

APPENDIX E 2019 MS4 ANNUAL REPORT

Bristol, CT

OUTFALL SAMPLING

(Summary, GIS Worksheets and Laboratory Reports)

Date	Outfall	Basin	Est. DCIA	Dryweather	Wetweather	Outfall Monitoring Record	Lab Record	pH	Temp	AmmCh	E Coli	Cond	Comments	Photo	E.coli results higher than 235 CFU/100 mL at a designated swimming area or greater than 410 CFU/100 mL in other areas requires a follow-up investigation.
7/25/2018	5647	4315-00-3-R2		17.9	x	Y							Follow-up	Y	E.coli results higher than 235 CFU/100 mL at a designated swimming area or greater than 410 CFU/100 mL in other areas requires a follow-up investigation.
7/25/2018	7446In/Out	4315-10-1-L1		14.4	x	Y							Follow-up & correct in GIS	Y	
7/25/2018	9677near	4315-08		3.8	x	Y							Follow-up	Y	
7/25/2018	7379	882335			x	Y							Follow-up	Y	
7/25/2018	7406	882335			x	Y							Follow-up	Y	
7/25/2018	7393	882335			x	Y							Follow-up	Y	
7/25/2018	5472	4315-00-3-R2		17.9	x	Y							Follow-up	Y	
7/25/2018	5457near	4315-00-3-R2		17.9	x	Y							Follow-up	Y	
7/25/2018	5391	4315-00-3-R1		46.5	x	Y							Follow-up	Y	
7/25/2018	5419	4315-00-3-R2		17.9	x	Y							Follow-up	Y	
7/25/2018	5349out	4315-00-3			x	Y							Dry	Y	
7/25/2018	5318	4315-00-3-R1		46.5	x	Y							Dry	Y	
7/25/2018	5328	4315-00-3-R2		17.9	x	Y							Dry	Y	
12/4/2018	144	4314-00-3-R2		16.8	x	Y	Y	7.75	51.5	0	0	130	399		
12/4/2018	1575	4314-00-3-R3		24.8	x									Not visible	
12/4/2018	11187	4314-00-3-R3		24.8	x									Not visible	
12/4/2018	11188	4314-00-3-R3		24.8	x									Not sampled (brook flow)	
12/4/2018	11192	4314-00-3-R3		24.8	x									Dry	Y
12/4/2018	1611	4314-00-3-R3		24.8	x									Underwater	Y
12/4/2018	1619	4314-00-3-R3		24.8	x	Y	Y	7.69	53	0	0	20	289		
12/4/2018	1629	4314-00-3-R3		24.8	x									Flowline under water	Y
12/4/2018	2266	4314-00-3-R3		24.8	x									Flowline under water	Y
12/4/2018	2272	4314-00-3-R3		24.8	x	Y	Y	7.72	51.6	0	0	<10	280		
12/5/2018	9522	4314-00-3-R3		24.8	x	Y	Y	7.68	48.3	0	0	<10	674	Clean & Clear	Y
12/5/2018	11370	4314-00-3-R4		17.1	x	Y	Y	7.89	42.1	0	0	840	789	15" RCP	Y
12/5/2018	9605	4314-00-3-R4		17.1	x	Y								Dry	Y
12/5/2018	2628	4314-00-3-R4		17.1	x									Dry	Y
12/5/2018	2653	4314-00-3-R4		17.1	x									Dry	Y
12/5/2018	3159u	4314-00-3-R4		17.1	x	Y	Y	6.89	53.5	0	0	<10	612	Update number (3157?) 36"RCP	Y
12/5/2018	3117	4314-00-3-R4		17.1	x	Y	Y	7.46	49.7	0	0	10	816	24" RCP	Y
6/27/2019	7761	4315-00-4-R2		17.2	x	Y								No flow	N
6/27/2019	7295	4315-00-4-R2		17.2	x	Y	Y	7.79	69.2	0	0	260	553		Y
6/27/2019	7291	4315-00-4-R2		17.2	x	Y								No flow	Y
6/27/2019	7290	4315-00-4-R2		17.2	x	Y								No flow	Y
6/27/2019	7869	4315-00-4-R2		17.2	x	Y								No flow	Y
6/27/2019	7379a	4315-00-4-R2		17.2	x	Y								No flow	Y
6/27/2019	7379b	4315-10-1		29.2	x	Y	Y	7.58	68.3	0	0		584		Y
6/27/2019	7393	4315-10-1		29.2	x	Y	Y	6.89	68.7	0	0	40	696		Y
6/27/2019	7406	4315-10-1		29.2	x	Y	Y	6.97	74.1	0	0	800	491		Y
6/27/2019	7745	4315-00-4-R1		20.5	x									Submerged-No upstream flow	Y
7/17/2019	7794	4315-00-4-R2		17.2	x	Y								No discharge	Y
7/17/2019	3113	4314-00-3-R5		15.4	x	Y								No discharge	
7/17/2019	3115	4314-00-3-R5		15.4	x	Y								No discharge	
7/17/2019	11434	4314-00-3-R5		15.4	x	Y								No discharge	
7/17/2019	7618	4314-00-3-R5		15.4	x	Y								No discharge	
7/17/2019	7643	4315-00-3-R2		17.9	x	Y								No discharge	
7/17/2019	7662	4315-00-3-R2		17.9	x	Y								No discharge	
7/17/2019	7718	4315-00-3-R2		17.9	x	Y								No discharge	
7/17/2019	7690	4315-00-3-R2		17.9	x	Y								No discharge	
7/17/2019	7672	4315-00-3-R2		17.9	x	Y								No discharge	
7/17/2019	7539	4315-00-3-R2		17.9	x	Y								No discharge	

2004 MS4 Outfalls to Impaired Waters - Monitoring Summary

Table 3 Commercial Land Use Annual Monitoring Results (2013-2016)

