.10						
12	5/30/2014	21:35	21:50	0.25		0.02 ***						
Î												
										TOTAL MONTH	TH	2000
										FLOW VOLUME =	ME	0.402

Overflow occurs when Interceptor level reaches 53.5" Note:

0.402

n Fitch Street			2014					RAINFALL EVENT	
Whalley Ave. 30 yrds from Fitch Street	900		May YEAR:	51	69	4.22		RA	
CSO EVENTS LOG	LOCATION:	NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	Measured Snowfall:		

				RAINFALL EVENT	ENT			× 1	CSO EVENT			
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	Qavg Q volume (MGD)
F	5/2/2014	0:40	0:45	0.08	0.01	***						
2	5/4/2014	16:20	16:30	0.17		0.02 ***						
m	5/8/2014	6:45	16:25			0.20 ***						
4	5/9/2014	4:20	6:55	2,58		0.11 ***						
2	5/10/2014 -5/11/2014	5:15	3:30	22.25		0.13 ***						
9	5/15/2014	19:50	20:10			0.03 ***						ľ
7	5/16/2014 - 5/17/2014	5:55	4:20			1.62 1 YEAR	5/17/2014	1:10	2:30	1.33	1.827	0.380
00	5/22/2014 - 5/23/2014	4:25	1:40	14		0.46 ***						
6	5/23/20114 - 5/24/2014	21:45	7:30	9.75		0.19 ***			Á			
10	5/27/2014	20:10	21:25			1.33 Z YEAR	5/27/2014	21:00	21:40	0.67	1.827	0.051
11	5/28/2014	9:50	10:25	0.58		0.10 ***						
12	5/30/2014	21:35	21:50			0.02 ***				V		
										TOTAL MONTH	TH	0.431
										FLOW VOLUME =	ME =	0.431

Note: Overflow occurs when Interceptor level reaches 27"

0.431

		DAT							5/17/2014	5/22/2014				
		FREQUENCY	***	***	***	***	***	***	1.62 1 YEAR	***	***	1.33 2 YEAR	***	***
	TN	TOTAL	0.01 ***	0.02	0.20	0.11 ***	0.13	0.03	1.62	0.46	0.19 ***	1.33	0.10 ***	0.02 ***
Street 2014	RAINFALL EVENT	DURATION (hours)	80.0	0.17	9.67	2,58	22.25	0.33	22.42	21.25	9.75	1.25	0.58	0.25
Je & James		STOP	0:45	16:30	16:25	6:55	3:30	20:10	4:20	1:40	7:30	21:25	10:25	21:50
Grand Avenue & James Street 009 May YEAR: 51 69 4.22	Ī	START	0:40	16:20	6:45	4:20	5:15	19:50	5:55	4:25	21:45	20:10	9:50	21:35
#		DATE	5/2/2014	5/4/2014	5/8/2014	5/9/2014	5/10/2014 -5/11/20	5/15/2014	5/16/2014 - 5/17/20	5/22/2014 - 5/23/20	5/23/20114 - 5/24/2	5/27/2014	5/28/2014	5/30/2014
CSO EVENTS LOG LOCATION: NPDES Permit Outfa MONTH: Average Low Temp: Average High Temp: Measured Rainfall: Measured Snowfall:		EVENT No.	H	2	m	4	Ŋ	9	7	00	0	10	11	12

TOTAL MONTH FLOW VOLUME =

0.102

0.097

2.151

1.08

3:25

2:20

Q volume OUTFALL

> DURATION (hours)

OUTFALL

CSO EVENT

(MG)

(MGD) Qavg

STOP

START

DATE

												20	-							
					2:25	7						STOP	CSO EVENT							
					1:15					Ī		START								
					5/17/2014							DATE								
*	***	1.33 2 YEAR	***	***	1.62 1 YEAR	***	* * *	**	**	***	**	FREQUENCY								
0.02 ***	0.10 ***	1.33	0.19	0.46 ***	1.62	0.03 ***	0.13 ***	0.11 ***	0.20	0.02 ***	0.01	TOTAL	L7							
0.25	0.58	1.25	9.75	21.25	22.42	0.33	22.25	2.58	29.67	0.17	0.08	DURATION (hours)	RAINFALL EVENT				2014			
21:50	10:25	21:25	7:30	1:40	4:20	20:10	3:30	6:55	16:25	16:30	0:45	STOP					EAR:			et
21:35	9:50	20:10	21:45	4:25	5:55	19:50	5:15	4:20	6:45	16:20	0:40	START		4.22	69	51	May YEAR:		010	547 East Stre
5/30/2014	5/28/2014	5/27/2014	5/23/20114-5/24/2	5/22/2014 - 5/23/20	5/16/2014 - 5/17/20	5/15/2014	5/10/2014 -5/11/20:	5/9/2014	5/8/2014	5/4/2014	5/2/2014	DATE		ainfall: nowfall:	h Temp:	v Temp:		it Outfall #:		
12	11	10	6	89	7	9	5	4	6	2	1	EVENT No.		Measured R	Average Hig	Average Low	MONTH:	NPDES Perm	LOCATION:	CSO EVENTS
	11 5/28/2014	10 5/27/2014	9 5/23/20114 - 5/24/2	8 5/22/2014 - 5/23/20	7 5/16/2014 - 5/17/20	6 5/15/2014	5 5/10/2014-5/11/20:	4 5/9/2014	3 5/8/2014	2 5/4/2014	1 5/2/2014	DATE		Measured Rainfall: Measured Snowfall:	Average High Temp:	Average Low Temp:	MONTH:	NPDES Permit Outfall #:		CSO EVENTS LOG 547

OUTFALL OUTFALL
Qavg Qvolume
(MGD) (MG)

DURATION (hours)

0.296

6.093

1.17

Overflow occurs when sewer level reaches 54"

0.296

			_	_	_	_		_	-	_	_	_	_	
		START							1:20					
		DATE							5/17/2014					
		FREQUENCY	***	***		***	***	***	1.62 1 YEAR	***	***	1.33 2 YEAR	***	***
	NT	TOTAL	0.01	0.02 ***	0.20	0.11 ***	0.13 ***	0.03	1.62	0.46 ***	0.19	1.33	0.10	0.02
2014	RAINFALL EVENT	DURATION (hours)	80.0	0.17	79.67	2.58	22.25	0.33	22.42	21.25	9.75	1.25	0.58	0.25
EAR;		STOP	0:45	16:30	16:25	6:55	3:30	20:10	4:20	1:40	7:30	21:25	10:25	21:50
547 East Street 010A May YEAR: 51 69 4.22		START	0:40	16:20	6:45	4:20	5:15	19:50	5:55	4:25	21:45	20:10	9:50	21:35
LOG iit Outfall #: v Temp: h Temp: ainfall:		DATE	5/2/2014	5/4/2014	5/8/2014	5/9/2014	5/10/2014 -5/11/2014	5/15/2014	5/16/2014 - 5/17/2014	5/22/2014 - 5/23/2014	5/23/20114 - 5/24/2014	5/27/2014	5/28/2014	5/30/2014
CSO EVENTS LOG LOCATION: NPDES Permit Outfall #: MONTH: Average Low Temp: Average High Temp: Measured Rainfall: Measured Snowfall:		EVENT No.	1	2	m	4	Ŋ	9	7	60	on on	10	11	12

Q volume (MG)

Qavg (MGD)

(hours)

STOP

OUTFALL OUTFALL

CSO EVENT

0.140

4.487

0.75

2:05

Overflow occurs when sewer level reaches 62"

0.140

CSO EVENTS LOG	LOCATION:	THE PARTY OF THE P

May **YEAR:** 51 69 4.22 011 NPDES Permit Outfall #: MONTH:

2014

Average Low Temp: Average High Temp: Measured Rainfall:

Measured Snowfall:

אוכפייתובת הוויים				RAINFALL EVENT	TNE				CSO EVENT			
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
-	5/2/2014	0:40	0:45		0.01	***						
2	5/4/2014	16:20	16:30	0.17	0.02 ***	***						
m	5/8/2014	6:45	16:25	9.67	0.20 ***	* *						
4	5/9/2014	4:20	6:55	2.58	0.11	***						
S	5/10/2014 -5/11/20;	5:15	3:30	22.25	0.13 ***	***						
9	5/15/2014	19:50	20:10	0.33	0.03 ***	***		1				
7	5/16/2014 - 5/17/20	5:55	4:20	22.42	1.62	1.62 1 YEAR	5/17/2014	1:15	3:20	2.08	13.134	1.140
00	5/22/2014 - 5/23/20	4:25	1:40		0.46 ***	* *						
61	5/23/20114 - 5/24/2	21:45	7:30	9.75	0.19 ***	* * *						
10	5/27/2014	20:10	21:25	1.25	1.33	1.33 2 YEAR						
11	5/28/2014	9:50	10:25	0.58	0.10 ***	***						
12	5/30/2014	21:35	21:50	0.25	0.02							
		Ų		Ì								

OF-011-609 and OF-011-997 removed on 8/26

1.140

FLOW MONITORING REPORT SUMMARY TABLE

			2014			
	011		May YEAR:	51	69	4.22
CSO EVENTS LOG	LOCATION:	NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:

S/2/2014 DATE START STOP (hours) TOTAL FREQUENCY DATE START STOP (hours) TOTAL FREQUENCY DATE START STOP (hours) TOTAL FREQUENCY DATE START STOP (hours) (MGD) (MG) (MG)					RAINFALL EVENT	ENT				CSO EVENT			
5/2/2014 0:45 0:08 0:01 *** 5/4/2014 16:20 16:30 0:17 0.02 *** 5/4/2014 6:45 16:25 9:67 0.20 *** 5/9/2014 4:20 6:45 16:25 9:67 0.20 *** 5/10/2014 4:20 6:55 2:28 0.11 *** 13:30 22.25 0.13 *** 5/10/2014 5/15/2014 19:50 20:10 0.03 *** 5/17/2014 1:15 3:20 2:08 14:769 5/16/2014 5/23/2014 5/23/2014 5/24/2 1:40 21:25 0.16 *** 5/17/2014 1:15 3:20 2:08 14:769 5/23/2014 5/23/2014 5/24/2 1:33 2 VEAR 5/17/2014 1:15 3:20 2:08 14:769 5/23/2014 2:15 0:05 *** 0:05 *** 0:02 *** 5/30/2014 2:135 0:05 0:05	EVENT NO.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
5/4/2014 16:20 16:30 0.17 0.02 *** 5/8/2014 6:45 16:25 9:67 0.20 *** 5/9/2014 4:20 6:45 16:25 9:67 0.20 *** 5/10/2014 5:15 3:30 22.25 0.13 *** 5/17/2014 1:15 3:20 20:0 5/16/2014 5:17/2014 5:17/2014 1:15 3:20 20:0 14:769 5/16/2014 5/14/2014 5/14/2014 5/14/2014 5/14/2014 5/14/2014 1:15 3:20 20:0 5/16/2014 5/14/2014 5/14/2014 5/14/2014 5/14/2014 1:15 3:20 20:0 5/16/2014 5/14/2014 5/14/2014 5/14/2014 1:15 3:20 20:0 5/14/2014 5/14/2014 5/14/2014 5/14/2014 5/14/2014 1:15 3:20 5/14/2014 5/14/2014 5/14/2014 5/14/2014 5/14/2014 5/14/2014 5/14/2014 5/14/2014 5/14/2014 <td>H</td> <td>5/2/2014</td> <td>0:40</td> <td>0:45</td> <td>0.08</td> <td>0.01</td> <td>***</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	H	5/2/2014	0:40	0:45	0.08	0.01	***						
5/8/2014 6:45 16:25 9.67 0.20 *** 5/9/2014 4:20 6:55 2.58 0.11 *** 5/10/2014 5:15 3:30 22.25 0.03 **** 5/10/2014 5:15 20:10 0.33 0.03 **** 5/10/2014 5/15/2014 5/15/2014 5/15/2014 1:15 1/2014 1:15 3:20 2.08 14.769 5/12/2014 5/12/2014 5/12/2014 5/12/2014 5/12/2014 5/12/2014 3:20 2.08 14.769 5/12/2014 5/12/2014 5/12/2014 5/12/2014 5/12/2014 3:20 2.08 14.769 5/12/2014 5/12/2014 5/12/2014 5/12/2014 3:20 2.08 14.769 5/12/2014 5/12	2	5/4/2014	16:20	16:30	0.17	0.02	***						
5/9/2014 4:20 6:55 2.58 0.11 *** 5/10/2014 - 5/11/201 5:15 3:30 22.25 0.13 *** 5/10/2014 - 5/11/201 5:15 3:30 22.25 0.03 *** 5/17/2014 5/15/2014 - 5/11/201 5:15 4:20 22.42 1.62 1 YEAR 5/17/2014 1::15 3:20 2.08 5/16/2014 - 5/23/20 4:25 1:40 21.25 0.46 *** 5/13/2014 1::15 3:20 2.08 14.769 5/23/2014 - 5/23/20 4:25 1:25 0.13 *** 5/13/2014 1::15 3:20 2.08 14.769 5/23/2014 - 5/23/20 5:20 0.00 5/20/20 0.13 *** 5/13/20 0.10 *** 5/30/2014 - 2/13/20 21:35 21:35 0.02 *** 0.02 *** 0.02 ***	m	5/8/2014	6:45	16:25	9.67	0.20	***						
5/10/2014 -5/11/201 5:15 3:30 22.25 0.03 **** 19:50 20:10 0.33 0.03 **** 19:50 20:10 20:10 22.42 1.62 1YEAR 5/17/2014 1:15 3:20 2.08 14.769 5/16/2014 - 5/12/20 4:25 4:26 1:40 21.25 0.46 **** 5/17/2014 1:15 3:20 2:08 14.769 5/23/2014 - 5/24/2 21:45 7:30 9:75 0.19 **** 5/13/2014 1:25 1:33 2 YEAR 1:33 2 YEAR 5/20/2014 1:25 0.25 0.00 ***** 0.00 **** 0.00 ****	4	5/9/2014	4:20	6:55	2,58	0.11	***						
5/15/2014 19:50 20:10 0.33 0.03 *** 5/15/2014 1:15 3:20 2.08 14.769 5/16/2014 - 5/17/20 5:55 4:25 1:40 22.42 1:62 1 YEAR 5/17/2014 5/27/2014 - 5/23/20 21:45 7:30 9.75 0.046 **** 5/27/2014 - 5/24/2 21:45 7:30 9.75 0.19 **** 1.33 2 YEAR 1.33 2 YEAR 5/27/2014 5/20/2014 21:25 0.10 **** 0.58 0.010 **** 0.02	in	5/10/2014 -5/11/201	5:15	3:30	22.25	0.13	**						
5/16/2014 - 5/17/20 5:55 4:20 22.42 1.62 1 YEAR 5/17/2014 1:15 3:20 2.08 14.769 14.769 15/22/2014 - 5/23/20 4 5.25 1:40 21.25 0.46 **** 5/22/2014 - 5/23/2 21:45 7:30 9.75 0.19 **** 5/23/2014 - 5/24/2 21:45 7:30 9.75 0.19 **** 5/23/2014 - 5/24/2 21:45 7:30 0.58 0.10 **** 5/30/2014 21:35 21:50 0.25 0.02 ****	9	5/15/2014	19:50	20:10	0.33		***						
5/22/2014 - 5/23/20 5/23/20114 - 5/24/2 21:45 7:30 9.75 5/27/2014 20:10 21:25 1.25 5/38/2014 21:35 21:50 0.58 5/30/2014 21:35 21:50 0.25	7	5/16/2014 - 5/17/20	5:55	4:20			1 YEAR	5/17/2014	1:15	3:20			1.280
5/23/20114 - 5/24/2 21:45 7:30 9.75 5/27/2014 20:10 21:25 1.25 5/28/2014 9:50 10:25 0.58 5/30/2014 21:35 21:50 0.25	.00	5/22/2014 - 5/23/20	4:25	1:40	14	0.46	***						
5/27/2014 20:10 21:25 1.25 5/28/2014 9:50 10:25 0.58 5/30/2014 21:35 21:50 0.25	σ	5/23/20114 - 5/24/2	21:45	7:30		0.19	***						
5/28/2014 9:50 10:25 0.58 5/30/2014 21:35 21:50 0.25	10	5/27/2014	20:10	21:25		1,33	2 YEAR						
5/30/2014 21:35 21:50 0.25	11	5/28/2014	9:50	10:25	0,58	0.10	***						
	12	5/30/2014	21:35	21:50	0.25	0.02	* *						
			ì					•					

Note: Sum of 10A and 11

1.280

2014 May **YEAR:** 51 69 4.22 75 Mitchell Drive 012 NPDES Permit Outfall #: Average High Temp: Measured Rainfall: Measured Snowfall: Average Low Temp: CSO EVENTS LOG LOCATION: MONTH:

	OUTFALL Q volume (MG)						ĺ	0.064						4		0.064
Ī	OUTFALL OUTFALL Qavg Qvolume (MGD) (MG)							1.667								
	DURATION (hours)							0.92		١					TWOM INTO	FLOW VOLUME =
CSO EVENT	STOP						1	2:05	1	0				Ī		
	START							1:15								
	DATE							5/17/2014								
	FREQUENCY	* *	***	***	***	***		1.62 1 YEAR	***	***	1.33 2 YEAR	***	***			
TV	TOTAL	0.01	0.02 ***	0.20 ***	0.11 ***	0.13 ***	0.03 ***	1.62	0.46 ***	0.19 ***	1.33	0.10 ***	0.02 ***	5		
RAINFALL EVENT	DURATION (hours)	0.08	0.17	29.67	2.58	22.25	0.33	22.42	21.25	9.75	1.25	0.58	0.25			
	STOP	0:45	16:30	16:25	6:55	3:30	20:10	4:20	1:40	7:30	21:25	10:25	21:50	Ē		
	START	0:40									20:10		11	Ę	1	
	DATE	5/2/2014	5/4/2014	5/8/2014	5/9/2014	5/10/2014 -5/11/20;	5/15/2014	5/16/2014 - 5/17/20	5/22/2014 - 5/23/20	5/23/20114 - 5/24/2	5/27/2014	5/28/2014	5/30/2014			
	EVENT No.	1	2	М	4	5	9	7	80				12			

Note:

0.064

			2014				
15 James Street	015		May YEAR:	51	69	4.22	
CSO EVENTS LOG	LOCATION:	NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	
CSO EVE	LOCATIO	NPDES P	MONTH:	Average	Average	Measure	1

								-	200 505			
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
7	5/2/2014	0:40	0:45	0.08	0.01 ***	***						
2	5/4/2014	16:20	16:30	0.17	0.02	***						
m	5/8/2014	6:45	16:25	79.67	0.20 ***	***						
4	5/9/2014	4:20	6:55	2.58	0.11 ***	***						
S	5/10/2014 -5/11/201	5:15	3:30	22.25	0.13 ***	***						
9	5/15/2014	19:50	20:10	0.33	0.03 ***	###			I.			1
7	5/16/2014 - 5/17/20	5:55	4:20	22.42	1.62	1.62 1 YEAR	5/17/2014	0:55	3:35	2.67	0.109	0.012
00	5/22/2014 - 5/23/20	4:25	1:40	21.25	0.46 ***	***	5/22/2014	12:25	13:00	0.58	0.767	0.019
on	5/23/20114 - 5/24/2	21:45	7:30	9.75	0.19 ***	***			1			
10	5/27/2014	20:10	21:25	1.25	1.33	2 YEAR	5/27/2014	20:50	21:35			0.045
11	5/28/2014	9:50	10:25	0.58	0.10	***						
12	5/30/2014	21:35	21:50	0.25	0.02 ***	***						
8 9 10 11 12	5/22/2014 - 5/23/20 5/23/20114 - 5/24/2 5/27/2014 5/28/2014 5/30/2014	4:25 21:45 20:10 9:50 21:35	1:40 7:30 21:25 10:25 21:50	21.25 9.75 1.25 0.58	0.46 0.19 1.33 0.10	0.46 *** 0.19 *** 0.10 *** 0.02 ***	5/22/2014	20:50	27:	35		0.75

Note: Overflow can occur with DS sewer depth reaches 40.5" Expected capacity of siphon is between 24 and 30 MGD.

0.076

					CCO EVENIT	CSO EVENI	STOP							2:25	13:30					1
							START							1:00	12:05					
							DATE							5/17/2014	5/22/2014				Ī	
							FREQUENCY	***	***	* * *	***	***	***	1.62 1 YEAR	* * *	***	1.33 Z YEAR	***	*	
					Air	N	TOTAL	0.01	0.02	0.20 ***	0.11 ***	0.13 ***	0.03	1.62	0.46 ***	0.19	1.33	0.10 ***	0.02 ***	
	2014				Dalairati Carr	KAINFALL EVENI	DURATION (hours)	0.08	0.17	9.67	2.58	22.25	0.33	22.42	21.25	9.75	1.25	0.58	0.25	
oplar	EAR:						STOP	0:45	16:30	16:25	6:55	3:30	20:10	4:20	1:40	7:30	21:25	10:25	21:50	
int. River & Poplar 016	May YEAR:	51	69	4.22			START	0:40	16:20	6:45	4:20	5:15	19:50	5:55	4:25	21:45	20:10	9:50	21:35	
tfall #:		w Temp:	gh Temp:	Rainfall:	snowrall:		DATE	5/2/2014	5/4/2014	5/8/2014	5/9/2014	5/10/2014 -5/11/2014	5/15/2014	5/16/2014 - 5/17/2014	5/22/2014 - 5/23/2014	5/23/20114 - 5/24/2014	5/27/2014	5/28/2014	5/30/2014	
CSO EVENTS LOG LOCATION: NPDES Permit Ou	MONTH:	Average Low Temp:	Average High Temp.	Measured Rainfall:	Measured Snowrall:		EVENT No.	ĵ	7	m	4	'n	0	7	60	0	10	11	12	

OUTFALL OUTFALL
Qavg Qvolume
(MGD) (MG)

DURATION (hours) 0.142

2.401

1.42

0.184

279 Front Street

NPDES Permit Outfall #:

MONTH:

CSO EVENTS LOG LOCATION:

2014

May **YEAR**: 51 69 4.22

Average Low Temp: Average High Temp: Measured Rainfall:	ow Temp: igh Temp: Rainfall:	51 69 4.22	51 69 4.22									
Wedsured Strowlan.	Silbwidit.			RAINFALL EVENT	ENT				CSO EVENT			
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
F	5/2/2014	0:40	0:45			0.01 ***						
2	5/4/2014	-				0.02 ***						
m	5/8/2014		16:25	9.67		0.20 ***						
4	5/9/2014				0.11	***						
LO.	5/10/2014 -5/11/2014					0.13 ***	3					
9	5/15/2014					0.03 ***						
7	5/16/2014 - 5/17/2014					1.62 1 YEAR	5/17/2014	1:15	1:25	0.17	1.091	0.008
00	5/22/2014 - 5/23/2014					0.46 ***		j				
O	5/23/20114 - 5/24/2014					0.19 ***						
10	5/27/2014	20:10		1.25		1.33 2 YEAR						
11	5/28/2014	9:50				0.10 ***						
12	5/30/2014	21:35		0.25	0.02	***						
										4		
										TOTAL MONTH	T 5	0000
										FLOW VOLUME =	L	0,000

0.008

		+	•		-	-	-	-		0	-	_	_		
			DURATION (hours)							9.00					
		CSO EVENT	STOP							10:45					
			START							1:45					
			DATE							5/17/2014					
			FREQUENCY	***	***	***	***	***		AR	***	***	1.33 2 YEAR	***	* *
	4	TN	TOTAL	0.01 ***	0.02 ***	0.20	0.11 ***	0.13 ***	0.03	1.62	0.46	0.19	1.33	0.10	0.02
2014		RAINFALL EVENT	DURATION (hours)	0.08	0.17	79.67	2.58	22.25	0.33	. 22.42	21.25	9.75	1.25	0.58	0.25
Zuinnipiac EAR:			STOP	0:45	16:30	16:25	6:55	3:30	20:10	4:20	1:40	7:30	21:25	10:25	21:50
Clifton and Quinniplac 020 May YEAR: 51 69	4.22		START	0:40	16:20	6:45	4:20	5:15	19:50	5:55	4:25	21:45	20:10	9:50	21:35
LOG it Outfall #: Temp:	ainfall: iowfall:		DATE	5/2/2014	5/4/2014	5/8/2014	5/9/2014	5/10/2014-5/11/2014	5/15/2014	5/16/2014 - 5/17/2014	5/22/2014 - 5/23/2014	5/23/20114 - 5/24/2014	5/27/2014	5/28/2014	5/30/2014
CSO EVENTS LOG LOCATION: NPDES Permit Outfall #: MONTH: Average Low Temp: Average High Temp:	Measured Rainfall: Measured Snowfall:		EVENT No.	1	2	m	4	S	9	7	00	6	10 5	11	

OUTFALL OUTFALL
Qavg Qvolume
(MGD) (MG)

0.005

0.013

Overflow occurs when level is 31" in the interceptor. Note:

0.005

		START						I	1:30					Ī
		DATE S							4					
								P	5/17/2014					
		FREQUENCY	***	***	***	***	***	***	1.62 1 YEAR	***	***	1.33 2 YEAR	***	***
	17	TOTAL	0.01 ***	0.02 ***	0.20 ***	0.11 ***	0.13	0.03 ***	1.62	0.46 ***	0.19 ***	1,33	0.10 ***	0.02
2014	RAINFALL EVENT	DURATION (hours)	0.08	0.17	79.6	2.58	22.25	0.33	22.42	21.25	9.75	1.25	0.58	0.25
enf Drive		STOP	0:45	16:30	16:25	6:55	3:30	20:10	4:20	1:40	7:30	21:25	10:25	21:50
638 Long Wharf Drive 021 May YEAR: 51 69 4.22	1	START	0:40	16:20	6:45	4:20	5:15	19:50	5:55	4:25	21:45	20:10	9:50	21:35
CSO EVENTS LOG LOCATION: NPDES Permit Outfall #: MONTH: Average Low Temp: Average High Temp: Measured Rainfall:	nowfall:	DATE	5/2/2014	5/4/2014	5/8/2014	5/9/2014	5/10/2014 -5/11/2014	5/15/2014	5/16/2014 - 5/17/2014	5/22/2014 - 5/23/2014	5/23/20114 - 5/24/2014	5/27/2014	5/28/2014	5/30/2014
CSO EVENTS LOG LOCATION: NPDES Permit Outfa MONTH: Average Low Temp: Average High Temp: Measured Rainfall:	Measured Snowfall:	EVENT No.	1	2	m	4	'n	ω	7	00	on.	10	11	

Q volume (MG)

Qavg (MGD)

(hours)

STOP

OUTFALL OUTFALL

CSO EVENT

0.898

8.916

2.42

3:55

TOTAL MONTH FLOW VOLUME =

868.0

Note:

				H												
			CSO EVENT	STOP							3:25					
				START							1:25					
				DATE							5/17/2014					
				FREQUENCY	***	***	***	***	***	* *	1 YEAR	* * *	* *	2 YEAR	***	
			TA	TOTAL	10.0	0.02	0.20	0.11	0.13	0.03	1.62	0.46 ***	0.19 ***	1.33	0.10	0.02
ter Street	2014		RAINFALL EVENT	DURATION (hours)	0.08	0.17	29.67	2.58	22.25	0.33	22.42	21.25	9.75	1.25	0.58	0.25
South Wa	EAR:			STOP	0:45	16:30	16:25	6:55	3:30	20:10	4:20	1:40	7:30	21:25	10:25	21:50
Sea Street @ South Water Street 024	May YEAR: 51	4.22		START	0:40	16:20	6:45	4:20	5:15	19:50	5:55	4:25	21:45	20:10	9:50	21:35
LOG	v Temp:	ainfall:		DATE	5/2/2014	5/4/2014	5/8/2014	5/9/2014	5/10/2014 -5/11/2014	5/15/2014	5/16/2014-5/17/2014	5/22/2014 - 5/23/2014	5/23/20114 - 5/24/2014	5/27/2014	5/28/2014	5/30/2014
CSO EVENTS LOG LOCATION: NPDES Permit Outfall #:	MONTH: Average Low Temp:	Measured Rainfall:		EVENT No.	1	2	m	4	2	9	7	88	ō	10	11	12

QUTFALL OUTFALL
Qavg Qvolume
(MGD) (MG)

DURATION (hours) 0.174

2.019

2.00

Note: Overflow occurs when upstream depth reaches approx. 65" or when downstream reaches approx. 81".

0.174

CSO EVENTS LOG LOCATION: NPDES Permit Outfa MONTH: Average Low Temp: Average High Temp: Measured Rainfall: Measured Snowfall:	CSO EVENTS LOG LOCATION: LOCATION: NPDES Permit Outfall #: MONTH: Average Low Temp: Average High Temp: Measured Rainfall: Measured Snowfall:	Intersection 025 May) 51 69 4.22	action of State & 025 May YEAR: 51 69	Intersection of State & N. Front Street 025 May YEAR: 2014 51 69 4.22				
				RAINFALL EVENT	TN			
EVENT No.	DATE	START	STOP	(hours)	TOTAL	FREQUENCY	DATE	START
1	5/2/2014	0:40	0:45	80.0	0.01	16 N 4		
2	5/4/2014	16:20	16:30	0.17	0.02 ***	***		
m	5/8/2014	6:45	16:25	29.67	0.20	***		
4	5/9/2014	4:20	6:55	2.58	0.11	***		
Ŋ	5/10/2014 -5/11/2014	5:15	3:30	22.25	0.13 ***			_
9	5/15/2014	19:50	20:10	0.33	0.03	***		
7	5/16/2014 - 5/17/2014	5:55	4:20	22.42	1.62	1.62 1 YEAR		
00	5/22/2014 - 5/23/2014	4:25	1:40	21.25	0.46 ***	***		_
m	5/23/20114 - 5/24/2014	21:45	7:30	9.75	0.19 ***	***		_
10	5/27/2014	20:10	21:25	1.25	1.33	L.33 2 YEAR		
11	5/28/2014	9:50	10:25	0.58	0.10	***		
12	5/30/2014	21:35	21:50	0.25	0.02	***		

Qavg volume (MGD) (MG)

DURATION (hours)

STOP

CSO EVENT

TOTAL MONTH FLOW VOLUME =

0.000

Note:

CSO EVENTS LOG George and Temple
LOCATION:
Regulator 34
NPDES Permit Outfall #:
MONTH:
Average Low Temp:
Average High Temp:
Measured Rainfall:
Acsured Snowfall:
Acsured Snowfall:

				RAINFALL EVENT	TNE				CSO EVENT			
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Qvolume (MGD) (MG)
1	5/2/2014	0:40	0:45	80'0	0.01	0.01 ***						
2	5/4/2014	16:20	16:30	0.17	0.02	0.02 ***						
m	5/8/2014	6:45	16:25	9,67	0.20	0.20 ***						
4	5/9/2014	4:20	6:55	2.58	0.11	0,11 ***						
2	5/10/2014 -5/11/2014	5:15	3:30	CA	0.13	0.13 ***						
9	5/15/2014	19:50	20:10	0.33	0.03	0.03 ***		1				
7	5/16/2014 - 5/17/2014	5:55	4:20	22.42	1.62	1.62 1 YEAR	5/17/2014	0:50		1.50	4.944	0.309
00	5/22/2014 - 5/23/2014	4:25	1:40	21.25	0.46 ***	***	5/22/2014	12:30	12:40		2.233	0.016
o o	5/23/20114 - 5/24/2014	21:45	7:30		0.19	***						
10	5/27/2014	20:10	21:25	1.25	1.33	1.33 2 YEAR	5/27/2014	20:35	21:20	0.75	5,137	0,161
11	5/28/2014	9:50	10:25	0.58	0.10	0.10						
12	5/30/2014	21:35	21:50	0.25	0.02	0.02 ***						
				1								

Note:

0.486

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
CSO FLOW MONITORING PROGRAM
METER DATA SUMMARY - THROUGH JUNE 2014

CSO NUMBER	REGULATOR NUMBERS	CSO EVENTS	CSO VOLUME (MG)	RAINFALL (IN)	METER MONTHS
CSO 006	REGS 006 A, 006 B	32	9.686	91.19	25
CSO 005	REG 005	28	6.040	91.19	25
CSO 004	REG 004	92	42.867	91.19	25
CSO 003	REG 003	70	31.759	91.19	25
CSO 024	REG 024	23	24.487	85.59	23
600 050	REG 009	42	2.965	73.85	21
CSO 019	REG 019	28	1.535	85.59	23
CSO 016	REG 016	54	26.196	75.88	23
CSO 015	REG 015	38	6,171	73.85	21
CSO 010	REG 010	15	3.326	74.55	20
CSO 011	REGS 010A, 011, 014, 026	18	11,436	69,48	19
CSO 012	REGS 012A, 012B, 028	36	11.733	85.59	23
CSO 025	REGS 025, 034	9	0.992	29.10	7
CSO 021	REG 021	29	25,975	70.48	20
CSO 020	REG 020	Ŋ	0.233	53,93	15
TOTAL		516	205,401		

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY METER DATA SUMMARY - TYPICAL YEAR ESTIMATES CSO FLOW MONITORING PROGRAM

CSO NUMBER	REGULATOR NUMBERS	ANNUAL CSO EVENTS BASED ON RAINFALL(4)	ANNUAL CSO VOLUME (MG) BASED ON RAINFALL ^[2]	ANNUAL CSO EVENTS BASED ON MONTHS(3)	ANNUAL CSO VOLUME (MG) BASED ON MONTHS ⁽⁴⁾	MODEL CSO EVENTS	MODEL CSO VOLUME [MG]
CSO 006	REGS 006.A, 006 B.	1.4	4.384	15	4.649	27	27.0
CSO 005	REG 005	13	2,734	13	2.899	39	22.0
CSO 004	REG 004	42	19.400	44	20.576	44	65.3
CSO 003	REG 003	32	14.373	34	15.244	28	12.5
CSO 024	REG 024	11	11,807	12	12.776	0	1.9
CSO 009	REG 009	23	1.657	24	1.694	27	8.1
CSO 019	REG 019	14	0.740	15	0.801	7	2.4
CSO 016	REG 016	29	14,248	28	13.567	45	20.4
CSO 015	REG 015	.21	3.449	22	3.526	on.	4.1
CSO 010	REG 010	00	1,841	ō	1.996	وا	2,4
CSO 011	REGS 010A, 011, 014, 026	11	6.793	Ħ	7.223	120	26.6
CSO 012	REGS 012A, 012B, 028	17	5.657	19	6.122	00	2.9
CSO 025	REGS 025, 034	Œ1	1,407	10	1.701	9	9.0
CSO 021	REG 021	17	15.210	17	15.585	23	35.1
C\$O 020	REG 020	4	0.178	4	0.186	00	1,4
TOTAL		261	103,699	274	108,459	292	241.1

⁽¹⁾ Annual CSO Events Based on Rainfall = Annual Rainfall (3.44 in x 12 = 41.28 in) x CSO Events to Date / Rainfall to Date

⁽²⁾ Annual CSO Volume (MG) Based on Rainfall = Annual Rainfall (3.44 in x.12 = 41.28 in) x CSO Volume (MG) to Date / Rainfall to Date (3) Annual CSO Events Based on Months = 12 x CSO Events to Date / Meter Months to Date (4) Annual CSO Volume (MG) Based on Months = 12 x CSO Volume (MG) to Date / Meter Months to Date

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY CSO FLOW MONITORING PROGRAM METER DATA SUMMARY - JUNE 2014

MONTHLY RAINFALL SUMMARY

4.39 inches of rain (3.44 inches of rain in a typical month)

No snow

6 rain events (10 rain events in a typical month)

Two 6 month storms, one 1 month storm, all other storms less than 1 month return frequency

REG 005 B 3 REG 005 REG 004 REG 003 REG 003 REG 024 1 REG 019 REG 019 REG 016 REG 010	CSO NUMBER	REGULATOR NUMBERS	CSO EVENTS	CSO VOLUME (MG)
REG 005 REG 004 REG 003 REG 003 REG 009 REG 019 REG 016 REG 016 REG 015 REG 015 REG 015 REG 015 REG 010 REG 020 1 REG 020 1 REG 020 2 3 4 4 REG 020 1 REG 020 2 3 4 A A REG 020 0 REG 020 0 REG 020 0	CSO 006	REGS 006 A, 006 B	2	0.410
REG 004 REG 003 REG 003 REG 019 REG 019 REG 016 REG 010 REG 010 REG 010 REG 010 1 REG 020 2 4 4 4 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	CSO 005	REG 005	m	0.557
REG 003 REG 024 REG 009 REG 019 REG 016 REG 016 REG 017 REG 010 REGS 012A, 012B, 028 REG 021 REG 021 2 REG 020 2 4 4 4 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	CSO 004	REG 004	4	1.904
REG 024 1 REG 009 REG 016 REG 016 REG 016 REG 010 REG 010 REG 010 1 REG 020 2 4 4 4 A REG 020 1 REG 020 1 REG 021 2 REG 021 2 REG 021 1 REG 021 0 REG 020 0	CSO 003	REG 003	4	0.114
REG 009 REG 019 REG 016 REG 015 REG 010 REG 010 REGS 010A, 011, 014, 026 REGS 022A, 012B, 028 REGS 025, 034 REG 021 REG 020 REG 020	CSO 024	REG 024	₩	0.143
REG 019 REG 016 REG 015 A REG 010 REGS 010A, 011, 014, 026 REGS 012A, 012B, 028 REGS 025, 034 REG 021 REG 020 0	CSO 009	REG 009	2	0.099
REG 016 REG 015 REG 010 REGS 010A, 011, 014, 026 REGS 012A, 012B, 028 REGS 025, 034 REG 021 REG 020 0	CSO 019	REG 019	2	0.084
REG 015 REG 010 REGS 010A, 011, 014, 026 REGS 012A, 012B, 028 REGS 025, 034 REG 021 REG 020 0	CSO 016	REG 016	m	0.202
REG 010 REGS 010A, 011, 014, 026 REGS 012A, 012B, 028 REGS 025, 034 REG 021 REG 020 0	CSO 015	REG 015	4	0.493
REGS 010A, 011, 014, 026 2 REGS 012A, 012B, 028 1 REGS 025, 034 3 REG 021 2	CSO 010	REG 010	H	0.201
REGS 012A, 012B, 028 1 REGS 025, 034 3 REG 021 2 REG 020 0	CSO 011	REGS 010A, 011, 014, 026	2	0.921
REGS 025, 034 3 REG 021 2 REG 020 0	CSO 012	REGS 012A, 012B, 028	1	0.074
REG 021 2 REG 020 0	CSO 025	REGS 025, 034	m	0.506
REG 020	CSO 021	REG 021	2	0.367
33	CSO 020	REG 020	0	0.000
to	TOTAL		34	6.075

- C	10 do 401 @ 01.0 000000	T Concess Ohio
CSO EVENIS LOG	Orange Ave. (a) Int. of Elia I. Grasso bivo.	id I. Grasso Biva.
OCATION:	003	
VPDES Permit Outfall #:		
MONTH:	June YEAR:	2014
Average Low Temp:	09	
verage High Temp:	78	
Measured Rainfall:	4,39	

			RAINFALL EVENT	TN			ຽ	CSO EVENT			
EVENT NO. DATE	TE START	T	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL OUTFALL Qavg Qvolume (MGD) (MG)	OUTFALL Q volume (MG)
6/5/2014				-	***	6/5/2014	10:35	11:50		060.0	0.005
2 6/9/2014	7	7:35 14:55		1.02	1.02 6 Month	6/9/2014	13:40	15:45		0.118	0.010
3 6/12/2014	12			0.02 ***	并表本						
4 6/13/2014	0		23.92	2.08	2.08 6 Month	6/13/2014	11:00	22:10	11.17	0.180	0.084
5 6/19/2014	- vii			0.74	0.74 1 Month	6/19/2014	7:25	9:40		0.163	0.015
6 6/26/2014	H			0.03 **	* *						

Overflow occurs when Interceptor level reaches 46"

0.114

Ella T. Grasso Blvd. - 23 yrds North of Legion Ave. 004 CSO EVENTS LOG LOCATION:

NPDES Permit Outfall #:

Average Low Temp: MONTH:

Average High Temp: Measured Rainfall: Measured Snowfall:

60 78 4.39

2014

June YEAR:

				RAINFALL EVENT	ENT			CS	CSO EVENT			
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	1 1 1	Qavg Q volume (MGD)
	6/5/2014	2:50	12:20			0.50 ***	6/5/2014	10:25	12:15	1.83		0.088
7	6/9/2014	7:35	14:55	7.33		1.02 6 Month	6/9/2014	13:40	16:00			0.294
m	6/12/2014	12:05	12:35	0.50		0.02		ì				
4	6/13/2014	00:00	23:55	23.92		2.08 6 Month	6/13/2014	10:50	22:25		2,461	1.188
S	6/19/2014	5:20	10:15	4.92		0.74 1 Month	6/19/2014	7:20	10:05	2.75		0.334
9	6/26/2014	1:55	4:40	2.75		0.03 ***						

Overflow occurs when Interceptor level reaches 35" Note

1.904

Derby Ave. 20 yrds East of Ella T. Grasso Blvd, 005 CSO EVENTS LOG

LOCATION:

NPDES Permit Outfall #:

Average Low Temp: MONTH:

Average High Temp: Measured Rainfall: Measured Snowfall:

June YEAR: 60 78 4.39

2014

Weasured showfall:	Showidil.			RAINFALL EVENT	TNE			J	CSO EVENT			
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Q.volume (MGD) (MG)
1 2	6/5/2014 6/9/2014	2:50	12:20		2	0.50 *** 1.02 6 Month	6/9/2014	14:30	15:00	0.50	5.206	0.108
g 4	6/12/2014 6/13/2014	12:05		.,,		0.02 *** 2.08 6 Month	6/13/2014	13:00	14:10	1.17		
un up	6/19/2014 6/26/2014	5:20 1:55		4.92 2.75		0.03 ***	6/19/2014	7:55	0 4 :		0.294	0.003
										TOTAL MONTH	TH.	0.557

Overflow occurs when Interceptor level reaches 53.5" Note:

Whalley Ave. 30 yrds from Fitch Street 006 2014 June YEAR: NPDES Permit Outfall #: **CSO EVENTS LOG** LOCATION:

Average Low Temp: Average High Temp: Measured Rainfall: Measured Snowfall:

MONTH:

60 78 4.39

				RAINFALL EVENT	ENT			0_	CSO EVENT			
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	TOTAL FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Qvolume (MGD) (MG)
1	6/5/201	2:50		9.50		0:50 ***						
2	6/9/2014	7:35		7.33		1.02 6 Month	6/9/2014	14:40	14:55	0.25	1.056	0.011
m	6/12/2014	12:05				***						
4	6/13/2014	00:00	23:55	23.92		2.08 6 Month	6/13/2014	13:10	14:50	1.67	5.746	0.399
in	6/19/2014	5:20				0.74 1 Month						
10	6/26/2014	1:55		2.75	0.03	***						
k E												
										TOTAL MONTH FLOW VOLUME =	H E=	0.41

Overflow occurs when Interceptor level reaches 27" Note:

Street			2014					DAINEALL EVENIT
Grand Avenue & James Street	600		June YEAR:	09	78	4.39		
CSO EVENTS LOG	LOCATION:	NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	Measured Snowfall:	

	OUTFALL Q volume (MG)	0.002	0.099
	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)	0.081	!!
	DURATION (hours)	0.58	TOTAL MONTH
CSO EVENT	STOP	7:55	
	START	12:55 7:20	
	DATE	6/13/2014 6/19/2014	
	FREQUENCY	0.50 *** 1.02 6 Month 0.02 *** 2.08 6 Month 0.74 1 Month 0.03 ***	
TN	TOTAL		
RAINFALL EVENT	DURATION (hours)	9,50 7,33 0,50 23,92 4,92 2,75	
	STOP	12:20 14:55 12:35 23:55 10:15 4:40	
	START	2:50 7:35 12:05 0:00 5:20 1:55	
7.00.00	DATE	6/5/2014 6/9/2014 6/12/2014 6/13/2014 6/19/2014 6/26/2014	
	EVENT NO.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Note:

CSO EVENTS LOG 547 East Street LOCATION: 010
NPDES Permit Outfall #: June YEAR:

2014

Average Low Temp:

Average High Temp: Measured Rainfall: Measured Snowfall:

June YEAR: 60 78 4.39

Measured	Measured Showfall:			RAINFALL EVENT	TN				CSO EVENT	II		
EVENT No.	DATE	START	STOP	DURATION (hours)	OTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)		OUTFALL OUTFALL Qavg Q volume (MGD) (MG)
П	6/5/20	2:50	12:20			**						
2	6/9/2014	7:35	14:55	7.33		1.02 6 Month						
m	6/12/2014	12:05	12:35	0.50		0.02 ***						
4	6/13/2014	00:0	23:55	23.92		2.08 6 Month	6/13/2014	13:05	14:20	1.25	3.867	0.201
ın	6/19/2014	5:20	10:15		0.74	0.74 1 Month						
9	6/26/2014	1:55	4:40		0.03	0.03 ***						
			2									

Note: Overflow occurs when sewer level reaches 54"

0.201

			2014					a transfer or an execution
547 East Street	010A		June YEAR:	09	78	4.39		
CSO EVENTS LOG	LOCATION:	NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	Measured Snowfall:	

				RAINFALL EVENT	INT				CSO EVENT	П		
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	Qavg Qvolume (MGD) (MG)
1	6/5/2014	2:50		9.50		0.50 ***						
2	6/9/2014	7:35		7,33		1.02 6 Month						
m	6/12/2014	12:05		0.50		0.02 ***						
4	6/13/2014	00:00	23:55	23.92		2.08 6 Month	6/13/2014	13:15	14:05	0.83	5.801	0.201
ın	6/19/2014	5:20		4.92		0.74 1 Month						
9	6/26/2014	1:55		2.75	0.03 ***	***						
					ì							
						1		Y				

Note: Overflow occurs when sewer level reaches 62"

0.201

CSO EVENTS LOG LOCATION: NPDES Permit Outfall #:

MONTH:

Average Low Temp:
Average High Temp:
Measured Rainfall:
Measured Snowfall:

2014	
June YEAR:	09

j	78	

4.39

Medsured Showidil.	Silowidii.			RAINFALL EVENT	ENT				CSO EVENT			
EVENT NO.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)
	6/5/2014	2:50				***						
2	6/9/2014	7:35		7.33		6 Month	6/9/2014	14:35	15:25	0.83	2.348	0.082
m	6/12/2014	12:05				0.02 ***				Z,		k
4	6/13/2014	0:00		23.92		2.08 6 Month	6/13/2014	13:10	15:05	1.92	7.991	0.638
15	6/19/2014	5:20	10:15			0.74 1 Month						
0	6/26/2014	1:55		2.75	0.03	0.03 ***						
										j		

OF-011-609 and OF-011-997 removed on 8/26

Note:

0.720

CSO EVENTS LOG

LOCATION:

June YEAR: 60 78 4.39 011 NPDES Permit Outfall #:

2014

Average Low Temp: MONTH:

Average High Temp: Measured Rainfall:

Measured Snowfall:

CSO EVENT RAINFALL EVENT

0.839 0.082 Q volume OUTFALL (MG) 2.348 10.487 OUTFALL Qavg (MGD) 0.83 1.92 DURATION (hours) 15:05 15:25 STOP 14:35 13:10 START DATE 6/13/2014 6/9/2014 FREQUENCY 1.02 6 Month 0.02 *** 2.08 6 Month 0.74 1 Month 0.03 *** 0.50 *** TOTAL 9.50 7.33 0.50 23.92 4.92 2.75 DURATION (hours) 12:20 14:55 12:35 23:55 10:15 4:40 STOP 2;50 7:35 12:05 0:00 5:20 1:55 START DATE 6/13/2014 6/19/2014 6/5/2014 6/9/2014 6/12/2014 6/26/2014 EVENT No. H 24 M 4 M 6

Sum of 10A and 11

Note:

0.921

75 Mitchell Drive 012 CSO EVENTS LOG LOCATION:

NPDES Permit Outfall #:

Average Low Temp: MONTH:

2014

June YEAR: 60 78 4.39

Average High Temp: Measured Rainfall: Measured Snowfall:

				RAINFALL EVENT	INT				CSO EVENT			
EVENT NO.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)
1	6/5/2014	2:50			0.50	***						
2	6/9/2014	7:35		7.33		1.02 6 Month	1					
8	6/12/2014	12:05		0.50		* * *						
4	6/13/2014	00:0		23.92		2.08 6 Month	6/13/2014	13:10	14:05	1.00	1.779	0.074
5	6/19/2014	5:20		4.92	0.74	0.74 1 Month						
9	6/26/2014	1:55	4:40	2.75	0.03	0.03 ***						
								4	1			1

Note:

0.074

June YEAR: 15 James Street 60 78 4.39 NPDES Permit Outfall #: Average High Temp: Measured Rainfall: Measured Snowfall: Average Low Temp: CSO EVENTS LOG LOCATION: MONTH:

2014

			RAINFALL EVENT	LN				CSO EVENT		7	
EVENT No. DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
6/5/20		12:20	-	0.50	0.50 ***						
2 6/9/2014	7:35	14:55		1.02	1.02 6 Month	6/9/2014	13:50	15:10	1.33	1.819	0.101
3 6/12/2014	12:05	12:35		0.02	0.02 ***						
4 6/13/2014	00:00	23:55	23.92	2.08	2.08 6 Month	6/13/2014	13:00	14:30	1.50		0,274
						6/13/2014	20:55	21:05	0.17	3.816	0.027
5 6/19/2014	5:20	10:15	4.92	0.74	0.74 I Month	6/19/2014	7:30	8:50	1.33	Ď	0.091
6 6/26/2014	1:55	4:40	2.75	** * * *	* *						
									TOTAL MONTH FLOW VOLUME =	H E=	0,493

Expected capacity of siphon is between 24 and 30 MGD. Overflow can occur with DS sewer depth reaches 40.5"

Note:

CSO EVENTS LOG	Int. River & Poplar	
LOCATION:	016	
NPDES Permit Outfall #:		
MONTH:	June YEAR:	2014
Average Low Temp:	09	
Average High Temp:	78	
Measured Rainfall:	4.39	
Measured Snowfall:		

EVENT No. DATE START STOP (hours) TOTAL FREQUENCY DATE START STOP (hours) TOTAL FREQUENCY DATE START STOP (hours) (MGD)					RAINFALL EVENT	ENT				CSO EVENT			
6/5/2014 2:50 12:20 9:50 0.50 *** 6/5/2014 10:35 12:35 2:00 0.392 6/9/2014 7:35 14:55 7:33 1.02 6 Month 6/9/2014 13:40 15:55 2.25 1.047 6/13/2014 12:05 12:35 0.50 0.02 *** 6/13/2014 11:45 13:45 2:00 0.347 6/13/2014 5:20 10:15 4:40 2.75 0.03 *** 6/13/2014 11:45 13:45 2:00 0.347 6/13/2014 1:55 4:40 2.75 0.03 *** FILOW VOLUME =	EVENT NO.		START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
6/9/2014 7:35 14:55 7:33 1.02 6 Month 6/9/2014 13:40 15:55 2.25 1.047 6/12/2014 12:05 12:35 0.50 0.02 *** 6/13/2014 13:45 2.08 6 Month 6/13/2014 13:45 2.08 6 Month 6/13/2014 13:45 2.09 0.03 *** 1:55 4:40 2.75 0.03 *** 1:55 4:40 2.75 0.03 *** 1:55 4:40 2.75 0.00 *** 1:	T	6/5/2014	2:50	12:20			20 元年	6/5/2014	10:35	12:35			
6/12/2014 12:05 12:35 0.50 0.02 *** 6/13/2014 0:00 23:55 23:92 2.08 6 Month 6/13/2014 11:45 13:45 2.00 0.847 6/19/2014 5:20 10:15 4:92 0.74 1 Month 6/13/2014 11:45 13:45 2.00 0.847 6/26/2014 1:55 4:40 2.75 0.03 *** FLOW VOLUME =	2	6/9/2014	7:35	14:55			6 Month	6/9/2014	13:40	15:55			
6/13/2014 0:00 23:55 23:92 2.08 6 Month 6/13/2014 11:45 13:45 2.00 0.847 6/13/2014 5:20 10:15 4:92 0.74 1 Month 6/13/2014 11:55 4:40 2.75 0.03 *** 6/26/2014 1:55 4:40 2.75 0.03 *** FLOW VOLUME =	m	6/12/2014	12:05	12:35			***						
6/26/2014 5:20 10:15 4:92 0.74 1 Month 6/26/2014 1:55 4:40 2.75 0.03 *** TOTAL MONTH FLOW VOLUME =	4	6/13/2014	00:0	23:55			6 Month	6/13/2014	11:45	13:45			
6/26/2014 1:55 4:40 2.75 0.03 *** TOTAL MONTH FLOW VOLUME =	ın	6/19/2014	5:20	10:15			1 Month						
TOTAL MONTH FLOW VOLUME =	9	6/26/2014	1:55	4:40			* * *						
	V												
											TOTAL MONT	H = H	0.202

Note

CSO EVENTS LOG 279 Front Street
LOCATION: 019
NPDES Permit Outfall #: June YEAR: 2014
Average Low Temp: 60
Average High Temp: 78
Measured Rainfall: 4.39
Measured Snowfall:

				RAINFALL EVENT	TN				CSO EVENT			
EVENT NO.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)
	6/5/2014	2:50	12:20	9.50		0.50 ***						
2	6/9/2014	7:35	14:55	7,33		1.02 6 Month	6/9/2014	14:30	15:00	0.50	0.639	0.013
ю	6/12/2014	12:05	12:35	0.50		0.02 ***						
4	6/13/2014	00:00	23:55	23.92	2.08	2.08 6 Month	6/13/2014	11:45	13:45	2.00	0.847	0.071
Ŋ	6/19/2014	5:20	10:15	4.92	0.74	0.74 1 Month						
9	6/26/2014	1:55	4:40	2.75	0.03 ***	***						
						1						

0.084

			2014					Contract Con
Clifton and Quinnipiac	020		June YEAR:	60	78	4.39		
CSO EVENTS LOG	LOCATION:	NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	Measured Snowfall:	

				RAINFALL EVENT	ENT				CSO EVENT	_		
EVENT NO.	. DATE	START	STOP	DURATION (hours)	TOTAL	TOTAL FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Qvolume (MGD) (MG)
H V W 4 N D	6/5/2014 6/9/2014 6/12/2014 6/13/2014 6/19/2014 6/26/2014	2:50 7:35 12:05 0:00 5:20 1:55	12:20 14:55 12:35 23:55 10:15 4:40	9.50 7.33 0.50 23.92 4.92 2.75		0.50 *** 1.02 6 Month 0.02 *** 2.08 6 Month 0.74 1 Month 0.03 ***						
										TOTAL MONTH	H.	0.000

Note: Overflow occurs when level is 31" in the interceptor.

638 Long Wharf Drive	021		June YEAR: 2014	99	78	4.39	
CSO EVENTS LOG	LOCATION:	NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	Measured Snowfall:

	Qavg Qvolume (MGD) (MG)	U	0.025		0.342				
	OUTFALL Qavg (MGD)	B	0.668		4,104				
	DURATION (hours)		0.92		2.00	J			
CSO EVENT	STOP		15:30		15:25				
	START		14:35		13:25				
	DATE		6/9/2014		6/13/2014				
	TOTAL FREQUENCY	***	1.02 6 Month	0.02 ***	2.08 6 Month	0.74 1 Month	***		
TN	TOTAL	0.50 ***	1.02	0.02	2.08	0.74	0.03 ***		
RAINFALL EVENT	DURATION (hours)	9.50	7.33	0.50	23.92	4.92	2.75		
	STOP	12:20	14:55	12:35	23:55	10:15	4:40	Ī	
	START	2:50	7:35	12:05	00:00	5:20	1:55		
	DATE	6/5/2014	6/9/2014	6/12/2014	6/13/2014	6/19/2014	6/26/2014		
	EVENT NO.	7	2	m	4	ın	9		

0,367

ater Street			2014					The state of the s
Sea Street @ South Water Street	024		June YEAR:	09	78	4.39		
CSO EVENTS LOG	LOCATION:	NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	Measured Snowfall:	

				RAINFALL EVENT	ENT				CSO EVENT			
EVENT NO.	DATE	TE START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)	OUTFALL Q volume (MG)
T	6/5/2014		12:20			* *						
2	6/9/2014	7:35		7.33		1.02 6 Month						
m	6/12/2014	12:05				* *		E C			Ī	
4	6/13/2014	0:00				2.08 6 Month	6/13/2014	13:10	14:35	1.42	2.422	0.143
S	6/19/2014	5:20		4.92		0.74 1 Month						
9	6/26/2014	1:55				**						
									Ī			

Note: Overflow occurs when upstream depth reaches approx. 65" or when downstream reaches approx. 81".

0.143

Front Street			2014				The second second	The state of the state of
Intersection of State & N. Front Street	025		June YEAR:	09	78	4.39		
CSO EVENTS LOG	LOCATION:	NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	Measured Snowfall:	

	OUTFALL OUTFALL Q Qavg volume (MGD) (MG)		
	OUTFALL Qavg (MGD)		7.1
	DURATION (hours)		TOTAL MONTH
CSO EVENT	STOP		
R	START		
	DATE		
	FREQUENCY	0.50 *** 0.02 6 Month 0.02 *** 0.74 1 Month 0.03 ***	
NT	TOTAL	0.50 1.02 6 Mc 0.02 *** 2.08 6 Mc 0.74 1 Mc	
RAINFALL EVENT	DURATION (hours)	9.50 7,33 0.50 23.92 4.92 2.75	
	STOP	12:20 14:55 12:35 23:55 10:15 4:40	
	START	2:50 7:35 12:05 0:00 5:20 1:55	
	DATE	6/5/2014 6/9/2014 6/12/2014 6/13/2014 6/19/2014 6/26/2014	
	EVENT No.	H 54 M 4 M 10	

2014 George and Temple Regulator 34 June YEAR: 60 78 NPDES Permit Outfall #: MONTH: Average High Temp: Measured Rainfall: Measured Snowfall: Average Low Temp: CSO EVENTS LOG LOCATION:

O	
7 3	1

				RAINFALL EVENT	INT				CSO EVENT			
EVENT NO.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Qvolume (MGD) (MG)
ы		2:50	12:20			***	1100000	13.4	14.65	1 17	200	0.258
2	6/9/2014	7:35	14:55			T.U.Z. b Month	6/3/2014	15.45	14:00			
m	6/12/2014	12:05	12:35					0.000	2000			
4	6/13/2014	00:0	23:55	23,92	2.08	2.08 6 Month	6/13/2014	10:55	14:15	3.33	1.243	0.173
50	6/19/2014	5:20	10:15	4.92	0.74	0.74 1 Month	6/19/2014	7:25	8:40	1.25		
9	6/26/2014	1:55	4:40	2.75	0.03	* *						

0.506

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
CSO FLOW MONITORING PROGRAM
METER DATA SUMMARY - THROUGH JULY 2014

CSO NUMBER	REGULATOR NUMBERS	CSO EVENTS	CSO VOLUME (MG)	RAINFALL (IN)	METER MONTHS
CSO 006	REGS 006 A, 006 B	34	10.408	95.79	26
CSO 005	REG 005	31	6.882	95,79	26
CSO 004	REG 004	26	44.976	95.79	26
CSO 003	REG 003	74	32.030	95.79	26
CSO 024	REG 024	23	24.487	85.59	23
CSO 009	REG 009	45	3.243	78.45	22
CSO 019	REG 019	29	1.539	90.19	24
CSO 016	REG 016	59	26.510	80.48	24
CSO 015	REG 015	43	6.345	78.45	22
CSO 010	REG 010	16	3.923	79.15	21
CSO 011	REGS 010A, 011, 026	20	13,469	74.08	20
CSO 012	REGS 012A, 012B, 028	38	11,864	90.19	24
CSO 025	REGS 025, 034	o	1.556	33.70	00
CSO 021	REG 021	31	27,407	75.08	21
CSO 020	REG 020	7	0.270	58,53	16
TOTAL		556	214,909		

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY METER DATA SUMMARY - TYPICAL YEAR ESTIMATES CSO FLOW MONITORING PROGRAM

SO NUMBER	REGULATOR NUMBERS	ANNUAL CSO EVENTS BASED ON RAINFALL ^[1]	ANNUAL CSO VOLUME (MG) BASED ON RAINFALL ⁽²⁾	ANNUAL CSO EVENTS BASED ON MONTHS ⁽³⁾	ANNUAL CSO VOLUME [MG] BASED ON MONTHS ⁽⁴⁾	MODEL CSO EVENTS	MODEL CSO VOLUME (MG)
CSO 006	REGS 006 A, 006 B	15	4,484	16	4.804	27	27.0
CSO 005	REG 005	13	2,965	14	3.176	39	22.0
CSO 004	REG 004	42	19,377	45	20.758	44	65.3
CSO 003	REG 003	32	13,800	34	14.783	28	12.5
CSO 024	REG 024	11	11.807	12	12,776	0	1.9
CSO 009	REG 009	24	1.706	25	1.769	27	8,1
CSO 019	REG 019	13	0.704	15	0.770	7	2.4
CSO 016	REG 016	30	13.594	30	13.255	45	20.4
CSO 015	REG 015	23	3,338	23	3,461	đi	4.1
CSO 010	REG 010	90	2.046	6	2.242	9	2.4
CSO 011	REGS 010A, 011, 026	11	7.504	12	8.081	15	26.6
CSO 012	REGS 012A, 012B, 028	17	5.429	19	5.932	003	2.9
CSO 025	REGS 025, 034	H	1,906	14	2.334	9	0.6
CSO 021	REG 021	17	15.065	18.	15.661	23	35.1
CSO 020	REG 020	'n	0.190	V	0.203	60	4, 1
TOTAL		268	103.725	284	109.802	292	241.1

⁽¹⁾ Annual CSO Events Based on Rainfall = Annual Rainfall (3.44 in x 12 = 41.28 in) x CSO Events to Date / Rainfall to Date

⁽²⁾ Annual CSO Volume (MG) Based on Rainfall = Annual Rainfall (3.44 in x 12 = 41,28 in) x CSO Volume (MG) to Date / Rainfall to Date (3) Annual CSO Events Based on Months = 12 x CSO Events to Date / Meter Months to Date (4) Annual CSO Volume (MG) Based on Months = 12 x CSO Volume (MG) to Date / Meter Months to Date

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY CSO FLOW MONITORING PROGRAM METER DATA SUMMARY - JULY 2014

MONTHLY RAINFALL SUMMARY

4.60 inches of rain (3.44 inches of rain in a typical month)

No snow

8 rain events (10 rain events in a typical month)

One 2 year storm, one 3 month storm, all other storms less than 1 month return frequency

CSO NUMBER	REGULATOR NUMBERS	CSO EVENTS	CSO VOLUME (MG)
	REGS 006 A, 006 B	2	0.722
	REG 005	ĸ	0.842
	REG 004	5	2.109
	REG 003	4	0.271
	REG 024	No Data	No Data
	REG 009	3	0,278
	REG 019	1	0.004
CSO 016	REG 016	5	0.314
CSO 015	REG 015	\$	0.174
CSO 010	REG 010	F	0.597
	REGS 010A, 011, 026	2	2.033
	REGS 012A, 012B, 028	2	0.131
	REGS 025, 034	8	0.564
	REG 021	7	1.432
CSO 020	REG 020	2	0.037
		40	9.508
	(2	(22 CSO events in a typical month)	(20.358 MG of CSO volume in a typical month)

Orange Ave. @ Int. of Ella T. Grasso Blvd.	003		July YEAR: 2014	29	83	4.60	
CSO EVENTS LOG Ora	LOCATION:	NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	Measured Snowfall:

				RAINFALL EVENT	INT			8	CSO EVENT			
EVENT NO.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)
ei -	7/2/2014 - 7/3/14	18:40				0.40 ***	7/2/2014	19:50	20:10		0.045	
7 0	7/3/2014	20:50	22:40	1.83		0.52 3 Month	7/4/2014	15-35	15:55	2.00	0.067	0.0019
4	7/8/2014	1:05			Ę	0.07 ***						
2	7/14/2014 - 7/15/14	19:50				2.44 2 year	7/14/2014 - 7/15/14	20:25	0:10	3.75	0.381	0.250
9	7/15/2014	16:30	22:15	5.75		* * *						
7	7/23/2014	22:55	23:15			0.13 ***						
00	7/28/2014	4:15		1.58	0.20	0.20 ***						
1												
										TOTAL MONTH	Ŧ	
										FLOW VOLUME =	ME =	0.271
	And the state of t	A second section in	Hart and annual articles									

Overflow occurs when Interceptor level reaches 46"

Note:

Ella T. Grasso Blvd. - 23 yrds North of Legion Ave. **CSO EVENTS LOG**

2014

July YEAR: LOCATION: NPDES Permit Outfall #: MONTH:

Average High Temp: Average Low Temp:

Measured Rainfall: Measured Snowfall:

67 83 4.60

				RAINFALL EVENT	INT			SS	CSO EVENT			
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)	OUTFALL Q volume (MG)
1	7/2/2014 - 7/3/14	18:40	0:30	5.83		0.40 ***	7/2/2014	19:00	23:00	4.00	0.828	0.138
2	7/3/2014	20:50	22:40	1.83		0.52 3 Month	7/3/2014	21:25	23:50	2.42	4.854	0.489
m	7/4/2014	11:00	19:35	8.58		0.36 ***	7/4/2014	15:15	16:25	1.17	0.509	0.025
4	7/8/2014	1:05	2:10	1.08		0.07					į	
Ŋ	7/14/2014 - 7/15/14	19:50	0:05	4.25	2,44	2,44 2 year	7/14/2014 - 7/15/14	20:20		4.33	7.709	1.392
9	7/15/2014	16:30	22:15	5.75	0.34 ***	* *	7/15/2014	21:45	23:00	1.25	1.254	0.065
7	7/23/2014	22:55	23:15	0.33	0.13 ***	* * *						
00	7/28/2014	4:15	5:50	1.58	0.20 ***	***						

Note: Overflow occurs when Interceptor level reaches 35"

2,109

FLOW VOLUME = TOTAL MONTH

Derby Ave. 20 yrds East of Ella T. Grasso Blvd. 005 2014 July YEAR: 67 83 4.60 NPDES Permit Outfall #: Average Low Temp: Average High Temp: Measured Rainfall: CSO EVENTS LOG LOCATION: MONTH:

				RAINFALL EVENT	INT			S	CSO EVENT			
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL Q volume (MG)
1	7/2/2014 - 7/3/14	18:40			0,40	0,40 ***	7/2/2014	19:05	19:25		1.073	0.015
2	7/3/2014	20:50	22:40	1.83		0,52 3 Month	7/3/2014	21:35	22:20	0.75	0.509	0.016
m	7/4/2014	11:00		8.58		0.36 ***						
4	7/8/2014	1:05		1.08		0.07 ***	1000		1		1	
25	7/14/2014 - 7/15/14	19:50	0:05	4.25	2.44	2.44 2 year	7/14/2014	20:25	23:20	2.92	6.671	0.811
9	7/15/2014	16:30		5.75	0.34	0.34 ***						
7	7/23/2014	22:55	23:15	0.33	0.13	0.13 ***						
60	7/28/2014	4:15	5:50	1.58		0.20 ***						
	Į											
										TOTAL MONTH FLOW VOLUME =	= H	0.842

Overflow occurs when Interceptor level reaches 53.5" weir raised on 7/25/14, new elevation is 71" Note:

CSO EVENTS LOG

UNdalley Ave. 30 yrds from Fitch Street
006

NPDES Permit Outfall #:

MONTH:
Average Low Temp:
Average High Temp:
Measured Rainfall:
Measured Snowfall:
Action

When the temp is the t

TOTAL FREQUENCY DATE START STOP (hours) (MGD) QUFALL (MG) 0.40 **** 0.52 3 Month 7/3/2014 21:35 22:40 1.08 5.051 0.228 0.07 *** 0.07 *** 0.494 20:35 22:05 1.50 7/304 0.494 0.20 *** 0.20 *** 0.494 0.494	FREQUENCY DATE START STOP (hours) (MGD) (N SW) Q vo START STOP (hours) (MGD) (N SW) Q vo START STOP (hours) (MGD) (N SW) Q vo SW	OUTFALL OUTPALL OUTPAL	OUTFALL ODURATION Gavg of thours) OUTFALL ODURATION Qavg of thours)
onth 7/3/2014 21:35 22:40 1.08 5.051 ar 7/14/2014 20:35 22:05 1.50 7.904	onth 7/3/2014 21:35 22:40 1.08 5.051 ar 7/14/2014 20:35 22:05 1.50 7.904	onth 7/3/2014 21:35 22:40 1.08 5.051	onth 7/3/2014 21:35 22:40 1.08 5.051
onth 7/3/2014 21:35 22:40 1.08 5.051	onth 7/3/2014 21:35 22:40 1.08 5.051	onth 7/3/2014 21:35 22:40 1.08 5.051	onth 7/3/2014 21:35 22:40 1.08 5.051
ar 7/14/2014 20:35 22:05 1.50 7.904	ar 7/14/2014 20:35 22:05 7.904	ar 7/14/2014 20:35 22:05 1.50 7.904	ar 7/14/2014 20:35 22:05 1.50 7.904
ar 7/14/2014 20:35 22:05 1.50 7.904	ar 7/14/2014 20:35 22:05 1.50 7.904	ar 7/14/2014 20:35 22:05 1.50 7.904	ar 7/14/2014 20:35 22:05 1.50 7.904
ar 7/14/2014 20:35 22:05 1.50 7.904	ar 7/14/2014 20:35 22:05 1.50 7.904	ar 7/14/2014 20:35 22:05 1.50 7.904	ar 7/14/2014 20:35 22:05 1.50 7.904
在 表 表 表	# # # # # # # # # # # # # # # # # # #	# # # #	# # # # # #
· · · · · · · · · · · · · · · · · · ·	* * *	* *	# · #
**	**	· ·	

Overflow occurs when Interceptor level reaches 27"

Note:

0.722

treet			2014				
Grand Avenue & James Street	600		July YEAR:	29	83	4.60	
CSO EVENTS LOG	LOCATION:	NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	Measured Snowfall:

				RAINFALL EVENT	TN				CSO EVENT			
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)	OUTFALL Q volume (MG)
1	7/2/2014 - 7/3/14	18:40	0:30	5.83	0.40 ***	***	7/2/14 - 7/3/14	19:05	19:10	0.08	0.058	0.000
2	7/3/2014	20:50	22:40	1.83	0.52	0.52 3 Month	7/3/2014	21:30	21:55	0.42	9200	0.001
m	7/4/2014	11:00	19:35	8,58	0.36 ***	***	7/4/2014	11:50	11:55	0.08	0.056	0.000
4	7/8/2014	1:05	2:10	1.08	0.07	*** 20.00			Ī			
S	7/14/2014 - 7/15/14	19:50	0:05	4.25	2.44	2.44 2 year	7/14/2014	20:30	23:15	2.75	2.399	0.275
9	7/15/2014	16:30	22:15	5.75	0.34	0.34 ***	7/15/2014	21:50	22:30	0.67	0.082	0.002
7	7/23/2014	22:55	23:15	0.33	0.13 ***	***						
00	7/28/2014	4:15	5:50	1.58	0.20	* * *						
	1											
								7				

0.278

July YEAR: 67 83 4.60 547 East Street 010 NPDES Permit Outfall #: Average Low Temp: Average High Temp: Measured Rainfall: Measured Snowfall: CSO EVENTS LOG LOCATION: MONTH:

2014

		1		RAINFALL EVENT	TN				CSO EVENT	II		
FVENT	DATE	TAART	STOP	DURATION	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)
1	7/2/2014	18:40	0:30		0.40	0.40 ***						
2	7/3/2014	20:50	22:40	1.83	0.52	0.52 3 Month	2					
m	7/4/2014	11:00	19:35	8.58		0.36 ***						
4	7/8/2014	1:05	2:10	1.08	0.07	0.07 ***						1
2	7/14/2014 - 7/15/14	19:50	0:05	4.25	2.44	2.44 2 year	7/14/2014	20:40	23:20	2.67	5.37	0.597
9	7/15/2014	16:30	22:15	5.75	0.34	0.34 ***						
7	7/23/2014	22:55	23:15		0.13	0.13 ***						
00	7/28/2014	4:15	5:50	1.58	0.20	0.20 ***						
			1									
											1	

Overflow occurs when sewer level reaches 54" Note:

0.597

TOTAL MONTH FLOW VOLUME =

Overflow closed on 7/25

CSO EVENTS LOG

LOCATION:

NPDES Permit Outfall #:

MONTH:

Average Low Temp:

Average High Temp:

Measured Rainfall:

Measured Snowfall:

A.60

				RAINFALL EVENT	INT				CSO EVENT	Ţ		
EVENT NO.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)
1	7/2/2014-	18:40	0:30		0.40	***						
7	7/3/2014	20:50	22:40	1.83		0.52 3 Month						
m	7/4/2014	11:00	19:35	8,58		* * *						
4	7/8/2014	1:05	2:10	1.08	0.07	**		Ì			3	ł
15	7/14/2014 - 7/15/14	19:50	0:05	4.25		2.44 2 year	7/14/2014	20:40	21:45	1.08	11,130	0.502
9	7/15/2014	16:30	22:15	5.75	0.34 ***	**						
7	7/23/2014	22:55	23:15	0.33	0.13 ***	***					1	
90	7/28/2014	4:15	5:50	1.58	0.20 ***	**						
									1		1	
				1			1					

Overflow occurs when sewer level reaches 62"

0.502

CSO EVENTS LOG LOCATION:

011

NPDES Permit Outfall #:

MONTH:

Average Low Temp: Average High Temp: Measured Rainfall: Measured Snowfall;

July YEAR: 67 83 4.60

2014

				RAINFALL EVENT	INS				CSO EVENT			
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)
1	7/2/2014 - 7/3/14	18:40	0:30	1-1	0.40	0.40						
7	7/3/2014	20:50	22:40	1.83		0.52 3 Month	7/3/2014	21:40	22:35	0.92	3.171	0.121
m	7/4/2014	11:00	19:35	8.58	0.36	0.36 ***				1		Ī
4	7/8/2014	1:05	2:10	1.08		0.07 ***				1		
2	7/14/2014 - 7/15/14	19:50	0:05	4.25	2.44	2.44 2 year	7/14/2014	20:30	23:50	3.33	10.153	1.410
9	7/15/2014	16:30	22:15	5.75	0.34	0.34 ***						
7	7/23/2014	22:55	23:15		0.13	0.13 ***						
00	7/28/2014	4:15	5:50	1.58	0.20 ***	* *						
			9							Ĭ		

OF-011-609 and OF-011-997 removed on 8/26

Note:

1.531

FLOW MONITORING REPORT SUMMARY TABLE

SO EVENTS LOG	CATION:

011

NPDES Permit Outfall #: MONTH:

2014

Average Low Temp: Average High Temp: Measured Rainfall: Measured Snowfall:

July YEAR: 67 83 4,60

וארפסחובה	ייינים לכן בייינים ביינים בייינים ביינים ביי			RAINFALL EVENT	TNE			0	CSO EVENT			
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	TOTAL FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)
1	7/2/2014	18:40			0.40	0.40 ***	7/3/2014	01.40	22.25	0 0	1718	121.0
v m	7/4/2014	11:00	19:35			0.36 ***	1107/01/		77.74			
4	7/8/2014	1:05		į		0.07 ***						
ın	7/14/2014 - 7/15/14	19:50		4.25		2.44 2 year	7/14/2014	20:30	23;50	3.33	13.766	1.912
9	7/15/2014	16:30		5.75		0.34 ***						
7	7/23/2014	22:55		0.33		0.13 ***						
00	7/28/2014	4:15		1.58		***						
				I								V
										TOTAL MONTH FLOW VOLUME =	_ = H	2.033

Sum of 10A and 11

Note:

			2014					
75 Mitchell Drive	012		July YEAR:	29	83	4.60		
CSO EVENTS LOG	LOCATION:	NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	Measured Snowfall:	

Table and the County	The state of the s			RAINFALL EVENT	INT				CSO EVENT			
EVENT NO.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)
П	7/2/2014 -	18:40		5.83		0,40 ***						
2	7/3/2014	20:50		1.83		0.52 3 Month						
m	7/4/2014	11:00		8.58		0.36 ***						
4	7/8/2014	1:05		1.08		0.07 ***		1				d
S	7/14/2014 - 7/15/14	19:50		4.25		2.44 2 year	7/14/2014	20:30	22:50	2.33	1,329	0.129
9	7/15/2014	16;30		5.75	0.34	0.34 ***	7/15/2014	20:10		1.25	0.045	0.002
7	7/23/2014	22:55		0.33	0.13 ***	***						
00	7/28/2014	4:15	5:50	1.58	0,20 ***	* *		Y				
						y						
									Š			

Note:

0.131

			2014				
15 James Street	015		July YEAR:	.67	83	4.60	
CSO EVENTS LOG	LOCATION:	NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	Measured Snowfall:

				RAINFALL EVENT	ENT				CSO EVENT			
EVENT No.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Qvolume (MGD) (MG)
r.T	7/2/2014	18:40	0:30	5.83	E	0.40 ***	7/2/2014	19:10	19:30	0.33	2.043	0.028
N	7/3/2014	20:50	22:40	1.83		0.52 3 Month	7/3/2014	21:35	22:35	1.00	1.866	0.078
m	7/4/2014	11:00	19:35	8.58		0.36 ***	7/4/2014	11:55	12:10	0.25	0.520	0.005
4	7/8/2014	1:05	2:10	1.08		0.07 ***			7			
S	7/14/2014 - 7/15/14	19,50	0:05	4.25		2.44 2 year	7/14/2014	20:35	23:50	3.25	0.453	0.061
9	7/15/2014	16:30	22:15	5.75		0.34 ***	7/15/2014	21:40	22:00	0.33	0.162	0,002
7	7/23/2014	22:55	23:15	0.33		0.13 ***						
00	7/28/2014	4:15	5:50	1.58		0.20 ***						
			1									Ī

Note: Overflow can occur with DS sewer depth reaches 40.5" Expected capacity of siphon is between 24 and 30 MGD.

0.174

			2014				
Int. River & Poplar	016		July YEAR:	29	83	4.60	
CSO EVENTS LOG	LOCATION:	NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	Measured Snowfall:

The same of the sa				RAINFALL EVENT	ENT				CSO EVENT			
EVENT NO.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)
H	7/2/2014	18:40	0:30	100		***	7/2/2014	18:55	22:45	3.83		0.052
2	7/3/2014	20:50		1.83		0.52 3 Month	7/3/2014	21:10	23:20	2.17		0.079
m	7/4/2014	11:00		8.58		0.36 ***	7/4/2014	11:40	12:40	1.00	0.767	0.032
4	7/8/2014	1:05	2:10	1.08		0.07 ***				1		
S	7/14/2014 - 7/15/14	19;50	0:05	4.25		2.44 2 year	7/14/2014	20:20	20:45	0.42	3.026	0.053
9	7/15/2014	16:30	22:15	5.75		0.34 ***	7/15/2014	21:30	22:55		1.664	0.098
7	7/23/2014	22:55	23:15	0.33		* *						
00	7/28/2014	4:15	5:50	1.58		0.20 ***						
			ij									
										TOTAL MONTH FLOW VOLUME =	Ή Æ=	0.314

0,314

2014 July YEAR: 279 Front Street 019 67 4.60 NPDES Permit Outfall #: Average High Temp: Measured Rainfall: Measured Snowfall: Average Low Temp: CSO EVENTS LOG LOCATION: MONTH:

	OUTFALL Q volume (MG)	0.004	0.004
	OUTFALL OUTFALL Qavg (MGD)	0.295	= = =
	DURATION (hours)	0.33	TOTAL MONTH
CSO EVENT	STOP	21:15	
	START	20:55	
	DATE	7/14/2014	
	TOTAL FREQUENCY	0.40 *** 0.52 3 Month 0.36 *** 0.07 *** 0.07 *** 0.034 *** 0.13 ***	
TN	TOTAL	0.40 0.52 0.07 0.07 2.44 0.34 0.13	
RAINFALL EVENT	DURATION (hours)	5.83 1.83 8.58 1.08 4.25 5.75 0.33 1.58	
	STOP	0:30 22:40 19:35 2:10 0:05 22:15 23:15 5:50	
	START	18:40 20:50 11:00 1:05 19:50 16:30 22:55 4:15	
	DATE	7/2/2014 - 7/3/14 7/3/2014 7/4/2014 7/14/2014 - 7/15/14 7/15/2014 7/23/2014	
	EVENT NO.	12 8 4 13 6 7 8	

Note:

0.004

			2014				
Clifton and Quinniplac	020		July YEAR:	29	83	4.60	
CSO EVENTS LOG	LOCATION:	NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	Measured Snowfall:

	OUTFALL Q volume (MG)	0.036	0.037
	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)	0.161	- II
	DURATION (hours)	0.08	TOTAL MONTH FLOW VOLUME =
CSO EVENT	STOP	16:30	
	START	16:25	
	DATE	7/4/2014	
	FREQUENCY	0.40 *** 0.52 3 Month 0.36 *** 0.07 *** 0.07 *** 0.13 *** 0.20 ***	
TN	TOTAL	0.40 *** 0.52 3 Mc 0.36 *** 0.07 *** 0.07 *** 0.34 2 yes 0.34 *** 0.13 ***	
RAINFALL EVENT	DURATION (hours)	5,83 1,83 1,08 1,08 6,75 0,33 1,58	
	STOP	0:30 22:40 19:35 2:10 0:05 22:15 23:15 5:50	
	START	18:40 20:50 11:00 11:05 19:50 16:30 22:55 4:15	
	DATE	7/2/2014 - 7/3/14 7/3/2014 7/4/2014 7/8/2014 7/14/2014 - 7/15/14 7/23/2014 7/28/2014	
	EVENT No.	H M M M M M M M M M M M M M M M M M M M	

Note: Overflow occurs when level is 31" in the interceptor.

CSO EVENTS LOG 638 Long Wharf Drive 021

NPDES Permit Outfall #: July YEAR: 2014

Average Low Temp: 67

Average High Temp: 83

Measured Rainfall: 4.60

Measured Snowfall: 4.60

	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)		0.007			1.425				
	Qavg (MGD)		0.316			8.917				
	DURATION (hours)		05'0	Ī		3.83				
CSO EVENT	STOP		23:00	İ		0:40				
	START		22:30			20:50	Ì			
	DATE		7/3/2014			7/14/2014 - 7/15/14				
	TOTAL FREQUENCY	0.40 ***	0.52 3 Month	0.36 ***	0.07 ***	2.44 2 year	0.34 ***	***	***	
IN	TOTAL	0.40	0.52	0.36	0.07	2.44	0.34	0.13 ***	0.20	
RAINFALL EVENT	DURATION (hours)	5.83	1.83	8.58	1.08	4.25	5.75	0.33	1.58	V
	STOP	0:30	22:40	19:35	2:10	0:05	22:15	23:15	5:50	
	START	18:40	20:50	11:00	1:05	19:50	16:30	22:55	4:15	
	DATE	7/2/203	7/3/2014	7/4/2014	7/8/2014	7/14/2014 - 7/15/14	7/15/2014	7/23/2014	7/28/2014	
	EVENT No.	1	2	m	4	2	9	7	00	7

Note:

1.432

								START			_					
								DATE								
								FREQUENCY	* *	0.52 3 Month	***	***	2.44 2 year	***	***	
							TI.	TOTAL	0.40	0.52	0.36 ***	0.07	2.44	0.34 ***	0.13 ***	0.20
er Street		2014					RAINFALL EVENT	DURATION (hours)	5.83	1.83	8.58	1.08	4.25	5.75	0.33	1,58
South Wat		AR:						STOP	0:30	22:40	19:35	2:10	0:02	22:15	23:15	5:50
Sea Street @ South Water Street	024	July YEAR:	29	83	4.60			START	18:40	20:50	11:00	1:05	19:50	16:30	22:55	4:15
907	nit Outfall #:		v Temp:	h Temp:	ainfall:	nowfall:		DATE	7/2/2014 - 7/3/14	7/3/2014	7/4/2014	7/8/2014	7/14/2014 - 7/15/14	7/15/2014	7/23/2014	7/28/2014
CSO EVENTS LOG	LOCATION: NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	Measured Snowfal		EVENT NO.	1	2	æ	4	2	9	7	∞

OUTFALL OUTFALL
Qavg Q volume
(MGD) (MG)

DURATION (hours)

STOP

CSO EVENT

Q volume (MG)

Meter not installed during Rain Event, removed for line service 6/17/14 to 7/15/14

Overflow occurs when upstream depth reaches approx. 65" or when downstream reaches approx. 81". Note:

0

						1										
							DURATION (hours)		0.08							
					CSO EVENT		STOP		22:20							
							START		22:15							
							DATE		7/3/2014							
							FREQUENCY	***	0.52 3 Month	***	***	2.44 2 year	***	***	* *	
					TN		TOTAL	0.40	0.52	0.36	0.07 ***	2.44	0.34 ***	0.13 ***	0.20	
V. Front Street	2014				RAINEALL EVENT		(hours)	5.83	1.83	8.58	1.08	4.25	5.75	0.33	1.58	
of State & I	EAR:						STOP	0:30	22:40	19:35	2:10	0:05	22:15	23:15	5:50	
Intersection of State & N. Front Street 025	July YEAR:	29	83	4.60			START	18:40	20:50	11:00	1:05	19:50	16:30	22:55	4:15	
CSO EVENTS LOG LOCATION: NPDES Permit Outfall #:		v Temp:	h Temp:	ainfall:	nowfall:		DATE	7/2/2014 - 7/3/14	7/3/2014	7/4/2014	7/8/2014	7/14/2014 - 7/15/14	7/15/2014	7/23/2014	7/28/2014	
CSO EVENTS LOG LOCATION: NPDES Permit Ou	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	Measured Snowfall:		EVENT No.	1	2	3	4	20	9	7	90.	

