



ESSEX HIGHWAY DEPARTMENT

29 West Avenue
Essex, CT 06426
(860) 767-0715

December 19, 2014

Stormwater Permit Coordinator
Bureau of Water Management
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, Connecticut 06106-5127

RE: 2014 Annual Report
General Permit for the Discharge Stormwater from Small Municipal Separate Storm
Sewer System (MS4)
Town of Essex

Dear Stormwater Permit Coordinator:

In accordance with Section 6(i)(2) of the Connecticut Department of Energy and Environmental Protection (CTDEEP) General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer System (MS4), the Town of Essex (Town) is submitting this 2014 Annual Report for your review. The 2014 Annual Report was prepared to update you on the status of compliance with the Town's MS4 general permit, to comment on the appropriateness of the identified best management practices, and the Town's progress towards achieving the implementation dates and measurable goals for each of the Minimum Control Measures outlined in the Town's Part B - General Permit Registration. The Town has developed a Stormwater Management Plan pursuant to Section 6 of this general permit and the Town anticipates completion of the Minimum Control Measures by the end of January 2016.

In December 2014, the Town of Essex received a 2014 Invoice for the MS4 Plan Review of \$187.50. The invoice was approved by the Town and has submitted it to the CTDEEP under Invoice No. DEP242399 (Client ID No. 994543).

In January 2015, the Town issued this 2014 Annual Report for the requisite 30-day Public Notice period. The BMP's listed in Part B of the permit application submitted to CTDEEP as described above are presently on schedule. The following bullets represent those issues that are of special interest:

- The Town has retained the services of Applied Geographic, Inc. (AppGeo) to complete the identification and location of catchbasins and stormwater outfalls throughout the Town of Essex. Approximately 60% of the catchbasins and stormwater outfalls throughout the Town have been identified.
 - Street sweeping was performed from March 2014 through the end of June 2014 (or the end of the snow season). Approximately 150 catchbasins were cleaned and inspected from August through November 2014.
 - In February 2014, an oil / water separator and holding tanks were cleaned and inspected on Pratt Street that was full off leaves and sand. Additionally, catch basins and pertinent piping on the same street were also cleaned and inspected (Walnut Street / Summit Street).
-
- Inspectors will be trained to identify and locate illicit discharges at this time. Outfall and catchbasin inspection logs have been prepared for these events.
 - The six outfall locations (2-residential / 2-urban / 2-industrial) were sampled in 2014 in accordance with the general permit. The sampling locations are identified as:
 1. NC - New City Street Catch Basin at End of East Street (residential)
 2. FM – Foot of Main Street (residential)
 3. IV – Ivoryton Village Behind Burdick’s and Ivoryton Service Station (commercial)
 4. BD – Brewer’s Dauntless Boat Yard (Pratt Street) (commercial)
 5. IP – Industrial Park Catch Basin (industrial)
 6. BR – Bokum River Outfall (industrial)

The SMR and analytical results are attached.

Please feel free to contact me at (860) 767-0715 if you should have any questions or comments related to this Annual Report.

Sincerely,

TOWN OF ESSEX

Lisa Fasulo, Director of Health.

David Caroline
Director of Public Works

cc: William P. Drouin (Apex)



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: <u>Essex</u>	
Mailing Address: <u>29 West Avenue, Essex, Connecticut 06429</u>	
Contact Person: <u>David Caroline</u>	Title: <u>Director of</u> Phone: <u>(860) 767-0715</u>
Permit Registration # <u>GSM 000019</u>	<u>Public Works</u>

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>NC – Foot New City</u>	
Please circle the appropriate area description: Industrial, Commercial, or Residential	
Receiving Water (name, basin): <u>Connecticut River</u>	
Time of Start of Discharge: _____	
Date/Time Collected: <u>9/25/14 12:50pm</u>	Water Temperature: <u>10 C</u>
Person Collecting Sample: <u>MB@ECL</u>	
Storm Magnitude (inches): <u>0.4 in</u>	Storm Duration (hours): <u>4 hr</u>
Date of Previous Storm Event: <u>9/21/2014</u>	

