THE TOWN OF FARMINGTON





THE TOWN OF PARMANGTON

TOWN HALL

1 MONTEITH DRIVE FARMINGTON, CONNECTICUT 06032-1053

INFORMATION (860) 675-2300 FAX (860) 675-7140 "BULLETIN BOARD" (860) 675-2301

December 9, 2008

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 2008

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 2008 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). We have included in Attachment A an Amended Part B Registration Form as part of the report, which effectively updates the data included in Part VIA of the original Part B Registration Form that was officially filed by the town on July 8, 2004. As noted previously, I am currently the primary contact for departmental correspondence and inquires. The stormwater monitoring data and sample locations for 2008 have been obtained based on the alternative sampling plan that the Commissioner approved in February 2007, the results of which can be found in Attachments B and C.

I have also enclosed the municipal plan review fee in the amount of \$187.50 as required by subsection 6(i)(2)(i) of the MS4 General Permit.

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.

Singerely,

Russell M. Arnold, Jr., P.E.

Kuneel M L'

Director/Town Engineer
Department of Public Works

Town of Farmington

enclosures

AN EQUAL OPPORTUNITY EMPLOYE



2008 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 2008

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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 Department of Environmental Protection (DEP) on January 9, 2004 and it is applicable to storm sewer facilities owned or operated by the Town of Farmington. 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 DEP 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.

Much of the information that must be included in the annual report is being provided by updating the Part B registration form to reflect the current status of the program implementation, especially with respect to the list of Best Management Practices (BMPs) enumerated in Part V of the original Part B registration form. The updated Part B registration form can be found in Attachment A. The data in the updated Part B is supplemented by narrative text in Section 2 of this report.

The stormwater monitoring data can be found in Attachment B, and mapping of the locations where the stormwater discharge samples were collected can be found in Attachment C.

The alternative sampling plan that was filed as Attachment D 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.

2. BEST MANAGEMENT PRACTICES

2.1 **Public Education**

The Town of Farmington has a newsletter, the *Farmington Town Letter*, which is published and distributed quarterly to all postal customers, i.e., residences and businesses, with mailing addresses within the town. It is also posted on the town website. The articles published in the newsletter during 2008 were notifications and general useful information for the public.

In the January issue, an article was written notifying all property owners of the new wetland regulation passed on November 26, 2007 by the Farmington Inland Wetland and Watercourse Agency. The regulation now requires all landowners to obtain a permit for the following activities conducted within 150ft of a designated wetland or watercourse. Such activities shall include land clearing, grubbing, grading, cutting or removal of vegetation, paving, excavating, construction of buildings or structures, deposition or removal of material and discharge of material including stormwater. In the April issue, articles were written regarding the upcoming Bulky Waste Program which was held between April 14th and April 18th, the Household Hazardous Waste Collection Day and the 11th Annual Town Wide Clean-up held on April 26th, the upcoming schedule for spring street sweeping, leaf compost and wood recycling program, and the implementation of the Town's new automated trash collection program. The Town of Farmington has changed over to an automated curbside trash collection program. All household waste is collected and disposed of in large covered garbage containers. In the October issue an in depth article regarding stormwater runoff pollution and what you can do to help, as well as articles written regarding the upcoming leaf collection schedule, dates and locations accepting household hazardous waste products. Much of the information was taken from the CTDEP website and covered items such as the use of fertilizers, illicit discharges, composting, the use of pesticides, washing your car, and the maintenance of septic system. The article has been very well received with many readers stating they were not aware of some of the do's and don'ts that were listed.

As noted in the last report, the Town has eliminated the use of sand during its winter snow plowing efforts, and went to a salt product used prior and during a snowstorm. Based on our street sweeping records, there has been a large reduction in the volume of sand collected from the previous year, on all Town owned public roadways.

The Town of Farmington Library maintains an inventory of three *After the Storm* videos produced by the EPA. The Town is also working with the Library to create a station where brochures and other stormwater information can be placed for public viewing.

