



Haverhill

Robert E. Ward, Deputy DPW Director
Water/Wastewater Division
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April 27, 2021

Ms. Elizabeth Kudarauskas
U.S. EPA - Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Subject: City of Haverhill, MA NPDES Permit #MA 0101621
Consent Decree Submittal (Civil Action No. 16-11698-IT)
Compliance Report Number 9 – July 1, 2020 through December 31, 2020

Dear Ms. Kudarauskas:

Enclosed is Compliance Report No. 9 as required by Section IX.67 of the Consent Decree. This report is for the July 1, 2020 through December 31, 2020 reporting period.

If you require additional information, please call me at (978) 374-2382.

Sincerely,

Robert E. Ward
Deputy DPW Director

Enclosure

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CITY OF HAVERHILL, MASSACHUSETTS

NPDES PERMIT No. MA0101621

CONSENT DECREE

(Civil Action No. 16-11698-IT, 11/10/16)

COMPLIANCE REPORT No. 9

JULY THROUGH DECEMBER 2020

APRIL 2021

CITY OF HAVERHILL, MASSACHUSETTS
NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM
PERMIT No. MA0101621
CONSENT DECREE
(Civil Action No. 16-11698-IT, 11/10/2016)
COMPLIANCE REPORT No. 9
JULY THROUGH DECEMBER 2020

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SECTION 1

INTRODUCTION

1.1 BACKGROUND

The United States Environmental Protection Agency (EPA), Massachusetts Department of Environmental Protection (MassDEP), and the City of Haverhill entered into a Consent Decree to require the City to take measures necessary to meet the requirements of the Clean Waters Act and the Massachusetts Clean Water Act, and to achieve and maintain compliance with the Small Municipal Separate Stormwater Sewer System (MS4) General Permit and the Publicly Owned Treatment Works (POTW) Permit, and all applicable federal and state regulations. The effective date of the Consent Decree is November 10, 2016.

As part of the Consent Decree, the City is required to submit a Compliance Report to EPA and MassDEP for the previous six-month period, referred to as a “Reporting Period.” The bi-annual Reporting Periods run from January through June and July through December, with the Compliance Reports due on April 30th and October 31st for the previous period.

The goal of this Compliance Report is to provide the EPA and MassDEP an updated summary of the work performed by the City to achieve and maintain compliance over the course of the Reporting Period.

1.2 UNFORESEEN CHALLENGES

Since March 2020, the City continues to face both external and internal challenges that impacts their ability to perform required tasks as originally scheduled. During the reporting period, the Coronavirus (COVID-19) pandemic continues to impede the collection systems operations activities due to reduced daily productivity levels because of the coronavirus safety protocols that remain in place.

1.2.1 Vacant Positions

As reported previously, the Collection System Supervisor position remains vacant and is currently being filled by the former and retired Collection System Supervisor in an acting capacity. Every effort continues to be made to fill this critical role with a permanent hire.

1.3 REPORT ORGANIZATION

The Compliance Report is divided into several sections including:

- IDDE Program
- SSO and Building/Private Party Backup Events
- Construction Site Inspection and Enforcement Program
- General Status
- Secondary Treatment Bypass
- CMOM Corrective Action Plan (per MassDEP request)

Each section summarizes the City's actions, activities, and events that have occurred over the previous Reporting Period in accordance with the Consent Decree.

1.4 CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Robert Ward
Digitally signed by Robert Ward
DN: cn=Robert Ward, o, ou,
email=rward@haverhillwater.com, c=US
Date: 2021.04.27 11:05:15 -04'00'

Robert E. Ward

Deputy DPW Director

City of Haverhill, Massachusetts

(date)

SECTION 2

IDDE PROGRAM

2.1 INTRODUCTION

The City identified and inspected 1,200 stormwater outfalls (13 of these outfalls are shared stormwater/combined sewer overflow (CSO) outfalls) as part of the 2014/2015 Stormwater Outfall Inspection Report. Based on the findings, the City established a draft schedule of prioritized inspections.

In 2017, the City prepared the “Illicit Discharge Detection and Elimination (IDDE) Manual.” The manual identified the procedures that the City will follow to continue their comprehensive inspections of its stormwater outfalls, upstream system investigations, and enforcement procedures when an illicit connection is identified. Most recently, the IDDE Manual was updated to be in compliance with the City’s MS4 permit.

The IDDE Manual can be found on the City’s Stormwater website at:

www.cityofhaverhill.com/departments/storm_water_program/index.php

2.2 CURRENT REVISED PRIORITY LISTING

The City continues to conduct IDDE sampling and update priorities based on field investigation and lab analysis testing results. The current IDDE investigation priorities as of December 2020 are shown in Table 2-1. The current priorities categories reflect the following inventory: there are now 6 Problem Priority outfalls; 3 Medium Priority outfalls; and 47 Low Priority outfalls. Table 2-1 has been updated with the most recent sampling results for each outfall. The priority listing of outfalls, with sample results, is available at the City’s stormwater website.

2.3 IDDE INVESTIGATION PROGRESS REPORTING

Table 2-2 shows the City's progress to date on their IDDE investigations during the reporting period (July through December 2020). Table 2-3 shows the City's current list of priority outfalls for maintenance.

Using GIS, the City identified a total of 26.12 miles of storm drain piping and 2,617 drainage manholes and catch basins in the tributary area upstream of the outfalls included in the Priorities List as Problem, High, Low priorities. The total length investigated is included and updated from previous reporting for a cumulative percentage investigated. Some outfalls are considered fully investigated if there was no upstream flow to initiate further investigation.

During this reporting period three outfalls were removed from the Problem Priority category and moved to the Low Priorities category, two catchment investigations were completed, and 71 dry weather outfall inspections completed.

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Table 2-1

PRIORITIZED LIST OF OUTFALL SUB-AREA INVESTIGATIONS

(BASED ON OUTFALL INSPECTION PROGRAM)

2014-2020 Dry-Weather MS4/Stormwater Outfall Inspection Program

Summary of Water Quality Testing of Dry Weather Flow at MS4/CSO Outfalls

Outfall Information					Field Inspection Information			Dry-Weather Flow Characteristics					Field Parameter Test Results							Coliform Laboratory Sampling/Analysis					
					Date	Previous Rainfall	Dry Weather < 24 hours < 48 hours	Flow Description	Odor	Color	Floatables	Turbidity	Sample Time	Sample Temp (F)	pH	Conductivity	Ammonia (mg/l)	Surfactants (mg/l)	Chlorine (mg/l)	Sample Date for Bacteria	Previous Rainfall (inches)	Previous Rainfall (Date)	Previous Rainfall (End Time)	E.Coli (MPN/100 ml)	Enterococcus (MPN/100 ml)
Problem Priority																									
UNK0955	36"	RCP	South Main St(Dominator Plaza)	City	9/16/2020	01" ON 9/13/2020		TRICKLE	NONE	CLEAR	NONE	NONE	725	62.2	7	1630	0.13	0.1	0	9/16/2020	0.1	9/13/2020		>2400	
PL0891	30"	RCP	Main St @ Marsh Ave	City	6/9/2020	0.01" ON 6/6/20		MODERATE	DETERGENT	NONE	NONE	CLEAR	1011	58	7.9	1200	0.17	2.19	0.02	6/9/2020	0.01	6/6/2020		>2400	
MR1109	12"	RCP	350 Water Street	City	11/9/2020	01" ON 11/3/2020		TRICKLE	NONE	NONE	NONE	NONE	930	59.3	7.31	3	0	0	0	12/10/2015	0.1	12/3/2015		1413.6	> 2420
UNK1767	36"	CMP	Tudor Ct	City	6/23/2020	02" ON 6/11/2020		TRICKLE	NONE	CLEAR	NONE	CLEAR	750	64	7	453	0.07	0	0	6/23/2020	0.2	6/11/2020		>2400	
UNK0951	48"	RCP	61 Brook St	City	8/27/2020	4" ON 8/23/2020		NONE	NONE	CLEAR	NONE	CLEAR	900	65.5	7.88	334	0	0.25		10/14/2014				>2419.6	
DP0946	48"	RCP	High School	City	11/5/2015	0.02" ON 11/1/15		TRICKLE	NONE	NONE	NONE	NONE	815	56.4	7.22	849	0	0.25	0	12/10/2015	0.1	2/3/2015		>2420	
High Priority																									
LR1260	36"	OTHER, Blocks	140 Hale Street	City	9/28/2015	0.10" ON 9/13/15		NO INFORMATION	NONE	NONE	NONE	NONE	1040	69.9	7.1	927	0	0.5	0	11/4/2015	0.02	11/3/2015		1986.3	
UNK1166	34"	RCP	8 Franzone Dr	City	6/11/2020	0.01 ON 6/11/2020		SUBSTANTIAL	NONE	CLEAR	NONE	CLEAR	831	62	6.5	1000	0.09	0	0.03	6/11/2020	0.01	6/11/2020		461.1	
UNK1177	48"	RCP	Franzone Dr	City	6/11/2020	0.01" ON 6/11/2020		SUBSTANTIAL	NONE	CLEAR	NONE	CLEAR	925	63	6.1	1000	0.1	0.15	0.01	6/11/2020	0.01	6/11/2020		770.1	
Low Priority																									
UNK1835	15"	PVC	Broadway	City	6/10/2015	0.1" ON 6/6/15		NO FLOW	NONE	NONE	NONE	NONE	935	69	7.08	240	0	0	0	6/12/2015	0.1	6/6/2015		980.4	
LR1103	15"	RCP	Bennington St	City	9/10/2014	0.5" ON 9/7/14		TRICKLE	NONE	CLEAR	NONE	NONE	830	68.1	7.35	683	0	0		9/16/2014	0.18	9/13/2014		920.8	
BZ00847	15"	RCP	Fernanagh St	City	10/20/2014	0.02" ON 10/19/14		TRICKLE	NONE	CLEAR	NONE	NONE	1306	60	7.7	287	0	1		11/13/2014	0.06	11/7/2014		770.1	
MR20718	10"	RCP	1 Water Street	City	8/14/2015	0.57" ON 8/11/15		NO INFORMATION	NONE	NONE	NONE	NONE	1000	78	7.99	2	0	0	0	8/31/2015	0.19	8/23/2015		556	631
MR1164	36"	RCP	Water Street	City	8/25/2015	0.36" ON 8/21/15			NONE	CLEAR	NONE	NONE		72.2	7.6	2	0	0	0	08/31/2015	0.19	08/23/2015		461	< 10
FBO0638	12"	RCP	Hilldale Ave.	City	6/27/2015	0.04" ON 6/27/15		TRICKLE	NONE	NONE	NONE	NONE	945	64.5	6.91	453	0	0	0	7/7/2015	0.02	7/4/2015		435.2	
PL1222	36"	RCP	West Gile St.	City	5/20/2015	0.07" ON 5/19/15		NO INFORMATION	NONE	NONE	NONE	NONE	825	65.4	7	548	0	0.25	0	6/5/2015	1.38	6/2/15		410.6	
UNK0961	24"	RCP	Parkridge Rd.	City	9/26/2014	0.36" ON 9/21/14		TRICKLE	NONE		NONE	NONE		67.1	7.84	815	0	0		11/13/2014	0.06	11/7/2014		365.4	
MR0982	18"	CLAY	20 Back Lane	City	10/14/2015	0.02" ON 10/13/15		NO INFORMATION	NONE	NONE	NONE	NONE	1150	63.1	7.25	3	0	0	0	11/4/2015	0.02	11/3/15		547.5	183.5
MR23912	8"	STEEL	120 Merrimack St	City	8/27/2015	0.19" ON 8/23/15		TRICKLE	NONE	NONE	NONE	NONE	915	55.1	6.71	6	0	0	0	8/31/2015	0.19	8/23/2015		12.1	148
MR1141	36"	RCP	Merrimack River (River St)	State	6/9/2020	0.01" ON 6/6/20		TRICKLE	NONE	CLEAR	NONE	CLEAR	848	59	7.7	1200	0	0.01	0.02	6/9/2020	0.01	6/6/2020		166.4	160.7
MR1140	15"	RCP	River St	City	9/23/2014	0.36" ON 9/21/14		TRICKLE	NONE	BROWN	OTHER	CLOUDY		42.6	8.18	484	0	0		11/13/2014	0.06	11/7/2014		62.4	
LRO0995	18"	RCP	Newark St	City	9/10/2014	0.5" ON 9/7/14		TRICKLE	NONE	CLEAR	NONE	CLEAR	915	71.4	7.41	120	0	0.75		10/14/2014	0.18	10/11/2014		52	
MR0834	48"	RCP	Merrimack River (Bradley Ave)	City	9/19/2014	0.02" ON 9/16/14		MODERATE	NONE	CLEAR	NONE	NONE	831	50	7.6	295	0	0		11/13/2014	0.06	11/7/2014		43.2	
UNK0883	12"	CMP		City	9/24/2014	0.36" ON 9/21/14		TRICKLE	NONE	CLEAR	NONE	NONE	925	64.7	7.41	224	0	0.25		10/20/2014	0.02	10/18/2014		28.8	
MR0662	18"	RCP		City	9/25/2014	0.36" ON 9/21/14		TRICKLE	NONE	CLEAR	NONE	NONE	1120	65.4	7.5	475	0	0.25		10/6/2014	0.12	10/4/14		23.8	
LR0963	15"	HDPE	Alvamos St	City	9/11/2014	0.5" ON 9/8/14		MODERATE	NONE	CLEAR	NONE	SLIGHT CLOUDINESS	1015	68.1	7.87	855	0	0.25		9/16/2014	0.18	9/13/2014		22.6	
CB1198	NA	RCP	Research Dr	City	11/4/2014	0.25" ON 11/2/14		MODERATE	NONE	CLEAR	NONE	CLEAR	1003	50.2	7.06	208	0	0.25		11/13/2014	0.06	11/7/2014		21.3	
MR0770	36"	RCP	Merrimack River (River St)	City	9/23/2014	0.36" ON 9/21/14		TRICKLE	NONE	CLEAR	NONE	CLEAR	930	60.6	7.86	713	0	0.25		9/30/2014	0.01	9/29/2014		19.9	

Outfall Information					Field Inspection Information			Dry-Weather Flow Characteristics					Field Parameter Test Results							Coliform Laboratory Sampling/Analysis					
					Date	Previous Rainfall	Dry Weather		Flow Description	Odor	Color	Floatables	Turbidity	Sample Time	Sample Temp (F)	pH	Conductivity	Ammonia (mg/l)	Surfactants (mg/l)	Chlorine (mg/l)	Sample Date for Bacteria	Previous Rainfall (inches)	Previous Rainfall (Date)	Previous Rainfall (End Time)	E.Coli (MPN/100 ml)
GIS Identifier	Diameter	Material	Outfall Location	Owner-ship		< 24 hours	<48 hours																		
UNK1836	36"	RCP	Computer Dr	City	11/6/2014	0.25" ON 11/2/14			MODERATE	NONE	CLEAR	NONE	CLEAR	850	53.7	7.48	3	0	0.5		11/13/2014	0.06	11/7/2014		18.3
FP7115	12"	RCP	Brickett Ln	City	5/18/2015	0.03" ON 5/12/15			NO INFORMATION	NONE	BROWN	OTHER	CLOUDY	920	56	7.4	6	0	0.5	0.25	5/22/2015	0.07	5/19/15		8.4
DP0969	15"	RCP	Diana Road	City	6/4/2015	1.38" ON 6/2/15			MODERATE	NONE	NONE	NONE	NONE	1035	65.3	7.22	610	0	0	0.25	6/5/2015	1.38	6/2/2015		5.2
DPO0657	45"	RCP	44 Sarah J Circle	City	6/9/2015	0.1" ON 6/6/15			TRICKLE	NONE	NONE	NONE	SLIGHT CLOUDINESS	925	65.4	6.94	206	0	0	0	7/7/2015	0.02	7/4/15		4.1
UNK1011	24"	RCP	Lake Street	City	6/8/2015	0.1" ON 6/6/15			TRICKLE	NONE	NONE	NONE	NONE	915	59.3	6.95	794	0	0.25	0	6/12/2015	0.1	6/6/2015		3.1
UNK0627	15"	RCP		City	5/21/2015	0.07" ON 5/19/15			NO INFORMATION	NONE	NONE	NONE	NONE	840	64.5	6.82	791	0	0	0.25	5/22/2015	0.07	5/19/15		2
LR0993	16"	CMP	100 Newark Street	City	8/27/2020	4" ON 8/23/2020			SUBSTANTIAL	NONE	NONE	NONE	NONE	727	61.7	7.2	808	0	0	0	8/27/2020	0.4	8/23/2020		11
JC1028	15"	RCP	Kali Way	City	9/9/2020	1" ON 9/3/2020			NO FLOW	NONE	CLEAR	NONE	CLEAR	950	67.3	7.4	433	0	0		10/29/2014	0.02	10/18/2014		1046.2
MR1138	36"	RCP	Merimac River (River St)	City	8/12/2020	18" ON 8/4/2020			NO FLOW	NONE	CLEAR	OTHER (DIRT)	CLEAR	920	58.6	7.24	613	0	0		9/30/2014	0.01	9/29/2014		2420
DP0947	18"	RCP	177 Brook Street	City	10/31/2015	0.66" ON 10/29/15			MODERATE	RANCID/ SOUR	NONE	NONE	NONE	800	52.3	7.4	283	0	0	0	12/10/2015	0.1	12/3/15		1
DPO0696	12"	RCP	Pamela Lane	City	8/12/2020	18" ON 8/4/2020			NONE	NONE	NONE	NONE	NONE	1010	64.2	6.75	365	0	0	0	6/12/2015	0.1	6/6/2015		>2419
UNK1189	NA	NA	Primrose St (Dpw)	City	9/12/2014	0.01" ON 9/9/14			TRICKLE	NONE	CLEAR	NONE	CLEAR	1025	64.7	7.86	343	0	0.25		9/16/2014	0.18	9/13/2014		<1
TS0984	24"	RCP		City	5/11/2015	0.03" ON 5/12/15			MODERATE	NONE	BROWN	NONE	SLIGHT CLOUDINESS	1111	62.2	6.81	76	0	0	0.25	5/22/2015	0.07	5/19/15		<1
TS0989	24"	RCP	Newton Rd	City	5/18/2015	0.03" ON 5/12/15			SUBSTANTIAL	NONE	Clear	NONE	SLIGHT CLOUDINESS	1100	63.3	7.2	48	0	0	0.25	5/22/2015	0.07	5/19/15		<1
UNK1020	24"	RCP		Private	9/30/2014	0.36" ON 9/21/14			TRICKLE	NONE	NONE		SLIGHT CLOUDINESS	840	44.9	7.77	301	0	0		11/13/2014	0.06	11/7/2014		34.1
UNK1750	24"	RCP	36 Magnavista	City	5/18/2015	0.03" ON 5/12/15			TRICKLE	NONE	NONE	NONE	NONE	955	64.7	7.6	574	0	0	0.25	5/22/2015	0.07	5/19/2015		<1
UNK1040	24"	RCP	Gile St.	City	5/20/2015	0.07" ON 5/19/15			TRICKLE	NONE	ORANGE	NONE	SLIGHT CLOUDINESS	930	63.1	7.3	877	0	0.25	0	5/22/2015	0.07	5/19/2015		<1
UNK0902	40"	CMP	Shelley Rd	City	9/24/2014	0.36" ON 9/21/14			MODERATE	NONE	CLEAR	OTHER (RUST)	CLEAR		62.6	7.02	1567	0	0.25						
UNK1680	15"	HDPE	Colonial Farm Road	Private	6/27/2015	0.04" ON 6/27/15			TRICKLE	NONE	BROWN	NONE	NONE		66.9	6.9	238	0	0	0					
MR24314	24"	RCP	Groveland Street/Water Street	City	8/21/2020	0.18" ON 8/4/2020			NO FLOW	NONE	NONE	NONE	NONE	800	70.1	7.6	1009	0	3	0	9/9/2015	0.19	8/23/2015		>24,000 >24,190
DP11007	54"	CMP	Kentworth Ln	City	10/10/2014	0.08" ON 10/8/14			TRICKLE	NONE	CLEAR	OTHER (DIRT/DEBRIS)	CLEAR	1040	51.5	7.86	471	0	0.25						
UNK0848	18"	RCP	Woodrow Ave	City	9/26/2019	0.01" ON 9/23/19			NO FLOW																
FBO0723	18"	RCP	Hanna Ridge Rd.	City	7/31/2019	1.2" ON 7/23/19			MODERATE	NONE	NONE	NONE	CLEAR	923	76.6	7.77	440	0	<0.05	0	7/31/2019	1.2	7/23/2019	1045	8.5
UNK0888	NA	NA	West Lowell Street	City	6/12/2015	0.1" ON 6/6/15			MODERATE																
UNK1188	32"	RCP	Primrose Street	City	7/16/2019	0.45" ON 7/12/19			TRICKLE	NONE	NONE	NONE	CLEAR	930	73.9	7.48	855	0.5	<0.05	0	7/16/2019	0.45	7/12/2019	2045	770.1
MR36714	6"	PVC		City	3/9/2016	0.01" ON 3/4/16			TRICKLE																
MR36718	18"	RCP	Merrimack River	City	9/26/2019	0.01" ON 9/23/19			TRICKLE	NONE	NONE	NONE	CLEAR	1013	68.1	8.01	509	0	<0.05	0	9/29/2019	0.01	9/23/2019	2240	>2400
LR39512	48"	RCP	Little River	City	7/31/2019	1.2" ON 7/23/19			NO FLOW																

NOTE: Data exceeds one of the parameter thresholds that suggest it should be added to the IDOE program

Laboratory Sampling Dates in Red are the samples taken with less than 48 hours of dry weather.

TABLE 2-2
SUMMARY OF IDDE INVESTIGATIONS OF SYSTEMS WITH POTENTIAL ILLICIT CONNECTIONS BY BASIN
(BASED ON OUTFALL INSPECTION PROGRAM)
2014-2020 Dry-Weather MS4/Stormwater Outfall Inspection Program
REVISED (December 2020) IDDE INVESTIGATION PRIORITIES

Basin ID	Outfall ID	Current Report Period July 2020 - December 2020						Completed to Date Including this Reporting Period			
		Existing Length of Pipe (ft)	Number of Manholes and Catch Basins	Upstream Length of Pipe (ft)	Percent Completed	Number of Manholes and Catch Basins	Percent Completed	Upstream Length of Pipe (ft)	Percent Completed	Number of Manholes and Catch Basins	Percent Completed
Buswell Brook	BZB0847	1,697	24					1,697	100%	24	100%
Buswell Brook TOTAL		1,697	24	0	0%	0	0%	1,697	100%	24	100%
Creek Brook	CB1193	70	0					70	100%		
	CB1198	144	5								
	CB1710	71	0					71	100%		
Creek Brook Outlet TOTAL		285	5	0	0%	0	0%	141	49%	0	0%
Detention Pond Outlet	DPO0657	422	7								
	DPO0696	61	2					61	100%	2	100%
	DPO1079	37	0								
Detention Pond Outlet TOTAL		520	9	0	0%	0	0%	61	12%	2	22%
Detention Pond Inlet	DP10946	7,421	172					7,421	100%	172	1
	DP10947	1,360	11								
	DP10969	1,515	22								
	DP11007	1,634	0								
	DP11074	694	14								
	DP11094	22	0					22	100%		
Detention Pond Inlet TOTAL		12,646	219	0	0%	0	0%	7,443	59%	172	79%
Fishing Brook	FBO0638	852	15					852	100%	15	100%
Fishing Brook TOTAL		852	15	0	0%	0	0%	852	100%	15	100%
Frey's Pond	FP7115	72	3								
Frey's Pond TOTAL		72	3	0	0%	0	0%	0	0%	0	0%
Johnston's Creek	JC1028	1,397	12					1,397	100%	12	100%
Johnston's Creek TOTAL		1,397	12	0	0%	0	0%	1,397	100%	12	100%
Little River	LR0952	7,268	88								
	LR0963	703	11								
	LR0993	539	4					539	100%	4	100%
	LR0995	822	0								
	LR1103	4,418	4					4,418	100%	4	100%
	LR1260 ¹	26,134	614	19,920	76%	468	76%	26,134	100%	614	24%
Little River TOTAL		39,884	721	19,920	50%	468	65%	31,091	78%	622	86%
Merrimack River	MR0662	210	5								
	MR0770	2,980	47								
	MR0834	756	8								
	MR0982	128	10					128	100%	10	100%
	MR1109	941	12	941	100%	12	100%	941	100%	12	100%
	MR1138	289	18					289	100%	18	100%
	MR1140	90	2								
	MR1141 ²	3,899	104					3,899	100%	104	100%
	MR1164	1,746	116					1,746	100%	116	100%
	MR20718	NA									
	MR23912	0	1								
	MR38718	1713	30								
	MR24314	541	24					541	100%	24	100%
Merrimack River TOTAL		13,293	377	941	7%	12	3%	7,544	57%	284	75%
Pentucket Lake	PL0891	5,463	128					5,463	100%	128	100%
	PL1222 ¹	3,292	102					3,292	100%	102	100%
Pentucket Lake TOTAL		8,755	230	0	0%	0	0%	8,755	100%	230	100%
Tilton Swamp	TS0984	52	1								
	TS0989	3,893	47								
Tilton Swamp TOTAL		3,945	48	0	0%	0	0%	0	0%	0	0%
Unknown	UNK0627	254	8								
	UNK0661	410	11					410	100%	11	100%
	UNK0668	854	18								
	UNK0788	869	16					869	100%	16	100%
	UNK0836	842	12								
	UNK0883	570	7								
	UNK0898	91	0					91	100%		
	UNK0902	54	2								
	UNK0951	1,910	34					1,910	100%	34	100%
	UNK0953	225	0					225	100%		
	UNK0954	81	0					81	100%		
	UNK0955	6058	146					6,058	100%	146	100%
	UNK1011	5306	44								
	UNK1020	71	2								
	UNK1040	1414	21								
	UNK1063	49	0								
	UNK1166	1079	28					1,079	100%	28	100%
	UNK1177	156	3					156	100%	3	100%
	UNK1188	25926	470					25,926	100%	470	100%
	UNK1189	2043	17								
	UNK1680	719	8								
	UNK1750	1239	23								

TABLE 2-2 CONTINUED

Basin ID	Outfall ID	Current Report Period						Completed to Date			
		July 2020 - December 2020						Including this Reporting Period			
		Existing Length of Pipe (ft)	Number of Manholes and Catch Basins	Upstream Length of Pipe (ft)	Percent Completed	Number of Manholes and Catch Basins	Percent Completed	Upstream Length of Pipe (ft)	Percent Completed	Number of Manholes and Catch Basins	Percent Completed
Unknown	UNK1767	2077	52					2,077	100%	52	100%
	UNK1835	761	10					761	100%	10	100%
	UNK1836	1179	22								
	UNK1886	20	0					20	100%		
	UNK1887	20	0					20	100%		
	UNK1888	21	0					21	100%		
	UNK1889	21	0					21	100%		
Unknown TOTAL		54,319	954	0	0%	0	0%	39,725	73%	770	81%
West Meadow Brook	WMB0738	80	0					80	100%		
	WMB0739	80	0					80	100%		
	WMB0740	82	0					82	100%		
	WMB0759	20	0					20	100%		
West Meadow Brook TOTAL		262	0					262	100%		
GRAND TOTAL		137,927	2,617	20,861	15%	480	18%	98,968	72%	2,131	81%
		26.12mi.		3.95mi.				18.74mi.			

¹ Estimate Base upon Percentage of Manholes Inspected

² Catchment includes State owned drainage and outfall. City inspected City owned drainage.

Table 2-3
Outfall Maintenance Priority Table
July Through December 2020

Outfall ID	Work Order Number		High Priority		Medium Priority	Low Priority					Inspection Date	Re-Inspection Date
			Could Not Locate	Buried		Partially Submerged in Sediment	Fully Submerged in Water	Partially Submerged in Water	Abnormal Vegetation	Outfall Damage		
DPI1056	ST00000521	closed	X								June-18	
KL1227	ST00001275		X								June-18	
LR1101	ST00001276	closed	X								June-18	
UNK1015	ST00001278	closed	X								June-18	
UNK1016	ST00001279	closed	X								June-18	
UNK1035	ST00001280	closed	X								June-18	
DPI0942	ST00000517			X							August-18	
DPI0943	ST00001281			X							August-18	March-19
DPI0944	ST00000518			X							August-18	March-19
LR1150	ST00001282			X							June-19	
UNK0888	ST00000478			X							March-19	
UNK0889	ST00000554			X							August-18	
UNK0905	ST00000556			X							August-18	
UNK0997	ST00000560			X							August-18	
UNK1033	ST00000562			X							June-18	
UNK1136	STI0001311			X							August-18	
UNK1207	STI0001312			X							March-19	
UNK1221	ST00000568			X							August-18	
UNK1907	STI0001313			X							August-18	
UNK35912	STI0001314			X							August-18	
UNK1773	ST00000575			X							March-19	
UNK1774	ST00000576			X							August-18	
BZB0959	ST00000508				X						April-19	
CB1196	ST00000510				X						March-19	
DPI0655	ST00000514				X						March-19	
DPI1008	ST00000520				X						April-19	
DPO1154	ST00000524				X						March-19	
FP7112	ST00000529				X						March-19	
JP1179	ST00000530				X						April-19	
KL1230	ST00001152				X						March-19	
LR0844	ST00000083				X						March-19	
LR1118	ST00001283				X						March-19	
MR1278	ST00000541				X						April-19	
MR24329	ST00000544				X						April-19	
SB11512	ST00000545				X						August-18	
TS0987	ST00000548				X						March-19	
UNK0064	ST00000551				X						April-19	
UNK0782	ST00000553				X						March-19	
UNK0935	ST00000558				X						March-19	
UNK1017	ST00000561				X						March-19	
UNK1076	ST00000563				X						March-19	
UNK1137	ST00000564				X						March-19	
UNK1183	ST00000566				X						March-19	
UNK1678	ST00000572				X						March-19	
UNK1748	ST00000573				X						March-19	
UNK1772	ST00000574				X						March-19	
UNK1906	ST00000580				X						March-19	
UNK25513	ST00000583				X						March-19	
UNK31513	ST00000584				X						March-19	
CB1148	ST00000591					X					August-19	
CB1199	ST00000595					X					August-19	
CB1200	ST00000596					X					August-19	
CB1201	ST00000597					X					August-19	
CL0681	ST00000600					X					April-19	
CL0683	ST00000601					X					April-19	
CL0690	ST00000602					X					April-19	
CL0701	ST00000603					X					April-19	
CLO0688	ST00000605					X					April-19	
DPI0634	ST00000606					X					April-19	
DPI0841	ST00000608					X					April-19	
DPI0965	ST00000609					X					April-19	
DPI1001	ST00000612					X					April-19	
DPI1004	ST00000613					X					July-19	
DPI1081	ST00000615					X						
DPI1090	ST00000617					X					April-19	
FBO0721	ST00000628					X					April-19	
FP7114	ST00000629					X					April-19	
FP7115	ST00000630					X					April-19	
KL30718	ST00000634					X					April-19	

Table 2-3 Continued

Outfall ID	Work Order Number	High Priority			Medium Priority	Low Priority					Inspection Date	Re-Inspection Date
			Could Not Locate	Buried		Partially Submerged in Sediment	Fully Submerged in Water	Partially Submerged in Water	Abnormal Vegetation	Outfall Damage		
LR0931	ST00000635					X					April-19	
LR1099	ST00000636					X					April-19	
LR1102	ST00000637					X					April-19	
LR1251	ST00000641					X					April-19	
MR23513	ST00000650					X						
MR23514	ST00000651					X						
MR23515	ST00000652					X						
MR23516	ST00000653					X						
MR23517	ST00000654					X						
MR23518	ST00000655					X						
MR23519	ST00000656					X						
MR23520	ST00000657					X						
MR23522	ST00000659					X						
MR23523	ST00000660					X						
MR23524	ST00000661					X						
MR23525	ST00000662					X						
MR24316	ST00000663					X					April-19	
MR24318	ST00000664					X						
MR24718	ST00000665					X					April-19	
MR5112	ST00000666					X					April-19	
PL1181	ST00000667					X					April-19	
SB1117	ST00000668					X					April-19	
UNK0626	ST00000674					X					April-19	
UNK0663	ST00000677					X					April-19	
UNK0669	ST00000682					X						
UNK0756	ST00000691					X					April-19	
UNK0882	ST00000700					X					April-19	
UNK0885	ST00000701					X					April-19	
UNK0950	ST00000706					X					April-19	
UNK0962	ST00000709					X						
UNK1000	ST00000710					X					April-19	
UNK1005	ST00000711					X					April-19	
UNK1006	ST00000712					X					April-19	
UNK1111	ST00000717					X					April-19	
UNK1123	ST00000718					X					April-19	
UNK1158	ST00000721					X					April-19	
UNK1160	ST00000722					X					April-19	
UNK1170	ST00000724					X					April-19	
UNK1174	ST00000726					X					April-19	
UNK1205	ST00000732					X					April-19	
UNK1213	ST00000734					X					April-19	
UNK1263	ST00000736					X					April-19	
UNK1265	ST00000737					X					April-19	
UNK13512	ST00000738					X					April-19	
UNK16715	ST00000741					X						
UNK1684	ST00000742					X					April-19	
UNK1685	ST00000743					X					July-19	
UNK1686	ST00000744					X					July-19	
UNK1738	ST00000751					X						
UNK1801	ST00000758					X					July-19	
UNK1802	ST00000759					X					July-19	
UNK1806	ST00000760					X						
UNK1864	ST00000767					X						
UNK1865	ST00000768					X						
UNK1867	ST00000770					X						
UNK1868	ST00000771					X					April-19	
UNK1880	ST00000772					X					April-19	
UNK1891	ST00000773					X					April-19	
UNK1896	ST00000774					X					April-19	
UNK1899	ST00000775					X					July-19	
UNK1900	ST00000776					X					July-19	
UNK24721	ST00000780					X					August-19	
UNK32717	ST00000791					X					May-19	
UNK34712	ST00000793					X						
UNK34713	ST00000794					X					May-19	
UNK26725	ST00001286					X					May-19	
UNK26726	ST00000784					X						
UNK29512	ST00000787					X					May-19	
CB0976	ST00001287								X		May-19	
CB0977	ST00001288								X			

Table 2-3 Continued

Outfall ID	Work Order Number	High Priority			Medium Priority	Low Priority					Inspection Date	Re-Inspection Date
			Could Not Locate	Buried		Partially Submerged in Sediment	Fully Submerged in Water	Partially Submerged in Water	Abnormal Vegetation	Outfall Damage		
CB1147	ST00001289								X		August-19	
DPO0657	ST00001291								X		May-19	
DPO1007	ST00001292								X		August-19	
FB0715	ST00001293								X			
UNK0906	ST00001294								X			
UNK1901	ST00001295								X		May-19	
UNK1902	ST00001296								X		May-19	
UNK5113	ST00001297								X			
CB1198	ST00001298						X				May-19	
DPI0945	ST00000519						X				May-19	
DPI1133	ST00000522						X				May-19	
MR20719	ST00000542						X					
TS0989	ST00000549						X				April-19	
KL26714	ST00000533						X					
DPI0970	ST00000610							X				
DPI1007	ST00000614							X				
DPI1084	ST00000616							X				
DPI1125	ST00000618							X				
DPI1131	ST00000619							X			May-19	
DPI1162	ST00000621							X			May-19	
DPI1197	ST00001299							X				
FBO0719	ST00000627							X			April-19	
KL1178	ST00000633							X			April-19	
LR1260	ST00000642							X				
TS0984	ST00000670							X			April-19	
TS33514	ST00000673							X			April-19	
UNK0665	ST00000678							X			May-19	
UNK0666	ST00000679							X			May-19	
UNK0728	ST00000688							X			May-19	
UNK0729	ST00000689							X				
UNK0730	ST00000690							X			May-19	
UNK0902	ST00000703							X			July-19	
UNK0955	ST00000708							X				
UNK1168	ST00000723							X				
UNK1176	ST00000728							X			July-19	
UNK1177	ST00000729							X			June-19	
UNK1188	ST00001301							X			April-19	
UNK1206	ST00000733							X			May-19	
UNK1220	ST00000735							X				
UNK1695	ST00000745							X			April-19	
UNK1696	ST00000746							X			April-19	
UNK1749	ST00000752							X			April-19	
UNK1767	ST00000755							X				
UNK1823	ST00000761							X				
UNK1829	ST00000762							X				
UNK1835	ST00000763							X			May-19	
UNK1910	ST00000777							X			May-19	
UNK6316	ST00001303							X			May-19	
UNK8312	ST00000797							X				
UNK1775	ST00000756							X			August-19	
LR0979	ST00001304									X	April-19	
MR0607	ST00001305									X	May-19	
TS0983	ST00001307									X	April-19	
UNK1173	ST00001308									X		
MR0927	ST00001309											
UNK1189	ST00001310											
Unknown Ownership Outfalls												

2.4 IDENTIFIED ILLICIT CONNECTIONS AND CURRENT RESOLUTION STATUS

The ongoing and cumulative status of the City's efforts to remove any identified illicit connections or discharges is summarized in Table 2-4.

Merrimack River Basin Outfalls – MR24314 was inspected for dry weather flow on 8/4/2020 and 8/12/2020. No flow was present on either visit. This outfall has been moved from Problem to Low category and will confirm no flow in upcoming months. MR1138 was inspected on two occasions and no flow was present on 8/12/2020 and 8/21/2020.

