



ESSEX HIGHWAY DEPARTMENT

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

December 18, 2015

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

RE: 2015 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 2015 Annual Report for your review. The 2015 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 2017.

In November 2015, the Town of Essex received a 2015 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. DEP255315 (Client ID No. 994543).

In January 2016, the Town issued this 2015 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) and VEOCI, The Virtual Emergency Operations Center to complete the identification and

location of catchbasins and stormwater outfalls throughout the Town of Essex. Approximately 100% of the catchbasins and stormwater outfalls throughout the Town have been identified and located on electronic Town of Essex mapping systems.

- Street sweeping was performed from March 2015 through the end of June 2015 (or the end of the snow season). Street sweeping and leaf collection was also performed from September through October 2015. Approximately 150 catchbasins were cleaned and inspected from August through November 2015. Approximately 5-6 catchbasins were repaired based on the electronic identification and location efforts.
- Enclosed is a copy of the 4th quarter 2015 Essex Events Magazine containing an article titled *Protecting Water Quality in Our Streams and Rivers*. This magazine is sent to every household in Essex, Centerbrook and Ivoryton. The article is intended to educate residents about storm water runoff and provides some examples of what they can do to eliminate residential sources of pollution in stormwater. Additionally, the article highlights Essex's ongoing activities and best management practices which comply with the State mandated General Permit for the Discharge of Storm water from Small MS4s.
- The six outfall locations (2-residential / 2-urban / 2-industrial) were sampled in 2015 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

David Caroline
Director of Public Works

cc: William P. Drouin (Apex Companies, LLC)

ATTACHMENTS

ESSEX TOWN HALL

767-4340 (Unless otherwise noted)

THE ESSEX TOWN HALL
is open 9 a.m. to 4 p.m. Monday through Friday

THE LANDFILL AND RECYCLING CENTER
is open Mondays, Thursdays, Fridays & Saturdays, 7 a.m. to 3 p.m.

SELECTMEN'S OFFICE

Norman Needleman, First Selectman	x114	nneedleman@essexct.gov
Maria Lucarelli	x112	mlucarelli@essexct.gov
Betsy D'Amico	x145	bdamico@essexct.gov

ANIMAL CONTROL OFFICER

Jae Wolf	860-388-7082	jwolf@essexct.gov
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ASSESSOR

Jessica Sypher, Assessor	x124	jsypher@essexct.gov
Nancy Berryman	x123	nberryman@essexct.gov

BUILDING DEPARTMENT & FIRE MARSHAL

Keith Nolin, Fire Marshal	x146	knolin@essexct.gov
Darcy Roper	x144	droper@essexct.gov
Dave DeLeeuw, Building Official	x117	ddeleew@essexct.gov

HEALTH DEPARTMENT

Lisa Fasulo, Director of Health	x118	lfasulo@essexct.gov
Kerry Berardinelli	x119	kberardinelli@essexct.gov

LANDFILL/RECYCLING CENTER

Mike Birner, Supervisor	860-767-1926	
Bill Armstead		

PARK AND RECREATION DEPARTMENT

Mary Ellen Barnes	x110	mbarnes@essexct.gov
Recreation Aide	x148	

PUBLIC WORKS

David Caroline, Director	860-767-0715	dcaroline@essexct.gov
William Angier, Boris Churyk,		
Richard Gallacher, Ryan Welch		

REGISTRARS OF VOTERS

Lois Ely	x142	registrar@essexct.gov
John Heiser	x142	lely@essexct.gov
		jheiser@essexct.gov

RESIDENT STATE TROOPER

ESSEX POLICE	860-767-1054	
David Tretter, Resident State Trooper		dtretter@essexct.gov
Russell Gingras, Corporal		rgingras@essexct.gov
Paul Kenefick		jkenefick@essexct.gov
Scott O'Donnell		sodonnell@essexct.gov
Todd Belcourt		tblcourt@essexct.gov

SOCIAL SERVICES

Mary Ellen Barnes	x201	mbarnes@essexct.gov
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TAX COLLECTOR