0.005

1.559

OUTFALL OUTFALL Q

volume (MG)

Qavg (MGD)

meter reinstalled, CB telog, photos, video, weir wall was not raised it was coated with concrete / plaster, antenna was

0.005

TOTAL MONTH FLOW VOLUME =

cut, swapped out, sensors calibrated before installing in

Note:

ile			2014				
George and Temple	Regulator 34		July YEAR:	29	83	4.60	
CSO EVENTS LOG	LOCATION:	NPDES Permit Outfall #:	MONTH:	Average Low Temp:	Average High Temp:	Measured Rainfall:	Measured Snowfall:

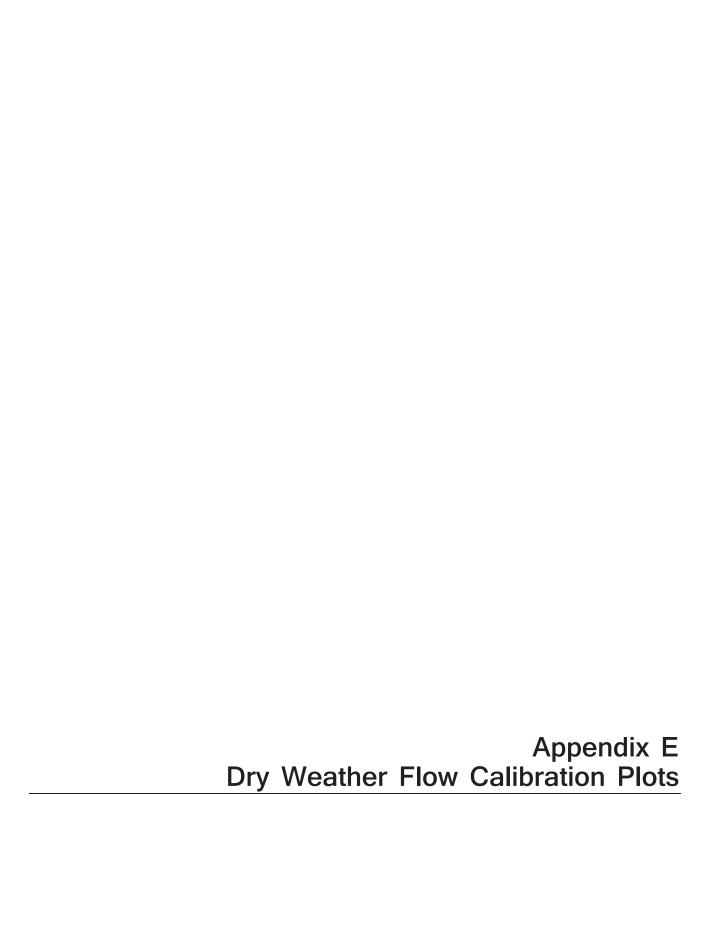
				RAINFALL EVENT	ENT				CSO EVENT			
EVENT NO.	DATE	START	STOP	DURATION (hours)	TOTAL	FREQUENCY	DATE	START	STOP	DURATION (hours)	OUTFALL Qavg (MGD)	OUTFALL OUTFALL Qavg Q volume (MGD) (MG)
1	7/2/2014 - 7/3/14	18:40				0.40	7/2/2014	19:00	19:20	0.33	4.334	Ē
2	7/3/2014	20:50	22:40	1.83		0.52 3 Month	7/3/2014	21:25	22:15	0.83	10.332	0.359
m	7/4/2014	11:00		8.58		0.36 ***						1
4	7/8/2014	1:05		1.08		0.07 ***				N.		
'n	7/14/2014 - 7/15/14	19:50		4.25		2.44 2 year	7/14/2014	21:25	21:45	0.33	10.680	0.140
9	7/15/2014	16:30		5.75	0.34 ***	***						
7	7/23/2014	22:55		0.33	0.13 ***	***						
00	7/28/2014	4:15		1.58	0.20	***						
						1						

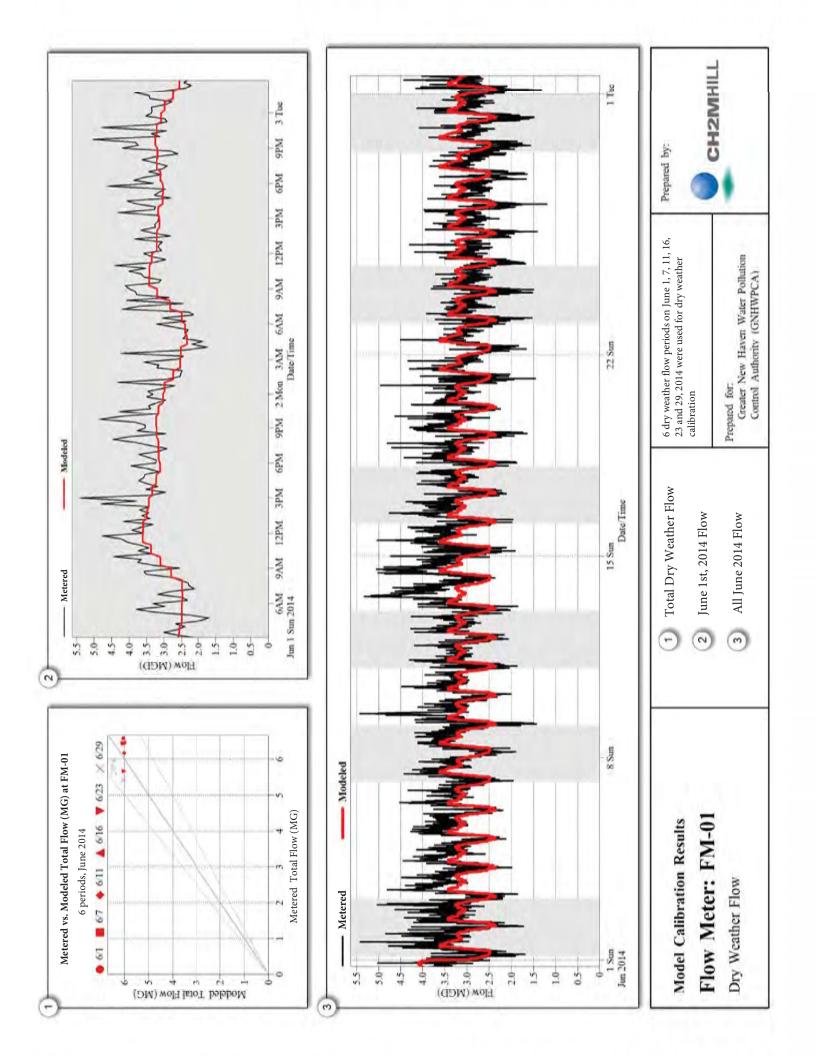
removed on 7/30/14, on 8/6/14 reinstalled meter, CB telog, photos, video and measurements of new weir wall extension, overall height is 61", 25" added to the wall

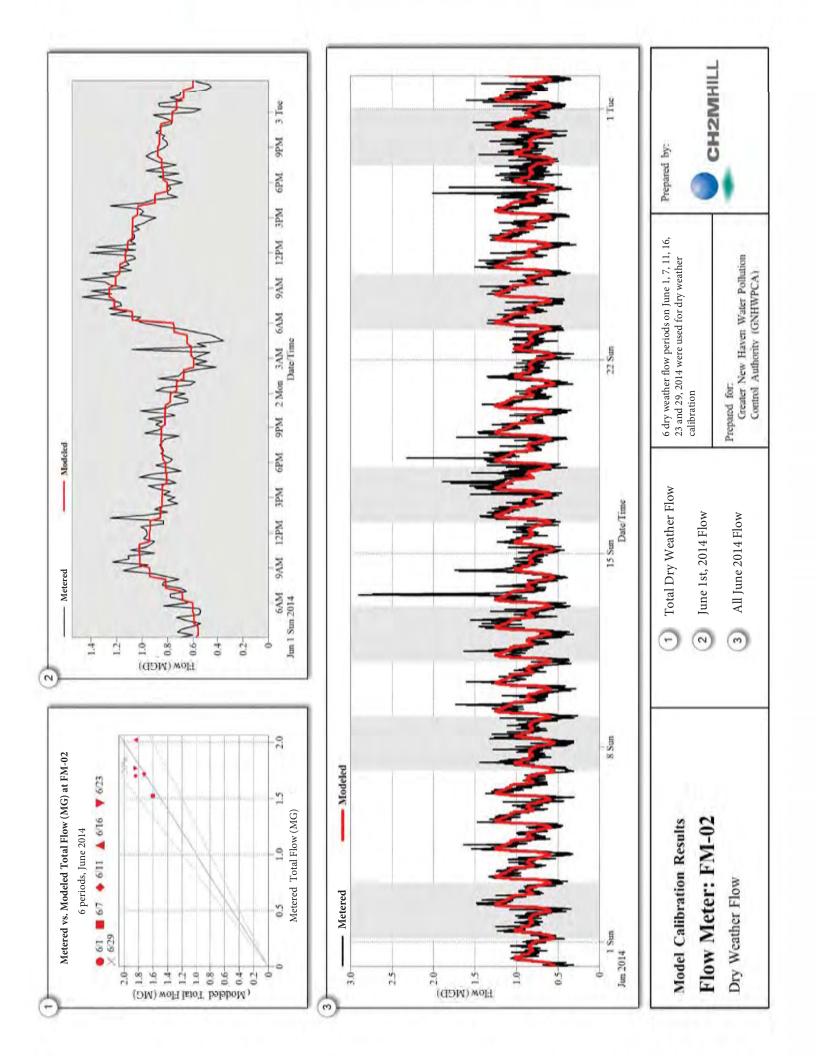
0.559

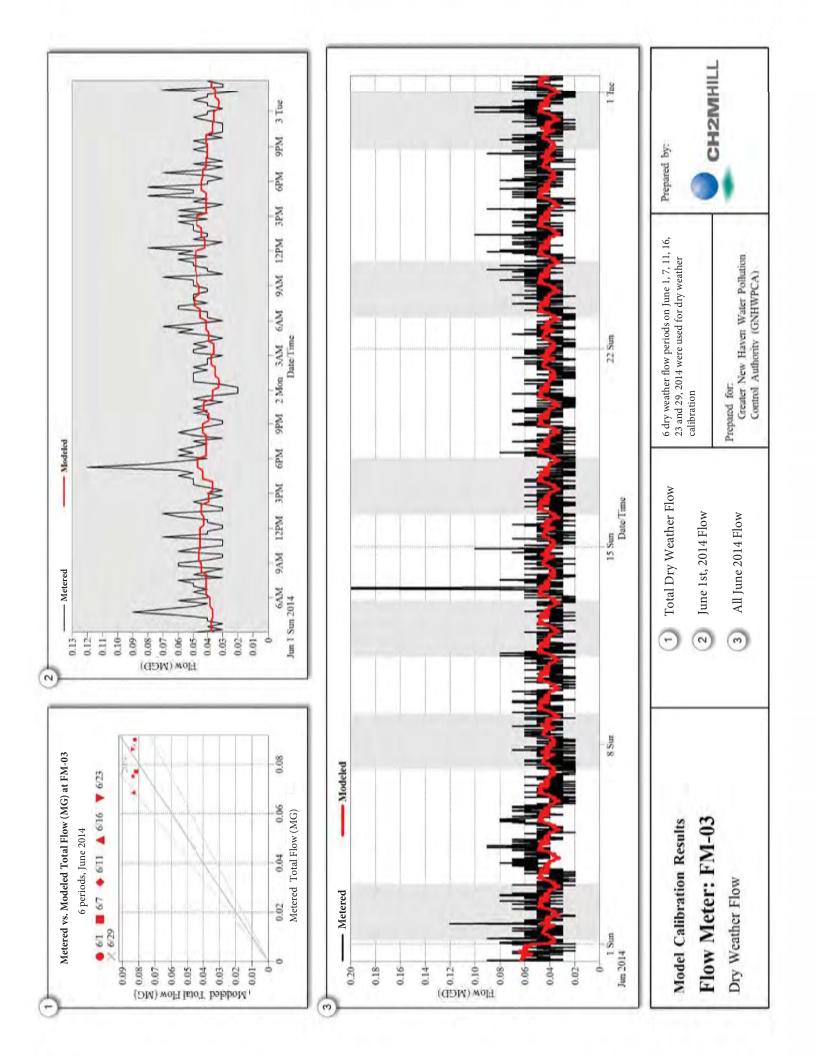
TOTAL MONTH FLOW VOLUME =

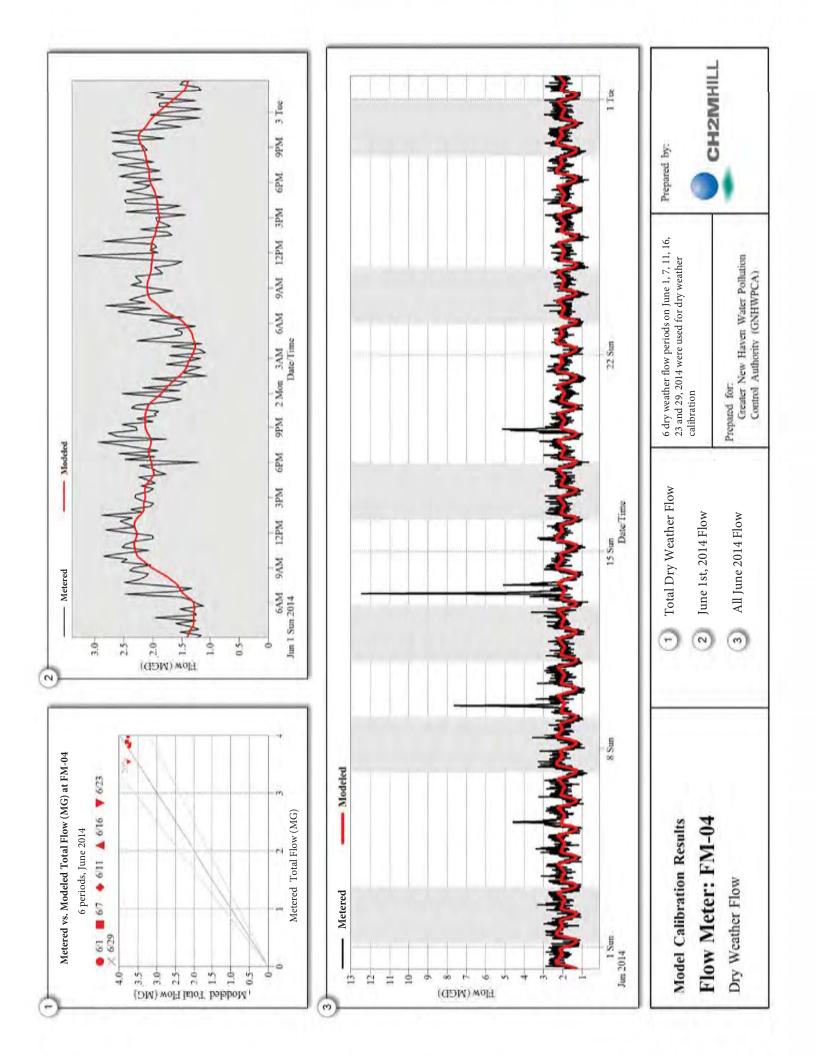
Note:

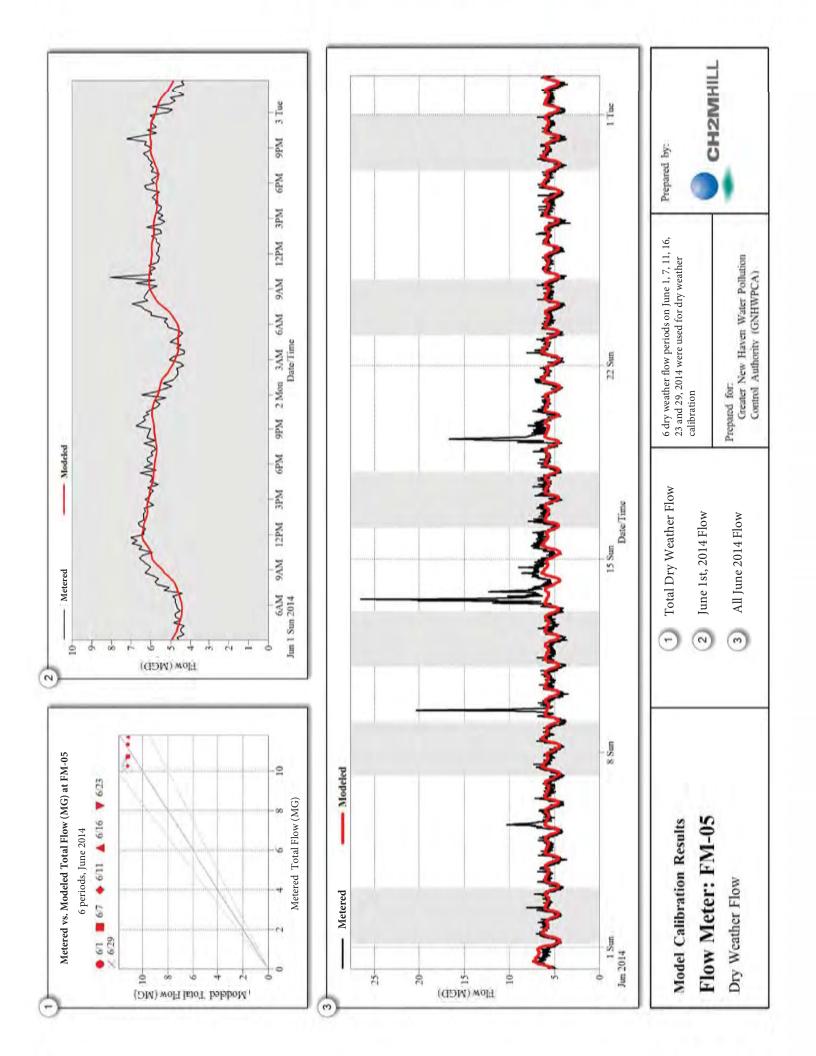


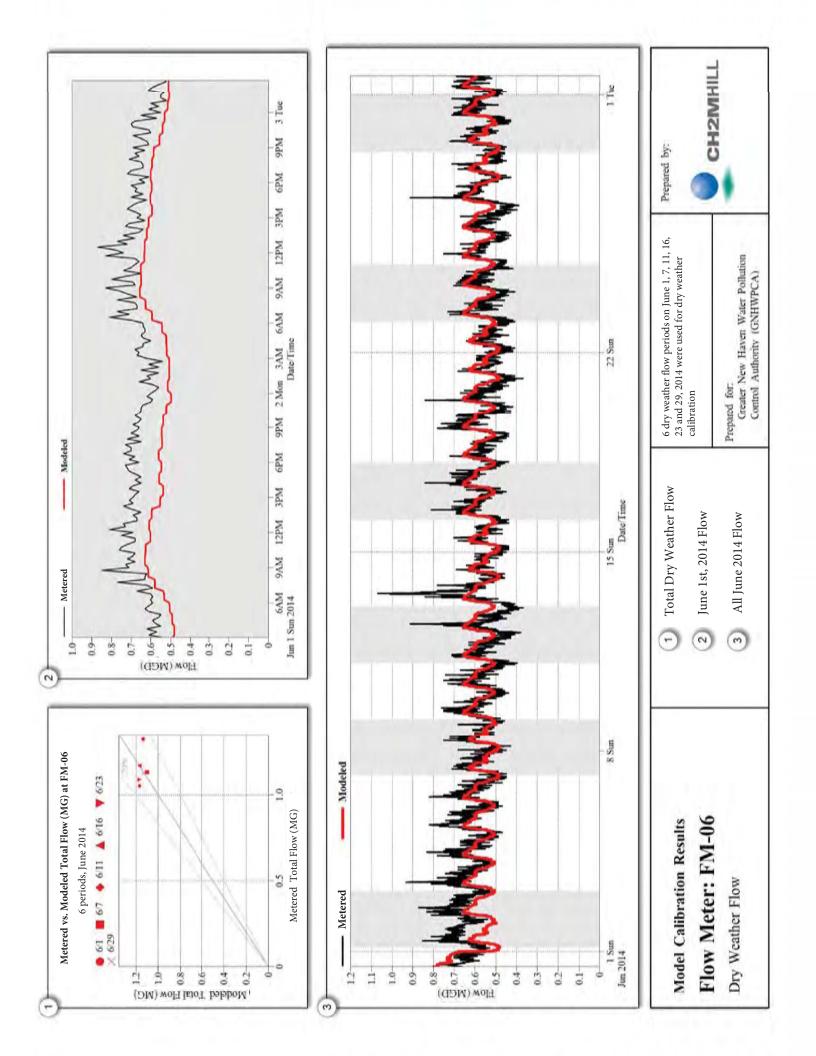


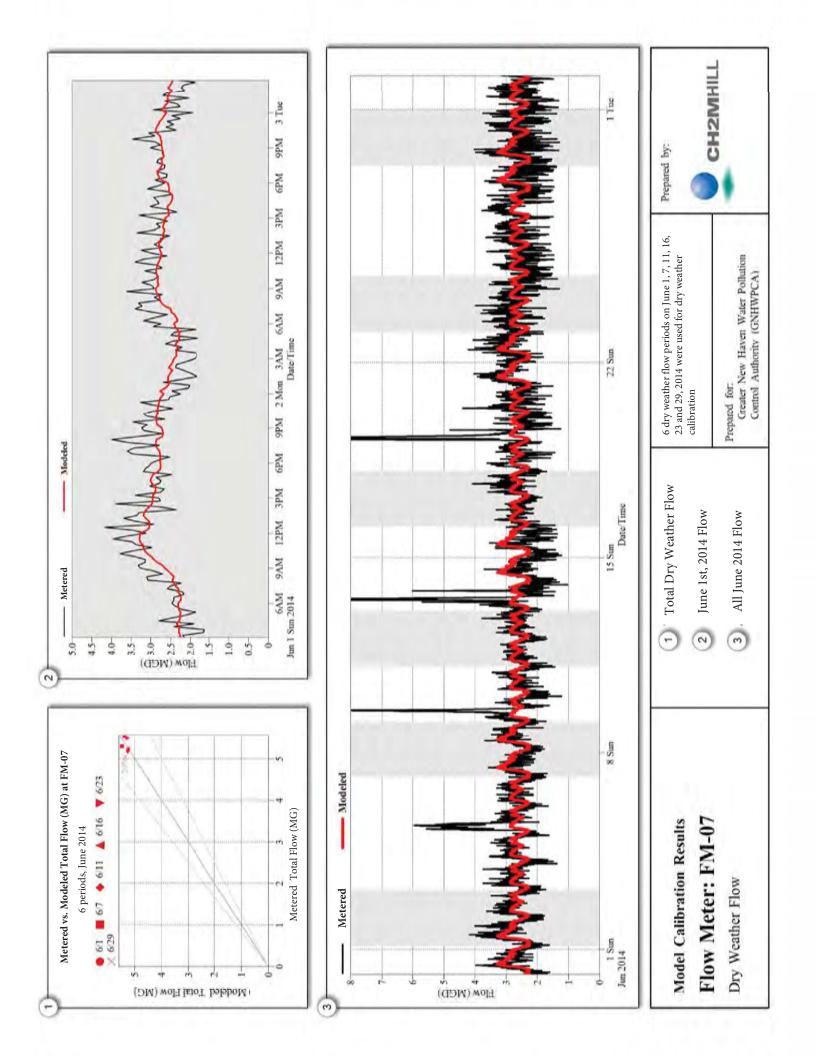


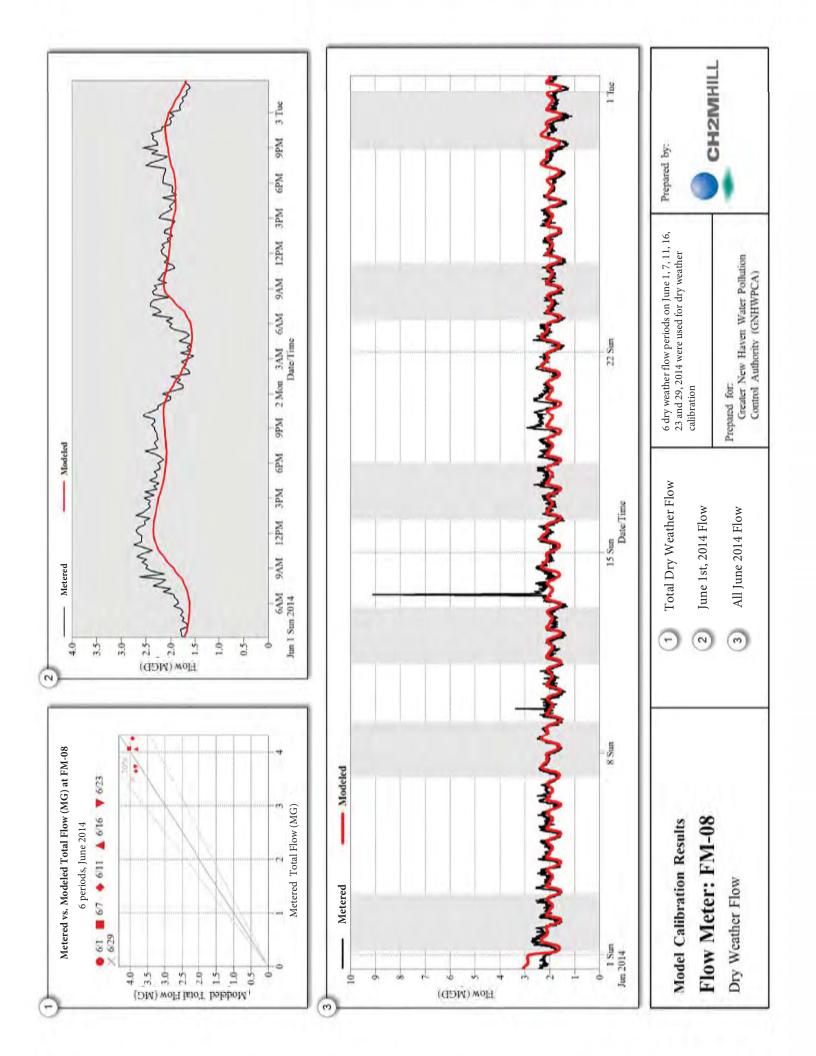


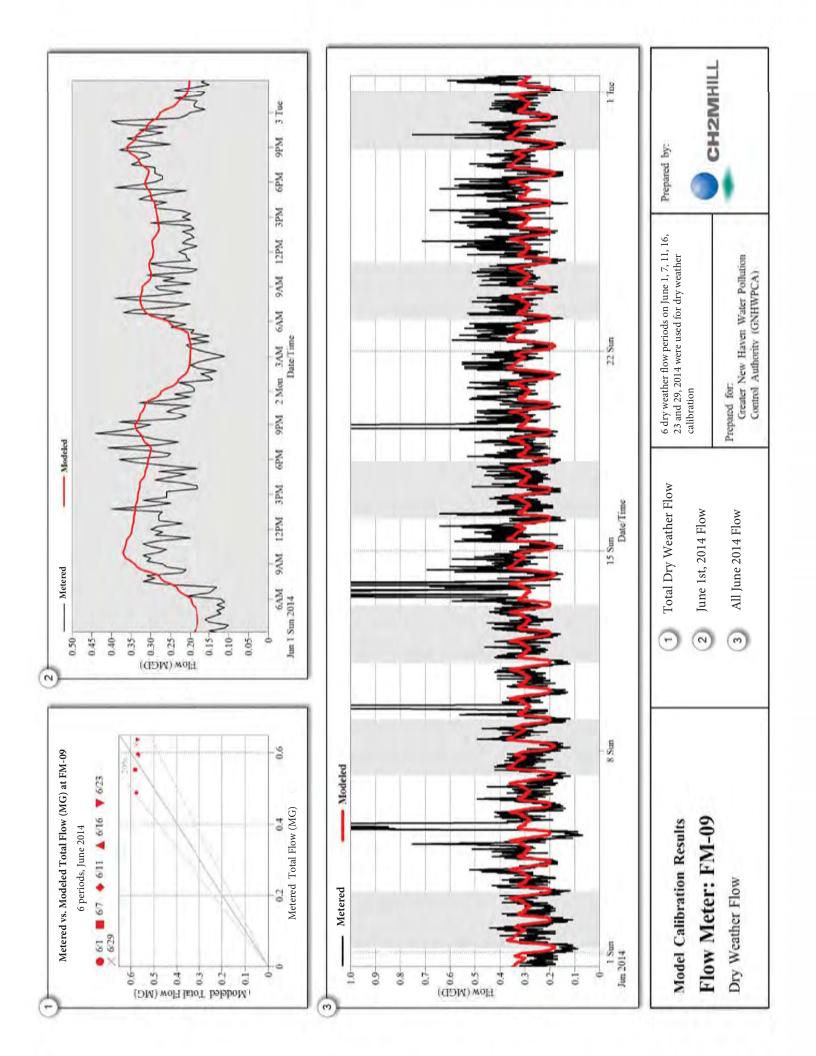


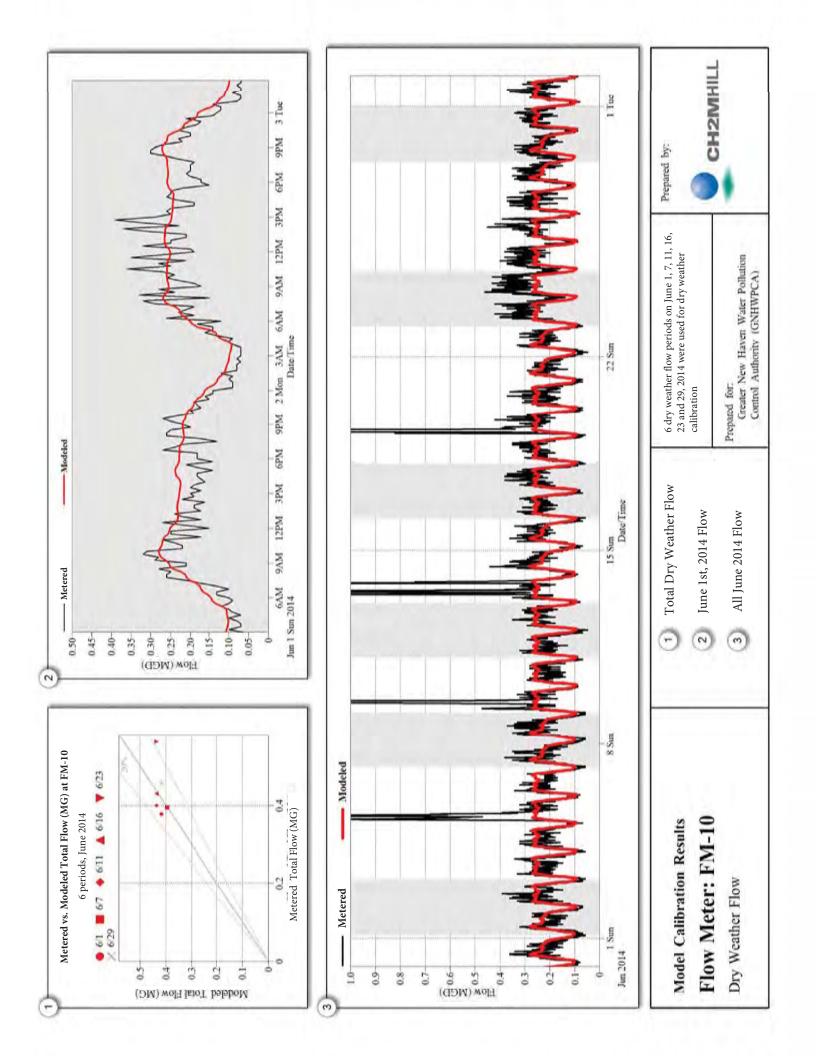


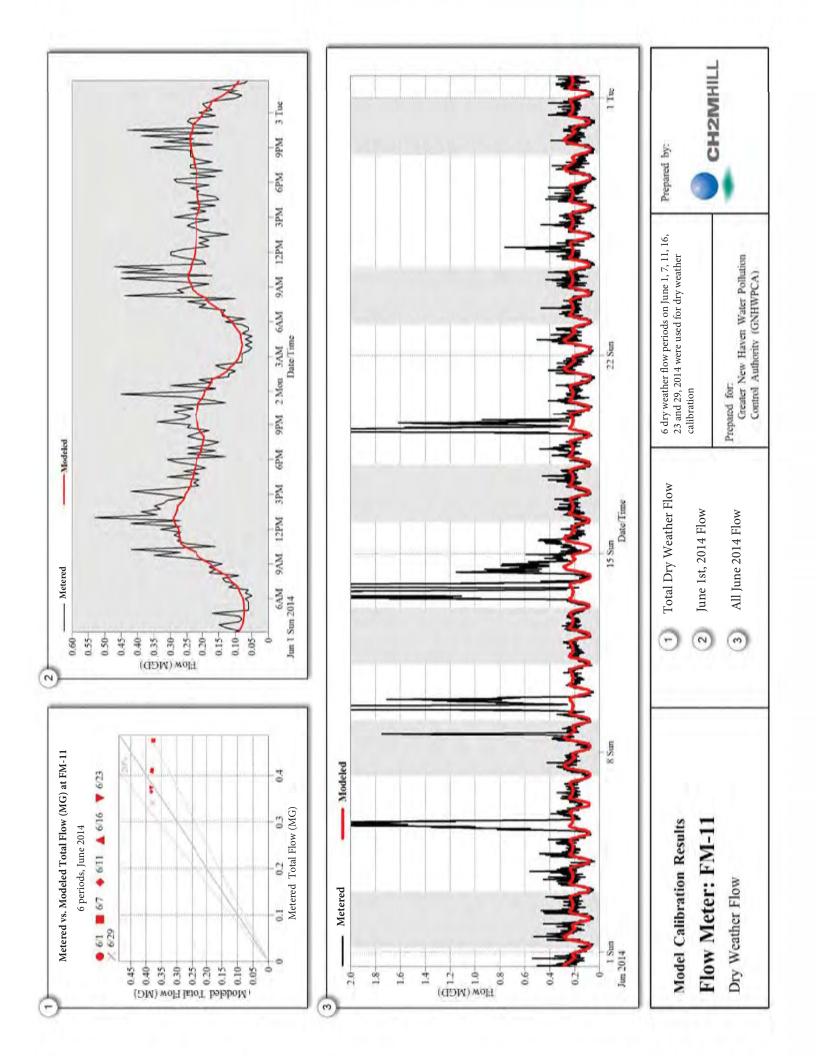


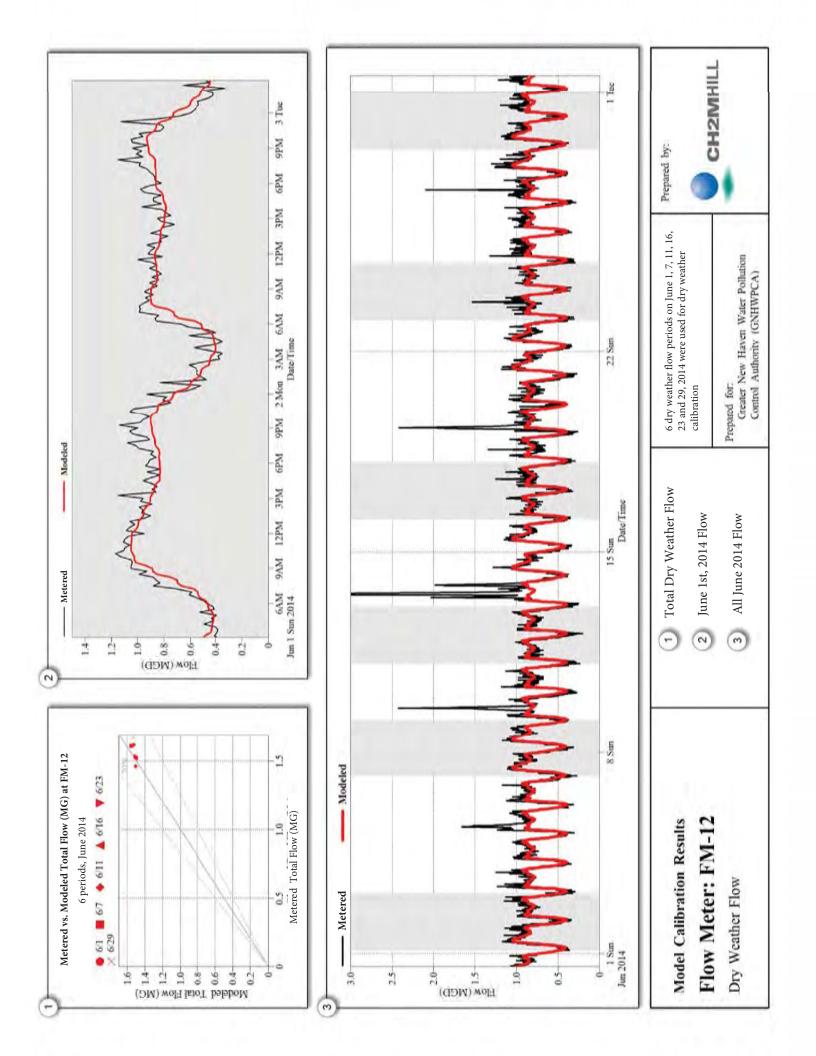


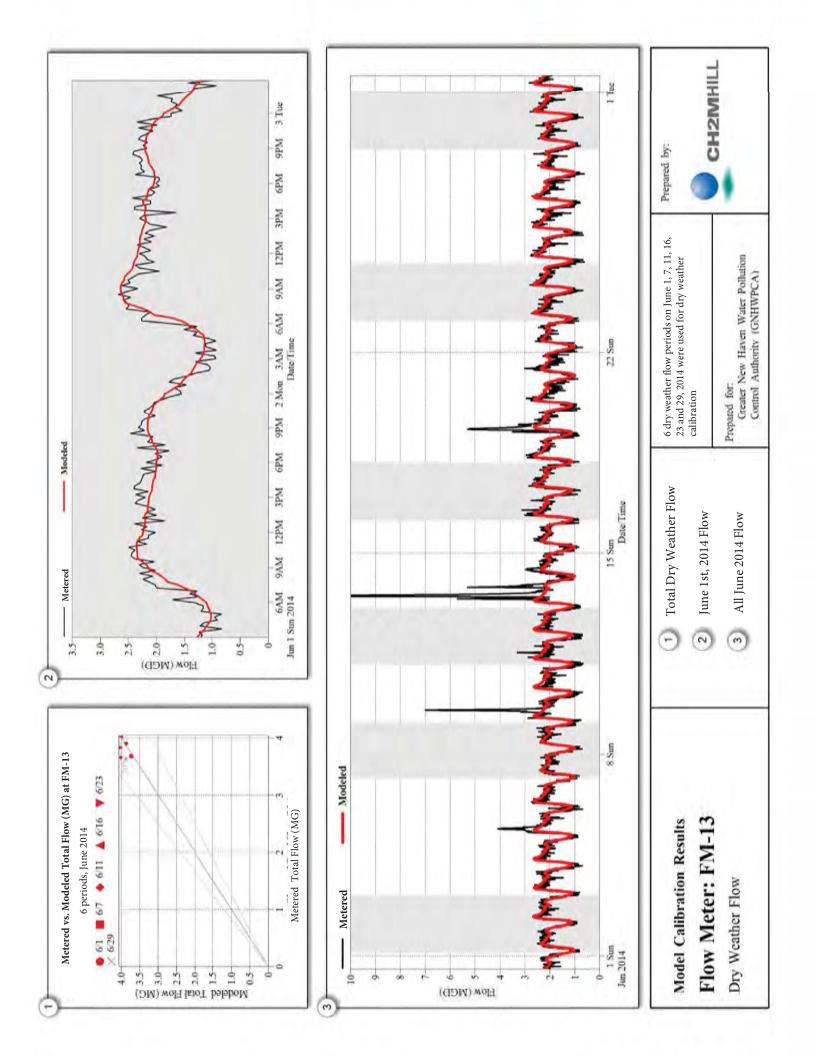


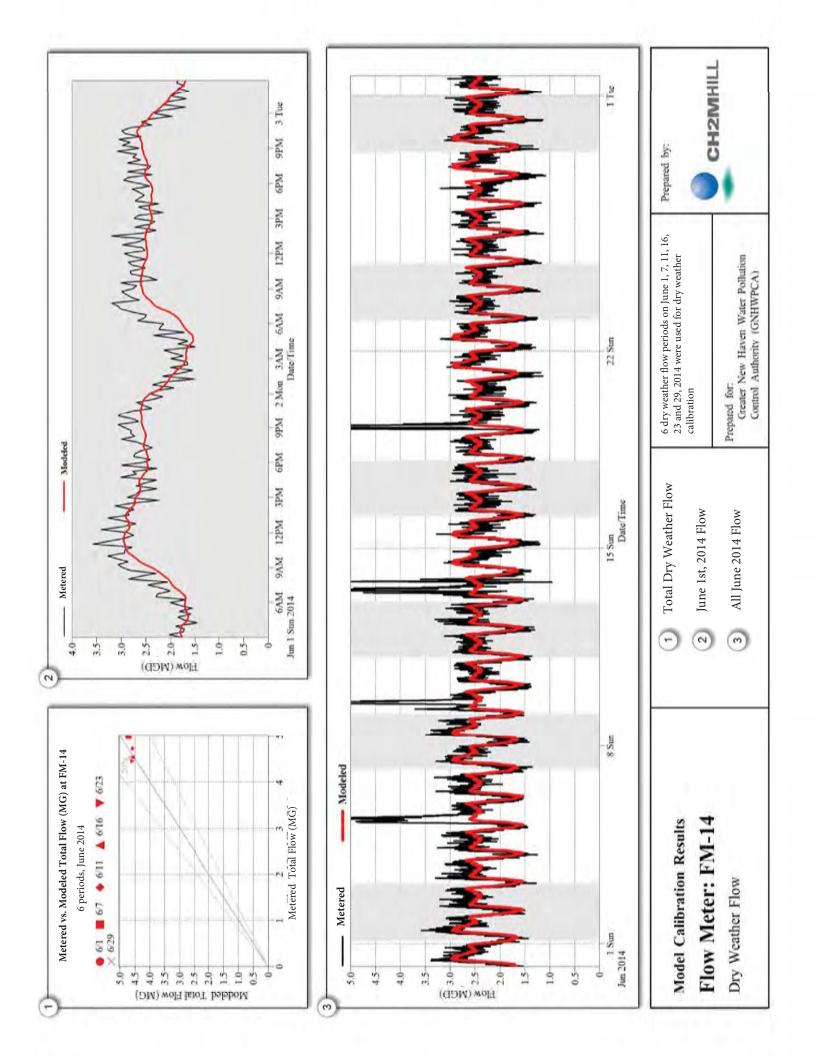


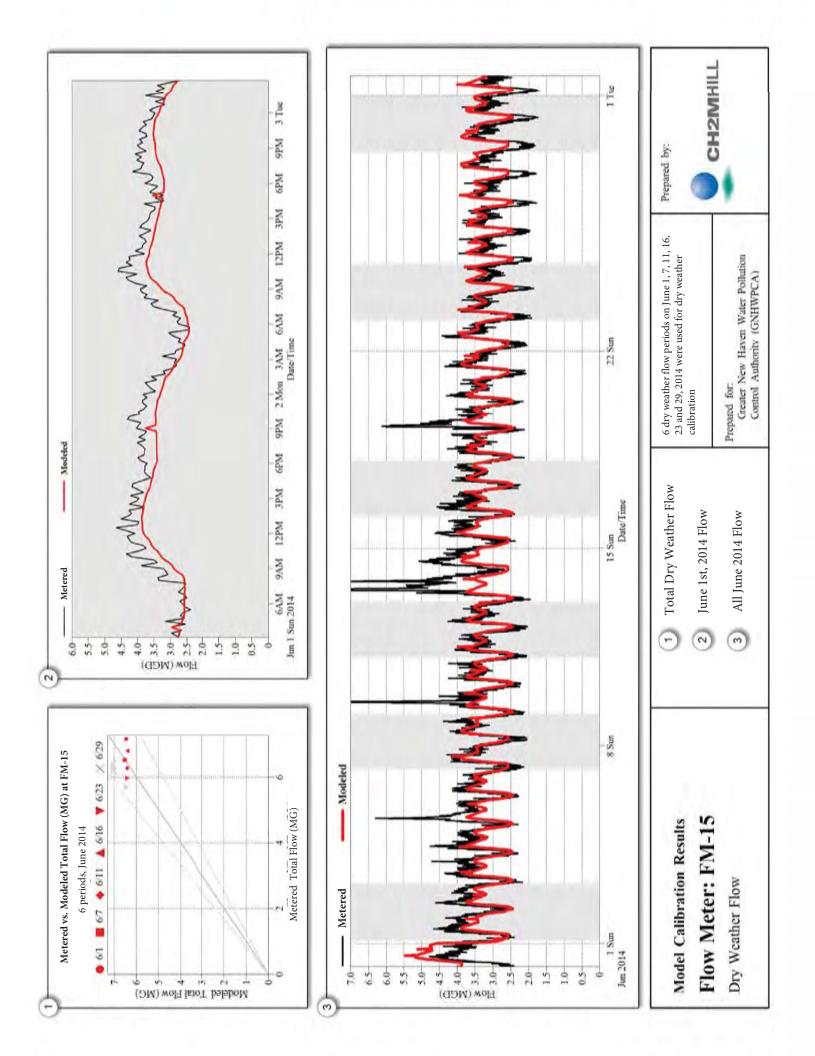


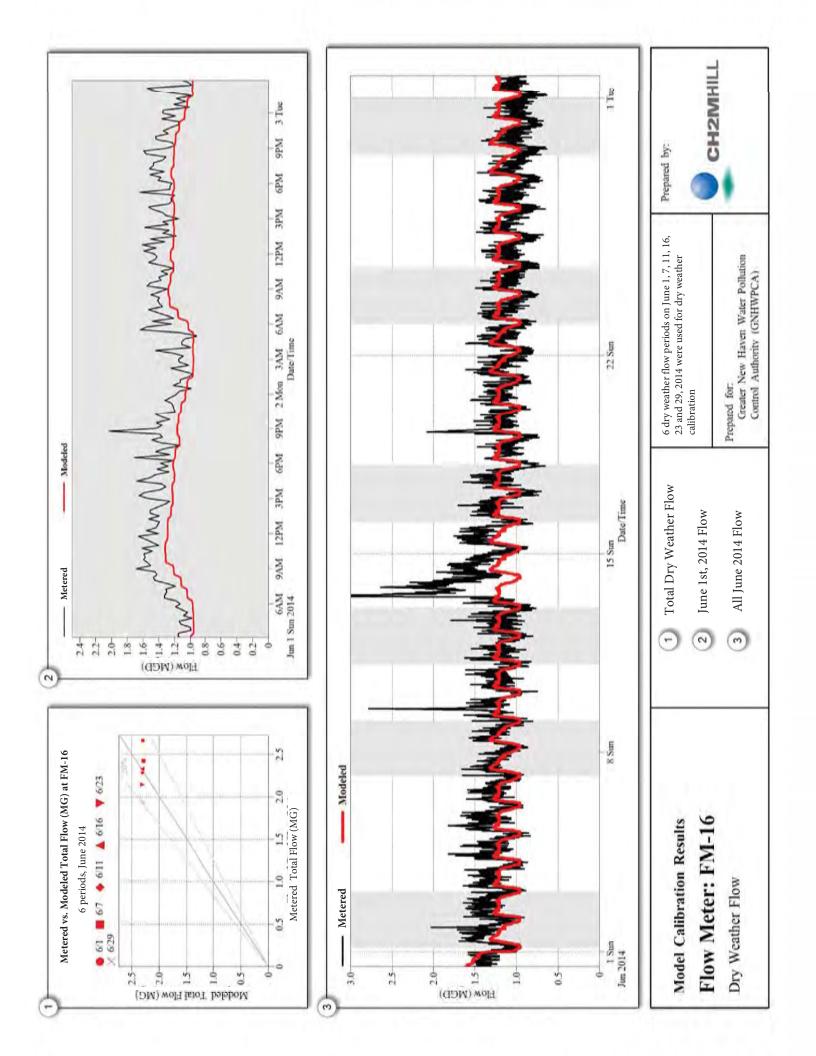


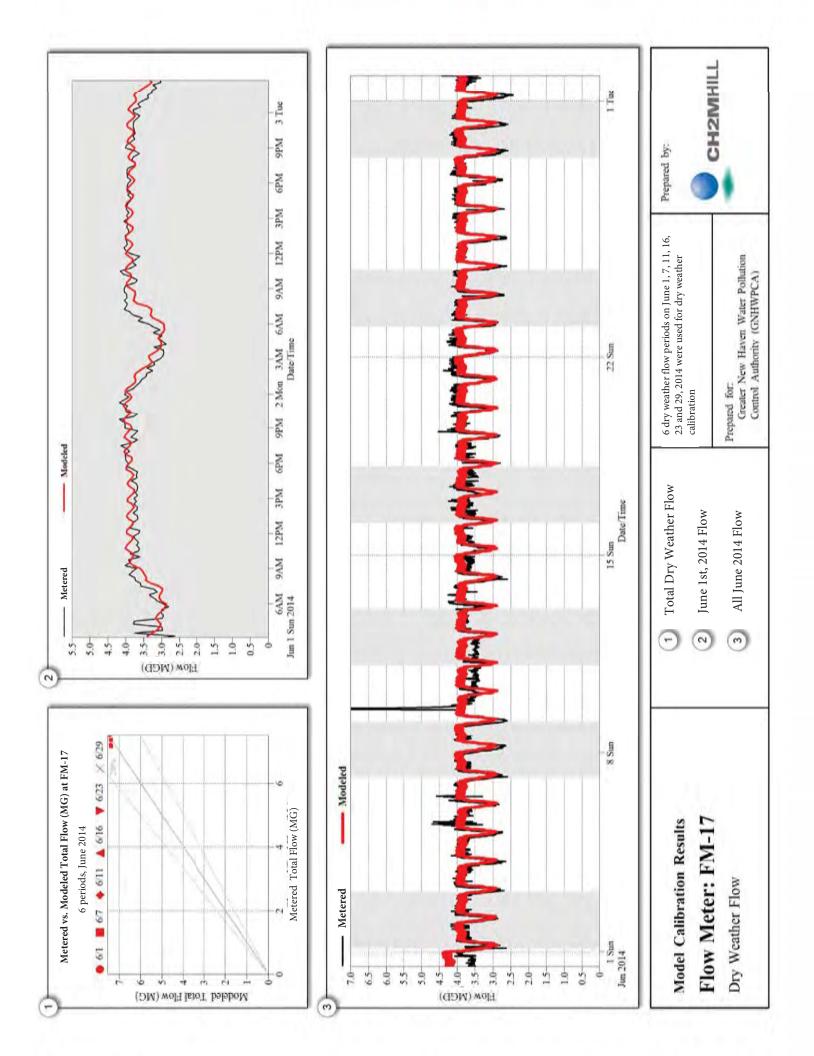


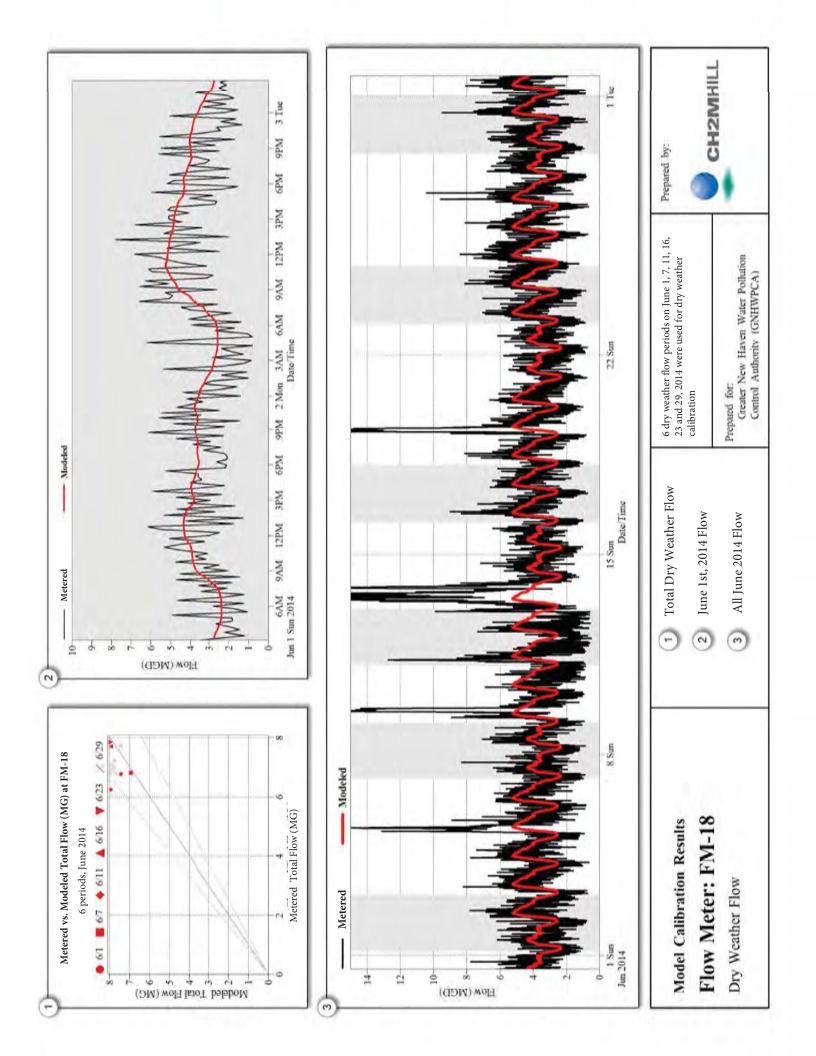


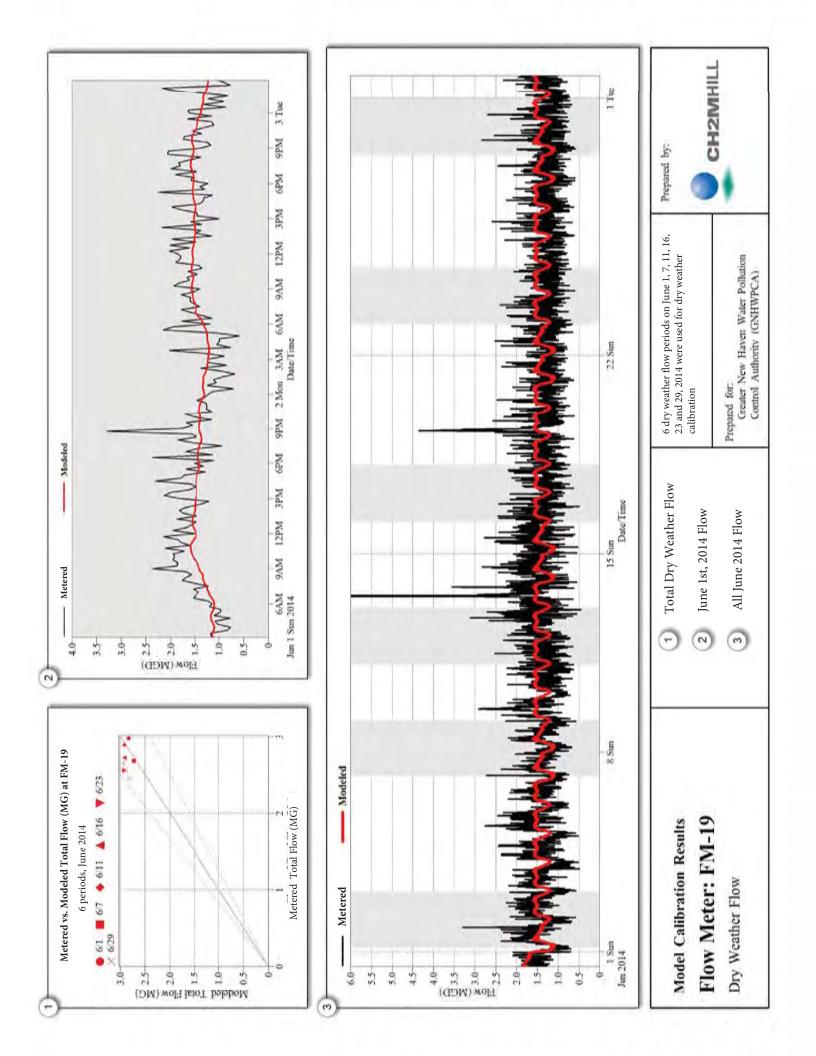


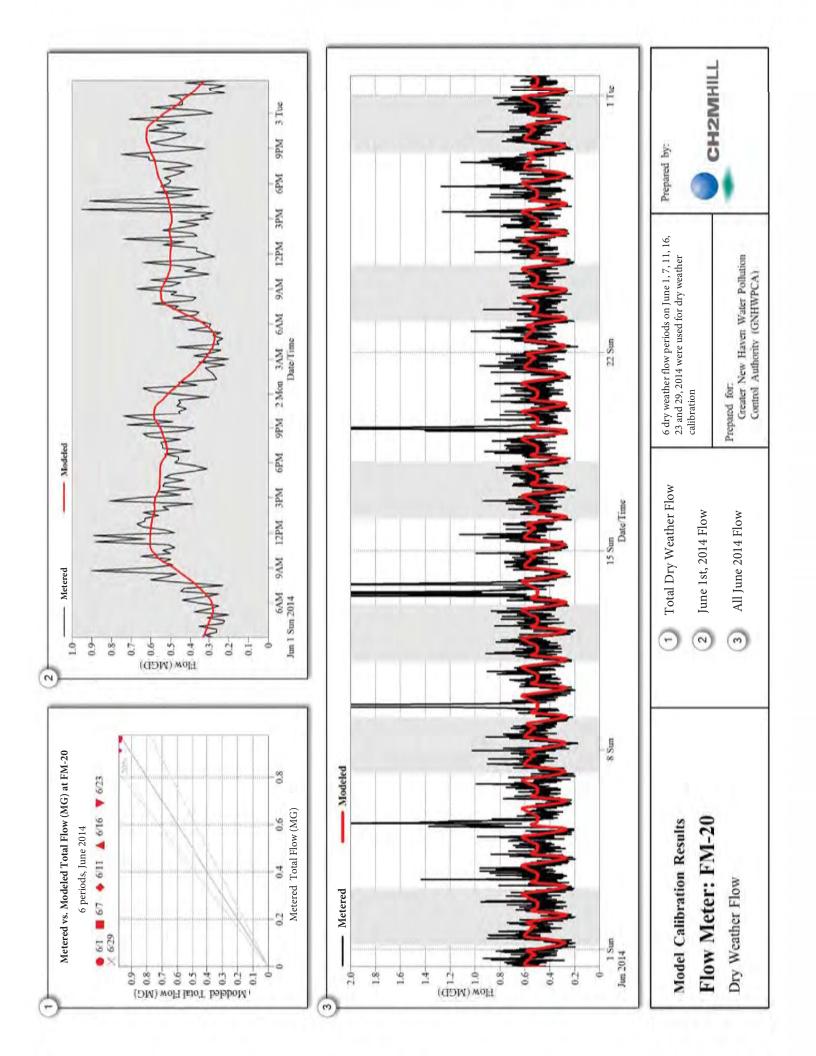


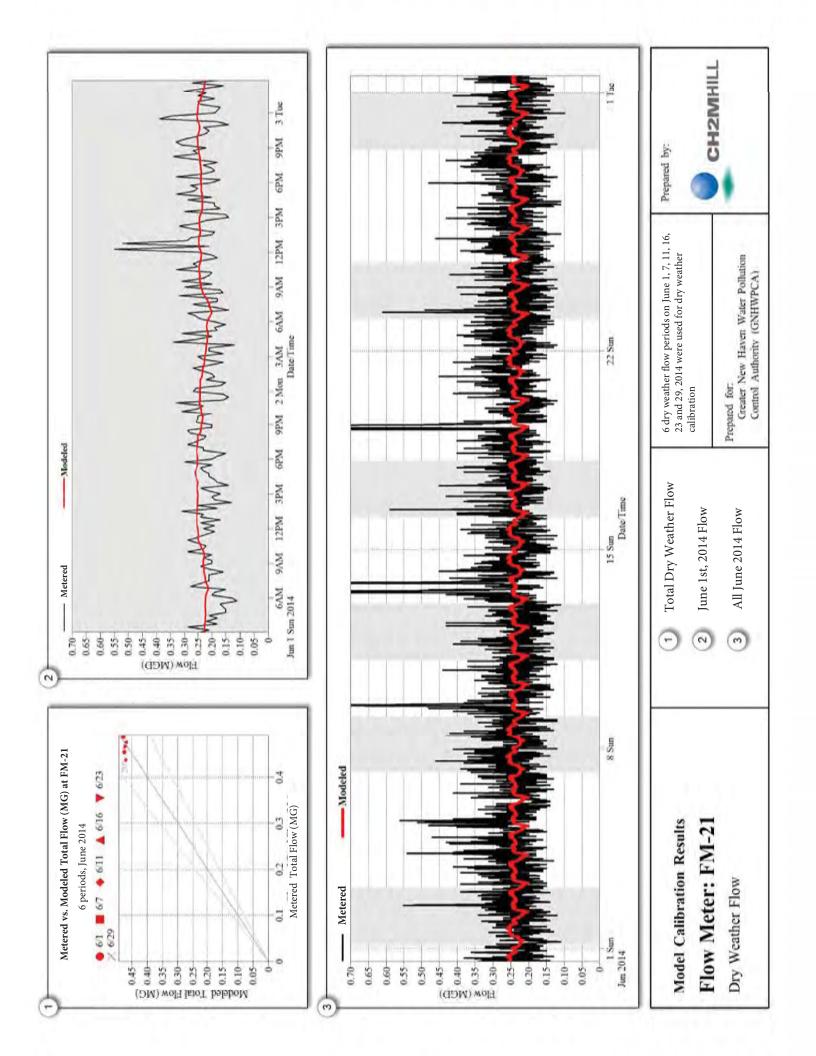


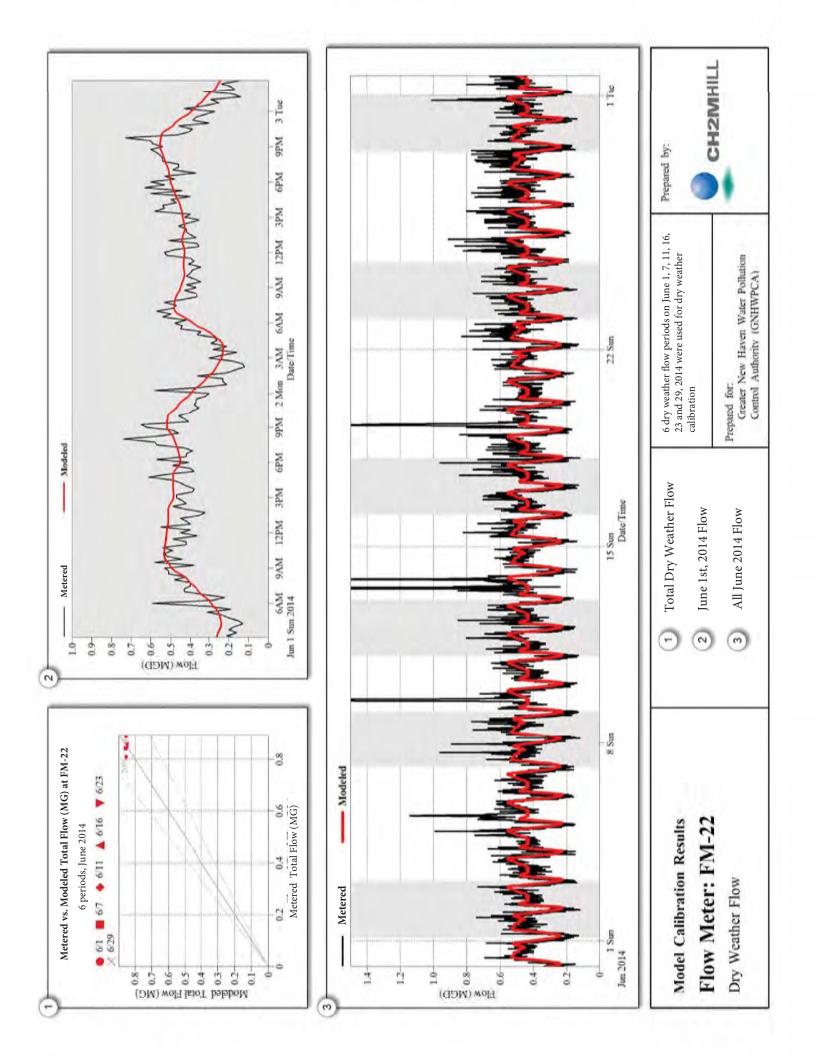


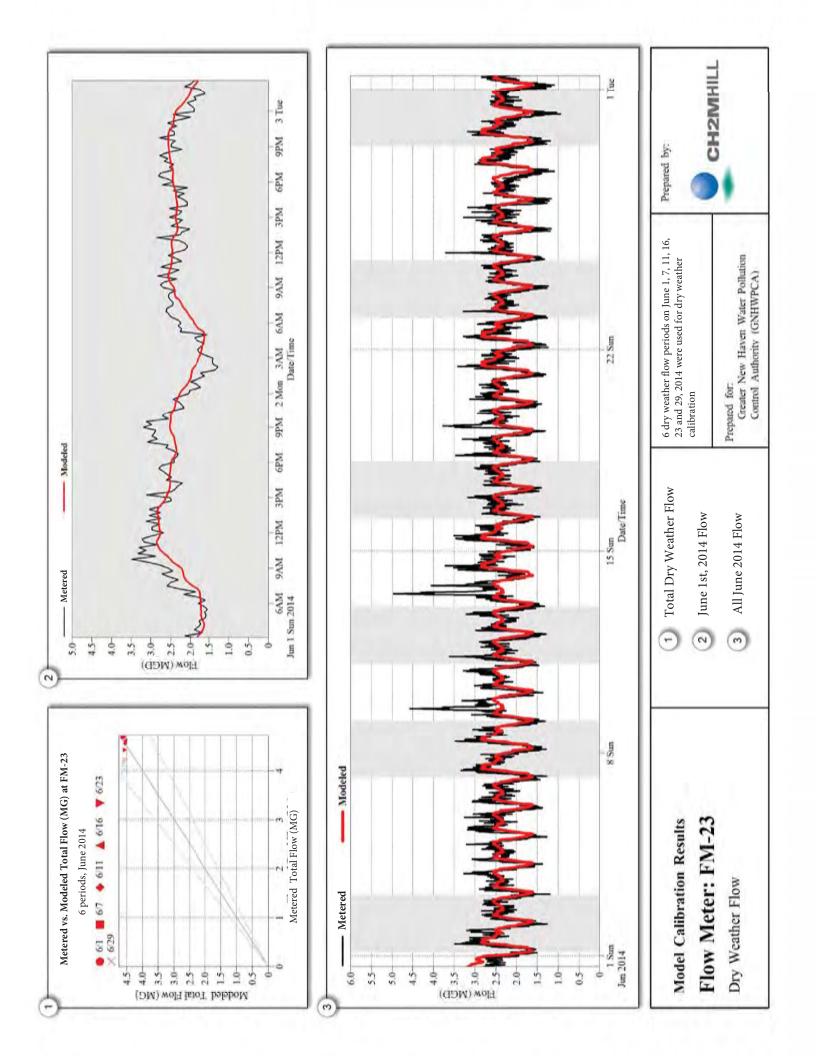


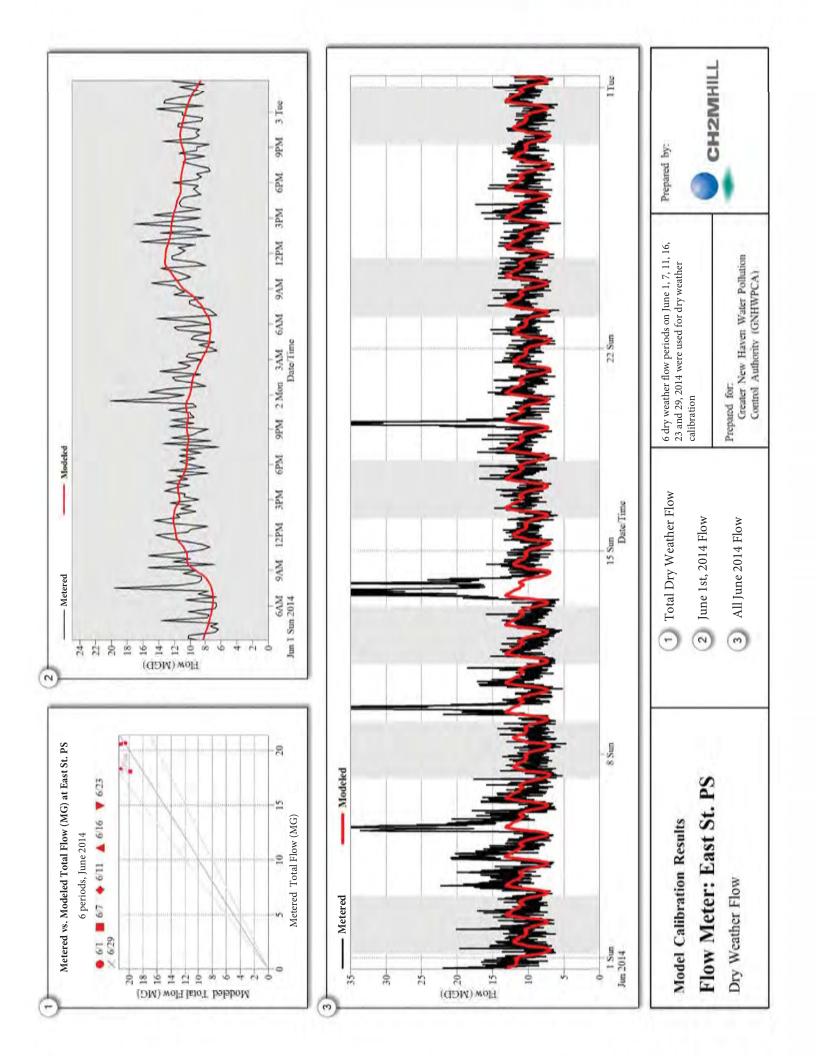


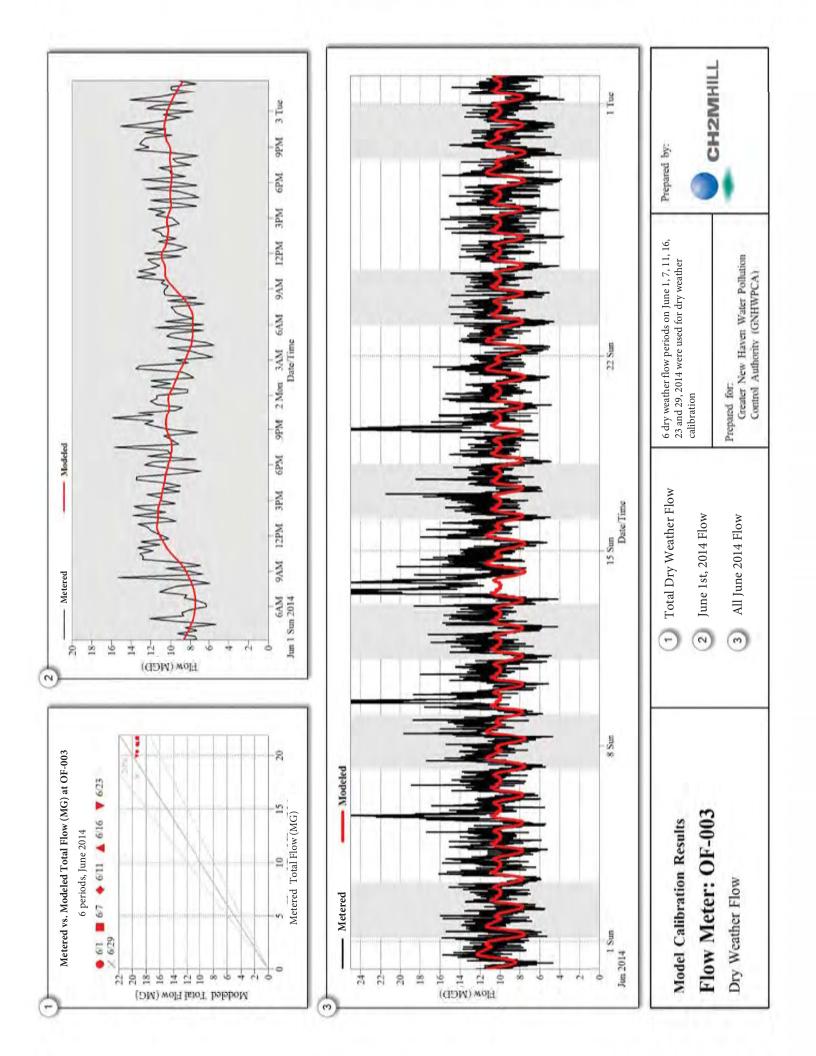


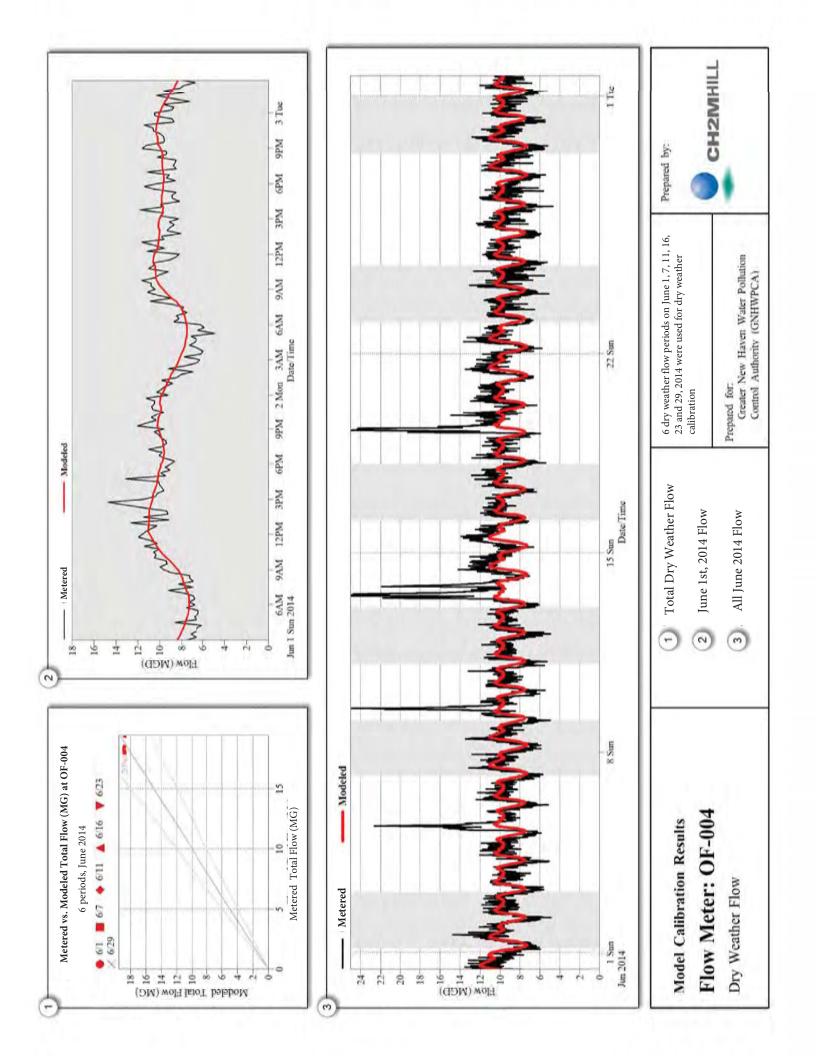


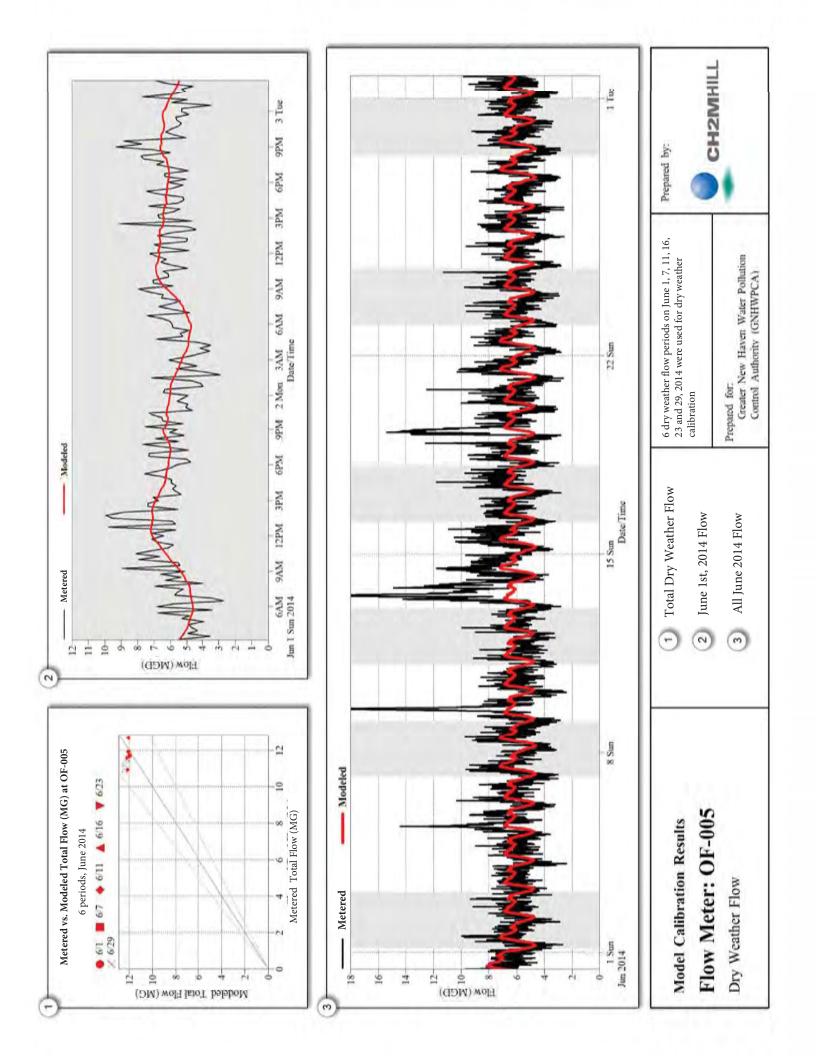


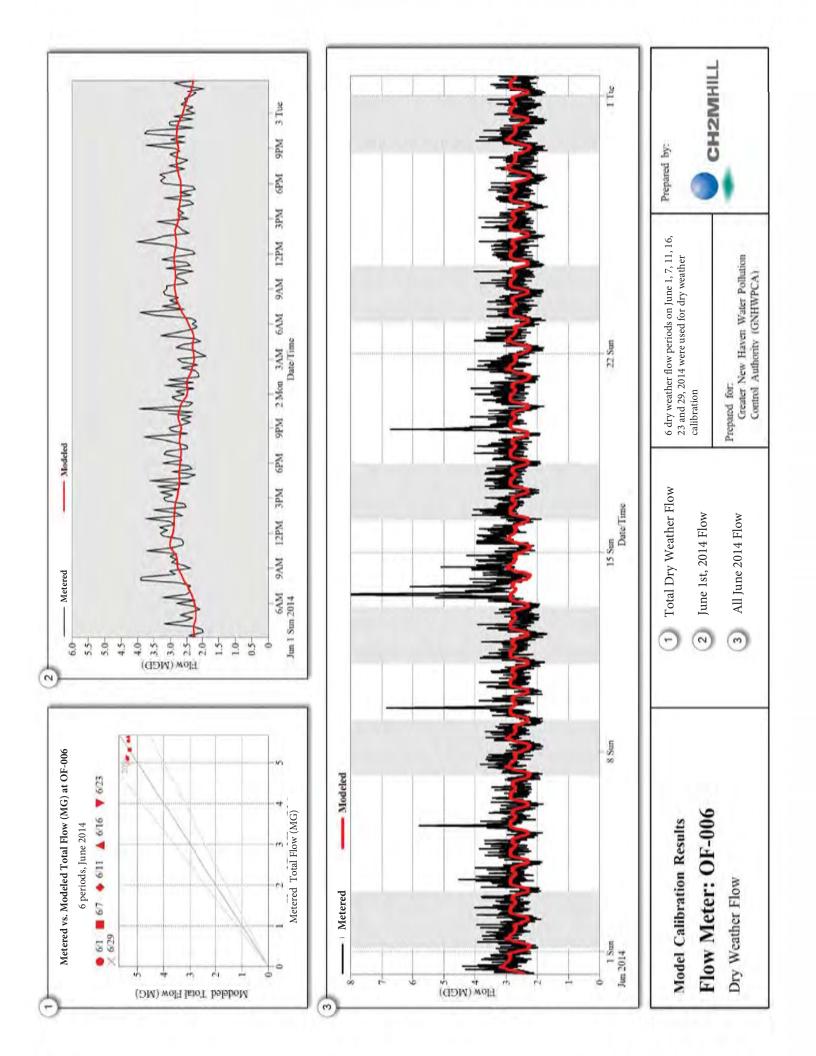


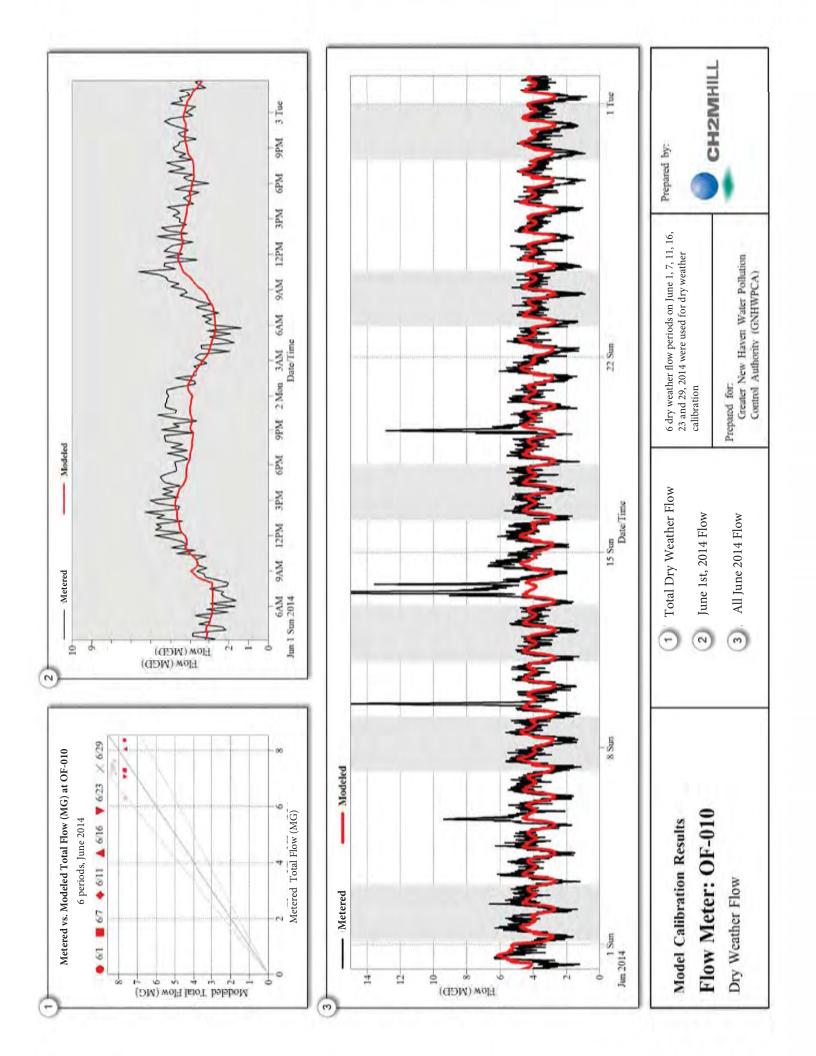


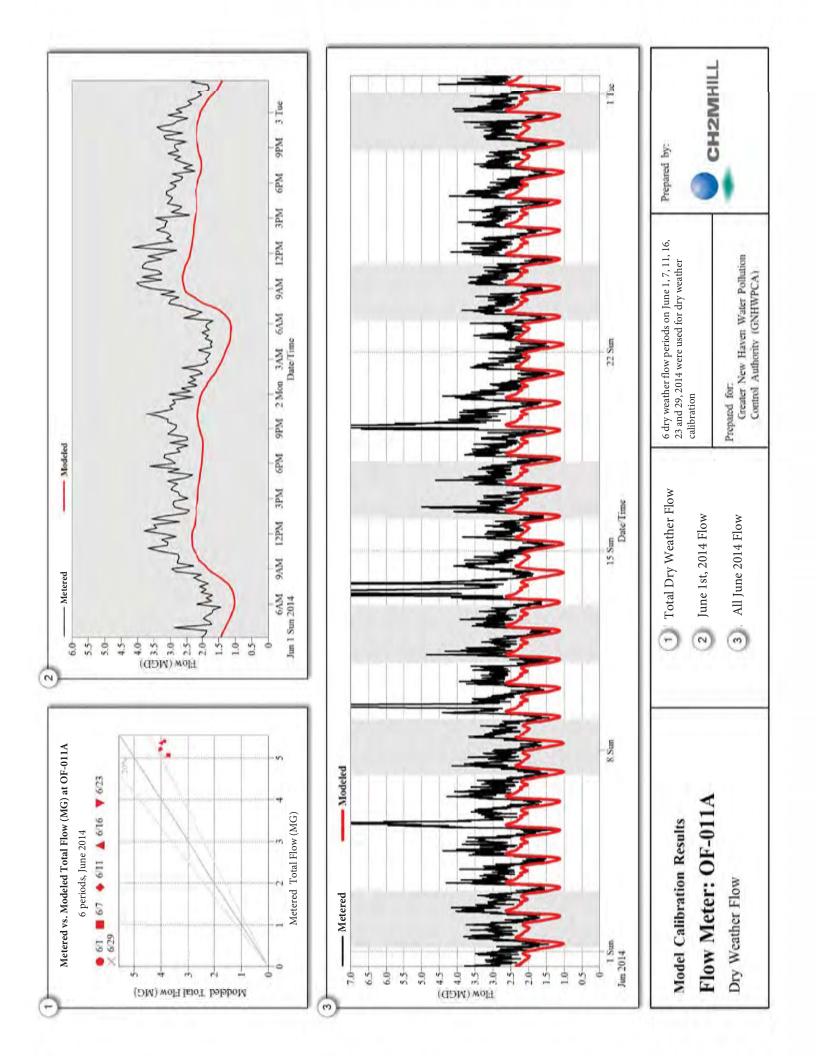


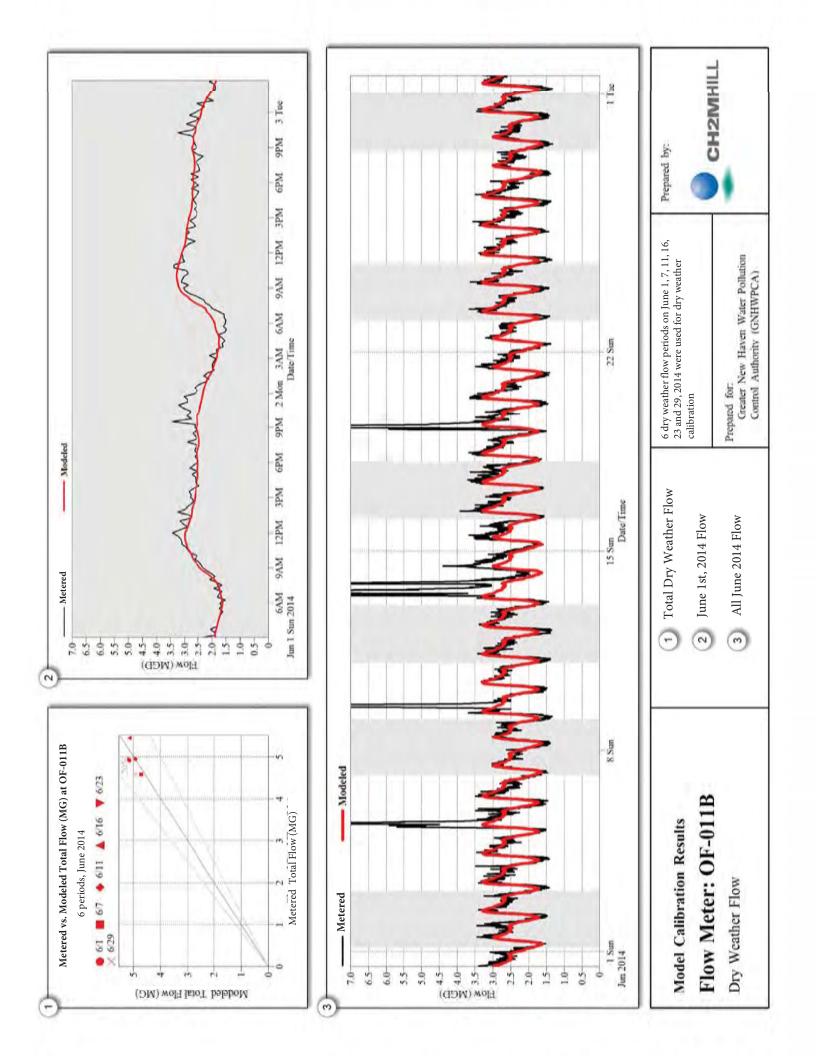


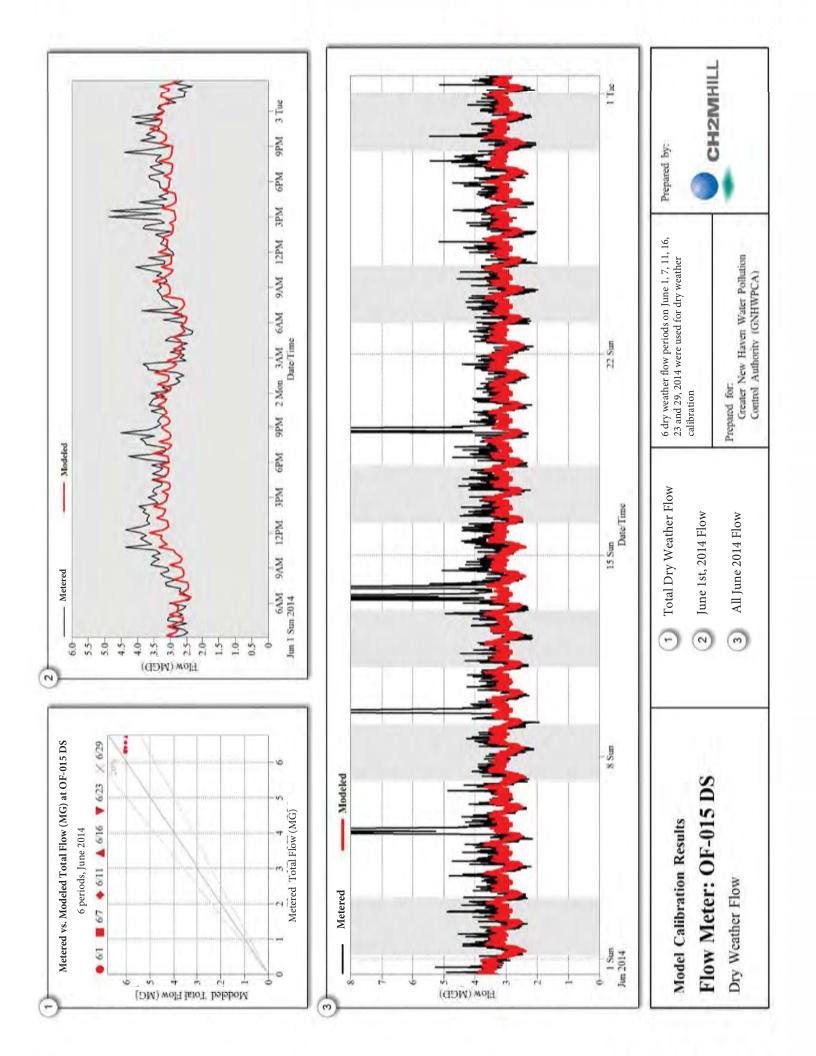


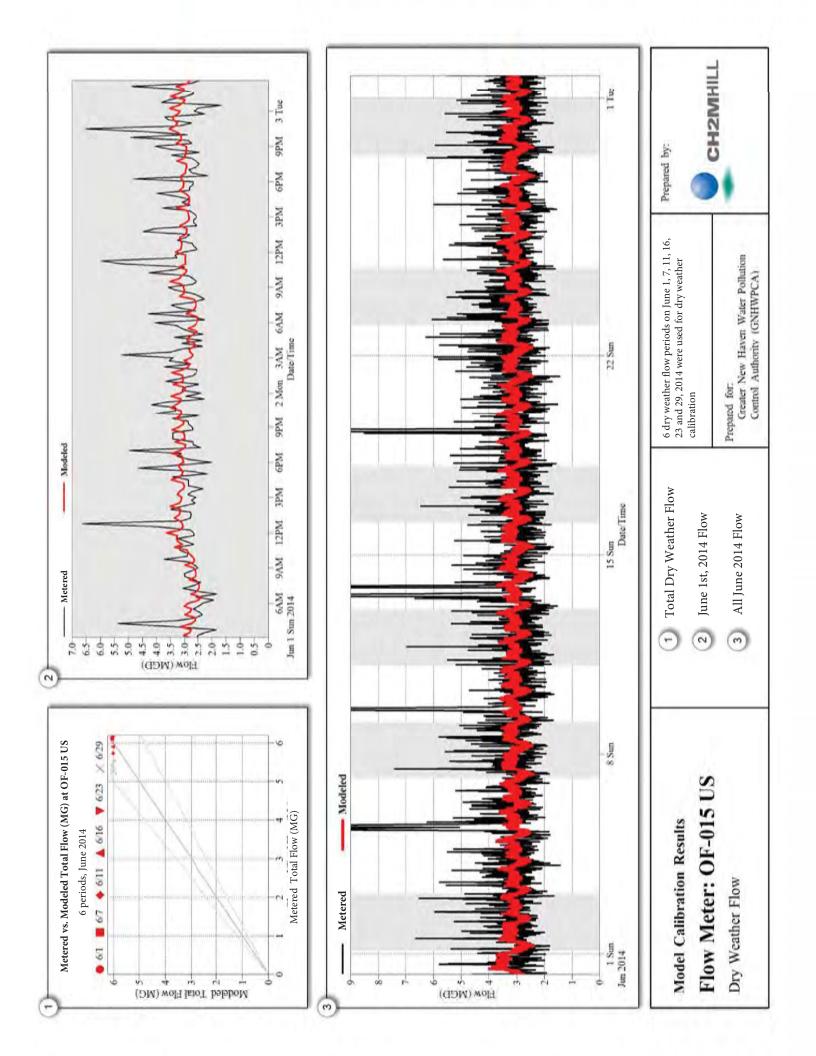


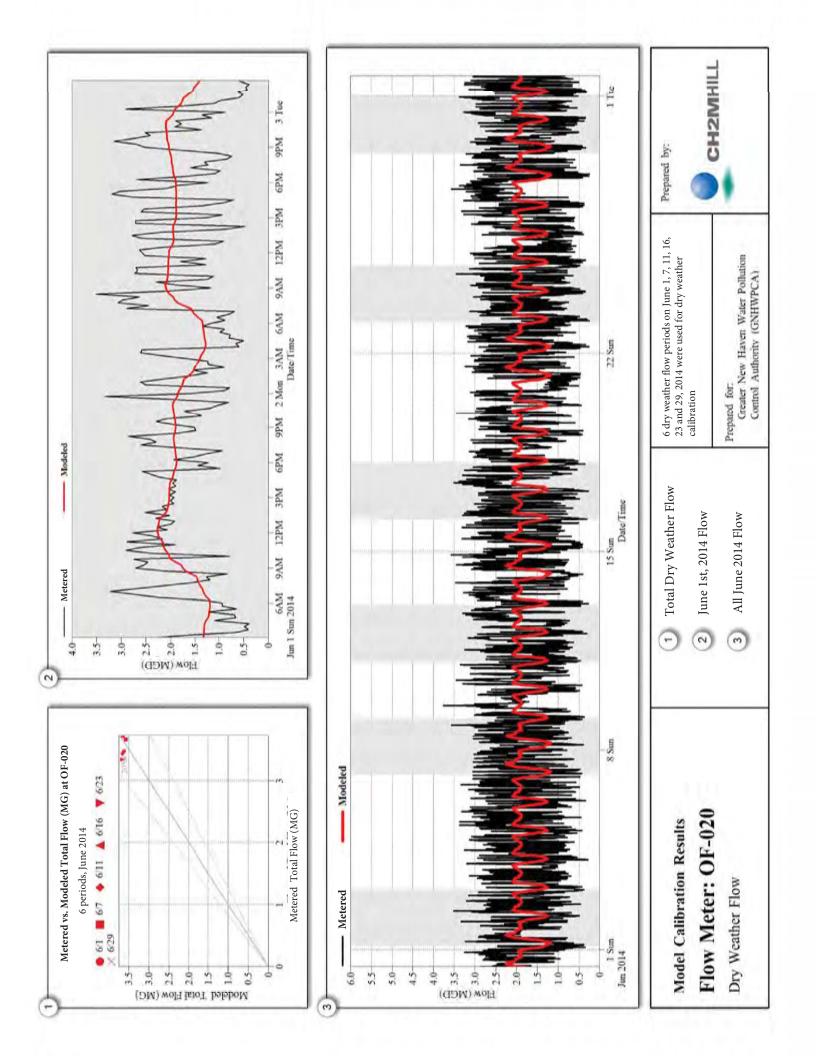


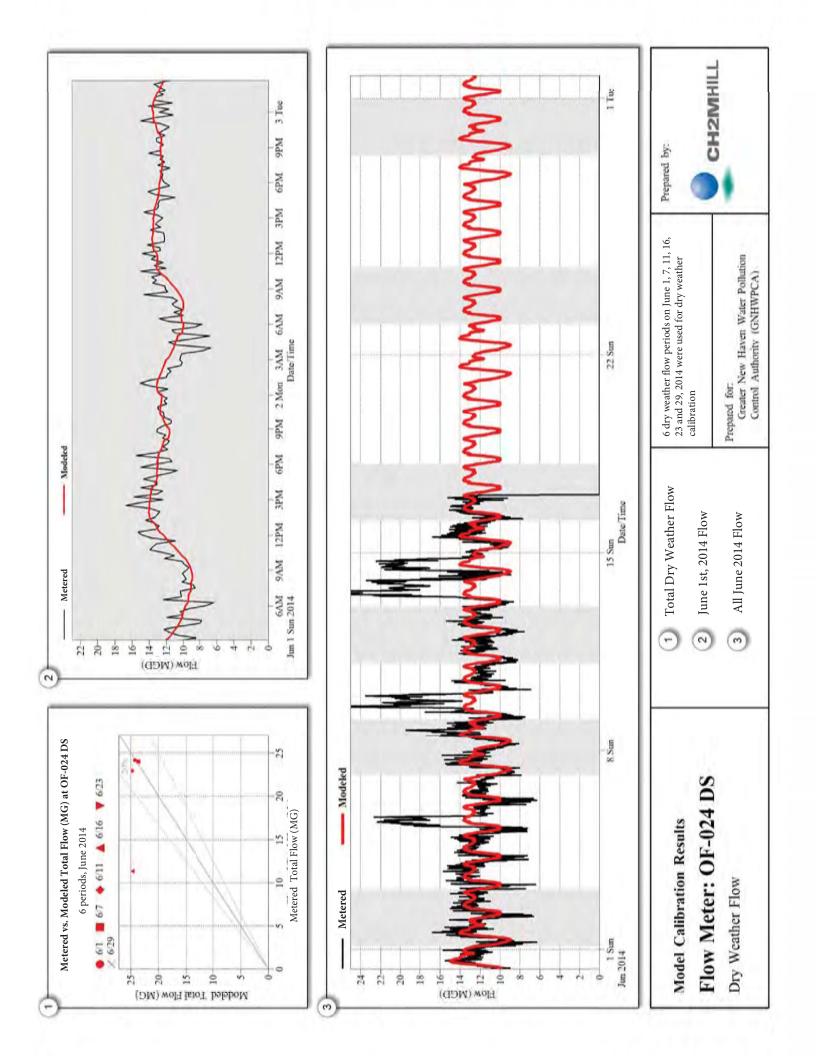


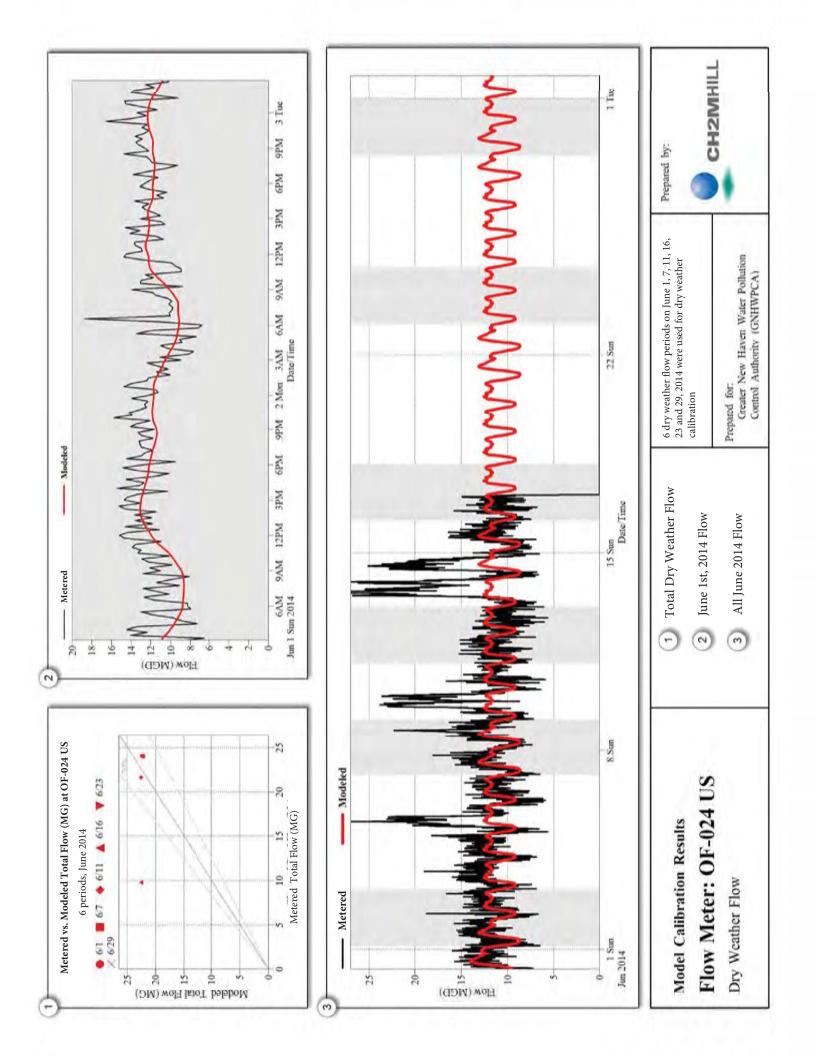


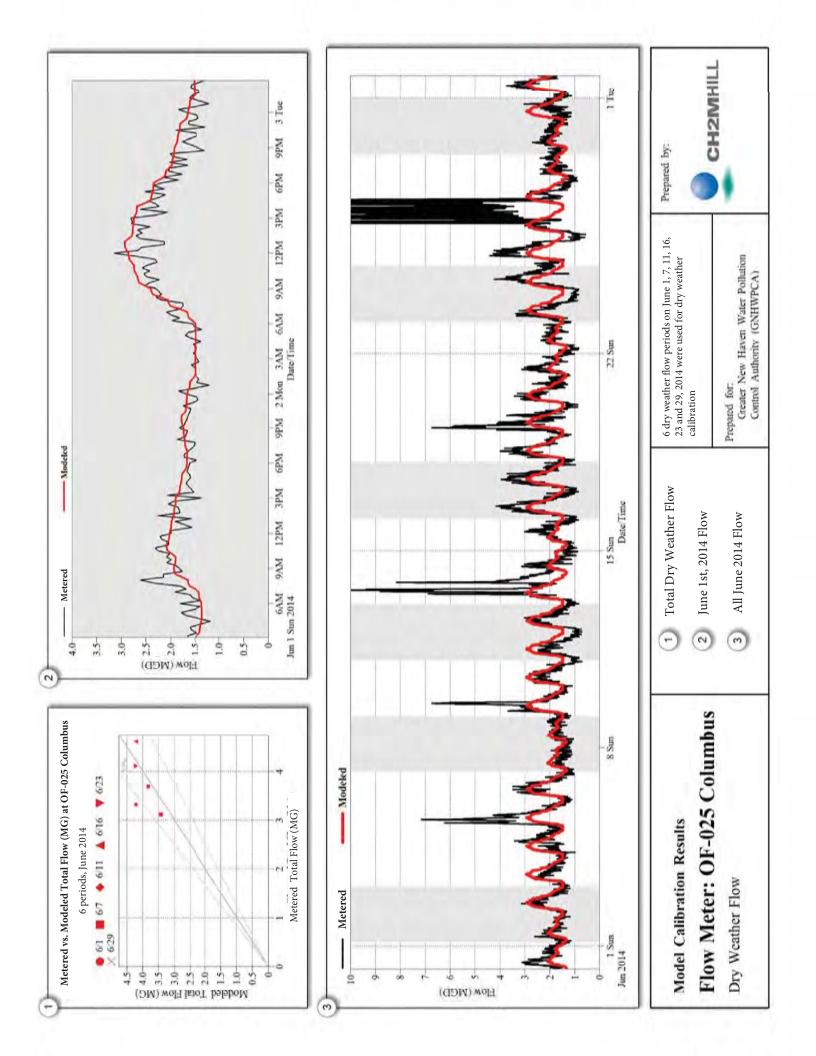


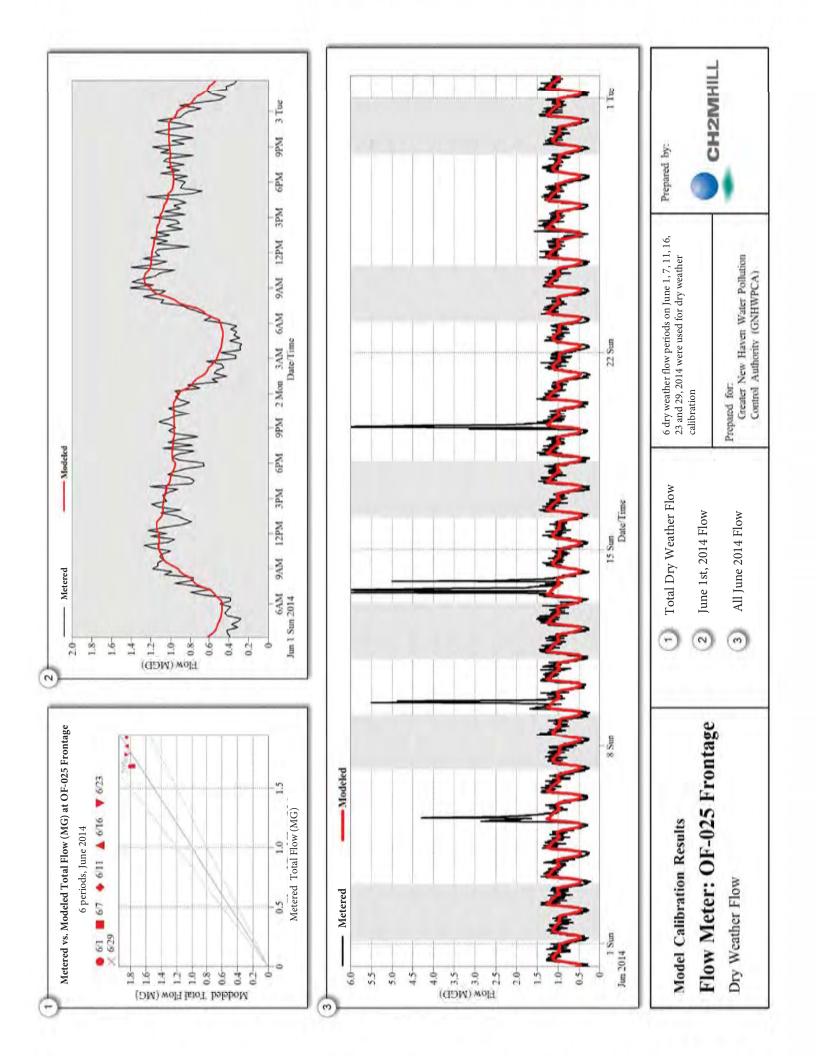


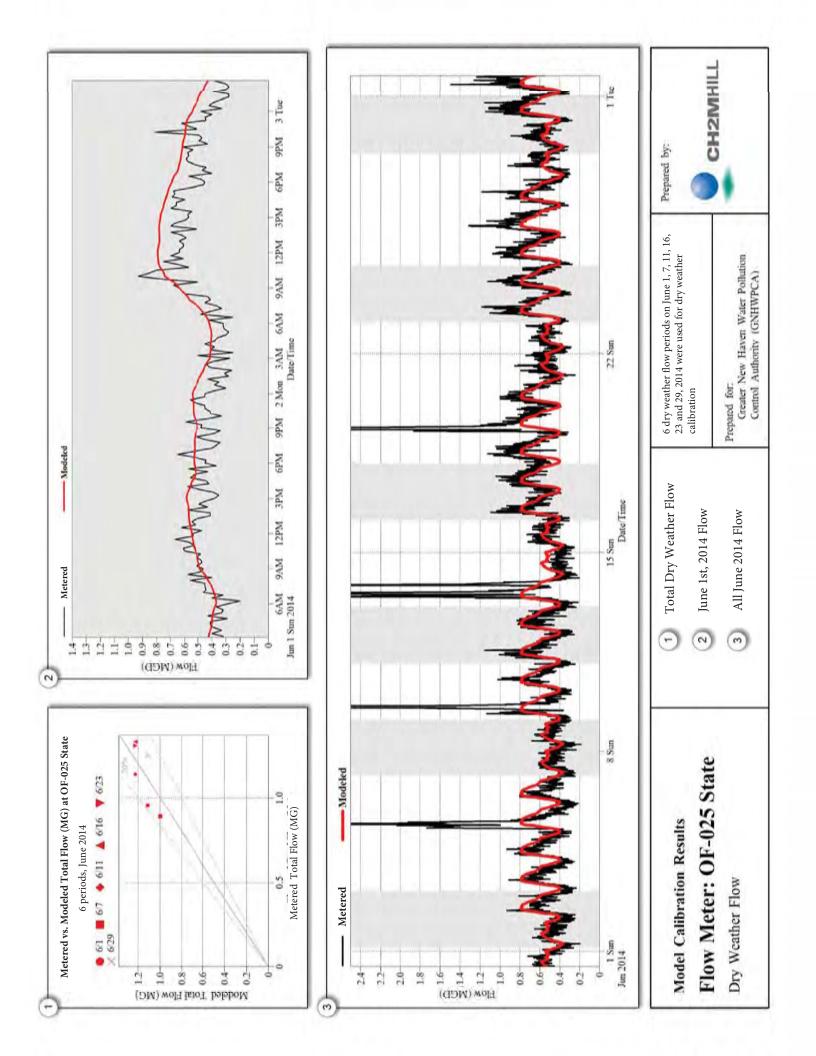


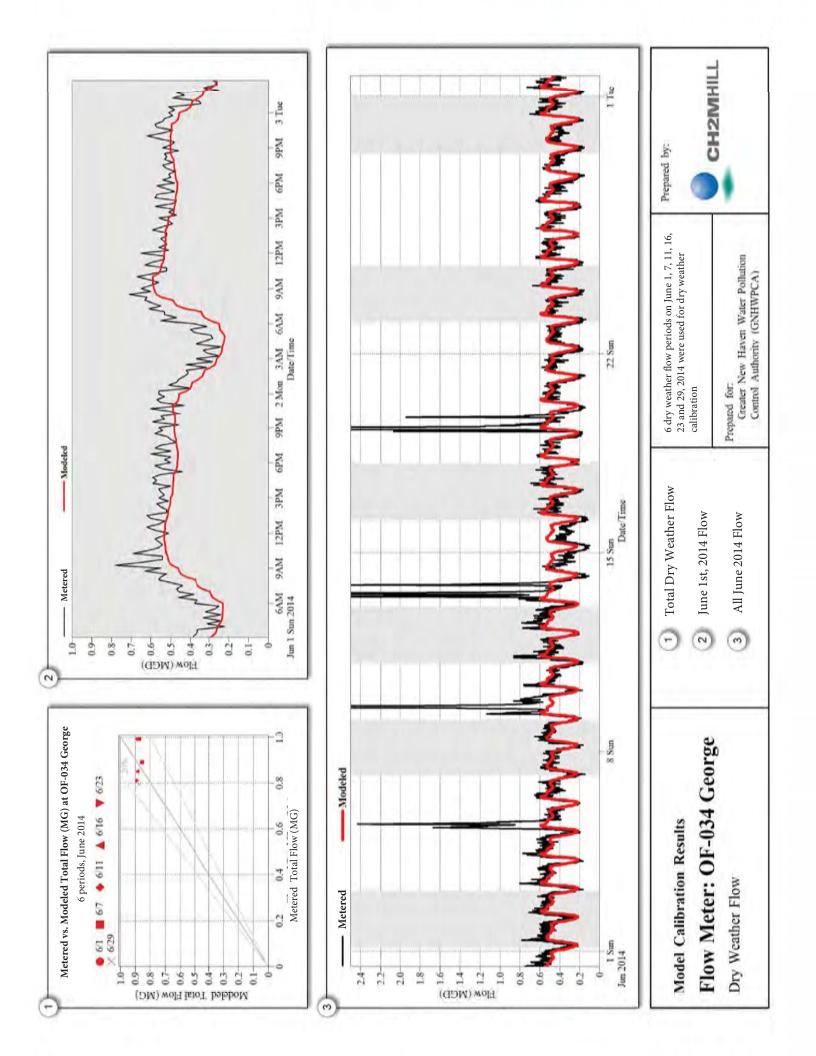


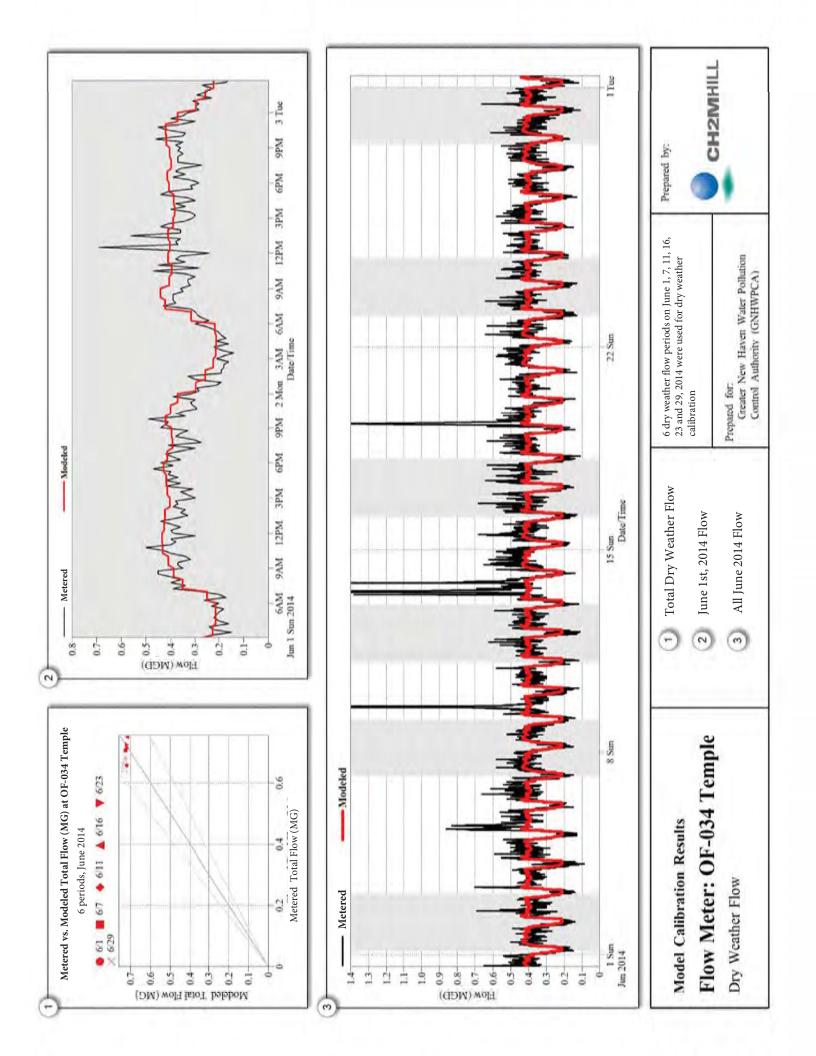












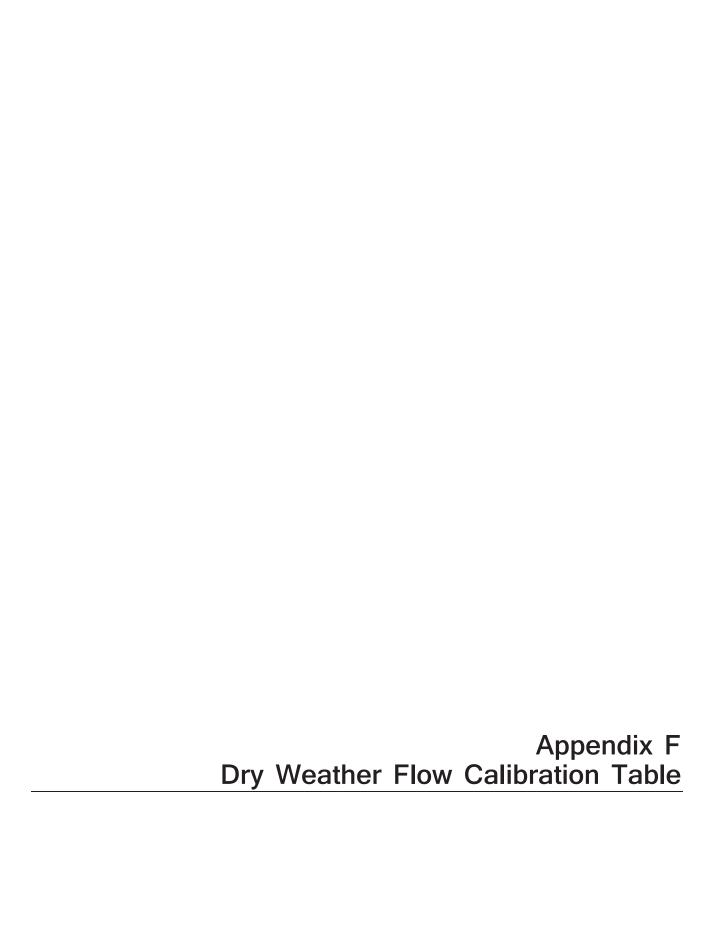


TABLE F-1

Maximum Flow Dry Weather Flow Calibration Results at Each Sewer Flow Meter

Meter ID	Event ID	Date	Duration (hrs)	Metered Maximum Flow (MGD)	Modeled Maximum Flow (MGD)	Difference (%)
East_St_PS	1	6/1/14 3:00	48	20.11	13.23	34.2
East_St_PS	2	6/7/14 3:50	48	14.30	12.15	15.0
East_St_PS	3	6/11/14 3:00	48	15.86	13.24	16.5
East_St_PS	4	6/16/14 3:00	48	16.83	13.23	21.4
East_St_PS	5	6/23/14 2:00	48	15.67	13.28	15.3
East_St_PS	6	6/29/14 0:00	48	14.45	13.23	8.4
FM-01	1	6/1/14 3:00	48	5.41	3.61	33.3
FM-01	2	6/7/14 3:50	48	4.41	3.61	18.2
FM-01	3	6/11/14 3:00	48	4.29	3.42	20.2
FM-01	4	6/16/14 3:00	48	4.76	3.42	28.1
FM-01	5	6/23/14 2:00	48	3.90	3.42	12.2
FM-01	6	6/29/14 0:00	48	4.12	3.61	12.4
FM-02	1	6/1/14 3:00	48	1.48	1.26	15.0
FM-02	2	6/7/14 3:50	48	1.44	1.02	29.2
FM-02	3	6/11/14 3:00	48	1.63	1.26	22.8
FM-02	4	6/16/14 3:00	48	1.89	1.26	33.4
FM-02	5	6/23/14 2:00	48	1.44	1.26	12.6
FM-02	6	6/29/14 0:00	48	1.52	1.26	17.2
FM-03	1	6/1/14 3:00	48	0.12	0.05	59.0
FM-03	2	6/7/14 3:50	48	0.07	0.05	33.3
FM-03	3	6/11/14 3:00	48	0.08	0.05	38.5
FM-03	4	6/16/14 3:00	48	0.06	0.05	18.1
FM-03	5	6/23/14 2:00	48	0.09	0.05	45.4
FM-03	6	6/29/14 0:00	48	0.10	0.05	50.8
FM-04	1	6/1/14 3:00	48	3.28	2.32	29.2
FM-04	2	6/7/14 3:50	48	3.55	2.32	34.6
FM-04	3	6/11/14 3:00	48	3.62	2.25	37.8
FM-04	4	6/16/14 3:00	48	2.90	2.25	22.3
FM-04	5	6/23/14 2:00	48	2.95	2.25	23.6
FM-04	6	6/29/14 0:00	48	2.93	2.32	20.7
FM-05	1	6/1/14 3:00	48	8.06	6.44	20.0
FM-05	2	6/7/14 3:50	48	7.32	6.44	12.0
FM-05	3	6/11/14 3:00	48	6.92	6.09	12.0
FM-05	4	6/16/14 3:00	48	7.92	6.09	23.1
FM-05	5	6/23/14 2:00	48	6.93	6.09	12.1
FM-05	6	6/29/14 0:00	48	6.88	6.44	6.3

Meter ID	Event ID	Date	Duration (hrs)	Metered Maximum Flow (MGD)	Modeled Maximum Flow (MGD)	Difference (%)
FM-06	1	6/1/14 3:00	48	0.87	0.66	24.5
FM-06	2	6/7/14 3:50	48	0.75	0.63	16.0
FM-06	3	6/11/14 3:00	48	0.91	0.66	27.8
FM-06	4	6/16/14 3:00	48	0.84	0.66	21.8
FM-06	5	6/23/14 2:00	48	0.73	0.66	10.0
FM-06	6	6/29/14 0:00	48	0.72	0.66	8.8
FM-07	1	6/1/14 3:00	48	4.17	3.29	21.1
FM-07	2	6/7/14 3:50	48	3.68	3.29	10.5
FM-07	3	6/11/14 3:00	48	3.77	2.88	23.6
FM-07	4	6/16/14 3:00	48	4.07	2.88	29.2
FM-07	5	6/23/14 2:00	48	3.98	2.88	27.6
FM-07	6	6/29/14 0:00	48	4.02	3.29	18.1
FM-08	1	6/1/14 3:00	48	2.75	2.35	14.7
FM-08	2	6/7/14 3:50	48	2.49	2.35	5.7
FM-08	3	6/11/14 3:00	48	2.16	2.13	1.2
FM-08	4	6/16/14 3:00	48	2.63	2.13	18.9
FM-08	5	6/23/14 2:00	48	2.30	2.13	7.2
FM-08	6	6/29/14 0:00	48	2.18	2.35	7.7
FM-09	1	6/1/14 3:00	48	0.44	0.37	15.8
FM-09	2	6/7/14 3:50	48	0.49	0.37	24.3
FM-09	3	6/11/14 3:00	48	0.46	0.36	21.6
FM-09	4	6/16/14 3:00	48	0.64	0.36	43.6
FM-09	5	6/23/14 2:00	48	0.53	0.36	31.9
FM-09	6	6/29/14 0:00	48	0.75	0.37	50.6
FM-10	1	6/1/14 3:00	48	0.39	0.28	28.3
FM-10	2	6/7/14 3:50	48	0.38	0.28	26.4
FM-10	3	6/11/14 3:00	48	0.35	0.27	22.5
FM-10	4	6/16/14 3:00	48	0.38	0.27	28.6
FM-10	5	6/23/14 2:00	48	0.46	0.27	41.0
FM-10	6	6/29/14 0:00	48	0.34	0.28	17.8
FM-11	1	6/1/14 3:00	48	0.53	0.29	45.1
FM-11	2	6/7/14 3:50	48	1.75	0.29	83.4
FM-11	3	6/11/14 3:00	48	0.30	0.25	17.8
FM-11	4	6/16/14 3:00	48	0.46	0.25	46.4
FM-11	5	6/23/14 2:00	48	0.47	0.25	47.5
FM-11	6	6/29/14 0:00	48	0.41	0.29	29.1
FM-12	1	6/1/14 3:00	48	1.17	1.05	10.2
FM-12	2	6/7/14 3:50	48	1.17	1.05	10.2

Meter ID	Event ID	Date	Duration (hrs)	Metered Maximum Flow (MGD)	Modeled Maximum Flow (MGD)	Difference (%)
FM-12	3	6/11/14 3:00	48	1.05	0.93	11.4
FM-12	4	6/16/14 3:00	48	1.25	0.93	25.5
FM-12	5	6/23/14 2:00	48	1.53	0.93	39.2
FM-12	6	6/29/14 0:00	48	1.19	1.05	11.7
FM-13	1	6/1/14 3:00	48	2.68	2.64	1.6
FM-13	2	6/7/14 3:50	48	2.51	2.35	6.3
FM-13	3	6/11/14 3:00	48	3.30	2.64	20.1
FM-13	4	6/16/14 3:00	48	3.11	2.64	15.2
FM-13	5	6/23/14 2:00	48	2.80	2.64	5.8
FM-13	6	6/29/14 0:00	48	2.78	2.64	5.1
FM-14	1	6/1/14 3:00	48	3.57	2.95	17.3
FM-14	2	6/7/14 3:50	48	3.48	2.95	15.1
FM-14	3	6/11/14 3:00	48	3.30	2.68	18.8
FM-14	4	6/16/14 3:00	48	2.99	2.68	10.4
FM-14	5	6/23/14 2:00	48	3.00	2.68	10.7
FM-14	6	6/29/14 0:00	48	3.11	2.95	5.0
FM-15	1	6/1/14 3:00	48	4.65	3.88	16.5
FM-15	2	6/7/14 3:50	48	4.38	4.13	5.7
FM-15	3	6/11/14 3:00	48	4.26	3.98	6.7
FM-15	4	6/16/14 3:00	48	4.56	3.77	17.3
FM-15	5	6/23/14 2:00	48	3.89	3.96	1.9
FM-15	6	6/29/14 0:00	48	3.86	3.88	0.6
FM-16	1	6/1/14 3:00	48	2.03	1.32	35.1
FM-16	2	6/7/14 3:50	48	1.66	1.32	20.7
FM-16	3	6/11/14 3:00	48	1.79	1.28	28.5
FM-16	4	6/16/14 3:00	48	1.70	1.28	24.7
FM-16	5	6/23/14 2:00	48	1.49	1.28	14.1
FM-16	6	6/29/14 0:00	48	1.42	1.32	7.3
FM-17	1	6/1/14 3:00	48	4.18	4.07	2.7
FM-17	2	6/7/14 3:50	48	4.08	4.06	0.5
FM-17	3	6/11/14 3:00	48	4.03	4.04	0.1
FM-17	4	6/16/14 3:00	48	4.25	4.03	5.1
FM-17	5	6/23/14 2:00	48	4.16	4.03	3.1
FM-17	6	6/29/14 0:00	48	4.20	4.07	3.1
FM-18	1	6/1/14 3:00	48	7.79	5.25	32.6
FM-18	2	6/7/14 3:50	48	8.30	4.34	47.7
FM-18	3	6/11/14 3:00	48	12.73	5.26	58.7
FM-18	4	6/16/14 3:00	48	8.98	5.25	41.6

Meter ID	Event ID	Date	Duration (hrs)	Metered Maximum Flow (MGD)	Modeled Maximum Flow (MGD)	Difference (%)
FM-18	5	6/23/14 2:00	48	8.10	5.25	35.2
FM-18	6	6/29/14 0:00	48	9.47	5.25	44.6
FM-19	1	6/1/14 3:00	48	3.29	1.60	51.4
FM-19	2	6/7/14 3:50	48	2.72	1.60	41.2
FM-19	3	6/11/14 3:00	48	3.11	1.60	48.6
FM-19	4	6/16/14 3:00	48	2.45	1.60	34.8
FM-19	5	6/23/14 2:00	48	2.40	1.60	33.5
FM-19	6	6/29/14 0:00	48	2.83	1.60	43.5
FM-20	1	6/1/14 3:00	48	0.95	0.62	34.4
FM-20	2	6/7/14 3:50	48	1.02	0.61	40.6
FM-20	3	6/11/14 3:00	48	0.91	0.62	31.6
FM-20	4	6/16/14 3:00	48	0.93	0.62	33.0
FM-20	5	6/23/14 2:00	48	0.93	0.62	33.0
FM-20	6	6/29/14 0:00	48	0.98	0.62	36.4
FM-21	1	6/1/14 3:00	48	0.55	0.26	52.5
FM-21	2	6/7/14 3:50	48	0.46	0.26	43.1
FM-21	3	6/11/14 3:00	48	0.43	0.25	41.0
FM-21	4	6/16/14 3:00	48	0.59	0.25	57.1
FM-21	5	6/23/14 2:00	48	0.61	0.25	58.4
FM-21	6	6/29/14 0:00	48	0.44	0.26	40.7
FM-22	1	6/1/14 3:00	48	0.74	0.55	25.3
FM-22	2	6/7/14 3:50	48	0.96	0.53	44.5
FM-22	3	6/11/14 3:00	48	0.85	0.55	35.0
FM-22	4	6/16/14 3:00	48	0.96	0.55	42.4
FM-22	5	6/23/14 2:00	48	0.76	0.55	27.3
FM-22	6	6/29/14 0:00	48	1.01	0.55	45.3
FM-23	1	6/1/14 3:00	48	3.49	2.85	18.3
FM-23	2	6/7/14 3:50	48	3.47	2.85	17.8
FM-23	3	6/11/14 3:00	48	3.61	2.56	29.0
FM-23	4	6/16/14 3:00	48	3.17	2.56	19.1
FM-23	5	6/23/14 2:00	48	3.28	2.56	21.9
FM-23	6	6/29/14 0:00	48	3.18	2.85	10.3
OF-003	1	6/1/14 3:00	48	15.94	11.37	28.7
OF-003	2	6/7/14 3:50	48	19.61	11.37	42.0
OF-003	3	6/11/14 3:00	48	18.59	10.90	41.4
OF-003	4	6/16/14 3:00	48	21.44	10.90	49.2
OF-003	5	6/23/14 2:00	48	15.06	10.90	27.6
OF-003	6	6/29/14 0:00	48	15.01	11.37	24.3

Meter ID	Event ID	Date	Duration (hrs)	Metered Maximum Flow (MGD)	Modeled Maximum Flow (MGD)	Difference (%)
OF-004	1	6/1/14 3:00	48	14.73	11.05	25.0
OF-004	2	6/7/14 3:50	48	13.44	11.05	17.8
OF-004	3	6/11/14 3:00	48	12.11	10.57	12.7
OF-004	4	6/16/14 3:00	48	12.82	10.57	17.6
OF-004	5	6/23/14 2:00	48	13.06	10.57	19.1
OF-004	6	6/29/14 0:00	48	12.79	11.05	13.6
OF-005	1	6/1/14 3:00	48	9.95	7.21	27.6
OF-005	2	6/7/14 3:50	48	9.69	7.21	25.6
OF-005	3	6/11/14 3:00	48	9.93	6.90	30.5
OF-005	4	6/16/14 3:00	48	11.78	6.90	41.4
OF-005	5	6/23/14 2:00	48	11.28	6.90	38.8
OF-005	6	6/29/14 0:00	48	9.20	7.21	21.7
OF-006	1	6/1/14 3:00	48	4.01	3.03	24.5
OF-006	2	6/7/14 3:50	48	3.82	3.03	20.8
OF-006	3	6/11/14 3:00	48	3.91	2.89	26.0
OF-006	4	6/16/14 3:00	48	4.08	2.89	29.1
OF-006	5	6/23/14 2:00	48	4.02	2.89	28.0
OF-006	6	6/29/14 0:00	48	3.96	3.03	23.6
OF-010	1	6/1/14 3:00	48	6.61	4.77	27.9
OF-010	2	6/7/14 3:50	48	5.65	4.93	12.7
OF-010	3	6/11/14 3:00	48	5.39	4.61	14.4
OF-010	4	6/16/14 3:00	48	5.70	4.61	19.1
OF-010	5	6/23/14 2:00	48	5.26	4.63	12.0
OF-010	6	6/29/14 0:00	48	4.95	4.77	3.7
OF-011A	1	6/1/14 3:00	48	4.16	2.63	36.7
OF-011A	2	6/7/14 3:50	48	4.14	2.35	43.2
OF-011A	3	6/11/14 3:00	48	4.85	2.63	45.7
OF-011A	4	6/16/14 3:00	48	4.99	2.63	47.3
OF-011A	5	6/23/14 2:00	48	3.86	2.63	31.8
OF-011A	6	6/29/14 0:00	48	4.11	2.63	36.0
OF-011B	1	6/1/14 3:00	48	3.44	3.28	4.5
OF-011B	2	6/7/14 3:50	48	3.02	3.00	0.8
OF-011B	3	6/11/14 3:00	48	3.42	3.29	3.9
OF-011B	4	6/16/14 3:00	48	3.91	3.28	16.0
OF-011B	5	6/23/14 2:00	48	3.66	3.28	10.3
OF-011B	6	6/29/14 0:00	48	3.45	3.28	4.8
OF-015DS	1	6/1/14 3:00	48	4.89	3.64	25.6
OF-015DS	2	6/7/14 3:50	48	4.26	3.55	16.7

Meter ID	Event ID	Date	Duration (hrs)	Metered Maximum Flow (MGD)	Modeled Maximum Flow (MGD)	Difference (%)
OF-015DS	3	6/11/14 3:00	48	4.96	3.69	25.5
OF-015DS	4	6/16/14 3:00	48	4.51	3.71	17.7
OF-015DS	5	6/23/14 2:00	48	4.57	3.68	19.5
OF-015DS	6	6/29/14 0:00	48	5.45	3.71	32.0
OF-015US	1	6/1/14 3:00	48	6.63	3.65	45.0
OF-015US	2	6/7/14 3:50	48	7.39	3.54	52.1
OF-015US	3	6/11/14 3:00	48	6.96	3.70	46.9
OF-015US	4	6/16/14 3:00	48	6.45	3.66	43.3
OF-015US	5	6/23/14 2:00	48	6.04	3.70	38.7
OF-015US	6	6/29/14 0:00	48	5.92	3.65	38.3
OF-020	1	6/1/14 3:00	48	3.51	2.27	35.4
OF-020	2	6/7/14 3:50	48	3.56	2.27	36.3
OF-020	3	6/11/14 3:00	48	3.29	2.11	36.0
OF-020	4	6/16/14 3:00	48	3.50	2.11	39.9
OF-020	5	6/23/14 2:00	48	3.45	2.11	39.0
OF-020	6	6/29/14 0:00	48	3.37	2.27	32.7
OF-024DS	1	6/1/14 3:00	48	16.74	14.04	16.1
OF-024DS	2	6/7/14 3:50	48	19.37	14.04	27.5
OF-024DS	3	6/11/14 3:00	48	15.34	13.67	10.9
OF-024DS	4	6/16/14 3:00	48	15.21	13.67	10.1
OF-024DS	5	6/23/14 2:00	48	0.00	13.67	-
OF-024DS	6	6/29/14 0:00	48	0.00	14.04	-
OF-024US	1	6/1/14 3:00	48	18.71	13.08	30.1
OF-024US	2	6/7/14 3:50	48	22.24	13.08	41.2
OF-024US	3	6/11/14 3:00	48	15.21	12.54	17.6
OF-024US	4	6/16/14 3:00	48	15.75	12.54	20.4
OF-024US	5	6/23/14 2:00	48	0.00	12.54	-
OF-024US	6	6/29/14 0:00	48	0.00	13.07	-
OF-025C	1	6/1/14 3:00	48	3.14	2.93	6.7
OF-025C	2	6/7/14 3:50	48	2.11	2.09	0.9
OF-025C	3	6/11/14 3:00	48	3.02	2.93	2.9
OF-025C	4	6/16/14 3:00	48	4.16	2.93	29.5
OF-025C	5	6/23/14 2:00	48	4.23	2.93	30.7
OF-025C	6	6/29/14 0:00	48	3.03	2.93	3.3
OF-025F	1	6/1/14 3:00	48	1.41	1.27	10.1
OF-025F	2	6/7/14 3:50	48	1.50	1.14	24.1
OF-025F	3	6/11/14 3:00	48	1.51	1.27	16.0
OF-025F	4	6/16/14 3:00	48	1.46	1.27	13.2

Meter ID	Event ID	Date	Duration (hrs)	Metered Maximum Flow (MGD)	Modeled Maximum Flow (MGD)	Difference (%)
OF-025F	5	6/23/14 2:00	48	1.40	1.27	9.4
OF-025F	6	6/29/14 0:00	48	1.45	1.27	12.6
OF-025S	1	6/1/14 3:00	48	0.93	0.79	14.9
OF-025S	2	6/7/14 3:50	48	0.68	0.59	13.8
OF-025S	3	6/11/14 3:00	48	1.15	0.79	31.2
OF-025S	4	6/16/14 3:00	48	1.09	0.79	27.4
OF-025S	5	6/23/14 2:00	48	1.18	0.79	32.9
OF-025S	6	6/29/14 0:00	48	1.15	0.79	31.2
OF-034G	1	6/1/14 3:00	48	0.78	0.59	24.4
OF-034G	2	6/7/14 3:50	48	0.65	0.53	18.1
OF-034G	3	6/11/14 3:00	48	0.86	0.59	31.4
OF-034G	4	6/16/14 3:00	48	0.69	0.59	14.5
OF-034G	5	6/23/14 2:00	48	0.67	0.59	12.0
OF-034G	6	6/29/14 0:00	48	0.70	0.59	15.7
OF-034T	1	6/1/14 3:00	48	0.69	0.44	36.1
OF-034T	2	6/7/14 3:50	48	0.58	0.43	25.1
OF-034T	3	6/11/14 3:00	48	0.62	0.44	28.9
OF-034T	4	6/16/14 3:00	48	0.68	0.44	35.2
OF-034T	5	6/23/14 2:00	48	0.64	0.44	31.1
OF-034T	6	6/29/14 0:00	48	0.66	0.44	33.2

TABLE F-2

Total Flow Dry Weather Flow Calibration Results at Each Sewer Flow Meter

Meter ID	Event ID	Date	Duration (hrs)	Metered Total Flow (MGD)	Modeled Total Flow (MGD)	Difference (%)
East_St_PS	1	6/1/14 3:00	48	20.66	20.47	0.9
East_St_PS	2	6/7/14 3:50	48	18.14	19.84	9.4
East_St_PS	3	6/11/14 3:00	48	18.32	21.16	15.5
East_St_PS	4	6/16/14 3:00	48	20.62	21.17	2.7
East_St_PS	5	6/23/14 2:00	48	20.54	21.17	3.1
East_St_PS	6	6/29/14 0:00	48	19.45	20.45	5.1
FM-01	1	6/1/14 3:00	48	6.58	6.04	8.2
FM-01	2	6/7/14 3:50	48	6.47	6.09	5.9
FM-01	3	6/11/14 3:00	48	6.18	6.01	2.7
FM-01	4	6/16/14 3:00	48	6.47	6.01	7.2
FM-01	5	6/23/14 2:00	48	5.68	6.01	5.9
FM-01	6	6/29/14 0:00	48	5.42	6.04	11.5
FM-02	1	6/1/14 3:00	48	1.72	1.72	0.1
FM-02	2	6/7/14 3:50	48	1.53	1.61	5.1
FM-02	3	6/11/14 3:00	48	1.70	1.84	8.2
FM-02	4	6/16/14 3:00	48	2.02	1.84	9.0
FM-02	5	6/23/14 2:00	48	1.77	1.84	4.1
FM-02	6	6/29/14 0:00	48	1.70	1.72	1.2
FM-03	1	6/1/14 3:00	48	0.09	0.08	8.6
FM-03	2	6/7/14 3:50	48	0.08	0.08	5.6
FM-03	3	6/11/14 3:00	48	0.08	0.08	11.0
FM-03	4	6/16/14 3:00	48	0.07	0.08	21.7
FM-03	5	6/23/14 2:00	48	0.09	0.08	3.2
FM-03	6	6/29/14 0:00	48	0.09	0.08	5.7
FM-04	1	6/1/14 3:00	48	3.97	3.77	5.2
FM-04	2	6/7/14 3:50	48	3.90	3.80	2.5
FM-04	3	6/11/14 3:00	48	3.80	3.74	1.6
FM-04	4	6/16/14 3:00	48	3.85	3.74	2.8
FM-04	5	6/23/14 2:00	48	3.54	3.74	5.6
FM-04	6	6/29/14 0:00	48	3.89	3.77	3.1
FM-05	1	6/1/14 3:00	48	11.36	11.15	1.8
FM-05	2	6/7/14 3:50	48	10.79	11.15	3.3
FM-05	3	6/11/14 3:00	48	10.26	11.17	8.9
FM-05	4	6/16/14 3:00	48	11.72	11.17	4.7
FM-05	5	6/23/14 2:00	48	10.69	11.17	4.5
FM-05	6	6/29/14 0:00	48	10.75	11.14	3.6

Meter ID	Event ID	Date	Duration (hrs)	Metered Total Flow (MGD)	Modeled Total Flow (MGD)	Difference (%)
FM-06	1	6/1/14 3:00	48	1.33	1.13	14.6
FM-06	2	6/7/14 3:50	48	1.14	1.10	3.0
FM-06	3	6/11/14 3:00	48	1.05	1.17	10.6
FM-06	4	6/16/14 3:00	48	1.17	1.17	0.4
FM-06	5	6/23/14 2:00	48	1.09	1.17	7.0
FM-06	6	6/29/14 0:00	48	1.13	1.13	0.4
FM-07	1	6/1/14 3:00	48	5.54	5.36	3.2
FM-07	2	6/7/14 3:50	48	5.32	5.48	2.9
FM-07	3	6/11/14 3:00	48	5.18	5.27	1.7
FM-07	4	6/16/14 3:00	48	5.24	5.27	0.6
FM-07	5	6/23/14 2:00	48	5.50	5.27	4.3
FM-07	6	6/29/14 0:00	48	5.05	5.36	6.0
FM-08	1	6/1/14 3:00	48	4.25	3.93	7.6
FM-08	2	6/7/14 3:50	48	4.08	4.04	0.9
FM-08	3	6/11/14 3:00	48	3.64	3.84	5.3
FM-08	4	6/16/14 3:00	48	4.05	3.84	5.3
FM-08	5	6/23/14 2:00	48	3.73	3.84	2.8
FM-08	6	6/29/14 0:00	48	3.49	3.94	12.8
FM-09	1	6/1/14 3:00	48	0.49	0.58	17.7
FM-09	2	6/7/14 3:50	48	0.55	0.58	4.9
FM-09	3	6/11/14 3:00	48	0.60	0.57	4.5
FM-09	4	6/16/14 3:00	48	0.59	0.57	4.1
FM-09	5	6/23/14 2:00	48	0.64	0.57	10.6
FM-09	6	6/29/14 0:00	48	0.62	0.57	7.7
FM-10	1	6/1/14 3:00	48	0.38	0.42	9.9
FM-10	2	6/7/14 3:50	48	0.40	0.40	0.0
FM-10	3	6/11/14 3:00	48	0.40	0.44	9.1
FM-10	4	6/16/14 3:00	48	0.43	0.44	1.4
FM-10	5	6/23/14 2:00	48	0.56	0.44	22.6
FM-10	6	6/29/14 0:00	48	0.46	0.42	8.9
FM-11	1	6/1/14 3:00	48	0.41	0.38	8.1
FM-11	2	6/7/14 3:50	48	0.48	0.38	21.0
FM-11	3	6/11/14 3:00	48	0.37	0.38	4.7
FM-11	4	6/16/14 3:00	48	0.41	0.38	6.4
FM-11	5	6/23/14 2:00	48	0.37	0.38	2.1
FM-11	6	6/29/14 0:00	48	0.34	0.38	11.1
FM-12	1	6/1/14 3:00	48	1.62	1.53	5.7
FM-12	2	6/7/14 3:50	48	1.62	1.55	3.8

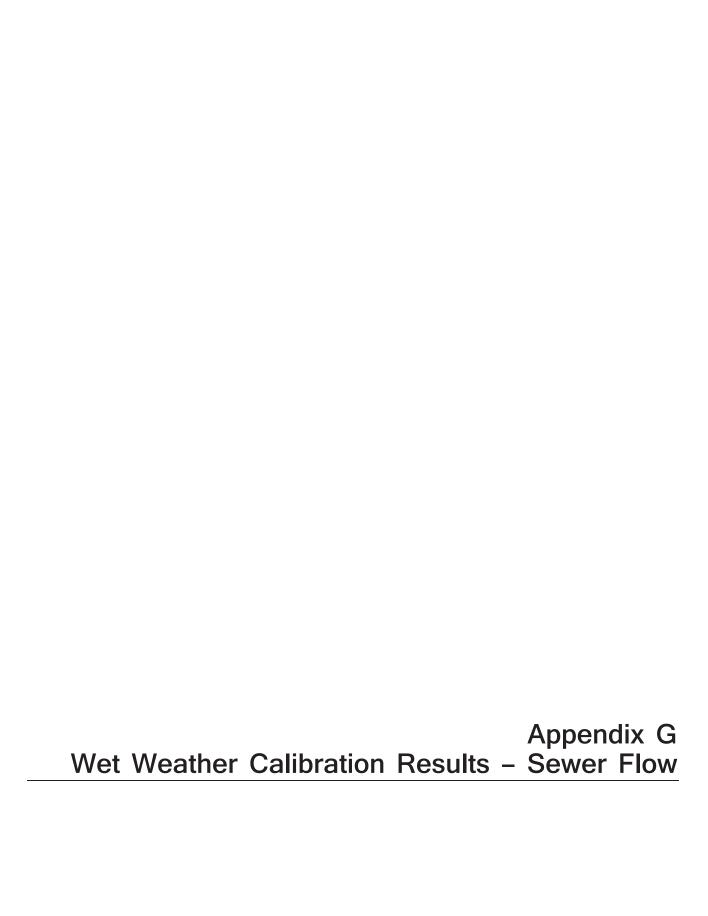
Meter ID	Event ID	Date	Duration (hrs)	Metered Total Flow (MGD)	Modeled Total Flow (MGD)	Difference (%)
FM-12	3	6/11/14 3:00	48	1.46	1.50	2.9
FM-12	4	6/16/14 3:00	48	1.52	1.50	1.0
FM-12	5	6/23/14 2:00	48	1.53	1.50	2.0
FM-12	6	6/29/14 0:00	48	1.67	1.53	8.5
FM-13	1	6/1/14 3:00	48	3.90	3.86	1.1
FM-13	2	6/7/14 3:50	48	3.69	3.73	0.9
FM-13	3	6/11/14 3:00	48	3.66	4.01	9.8
FM-13	4	6/16/14 3:00	48	4.03	4.01	0.3
FM-13	5	6/23/14 2:00	48	3.83	4.01	4.8
FM-13	6	6/29/14 0:00	48	3.64	3.87	6.4
FM-14	1	6/1/14 3:00	48	4.98	4.66	6.4
FM-14	2	6/7/14 3:50	48	5.00	4.75	5.0
FM-14	3	6/11/14 3:00	48	4.73	4.58	3.2
FM-14	4	6/16/14 3:00	48	4.54	4.58	0.9
FM-14	5	6/23/14 2:00	48	4.46	4.58	2.9
FM-14	6	6/29/14 0:00	48	4.53	4.67	3.0
FM-15	1	6/1/14 3:00	48	7.16	6.46	9.8
FM-15	2	6/7/14 3:50	48	6.55	6.53	0.3
FM-15	3	6/11/14 3:00	48	6.28	6.41	2.1
FM-15	4	6/16/14 3:00	48	6.80	6.41	5.8
FM-15	5	6/23/14 2:00	48	5.98	6.41	7.2
FM-15	6	6/29/14 0:00	48	5.70	6.45	13.3
FM-16	1	6/1/14 3:00	48	2.66	2.30	13.8
FM-16	2	6/7/14 3:50	48	2.43	2.29	5.7
FM-16	3	6/11/14 3:00	48	2.29	2.31	1.0
FM-16	4	6/16/14 3:00	48	2.33	2.31	0.9
FM-16	5	6/23/14 2:00	48	2.14	2.31	7.7
FM-16	6	6/29/14 0:00	48	1.93	2.30	18.8
FM-17	1	6/1/14 3:00	48	7.37	7.39	0.2
FM-17	2	6/7/14 3:50	48	7.20	7.39	2.7
FM-17	3	6/11/14 3:00	48	7.21	7.40	2.6
FM-17	4	6/16/14 3:00	48	7.38	7.40	0.3
FM-17	5	6/23/14 2:00	48	7.51	7.40	1.5
FM-17	6	6/29/14 0:00	48	7.30	7.39	1.3
FM-18	1	6/1/14 3:00	48	6.77	7.42	9.6
FM-18	2	6/7/14 3:50	48	6.82	6.94	1.7
FM-18	3	6/11/14 3:00	48	6.23	7.94	27.4
FM-18	4	6/16/14 3:00	48	7.70	7.94	3.1

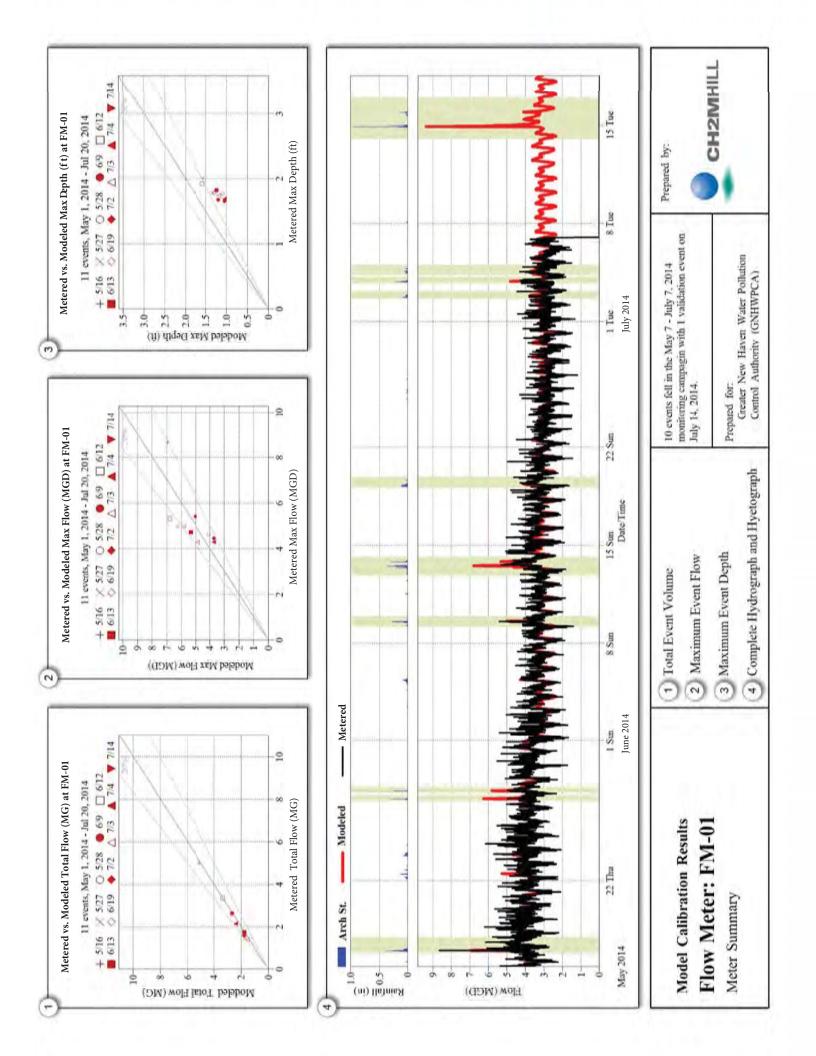
Meter ID	Event ID	Date	Duration (hrs)	Metered Total Flow (MGD)	Modeled Total Flow (MGD)	Difference (%)
FM-18	5	6/23/14 2:00	48	7.84	7.94	1.3
FM-18	6	6/29/14 0:00	48	7.72	7.44	3.6
FM-19	1	6/1/14 3:00	48	2.98	2.82	5.1
FM-19	2	6/7/14 3:50	48	2.69	2.73	1.5
FM-19	3	6/11/14 3:00	48	2.89	2.92	0.9
FM-19	4	6/16/14 3:00	48	2.73	2.92	6.9
FM-19	5	6/23/14 2:00	48	2.56	2.92	14.0
FM-19	6	6/29/14 0:00	48	2.45	2.81	14.5
FM-20	1	6/1/14 3:00	48	0.91	0.97	6.6
FM-20	2	6/7/14 3:50	48	0.96	0.98	2.1
FM-20	3	6/11/14 3:00	48	0.96	0.97	1.4
FM-20	4	6/16/14 3:00	48	0.97	0.97	0.4
FM-20	5	6/23/14 2:00	48	0.91	0.97	6.6
FM-20	6	6/29/14 0:00	48	0.97	0.97	0.0
FM-21	1	6/1/14 3:00	48	0.45	0.47	4.5
FM-21	2	6/7/14 3:50	48	0.49	0.48	2.0
FM-21	3	6/11/14 3:00	48	0.44	0.47	7.7
FM-21	4	6/16/14 3:00	48	0.48	0.47	1.2
FM-21	5	6/23/14 2:00	48	0.47	0.47	0.9
FM-21	6	6/29/14 0:00	48	0.46	0.47	2.9
FM-22	1	6/1/14 3:00	48	0.81	0.85	5.0
FM-22	2	6/7/14 3:50	48	0.84	0.86	1.5
FM-22	3	6/11/14 3:00	48	0.85	0.85	0.3
FM-22	4	6/16/14 3:00	48	0.86	0.85	1.2
FM-22	5	6/23/14 2:00	48	0.89	0.85	4.4
FM-22	6	6/29/14 0:00	48	0.87	0.85	1.8
FM-23	1	6/1/14 3:00	48	4.70	4.58	2.6
FM-23	2	6/7/14 3:50	48	4.70	4.63	1.6
FM-23	3	6/11/14 3:00	48	4.56	4.55	0.3
FM-23	4	6/16/14 3:00	48	4.62	4.55	1.6
FM-23	5	6/23/14 2:00	48	4.42	4.55	2.8
FM-23	6	6/29/14 0:00	48	4.23	4.58	8.3
OF-003	1	6/1/14 3:00	48	20.39	19.31	5.3
OF-003	2	6/7/14 3:50	48	21.71	19.35	10.9
OF-003	3	6/11/14 3:00	48	21.00	19.30	8.1
OF-003	4	6/16/14 3:00	48	21.22	19.30	9.0
OF-003	5	6/23/14 2:00	48	20.01	19.30	3.5
OF-003	6	6/29/14 0:00	48	18.08	19.29	6.7

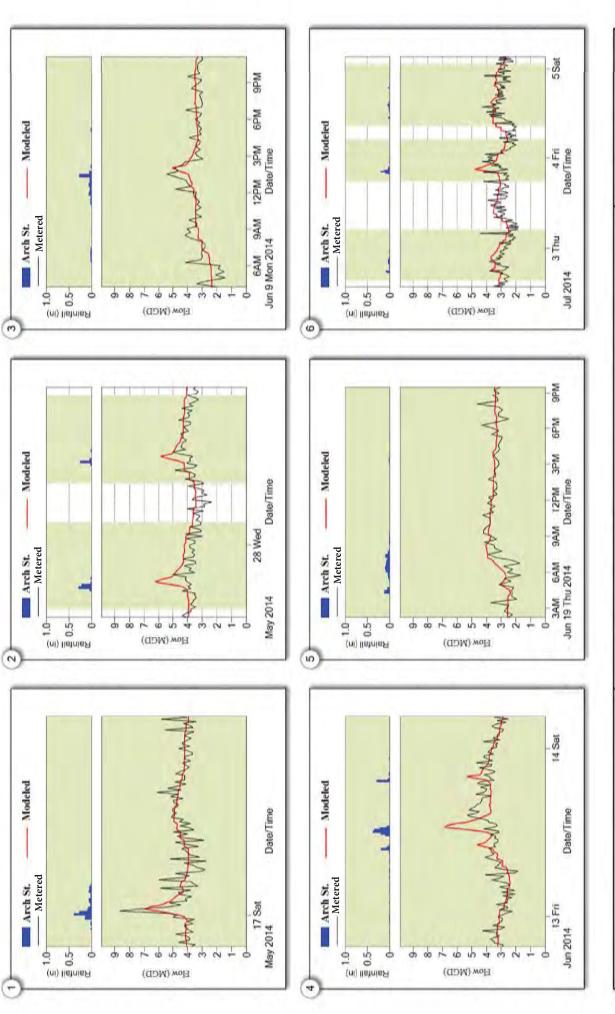
Meter ID	Event ID	Date	Duration (hrs)	Metered Total Flow (MGD)	Modeled Total Flow (MGD)	Difference (%)
OF-004	1	6/1/14 3:00	48	18.51	18.80	1.6
OF-004	2	6/7/14 3:50	48	18.07	18.81	4.1
OF-004	3	6/11/14 3:00	48	17.99	18.82	4.6
OF-004	4	6/16/14 3:00	48	19.37	18.82	2.8
OF-004	5	6/23/14 2:00	48	18.23	18.82	3.2
OF-004	6	6/29/14 0:00	48	17.75	18.77	5.7
OF-005	1	6/1/14 3:00	48	11.95	12.05	0.8
OF-005	2	6/7/14 3:50	48	11.76	11.97	1.8
OF-005	3	6/11/14 3:00	48	10.94	12.14	11.0
OF-005	4	6/16/14 3:00	48	12.71	12.14	4.5
OF-005	5	6/23/14 2:00	48	11.59	12.14	4.7
OF-005	6	6/29/14 0:00	48	11.42	12.02	5.3
OF-006	1	6/1/14 3:00	48	5.54	5.32	3.9
OF-006	2	6/7/14 3:50	48	5.34	5.29	0.9
OF-006	3	6/11/14 3:00	48	5.08	5.37	5.6
OF-006	4	6/16/14 3:00	48	5.63	5.37	4.7
OF-006	5	6/23/14 2:00	48	5.13	5.37	4.5
OF-006	6	6/29/14 0:00	48	4.96	5.32	7.2
OF-010	1	6/1/14 3:00	48	8.38	7.67	8.5
OF-010	2	6/7/14 3:50	48	7.33	7.69	4.9
OF-010	3	6/11/14 3:00	48	7.28	7.64	5.0
OF-010	4	6/16/14 3:00	48	8.06	7.64	5.2
OF-010	5	6/23/14 2:00	48	7.07	7.64	8.1
OF-010	6	6/29/14 0:00	48	6.30	7.63	21.3
OF-011A	1	6/1/14 3:00	48	5.40	3.86	28.4
OF-011A	2	6/7/14 3:50	48	5.09	3.73	26.6
OF-011A	3	6/11/14 3:00	48	5.22	4.01	23.1
OF-011A	4	6/16/14 3:00	48	5.35	4.01	25.0
OF-011A	5	6/23/14 2:00	48	5.20	4.01	22.9
OF-011A	6	6/29/14 0:00	48	5.03	3.87	23.0
OF-011B	1	6/1/14 3:00	48	4.95	4.92	0.6
OF-011B	2	6/7/14 3:50	48	4.60	4.71	2.5
OF-011B	3	6/11/14 3:00	48	4.90	5.14	4.9
OF-011B	4	6/16/14 3:00	48	5.45	5.14	5.7
OF-011B	5	6/23/14 2:00	48	4.94	5.14	4.0
OF-011B	6	6/29/14 0:00	48	4.58	4.92	7.4
OF-015DS	1	6/1/14 3:00	48	6.57	6.03	8.1
OF-015DS	2	6/7/14 3:50	48	6.32	6.06	4.2

Meter ID	Event ID	Date	Duration (hrs)	Metered Total Flow (MGD)	Modeled Total Flow (MGD)	Difference (%)
OF-015DS	3	6/11/14 3:00	48	6.31	6.02	4.6
OF-015DS	4	6/16/14 3:00	48	6.73	6.03	10.4
OF-015DS	5	6/23/14 2:00	48	6.42	6.02	6.2
OF-015DS	6	6/29/14 0:00	48	6.31	6.02	4.6
OF-015US	1	6/1/14 3:00	48	6.14	6.03	1.8
OF-015US	2	6/7/14 3:50	48	6.13	6.05	1.3
OF-015US	3	6/11/14 3:00	48	5.73	6.01	4.8
OF-015US	4	6/16/14 3:00	48	5.90	6.02	2.0
OF-015US	5	6/23/14 2:00	48	6.18	6.00	2.9
OF-015US	6	6/29/14 0:00	48	6.00	6.03	0.5
OF-020	1	6/1/14 3:00	48	3.48	3.61	3.9
OF-020	2	6/7/14 3:50	48	3.68	3.58	2.7
OF-020	3	6/11/14 3:00	48	3.43	3.65	6.4
OF-020	4	6/16/14 3:00	48	3.71	3.65	1.6
OF-020	5	6/23/14 2:00	48	3.34	3.65	9.3
OF-020	6	6/29/14 0:00	48	3.37	3.60	7.0
OF-024DS	1	6/1/14 3:00	48	24.20	24.22	0.1
OF-024DS	2	6/7/14 3:50	48	24.08	23.69	1.6
OF-024DS	3	6/11/14 3:00	48	22.94	24.71	7.7
OF-024DS	4	6/16/14 3:00	48	11.34	24.71	117.9
OF-024DS	5	6/23/14 2:00	48	0.00	24.70	-
OF-024DS	6	6/29/14 0:00	48	0.00	24.07	-
OF-024US	1	6/1/14 3:00	48	24.10	22.40	7.1
OF-024US	2	6/7/14 3:50	48	24.12	22.21	7.9
OF-024US	3	6/11/14 3:00	48	21.62	22.59	4.5
OF-024US	4	6/16/14 3:00	48	9.77	22.59	131.2
OF-024US	5	6/23/14 2:00	48	0.00	22.58	-
OF-024US	6	6/29/14 0:00	48	0.00	22.32	-
OF-025C	1	6/1/14 3:00	48	3.70	3.82	3.3
OF-025C	2	6/7/14 3:50	48	3.13	3.43	9.4
OF-025C	3	6/11/14 3:00	48	3.32	4.22	27.0
OF-025C	4	6/16/14 3:00	48	4.61	4.22	8.5
OF-025C	5	6/23/14 2:00	48	4.11	4.22	2.7
OF-025C	6	6/29/14 0:00	48	3.68	3.82	3.8
OF-025F	1	6/1/14 3:00	48	1.68	1.80	7.1
OF-025F	2	6/7/14 3:50	48	1.69	1.77	4.5
OF-025F	3	6/11/14 3:00	48	1.93	1.85	3.9
OF-025F	4	6/16/14 3:00	48	1.85	1.85	0.1

Meter ID	Event ID	Date	Duration (hrs)	Metered Total Flow (MGD)	Modeled Total Flow (MGD)	Difference (%)
OF-025F	5	6/23/14 2:00	48	1.78	1.85	4.0
OF-025F	6	6/29/14 0:00	48	1.79	1.81	1.2
OF-025S	1	6/1/14 3:00	48	0.96	1.11	16.1
OF-025S	2	6/7/14 3:50	48	0.89	1.00	11.7
OF-025S	3	6/11/14 3:00	48	1.14	1.23	7.4
OF-025S	4	6/16/14 3:00	48	1.33	1.23	8.1
OF-025S	5	6/23/14 2:00	48	1.31	1.23	6.4
OF-025S	6	6/29/14 0:00	48	1.25	1.11	11.2
OF-034G	1	6/1/14 3:00	48	0.99	0.87	12.3
OF-034G	2	6/7/14 3:50	48	0.89	0.86	4.1
OF-034G	3	6/11/14 3:00	48	0.99	0.89	10.4
OF-034G	4	6/16/14 3:00	48	0.85	0.89	4.5
OF-034G	5	6/23/14 2:00	48	0.81	0.89	9.4
OF-034G	6	6/29/14 0:00	48	0.79	0.87	10.3
OF-034T	1	6/1/14 3:00	48	0.66	0.72	9.0
OF-034T	2	6/7/14 3:50	48	0.71	0.73	2.4
OF-034T	3	6/11/14 3:00	48	0.71	0.72	0.4
OF-034T	4	6/16/14 3:00	48	0.75	0.72	4.3
OF-034T	5	6/23/14 2:00	48	0.73	0.72	1.0
OF-034T	6	6/29/14 0:00	48	0.68	0.73	6.3







Arch St. Rain Gauge Events:

1 May 16, 2014 (1.47 in.)

Model Calibration Results

Flow Meter: FM-01

Event Comparison: Flow

May 27, 2014 (0.58 in.) and May 28, 2014 (0.32 in.) (2)

June 9, 2014 (0.70 in.) (0)

June 12, 2014 (1.66 in.) and June 13, 2014 (0.38 in.) 7

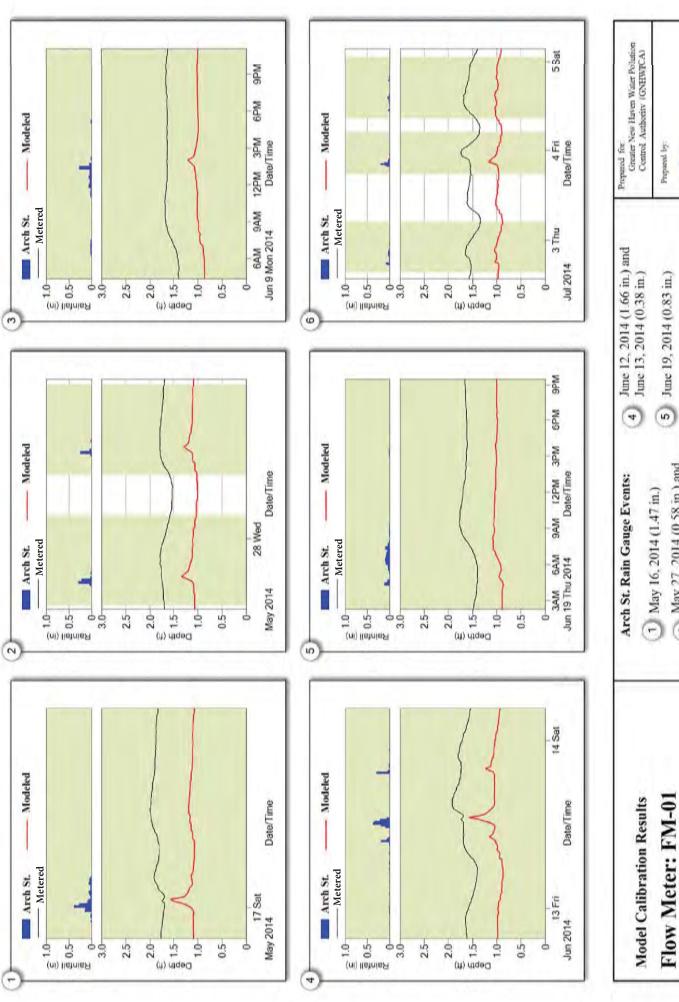
June 19, 2014 (0.83 in.) 2

July 2, 2014 (0.38 in.), July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.) 9

Prepared for Greater New Haven Water Poliution Control Authority (GNHWPCA)







May 27, 2014 (0.58 in.) and May 28, 2014 (0.32 in.) (2)

June 9, 2014 (0.70 in.) (0)

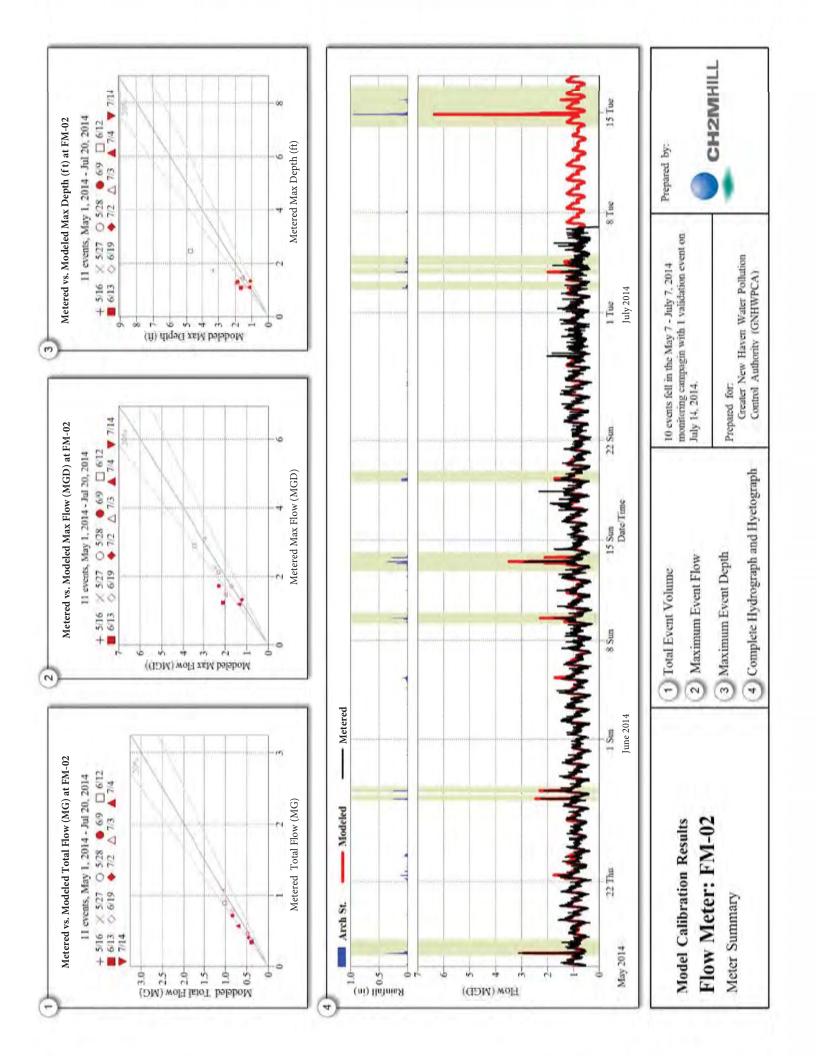
Event Comparison: Depth

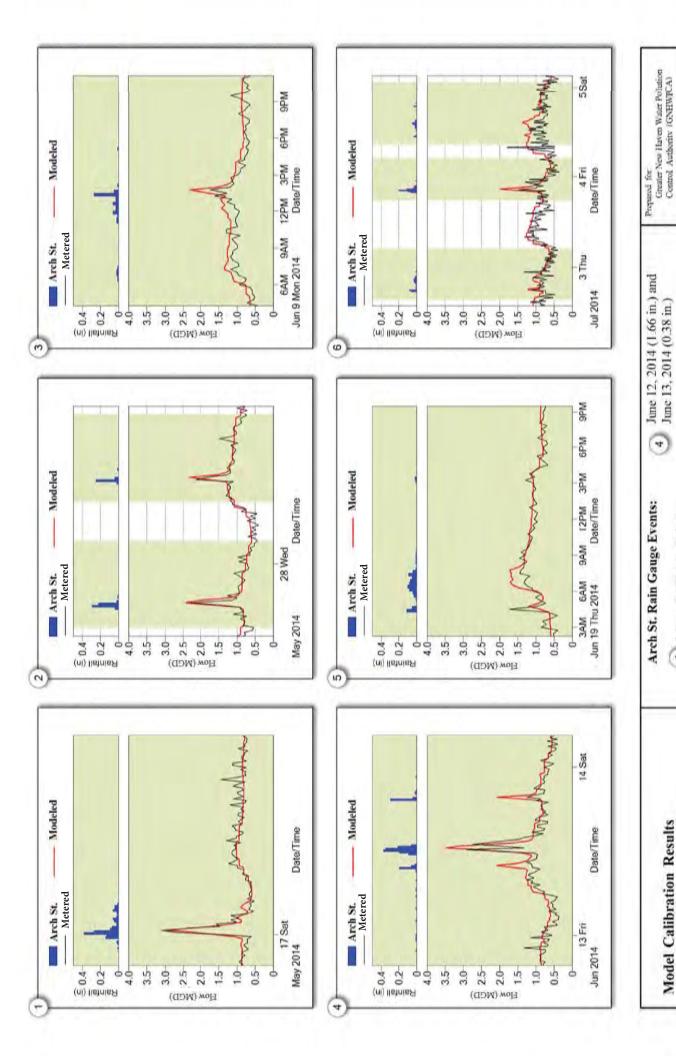
June 19, 2014 (0.83 in.) (0)

July 2, 2014 (0.38 in.), July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.) 9









July 2, 2014 (0.38 in.), July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.)

