TOWN HALL 1 MONTEITH DRIVE FARMINGTON, CONNECTICUT 06032-1053

INFORMATION ((860) 675-2300 FAX (860) 675-7140 "TOWN TALK" (860) 675-2301

December 31, 2013

State of Connecticut
Department of Environmental Protection
Bureau of Water Management
79 Elm Street

Hartford, CT 06106-5127

Attn: Stormwater Permit Coordinator

RE: Annual Report on Municipal Storm Sewers for 2013

Town of Farmington

Sir or Madame:

Enclosed with this letter, we are transmitting the Annual Report on Municipal Storm Sewers covering our activities performed during the calendar year 2013 as required under subsection 6(i)(2) of the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit). As noted previously, I am currently the primary contact for departmental correspondence and inquires. The stormwater monitoring data and sample locations for 2013 have been obtained based on the alternative sampling plan that the Commissioner approved in February 2007, the results of which can be found in Attachment A. A check for the municipal plan review fee, in the amount of \$187.50, was recently mailed to the Accounts Receivable Department at the CTDEEP.

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute.

Sincerely,

Russell M. Arnold, Jr., P.E. Director/Town Engineer Department of Public Works Town of Farmington

enclosures



2013 ANNUAL REPORT

Municipal Separate Storm Sewer System FARMINGTON, CT

Prepared by

TOWN OF FARMINGTON
DEPARTMENT OF PUBLIC WORKS
Engineering Division
1 Monteith Drive
Farmington, CT 06032

December 2013

1. PURPOSE AND SCOPE

This Annual Report is required by subsection 6(i)(2) of the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit). The MS4 General Permit was issued by the Connecticut Department of Energy and Environmental Protection (CTDEEP) on January 9, 2004 and it is applicable to storm sewer facilities owned or operated by the Town of Farmington. The permit was extended "as-is" until January 8, 2015. The municipal storm sewer facilities owned by the Town of Farmington were registered by the filing of Part A and Part B of the required registration forms. This report is the vehicle by which the Town of Farmington is required to annually report to the CTDEEP Stormwater Permit Coordinator on the status of compliance with the MS4 General Permit and to submit the stormwater monitoring data collected and analyzed during the year.

The Stormwater Monitoring Report Forms and Averill Environmental Laboratory data results can be found in Attachment A. The mapping of the locations where the stormwater discharge samples were collected can be found in Attachment B.

The Town of Farmington alternative sampling plan that was filed as part of the 2006 Annual Report was approved by the Department of Environmental Protection Stormwater Permit Coordinator on February 27, 2007.

The certification required under subsection 7(e) of the MS4 General Permit is presented in Section 3 of this report.

The April issue also included notices for "Clean-Up your House Day" held on April 27, 2013, and a "Clean-Up the Town Day" held on May 4, 2013. These two events are further detailed in Section 2.2.

In addition to the Farmington Town Letter, the Town has a Green Efforts Committee that is tasked with promoting energy efficiency, clean energy sources, as well as stormwater, recycling, understanding the value and protection of wetlands, the environment, and natural resources. The Committee consists of residents, students, Town staff, Board of Education members, as well as Town Council members. The Committee has created a "Green Initiatives" webpage on the Town of Farmington Website, which includes a Stormwater Runoff link, where the article "Stormwater Runoff Pollution: What You Can Do to Help", is presented. In the future, other information will be added to the webpage bringing awareness to the effects of stormwater pollution.

Contact continues to be maintained with other organizations involved with the Town's stormwater program. These include the Department of Energy and Environmental Protection (CTDEEP), the Department of Transportation (ConnDOT), the Farmington River Watershed Association, the Central Connecticut Regional Planning Agency (CCRPA), the Pequabuck River Watershed Association, and the University of Connecticut education program known as the Nonpoint Education for Municipal Officials program.

The Town is working with CCRPA to update the Pequabuck River Watershed Management Plan. The Town of Farmington is the most downstream Town in the Pequabuck River Watershed, which drains parts of the Towns of Harwinton, Plymouth, Burlington, Bristol, Plainville and Farmington. The earlier plan was completed in 2005 and presented before the Town of in 2006. The preparation of a Pequabuck River Watershed Management Plan was a primary recommendation of "The Pequabuck River State of the Watershed Report" in December of 2004. CCRPA is currently awaiting the potential notification of a CTDEEP grant to update the plan in accordance with the Environmental Protection Agency (EPA) requirements. Once the plan is updated, the Town's will be eligible for EPA funding opportunities to implement any mitigation strategies that may be identified in the plan.

2.2 Public Participation

The Town of Farmington has collaborated with other local non-profit organizations in an attempt to involve the public in environmentally friendly projects. While the events were planned to perform certain tasks, one of the key goals was to involve the public to educate them of the surrounding environment and the possible negative effects of their everyday lifestyles. It is the

Code and the Town Planning review process to establish and enforce a required local review and approval of new storm sewer connections to municipal, institutional, private and state-owned storm sewers, and the construction of new privately owned storm sewer outfalls.