Megan Haskins, Tax Collector	x120	mhaskins@essexct.gov
Lynne Skinner	x121	lskinner@essexct.gov

TOWN CLERK

Joel Marzi, Town Clerk	x129	jmarzi@essexct.gov
Yvonne Roziak, Assistant	x128	yroziak@essexct.gov

TOWN HALL OPERATIONS

Mark Hiatt	x136	maintenance@essexct.gov
Joe Donofrio		

FINANCE DEPARTMENT

Kelly Sterner, Director of Finance	x122	ksterner@essexct.gov
Dana Novorio	x116	dnovorio@essexct.gov
James Francis, Treasurer	x127	jfrancis@essexct.gov

ZONING ENFORCEMENT

Joe Budrow, Enforcement Agent	x115	jbudrow@essexct.gov
Kerry Berardinelli	x119	kberardinelli@essexct.gov

www.essexct.gov

Protecting Water Quality in Our Streams and Rivers

Stormwater runoff from rain and snowmelt is directed into the Municipal Separate Stormwater Sewer System (MS4) consisting of a network of catch basins, underground piping, culverts and drainage swales. This network is essential for flood and erosion control but unfortunately it is also a significant conduit for unwanted pollution in our beautiful waterways and recreational areas. As stormwater flows downhill over driveways, streets, sidewalks, and lawns it picks up leaves, sand, dirt, oil, grease, lawn fertilizer, metals, plastic and trash and deposits it – untreated - directly into local wetlands, streams and rivers.

Water that we use for swimming, fishing, recreation or drinking is harmed by polluted stormwater runoff. High bacterial levels and algae growth in lakes and ponds poison aquatic plants, fish and humans. Trash washed into the waterways chokes birds and small mammals.

To minimize stormwater pollution, State regulations require Essex and towns all across Connecticut to protect the quality of stormwater discharged into their MS4's. Essex's Stormwater Management Plan defines the best management practices that town departments are required to use to protect stormwater quality. Some examples include:

- Dept of Public Works - oversees street sweeping, catch basin cleaning, road repair, debris management and the identification & elimination of illicit discharges to the stormwater system.
- Land Use Dept - regulates, through a permitting process, activities in wetland & watercourse areas and the repair of failing septic systems.
- Landfill/Transfer Station & Recycling Center –allows residents to properly dispose of antifreeze, oil, paint, leaves, brush, etc. (FREE OF CHARGE)
- Storm drain stencils and placards on catch basins near the CT River are part of the outreach efforts by Essex DPW to educate residents on illicit dumping of pollutants into waterways.

Residents and property owners are encouraged to help the Town protect stormwater quality. Here are a few things you can do:

LEAVES: When removing leaves from your property, DO NOT blow leaves into the street, catch basins, drainage areas or swales. DO NOT place leaf piles on the edge of the road where they can easily blow into the roadway. Bring leaves to the compost area at the landfill/transfer station – free of charge

Continued on page 15

VEHICLE MAINTENANCE: Wash your car on an unpaved surface. Check your car, boat, motorcycle and garden machinery for leaks. Clean up spilled fluids with an absorbent material like sand. Recycle used motor oil at the landfill/transfer station – free of charge.

LAWNS AND GARDENS: Use pesticides and herbicides sparingly. Sweep up yard debris. Cover piles of dirt and mulch. Cultivate plantings over bare spots in yard.

HOME REPAIRS: Sweep up and properly dispose of construction debris such as concrete and mortar. Use hazardous substances like paint, solvents and cleaners in the smallest amounts possible and clean up spills immediately. Dispose of hazardous materials at the Household Hazardous Waste Facility.

PET CARE: Clean up after your dog. Pick up outdoor pet waste by bagging it or flushing it down your toilet. Dispose of kitty litter in the trash (not down the toilet).

SEPTIC SYSTEMS: Pump your septic system regularly (every 3-5 years). Don't pour household chemicals down your drain.