9

June 19, 2014 (0.83 in.)

9

May 27, 2014 (0.58 in.) and May 28, 2014 (0.32 in.)

(2)

Flow Meter: FM-02

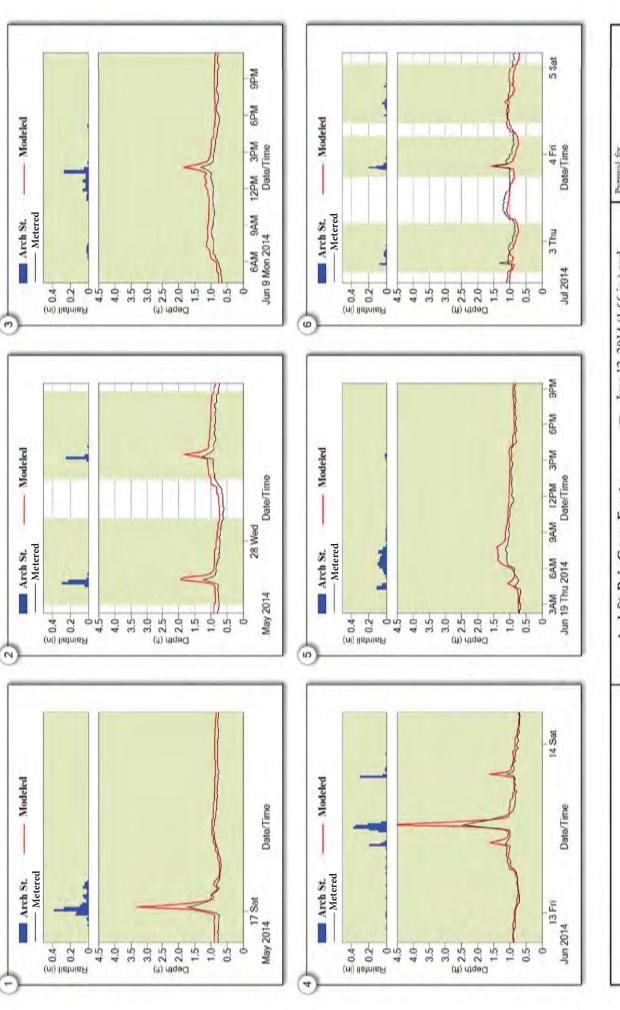
Event Comparison: Flow

Model Calibration Results

June 9, 2014 (0.70 in.)

0

1 May 16, 2014 (1.47 in.)



Arch St. Rain Gauge Events:

1) May 16, 2014 (1.47 in.)

May 27, 2014 (0.58 in.) and May 28, 2014 (0.32 in.) (2)

Flow Meter: FM-02

Event Comparison: Depth

Model Calibration Results

0

June 9, 2014 (0.70 in.)

June 12, 2014 (1.66 in.) and June 13, 2014 (0.38 in.) 7

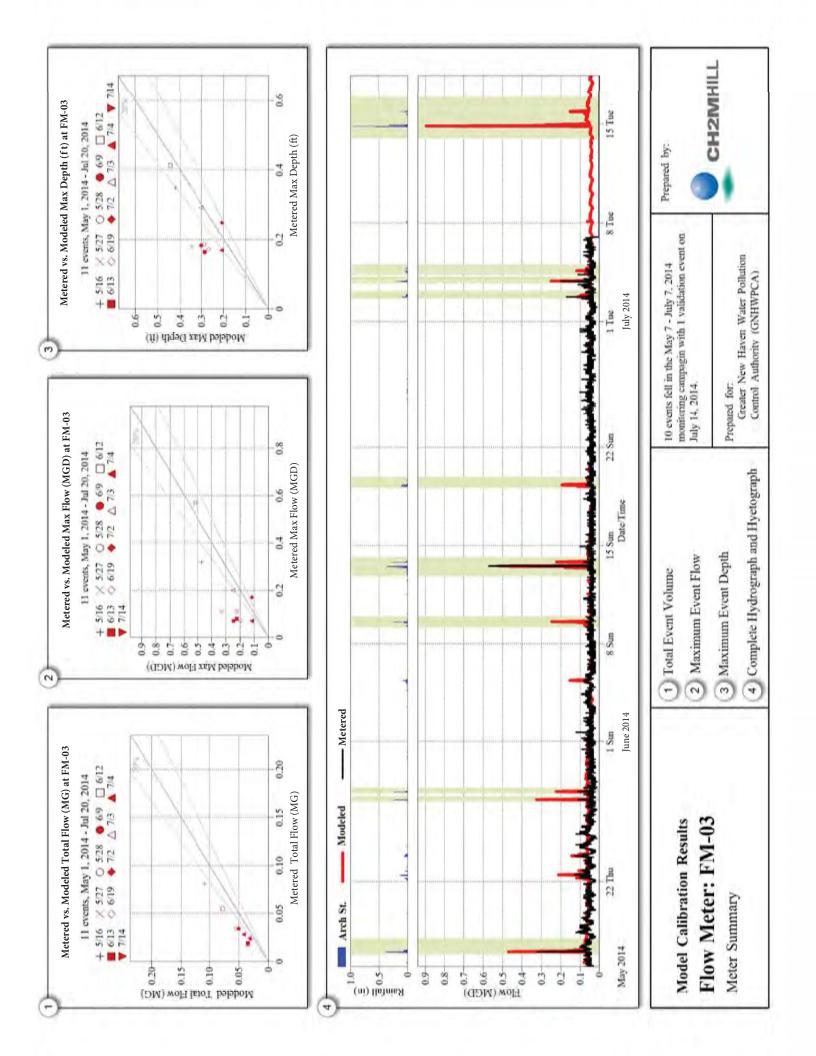
June 19, 2014 (0.83 in.) 9

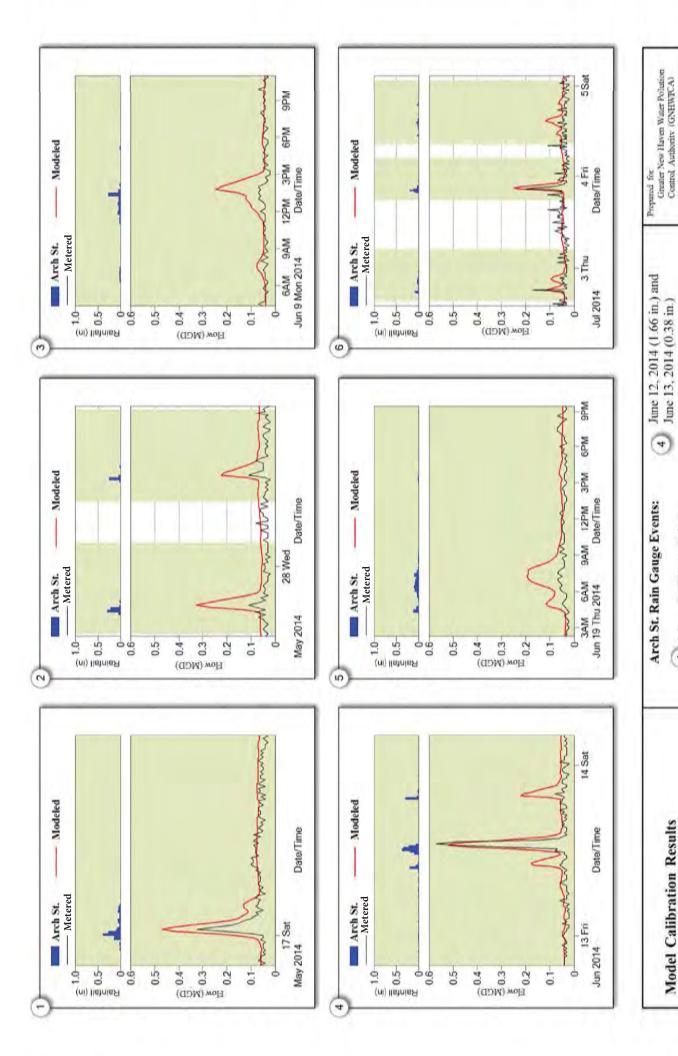
July 2, 2014 (0.38 in.), July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.) 9

Greater New Haven Water Polistion Control Authority (GNHWPCA) Prepared for



CH2MHILL





July 2, 2014 (0.38 in.), July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.)

9

June 19, 2014 (0.83 in.)

9

May 27, 2014 (0.58 in.) and May 28, 2014 (0.32 in.)

(2)

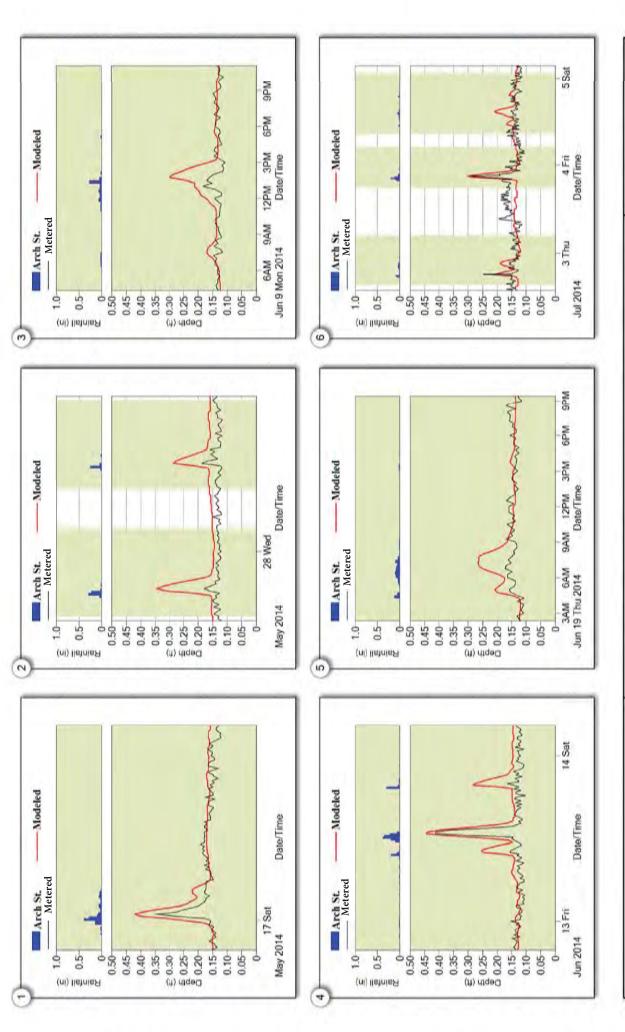
Flow Meter: FM-03

Event Comparison: Flow

June 9, 2014 (0.70 in.)

0

1 May 16, 2014 (1.47 in.)



Arch St. Rain Gauge Events:

1) May 16, 2014 (1.47 in.)

May 27, 2014 (0.58 in.) and May 28, 2014 (0.32 in.) (7)

Flow Meter: FM-03

Event Comparison: Depth

Model Calibration Results

June 9, 2014 (0.70 in.) 6

June 12, 2014 (1.66 in.) and June 13, 2014 (0.38 in.) 4

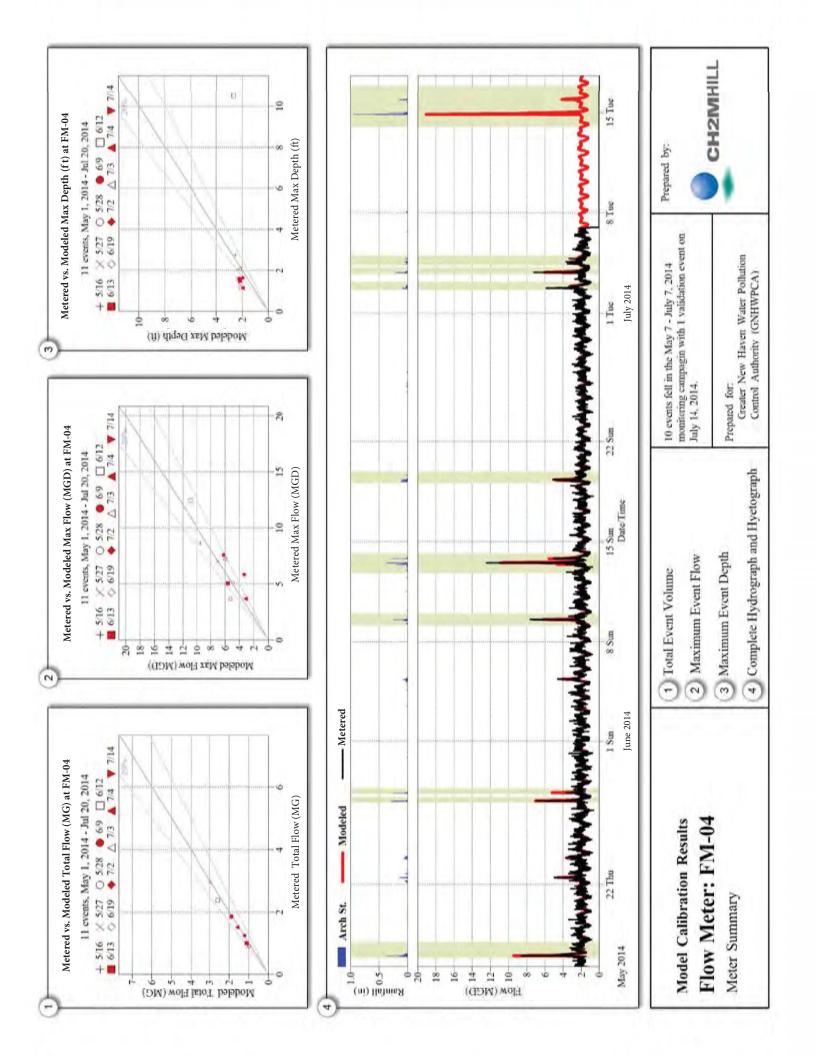
June 19, 2014 (0.83 in.) 2

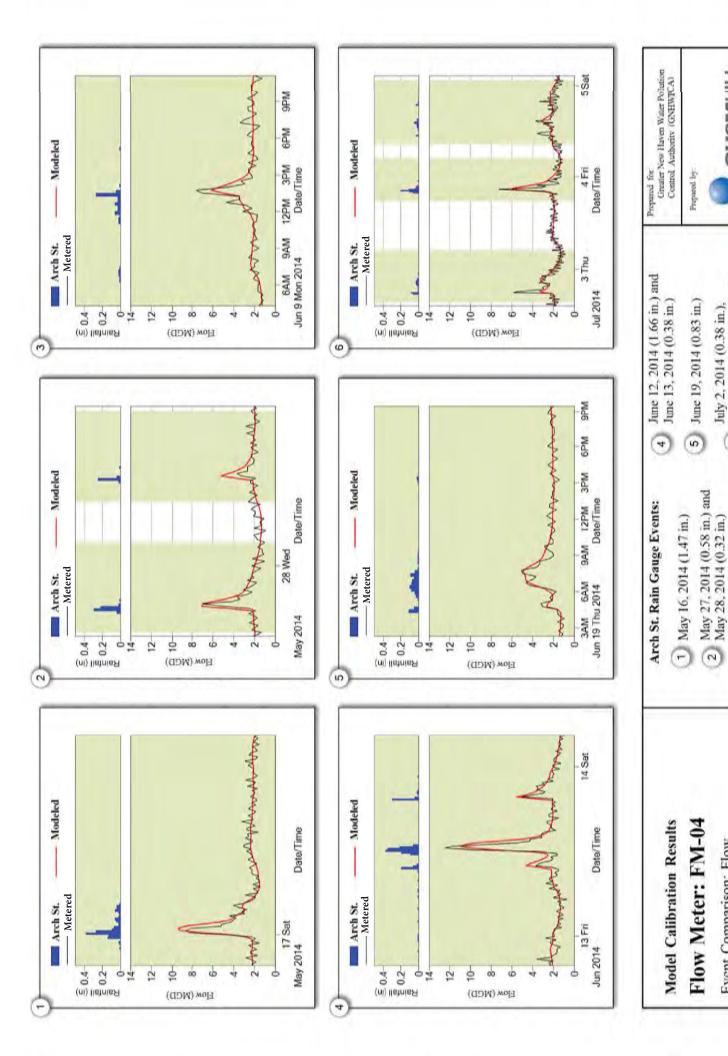
July 2, 2014 (0.38 in.), July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.) 9

Greater New Haven Water Pollution Control Authority (GNHWPCA) Prepared for







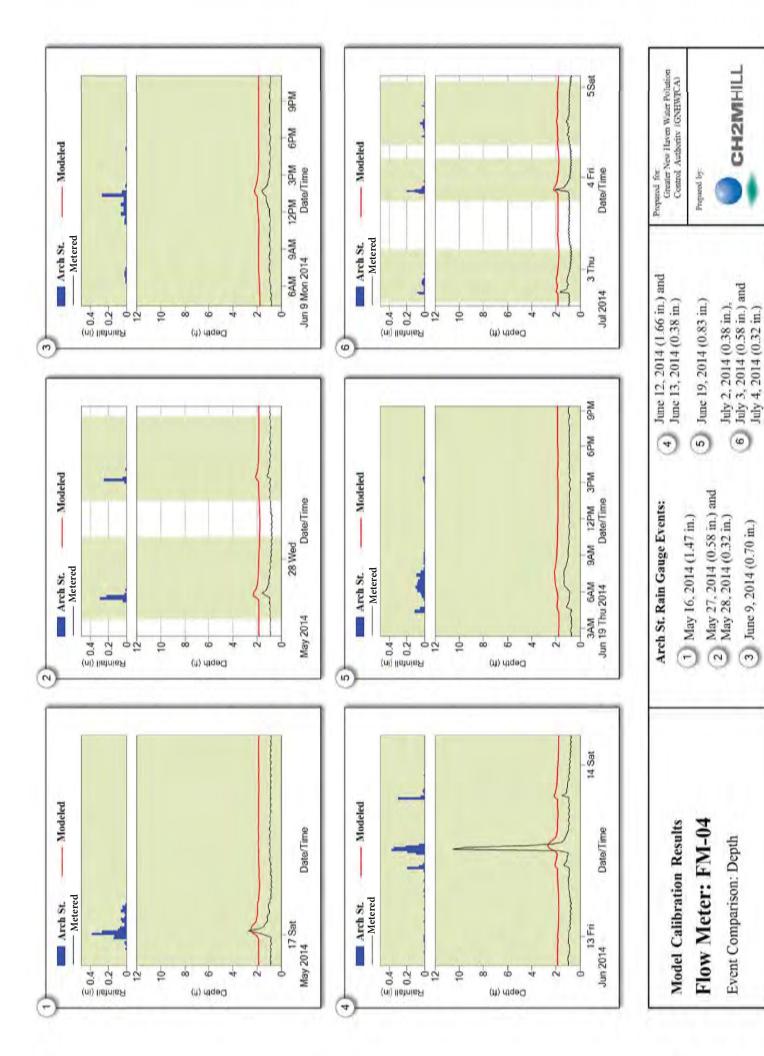


July 2, 2014 (0.38 in.), July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.)

9

June 9, 2014 (0.70 in.)

(0)

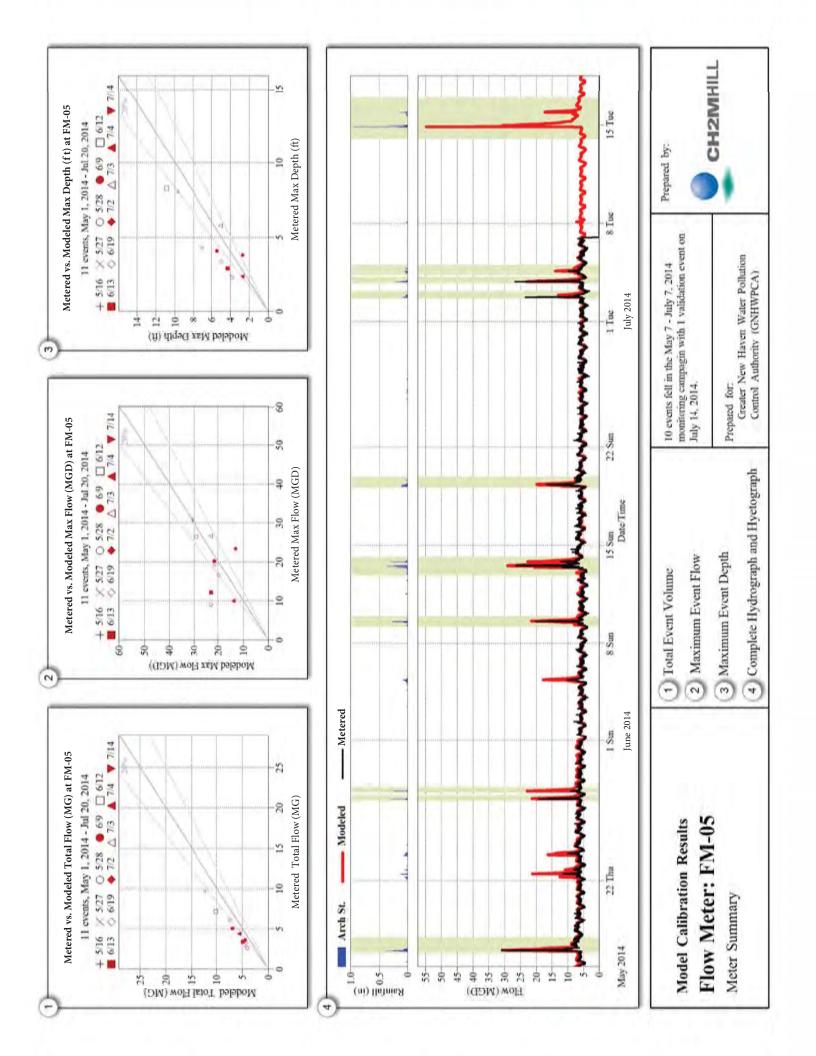


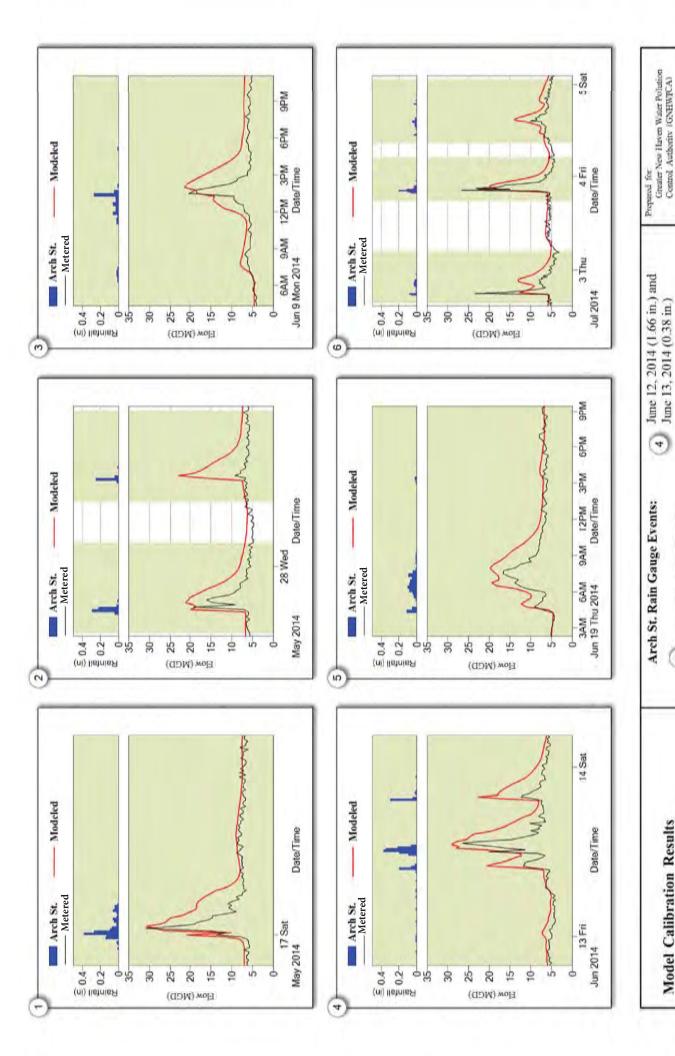
9

June 9, 2014 (0.70 in.)

(0)

Event Comparison: Depth





July 2, 2014 (0.38 in.), July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.)

9

June 19, 2014 (0.83 in.)

9

May 27, 2014 (0.58 in.) and May 28, 2014 (0.32 in.)

(2)

Flow Meter: FM-05

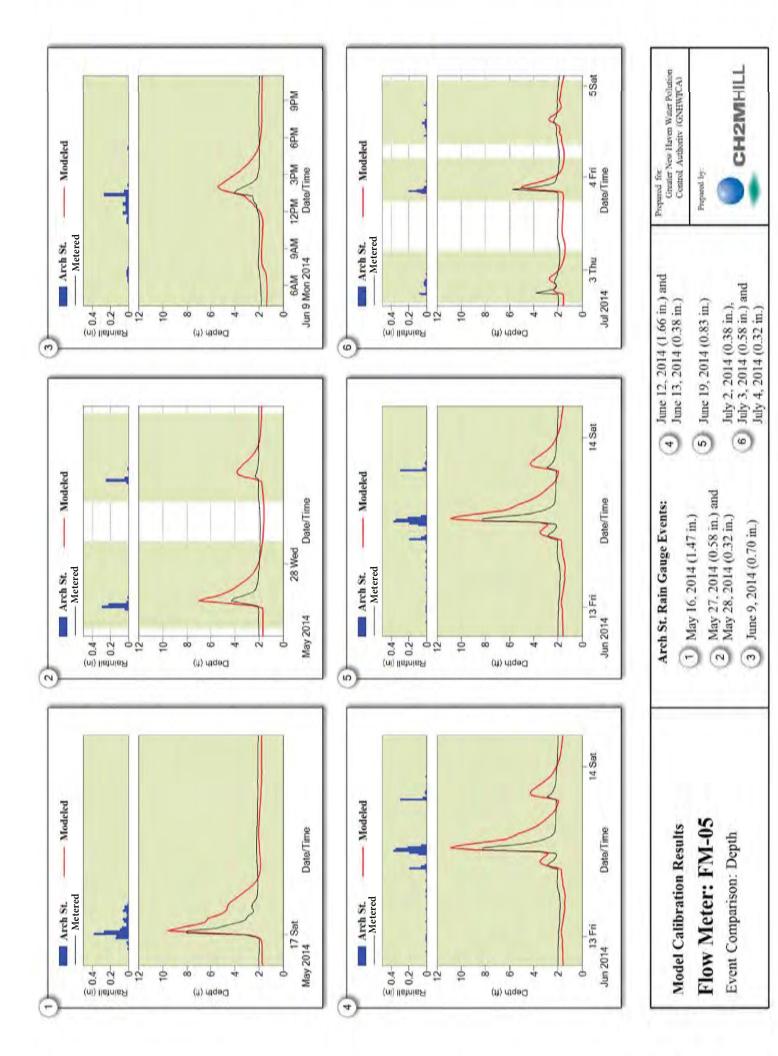
Event Comparison: Flow

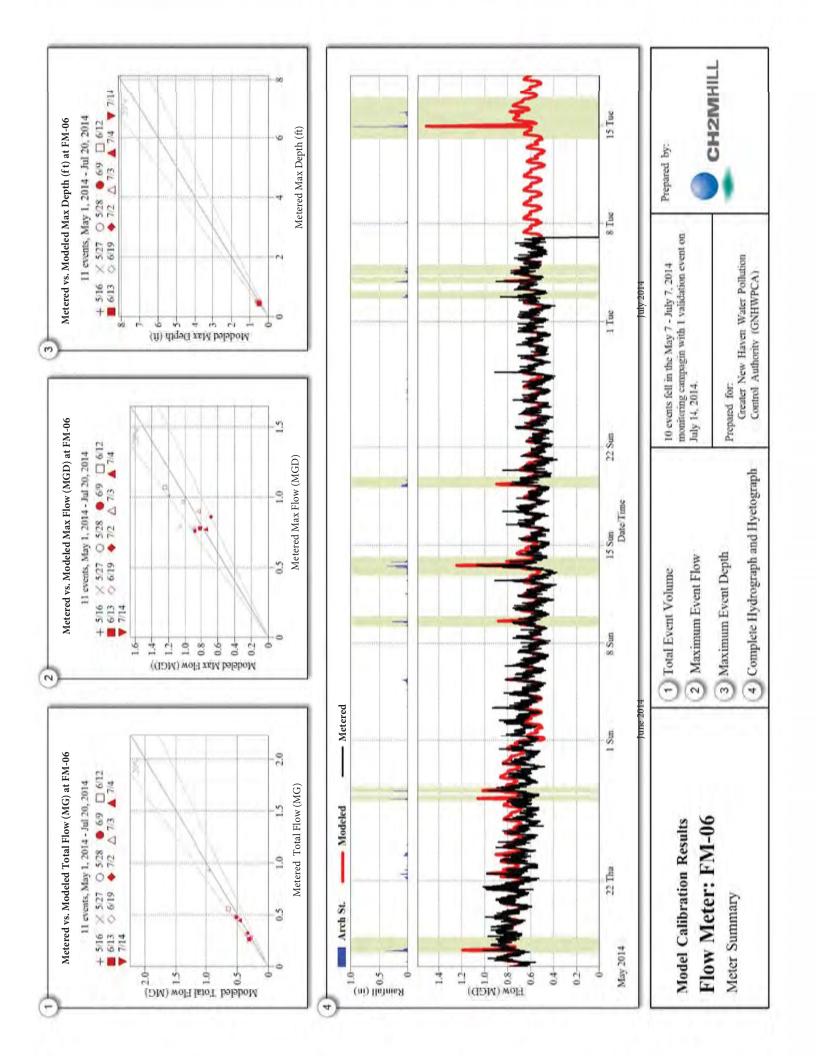
Model Calibration Results

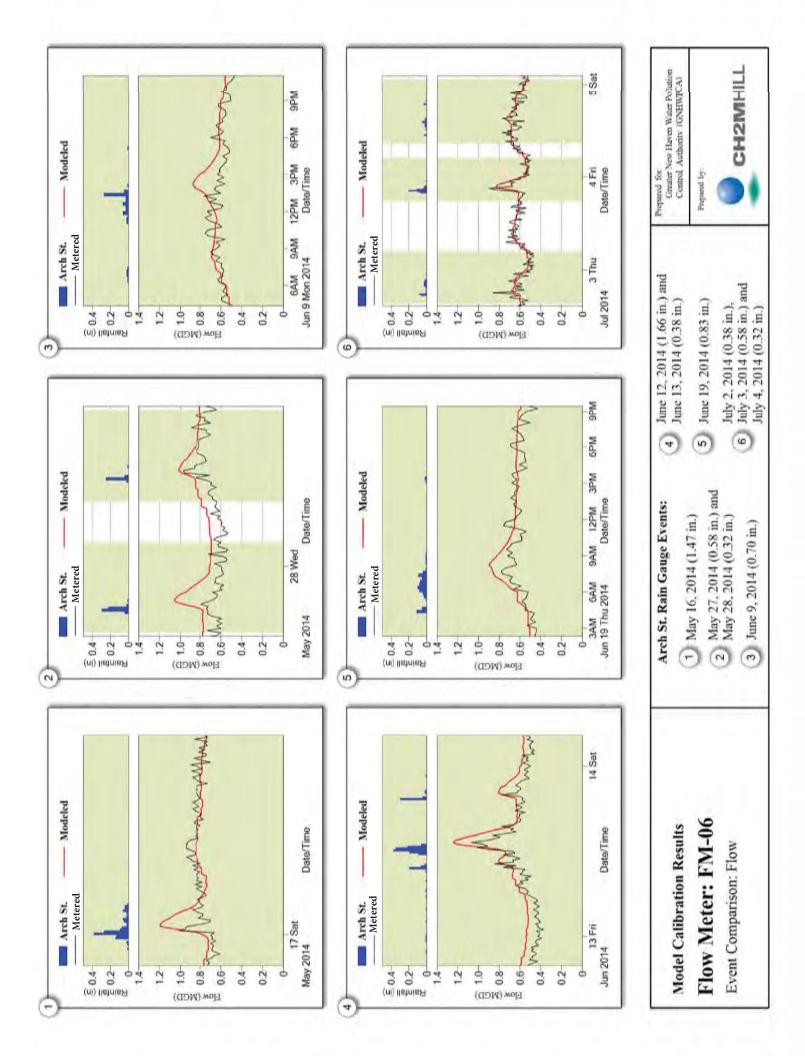
June 9, 2014 (0.70 in.)

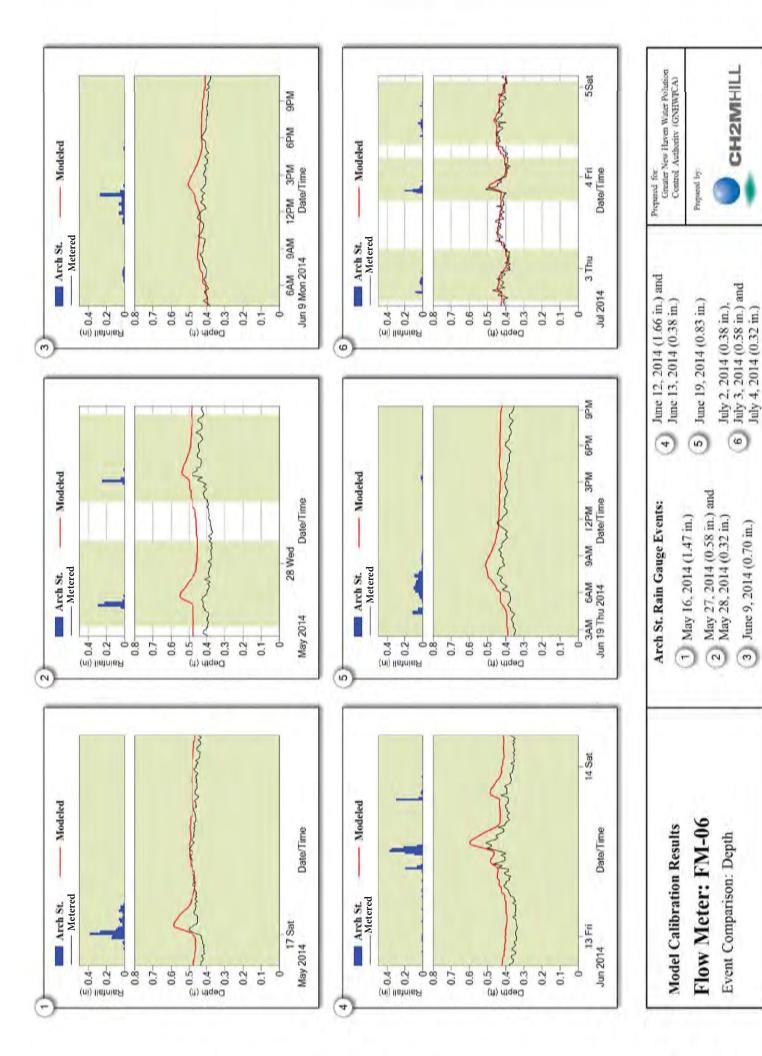
(0)

1 May 16, 2014 (1.47 in.)





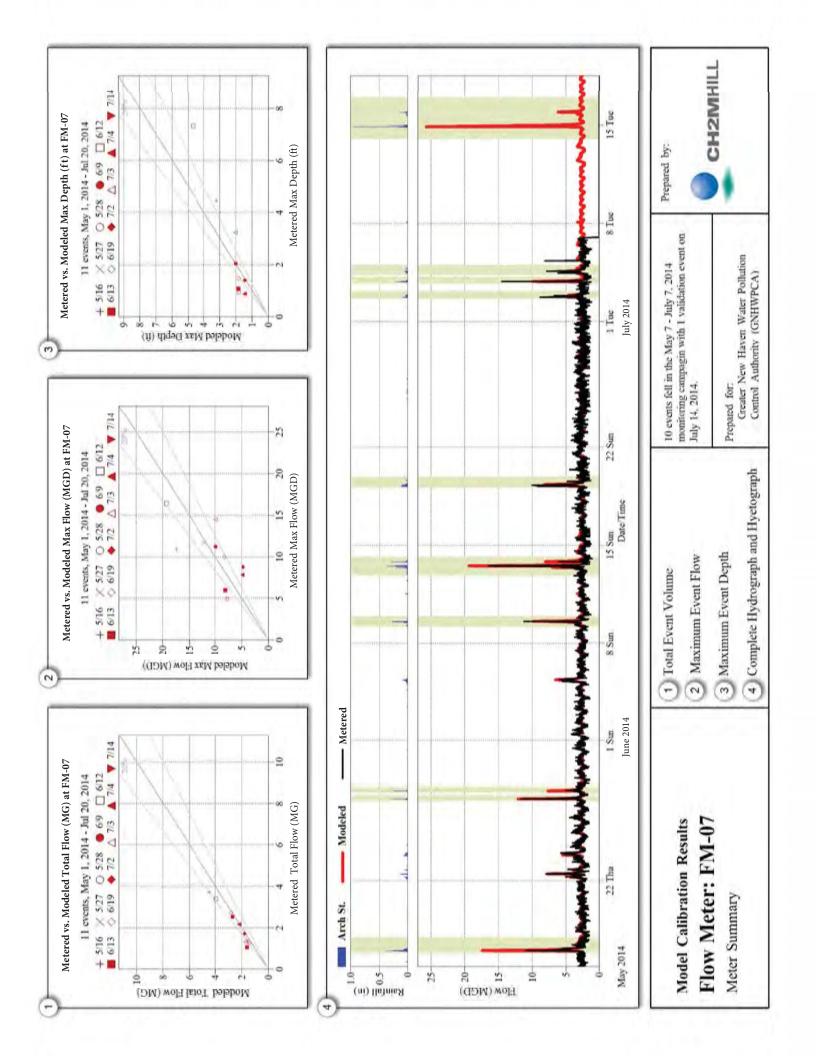


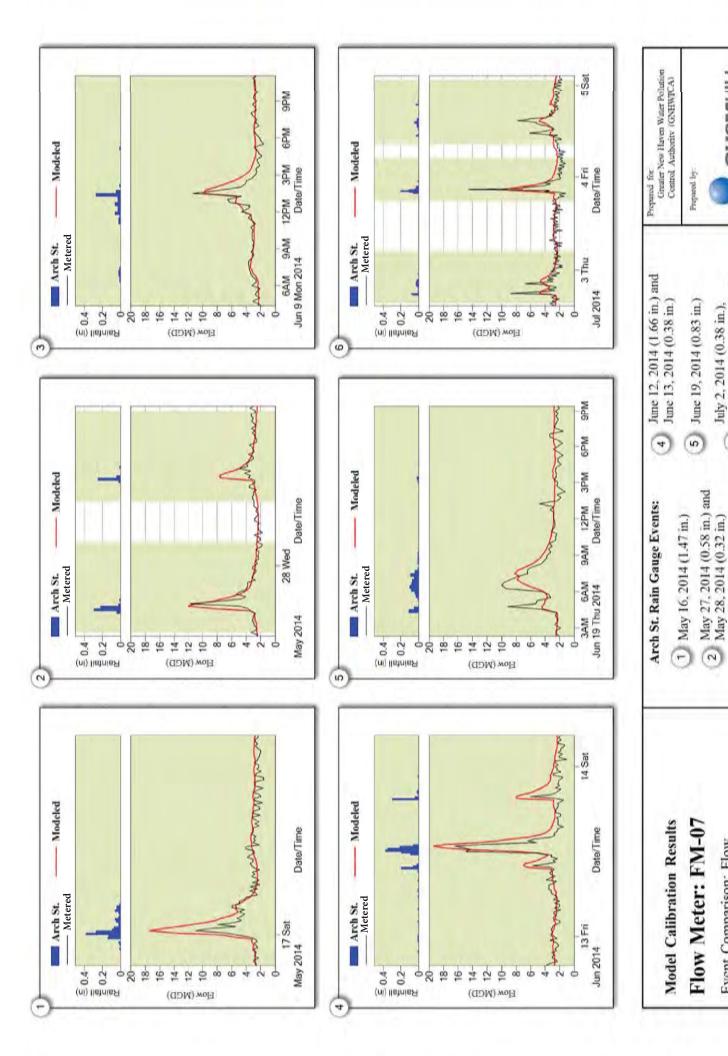


9

June 9, 2014 (0.70 in.)

0



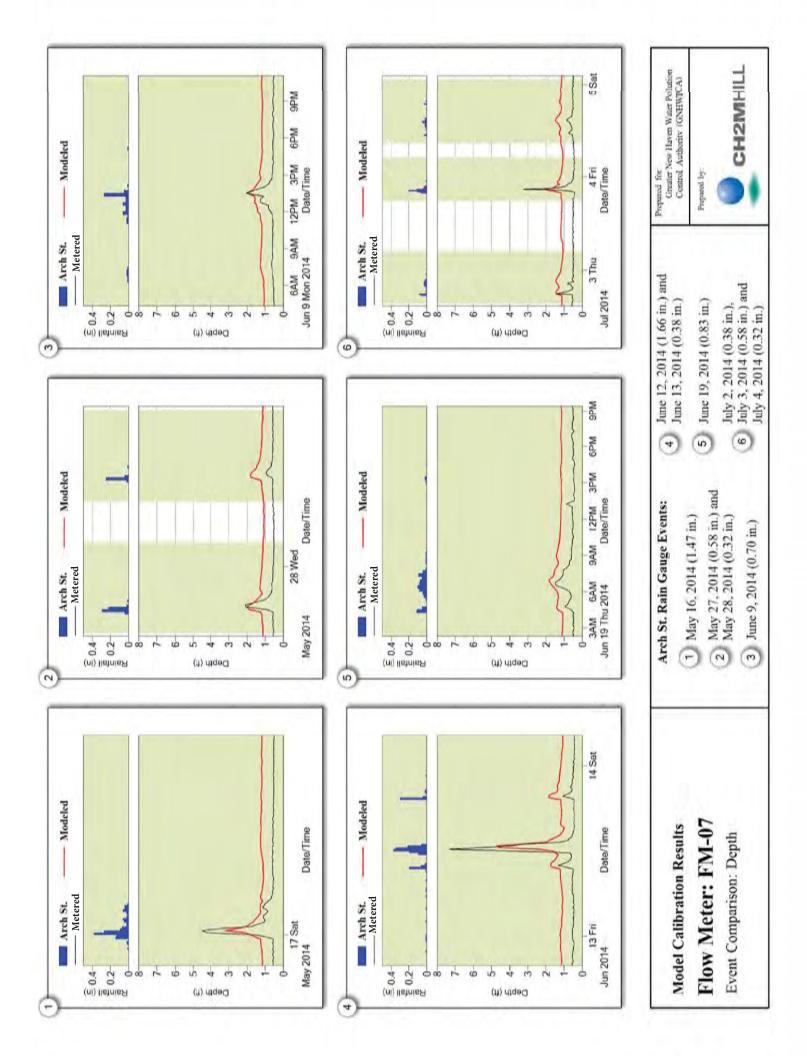


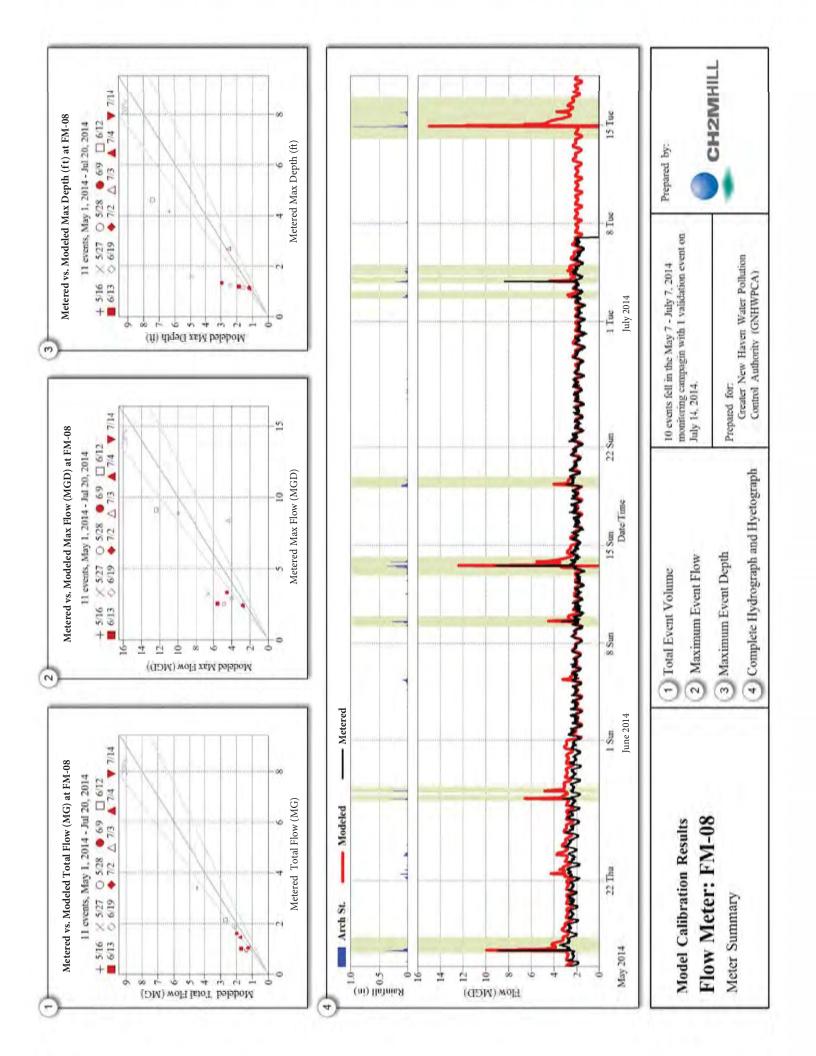
July 2, 2014 (0.38 in.), July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.)

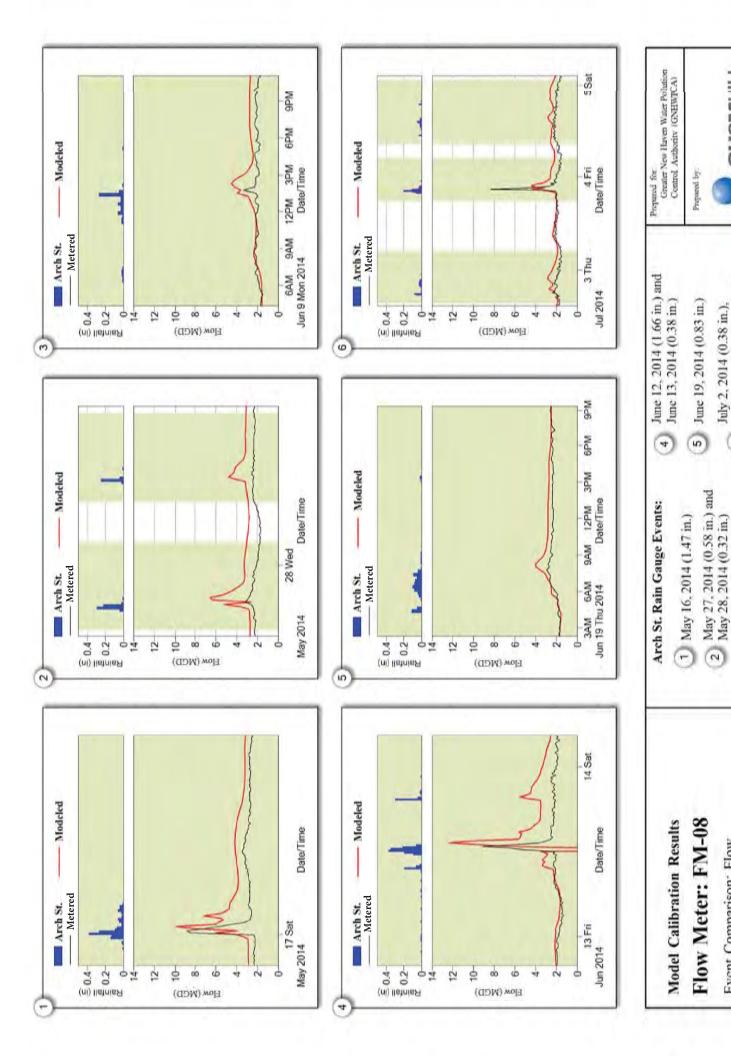
9

June 9, 2014 (0.70 in.)

(0)





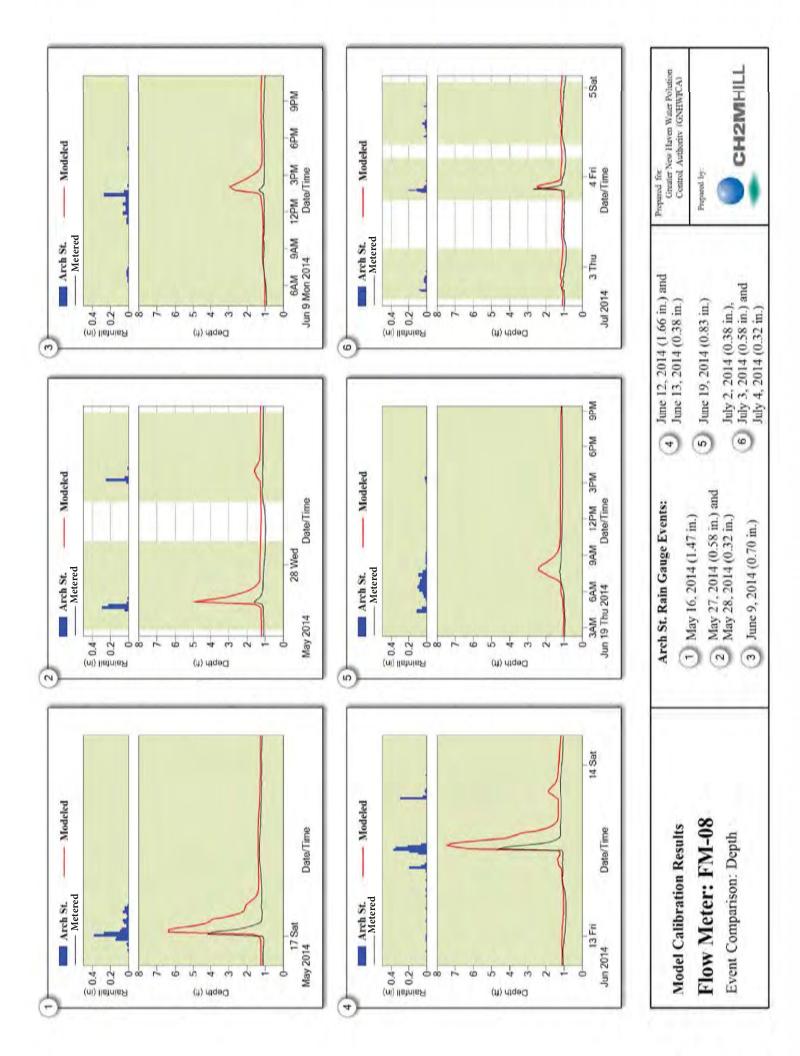


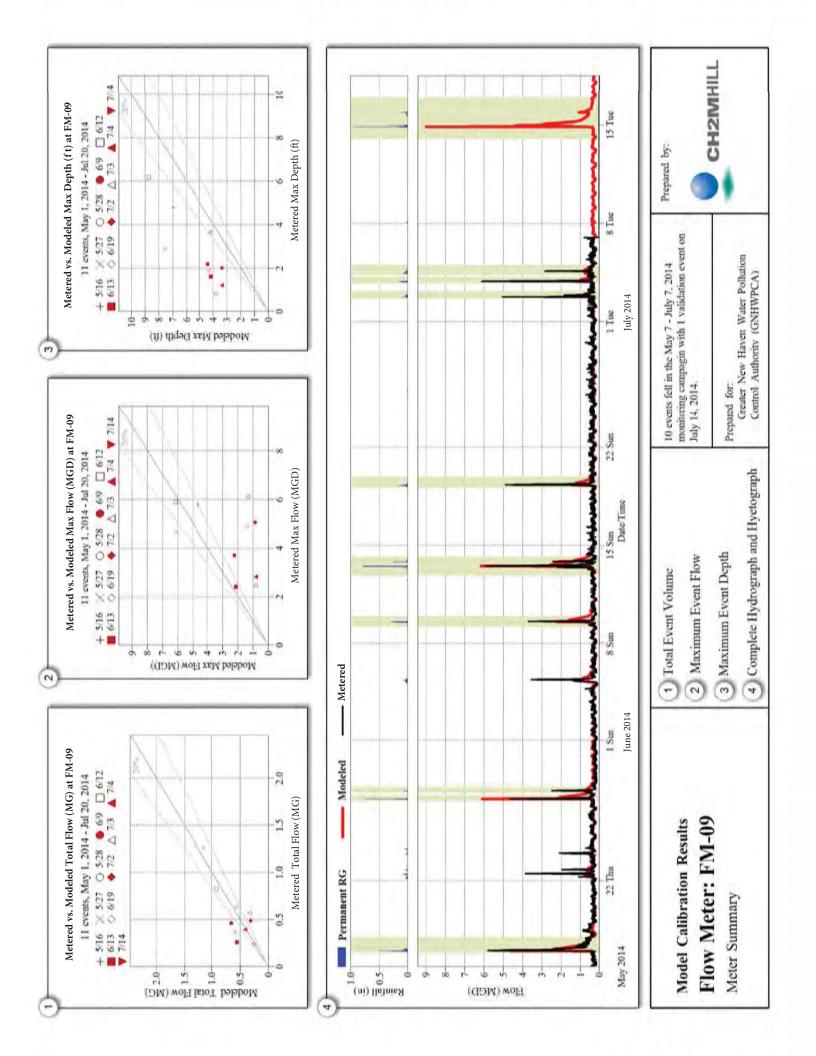
July 2, 2014 (0.38 in.), July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.)

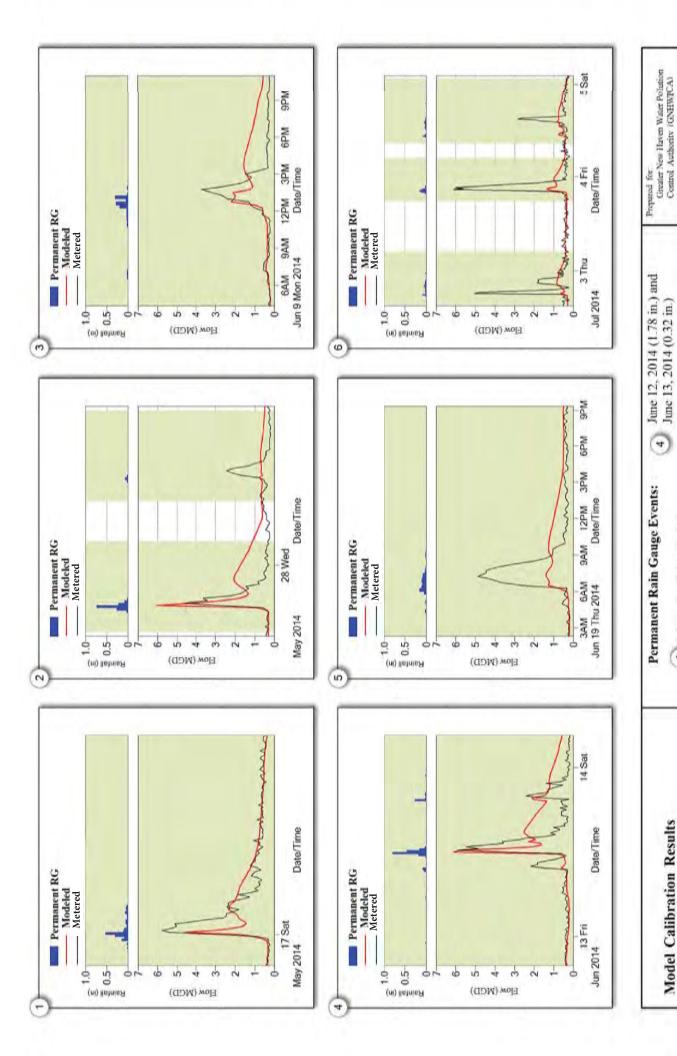
9

June 9, 2014 (0.70 in.)

(10)







July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.)

60

June 19, 2014 (0.74 in.)

9

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.)

(2)

Flow Meter: FM-09

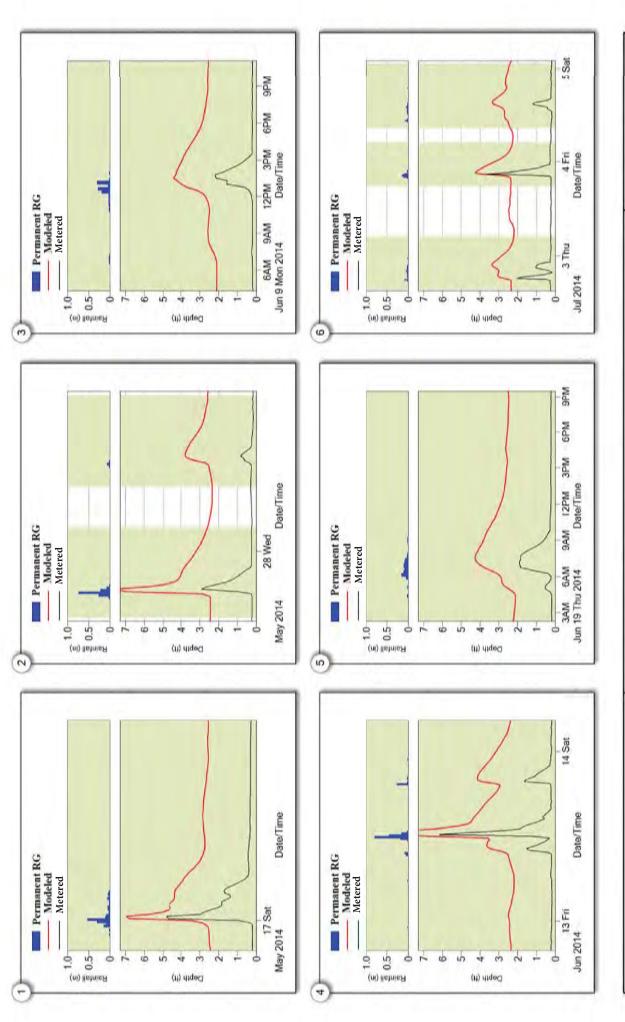
Event Comparison: Flow

June 9, 2014 (1.02 in.)

6

May 16, 2014 (1.61 in.)

F



May 16, 2014 (1.61 in.) F

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)

June 9, 2014 (1.02 in.)

June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.) 4

July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.)

Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)



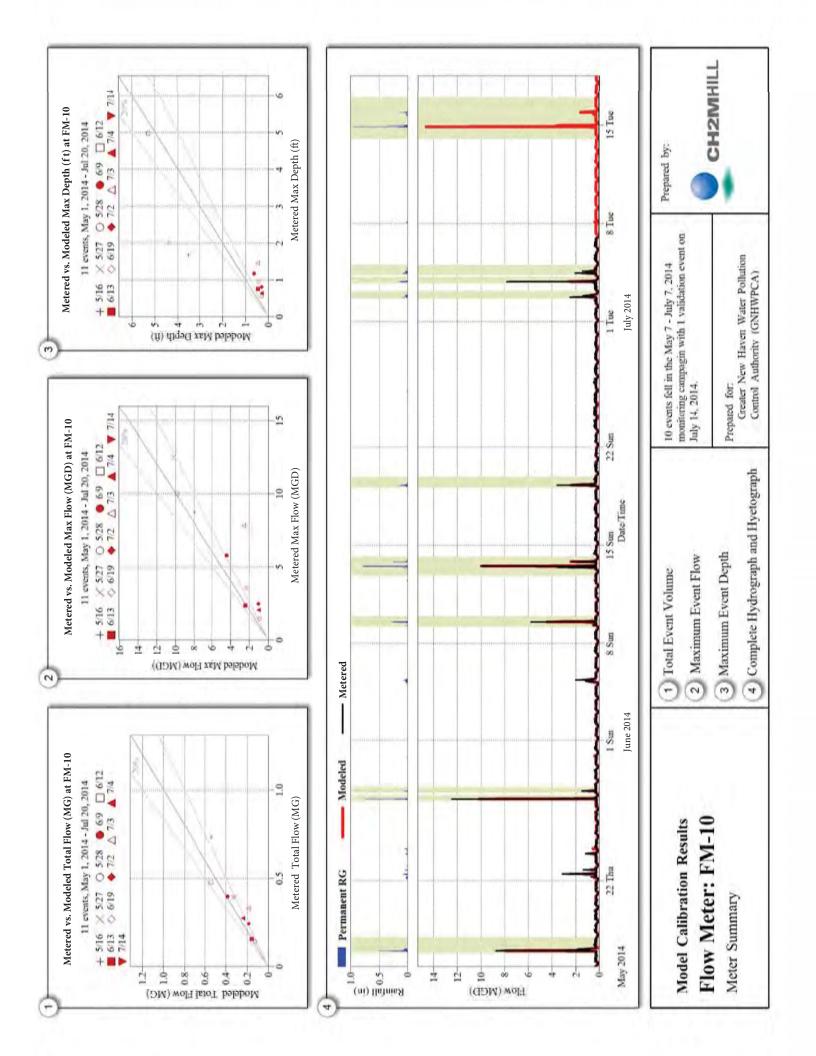


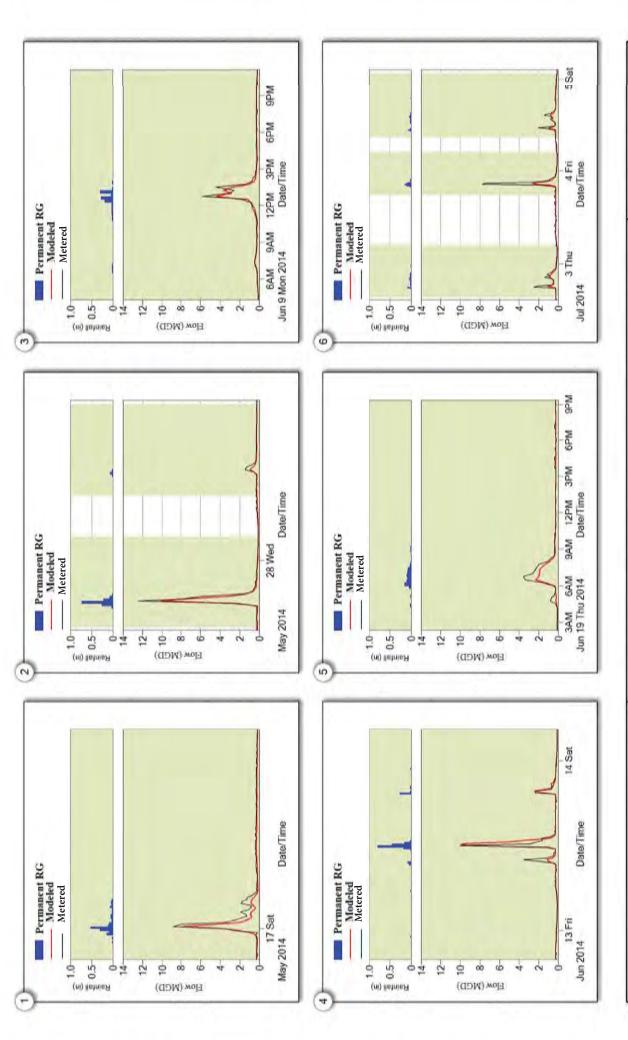
Event Comparison: Depth

Flow Meter: FM-09 Model Calibration Results

9

June 19, 2014 (0.74 in.) 2 60





May 16, 2014 (1.61 in.) Ŧ

Model Calibration Results

Flow Meter: FM-10

Event Comparison: Flow

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)

June 9, 2014 (1.02 in.) 9

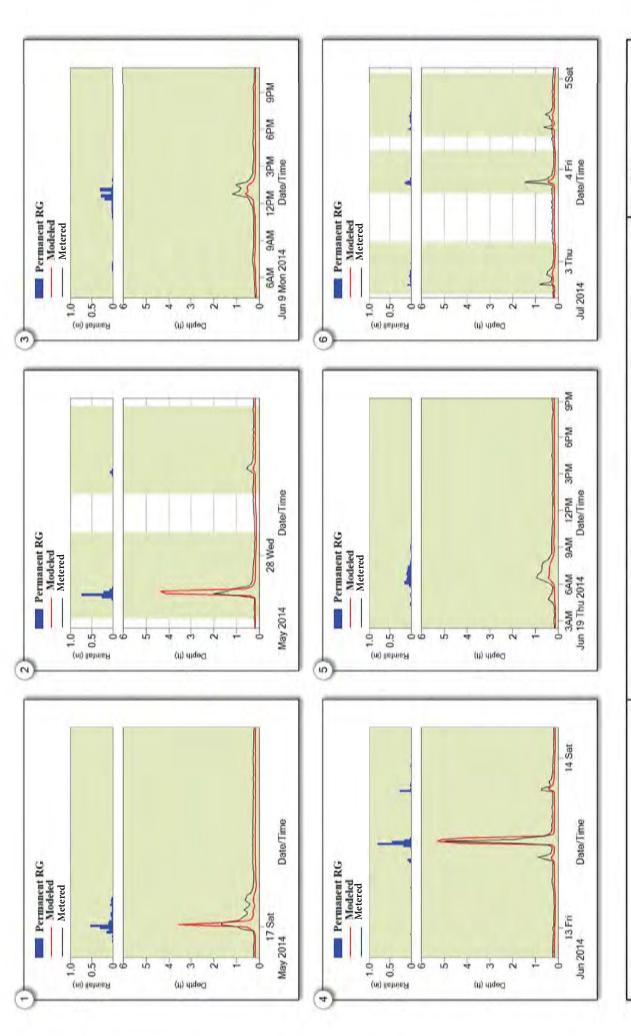
June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.) 4

June 19, 2014 (0.74 in.) 9

July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 60

Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)





1) May 16, 2014 (1.61 in.)

Model Calibration Results

Flow Meter: FM-10

Event Comparison: Depth

2) May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.)

3 June 9, 2014 (1.02 in.)

4 June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.)

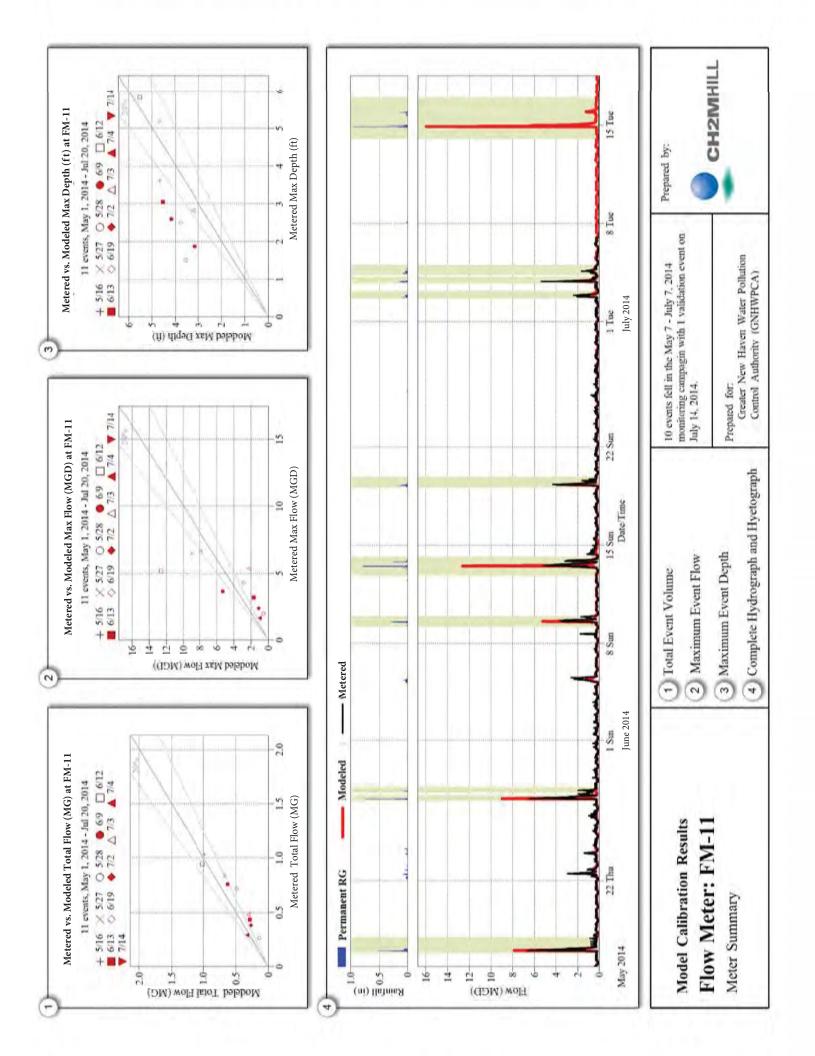
5 June 19, 2014 (0.74 in.)

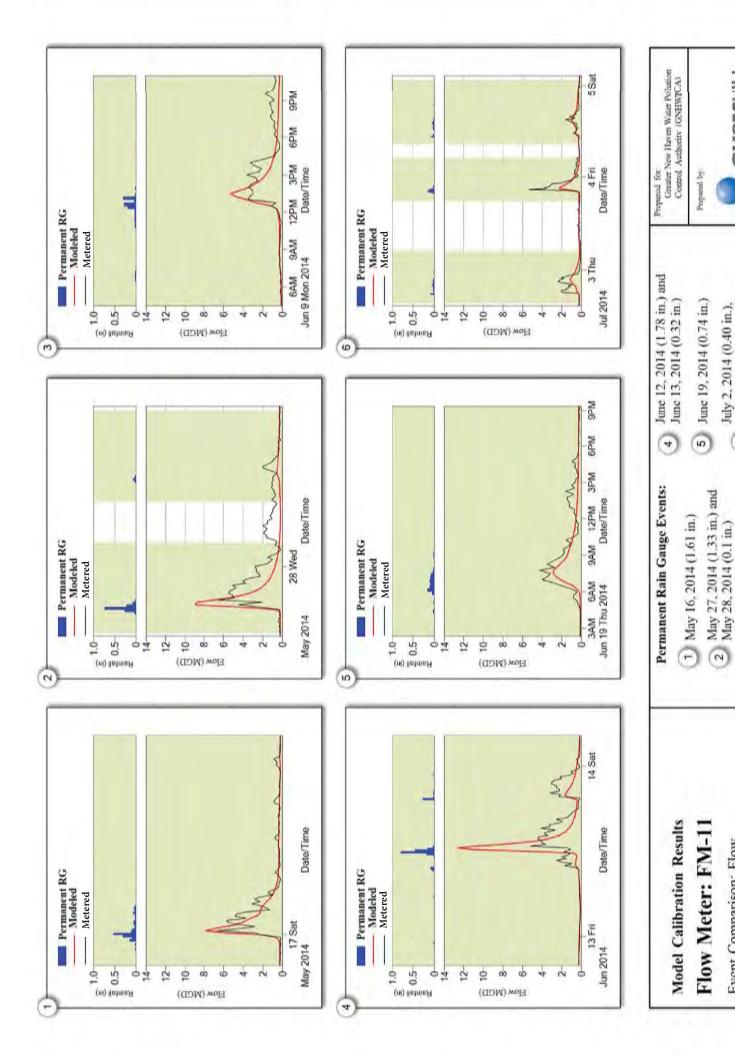
fuly 2, 2014 (0.40 in.), 6 July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.)

Prepared for Greater New Haven Water Polistion Control Authority (GNHWPCA)







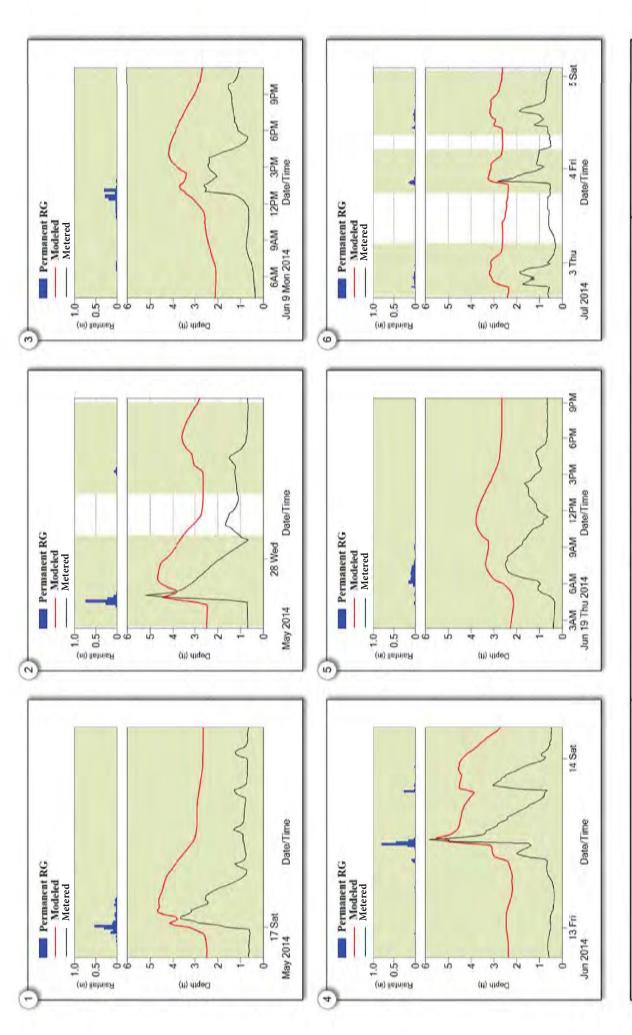


July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.)

60

June 9, 2014 (1.02 in.)

9



1 May 16, 2014 (1.61 in.)

Model Calibration Results

Flow Meter: FM-11

Event Comparison: Depth

2) May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.)

3 June 9, 2014 (1.02 in.)

4 June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.)

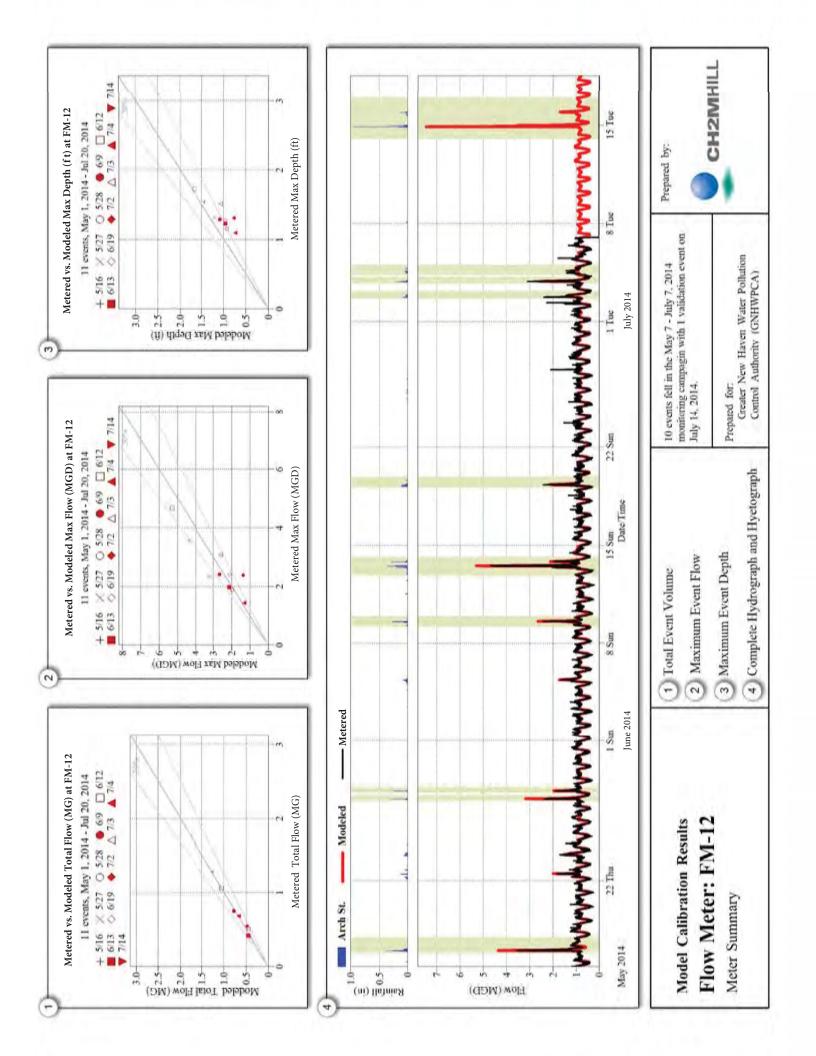
5 June 19, 2014 (0.74 in.)

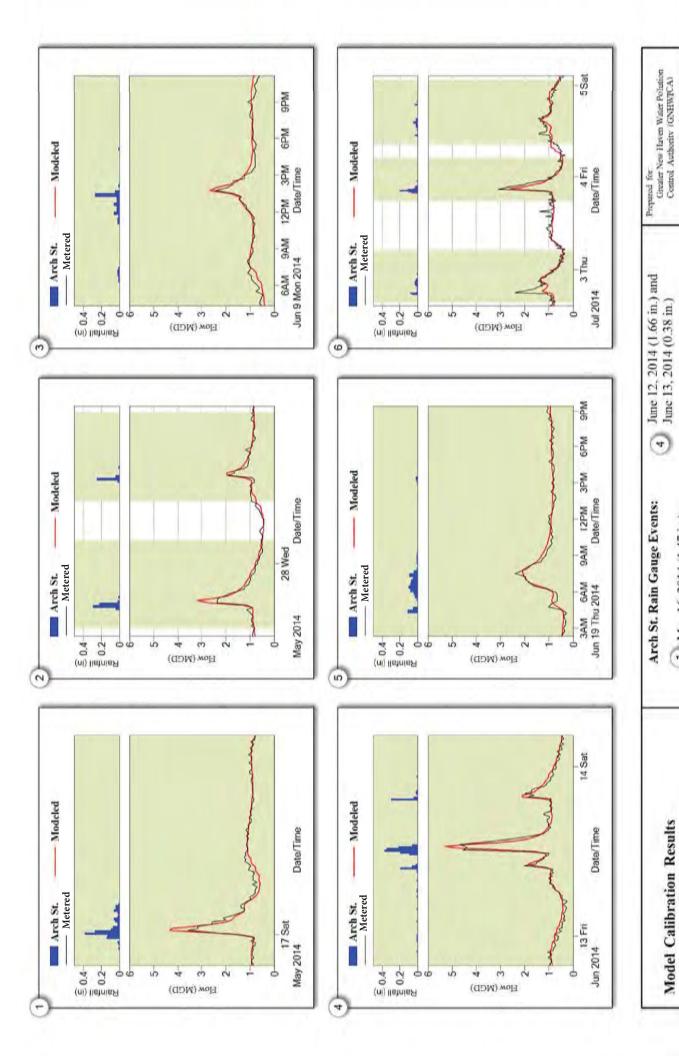
July 2, 2014 (0.40 in.), 6 July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.)

Prepared for Greater New Haven Water Pollution Centrol Authority (GNHWPCA)



CH2MHILL





July 2, 2014 (0.38 in.), July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.)

9

June 19, 2014 (0.83 in.)

9

May 27, 2014 (0.58 in.) and May 28, 2014 (0.32 in.)