MR1109 was inspected and sampled on 11/9/2020 including the full catchment area, flow was detected and traced to the inlet for the catchment area. This inlet is placed at a depression area to relieve groundwater and avoid water runoff entering homes. CCTV was completed of the drainage with no additional infiltration sources found. The City will conduct CCTV of the surrounding sewer connections to ensure no infiltration. CCTV revealed raccoons living in the catchment area resulting in high bacteria counts. Additional lab testing will be required for bacteria counts.

Detention Pond Outlets - DPO0696 was inspected for dry weather flow on 8/12/2020 and 8/21/2020. No flow was present on either visit. This outfall has been moved from Problem to Low category and will confirm no flow in upcoming months.

Johnson Creek Basin Outfalls – JC1028 was inspected for dry weather flow on three occasions with no flow present at any inspection; therefore the outfall was moved from High Priority to Low Priority to confirm no flow in upcoming months.

Little River Basin Outfalls - LR0993 was inspected on 8/27/2020 and was moved to the Low Priority ranking as field and lab results were all within Stormwater mandated parameters.

LR1103 - was inspected on two occasions with no flow present; as such the Outfall was moved to Low priority category to confirm no flow in the upcoming months.

Unknown Basin Outfalls - UNK1063 was determined to be a culvert and removed from the Priority list.

UNK1835 - was inspected on three occasions with no flow present at each inspection; as such the outfall was moved to the Low priority category to confirm no flow in the upcoming months.

UNK0951 – was inspected and sampled on 8/27/2020 and no flow was present, this outfall remains a High Priority due to physical damage to the storm drain catchment. Work will begin when weather permits.

UNK0955 – was inspected and sampled on 9/16/2020 and the catchment area was inspected and found that there are drain manholes that have been paved over that are driving flow to the outfall. These drain manholes will be exposed and CCTV'd when weather permits to identify source of illicit flow.

Pentucket Lake Basin Outfalls – PL0891 was determined to be high in bacteria and surfactants, the surfactants being attributed to a laundromat the owner has been instructed to repair the broken lateral, expected completion in the next reporting period.

TABLE 2-4
SUMMARY OF ILLICIT DISCHARGES IDENTIFIED BY BASIN AND CURRENT STATUS
(July through December 2020)

Description		Illicit Discharge/Connection Verified				Ongoing Illicit Discharge Removal Activities					Final Illicit Connection Removal Actions				Assessment: Is the City in compliance with the schedule?	
CD Requirement		67.a.iii.1			67.a.iii.2	67.a.iii.7		67.a.iii.8		67.a.iii.9	67.a.iii.3		67.a.iii.4	67.a.iii.5		67.a.iii.6
Basin ID	Outfall ID	Date Verified	Address Location	Type of Discharge	Estimated Flow	Removed?	Reasons Why Not	Schedule for Removal	Reason why expedited	Legal Actions against Private Property Owners	Actions Taken (with Dates)	Date Connection Eliminated	Est. Cost of Removal	Estimated Volume Removed (gallons)		
Little River	LR1260	10/26/2017	29 Union Street	Single family broken sewer	400 gpd	not removed	gave extension	Was removed on 2/24/18			Catchment investigation completed on 10/10/2020.			60,000		
Merrimack River	MR1164	11/19/2016	Market Basket Parking Lot	groundwater into drain	Seasonal Flow/ Not able to estimate	N/A	N/A	N/A	N/A	N/A	This dry weather flow appears to be from a groundwater discharge into the drainage system across a parking lot. Additional testing is required to confirm bacteria source is groundwater.	N/A	N/A	N/A	Yes, the City is in compliance with resolving this "illicit discharge".	
	MR1141	12/20/2018	River St	Sewer pipe joint offset leaking in DMH	Not able to estimate	Yes		Was repaired 5/16/2019			Sewer pipe joint and DMH were repaired on 5/16/2019	5/16/2019	\$500	Not able to estimate	Yes, the City is in compliance	
	MR1109	12/21/2020	350 Water St	IDDE conducted and needs further investigation to determine the source.	500gpd	not removed	verifying bacteria counts				CCTV conducted on 12.21.2020 no defects found. Flow appears to be from top of catchment from depression/wetland flowing through drain. Additional CCTV required in nearby sewer lines to confirm no infiltration				Yes, the City is in compliance	
	MR1138	10/20/2017	River St	Upstream contamination from culvert inlet.	Not able to estimate	Yes					Continuiuing to monitor outfall for dry weather flow.				Yes, the City is in compliance	
	MR24314	7/27/2016	15 Groveland St., 19 Groveland St, 312 Water St	3 Single family	N/A	Yes	N/A	N/A	N/A	N/A	New gravity sewer installed on Nov 11, 2016 and 3 homes removed from drain system	11/4/2016	\$ 12,788	26,377	Yes, the City is in compliance	
Pentucket Lake	PL0891	10/5/2016	Marsh Avenue	leaking sewer/ exfiltration	Not able to estimate	X	Sewer replacement costs/lengths are extensive; cost exceeds discretionary funds; new fund required in next fiscal year to complete project	2021	This connection is being removed as quickly as possible and dependent on the availability of funds within the fiscal year.	NOV	10/5/18-10/10/18: SMH-2190 point repair and manhole rehabilitation complete. 10/11/18-10/16/18: Installation of CIPP main line liner on Main St 10/17/18-10/23/18: Installation of CIPP main line liner on Marsh Ave. 10/24/18: Began installing CIPP of sewer laterals. Groundwater too high causing flooding in homes. Project on hold until mid-end March. Project is complete. Post lining CCTV was reviewed and determined that more CCTV needs to be conducted and 1 defect in lining needs to be repaired.6/9/2020: illicit connection located at lateral from laundromat, owner notified to repair	-	\$ 446,000	-	Marsh Ave sewer repair project was bid and awarded to National Water Main Cleaning Co. and contract had to be extended to 6/30/19 due to high groundwater. Project was completed by the end of June 2019 but after review of CCTV, it was determined that more CCTV needs to be conducted and 1 defect in lining needs to be repaired.	
Unknown	UNK0788	7/27/2016	West Lowell Ave	Possible contamination from leaching septic system	Not able to estimate	N/A	N/A	N/A	N/A	N/A	City drain was disconnected from culvert and residence was connected to City sewer.	Jun-18	\$ 16,700	-	Yes, the City is in compliance	
	UNK0951	11/1/2017	Brook Street	Leaking sewer running through drain	Not able to estimate	not removed	Not able to fix due to weather	As soon as weather permits	-	-	Section of sewer was dug up and replaced. Further inspections in 2020 showed no dry weather flow. The City will continue to monitor for dry weather flow	4/17/2018	\$ 4,277	-	Yes, the City is in compliance	
	UNK0955	10/14/2016	South Main St	Contaminated private line discharges to City line.	Not able to estimate	not removed	unable to complete investigation due to weather	As soon as weather permits			drain manholes will be exposed and CCTV'd when weather permits to identify source of illicit flow.					
	UNK1166	6/11/2020	Franzone Dr	Upstream contamination needs additional IDDE	10gpm est	not removed	CCTV to be completed in next reporting period									

Description		Illicit Discharge/Connection Verified				Ongoing Illicit Discharge Removal Activities					Final Illicit Connection Removal Actions				Assessment: Is the City in compliance with the schedule?
CD Requirement		67.a.iii.1			67.a.iii.2	67.a.iii.7		67.a.iii.8		67.a.iii.9	67.a.iii.3	67.a.iii.4	67.a.iii.5	67.a.iii.6	
Basin ID	Outfall ID	Date Verified	Address Location	Type of Discharge	Estimated Flow	Removed?	Reasons Why Not	Schedule for Removal	Reason why expedited	Legal Actions against Private Property Owners	Actions Taken (with Dates)	Date Connection Eliminated	Est. Cost of Removal	Estimated Volume Removed (gallons)	
Unknown	UNK1188	12/25/2012	34 Columbia Pk., 66 Columbia Pk., 74 Columbia Pk., 80 Columbia Pk., 90-92 Columbia Pk.	5 Single family	N/A	N/A	N/A	N/A	N/A	N/A	5-house sewer services through a drain pipe that were dripping. Install a PVC sleeve through drain	6/8/2016	\$ 13,000	26,481	City is in compliance. 60 day deadline was not applicable until November 2016.
	UNK1767	6/23/2020	Tudor Ct	IDDE conducted. CCTV needs to be completed. High ammonia from private pipe. Dye tested home and their wastes go to sewer.	N/A	not removed	CCTV to be completed in next reporting period								
Detention Pond Outlet	DPO0696	6/12/2015	Pamela Lane	Private drain and outfall DPI0697 that discharge to detention pond and not contaminated.	Not able to estimate	N/A	N/A	N/A	N/A	N/A	No Flow present on multiple inspections in 2020. City will continue to monitor for dry weather flow	N/A	N/A	N/A	
Grand Total =													\$ 493,265	112,858	

SECTION 3

3.1 SSO AND BUILDING/PRIVATE PARTY BACKUP EVENTS

A chronological list of the sanitary sewer overflows (SSO) and building/private party backup events that occurred during this Reporting Period (July through December 2020), are listed in Table 3-1 and shown in Figure 3-1.

Over the Reporting Period, there were a total of two reportable SSO events associated with the City's sewer collection system and are listed in Table 3-1. Neither of the two reported SSO's associated with the City have occurred previously.

It is important to note that the SSO's associated with the City collection system operations continue to not be a result of pipe capacity deficiencies and the City continues to make significant progress in reducing the number of SSOs that occur in the system attributed to City operations. For this six-month reporting period, the City had two SSOs that were directly attributable to unanticipated collection system conditions. The EPA reported annual average SSOs in a typical nationwide system is about four SSOs per 100 miles. Accordingly, Haverhill continues to have less SSOs than the national average.

TABLE 3-1
SANITARY SEWER OVERFLOW EVENTS

SSO Ownership City or Private	City	City
MaintStar Work Order	WW00001944	WW00001951
SSO ID	SSO B 20-02	SSO-20-06
SSO Address	429 Primrose Street	SMH-5832
Start Date/Time	11/7/2020 6:00	11/23/2020 12:14
End Date/Time	11/7/2020 14:00	11/23/2020 13:00
Date Reported EPA/DEP	12/15/2020 8:30	11/23/2020 13:45
Who notified	PAUL JESSEL	PAUL JESSEL
Reason for occurrence	Construction debris in buried SMH	Heavy Rain SMH bolts broke
Date of last SSO occurrence	First occurrence	First occurrence
SSO est. vol.	500	5,000
Receiving Waters if sewerage entered	NA	Merrimack River
Method Use to Estimate volume	Visual	Visual
Nearest CB location ID	CB-5111	SMH-5832
Distance to Nearest CB (ft.)	35	NA
Name of receive Water whether or not there was a release	Little River	Merrimack River
Entered CB Yes or No	NO	NO
Measure Taken to Stop SSO	Uncovered SMH flush sewer main	Replaced cover and welded the cover to frame.
Decontaminate	NA	NA
Measures taken to prevent future overflows	keep debris out SMH	Welded the cover to frame.
Sewerage Location into Stream	NO	NO

Roads, surface water, and town boundaries from MassGIS and NH GRANIT. SSO and facility locations from City of Haverhill. Map produced by Wright-Pierce.

J:\N W:\GIS_Development\Projects\MA\Haverhill\13703_EPA-ConsentDecree\MXD\SSOs_July-Dec2020_11x17.mxd

◆

SSO

WTF

Water Treatment Facility

▲

WPAF



SSO and Building/Private Party
Backup Locations
July through December, 2020
City of Haverhill, MA



Haverhill

DATE: April 2021

FIGURE: 3-1

SECTION 4

4.1 CONSTRUCTION SITE INSPECTION AND ENFORCEMENT PROGRAM

At their June 26, 2018 Haverhill City Council meeting, the Council passed and adopted a Pre and Post Construction Stormwater Management Ordinance as required as part of the Consent Decree.

The City is currently reviewing its first two permit applications for "non-exempt" projects. The first project consists of the redevelopment of an existing church property; the second is the development of a new residential subdivision. Both projects disturb more than one acre of land and discharge to the MS4.

Thus far, projects meeting the one acre and MS4 connection requirements have been exempt under the Ordinance due to their being permitted by the Conservation Commission under the Massachusetts stormwater regulations. In addition, the Ordinance has served as a deterrent, as there have been instances where projects have been redesigned to reduce proposed disturbances to less than one acre.

SECTION 5

GENERAL STATUS

5.1 INTRODUCTION

This section summarizes the actions taken by the City of Haverhill to achieve Consent Decree compliance within the Reporting Period.

For the ninth Reporting Period (July through December 2020) there was one deliverable and/or activities due within that timeframe to achieve compliance. The one deliverable/activity is shown in Table 5-1 below.

The City continuous to make progress related to their Combined Sewer Overflow Final Long-Term Control Plan, however anticipated bidding of the CSO Dry Weather Connector Pipe Improvements in Spring 2020 was delayed due to Covid-19. This project was bid in December and awarded to N. Granese & Sons, Inc. with a start date January 2021.

The City is developing an application for a Massachusetts Clean Water Trust Asset Management Grant with an anticipated amount of \$250,000 to be submitted during the next reporting period. This grant will assist the City towards developing an asset management plan for its sewer and stormwater system that will provide a risk-based approach towards rehabilitation.

A draft Request for Qualifications, (RFQ), for the preliminary design of the City's Water Pollution Abatement Facility's Rehabilitation and Upgrade Project has been prepared. This draft RFQ is scheduled to be advertised in the first half of 2021. During this reporting period, there were no NPDES permit violations and zero secondary treatment bypasses. The WPAF has not had a secondary treatment bypass since September of 2017.

The City has requested that their cleaning and inspection subcontractor, Ted Berry, add the Upper Siphon and connecting interceptor be added to their scope of services. All three barrels were cleaned and CCTV.

The City is also currently reviewing their computer maintenance management system (CMMS) to seek another CMMS that will be utilized to develop consequence of failure and likelihood of failure values through CCTV to be inputted into the City's long-term CIP. The City is in its final review for a CMMS.

In addition to CSO progress and improvements at the WPCF, in January 2020, the City filled the following positions:

- Collection System Operator/MEO

The City is also actively searching to fill the Collection System Supervisor

Work orders generated from the City's computerized maintenance management system, Utility Cloud for the outfall inspection program from January through June 2020 are attached to this Compliance Report in Appendix A.

TABLE 5-1
SUBMISSIONS WITHIN CURRENT REPORTING PERIOD

<i>Part</i>	<i>Activity</i>	<i>Due Date</i>	<i>Submittal Date</i>
Effective Date of Consent Decree (11/10/2016)			
IX	Compliance Reporting		
	Compliance Report No. 8	10/31/2020	10/26/2020

5.2 ISSUES OF NONCOMPLIANCE

The City is in compliance with the requirements of this Consent Decree.

5.3 LOOKING AHEAD - SIX MONTH FORECAST

The anticipated future deliverable required under the Consent Decree for the next Reporting Period, January through June 2021, is shown in Table 5-2.

**TABLE 5-2
FUTURE DELIVERABLES DURING THE PROCEEDING REPORTING PERIOD
(JANUARY THROUGH JUNE 2020)**

Part	Activity	Trigger Event	# Days Due	Due Dates
			Post Trigger Event	
Effective Date of Consent Decree		11/10/2016		
IX	Compliance Reporting			
	Compliance Report No. 9	10/31/2020	180	4/30/2021

SECTION 6

SECONDARY TREATMENT BYPASS

6.1 INTRODUCTION

The intent of this section is to summarize the secondary treatment bypass events that occurred at the City of Haverhill's Water Pollution Abatement Facility during the reporting period, July through December 2020.

6.2 BYPASS EVENTS

There were no secondary treatment bypass events that occurred during the reporting period. Particularly of note, this is the sixth consecutive reporting period (three years), that the secondary treatment bypass facilities have not been activated. They have not been activated since September 7, 2017.

SECTION 7

CMOM CORRECTIVE ACTION PLAN

7.1 INTRODUCTION

Pursuant to the Consent Decree, the City of Haverhill submitted the Capacity, Management, Operation, and Maintenance Program Assessment Corrective Action Plan (CMOM), dated February 22, 2017, to MassDEP and EPA. In their review letter dated August 3, 2017, MassDEP requested that a summary of the status of CMOM-Related corrective actions that occurred during the reporting period be included in the Compliance Reporting.

7.2 CMOM CORRECTIVE ACTIONS

The CMOM identified 27 deficiencies, their recommended corrective actions, and an implementation schedule, are listed below in Table 7-1.

7.3 ADDITIONAL CMOM-RELATED ACTIVITIES

In conjunction with the corrective activities, the City has also performed additional activities as outlined and recommended in the CMOM Program, which includes collection system maintenance and construction activities. The expenses related to collection system maintenance activities performed from July through December 2020 (Reporting Period 9) are listed in Table 7-2 below.

In addition, continued construction activities occurred during the reporting period include the sewer repair and replacement included under the Phase II Water Transmission Main and Distribution Improvements, DWSRF #4397. The total bid price for the sewer work within the contract was approximately \$2,400,000. Funds expended for this reporting period is \$383,145, which includes activities such as spot repairs, sewer reconstruction, and the use of trenchless technology. In total, approximately 95% of the project is complete. The cost of engineering services is not included.

**Table 7-1
CMOM Corrective Action Plans & Status**

Action #	Deficiency	Recommended Corrective Action	Implementation Schedule	Status
1	The City does not have a formal long-term plan to mitigate SSO.	The recommendations in the Wastewater Treatment Plant & Collection System Staffing Analysis (Woodard & Curran, 2017), Collection System CIP and Sewer Inspection SOP (Appendices B and F), and the Pump Station Evaluation (Wright Pierce, 2016) will serve as a long term plan to reduce the causes of SSOs.	Ongoing/ Completed	The City has a capital improvement plan which includes recommendations from the Wastewater Treatment Plant & Collection System Staffing Analysis, Collection System CIP and Sewer Inspection SOP, and the Pump Station Evaluation which is the long-term plan to reduce the causes of SSOs. A majority of SSO's are caused by unanticipated sewer blockages. Every effort is taken to minimize the overflow and to take corrective action to prevent reoccurrences. The City has made great strides in order to reduce the number of SSOs over the years, which has seen a downward trend in the annual total occurrences City Standard Operating Procedure (SOP) whenever there is a SSO calls for CCTV of the sewer segment to verify previous corrective actions are sufficient. If there are three occurrences within a year, the sewer segment or street is placed on a preventative maintenance schedule, (PM). This PM is bi-annual. This is a reason that SSOs are reduced from year to year.

**Table 7-1
CMOM Corrective Action Plans & Status**

Action #	Deficiency	Recommended Corrective Action	Implementation Schedule	Status
2	The City does not have a comprehensive system to prioritize investigations, repairs, and rehabilitation.	Use the risk-based methods described in Appendices B and F from Capacity, Management, Operations and Maintenance (CMOM), Program Assessment and Corrective Action Plan prepared by Woodard & Curran (February 2017) to prioritize investigations, repairs, and rehabilitation.	Ongoing/Complete	A PEF was submitted to complete planning and implementation of various CMOM corrective action plans including pipe inspections. The City has also began adding CCTV and LOF pipe ratings to their new CMMS software (Utility Cloud). The City is finalizing the purchase of a new CMMS. The CMMS will be GIS centric with the ability to indicate CoF and LoF values as an attribute to the sewer segment. This will be done Citywide and will be used for capital planning. The City to continue utilizing Engineering services for risk-base method whenever there is a water, sewer, or other infrastructure project as their standard operating procedure. The City has hired an Asset Manager who will update, revise, and develop further CoF and LoF values that will be used to develop the City's long-range CIP. The City will use this data and incorporate into a capital asset planning tool.
3	The City does not have updated job descriptions that match technical requirements for a modern collection system utility.	Update job descriptions for the revised organizational structure proposed in the Wastewater Treatment Plant & Collection System Staffing Analysis (Woodard & Curran, 2017)	Within one year after EPA approves the CMOM Action Plan	Complete.
4	Although the City training program includes some key safety training, staff would benefit from a formalized safety and technical training program.	Implement a staff training program using the guidelines outlined in Appendix C.	Within one year after EPA approves the CMOM Action Plan	The City is in contact with Innovative Safety Services, NEWWTA, and others, to schedule yearly training, focusing on safety and operations and maintenance. All Wastewater employees are encouraged to seek any additional training, including management and leadership training, at the City's cost.
5	Although the City uses MaintStar to track customer complaints, they do not use the database to prioritize preventative maintenance.	Annually review customer complaint data using GIS to identify areas that may require further investigation.	Within one year after EPA approves the CMOM Action Plan	Ongoing See response to item 1 above

**Table 7-1
CMOM Corrective Action Plans & Status**

Action #	Deficiency	Recommended Corrective Action	Implementation Schedule	Status
6	The City lacks a comprehensive, risk-based approach to maintenance planning.	Use the risk-based methods described in Appendices B and F from CMOM Program Assessment and Corrective Action Plan prepared by Woodard & Curran, February 2017 to prioritize investigations, repairs, and rehabilitation.	Ongoing/Complete	The City's Asset Manager will use the risk base approach from Appendix B and F from the CMOM Program Assessment and Corrective Action Plan prepared by Woodard & Curran, February 2017, along with developing a CIP See response to item 1 above
7	Local limits need to be updated.	Perform a local limits study and update the limits table in the ordinance (per Appendix E, Sewer Ordinance Review from CMOM Program Assessment and Corrective Action Plan prepared by Woodard & Curran, February 2017).	Within one year after EPA approves the CMOM Action Plan	Final NPDES Permit went into effect on January 1, 2020. Local limits evaluation is being finalized and is scheduled for completion in the first quarter of 2021.
8	The City needs to improve implementation and enforcement of their Sewer Use Ordinance (SUO).	Improve implementation and enforcement of the SUO. Begin mapping Food Service Establishments in GIS and building database of grease trap inspectional data.	Within one year after EPA approves the CMOM Action Plan	Utility Cloud (CMMS) has been updated to reflect all food service establishments (FSE) and is updated as new permits are submitted. The City hired Watermark Environmental Inc. to conduct FSE annual FOG inspections and to update Utility Cloud system with pass/fail designations. In December of 2020 the City completed draft updates to the SUO for FOG inspection implementation and enforcement; as well as updated the Enforcement Response Plan. These drafts are currently being reviewed before approvals.
9	The City should update recordkeeping pertaining to private systems.	Input private lift stations into CMMS to track issues & contact information.	Within three months after EPA approves the CMOM Action Plan	Complete.

**Table 7-1
CMOM Corrective Action Plans & Status**

Action #	Deficiency	Recommended Corrective Action	Implementation Schedule	Status
10	The City does not have a finalized version of their capital improvement plan – which will include pump station upgrades, collection system rehabilitation, and WWTP upgrades.	The City should finalize their CIP and appropriate funds as necessary.	Within three months after EPA approves the CMOM Action Plan	Complete, and as part of the annual budget process, the city updates the CIP each year. The CIP is used to develop the wastewater 5-year financial plan to fund the CIP. The CIP includes pump station upgrades, collection system rehabilitation, and WWTP upgrades. In order to fund the CIP, the City has raised sewer user rates by 40% over the last four years. CIP Implementation is only considered based upon a sewer user funds increase that includes increases from water improvements as a phased approach. See response to item 1 above
11	The City does not have a finalized version of their capital improvement plan – which will include pump station upgrades, collection system rehabilitation, and WWTP upgrades.	The City should finalize their CIP and appropriate funds as necessary.	Within three months after EPA approves the CMOM Action Plan	Complete, refer to Action #10 Status.
12	The City has not verified that other air relief valves do not exist. Maintenance of air relief valves has not been performed historically.	Review record drawings and inspect force main routes to confirm location of air relief valves. If located, enter in GIS and schedule routine maintenance in CMMS.	Within one year after EPA approves the CMOM Action Plan	Ongoing.
13	The City does not have a standard procedure for maintaining safety training records.	The City will utilize their CMMS program to organize safety training records.	Within one year after EPA approves the CMOM Action Plan	Complete Training is currently tracked by administration staff in a Microsoft Access File.
14	The City has a general emergency response plan (ERP). The Division recently completed an ERP for responding to SSOs. The Division lacks ERP for other collection system emergencies.	Develop ERP for collections-specific emergencies, in particular those affecting critical assets. For example, there should be an SOP for providing backup power to pump stations during a system-wide power outage.	Within one year after EPA approves the CMOM Action Plan	Complete. The City has purchased a vac-truck, which is scheduled for delivery in Spring 2021. The ERP has been updated to incorporate the utilization of the vac-truck. The City has combined Power Outage, Sanitary Sewer Overflows, and Marginal Pump Station High Flow Management, into one document. This document is being circulated for staff review.

**Table 7-1
CMOM Corrective Action Plans & Status**

Action #	Deficiency	Recommended Corrective Action	Implementation Schedule	Status
15	The City does not have formal emergency response training.	Implement a program for training and practicing emergency response.	Within one year after EPA approves the CMOM Action Plan	The Wastewater Staff have been trained and additional training will be documented into the City's CMMS. For minor emergencies, the staff prepares in advance of a weather event (e.g., setting up bypass pumps at the Marginal Pump Station, verifying that equipment has fuel (gasoline, diesel, or propane), along with procuring rental generators. The need for training is incorporated into these routine preparations.
16	The City has a hydraulic model for interceptors and CSOs, but there is no city-wide hydraulic model.	Although developing a comprehensive hydraulic model is not a high priority, Woodard & Curran recommends building out the model as required to address capacity issues and plan for new development as the need arises.	As Needed	The City's GIS system is updated on an ongoing basis which will provide a good foundation for a future model.
17	The City does not have adequate staff to perform sufficient preventative maintenance on all 36 pump stations part of the collection system.	Follow the recommendations of the Wastewater Treatment Plant & Collection System Staffing Analysis (Woodard & Curran, 2017) to assign sufficient resources to keep up with required maintenance.	Within one year after EPA approves the CMOM Action Plan	The City developed a job description for a new Collection System MEO/laborer and hired a qualified candidate. The City outsources many tasks. See response to Item #19. The Mission Systems improve the monitoring of pump stations resulting in reduced staff time for routine inspections (weekly vs. daily) and more time on preventative maintenance.

**Table 7-1
CMOM Corrective Action Plans & Status**

Action #	Deficiency	Recommended Corrective Action	Implementation Schedule	Status
18	Although there is generally sufficient redundancy of pumps and level controls, some stations require specific upgrades related to redundancy.	The City will utilize the recommendations of the Pump Station Evaluation (Wright Pierce, 2016) to evaluate future rehabilitation. The City is planning for Carleton Street PS and North Ave PS to be in construction by EOY 2019.	Ongoing	The replacement/upgrades to the Carleton Street and North Avenue Pump Stations are complete and online. The City will be standardizing all their pump stations during upgrades and additional pump stations will be recommended for rehabilitation/upgrades as outlined in the Pump Station CIP. Mission alarms are currently installed in twenty-three (23 out of 36) lift stations with seven (7) budgeted for FY 21. The remaining thirteen (13) will be budget over the next few fiscal years. Lift stations with bubblers will be changed to Vega Radar level control with backup floats. Six (6) stations have been budgeted for this upgrade.
19	Not all pump stations have communication ability. Lack of communication at pump stations has contributed to SSOs.	The City will utilize the recommendations of the SCADA Study (Woodard & Curran, 2011) and Pump Station Evaluation (Wright Pierce, 2016) to evaluate communication improvements.	Ongoing	All pump stations have the ability to communicate alarms. City has selected the use of Mission Alarm and Monitoring Systems for communication. Currently, 23 out of the City's 36 pump stations have Mission Systems. The City has budgeted money to install Mission RTU alarms at 7+/- additional stations this fiscal year (the number of stations will depend on the bid price). The City will be continuing to install Mission Systems until all lift stations are equipped, which is estimated to be complete within the next two fiscal years.

**Table 7-1
CMOM Corrective Action Plans & Status**

Action #	Deficiency	Recommended Corrective Action	Implementation Schedule	Status
20	11 pump stations do not have working backup power, though most of these have connections for a portable generator or are small enough to pump out.	The City will utilize the recommendations of the SCADA Study (Woodard & Curran, 2011) and Pump Station Evaluation (Wright Pierce, 2016) to evaluate emergency power improvements. Develop an ERP to address a system-wide power outage including monitoring fuel supplies, mobilizing portable generators, and pumping out with trucks.	Ongoing ERP for system wide power outage will be developed within three months after EPA approves the CMOM Action Plan	Completed There are currently seven stations without backup generators. The ERP will be updated to include new generator at the North Avenue Station and the use of the City's new vac-truck. See response to item #14 ERP has been updated needs to be review by staff.
21	There is currently no schedule for cleaning sewer lines on a system-wide basis.	The City will utilize a 20-year plan to inspect all sewer pipes calculated to have a consequence of failure value ≥ 3 (approximately 57% of system). See the Collection System CIP (Appendix B) for additional information.	Will begin to implement program within six months after EPA approves the CMOM Action Plan	The City has purchased their own vac truck (anticipated delivery Spring 2021). Sewers are designed to achieve self-cleaning velocities. Once the Vac-Truck is delivered the City will begin to clean the City's sewers as necessary. The City has added flushing PM's with more flushing being conducted with 194 sewer mains cleaned.
22	The City does not have a dedicated location for offloading and dewatering sewer cleanings. The City does not have an enclosed location for storage of their sewer maintenance vehicles.	The City will purchase a dewatering dumpster for sewer cleanings. The City will construct a facility for storage of sewer maintenance vehicles.	Within three years after EPA approves the CMOM Action Plan	Dewatering dumpsters – Complete. Maintenance Vehicle Facility – Included in 5-year CIP
23	The City does not have a list of assets located on right-of-ways. The City has also not developed an SOP for maintenance of right-of-ways and easements.	Identify off-street assets using GIS. Schedule preventative maintenance for maintaining accessibility in CMMS. Develop SOPs for specific easements as necessary, including contacting property owners to obtain keys, etc.	Within two years after EPA approves the CMOM Action Plan	The City has inputted easements into GIS and assets. These assets will be populated, and SOPs will be made; as well as the development of preventative maintenance plan. The City has developed sewer segments that are contained within the easements along with a PM schedule. The City will be moving from MainStar and UtilityCloud to a new CMMS. These PM's will be inputted into new CMMS and begin soon

**Table 7-1
CMOM Corrective Action Plans & Status**

Action #	Deficiency	Recommended Corrective Action	Implementation Schedule	Status
24	There is no systematic program for uncovering manholes that have been paved over.	Develop an SOP which includes: • Identification of paved over manholes as part of routine inspections • Add paved-over manholes to GIS. • Adding work orders to CMMS for raising paved-over manholes.	Within two years after EPA approves the CMOM Action Plan	The City's highway department distributes a street paving list to each department. The engineering department investigates those streets and puts a list together of buried manholes. This list is then given to the contractor and the contractor raises the manholes. Paved over manholes are added to GIS on an ongoing basis as they are discovered.
25	Although the City has identified areas with high measured inflow, building inspections have not been performed.	The City will perform trial building inspections to a sample of 10% of buildings located in Areas 14 & 23 Infiltration and Inflow Report (CDM Smith, 2011). Sample brochures will be sent out to buildings where inspections are not successfully completed.	Within two years after EPA approves the CMOM Action Plan	The City is considering this as part of their Phase 3 CSO work however recommended corrective action is only practical in separated sewer areas. Under Phase 3 CSO, the City will evaluate the development of informative brochures to send to all homeowners.
26	The City lacks public education materials associated with roof leaders and sump pumps.	The City will consider using a public education campaign to inform residents of proper plumbing in areas of separated sewer.	Within one year after EPA approves the CMOM Action Plan	The City is considering this as part of their Phase 3 CSO work. Refer to Item #25 status
27	The City does not have a system-wide manhole inspection program.	Perform manhole inspections using NASSCO Level 1 MACP. Prioritize and schedule using the risk-based approach described in Appendices B and F rehabilitation. The City plans to complete manhole inspections while performing pipe inspections.	Will begin to implement program within six months after EPA approves the CMOM Action Plan	Manholes inspection are ongoing as part of pipe inspections. As the City contracts with engineering firms for CCTV work, their scope will also include manhole inspections. The City has implemented NAASCO MACP sewer inspection standards and requires contractors to be NAASCO certified when performing inspections. In addition, MACP Level 1 form has been created in the City's CMMS Utility Cloud. The City will ask CCTV vendors to perform a MACP level 1 when they CCTV a sewer segment.