Outfall #3-Farmington Ave. (Dallas Ave)			11/15/2016	12/1/2015	11/6/2014	12/6/2013	Average
Parameter	Frequen	Units					
Sample pH	Annual	SU	6.23	6.16	6.25	7.19	6.5
Rainfall pH	Annual	SU	5.8	4.75		6	5.5
Hardness	Annual	mg/l	310	150.2	13.12	53.8	131.8
Conductivity	Annual	umhos	16	700	77	192	246.3
Oil & Grease	Annual	mg/l	0.5	0.5	0.5	0.75	0.6
COD	Annual	mg/l	11.3	0.5	0.5	176	47.1
Turbidity	Annual	NTU	2.95	2.45	5.2	1.78	3.1
TSS	Annual	mg/l	4.0	3	11	2.5	5.1
TP	Annual	mg/l	0.21	0.05	0.05	0.05	0.1
Ammonia	Annual	mg/l	0.68	0.05	0.13	0.13	0.2
TKN	Annual	mg/l	0.80	0.36	1.18	0.64	0.7
NO3+NO2	Annual	mg/l	0.34	0.8	0.05	1.07	0.6
E.coli	Annual	cfu/100mL	4	424	160	300	222.0
Outfall #4-Farmington Ave.			11/15/2016	12/1/2015	11/6/2014	12/6/2013	Average
Parameter	Frequen	Units					
Sample pH	Annual	SU	7.3	6.73	7.09	7.19	7.1
Rainfall pH	Annual	SU	5.8	4.75		6	5.5
Hardness	Annual	mg/l	173.8	202.2	153.8	21.4	137.8
Conductivity	Annual	umhos	855	598	625	148	556.5
Oil & Grease	Annual	mg/l	1.6	1.2	0.5	0.75	1.0
COD	Annual	mg/l	0.5	0.5	15	5	5.3
Turbidity	Annual	NTU	2.13	3.81	2.02	1.61	2.4
TSS	Annual	mg/l	4.0	7	0.5	2.5	3.5
TP	Annual	mg/l	0.17	0.025	0.1	0.04	0.1
Ammonia	Annual	mg/l	0.05	0.11	0.16	0.11	0.1
TKN	Annual	mg/l	0.42	0.6	0.58	0.39	0.5
NO3+NO2	Annual	mg/l	1.16	2.16	1.9	0.18	1.4
E.coli	Annual	cfu/100mL	84	176	0	10	67.5



0 50 100 200 300 400 Feet
1 inch = 100 feet

Safety First!

①

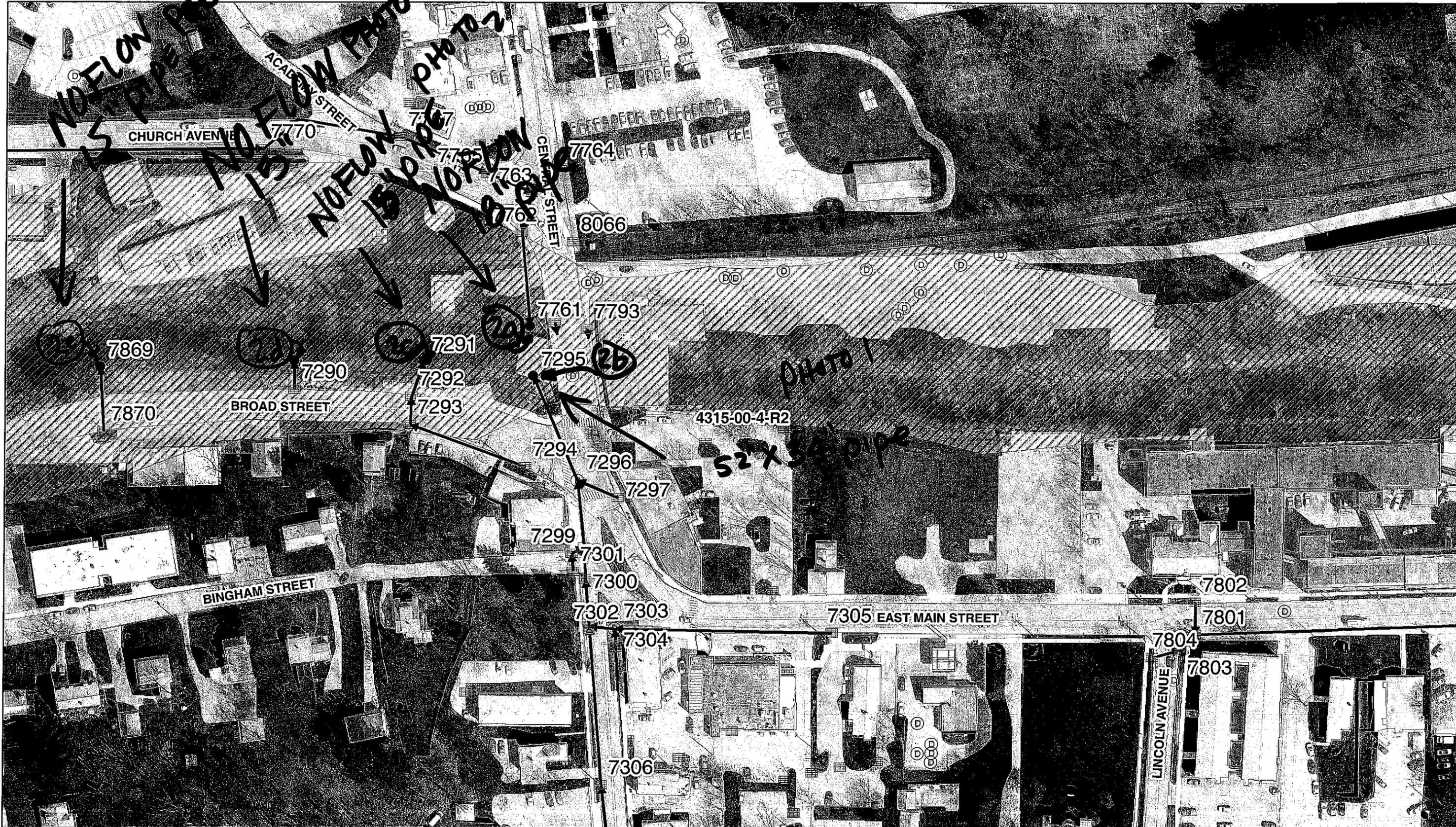




0 50 100 200 300 400 Feet
1 inch = 100 feet

Safety First!