(2)

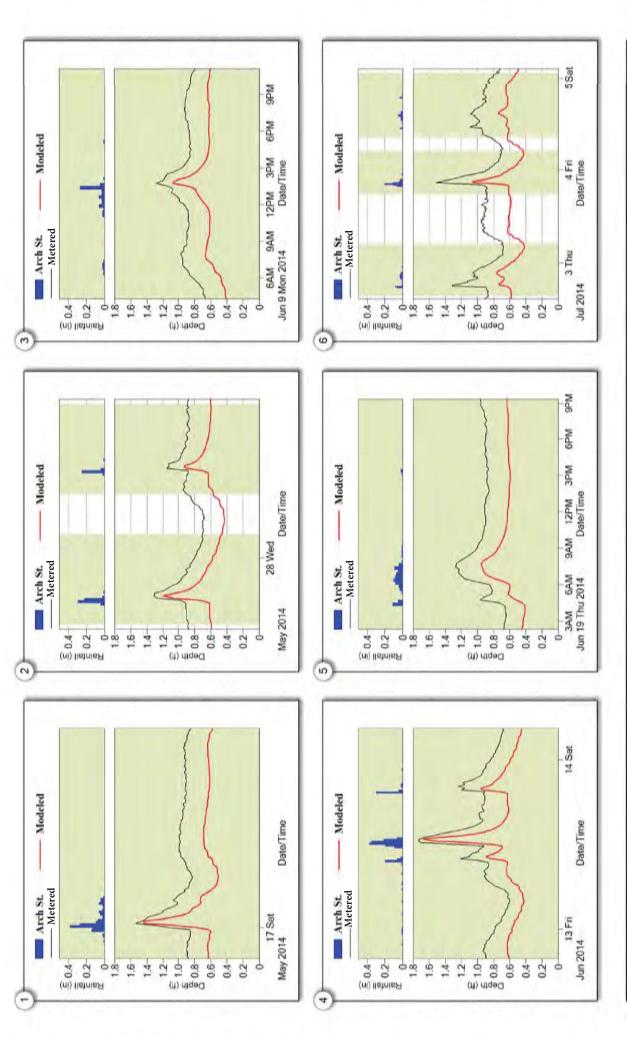
Flow Meter: FM-12

Event Comparison: Flow

June 9, 2014 (0.70 in.)

6

1 May 16, 2014 (1.47 in.)



Arch St. Rain Gauge Events:

- 1 May 16, 2014 (1.47 in.)
- May 27, 2014 (0.58 in.) and May 28, 2014 (0.32 in.) (2)

Flow Meter: FM-12

Event Comparison: Depth

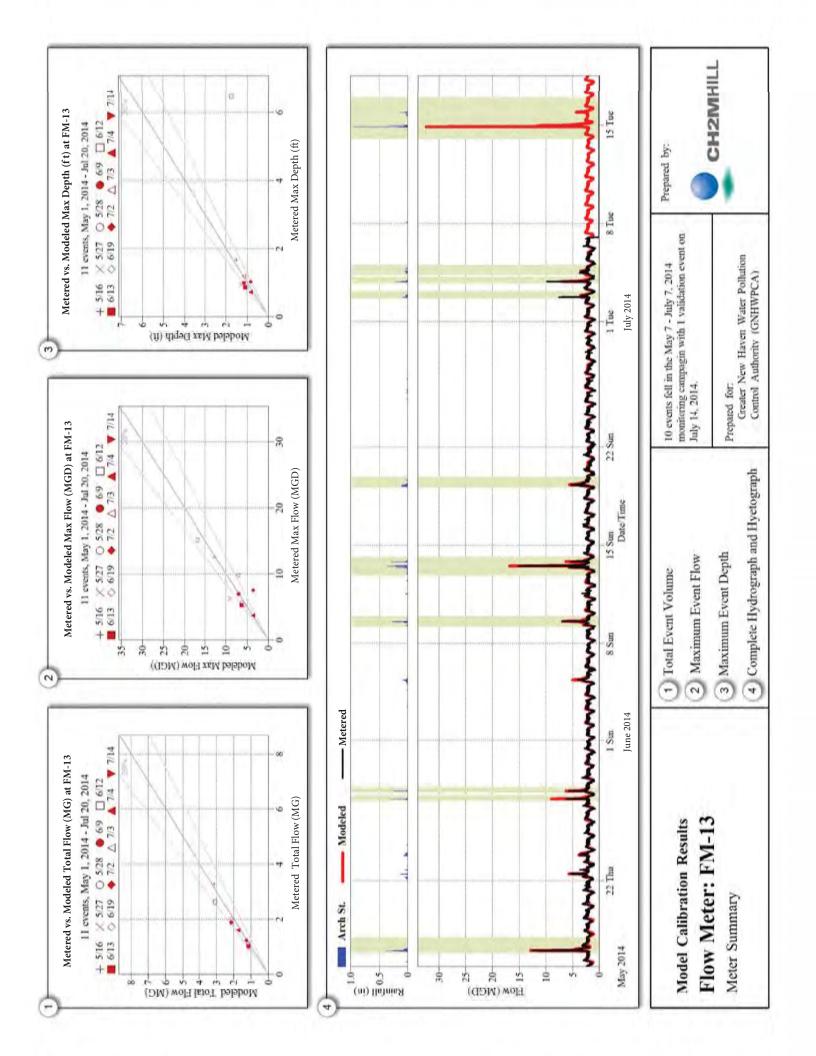
Model Calibration Results

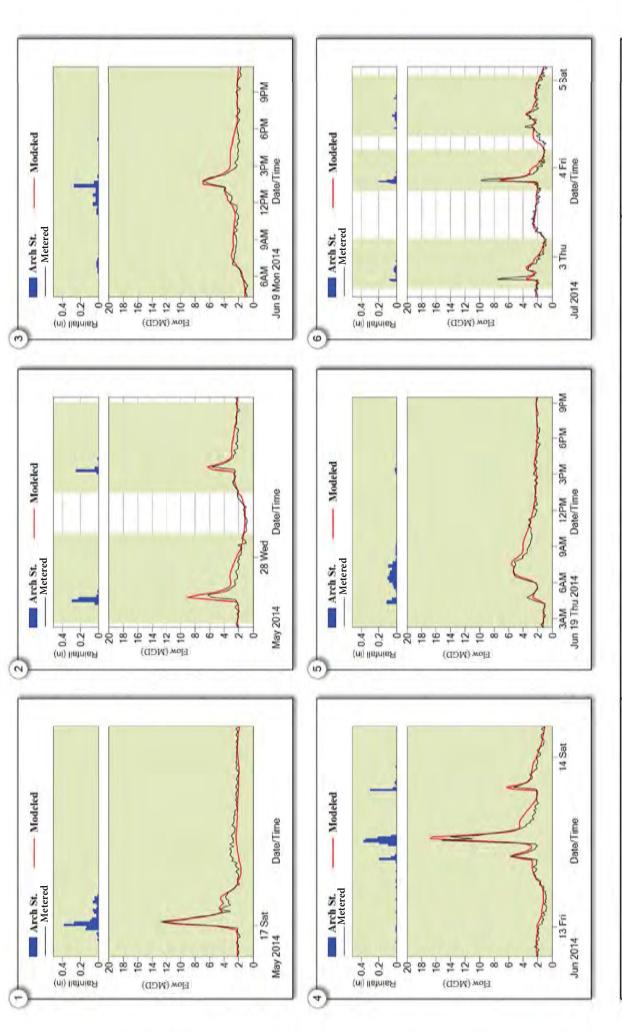
- June 9, 2014 (0.70 in.) 6
- June 12, 2014 (1.66 in.) and June 13, 2014 (0.38 in.) 7
- June 19, 2014 (0.83 in.) 2
- July 2, 2014 (0.38 in.), July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.) 9
- Greater New Haven Water Pollution Control Authority (GNHWPCA) Prepared for











Arch St. Rain Gauge Events:

1) May 16, 2014 (1.47 in.)

Flow Meter: FM-13

Event Comparison: Flow

Model Calibration Results

May 27, 2014 (0.58 in.) and May 28, 2014 (0.32 in.) (2)

June 9, 2014 (0.70 in.) 6

June 12, 2014 (1.66 in.) and June 13, 2014 (0.38 in.) 7

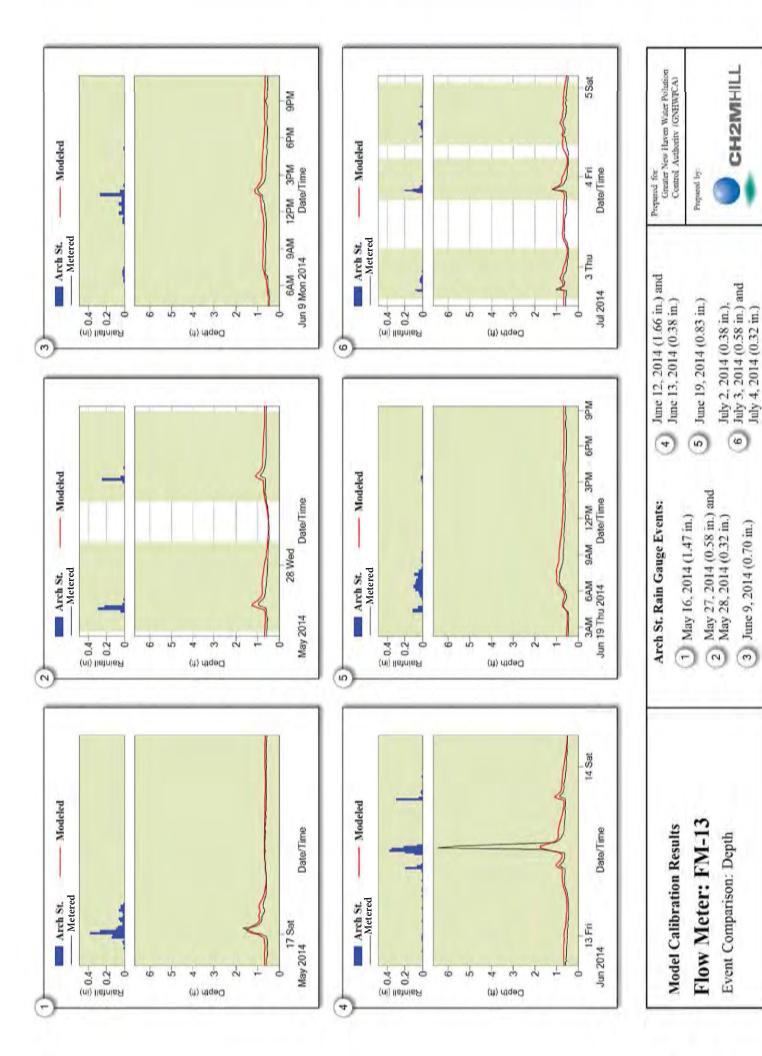
June 19, 2014 (0.83 in.) 2

July 2, 2014 (0.38 in.), July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.) 60

Greater New Haven Water Polistion Control Authority (GNHWPCA) Prepared for

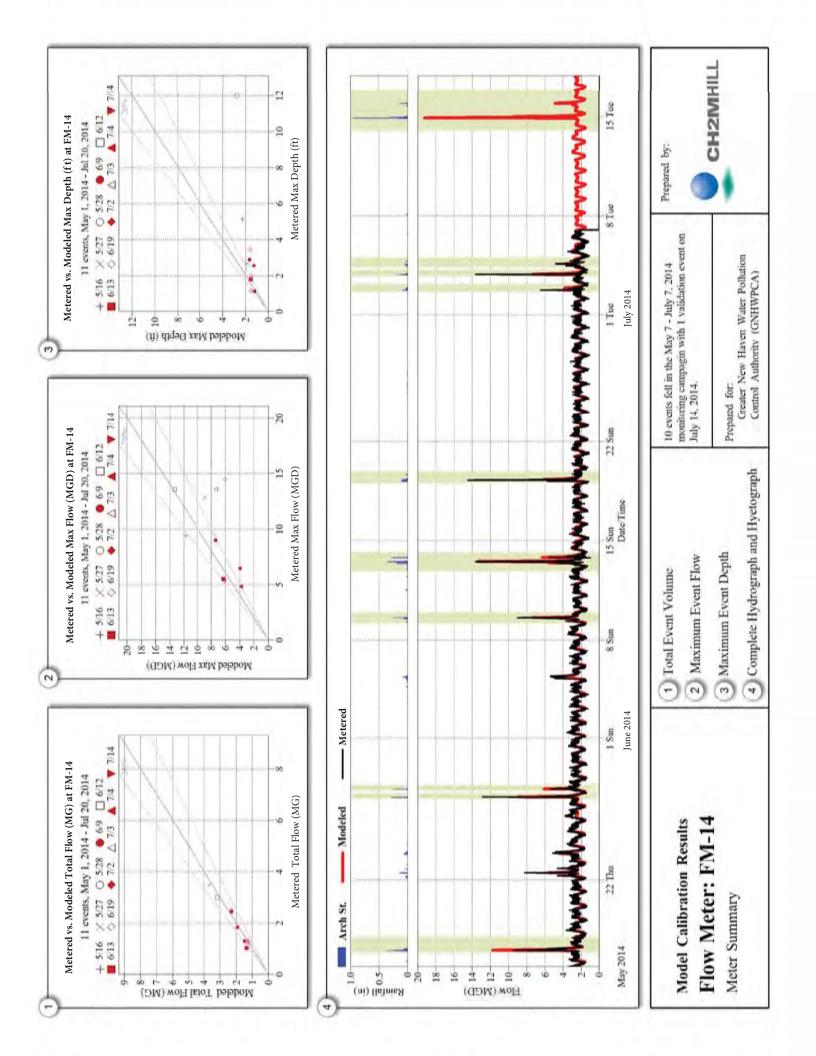


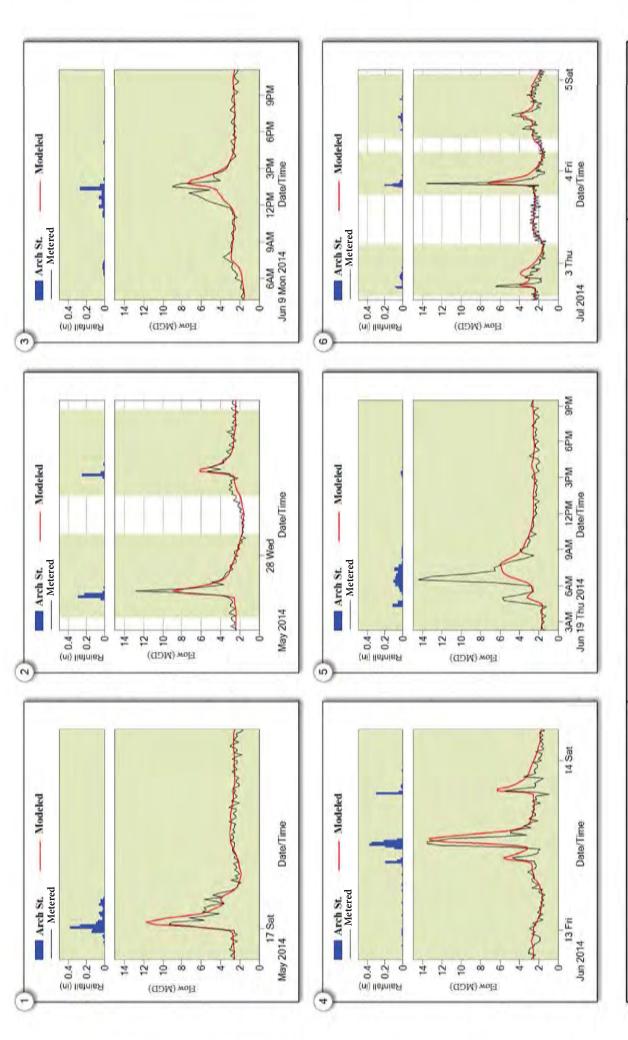




June 9, 2014 (0.70 in.)

6





Arch St. Rain Gauge Events:

- 1 May 16, 2014 (1.47 in.)
- 2) May 27, 2014 (0.58 in.) and May 28, 2014 (0.32 in.)

Flow Meter: FM-14

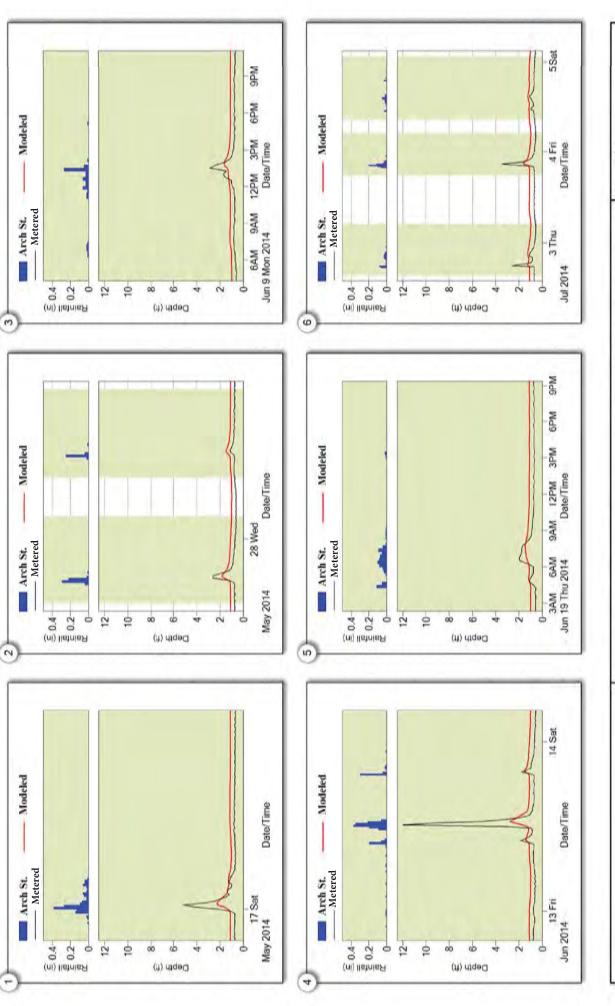
Event Comparison: Flow

Model Calibration Results

- 3 June 9, 2014 (0.70 in.)
- 4 June 12, 2014 (1.66 in.) and June 13, 2014 (0.38 in.)
- 5 June 19, 2014 (0.83 in.)
- fuly 2, 2014 (0.38 in.), 6 July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.)
- Propared for Greater New Haven Water Polation Control, Authority (GNHWPCA)







Arch St. Rain Gauge Events:

1) May 16, 2014 (1.47 in.)

Flow Meter: FM-14

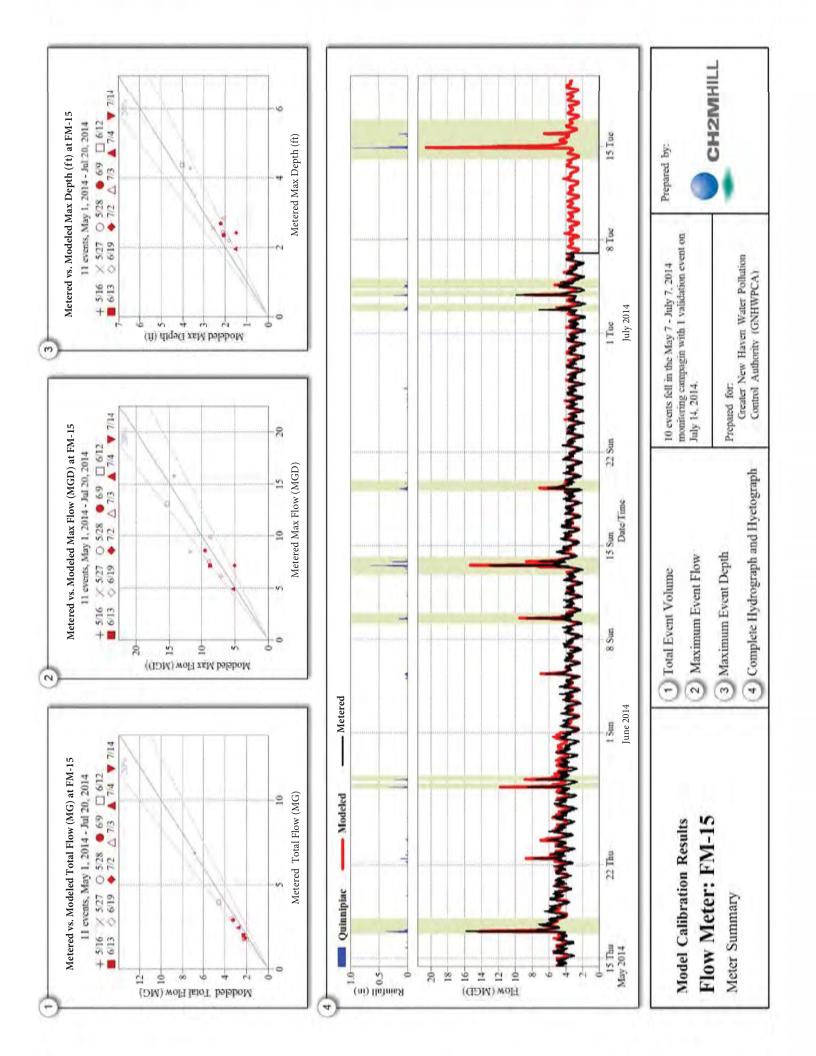
Event Comparison: Depth

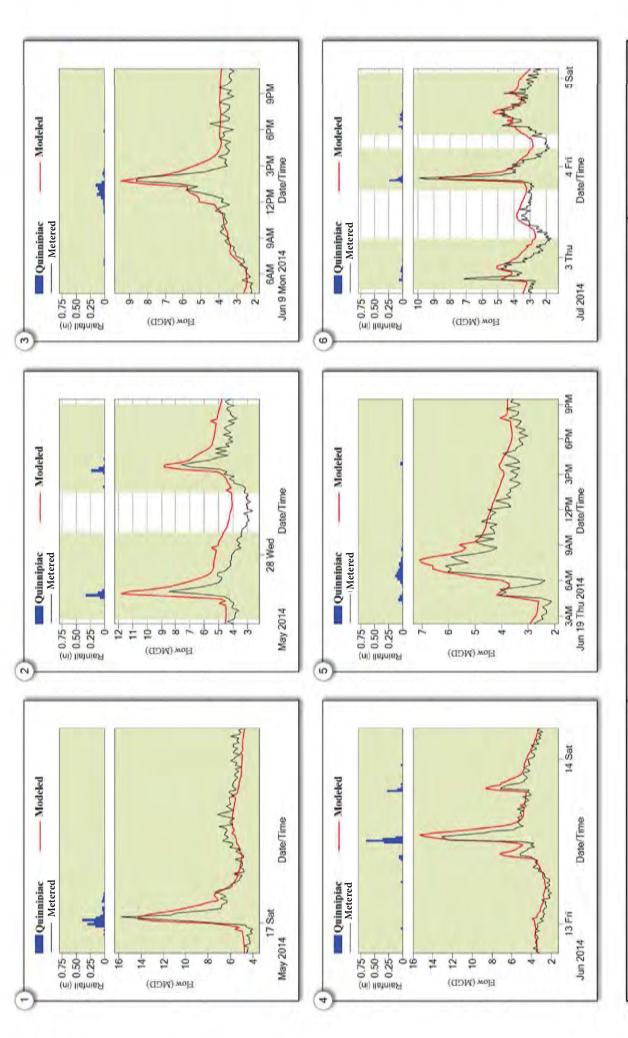
Model Calibration Results

- 2) May 27, 2014 (0.58 in.) and May 28, 2014 (0.32 in.)
 - 3 June 9, 2014 (0.70 in.)
- 4 June 12, 2014 (1.66 in.) and June 13, 2014 (0.38 in.)
- 5 June 19, 2014 (0.83 in.)
- Fuly 2, 2014 (0.38 in.), 6 July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.)









May 16, 2014 (1.51 in.) Ē

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.) (2)

Flow Meter: FM-15

Event Comparison: Flow

Model Calibration Results

6

June 9, 2014 (0.74 in.)

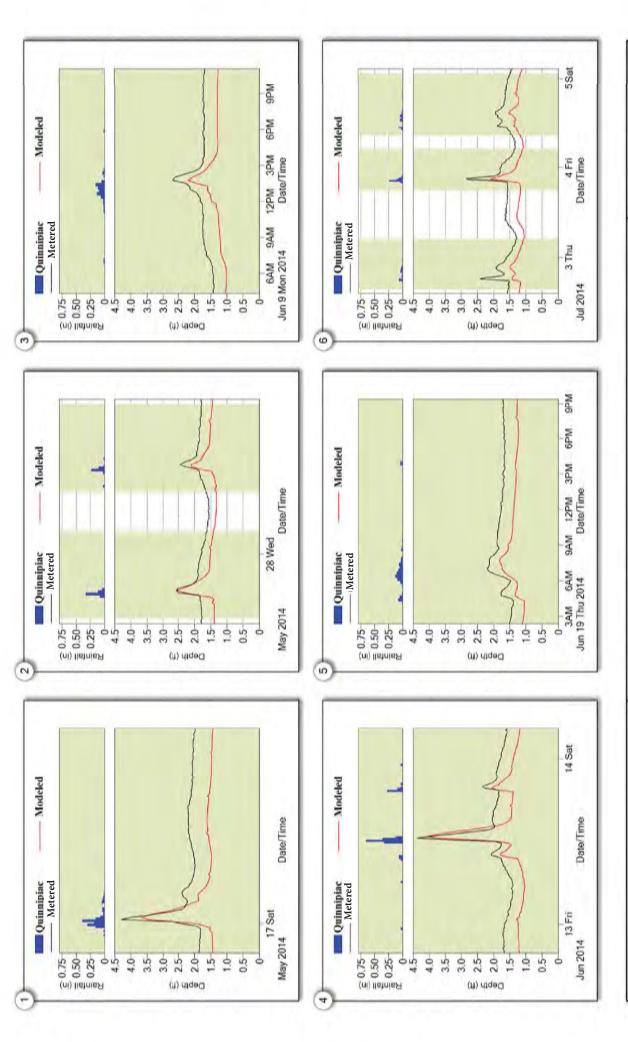
June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.) 4

June 19, 2014 (0.78 in.) 2

July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.) 9







1) May 16, 2014 (1.51 in.)

2) May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

Flow Meter: FM-15

Event Comparison: Depth

Model Calibration Results

3 June 9, 2014 (0.74 in.)

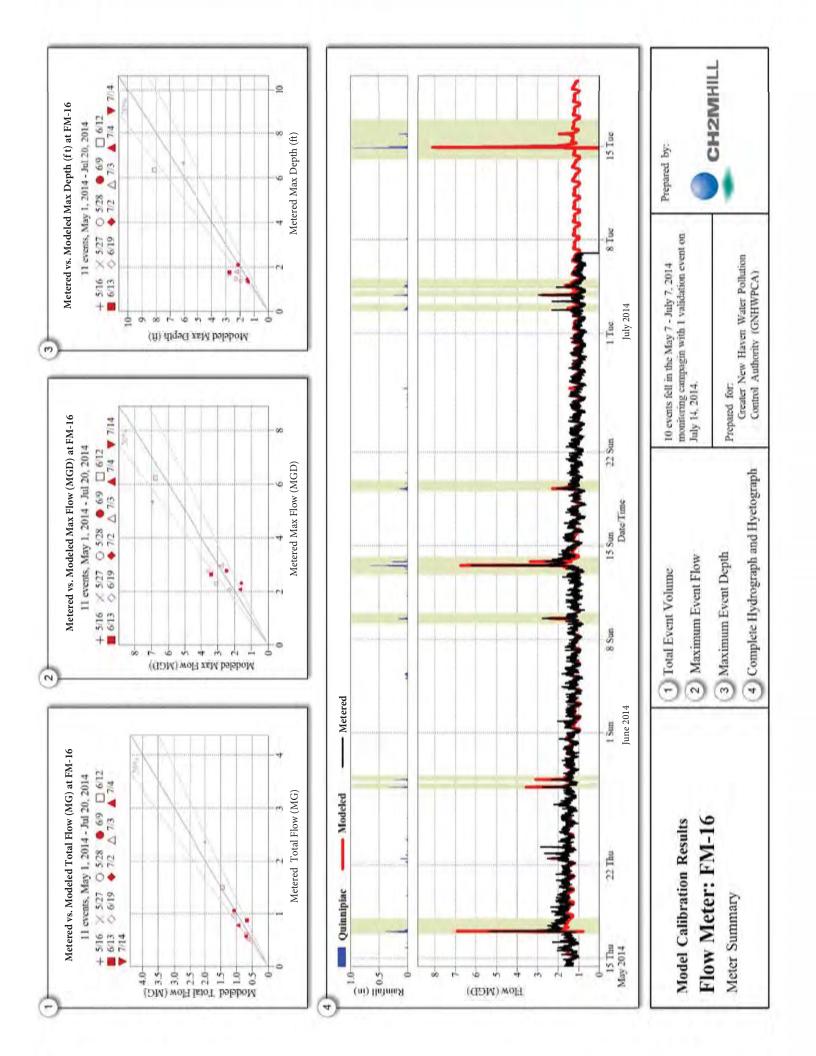
4 June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.)

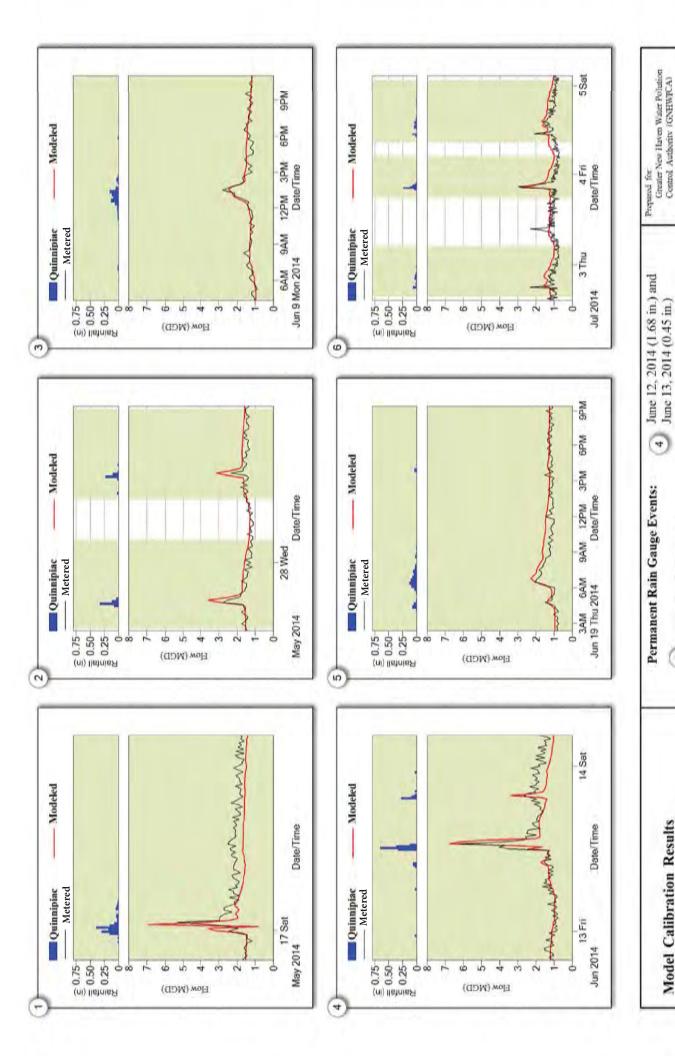
5 June 19, 2014 (0.78 in.)

Fuly 2, 2014 (0.38 in.), E July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)









July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)

60

June 19, 2014 (0.78 in.)

2

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

(2)

Flow Meter: FM-16

Event Comparison: Flow

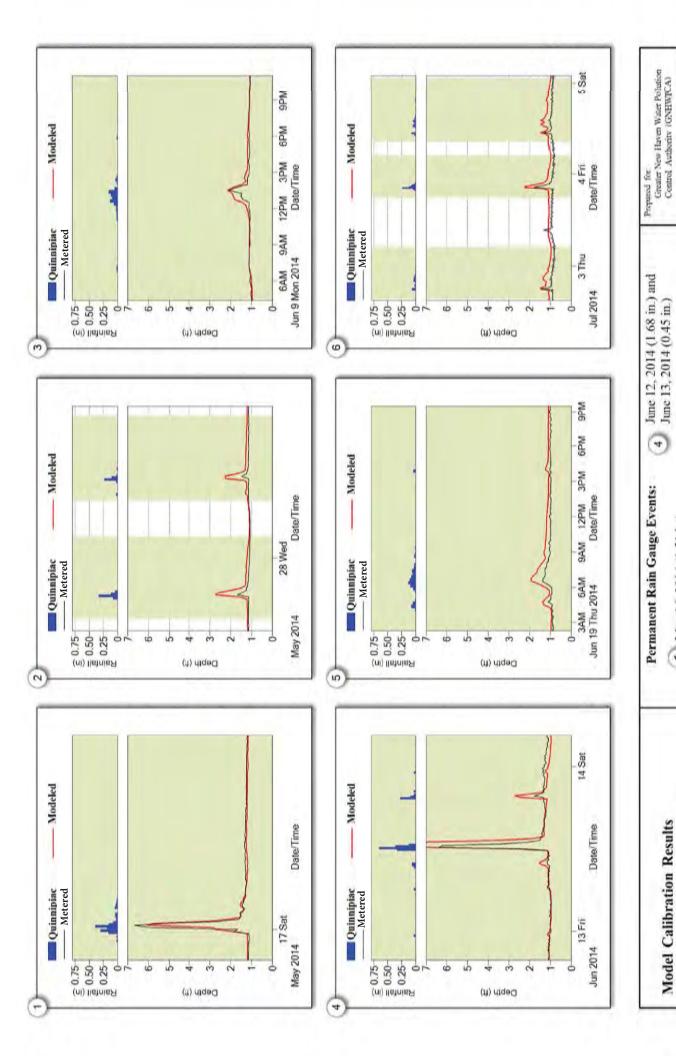
Model Calibration Results

June 9, 2014 (0.74 in.)

6

May 16, 2014 (1.51 in.)

Ē



July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)

9

June 19, 2014 (0.78 in.)

9

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

(2)

Flow Meter: FM-16

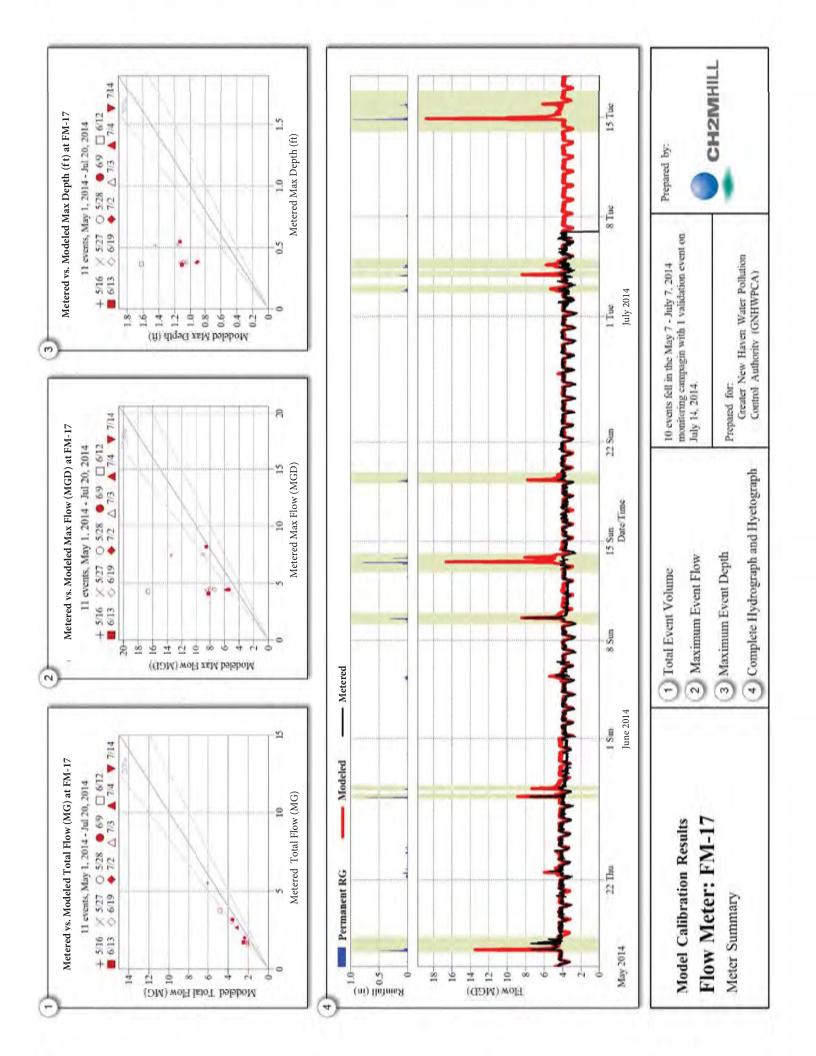
Event Comparison: Depth

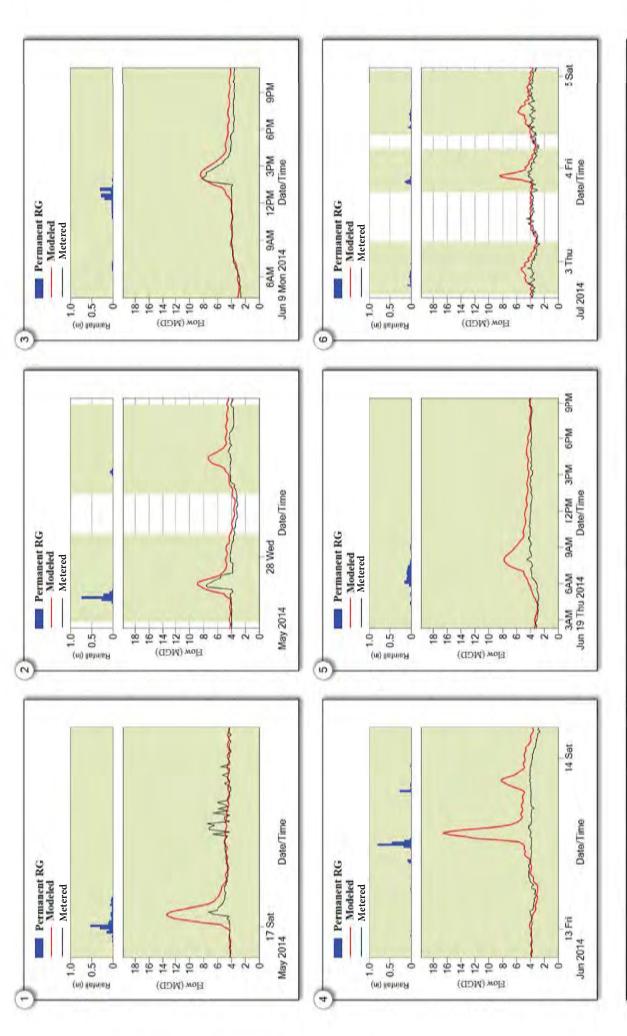
June 9, 2014 (0.74 in.)

6

May 16, 2014 (1.51 in.)

Ē





May 16, 2014 (1.61 in.) P

Model Calibration Results

Flow Meter: FM-17

Event Comparison: Flow

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) 2

June 9, 2014 (1.02 in.)

(0)

June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.) 4

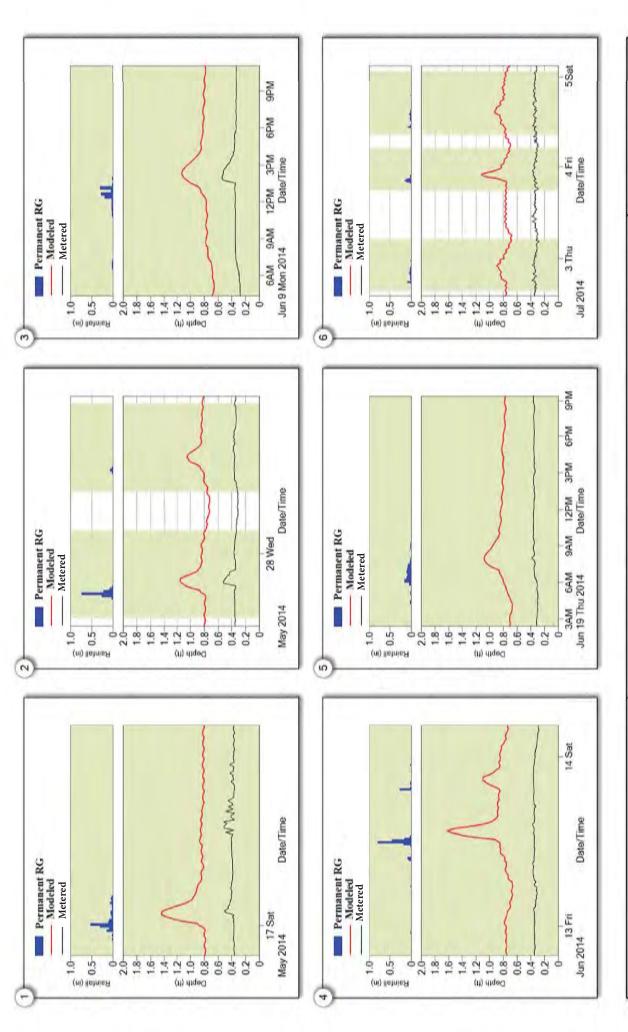
June 19, 2014 (0.74 in.) 2

July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 60

Greater New Haven Water Polution Control Authority (GNHWPCA) Prepared for







May 16, 2014 (1.61 in.) F

Model Calibration Results

Flow Meter: FM-17

Event Comparison: Depth

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) 2

6

June 9, 2014 (1.02 in.)

June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.) 4

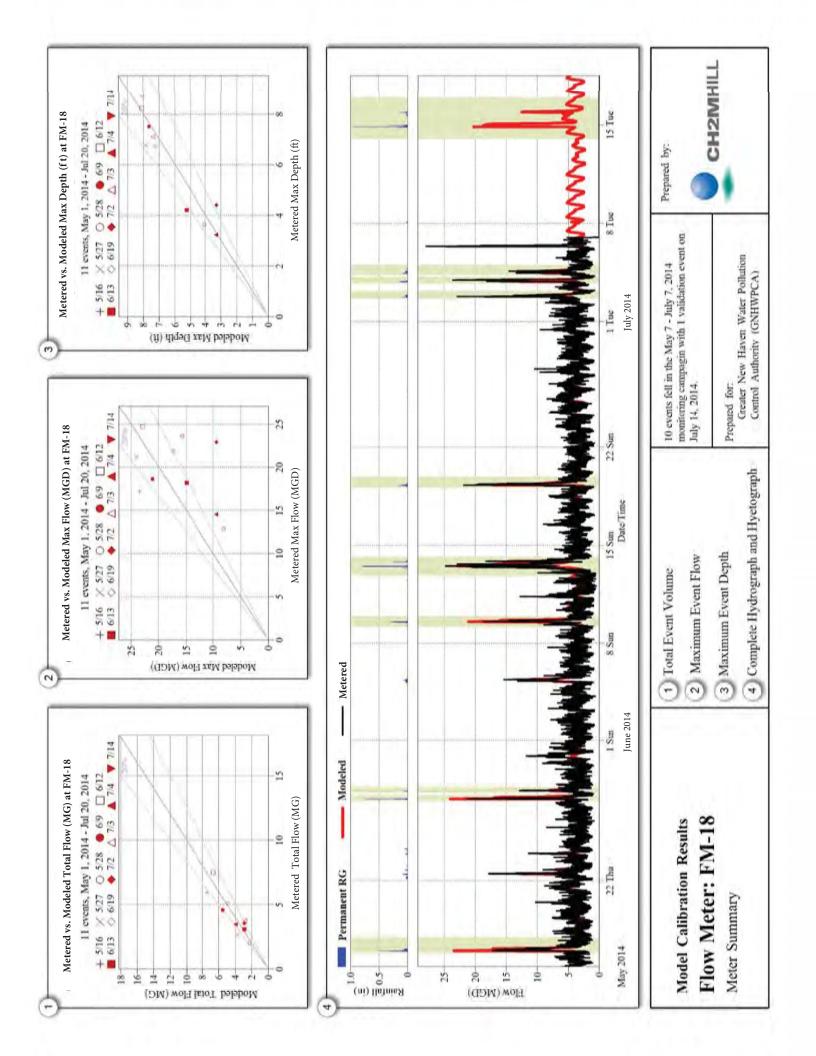
June 19, 2014 (0.74 in.) 2

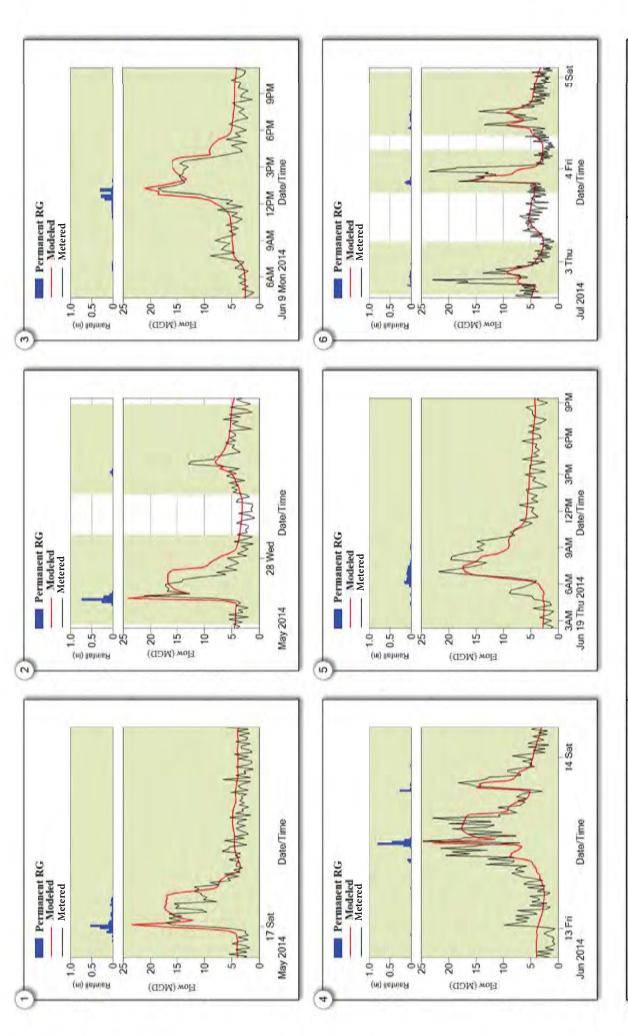
July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 60

Greater New Haven Water Pollution Control Authority (GNHWPCA) Prepared for



CH2MHILL





- May 16, 2014 (1.61 in.) Ē
- May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)

Flow Meter: FM-18

Event Comparison: Flow

Model Calibration Results

- June 9, 2014 (1.02 in.) 9
- June 13, 2014 (0.32 in.) June 19, 2014 (0.74 in.) 2 4

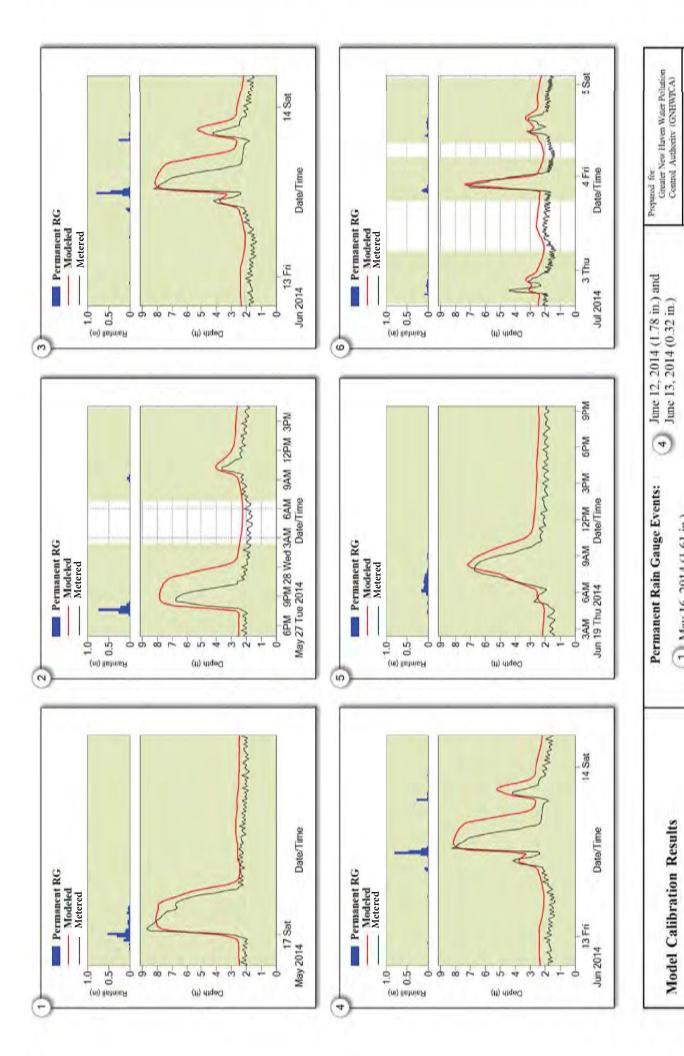
June 12, 2014 (1.78 in.) and

- July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 9
- Greater New Haven Water Pollution Control Authority (GNHWPCA) Property for





CH2MHILL



July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.)

60

June 19, 2014 (0.74 in.)

2

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.)

(2)

Flow Meter: FM-18

Event Comparison: Depth

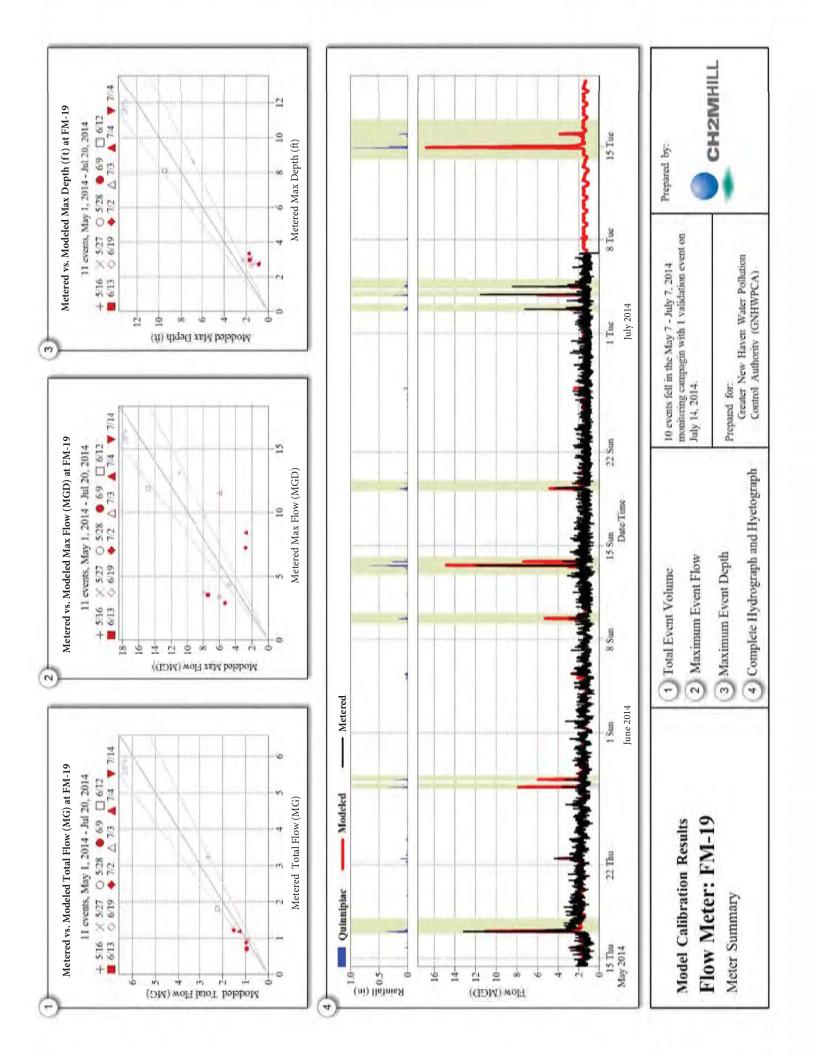
Model Calibration Results

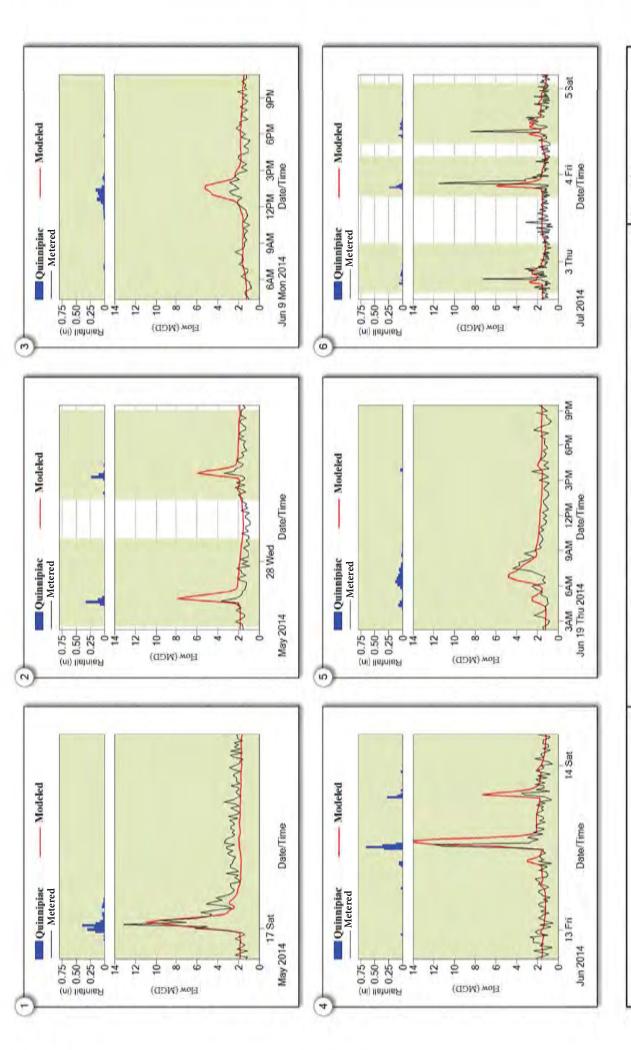
June 9, 2014 (1.02 in.)

9

May 16, 2014 (1.61 in.)

F





1 May 16, 2014 (1.51 in.)

2) May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

3 June 9, 2014 (0.74 in.)

4 June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.)

5 June 19, 2014 (0.78 in.)

Fuly 2, 2014 (0.38 in.), 6 July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)

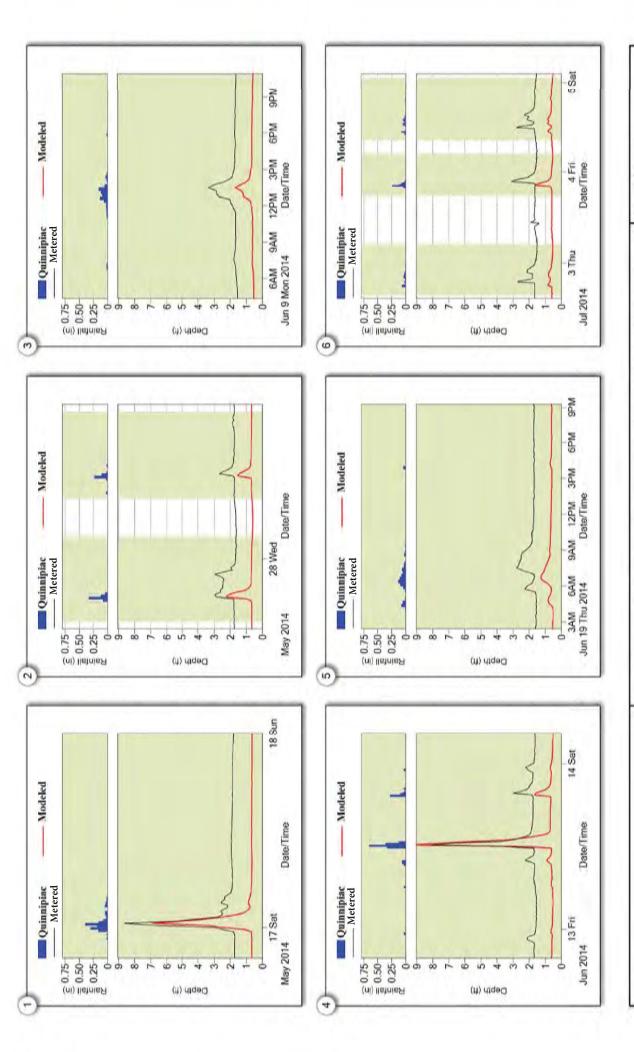
Prepared for Greater New Haven Water Polistion Centrol Authority (GNHWPCA)





Event Comparison: Flow

Model Calibration Results Flow Meter: FM-19



May 16, 2014 (1.51 in.) Ē

Model Calibration Results

Flow Meter: FM-19

Event Comparison: Depth

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.) (2)

6

June 9, 2014 (0.74 in.)

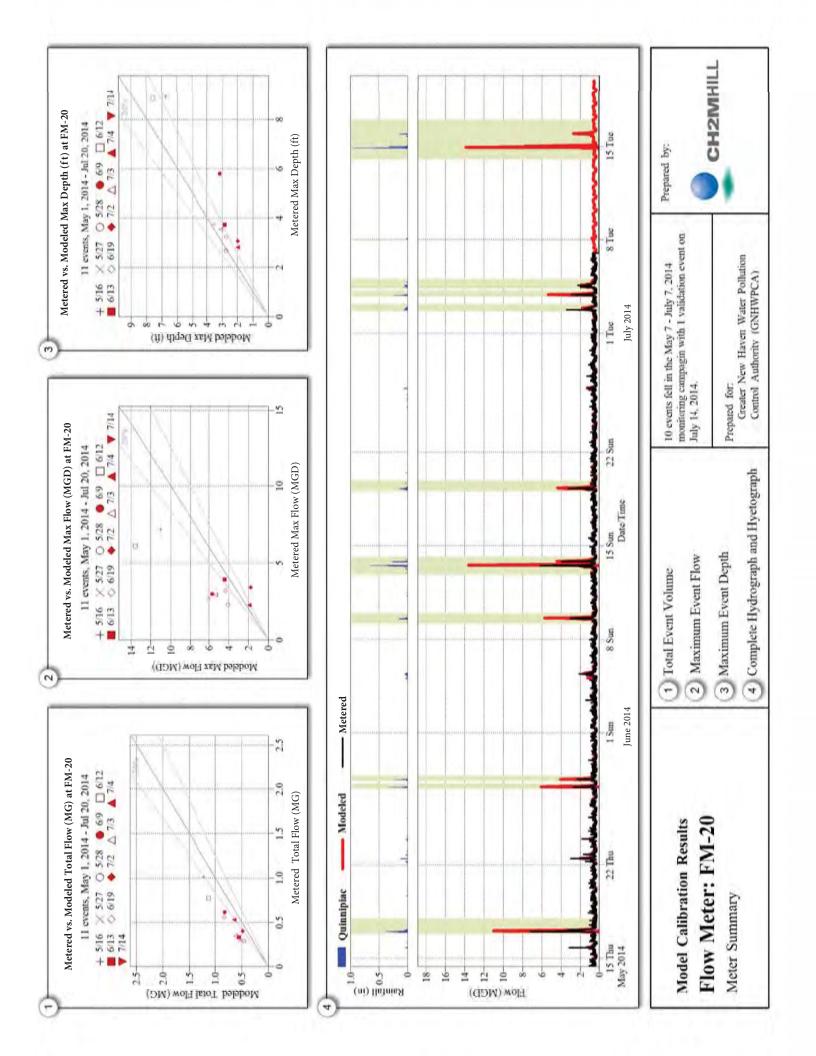
June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.) 4

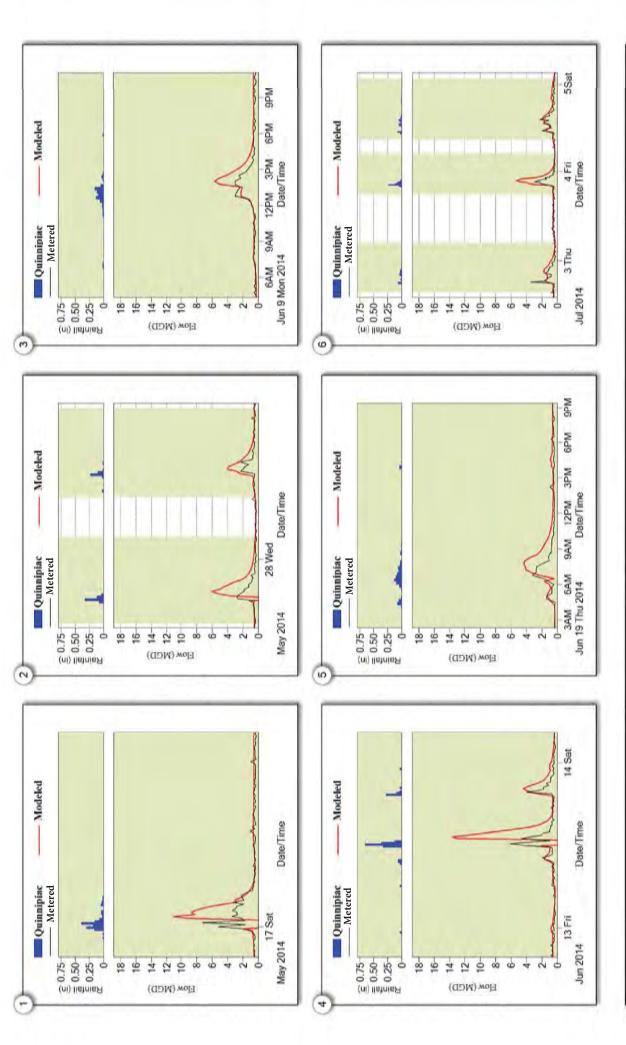
June 19, 2014 (0.78 in.) 2

July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.) 60









1) May 16, 2014 (1.51 in.)

Model Calibration Results

Flow Meter: FM-20

Event Comparison: Flow

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.) (2)

June 9, 2014 (0.74 in.) 0

June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.) 4

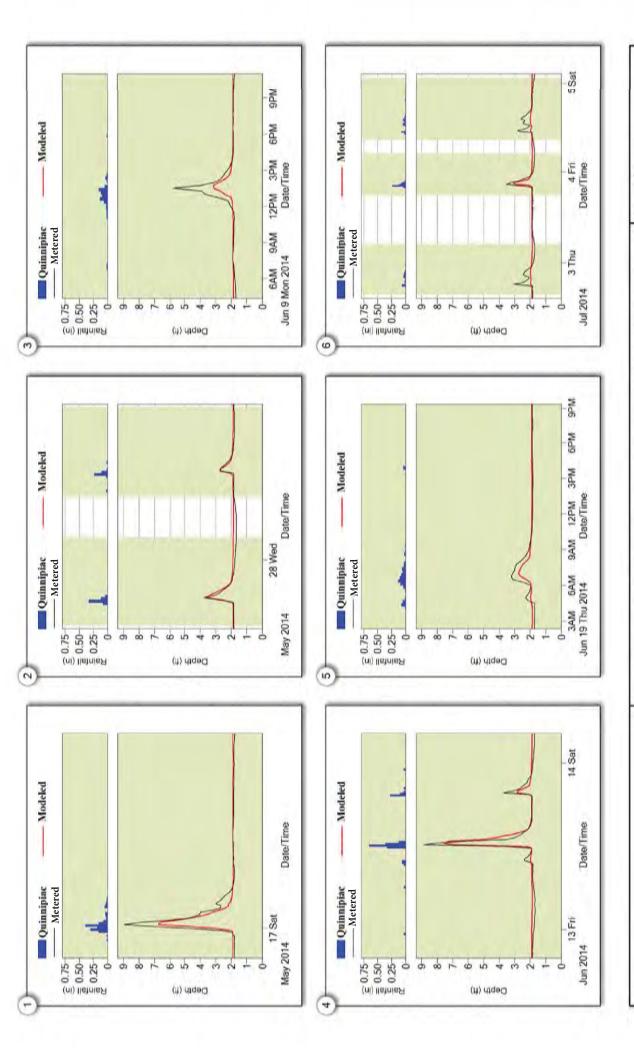
June 19, 2014 (0.78 in.) 2

July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.) 9

Greater New Haven Water Pollution Control Authority (GNHWPCA) Prepared for







1) May 16, 2014 (1.51 in.)

Model Calibration Results

Flow Meter: FM-20

Event Comparison: Depth

2) May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

3 June 9, 2014 (0.74 in.)

4 June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.)

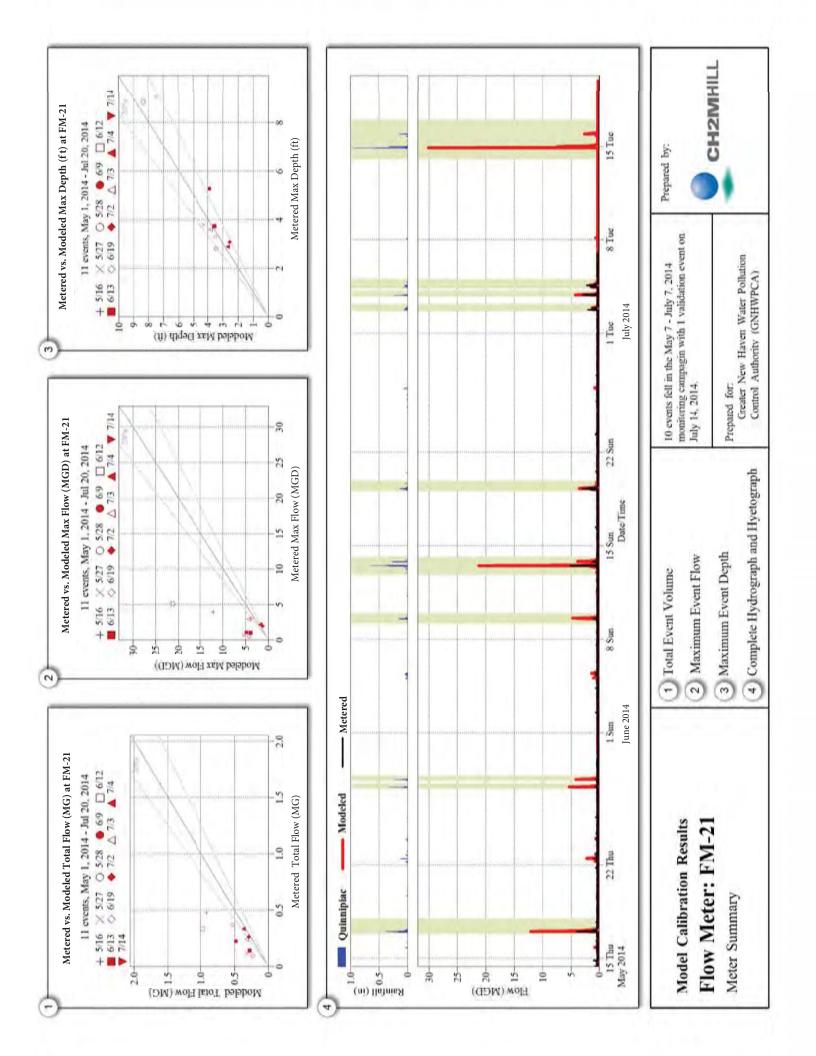
5 June 19, 2014 (0.78 in.)

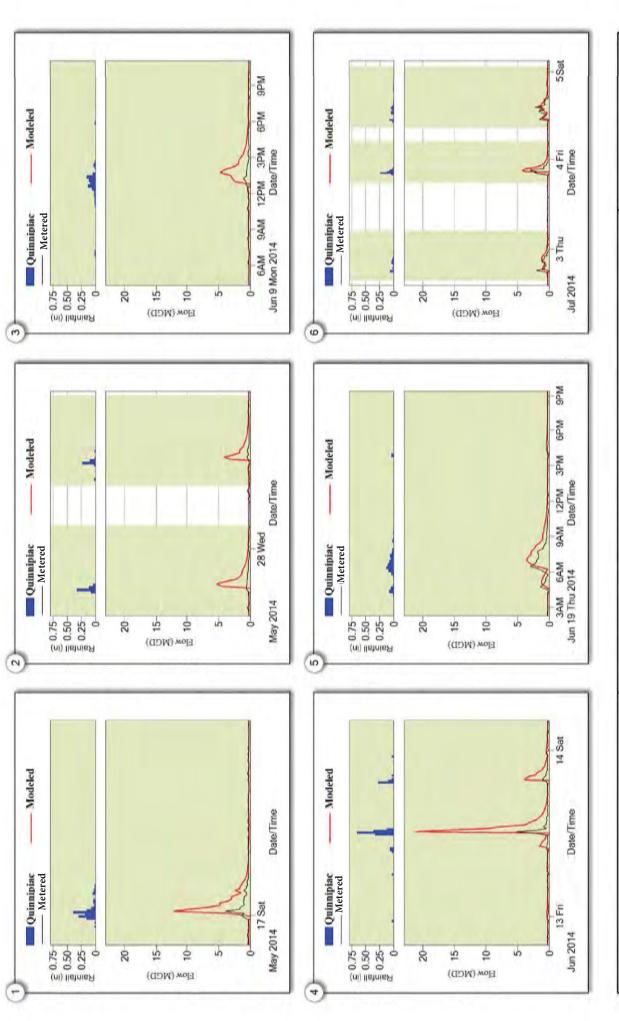
fuly 2, 2014 (0.38 in.), fuly 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)

Prepared for Greater New Haven Water Pollution Centrol Authority (GNHWPCA)

Property by

CHZMHILL





1) May 16, 2014 (1.51 in.)

Model Calibration Results

Flow Meter: FM-21

Event Comparison: Flow

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.) (2)

June 9, 2014 (0.74 in.) 6

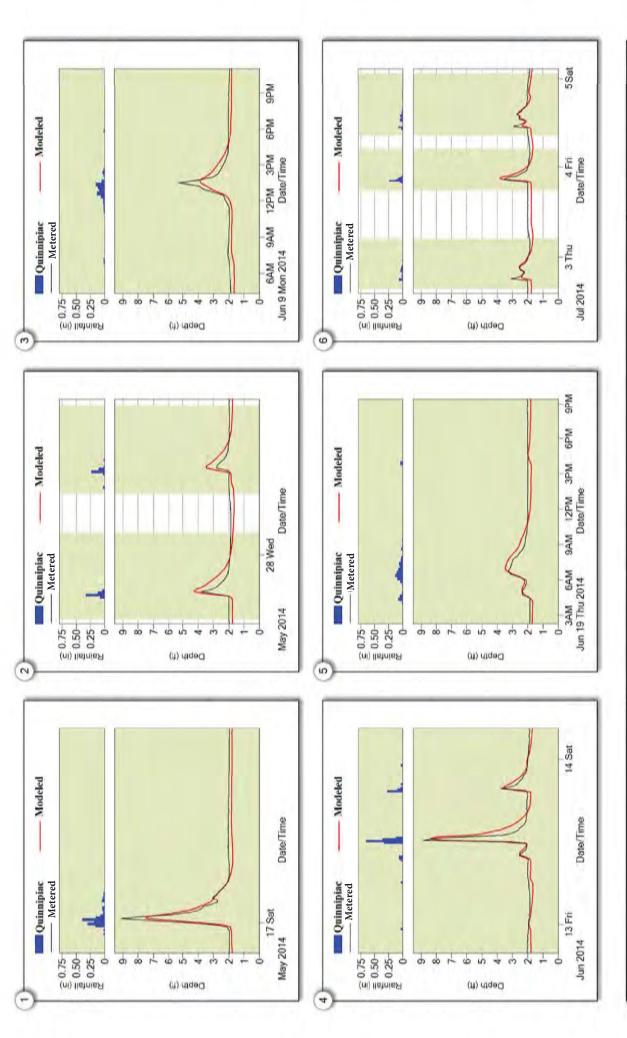
June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.) 7

June 19, 2014 (0.78 in.) 9

July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.) 9







1 May 16, 2014 (1.51 in.)

Model Calibration Results

Flow Meter: FM-21

Event Comparison: Depth

2) May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

3 June 9, 2014 (0.74 in.)

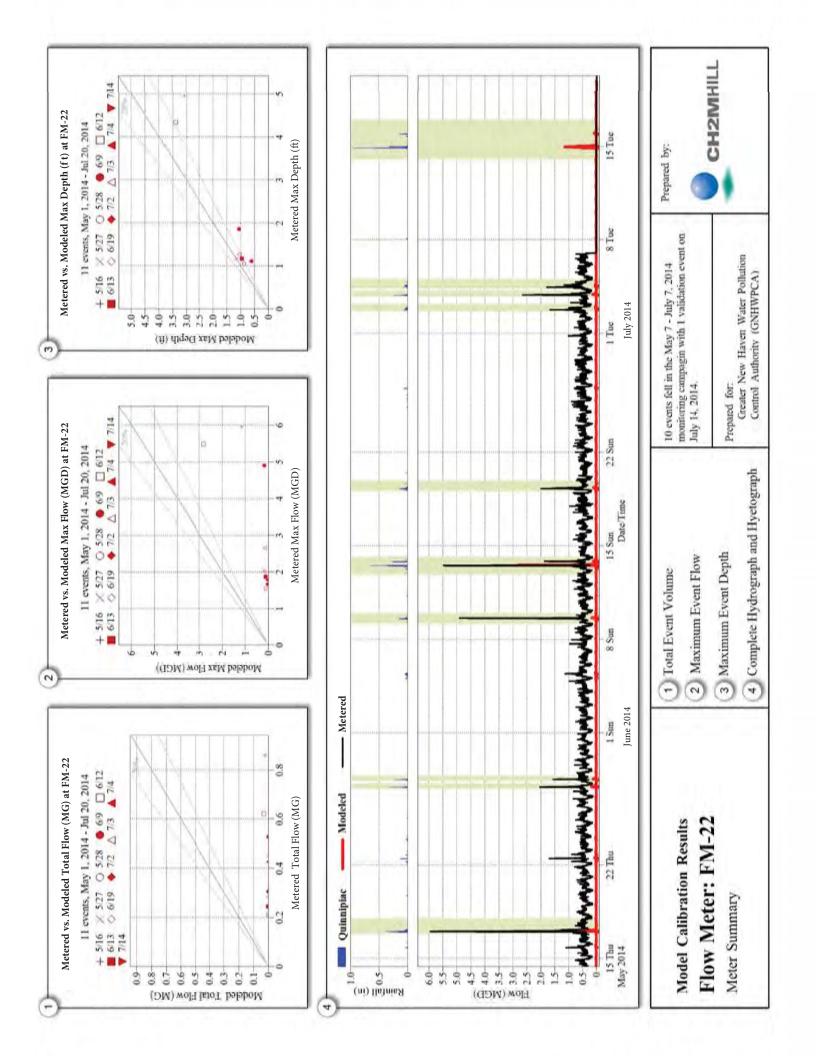
4 June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.)

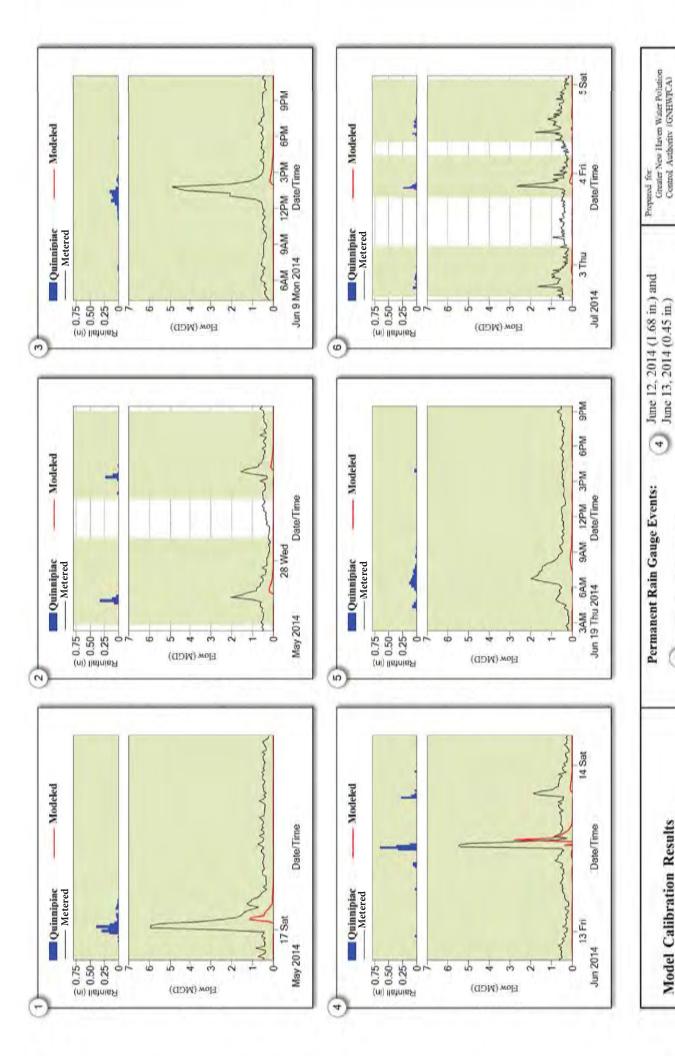
5 June 19, 2014 (0.78 in.)

July 2, 2014 (0.38 in.), 6 July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)









July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)

9

June 19, 2014 (0.78 in.)

2

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

(2)

Flow Meter: FM-22

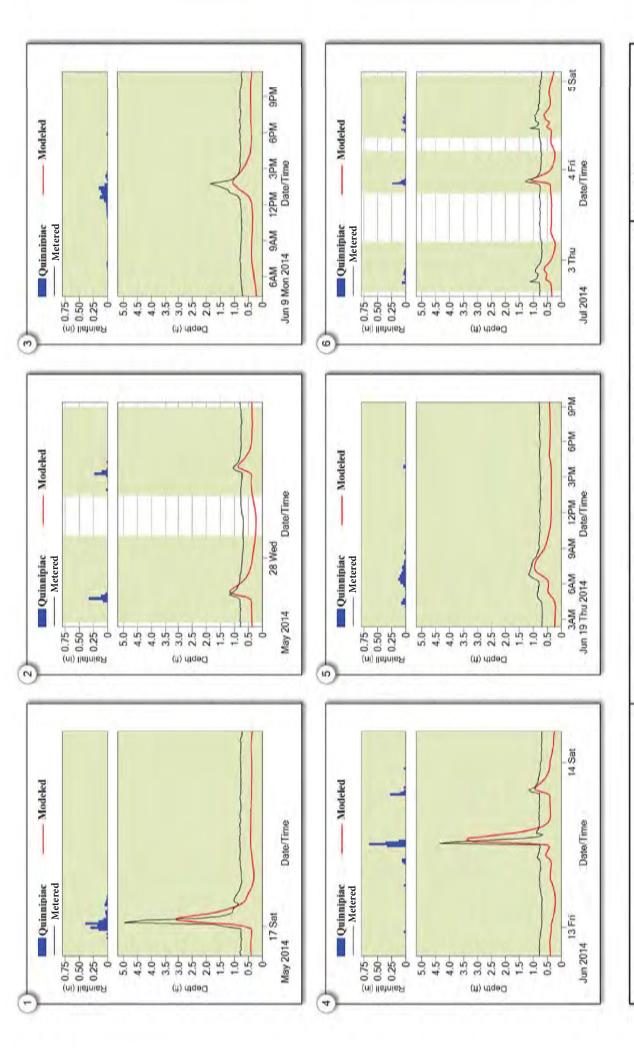
Event Comparison: Flow

Model Calibration Results

June 9, 2014 (0.74 in.)

0

1 May 16, 2014 (1.51 in.)



1 May 16, 2014 (1.51 in.)

Model Calibration Results

Flow Meter: FM-22

Event Comparison: Depth

2) May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

3 June 9, 2014 (0.74 in.)

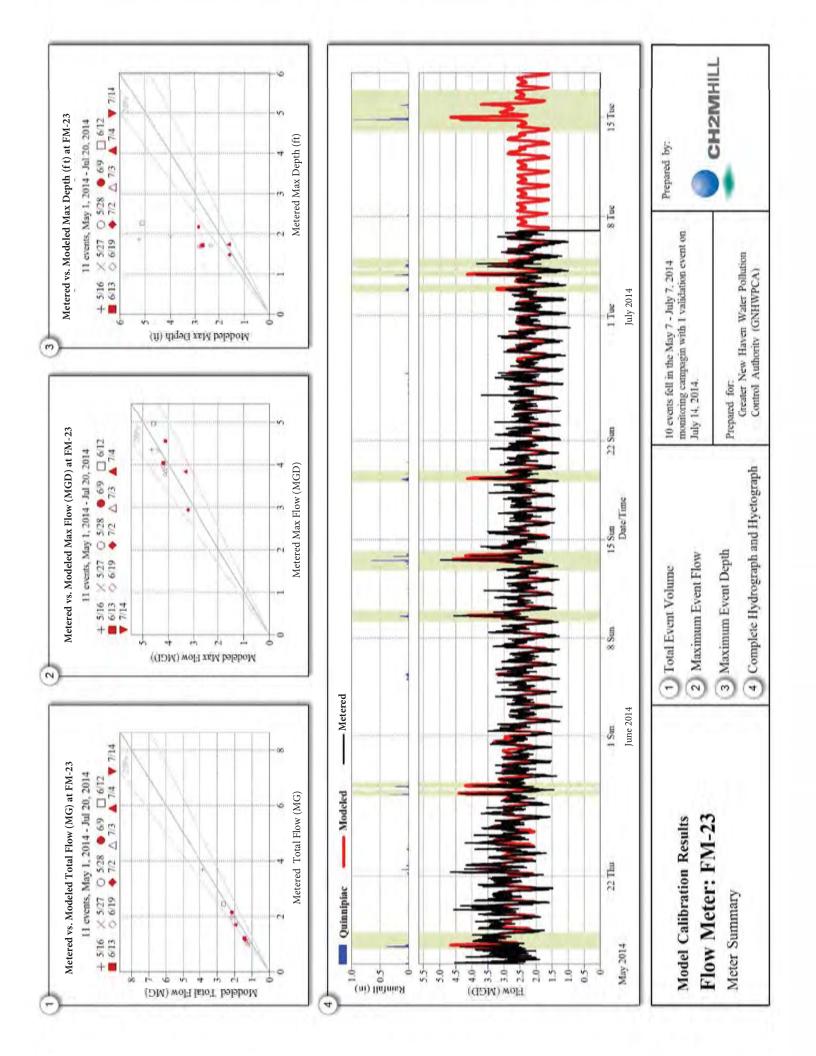
4 June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.)

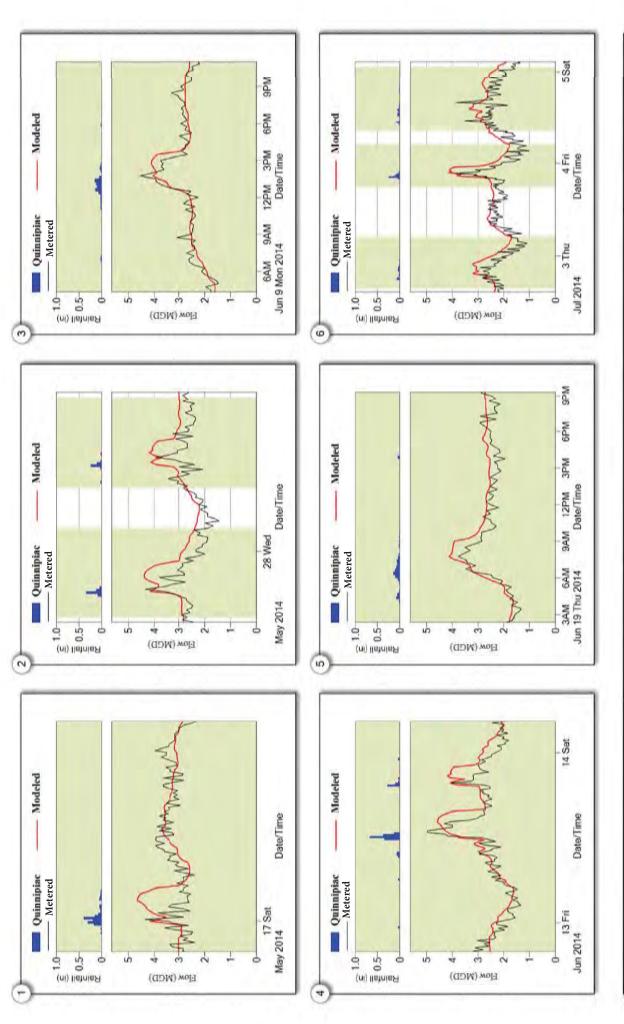
5 June 19, 2014 (0.78 in.)