TABLE 7-2
CMOM-RELATED EXPENSES THAT OCCURRED
DURING REPORTING PERIOD 9
(JULY THROUGH DECEMBER 2020)

Account	Funds Expended during Reporting Period	Account Description
Lift Station Operation and Maintenance	\$39,549	Used to fund costs for all maintenance and repair of the wastewater collection system.
Sewer Assessment & Inspection	\$54,272	Used to fund cleaning, CCTV inspection, and assessment of sewer lines and grit removal
Service Contracts	\$35,207	Used to fund the annual service contracts for various items in the wastewater department.
Wastewater Infrastructure	\$0	This account is use for sewer repair miscellaneous items. This is an annual appropriation funded from current year revenues.
Wastewater Capital	\$45,500	Funds are used for expenditures greater than \$10,000 with a life greater than 3-years. This is an annual appropriation funded from current year revenues.
Storm Water - Capital	\$76,865	Funds capital expenditures greater than \$10,000 with a life greater than 3-years. Funds are annual appropriations from user rates and fees.
Stormwater Expense	\$70,266	Funds various expenses related to stormwater system operation and maintenance, street sweeping, federal and state permit requirements, and the downtown flood system. There is currently no revenue source for stormwater expenditures.
Total Spent During Reporting Period	\$321,659	





CITY OF HAVERHILL, MASSACHUSETTS

NPDES PERMIT No. MA0101621

CONSENT DECREE

(Civil Action No. 16-11698-IT, 11/10/16)

COMPLIANCE REPORT No. 9

JULY THROUGH DECEMBER 2020

APPENDICES

APRIL 2021

APPENDIX A

OUTFALL INVESTIGATIONS AND INSPECTIONS

JULY 2020

Haverhill IDDE Inspection Form

Drain Manhole

SECTION 1: BACKGROUND DATA						
ASSET ID: DMH-54		OUTFALL ID: MR0770				
Date/Time: 2020-07-21 7:57						
Temperature: °F 73		Inspector(s): James Conte Jesse Middleton Zebulan Day Justin Mazzotta				
Street Name/Structure Location: RIVER ST						
Previous Precipitation Date/End Time: 2020-07-18 1:45:00		Amount (inches): 0.01				
Pictures						
SECTION 2: OUTLET PIPE ASSET DESCRIPTION						
Location	DMH Interior Condition	Material	Shape	Diameter/Dimension (in.)	Submerged	
DMH Outlet Pipe	Fair	Reinforced Concrete	Circle	35	In Water:	No
					With Sediment:	No
SECTION 3A: INLET PIPE NO. 1 ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 1	CB-4298	Reinforced Concrete	12:00	Circle	12	In Water: No
					With Sediment:	No
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS						
Indicator		Indicator Present?		Indicator Description		
Asset Damage		None				
Deposits/Stains		Flow Line				
Pool Quality		None				
Pipe Algae/Growth		None				
*Do physical indicators suggest an illicit discharge is present (Y/N):		No				
Is Inlet Pipe No.1 Flowing?		No		Estimated GPM:		
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS (ALL FLOWING ASSETS)						
Indicator	Indicator Present (Yes/No)		Description		Severity	
Odor						
Color						
Turbidity						
Floatables (Does Not Include Trash)						
SECTION 3A: INLET PIPE NO. 1 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)						
Sample Date/Time:	Result		Typical EPA Benchmarks		Equipment	
Parameter						
Temperature (degrees F)					Hanna portable PH and Temp meter	
pH					Hanna portable PH and Temp meter	
Specific Conductivity (uS)					To be sent to lab or EXTECH EC500	
Salinity (ppm S)					EXTECH EC500	
Chlorine (ppm)			≥ Reporting Limit		Hach pocket Colorimeter	
Ammonia (mg/L)			≥ 0.5 mg/L		To be sent to lab	
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C	
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)					To be sent to lab	
SECTION 3B: INLET PIPE NO. 2 ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 2	DMH-57	Reinforced Concrete	3:00	Circle	30	In Water: No
					With Sediment:	No
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS						
Indicator		Indicator Present?		Indicator Description		
Asset Damage		None				
Deposits/Stains		Flow Line				
Pool Quality		None				
Pipe Algae/Growth		None				
*Do physical indicators suggest an illicit discharge is present (Y/N):		No				
Is Inlet Pipe No.2 Flowing?		Yes		Trickle		Estimated GPM: 0.5
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS (ALL FLOWING ASSETS)						
Indicator	Indicator Present (Yes/No)		Description		Severity	
Odor	No					
Color	No					
Turbidity						
Floatables (Does Not Include Trash)	No				Clear	
SECTION 3B: INLET PIPE NO. 2 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)						
Sample Date/Time:	Result		Typical EPA Benchmarks		Equipment	
Parameter						
Temperature (degrees F)	67.6				EXTECH EC500	
pH	6.3				EXTECH EC500	
Specific Conductivity (uS)	1008				EXTECH EC500	
Salinity (ppm S)	528		≥ Reporting Limit		EXTECH EC500	
Chlorine (ppm)	0.01		≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)					To be sent to lab	

SECTION 3C: INLET PIPE NO. 3 ASSET DESCRIPTION								
Location	Upstream Asset ID	Material		Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 3	CB-585	Other	Steel	4:00	Circle	12	In Water:	No
							With Sediment:	No
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS								
Indicator			Indicator Present?		Indicator Description			
Asset Damage			None					
Deposits/Stains			Flow Line					
Pool Quality			None					
Pipe Algae/Growth			None					
*Do physical indicators suggest an illicit discharge is present (Y/N):			No					
Is Inlet Pipe No.3 Flowing?			No		Estimated GPM:			
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS (ALL FLOWING ASSETS)								
Indicator	Indicator Present (Yes/No)			Description		Severity		
Odor								
Color								
Turbidity								
Floatables (Does Not Include Trash)								
SECTION 3C: INLET PIPE NO. 3 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)								
Sample Date/Time:								
Parameter	Result			Typical EPA Benchmarks		Equipment		
Temperature (degrees F)						EXTECH EC500		
pH						EXTECH EC500		
Specific Conductivity (uS)						EXTECH EC500		
Salinity (ppm S)						EXTECH EC500		
Chlorine (ppm)				≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)				≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)						To be sent to lab		
SECTION 3D: INLET PIPE NO. 4 ASSET DESCRIPTION								
Location	Upstream Asset ID	Material		Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 4							In Water:	
							With Sediment:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS								
Indicator			Indicator Present?		Indicator Description			
Asset Damage								
Deposits/Stains								
Pool Quality								
Pipe Algae/Growth								
*Do physical indicators suggest an illicit discharge is present (Y/N):								
Is Inlet Pipe No.4 Flowing?					Estimated GPM:			
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS (ALL FLOWING ASSETS)								
Indicator	Indicator Present (Yes/No)			Description		Severity		
Odor								
Color								
Turbidity								
Floatables (Does Not Include Trash)								
SECTION 3D: INLET PIPE NO. 4 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)								
Sample Date/Time:								
Parameter	Result			Typical EPA Benchmarks		Equipment		
Temperature (degrees F)						EXTECH EC500		
pH						EXTECH EC500		
Specific Conductivity (uS)						EXTECH EC500		
Salinity (ppm S)						EXTECH EC500		
Chlorine (ppm)				≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)				≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)						To be sent to lab		
SECTION 3E: INLET PIPE NO. 5 ASSET DESCRIPTION								
Location	Upstream Asset ID	Material		Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 5							In Water:	
							With Sediment:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS								
Indicator			Indicator Present?		Indicator Description			
Asset Damage								
Deposits/Stains								
Pool Quality								
Pipe Algae/Growth								
*Do physical indicators suggest an illicit discharge is present (Y/N):								
Is Inlet Pipe No.5 Flowing?					Estimated GPM:			
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS (ALL FLOWING ASSETS)								
Indicator	Indicator Present (Yes/No)			Description		Severity		
Odor								
Color								
Turbidity								
Floatables (Does Not Include Trash)								
SECTION 3E: INLET PIPE NO. 5 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)								
Sample Date/Time:								
Parameter	Result			Typical EPA Benchmarks		Equipment		
Temperature (degrees F)						EXTECH EC500		
pH						EXTECH EC500		
Specific Conductivity (uS)						EXTECH EC500		
Salinity (ppm S)						EXTECH EC500		
Chlorine (ppm)				≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)				≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab		

Phosphorus (mg/L)				To be sent to lab
SECTION 3F: INLET PIPE NO. 6 ASSET DESCRIPTION				
Location	Upstream Asset ID	Material	Clock Postion (Outlet Pipe at 6:00)	Shape
Inlet Pipe No. 6				
				Diameter/Dimension (in.)
				Submerged
				In Water
				With Sediment
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS				
Indicator	Indicator Present?		Indicator Description	
Asset Damage				
Deposits/Stains				
Pool Quality				
Pipe Algae/Growth				
*Do physical indicators suggest an illicit discharge is present (Y/N):				
Is Inlet Pipe No.6 Flowing?			Estimated GPM:	
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS (ALL FLOWING ASSETS)				
Indicator	Indicator Present (Yes/No)	Description	Severity	
Odor				
Color				
Turbidity				
Floatables (Does Not Include Trash)				
SECTION 3F: INLET PIPE NO. 6 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)				
Sample Date/Time:	Result		Typical EPA Benchmarks	Equipment
Parameter				
Temperature (degrees F)				EXTECH EC500
pH				EXTECH EC500
Specific Conductivity (uS)				EXTECH EC500
Salinity (ppm S)				EXTECH EC500
Chlorine (ppm)			≥ Reporting Limit	Hach Test Strips
Ammonia (mg/L)			≥ 0.5 mg/L	Hach Test Strips
Surfactants (mg/L)			≥ 0.25 mg/L	To be sent to Lab or CHEMets Detergents Kit K-9400
E.coli (cfu/100mL)			> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)			> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)				To be sent to lab
Comments :				
Signature of Inspector : JL JM ZD JM				

Haverhill IDDE Inspection Form

Drain Manhole

SECTION 1: BACKGROUND DATA						
ASSET ID:		DMH-58		OUTFALL ID: MR0770		
Date/Time:		2020-07-21 8:20				
Temperature: °F		76		Inspector(s): James Conte		
Street Name/Structure Location:		WORCESTER ST				
Previous Precipitation Date/End Time:		2020-07-18 1:45:00		Amount (inches): 0.01		
Pictures						
SECTION 2: OUTLET PIPE ASSET DESCRIPTION						
Location	DMH Interior Condition	Material	Shape	Diameter/Dimension (in.)	Submerged	
DMH Outlet Pipe	Good	Reinforced Concrete	Circle	30	In Water:	No
					With Sediment:	No
SECTION 3A: INLET PIPE NO. 1 ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 1	CB-587	Reinforced Concrete	8:00	Circle	12	In Water: No
						With Sediment: No
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS						
Indicator		Indicator Present?		Indicator Description		
Asset Damage		None				
Deposits/Stains		Flow Line				
Pool Quality		Odors				
Pipe Algae/Growth		None				
*Do physical indicators suggest an illicit discharge is present (Y/N):		No				
Is Inlet Pipe No.1 Flowing?		No		Estimated GPM:		
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS (ALL FLOWING ASSETS)						
Indicator	Indicator Present (Yes/No)		Description		Severity	
Odor						
Color						
Turbidity						
Floatables (Does Not Include Trash)						
SECTION 3A: INLET PIPE NO. 1 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)						
Sample Date/Time:						
Parameter	Result		Typical EPA Benchmarks		Equipment	
Temperature (degrees F)					Hanna portable PH and Temp meter	
pH					Hanna portable PH and Temp meter	
Specific Conductivity (uS)					To be sent to lab or EXTECH EC500	
Salinity (ppm S)					EXTECH EC500	
Chlorine (ppm)			≥ Reporting Limit		Hach pocket Colorimeter	
Ammonia (mg/L)			≥ 0.5 mg/L		To be sent to lab	
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C	
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)					To be sent to lab	
SECTION 3B: INLET PIPE NO. 2 ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 2	DMH-213	Reinforced Concrete	9:00	Circle	18	In Water: No
						With Sediment: No
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS						
Indicator		Indicator Present?		Indicator Description		
Asset Damage		None				
Deposits/Stains		Flow Line				
Pool Quality		None				
Pipe Algae/Growth		None				
*Do physical indicators suggest an illicit discharge is present (Y/N):		No				
Is Inlet Pipe No.2 Flowing?		Yes		Trickle		Estimated GPM: 0.5
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS (ALL FLOWING ASSETS)						
Indicator	Indicator Present (Yes/No)		Description		Severity	
Odor	No					
Color	No					
Turbidity	-		-		Clear	
Floatables (Does Not Include Trash)	No				-	
SECTION 3B: INLET PIPE NO. 2 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)						
Sample Date/Time:		2020-07-21 8:28:00				
Parameter	Result		Typical EPA Benchmarks		Equipment	
Temperature (degrees F)	70.7				EXTECH EC500	
pH	6.2				EXTECH EC500	
Specific Conductivity (uS)	415				EXTECH EC500	
Salinity (ppm S)	706		≥ Reporting Limit		EXTECH EC500	
Chlorine (ppm)	0		≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)					To be sent to lab	

SECTION 3C: INLET PIPE NO. 3 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 3	DMH-212	Reinforced Concrete	3:00	Circle	24	In Water:	No
						With Sediment:	No
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS							
Indicator	Indicator Present?		Indicator Description				
Asset Damage	None						
Deposits/Stains	Flow Line						
Pool Quality	None						
Pipe Algae/Growth	None						
*Do physical indicators suggest an illicit discharge is present (Y/N):			No				
Is Inlet Pipe No.3 Flowing?			No		Estimated GPM:		
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3C: INLET PIPE NO. 3 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3D: INLET PIPE NO. 4 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 4	CB-586	Reinforced Concrete	4:00	Circle	12	In Water:	No
						With Sediment:	No
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS							
Indicator	Indicator Present?		Indicator Description				
Asset Damage	None						
Deposits/Stains	Flow Line						
Pool Quality	None						
Pipe Algae/Growth	None						
*Do physical indicators suggest an illicit discharge is present (Y/N):			No				
Is Inlet Pipe No.4 Flowing?			No		Estimated GPM:		
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3D: INLET PIPE NO. 4 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3E: INLET PIPE NO. 5 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 5						In Water:	
						With Sediment:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS							
Indicator	Indicator Present?		Indicator Description				
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.5 Flowing?					Estimated GPM:		
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3E: INLET PIPE NO. 5 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		

Phosphorus (mg/L)						To be sent to lab
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SECTION 3F: INLET PIPE NO. 6 ASSET DESCRIPTION

Location	Upstream Asset ID	Material	Clock Postion (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 6						In Water With Sediment

SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS

Indicator	Indicator Present?	Indicator Description
Asset Damage		
Deposits/Stains		
Pool Quality		
Pipe Algae/Growth		
*Do physical indicators suggest an illicit discharge is present (Y/N):		
Is Inlet Pipe No.6 Flowing?		Estimated GPM:

SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS (ALL FLOWING ASSETS)

Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color			
Turbidity			
Floatables (Does Not Include Trash)			

SECTION 3F: INLET PIPE NO. 6 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)

Sample Date/Time:			
Parameter	Result	Typical EPA Benchmarks	Equipment
Temperature (degrees F)			EXTECH EC500
pH			EXTECH EC500
Specific Conductivity (uS)			EXTECH EC500
Salinity (ppm S)			EXTECH EC500
Chlorine (ppm)		≥ Reporting Limit	Hach Test Strips
Ammonia (mg/L)		≥ 0.5 mg/L	Hach Test Strips
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or CHEMets Detergents Kit K-9400
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)			To be sent to lab

Comments :

Signature of Inspector :

JL JM

ZD JM

AUGUST 2020

Haverhill IDDE Investigation & Inspection Form

Catch Basin

SECTION 1: BACKGROUND DATA									
ASSET ID:		CB-1377			OUTFALL ID:		LR0993		
Date/Time:		2020-08-27 8:02:00							
Temperature: °F		56			Inspector(s):		James Conte Jesse Middleton Zebulan Day		
Street Name/Structure Location:		NEWARK ST							
Previous Precipitation Date/End Time:		2020-08-23 15:15:00			Amount (inches):		0.4		
Pictures									
SECTION 2: OUTLET PIPE ASSET DESCRIPTION									
Location	CB Interior Condition	Material		Shape	Diameter/Dimension (in.)		Submerged		
CB Outlet Pipe	Good	Corrugated Metal		Circle	15		In Water:	Partially	
							With Sediment:	No	
SECTION 3A: INLET PIPE NO. 1 ASSET DESCRIPTION									
Location	Upstream Asset ID	Material		Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)		Submerged	
Inlet Pipe No. 1	CB-1378	Corrugated Metal		12:00	Circle	15		In Water:	Partially
							With Sediment:	No	
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS									
Indicator		Indicator Present?		Indicator Description					
Asset Damage		Corrosion							
Deposits/Stains		Flow Line							
Pool Quality		None							
Pipe Algae/Growth		None							
*Do physical indicators suggest an illicit discharge is present (Y/N):		No							
Is Inlet Pipe No.1 Flowing?		Yes		Trickle		Estimated GPM:		0.5	
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS (ALL FLOWING ASSETS)									
Indicator	Indicator Present (Yes/No)		Description			Severity			
Odor	No								
Color	No								
Turbidity						Clear			
Floatables (Does Not Include Trash)	No								
SECTION 3A: INLET PIPE NO. 1 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)									
Sample Date/Time:		2020-08-27 8:12:00							
Parameter		Result		Typical EPA Benchmarks		Equipment			
Temperature (degrees F)		63.6				Hanna portable PH and Temp meter			
pH		7				Hanna portable PH and Temp meter			
Specific Conductivity (uS)		733				To be sent to lab or EXTECH EC500			
Salinity (ppm S)		352				EXTECH EC500			
Chlorine (ppm)		0		≥ Reporting Limit		Hach pocket Colorimeter			
Ammonia (mg/L)		0		≥ 0.5 mg/L		To be sent to lab			
Surfactants (mg/L)		0		≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C			
E.coli (cfu/100mL)		4.1		> 235 cfu/100mL		To be sent to lab			
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab			
Phosphorus (mg/L)						To be sent to lab			
SECTION 3B: INLET PIPE NO. 2 ASSET DESCRIPTION									
Location	Upstream Asset ID	Material		Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)		Submerged	
Inlet Pipe No. 2	CB-1376	Corrugated Metal		1:00	Circle	8		In Water:	No
							With Sediment:	No	
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS									
Indicator		Indicator Present?		Indicator Description					
Asset Damage		Corrosion							
Deposits/Stains		Flow Line							
Pool Quality		None							
Pipe Algae/Growth		None							
*Do physical indicators suggest an illicit discharge is present (Y/N):		No							
Is Inlet Pipe No.2 Flowing?		No				Estimated GPM:			
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS (ALL FLOWING ASSETS)									
Indicator	Indicator Present (Yes/No)		Description			Severity			
Odor									
Color									
Turbidity									
Floatables (Does Not Include Trash)									
SECTION 3B: INLET PIPE NO. 2 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)									
Sample Date/Time:									
Parameter		Result		Typical EPA Benchmarks		Equipment			
Temperature (degrees F)						EXTECH EC500			
pH						EXTECH EC500			
Specific Conductivity (uS)						EXTECH EC500			
Salinity (ppm S)				≥ Reporting Limit		EXTECH EC500			
Chlorine (ppm)				≥ Reporting Limit		Hach Test Strips			
Ammonia (mg/L)				≥ 0.5 mg/L		Hach Test Strips			
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400			
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab			
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab			
Phosphorus (mg/L)						To be sent to lab			

SECTION 3C: INLET PIPE NO. 3 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 3						In Water:	
						With Sediment:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.3 Flowing?				Estimated GPM:			
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3C: INLET PIPE NO. 3 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:	Result		Typical EPA Benchmarks		Equipment		
Parameter							
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3D: INLET PIPE NO. 4 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 4						In Water:	
						With Sediment:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.4 Flowing?				Estimated GPM:			
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3D: INLET PIPE NO. 4 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:	Result		Typical EPA Benchmarks		Equipment		
Parameter							
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3E: INLET PIPE NO. 5 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 5						In Water:	
						With Sediment:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.5 Flowing?				Estimated GPM:			
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3E: INLET PIPE NO. 5 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:	Result		Typical EPA Benchmarks		Equipment		
Parameter							
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		

SECTION 3F: INLET PIPE NO. 6 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 6						In Water:	
						With Sediment:	
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.6 Flowing?				Estimated GPM:			
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator		Indicator Present (Yes/No)		Description		Severity	
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3F: INLET PIPE NO. 6 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter		Result		Typical EPA Benchmarks		Equipment	
Temperature (degrees F)						EXTECH EC500	
pH						EXTECH EC500	
Specific Conductivity (uS)						EXTECH EC500	
Salinity (ppm S)						EXTECH EC500	
Chlorine (ppm)				≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)				≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)						To be sent to lab	
Comments :							
Signature of Inspector :		JL JM ZD					

Haverhill IDDE Investigation & Inspection Form

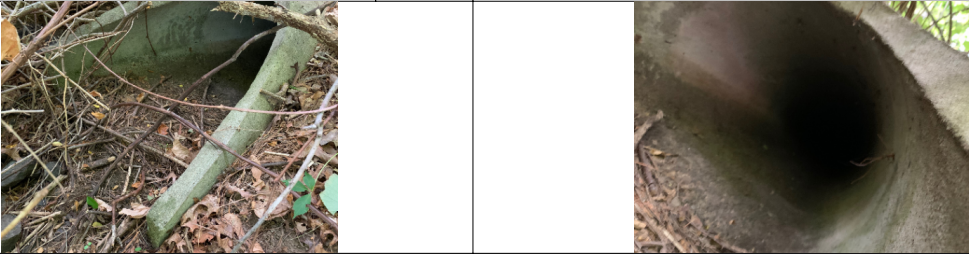
Catch Basin

SECTION 1: BACKGROUND DATA													
ASSET ID:		CB-1378				OUTFALL ID:				LR0993			
Date/Time:		2020-08-27 8:21											
Temperature: °F		56				Inspector(s):				James Conte Jesse Middleton Zebulan Day			
Street Name/Structure Location:		NEWARK ST											
Previous Precipitation Date/End Time:						Amount (inches):							
Pictures													
SECTION 2: OUTLET PIPE ASSET DESCRIPTION													
Location		CB Interior Condition		Material		Shape		Diameter/Dimension (in.)		Submerged			
CB Outlet Pipe		Good		Corrugated Metal		Circle		15		In Water:	No		
										With Sediment:	No		
SECTION 3A: INLET PIPE NO. 1 ASSET DESCRIPTION													
Location		Upstream Asset ID		Material		Clock Position (Outlet Pipe at 6:00)		Shape		Diameter/Dimension (in.)		Submerged	
Inlet Pipe No. 1		CB-1379		Corrugated Metal		3:00		Circle		8		In Water:	No
												With Sediment:	No
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS													
Indicator				Indicator Present?				Indicator Description					
Asset Damage				Corrosion									
Deposits/Stains				Flow Line									
Pool Quality				None									
Pipe Algae/Growth				None									
*Do physical indicators suggest an illicit discharge is present (Y/N):				No									
Is Inlet Pipe No.1 Flowing?				No				Estimated GPM:					
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS (ALL FLOWING ASSETS)													
Indicator		Indicator Present (Yes/No)				Description				Severity			
Odor													
Color													
Turbidity													
Floatables (Does Not Include Trash)													
SECTION 3A: INLET PIPE NO. 1 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)													
Sample Date/Time:													
Parameter		Result				Typical EPA Benchmarks				Equipment			
Temperature (degrees F)										Hanna portable PH and Temp meter			
pH										Hanna portable PH and Temp meter			
Specific Conductivity (uS)										To be sent to lab or EXTECH EC500			
Salinity (ppm S)										EXTECH EC500			
Chlorine (ppm)						≥ Reporting Limit				Hach pocket Colorimeter			
Ammonia (mg/L)						≥ 0.5 mg/L				To be sent to lab			
Surfactants (mg/L)						≥ 0.25 mg/L				To be sent to Lab or Hanna Instruments HI96769C			
E.coli (cfu/100mL)						> 235 cfu/100mL				To be sent to lab			
Enterococcus (cfu/100mL)						> 61 cfu/100mL				To be sent to lab			
Phosphorus (mg/L)										To be sent to lab			
SECTION 3B: INLET PIPE NO. 2 ASSET DESCRIPTION													
Location		Upstream Asset ID		Material		Clock Position (Outlet Pipe at 6:00)		Shape		Diameter/Dimension (in.)		Submerged	
Inlet Pipe No. 2												In Water:	
												With Sediment:	
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS													
Indicator				Indicator Present?				Indicator Description					
Asset Damage													
Deposits/Stains													
Pool Quality													
Pipe Algae/Growth													
*Do physical indicators suggest an illicit discharge is present (Y/N):													
Is Inlet Pipe No.2 Flowing?								Estimated GPM:					
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS (ALL FLOWING ASSETS)													
Indicator		Indicator Present (Yes/No)				Description				Severity			
Odor													
Color													
Turbidity													
Floatables (Does Not Include Trash)													
SECTION 3B: INLET PIPE NO. 2 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)													
Sample Date/Time:													
Parameter		Result				Typical EPA Benchmarks				Equipment			
Temperature (degrees F)										EXTECH EC500			
pH										EXTECH EC500			
Specific Conductivity (uS)										EXTECH EC500			
Salinity (ppm S)						≥ Reporting Limit				EXTECH EC500			
Chlorine (ppm)						≥ Reporting Limit				Hach Test Strips			
Ammonia (mg/L)						≥ 0.5 mg/L				Hach Test Strips			
Surfactants (mg/L)						≥ 0.25 mg/L				To be sent to Lab or CHEMets Detergents Kit K-9400			
E.coli (cfu/100mL)						> 235 cfu/100mL				To be sent to lab			
Enterococcus (cfu/100mL)						> 61 cfu/100mL				To be sent to lab			
Phosphorus (mg/L)										To be sent to lab			

SECTION 3C: INLET PIPE NO. 3 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 3						In Water:	
						With Sediment:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.3 Flowing?				Estimated GPM:			
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3C: INLET PIPE NO. 3 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3D: INLET PIPE NO. 4 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 4						In Water:	
						With Sediment:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.4 Flowing?				Estimated GPM:			
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3D: INLET PIPE NO. 4 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3E: INLET PIPE NO. 5 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 5						In Water:	
						With Sediment:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.5 Flowing?				Estimated GPM:			
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3E: INLET PIPE NO. 5 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		

SECTION 3F: INLET PIPE NO. 6 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 6						In Water:	
						With Sediment:	
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.6 Flowing?				Estimated GPM:			
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3F: INLET PIPE NO. 6 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment	
Parameter							
Temperature (degrees F)						EXTECH EC500	
pH						EXTECH EC500	
Specific Conductivity (uS)						EXTECH EC500	
Salinity (ppm S)						EXTECH EC500	
Chlorine (ppm)				≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)				≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)						To be sent to lab	
Comments :							
Signature of Inspector :		J C J M Z D					

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID: DP00696					OUTFALL ID: DP00696				
Date/Time: 2020-08-12 9:29									
Temperature: °F 81					Inspector(s): James Conte Jesse Middleton Zebulan Day Justin Mazzotta				
Street Name/Structure Location: Cross Country									
Previous Precipitation Date/End Time: 2020-08-04 16:55:00					Amount (inches): 0.18				
Pictures									

SECTION 2: OUTFALL PIPE ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Shape	Diameter/Dimension (in.)	Submerged	
Outfall Pipe	CB-2298	Reinforced Concrete	Circle	15	In Water:	No
					With Sediment:	Partially

SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS			
Indicator	Indicator Present?	Indicator Description	
Asset Damage	None		
Deposits/Stains	Flow Line		
Pool Quality	None		
Pipe Algae/Growth	None		
*Do physical indicators suggest an illicit discharge is present (Y/N):		No	
Is Inlet Pipe No.1 Flowing?		No	Estimated GPM:

SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color			
Turbidity			
Floatables (Does Not Include Trash)			

SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)			
Sample Date/Time:	Parameter	Result	Equipment
	Temperature (degrees F)		Hanna portable PH and Temp meter
	pH		Hanna portable PH and Temp meter
	Specific Conductivity (uS)		To be sent to lab or EXTECH EC500
	Salinity (ppm S)		EXTECH EC500
	Chlorine (ppm)	≥ Reporting Limit	Hach pocket Colorimeter
	Ammonia (mg/L)	≥ 0.5 mg/L	To be sent to lab
	Surfactants (mg/L)	≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C
	E.coli (cfu/100mL)	> 235 cfu/100mL	To be sent to lab
	Enterococcus (cfu/100mL)	> 61 cfu/100mL	To be sent to lab
	Phosphorus (mg/L)		To be sent to lab

Comments :	NO FLOW ON 8/12/2020
Signature of Inspector :	   

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID: JC1028					OUTFALL ID: JC1028				
Date/Time: 2020-08-26 9:30:00									
Temperature: °F 74					Inspector(s): Jesse Middleton				
Street Name/Structure Location: Cross Country									
Previous Precipitation Date/End Time: 2020-08-23 15:15:00					Amount (inches): 0.4				
Pictures									

SECTION 2: OUTFALL PIPE ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Shape	Diameter/Dimension (in.)	Submerged	
Outfall Pipe		Cement Concrete	Rectangle	32	In Water:	No
					With Sediment:	No

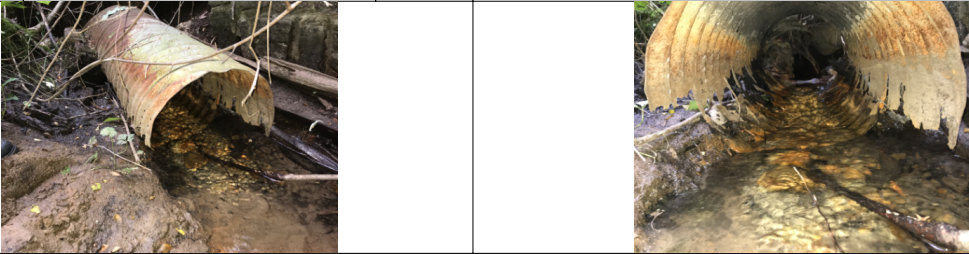
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS			
Indicator	Indicator Present?	Indicator Description	
Asset Damage	None		
Deposits/Stains	None		
Pool Quality	None		
Pipe Algae/Growth	None		
*Do physical indicators suggest an illicit discharge is present (Y/N):		No	
Is Inlet Pipe No.1 Flowing?		No	Estimated GPM:

SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color			
Turbidity			
Floatables (Does Not Include Trash)			

SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)			
Sample Date/Time:			
Parameter	Result	Typical EPA Benchmarks	Equipment
Temperature (degrees F)			Hanna portable PH and Temp meter
pH			Hanna portable PH and Temp meter
Specific Conductivity (uS)			To be sent to lab or EXTECH EC500
Salinity (ppm S)			EXTECH EC500
Chlorine (ppm)		≥ Reporting Limit	Hach pocket Colorimeter
Ammonia (mg/L)		≥ 0.5 mg/L	To be sent to lab
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)			To be sent to lab

Comments :	
Signature of Inspector :	

Haverhill IDDE Investigation & Inspection Form Outfall

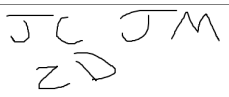
SECTION 1: BACKGROUND DATA									
ASSET ID: LR0993					OUTFALL ID: LR0993				
Date/Time: 2020-08-27 7:27:00									
Temperature: °F 56					Inspector(s): James Conte Jesse Middleton Zebulan Day				
Street Name/Structure Location: NEWARK ST									
Previous Precipitation Date/End Time: 2020-08-23 15:15:00					Amount (inches): 0.4				
Pictures									

SECTION 2: OUTFALL PIPE ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Shape	Diameter/Dimension (in.)	Submerged	
Outfall Pipe	CB-1377	Corrugated Metal	Circle	18	In Water:	Partially
					With Sediment:	Partially

SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS				
Indicator	Indicator Present?	Indicator Description		
Asset Damage	Chipping/Corrosion			
Deposits/Stains	Flow Line			
Pool Quality	None			
Pipe Algae/Growth	None			
*Do physical indicators suggest an illicit discharge is present (Y/N):		No		
Is Inlet Pipe No.1 Flowing?		Yes	Substantial	Estimated GPM: 5

SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor	No		
Color	No		
Turbidity	-	-	Clear
Floatables (Does Not Include Trash)	No		-

SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)				
Sample Date/Time:	2020-08-27 7:46:00			
Parameter	Result	Typical EPA Benchmarks	Equipment	
Temperature (degrees F)	61.7		Hanna portable PH and Temp meter	
pH	7.2		Hanna portable PH and Temp meter	
Specific Conductivity (uS)	808		To be sent to lab or EXTECH EC500	
Salinity (ppm S)	358		EXTECH EC500	
Chlorine (ppm)	0	≥ Reporting Limit	Hach pocket Colorimeter	
Ammonia (mg/L)	0	≥ 0.5 mg/L	To be sent to lab	
Surfactants (mg/L)	0	≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C	
E.coli (cfu/100mL)	11	> 235 cfu/100mL	To be sent to lab	
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab	
Phosphorus (mg/L)			To be sent to lab	

Comments :	End of outfall in major disrepair. No bottom
Signature of Inspector :	

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA										
ASSET ID: LR1102					OUTFALL ID: LR1102					
Date/Time: 2020-08-27 8:46:00										
Temperature: °F 59					Inspector(s): James Conte Jesse Middleton Zebulan Day					
Street Name/Structure Location: Cross Country										
Previous Precipitation Date/End Time:					Amount (inches):					
Pictures										
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION										
Location	Upstream Asset ID	Material			Shape	Diameter/Dimension (in.)	Submerged			
Outfall Pipe	DMH-358	Reinforced Concrete			Circle	24	In Water:	No		
							With Sediment:	No		
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS										
Indicator		Indicator Present?		Indicator Description						
Asset Damage		None								
Deposits/Stains		None								
Pool Quality		None								
Pipe Algae/Growth		None								
*Do physical indicators suggest an illicit discharge is present (Y/N):		No								
Is Inlet Pipe No.1 Flowing?		No						Estimated GPM:		
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)										
Indicator	Indicator Present (Yes/No)		Description			Severity				
Odor										
Color										
Turbidity										
Floatables (Does Not Include Trash)										
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)										
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment				
Parameter										
Temperature (degrees F)						Hanna portable PH and Temp meter				
pH						Hanna portable PH and Temp meter				
Specific Conductivity (uS)						To be sent to lab or EXTECH EC500				
Salinity (ppm S)						EXTECH EC500				
Chlorine (ppm)				≥ Reporting Limit		Hach pocket Colorimeter				
Ammonia (mg/L)				≥ 0.5 mg/L		To be sent to lab				
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C				
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab				
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab				
Phosphorus (mg/L)						To be sent to lab				
SECTION 6: COMMENTS AND SIGNATURES										
Comments :		Riprap from around outfall has fallen in								
Signature of Inspector :		  								

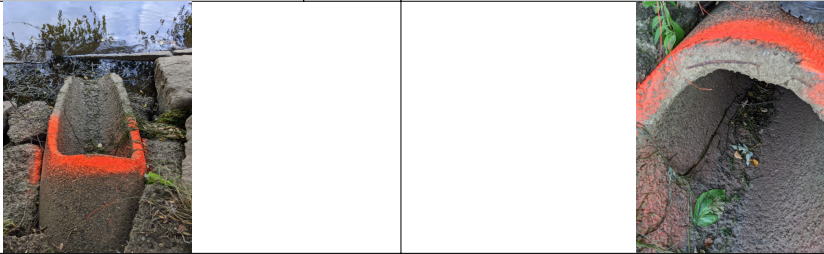
Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA										
ASSET ID:		LR1103				OUTFALL ID:		LR1103		
Date/Time:		2020-08-27 8:39								
Temperature: °F		59				Inspector(s):		James Conte Jesse Middleton Zebulan Day		
Street Name/Structure Location:		Cross Country								
Previous Precipitation Date/End Time:						Amount (inches):				
Pictures										
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION										
Location	Upstream Asset ID	Material		Shape	Diameter/Dimension (in.)	Submerged				
Outfall Pipe	CB-3621	Reinforced Concrete		Circle	15	In Water:	No	With Sediment:	No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS										
Indicator		Indicator Present?		Indicator Description						
Asset Damage		None								
Deposits/Stains		Flow Line								
Pool Quality		None								
Pipe Algae/Growth		None								
*Do physical indicators suggest an illicit discharge is present (Y/N):										
Is Inlet Pipe No.1 Flowing?		No				Estimated GPM:				
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)										
Indicator	Indicator Present (Yes/No)		Description		Severity					
Odor										
Color										
Turbidity										
Floatables (Does Not Include Trash)										
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)										
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment				
Parameter										
Temperature (degrees F)						Hanna portable PH and Temp meter				
pH						Hanna portable PH and Temp meter				
Specific Conductivity (uS)						To be sent to lab or EXTECH EC500				
Salinity (ppm S)						EXTECH EC500				
Chlorine (ppm)				≥ Reporting Limit		Hach pocket Colorimeter				
Ammonia (mg/L)				≥ 0.5 mg/L		To be sent to lab				
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C				
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab				
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab				
Phosphorus (mg/L)						To be sent to lab				
SECTION 6: COMMENTS AND SIGNATURES										
Comments :										
Signature of Inspector :		JLC JM ZD								

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA										
ASSET ID:		MR1138			OUTFALL ID:		MR1138			
Date/Time:		2020-08-12 10:00:00								
Temperature: °F		80			Inspector(s):		James Conte Jesse Middleton Zebulan Day Justin Mazzotta			
Street Name/Structure Location:		Cross Country								
Previous Precipitation Date/End Time:		2020-08-04 16:55:00			Amount (inches):		0.18			
Pictures										
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION										
Location	Upstream Asset ID	Material		Shape	Diameter/Dimension (in.)	Submerged				
Outfall Pipe	DMH-5804	Reinforced Concrete		Circle	36	In Water:		No		
						With Sediment:		No		
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS										
Indicator		Indicator Present?		Indicator Description						
Asset Damage		None								
Deposits/Stains		Flow Line								
Pool Quality		None								
Pipe Algae/Growth		None								
*Do physical indicators suggest an illicit discharge is present (Y/N):		No								
Is Inlet Pipe No.1 Flowing?		No				Estimated GPM:				
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)										
Indicator	Indicator Present (Yes/No)		Description		Severity					
Odor										
Color										
Turbidity										
Floatables (Does Not Include Trash)										
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)										
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment				
Parameter										
Temperature (degrees F)						Hanna portable PH and Temp meter				
pH						Hanna portable PH and Temp meter				
Specific Conductivity (uS)						To be sent to lab or EXTECH EC500				
Salinity (ppm S)						EXTECH EC500				
Chlorine (ppm)				≥ Reporting Limit		Hach pocket Colorimeter				
Ammonia (mg/L)				≥ 0.5 mg/L		To be sent to lab				
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C				
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab				
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab				
Phosphorus (mg/L)						To be sent to lab				
SECTION 6: COMMENTS AND SIGNATURES										
Comments :		NO FLOW ON 8/12/2020								
Signature of Inspector :		JL JD JM JM								

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID:		MR24314			OUTFALL ID:		MR24314		
Date/Time:		2020-08-12 11:29							
Temperature: °F		86			Inspector(s):		James Conte Jesse Middleton Zebulan Day Justin Mazzotta		
Street Name/Structure Location:		MERIMACK RIVER							
Previous Precipitation Date/End Time:		2020-08-04 16:55:00			Amount (inches):		0.18		
Pictures									

SECTION 2: OUTFALL PIPE ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Shape	Diameter/Dimension (in.)	Submerged	
Outfall Pipe	CB-4919	Reinforced Concrete	Circle	15	In Water:	No
					With Sediment:	No

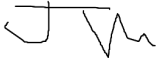
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS			
Indicator	Indicator Present?	Indicator Description	
Asset Damage	Chipping/Corrosion		
Deposits/Stains	Flow Line		
Pool Quality	None		
Pipe Algae/Growth	None		
*Do physical indicators suggest an illicit discharge is present (Y/N):		No	
Is Inlet Pipe No.1 Flowing?		No	Estimated GPM:

SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color			
Turbidity			
Floatables (Does Not Include Trash)			

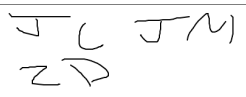
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)			
Sample Date/Time:	Parameter	Result	Equipment
	Temperature (degrees F)		Hanna portable PH and Temp meter
	pH		Hanna portable PH and Temp meter
	Specific Conductivity (uS)		To be sent to lab or EXTECH EC500
	Salinity (ppm S)		EXTECH EC500
	Chlorine (ppm)	≥ Reporting Limit	Hach pocket Colorimeter
	Ammonia (mg/L)	≥ 0.5 mg/L	To be sent to lab
	Surfactants (mg/L)	≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C
	E.coli (cfu/100mL)	> 235 cfu/100mL	To be sent to lab
	Enterococcus (cfu/100mL)	> 61 cfu/100mL	To be sent to lab
	Phosphorus (mg/L)		To be sent to lab