SWIMMING POOLS: Store pool chemicals in a covered area. Use care to prevent leaks and spills of chemicals. DO NOT drain swimming pools to a municipal catch basin or drainage swale.

LANDSCAPE DESIGN: Utilize porous material, paving stones, bricks, etc., instead of asphalt for walkways. Build a garden shed to store fertilizer & pesticides.

For additional information on Stormwater Management visit the CT Dept of Energy & Environmental Protection website at: www.ct.gov/deep and search Municipal Stormwater or MS4 General Permit.

Essex Town Hall

29 West Avenue, Essex, CT 06426

Ph: 860-767-4340

Fax: 860-767-8509

Normal Hours: Monday - Friday,
9:00 am to 4:00 pm

TRUST YOUR CAR TO THE REPAIR SHOP MORE PEOPLE TRUST...

We are a full service garage dedicated to quality work and service.

"The Only Call You Need For Quality Service & Repairs"

AUTO SERVICE of Old Saybrook, Inc.

**We have Senior Citizen Day Every Day!
We Offer 10% OFF Repairs and Service up to \$50.00 Maximum.**



We employ ASE
Certified Technicians

Servicing Domestic & All European Cars Including
Mercedes, BMW, Jaguar, Audi, Saab, Volvo & VW



860-388-6838

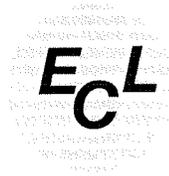
From oil changes & scheduled maintenance to engine repair or replacement, we can provide complete mechanical & electrical service to your vehicle.



**4 JADE COURT • OLD SAYBROOK
HOURS: MON. - FRI. 8 a.m. - 5 p.m.**



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: 8/11/2015
Receipt Date: 8/11/2015
Report Date: 8/27/2015
Sample Site: NC - Foot New City

Sample ID#: 100322
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	435.2	MPN/100mL	SM9223B	0	8/11/2015	JB
Chemical						
Ammonia as N	0.26	mg/L	ASTM D6919-03	0.05	8/13/2015	KC
Chemical Oxygen Demand	77.0	mg/L	H8000	2	8/19/2015	KC
Hardness-Total	2.27	mg/L	EPA 200.7	1	8/17/2015	JM
Nitrate as N	0.74	mg/L	EPA300.0	0.1	8/11/2015	JB
Nitrite as N	ND	mg/L	EPA300.0	0.01	8/11/2015	JB
Oil & Grease-Total (HEM)	<5.0	mg/L	1664B	5	8/25/2015	DB
Phosphorous -Total as P	0.30	mg/L	EPA 200.7	0.04	8/18/2015	JM
TKN as N	1.21	mg/L	4500NorgC	0.5	8/20/2015	KC
Total Suspended Solids	44.0	mg/L	SM2540D	1	8/14/2015	JB
Physical						
Conductivity	36.1	umhos/cm	SM2510B	1	8/13/2015	JB
PH	6.15	pH	EPA 150.2	1	8/11/2015	KC
Turbidity	12	NTU	180.1	0.05	8/13/2015	JB
PH(Rain Water)	6.10	pH	EPA 150.2	1	8/11/2015	KC

DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected



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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Essex

Mailing Address: 29 West Ave., Essex, CT 06426

Contact Person: Lisa Fasulo Title: Director of Health Phone: 860-767-4340 x118

Permit Registration #GSM - 000019

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): NC – Foot New City

Please circle the appropriate area description: Industrial, Commercial, or **Residential**