July 2, 2014 (0.38 in.), 6 July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)









1 May 16, 2014 (1.51 in.)

Model Calibration Results

Flow Meter: FM-23

Event Comparison: Flow

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.) (2)

June 9, 2014 (0.74 in.)

0

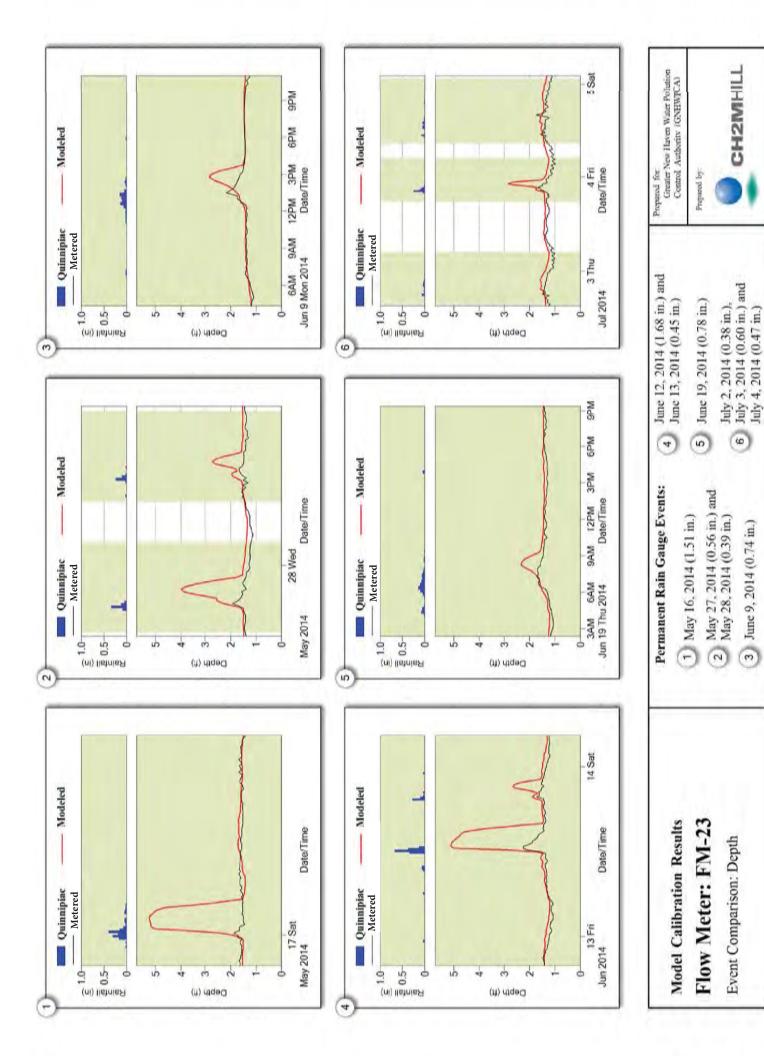
June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.) Ŧ

June 19, 2014 (0.78 in.) 9

July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.) 9



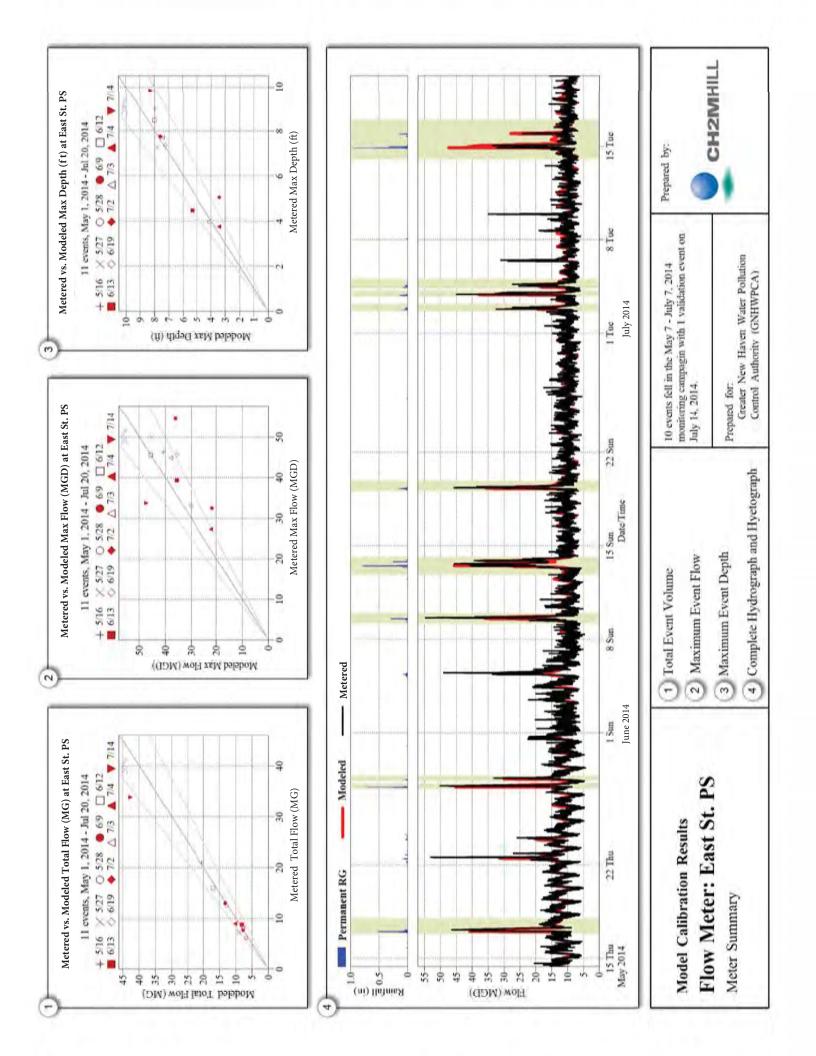


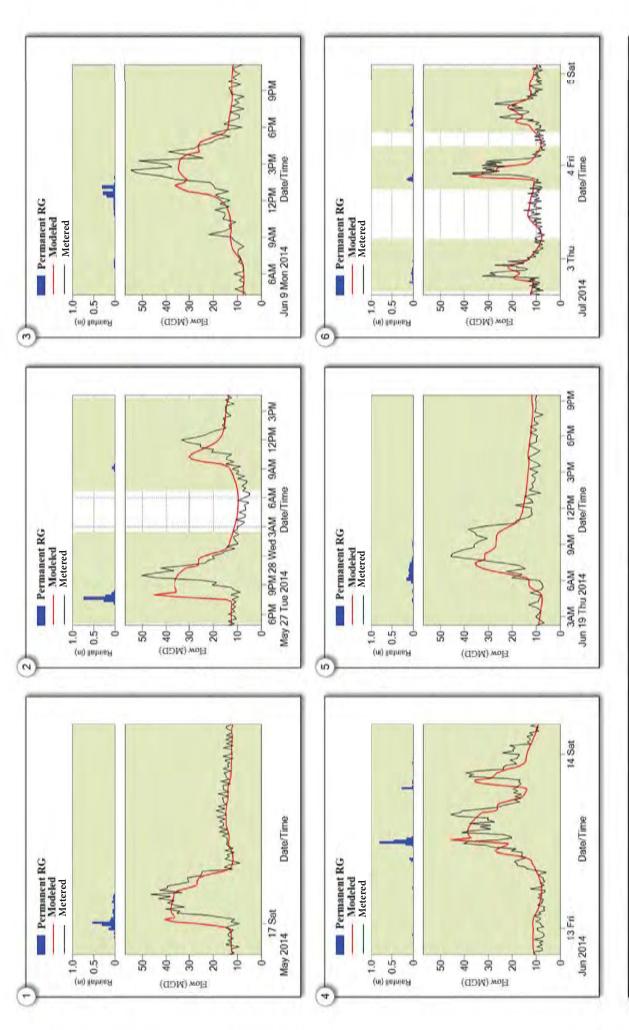


9

June 9, 2014 (0.74 in.)

9





- 1 May 16, 2014 (1.61 in.)

Flow Meter: East St. PS

Event Comparison: Flow

Model Calibration Results

- May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)
- June 9, 2014 (1.02 in.)

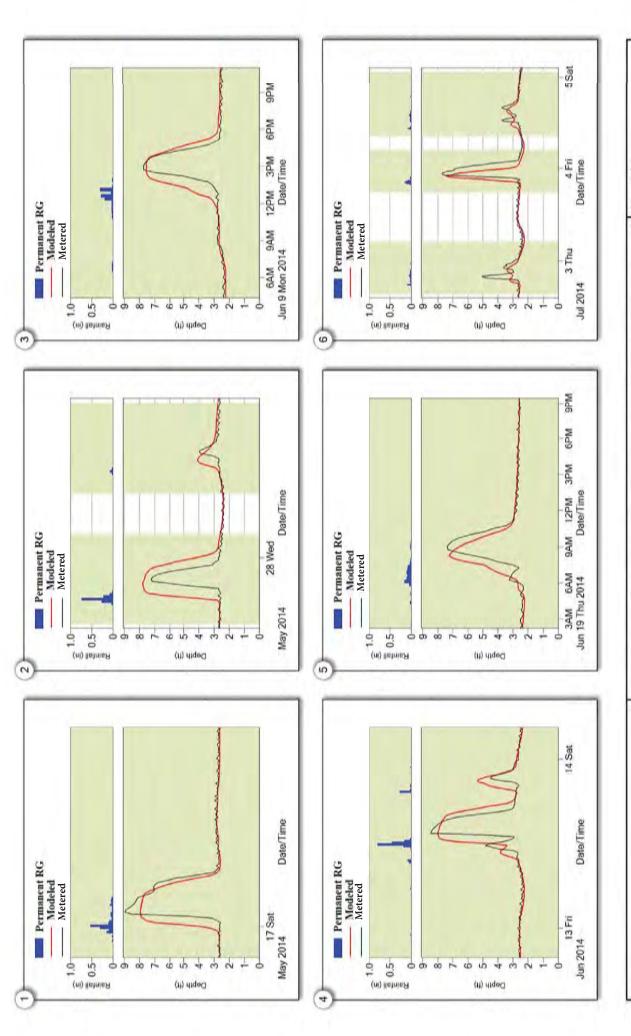
9

- June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.) 4
- June 19, 2014 (0.74 in.) 2
- July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 9

Greater New Haven Water Pollution Control Authority (GNHWPCA) Propand for







1 May 16, 2014 (1.61 in.)

2) May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.)

Flow Meter: East St. PS

Event Comparison: Depth

Model Calibration Results

3 June 9, 2014 (1.02 in.)

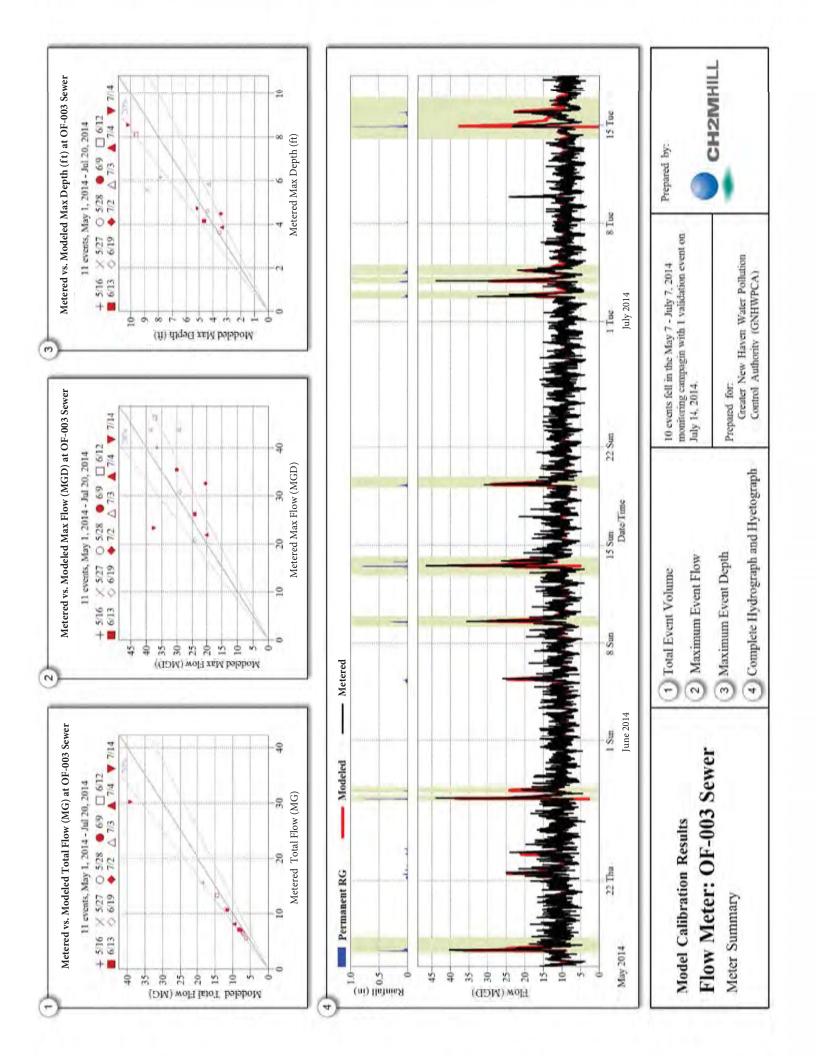
4 June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.)

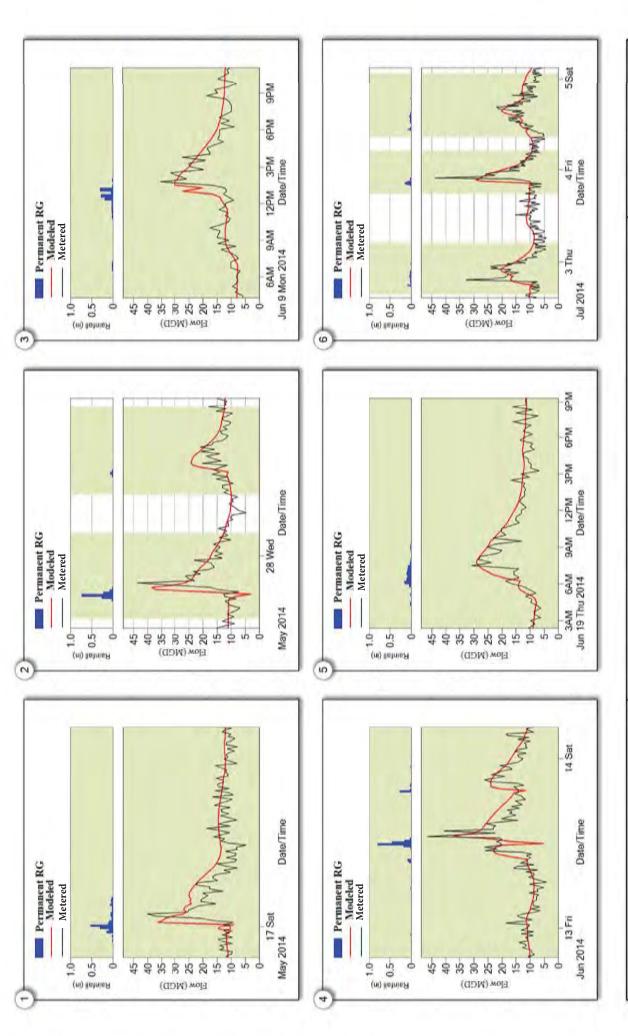
5 June 19, 2014 (0.74 in.)

Fuly 2, 2014 (0.40 in.), 6 July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.)

Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)







1) May 16, 2014 (1.61 in.)

Flow Meter: OF-003 Sewer

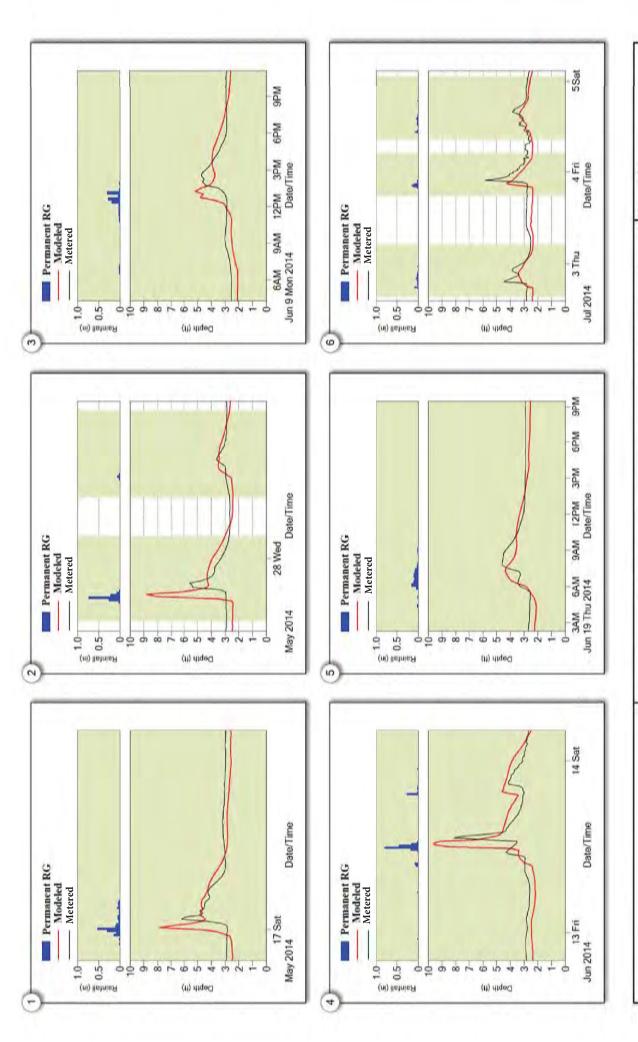
Event Comparison: Flow

Model Calibration Results

- 2) May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.)
- 3 June 9, 2014 (1.02 in.)
- 4 June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.)
- 5 June 19, 2014 (0.74 in.)
- fuly 2, 2014 (0.40 in.), 6 July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.)
- Prepared for Greater New Haven Water Polintion Control Authority (GNHWPCA)







1 May 16, 2014 (1.61 in.) May 27, 2014 (1.33 in.) an

Flow Meter: OF-003 Sewer

Event Comparison: Depth

Model Calibration Results

2) May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.)

3 June 9, 2014 (1.02 in.)

4 June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.)

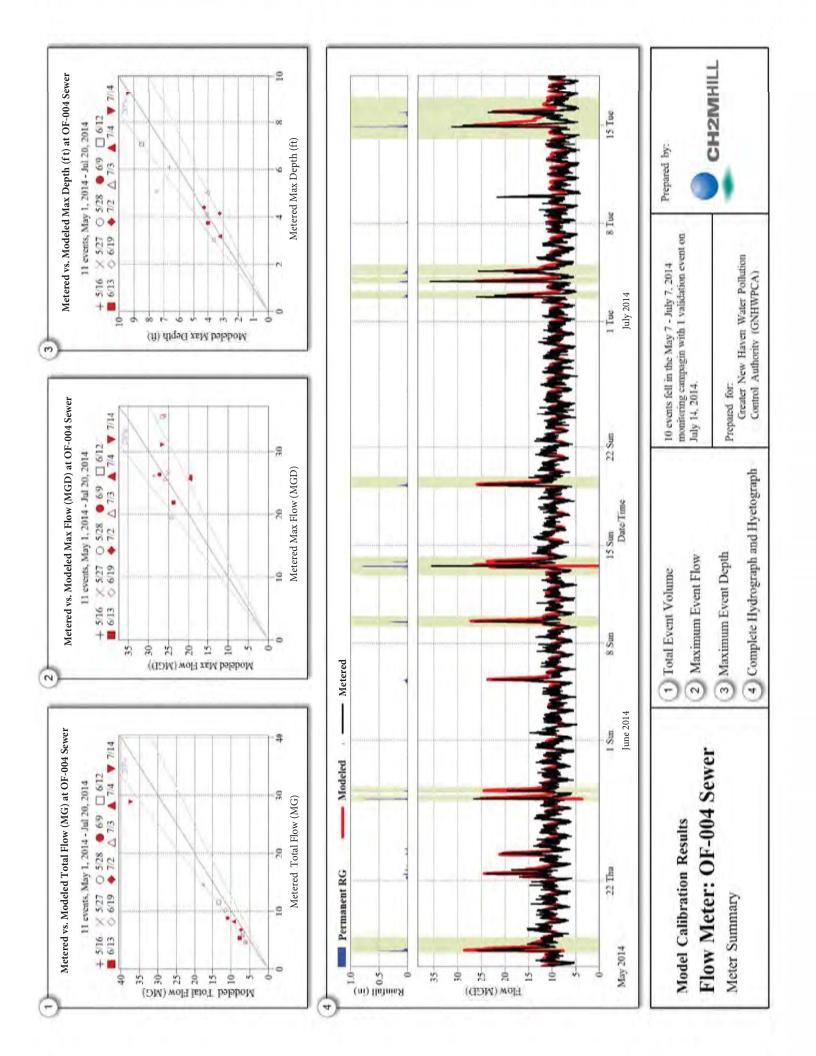
5 June 19, 2014 (0.74 in.)

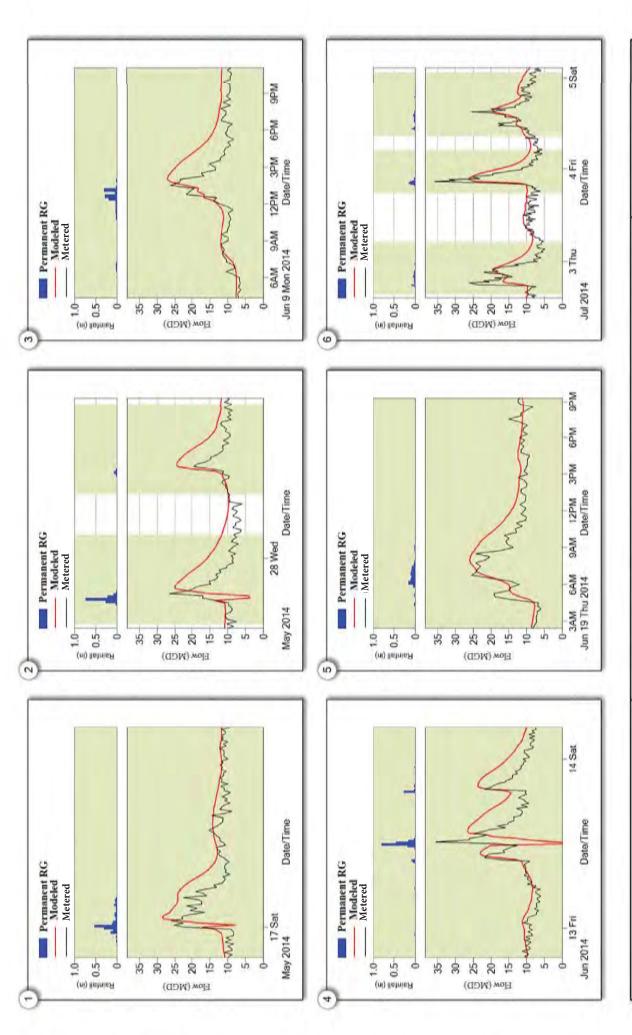
fuly 2, 2014 (0.40 in.), 6 July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.)

Prepared for Greater New Haven Water Polintion Control Authority (GNHWPCA)

Proposed by:







May 16, 2014 (1.61 in.) F

Flow Meter: OF-004 Sewer

Event Comparison: Flow

Model Calibration Results

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)

June 9, 2014 (1.02 in.) 9

4

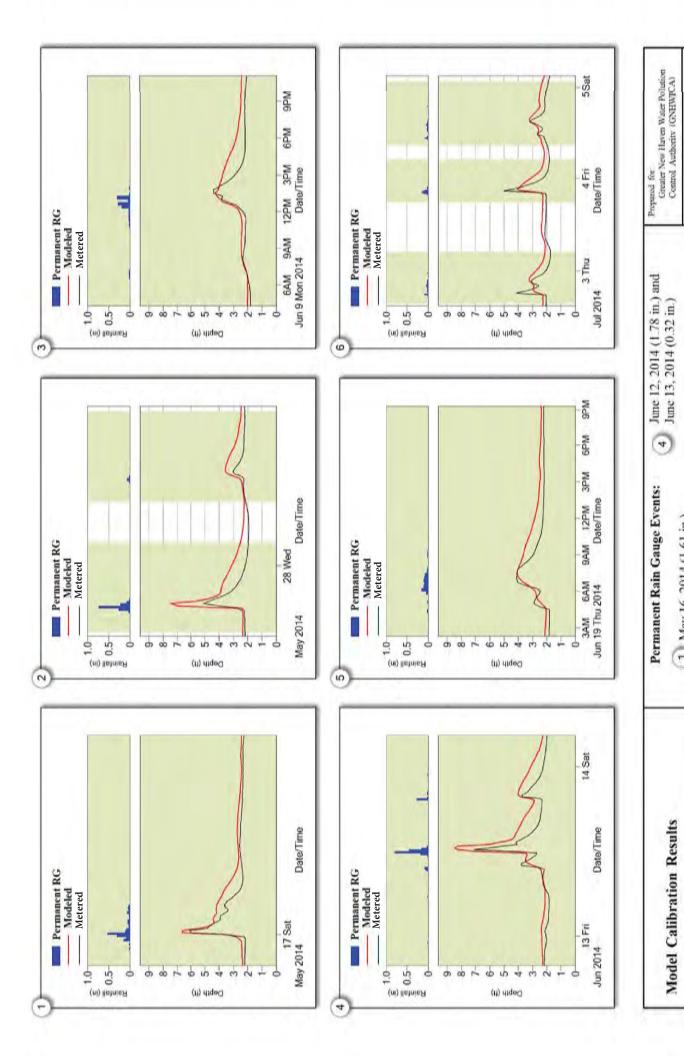
June 19, 2014 (0.74 in.) 2

July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 60

June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.)

Greater New Haven Water Pollution Control Authority (GNHWPCA) Property for





July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.)

60

June 13, 2014 (0.32 in.)

June 19, 2014 (0.74 in.)

2

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.)

2

Flow Meter: OF-004 Sewer

Event Comparison: Depth

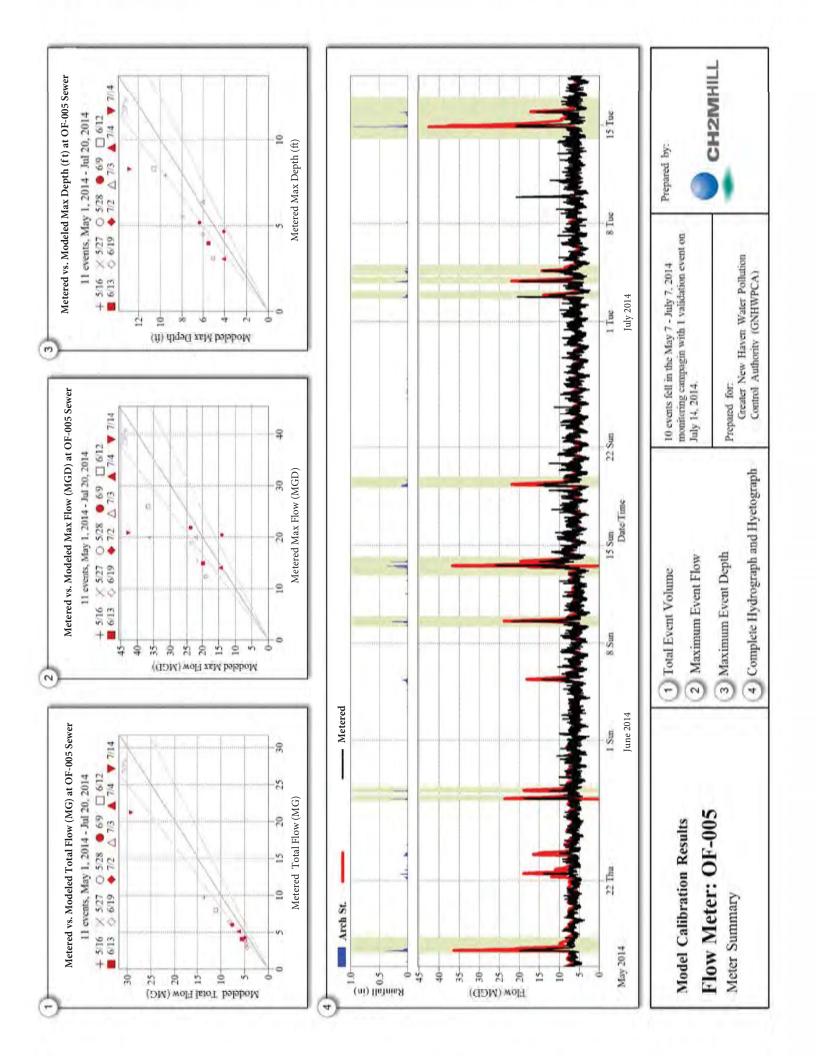
Model Calibration Results

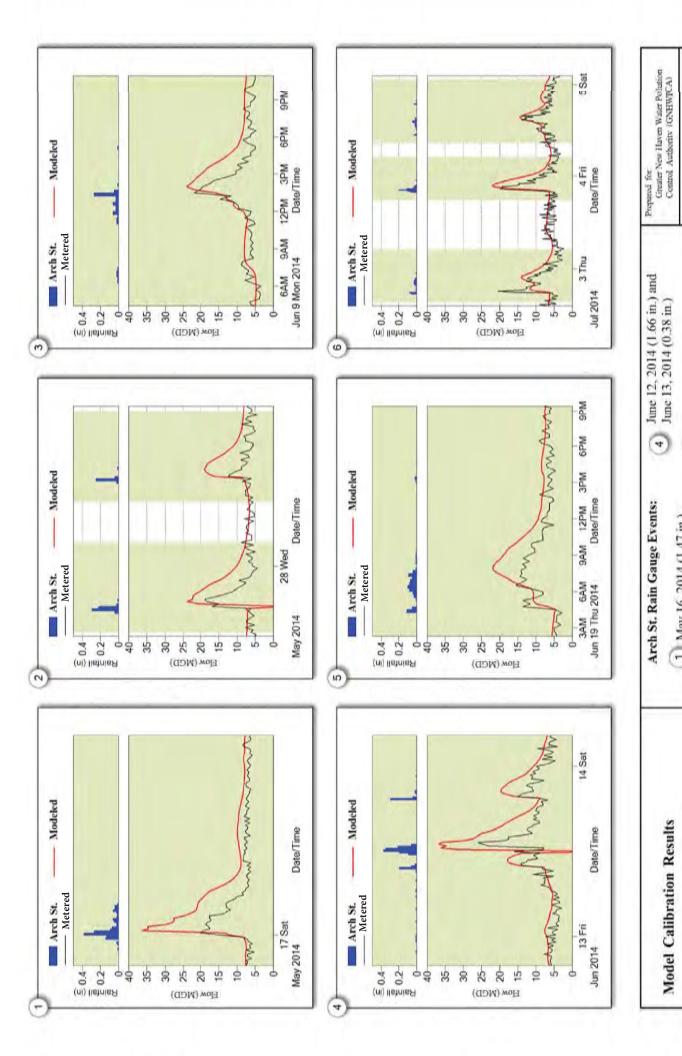
June 9, 2014 (1.02 in.)

9

May 16, 2014 (1.61 in.)

F





July 2, 2014 (0.38 in.), July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.)

9

June 19, 2014 (0.83 in.)

2

May 27, 2014 (0.58 in.) and May 28, 2014 (0.32 in.)

(2)

Flow Meter: OF-005

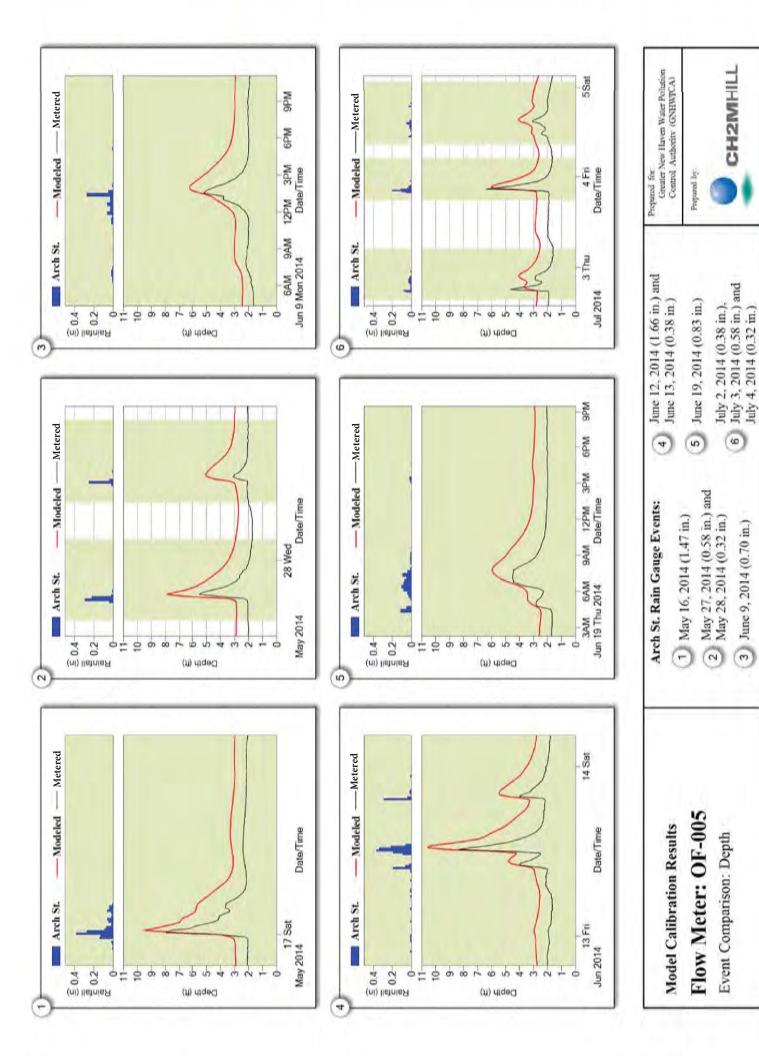
Event Comparison: Flow

Model Calibration Results

June 9, 2014 (0.70 in.)

6

1) May 16, 2014 (1.47 in.)

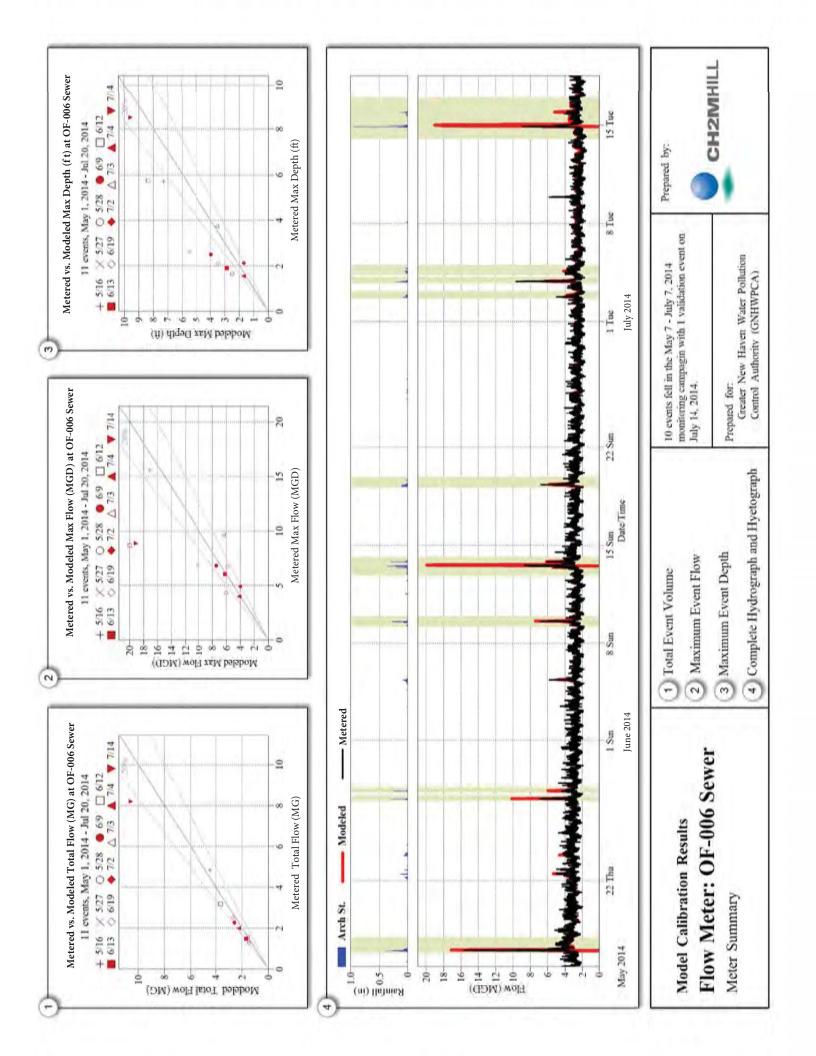


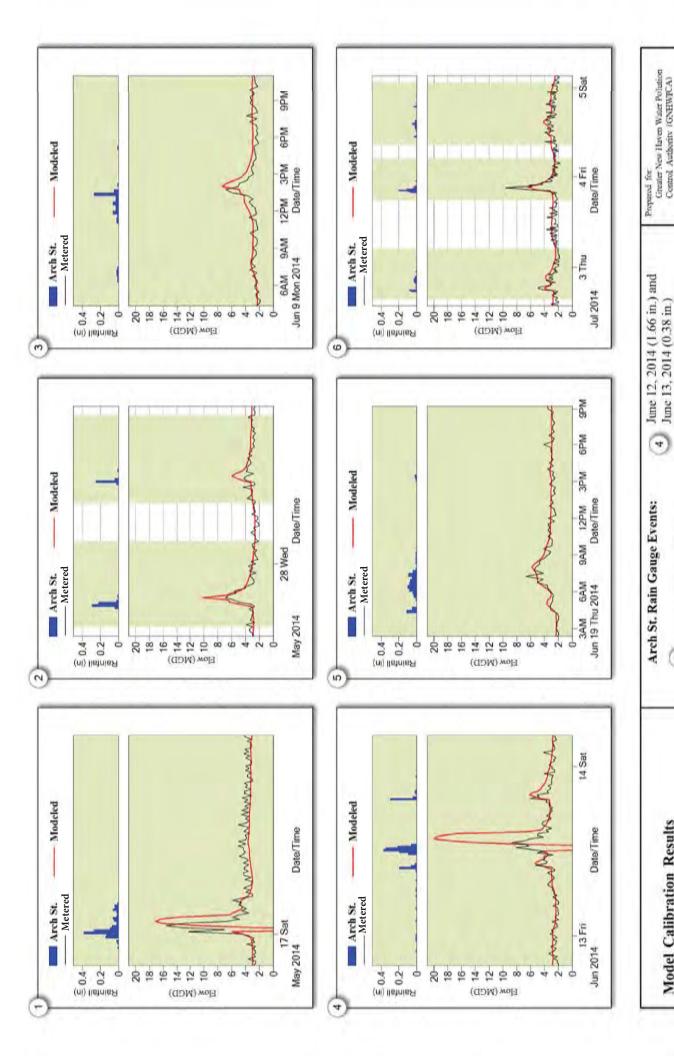
60

June 9, 2014 (0.70 in.)

6

Event Comparison: Depth





July 2, 2014 (0.38 in.), July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.)

9

June 19, 2014 (0.83 in.)

2

May 27, 2014 (0.58 in.) and May 28, 2014 (0.32 in.)

(2)

Flow Meter: OF-006 Sewer

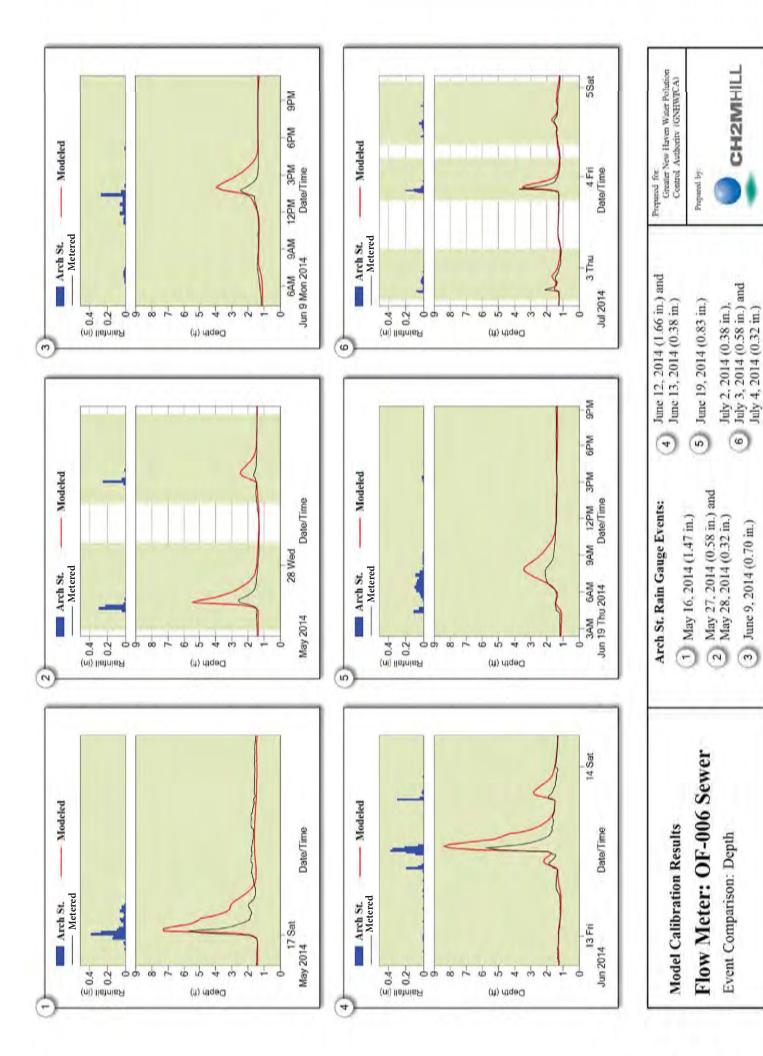
Event Comparison: Flow

Model Calibration Results

June 9, 2014 (0.70 in.)

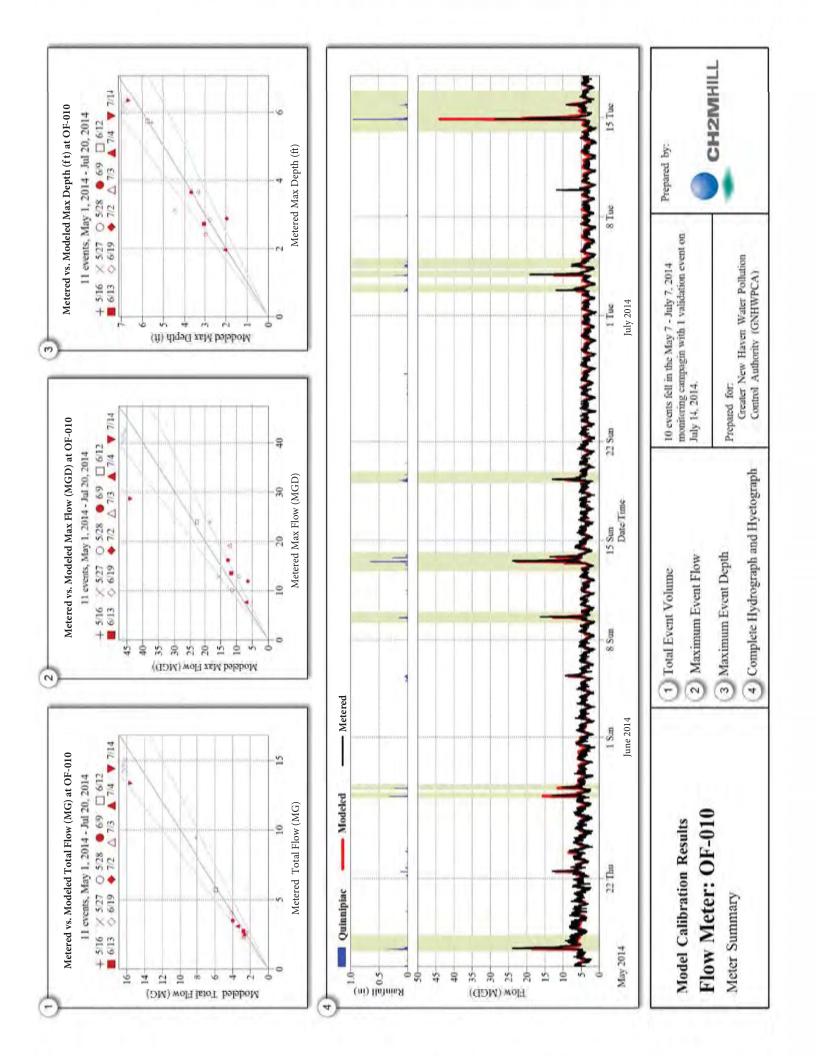
6

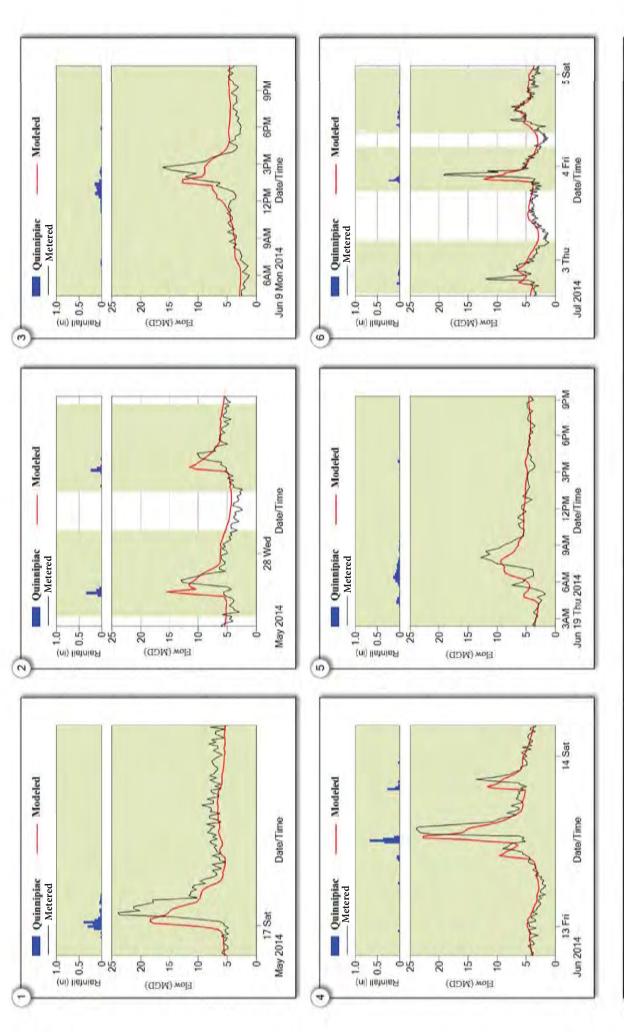
1) May 16, 2014 (1.47 in.)



June 9, 2014 (0.70 in.)

(0)





1) May 16, 2014 (1.51 in.)

2) May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

Flow Meter: OF-010

Event Comparison: Flow

Model Calibration Results

3 June 9, 2014 (0.74 in.)

4 June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.)

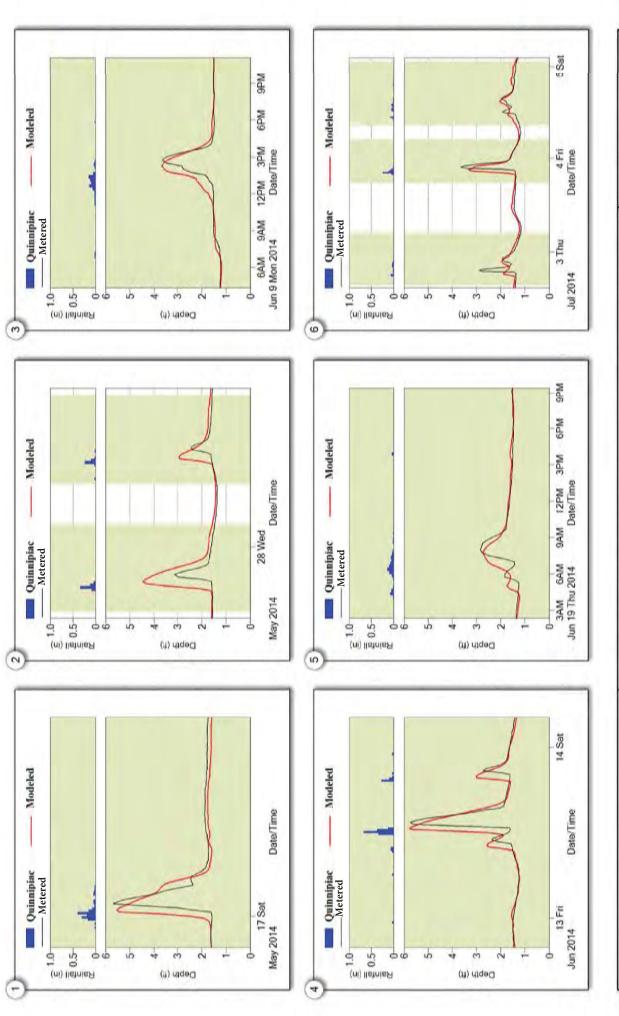
5 June 19, 2014 (0.78 in.)

Fuly 2, 2014 (0.38 in.), Fuly 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)

Prepared for Greater New Haven Water Polistion Control Authority (GNHWPCA)







1) May 16, 2014 (1.51 in.)

2) May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

Flow Meter: OF-010

Event Comparison: Depth

Model Calibration Results

3 June 9, 2014 (0.74 in.)

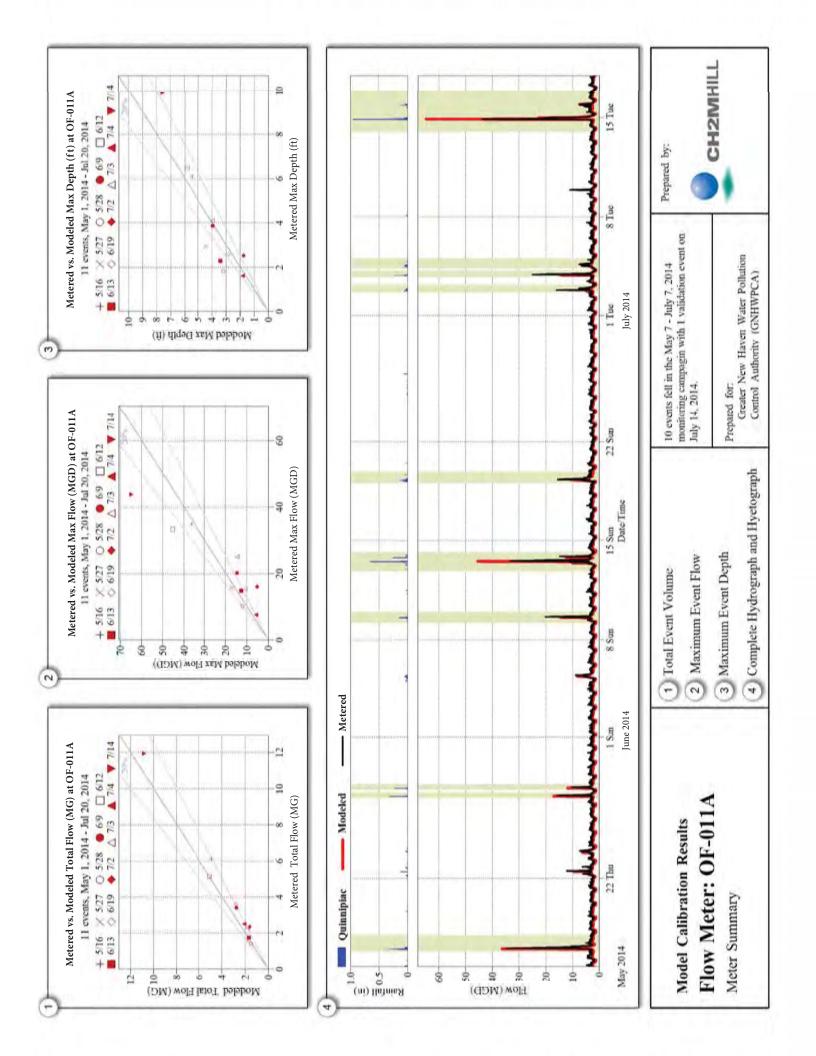
4 June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.)

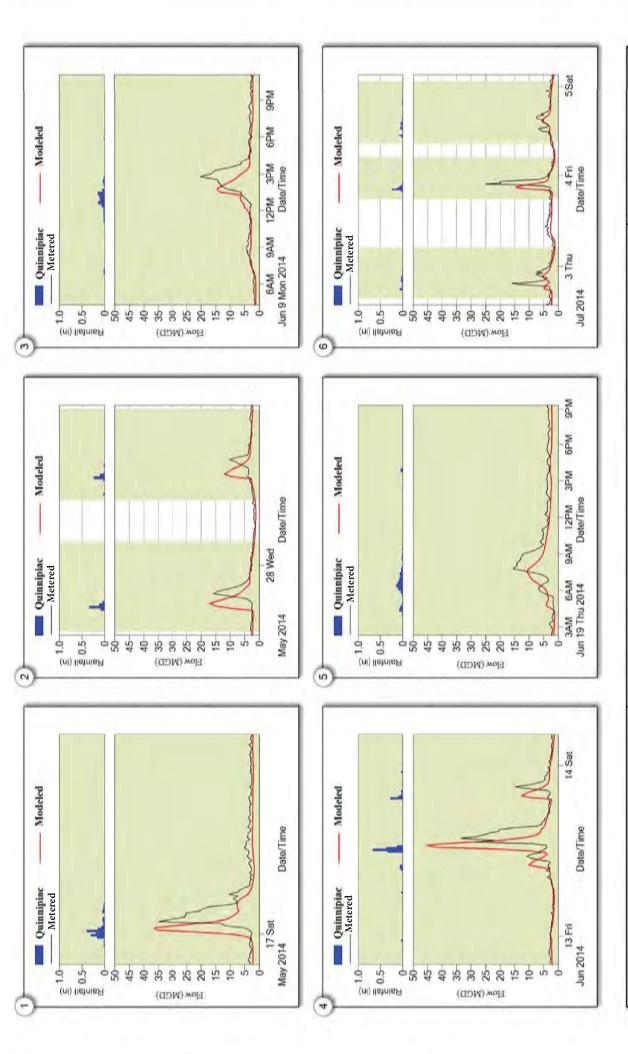
5 June 19, 2014 (0.78 in.)

fuly 2, 2014 (0.38 in.), 6 July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)

Prepared for Greater New Haven Water Pollution Centrol Authority (GNHWPCA)







1) May 16, 2014 (1.51 in.)

2) May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

Flow Meter: OF-011A

Event Comparison: Flow

Model Calibration Results

3 June 9, 2014 (0.74 in.)

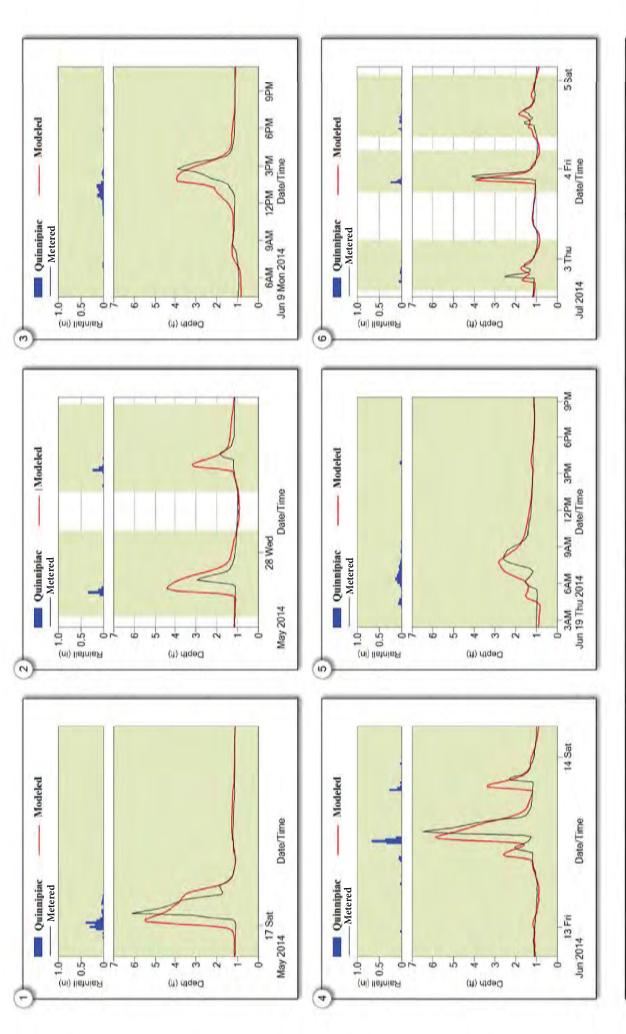
4 June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.)

5 June 19, 2014 (0.78 in.)

July 2, 2014 (0.38 in.), 6 July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)

Propered for Greater New Haven Water Pollation Control Authority (GNHWPCA)





- May 16, 2014 (1.51 in.) Ē
- May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.) (2)

Flow Meter: OF-011A

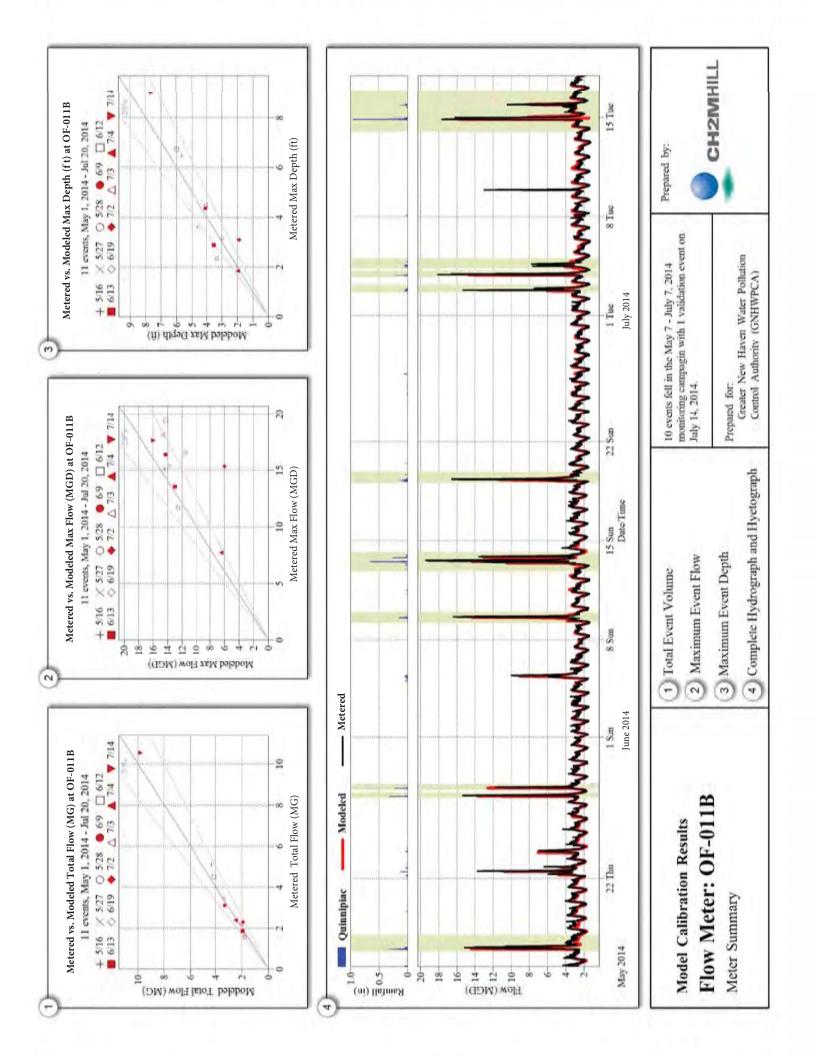
Event Comparison: Depth

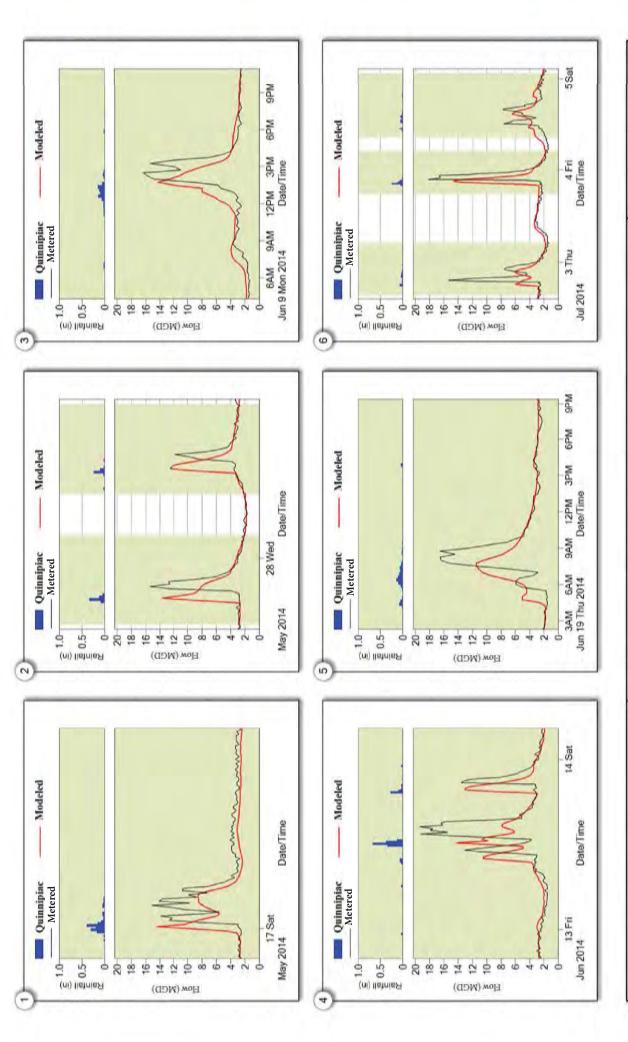
Model Calibration Results

- June 9, 2014 (0.74 in.) 6
- June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.) 4
- June 19, 2014 (0.78 in.) 2
- July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.) 60
- Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)









May 16, 2014 (1.51 in.) Ē

Flow Meter: OF-011B

Event Comparison: Flow

Model Calibration Results

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.) (2)

June 9, 2014 (0.74 in.) 9

June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.) 4

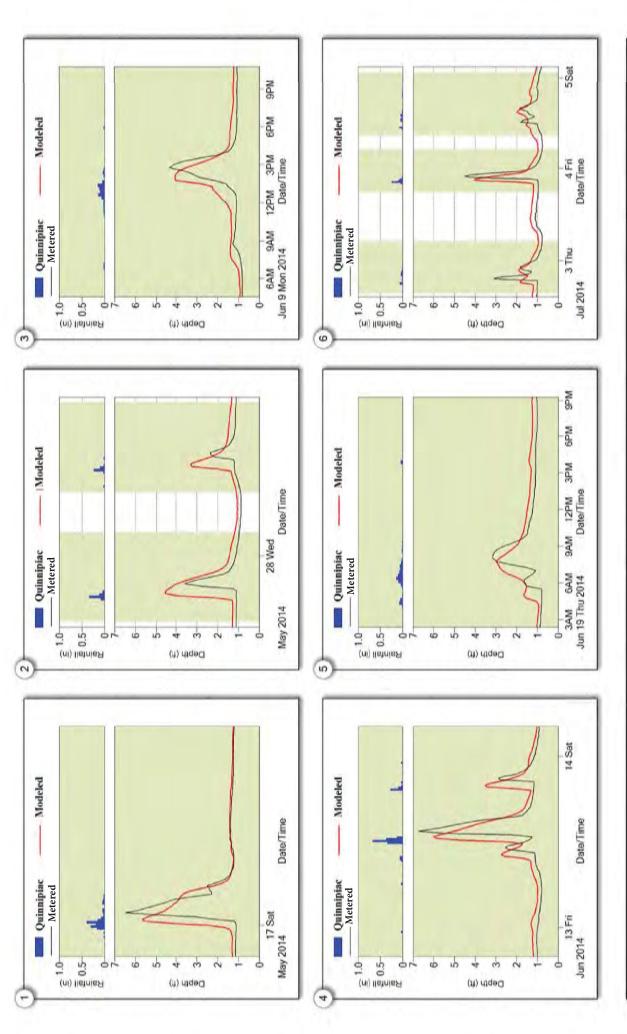
June 19, 2014 (0.78 in.) 2

July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.) 9

Greater New Haven Water Pollution Control Authority (GNHWPCA) Prepared for







- May 16, 2014 (1.51 in.) Ē
- May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.) (2)

Flow Meter: OF-011B

Event Comparison: Depth

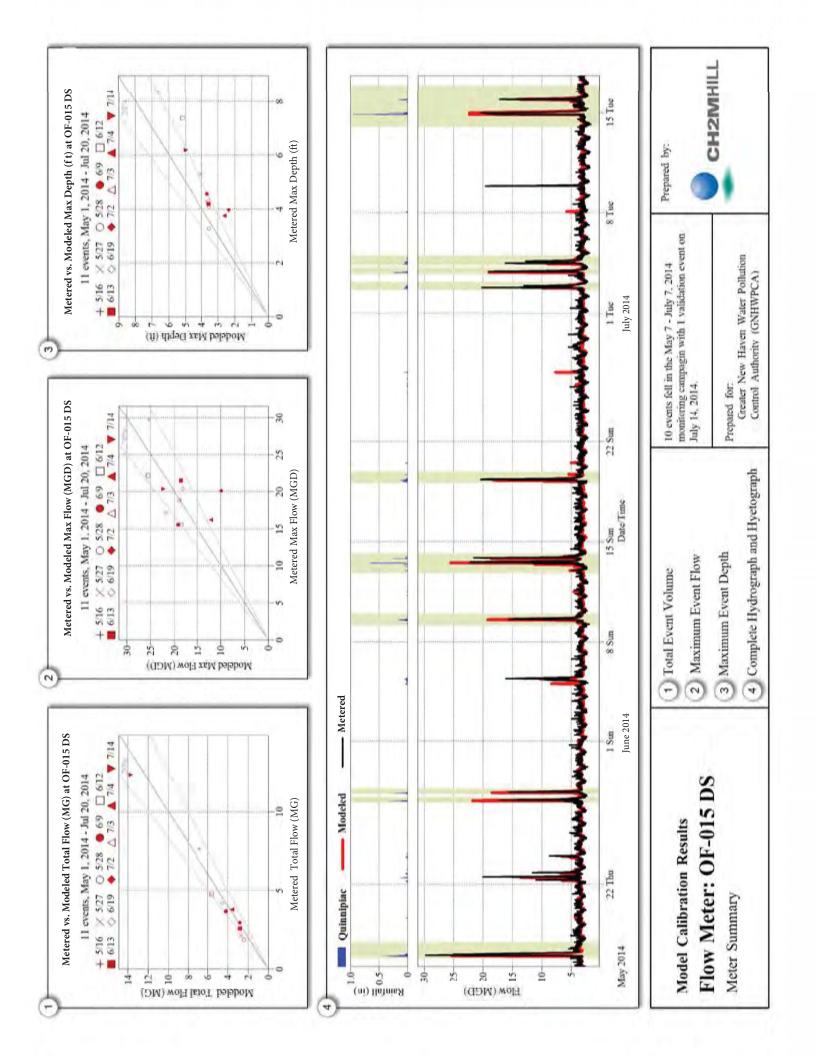
Model Calibration Results

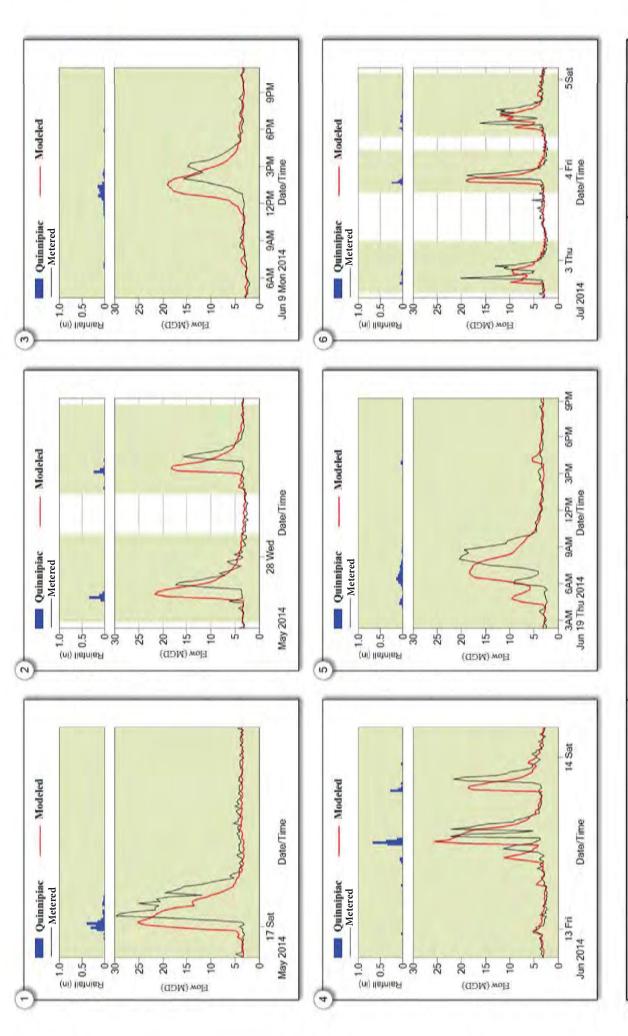
- June 9, 2014 (0.74 in.) 6
- June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.) 4
- June 19, 2014 (0.78 in.) 2
- July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.) 60
- Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)











- 1 May 16, 2014 (1.51 in.)
- 2) May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

Flow Meter: OF-015 DS

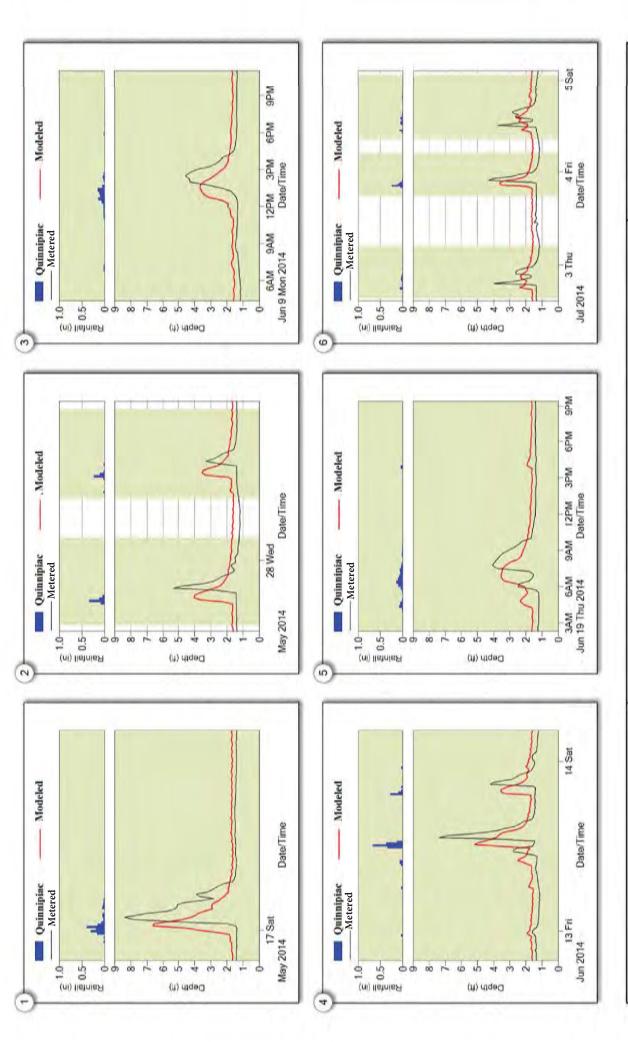
Event Comparison: Flow

Model Calibration Results

- 3 June 9, 2014 (0.74 in.)
- 4 June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.)
- 5 June 19, 2014 (0.78 in.)
- Fuly 2, 2014 (0.38 in.), 6 July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)
- Prepared for Greater New Haven Water Polistion Centrel Authority (GNHWPCA)







1) May 16, 2014 (1.51 in.)

2) May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

Flow Meter: OF-015 DS

Event Comparison: Depth

Model Calibration Results

3 June 9, 2014 (0.74 in.)

4 June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.)

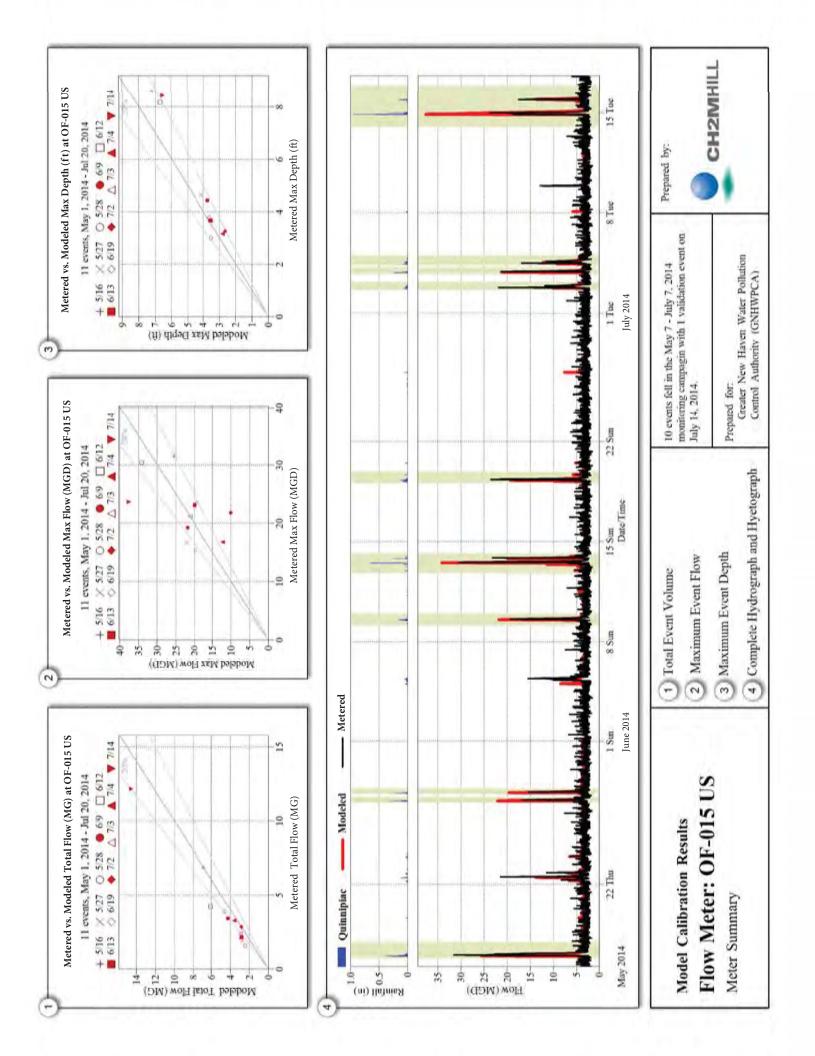
5 June 19, 2014 (0.78 in.)

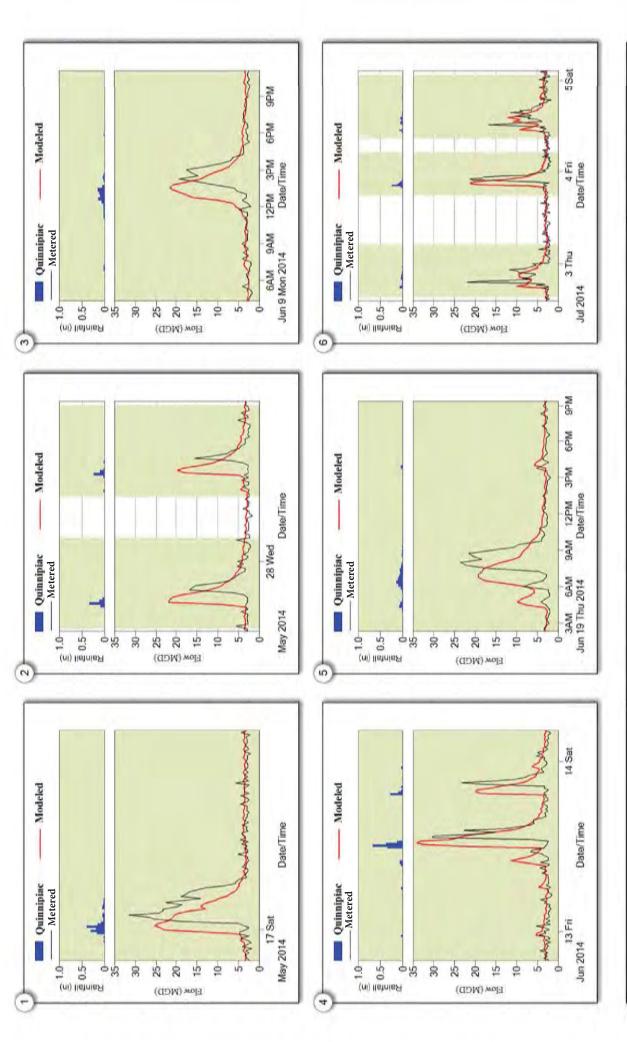
July 2, 2014 (0.38 in.), 6 July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)

Prepared for. Greater New Haven Water Polintion Control Authority (GNHWPCA)









1 May 16, 2014 (1.51 in.)

2) May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

Flow Meter: OF-015 US

Event Comparison: Flow

Model Calibration Results

3 June 9, 2014 (0.74 in.)

4 June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.)

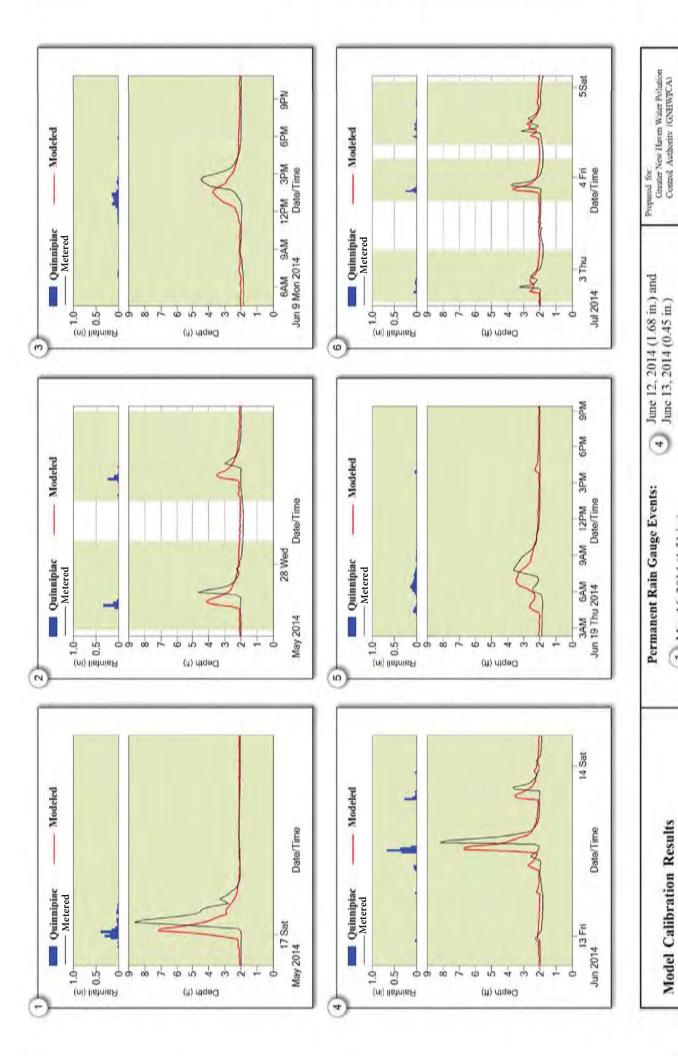
5 June 19, 2014 (0.78 in.)

fuly 2, 2014 (0.38 in.), 6 July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)

Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)







July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)

9

June 19, 2014 (0.78 in.)

2

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

(2)

Flow Meter: OF-015 US

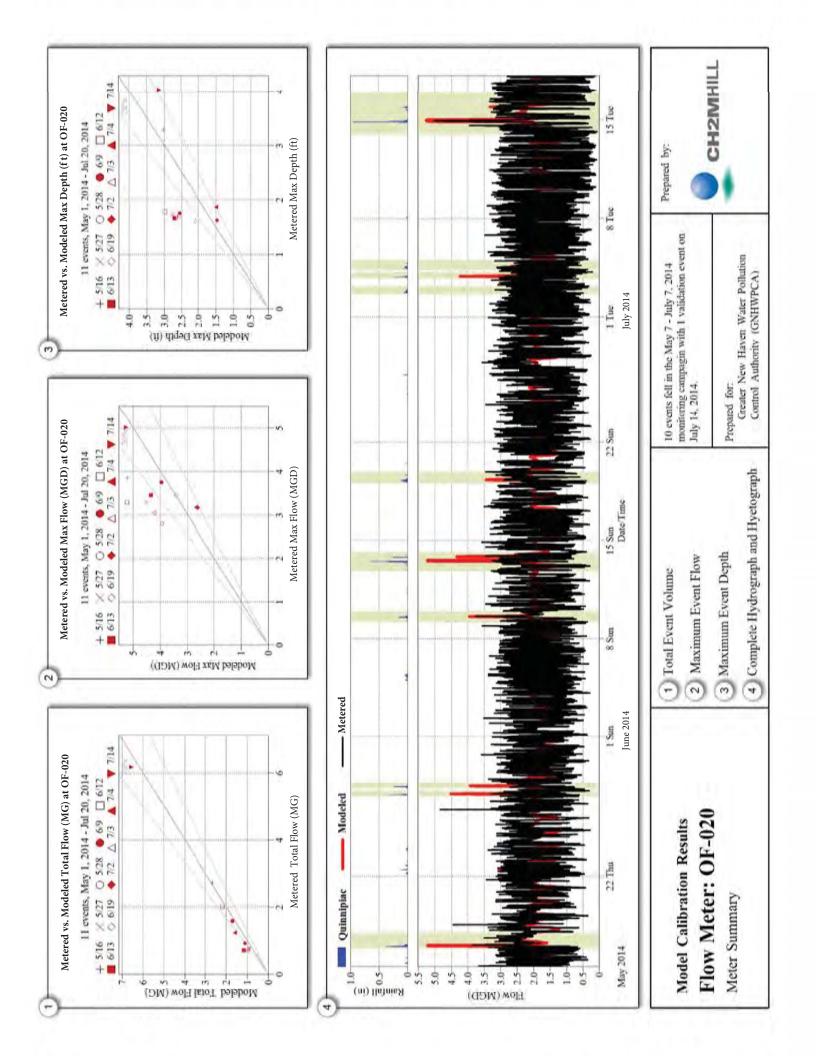
Event Comparison: Depth

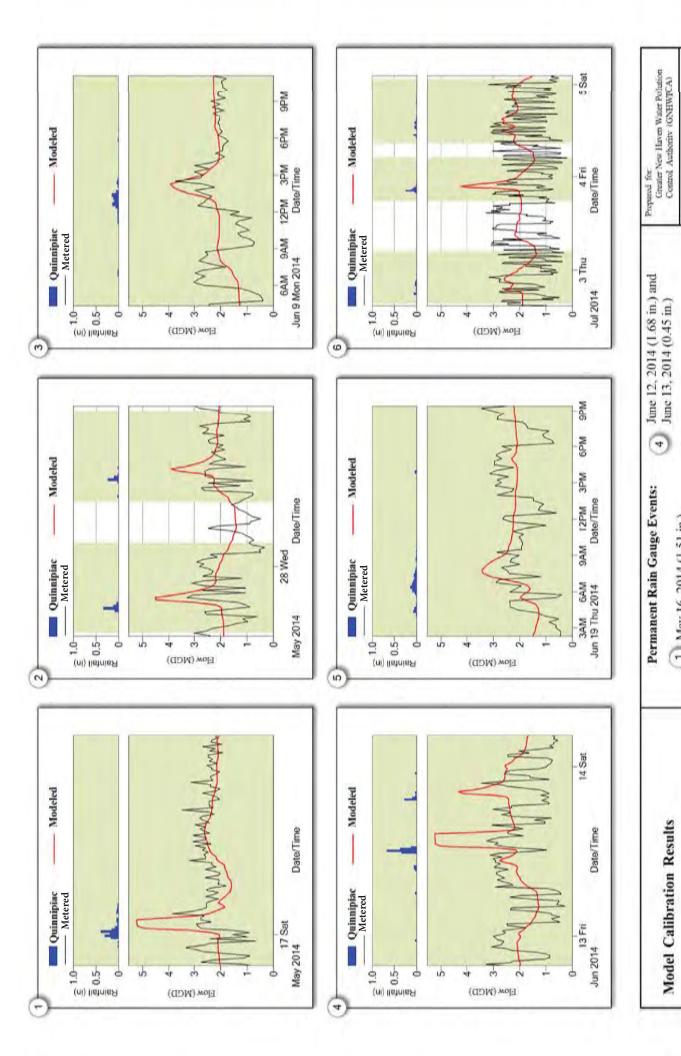
June 9, 2014 (0.74 in.)