Comments :	NO FLOW ON 8/12/2020
Signature of Inspector :	JC ZD JM JM

Haverhill IDDE Investigation & Inspection Form Outfall

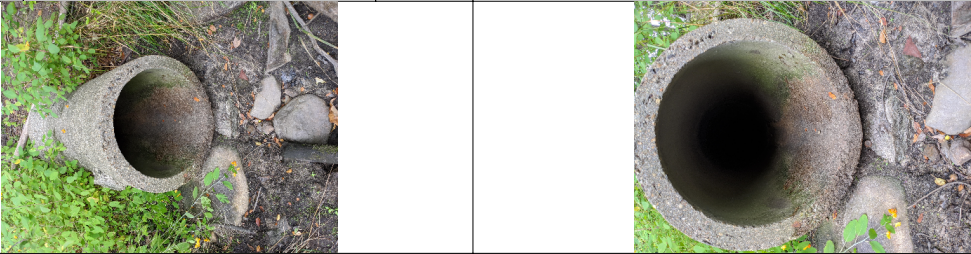
SECTION 1: BACKGROUND DATA														
ASSET ID:		UNK0848			OUTFALL ID:		UNK0848							
Date/Time:		2020-08-26 10:00:00												
Temperature: °F		74			Inspector(s):		Jesse Middleton							
Street Name/Structure Location:		WOODROW AVE												
Previous Precipitation Date/End Time:		2020-08-23 15:15:00			Amount (inches):		0.4							
Pictures														
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION														
Location	Upstream Asset ID	Material			Shape		Diameter/Dimension (in.)		Submerged					
Outfall Pipe		Reinforced Concrete			Circle		18		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #d3d3d3;">In Water:</td> <td>No</td> </tr> <tr> <td style="background-color: #d3d3d3;">With Sediment:</td> <td>No</td> </tr> </table>		In Water:	No	With Sediment:	No
In Water:	No													
With Sediment:	No													
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS														
Indicator		Indicator Present?			Indicator Description									
Asset Damage		None												
Deposits/Stains		None												
Pool Quality		None												
Pipe Algae/Growth		None												
*Do physical indicators suggest an illicit discharge is present (Y/N):		No												
Is Inlet Pipe No.1 Flowing?		No			Estimated GPM:									
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)														
Indicator	Indicator Present (Yes/No)			Description			Severity							
Odor														
Color														
Turbidity														
Floatables (Does Not Include Trash)														
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)														
Sample Date/Time:		Result			Typical EPA Benchmarks		Equipment							
Parameter														
Temperature (degrees F)							Hanna portable PH and Temp meter							
pH							Hanna portable PH and Temp meter							
Specific Conductivity (uS)							To be sent to lab or EXTECH EC500							
Salinity (ppm S)							EXTECH EC500							
Chlorine (ppm)					≥ Reporting Limit		Hach pocket Colorimeter							
Ammonia (mg/L)					≥ 0.5 mg/L		To be sent to lab							
Surfactants (mg/L)					≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C							
E.coli (cfu/100mL)					> 235 cfu/100mL		To be sent to lab							
Enterococcus (cfu/100mL)					> 61 cfu/100mL		To be sent to lab							
Phosphorus (mg/L)							To be sent to lab							
Comments :														
Signature of Inspector :														
														

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA										
ASSET ID:		UNK0951			OUTFALL ID:		UNK0951			
Date/Time:		2020-08-27 9:04								
Temperature: °F		59			Inspector(s):		James Conte Jesse Middleton Zebulan Day			
Street Name/Structure Location:		Cross Country								
Previous Precipitation Date/End Time:					Amount (inches):					
Pictures										
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION										
Location	Upstream Asset ID	Material			Shape	Diameter/Dimension (in.)	Submerged			
Outfall Pipe	DMH-728	Reinforced Concrete			Circle	48	In Water:		No	
							With Sediment:		No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS										
Indicator		Indicator Present?		Indicator Description						
Asset Damage		None								
Deposits/Stains		None								
Pool Quality		None								
Pipe Algae/Growth		None								
*Do physical indicators suggest an illicit discharge is present (Y/N):		No								
Is Inlet Pipe No.1 Flowing?		No				Estimated GPM:				
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)										
Indicator	Indicator Present (Yes/No)		Description		Severity					
Odor										
Color										
Turbidity										
Floatables (Does Not Include Trash)										
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)										
Sample Date/Time:										
Parameter		Result		Typical EPA Benchmarks		Equipment				
Temperature (degrees F)						Hanna portable PH and Temp meter				
pH						Hanna portable PH and Temp meter				
Specific Conductivity (uS)						To be sent to lab or EXTECH EC500				
Salinity (ppm S)						EXTECH EC500				
Chlorine (ppm)				≥ Reporting Limit		Hach pocket Colorimeter				
Ammonia (mg/L)				≥ 0.5 mg/L		To be sent to lab				
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C				
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab				
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab				
Phosphorus (mg/L)						To be sent to lab				
SECTION 6: COMMENTS AND SIGNATURE										
Comments :										
Signature of Inspector :										

SEPTEMBER 2020

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID: BZB0847					OUTFALL ID: BZB0847				
Date/Time: 2020-09-09 10:00:00									
Temperature: °F 69					Inspector(s): Jesse Middleton				
Street Name/Structure Location: Cross Country									
Previous Precipitation Date/End Time: 2020-09-03 1:40:00					Amount (inches): 0.1				
Pictures									

SECTION 2: OUTFALL PIPE ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Shape	Diameter/Dimension (in.)	Submerged	
Outfall Pipe		Reinforced Concrete	Circle	18	In Water:	No
					With Sediment:	No

SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS			
Indicator	Indicator Present?	Indicator Description	
Asset Damage	None		
Deposits/Stains	None		
Pool Quality	None		
Pipe Algae/Growth	None		
*Do physical indicators suggest an illicit discharge is present (Y/N):		No	
Is Inlet Pipe No.1 Flowing?		No	Estimated GPM:

SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color			
Turbidity			
Floatables (Does Not Include Trash)			

SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)			
Sample Date/Time:			
Parameter	Result	Typical EPA Benchmarks	Equipment
Temperature (degrees F)			Hanna portable PH and Temp meter
pH			Hanna portable PH and Temp meter
Specific Conductivity (uS)			To be sent to lab or EXTECH EC500
Salinity (ppm S)			EXTECH EC500
Chlorine (ppm)		≥ Reporting Limit	Hach pocket Colorimeter
Ammonia (mg/L)		≥ 0.5 mg/L	To be sent to lab
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)			To be sent to lab

Comments :	
Signature of Inspector :	

Haverhill IDDE Investigation & Inspection Form Outfall

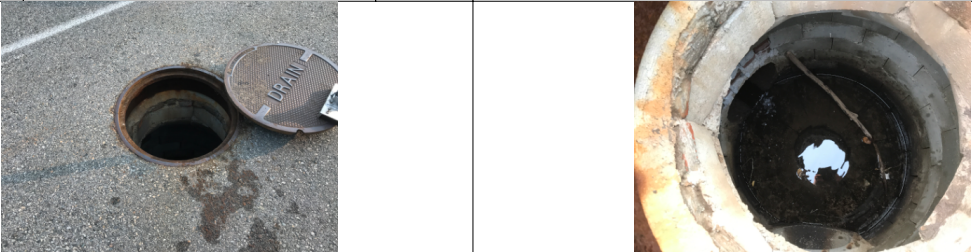
SECTION 1: BACKGROUND DATA										
ASSET ID:		CL0682			OUTFALL ID:		CL0682			
Date/Time:		2020-09-16 13:45								
Temperature: °F		70			Inspector(s):		Samuel Martinez			
Street Name/Structure Location:		CHIPPER LN								
Previous Precipitation Date/End Time:		2020-09-13 23:10:00			Amount (inches):		0.01			
Pictures										
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION										
Location	Upstream Asset ID	Material			Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe	CB-419	Reinforced Concrete			Circle		12		In Water:	
									With Sediment:	
									No	
									No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS										
Indicator		Indicator Present?			Indicator Description					
Asset Damage		None								
Deposits/Stains		None								
Pool Quality		None								
Pipe Algae/Growth		None								
*Do physical indicators suggest an illicit discharge is present (Y/N):		No								
Is Inlet Pipe No.1 Flowing?		No								
							Estimated GPM:			
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)										
Indicator	Indicator Present (Yes/No)			Description			Severity			
Odor										
Color										
Turbidity										
Floatables (Does Not Include Trash)										
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)										
Sample Date/Time:		Result			Typical EPA Benchmarks		Equipment			
Parameter										
Temperature (degrees F)							Hanna portable PH and Temp meter			
pH							Hanna portable PH and Temp meter			
Specific Conductivity (uS)							To be sent to lab or EXTECH EC500			
Salinity (ppm S)							EXTECH EC500			
Chlorine (ppm)					≥ Reporting Limit		Hach pocket Colorimeter			
Ammonia (mg/L)					≥ 0.5 mg/L		To be sent to lab			
Surfactants (mg/L)					≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C			
E.coli (cfu/100mL)					> 235 cfu/100mL		To be sent to lab			
Enterococcus (cfu/100mL)					> 61 cfu/100mL		To be sent to lab			
Phosphorus (mg/L)							To be sent to lab			
Comments :										
Signature of Inspector :										

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA											
ASSET ID:		CL0683			OUTFALL ID:		CL0683				
Date/Time:		2020-09-16 13:24									
Temperature: °F		70			Inspector(s):		Samuel Martinez				
Street Name/Structure Location:		SAWMILL RIDGE RD									
Previous Precipitation Date/End Time:		2020-09-16 23:10:00			Amount (inches):		0.01				
Pictures											
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION											
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe		DMH-110		Reinforced Concrete		Circle		15		In Water:	
										With Sediment:	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS											
Indicator				Indicator Present?		Indicator Description					
Asset Damage				None							
Deposits/Stains				None							
Pool Quality				None							
Pipe Algae/Growth				None							
*Do physical indicators suggest an illicit discharge is present (Y/N):				No							
Is Inlet Pipe No.1 Flowing?				No		Estimated GPM:					
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)											
Indicator		Indicator Present (Yes/No)			Description			Severity			
Odor											
Color											
Turbidity											
Floatables (Does Not Include Trash)											
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)											
Sample Date/Time:											
Parameter		Result			Typical EPA Benchmarks			Equipment			
Temperature (degrees F)								Hanna portable PH and Temp meter			
pH								Hanna portable PH and Temp meter			
Specific Conductivity (uS)								To be sent to lab or EXTECH EC500			
Salinity (ppm S)								EXTECH EC500			
Chlorine (ppm)					≥ Reporting Limit			Hach pocket Colorimeter			
Ammonia (mg/L)					≥ 0.5 mg/L			To be sent to lab			
Surfactants (mg/L)					≥ 0.25 mg/L			To be sent to Lab or Hanna Instruments HI96769C			
E.coli (cfu/100mL)					> 235 cfu/100mL			To be sent to lab			
Enterococcus (cfu/100mL)					> 61 cfu/100mL			To be sent to lab			
Phosphorus (mg/L)								To be sent to lab			
SECTION 6: COMMENTS AND SIGNATURE											
Comments :											
Signature of Inspector :											

Haverhill IDDE Investigation Form

Drain Manhole

SECTION 1: BACKGROUND DATA				
ASSET ID:	DMH-804		OUTFALL ID:	
Date/Time:	2020-09-16 8:16:00			
Temperature: °F	50		Inspector(s):	James Conte Jesse Middleton Zebulan Day
Street Name/Structure Location:	SOUTH MAIN ST			
Previous Precipitation Date/End Time:	2020-09-13 23:10:00		Amount (inches):	0.01
Pictures				

SECTION 2: OUTLET PIPE ASSET DESCRIPTION									
Location	DMH Interior Condition	Material	Shape	Diameter/Dimension (in.)	Submerged				
DMH Outlet Pipe	Good	Reinforced Concrete	Circle	18	<table><tr><td>In Water:</td><td>No</td></tr><tr><td>With Sediment:</td><td>No</td></tr></table>	In Water:	No	With Sediment:	No
In Water:	No								
With Sediment:	No								

SECTION 3A: INLET PIPE NO. 1 ASSET DESCRIPTION					
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)
Inlet Pipe No. 1	DMH-945	Reinforced Concrete	9:00	Circle	18

SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS					
Indicator	Indicator Present?	Indicator Description			
Asset Damage	None				
Deposits/Stains	Flow Line				
Pool Quality	None				
Pipe Algae/Growth	None				
*Do physical indicators suggest an illicit discharge is present (Y/N):		No			
Is Inlet Pipe No.1 Flowing?		Yes		Moderate	Estimated GPM: 5

SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color	No		
Turbidity	-	-	Clear
Floatables (Does Not Include Trash)	No		-

SECTION 3A: INLET PIPE NO. 1 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)				
Sample Date/Time:	2020-09-16 8:15:00			
Parameter	Result	Typical EPA Benchmarks	Equipment	
Temperature (degrees F)	64.8		Hanna portable PH and Temp meter	
pH	7.5		Hanna portable PH and Temp meter	
Specific Conductivity (uS)	1566		To be sent to lab or EXTECH EC500	
Salinity (ppm S)	780		EXTECH EC500	
Chlorine (ppm)	0	≥ Reporting Limit	Hach pocket Colorimeter	
Ammonia (mg/L)	0.71	≥ 0.5 mg/L	To be sent to lab	
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C	
E.coli (cfu/100mL)	>2400	> 235 cfu/100mL	To be sent to lab	
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab	
Phosphorus (mg/L)			To be sent to lab	

SECTION 3B: INLET PIPE NO. 2 ASSET DESCRIPTION					
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)
Inlet Pipe No. 2					

SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS					
Indicator	Indicator Present?	Indicator Description			
Asset Damage					
Deposits/Stains					
Pool Quality					
Pipe Algae/Growth					
*Do physical indicators suggest an illicit discharge is present (Y/N):		No			
Is Inlet Pipe No.2 Flowing?				Estimated GPM:	

SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color			
Turbidity	-	-	
Floatables (Does Not Include Trash)			-

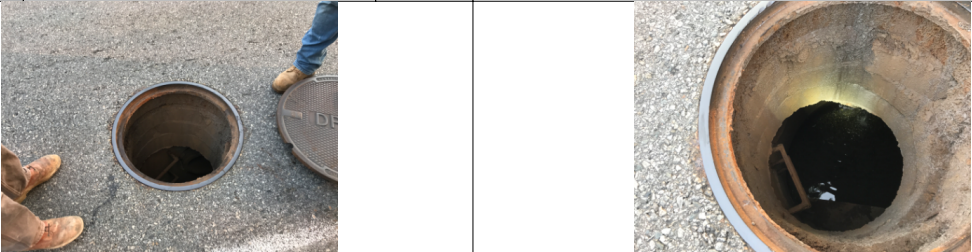
SECTION 3B: INLET PIPE NO. 2 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)				
Sample Date/Time:				
Parameter	Result	Typical EPA Benchmarks	Equipment	
Temperature (degrees F)			EXTECH EC500	
pH			EXTECH EC500	
Specific Conductivity (uS)			EXTECH EC500	
Salinity (ppm S)		≥ Reporting Limit	EXTECH EC500	
Chlorine (ppm)		≥ Reporting Limit	Hach Test Strips	
Ammonia (mg/L)		≥ 0.5 mg/L	Hach Test Strips	
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab	
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab	
Phosphorus (mg/L)			To be sent to lab	

SECTION 3C: INLET PIPE NO. 3 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 3						In Water:	
						With Sediment:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.3 Flowing?						Estimated GPM:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3C: INLET PIPE NO. 3 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment	
Parameter							
Temperature (degrees F)						EXTECH EC500	
pH						EXTECH EC500	
Specific Conductivity (uS)						EXTECH EC500	
Salinity (ppm S)						EXTECH EC500	
Chlorine (ppm)				≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)				≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)						To be sent to lab	
SECTION 3D: INLET PIPE NO. 4 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 4						In Water:	
						With Sediment:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.4 Flowing?						Estimated GPM:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3D: INLET PIPE NO. 4 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment	
Parameter							
Temperature (degrees F)						EXTECH EC500	
pH						EXTECH EC500	
Specific Conductivity (uS)						EXTECH EC500	
Salinity (ppm S)						EXTECH EC500	
Chlorine (ppm)				≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)				≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)						To be sent to lab	
SECTION 3E: INLET PIPE NO. 5 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 5						In Water:	
						With Sediment:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.5 Flowing?						Estimated GPM:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3E: INLET PIPE NO. 5 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment	
Parameter							
Temperature (degrees F)						EXTECH EC500	
pH						EXTECH EC500	
Specific Conductivity (uS)						EXTECH EC500	
Salinity (ppm S)						EXTECH EC500	
Chlorine (ppm)				≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)				≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab	

Phosphorus (mg/L)				To be sent to lab
SECTION 3F: INLET PIPE NO. 6 ASSET DESCRIPTION				
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape
Inlet Pipe No. 6				
				Diameter/Dimension (in.)
				Submerged
				In Water:
				With Sediment:
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS				
Indicator	Indicator Present?		Indicator Description	
Asset Damage				
Deposits/Stains				
Pool Quality				
Pipe Algae/Growth				
*Do physical indicators suggest an illicit discharge is present (Y/N):				
Is Inlet Pipe No.6 Flowing?			Estimated GPM:	
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS (ALL FLOWING ASSETS)				
Indicator	Indicator Present (Yes/No)	Description	Severity	
Odor				
Color				
Turbidity				
Floatables (Does Not Include Trash)				
SECTION 3F: INLET PIPE NO. 6 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)				
Sample Date/Time:	Result		Typical EPA Benchmarks	Equipment
Parameter				
Temperature (degrees F)				EXTECH EC500
pH				EXTECH EC500
Specific Conductivity (uS)				EXTECH EC500
Salinity (ppm S)				EXTECH EC500
Chlorine (ppm)			≥ Reporting Limit	Hach Test Strips
Ammonia (mg/L)			≥ 0.5 mg/L	Hach Test Strips
Surfactants (mg/L)			≥ 0.25 mg/L	To be sent to Lab or CHEMets Detergents Kit K-9400
E.coli (cfu/100mL)			> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)			> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)				To be sent to lab
Comments :				
Signature of Inspector : JL JM ZD				

Haverhill IDDE Investigation & Inspection Form

Drain Manhole

SECTION 1: BACKGROUND DATA				
ASSET ID:	DMH-7271		OUTFALL ID:	
Date/Time:	2020-09-16 7:52:00			
Temperature: °F	50		Inspector(s):	James Conte Jesse Middleton Zebulan Day
Street Name/Structure Location:	SOUTH MAIN ST			
Previous Precipitation Date/End Time:	2020-09-13 23:10:00		Amount (inches):	0.01
Pictures				

SECTION 2: OUTLET PIPE ASSET DESCRIPTION									
Location	DMH Interior Condition	Material	Shape	Diameter/Dimension (in.)	Submerged				
DMH Outlet Pipe	Good	Reinforced Concrete	Circle	30	<table><tr><td>In Water:</td><td>Partially</td></tr><tr><td>With Sediment:</td><td>No</td></tr></table>	In Water:	Partially	With Sediment:	No
In Water:	Partially								
With Sediment:	No								

SECTION 3A: INLET PIPE NO. 1 ASSET DESCRIPTION									
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)				
Inlet Pipe No. 1	DMH-9374	Reinforced Concrete	9:00	Circle	15				
					<table><tr><td>In Water:</td><td>No</td></tr><tr><td>With Sediment:</td><td>No</td></tr></table>	In Water:	No	With Sediment:	No
In Water:	No								
With Sediment:	No								

SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS			
Indicator	Indicator Present?	Indicator Description	
Asset Damage	None		
Deposits/Stains	None		
Pool Quality	None		
Pipe Algae/Growth	None		
*Do physical indicators suggest an illicit discharge is present (Y/N):		No	
Is Inlet Pipe No.1 Flowing?		No	Estimated GPM:

SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color			
Turbidity	-	-	
Floatables (Does Not Include Trash)			-

SECTION 3A: INLET PIPE NO. 1 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)			
Sample Date/Time:			
Parameter	Result	Typical EPA Benchmarks	Equipment
Temperature (degrees F)			Hanna portable PH and Temp meter
pH			Hanna portable PH and Temp meter
Specific Conductivity (uS)			To be sent to lab or EXTECH EC500
Salinity (ppm S)			EXTECH EC500
Chlorine (ppm)		≥ Reporting Limit	Hach pocket Colorimeter
Ammonia (mg/L)		≥ 0.5 mg/L	To be sent to lab
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)			To be sent to lab

SECTION 3B: INLET PIPE NO. 2 ASSET DESCRIPTION									
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)				
Inlet Pipe No. 2	DMH-7542	Reinforced Concrete	12:00	Circle	30				
					<table><tr><td>In Water:</td><td>Partially</td></tr><tr><td>With Sediment:</td><td>No</td></tr></table>	In Water:	Partially	With Sediment:	No
In Water:	Partially								
With Sediment:	No								

SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS			
Indicator	Indicator Present?	Indicator Description	
Asset Damage	None		
Deposits/Stains	None		
Pool Quality	None		
Pipe Algae/Growth	None		
*Do physical indicators suggest an illicit discharge is present (Y/N):		No	
Is Inlet Pipe No.2 Flowing?		Yes	Moderate
			Estimated GPM: 5

SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor	No		
Color	No		
Turbidity	-	-	Clear
Floatables (Does Not Include Trash)	No		-

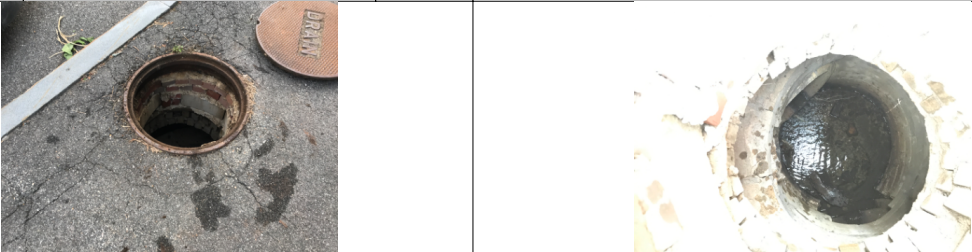
SECTION 3B: INLET PIPE NO. 2 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)			
Sample Date/Time:	2020-09-16 7:50:00		
Parameter	Result	Typical EPA Benchmarks	Equipment
Temperature (degrees F)	63.7		EXTECH EC500
pH	7.3		EXTECH EC500
Specific Conductivity (uS)	1677		EXTECH EC500
Salinity (ppm S)	799	≥ Reporting Limit	EXTECH EC500
Chlorine (ppm)	0	≥ Reporting Limit	Hach Test Strips
Ammonia (mg/L)	0.47	≥ 0.5 mg/L	Hach Test Strips
Surfactants (mg/L)	0	≥ 0.25 mg/L	To be sent to Lab or CHEMets Detergents Kit K-9400
E.coli (cfu/100mL)	>2400	> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)			To be sent to lab

SECTION 3C: INLET PIPE NO. 3 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 3	DMH-884	Reinforced Concrete	3:00	Circle	12	In Water:	No
						With Sediment:	No
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS							
Indicator	Indicator Present?		Indicator Description				
Asset Damage	None						
Deposits/Stains	None						
Pool Quality	None						
Pipe Algae/Growth	None						
*Do physical indicators suggest an illicit discharge is present (Y/N):			No				
Is Inlet Pipe No.3 Flowing?			No		Estimated GPM:		
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3C: INLET PIPE NO. 3 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3D: INLET PIPE NO. 4 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 4						In Water:	
						With Sediment:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS							
Indicator	Indicator Present?		Indicator Description				
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.4 Flowing?					Estimated GPM:		
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3D: INLET PIPE NO. 4 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3E: INLET PIPE NO. 5 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 5						In Water:	
						With Sediment:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS							
Indicator	Indicator Present?		Indicator Description				
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.5 Flowing?					Estimated GPM:		
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3E: INLET PIPE NO. 5 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		

Phosphorus (mg/L)				To be sent to lab
SECTION 3F: INLET PIPE NO. 6 ASSET DESCRIPTION				
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape
Inlet Pipe No. 6				
				Diameter/Dimension (in.)
				Submerged
				In Water:
				With Sediment:
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS				
Indicator	Indicator Present?		Indicator Description	
Asset Damage				
Deposits/Stains				
Pool Quality				
Pipe Algae/Growth				
*Do physical indicators suggest an illicit discharge is present (Y/N):				
Is Inlet Pipe No.6 Flowing?				
				Estimated GPM:
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS (ALL FLOWING ASSETS)				
Indicator	Indicator Present (Yes/No)	Description	Severity	
Odor				
Color				
Turbidity				
Floatables (Does Not Include Trash)				
SECTION 3F: INLET PIPE NO. 6 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)				
Sample Date/Time:				
Parameter	Result	Typical EPA Benchmarks	Equipment	
Temperature (degrees F)			EXTECH EC500	
pH			EXTECH EC500	
Specific Conductivity (uS)			EXTECH EC500	
Salinity (ppm S)			EXTECH EC500	
Chlorine (ppm)		≥ Reporting Limit	Hach Test Strips	
Ammonia (mg/L)		≥ 0.5 mg/L	Hach Test Strips	
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab	
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab	
Phosphorus (mg/L)			To be sent to lab	
Comments :				
Signature of Inspector : 				

Haverhill IDDE Investigation & Inspection Form

Drain Manhole

SECTION 1: BACKGROUND DATA				
ASSET ID:	DMH-7547		OUTFALL ID:	
Date/Time:	2020-09-16 8:47:00			
Temperature: °F	50		Inspector(s):	James Conte Jesse Middleton Zebulan Day
Street Name/Structure Location:	FOREST ACRES DR			
Previous Precipitation Date/End Time:	2020-09-13 23:10:00		Amount (inches):	0.01
Pictures				

SECTION 2: OUTLET PIPE ASSET DESCRIPTION									
Location	DMH Interior Condition	Material	Shape	Diameter/Dimension (in.)	Submerged				
DMH Outlet Pipe	Good	Reinforced Concrete	Circle	24	<table><tr><td>In Water:</td><td>Partially</td></tr><tr><td>With Sediment:</td><td>No</td></tr></table>	In Water:	Partially	With Sediment:	No
In Water:	Partially								
With Sediment:	No								

SECTION 3A: INLET PIPE NO. 1 ASSET DESCRIPTION									
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)				
Inlet Pipe No. 1	DMH-7548	Reinforced Concrete	9:00	Circle	12				
					<table><tr><td>In Water:</td><td>No</td></tr><tr><td>With Sediment:</td><td>No</td></tr></table>	In Water:	No	With Sediment:	No
In Water:	No								
With Sediment:	No								

SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS			
Indicator	Indicator Present?	Indicator Description	
Asset Damage	None		
Deposits/Stains	Flow Line		
Pool Quality	None		
Pipe Algae/Growth	None		
*Do physical indicators suggest an illicit discharge is present (Y/N):		No	
Is Inlet Pipe No.1 Flowing?		No	
		Estimated GPM:	

SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color			
Turbidity			
Floatables (Does Not Include Trash)			

SECTION 3A: INLET PIPE NO. 1 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)			
Sample Date/Time:			
Parameter	Result	Typical EPA Benchmarks	Equipment
Temperature (degrees F)			Hanna portable PH and Temp meter
pH			Hanna portable PH and Temp meter
Specific Conductivity (uS)			To be sent to lab or EXTECH EC500
Salinity (ppm S)			EXTECH EC500
Chlorine (ppm)		≥ Reporting Limit	Hach pocket Colorimeter
Ammonia (mg/L)		≥ 0.5 mg/L	To be sent to lab
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)			To be sent to lab

SECTION 3B: INLET PIPE NO. 2 ASSET DESCRIPTION									
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)				
Inlet Pipe No. 2	DMH-6924	Reinforced Concrete	10:00	Circle	24				
					<table><tr><td>In Water:</td><td>No</td></tr><tr><td>With Sediment:</td><td>No</td></tr></table>	In Water:	No	With Sediment:	No
In Water:	No								
With Sediment:	No								

SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS			
Indicator	Indicator Present?	Indicator Description	
Asset Damage	None		
Deposits/Stains	Flow Line		
Pool Quality	None		
Pipe Algae/Growth	None		
*Do physical indicators suggest an illicit discharge is present (Y/N):		No	
Is Inlet Pipe No.2 Flowing?		Yes	
		Moderate	Estimated GPM: 5

SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor	No		
Color	No		
Turbidity	-	-	Clear
Floatables (Does Not Include Trash)	No		-

SECTION 3B: INLET PIPE NO. 2 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)			
Sample Date/Time:	2020-09-16 8:52:00		
Parameter	Result	Typical EPA Benchmarks	Equipment
Temperature (degrees F)	65.6		EXTECH EC500
pH	7.6		EXTECH EC500
Specific Conductivity (uS)	2.16		EXTECH EC500
Salinity (ppm S)	1.07	≥ Reporting Limit	EXTECH EC500
Chlorine (ppm)	0	≥ Reporting Limit	Hach Test Strips
Ammonia (mg/L)	0	≥ 0.5 mg/L	Hach Test Strips
Surfactants (mg/L)	0	≥ 0.25 mg/L	To be sent to Lab or CHEMets Detergents Kit K-9400
E.coli (cfu/100mL)	38.8	> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)			To be sent to lab

SECTION 3C: INLET PIPE NO. 3 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 3						In Water:	
						With Sediment:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.3 Flowing?						Estimated GPM:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3C: INLET PIPE NO. 3 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3D: INLET PIPE NO. 4 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 4						In Water:	
						With Sediment:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.4 Flowing?						Estimated GPM:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3D: INLET PIPE NO. 4 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3E: INLET PIPE NO. 5 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 5						In Water:	
						With Sediment:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.5 Flowing?						Estimated GPM:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3E: INLET PIPE NO. 5 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		

Phosphorus (mg/L)				To be sent to lab
SECTION 3F: INLET PIPE NO. 6 ASSET DESCRIPTION				
Location	Upstream Asset ID	Material	Clock Postion (Outlet Pipe at 6:00)	Shape
Inlet Pipe No. 6				
				Diameter/Dimension (in.)
				Submerged
				In Water:
				With Sediment:
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS				
Indicator	Indicator Present?		Indicator Description	
Asset Damage				
Deposits/Stains				
Pool Quality				
Pipe Algae/Growth				
*Do physical indicators suggest an illicit discharge is present (Y/N):				
Is Inlet Pipe No.6 Flowing?			Estimated GPM:	
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS (ALL FLOWING ASSETS)				
Indicator	Indicator Present (Yes/No)	Description	Severity	
Odor				
Color				
Turbidity				
Floatables (Does Not Include Trash)				
SECTION 3F: INLET PIPE NO. 6 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)				
Sample Date/Time:	Result		Typical EPA Benchmarks	Equipment
Parameter				
Temperature (degrees F)				EXTECH EC500
pH				EXTECH EC500
Specific Conductivity (uS)				EXTECH EC500
Salinity (ppm S)				EXTECH EC500
Chlorine (ppm)			≥ Reporting Limit	Hach Test Strips
Ammonia (mg/L)			≥ 0.5 mg/L	Hach Test Strips
Surfactants (mg/L)			≥ 0.25 mg/L	To be sent to Lab or CHEMets Detergents Kit K-9400
E.coli (cfu/100mL)			> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)			> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)				To be sent to lab
Comments :				
Signature of Inspector : JL JM ZD				

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA										
ASSET ID: DP10659					OUTFALL ID: DP10659					
Date/Time: 2020-09-29 11:09:00										
Temperature: °F 72					Inspector(s): Jesse Middleton					
Street Name/Structure Location: PETERS LN										
Previous Precipitation Date/End Time: 2020-09-28 1:40:00					Amount (inches): 0.01					
Pictures										

SECTION 2: OUTFALL PIPE ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Shape	Diameter/Dimension (in.)	Submerged	
Outfall Pipe		Reinforced Concrete	Circle	24	In Water:	No
					With Sediment:	No

SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS			
Indicator	Indicator Present?	Indicator Description	
Asset Damage	None		
Deposits/Stains	None		
Pool Quality	None		
Pipe Algae/Growth	None		
*Do physical indicators suggest an illicit discharge is present (Y/N):		No	
Is Inlet Pipe No.1 Flowing?		No	Estimated GPM:

SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color			
Turbidity			
Floatables (Does Not Include Trash)			

SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)			
Sample Date/Time:			
Parameter	Result	Typical EPA Benchmarks	Equipment
Temperature (degrees F)			Hanna portable PH and Temp meter
pH			Hanna portable PH and Temp meter
Specific Conductivity (uS)			To be sent to lab or EXTECH EC500
Salinity (ppm S)			EXTECH EC500
Chlorine (ppm)		≥ Reporting Limit	Hach pocket Colorimeter
Ammonia (mg/L)		≥ 0.5 mg/L	To be sent to lab
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)			To be sent to lab

Comments :	
Signature of Inspector :	

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID:		JC1028			OUTFALL ID:		JC1028		
Date/Time:		2020-09-09 11:28							
Temperature: °F		64			Inspector(s):		Jesse Middleton		
Street Name/Structure Location:		Cross Country							
Previous Precipitation Date/End Time:		2020-09-03 1:40:00			Amount (inches):		0.1		
Pictures									

SECTION 2: OUTFALL PIPE ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Shape	Diameter/Dimension (in.)	Submerged	
Outfall Pipe		Cement Concrete	Rectangle	32	In Water:	No
					With Sediment:	No

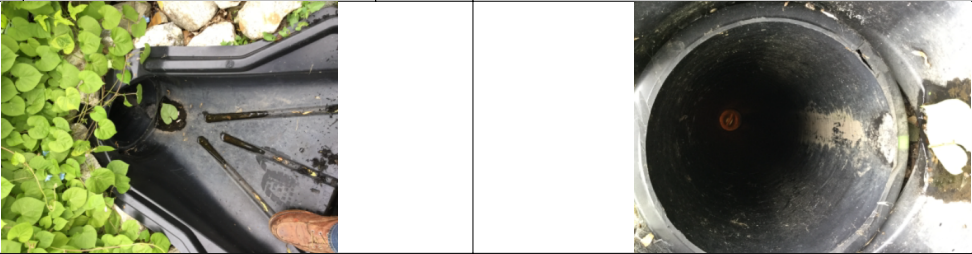
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS			
Indicator	Indicator Present?	Indicator Description	
Asset Damage	None		
Deposits/Stains	None		
Pool Quality	None		
Pipe Algae/Growth	None		
*Do physical indicators suggest an illicit discharge is present (Y/N):		No	
Is Inlet Pipe No.1 Flowing?		No	Estimated GPM:

SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color			
Turbidity			
Floatables (Does Not Include Trash)			

SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)			
Sample Date/Time:			
Parameter	Result	Typical EPA Benchmarks	Equipment
Temperature (degrees F)			Hanna portable PH and Temp meter
pH			Hanna portable PH and Temp meter
Specific Conductivity (uS)			To be sent to lab or EXTECH EC500
Salinity (ppm S)			EXTECH EC500
Chlorine (ppm)		≥ Reporting Limit	Hach pocket Colorimeter
Ammonia (mg/L)		≥ 0.5 mg/L	To be sent to lab
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)			To be sent to lab

Comments :	
Signature of Inspector :	

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID:		LR0880				OUTFALL ID:		LR0880	
Date/Time:		2020-09-18 10:09							
Temperature: °F		54				Inspector(s):		Zebulan Day	
Street Name/Structure Location:		PERLS WAY							
Previous Precipitation Date/End Time:		2020-09-13 23:10:00				Amount (inches):		0.01	
Pictures									
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location	Upstream Asset ID	Material		Shape	Diameter/Dimension (in.)	Submerged			
Outfall Pipe	CB-2612	HDPE		Circle	12	In Water:		No	
						With Sediment:		No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator		Indicator Present?		Indicator Description					
Asset Damage		None							
Deposits/Stains		None							
Pool Quality		None							
Pipe Algae/Growth		None							
*Do physical indicators suggest an illicit discharge is present (Y/N):		No							
Is Inlet Pipe No.1 Flowing?		No		Estimated GPM:					
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)									
Indicator	Indicator Present (Yes/No)		Description			Severity			
Odor									
Color									
Turbidity									
Floatables (Does Not Include Trash)									
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)									
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment			
Parameter									
Temperature (degrees F)						Hanna portable PH and Temp meter			
pH						Hanna portable PH and Temp meter			
Specific Conductivity (uS)						To be sent to lab or EXTECH EC500			
Salinity (ppm S)						EXTECH EC500			
Chlorine (ppm)				≥ Reporting Limit		Hach pocket Colorimeter			
Ammonia (mg/L)				≥ 0.5 mg/L		To be sent to lab			
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C			
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab			
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab			
Phosphorus (mg/L)						To be sent to lab			
Comments :									
Signature of Inspector :									

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA										
ASSET ID:		LR1102				OUTFALL ID:		LR1102		
Date/Time:		2020-09-09 9:30:00								
Temperature: °F		65				Inspector(s):		Jesse Middleton		
Street Name/Structure Location:		Cross Country								
Previous Precipitation Date/End Time:		2020-09-03 1:40:00				Amount (inches):		0.1		
Pictures										
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION										
Location	Upstream Asset ID	Material		Shape	Diameter/Dimension (in.)	Submerged				
Outfall Pipe	24	Reinforced Concrete		Circle		In Water: No With Sediment: No				
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS										
Indicator		Indicator Present?		Indicator Description						
Asset Damage		None								
Deposits/Stains		None								
Pool Quality		None								
Pipe Algae/Growth		None								
*Do physical indicators suggest an illicit discharge is present (Y/N):		No								
Is Inlet Pipe No.1 Flowing?		No						Estimated GPM:		
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)										
Indicator	Indicator Present (Yes/No)		Description		Severity					
Odor										
Color										
Turbidity										
Floatables (Does Not Include Trash)										
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)										
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment				
Parameter										
Temperature (degrees F)						Hanna portable PH and Temp meter				
pH						Hanna portable PH and Temp meter				
Specific Conductivity (uS)						To be sent to lab or EXTECH EC500				
Salinity (ppm S)						EXTECH EC500				
Chlorine (ppm)				≥ Reporting Limit		Hach pocket Colorimeter				
Ammonia (mg/L)				≥ 0.5 mg/L		To be sent to lab				
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C				
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab				
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab				
Phosphorus (mg/L)						To be sent to lab				
Comments :										
Signature of Inspector :										