Receiving Water (name, basin): Connecticut River

Time of Start of Discharge: _____

Date/Time Collected: 8/11/15 8:15am Water Temperature: 16 C

Person Collecting Sample: MB@ECL

Storm Magnitude (inches): 2.01 Storm Duration (hours): 5 hr

Date of Previous Storm Event: 8/4/2015

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	150.2	6.15 s.u	ECL, INC. CT PH-0535
Rain pH	150.2	6.10 s.u.	ECL, INC. CT PH-0535
Hardness	200.7	2.27 mg/L	ECL, INC. CT PH-0535
Conductivity	SM2510B	36.7 umhos/cm	ECL, INC. CT PH-0535
Oil & Grease	1664B	<5.0 mg/L	ECL, INC. CT PH-0535
COD	H8000	77.0 mg/L	ECL, INC. CT PH-0535
Turbidity	180.1	12 NTU	ECL, INC. CT PH-0535
TSS	SM2540D	44.0 mg/L	ECL, INC. CT PH-0535
TP	200.7	0.30 mg/L	ECL, INC. CT PH-0535
Ammonia	ASTM D6919-03	0.26 mg/L	ECL, INC. CT PH-0535
TKN	SM4500orgC	1.21 mg/L	ECL, INC. CT PH-0535
NO ₃ +NO ₂	300.0	0.74 mg/L	ECL, INC. CT PH-0535
E. coli	SM9223B	435.2 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: Lisa Fasulo

Signature: Lisa Fasulo Date: 10/15/2015



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 Ave., Essex, CT 06426</u>	
Contact Person: <u>LISA FASULO</u>	Title: <u>Director of Health</u>
Phone: <u>860-767-4340 x118</u>	
Permit Registration # <u>GSM-000019</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>8/11/15 7:50am</u>	Water Temperature: <u>15 C</u>	
Person Collecting Sample: <u>MB@ECL</u>		
Storm Magnitude (inches): <u>2.01</u>	Storm Duration (hours): <u>5</u>	
Date of Previous Storm Event: <u>8/4/2015</u>		

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	150.2	5.72 s.u	ECL, INC. CT PH-0535
Rain pH	150.2	6.10 s.u.	ECL, INC. CT PH-0535
Hardness	200.7	9.92 mg/L	ECL, INC. CT PH-0535
Conductivity	SM2510B	61.8umhos/cm	ECL, INC. CT PH-0535
Oil & Grease	1664B	7.3 mg/L	ECL, INC. CT PH-0535
COD	H8000	188mg/L	ECL, INC. CT PH-0535
Turbidity	180.1	14 NTU	ECL, INC. CT PH-0535
TSS	SM2540D	153 mg/L	ECL, INC. CT PH-0535
TP	200.7	0.39 mg/L	ECL, INC. CT PH-0535
Ammonia	ASTM D6919-03	0.61 mg/L	ECL, INC. CT PH-0535
TKN	SM4500orgC	5.22 mg/L	ECL, INC. CT PH-0535
NO ₃ +NO ₂	300.0	1.02 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>LISA FASULO</u>	
Signature: <u>Lisa Fasulo</u>	Date: <u>10/15/2015</u>

1005 BOSTON POST ROAD
MADISON, CT 06443



ENVIRONMENTAL
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Fax 203-318-0830
Connecticut Certification PH-0535

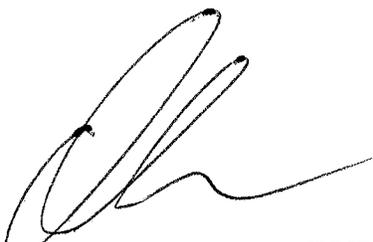
Report of Analysis

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

Sample Date: 8/11/2015
Receipt Date: 8/11/2015
Report Date: 8/27/2015
Sample Site: FM - Foot of Main St.

Sample ID#: 100323
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	2419.6	MPN/100mL	SM9223B	0	8/11/2015	JB
Chemical Ammonia as N	0.61	mg/L	ASTM D6919-03	0.05	8/13/2015	KC
Chemical Oxygen Demand	188	mg/L	H8000	2	8/19/2015	KC
Hardness-Total	9.92	mg/L	EPA 200.7	1	8/17/2015	JM
Nitrate as N	0.99	mg/L	EPA300.0	0.1	8/11/2015	JB
Nitrite as N	0.03	mg/L	EPA300.0	0.01	8/11/2015	JB
Oil & Grease-Total (HEM)	7.3	mg/L	1664B	5	8/25/2015	DB
Phosphorous -Total as P	0.39	mg/L	EPA 200.7	0.04	8/18/2015	JM
TKN as N	5.22	mg/L	4500NorgC	0.5	8/20/2015	KC
Total Suspended Solids	153	mg/L	SM2540D	1	8/14/2015	JB
Physical Conductivity	61.8	umhos/cm	SM2510B	1	8/13/2015	JB
PH	5.72	pH	EPA 150.2	1	8/11/2015	KC
Turbidity	14	NTU	180.1	0.05	8/13/2015	JB
PH(Rain Water)	6.10	pH	EPA 150.2	1	8/11/2015	KC



DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected



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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Essex

Mailing Address: 29 West Ave., Essex, CT 06426

Contact Person: Lisa Fasulo Title: Director of Health Phone: 860-767-4340 x118

Permit Registration # GSM-000019

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): BR - Brewers Dauntles

Please circle the appropriate area description: Industrial, Commercial, or **Residential**

Receiving Water (name, basin): Connecticut River

Time of Start of Discharge: _____

Date/Time Collected: 8/11/15 8:00am Water Temperature: 18 c

Person Collecting Sample: MB@ECL

Storm Magnitude (inches): 2.01 Storm Duration (hours): 5

Date of Previous Storm Event: 8/4/2015

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	150.2	7.06 s.u	ECL, INC. CT PH-0535
Rain pH	150.2	6.10 s.u.	ECL, INC. CT PH-0535
Hardness	200.7	9.55 mg/L	ECL, INC. CT PH-0535
Conductivity	SM2510B	84.9umhos/cm	ECL, INC. CT PH-0535
Oil & Grease	1664B	ND<5.0 mg/L	ECL, INC. CT PH-0535
COD	H8000	90.0 mg/L	ECL, INC. CT PH-0535
Turbidity	180.1	50 NTU	ECL, INC. CT PH-0535
TSS	SM2540D	77.0 mg/L	ECL, INC. CT PH-0535
TP	200.7	0.23 mg/L	ECL, INC. CT PH-0535
Ammonia	ASTM D6919-03	0.21 mg/L	ECL, INC. CT PH-0535
TKN	SM4500orgC	1.05 mg/L	ECL, INC. CT PH-0535
NO ₃ +NO ₂	300.0	1.01 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: Lisa Fasulo

Signature: Lisa Fasulo Date: 10/15/2015

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Connecticut Certification PH-0535

Report of Analysis

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

Sample Date: 8/11/2015
Receipt Date: 8/11/2015
Report Date: 8/27/2015
Sample Site: BD - Brewrers Dauntles

Sample ID#: 100324
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	>2419.6	MPN/100mL	SM9223B	0	8/11/2015	JB
Chemical Ammonia as N	0.21	mg/L	ASTM D6919-03	0.05	8/13/2015	KC
Chemical Oxygen Demand	90.0	mg/L	H8000	2	8/19/2015	KC
Hardness-Total	9.55	mg/L	EPA 200.7	1	8/17/2015	JM
Nitrate as N	1.01	mg/L	EPA300.0	0.1	8/11/2015	JB
Nitrite as N	ND	mg/L	EPA300.0	0.01	8/11/2015	JB
Oil & Grease-Total (HEM)	<5.0	mg/L	1664B	5	8/25/2015	DB
Phosphorous -Total as P	0.23	mg/L	EPA 200.7	0.04	8/18/2015	JM
TKN as N	1.05	mg/L	4500NorgC	0.5	8/20/2015	KC
Total Suspended Solids	77.0	mg/L	SM2540D	1	8/14/2015	JB
Physical Conductivity	84.9	umhos/cm	SM2510B	1	8/13/2015	JB
PH	7.06	pH	EPA 150.2	1	8/11/2015	KC
Turbidity	50	NTU	180.1	0.05	8/13/2015	JB
PH(Rain Water)	6.10	pH	EPA 150.2	1	8/11/2015	KC

DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected



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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Essex
 Mailing Address: 29 West Ave., Essex, CT 06426
 Contact Person: LISA FASULO Title: Director of Health Phone: 860-767-4340 x118
 Permit Registration # GSM-000019

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): BR – Bokum Road
 Please circle the appropriate area description: Industrial, Commercial, or **Residential**
 Receiving Water (name, basin): Connecticut River
 Time of Start of Discharge: _____
 Date/Time Collected: 8/11/15 8:29am Water Temperature: 18 c
 Person Collecting Sample: MB@ECL
 Storm Magnitude (inches): 2.01 Storm Duration (hours): 5
 Date of Previous Storm Event: 8/4/2015

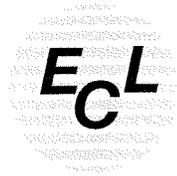
MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	150.2	6.44s.u	ECL, INC. CT PH-0535
Rain pH	150.2	6.10s.u.	ECL, INC. CT PH-0535
Hardness	200.7	2.35 mg/L	ECL, INC. CT PH-0535
Conductivity	SM2510B	19.5umhos/cm	ECL, INC. CT PH-0535
Oil & Grease	1664B	ND<5.0 mg/L	ECL, INC. CT PH-0535
COD	H8000	53.0 mg/L	ECL, INC. CT PH-0535
Turbidity	180.1	17 NTU	ECL, INC. CT PH-0535
TSS	SM2540D	28.0 mg/L	ECL, INC. CT PH-0535
TP	200.7	0.08mg/L	ECL, INC. CT PH-0535
Ammonia	ASTM D6919-03	0.18 mg/L	ECL, INC. CT PH-0535
TKN	SM4500orgC	<0.50 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	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: LISA FASULO
 Signature: Lisa Fasulo Date: 10/15/2015



1005 BOSTON POST ROAD
MADISON, CT 06443

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: 8/11/2015
Receipt Date: 8/11/2015
Report Date: 8/27/2015
Sample Site: BR - Bokum Road

Sample ID#: 100325
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	8/11/2015	JB
Chemical Ammonia as N	0.18	mg/L	ASTM D6919-03	0.05	8/13/2015	KC
Chemical Oxygen Demand	53.0	mg/L	H8000	2	8/19/2015	KC
Hardness-Total	2.35	mg/L	EPA 200.7	1	8/17/2015	JM
Nitrate as N	0.53	mg/L	EPA300.0	0.1	8/11/2015	JB
Nitrite as N	ND	mg/L	EPA300.0	0.01	8/11/2015	JB
Oil & Grease-Total (HEM)	5.2	mg/L	1664B	5	8/25/2015	DB
Phosphorous -Total as P	0.08	mg/L	EPA 200.7	0.04	8/18/2015	JM
TKN as N	<0.50	mg/L	4500NorgC	0.5	8/20/2015	KC
Total Suspended Solids	28.0	mg/L	SM2540D	1	8/14/2015	JB
Physical Conductivity	19.5	umhos/cm	SM2510B	1	8/13/2015	JB
PH	6.44	pH	EPA 150.2	1	8/11/2015	KC
Turbidity	17	NTU	180.1	0.05	8/13/2015	JB
PH(Rain Water)	6.10	pH	EPA 150.2	1	8/11/2015	KC

DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected



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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Essex
 Mailing Address: 29 West Ave., Essex, CT 06426
 Contact Person: Lisa Fasulo Title: Director of Health Phone: 860-767-4340 x118
 Permit Registration #GSM: 000019

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): IV - Ivoryton village
 Please circle the appropriate area description: Industrial, Commercial, or **Residential**
 Receiving Water (name, basin): Connecticut
 Time of Start of Discharge: _____
 Date/Time Collected: 8/11/2015 8:47am Water Temperature: 19 c
 Person Collecting Sample: MB@ECL
 Storm Magnitude (inches): 2.01 Storm Duration (hours): 5 hr
 Date of Previous Storm Event: 8/4/2015