(0)

May 16, 2014 (1.51 in.)

Ē





July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)

9

June 19, 2014 (0.78 in.)

2

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

(2)

Flow Meter: OF-020

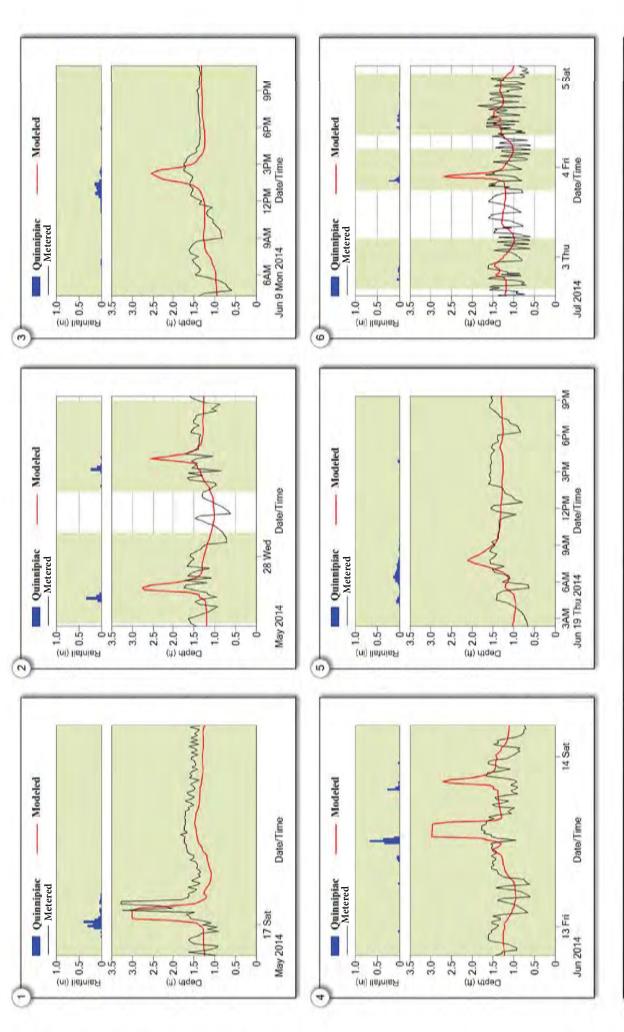
Event Comparison: Flow

Model Calibration Results

June 9, 2014 (0.74 in.)

0

1) May 16, 2014 (1.51 in.)



1) May 16, 2014 (1.51 in.)

2) May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

Flow Meter: OF-020

Event Comparison: Depth

Model Calibration Results

3) June 9, 2014 (0.74 in.)

4 June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.)

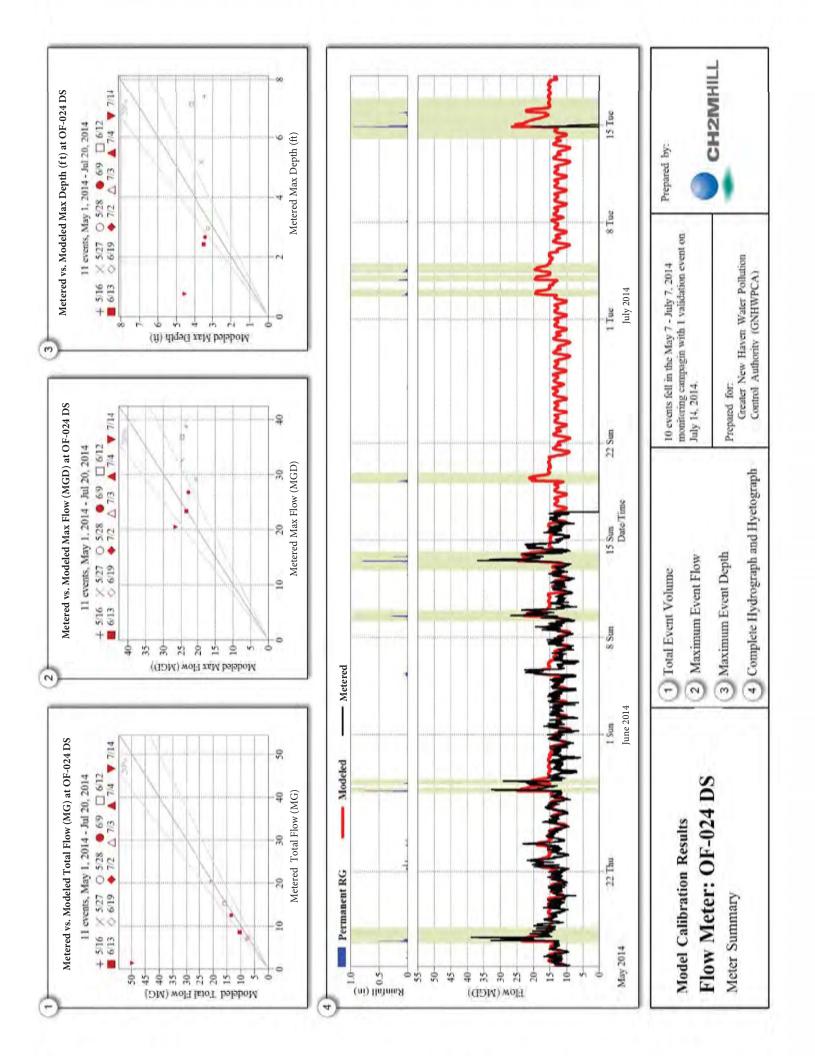
5 June 19, 2014 (0.78 in.)

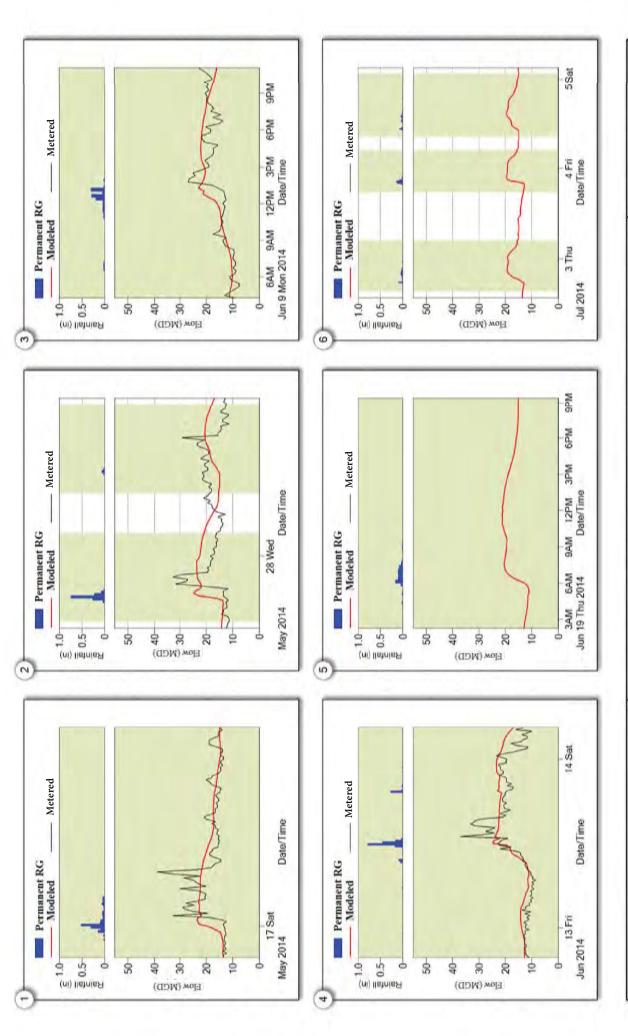
July 2, 2014 (0.38 in.), 6 July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)

Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)









1 May 16, 2014 (1.61 in.)

Flow Meter: OF-024 DS

Event Comparison: Flow

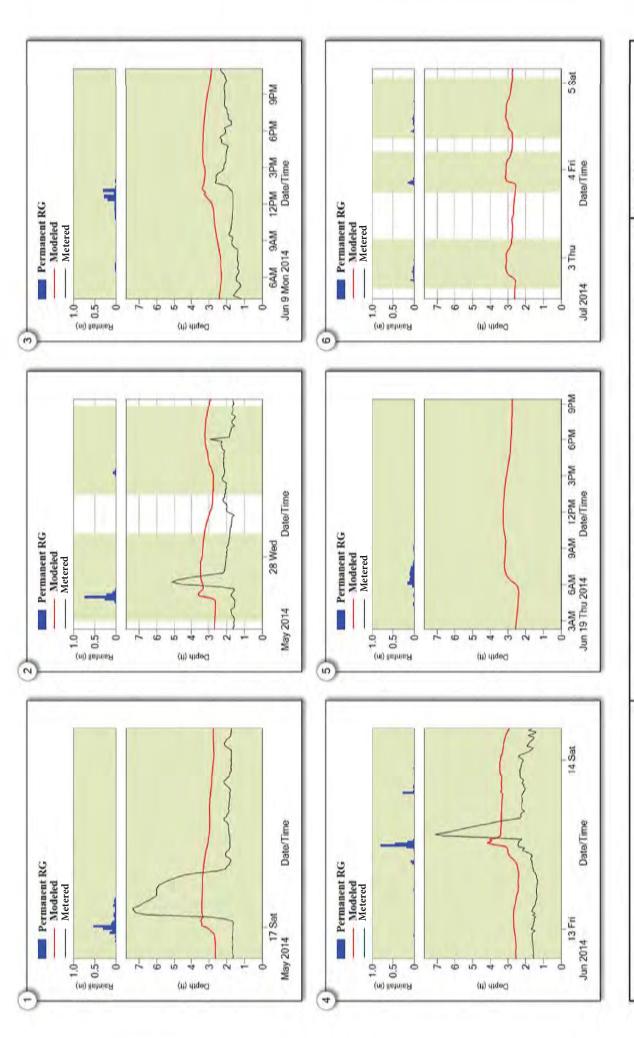
Model Calibration Results

- May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)
- June 9, 2014 (1.02 in.) 0
- June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.) 7
- June 19, 2014 (0.74 in.) 9
- July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 9
- Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)









May 16, 2014 (1.61 in.) F

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)

Flow Meter: OF-024 DS

Event Comparison: Depth

Model Calibration Results

6

June 9, 2014 (1.02 in.)

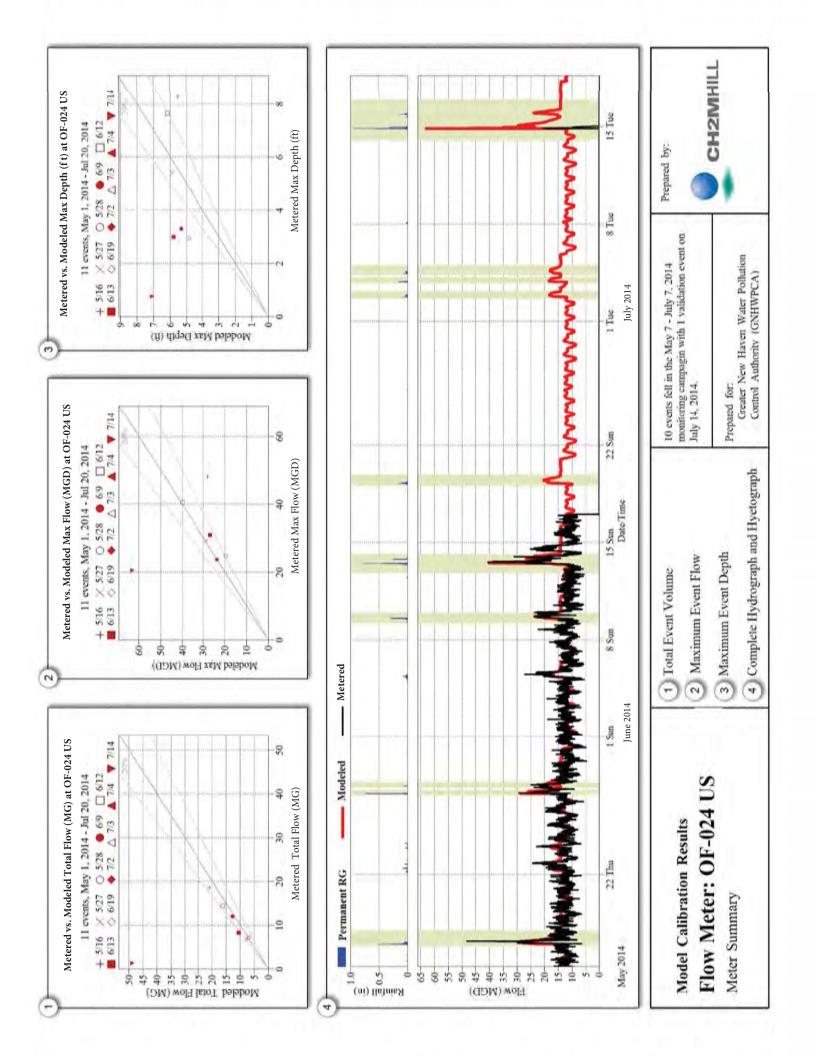
June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.) 4

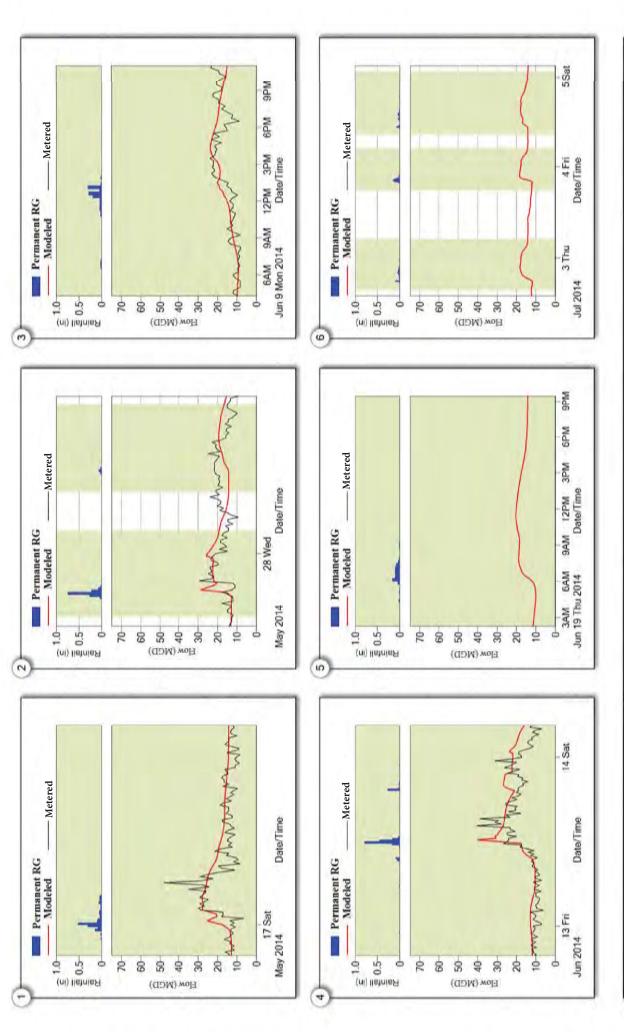
June 19, 2014 (0.74 in.) 2

July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 60

Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)







1) May 16, 2014 (1.61 in.)

Flow Meter: OF-024 US

Event Comparison: Flow

Model Calibration Results

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)

June 9, 2014 (1.02 in.) (0)

June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.) 7

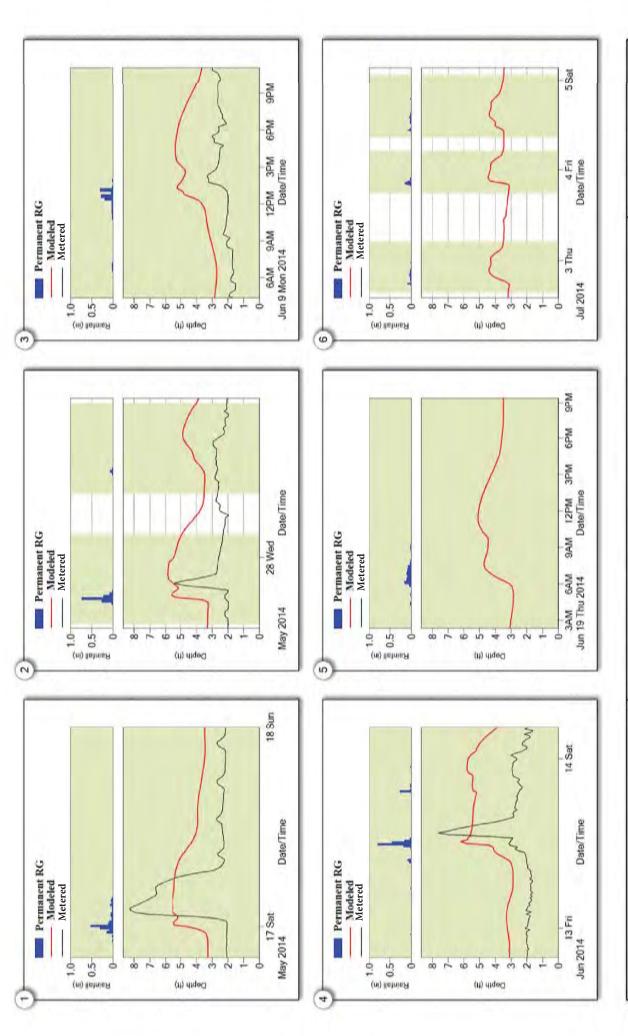
June 19, 2014 (0.74 in.) 2

July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 9

Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)







- 1) May 16, 2014 (1.61 in.)
- 2) May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.)

Flow Meter: OF-024 US

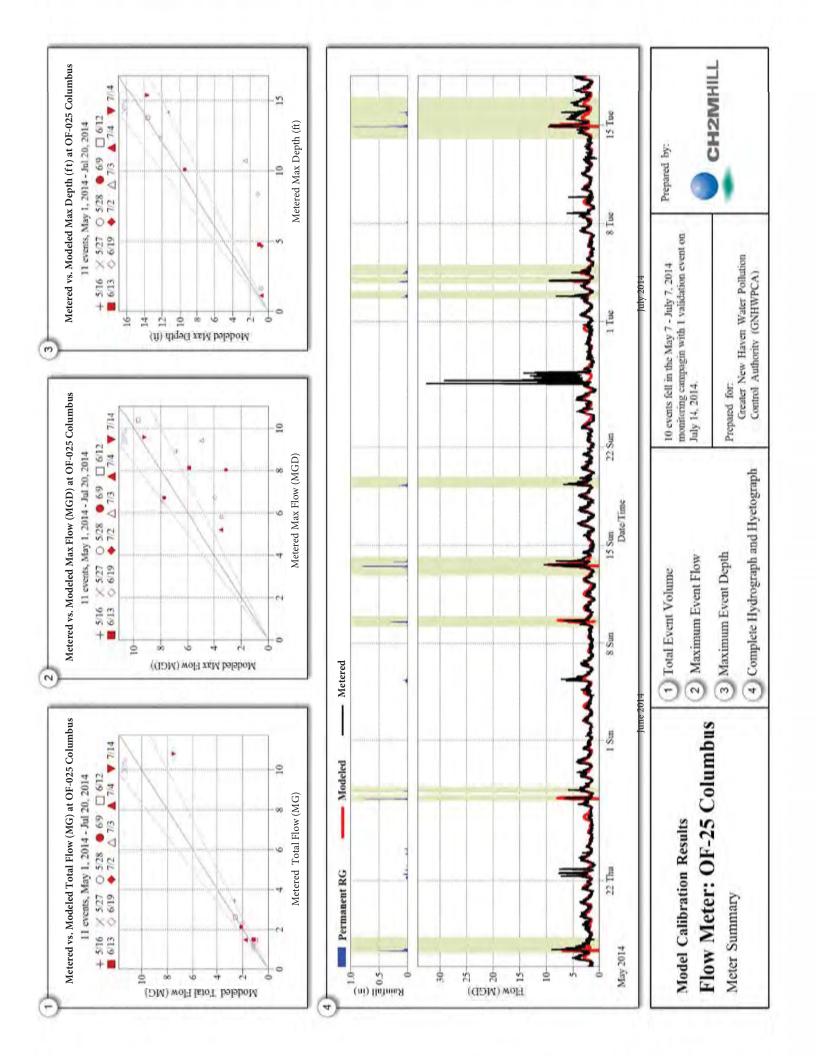
Event Comparison: Depth

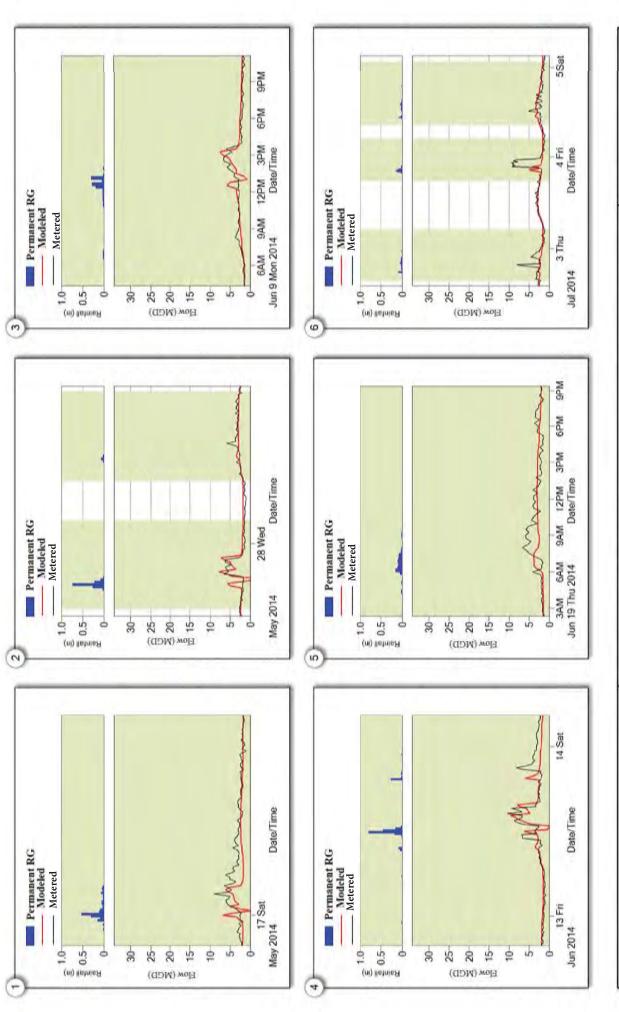
Model Calibration Results

- 3 June 9, 2014 (1.02 in.)
- 4 June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.)
- 5 June 19, 2014 (0.74 in.)
- fuly 2, 2014 (0.40 in.), 6 July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.)
- Prepared for Greater New Haven Water Polistion Control Authority (GNHWPCA)









1) May 16, 2014 (1.61 in.)

Flow Meter: OF-025 Columbus

Event Comparison: Flow

Model Calibration Results

2) May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.)

3 June 9, 2014 (1.02 in.)

4 June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.)

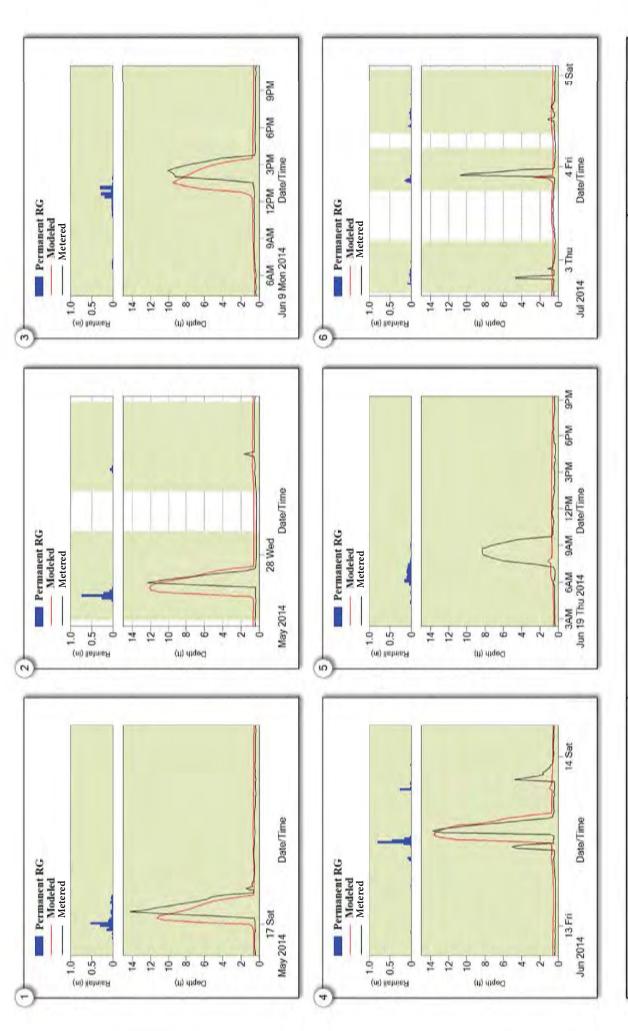
5 June 19, 2014 (0.74 in.)

July 2, 2014 (0.40 in.), 6 July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.)

Prepared for Greater New Haven Water Polintion Control Authority (GNHWPCA)







May 16, 2014 (1.61 in.) Ē

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)

Flow Meter: OF-025 Columbus

Event Comparison: Depth

Model Calibration Results

June 9, 2014 (1.02 in.) 9

June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.) 4

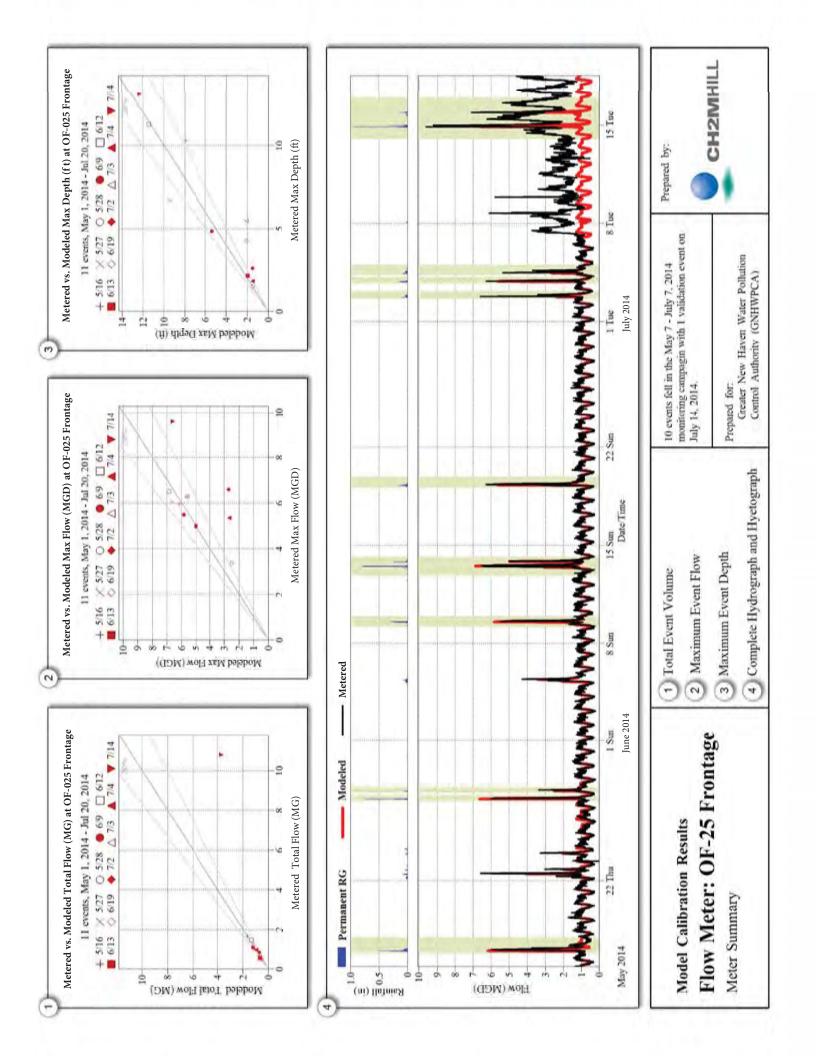
June 19, 2014 (0.74 in.) 2

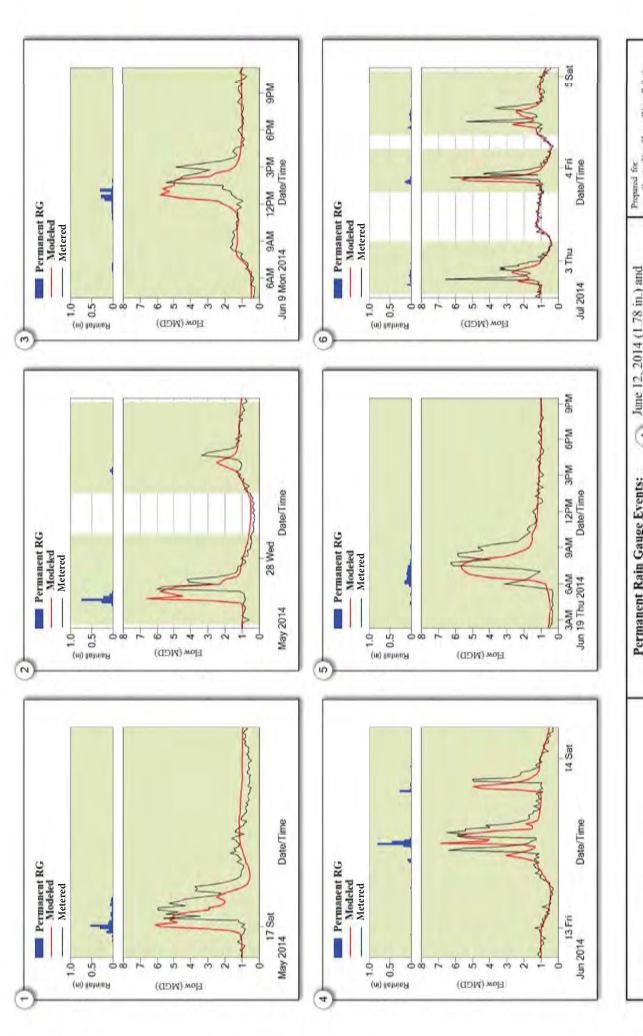
July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 60

Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)









May 16, 2014 (1.61 in.) P

Flow Meter: OF-025 Frontage

Event Comparison: Flow

Model Calibration Results

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)

June 9, 2014 (1.02 in.) 9

June 13, 2014 (0.32 in.) 4

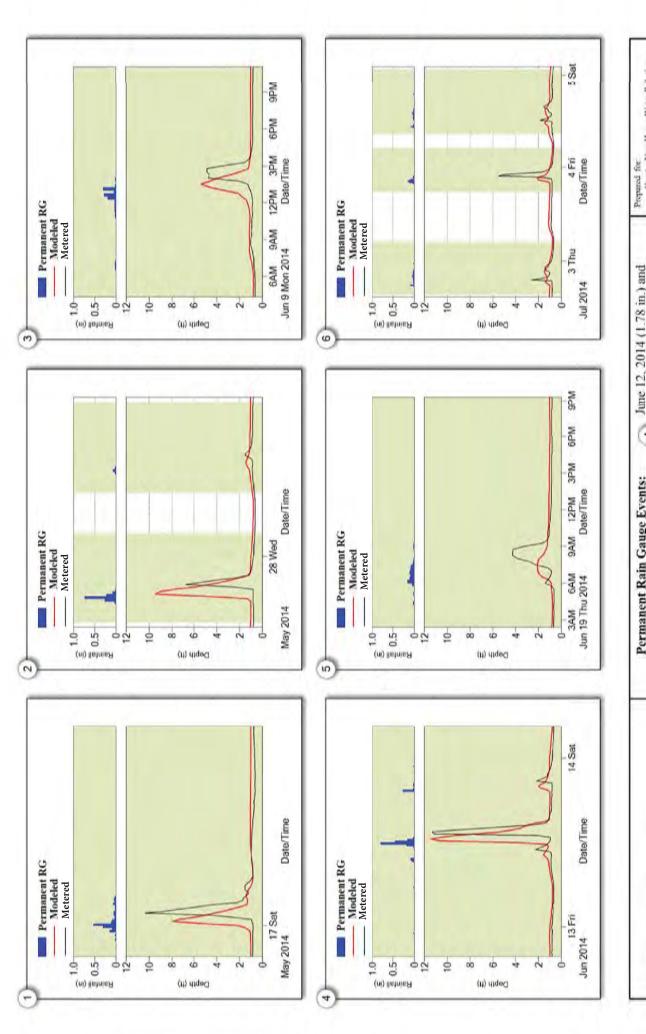
June 19, 2014 (0.74 in.) 2

July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 60

Prepared for Greater New Haven Water Polistion Centrel Authority (GNHWPCA)



CH2MHILL



May 16, 2014 (1.61 in.) P

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)

Flow Meter: OF-025 Frontage

Event Comparison: Depth

Model Calibration Results

June 9, 2014 (1.02 in.) 9

June 13, 2014 (0.32 in.)

June 19, 2014 (0.74 in.) 2

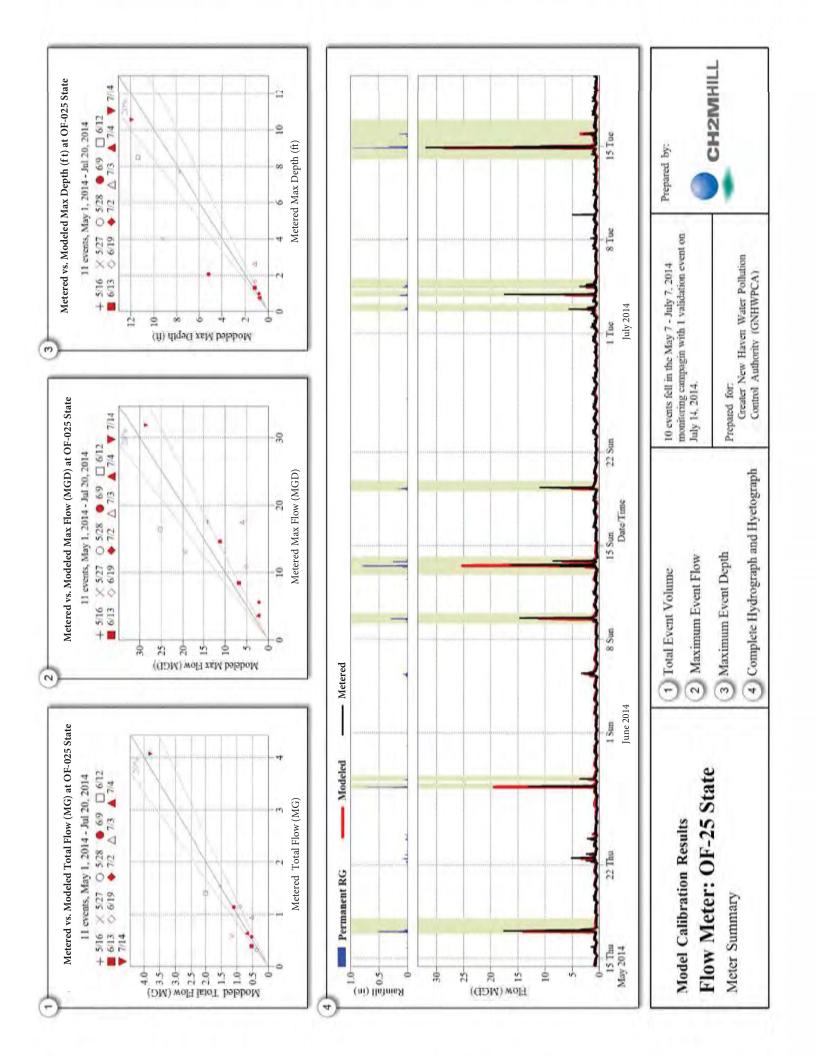
July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 60

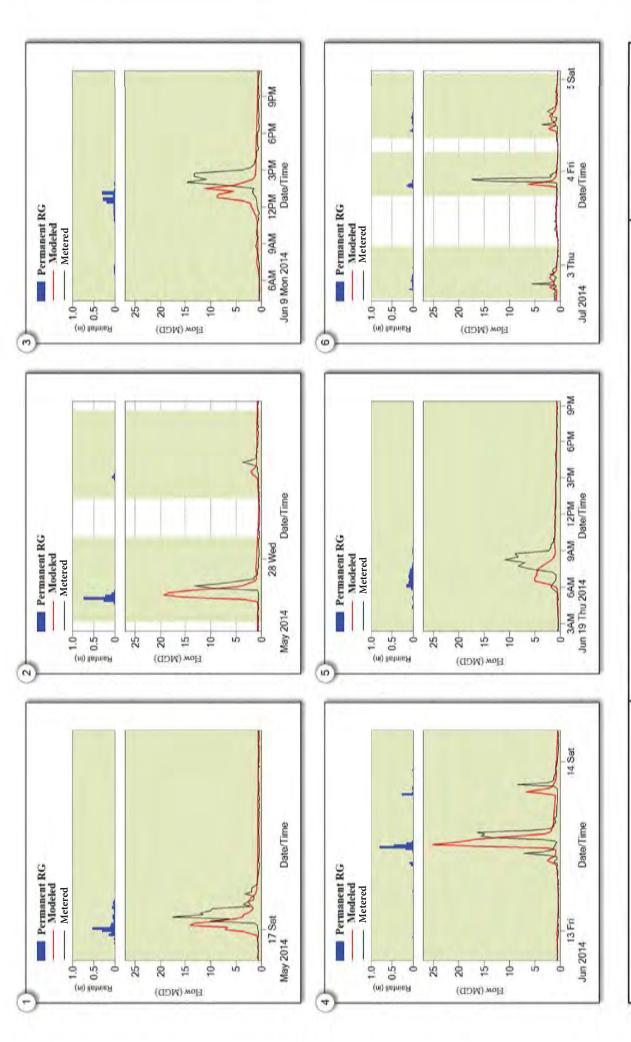
Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)





CH2MHILL





May 16, 2014 (1.61 in.) Ē

Flow Meter: OF-025 State

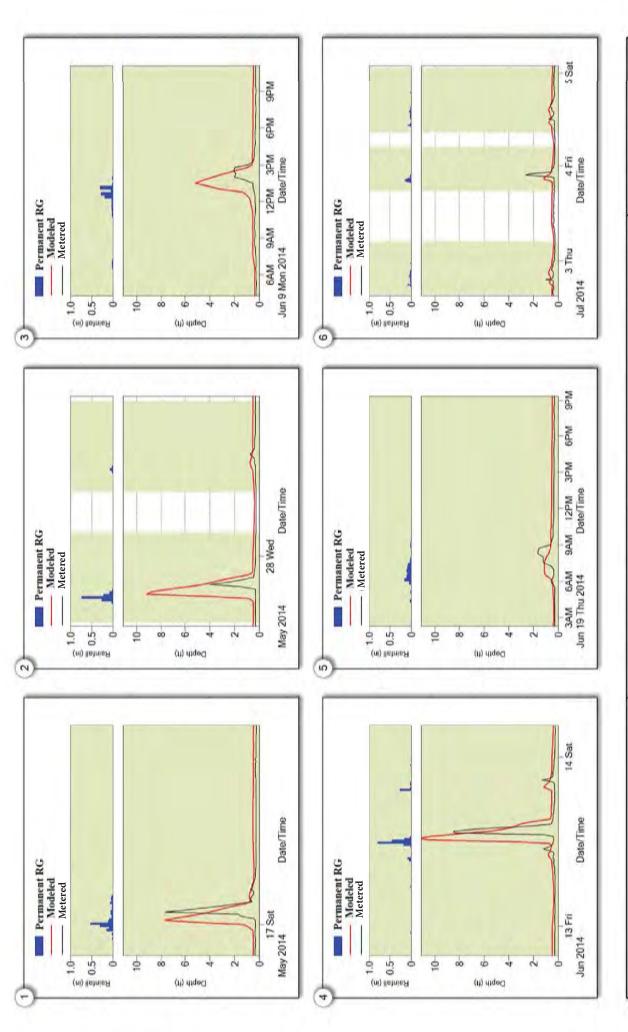
Event Comparison: Flow

Model Calibration Results

- May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)
- June 9, 2014 (1.02 in.) 9
- June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.) 4
- June 19, 2014 (0.74 in.) 2
- July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 60
- Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)







May 16, 2014 (1.61 in.) F

Flow Meter: OF-025 State

Event Comparison: Depth

Model Calibration Results

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)

June 9, 2014 (1.02 in.) 9

June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.) 4

June 19, 2014 (0.74 in.) 2

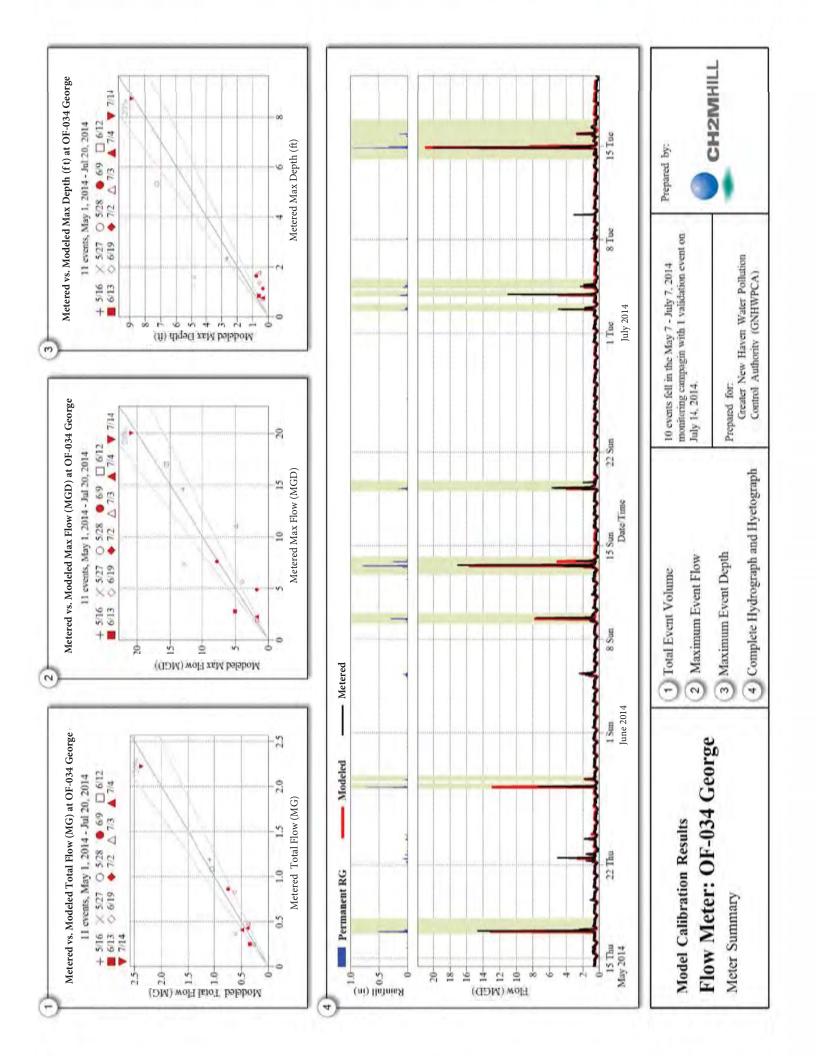
July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 60

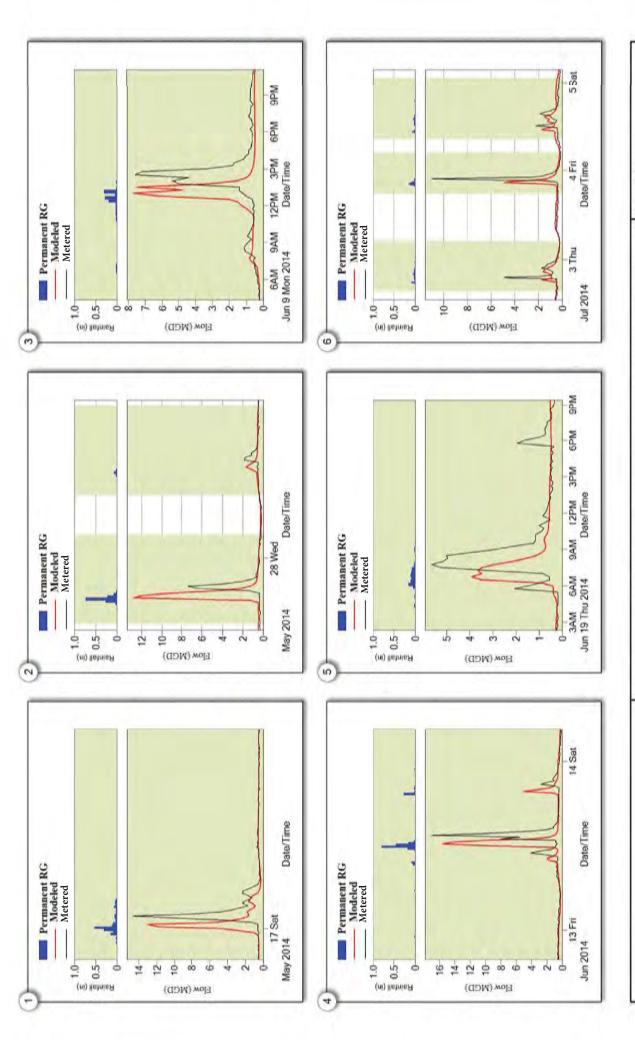
Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)





CH2MHILL





May 16, 2014 (1.61 in.) F

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)

Flow Meter: OF-034 George

Event Comparison: Flow

Model Calibration Results

June 9, 2014 (1.02 in.) 9

June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.) 4

June 19, 2014 (0.74 in.) 2

July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 60

Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)







May 16, 2014 (1.61 in.) P

Flow Meter: OF-034 George

Event Comparison: Depth

Model Calibration Results

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)

6

June 9, 2014 (1.02 in.)

June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.) 4

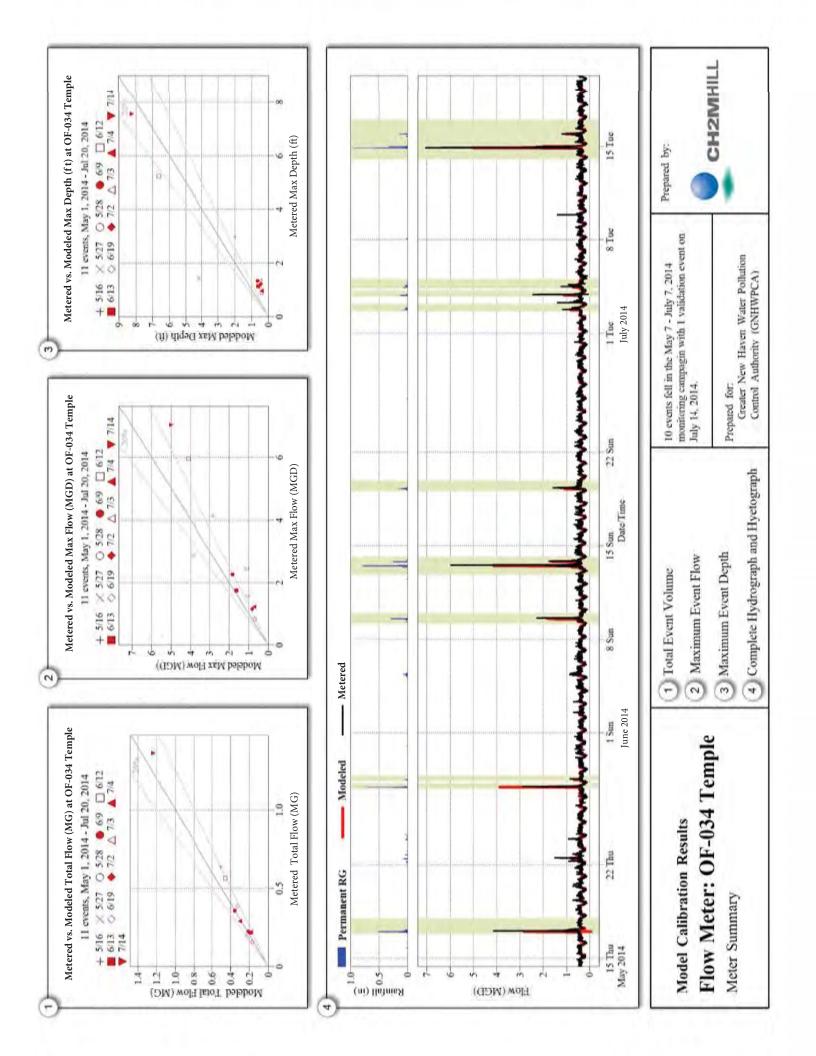
June 19, 2014 (0.74 in.) 2

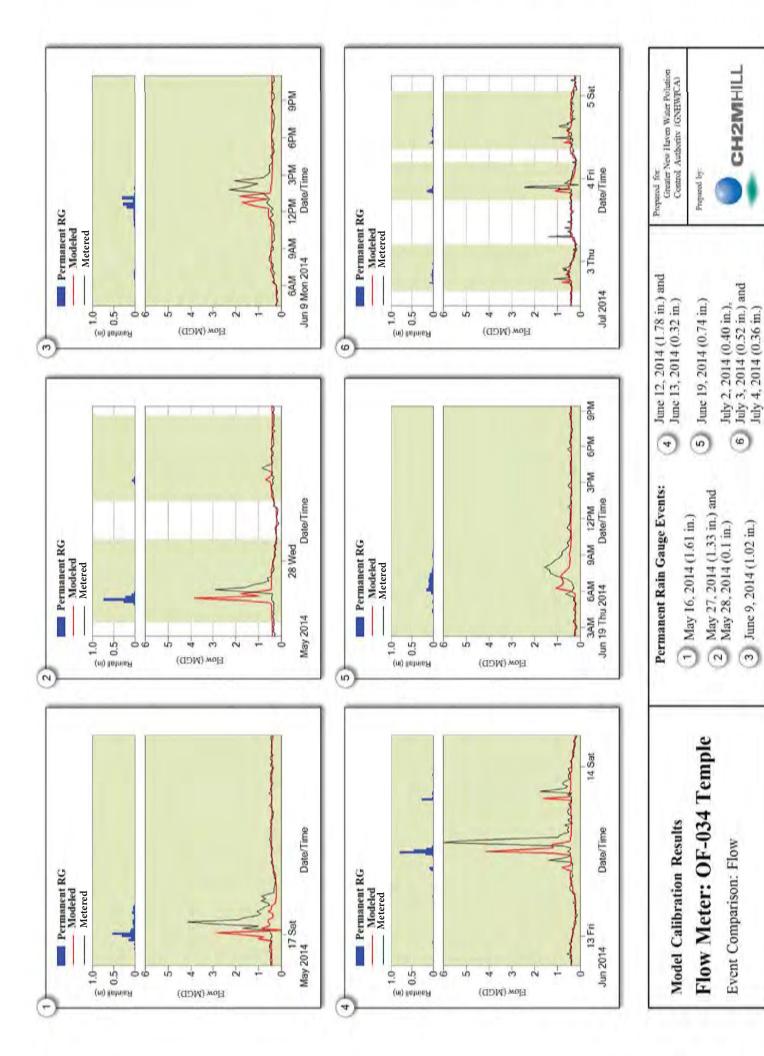
July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 60

Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)









June 9, 2014 (1.02 in.)

9

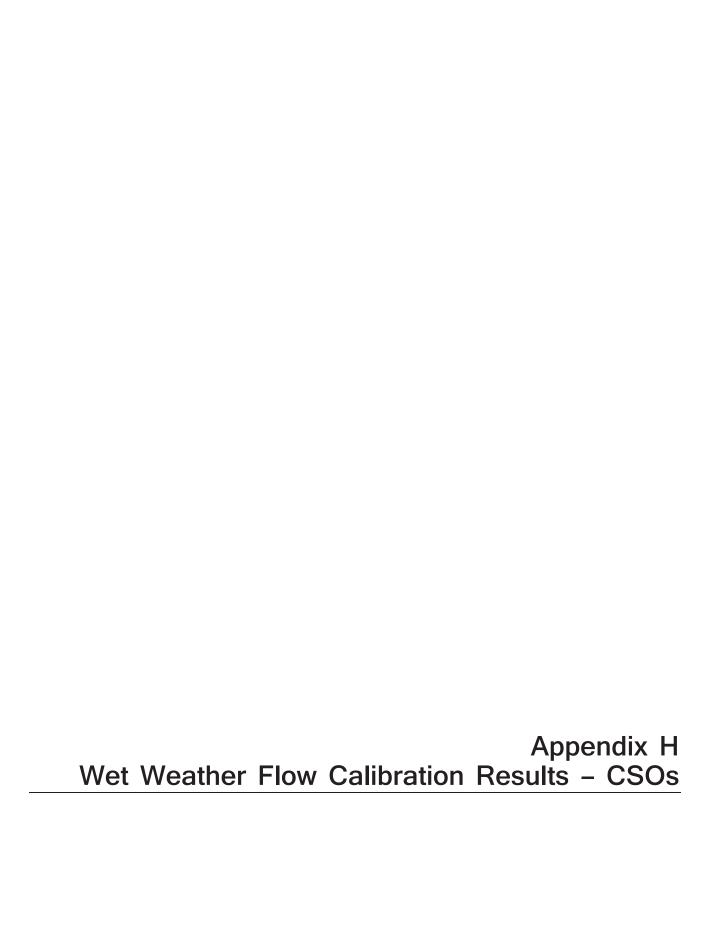


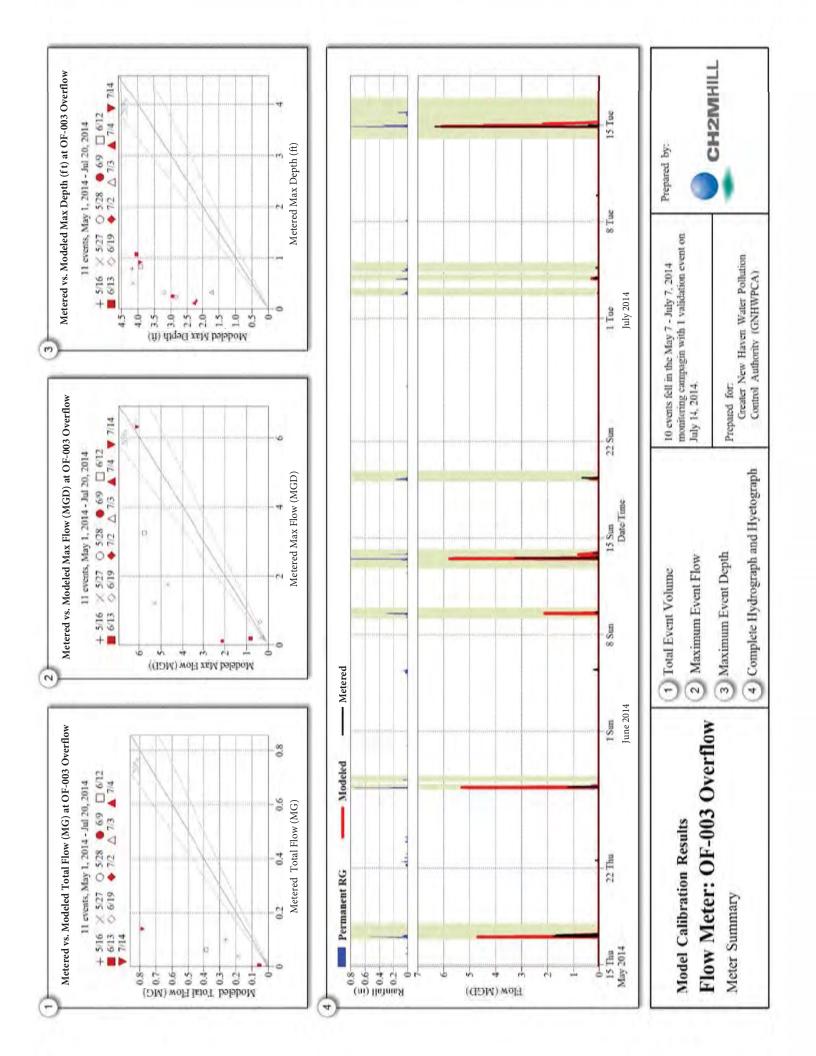
60

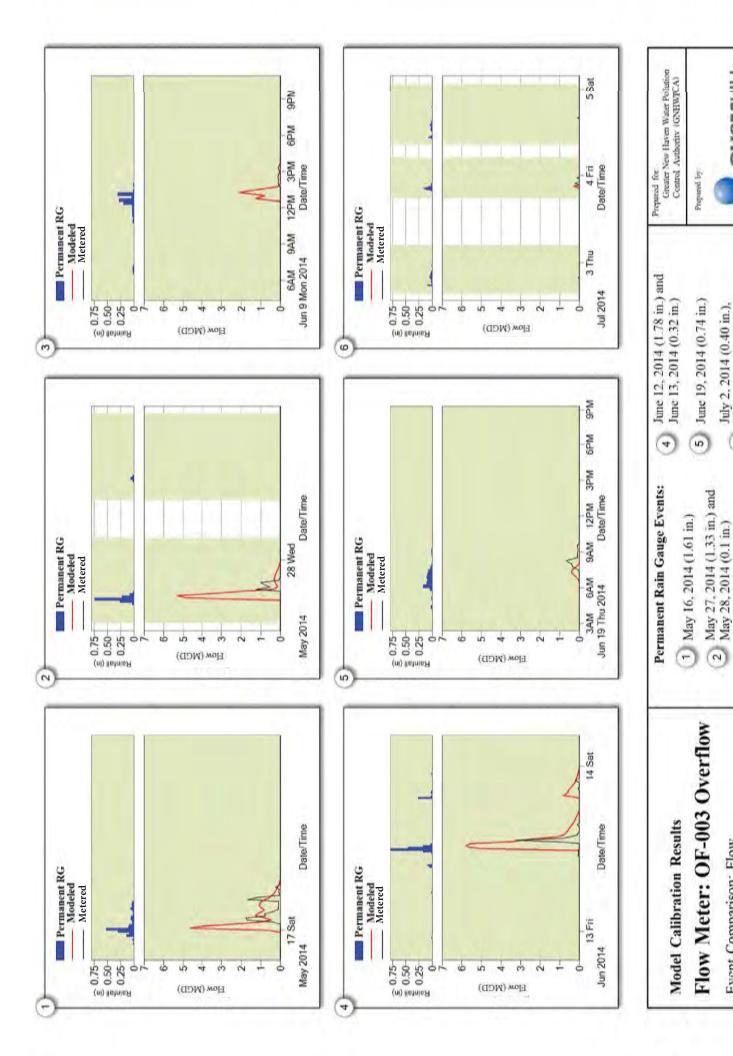
June 9, 2014 (1.02 in.)

6

Event Comparison: Depth







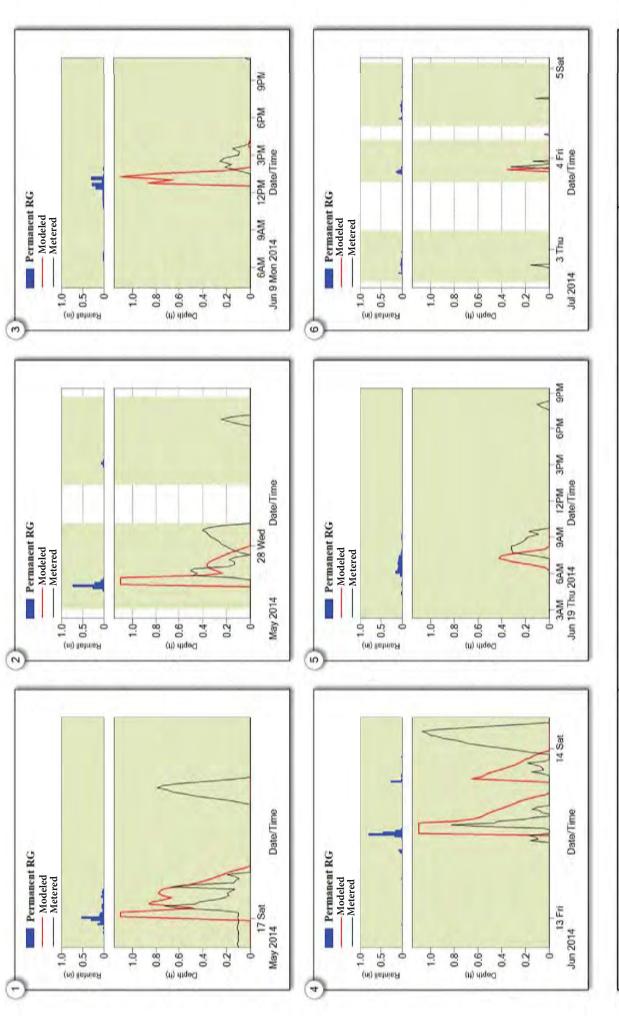
July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.)

60

June 9, 2014 (1.02 in.)

9

Event Comparison: Flow



May 16, 2014 (1.61 in.) Ē

Flow Meter: OF-003 Overflow

Event Comparison: Depth

Model Calibration Results

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)

June 9, 2014 (1.02 in.) 6

June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.) 4

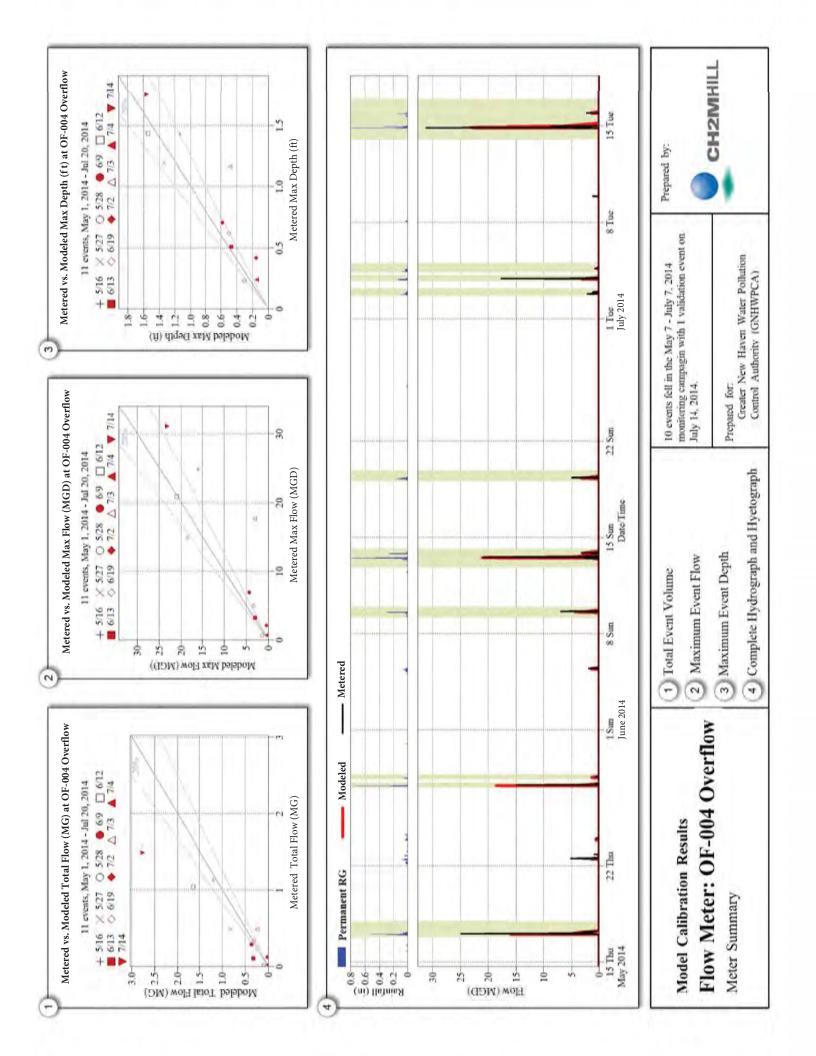
June 19, 2014 (0.74 in.) 2

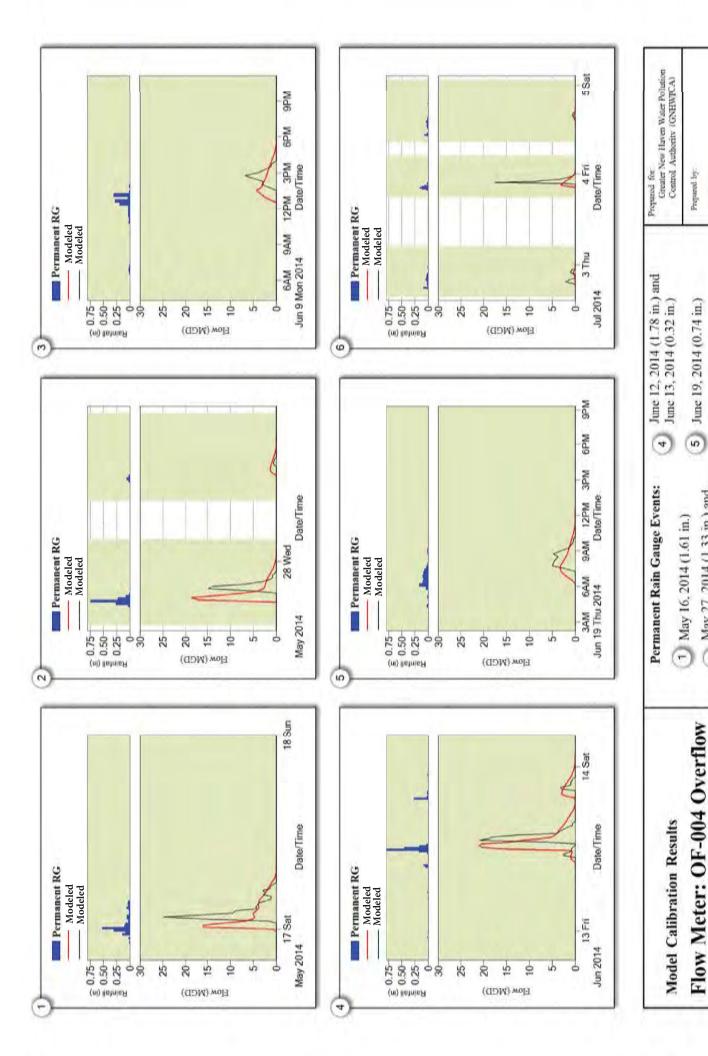
July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 9

Greater New Haven Water Pollution Control Authority (GNHWPCA) Prepared for









July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.)

9

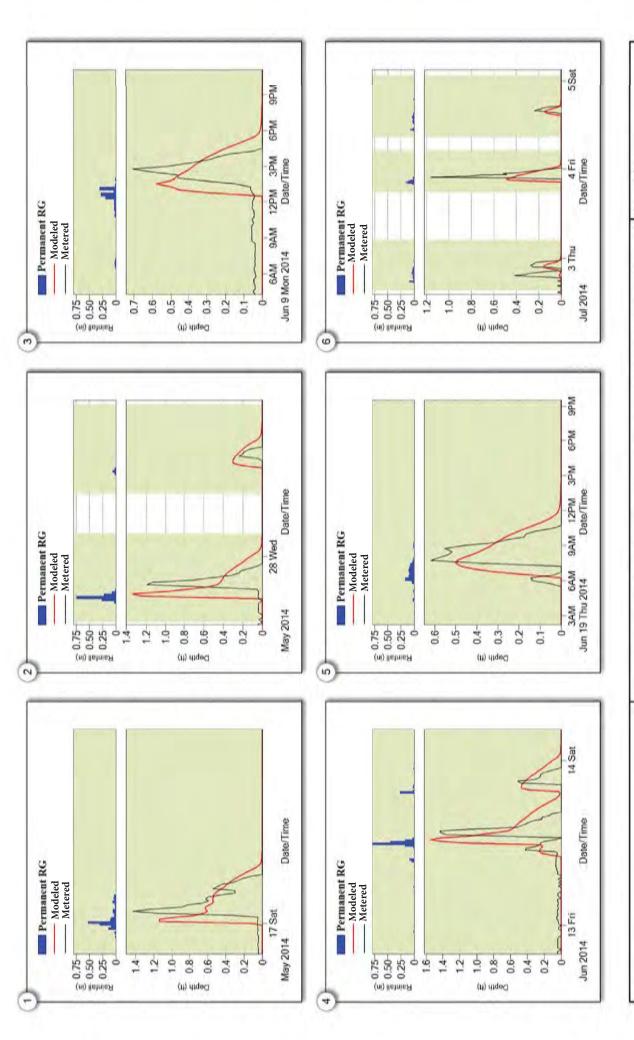
May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.)

(2)

Event Comparison: Flow

June 9, 2014 (1.02 in.)

0



May 16, 2014 (1.61 in.) F

May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)

Flow Meter: OF-004 Overflow

Event Comparison: Depth

Model Calibration Results

9

June 9, 2014 (1.02 in.)

June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.) 4

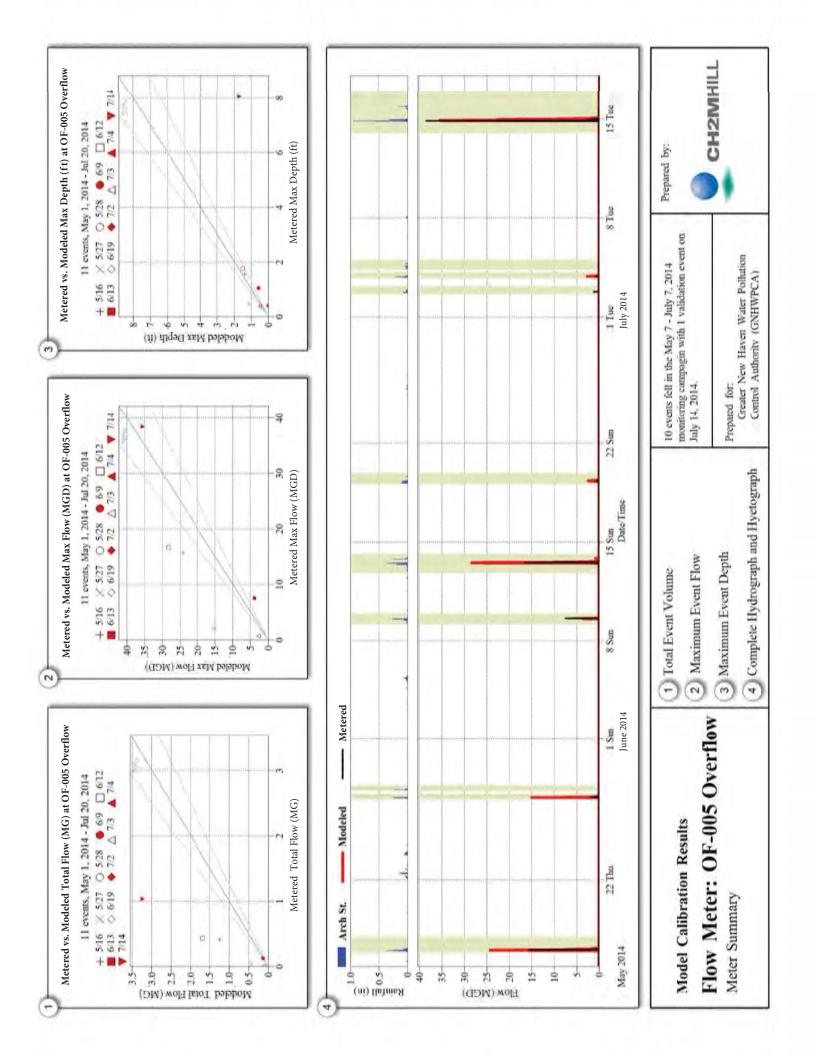
June 19, 2014 (0.74 in.) 2

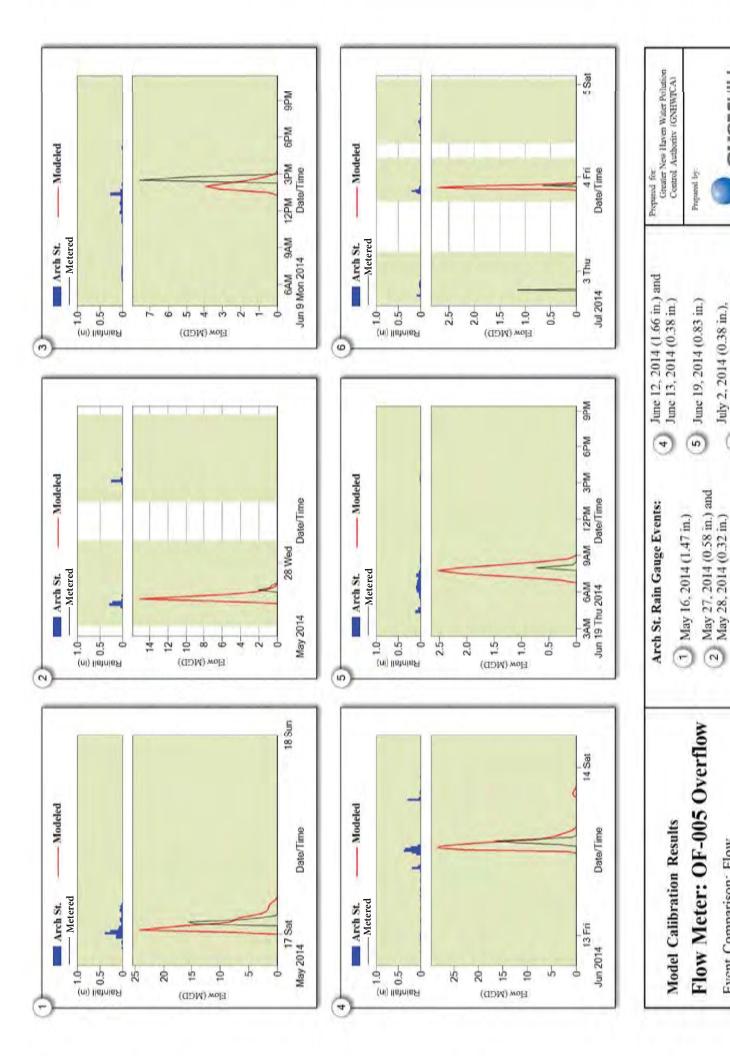
July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 9

Greater New Haven Water Polistion Control Authority (GNHWPCA) Prepared for









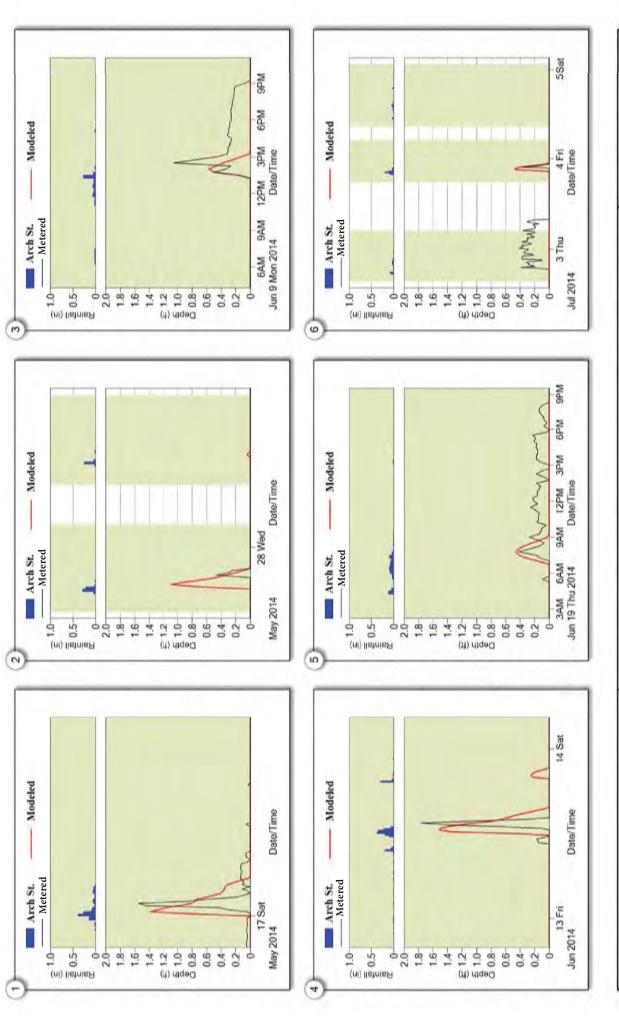
July 2, 2014 (0.38 in.), July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.)

9

June 9, 2014 (0.70 in.)

(0)

Event Comparison: Flow



Arch St. Rain Gauge Events:

1 May 16, 2014 (1.47 in.)

2) May 27, 2014 (0.58 in.) and May 28, 2014 (0.32 in.)

Flow Meter: OF-005 Overflow

Event Comparison: Depth

Model Calibration Results

3 June 9, 2014 (0.70 in.)

4 June 12, 2014 (1.66 in.) and June 13, 2014 (0.38 in.)

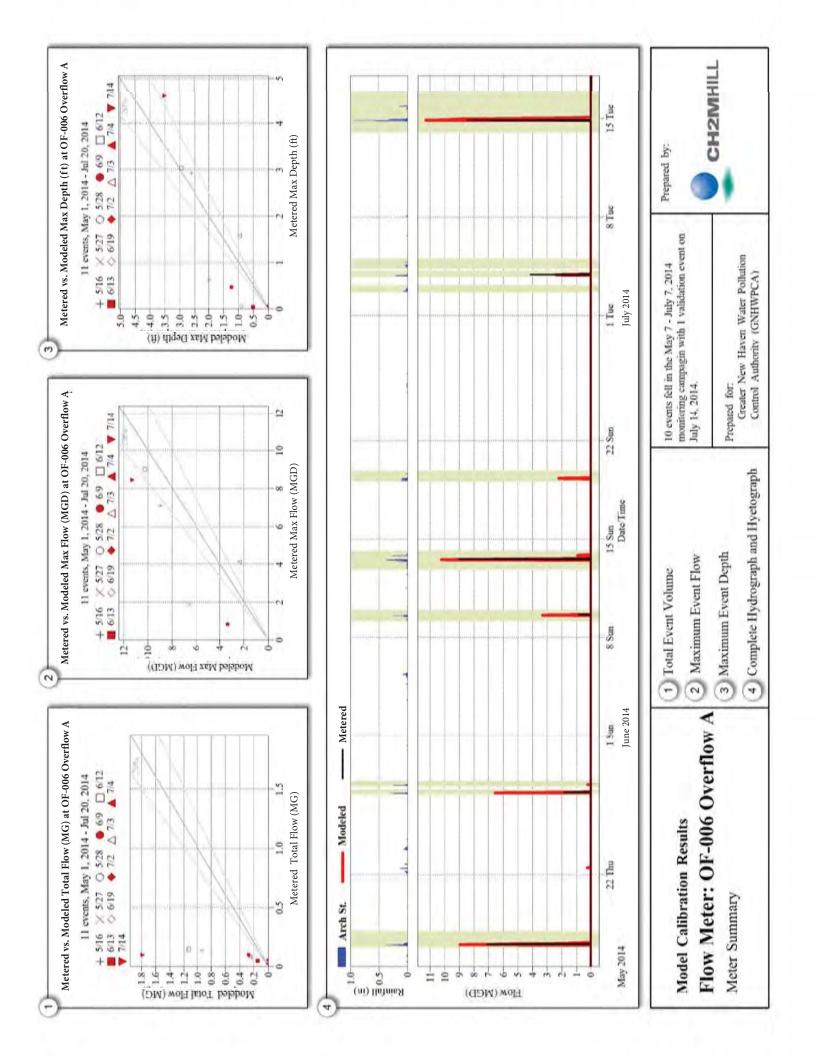
5 June 19, 2014 (0.83 in.)

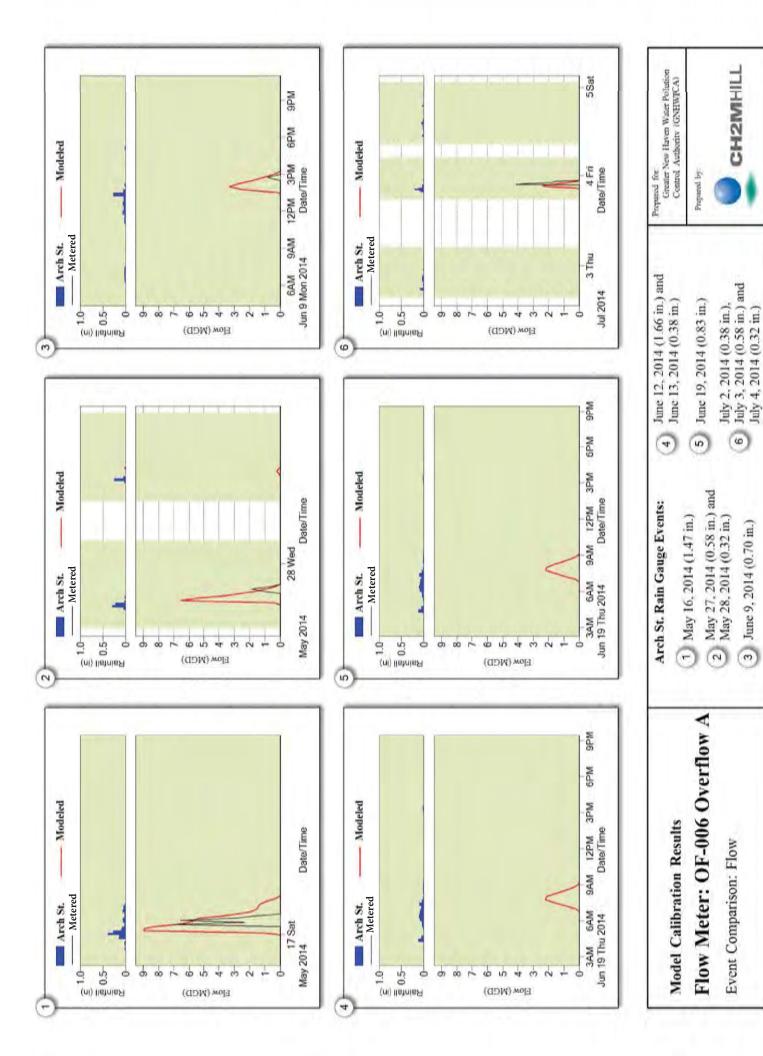
Fuly 2, 2014 (0.38 in.), 6 July 3, 2014 (0.58 in.) and July 4, 2014 (0.32 in.)