An Illicit Discharge and Connection Ordinance was approved by the Farmington Town Council, on July 12, 2011. The ordinance was developed to forbid any future illicit discharges or connections, and gives the Town authority to inspect any possible illicit discharge or connections, and allows for the Town to issue citations and fines if deemed necessary.

2.4 Construction Site Runoff

Article IV, Section 11, of the Farmington Regulations for Zoning, requires the submission and approval of an erosion and sediment control plan whenever more than one half acre of land will be disturbed. The regulations also reference the *Connecticut Guidelines for Soil Erosion and Sediment Control*, as amended. In addition, the regulations establish enforceable performance standards for construction activities that do not require the submission of an erosion and sediment control plan, including projects disturbing less than one half acre of land. These regulatory requirements continue to be monitored and enforced.

On November 26, 2007 the Town had updated the Farmington Inland Wetland and Watercourse Agency regulations that now require all landowners to obtain a permit for activities listed in Section 2.1 of the permit, conducted within 150ft of a designated wetland or watercourse.

In 2012 the Town of Farmington Plan & Zoning Commission and Inland Wetlands & Watercourse Commission, were separated into two separate commissions, the "Town Plan and Zoning Commission" and the "Conservation and Inland Wetlands Commission" (CIWC). The CIWC is responsible for promoting the development and conservation of natural resources, including water resources. The Commission is also responsible for reviewing applications involving activities within wetlands or watercourses, and activities conducted within 150ft of a designated wetland or watercourse. The Commission also reviews land use applications to provide advisory recommendations to the Town Plan and Zoning Commission on environmental and conservation related elements of these projects. The Commission is also responsible for the permitting of all regulated activities conducted upon or upland of an inland wetland or watercourse within the Town of Farmington, as those terms are defined in the Inland Wetlands and Watercourses Act of the State of Connecticut and in the Farmington Regulations for Inland Wetlands.

the erosion of sand from roadways. ConnDOT adopted a similar program in 2005 opting to use a liquid mixture in lieu of sand and salt.

The evaluation and cleaning of stormwater structures and the evaluation and prioritization of the need to upgrade and repair stormwater structures, have always been routine activities within the Department of Public Works. These activities will be continued and the effectiveness of the effort can be expected to improve as a result of the focus created by the stormwater general permit and stormwater training. The elimination of the use of sand for skid control is a manifestation of this focus. No additional staff is being added to materially expand the programs outside of the normal annual budget process.

2.7 Monitoring

The monitoring of six stormwater outfalls was planned and completed during the fall of 2013. The analytical results are presented on the laboratory examination reports and on the CTDEEP Stormwater Monitoring Report Forms contained in Attachment A. The sample site locations are identified on maps presented in Attachment B. The individual sample analysis results can be correlated with the mapped monitoring site locations by reference to the following table. The sampling data is presented in the same order as the site location identifiers listed below.

Sample Number	<u>Laboratory Number</u>
C-7_11-7-13	AEL13006772
I-1_11-7-13	AEL13006769
I-2_11-7-13	AEL13006770
I-5_11-7-13	AEL13006771
R-3_11-7-13	AEL13006773
R-31 11-7-13	AEL13006774

All six of the 2013 stormwater samples were collected during a rainstorm event that commenced during the 1300hr on the afternoon of November 7, 2013. The samples were collected from the identified outfalls between 1400hrs and 1530hrs, commencing after it was determined that sufficient flow would be discharging from the selected outfalls, based on data transmitted from a local rainfall monitoring station. The total rainfall produced by the storm was measured at 0.19 inches. The event was a qualifying event as the preceding rainfall event occurred on October 7, 2013.

The Town had decided to focus sampling mostly from previously sampled locations. The Town has identified a limited number of potential sampling locations for both Industrial and Commercial zoned areas. Sample location C-7 is a new sampling location and chosen because it discharges in the vicinity of the Farmington River. Industrial samples (I-1, I-2, and I-5) are sites

Outlet R-3, previously sampled in 2005, is located on the east side of Knollwood Road, northeast of the intersection with Route 4, and ultimately discharges into the Farmington River Basin. The drainage area is comprised of Residential properties zoned R-20 (20,000 ft²). Sampling is performed in a catch basin upstream of the outlet into the State of Connecticut Drainage System on Route 4. The current sampling indicated elevated levels of COD and Escherichia Coliform. The area is serviced with both public water and sanitary sewer. The Town will have our closed drainage system in this area cleaned, and will consider future upstream sampling.