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	150.2	7.63s.u	ECL, INC. CT PH-0535
Rain pH	150.2	6.10 s.u.	ECL, INC. CT PH-0535
Hardness	200.7	15.7 mg/L	ECL, INC. CT PH-0535
Conductivity	SM2510B	60.3 umhos/cm	ECL, INC. CT PH-0535
Oil & Grease	1664B	5.2 mg/L	ECL, INC. CT PH-0535
COD	H8000	66.0 mg/L	ECL, INC. CT PH-0535
Turbidity	180.1	110 NTU	ECL, INC. CT PH-0535
TSS	SM2540D	119 mg/L	ECL, INC. CT PH-0535
TP	200.7	0.09 mg/L	ECL, INC. CT PH-0535
Ammonia	ASTM D6919-03	0.08 mg/L	ECL, INC. CT PH-0535
TKN	SM4500orgC	<0.50 mg/L	ECL, INC. CT PH-0535
NO ₃ +NO ₂	300.0	0.56 mg/L	ECL, INC. CT PH-0535
E. coli	SM9223B	83.0MPN/100ml	ECL, INC. CT PH-0535

STATEMENT OF ACKNOWLEDGMENT

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Authorized Official: Lisa Fasulo
 Signature: Lisa Fasulo Date: 10/15/2015

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: 8/11/2015
Receipt Date: 8/11/2015
Report Date: 8/27/2015
Sample Site: IV - Ivoryton Village

Sample ID#: 100326
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	83.9	MPN/100mL	SM9223B	0	8/11/2015	JB
Chemical Ammonia as N	0.08	mg/L	ASTM D6919-03	0.05	8/13/2015	KC
Chemical Oxygen Demand	66.0	mg/L	H8000	2	8/19/2015	KC
Hardness-Total	15.7	mg/L	EPA 200.7	1	8/17/2015	JM
Nitrate as N	0.56	mg/L	EPA300.0	0.1	8/11/2015	JB
Nitrite as N	ND	mg/L	EPA300.0	0.01	8/11/2015	JB
Oil & Grease-Total (HEM)	5.2	mg/L	1664B	5	8/25/2015	DB
Phosphorous -Total as P	0.09	mg/L	EPA 200.7	0.04	8/18/2015	JM
TKN as N	<0.50	mg/L	4500NorgC	0.5	8/20/2015	KC
Total Suspended Solids	119	mg/L	SM2540D	1	8/14/2015	JB
Physical Conductivity	60.3	umhos/cm	SM2510B	1	8/13/2015	JB
PH	7.63	pH	EPA 150.2	1	8/11/2015	KC
Turbidity	110	NTU	180.1	0.05	8/13/2015	JB
PH(Rain Water)	6.10	pH	EPA 150.2	1	8/11/2015	KC

DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected



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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Eddex

Mailing Address: 29 West Ave., Eddex CT 06426

Contact Person: LISA FASULO Title: Director of Health Phone: 860-767-4340 x118

Permit Registration # GSM-000019

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): _____ IP – Industrial Park

Please circle the appropriate area description: **Industrial**, Commercial, or Residential

Receiving Water (name, basin): Connecticut River

Time of Start of Discharge: _____

Date/Time Collected: 8/11/2015 8:36am Water Temperature: 17 c

Person Collecting Sample: MB@ECL

Storm Magnitude (inches): 2.01 Storm Duration (hours): 5

Date of Previous Storm Event: 8/4/2015

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	150.2	4.80s.u	ECL, INC. CT PH-0535
Rain pH	150.2	6.10s.u.	ECL, INC. CT PH-0535
Hardness	200.7	1.49 mg/L	ECL, INC. CT PH-0535
Conductivity	SM2510B	15.9umhos/cm	ECL, INC. CT PH-0535
Oil & Grease	1664A	ND<5.0 mg/L	ECL, INC. CT PH-0535
COD	H8000	38.0 mg/L	ECL, INC. CT PH-0535
Turbidity	180.1	17 NTU	ECL, INC. CT PH-0535
TSS	SM2540D	28.0 mg/L	ECL, INC. CT PH-0535
TP	200.7	<0.04 mg/L	ECL, INC. CT PH-0535
Ammonia	ASTM D6919-03	0.13 mg/L	ECL, INC. CT PH-0535
TKN	SM4500orgC	<0.50 mg/L	ECL, INC. CT PH-0535
NO ₃ +NO ₂	300.0	0.50 mg/L	ECL, INC. CT PH-0535
E. coli	SM9223B	<1.0MPN/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: LISA FASULO