2

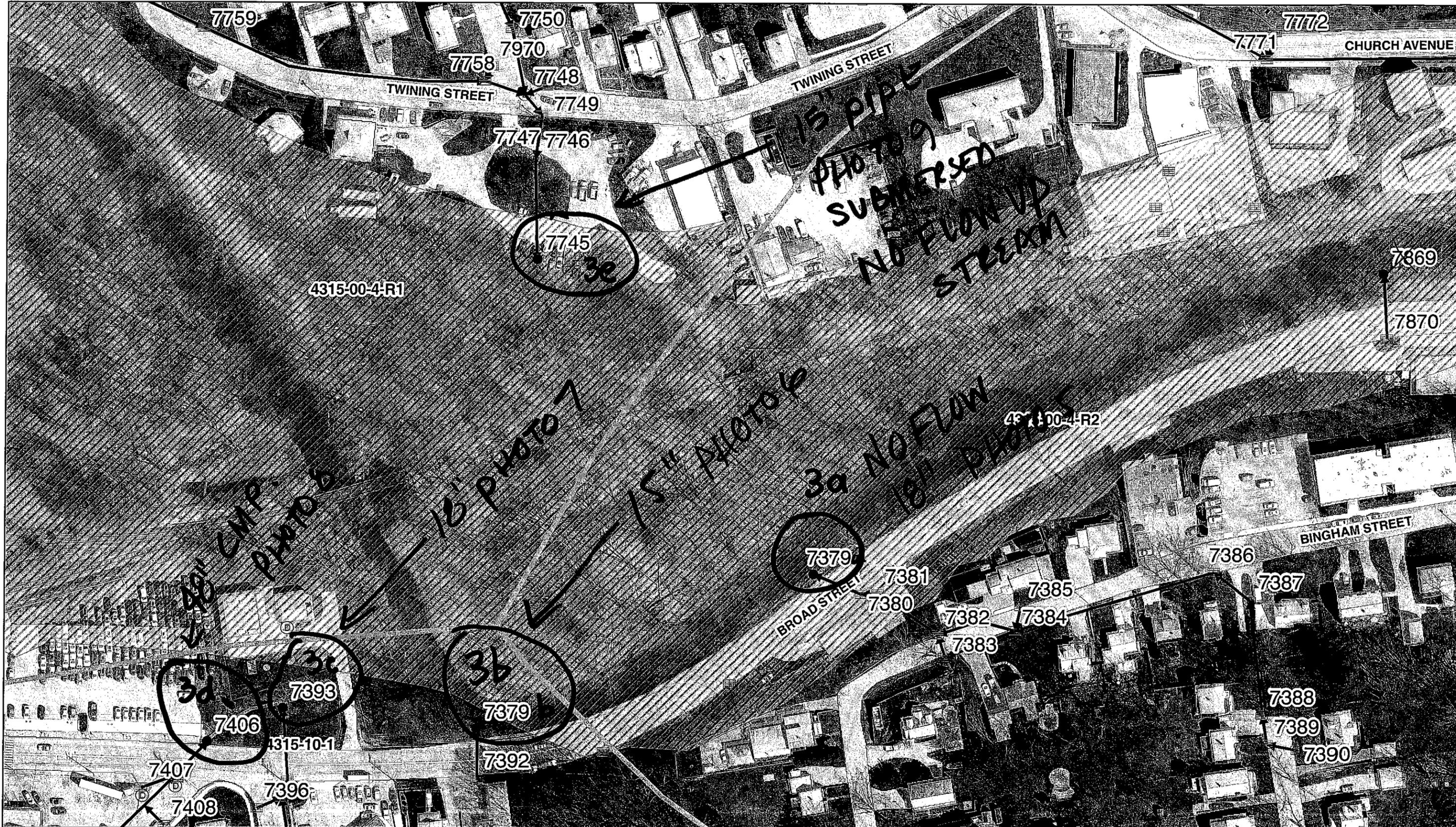




0 50 100 200 300 400 Feet
1 inch = 100 feet

Safety First

3



2a

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID: 4315-00-4-R2/7761	
Outfall Physical Location:	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or <u>Dryweather</u>	
Nature of Discharge: Rainfall _____ Snowmelt _____ <u>None</u>	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Photo recorded

No PHOTO TAKEN

Observations, concerns, comments, description of pictures taken:

Name: JASON CAGANON
Date: 10/19/06/11

Title: EPT
Signature: [Handwritten Signature]

26

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID: 4315-00-4-R2/7295	
Outfall Physical Location:	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected: 20190627 1023	
Date and Time Sample Examined: 20190627 10:31	
Rainfall amount (in) or Dryweather	
Nature of Discharge: Rainfall Snowmelt <u>None</u>	
Visible Sample Parameter	
Color	NONE
Odor	NONE
Clarity	CLEAR
Floating Solids	NONE
Settled Solids**	NONE
Suspended Solids	NONE
Oil Sheen	NONE
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	NONE
Field Measurement at Outfall Discharge	
pH	7.79
Temperature	19.2
Ammonia	0
Chlorine	TC 0 FE 0
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Photo record
PHOTO 1