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	150.2	5.42 s.u	ECL, INC. CT PH-0535
Rain pH	150.2	5.54 s.u.	ECL, INC. CT PH-0535
Hardness	200.7	38.9 mg/L	ECL, INC. CT PH-0535
Conductivity	SM2510B	52.7 umhos/cm	ECL, INC. CT PH-0535
Oil & Grease	1664A	10.7 mg/L	ECL, INC. CT PH-0535
COD	H8000	593 mg/L	ECL, INC. CT PH-0535
Turbidity	180.1	70 NTU	ECL, INC. CT PH-0535
TSS	SM2540D	990 mg/L	ECL, INC. CT PH-0535
TP	200.7	1.30 mg/L	ECL, INC. CT PH-0535
Ammonia	ASTM D6919-03	<0.05 mg/L	ECL, INC. CT PH-0535
TKN	SM4500orgC	8.80 mg/L	ECL, INC. CT PH-0535
NO ₃ +NO ₂	300.0	0.62 mg/L	ECL, INC. CT PH-0535
E. coli	SM9223B	307.6 MPN/100ml	ECL, INC. CT PH-0535

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>David Caroline</u>	
Signature: <u>Lisa Toscano, Director of Health</u>	Date: <u>12/22/2014</u>



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: <u>Essex</u>	
Mailing Address: <u>29 West Avenue, Essex, Connecticut 06429</u>	
Contact Person: <u>David Caroline</u>	Title: <u>Director of</u> Phone: <u>(860) 767-0715</u>
Permit Registration # <u>GSM 000019</u>	<u>Public Works</u>

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): _____	FM – Foot of Main
Please circle the appropriate area description: Industrial, Commercial, or Residential	
Receiving Water (name, basin): <u>Connecticut River</u>	
Time of Start of Discharge: _____	
Date/Time Collected: <u>9/25/14 12:40pm</u>	Water Temperature: <u>10 C</u>
Person Collecting Sample: <u>MB@ECL</u>	
Storm Magnitude (inches): <u>0.4 in</u>	Storm Duration (hours): <u>4 hr</u>
Date of Previous Storm Event: <u>9/21/2014</u>	

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	150.2	5.78 s.u	ECL, INC. CT PH-0535
Rain pH	150.2	5.54 s.u.	ECL, INC. CT PH-0535
Hardness	200.7	54.2 mg/L	ECL, INC. CT PH-0535
Conductivity	SM2510B	107umhos/cm	ECL, INC. CT PH-0535
Oil & Grease	1664A	8.8 mg/L	ECL, INC. CT PH-0535
COD	H8000	872mg/L	ECL, INC. CT PH-0535
Turbidity	180.1	110 NTU	ECL, INC. CT PH-0535
TSS	SM2540D	1458 mg/L	ECL, INC. CT PH-0535
TP	200.7	1.62 mg/L	ECL, INC. CT PH-0535
Ammonia	ASTM D6919-03	0.06 mg/L	ECL, INC. CT PH-0535
TKN	SM4500orgC	11.6 mg/L	ECL, INC. CT PH-0535
NO ₃ +NO ₂	300.0	0.49 mg/L	ECL, INC. CT PH-0535
E. coli	SM9223B	1986.3 MPN/100ml	ECL, INC. CT PH-0535

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>David Caroline</u>	
Signature: <u>Lisa Fusco, Director of Health</u>	Date: <u>12/22/2014</u>



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: <u>Essex</u>	
Mailing Address: <u>29 West Avenue, Essex, Connecticut 06429</u>	
Contact Person: <u>David Caroline</u>	Title: <u>Director of</u> Phone: <u>(860) 767-0715</u>
Permit Registration # <u>GSM 000019</u>	<u>Public Works</u>

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>BR -Brewers Dauntles</u>	
Please circle the appropriate area description: Industrial, Commercial, or Residential	
Receiving Water (name, basin): <u>Connecticut River</u>	
Time of Start of Discharge: _____	
Date/Time Collected: <u>9/25/14 12:25pm</u>	Water Temperature: <u>10 C</u>
Person Collecting Sample: <u>MB@ECL</u>	
Storm Magnitude (inches): <u>0.4 in</u>	Storm Duration (hours): <u>4 hr</u>
Date of Previous Storm Event: <u>9/21/2014</u>	