Signature: Lisa Fasulo Date: 10/15/2015

1005 BOSTON POST ROAD
MADISON, CT 06443

CT TOLL-FREE
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Fax 203-318-0830
Connecticut Certification PH-0535

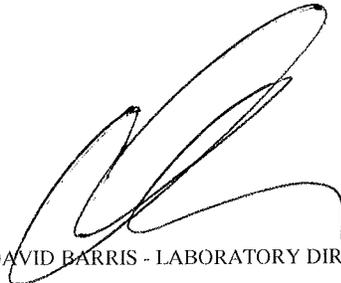
Report of Analysis

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

Sample Date: 8/11/2015
Receipt Date: 8/11/2015
Report Date: 8/27/2015
Sample Site: IP - Industrial Park

Sample ID#: 100327
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	<1.0	MPN/100mL	SM9223B	0	8/11/2015	JB
Chemical Ammonia as N	0.13	mg/L	ASTM D6919-03	0.05	8/13/2015	KC
Chemical Oxygen Demand	38.0	mg/L	H8000	2	8/19/2015	KC
Hardness-Total	1.49	mg/L	EPA 200.7	1	8/17/2015	JM
Nitrate as N	0.50	mg/L	EPA300.0	0.1	8/11/2015	JB
Nitrite as N	ND	mg/L	EPA300.0	0.01	8/11/2015	JB
Oil & Grease-Total (HEM)	<5.0	mg/L	1664B	5	8/25/2015	DB
Phosphorous -Total as P	<0.04	mg/L	EPA 200.7	0.04	8/18/2015	JM
TKN as N	<0.50	mg/L	4500NorgC	0.5	8/20/2015	KC
Total Suspended Solids	28.0	mg/L	SM2540D	1	8/14/2015	JB
Physical Conductivity	15.9	umhos/cm	SM2510B	1	8/13/2015	JB
PH	4.80	pH	EPA 150.2	1	8/11/2015	KC
Turbidity	17	NTU	180.1	0.05	8/13/2015	JB
PH(Rain Water)	6.10	pH	EPA 150.2	1	8/11/2015	KC


DAVID BARRIS - LABORATORY DIRECTOR

ND = Not Detected

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

Samplers Name: (Print)
Michael B

PWSID#: _____
System Type: _____

Client I.D.	Sampling Location	Date	Time	Sample Type			Number of Containers	Required Analysis						All bacteria samples must have corresponding field chlorine residual recorded		
				Water	Solid	Comp		Grab	PH-Sample & Rainwater	Hardness, Conductivity	Total O & G, Turbidity	COD, TSS, T-Phos	NO2, NO3, NH3 & TKN		Fi Coll	
NC	New City	8-11	8:15 AM	X			X	X	X	X	X	X	X	X	16	100322
FM	Foot of Main St.		7:50 AM	X			X	X	X	X	X	X	X	X	15	100323
BD	Brewers Daunties		8:00 AM	X			X	X	X	X	X	X	X	X	18	100324
BR	Bokum Road		8:29 AM	X			X	X	X	X	X	X	X	X	18	100325
IV	Ivoryton Village		8:47 AM	X			X	X	X	X	X	X	X	X	19	100326
IP	Industrial Park		8:36 AM	X			X	X	X	X	X	X	X	X	17	100327

Relinquished by:	Date	Time	Received by:	Date	Time
	8-11	9:15 AM	<i>[Signature]</i>		
Relinquished by:	Date	Time	Received by:	Date	Time

Were Samples received within holding time? Y N
 Were Samples chilled upon receipt? Y N
 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