Observations, concerns, comments, description of pictures taken:

52" x 34" Pipe

Name: JASON GAGNON
Date: 20190627

Title: EPT
Signature: [Handwritten Signature]

2c

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Photo 2 received

Basin Number/Outfall ID: 4319-00-4-122/7291	
Outfall Physical Location:	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or <u>Dryweather</u>	
Nature of Discharge: Rainfall Snowmelt None	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Observations, concerns, comments, description of pictures taken:

15"

Name: JASON GAGNON
Date: 20190627

Title: EPT
Signature: [Handwritten Signature]

29

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID: 4315-00-4-R2/7290	
Outfall Physical Location:	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or <u>Dryweather</u>	
Nature of Discharge: Rainfall Snowmelt None	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Photo 3 record

Observations, concerns, comments, description of pictures taken:

15"

Name: JASON GAGNON
Date: 20190611

Title: EPT
Signature: [Handwritten Signature]

2e

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID: 4315-00-4-RZ/7869	
Outfall Physical Location:	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or <u>Dryweather</u>	
Nature of Discharge: Rainfall Snowmelt None	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Photo 4 record

Observations, concerns, comments, description of pictures taken:

Name: JASON GAGNON
Date: 10/19/06

Title: EPT
Signature: [Signature]

39

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID: 4315-00-4-R2 / 73799	
Outfall Physical Location:	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or <u>Dryweather</u>	
Nature of Discharge: Rainfall Snowmelt None	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Photo's received

Observations, concerns, comments, description of pictures taken:

10th

Name: JASON GAGNON
 Date: 20190627

Title: EPT
 Signature: [Handwritten Signature]

36

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID: 4315-10-1 / 7379b	
Outfall Physical Location:	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected: 20190627 11:36	
Date and Time Sample Examined: 20190627 11:42	
Rainfall amount (in) _____ or <u>Dryweather</u>	
Nature of Discharge: Rainfall Snowmelt <u>None</u>	
Visible Sample Parameter	
Color	NONE
Odor	NONE
Clarity	CLEAR
Floating Solids	NONE
Settled Solids**	NONE
Suspended Solids	NONE
Oil Sheen	NONE
Foam (gently shake sample)	NONE
Other Obvious Indicators of Pollution	NONE
Field Measurement at Outfall Discharge	
pH	7.58
Temperature	68.3
Ammonia	0
Chlorine	TC 0 FCO
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Photo & record

Observations, concerns, comments, description of pictures taken:

15"

Name: JASON GAGNON
Date: 20190627

Title: EPT
Signature: [Signature]

3c

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID: 4315-10-1 / 7393	
Outfall Physical Location:	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected: 20190627 1154	
Date and Time Sample Examined: 20190627 1200	
Rainfall amount (in) _____ or <u>Dryweather</u>	
Nature of Discharge: Rainfall Snowmelt <u>None</u>	
Visible Sample Parameter	
Color	CLEAR/NONE
Odor	NONE
Clarity	CLEAR
Floating Solids	NONE
Settled Solids**	NONE
Suspended Solids	NONE
Oil Sheen	NONE
Foam (gently shake sample)	NONE
Other Obvious Indicators of Pollution	NONE
Field Measurement at Outfall Discharge	
pH	6.89
Temperature	68.7
Ammonia	0
Chlorine	TC 0 FC 0
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

photo record 7

Observations, concerns, comments, description of pictures taken:

18^u

Name: JASON GAIGNAL
Date: 20190627

Title: EPT
Signature: [Signature]

3d

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID:	4315-10-1 / 7406		
Outfall Physical Location:			
Person Collecting Sample:			
Person Examining Sample:			
Date and Time Sample Collected:			
Date and Time Sample Examined:			
Rainfall amount (in)	or	Dryweather	
Nature of Discharge:	Rainfall	Snowmelt	None
Visible Sample Parameter			
Color	NONE		
Odor	NONE		
Clarity	CLEAR		
Floating Solids	NONE		
Settled Solids**	NONE		
Suspended Solids	NONE		
Oil Sheen	NONE		
Foam (gently shake sample)	NONE		
Other Obvious Indicators of Pollution	NONE		
Field Measurement at Outfall Discharge			
pH	6.97		
Temperature	74.1		
Ammonia	0		
Chlorine	TC O FCO		
Salinity			
Conductivity			
E.coli (lab sample)	Was sample taken for lab?		
TN (lab sample)	Was sample taken for lab?		
TP (lab sample)	Was sample taken for lab?		

Photo 8
recovered

Observations, concerns, comments, description of pictures taken:

48"

Name: JASON GAGNON
Date: 20190627

Title: EPT
Signature: [Signature]

3e

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID: 4315-00-4-121/7745	
Outfall Physical Location:	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or _____ Dryweather	
Nature of Discharge: Rainfall Snowmelt None	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Photo record

Observations, concerns, comments, description of pictures taken:

Submerged 15" pipe - no flow upstream

Name: JASON GAQUON
Date: 10/19/06

Title: EPT
Signature: [Signature]

**ANALYTICAL
CONSULTING
TECHNOLOGY, INC**

Certified Laboratory
US EPA CT-021
CT PH-0518
EMail: csr@actlabsct.com

168 Railroad Hill St., Waterbury, CT 06708 • (203) 757-3960 • Fax (203) 759-2155
www.actlabs.biz

City of Bristol
Carol Noble
Dept. of Public Works
111 North Main Street
Bristol, CT 06010