Outlet R-31 is a new sampling location, along the east side of River Road north of Strawfield, and discharges into the Farmington River Basin. The outlet discharges into the Unionville Brook, and eventually the Farmington River. Due to the difficulty of accessing the outlet location, the sample was taken from the catch basin prior to the discharge. The area is serviced with both public water and sanitary sewer. Sampling parameters were within normal levels.

ATTACHMENT A

Stormwater Monitoring Report Forms

and

Laboratory Data Results



Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Fown: Town of Farmington			
niling Address: 1 Monteith Drive, Farmington CT 06032			
Contact Person: Russell M. Arnold, Jr. P.E. Title: DPW Director Phone: 860-675-2305			
Permit Registration #GSM000090			

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2013) C7: Lat 41-44-28.29, Long 72-51-52.27				
Catch Basin on the north side of New Britain Avenue, across from #656 New Britain Avenue				
Please circle the appropriate area description: Industrial Commercial or Residential				
Receiving Water (name, basin): Farmington River, 4300-00-4+R17				
Time of Start of Discharge:1300hrs				
Date/Time Collected: November 7, 2013/1400hrs Water Temperature: 52°F				
Person Collecting Sample: Bruce Cyr & Stephen Doyon				
Storm Magnitude (inches): 0.19 Storm Duration (hours): 5 (approx)				
Date of Previous Storm Event: October 7, 2013				

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	7.2	Averill Environmental Lab #AEL13006772
Rain pH	SM19 4500H+B	6.5	
Hardness	SM 2340 B	24.5 mg/L CaO3	Averill Environmental Lab #AEL13006772
Conductivity	SM19 2510B	62 micromhos/cm	Averill Environmental Lab #AEL13006772
Oil & Grease	EPA 1664A	<2.0 mg/L	Averill Environmental Lab #AEL13006772
COD	EPA 410.4	21 mg/L	Averill Environmental Lab #AEL13006772
Turbidity	EPA 180.1	15 NTU	Averill Environmental Lab #AEL13006772
TSS	SM19 2540D	18.5 mg/L	Averill Environmental Lab #AEL13006772
TP	SM19 4500PE	0.116 mg/L as P	Averill Environmental Lab #AEL13006772
Ammonia	SM19 4500NHD	<0.50 mg/L	Averill Environmental Lab #AEL13006772
TKN	SM194500NH3F	<1.0 mg/L	Averill Environmental Lab #AEL13006772
NO ₃ +NO ₂	EPA 300.0	0.62 mg/L	Averill Environmental Lab #AEL13006772
E. coli	SM 9222 B	41,000 MPN per 100 mL	Averill Environmental Lab #AEL13006772

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:	Russell M. Arnold, Jr., P.E., Dire	ctor of Public Works/Town Engineer	
Signature:	famel MA Aff	Date: December 23, 2013	



Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Farmington			
Mailing Address: 1 Monteith Drive, Farmington CT 06032			
Contact Person: Russell M. Arnold, Jr. P.E. Title: DPW Director Phone: 860-675-2305			
Permit Registration #GSM000090			

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2013) 11: Lat 41-42-26.896, Long 72-51-37.672					
On the east side of New Britain Avenue, across from #1690 New Britain Avenue					
Please circle the appropriate area description Industrial, Commercial, or Residential					
Receiving Water (name, basin): Pequabuck River, 4315-00-4-R6					
Time of Start of Discharge:1300hrs					
Date/Time Collected: November 7, 2013/1420hrs Water Temperature: 52°F					
Person Collecting Sample: Bruce Cyr & Stephen Doyon					
Storm Magnitude (inches): Storm Duration (hours): <u>5 (approx)</u>					
Date of Previous Storm Event: October 7, 2013					

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	6.5	Averill Environmental Lab #AEL13006769
Rain pH	SM19 4500H+B	6.5	
Hardness	SM 2340 B	4.2 mg/L CaO3	Averill Environmental Lab #AEL13006769
Conductivity	SM19 2510B	14 micromhos/cm	Averill Environmental Lab #AEL13006769
Oil & Grease	EPA 1664A	<1.8 mg/L	Averill Environmental Lab #AEL13006769
COD	EPA 410.4	<20 mg/L	Averill Environmental Lab #AEL13006769
Turbidity	EPA 180.1	4.5 NTU	Averill Environmental Lab #AEL13006769
TSS	SM19 2540D	4.0 mg/L	Averill Environmental Lab #AEL13006769
TP	SM19 4500PE	0.098 mg/L as P	Averill Environmental Lab #AEL13006769
Ammonia	SM19 4500NHD	<0.50 mg/L	Averill Environmental Lab #AEL13006769
TKN	SM194500NH3F	<1.0 mg/L	Averill Environmental Lab #AEL13006769
NO ₃ +NO ₂	EPA 300.0	<0.46 mg/L	Averill Environmental Lab #AEL13006769
E. coli	SM 9222 B	50 MPN per 100 mL	Averill Environmental Lab #AEL13006769