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	150.2	6.54 s.u	ECL, INC. CT PH-0535
Rain pH	150.2	5.54 s.u.	ECL, INC. CT PH-0535
Hardness	200.7	13.4 mg/L	ECL, INC. CT PH-0535
Conductivity	SM2510B	64.7 umhos/cm	ECL, INC. CT PH-0535
Oil & Grease	1664A	ND<5.0 mg/L	ECL, INC. CT PH-0535
COD	H8000	122 mg/L	ECL, INC. CT PH-0535
Turbidity	180.1	40 NTU	ECL, INC. CT PH-0535
TSS	SM2540D	149 mg/L	ECL, INC. CT PH-0535
TP	200.7	0.37 mg/L	ECL, INC. CT PH-0535
Ammonia	ASTM D6919-03	0.64 mg/L	ECL, INC. CT PH-0535
TKN	SM4500orgC	2.47 mg/L	ECL, INC. CT PH-0535
NO ₃ +NO ₂	300.0	0.58 mg/L	ECL, INC. CT PH-0535
E. coli	SM9223B	1732.9 MPN/100ml	ECL, INC. CT PH-0535

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>David Caroline</u>	
Signature: <u>Lisa Fasulo, Director of Health</u>	Date: <u>12/22/2014</u>



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: <u>Essex</u>	
Mailing Address: <u>29 West Avenue, Essex, Connecticut 06429</u>	
Contact Person: <u>David Caroline</u>	Title: <u>Director of</u> Phone: <u>(860) 767-0715</u>
Permit Registration # <u>GSM 000019</u>	<u>Public Works</u>

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>BR – Bokum Road</u>	
Please circle the appropriate area description: Industrial, Commercial, or Residential	
Receiving Water (name, basin): <u>Connecticut River</u>	
Time of Start of Discharge: _____	
Date/Time Collected: <u>9/25/14 1:03pm</u>	Water Temperature: <u>10 C</u>
Person Collecting Sample: <u>MB@ECL</u>	
Storm Magnitude (inches): <u>0.4 in</u>	Storm Duration (hours): <u>4 hr</u>
Date of Previous Storm Event: <u>9/21/2014</u>	

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	150.2	6.45 s.u	ECL, INC. CT PH-0535
Rain pH	150.2	5.54 s.u.	ECL, INC. CT PH-0535
Hardness	200.7	16.2 mg/L	ECL, INC. CT PH-0535
Conductivity	SM2510B	93.7 umhos/cm	ECL, INC. CT PH-0535
Oil & Grease	1664A	ND<5.0 mg/L	ECL, INC. CT PH-0535
COD	H8000	176 mg/L	ECL, INC. CT PH-0535
Turbidity	180.1	50 NTU	ECL, INC. CT PH-0535
TSS	SM2540D	70.0 mg/L	ECL, INC. CT PH-0535
TP	200.7	0.18mg/L	ECL, INC. CT PH-0535
Ammonia	ASTM D6919-03	0.33 mg/L	ECL, INC. CT PH-0535
TKN	SM4500orgC	2.60 mg/L	ECL, INC. CT PH-0535
NO ₃ +NO ₂	300.0	0.64 mg/L	ECL, INC. CT PH-0535
E. coli	SM9223B	2419.6 MPN/100ml	ECL, INC. CT PH-0535

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>David Caroline</u>	
Signature: <u>Lisa Tansulo, Director of Health</u>	Date: <u>12/22/2014</u>



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: <u>Essex</u>	
Mailing Address: <u>29 West Avenue, Essex, Connecticut 06429</u>	
Contact Person: <u>David Caroline</u>	Title: <u>Director of</u> Phone: <u>(860) 767-0715</u>
Permit Registration # <u>GSM 000019</u>	<u>Public Works</u>

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): _____ <u>IV – Ivoryton village</u>	
Please circle the appropriate area description: Industrial, Commercial, or Residential	
Receiving Water (name, basin): <u>Connecticut River</u>	
Time of Start of Discharge: _____	
Date/Time Collected: <u>9/25/2014 1:30pm</u>	Water Temperature: <u>10 C</u>
Person Collecting Sample: <u>MB@ECL</u>	
Storm Magnitude (inches): <u>0.4 in</u>	Storm Duration (hours): <u>4 hr</u>
Date of Previous Storm Event: <u>9/21/2014</u>	