Report Date: 07/15/2019

ACT Number: 2019060360 - 1		Sample Date: 06/27/2019	Date Received: 06/27/2019		
Sample Type: Grab		Sample Time: 10:23:00	Project number		
Collected by: Client		Sample Matrix: Wastewater			
Location/ID: 7295 (2b)		Description:			
Laboratory Test	Result	Units	Method	Analysis Date	Analyst
<i>Inorganic</i>					
Conductivity	553	umho/cm2	SM 2510B	06/28/2019 03:40:00 PM	NS
<i>Microbiology</i>					
E-Coli	260	col./100ml	SM9222G	06/27/2019 04:45:00 PM	EG
ACT Number: 2019060360 - 2		Sample Date: 06/27/2019	Date Received: 06/27/2019		
Sample Type: Grab		Sample Time: 11:36:00	Project number		
Collected by: Client		Sample Matrix: Wastewater			
Location/ID: 7379b (3b)		Description:			
Laboratory Test	Result	Units	Method	Analysis Date	Analyst
<i>Inorganic</i>					
Conductivity	584	umho/cm2	SM 2510B	06/28/2019 03:40:00 PM	NS
ACT Number: 2019060360 - 3		Sample Date: 06/27/2019	Date Received: 06/27/2019		
Sample Type: Grab		Sample Time: 11:54:00	Project number		
Collected by: Client		Sample Matrix: Wastewater			
Location/ID: 7393 (3c)		Description:			
Laboratory Test	Result	Units	Method	Analysis Date	Analyst

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www.actlabs.biz

City of Bristol
Carol Noble
Dept. of Public Works
111 North Main Street
Bristol, CT 06010

Page 2

Report Date: 07/15/2019

ACT Number: 2019060360 - 3		Sample Date: 06/27/2019	Date Received: 06/27/2019		
Sample Type: Grab		Sample Time: 11:54:00	Project number		
Collected by: Client		Sample Matrix: Wastewater			
Location/ID: 7393 (3c)					
Description:					
Laboratory Test	Result	Units	Method	Analysis Date	Analyst
<i>Inorganic</i>					
Conductivity	696	umho/cm2	SM 2510B	06/28/2019 03:40:00 PM	NS
<i>Microbiology</i>					
E-Coli	40	col./100ml	SM9222G	06/27/2019 04:45:00 PM	EG
ACT Number: 2019060360 - 4		Sample Date: 06/27/2019	Date Received: 06/27/2019		
Sample Type: Grab		Sample Time: 12:14:00	Project number		
Collected by: Client		Sample Matrix: Wastewater			
Location/ID: 7406 (3d)					
Description:					
Laboratory Test	Result	Units	Method	Analysis Date	Analyst
<i>Inorganic</i>					
Conductivity	491	umho/cm2	SM 2510B	06/28/2019 03:40:00 PM	NS
<i>Microbiology</i>					
E-Coli	800	col./100ml	SM9222G	06/27/2019 04:45:00 PM	EG

ANALYTICAL
CONSULTING
TECHNOLOGY, INC

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For Analytical Consulting Technology, Inc.



Laboratory Director

2019060360

Analytical Consulting Technology, Inc.
 168 Railroad Hill Street, Waterbury, CT. 06708
 (203) 757-3960 (203) 759-2155 (fax)

Chain of Custody
 State Pricing

ACT Order # 2010060360 ²⁸² _{1/4}
 Turnaround Time: 24-Hr 48-Hr Standard
 Additional cost applies to 24 + 48 TAT

Client Name: **City of Bristol**
 Contact Person: **Carol Noble**

Client Address: 111 N. Main Street
 Bristol, CT 06010
 Client Telephone: 860-584-6100

Project Description: _____
 Outfall Sampling IDDE
 CSI#: _____
 GSI# _____

Page ____ of ____
 Laboratory Use Only:
 Additional Reports?
 DMR Forms?
 Other Attachments:

Sample Collected By: _____ P.O. Number: _____

SAMPLE INFORMATION

Sample Location	Date	Time	Sample Matrix	Sample Type & Preserve
Outfall #			SW	Composite or Grab
7406 (3a)	2019	1214	Grab	Non-Preserve
7745 (3c)	06/27			Nitric Acid (P)
				Sulfuric Acid (P)
				Sodium Hydroxide (P)
				VOA vials (H)
				Baked Amber
				Sterile Container

ANALYSIS REQUIRED

Copper, Total	Lead, Total	Zinc, Total	Kjeldahl, Total	Phosphorus, Total	TSS	Oil & Grease	COD	Nitrate	Aquatic Toxicity	E-Coli (Annual)	Conductivity

Preservative Code: I = Iced N = Nitric Acid H = Hydrochloric Acid O = Sodium Hydroxide S = Sulfuric Acid C = Copper Sulfate T = Sodium Thiosulfate.
 Source Code: IN = In Process Unit/Tank L = Lake/Pond/Stream MW = Monitoring Well O = Outflow R = Run Off S = Soil T = Treatment Facility/Tank
 Container Code: P = Plastic G = Glass S = Sterile E = EPA vial C = Plastic Cube B = Plastic Bag M = Metal Container N = Envelope.
 Senior Operator/Reviewer Signature _____ Time _____ Date _____
 Relinquished By: _____ Time _____ Date _____
 Accepted By: _____ Time _____ Date _____
 Additional Comments: _____
 Revised 10/10/15

Special Instructions
 to the Laboratory:
 E-Coli done once per
 year

Analytical Consulting Technology, Inc.
 168 Railroad Hill Street, Waterbury, CT. 06708
 (203) 757-3960 (203) 759-2155 (fax)

Chain of Custody
 State Pricing

ACT Order # 20190060360 1/4
 Turnaround Time: 24-Hr 48-Hr Standard
 Additional cost applies to 24 + 48 TAT

Client Name: City of Bristol
 Contact Person: Carol Noble

Client Address: 111 N. Main Street
Bristol, CT 06010
 Client Telephone: 860-584-6100

Project Description: _____
 Outfall Sampling IDDE
 CSI#: _____
 GSI#: _____

Sample Collected By: _____ P.O. Number: _____

SAMPLE INFORMATION

Sample Location	Date	Time	Sample Matrix	Sample Type & Preserve
Outfall #			SW	Composite or Grab
			Grab	Non-Preserve
				Nitric Acid (P)
				Sulfuric Acid (P)
				Sodium Hydroxide (P)
				VOA vials (H)
				Baked Amber
				Sterile Container

ANALYSIS REQUIRED

	Copper, Total	
	Lead, Total	
	Zinc, Total	
	Kjeldahl, Total	
	Phosphorus, Total	
	TSS	
	Oil & Grease	
	COD	
	Nitrate	
	Aquatic Toxicity	
	E-Coli (Annual)	
	Conductivity	

SM per cess tower

Preservative Code: I = Iced N = Nitric Acid H = Hydrochloric Acid O = Sodium Hydroxide S = Sulfuric Acid C = Copper Sulfate T = Sodium Thiosulfate
 Source Code: IN = In Process Unit/Tank L = Lake/Pond/Stream MW = Monitoring Well O = Outflow R = Run Off S = Soil T = Treatment Facility/Tank
 Container Code: P = Plastic G = Glass S = Sterile E = EPA vial C = Plastic Cube B = Plastic Bag M = Metal Container N = Envelope
 Senior Operator/Reviewer Signature _____ Time _____ Date _____
 Relinquished By: _____ Time _____ Date _____
 Accepted By: _____ Time _____ Date _____

Additional Comments: 1357 20190627 1401 20190627 1404 6/27/19
 Revised 10/10/15

Page ____ of ____
 Laboratory Use Only:
 Additional Reports?
 DMR Forms?
 Other Attachments:

Special Instructions
 to the Laboratory:
 E-Coli done once per
 year

Carol Noble

From: Carol Noble
Sent: Wednesday, January 16, 2019 1:40 PM
To: Jason Gagnon
Subject: Fwd: Re: Artisan St sampling
Attachments: GIS SS-SD to WPC.pdf; MS4 Sampling 2018 to WPC.xlsx

Jason,

Will you please put on you list to check the 11370 structure periodically for dry weather flow? Thanks.

>>> Sean Hennessey 1/16/2019 1:08 PM >>>

Carol,

I visually inspected CB 11370 as well as others in that location. No flow was detected entering the CB as well as no odors detected. Currently, no I/I projects are slated in this location with the exception of possibly increasing one of the two existing sewer lines to a larger diameter for capacity. We'll have to do some camera inspection.

Thanks,

Sean

>>> Carol Noble 1/16/2019 11:36 AM >>>

Good morning,

The attached map and spreadsheet shows CB location 11370, for which lab results indicate a high result (840) for e.coli. Would you please investigate and/or comment on any plans for I/I in that location? Thanks!



0 50 100 200 300 400 Feet
1 inch = 100 feet

Safety First!

①

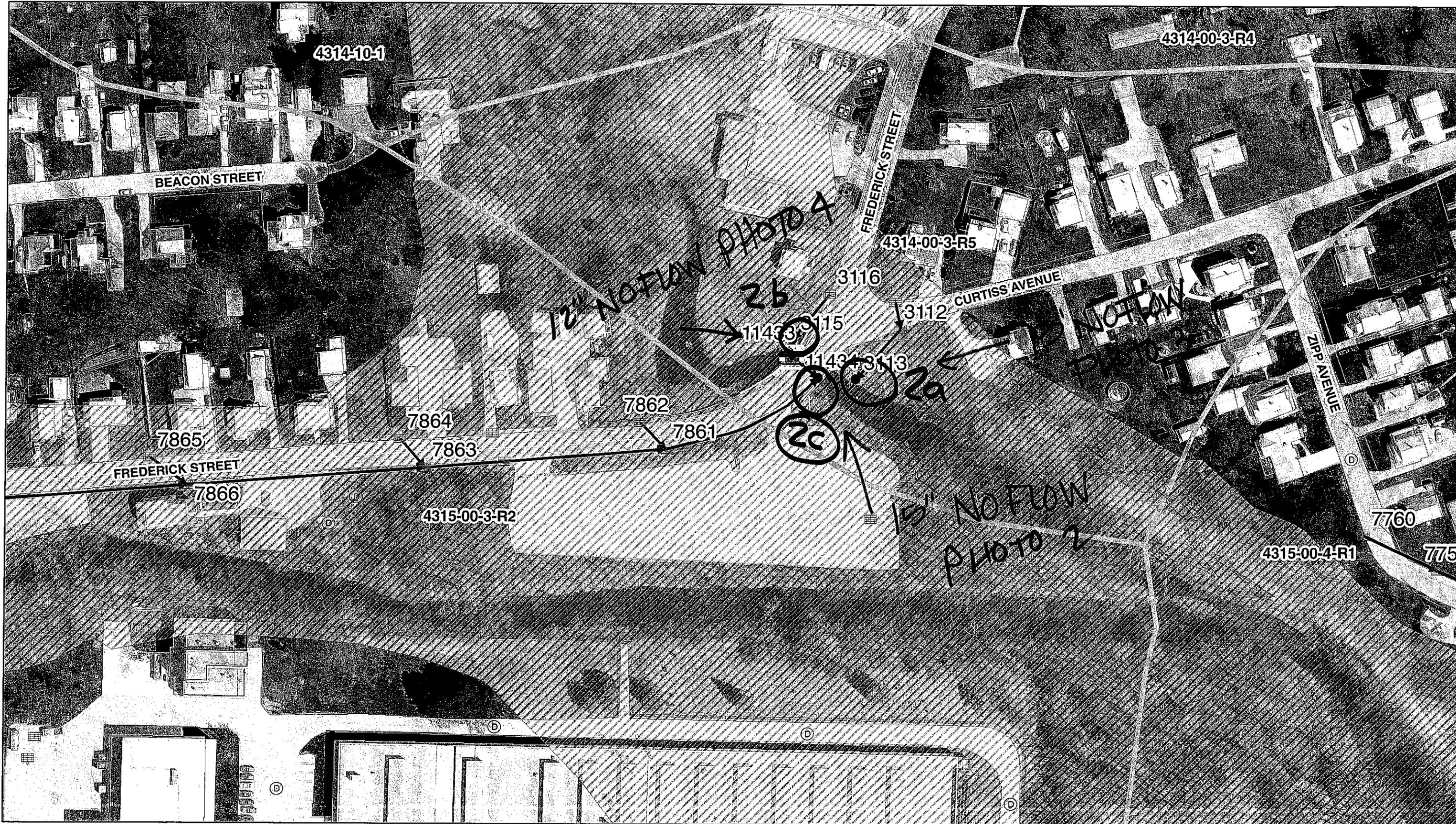




0 50 100 200 300 400 Feet
1 inch = 100 feet

Safety First!

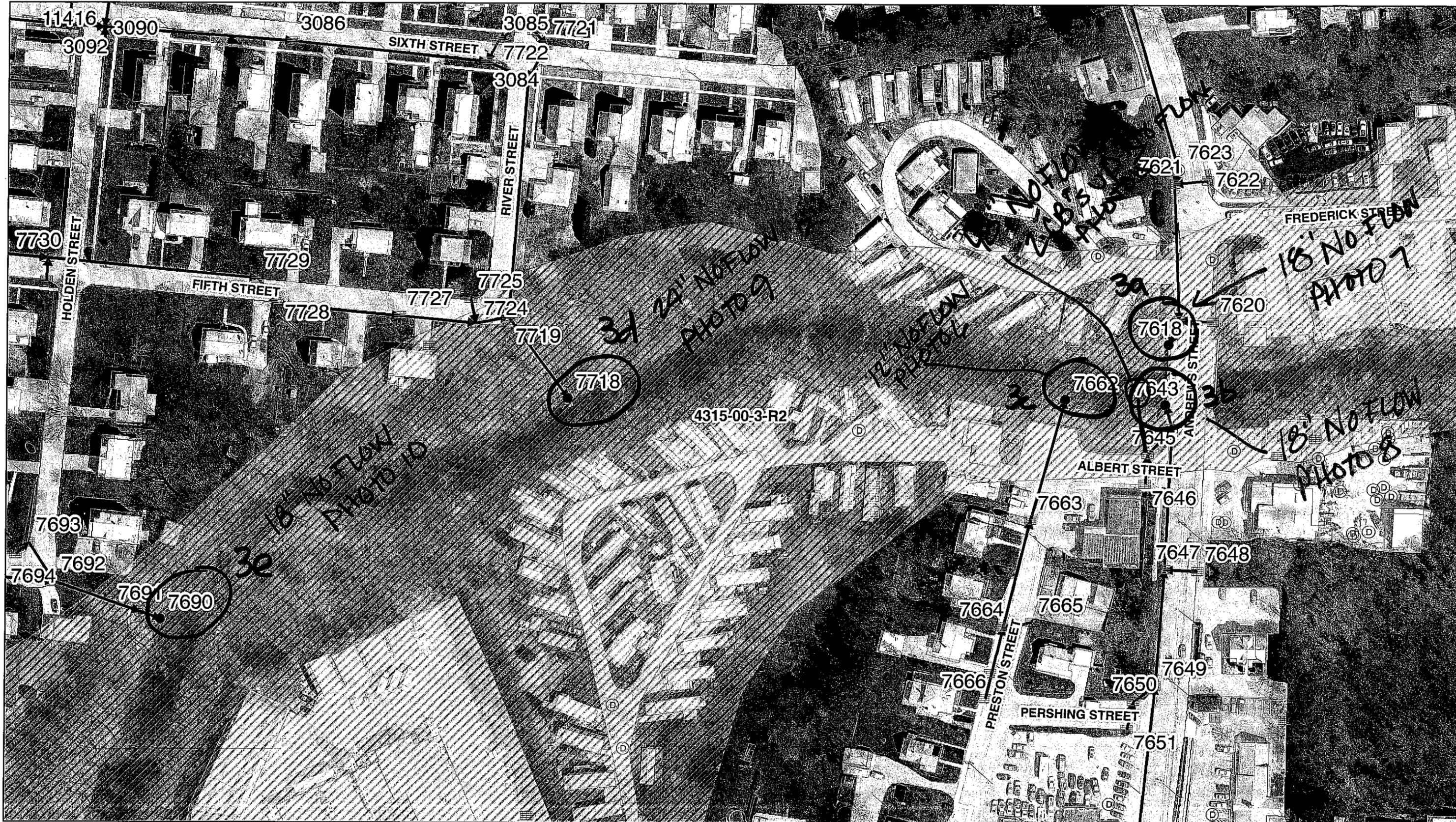
2





0 50 100 200 300 400 Feet
1 inch = 100 feet

Safety First (3)



5a

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID: 4315-00-3-R2 / 7539	
Outfall Physical Location: Pine St N behind #107/115-disch to PR	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or _____ Dryweather	
Nature of Discharge: Rainfall Snowmelt <u>None</u>	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Photo recorded

Observations, concerns, comments, description of pictures taken:

Name: GAGNON, JASON
Date: 20190717

Title: EPT
Signature: [Handwritten Signature]

5b

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID: 4315-00-3-RZ/7543	
Outfall Physical Location: Pine St N behind #67/disch to PR	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or _____ Dryweather	
Nature of Discharge: Rainfall Snowmelt None	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Photo received

Observations, concerns, comments, description of pictures taken:

Name: _____
Date: _____

Title: _____
Signature: _____

①

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

PHOTO
REMOVED

Basin Number/Outfall ID: 4315-00-4-R2 / 7794	
Outfall Physical Location:	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or <u>Dryweather</u>	
Nature of Discharge: Rainfall _____ Snowmelt _____ <u>(None)</u> 8/6/07	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Observations, concerns, comments, description of pictures taken:

Name: JASON GAGANON
Date: 20190707

Title: EPT
Signature: [Handwritten Signature]

2a

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Photo
received

Basin Number/Outfall ID: 4314-00-3-RS / 3113	
Outfall Physical Location: Cortis Ave outfall to Coppermine	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or _____ Dryweather	
Nature of Discharge: Rainfall _____ Snowmelt _____ <u>None</u>	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Observations, concerns, comments, description of pictures taken:

Name: JASON GAGNON
Date: 10/10/17

Title: EPT
Signature: [Signature]

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

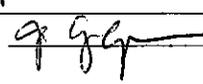
26

Basin Number/Outfall ID: <u>4314-00-3-R5 / 3115</u>	
Outfall Physical Location: <u>Frederick St North dSch to Coppershire</u>	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or _____ Dryweather	
Nature of Discharge: Rainfall Snowmelt None	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Photo removed

Observations, concerns, comments, description of pictures taken:

Name: JASON GAGNON
 Date: 2019 07 17

Title: EPT
 Signature: 

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID: <u>4314-00-3-R5 / 11434</u>	
Outfall Physical Location: <u>Frederick St - South side discharge to Coppermine</u>	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or _____ Dryweather	
Nature of Discharge: Rainfall Snowmelt <u>None</u>	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

2c

Photo removed

Observations, concerns, comments, description of pictures taken:

Name: JASON GAGNON
 Date: 20190117

Title: EPT
 Signature: [Handwritten Signature]

3a

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID: 4315-00-3-R2/7618	
Outfall Physical Location: Andrews St - N disch to PR	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or _____ Dryweather	
Nature of Discharge: Rainfall Snowmelt <u>None</u>	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Photo recorded
—

Observations, concerns, comments, description of pictures taken:

Name: JASON GAGNON
Date: 10/9/17

Title: EPT
Signature: [Signature]

36

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID: 4315-00-3-R2/7643	
Outfall Physical Location: Andrews St - Sdisch to PR	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or _____ Dryweather	
Nature of Discharge: Rainfall Snowmelt <u>None</u>	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Photo received

Observations, concerns, comments, description of pictures taken:

Name: JASON GAGNON
Date: 20190717

Title: EPT
Signature: [Signature]

3c

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID: 4315-03-R2 17662	
Outfall Physical Location: Preston St Outfall to PR	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or _____ Dryweather	
Nature of Discharge: Rainfall Snowmelt <u>None</u>	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Photo recorded

Observations, concerns, comments, description of pictures taken:

Name: JASON GAGNON
Date: 2019.07.17

Title: EPT
Signature: [Handwritten Signature]

3d

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID: 4315-00-3-R2/771B	
Outfall Physical Location: Fifth St/River St discharge to PR	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or _____ Dryweather	
Nature of Discharge: Rainfall _____ Snowmelt _____ <u>None</u>	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Photo record

Observations, concerns, comments, description of pictures taken:

Name: GAGNON, JASON
Date: 20190717

Title: EPT
Signature: [Signature]

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

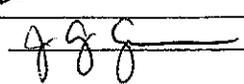
30

Basin Number/Outfall ID: <u>4315-00-3-R2/7690</u>	
Outfall Physical Location: <u>Holden St discharge to PR</u>	
Person Collecting Sample: _____	
Person Examining Sample: _____	
Date and Time Sample Collected: _____	
Date and Time Sample Examined: _____	
Rainfall amount (in) _____ or _____ Dryweather	
Nature of Discharge: Rainfall Snowmelt None	
Visible Sample Parameter	
Color	_____
Odor	_____
Clarity	_____
Floating Solids	_____
Settled Solids**	_____
Suspended Solids	_____
Oil Sheen	_____
Foam (gently shake sample)	_____
Other Obvious Indicators of Pollution	_____
Field Measurement at Outfall Discharge	
pH	_____
Temperature	_____
Ammonia	_____
Chlorine	_____
Salinity	_____
Conductivity	_____
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Photo record
—

Observations, concerns, comments, description of pictures taken:

Name: Jason Gagnon
Date: 20190717

Title: EPT
Signature: 

4

Outfall Monitoring Report

(Complete a separate form and add photo for each outfall)

Basin Number/Outfall ID: 4315-00-3-RZ / 7672	
Outfall Physical Location: Broad St (West) N discharge to PR	
Person Collecting Sample:	
Person Examining Sample:	
Date and Time Sample Collected:	
Date and Time Sample Examined:	
Rainfall amount (in) _____ or _____ Dryweather	
Nature of Discharge: Rainfall Snowmelt <u>None</u>	
Visible Sample Parameter	
Color	
Odor	
Clarity	
Floating Solids	
Settled Solids**	
Suspended Solids	
Oil Sheen	
Foam (gently shake sample)	
Other Obvious Indicators of Pollution	
Field Measurement at Outfall Discharge	
pH	
Temperature	
Ammonia	
Chlorine	
Salinity	
Conductivity	
E.coli (lab sample)	Was sample taken for lab?
TN (lab sample)	Was sample taken for lab?
TP (lab sample)	Was sample taken for lab?

Photo record

Observations, concerns, comments, description of pictures taken:

Name: GIAGNON, JASON
Date: 20190717

Title: EPT
Signature: [Handwritten Signature]