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:	Russell M. Arnold, Jr., B.E., Director of	f Public Works/Town Engineer		
Signature:	Juneal M All	Date: December 23, 2013		



Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Farmington			
Mailing Address: 1 Monteith Drive, Farmington CT 06032			
Contact Person: Russell M. Arnold, Jr. P.E. Title: DPW Director Phone: 860-675-2305			
Permit Registration #GSM000090			

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2013) I2: Lat 41-41-59.172, Long 72-51-39.682				
On the south side of the Hyde Road/New Britain Avenue intersection				
Please circle the appropriate area description; Industrial, Commercial, or Residential				
Receiving Water (name, basin): Pequabuck River, 4315-13-2-L2				
Time of Start of Discharge: 1300hrs				
Date/Time Collected: November 7, 2013/1430hrs Water Temperature: 52°F				
Person Collecting Sample: Bruce Cyr & Stephen Doyon				
Storm Magnitude (inches): 0.19 Storm Duration (hours): 5 (approx)				
Date of Previous Storm Event: October 7, 2013				

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	6.3	Averill Environmental Lab #AEL13006770
Rain pH	SM19 4500H+B	6.5	
Hardness	SM 2340 B	9.5 mg/L CaO3	Averill Environmental Lab #AEL13006770
Conductivity	SM19 2510B	26 micromhos/cm	Averill Environmental Lab #AEL13006770
Oil & Grease	EPA 1664A	<1.9 mg/L	Averill Environmental Lab #AEL13006770
COD	EPA 410.4	89 mg/L	Averill Environmental Lab #AEL13006770
Turbidity	EPA 180.1	21 NTU	Averill Environmental Lab #AEL13006770
TSS	SM19 2540D	10.0 mg/L	Averill Environmental Lab #AEL13006770
TP	SM19 4500PE	0.358 mg/L as P	Averill Environmental Lab #AEL13006770
Ammonia	SM19 4500NHD	<0.50 mg/L	Averill Environmental Lab #AEL13006770
TKN	SM194500NH3F	1.2 mg/L	Averill Environmental Lab #AEL13006770
NO ₃ +NO ₂	EPA 300.0	<0.46 mg/L	Averill Environmental Lab #AEL13006770
E. coli	SM 9222 B	380 MPN per 100 ml	Averill Environmental Lab #AEL13006770

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:	Russell M. Arnold, Jr., P.E., Director of Public Works/Town Engineer			
Signature:	Juneal M All Date: December 23, 2013			



Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Farmington			
Mailing Address: 1 Monteith Drive, Farmington CT 06032	_		
Contact Person: Russell M. Arnold, Jr. P.E. Title: DPW Director Phone: 860-675-2305			
Permit Registration #GSM000090			

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2013) I5: Lat 41-41-51.82, Long 72-52-0.50				
On the south side of the Hyde Road, west of 111 Hyde Road				
Please circle the appropriate area description: Industrial, Commercial, or Residential				
Receiving Water (name, basin): Pequabuck River, 4315-13-2-L2				
Time of Start of Discharge:13:00pm				
Date/Time Collected: November 7, 2013/14:45hrs Water Temperature: 52°F				
Person Collecting Sample: Bruce Cyr & Stephen Doyon				
Storm Magnitude (inches): 0.19 Storm Duration (hours): 5 (approx)				
Date of Previous Storm Event: October 7, 2013				

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	6.8	Averill Environmental Lab #AEL13006771
Rain pH	SM19 4500H+B	6.5	
Hardness	SM 2340 B	8.6 mg/L CaO3	Averill Environmental Lab #AEL13006771
Conductivity	SM19 2510B	55 micromhos/cm	Averill Environmental Lab #AEL13006771
Oil & Grease	EPA 1664A	<1.8 mg/L	Averill Environmental Lab #AEL13006771
COD	EPA 410.4	25 mg/L	Averill Environmental Lab #AEL13006771
Turbidity	EPA 180.1	11 NTU	Averill Environmental Lab #AEL13006771
TSS	SM19 2540D	12.0 mg/L	Averill Environmental Lab #AEL13006771
TP	SM19 4500PE	0.121 mg/L as P	Averill Environmental Lab #AEL13006771
Ammonia	SM19 4500NHD	<0.50 mg/L	Averill Environmental Lab #AEL13006771
TKN	SM194500NH3F	1.0 mg/L	Averill Environmental Lab #AEL13006771
NO ₃ +NO ₂	EPA 300.0	0.57 mg/L	Averill Environmental Lab #AEL13006771
E. coli	SM 9222 B	50 MPN per 100 mL	Averill Environmental Lab #AEL13006771

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:	Russell M. Arnold, Jr., P.E., Directo	or of Public Works/Town Engineer		
Signature:	fined me all	Date: December 23, 2013		



Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Farmington			
Mailing Address: 1 Monteith Drive, Farmington CT 06032			
Contact Person: Russell M. Arnold, Jr. P.E. Title: DPW Director Phone: 860-675-2305			
Permit Registration #GSM000090			

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2013) R3: Lat 41-44-43.751, Long 72-51-45.227				
Catch Basin on the east side of Knollwood Road, approx. 175 feet northeast of intersection with Rte 4				
Please circle the appropriate area description: Industrial, Commercial, or Residential				
Receiving Water (name, basin): Farmington River, 4300-28-1-L2				
Time of Start of Discharge: 13:00pm				
Date/Time Collected: November 7, 2013/15:30hrs Water Temperature: 52°F				
Person Collecting Sample: Bruce Cyr & Stephen Doyon				
Storm Magnitude (inches): 0.19 Storm Duration (hours): 5 (approx)				
Date of Previous Storm Event: October 7, 2013				

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	6.2	Averill Environmental Lab #AEL13006773
Rain pH	SM19 4500H+B	6.5	
Hardness	SM 2340 B	17.9 mg/L CaO3	Averill Environmental Lab #AEL13006773
Conductivity	SM19 2510B	74 micromhos/cm	Averill Environmental Lab #AEL13006773
Oil & Grease	EPA 1664A	<1.9 mg/L	Averill Environmental Lab #AEL13006773
COD	EPA 410.4	260 mg/L	Averill Environmental Lab #AEL13006773
Turbidity	EPA 180.1	28 NTU	Averill Environmental Lab #AEL13006773
TSS	SM19 2540D	36.0 mg/L	Averill Environmental Lab #AEL13006773
TP	SM19 4500PE	0.596 mg/L as P	Averill Environmental Lab #AEL13006773
Ammonia	SM19 4500NHD	<0.50 mg/L	Averill Environmental Lab #AEL13006773
TKN	SM194500NH3F	1.8 mg/L	Averill Environmental Lab #AEL13006773
NO ₃ +NO ₂	EPA 300.0	<0.46 mg/L	Averill Environmental Lab #AEL13006773
E. coli	SM 9222 B	15,000 MPN per 100 mL	Averill Environmental Lab #AEL13006773

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:	Russell M. Arnold, Jr., P.E.	Director of Public Works/Town Engineer		
Signature:	finell but I	Date: <u>December 23, 2013</u>		



Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town:	Town of Farmington		
Mailing Address: _1	Monteith Drive, Farmington CT 06032		
Contact Person: Russell M. Arnold, Jr. P.E. Title: DPW Director Phone: 860-675-2305			
Permit Registration	# <u>GSM000090</u>		

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2013) R31: Lat 41-45-09.86, Long 72-53-42.94			
Catch Basin on the north side of Strawfield, at the intersection with River Road			
Please circle the appropriate area description: Industrial, Commercial, or Residential			
Receiving Water (name, basin): Farmington River, 4300-20-2-R1			
Time of Start of Discharge: 13:00pm			
Date/Time Collected: November 7, 2013/15:00hrs Water Temperature: 52°F			
Person Collecting Sample: Bruce Cyr & Stephen Doyon			
Storm Magnitude (inches): 0.19 Storm Duration (hours): 5 (approx)			
Date of Previous Storm Event: October 7, 2013			

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	7.2	Averill Environmental Lab #AEL13006774
Rain pH	SM19 4500H+B	6.5	
Hardness	SM 2340 B	14.8 mg/L CaO3	Averill Environmental Lab #AEL13006774
Conductivity	SM19 2510B	34 micromhos/cm	Averill Environmental Lab #AEL13006774
Oil & Grease	EPA 1664A	2.2 mg/L	Averill Environmental Lab #AEL13006774
COD	EPA 410.4	<20 mg/L	Averill Environmental Lab #AEL13006774
Turbidity	EPA 180.1	2.2 NTU	Averill Environmental Lab #AEL13006774
TSS	SM19 2540D	<1.7 mg/L	Averill Environmental Lab #AEL13006774
TP	SM19 4500PE	0.106 mg/L as P	Averill Environmental Lab #AEL13006774
Ammonia	SM19 4500NHD	<0.50 mg/L	Averill Environmental Lab #AEL13006774
TKN	SM194500NH3F	<1.0 mg/L	Averill Environmental Lab #AEL13006774
NO ₃ +NO ₂	EPA 300.0	0.55 mg/L	Averill Environmental Lab #AEL13006774
E. coli	SM 9222 B	<50 MPN per 100 mL	Averill Environmental Lab #AEL13006774

STATEMENT OF ACKNOWLEDGMENT

I certify that the data accordance with the and belief, true, accu	a reported on this document were prepared under my direction or supervision in MS4 General Permit. The information submitted is, to the best of my knowledge rate and complete.
Authorized Official:	Russell M. Arnold, Jr., P.E., Director of Public Works/Town Engineer
Signature:	Runell M A M Date: December 23, 2013