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	150.2	6.92 s.u	ECL, INC. CT PH-0535
Rain pH	150.2	5.54 s.u.	ECL, INC. CT PH-0535
Hardness	200.7	29.8 mg/L	ECL, INC. CT PH-0535
Conductivity	SM2510B	146 umhos/cm	ECL, INC. CT PH-0535
Oil & Grease	1664A	ND<5.0 mg/L	ECL, INC. CT PH-0535
COD	H8000	282 mg/L	ECL, INC. CT PH-0535
Turbidity	180.1	180 NTU	ECL, INC. CT PH-0535
TSS	SM2540D	721 mg/L	ECL, INC. CT PH-0535
TP	200.7	0.58 mg/L	ECL, INC. CT PH-0535
Ammonia	ASTM D6919-03	0.74 mg/L	ECL, INC. CT PH-0535
TKN	SM4500orgC	3.12 mg/L	ECL, INC. CT PH-0535
NO ₃ +NO ₂	300.0	0.64 mg/L	ECL, INC. CT PH-0535
E. coli	SM9223B	>2419.6MPN/100ml	ECL, INC. CT PH-0535

STATEMENT OF ACKNOWLEDGMENT

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Authorized Official: <u>David Caroline</u>	
Signature: <u>Lisa Yasuda, Director of Health</u>	Date: <u>12/22/2014</u>



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: <u>Essex</u>	
Mailing Address: <u>29 West Avenue, Essex, Connecticut 06429</u>	
Contact Person: <u>David Caroline</u>	Title: <u>Director of</u> Phone: <u>(860) 767-0715</u>
Permit Registration # <u>GSM 000019</u>	<u>Public Works</u>

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>IP – Industrial Park</u>	
Please circle the appropriate area description: Industrial , Commercial, or Residential	
Receiving Water (name, basin): <u>Connecticut River</u>	
Time of Start of Discharge: _____	
Date/Time Collected: <u>9/25/2014 1:15pm</u>	Water Temperature: <u>10 C</u>
Person Collecting Sample: <u>MB@ECL</u>	
Storm Magnitude (inches): <u>0.4 in</u>	Storm Duration (hours): <u>4 hr</u>
Date of Previous Storm Event: <u>9/21/2014</u>	

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	150.2	4.87 s.u	ECL, INC. CT PH-0535
Rain pH	150.2	5.54 s.u.	ECL, INC. CT PH-0535
Hardness	200.7	9.38 mg/L	ECL, INC. CT PH-0535
Conductivity	SM2510B	40.5 umhos/cm	ECL, INC. CT PH-0535
Oil & Grease	1664A	ND<5.0 mg/L	ECL, INC. CT PH-0535
COD	H8000	93.0 mg/L	ECL, INC. CT PH-0535
Turbidity	180.1	38 NTU	ECL, INC. CT PH-0535
TSS	SM2540D	32.0 mg/L	ECL, INC. CT PH-0535
TP	200.7	0.08 mg/L	ECL, INC. CT PH-0535
Ammonia	ASTM D6919-03	0.10 mg/L	ECL, INC. CT PH-0535
TKN	SM4500orgC	1.17 mg/L	ECL, INC. CT PH-0535
NO ₃ +NO ₂	300.0	0.53 mg/L	ECL, INC. CT PH-0535
E. coli	SM9223B	488.4 MPN/100ml	ECL, INC. CT PH-0535

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>David Caroline</u>	
Signature: <u>Lisa Daniels, Director of Health</u>	Date: <u>12/22/2014</u>

ENVIRONMENTAL
CONSULTING LABORATORIES, INC.

1005 Boston Post Road
Madison, CT 06443

(203) 245-0568 Phone
(203) 318-0830 Fax

Client: Town of Essex- Dept. Public Works
Contact: Mr. David Caroline
Address: 29 West Ave. Essex, CT
Phone: Fax:

Project:

MS4-Phase II Stormwater
Monitoring

PWSID#

Samplers Name: (Print)

System Type:

M Bazzis

Client I.D.	Sampling Location	Date	Time	Sample Type		Number of Containers	Required Analysis						Cl ₂ Res.	ECL Sample I.D.#	
				Water	Solid		Comp	Grab	pH Sample & Rainwater	Hardness, Conductivity	Total O & G, Turbidity	COD, TSS, T-Phos			NO ₂ , NO ₃ , NH ₃ & TKN
NC	New City	9/25	12:50pm	X			X				X	X	X	X	95441
FM	Foot of Main St.		12:40p	X			X				X	X	X	X	95442
BD	Brewers Daunties		12:25pm	X			X				X	X	X	X	95443
BR	Bokum Road		1:03pm	X			X				X	X	X	X	95444
IV	Ivoryton Village		1:30pm	X			X				X	X	X	X	95445
IP	Industrial Park		1:15pm	X			X				X	X	X	X	95446
	Rain Water PH		2:05pm	X			X				X				