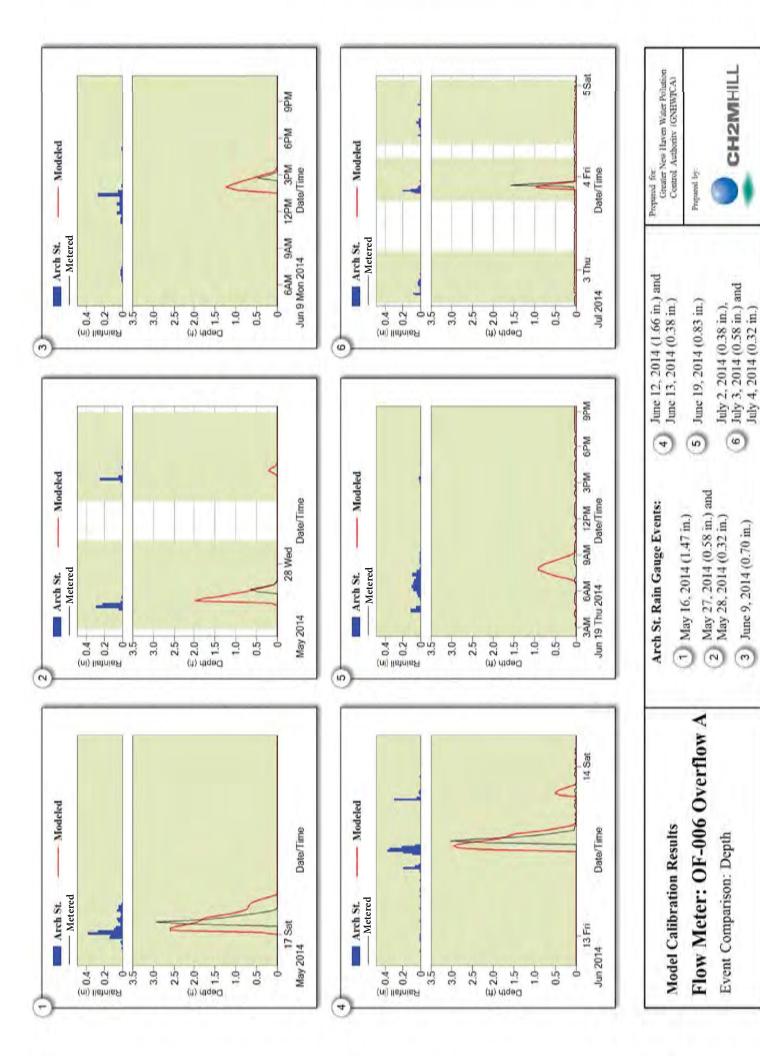
Prepared for Greater New Haven Water Polistion Control Authority (GNHWPCA)







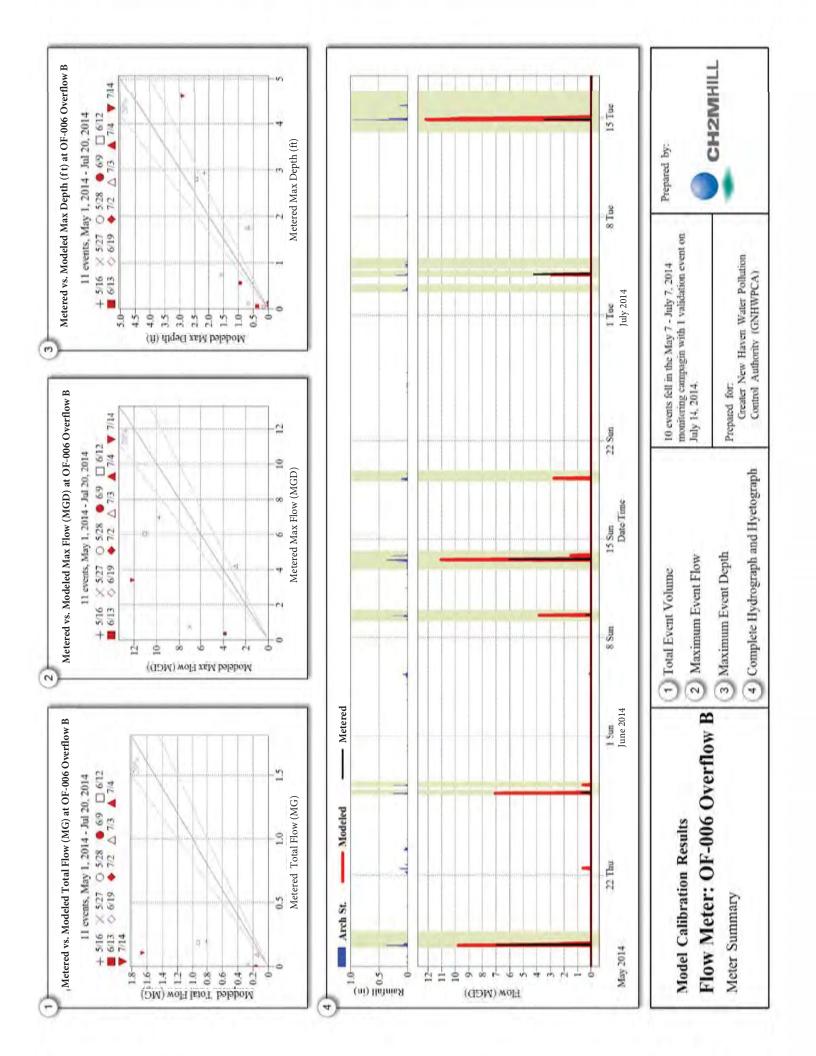


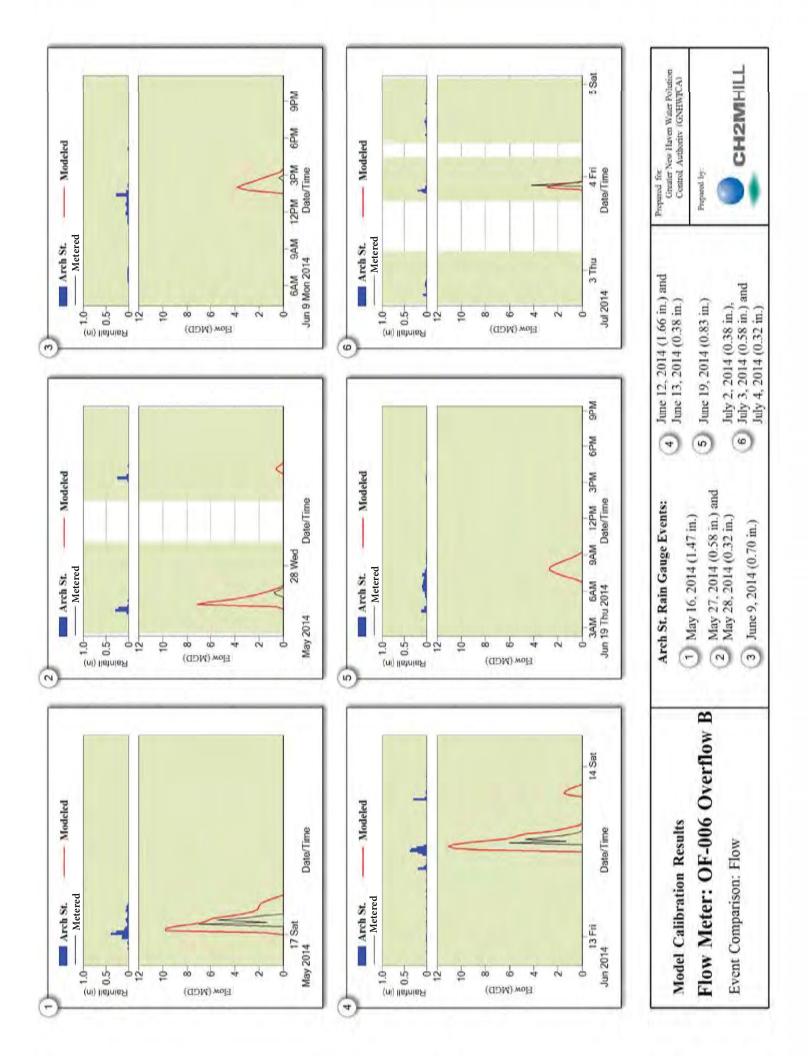


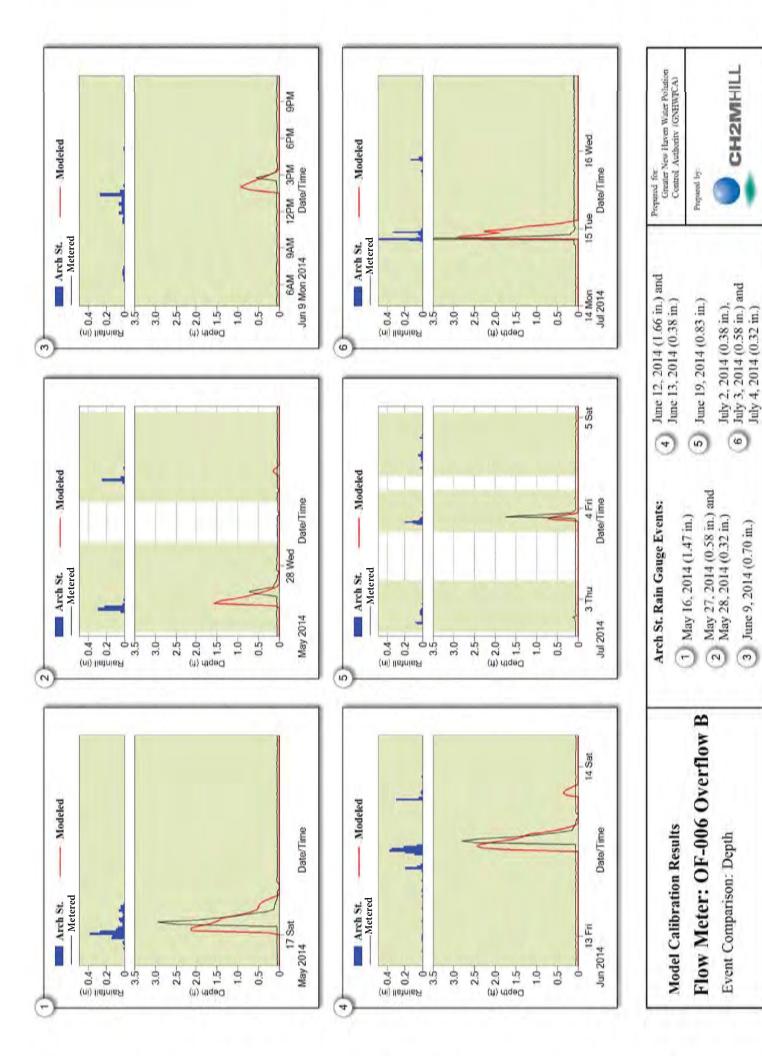
9

June 9, 2014 (0.70 in.)

6



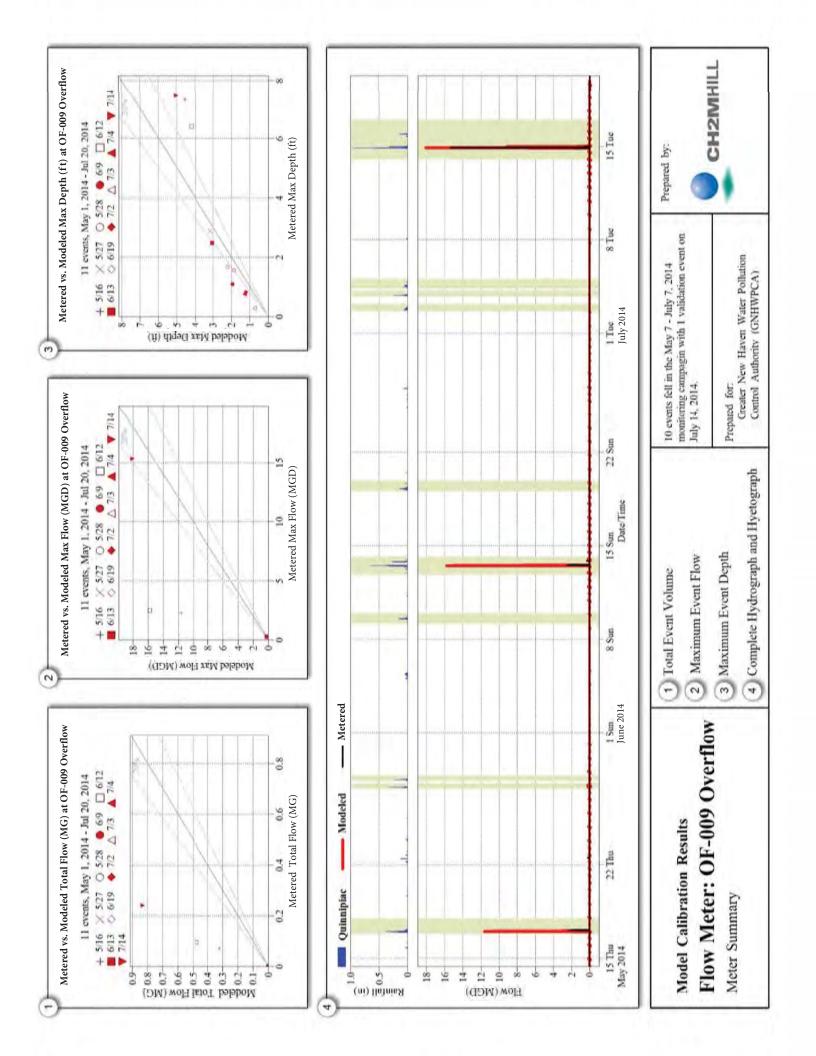


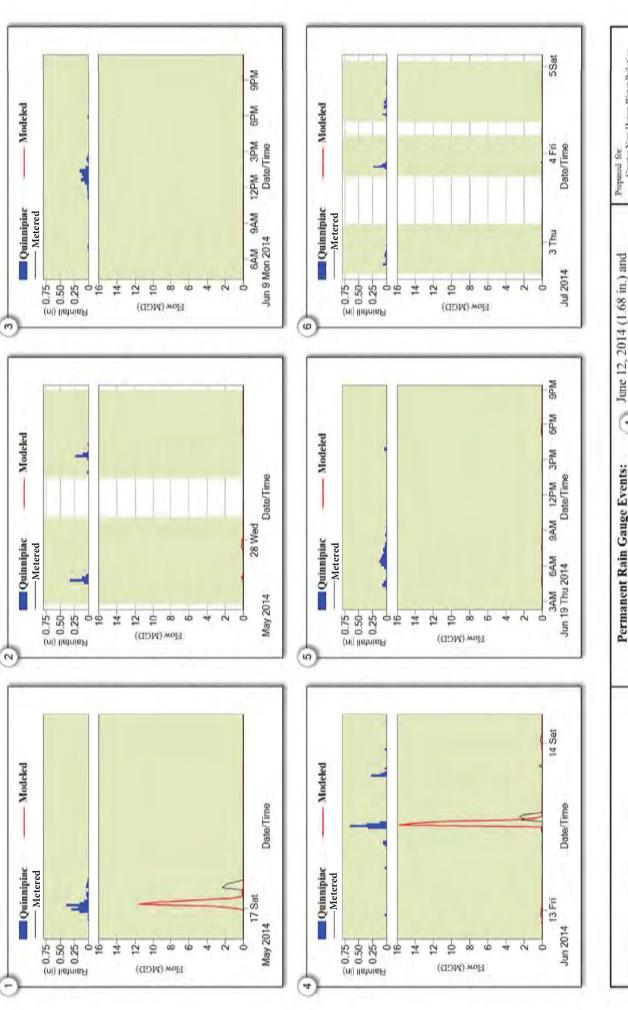


9

June 9, 2014 (0.70 in.)

0





1) May 16, 2014 (1.51 in.)

Flow Meter: OF-009 Overflow

Event Comparison: Flow

Model Calibration Results

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.) (2)

June 9, 2014 (0.74 in.) (0)

June 13, 2014 (0.45 in.) 4

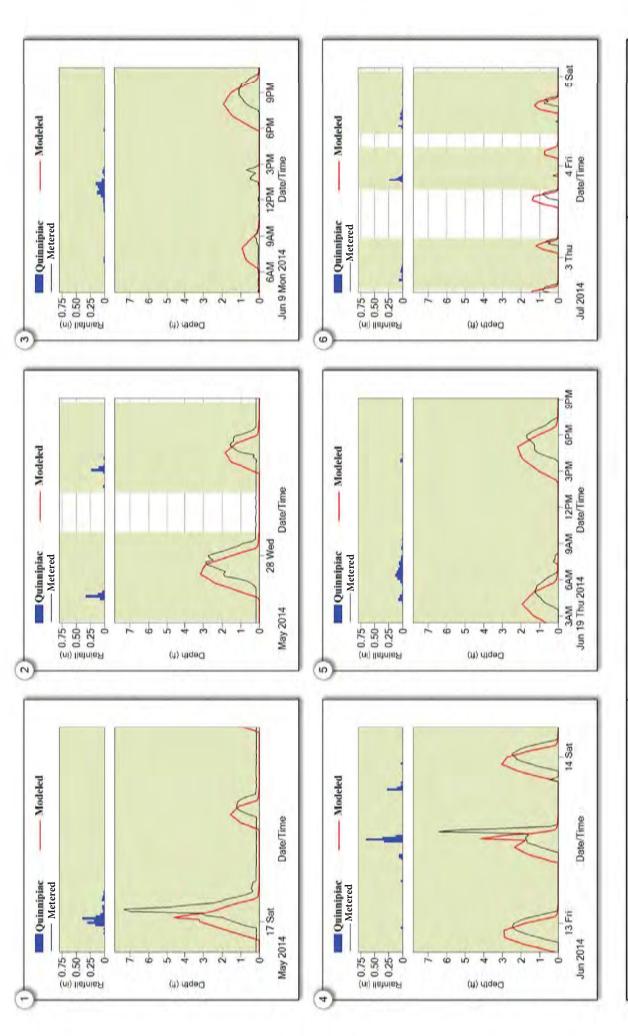
June 19, 2014 (0.78 in.) 2

July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.) 9

Greater New Haven Water Polistion Control Authority (GNHWPCA)







May 16, 2014 (1.51 in.) Ē

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.) (2)

Flow Meter: OF-009 Overflow

Event Comparison: Depth

Model Calibration Results

June 9, 2014 (0.74 in.)

6

June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.) 4

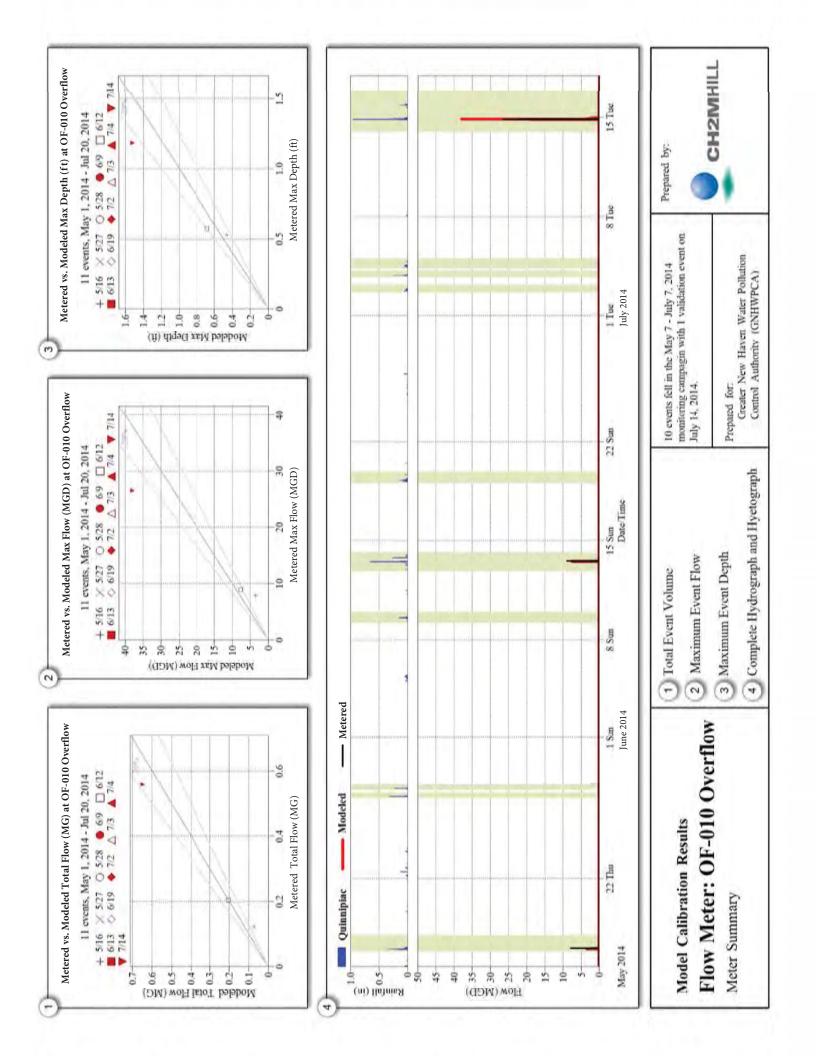
June 19, 2014 (0.78 in.) 2

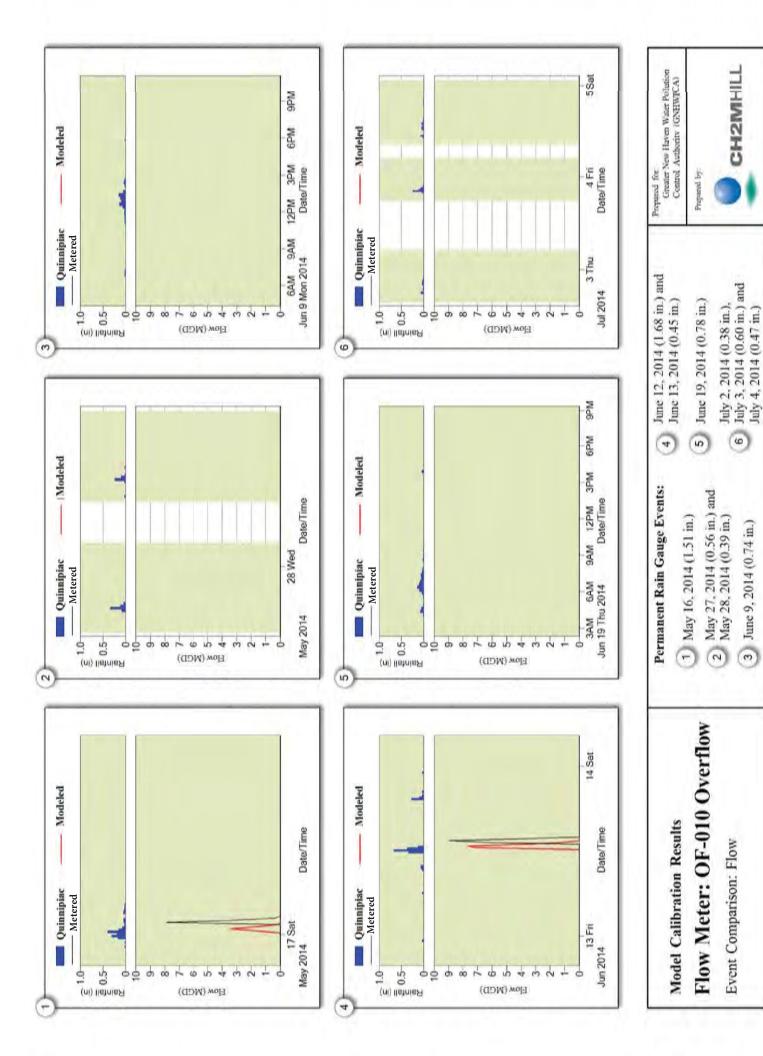
July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.) 60

Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)



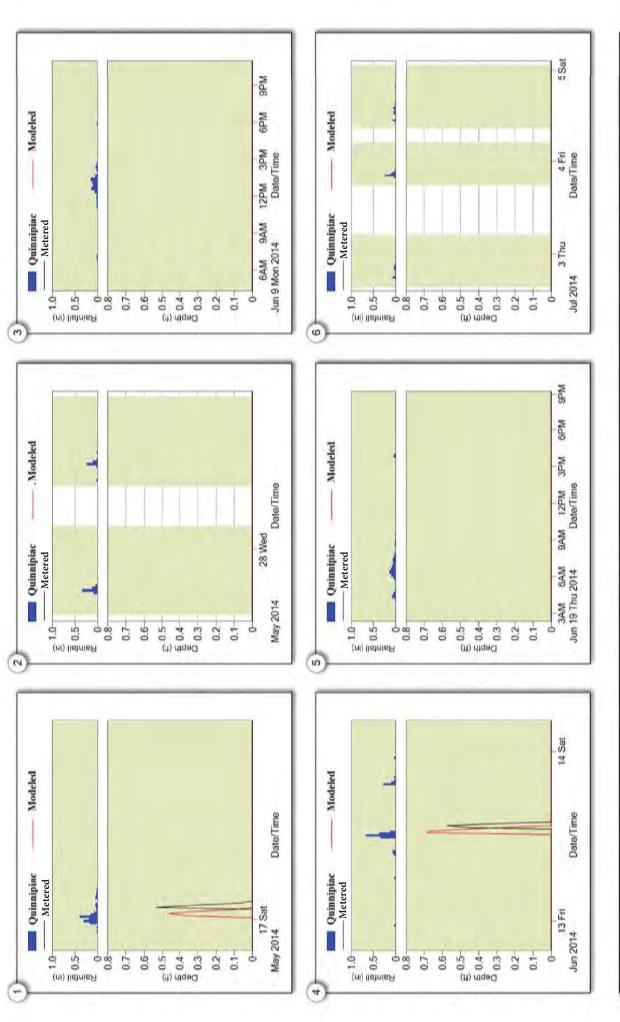
CH2MHILL





June 9, 2014 (0.74 in.)

6



- 1) May 16, 2014 (1.51 in.)
- 2) May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

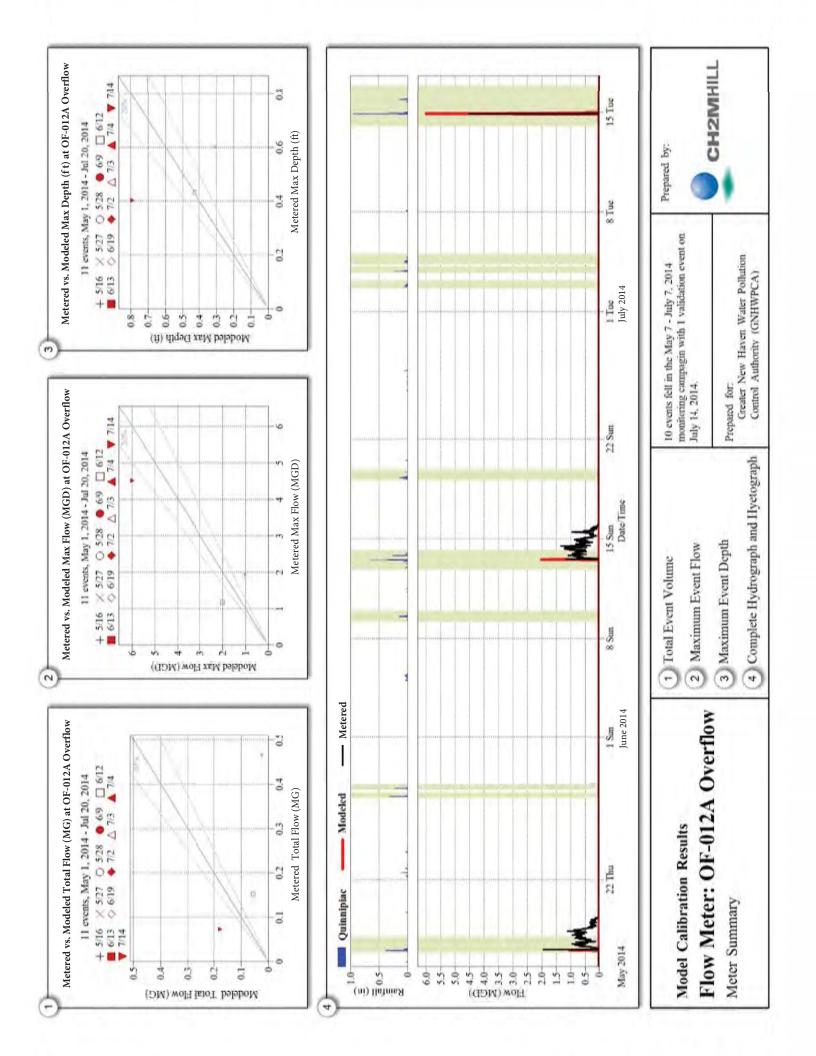
Flow Meter: OF-010 Overflow

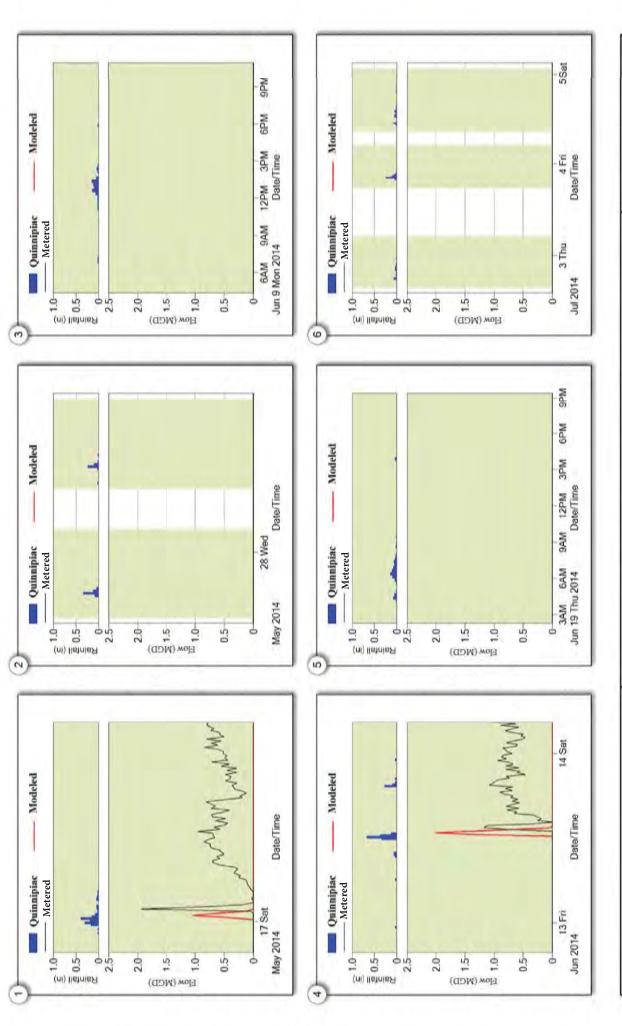
Event Comparison: Depth

- 3 June 9, 2014 (0.74 in.)
- 4 June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.)
- 5 June 19, 2014 (0.78 in.)
- July 2, 2014 (0.38 in.), 6 July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)
- Prepared for Greater New Haven Water Polistion Control Authority (GNHWPCA)









1 May 16, 2014 (1.51 in.)

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.) (2)

Flow Meter: OF-012A Overflow

Event Comparison: Flow

Model Calibration Results

(P)

June 9, 2014 (0.74 in.)

June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.) 9

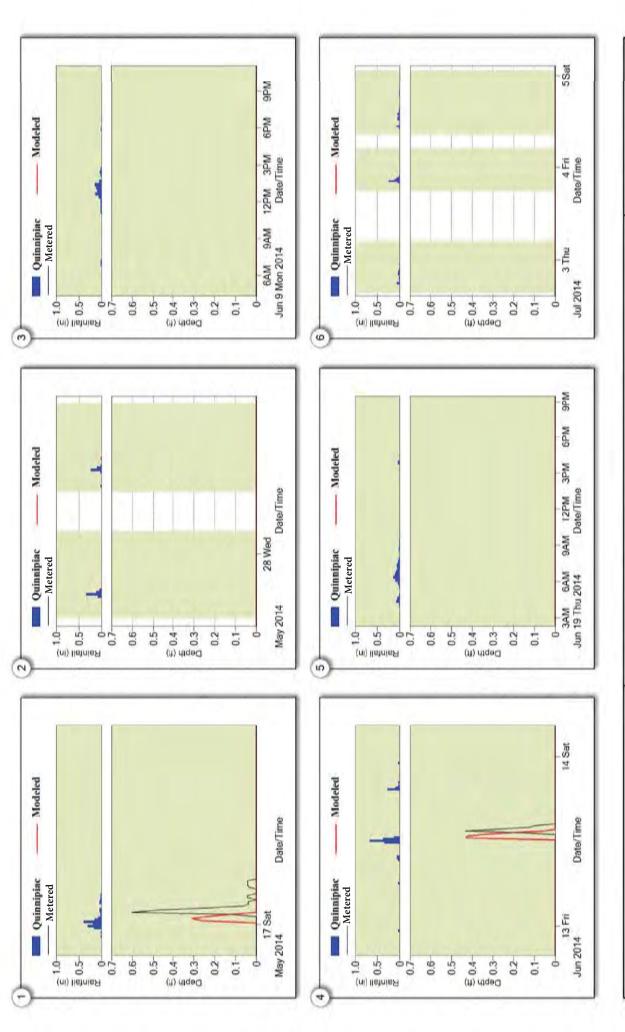
June 19, 2014 (0.78 in.) 9

July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.) 9

Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)







1 May 16, 2014 (1.51 in.)

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.) (2)

Flow Meter: OF-012A Overflow

Event Comparison: Depth

Model Calibration Results

June 9, 2014 (0.74 in.) 9

June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.) 7

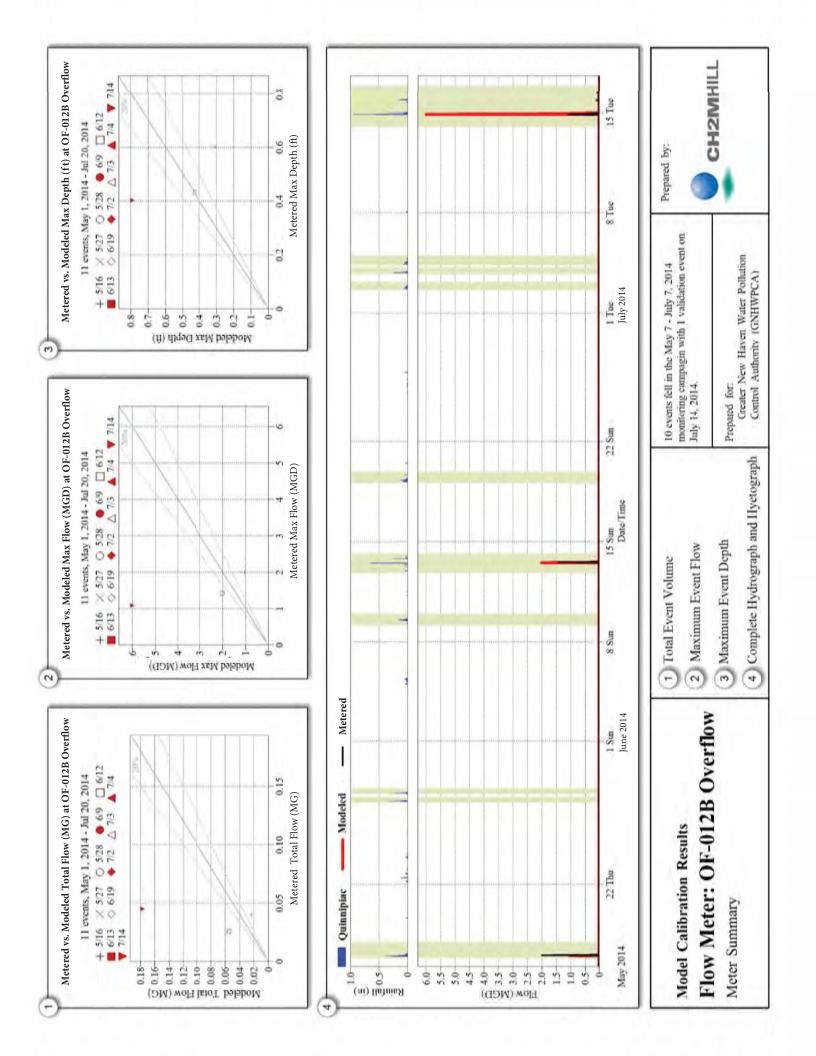
June 19, 2014 (0.78 in.) 9

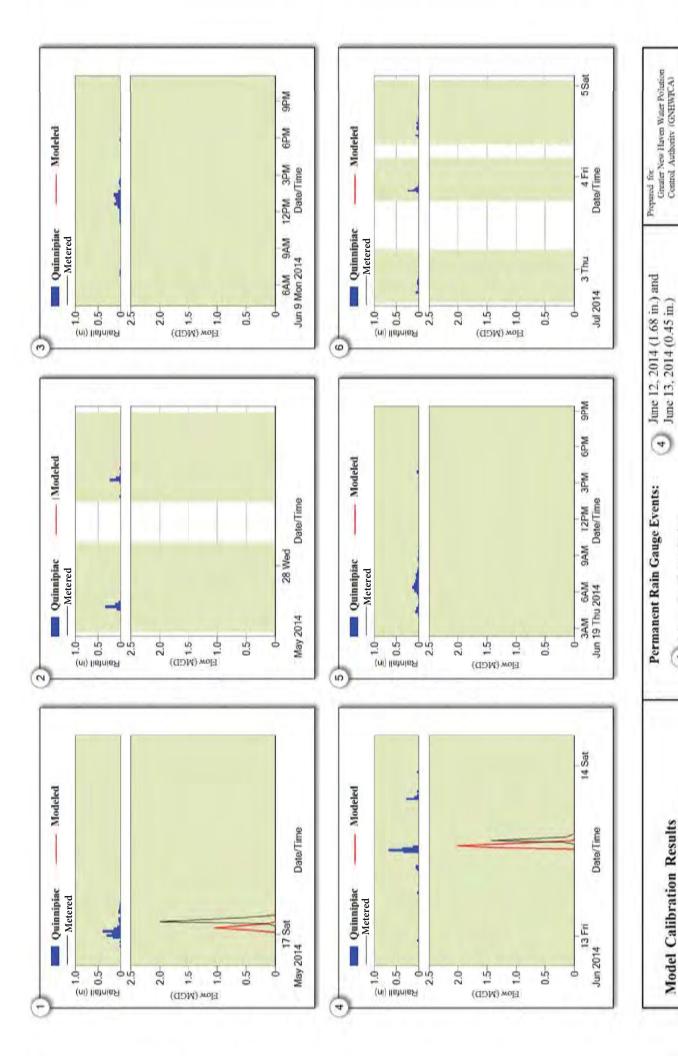
July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.) 9

Greater New Haven Water Pollution Control Authority (GNHWPCA) Prepared for









July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)

9

June 19, 2014 (0.78 in.)

9

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

(2)

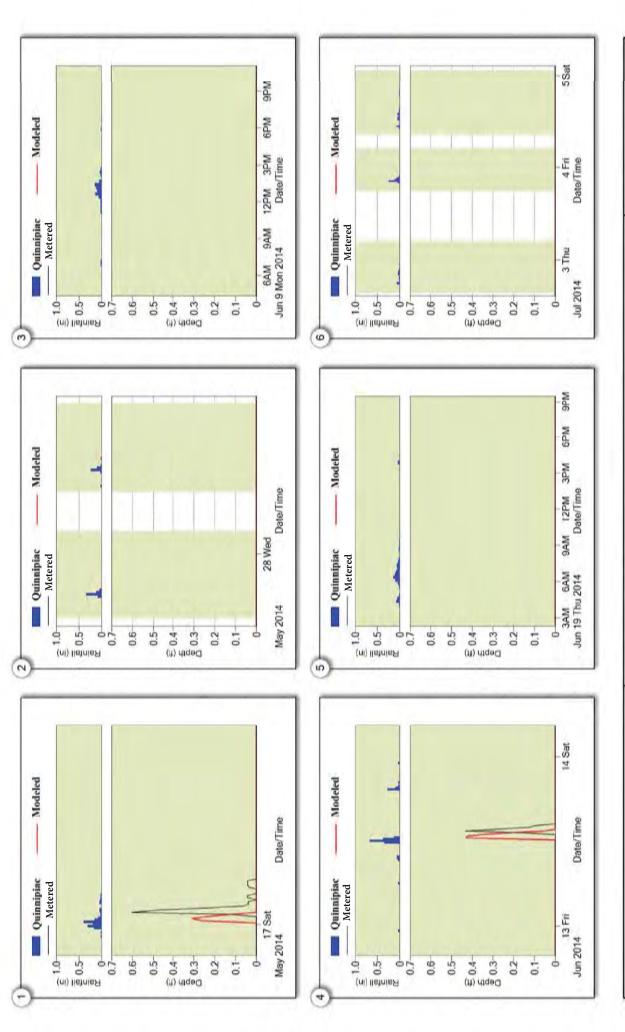
Flow Meter: OF-012B Overflow

Event Comparison: Flow

June 9, 2014 (0.74 in.)

(0)

1 May 16, 2014 (1.51 in.)



1) May 16, 2014 (1.51 in.)

2) May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

Flow Meter: OF-012B Overflow

Event Comparison: Depth

Model Calibration Results

3 June 9, 2014 (0.74 in.)

June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.)

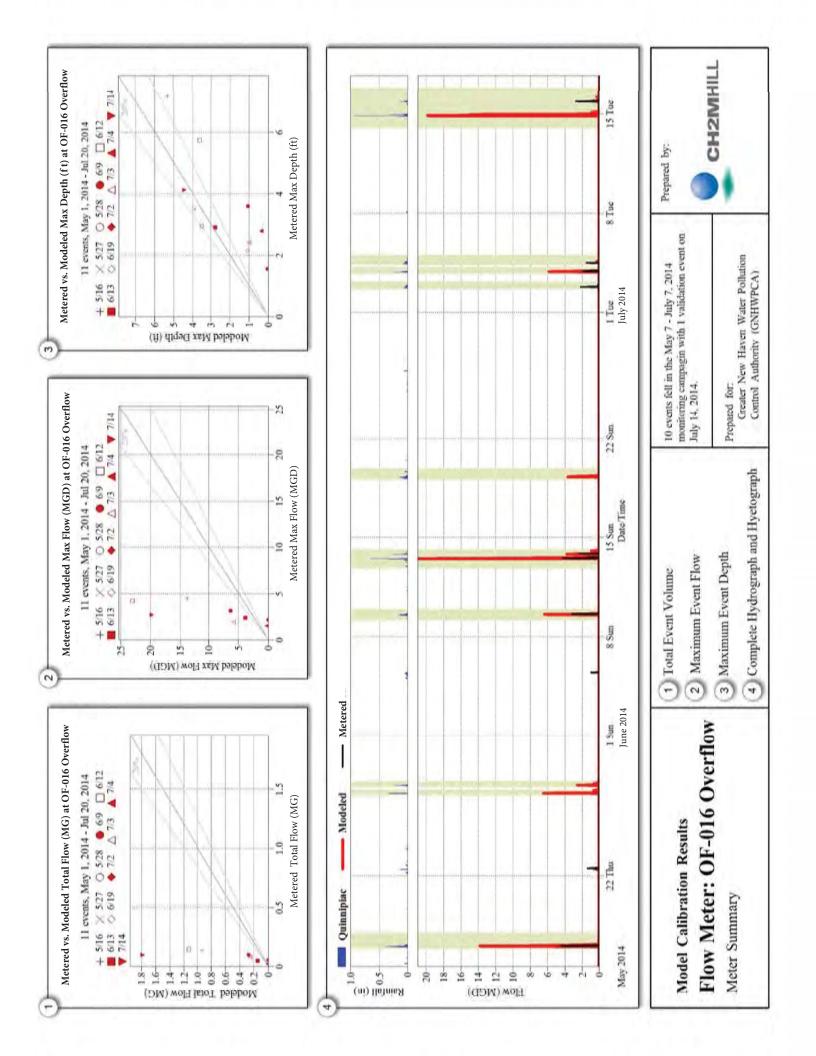
5 June 19, 2014 (0.78 in.)

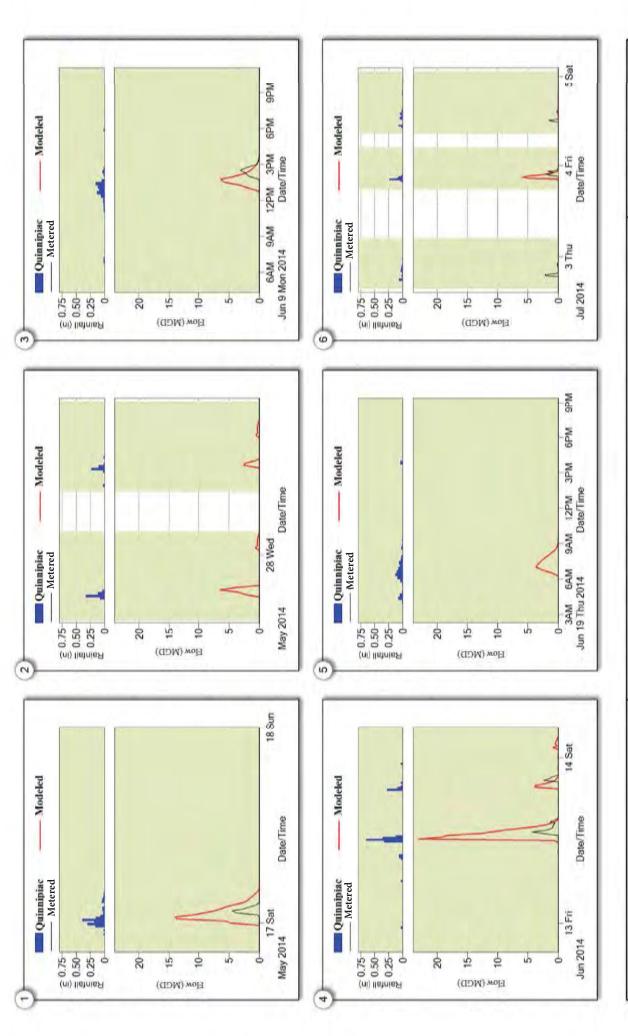
July 2, 2014 (0.38 in.), 6 July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)

Prepared for. Greater New Haven Water Polistion Centrel Authority (GNHWPCA)









Quinnipiac Rain Gauge Events:

- 1) May 16, 2014 (1.51 in.)
- May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.) (2)

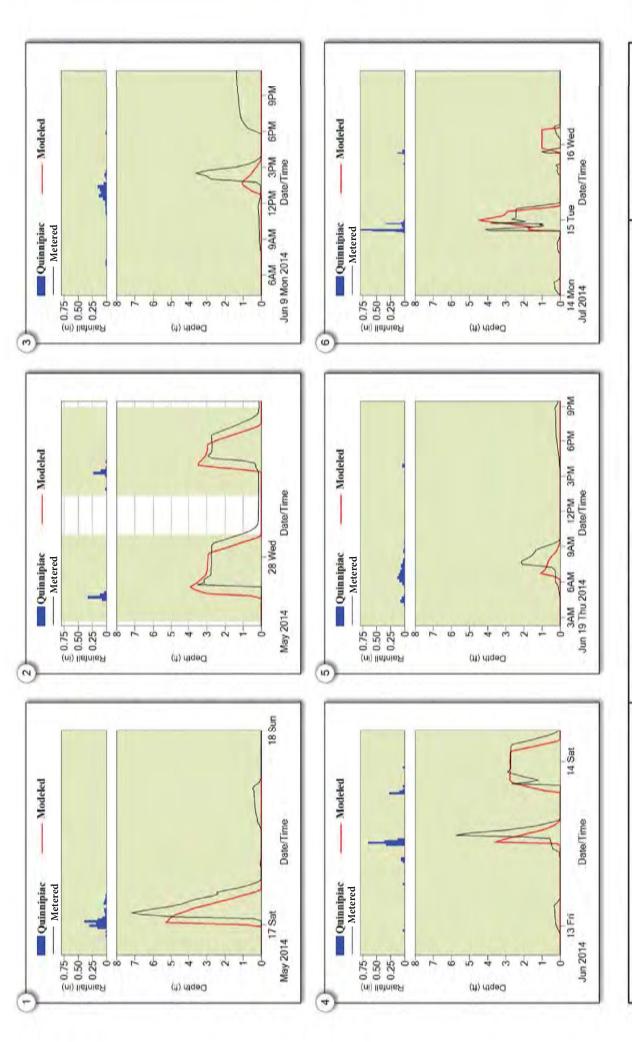
Flow Meter: OF-016 Overflow

Event Comparison: Flow

- June 9, 2014 (0.74 in.) 6
- June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.) 9
- June 19, 2014 (0.78 in.) 2
- July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.) 9
- Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)







Quinnipiac Rain Gauge Events:

1 May 16, 2014 (1.51 in.)

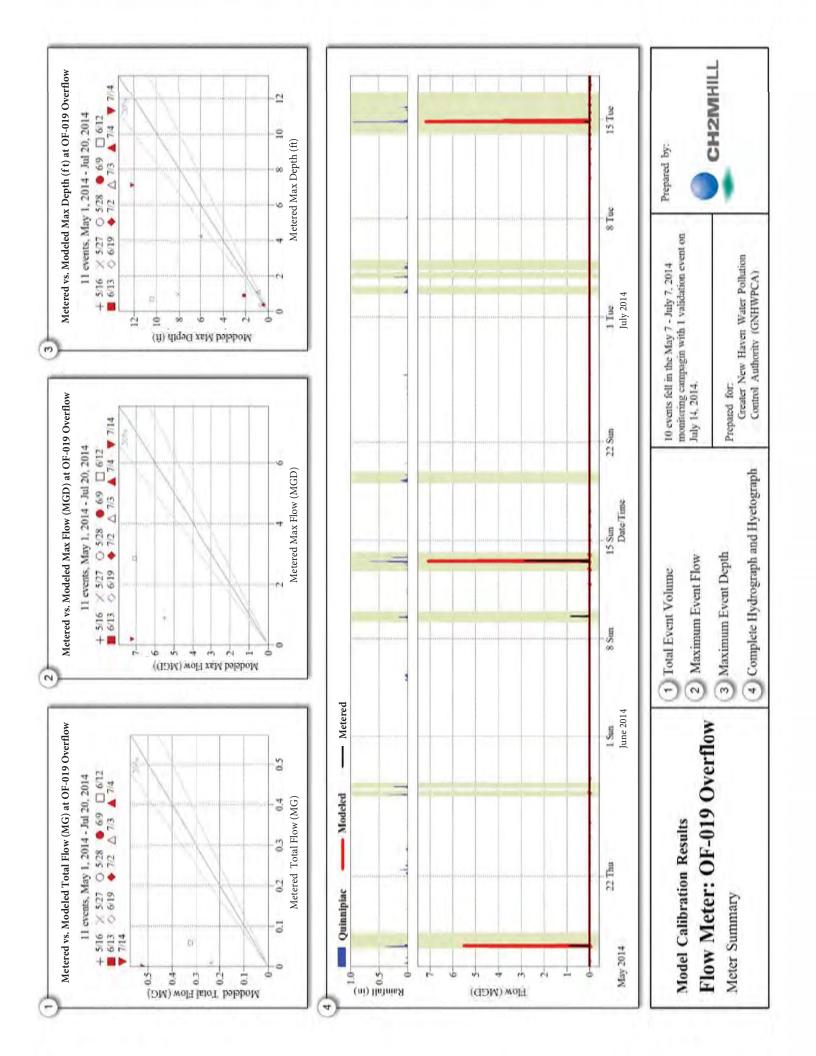
Flow Meter: OF-016 Overflow

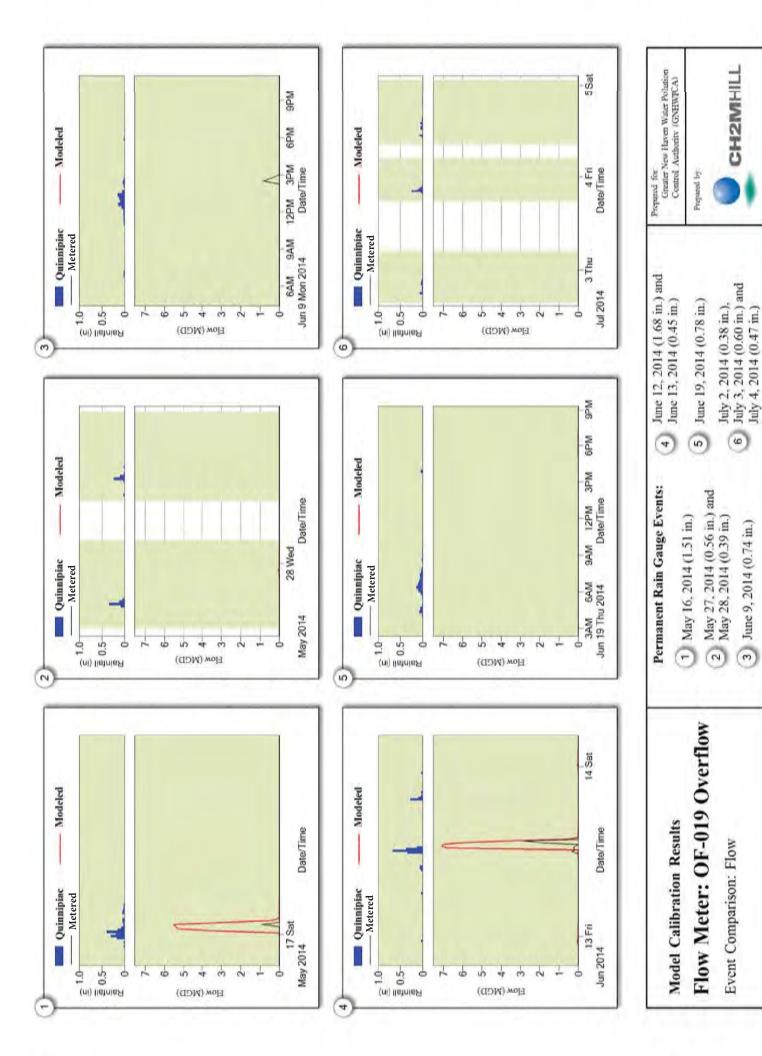
Event Comparison: Depth

- May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.) (2)
- June 9, 2014 (0..74 in.) 0
- June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.) 4
- June 19, 2014 (0.78 in.) 2
- July 2, 2014 (0.38 im.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.) 60
- Prepared for Greater New Haven Water Poliution Control Authority (GNHWPCA)







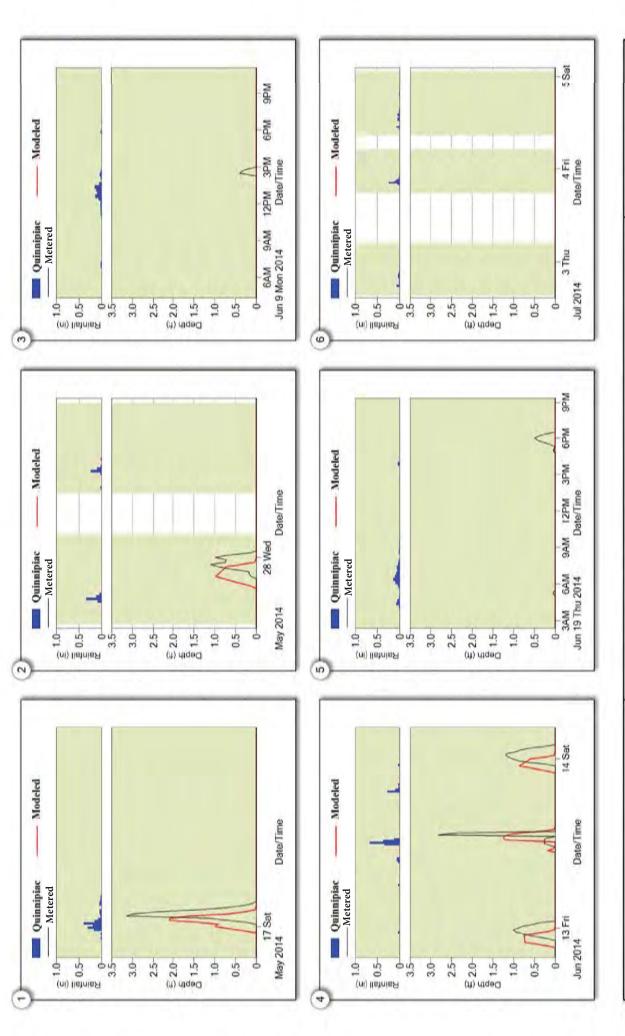


60

June 9, 2014 (0.74 in.)

(0)

Event Comparison: Flow



1 May 16, 2014 (1.51 in.)

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.) (2)

Flow Meter: OF-019 Overflow

Event Comparison: Depth

Model Calibration Results

0

June 9, 2014 (0.74 in.)

June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.) 4

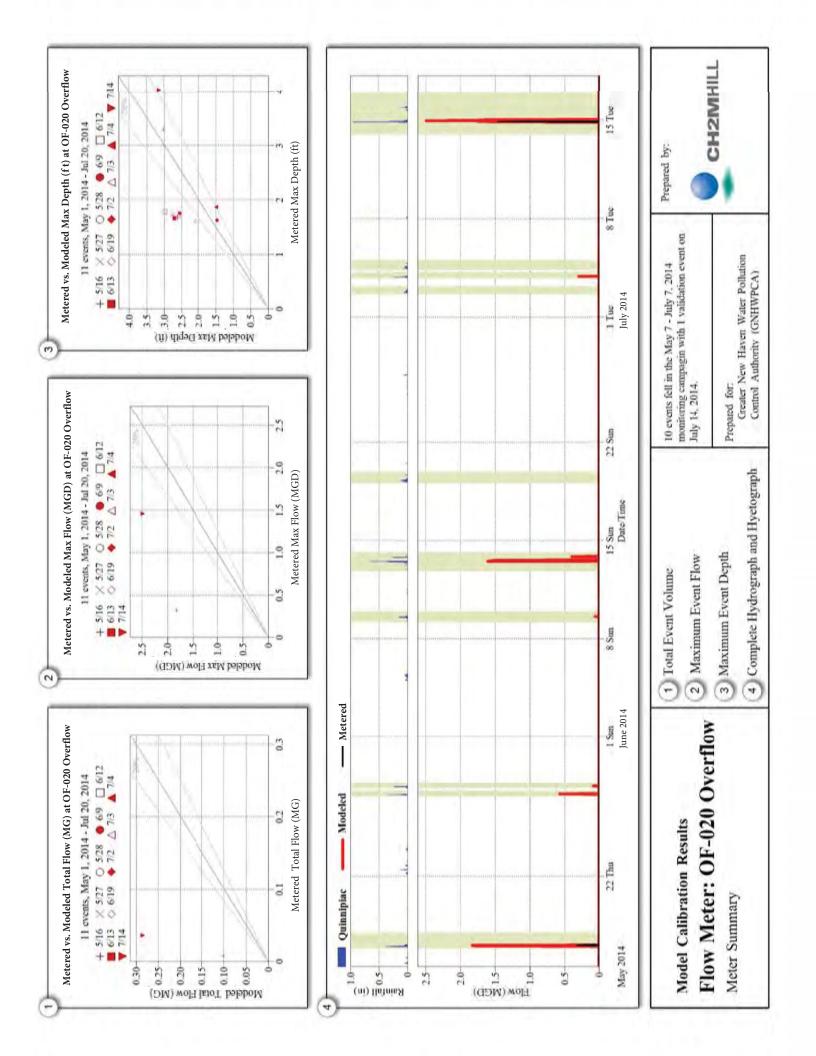
June 19, 2014 (0.78 in.) 2

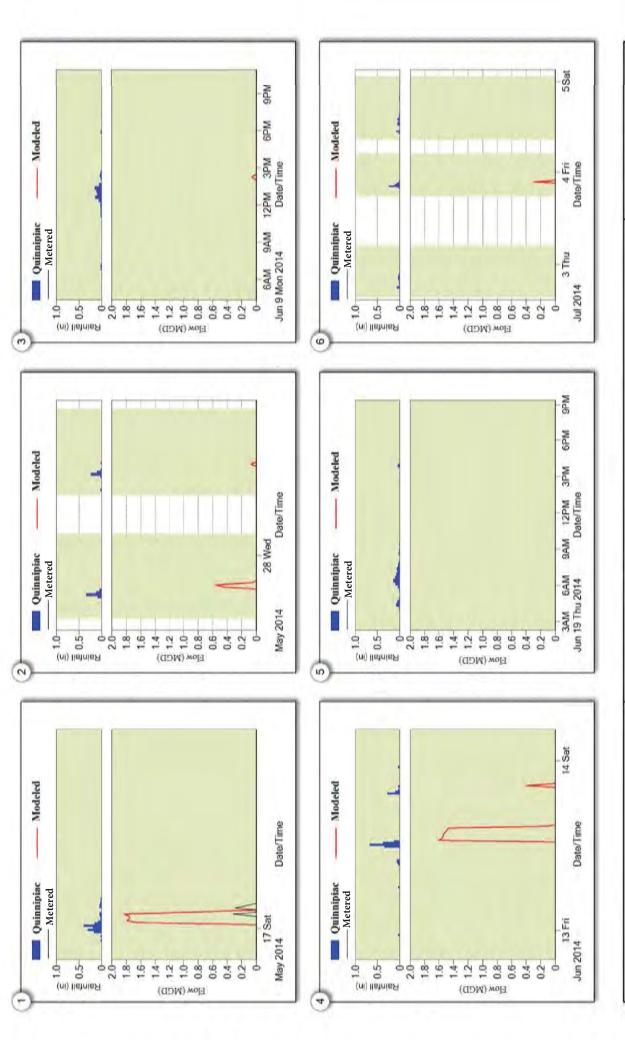
July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.) 9

Prepared for Greater New Haven Water Pollution Control Authority (GNHWPCA)









1) May 16, 2014 (1.51 in.)

May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.) (2)

Flow Meter: OF-020 Overflow

Event Comparison: Flow

Model Calibration Results

June 9, 2014 (0.74 in.) 0

June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.) 4

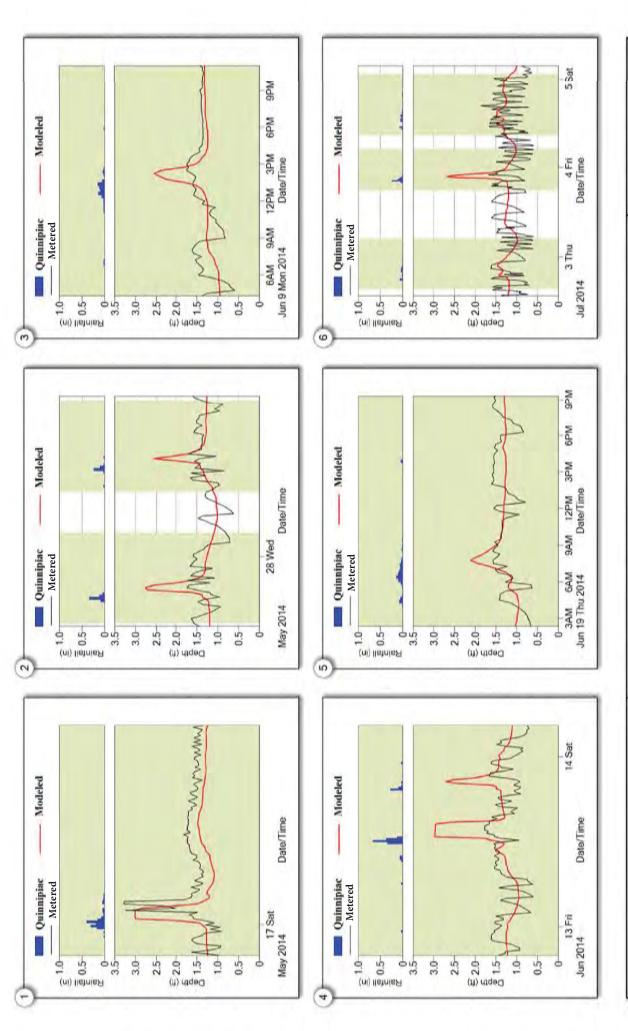
June 19, 2014 (0.78 in.) 2

July 2, 2014 (0.38 in.), July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.) 9

Greater New Haven Water Pollution Control Authority (GNHWPCA) Prepared for







- 1 May 16, 2014 (1.51 in.)
- 2 May 27, 2014 (0.56 in.) and May 28, 2014 (0.39 in.)

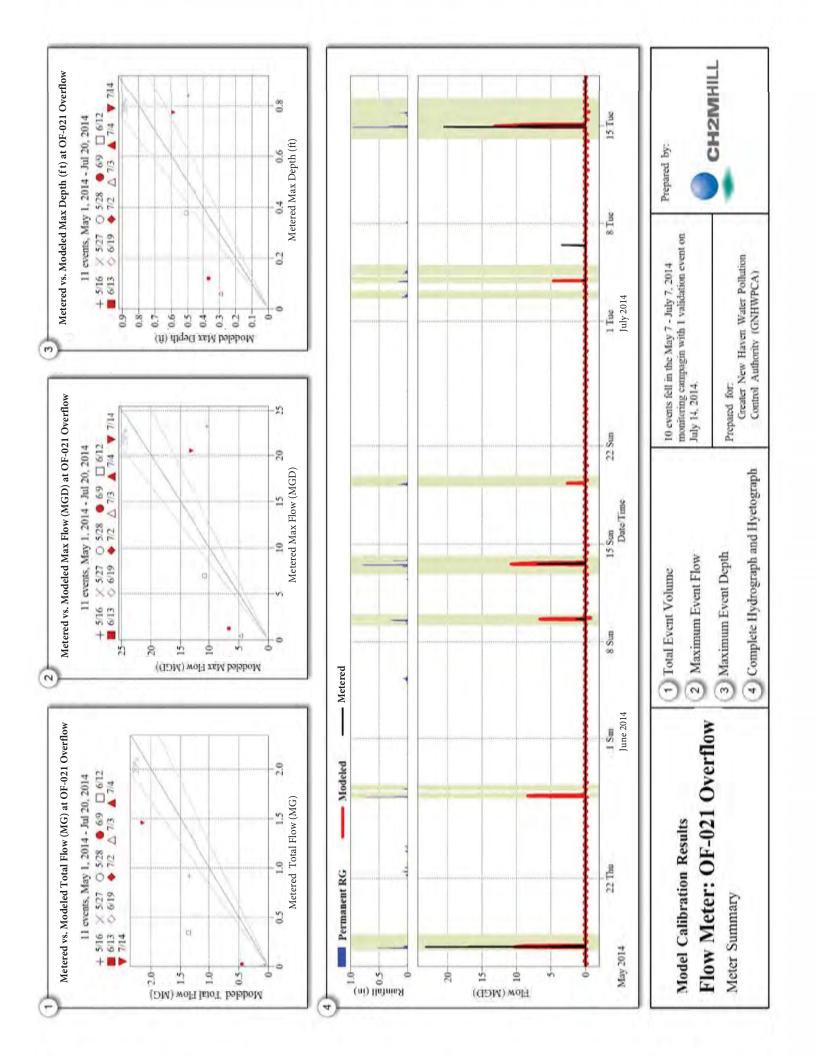
Flow Meter: OF-020 Overflow

Event Comparison: Depth

- 3 June 9, 2014 (0.74 in.)
- 4 June 12, 2014 (1.68 in.) and June 13, 2014 (0.45 in.)
- 5 June 19, 2014 (0.78 in.)
- Fuly 2, 2014 (0.38 in.), 6 July 3, 2014 (0.60 in.) and July 4, 2014 (0.47 in.)
- Prepared for. Greater New Haven Water Pollution Control Authority (GNHWPCA)





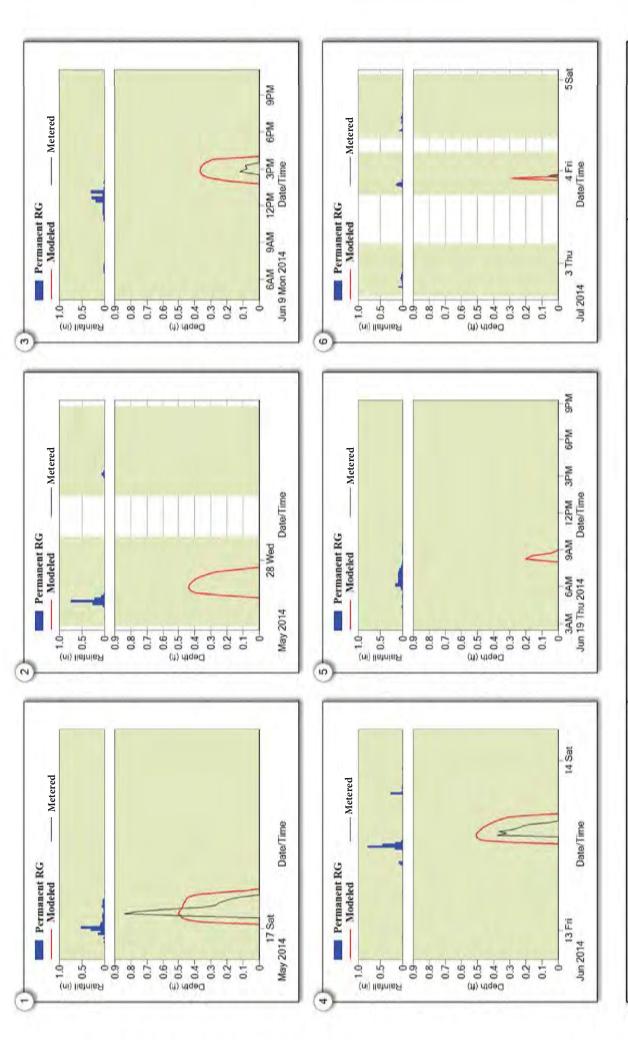




9

June 9, 2014 (1.02 in.)

6



May 16, 2014 (1.61 in.) Ē

Flow Meter: OF-021 Overflow

Event Comparison: Depth

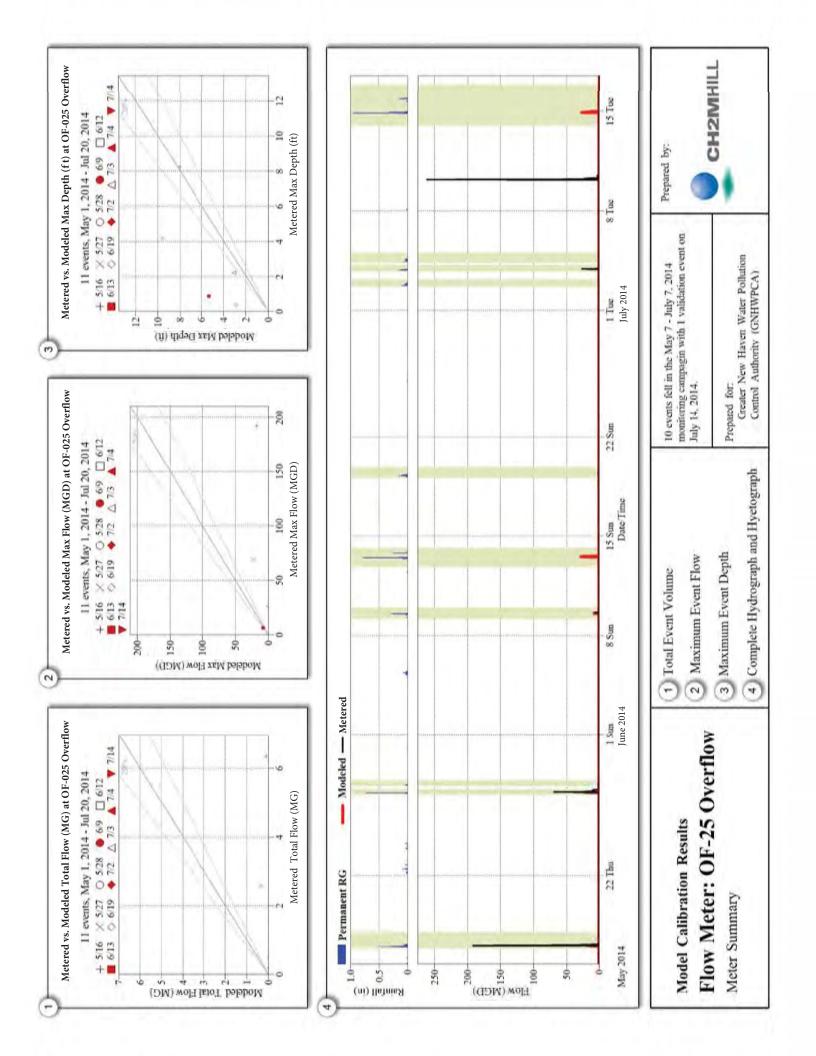
Model Calibration Results

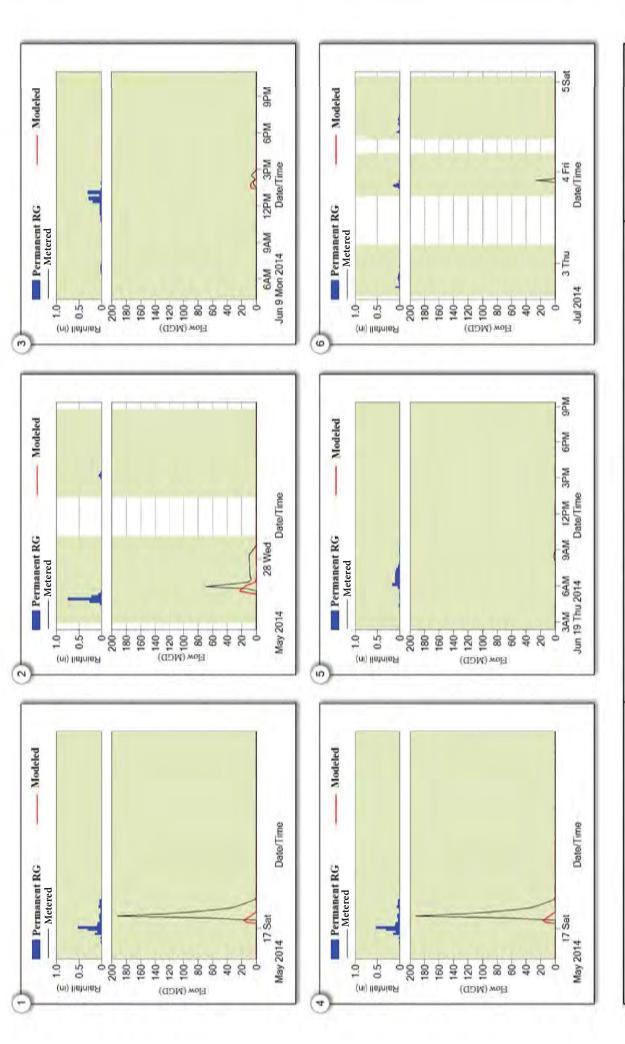
- May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.) (2)
- June 9, 2014 (1.02 in.) 6
- June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.) 4
- June 19, 2014 (0.74 in.) 2
- July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.) 60

Greater New Haven Water Polistion Control Authority (GNHWPCA) Prepared for









1) May 16, 2014 (1.61 in.)

2) May 27, 2014 (1.33 in.) and May 28, 2014 (0.1 in.)

Flow Meter: OF-025 Overflow

Event Comparison: Flow

Model Calibration Results

May 28, 2014 (0.1 in.)

3 June 9, 2014 (1.02 in.)

.1 in.) July 2.

4 June 12, 2014 (1.78 in.) and June 13, 2014 (0.32 in.)

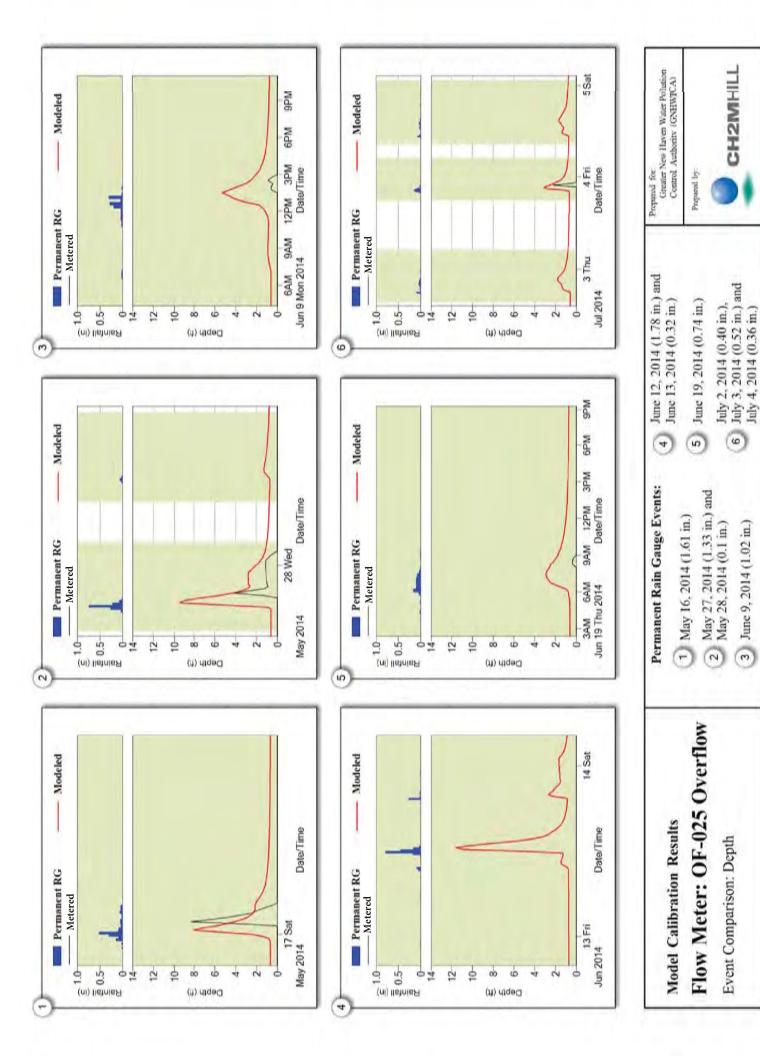
5 June 19, 2014 (0.74 in.)

July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.)

Prepared for Greater New Haven Water Polistion Control Authority (GNHWPCA)





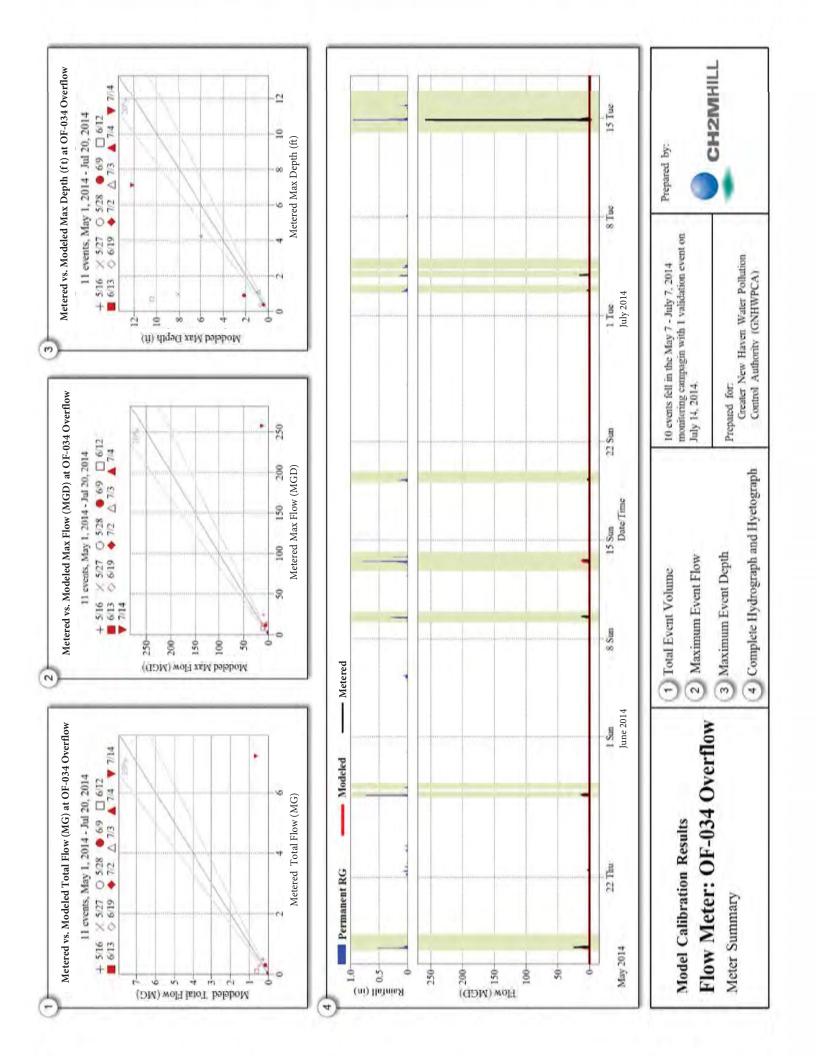


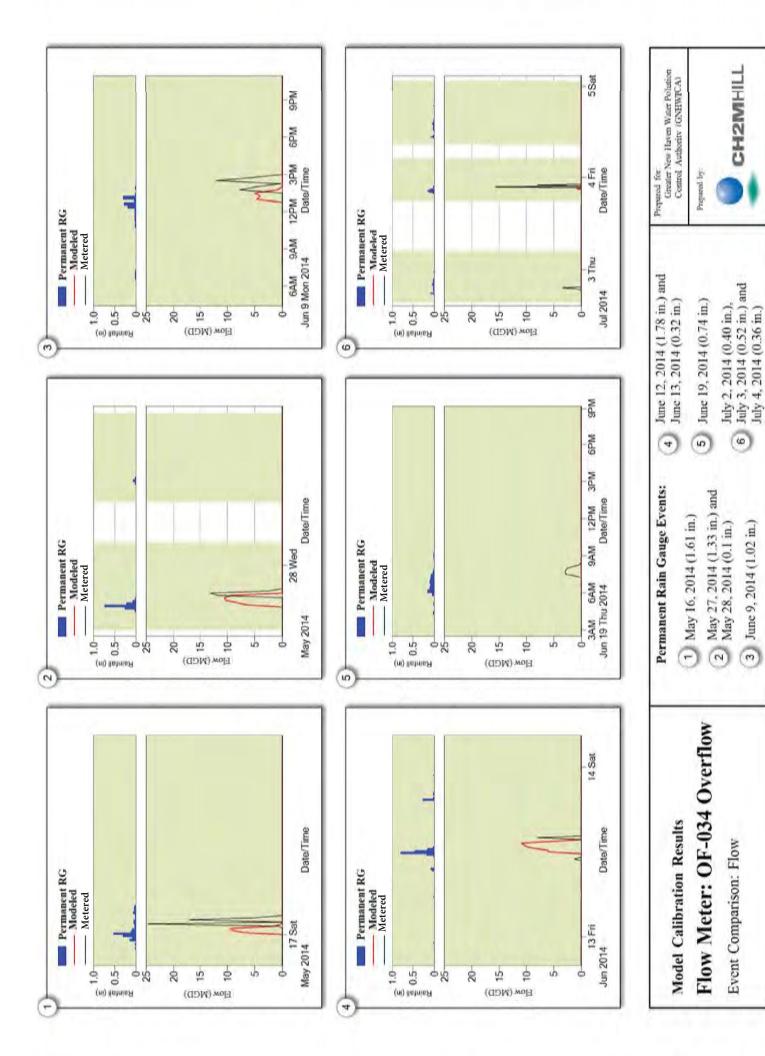
60

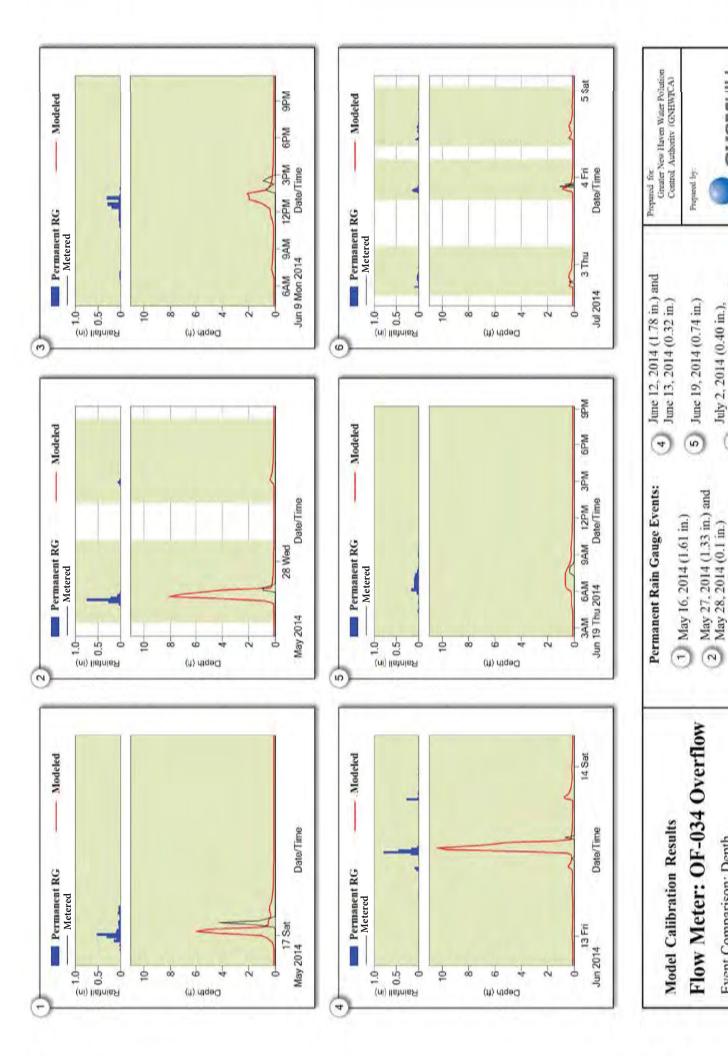
June 9, 2014 (1.02 in.)

6

Event Comparison: Depth







July 2, 2014 (0.40 in.), July 3, 2014 (0.52 in.) and July 4, 2014 (0.36 in.)

9

June 9, 2014 (1.02 in.)

0

Event Comparison: Depth