CT Laboratory ID No. PH-0513

100 Northwest Drive, Plainville, Connecticut 06062 (860) 747-0676 Fax: (860) 747-9264 CT ONLY 1-(800) 870-7904

Lawton S. Averill - Director

CT ONLY 1-(800) 870-7904 Alan G. Jacobs - Co-Director MA Laboratory ID No. M-CT0513

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering 1 Monteith Drive

Farmington, CT 06034-0948

Report No: AEL13R-19084.0

Report Date: Wednesday, December 11, 2013

ATTN: Buce Cyr Collected By: Bruce Cyr

Source: Town of Farmington, Farmington, CT

Sample Matrix: Surface Water

Sample ID: Stormwater Discharge Sample, C-7_11-7-13

AEL Lab#: AEL13006772

Collect Date: 11/7/2013
Collect Time: 14:00

Received Date: 11/7/2013

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	18.5	mg/L	AGJ	11/13/2013	SM19 2540D
Nitrite - Nitrate as N	0.62	mg/L	JF	11/7/2013	EPA 300.0
рH	7.2	units	JF/AGJ	11/7/2013	SM19 4500H+B
pH of Rain	6.5	units	JF/AGJ	11/7/2013	SM19 4500H+B
Specific Conductivity	62	micromhos/cm	RB	11/14/2013	SM19 2510B
Hardness, Calculated	24.5	mg/L CaCO3	JM	11/12/2013	SM 2340 B
Chemical Oxygen Demand	21	mg/L	JF	11/19/2013	EPA 410.4
Ammonia Nitrogen as N	< 0.50	mg/L	MAP	12/9/2013	SM19 4500NHD
Phosphorus, Total as P	0.116	mg/L as P	JM	11/15/2013	SM19 4500PE
E. Coli	41000	MPN/100 ml	JF/AGJ	11/7/2013	SM 9222 B
Total Coliform	78000	MPN/100 ml	JF/AGJ	11/7/2013	SM 9222 B
Total Kjeldahl Nitrogen	<1.0	mg/L	MAP	12/9/2013	SM194500NH3F
Turbidity	15	NTU	AGJ	11/7/2013	EPA 180.1
Calcium	7.94	mg/L	JM	11/12/2013	EPA 200.7
Magnesium	1.13	mg/L	JM	11/12/2013	EPA 200.7
Oil & Grease, Hexane Ext. Material	<2.0	mg/L	RB	11/27/2013	EPA 1664A

The results recorded in this report relate only to the samples as received on the date and time noted.

Laboratory Director

CT Laboratory ID No. PH-0513

100 Northwest Drive, Plainville, Connecticut 06062 (860) 747-0676 Fax: (860) 747-9264 CT ONLY 1-(800) 870-7904

Lawton S. Averill - Director Alan G. Ja

CT ONLY 1-(800) 870-7904 Alan G. Jacobs - Co-Director MA Laboratory ID No. M-CT0513

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering

1 Monteith Drive

Farmington, CT 06034-0948

Report No: AEL13R-19084.0

Report Date: Wednesday, December 11, 2013

ATTN: Buce Cyr

Collected By: Bruce Cyr

Source: Town of Farmington, Farmington, CT

Sample Matrix: Surface Water

Sample ID: Stormwater Discharge Sample, I-1_11-7-13

AEL Lab#: AEL13006769

Collect Date: 11/7/2013 Collect Time: 14:20

Received Date: 11/7/2013

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	4.0 ,	mg/L	AGJ	11/12/2013	SM19 2540D
Nitrite - Nitrate as N	< 0.46	mg/L	JF	11/7/2013	EPA 300.0
рН	6.5	units	JF/AGJ	11/7/2013	SM19 4500H+B
pH of Rain	6.5	units	JF/AGJ	11/7/2013	SM19 4500H+B
Specific Conductivity	14	micromhos/cm	RB	11/14/2013	SM19 2510B
Hardness, Calculated	4.2	mg/L CaCO3	JM	11/12/2013	SM 2340 B
Chemical Oxygen Demand	<20	mg/L	JF	11/19/2013	EPA 410.4
Ammonia Nitrogen as N	< 0.50	mg/L	MAP	11/26/2013	SM19 4500NHD
Phosphorus, Total as P	0.098	mg/L as P	JM	11/15/2013	SM19 4500PE
E. Coli	50	MPN/100 ml	JF/AGJ	11/7/2013	SM 9222 B
Total Coliform	> 120,000.	MPN/100 ml	JF/AGJ	11/7/2013	SM 9222 B
Total Kjeldahl Nitrogen	<1.0	mg/L	MAP	11/26/2013	SM194500NH3F
Turbidity	4.5	NTU	AGJ	11/7/2013	EPA 180.1
Calcium	0.91	mg/L	JM	11/12/2013	EPA 200.7
Magnesium	0.46	mg/L	JM	11/12/2013	EPA 200.7
Oil & Grease, Hexane Ext. Material	< 1.8	mg/L	RB	11/27/2013	EPA 1664A

The results recorded in this report relate only to the samples as received on the date and time noted.