All bacteria samples must have corresponding field chlorine residual recorded

Relinquished by:	Date	Time	Received by:	Time
	9/25/14	2:05pm		
Relinquished by:	Date	Time	Received by:	Time

Were Samples received within holding time? Y N
 Were Samples chilled upon receipt? Y N 10.0°C
 Were Samples in appropriate containers? Y N
 If No Explain:
 Are containers broken/leaking? Y N
 Did Samples need to be split upon receipt? Y N
 Were Samples preserved properly? Y N

1005 BOSTON POST ROAD
MADISON, CT 06443



ENVIRONMENTAL
CONSULTING LABORATORIES, INC.

CT TOLL-FREE
1-800-246-9624 / 203-245-0568
Fax 203-318-0830
Connecticut Certification PH-0535

Report of Analysis

Name:	Town of Essex - DPW 29 West Avenue Essex, CT 06426 Attn: Mr. David Caroline	Sample ID#:	95441
Sample Date:	9/25/2014	Sample Type:	Water
Receipt Date:	9/25/2014	Sample Source:	MS4 Phase II - Stormwater
Report Date:	10/14/2014	Sampler:	ECL - MB
Sample Site:	NC - Foot New City		

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological						
Coliform, E. Coli	307.6	MPN/100mL	SM9223B	0	9/25/2014	JB
Chemical						
Ammonia as N	<0.05	mg/L	ASTM D6919-03	0.05	10/3/2014	KC
Chemical Oxygen Demand	593	mg/L	H8000	2	9/29/2014	KC
Hardness-Total	38.9	mg/L	EPA 200.7	1	10/7/2014	JM
Nitrate as N	0.62	mg/L	EPA300.0	0.1	9/26/2014	JB
Nitrite as N	ND	mg/L	EPA300.0	0.01	9/26/2014	JB
Oil & Grease-Total	10.7	mg/L	1664B	5	10/10/2014	DB
Phosphorous -Total as P	1.30	mg/L	EPA 200.7	0.04	10/7/2014	JM
TKN as N	8.80	mg/L	4500NorgC	0.5	10/3/2014	KC
Total Suspended Solids	990	mg/L	SM2540D	1	10/2/2014	JB
Physical						
Conductivity	52.7	umhos/cm	SM2510B	1	10/1/2014	JB
PH	5.42	pH	EPA 150.2	1	9/25/2014	KC
Turbidity	70	NTU	180.1	0.05	9/26/2014	JB
PH(Rain Water)	5.54	pH	EPA 150.2	1	9/25/2014	JB



DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected

1005 BOSTON POST ROAD
MADISON, CT 06443



ENVIRONMENTAL
CONSULTING LABORATORIES, INC.

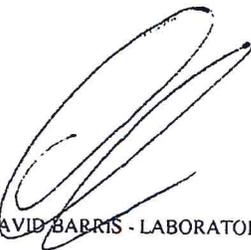
CT TOLL-FREE
1-800-246-9624 / 203-245-0568
Fax 203-318-0830
Connecticut Certification PH-0535

Report of Analysis

Name: Town of Essex - DPW
29 West Avenue
Essex, CT 06426
Attn: Mr. David Caroline
Sample Date: 9/25/2014
Receipt Date: 9/25/2014
Report Date: 10/14/2014
Sample Site: FM - Foot of Main St.

Sample ID#: 95442
Sample Type: Water
Sample Source: MS4 Phase II - Stormwater
Sampler: ECL - MB