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA											
ASSET ID:		LR1250				OUTFALL ID:		LR1250			
Date/Time:		2020-11-11 7:32									
Temperature: °F		57				Inspector(s):		James Conte Samuel Martinez			
Street Name/Structure Location:		Cross Country									
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01			
Pictures											
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION											
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe		DMH-5626		Reinforced Concrete		Circle		15		In Water:	
										With Sediment:	
										No	
										No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS											
Indicator				Indicator Present?		Indicator Description					
Asset Damage				None							
Deposits/Stains				None							
Pool Quality				None							
Pipe Algae/Growth				None							
*Do physical indicators suggest an illicit discharge is present (Y/N):				No							
Is Inlet Pipe No.1 Flowing?				No						Estimated GPM:	
Comments :											
Signature of Inspector :		JL SM									

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID: LRO0879					OUTFALL ID: LRO0879				
Date/Time: 2020-09-18 9:50:00									
Temperature: °F 54					Inspector(s): Zebulan Day				
Street Name/Structure Location: PERLS WAY									
Previous Precipitation Date/End Time: 2020-09-13 23:10:00					Amount (inches): 0.01				
Pictures									

SECTION 2: OUTFALL PIPE ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Shape	Diameter/Dimension (in.)	Submerged	
Outfall Pipe	DMH-7839	HDPE	Circle	18	In Water:	No
					With Sediment:	No

SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS			
Indicator	Indicator Present?	Indicator Description	
Asset Damage	None		
Deposits/Stains	None		
Pool Quality	None		
Pipe Algae/Growth	None		
*Do physical indicators suggest an illicit discharge is present (Y/N):		No	
Is Inlet Pipe No.1 Flowing?		No	Estimated GPM:

SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color			
Turbidity			
Floatables (Does Not Include Trash)			

SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)			
Sample Date/Time:			
Parameter	Result	Typical EPA Benchmarks	Equipment
Temperature (degrees F)			Hanna portable PH and Temp meter
pH			Hanna portable PH and Temp meter
Specific Conductivity (uS)			To be sent to lab or EXTECH EC500
Salinity (ppm S)			EXTECH EC500
Chlorine (ppm)		≥ Reporting Limit	Hach pocket Colorimeter
Ammonia (mg/L)		≥ 0.5 mg/L	To be sent to lab
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)			To be sent to lab

Comments :	
Signature of Inspector :	Z D BR

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA								
ASSET ID:		LR03112			OUTFALL ID:			LR03112
Date/Time:		2020-09-18 9:35						
Temperature: °F		54			Inspector(s):			Zebulan Day
Street Name/Structure Location:		Cross Country						
Previous Precipitation Date/End Time:		2020-09-13 23:10:00			Amount (inches):			0.01
Pictures								
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION								
Location	Upstream Asset ID	Material		Shape	Diameter/Dimension (in.)	Submerged		
Outfall Pipe	DMH-7840	HDPE		Circle	12	In Water:	No	
						With Sediment:	No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS								
Indicator		Indicator Present?		Indicator Description				
Asset Damage		None						
Deposits/Stains		None						
Pool Quality		None						
Pipe Algae/Growth		None						
*Do physical indicators suggest an illicit discharge is present (Y/N):		No						
Is Inlet Pipe No.1 Flowing?		No				Estimated GPM:		
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)								
Indicator	Indicator Present (Yes/No)		Description		Severity			
Odor								
Color								
Turbidity								
Floatables (Does Not Include Trash)								
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)								
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment		
Parameter								
Temperature (degrees F)						Hanna portable PH and Temp meter		
pH						Hanna portable PH and Temp meter		
Specific Conductivity (uS)						To be sent to lab or EXTECH EC500		
Salinity (ppm S)						EXTECH EC500		
Chlorine (ppm)				≥ Reporting Limit		Hach pocket Colorimeter		
Ammonia (mg/L)				≥ 0.5 mg/L		To be sent to lab		
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C		
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)						To be sent to lab		
Comments :								
Signature of Inspector :		Z P B R						

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA													
ASSET ID: LR03113					OUTFALL ID: LR03113								
Date/Time: 2020-09-18 10:01:00													
Temperature: °F 54					Inspector(s): Zebulan Day								
Street Name/Structure Location: Cross Country													
Previous Precipitation Date/End Time: 2020-09-13 23:10:00					Amount (inches): 0.01								
Pictures													
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION													
Location	Upstream Asset ID	Material			Shape	Diameter/Dimension (in.)	Submerged						
Outfall Pipe	DMH-7953	HDPE			Circle	12	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>In Water:</td> <td>No</td> </tr> <tr> <td>With Sediment:</td> <td>No</td> </tr> </table>			In Water:	No	With Sediment:	No
In Water:	No												
With Sediment:	No												
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS													
Indicator		Indicator Present?		Indicator Description									
Asset Damage		None											
Deposits/Stains		None											
Pool Quality		None											
Pipe Algae/Growth		None											
*Do physical indicators suggest an illicit discharge is present (Y/N):		No											
Is Inlet Pipe No.1 Flowing?		No		Estimated GPM:									
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)													
Indicator	Indicator Present (Yes/No)		Description				Severity						
Odor													
Color													
Turbidity													
Floatables (Does Not Include Trash)													
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)													
Sample Date/Time:	Parameter		Result	Typical EPA Benchmarks		Equipment							
	Temperature (degrees F)					Hanna portable PH and Temp meter							
	pH					Hanna portable PH and Temp meter							
	Specific Conductivity (uS)					To be sent to lab or EXTECH EC500							
	Salinity (ppm S)					EXTECH EC500							
	Chlorine (ppm)			≥ Reporting Limit		Hach pocket Colorimeter							
	Ammonia (mg/L)			≥ 0.5 mg/L		To be sent to lab							
	Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C							
	E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab							
	Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab							
	Phosphorus (mg/L)					To be sent to lab							
Comments :													
Signature of Inspector : ZD BR													

Haverhill IDDE Investigation & Inspection Form Outfall

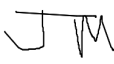
SECTION 1: BACKGROUND DATA									
ASSET ID: UNK0848					OUTFALL ID: UNK0848				
Date/Time: 2020-09-09 11:17									
Temperature: °F 64					Inspector(s): Jesse Middleton				
Street Name/Structure Location: WOODROW AVE									
Previous Precipitation Date/End Time: 2020-09-03 1:40:00					Amount (inches): 0.1				
Pictures									

SECTION 2: OUTFALL PIPE ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Shape	Diameter/Dimension (in.)	Submerged	
Outfall Pipe		Reinforced Concrete	Circle	18	In Water:	No
					With Sediment:	No

SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS			
Indicator	Indicator Present?	Indicator Description	
Asset Damage	None		
Deposits/Stains	None		
Pool Quality	None		
Pipe Algae/Growth	None		
*Do physical indicators suggest an illicit discharge is present (Y/N):		No	
Is Inlet Pipe No.1 Flowing?		No	Estimated GPM:

SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color			
Turbidity			
Floatables (Does Not Include Trash)			

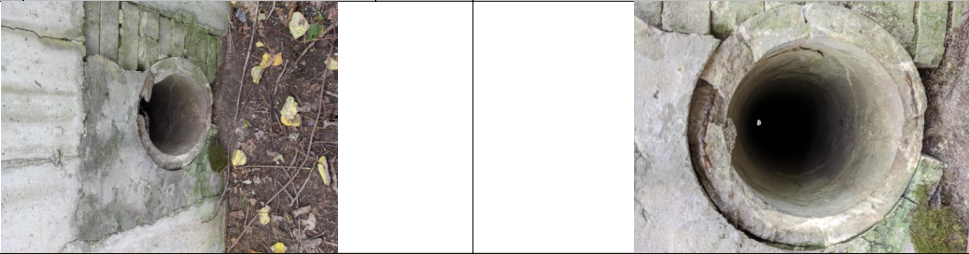
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)			
Sample Date/Time:			
Parameter	Result	Typical EPA Benchmarks	Equipment
Temperature (degrees F)			Hanna portable PH and Temp meter
pH			Hanna portable PH and Temp meter
Specific Conductivity (uS)			To be sent to lab or EXTECH EC500
Salinity (ppm S)			EXTECH EC500
Chlorine (ppm)		≥ Reporting Limit	Hach pocket Colorimeter
Ammonia (mg/L)		≥ 0.5 mg/L	To be sent to lab
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)			To be sent to lab

Comments :	
Signature of Inspector :	

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID: UNK0955					OUTFALL ID: UNK0955				
Date/Time: 2020-09-16 7:28:00									
Temperature: °F 49					Inspector(s): James Conte Jesse Middleton Zebulan Day				
Street Name/Structure Location: SOUTH MAIN ST									
Previous Precipitation Date/End Time: 2020-09-13 23:10:00					Amount (inches): 0.01				
Pictures									
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location	Upstream Asset ID	Material			Shape	Diameter/Dimension (in.)	Submerged		
Outfall Pipe	DMH-802	Reinforced Concrete			Circle	36	In Water: Partially With Sediment: Partially		
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator		Indicator Present?		Indicator Description					
Asset Damage		None							
Deposits/Stains		None							
Pool Quality		None							
Pipe Algae/Growth		None							
*Do physical indicators suggest an illicit discharge is present (Y/N):		No							
Is Inlet Pipe No.1 Flowing?		Yes		Trickle			Estimated GPM:		0.4
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)									
Indicator	Indicator Present (Yes/No)		Description				Severity		
Odor	No								
Color	No								
Turbidity	-		-				Clear		
Floatables (Does Not Include Trash)	No						-		
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)									
Sample Date/Time:		2020-09-16 7:25:00							
Parameter	Result	Typical EPA Benchmarks			Equipment				
Temperature (degrees F)	62.2				Hanna portable PH and Temp meter				
pH	7				Hanna portable PH and Temp meter				
Specific Conductivity (uS)	1630				To be sent to lab or EXTECH EC500				
Salinity (ppm S)	766				EXTECH EC500				
Chlorine (ppm)	0	≥ Reporting Limit			Hach pocket Colorimeter				
Ammonia (mg/L)	0.13	≥ 0.5 mg/L			To be sent to lab				
Surfactants (mg/L)	.10	≥ 0.25 mg/L			To be sent to Lab or Hanna Instruments HI96769C				
E.coli (cfu/100mL)	<2400	> 235 cfu/100mL			To be sent to lab				
Enterococcus (cfu/100mL)		> 61 cfu/100mL			To be sent to lab				
Phosphorus (mg/L)					To be sent to lab				
Comments :									
Signature of Inspector :		  							

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID: UNK0973					OUTFALL ID: UNK0973				
Date/Time: 2020-09-22 13:03:00									
Temperature: °F 60					Inspector(s): Jesse Middleton				
Street Name/Structure Location: DAWN CIR									
Previous Precipitation Date/End Time: 2020-09-13 23:10:00					Amount (inches): 0.01				
Pictures									

SECTION 2: OUTFALL PIPE ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Shape	Diameter/Dimension (in.)	Submerged	
Outfall Pipe		Reinforced Concrete	Circle	12	In Water:	No
					With Sediment:	No

SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS			
Indicator	Indicator Present?	Indicator Description	
Asset Damage	None		
Deposits/Stains	None		
Pool Quality	None		
Pipe Algae/Growth	None		
*Do physical indicators suggest an illicit discharge is present (Y/N):		No	
Is Inlet Pipe No.1 Flowing?		No	Estimated GPM:

SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color			
Turbidity			
Floatables (Does Not Include Trash)			

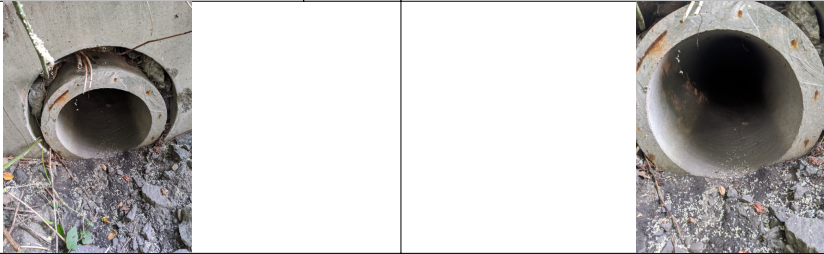
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)			
Sample Date/Time:			
Parameter	Result	Typical EPA Benchmarks	Equipment
Temperature (degrees F)			Hanna portable PH and Temp meter
pH			Hanna portable PH and Temp meter
Specific Conductivity (uS)			To be sent to lab or EXTECH EC500
Salinity (ppm S)			EXTECH EC500
Chlorine (ppm)		≥ Reporting Limit	Hach pocket Colorimeter
Ammonia (mg/L)		≥ 0.5 mg/L	To be sent to lab
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)			To be sent to lab

Comments :	
Signature of Inspector :	

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA											
ASSET ID:		UNK1226			OUTFALL ID:		UNK1226				
Date/Time:		2020-09-29 11:02:00									
Temperature: °F		72			Inspector(s):		Jesse Middleton				
Street Name/Structure Location:		Cross Country									
Previous Precipitation Date/End Time:		2020-09-28 1:40:00			Amount (inches):		0.01				
Pictures											
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION											
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe				Reinforced Concrete		Circle		24		In Water:	
										With Sediment:	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS											
Indicator				Indicator Present?		Indicator Description					
Asset Damage				None							
Deposits/Stains				None							
Pool Quality				None							
Pipe Algae/Growth				None							
*Do physical indicators suggest an illicit discharge is present (Y/N):				No							
Is Inlet Pipe No.1 Flowing?				No						Estimated GPM:	
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)											
Indicator		Indicator Present (Yes/No)			Description			Severity			
Odor											
Color											
Turbidity											
Floatables (Does Not Include Trash)											
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)											
Sample Date/Time:											
Parameter		Result			Typical EPA Benchmarks			Equipment			
Temperature (degrees F)								Hanna portable PH and Temp meter			
pH								Hanna portable PH and Temp meter			
Specific Conductivity (uS)								To be sent to lab or EXTECH EC500			
Salinity (ppm S)								EXTECH EC500			
Chlorine (ppm)					≥ Reporting Limit			Hach pocket Colorimeter			
Ammonia (mg/L)					≥ 0.5 mg/L			To be sent to lab			
Surfactants (mg/L)					≥ 0.25 mg/L			To be sent to Lab or Hanna Instruments HI96769C			
E.coli (cfu/100mL)					> 235 cfu/100mL			To be sent to lab			
Enterococcus (cfu/100mL)					> 61 cfu/100mL			To be sent to lab			
Phosphorus (mg/L)								To be sent to lab			
Comments :											
Signature of Inspector :											

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID:		UNK1787			OUTFALL ID:		UNK1787		
Date/Time:		2020-09-16 10:52							
Temperature: °F		49			Inspector(s):		Jesse Middleton		
Street Name/Structure Location:		SOUTH MAIN ST							
Previous Precipitation Date/End Time:		2020-09-13 23:10:00			Amount (inches):		0.01		
Pictures									

SECTION 2: OUTFALL PIPE ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Shape	Diameter/Dimension (in.)	Submerged	
Outfall Pipe		Reinforced Concrete	Circle	12	In Water:	No
					With Sediment:	No

SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS			
Indicator	Indicator Present?	Indicator Description	
Asset Damage	None		
Deposits/Stains	None		
Pool Quality	None		
Pipe Algae/Growth	None		
*Do physical indicators suggest an illicit discharge is present (Y/N):		No	
Is Inlet Pipe No.1 Flowing?		No	Estimated GPM:

SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color			
Turbidity			
Floatables (Does Not Include Trash)			

SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)			
Sample Date/Time:			
Parameter	Result	Typical EPA Benchmarks	Equipment
Temperature (degrees F)			Hanna portable PH and Temp meter
pH			Hanna portable PH and Temp meter
Specific Conductivity (uS)			To be sent to lab or EXTECH EC500
Salinity (ppm S)			EXTECH EC500
Chlorine (ppm)		≥ Reporting Limit	Hach pocket Colorimeter
Ammonia (mg/L)		≥ 0.5 mg/L	To be sent to lab
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)			To be sent to lab

Comments :	no dry weather flow
Signature of Inspector :	

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA											
ASSET ID:		UNK1835				OUTFALL ID:		UNK1835			
Date/Time:		2020-09-09 14:12				Inspector(s):		Jesse Middleton			
Temperature: °F		70									
Street Name/Structure Location:		BROADWAY									
Previous Precipitation Date/End Time:		2020-09-03 1:40:00				Amount (inches):		0.1			
Pictures											
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION											
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe		DMH-9706		Reinforced Concrete		Circle		15		In Water:	
										With Sediment:	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS											
Indicator				Indicator Present?		Indicator Description					
Asset Damage				None							
Deposits/Stains				None							
Pool Quality				None							
Pipe Algae/Growth				None							
*Do physical indicators suggest an illicit discharge is present (Y/N):				No							
Is Inlet Pipe No.1 Flowing?				No		Estimated GPM:					
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)											
Indicator		Indicator Present (Yes/No)			Description				Severity		
Odor											
Color											
Turbidity											
Floatables (Does Not Include Trash)											
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)											
Sample Date/Time:											
Parameter		Result			Typical EPA Benchmarks			Equipment			
Temperature (degrees F)								Hanna portable PH and Temp meter			
pH								Hanna portable PH and Temp meter			
Specific Conductivity (uS)								To be sent to lab or EXTECH EC500			
Salinity (ppm S)								EXTECH EC500			
Chlorine (ppm)					≥ Reporting Limit			Hach pocket Colorimeter			
Ammonia (mg/L)					≥ 0.5 mg/L			To be sent to lab			
Surfactants (mg/L)					≥ 0.25 mg/L			To be sent to Lab or Hanna Instruments HI96769C			
E.coli (cfu/100mL)					> 235 cfu/100mL			To be sent to lab			
Enterococcus (cfu/100mL)					> 61 cfu/100mL			To be sent to lab			
Phosphorus (mg/L)								To be sent to lab			
SECTION 6: COMMENTS AND SIGNATURE											
Comments :											
Signature of Inspector :											

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID: UNK1908					OUTFALL ID: UNK1908				
Date/Time: 2020-09-22 10:55:00									
Temperature: °F 53					Inspector(s): Jesse Middleton				
Street Name/Structure Location: FONDI RD									
Previous Precipitation Date/End Time: 2020-09-13 23:10:00					Amount (inches): 0.01				
Pictures									
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location	Upstream Asset ID	Material			Shape	Diameter/Dimension (in.)	Submerged		
Outfall Pipe	DMH-7086	Reinforced Concrete			Circle	12	In Water:	No	
							With Sediment:	No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator		Indicator Present?		Indicator Description					
Asset Damage		None							
Deposits/Stains		Flow Line							
Pool Quality		None							
Pipe Algae/Growth		None							
*Do physical indicators suggest an illicit discharge is present (Y/N):		No							
Is Inlet Pipe No.1 Flowing?		No						Estimated GPM:	
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)									
Indicator	Indicator Present (Yes/No)		Description				Severity		
Odor									
Color									
Turbidity									
Floatables (Does Not Include Trash)									
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)									
Sample Date/Time:	Parameter		Result	Typical EPA Benchmarks		Equipment			
	Temperature (degrees F)					Hanna portable PH and Temp meter			
	pH					Hanna portable PH and Temp meter			
	Specific Conductivity (uS)					To be sent to lab or EXTECH EC500			
	Salinity (ppm S)					EXTECH EC500			
	Chlorine (ppm)			≥ Reporting Limit		Hach pocket Colorimeter			
	Ammonia (mg/L)			≥ 0.5 mg/L		To be sent to lab			
	Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C			
	E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab			
	Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab			
	Phosphorus (mg/L)					To be sent to lab			
Comments :									
Signature of Inspector : 									

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA													
ASSET ID: UNK10712					OUTFALL ID: UNK10712								
Date/Time: 2020-09-22 15:31													
Temperature: °F 58					Inspector(s): Jesse Middleton								
Street Name/Structure Location: VALE ST													
Previous Precipitation Date/End Time: 2020-09-13 23:10:00					Amount (inches): 0.01								
Pictures													
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION													
Location	Upstream Asset ID	Material			Shape	Diameter/Dimension (in.)	Submerged						
Outfall Pipe	DMH8368	Reinforced Concrete			Circle	24	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>In Water:</td> <td>No</td> </tr> <tr> <td>With Sediment:</td> <td>No</td> </tr> </table>			In Water:	No	With Sediment:	No
In Water:	No												
With Sediment:	No												
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS													
Indicator		Indicator Present?		Indicator Description									
Asset Damage		None											
Deposits/Stains		None											
Pool Quality		None											
Pipe Algae/Growth		None											
*Do physical indicators suggest an illicit discharge is present (Y/N):		No											
Is Inlet Pipe No.1 Flowing?		No						Estimated GPM:					
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)													
Indicator	Indicator Present (Yes/No)		Description				Severity						
Odor													
Color													
Turbidity													
Floatables (Does Not Include Trash)													
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)													
Sample Date/Time:	Parameter		Result	Typical EPA Benchmarks		Equipment							
	Temperature (degrees F)					Hanna portable PH and Temp meter							
	pH					Hanna portable PH and Temp meter							
	Specific Conductivity (uS)					To be sent to lab or EXTECH EC500							
	Salinity (ppm S)					EXTECH EC500							
	Chlorine (ppm)			≥ Reporting Limit		Hach pocket Colorimeter							
	Ammonia (mg/L)			≥ 0.5 mg/L		To be sent to lab							
	Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C							
	E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab							
	Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab							
	Phosphorus (mg/L)					To be sent to lab							
Comments :													
Signature of Inspector : 													

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA							
ASSET ID: UNK10713				OUTFALL ID: UNK10713			
Date/Time: 2020-09-22 12:34:00							
Temperature: °F 58				Inspector(s): Jesse Middleton			
Street Name/Structure Location: VALE ST							
Previous Precipitation Date/End Time: 2020-09-13 23:10:00				Amount (inches): 0.01			
Pictures	 						

SECTION 2: OUTFALL PIPE ASSET DESCRIPTION					
Location	Upstream Asset ID	Material	Shape	Diameter/Dimension (in.)	Submerged
Outfall Pipe	DMH8368	Reinforced Concrete	Circle	24	In Water: No With Sediment: Partially

SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS			
Indicator	Indicator Present?	Indicator Description	
Asset Damage	None		
Deposits/Stains	None		
Pool Quality	None		
Pipe Algae/Growth	None		
*Do physical indicators suggest an illicit discharge is present (Y/N):		No	
Is Inlet Pipe No.1 Flowing?		No	Estimated GPM:

SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color			
Turbidity			
Floatables (Does Not Include Trash)			

SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)			
Sample Date/Time:			
Parameter	Result	Typical EPA Benchmarks	Equipment
Temperature (degrees F)			Hanna portable PH and Temp meter
pH			Hanna portable PH and Temp meter
Specific Conductivity (uS)			To be sent to lab or EXTECH EC500
Salinity (ppm S)			EXTECH EC500
Chlorine (ppm)		≥ Reporting Limit	Hach pocket Colorimeter
Ammonia (mg/L)		≥ 0.5 mg/L	To be sent to lab
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)			To be sent to lab

Comments :	
Signature of Inspector :	

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID: UNK10714					OUTFALL ID: UNK10714				
Date/Time: 2020-09-22 12:44:00									
Temperature: °F 58					Inspector(s): Jesse Middleton				
Street Name/Structure Location: VALE ST									
Previous Precipitation Date/End Time: 2020-09-13 23:10:00					Amount (inches): 0.01				
Pictures									
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location	Upstream Asset ID	Material	Shape	Diameter/Dimension (in.)	Submerged				
Outfall Pipe	DMH-7184	Poly Vinyl Chloride	Circle	8					
					In Water:	No			
					With Sediment:				
					No				
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator		Indicator Present?		Indicator Description					
Asset Damage		None							
Deposits/Stains		None							
Pool Quality		None							
Pipe Algae/Growth		None							
*Do physical indicators suggest an illicit discharge is present (Y/N):		No							
Is Inlet Pipe No.1 Flowing?		No		Estimated GPM:					
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)									
Indicator	Indicator Present (Yes/No)		Description			Severity			
Odor									
Color									
Turbidity									
Floatables (Does Not Include Trash)									
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)									
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment			
Parameter									
Temperature (degrees F)						Hanna portable PH and Temp meter			
pH						Hanna portable PH and Temp meter			
Specific Conductivity (uS)						To be sent to lab or EXTECH EC500			
Salinity (ppm S)						EXTECH EC500			
Chlorine (ppm)				≥ Reporting Limit		Hach pocket Colorimeter			
Ammonia (mg/L)				≥ 0.5 mg/L		To be sent to lab			
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C			
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab			
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab			
Phosphorus (mg/L)						To be sent to lab			
Comments :									
Signature of Inspector :									

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA													
ASSET ID: UNK12712					OUTFALL ID: UNK12712								
Date/Time: 2020-09-29 10:50:00													
Temperature: °F 71					Inspector(s): Jesse Middleton								
Street Name/Structure Location: CROSS COUNTRY													
Previous Precipitation Date/End Time: 2020-09-28 1:40:00					Amount (inches): 0.01								
Pictures													
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION													
Location	Upstream Asset ID	Material			Shape	Diameter/Dimension (in.)	Submerged						
Outfall Pipe		Poly Vinyl Chloride			Circle	10	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>In Water:</td> <td>No</td> </tr> <tr> <td>With Sediment:</td> <td>No</td> </tr> </table>			In Water:	No	With Sediment:	No
In Water:	No												
With Sediment:	No												
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS													
Indicator		Indicator Present?		Indicator Description									
Asset Damage		None											
Deposits/Stains		Flow Line											
Pool Quality		None											
Pipe Algae/Growth		None											
*Do physical indicators suggest an illicit discharge is present (Y/N):		No											
Is Inlet Pipe No.1 Flowing?		No		Estimated GPM:									
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)													
Indicator	Indicator Present (Yes/No)		Description				Severity						
Odor													
Color													
Turbidity													
Floatables (Does Not Include Trash)													
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)													
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment							
Parameter													
Temperature (degrees F)						Hanna portable PH and Temp meter							
pH						Hanna portable PH and Temp meter							
Specific Conductivity (uS)						To be sent to lab or EXTECH EC500							
Salinity (ppm S)						EXTECH EC500							
Chlorine (ppm)				≥ Reporting Limit		Hach pocket Colorimeter							
Ammonia (mg/L)				≥ 0.5 mg/L		To be sent to lab							
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C							
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab							
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab							
Phosphorus (mg/L)						To be sent to lab							
Comments :													
Signature of Inspector :													

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID: UNK19112					OUTFALL ID: UNK19112				
Date/Time: 2020-09-22 12:56:00									
Temperature: °F 59					Inspector(s): Jesse Middleton				
Street Name/Structure Location: VALE ST									
Previous Precipitation Date/End Time: 2020-09-13 23:10:00					Amount (inches): 0.01				
Pictures									
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location	Upstream Asset ID	Material		Shape	Diameter/Dimension (in.)		Submerged		
Outfall Pipe		HDPE		Circle	10		In Water:		
							With Sediment:		
							No		
							No		
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator		Indicator Present?		Indicator Description					
Asset Damage		None							
Deposits/Stains		None							
Pool Quality		None							
Pipe Algae/Growth		None							
*Do physical indicators suggest an illicit discharge is present (Y/N):		No							
Is Inlet Pipe No.1 Flowing?		No						Estimated GPM:	
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)									
Indicator	Indicator Present (Yes/No)		Description				Severity		
Odor									
Color									
Turbidity									
Floatables (Does Not Include Trash)									
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)									
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment			
Parameter									
Temperature (degrees F)						Hanna portable PH and Temp meter			
pH						Hanna portable PH and Temp meter			
Specific Conductivity (uS)						To be sent to lab or EXTECH EC500			
Salinity (ppm S)						EXTECH EC500			
Chlorine (ppm)				≥ Reporting Limit		Hach pocket Colorimeter			
Ammonia (mg/L)				≥ 0.5 mg/L		To be sent to lab			
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C			
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab			
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab			
Phosphorus (mg/L)						To be sent to lab			
Comments :									
Signature of Inspector :									

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA								
ASSET ID:		UNK19113			OUTFALL ID:		UNK19113	
Date/Time:		2020-09-22 12:56:00						
Temperature: °F		59			Inspector(s):		Jesse Middleton	
Street Name/Structure Location:		VALE ST						
Previous Precipitation Date/End Time:		2020-09-13 23:10:00			Amount (inches):		0.01	
Pictures								
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION								
Location	Upstream Asset ID	Material		Shape	Diameter/Dimension (in.)	Submerged		
Outfall Pipe		HDPE		Circle	10	In Water:	No	
						With Sediment:	No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS								
Indicator		Indicator Present?		Indicator Description				
Asset Damage		None						
Deposits/Stains		None						
Pool Quality		None						
Pipe Algae/Growth		None						
*Do physical indicators suggest an illicit discharge is present (Y/N):		No						
Is Inlet Pipe No.1 Flowing?		No				Estimated GPM:		
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)								
Indicator	Indicator Present (Yes/No)		Description		Severity			
Odor								
Color								
Turbidity								
Floatables (Does Not Include Trash)								
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)								
Sample Date/Time:								
Parameter		Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)						Hanna portable PH and Temp meter		
pH						Hanna portable PH and Temp meter		
Specific Conductivity (uS)						To be sent to lab or EXTECH EC500		
Salinity (ppm S)						EXTECH EC500		
Chlorine (ppm)				≥ Reporting Limit		Hach pocket Colorimeter		
Ammonia (mg/L)				≥ 0.5 mg/L		To be sent to lab		
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C		
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)						To be sent to lab		
SECTION 6: COMMENTS AND SIGNATURE								
Comments :								
Signature of Inspector :								

Haverhill IDDE Investigation & Inspection Form Outfall

SECTION 1: BACKGROUND DATA										
ASSET ID: UNK32712					OUTFALL ID: UNK32712					
Date/Time: 2020-09-22 12:56:00										
Temperature: °F 59					Inspector(s): Jesse Middleton					
Street Name/Structure Location: Vale St										
Previous Precipitation Date/End Time: 2020-09-13 23:10:00					Amount (inches): 0.01					
Pictures										
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION										
Location	Upstream Asset ID	Material			Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe		Poly Vinyl Chloride			Circle		8		In Water:	No
									With Sediment:	No
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS										
Indicator		Indicator Present?			Indicator Description					
Asset Damage		None								
Deposits/Stains		None								
Pool Quality		None								
Pipe Algae/Growth		None								
*Do physical indicators suggest an illicit discharge is present (Y/N):		No								
Is Inlet Pipe No.1 Flowing?		No					Estimated GPM:			
SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)										
Indicator	Indicator Present (Yes/No)			Description			Severity			
Odor										
Color										
Turbidity										
Floatables (Does Not Include Trash)										
SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)										
Sample Date/Time:										
Parameter		Result			Typical EPA Benchmarks		Equipment			
Temperature (degrees F)							Hanna portable PH and Temp meter			
pH							Hanna portable PH and Temp meter			
Specific Conductivity (uS)							To be sent to lab or EXTECH EC500			
Salinity (ppm S)							EXTECH EC500			
Chlorine (ppm)					≥ Reporting Limit		Hach pocket Colorimeter			
Ammonia (mg/L)					≥ 0.5 mg/L		To be sent to lab			
Surfactants (mg/L)					≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C			
E.coli (cfu/100mL)					> 235 cfu/100mL		To be sent to lab			
Enterococcus (cfu/100mL)					> 61 cfu/100mL		To be sent to lab			
Phosphorus (mg/L)							To be sent to lab			
Comments :										
Signature of Inspector :										

OCTOBER 2020

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA										
ASSET ID:		DPI0912			OUTFALL ID:		DPI0912			
Date/Time:		2020-10-23 9:43								
Temperature: °F		61			Inspector(s):		Jesse Middleton			
Street Name/Structure Location:		Cross Country								
Previous Precipitation Date/End Time:		2020-10-21 7:23:00			Amount (inches):		0.02			
Pictures										
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION										
Location	Upstream Asset ID	Material			Shape	Diameter/Dimension (in.)	Submerged			
Outfall Pipe		Reinforced Concrete			Circle	24	In Water:	No		
							With Sediment:	No		
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS										
Indicator		Indicator Present?		Indicator Description						
Asset Damage		None								
Deposits/Stains		None								
Pool Quality		None								
Pipe Algae/Growth		None								
*Do physical indicators suggest an illicit discharge is present (Y/N):		No								
Is Inlet Pipe No.1 Flowing?		No						Estimated GPM:		
Comments :										
Signature of Inspector :										

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA										
ASSET ID:		DPI0913			OUTFALL ID:		DPI0913			
Date/Time:		2020-10-23 9:32								
Temperature: °F		61			Inspector(s):		Jesse Middleton			
Street Name/Structure Location:		Cross Country								
Previous Precipitation Date/End Time:		2020-10-21 7:23:00			Amount (inches):		0.02			
Pictures										
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION										
Location	Upstream Asset ID	Material			Shape	Diameter/Dimension (in.)	Submerged			
Outfall Pipe		Reinforced Concrete			Circle	18	In Water:	No		
							With Sediment:	No		
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS										
Indicator		Indicator Present?		Indicator Description						
Asset Damage		None								
Deposits/Stains		None								
Pool Quality		None								
Pipe Algae/Growth		None								
*Do physical indicators suggest an illicit discharge is present (Y/N):		No								
Is Inlet Pipe No.1 Flowing?		No				Estimated GPM:				
SECTION 4: COMMENTS AND SIGNATURE										
Comments :										
Signature of Inspector :										

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA											
ASSET ID:		DPI0914				OUTFALL ID:		DPI0914			
Date/Time:		2020-10-23 9:30									
Temperature: °F		61				Inspector(s):		Jesse Middleton			
Street Name/Structure Location:		Cross Country									
Previous Precipitation Date/End Time:		2020-10-21 7:23:00				Amount (inches):		0.02			
Pictures											
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION											
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe				Reinforced Concrete		Circle		18		In Water:	
										No	
										With Sediment:	
										No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS											
Indicator				Indicator Present?		Indicator Description					
Asset Damage				None							
Deposits/Stains				None							
Pool Quality				None							
Pipe Algae/Growth				None							
*Do physical indicators suggest an illicit discharge is present (Y/N):				No							
Is Inlet Pipe No.1 Flowing?				No						Estimated GPM:	
SECTION 4: COMMENTS AND SIGNATURE											
Comments :											
Signature of Inspector :											

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA								
ASSET ID:		DPI0915			OUTFALL ID:		DPI0915	
Date/Time:		2020-10-23 9:35						
Temperature: °F		61			Inspector(s):		Jesse Middleton	
Street Name/Structure Location:		Cross Country						
Previous Precipitation Date/End Time:		2020-10-21 7:23:00			Amount (inches):		0.02	
Pictures								
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION								
Location	Upstream Asset ID	Material		Shape	Diameter/Dimension (in.)	Submerged		
Outfall Pipe		Reinforced Concrete		Circle	24	In Water:	No	
						With Sediment:	Partially	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS								
Indicator		Indicator Present?		Indicator Description				
Asset Damage		None						
Deposits/Stains		None						
Pool Quality		None						
Pipe Algae/Growth		None						
*Do physical indicators suggest an illicit discharge is present (Y/N):		No						
Is Inlet Pipe No.1 Flowing?		No				Estimated GPM:		
Comments :								
Signature of Inspector :								

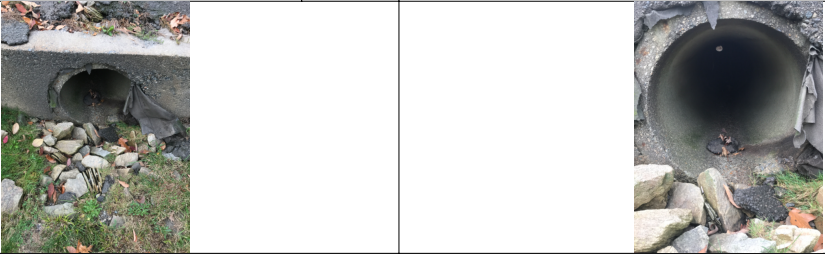
Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID:		DP10956			OUTFALL ID:		DP10956		
Date/Time:		2020-10-23 8:25							
Temperature: °F		61			Inspector(s):		Jesse Middleton		
Street Name/Structure Location:		Cross Country							
Previous Precipitation Date/End Time:		2020-10-21 7:23:00			Amount (inches):		0.02		
Pictures									
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location	Upstream Asset ID	Material			Shape	Diameter/Dimension (in.)	Submerged		
Outfall Pipe		Reinforced Concrete			Circle	12	In Water:	No	
							With Sediment:	No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator		Indicator Present?			Indicator Description				
Asset Damage		None							
Deposits/Stains		None							
Pool Quality		None							
Pipe Algae/Growth		None							
*Do physical indicators suggest an illicit discharge is present (Y/N):		No							
Is Inlet Pipe No.1 Flowing?		No					Estimated GPM:		
Comments :									
Signature of Inspector :									

Haverhill IDDE Inspection Form Outfall

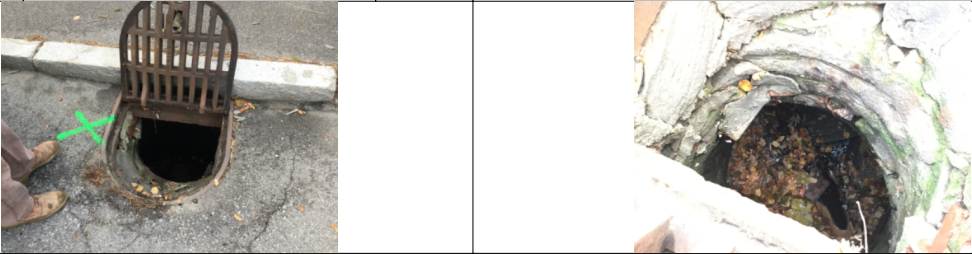
SECTION 1: BACKGROUND DATA										
ASSET ID:		UNK27919				OUTFALL ID:		UNK27919		
Date/Time:		2020-10-23 8:41								
Temperature: °F		62				Inspector(s):		Jesse Middleton		
Street Name/Structure Location:										
Previous Precipitation Date/End Time:		2020-10-21 7:23:00				Amount (inches):		0.02		
Pictures										
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION										
Location	Upstream Asset ID	Material		Shape		Diameter/Dimension (in.)		Submerged		
Outfall Pipe		Brick		Circle		6		In Water:	No	
								With Sediment:	No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS										
Indicator		Indicator Present?		Indicator Description						
Asset Damage		None								
Deposits/Stains		None								
Pool Quality		None								
Pipe Algae/Growth		None								
*Do physical indicators suggest an illicit discharge is present (Y/N):		No								
Is Inlet Pipe No.1 Flowing?		No						Estimated GPM:		
Comments :										
Signature of Inspector :										

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID:		UNK57112			OUTFALL ID:		UNK57112		
Date/Time:		2020-10-23 9:16							
Temperature: °F		61			Inspector(s):		Jesse Middleton		
Street Name/Structure Location:		FERRY RD							
Previous Precipitation Date/End Time:		2020-10-21 7:23:00			Amount (inches):		0.02		
Pictures									
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location	Upstream Asset ID	Material			Shape	Diameter/Dimension (in.)	Submerged		
Outfall Pipe		Reinforced Concrete			Circle	24	In Water:	No	
							With Sediment:	No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator		Indicator Present?			Indicator Description				
Asset Damage		None							
Deposits/Stains		None							
Pool Quality		None							
Pipe Algae/Growth		None							
*Do physical indicators suggest an illicit discharge is present (Y/N):		No							
Is Inlet Pipe No.1 Flowing?		No					Estimated GPM:		
Comments :									
Signature of Inspector :									

NOVEMBER 2020

Haverhill IDDE Investigation Form Catch Basin

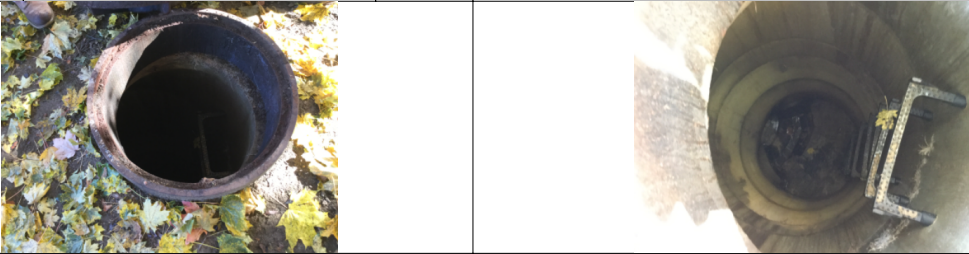
SECTION 1: BACKGROUND DATA									
ASSET ID: CB-3166					OUTFALL ID:				
Date/Time: 2020-11-09 7:39:00									
Temperature: °F 40					Inspector(s): James Conte Jesse Middleton Zebulan Day				
Street Name/Structure Location: WATER ST									
Previous Precipitation Date/End Time: 2020-11-03 8:40:00					Amount (inches): 0.01				
Pictures									
SECTION 2: OUTLET PIPE ASSET DESCRIPTION									
Location	CB Interior Condition	Material	Shape	Diameter/Dimension (in.)	Submerged				
CB Outlet Pipe	Fair	Cement Concrete	Circle	8	In Water:	No			
					With Sediment:	Partially			
SECTION 3A: INLET PIPE NO. 1 ASSET DESCRIPTION									
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged			
Inlet Pipe No. 1	DMH-368	Reinforced Concrete	2:00	Circle	12	In Water:	No		
						With Sediment:	No		
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS									
Indicator		Indicator Present?		Indicator Description					
Asset Damage		None							
Deposits/Stains		Flow Line							
Pool Quality		None							
Pipe Algae/Growth		None							
*Do physical indicators suggest an illicit discharge is present (Y/N):		No							
Is Inlet Pipe No.1 Flowing?		Yes		Moderate		Estimated GPM:	5		
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS (ALL FLOWING ASSETS)									
Indicator	Indicator Present (Yes/No)		Description			Severity			
Odor	No								
Color	No								
Turbidity						Clear			
Floatables (Does Not Include Trash)	No								
SECTION 3A: INLET PIPE NO. 1 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)									
Sample Date/Time:		2020-11-09 7:45:00							
Parameter	Result	Typical EPA Benchmarks			Equipment				
Temperature (degrees F)	55.6				Hanna portable PH and Temp meter				
pH	6.7				Hanna portable PH and Temp meter				
Specific Conductivity (uS)	1640				To be sent to lab or EXTECH EC500				
Salinity (ppm S)	809				EXTECH EC500				
Chlorine (ppm)	0	≥ Reporting Limit			Hach pocket Colorimeter				
Ammonia (mg/L)	0	≥ 0.5 mg/L			To be sent to lab				
Surfactants (mg/L)	0	≥ 0.25 mg/L			To be sent to Lab or Hanna Instruments HI96769C				
E.coli (cfu/100mL)	524.7	> 235 cfu/100mL			To be sent to lab				
Enterococcus (cfu/100mL)		> 61 cfu/100mL			To be sent to lab				
Phosphorus (mg/L)	0.016				To be sent to lab				
SECTION 3B: INLET PIPE NO. 2 ASSET DESCRIPTION									
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged			
Inlet Pipe No. 2						In Water:			
						With Sediment:			
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS									
Indicator		Indicator Present?		Indicator Description					
Asset Damage									
Deposits/Stains									
Pool Quality									
Pipe Algae/Growth									
*Do physical indicators suggest an illicit discharge is present (Y/N):									
Is Inlet Pipe No.2 Flowing?						Estimated GPM:			
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS (ALL FLOWING ASSETS)									
Indicator	Indicator Present (Yes/No)		Description			Severity			
Odor									
Color									
Turbidity									
Floatables (Does Not Include Trash)									
SECTION 3B: INLET PIPE NO. 2 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)									
Sample Date/Time:									
Parameter	Result	Typical EPA Benchmarks			Equipment				
Temperature (degrees F)					EXTECH EC500				
pH					EXTECH EC500				
Specific Conductivity (uS)					EXTECH EC500				
Salinity (ppm S)		≥ Reporting Limit			EXTECH EC500				
Chlorine (ppm)		≥ Reporting Limit			Hach Test Strips				
Ammonia (mg/L)		≥ 0.5 mg/L			Hach Test Strips				
Surfactants (mg/L)		≥ 0.25 mg/L			To be sent to Lab or CHEMets Detergents Kit K-9400				
E.coli (cfu/100mL)		> 235 cfu/100mL			To be sent to lab				
Enterococcus (cfu/100mL)		> 61 cfu/100mL			To be sent to lab				
Phosphorus (mg/L)					To be sent to lab				

SECTION 3C: INLET PIPE NO. 3 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 3						In Water:	
						With Sediment:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.3 Flowing?				Estimated GPM:			
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3C: INLET PIPE NO. 3 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:	Result		Typical EPA Benchmarks		Equipment		
Parameter							
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3D: INLET PIPE NO. 4 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 4						In Water:	
						With Sediment:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.4 Flowing?				Estimated GPM:			
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3D: INLET PIPE NO. 4 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:	Result		Typical EPA Benchmarks		Equipment		
Parameter							
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3E: INLET PIPE NO. 5 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 5						In Water:	
						With Sediment:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.5 Flowing?				Estimated GPM:			
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3E: INLET PIPE NO. 5 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:	Result		Typical EPA Benchmarks		Equipment		
Parameter							
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		

SECTION 3F: INLET PIPE NO. 6 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 6						In Water:	
						With Sediment:	
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.6 Flowing?						Estimated GPM:	
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator		Indicator Present (Yes/No)		Description		Severity	
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3F: INLET PIPE NO. 6 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter		Result		Typical EPA Benchmarks		Equipment	
Temperature (degrees F)						EXTECH EC500	
pH						EXTECH EC500	
Specific Conductivity (uS)						EXTECH EC500	
Salinity (ppm S)						EXTECH EC500	
Chlorine (ppm)				≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)				≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)						To be sent to lab	
Comments :							
Signature of Inspector :		JL JM ZD DB					

Haverhill IDDE Investigation Form

Drain Manhole

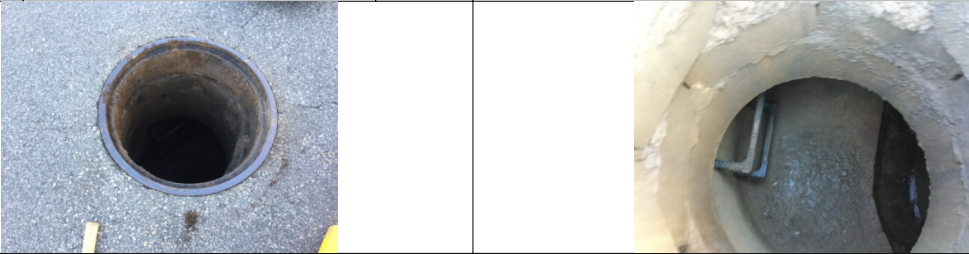
SECTION 1: BACKGROUND DATA						
ASSET ID:	DMH-365				OUTFALL ID:	
Date/Time:	2020-11-09 9:24:00					
Temperature: °F	50				Inspector(s):	James Conte Jesse Middleton Zebulan Day
Street Name/Structure Location:	Cross Country					
Previous Precipitation Date/End Time:	2020-11-03 8:40:00			Amount (inches):	0.01	
Pictures						
SECTION 2: OUTLET PIPE ASSET DESCRIPTION						
Location	DMH Interior Condition	Material	Shape	Diameter/Dimension (in.)	Submerged	
DMH Outlet Pipe	Excellent	Reinforced Concrete	Circle	18	In Water:	No
					With Sediment:	No
SECTION 3A: INLET PIPE NO. 1 ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 1	Open ended inlet	Reinforced Concrete	10:00	Circle	18	In Water: No
						With Sediment: No
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS						
Indicator	Indicator Present?		Indicator Description			
Asset Damage	None					
Deposits/Stains	Flow Line					
Pool Quality	None					
Pipe Algae/Growth	None					
*Do physical indicators suggest an illicit discharge is present (Y/N):			No			
Is Inlet Pipe No.1 Flowing?			Yes		Moderate	Estimated GPM: 5
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS (ALL FLOWING ASSETS)						
Indicator	Indicator Present (Yes/No)		Description		Severity	
Odor	No					
Color	No					
Turbidity	-		-		Clear	
Floatables (Does Not Include Trash)	No				-	
SECTION 3A: INLET PIPE NO. 1 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)						
Sample Date/Time:	2020-11-09 9:25:00					
Parameter	Result		Typical EPA Benchmarks		Equipment	
Temperature (degrees F)	52.4				Hanna portable PH and Temp meter	
pH	6.7				Hanna portable PH and Temp meter	
Specific Conductivity (uS)	1510				To be sent to lab or EXTECH EC500	
Salinity (ppm S)	731				EXTECH EC500	
Chlorine (ppm)	0		≥ Reporting Limit		Hach pocket Colorimeter	
Ammonia (mg/L)	0		≥ 0.5 mg/L		To be sent to lab	
Surfactants (mg/L)	0.06		≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C	
E.coli (cfu/100mL)	14.5		> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)	0.014				To be sent to lab	
SECTION 3B: INLET PIPE NO. 2 ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 2						In Water:
						With Sediment:
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS						
Indicator	Indicator Present?		Indicator Description			
Asset Damage						
Deposits/Stains						
Pool Quality						
Pipe Algae/Growth						
*Do physical indicators suggest an illicit discharge is present (Y/N):			No			
Is Inlet Pipe No.2 Flowing?					Estimated GPM:	
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS (ALL FLOWING ASSETS)						
Indicator	Indicator Present (Yes/No)		Description		Severity	
Odor						
Color						
Turbidity	-		-			
Floatables (Does Not Include Trash)					-	
SECTION 3B: INLET PIPE NO. 2 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)						
Sample Date/Time:						
Parameter	Result		Typical EPA Benchmarks		Equipment	
Temperature (degrees F)					EXTECH EC500	
pH					EXTECH EC500	
Specific Conductivity (uS)					EXTECH EC500	
Salinity (ppm S)			≥ Reporting Limit		EXTECH EC500	
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)					To be sent to lab	

SECTION 3C: INLET PIPE NO. 3 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 3						In Water:	
						With Sediment:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.3 Flowing?						Estimated GPM:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3C: INLET PIPE NO. 3 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3D: INLET PIPE NO. 4 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 4						In Water:	
						With Sediment:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.4 Flowing?						Estimated GPM:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3D: INLET PIPE NO. 4 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3E: INLET PIPE NO. 5 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 5						In Water:	
						With Sediment:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.5 Flowing?						Estimated GPM:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3E: INLET PIPE NO. 5 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		

Phosphorus (mg/L)				To be sent to lab
SECTION 3F: INLET PIPE NO. 6 ASSET DESCRIPTION				
Location	Upstream Asset ID	Material	Clock Postion (Outlet Pipe at 6:00)	Shape
Inlet Pipe No. 6				
				Diameter/Dimension (in.)
				Submerged
				In Water
				With Sediment
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS				
Indicator		Indicator Present?		Indicator Description
Asset Damage				
Deposits/Stains				
Pool Quality				
Pipe Algae/Growth				
*Do physical indicators suggest an illicit discharge is present (Y/N):				
Is Inlet Pipe No.6 Flowing?				Estimated GPM:
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS (ALL FLOWING ASSETS)				
Indicator	Indicator Present (Yes/No)	Description		Severity
Odor				
Color				
Turbidity				
Floatables (Does Not Include Trash)				
SECTION 3F: INLET PIPE NO. 6 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)				
Sample Date/Time:				
Parameter	Result	Typical EPA Benchmarks	Equipment	
Temperature (degrees F)			EXTECH EC500	
pH			EXTECH EC500	
Specific Conductivity (uS)			EXTECH EC500	
Salinity (ppm S)			EXTECH EC500	
Chlorine (ppm)		≥ Reporting Limit	Hach Test Strips	
Ammonia (mg/L)		≥ 0.5 mg/L	Hach Test Strips	
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab	
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab	
Phosphorus (mg/L)			To be sent to lab	
Comments :				
Signature of Inspector : JL JD JM DB				

Haverhill IDDE Investigation Form

Drain Manhole

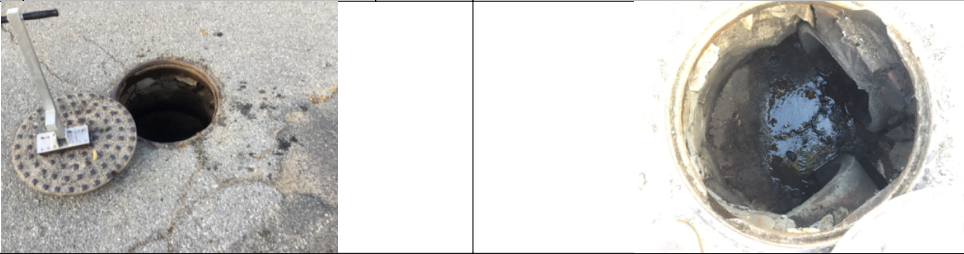
SECTION 1: BACKGROUND DATA						
ASSET ID:	DMH-366				OUTFALL ID:	
Date/Time:	2020-11-09 8:50:00					
Temperature: °F	45				Inspector(s):	James Conte Jesse Middleton Zebulan Day
Street Name/Structure Location:	GROVELAND ST					
Previous Precipitation Date/End Time:	2020-11-03 8:40:00				Amount (inches):	0.01
Pictures						
SECTION 2: OUTLET PIPE ASSET DESCRIPTION						
Location	DMH Interior Condition	Material	Shape	Diameter/Dimension (in.)	Submerged	
DMH Outlet Pipe	Excellent	Reinforced Concrete	Circle	18	In Water:	No
					With Sediment:	No
SECTION 3A: INLET PIPE NO. 1 ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 1	Duh-364	Reinforced Concrete	3:00	Circle	18	In Water: No
						With Sediment: No
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS						
Indicator	Indicator Present?		Indicator Description			
Asset Damage	None					
Deposits/Stains	Flow Line					
Pool Quality	None					
Pipe Algae/Growth	None					
*Do physical indicators suggest an illicit discharge is present (Y/N):			No			
Is Inlet Pipe No.1 Flowing?			Yes		Moderate	Estimated GPM: 5
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS (ALL FLOWING ASSETS)						
Indicator	Indicator Present (Yes/No)		Description		Severity	
Odor	No					
Color	No					
Turbidity	-		-		Slight Cloudiness	
Floatables (Does Not Include Trash)	No				-	
SECTION 3A: INLET PIPE NO. 1 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)						
Sample Date/Time:	2020-11-09 9:00:00					
Parameter	Result		Typical EPA Benchmarks		Equipment	
Temperature (degrees F)	55.3				Hanna portable PH and Temp meter	
pH	6.6				Hanna portable PH and Temp meter	
Specific Conductivity (uS)	1418				To be sent to lab or EXTECH EC500	
Salinity (ppm S)	710				EXTECH EC500	
Chlorine (ppm)	0		≥ Reporting Limit		Hach pocket Colorimeter	
Ammonia (mg/L)	0.07		≥ 0.5 mg/L		To be sent to lab	
Surfactants (mg/L)	0		≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C	
E.coli (cfu/100mL)	866.4		> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)	0.16				To be sent to lab	
SECTION 3B: INLET PIPE NO. 2 ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 2						In Water:
						With Sediment:
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS						
Indicator	Indicator Present?		Indicator Description			
Asset Damage						
Deposits/Stains						
Pool Quality						
Pipe Algae/Growth						
*Do physical indicators suggest an illicit discharge is present (Y/N):			No			
Is Inlet Pipe No.2 Flowing?					Estimated GPM:	
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS (ALL FLOWING ASSETS)						
Indicator	Indicator Present (Yes/No)		Description		Severity	
Odor						
Color						
Turbidity	-		-			
Floatables (Does Not Include Trash)					-	
SECTION 3B: INLET PIPE NO. 2 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)						
Sample Date/Time:						
Parameter	Result		Typical EPA Benchmarks		Equipment	
Temperature (degrees F)					EXTECH EC500	
pH					EXTECH EC500	
Specific Conductivity (uS)					EXTECH EC500	
Salinity (ppm S)			≥ Reporting Limit		EXTECH EC500	
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)					To be sent to lab	

SECTION 3C: INLET PIPE NO. 3 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 3						In Water:	
						With Sediment:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.3 Flowing?						Estimated GPM:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3C: INLET PIPE NO. 3 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3D: INLET PIPE NO. 4 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 4						In Water:	
						With Sediment:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.4 Flowing?						Estimated GPM:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3D: INLET PIPE NO. 4 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3E: INLET PIPE NO. 5 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 5						In Water:	
						With Sediment:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.5 Flowing?						Estimated GPM:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3E: INLET PIPE NO. 5 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		

Phosphorus (mg/L)				To be sent to lab
SECTION 3F: INLET PIPE NO. 6 ASSET DESCRIPTION				
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape
Inlet Pipe No. 6				
				Diameter/Dimension (in.)
				Submerged
				In Water:
				With Sediment:
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS				
Indicator	Indicator Present?		Indicator Description	
Asset Damage				
Deposits/Stains				
Pool Quality				
Pipe Algae/Growth				
*Do physical indicators suggest an illicit discharge is present (Y/N):				
Is Inlet Pipe No.6 Flowing?			Estimated GPM:	
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS (ALL FLOWING ASSETS)				
Indicator	Indicator Present (Yes/No)	Description	Severity	
Odor				
Color				
Turbidity				
Floatables (Does Not Include Trash)				
SECTION 3F: INLET PIPE NO. 6 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)				
Sample Date/Time:	Result		Typical EPA Benchmarks	Equipment
Parameter				
Temperature (degrees F)				EXTECH EC500
pH				EXTECH EC500
Specific Conductivity (uS)				EXTECH EC500
Salinity (ppm S)				EXTECH EC500
Chlorine (ppm)			≥ Reporting Limit	Hach Test Strips
Ammonia (mg/L)			≥ 0.5 mg/L	Hach Test Strips
Surfactants (mg/L)			≥ 0.25 mg/L	To be sent to Lab or CHEMets Detergents Kit K-9400
E.coli (cfu/100mL)			> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)			> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)				To be sent to lab
Comments :				
Signature of Inspector : JL JM 2D DB				

Haverhill IDDE Investigation Form

Drain Manhole

SECTION 1: BACKGROUND DATA						
ASSET ID:	DMH-367			OUTFALL ID:		
Date/Time:	2020-11-09 8:01:00					
Temperature: °F	40			Inspector(s):	James Conte Jesse Middleton Zebulan Day	
Street Name/Structure Location:	WATER ST					
Previous Precipitation Date/End Time:	2020-11-03 8:40:00			Amount (inches):	0.01	
Pictures						
SECTION 2: OUTLET PIPE ASSET DESCRIPTION						
Location	DMH Interior Condition	Material	Shape	Diameter/Dimension (in.)	Submerged	
DMH Outlet Pipe	Good	Reinforced Concrete	Circle	12	In Water:	No
					With Sediment:	No
SECTION 3A: INLET PIPE NO. 1 ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 1	Cb-3164	Vitrified Clay	1:00	Circle	8	In Water: No
						With Sediment: No
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS						
Indicator	Indicator Present?		Indicator Description			
Asset Damage	Cracking Chipping					
Deposits/Stains	None					
Pool Quality	None					
Pipe Algae/Growth	None					
*Do physical indicators suggest an illicit discharge is present (Y/N):			No			
Is Inlet Pipe No.1 Flowing?			No		Estimated GPM:	
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS (ALL FLOWING ASSETS)						
Indicator	Indicator Present (Yes/No)		Description		Severity	
Odor						
Color						
Turbidity						
Floatables (Does Not Include Trash)						
SECTION 3A: INLET PIPE NO. 1 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)						
Sample Date/Time:						
Parameter	Result		Typical EPA Benchmarks		Equipment	
Temperature (degrees F)					Hanna portable PH and Temp meter	
pH					Hanna portable PH and Temp meter	
Specific Conductivity (uS)					To be sent to lab or EXTECH EC500	
Salinity (ppm S)					EXTECH EC500	
Chlorine (ppm)			≥ Reporting Limit		Hach pocket Colorimeter	
Ammonia (mg/L)			≥ 0.5 mg/L		To be sent to lab	
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C	
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)					To be sent to lab	
SECTION 3B: INLET PIPE NO. 2 ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 2	DMH-369	Reinforced Concrete	3:00	Circle	15	In Water: No
						With Sediment: No
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS						
Indicator	Indicator Present?		Indicator Description			
Asset Damage	None					
Deposits/Stains	Flow Line					
Pool Quality	None					
Pipe Algae/Growth	None					
*Do physical indicators suggest an illicit discharge is present (Y/N):			No			
Is Inlet Pipe No.2 Flowing?			Yes		Moderate	Estimated GPM: 5
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS (ALL FLOWING ASSETS)						
Indicator	Indicator Present (Yes/No)		Description		Severity	
Odor	No					
Color	No					
Turbidity	-		-		Clear	
Floatables (Does Not Include Trash)	No				-	
SECTION 3B: INLET PIPE NO. 2 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)						
Sample Date/Time:	2020-11-09 8:05:00					
Parameter	Result		Typical EPA Benchmarks		Equipment	
Temperature (degrees F)	56.2				EXTECH EC500	
pH	6.2				EXTECH EC500	
Specific Conductivity (uS)	1531				EXTECH EC500	
Salinity (ppm S)	747		≥ Reporting Limit		EXTECH EC500	
Chlorine (ppm)	0		≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)	0		≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)	816.4		> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)					To be sent to lab	

SECTION 3C: INLET PIPE NO. 3 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 3	CB-1857	Vitrified Clay	5:00	Circle	8	In Water:	No
						With Sediment:	Partially
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage		None					
Deposits/Stains		None					
Pool Quality		None					
Pipe Algae/Growth		None					
*Do physical indicators suggest an illicit discharge is present (Y/N):		No					
Is Inlet Pipe No.3 Flowing?		No				Estimated GPM:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3C: INLET PIPE NO. 3 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3D: INLET PIPE NO. 4 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 4						In Water:	
						With Sediment:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.4 Flowing?						Estimated GPM:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3D: INLET PIPE NO. 4 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3E: INLET PIPE NO. 5 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 5						In Water:	
						With Sediment:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.5 Flowing?						Estimated GPM:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3E: INLET PIPE NO. 5 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		

Phosphorus (mg/L)				To be sent to lab
SECTION 3F: INLET PIPE NO. 6 ASSET DESCRIPTION				
Location	Upstream Asset ID	Material	Clock Postion (Outlet Pipe at 6:00)	Shape
Inlet Pipe No. 6				
				Diameter/Dimension (in.)
				Submerged
				In Water
				With Sediment
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS				
Indicator	Indicator Present?		Indicator Description	
Asset Damage				
Deposits/Stains				
Pool Quality				
Pipe Algae/Growth				
*Do physical indicators suggest an illicit discharge is present (Y/N):				
Is Inlet Pipe No.6 Flowing?			Estimated GPM:	
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS (ALL FLOWING ASSETS)				
Indicator	Indicator Present (Yes/No)	Description	Severity	
Odor				
Color				
Turbidity				
Floatables (Does Not Include Trash)				
SECTION 3F: INLET PIPE NO. 6 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)				
Sample Date/Time:	Result		Typical EPA Benchmarks	Equipment
Parameter				
Temperature (degrees F)				EXTECH EC500
pH				EXTECH EC500
Specific Conductivity (uS)				EXTECH EC500
Salinity (ppm S)				EXTECH EC500
Chlorine (ppm)			≥ Reporting Limit	Hach Test Strips
Ammonia (mg/L)			≥ 0.5 mg/L	Hach Test Strips
Surfactants (mg/L)			≥ 0.25 mg/L	To be sent to Lab or CHEMets Detergents Kit K-9400
E.coli (cfu/100mL)			> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)			> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)				To be sent to lab
Comments :				
Signature of Inspector :	JL ZD JM DB			

Haverhill IDDE Investigation Form

Drain Manhole

SECTION 1: BACKGROUND DATA				
ASSET ID:	DMH-368	OUTFALL ID:		
Date/Time:	2020-11-09 7:50:00			
Temperature: °F	39	Inspector(s):	James Conte Jesse Middleton Zebulan Day	
Street Name/Structure Location:	WATER ST			
Previous Precipitation Date/End Time:	2020-11-03 8:40:00	Amount (inches):	0.01	
Pictures				

SECTION 2: OUTLET PIPE ASSET DESCRIPTION					
Location	DMH Interior Condition	Material	Shape	Diameter/Dimension (in.)	Submerged
DMH Outlet Pipe	Good	Reinforced Concrete	Circle	12	In Water: No
					With Sediment: No

SECTION 3A: INLET PIPE NO. 1 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Postion (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 1	DMH-367	Reinforced Concrete	11:00	Circle	15	In Water:	No
						With Sediment:	No

SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS					
Indicator	Indicator Present?		Indicator Description		
Asset Damage	None				
Deposits/Stains	Flow Line				
Pool Quality	None				
Pipe Algae/Growth	None				
*Do physical indicators suggest an illicit discharge is present (Y/N):		No			
Is Inlet Pipe No.1 Flowing?	Yes	Moderate	Estimated GPM:	5	

SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor	No		
Color	No		
Turbidity	-	-	Clear
Floatables (Does Not Include Trash)	No		-

SECTION 3A: INLET PIPE NO. 1 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)				
Sample Date/Time:	2020-11-09 7:50:00			
Parameter	Result	Typical EPA Benchmarks	Equipment	
Temperature (degrees F)	55.7		Hanna portable PH and Temp meter	
pH	6.2		Hanna portable PH and Temp meter	
Specific Conductivity (uS)	1550		To be sent to lab or EXTECH EC500	
Salinity (ppm S)	755		EXTECH EC500	
Chlorine (ppm)	0	≥ Reporting Limit	Hach pocket Colorimeter	
Ammonia (mg/L)	0	≥ 0.5 mg/L	To be sent to lab	
Surfactants (mg/L)	0	≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C	
E.coli (cfu/100mL)	517.2	> 235 cfu/100mL	To be sent to lab	
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab	
Phosphorus (mg/L)	0.013		To be sent to lab	

SECTION 3B: INLET PIPE NO. 2 ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Clock Postion (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 2						In Water:
						With Sediment:

SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS				
Indicator	Indicator Present?	Indicator Description		
Asset Damage				
Deposits/Stains				
Pool Quality				
Pipe Algae/Growth				
*Do physical indicators suggest an illicit discharge is present (Y/N):				
Is Inlet Pipe No.2 Flowing?			Estimated GPM:	

SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor			
Color			
Turbidity	-	-	
Floatables (Does Not Include Trash)			-

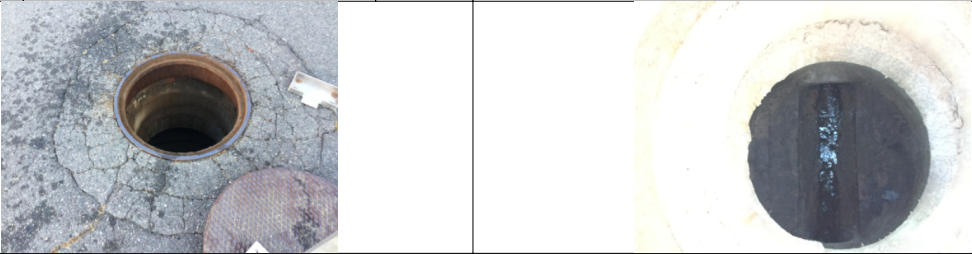
SECTION 3B: INLET PIPE NO. 2 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)				
Sample Date/Time:				
Parameter	Result	Typical EPA Benchmarks	Equipment	
Temperature (degrees F)			EXTECH EC500	
pH			EXTECH EC500	
Specific Conductivity (uS)			EXTECH EC500	
Salinity (ppm S)		≥ Reporting Limit	EXTECH EC500	
Chlorine (ppm)		≥ Reporting Limit	Hach Test Strips	
Ammonia (mg/L)		≥ 0.5 mg/L	Hach Test Strips	
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab	
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab	
Phosphorus (mg/L)			To be sent to lab	

SECTION 3C: INLET PIPE NO. 3 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 3						In Water:	
						With Sediment:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.3 Flowing?						Estimated GPM:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3C: INLET PIPE NO. 3 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment	
Parameter							
Temperature (degrees F)						EXTECH EC500	
pH						EXTECH EC500	
Specific Conductivity (uS)						EXTECH EC500	
Salinity (ppm S)						EXTECH EC500	
Chlorine (ppm)				≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)				≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)						To be sent to lab	
SECTION 3D: INLET PIPE NO. 4 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 4						In Water:	
						With Sediment:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.4 Flowing?						Estimated GPM:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3D: INLET PIPE NO. 4 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment	
Parameter							
Temperature (degrees F)						EXTECH EC500	
pH						EXTECH EC500	
Specific Conductivity (uS)						EXTECH EC500	
Salinity (ppm S)						EXTECH EC500	
Chlorine (ppm)				≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)				≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)						To be sent to lab	
SECTION 3E: INLET PIPE NO. 5 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 5						In Water:	
						With Sediment:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.5 Flowing?						Estimated GPM:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3E: INLET PIPE NO. 5 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment	
Parameter							
Temperature (degrees F)						EXTECH EC500	
pH						EXTECH EC500	
Specific Conductivity (uS)						EXTECH EC500	
Salinity (ppm S)						EXTECH EC500	
Chlorine (ppm)				≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)				≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab	

Phosphorus (mg/L)				To be sent to lab
SECTION 3F: INLET PIPE NO. 6 ASSET DESCRIPTION				
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape
Inlet Pipe No. 6				
				Diameter/Dimension (in.)
				Submerged
				In Water:
				With Sediment:
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS				
Indicator	Indicator Present?		Indicator Description	
Asset Damage				
Deposits/Stains				
Pool Quality				
Pipe Algae/Growth				
*Do physical indicators suggest an illicit discharge is present (Y/N):				
Is Inlet Pipe No.6 Flowing?			Estimated GPM:	
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS (ALL FLOWING ASSETS)				
Indicator	Indicator Present (Yes/No)	Description	Severity	
Odor				
Color				
Turbidity				
Floatables (Does Not Include Trash)				
SECTION 3F: INLET PIPE NO. 6 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)				
Sample Date/Time:	Result		Typical EPA Benchmarks	Equipment
Parameter				
Temperature (degrees F)				EXTECH EC500
pH				EXTECH EC500
Specific Conductivity (uS)				EXTECH EC500
Salinity (ppm S)				EXTECH EC500
Chlorine (ppm)			≥ Reporting Limit	Hach Test Strips
Ammonia (mg/L)			≥ 0.5 mg/L	Hach Test Strips
Surfactants (mg/L)			≥ 0.25 mg/L	To be sent to Lab or CHEMets Detergents Kit K-9400
E.coli (cfu/100mL)			> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)			> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)				To be sent to lab
Comments :				
Signature of Inspector : JL JM ZD DB				

Haverhill IDDE Investigation Form

Drain Manhole

SECTION 1: BACKGROUND DATA						
ASSET ID:	DMH-369			OUTFALL ID:		
Date/Time:	2020-11-09 8:19:00					
Temperature: °F	43			Inspector(s):	James Conte Jesse Middleton Zebulan Day	
Street Name/Structure Location:	SHAPLEIGH AVE					
Previous Precipitation Date/End Time:	2020-11-03 8:40:00			Amount (inches):	0.01	
Pictures						
SECTION 2: OUTLET PIPE ASSET DESCRIPTION						
Location	DMH Interior Condition	Material	Shape	Diameter/Dimension (in.)	Submerged	
DMH Outlet Pipe	Excellent	Reinforced Concrete	Circle	15	In Water:	No
					With Sediment:	No
SECTION 3A: INLET PIPE NO. 1 ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 1	DMH-370	Reinforced Concrete	12:00	Circle	15	In Water: No
						With Sediment: No
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS						
Indicator	Indicator Present?		Indicator Description			
Asset Damage	None					
Deposits/Stains	Flow Line					
Pool Quality	None					
Pipe Algae/Growth	None					
*Do physical indicators suggest an illicit discharge is present (Y/N):			No			
Is Inlet Pipe No.1 Flowing?			Yes		Moderate	Estimated GPM: 5
SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS (ALL FLOWING ASSETS)						
Indicator	Indicator Present (Yes/No)		Description		Severity	
Odor	No					
Color	No					
Turbidity	-		-		Clear	
Floatables (Does Not Include Trash)	No				-	
SECTION 3A: INLET PIPE NO. 1 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)						
Sample Date/Time:	2020-11-09 8:25:00					
Parameter	Result		Typical EPA Benchmarks		Equipment	
Temperature (degrees F)	55				Hanna portable PH and Temp meter	
pH	6.4				Hanna portable PH and Temp meter	
Specific Conductivity (uS)	1605				To be sent to lab or EXTECH EC500	
Salinity (ppm S)	713				EXTECH EC500	
Chlorine (ppm)	0		≥ Reporting Limit		Hach pocket Colorimeter	
Ammonia (mg/L)	0		≥ 0.5 mg/L		To be sent to lab	
Surfactants (mg/L)	0		≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C	
E.coli (cfu/100mL)	613.1		> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)	0.014				To be sent to lab	
SECTION 3B: INLET PIPE NO. 2 ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 2						In Water:
						With Sediment:
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS						
Indicator	Indicator Present?		Indicator Description			
Asset Damage						
Deposits/Stains						
Pool Quality						
Pipe Algae/Growth						
*Do physical indicators suggest an illicit discharge is present (Y/N):			No			
Is Inlet Pipe No.2 Flowing?					Estimated GPM:	
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS (ALL FLOWING ASSETS)						
Indicator	Indicator Present (Yes/No)		Description		Severity	
Odor						
Color						
Turbidity	-		-			
Floatables (Does Not Include Trash)					-	
SECTION 3B: INLET PIPE NO. 2 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)						
Sample Date/Time:						
Parameter	Result		Typical EPA Benchmarks		Equipment	
Temperature (degrees F)					EXTECH EC500	
pH					EXTECH EC500	
Specific Conductivity (uS)					EXTECH EC500	
Salinity (ppm S)			≥ Reporting Limit		EXTECH EC500	
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)					To be sent to lab	

SECTION 3C: INLET PIPE NO. 3 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 3						In Water:	
						With Sediment:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.3 Flowing?						Estimated GPM:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3C: INLET PIPE NO. 3 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3D: INLET PIPE NO. 4 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 4						In Water:	
						With Sediment:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.4 Flowing?						Estimated GPM:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3D: INLET PIPE NO. 4 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		
Phosphorus (mg/L)					To be sent to lab		
SECTION 3E: INLET PIPE NO. 5 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 5						In Water:	
						With Sediment:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.5 Flowing?						Estimated GPM:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3E: INLET PIPE NO. 5 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:							
Parameter	Result		Typical EPA Benchmarks		Equipment		
Temperature (degrees F)					EXTECH EC500		
pH					EXTECH EC500		
Specific Conductivity (uS)					EXTECH EC500		
Salinity (ppm S)					EXTECH EC500		
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips		
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips		
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400		
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab		
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab		

Phosphorus (mg/L)						To be sent to lab
SECTION 3F: INLET PIPE NO. 6 ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Clock Postion (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 6						In Water; With Sediment;
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS						
Indicator		Indicator Present?		Indicator Description		
Asset Damage						
Deposits/Stains						
Pool Quality						
Pipe Algae/Growth						
*Do physical indicators suggest an illicit discharge is present (Y/N):						
Is Inlet Pipe No.6 Flowing?				Estimated GPM:		
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS (ALL FLOWING ASSETS)						
Indicator	Indicator Present (Yes/No)		Description		Severity	
Odor						
Color						
Turbidity						
Floatables (Does Not Include Trash)						
SECTION 3F: INLET PIPE NO. 6 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)						
Sample Date/Time:						
Parameter	Result		Typical EPA Benchmarks		Equipment	
Temperature (degrees F)					EXTECH EC500	
pH					EXTECH EC500	
Specific Conductivity (uS)					EXTECH EC500	
Salinity (ppm S)					EXTECH EC500	
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)					To be sent to lab	
Comments :						
Signature of Inspector :						

Haverhill IDDE Investigation Form

Drain Manhole

SECTION 1: BACKGROUND DATA						
ASSET ID:	DMH-370			OUTFALL ID:		
Date/Time:	2020-11-09 8:35:00					
Temperature: °F	45			Inspector(s):	James Conte Jesse Middleton Zebulan Day	
Street Name/Structure Location:	GROVELAND ST					
Previous Precipitation Date/End Time:	2020-11-03 8:45:00			Amount (inches):	0.01	
Pictures						

SECTION 2: OUTLET PIPE ASSET DESCRIPTION						
Location	DMH Interior Condition	Material	Shape	Diameter/Dimension (in.)	Submerged	
DMH Outlet Pipe	Excellent	Reinforced Concrete	Circle	15	In Water:	No
					With Sediment:	No

SECTION 3A: INLET PIPE NO. 1 ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 1	DMH-366	Reinforced Concrete	9:00	Circle	18	In Water: No
						With Sediment: No

SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS						
Indicator	Indicator Present?		Indicator Description			
Asset Damage	None					
Deposits/Stains	Flow Line					
Pool Quality	None					
Pipe Algae/Growth	None					
*Do physical indicators suggest an illicit discharge is present (Y/N):			No			
Is Inlet Pipe No.1 Flowing?			Yes		Moderate	Estimated GPM: 5

SECTION 3A: INLET PIPE NO. 1 PHYSICAL INDICATORS (ALL FLOWING ASSETS)						
Indicator	Indicator Present (Yes/No)		Description		Severity	
Odor	No					
Color	No					
Turbidity	-		-		Clear	
Floatables (Does Not Include Trash)	No				-	

SECTION 3A: INLET PIPE NO. 1 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)						
Sample Date/Time:	2020-11-09 8:40:00					
Parameter	Result		Typical EPA Benchmarks		Equipment	
Temperature (degrees F)	55.4				Hanna portable PH and Temp meter	
pH	6.5				Hanna portable PH and Temp meter	
Specific Conductivity (uS)	1530				To be sent to lab or EXTECH EC500	
Salinity (ppm S)	745				EXTECH EC500	
Chlorine (ppm)	0		≥ Reporting Limit		Hach pocket Colorimeter	
Ammonia (mg/L)	0		≥ 0.5 mg/L		To be sent to lab	
Surfactants (mg/L)	0		≥ 0.25 mg/L		To be sent to Lab or Hanna Instruments HI96769C	
E.coli (cfu/100mL)	468.8		> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)	0.013				To be sent to lab	

SECTION 3B: INLET PIPE NO. 2 ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged
Inlet Pipe No. 2						In Water:
						With Sediment:

SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS						
Indicator	Indicator Present?		Indicator Description			
Asset Damage						
Deposits/Stains						
Pool Quality						
Pipe Algae/Growth						
*Do physical indicators suggest an illicit discharge is present (Y/N):			No			
Is Inlet Pipe No.2 Flowing?					Estimated GPM:	

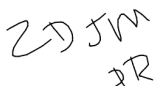
SECTION 3B: INLET PIPE NO. 2 PHYSICAL INDICATORS (ALL FLOWING ASSETS)						
Indicator	Indicator Present (Yes/No)		Description		Severity	
Odor						
Color						
Turbidity	-		-			
Floatables (Does Not Include Trash)					-	

SECTION 3B: INLET PIPE NO. 2 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)						
Sample Date/Time:						
Parameter	Result		Typical EPA Benchmarks		Equipment	
Temperature (degrees F)					EXTECH EC500	
pH					EXTECH EC500	
Specific Conductivity (uS)					EXTECH EC500	
Salinity (ppm S)			≥ Reporting Limit		EXTECH EC500	
Chlorine (ppm)			≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)			≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)			≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)			> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)			> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)					To be sent to lab	

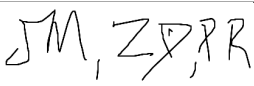
SECTION 3C: INLET PIPE NO. 3 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 3						In Water:	
						With Sediment:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.3 Flowing?						Estimated GPM:	
SECTION 3C: INLET PIPE NO. 3 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3C: INLET PIPE NO. 3 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment	
Parameter							
Temperature (degrees F)						EXTECH EC500	
pH						EXTECH EC500	
Specific Conductivity (uS)						EXTECH EC500	
Salinity (ppm S)						EXTECH EC500	
Chlorine (ppm)				≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)				≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)						To be sent to lab	
SECTION 3D: INLET PIPE NO. 4 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 4						In Water:	
						With Sediment:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.4 Flowing?						Estimated GPM:	
SECTION 3D: INLET PIPE NO. 4 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3D: INLET PIPE NO. 4 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment	
Parameter							
Temperature (degrees F)						EXTECH EC500	
pH						EXTECH EC500	
Specific Conductivity (uS)						EXTECH EC500	
Salinity (ppm S)						EXTECH EC500	
Chlorine (ppm)				≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)				≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab	
Phosphorus (mg/L)						To be sent to lab	
SECTION 3E: INLET PIPE NO. 5 ASSET DESCRIPTION							
Location	Upstream Asset ID	Material	Clock Position (Outlet Pipe at 6:00)	Shape	Diameter/Dimension (in.)	Submerged	
Inlet Pipe No. 5						In Water:	
						With Sediment:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS							
Indicator		Indicator Present?		Indicator Description			
Asset Damage							
Deposits/Stains							
Pool Quality							
Pipe Algae/Growth							
*Do physical indicators suggest an illicit discharge is present (Y/N):							
Is Inlet Pipe No.5 Flowing?						Estimated GPM:	
SECTION 3E: INLET PIPE NO. 5 PHYSICAL INDICATORS (ALL FLOWING ASSETS)							
Indicator	Indicator Present (Yes/No)		Description		Severity		
Odor							
Color							
Turbidity							
Floatables (Does Not Include Trash)							
SECTION 3E: INLET PIPE NO. 5 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)							
Sample Date/Time:		Result		Typical EPA Benchmarks		Equipment	
Parameter							
Temperature (degrees F)						EXTECH EC500	
pH						EXTECH EC500	
Specific Conductivity (uS)						EXTECH EC500	
Salinity (ppm S)						EXTECH EC500	
Chlorine (ppm)				≥ Reporting Limit		Hach Test Strips	
Ammonia (mg/L)				≥ 0.5 mg/L		Hach Test Strips	
Surfactants (mg/L)				≥ 0.25 mg/L		To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)				> 235 cfu/100mL		To be sent to lab	
Enterococcus (cfu/100mL)				> 61 cfu/100mL		To be sent to lab	

Phosphorus (mg/L)				To be sent to lab
SECTION 3F: INLET PIPE NO. 6 ASSET DESCRIPTION				
Location	Upstream Asset ID	Material	Clock Postion (Outlet Pipe at 6:00)	Shape
Inlet Pipe No. 6				
				Diameter/Dimension (in.)
				Submerged
				In Water:
				With Sediment:
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS				
Indicator		Indicator Present?		Indicator Description
Asset Damage				
Deposits/Stains				
Pool Quality				
Pipe Algae/Growth				
*Do physical indicators suggest an illicit discharge is present (Y/N):				
Is Inlet Pipe No.6 Flowing?				Estimated GPM:
SECTION 3F: INLET PIPE NO. 6 PHYSICAL INDICATORS (ALL FLOWING ASSETS)				
Indicator	Indicator Present (Yes/No)	Description		Severity
Odor				
Color				
Turbidity				
Floatables (Does Not Include Trash)				
SECTION 3F: INLET PIPE NO. 6 SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)				
Sample Date/Time:				
Parameter	Result	Typical EPA Benchmarks	Equipment	
Temperature (degrees F)			EXTECH EC500	
pH			EXTECH EC500	
Specific Conductivity (uS)			EXTECH EC500	
Salinity (ppm S)			EXTECH EC500	
Chlorine (ppm)		≥ Reporting Limit	Hach Test Strips	
Ammonia (mg/L)		≥ 0.5 mg/L	Hach Test Strips	
Surfactants (mg/L)		≥ 0.25 mg/L	To be sent to Lab or CHEMets Detergents Kit K-9400	
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab	
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab	
Phosphorus (mg/L)			To be sent to lab	
Comments :				
Signature of Inspector : JL JM ZO DB				

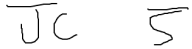
Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA											
ASSET ID:		DPI0965				OUTFALL ID:		DPI0965			
Date/Time:		2020-11-11 8:46									
Temperature: °F		62				Inspector(s):		Jesse Middleton Zebulan Day Pedro Rosario			
Street Name/Structure Location:		NORTH AVE									
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01			
Pictures											
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION											
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe				Reinforced Concrete		Circle		18		In Water:	
										No	
										With Sediment:	
										Fully	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS											
Indicator				Indicator Present?		Indicator Description					
Asset Damage				None							
Deposits/Stains				None							
Pool Quality				None							
Pipe Algae/Growth				None							
*Do physical indicators suggest an illicit discharge is present (Y/N):				No							
Is Inlet Pipe No.1 Flowing?				No							
						Estimated GPM:					
Comments :		Dredging needed									
Signature of Inspector :											

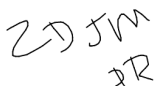
Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA											
ASSET ID:		FP7114				OUTFALL ID:		FP7114			
Date/Time:		2020-11-11 8:01									
Temperature: °F		60				Inspector(s):		Jesse Middleton Zebulan Day Pedro Rosario			
Street Name/Structure Location:		Cross Country									
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01			
Pictures											
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION											
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe				Reinforced Concrete		Circle		12		In Water:	
										With Sediment:	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS											
Indicator				Indicator Present?		Indicator Description					
Asset Damage				None							
Deposits/Stains				None							
Pool Quality				None							
Pipe Algae/Growth				None							
*Do physical indicators suggest an illicit discharge is present (Y/N):				No							
Is Inlet Pipe No.1 Flowing?				No						Estimated GPM:	
Comments :		Need maintenance									
Signature of Inspector :											

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA											
ASSET ID:		KL26312				OUTFALL ID:		KL26312			
Date/Time:		2020-11-11 10:09									
Temperature: °F		70				Inspector(s):		James Conte Samuel Martinez			
Street Name/Structure Location:		KENOZA ST									
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01			
Pictures											
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION											
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe		CB-8015		Poly Vinyl Chloride		Circle		8		In Water:	
										No	
										With Sediment:	
										No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS											
Indicator				Indicator Present?		Indicator Description					
Asset Damage				None							
Deposits/Stains				None							
Pool Quality				None							
Pipe Algae/Growth				None							
*Do physical indicators suggest an illicit discharge is present (Y/N):				No							
Is Inlet Pipe No.1 Flowing?				No						Estimated GPM:	
SECTION 4: COMMENTS AND SIGNATURE											
Comments :											
Signature of Inspector :											

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA											
ASSET ID:		DPI0965				OUTFALL ID:		DPI0965			
Date/Time:		2020-11-11 8:46									
Temperature: °F		62				Inspector(s):		Jesse Middleton Zebulan Day Pedro Rosario			
Street Name/Structure Location:		NORTH AVE									
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01			
Pictures											
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION											
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe				Reinforced Concrete		Circle		18		In Water:	
										No	
										With Sediment:	
										Fully	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS											
Indicator				Indicator Present?		Indicator Description					
Asset Damage				None							
Deposits/Stains				None							
Pool Quality				None							
Pipe Algae/Growth				None							
*Do physical indicators suggest an illicit discharge is present (Y/N):				No							
Is Inlet Pipe No.1 Flowing?				No						Estimated GPM:	
SECTION 4: COMMENTS AND SIGNATURE											
Comments :		Dredging needed									
Signature of Inspector :											

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA										
ASSET ID:		LR1120				OUTFALL ID:		LR1120		
Date/Time:		2020-11-11 8:54								
Temperature: °F		60				Inspector(s):		James Conte Samuel Martinez		
Street Name/Structure Location:		Cross Country								
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01		
Pictures										
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION										
Location	Upstream Asset ID	Material		Shape	Diameter/Dimension (in.)	Submerged				
Outfall Pipe	CB-3200	Reinforced Concrete		Circle	12	In Water:		No		
						With Sediment:		No		
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS										
Indicator		Indicator Present?		Indicator Description						
Asset Damage		None								
Deposits/Stains		Flow Line								
Pool Quality		None								
Pipe Algae/Growth		None								
*Do physical indicators suggest an illicit discharge is present (Y/N):		No								
Is Inlet Pipe No.1 Flowing?		No						Estimated GPM:		
Comments :										
Signature of Inspector :		J C S M								

Haverhill IDDE Inspection Form
Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID:		LR1243				OUTFALL ID:		LR1243	
Date/Time:		2020-11-11 8:26							
Temperature: °F		60				Inspector(s):		James Conte Samuel Martinez	
Street Name/Structure Location:		Cross Country							
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01	
Pictures									
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location	Upstream Asset ID	Material		Shape	Diameter/Dimension (in.)	Submerged			
Outfall Pipe	CB-4234	ACOMP		Circle	18	In Water:	No		
						With Sediment:	No		
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator		Indicator Present?		Indicator Description					
Asset Damage		None							
Deposits/Stains		Flow Line							
Pool Quality		None							
Pipe Algae/Growth		None							
*Do physical indicators suggest an illicit discharge is present (Y/N):		No							
Is Inlet Pipe No.1 Flowing?		No						Estimated GPM:	
Comments :	Outfall for outlet control structure								
Signature of Inspector :									

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA													
ASSET ID:		LR1244			OUTFALL ID:		LR1244						
Date/Time:		2020-11-11 8:31											
Temperature: °F		60			Inspector(s):		James Conte Samuel Martinez						
Street Name/Structure Location:		Cross Country											
Previous Precipitation Date/End Time:		2020-11-03 8:40:00			Amount (inches):		0.01						
Pictures													
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION													
Location	Upstream Asset ID	Material			Shape	Diameter/Dimension (in.)		Submerged					
Outfall Pipe	DMH-5618	Reinforced Concrete			Circle	24		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #d3d3d3;">In Water:</td> <td style="background-color: #d3d3d3;">Partially</td> </tr> <tr> <td style="background-color: #d3d3d3;">With Sediment:</td> <td style="background-color: #d3d3d3;">No</td> </tr> </table>		In Water:	Partially	With Sediment:	No
In Water:	Partially												
With Sediment:	No												
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS													
Indicator		Indicator Present?			Indicator Description								
Asset Damage		None											
Deposits/Stains		None											
Pool Quality		None											
Pipe Algae/Growth		None											
*Do physical indicators suggest an illicit discharge is present (Y/N):		No											
Is Inlet Pipe No.1 Flowing?		No					Estimated GPM:						
Comments :													
Signature of Inspector :													

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA											
ASSET ID:		LR1245				OUTFALL ID:		LR1245			
Date/Time:		2020-11-11 8:06									
Temperature: °F		60				Inspector(s):		James Conte Samuel Martinez			
Street Name/Structure Location:		Cross Country									
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01			
Pictures											
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION											
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe		DMH-5628		Reinforced Concrete		Circle		24		In Water:	
										Fully	
										With Sediment:	
										No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS											
Indicator				Indicator Present?		Indicator Description					
Asset Damage				None							
Deposits/Stains				None							
Pool Quality				None							
Pipe Algae/Growth				None							
*Do physical indicators suggest an illicit discharge is present (Y/N):				No							
Is Inlet Pipe No.1 Flowing?				No							
						Estimated GPM:					
Comments :											
Signature of Inspector :											

Haverhill IDDE Inspection Form
Outfall

SECTION 1: BACKGROUND DATA											
ASSET ID:		LR1246				OUTFALL ID:		LR1246			
Date/Time:		2020-11-11 8:15									
Temperature: °F		60				Inspector(s):		James Conte Samuel Marinez			
Street Name/Structure Location:		Cross Country									
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01			
Pictures											
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION											
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe		CB-4235		Reinforced Concrete		Circle		18		In Water: No With Sediment: No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS											
Indicator				Indicator Present?		Indicator Description					
Asset Damage				None							
Deposits/Stains				None							
Pool Quality				None							
Pipe Algae/Growth				None							
*Do physical indicators suggest an illicit discharge is present (Y/N):				No							
Is Inlet Pipe No.1 Flowing?				No		Estimated GPM:					
Comments :											
Signature of Inspector :		JC SM									

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA										
ASSET ID:		LR1247				OUTFALL ID:		LR1247		
Date/Time:		2020-11-11 7:58								
Temperature: °F		57				Inspector(s):		James Conte Jesse Middleton		
Street Name/Structure Location:		Cross Country								
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01		
Pictures										
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION										
Location	Upstream Asset ID	Material		Shape		Diameter/Dimension (in.)		Submerged		
Outfall Pipe	CB-4236	Reinforced Concrete		Circle		18		In Water:	No	
								With Sediment:	No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS										
Indicator		Indicator Present?		Indicator Description						
Asset Damage		None								
Deposits/Stains		Flow Line								
Pool Quality		None								
Pipe Algae/Growth		None								
*Do physical indicators suggest an illicit discharge is present (Y/N):										
Is Inlet Pipe No.1 Flowing?				No				Estimated GPM:		
Comments :										
Signature of Inspector :		JLC SM								

Haverhill IDDE Inspection Form
Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID:		LR1248				OUTFALL ID:		LR1248	
Date/Time:		2020-11-11 7:45							
Temperature: °F		57				Inspector(s):		James Conte Samuel Martinez	
Street Name/Structure Location:		Cross Country							
Previous Precipitation Date/End Time:		2020-11-11 8:40:00				Amount (inches):		0.01	
Pictures									
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location	Upstream Asset ID		Material		Shape	Diameter/Dimension (in.)	Submerged		
Outfall Pipe	DMH-5627		Reinforced Concrete		Circle	12	In Water:	Partially	
							With Sediment:	No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator			Indicator Present?		Indicator Description				
Asset Damage			None						
Deposits/Stains			None						
Pool Quality			None						
Pipe Algae/Growth			None						
*Do physical indicators suggest an illicit discharge is present (Y/N):			No						
Is Inlet Pipe No.1 Flowing?			No		Estimated GPM:				
Comments :	Requires maintenance brush removal								
Signature of Inspector :	JL JM								

Haverhill IDDE Inspection Form
Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID:		LR1249				OUTFALL ID:		LR1249	
Date/Time:		2020-11-11 7:38							
Temperature: °F		57				Inspector(s):		James Conte Samuel Martinez	
Street Name/Structure Location:		Cross Country							
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01	
Pictures									
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location	Upstream Asset ID		Material		Shape	Diameter/Dimension (in.)	Submerged		
Outfall Pipe	CB-4237		Reinforced Concrete		Circle	15	In Water:	No	
							With Sediment:	No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator			Indicator Present?		Indicator Description				
Asset Damage			None						
Deposits/Stains			Flow Line						
Pool Quality			None						
Pipe Algae/Growth			None						
*Do physical indicators suggest an illicit discharge is present (Y/N):			No						
Is Inlet Pipe No.1 Flowing?			No		Estimated GPM:				
Comments :									
Signature of Inspector :									

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID:		LR1250			OUTFALL ID:		LR1250		
Date/Time:		2020-11-11 7:32							
Temperature: °F		57			Inspector(s):		James Conte Samuel Martinez		
Street Name/Structure Location:		Cross Country							
Previous Precipitation Date/End Time:		2020-11-03 8:40:00			Amount (inches):		0.01		
Pictures									
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location	Upstream Asset ID	Material		Shape	Diameter/Dimension (in.)	Submerged			
Outfall Pipe	DMH-5626	Reinforced Concrete		Circle	15	In Water:		No	
						With Sediment:		No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator		Indicator Present?		Indicator Description					
Asset Damage		None							
Deposits/Stains		None							
Pool Quality		None							
Pipe Algae/Growth		None							
*Do physical indicators suggest an illicit discharge is present (Y/N):		No							
Is Inlet Pipe No.1 Flowing?		No				Estimated GPM:			
Comments :									
Signature of Inspector :									

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA											
ASSET ID:		LR1251				OUTFALL ID:		LR1251			
Date/Time:		2020-11-11 8:37									
Temperature: °F		60				Inspector(s):		James Conte Samuel Martinez			
Street Name/Structure Location:		Cross Country									
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01			
Pictures											
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION											
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe		DMH-5621		Reinforced Concrete		Circle		18		In Water:	
										With Sediment:	
										No	
										No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS											
Indicator				Indicator Present?		Indicator Description					
Asset Damage				None							
Deposits/Stains				None							
Pool Quality				None							
Pipe Algae/Growth				None							
*Do physical indicators suggest an illicit discharge is present (Y/N):				No							
Is Inlet Pipe No.1 Flowing?				No							
						Estimated GPM:					
Comments :		Requires maintenance full submerged in sediment									
Signature of Inspector :		JC SM									

Haverhill IDDE Investigation Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID:		MR1109			OUTFALL ID:		MR1109		
Date/Time:		2020-11-09 7:33:00							
Temperature: °F		40			Inspector(s):		James Conte Jesse Middleton Zebulan Day		
Street Name/Structure Location:		Cross Country							
Previous Precipitation Date/End Time:		2020-11-03 8:40:00			Amount (inches):		0.01		
Pictures									

SECTION 2: OUTFALL PIPE ASSET DESCRIPTION						
Location	Upstream Asset ID	Material	Shape	Diameter/Dimension (in.)	Submerged	
Outfall Pipe	Cb-3166	Cement Concrete	Circle	8	In Water:	No
					With Sediment:	No

SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS				
Indicator	Indicator Present?	Indicator Description		
Asset Damage	None			
Deposits/Stains	None			
Pool Quality	None			
Pipe Algae/Growth	None			
*Do physical indicators suggest an illicit discharge is present (Y/N):		No		
Is Inlet Pipe No.1 Flowing?		Yes	Trickle	Estimated GPM: 3

SECTION 4: OUTFALL PIPE PHYSICAL INDICATORS (ALL FLOWING ASSETS)			
Indicator	Indicator Present (Yes/No)	Description	Severity
Odor	No		
Color	No		
Turbidity	-	-	Clear
Floatables (Does Not Include Trash)	No		-

SECTION 5: OUTFALL PIPE SAMPLING/TESTING RESULTS (ALL FLOWING ASSETS)			
Sample Date/Time:	2020-11-09 7:30:00		
Parameter	Result	Typical EPA Benchmarks	Equipment
Temperature (degrees F)	55.6		Hanna portable PH and Temp meter
pH	6.2		Hanna portable PH and Temp meter
Specific Conductivity (uS)	2.25		To be sent to lab or EXTECH EC500
Salinity (ppm S)	813		EXTECH EC500
Chlorine (ppm)	0	≥ Reporting Limit	Hach pocket Colorimeter
Ammonia (mg/L)	0	≥ 0.5 mg/L	To be sent to lab
Surfactants (mg/L)	0	≥ 0.25 mg/L	To be sent to Lab or Hanna Instruments HI96769C
E.coli (cfu/100mL)		> 235 cfu/100mL	To be sent to lab
Enterococcus (cfu/100mL)		> 61 cfu/100mL	To be sent to lab
Phosphorus (mg/L)	.036		To be sent to lab

Comments :	
Signature of Inspector :	JL JM ZD DB

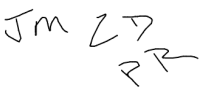
Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA										
ASSET ID:		SB1117			OUTFALL ID:		SB1117			
Date/Time:		2020-11-11 9:11								
Temperature: °F		65			Inspector(s):		James Conte Samuel Marinez			
Street Name/Structure Location:		Cross Country								
Previous Precipitation Date/End Time:		2020-11-03 8:40:00			Amount (inches):		0.01			
Pictures										
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION										
Location	Upstream Asset ID	Material		Shape	Diameter/Dimension (in.)	Submerged				
Outfall Pipe	CB-3195 and CB-3196	Reinforced Concrete		Circle	12	In Water:		No		
						With Sediment:		Partially		
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS										
Indicator		Indicator Present?		Indicator Description						
Asset Damage		None								
Deposits/Stains		None								
Pool Quality		None								
Pipe Algae/Growth		None								
*Do physical indicators suggest an illicit discharge is present (Y/N):		No								
Is Inlet Pipe No.1 Flowing?		No						Estimated GPM:		
Comments :										
Signature of Inspector :										

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA										
ASSET ID:		SB11512				OUTFALL ID:		SB11512		
Date/Time:		2020-11-11 9:35								
Temperature: °F		63				Inspector(s):		Jesse Middleton Zebulan Day Pedro Rosario		
Street Name/Structure Location:		NEWTON RD								
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01		
Pictures										
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION										
Location	Upstream Asset ID	Material		Shape	Diameter/Dimension (in.)	Submerged				
Outfall Pipe		Reinforced Concrete		Circle	15	In Water:	No			
						With Sediment:	No			
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS										
Indicator		Indicator Present?		Indicator Description						
Asset Damage		None								
Deposits/Stains		None								
Pool Quality		None								
Pipe Algae/Growth		None								
*Do physical indicators suggest an illicit discharge is present (Y/N):		No								
Is Inlet Pipe No.1 Flowing?		No						Estimated GPM:		
Comments :	Needs dredge									
Signature of Inspector :										

Haverhill IDDE Inspection Form
Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID:		SB11514				OUTFALL ID:		SB11514	
Date/Time:		2020-11-11 9:32							
Temperature: °F		63				Inspector(s):		Jesse Middleton Zebulan Day Pedro Rosario	
Street Name/Structure Location:		NEWTON RD							
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01	
Pictures									
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location	Upstream Asset ID	Material	Shape	Diameter/Dimension (in.)	Submerged				
Outfall Pipe		Reinforced Concrete	Circle	15	In Water:	No	With Sediment:	Fully	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator		Indicator Present?		Indicator Description					
Asset Damage		None							
Deposits/Stains		None							
Pool Quality		None							
Pipe Algae/Growth		None							
*Do physical indicators suggest an illicit discharge is present (Y/N):		No							
Is Inlet Pipe No.1 Flowing?		No		Estimated GPM:					
Comments :	Needs dredge								
Signature of Inspector :									

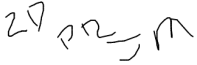
Haverhill IDDE Inspection Form
Outfall

SECTION 1: BACKGROUND DATA										
ASSET ID:		TS0984				OUTFALL ID:		TS0984		
Date/Time:		2020-11-11 10:15								
Temperature: °F		67				Inspector(s):		Jesse Middleton Zebulan Day Pedro Rosario		
Street Name/Structure Location:		NEWTON RD								
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01		
Pictures										
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION										
Location	Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe			Reinforced Concrete		Circle		10		In Water:	No
									With Sediment:	Fully
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS										
Indicator			Indicator Present?		Indicator Description					
Asset Damage			None							
Deposits/Stains			None							
Pool Quality			None							
Pipe Algae/Growth			None							
*Do physical indicators suggest an illicit discharge is present (Y/N):			No							
Is Inlet Pipe No.1 Flowing?			No		Estimated GPM:					
Comments :										
Signature of Inspector :		27/11/20								

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA													
ASSET ID:		TS0985				OUTFALL ID:		TS0985					
Date/Time:		2020-11-11 10:21											
Temperature: °F		67				Inspector(s):		Jesse Middleton Zebulan Day Pedro Rosario					
Street Name/Structure Location:		NEWTON RD											
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01					
Pictures													
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION													
Location	Upstream Asset ID	Material		Shape		Diameter/Dimension (in.)		Submerged					
Outfall Pipe		Reinforced Concrete		Circle		10		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>In Water:</td> <td>No</td> </tr> <tr> <td>With Sediment:</td> <td>No</td> </tr> </table>		In Water:	No	With Sediment:	No
In Water:	No												
With Sediment:	No												
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS													
Indicator		Indicator Present?		Indicator Description									
Asset Damage		None											
Deposits/Stains		None											
Pool Quality		None											
Pipe Algae/Growth		Green											
*Do physical indicators suggest an illicit discharge is present (Y/N):		No											
Is Inlet Pipe No.1 Flowing?		No				Estimated GPM:							
Comments :													
Signature of Inspector :		ZD PR JM											

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA										
ASSET ID:		TS0988				OUTFALL ID:		TS0988		
Date/Time:		2020-11-11 10:05								
Temperature: °F		66				Inspector(s):		Jesse Middleton Zebulan Day Pedro Rosario		
Street Name/Structure Location:		NEWTON RD								
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01		
Pictures										
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION										
Location	Upstream Asset ID	Material		Shape		Diameter/Dimension (in.)		Submerged		
Outfall Pipe		Reinforced Concrete		Circle		10		In Water:	Partially	
								With Sediment:	No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS										
Indicator		Indicator Present?		Indicator Description						
Asset Damage		None								
Deposits/Stains		None								
Pool Quality		None								
Pipe Algae/Growth		None								
*Do physical indicators suggest an illicit discharge is present (Y/N):		No								
Is Inlet Pipe No.1 Flowing?		No						Estimated GPM:		
Comments :										
Signature of Inspector :										

Haverhill IDDE Inspection Form
Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID:		TS0989				OUTFALL ID:		TS0989	
Date/Time:		2020-11-11 9:56							
Temperature: °F		66				Inspector(s):		Jesse Middleton Zebulan Day Pedro Rosario	
Street Name/Structure Location:		Cross Country							
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01	
Pictures									
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)	
Outfall Pipe				Reinforced Concrete		Circle		24	
								Submerged	
								In Water: Fully	
								With Sediment: No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator		Indicator Present?		Indicator Description					
Asset Damage		None							
Deposits/Stains		None							
Pool Quality		None							
Pipe Algae/Growth		None							
*Do physical indicators suggest an illicit discharge is present (Y/N):		No							
Is Inlet Pipe No.1 Flowing?		No		Estimated GPM:					
Comments :									
Signature of Inspector :									

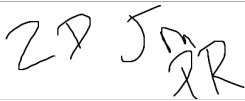
Haverhill IDDE Inspection Form
Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID:		TS33513			OUTFALL ID:		TS33513		
Date/Time:		2020-11-11 9:50							
Temperature: °F		64			Inspector(s):		Jesse Middleton Zebulan Day Pedro Rosario		
Street Name/Structure Location:		CROSS COUNTRY							
Previous Precipitation Date/End Time:		2020-11-03 8:40:00			Amount (inches):		0.01		
Pictures									
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)	
Outfall Pipe				Reinforced Concrete		Circle		24	
								Submerged	
								In Water: Partially	
								With Sediment: No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator		Indicator Present?		Indicator Description					
Asset Damage		None							
Deposits/Stains		None							
Pool Quality		None							
Pipe Algae/Growth		None							
*Do physical indicators suggest an illicit discharge is present (Y/N):		No							
Is Inlet Pipe No.1 Flowing?		No		Estimated GPM:					
Comments :									
Signature of Inspector :		2D PR UM							

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA											
ASSET ID:		TS33514				OUTFALL ID:		TS33514			
Date/Time:		2020-11-11 9:42									
Temperature: °F		64				Inspector(s):		Jesse Middleton Zebulan Day Pedro Rosario			
Street Name/Structure Location:											
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01			
Pictures											
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION											
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe				Reinforced Concrete		Circle		56		In Water:	
										Fully	
										With Sediment:	
										No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS											
Indicator				Indicator Present?		Indicator Description					
Asset Damage				Chipping							
Deposits/Stains				None							
Pool Quality				Other		Murky					
Pipe Algae/Growth				None							
*Do physical indicators suggest an illicit discharge is present (Y/N):				No							
Is Inlet Pipe No.1 Flowing?				No							
						Estimated GPM:					
Comments :											
Signature of Inspector :											

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA											
ASSET ID:		UNK0626				OUTFALL ID:		UNK0626			
Date/Time:		2020-11-11 8:38									
Temperature: °F		65				Inspector(s):		Jesse Middleton Zebulan Day Pedro Rosario			
Street Name/Structure Location:		HALEY RD									
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01			
Pictures											
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION											
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe				Reinforced Concrete		Circle		15		In Water:	
										With Sediment:	
										No	
										Partially	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS											
Indicator				Indicator Present?				Indicator Description			
Asset Damage				None							
Deposits/Stains				None							
Pool Quality				None							
Pipe Algae/Growth				None							
*Do physical indicators suggest an illicit discharge is present (Y/N):				No							
Is Inlet Pipe No.1 Flowing?				No							
								Estimated GPM:			
Comments :		Dredging needed									
Signature of Inspector :											

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA											
ASSET ID:		UNK1040				OUTFALL ID:		UNK1040			
Date/Time:		2020-11-11 8:56									
Temperature: °F		62				Inspector(s):		Jesse Middleton Zebulan Day Pedro Rosario			
Street Name/Structure Location:		Cross Country									
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01			
Pictures											
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION											
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)		Submerged	
Outfall Pipe				Reinforced Concrete		Circle		42		In Water:	
										With Sediment:	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS											
Indicator				Indicator Present?		Indicator Description					
Asset Damage				None							
Deposits/Stains				None							
Pool Quality				None							
Pipe Algae/Growth				None							
*Do physical indicators suggest an illicit discharge is present (Y/N):				No							
Is Inlet Pipe No.1 Flowing?				No							
						Estimated GPM:					
Comments :											
Signature of Inspector :											

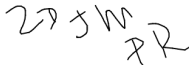
Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID:		UNK1188				OUTFALL ID:		UNK1188	
Date/Time:		2020-11-11 9:45							
Temperature: °F		65				Inspector(s):		James Conte Samuel Martinez	
Street Name/Structure Location:		Cross Country							
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01	
Pictures	 								
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location	Upstream Asset ID	Material		Shape	Diameter/Dimension (in.)	Submerged			
Outfall Pipe	CB-6070	Reinforced Concrete		Circle	30	In Water:		Partially	
						With Sediment:		No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator		Indicator Present?		Indicator Description					
Asset Damage		None							
Deposits/Stains		None							
Pool Quality		None							
Pipe Algae/Growth		None							
*Do physical indicators suggest an illicit discharge is present (Y/N):		No							
Is Inlet Pipe No.1 Flowing?		No						Estimated GPM:	
Comments :									
Signature of Inspector :		J C S M							

Haverhill IDDE Inspection Form Outfall

SECTION 1: BACKGROUND DATA									
ASSET ID:		UNK1748				OUTFALL ID:		UNK1748	
Date/Time:		2020-11-11 7:43							
Temperature: °F		63				Inspector(s):		Jesse Middleton Zebulan Day Pedro Rosario	
Street Name/Structure Location:		Cross Country							
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01	
Pictures									
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location		Upstream Asset ID		Material		Shape		Diameter/Dimension (in.)	
Outfall Pipe				Clay		Circle			
								Submerged	
								In Water:	
								No	
								With Sediment:	
								No	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator			Indicator Present?			Indicator Description			
Asset Damage			None						
Deposits/Stains			None						
Pool Quality			None						
Pipe Algae/Growth			None						
*Do physical indicators suggest an illicit discharge is present (Y/N):			No						
Is Inlet Pipe No.1 Flowing?			No			Estimated GPM:			
Comments :		Outfall maintenance required							
Signature of Inspector :									

Haverhill IDDE Inspection Form
Outfall

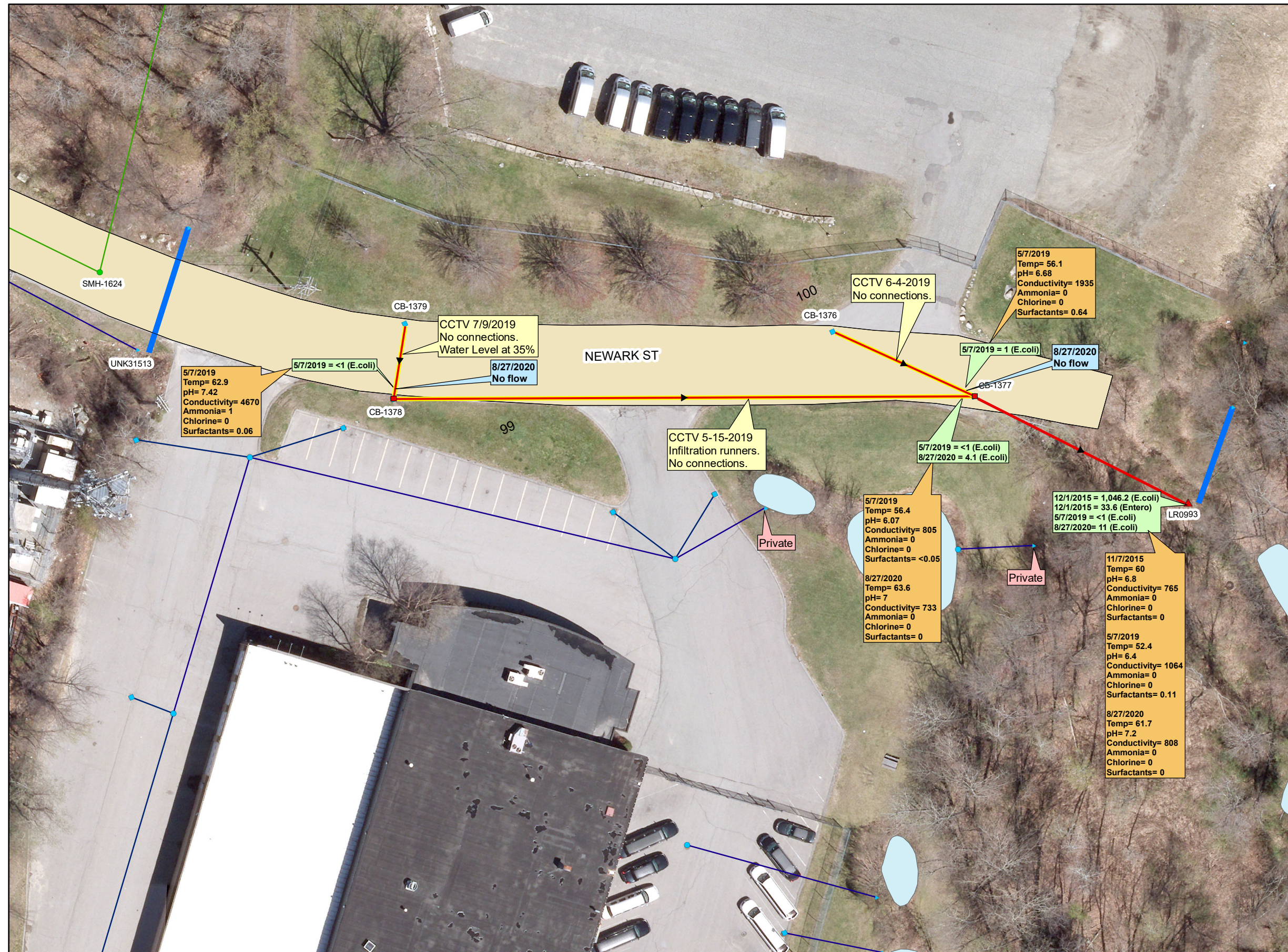
SECTION 1: BACKGROUND DATA									
ASSET ID:		UNK1749				OUTFALL ID:		UNK1749	
Date/Time:		2020-11-11 9:08							
Temperature: °F		63				Inspector(s):		Jesse Middleton Zebulan Day Pedro Rosario	
Street Name/Structure Location:		Cross Country							
Previous Precipitation Date/End Time:		2020-11-03 8:40:00				Amount (inches):		0.01	
Pictures									
SECTION 2: OUTFALL PIPE ASSET DESCRIPTION									
Location	Upstream Asset ID		Material		Shape	Diameter/Dimension (in.)	Submerged		
Outfall Pipe			Reinforced Concrete		Circle	24	In Water:	No	
							With Sediment:	Partially	
SECTION 3: OUTFALL PIPE PHYSICAL INDICATORS									
Indicator			Indicator Present?		Indicator Description				
Asset Damage			None						
Deposits/Stains			None						
Pool Quality			None						
Pipe Algae/Growth			None						
*Do physical indicators suggest an illicit discharge is present (Y/N):			No						
Is Inlet Pipe No.1 Flowing?			No		Estimated GPM:				
Comments :	Dredging needed								
Signature of Inspector :									

APPENDIX B

IDDE PROGRAM SUPPORTING DOCUMENTS

Outfall LR0993

Summary of IDDE Investigations



Assets

- Culvert
- Sewer
- Stormwater
- Catchment Pipes
- Sewer CCTV
- Catchment CCTV
- Manhole Sampled
- Catch Basin Sampled
- Outfall Sampled

CCTV Comments

Miscellaneous Comments

Inspection Results

Bacteria Results

Other Sampling Parameter Results

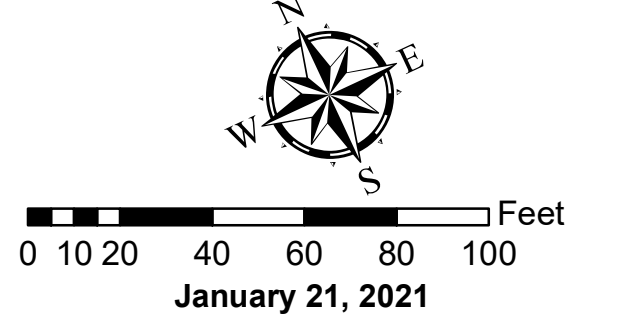
- City Owned Road
- Private Owned Road
- State Owned Road

Dry weather flow samples collected in each DMH from the mainline pipe entering the DMH. Branch flow collected as noted on plans.

Each inspection result is noted with a date, flow/no flow (at time of inspection), sample parameter and concentration.

Pipes that are not highlighted in red do NOT connect to this drainage system

DMH and SMH invert elevations in NGVD 1929 Datum



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Outfall LR1103

Summary of IDDE Investigations



Assets

- Culvert
- Sewer
- Stormwater
- Catchment Pipes
- Sewer CCTV
- Catchment CCTV
- Manhole Sampled
- Catch Basin Sampled
- Outfall Sampled

CCTV Comments

Miscellaneous Comments

Inspection Results

Bacteria Results

Other Sampling Parameter Results

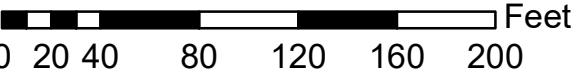
- City Owned Road
- Private Owned Road
- State Owned Road

Dry weather flow samples collected in each DMH from the mainline pipe entering the DMH. Branch flow collected as noted on plans.

Each inspection result is noted with a date, flow/no flow (at time of inspection), sample parameter and concentration.

Pipes that are not highlighted in red do NOT connect to this drainage system

DMH and SMH invert elevations in NGVD 1929 Datum

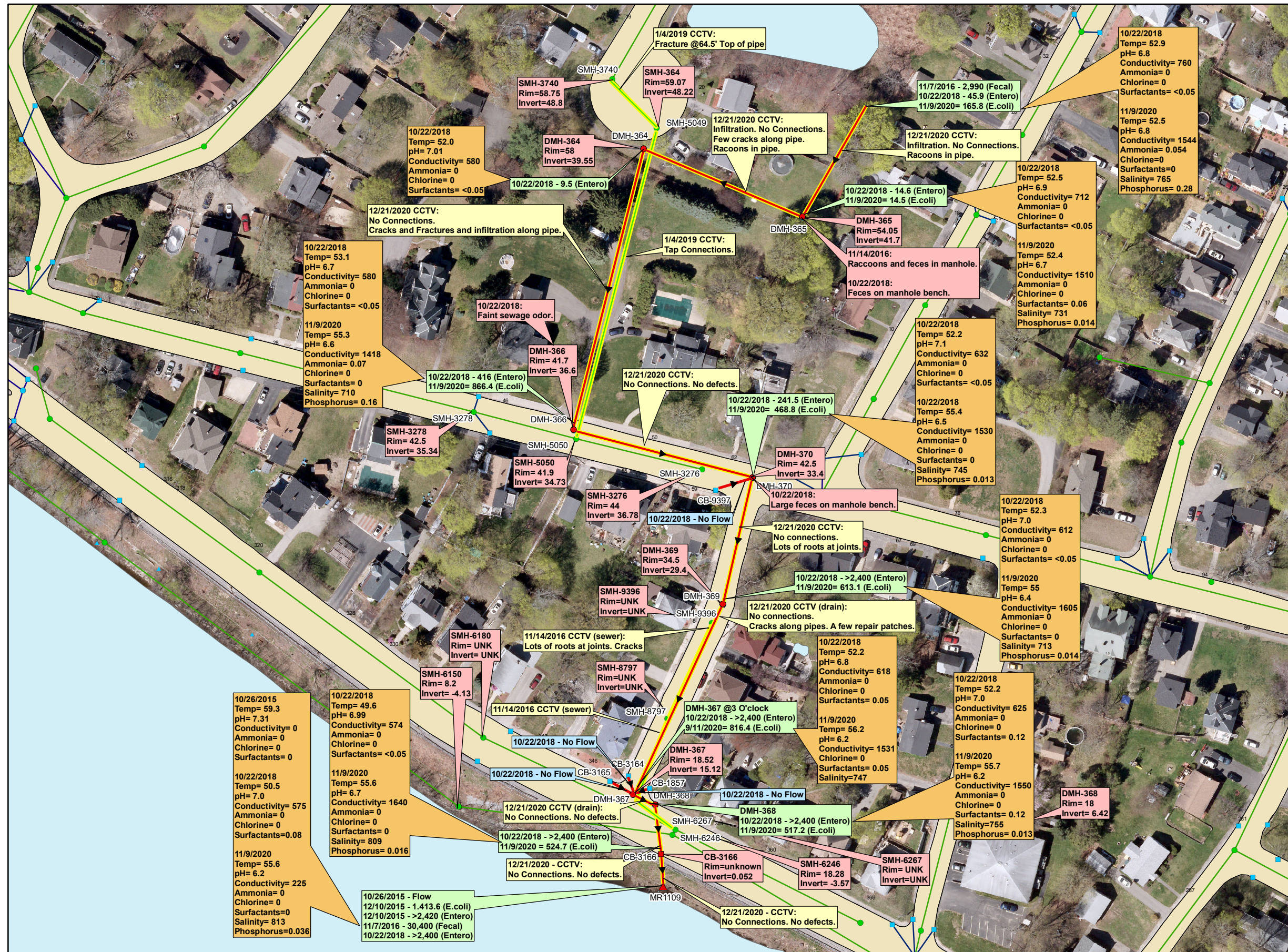


January 14, 2021

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Outfall MR1109

Summary of IDDE Investigations



Assets

- Sewer
- Stormwater
- Catchment Pipes
- Sewer CCTV
- Catchment CCTV
- Manhole Sampled
- Catch Basin Sampled
- Outfall Sampled

CCTV Comments

Inspection Results

Other Sampling Parameter Results

- City Owned Road
- Private Owned Road
- State Owned Road

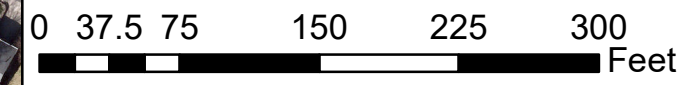
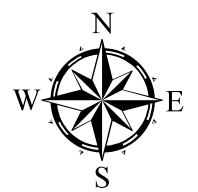
Dry weather flow samples collected in each DMH from the mainline pipe entering the DMH. Branch flow collected as noted on plans.

Each inspection result is noted with a date, flow/no flow (at time of inspection), sample parameter and concentration.

Pipes that are not highlighted in red do NOT connect to this drainage system

DMH and SMH invert elevations in NGVD 1929 Datum

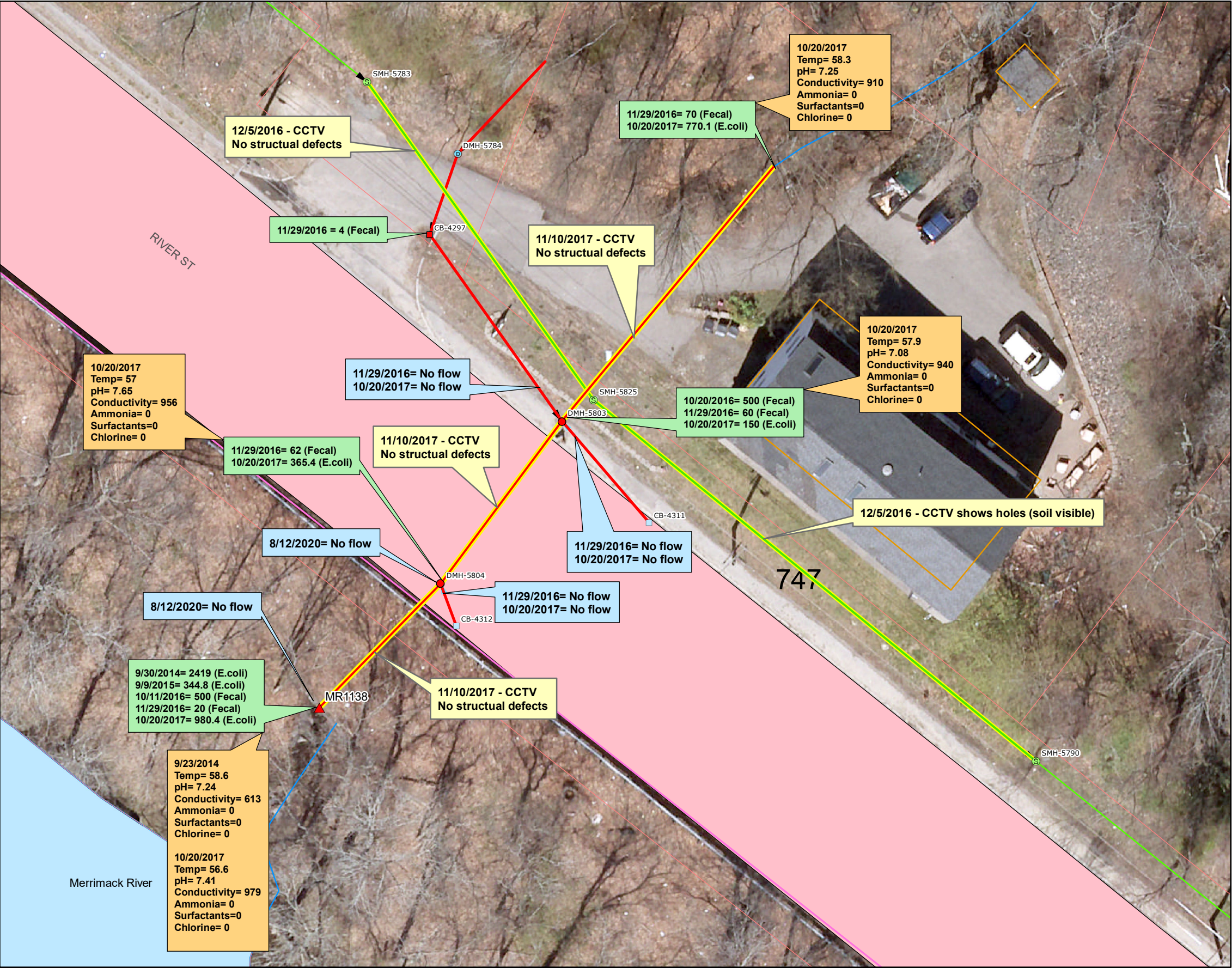
January 29, 2021



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Outfall MR1138

Summary of IDDE Investigations



Assets

- Catchment
- Outfall Sampled
- Manhole Sampled
- Catch Basin Sampled
- Catchment CCTV
- Sewer CCTV
- Outfall
- Catch Basin
- Sewer Manhole
- Storm Water Manhole
- Sewer Lamphole
- Catch Basin Lateral
- Sewer
- Stormwater
- Combined
- Flood Protection Diversion
- Combined System Overflow
- Culvert
- City Owned Road
- Private Owned Road
- State Owned Road

Bacteria Results

Other Sampling Parameter Results

Inspection Results

CCTV Comments

Miscellaneous Comments

Dry weather flow samples collected in each DMH from the mainline pipe entering the DMH. Branch flow collected as noted on plans.

Each inspection result is noted with a date, flow/no flow (at time of inspection), sample parameter and concentration.

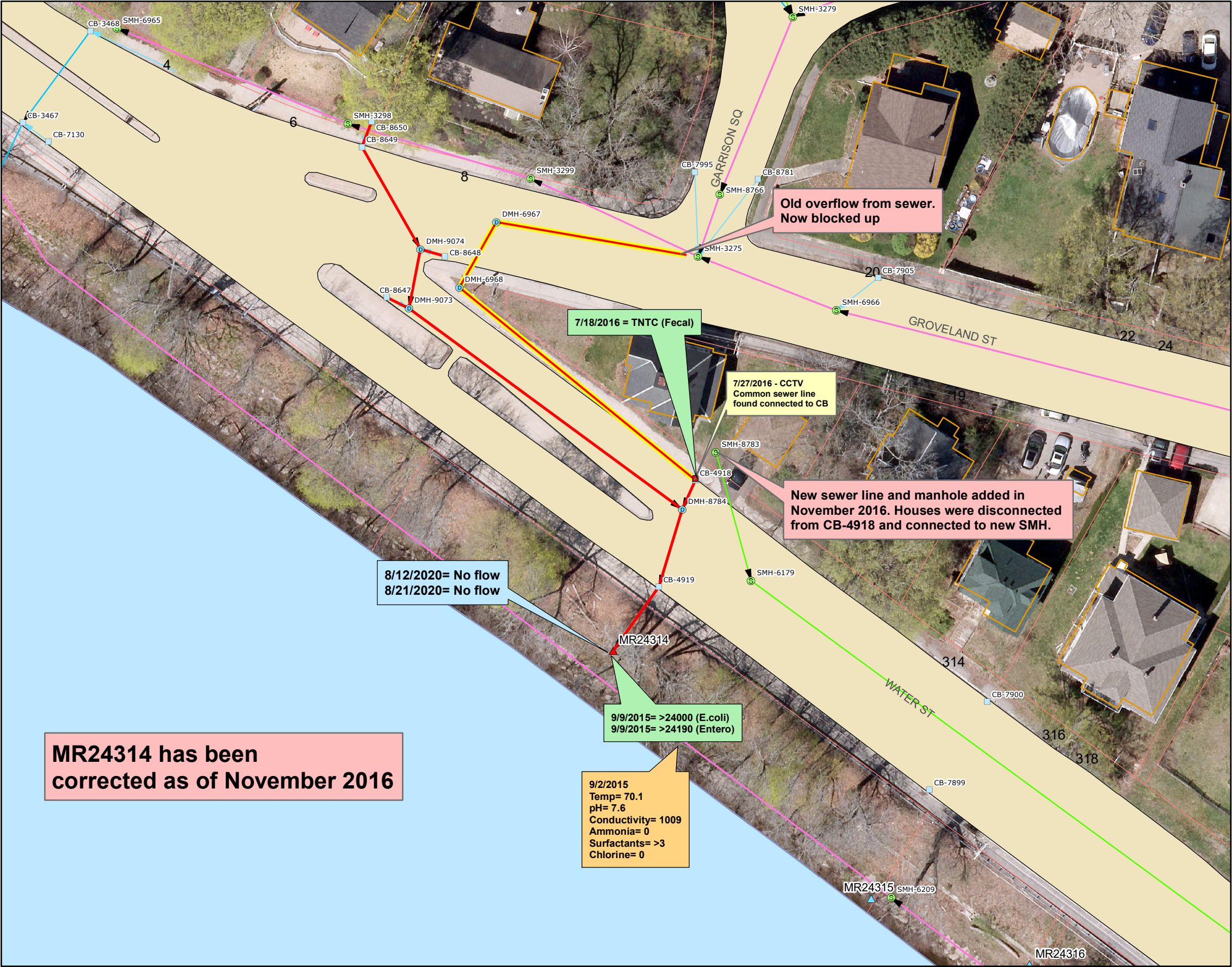
Pipes that are not highlighted in red do NOT connect to this drainage system



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Outfall MR24314

Summary of IDDE Investigations



Assets

- Catchment
- Outfall Sampled
- Manhole Sampled
- Catch Basin Sampled
- Catchment CCTV
- Sewer CCTV
- Outfall
- Catch Basin
- Sewer Manhole
- Storm Water Manhole
- Sewer Lamphole
- Catch Basin Lateral
- Sewer
- Stormwater
- Combined
- Flood Protection Diversion
- Combined System Overflow
- Culvert

- City Owned Road
- Private Owned Road
- State Owned Road

Bacteria Results

Other Sampling Parameter Results

Inspection Results

CCTV Comments

Miscellaneous Comments

Dry weather flow samples collected in each DMH from the mainline pipe entering the DMH. Branch flow collected as noted on plans.

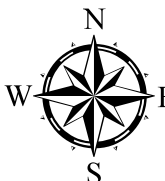
Each inspection result is noted with a date, flow/no flow (at time of inspection), sample parameter and concentration.

Pipes that are not highlighted in red do NOT connect to this drainage system

DMH and SMH invert elevations in NGVD 1929 Datum

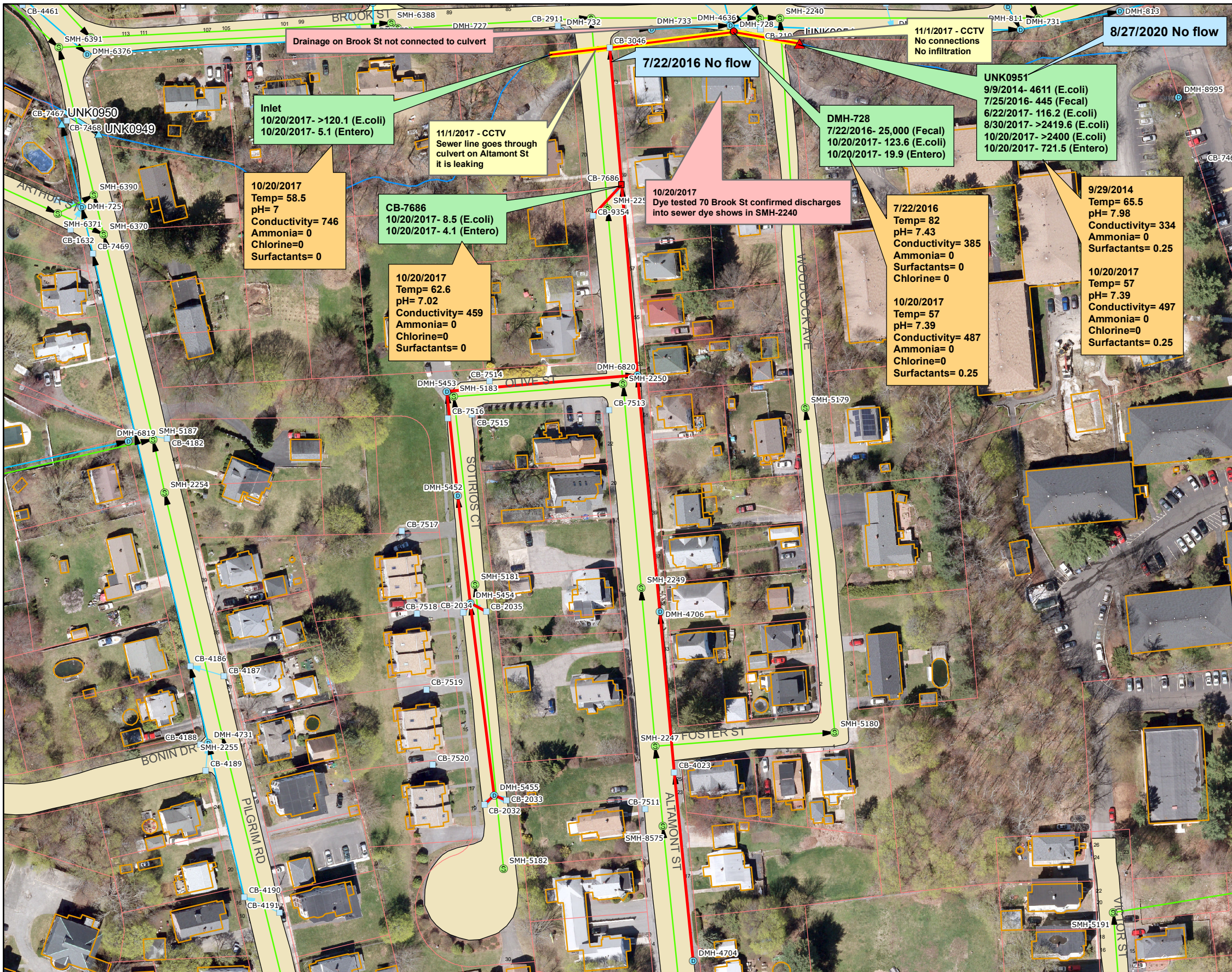
January 21, 2021

40 20 0 40 Feet



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Summary of IDDE Investigations



Assets

-  Catchment
-  Outfall Sampled
-  Manhole Sampled
-  Catch Basin Sampled
-  Catchment CCTV
-  Sewer CCTV
-  Outfall
-  Catch Basin
-  Sewer Manhole
-  Storm Water Manhole
-  Sewer Lamphole
-  Catch Basin Lateral
-  Sewer
-  Stormwater
-  Combined
-  Flood Protection Diversion
-  Combined System Overflow
-  Culvert
-  City Owned Road
-  Private Owned Road
-  State Owned Road

Bacteria Results

Other Sampling Parameter Results

Inspection Results

CCTV Comments

Miscellaneous Comments

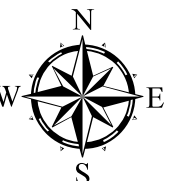
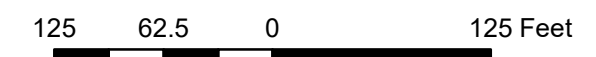
Dry weather flow samples collected in each DMH
from the mainline pipe entering the DMH.
Branch flow collected as noted on plans.

Each inspection result is noted with a date,
flow/no flow (at time of inspection),
sample parameter and concentration.

Pipes that are not highlighted in red
do NOT connect to this drainage system

DMH and SMH invert elevations in NGVD 1929 Datum

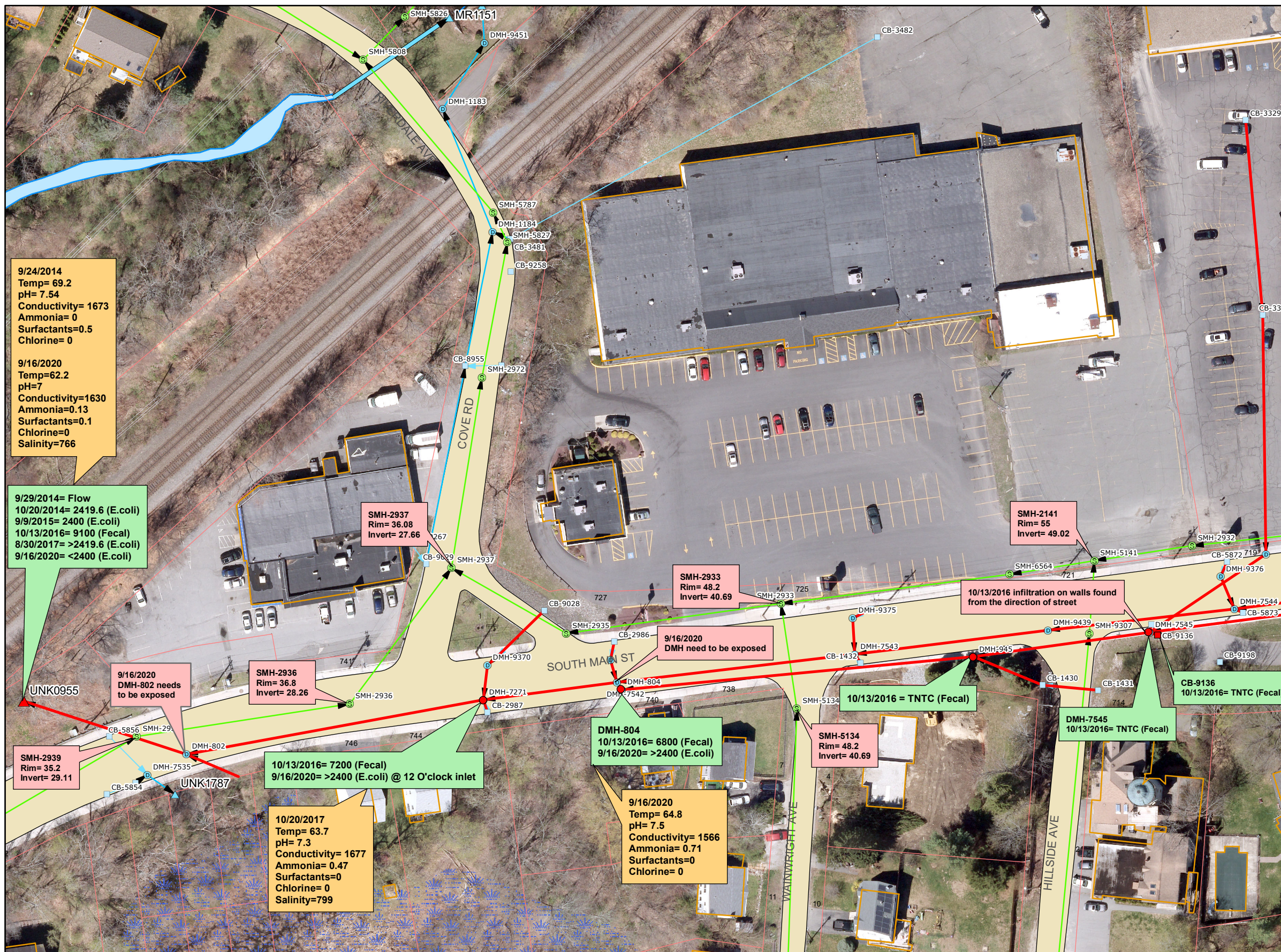
January 20, 2021



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Outfall UNK0955

Summary of IDDE Investigations



Assets

-
- Legend:
- Catchment
 - ▲ Outfall Sampled
 - Manhole Sampled
 - Catch Basin Sampled
 - Catchment CCTV
 - Sewer CCTV
 - ▲ Outfall
 - Catch Basin
 - Ⓢ Sewer Manhole
 - Ⓟ Storm Water Manhole
 - ⓧ Sewer Lamphole
 - ➡ Catch Basin Lateral
 - ➡ Sewer
 - ➡ Stormwater
 - ➡ Combined
 - ➡ Flood Protection Diversion
 - ➡ Combined System Overflow
 - ➡ Culvert
 - City Owned Road
 - Private Owned Road
 - State Owned Road

Bacteria Results

Other Sampling Parameter Results

Inspection Results

CCTV Comments

Miscellaneous Comments

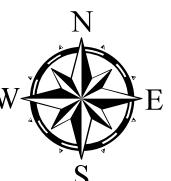
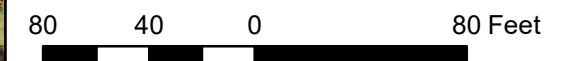
Dry weather flow samples collected in each DMH from the mainline pipe entering the DMH.
Branch flow collected as noted on plans.

Each inspection result is noted with a date,
flow/no flow (at time of inspection),
sample parameter and concentration.

Pipes that are not highlighted in red
do NOT connect to this drainage system

DMH and SMH invert elevations in NGVD 1929 Datum

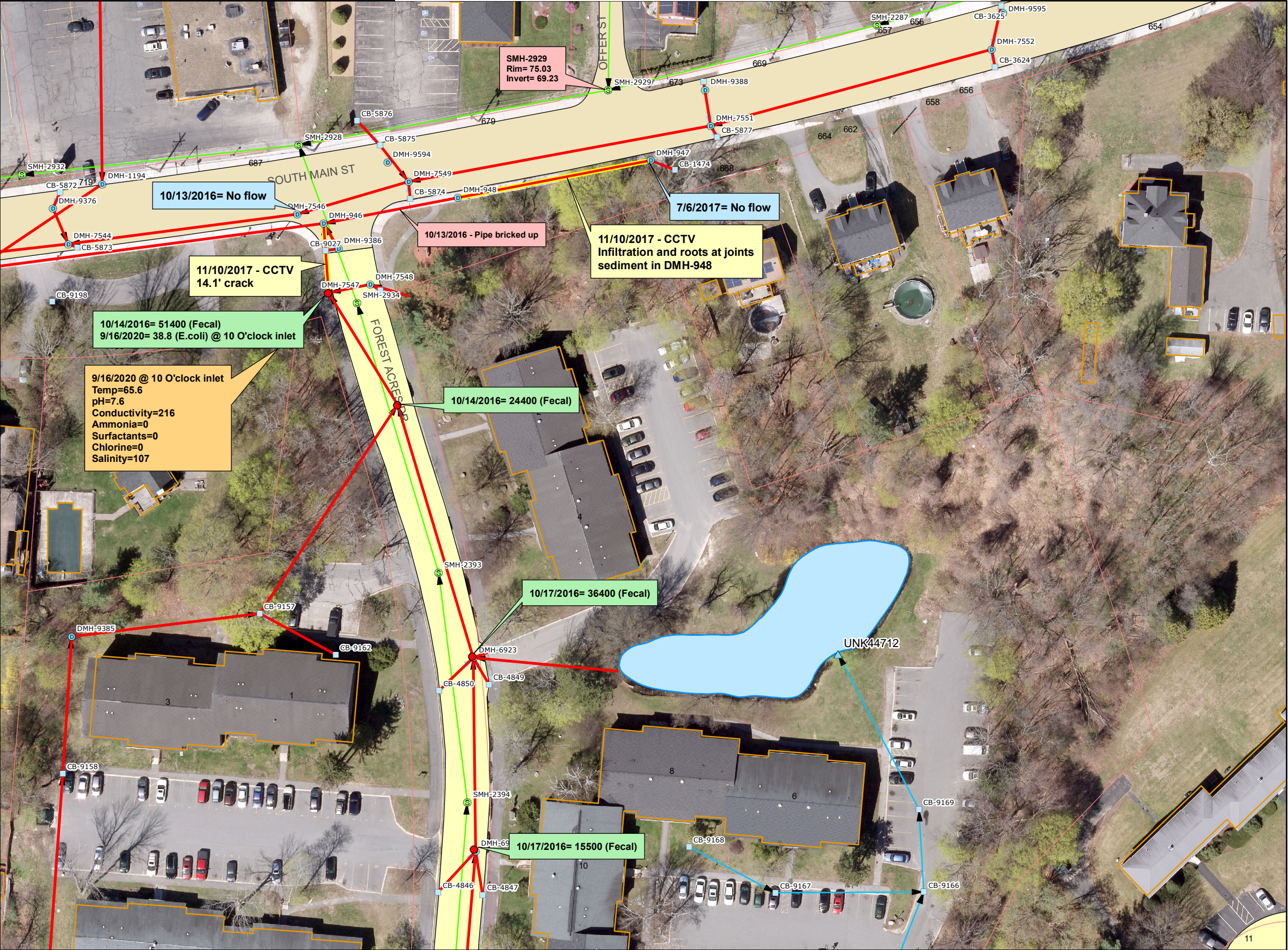
January 22, 2021



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Outfall UNK0955 (map 2)

Summary of IDDE Investigations



Assets

- Catchment
- Outfall Sampled
- Manhole Sampled
- Catch Basin Sampled
- Catchment CCTV
- Sewer CCTV
- Outfall
- Catch Basin
- Sewer Manhole
- Storm Water Manhole
- Sewer Lamphole
- Catch Basin Lateral
- Sewer
- Stormwater
- Combined
- Flood Protection Diversion
- Combined System Overflow
- Culvert

City Owned Road

Private Owned Road

State Owned Road

Bacteria Results

Other Sampling Parameter Results

Inspection Results

CCTV Comments

Miscellaneous Comments

Dry weather flow samples collected in each DMH from the mainline pipe entering the DMH. Branch flow collected as noted on plans. Each inspection result is noted with a date, flow/no flow (at time of inspection), sample parameter and concentration. Pipes that are not highlighted in red do NOT connect to this drainage system

Outfall UNK0955 (map 3)

Summary of IDDE Investigations

Assets

- Catchment
- Outfall Sampled
- Manhole Sampled
- Catch Basin Sampled
- Catchment CCTV
- Sewer CCTV
- Outfall
- Catch Basin
- Sewer Manhole
- Storm Water Manhole
- Sewer Lamphole
- Catch Basin Lateral
- Sewer
- Stormwater
- Combined
- Flood Protection Diversion
- Combined System Overflow
- Culvert
- City Owned Road
- Private Owned Road
- State Owned Road

Bacteria Results

Other Sampling Parameter Results

Inspection Results

CCTV Comments

Miscellaneous Comments

Dry weather flow samples collected in each DMH from the mainline pipe entering the DMH. Branch flow collected as noted on plans.

Each inspection result is noted with a date, flow/no flow (at time of inspection), sample parameter and concentration.

Pipes that are not highlighted in red do NOT connect to this drainage system

DMH and SMH invert elevations in NGVD 1929 Datum

January 22, 2021



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