Sauten S. Cencel (agj)

Laboratory Director

CT Laboratory ID No. PH-0513

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Lawton S. Averill - Director

Alan G. Jacobs - Co-Director

MA Laboratory ID No. M-CT0513

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering

1 Monteith Drive

Farmington, CT 06034-0948

Report No: AEL13R-19084.0

Report Date: Wednesday, December 11, 2013

ATTN: Buce Cyr

Collected By: Bruce Cyr

Source: Town of Farmington, Farmington, CT

Sample Matrix: Surface Water

Sample ID: Stormwater Discharge Sample, I-2_11-7-13

Collect Date: 11/7/2013 Collect Time: 14:30

AEL Lab#: AEL13006770

Received Date: 11/7/2013

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	10.0	mg/L	AGJ	11/12/2013	SM19 2540D
Nitrite - Nitrate as N	< 0.46	mg/L	JF	11/7/2013	EPA 300.0
pH of Rain	6.5	units	JF/AGJ	11/7/2013	SM19 4500H+B
pH	6.3	units	JF/AGJ	11/7/2013	SM19 4500H+B
Specific Conductivity	26	micromhos/cm	RB	11/14/2013	SM19 2510B
Hardness, Calculated	9.5	mg/L CaCO3	JM	11/12/2013	SM 2340 B
Chemical Oxygen Demand	89	mg/L	JF	11/19/2013	EPA 410.4
Ammonia Nitrogen as N	< 0.50	mg/L	MAP	11/26/2013	SM19 4500NHD
Phosphorus, Total as P	0.358	mg/L as P	JM	11/15/2013	SM19 4500PE
E. Coli	380	MPN/100 ml	JF/AGJ	11/7/2013	SM 9222 B
Total Coliform	71000	MPN/100 ml	JF/AGJ	11/7/2013	SM 9222 B
Total Kjeldahl Nitrogen	1.2	mg/L	MAP	11/26/2013	SM194500NH3F
Turbidity	21	NTU	AGJ	11/7/2013	EPA 180.1
Calcium	3.01	mg/L	JM	11/12/2013	EPA 200.7
Magnesium	0.49	mg/L	JM	11/12/2013	EPA 200.7
Oil & Grease, Hexane Ext. Material	<1.9	mg/L	RB	11/27/2013	EPA 1664A

The results recorded in this report relate only to the samples as received on the date and time noted.

Laboratory Director

CT Laboratory ID No. PH-0513

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Alan G. Jacobs - Co-Director

MA Laboratory ID No. M-CT0513

REPORT ON LABORATORY EXAMINATIONS

Lawton S. Averill - Director

To Client: Town of Farmington, Engineering

1 Monteith Drive

Farmington, CT 06034-0948

Report No: AEL13R-19084.0

Report Date: Wednesday, December 11, 2013

ATTN: Buce Cyr

Collected By: Bruce Cyr

Source: Town of Farmington, Farmington, CT

Sample Matrix: Surface Water

Sample ID: Stormwater Discharge Sample, I-5_11-7-13

Collect Date: 11/7/2013 Collect Time: 14:45

AEL Lab#: AEL13006771

Received Date: 11/7/2013

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	12.0	mg/L	AGJ	11/12/2013	SM19 2540D
Nitrite - Nitrate as N	0.57	mg/L	JF	11/7/2013	EPA 300.0
pН	6.8	units	JF/AGJ	11/7/2013	SM19 4500H+B
pH of Rain	6.5	units	JF/AGJ	11/7/2013	SM19 4500H+B
Specific Conductivity	55	micromhos/cm	RB	11/14/2013	SM19 2510B
Hardness, Calculated	8.6	mg/L CaCO3	JM	11/12/2013	SM 2340 B
Chemical Oxygen Demand	25	mg/L	JF	11/19/2013	EPA 410.4
Ammonia Nitrogen as N	< 0.50	mg/L	MAP	11/26/2013	SM19 4500NHD
Phosphorus, Total as P	0.121	mg/L as P	JM	11/15/2013	SM19 4500PE
E. Coli	50	MPN/100 ml	JF/AGJ	11/7/2013	SM 9222 B
Total Coliform	31000	MPN/100 ml	JF/AGJ	11/7/2013	SM 9222 B
Total Kjeldahl Nitrogen	1.0	mg/L	MAP	11/26/2013	SM194500NH3F
Turbidity	11	NTU	AGJ	11/7/2013	EPA 180.1
Calcium	2.59	mg/L	JM	11/12/2013	EPA 200.7
Magnesium	0.53	mg/L	JM	11/12/2013	EPA 200.7
Oil & Grease, Hexane Ext. Material	< 1.8	mg/L	RB	11/27/2013	EPA 1664A

The results recorded in this report relate only to the samples as received on the date and time noted.