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological						
Coliform, E. Coli	1986.3	MPN/100mL	SM9223B	0	9/25/2014	JB
Chemical						
Ammonia as N	0.06	mg/L	ASTM D6919-03	0.05	10/3/2014	KC
Chemical Oxygen Demand	872	mg/L	H8000	2	9/29/2014	KC
Hardness-Total	54.2	mg/L	EPA 200.7	1	10/7/2014	JM
Nitrate as N	0.49	mg/L	EPA300.0	0.1	9/26/2014	JB
Nitrite as N	ND	mg/L	EPA300.0	0.01	9/26/2014	JB
Oil & Grease-Total	8.8	mg/L	1664B	5	10/10/2014	DB
Phosphorous -Total as P	1.62	mg/L	EPA 200.7	0.04	10/7/2014	JM
TKN as N	11.6	mg/L	4500NorgC	0.5	10/3/2014	KC
Total Suspended Solids	1458	mg/L	SM2540D	1	10/2/2014	JB
Physical						
Conductivity	107	umhos/cm	SM2510B	1	10/1/2014	JB
PH	5.78	pH	EPA 150.2	1	9/25/2014	KC
Turbidity	110	NTU	180.1	0.05	9/26/2014	JB
PH(Rain Water)	5.54	pH	EPA 150.2	1	9/25/2014	JB



DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected

1005 BOSTON POST ROAD
MADISON, CT 06443



ENVIRONMENTAL
CONSULTING LABORATORIES, INC.

CT TOLL-FREE
1-800-246-9624 / 203-245-0568
Fax 203-318-0830
Connecticut Certification PH-0535

Report of Analysis

Name: Town of Essex - DPW
29 West Avenue
Essex, CT 06426
Attn: Mr. David Caroline

Sample Date: 9/25/2014
Receipt Date: 9/25/2014
Report Date: 10/14/2014
Sample Site: BD - Brewrers Dauntles

Sample ID#: 95443
Sample Type: Water
Sample Source: MS4 Phase II - Stormwater
Sampler: ECL - MB

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological						
Coliform, E. Coli	1732.9	MPN/100mL	SM9223B	0	9/25/2014	JB
Chemical						
Ammonia as N	0.64	mg/L	ASTM D6919-03	0.05	10/3/2014	KC
Chemical Oxygen Demand	122	mg/L	H8000	2	9/29/2014	KC
Hardness-Total	13.4	mg/L	EPA 200.7	1	10/7/2014	JM
Nitrate as N	0.58	mg/L	EPA300.0	0.1	9/26/2014	JB
Nitrite as N	ND	mg/L	EPA300.0	0.01	9/26/2014	JB
Oil & Grease-Total	ND	mg/L	1664B	5	10/10/2014	DB
Phosphorous -Total as P	0.37	mg/L	EPA 200.7	0.04	10/7/2014	JM
TKN as N	2.47	mg/L	4500NorgC	0.5	10/3/2014	KC
Total Suspended Solids	149	mg/L	SM2540D	1	10/2/2014	JB
Physical						
Conductivity	64.7	umhos/cm	SM2510B	1	10/1/2014	JB
PH	6.54	pH	EPA 150.2	1	9/25/2014	KC
Turbidity	40	NTU	180.1	0.05	9/26/2014	JB
PH(Rain Water)	5.54	pH	EPA 150.2	1	9/25/2014	JB

DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected

1005 BOSTON POST ROAD
MADISON, CT 06443



ENVIRONMENTAL
CONSULTING LABORATORIES, INC.

CT TOLL-FREE
1-800-246-9624 / 203-245-0568
Fax 203-318-0830
Connecticut Certification PH-0535

Report of Analysis

Name: Town of Essex - DPW
29 West Avenue
Essex, CT 06426
Attn: Mr. David Caroline

Sample ID#: 95444
Sample Type: Water
Sample Source: MS4 Phase II - Stormwater
Sampler: ECL - MB

Sample Date: 9/25/2014
Receipt Date: 9/25/2014
Report Date: 10/14/2014
Sample Site: BR - Bokum Road

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological						
Coliform, E. Coli	2419.6	MPN/100mL	SM9223B	0	9/25/2014	JB
Chemical						
Ammonia as N	0.33	mg/L	ASTM D6919-03	0.05	10/3/2014	KC
Chemical Oxygen Demand	176	mg/L	H8000	2	9/29/2014	KC
Hardness-Total	16.2	mg/L	EPA 200.7	1	10/7/2014	JM
Nitrate as N	0.64	mg/L	EPA300.0	0.1	9/26/2014	JB
Nitrite as N	ND	mg/L	EPA300.0	0.01	9/26/2014	JB
Oil & Grease-Total	ND	mg/L	1664B	5	10/10/2014	DB
Phosphorous -Total as P	0.18	mg/L	EPA 200.7	0.04	10/7/2014	JM
TKN as N	2.60	mg/L	4500NorgC	0.5	10/3/2014	KC
Total Suspended Solids	70.0	mg/L	SM2540D	1	10/2/2014	JB
Physical						
Conductivity	93.7	umhos/cm	SM2510B	1	10/1/2014	JB
PH	6.45	pH	EPA 150.2	1	9/25/2014	KC
Turbidity	50	NTU	180.1	0.05	9/26/2014	JB
PH(Rain Water)	5.54	pH	EPA 150.2	1	9/25/2014	JB