Laboratory Director

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Alan G. Jacobs - Co-Director

MA Laboratory ID No. M-CT0513

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering

1 Monteith Drive

Farmington, CT 06034-0948

Report No: AEL13R-19084.0

Report Date: Wednesday, December 11, 2013

ATTN: Buce Cyr Collected By: Bruce Cyr

Source: Town of Farmington, Farmington, CT

Sample Matrix: Surface Water

Sample ID: Stormwater Discharge Sample, R-3_11-7-13

AEL Lab#: AEL13006773

Collect Date: 11/7/2013 Collect Time: 15:30

Received Date: 11/7/2013

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	36.0	mg/L	AGJ	11/13/2013	SM19 2540D
Nitrite - Nitrate as N	< 0.46	mg/L	JF	11/7/2013	EPA 300.0
pH of Rain	6.5	units	JF/AGJ	11/7/2013	SM19 4500H+B
pH	6.2	units	JF/AGJ	11/7/2013	SM19 4500H+B
Specific Conductivity	74	micromhos/cm	RB	11/14/2013	SM19 2510B
Hardness, Calculated	17.9	mg/L CaCO3	JM	11/12/2013	SM 2340 B
Chemical Oxygen Demand	260	mg/L	JF	11/19/2013	EPA 410.4
Ammonia Nitrogen as N	< 0.50	mg/L	MAP	12/9/2013	SM19 4500NHD
Phosphorus, Total as P	0.596	mg/L as P	JM	11/15/2013	SM19 4500PE
E. Coli	15000	MPN/100 ml	JF/AGJ	11/7/2013	SM 9222 B
Total Coliform	> 120,000.	MPN/100 ml	JF/AGJ	11/7/2013	SM 9222 B
Total Kjeldahl Nitrogen	1.8	mg/L	MAP	12/9/2013	SM194500NH3F
Turbidity	28	NTU	AGJ	11/7/2013	EPA 180.1
Calcium	4.41	mg/L	JM	11/12/2013	EPA 200.7
Magnesium	1.67	mg/L	JM	11/12/2013	EPA 200.7
Oil & Grease, Hexane Ext. Material	< 1.9	mg/L	RB	11/27/2013	EPA 1664A

The results recorded in this report retate only to the samples as received on the date and time noted.

Laboratory Director

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Lawton S. Averill - Director

Alan G. Jacobs - Co-Director

MA Laboratory ID No. M-CT0513

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering

1 Monteith Drive Farmington, CT 06034-0948 Report No: AEL13R-19084.0

Report Date: Wednesday, December 11, 2013

ATTN: Buce Cyr Collected By: Bruce Cyr

Source: Town of Farmington, Farmington, CT

Sample Matrix: Surface Water

Sample ID: Stormwater Discharge Sample, R-31 11-7-13

AEL Lab#: AEL13006774

Collect Date: 11/7/2013 Collect Time: 15:00

Received Date: 11/7/2013

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	<1.7	mg/L	AGJ	11/13/2013	SM19 2540D
Nitrite - Nitrate as N	0.55	mg/L	JF	11/7/2013	EPA 300.0
pH of Rain	6.5	units	JF/AGJ	11/7/2013	SM19 4500H+B
pH	7.2	units	JF/AGJ	11/7/2013	SM19 4500H+B
Specific Conductivity	34	micromhos/cm	RB	11/14/2013	SM19 2510B
Hardness, Calculated	14.8	mg/L CaCO3	JM	11/12/2013	SM 2340 B
Chemical Oxygen Demand	< 20	mg/L	JF	11/19/2013	EPA 410.4
Ammonia Nitrogen as N	< 0.50	mg/L	MAP	12/9/2013	SM19 4500NHD
Phosphorus, Total as P	0.106	mg/L as P	JM	11/15/2013	SM19 4500PE
E. Coli	< 50	MPN/100 ml	JF/AGJ	11/7/2013	SM 9222 B
Total Coliform	12000	MPN/100 ml	JF/AGJ	11/7/2013	SM 9222 B
Total Kjeldahl Nitrogen	< 1.0	mg/L	MAP	12/9/2013	SM194500NH3F
Turbidity	2.2	NTU	AGJ	11/7/2013	EPA 180.1
Calcium	5.24	mg/L	JM	11/12/2013	EPA 200.7
Magnesium	0.40	mg/L	JM	11/12/2013	EPA 200.7
Oil & Grease, Hexane Ext. Material	2.2	mg/L	RB	11/27/2013	EPA 1664A

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Laboratory Director

ATTACHMENT B

Monitoring Site Location Mapping