DAVID BARRIS - LABORATORY DIRECTOR

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MADISON, CT 06443



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Report of Analysis

Name: Town of Essex - DPW
29 West Avenue
Essex, CT 06426
Attn: Mr. David Caroline

Sample ID#: 95445
Sample Type: Water
Sample Source: MS4 Phase II - Stormwater
Sampler: ECL - MB

Sample Date: 9/25/2014
Receipt Date: 9/25/2014
Report Date: 10/14/2014
Sample Site: IV - Ivoryton Village

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological						
Coliform, E. Coli	>2419.6	MPN/100mL	SM9223B	0	9/25/2014	JB
Chemical						
Ammonia as N	0.74	mg/L	ASTM D6919-03	0.05	10/3/2014	KC
Chemical Oxygen Demand	282	mg/L	H8000	2	9/29/2014	KC
Hardness-Total	29.8	mg/L	EPA 200.7	1	10/7/2014	JM
Nitrate as N	0.64	mg/L	EPA300.0	0.1	9/26/2014	JB
Nitrite as N	ND	mg/L	EPA300.0	0.01	9/26/2014	JB
Oil & Grease-Total	ND	mg/L	1664B	5	10/10/2014	DB
Phosphorous -Total as P	0.58	mg/L	EPA 200.7	0.04	10/7/2014	JM
TKN as N	3.12	mg/L	4500NorgC	0.5	10/3/2014	KC
Total Suspended Solids	721	mg/L	SM2540D	1	10/2/2014	JB
Physical						
Conductivity	146	umhos/cm	SM2510B	1	10/1/2014	JB
PH	6.92	pH	EPA 150.2	1	9/25/2014	KC
Turbidity	180	NTU	180.1	0.05	9/26/2014	JB
PH(Rain Water)	5.54	pH	EPA 150.2	1	9/25/2014	JB

DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected

1005 BOSTON POST ROAD
MADISON, CT 06443



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CONSULTING LABORATORIES, INC.

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Fax 203-318-0830
Connecticut Certification PH-0535

Report of Analysis

Name:	Town of Essex - DPW 29 West Avenue Essex, CT 06426 Attn: Mr. David Caroline	Sample ID#:	95446
Sample Date:	9/25/2014	Sample Type:	Water
Receipt Date:	9/25/2014	Sample Source:	MS4 Phase II - Stormwater
Report Date:	10/14/2014	Sampler:	ECL - MB
Sample Site:	IP - Industrial Park		

Parameter	Sample Result	Units	Method	MDL	Analysis Date	Analyst
Biological						
Coliform, E. Coli	488.4	MPN/100mL	SM9223B	0	9/25/2014	JB
Chemical						
Ammonia as N	0.10	mg/L	ASTM D6919-03	0.05	10/3/2014	KC
Chemical Oxygen Demand	93.0	mg/L	H8000	2	9/29/2014	KC
Hardness-Total	9.38	mg/L	EPA 200.7	1	10/7/2014	JM
Nitrate as N	0.53	mg/L	EPA300.0	0.1	9/26/2014	JB
Nitrite as N	ND	mg/L	EPA300.0	0.01	9/26/2014	JB
Oil & Grease-Total	ND	mg/L	1664B	5	10/10/2014	DB
Phosphorous -Total as P	0.08	mg/L	EPA 200.7	0.04	10/7/2014	JM
TKN as N	1.17	mg/L	4500NorgC	0.5	10/3/2014	KC
Total Suspended Solids	32.0	mg/L	SM2540D	1	10/2/2014	JB
Physical						
Conductivity	40.5	umhos/cm	SM2510B	1	10/1/2014	JB
PH	4.87	pH	EPA 150.2	1	9/25/2014	KC
Turbidity	38	NTU	180.1	0.05	9/26/2014	JB
PH(Rain Water)	5.54	pH	EPA 150.2	1	9/25/2014	JB

DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected