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

The CCRPA is taking the lead in the development of a Pequabuck River Watershed Management Plan. 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. The Pequabuck River Watershed Management Plan was completed in August 2005. The staffs of the CCRPA, the FRWA and the PRWA were the editors who compiled the watershed report. The plan was presented before the Farmington Conservation Commission on September 5, 2006 and the Town Council on December 12, 2006. 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.

2.2 **Public Participation**

The Planning Division developed a yearly schedule for the implementation of a public participation program. The schedule prepared during 2008 covered all of the public education and public participation activities implemented during 2008.

During the spring of 2008, the Annual Farmington Clean-up was conducted, and the Conservation Commission again sponsored a Household Hazardous Waste Collection Program jointly with The Metropolitan District Commission. As noted above, the public was made aware of these activities through the *Farmington Town Letter*.

The Town is currently working with the School Superintendent to allow Town Staff to conduct storm water education seminars in conjunction with their science program, targeted to the elementary schools. The program will include simple but yet powerful pictures that help provide examples of how stormwater pollution affects everyone in their daily lives.

2.3 Illicit Discharge Detection & Elimination

The mapping of municipal storm sewer outfalls within the Town of Farmington is proceeding on schedule. Although it is not required, the present plan is to map all public, institutional and private storm sewers and outfalls and to differentiate the storm sewer outfalls and sewers tributary to them on the basis of ownership. The specific size and area oriented requirements of

the *MS4 General Permit* are being addressed as minimum objectives with respect to time. The attached amended Part B registration form has been adjusted to show that the mapping of outfalls greater than 12 inches owned or maintained by the Town of Farmington has been completed in Urbanized Areas and the period beyond the required completion date has been amended to show "work in progress" in recognition of the fact that storm sewer and storm water outfall mapping will be a continuing mapping maintenance activity. The above described mapping reflects a choice to approach the program requirements as components of a broader town-wide effort to control pollution occurring due to both non-point and point source discharges that directly affect surface water quality and discharges conveyed by storm sewers or other types of storm water conveyance. The program that is being developed relies heavily on the use of the State Building Code 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, in addition, the construction of new privately owned storm sewer outfalls. The adoption of an illicit discharge ordinance is still being considered.

2.4 Construction Site Runoff

The Zoning Regulations, in Article IV, Section 11, 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 activity that does not require the submission of an erosion and sediment control plan. These regulatory requirements continue to be enforced.

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

2.5 **Post Construction Runoff Control**

A post construction best management strategy has been developed and it is being implemented. It is based on the enforcement of Section 25 of Article IV of the existing Zoning Regulations. It has been determined that these regulations are sufficient and no new ordinances are planned.

Where there is a specific need for the maintenance of construction site runoff controls installed and maintained by an applicant during a post construction period, provisions to ensure the applicant understands the obligation to maintain those controls are being included in the zoning approval. Where post construction maintenance of storm sewer systems by private owners is necessary to ensure continuous effective operation and the avoidance of adverse water pollution

impacts, the submission of maintenance programs is being required as a function of the approval process. In many cases, these programs are included in the Homeowners Association Documents.

In addition, an inventory of privately owned storm sewers is being developed in conjunction with the mapping of all storm sewers within the town.

2.6 **Good Housekeeping**

A training program for municipal employees is still in the process of being developed. Training to date has been limited to on-the-job instruction and training by supervisors and consultants. The primary focus of the training continues to be the cross training of existing employees within the divisions that make up the Department of Public Works aimed at ensuring a broader understanding of the roles of each member of the staff assigned specific stormwater management responsibilities and how those activities are integrated to meet the obligations of the stormwater general permit.

The practice of sweeping paved streets as soon as practical after snowmelt has been implemented. There has, however, been a major change in the administration and implementation of the skid control program. The use of a sand and salt mixture has been suspended in favor of a commercial salt and magnesium mixture. This operational change in the skid control program has significantly reduced the volume of sand that needs to be collected by street sweeping. The elimination of sand should improve the environmental health of the small and medium sized streams within the Town of Farmington, which have characteristically developed abnormal bottom deposits dominated by the erosion of skid control sand from roadways. The DOT 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 the stormwater management training program that is being developed. The elimination of the use of sand for skid control is a manifestation of this focus. No additional staff are 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 summer of 2008. The analytical results are presented on the laboratory examination reports and on the DEP Stormwater Monitoring Report Forms contained in Attachment B. The sample site locations are identified on maps presented in Attachment C. The individual sample analysis results can be correlated with the mapped monitoring site locations by reference to the following table. The sampling data are presented in the same order as the site location identifiers listed below.

Site Location Identifier	Sample Number	<u>Laboratory Number</u>
2008-R-12 (Residential)	R12-8-6-08	AEL08006503
2008-R-13 (Residential)	R13-8-6-08	AEL08006504
2008-R-14 (Residential)	R14-8-6-08	AEL08006505
2008-R-15 (Residential)	R15-8-6-08	AEL08006506
2008-C-6 (Commercial)	C6-8-6-08	AEL08006507
2008-R-16 (Residential)	R16-8-6-08	AEL08006508

Some of the sample locations in 2008 were upstream of samples taken in previous years which indicated elevated levels of E. Coli / Total Coliform. All six of the 2008 storm water samples were collected during a rainstorm event that commenced during the 6:00 AM hour, the morning of August 6, 2008. The samples were collected from the identified outfalls between 9:56 AM and 11:42 AM, starting about four hours after it was judged, based on data transmitted from a local rainfall monitoring station, that sufficient flow would probably be discharging from the selected outfalls. The total rainfall produced by the storm was measured at 0.75 inches. The event was a qualifying event since the preceding rainfall event occurred on August 2, 2008.

In general it may be stated that the analytical results obtained from these six sample locations were well within the range of the average pollutant concentrations for the majority of the parameters listed in the 2004 Stormwater Quality Manual for urban stormwater runoff. In fact, except for some elevated levels of nitrogen and phosphorus in the samples collected at three locations, and elevated levels of E. Coli at other locations, the analysis of the collected samples generally showed relatively low levels of pollutants. The following is a brief assessment of the stormwater sample analysis results derived from the collected samples.

Sample R-12 was taken from an off-road catch basin at the low point of Holmes Circle. This drainage system collects all of Holmes Circle and discharges through a closed drainage system through a wetland located in the rear yards of the homes located along the east side of Winterwood Terrace, to Berkshire Drive, and eventually to the R-5 outlet sampling location on Batterson Park Road. The area is devised of properties mainly from an R-20 zone (20,000ft²/residential lots). The results from the R-12 sampling location, revealed an elevated

total and Escherichia coliform count. The sampling at the R-5 location was performed in 2006, and was also found to have an elevated total and Escherichia coliform counts. The sampling performed on Holmes Circle was an attempt to isolate the area and locate the problem. The area is serviced by public sewer and water. Since the results are unclear, the Town will consider additional sampling in 2009 to further study this area in an attempt to find the problem.

Sample R-13 was taken from a 24"RCP outlet pipe along the east side of Main Street (Rt. 10). The outlet connects to the State of Connecticut's storm drainage system in Rt.10, and eventually to the Pequabuck River. There is a fairly large drainage area for this system, and the area is not served with public sewers. The area is devised of properties mainly from an R-40 and R-80 zones (20,000ft² and 80,000ft² residential lots). The results indicated an elevated total and Escherichia coliform counts. This may be due to the lack of public sewers in the area. The results also indicated elevated levels of phosphorus and nitrogen. These could be a result of lawn fertilizers being used in the area.

Sample R-14 was taken from a 36"RCP outlet at the NE intersection of Hobart Street and Garden Street. The drainage area for this system includes a large part of the NW corner of the Farmington Village devised of properties zoned R-40, R-80 (20,000ft² and 80,000ft² residential lots) and Business Zone. The water flows through a swale and eventually into the Farmington River. The drainage from sampling site R-15 also drains to this area. A large wetland area with a significant amount of standing water, drains to this system, and may account for why the results indicated an elevated total and Escherichia coliform counts. The area is serviced by public sewers and water. The results also indicated elevated levels of phosphorus and nitrogen.

Sample R-15 was taken from a 24" RCP outlet to the rear of #26 High Street. The outlet was reconstructed in 2005, along the entire drainage system, as part of the High Street Reconstruction Project. The drainage area to this system is devised of properties mainly from an R-80 zone (80,000 ft²/residential lots). The elevated total and Escherichia coliform counts indicated in the sampling could also originate from an upland wetland. The area is serviced by public sewers and water.

Sample R-16 was taken from a 24" RCP that drains to Lake Garda. The drainage area is comprised of mainly R-9 (9,000 ft²/residential lots). The lake is approximately 2.1million square feet, and this sample location accounts for only a small portion of the lakes drainage area. The results indicated an abnormally high level of total and Escherichia coliform. The area is serviced with public water and sewer, however the lake is used for recreational swimming. The Town has contacted the Farmington Valley Health District, whom performs testing at the swimming area.

The area was tested a total of five (5) times in the summer of 2008, and all the reports indicate the swimming area is acceptable for recreation use.

Sample C-6 was taken directly from a catch basin on the west side of Brickyard Road 170lf +/south of Eastview Drive. The sample was taken directly from the flow of a storm drainage line connected to the catch basin. The results indicated an elevated level of Escherichia coliform, however the results also indicated an extremely high level of total coliform. The Town had previously performed sampling in the area in 2006 identified as sampling location C-5. Test results for C-5 were performed twice in the same year to confirm the results. Both of the samples taken in 2006 showed extremely high levels of total and Escherichia coliform. Since the area is serviced with public sewer and water, the Town decided to perform testing upstream of sample location C-5 to determine the problem. The area south of Eastview Drive is serviced with public sewer and water. There are no public sewers or water north of Eastview Drive. The test results also indicated elevated levels of nitrogen and phosphorus. Future testing may need to be performed north of sample location C-6 to locate the source of these pollutants. The Town has contacted the Farmington Valley Health District, whom performs testing at the swimming area. The area was tested a total of five (5) times in the summer of 2008, and all the reports indicate the swimming area is acceptable for recreation use.

3. **CERTIFICATION**

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.

Russell M. Arnold, Jr. Director/Town Engineer

Department of Public Works

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ATTACHMENT A

Amended Part B Registration Form



Part B - General Permit Registration Form for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4)

Please complete this form in accordance with the general permit (DEP-PED-GP-021) in order to ensure the proper handling of your registration. Print or type unless otherwise noted.

Application No
Fermit No
Town I.D.

Part I: Registrant Information

1.	Name of Town/City: Farmington								
	Name of Chief Elected Official (CEO) or Principal Executive	Officer (PEO):							
	Kathleen Eagen	Title: Town Ma	anager						
	Mailing Address: 1 Monteith Drive								
	City/Town: Farmington	State: CT	Zip Code: 06032-1053						
	Business Phone: 675-2350	ext.	Fax: 673-8233						
	Contact Person: Russell M. Arnold, Jr.	Title: Director of Public Works							
	Check here if there are adjacent towns or other entities wit of your Stormwater Management Plan for a portion of your permit). If so, label and attach additional sheet(s) with the	MS4 (See Section	on 6(b)(3) of the general						
2.	List primary contact for departmental correspondence and in	nquiries, if differe	ent than the CEO/PEO						
	Name: Russell M. Arnold, Jr., PE Director of Public World	ks/Town Engine	eer						
	Mailing Address: 1 Monteith Drive								
	City/Town: Farmington	State: CT	Zip Code: 06032-1053						
	Business Phone: 675-2305	ext.	Fax: 675-2319						
	E-Mail: ArnoldR@Farmington-CT.org								
	Contact Person: Russell M. Arnold, Jr,. P.E.	Title: Dir. PW/	Town Engineer						
3.	List any engineer(s) or other consultant(s) employed or reta								
	Check here if additional sheets are necessary, and lab	el and attach the	em to this sheet.						
	Name:								
	Mailing Address:								
	City/Town:	State:	Zip Code:						
	Business Phone:	ext.	Fax:						
	E-Mail:								
	Contact Person:	Title:							
	Service Provided:								

1 of 3

Part II: Site Information

1.		vity included in your Stormwater Management Plan that would adversely affect properties for listing in the National Register of Historic Places?
		rant must be in compliance with requirements of the National Historic Preservation Act nate with the appropriate State Historic Preservation Officer to avoid or minimize impacts sary activities.
2.		vity included in your Stormwater Management Plan that is located within the coastal ineated on DEP approved coastal boundary maps?
		pplication is for a new authorization or for a modification of an existing permit, you must of Consistency Review Form (DEP-APP-004) with your application as Attachment A.
	For forms or ass	sistance, please call the Permit Assistance Office at 860-424-3003.
3.	identified as a h	vity included in your Stormwater Management Plan that is located within an area abitat for endangered, threatened or special concern species as identified on the "State ed Species and Natural Communities Map"?
	☐ Yes 🗵	No Date of Map: 2003
		and submit a Connecticut Natural Diversity Data Base (CT NDDB) Review Request Form to the address specified on the form.
	including copies information which	g this permit application, please include copies of any correspondence to the NDDB, of the completed CT NDDB Review Request Form, any field surveys, and any other h may lead you to believe that endangered or threatened species may or may not be ea of your existing or proposed permitted activity, as Attachment B.
	Has a field surve concern species	ey been conducted to determine the presence of any endangered, threatened or special? Yes No If yes, provide:
	Biologist's Name	p:
	Address:	
	and submit a co	py of the field survey with your application as an Attachment as specified above.
Pleas his a part (se check the attac application form. \	ng Documents chments submitted as verification that <i>all</i> applicable attachments have been submitted with When submitting any supporting documents, please label the documents as indicated in this A, etc.) and be sure to include the applicant's name as indicated on the <i>Permit Application</i>
	Attachment A:	Coastal Consistency Review Form: Activities within the state's coastal area, which includes the coastal boundary, must be consistent with the Connecticut Coastal Management Act (Sections 22a-90 through 22a-112 CGS). You may be required to complete a <i>Coastal Consistency Review Form</i> (DEP-APP-004) to demonstrate that the activity is consistent with the standards and policies of the Connecticut Coastal Management Act.
	Attachment B:	CT NDDB Information: Submit copies of any correspondence provided to or received from the CT NDDB program, including a copy of a completed <i>CT NDDB Request Form</i> (DEP-APP-007) and copies of any field surveys previously conducted to determine the presence of any endangered, threatened or special concern species.

Part IV: Registrant Certification

The registrant *and* the individual(s) responsible for actually preparing the registration must sign this part. A registration will be considered incomplete unless all required signatures are provided.

"I have personally examined and am familiar with the informatic attachments thereto, and I certify that, based on reasonable invindividuals responsible for obtaining the information, the submit to the best of my knowledge and belief.	restigation, including my inquiry of those
I certify that this permit registration is on complete and accurate without alteration of the text.	e forms as prescribed by the Commissioner
I also certify under penalty of law that I have read and understate the Discharge of Stormwater from a Municipal Separate Storm that all requirements for authorization under the general permit ensure that all terms and conditions of this general permit will only this general permit for the municipality. I am aware that there information, including the possibility of fine and imprisonment for	Sewer System issued on January 9, 2004 and are met and that a system is in place to ontinue to be met for all discharges authorized are significant penalties for submitting false
	Original Signed - 7/8/2004
Signature of CEO/PEO or designee [as specified in RCSA Section 22a-430-3(b)(2)(B)]	Date
John H. McGrane	Director of Public Works
Name of CEO/PEO or designee (print or type)	Title (if applicable)
Signature of Preparer (if different than above)	Date
Name of Preparer (print or type)	Title (if applicable)
Check here if additional signatures are necessary. If so, please reproduce this sheet and attach signed copi	es to this sheet.

Note: Please submit the Registration Form and all Supporting Documents to:

STORMWATER PERMIT COORDINATOR BUREAU OF WATER MANAGEMENT DEPARTMENT OF ENVIRONMENTAL PROTECTION 79 ELM STREET HARTFORD, CT 06106-5127

Part V: Best Management Practice List (BMP)

ВМР		Responsible	
ID	Public Education	Dept. or Person	Measurable Goal
	Publish article in the Town Letter once per year	Planning	Article published
1-2	Obtain educational videos for Library distribution	Planning	Videos available
1-3	Air educational videos in schools and on Public Access TV	Planning	Videos aired
1-4	Coordinate with others: DEP, DOT, FRWA, NEMO, CCRPA, PRWA	Planning	Annual summary/report
1-5			
1-6			
1-7			
1-8			
1-9			
1-10			
BMP ID	Public Participation	Responsible Dept. or Person	Measurable Goal
2-1	Develop public involvement/participation program	Planning	Prepare yearly schedule
2-2	Comply with state and local public notice and FOI requirements	Public Works	Maintain compliance
2-3	Hold meetings/workshops to educate and involve the public	Planning	Hold meetings/workshops
2-4	Organize/implement community clean-up days: Town, FRWA	Planning	Hold community clean-ups
2-5			
2-6			
2-7			
2-8			
2-9			
2-10			
BMP ID	Illicit Discharge Detection & Elimination	Responsible Dept. or Person	Measurable Goal
3-1	Map outfalls greater than 15" in Urbanized Area (Year 2)	Engineering	Mapping completed
3-2	Map outfalls greater than 15" in town-wide (Year 3)	Engineering	Mapping completed
3-3	Map outfalls greater than 12" in Urbanized Area (Year 4)	Engineering	Mapping completed
3-4	Develop program to detect and eliminate illicit discharges	Public Works	Program implemention
3-5	Develop illicit discharge ordinance	Public Works	Determine need
3-6			
3-7			
3-8			
3-9			
3-10			

BMP ID	Construction Site Runoff Control	Responsible Dept. or Person	Measurable Goal
4-1	Review land use regulations to meet requirements of MS4 permit and E&S Guidelines	Planning	Review completed
4-2	The state of the s		
4-3			
4-4			
4-5			
4-6			
4-7			
4-8			
4-9			
4-10			
BMP ID	Post Construction Runoff Control	Responsible Dept. or Person	Measurable Goal
5-1	Review land use regulations to meet requirements of MS4 permit and E&S Guidelines	Planning	Review completed
5-2	Develop post-construction ordinance or regulation	Planning	Determine need
5-3	Develop and implement post-construction BMP strategy	Planning	Program implemention
5-4	Develop program to ensure long-term operation and maintenance of BMPs	Planning	Program implemention
5-5			
5-6			
5-7			
5-8			
5-9			
5-10			
BMP ID	Good Housekeeping	Responsible Dept. or Person	Measurable Goal
6-1	Develop training program for municipal employees	Public Works	Program implemention
6-2	Sweep streets at least once a year as soon as possible after snowmelt	Highway	Program implemented
6-3	Evaluate Urbanized Area for possible sweeping more than once a year	Public Works	Evaluation completed
6-4	Develop program to evaluate and clean stormwater structures at least once a year	Public Works	Program implementation
6-5	Develop program to evaluate and prioritize system for upgrade and/or repair	Public Works	Program implementation
6-6			
6-7			
6-8			
6-9			
6-10			
BMP ID	Monitoring	Responsible Dept. or Person	Measurable Goal
S-1	Sample 6 outfalls once a year	Public Works	Completion
S-2	Alternate sampling plan	Public Works	Consideration completed

Part VIA: Best Management Practice Timeline

	Permit Year One					Permit Year Two				Permit Year Three				Permit Year Four				Permit Year Five			
BMP ID	Spring 2004	Summer 2004	Fall 2004	Winter 2004-05	Spring 2005	Summer 2005	Fall 2005	Winter 2005-06	Spring 2006	Summer 2006	Fall 2006	Winter 2006-07	Spring 2007	Summer 2007	Fall 2007	Winter 2007-08	Spring 2008	Summer 2008	Fall 2008	Winter 2008-09	Next Permit
Publi	c Educa	ation							1												
1-1				Done		Done			Done								Done		Done		
1-2			Done				Done														
1-3				Done		Done															
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Publi	c Partic	ipation																			
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3-1								Done													
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⁻⁻⁻⁻ Work in Progress

Done Task Completed

X Task Completed as a One-time Event During that Quarter

	Permit Year One					Permit	Year T	wo		Permit \	ear T	hree		Permit	Year F	our	Permit Year Five				
BMP ID	Spring 2004	Summer 2004			Spring 2005	Summer 2005	Fall 2005	Winter 2005-06	Spring 2006	Summer 2006	Fall 2006	Winter 2006-07	Spring 2007	Summer 2007	Fall 2007	Winter 2007-08	Spring 2008	Summer 2008	Fall 2008	Winter 2008-09	Next Permit
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Part VIB: Sample Best Management Practice Timeline

	Permit Year One					Permit Year Two				Permit Y	'ear T	hree	Permit Year Four				Permit Year Five				
BMP ID	Spring 2004	Summer 2004	Fall	Winter 2004-05	Spring 2005	Summer 2005	Fall 2005	Winter 2005-06	Spring 2006	Summer 2006	Fall	Winter 2006-07	Spring	Summer 2007	Fall	Winter 2007-08	Spring 2008	Summer 2008	Fall	Winter 2008-09	Next Permit
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⁻⁻⁻⁻ Work in Progress

Done Task Completed

X Task Completed as a One-time Event During that Quarter

	Permit Year One					Permit	Year 1	Гwо		Permit \	∕ear T	hree		Permit	Year I	our	Permit Year Five				
BMP ID	Spring	Summer 2004	Fall	Winter	Spring	Summer 2005	Fall 2005	Winter 2005-06	Spring	Summer 2006	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall	Winter 2008-09	Next Permit
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ATTACHMENT B

Stormwater Monitoring Report Forms



Stormwater Monitoring Report Form

PERMITTEE INFORMATION

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

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2008) R12: Lat 41-43-09.305, Long 72-46-59.954 Located on the east side of Holmes Circle, first CB offroad between houses #21 & #23.
Please circle the appropriate area description: Industrial, Commercial, or Residential
Receiving Water (name, basin): Bass Brook 4401-00-1-L2
Time of Start of Discharge:07:00hrs
Date/Time Collected: August 6, 2008/09:56hrs Water Temperature: 65°F
Person Collecting Sample: Bruce Cyr & Matt Blume
Storm Magnitude (inches): 0.75 Storm Duration (hours): 9(approx)
Date of Previous Storm Event: August 2, 2008

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	7.2	Averill Environmental Lab #AEL08006503
Rain pH	SM19 4500H+B	4.4	Averill Environmental Lab #AEL08006503
Hardness	SM 2340 B	128 mg/L CaO3	Averill Environmental Lab #AEL08006503
Conductivity	SM19 2510B	340 micromhos/cm	Averill Environmental Lab #AEL08006503
Oil & Grease	EPA 1664A	<1.9 mg/L	Averill Environmental Lab #AEL08006503
COD	EPA 410.4	<20 mg/L	Averill Environmental Lab #AEL08006503
Turbidity	EPA 180.1	1.1 NTU	Averill Environmental Lab #AEL08006503
TSS	SM19 2540D	<1.7 mg/L	Averill Environmental Lab #AEL08006503
TP	SM19 4500PE	0.716 mg/L as P	Averill Environmental Lab #AEL08006503
Ammonia	SM19 4500NHD	0.26 mg/L	Averill Environmental Lab #AEL08006503
TKN	SM194500NH3F	<1.0 mg/L	Averill Environmental Lab #AEL08006503
NO ₃ +NO ₂	EPA 300.0	1.58 mg/L	Averill Environmental Lab #AEL08006503
E. coli	SM 9222 B	2700 MPN/100 mL	Averill Environmental Lab #AEL08006503

	ta reported on this document were prepared MS4 General Permit. The information suburate and complete.	
Authorized Official:	Russell M. Arnold, Jr. P.E., Director of Po	ublic Works/Town Engineer
Signature:	Russel M. A. Alfr	Date: November 24, 2008



Stormwater Monitoring Report Form

PERMITTEE INFORMATION

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

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2008) R13: Lat 41-41-54.758, Long 72-50-41.661
Located on the east side of Main Street (Rt. 10), between houses #5 & #7 Hawthorne Lane.
Please circle the appropriate area description: Industrial, Commercial, or Residential
Receiving Water (name, basin): Pequabuck River 4315-00-4-R5
Time of Start of Discharge: 07:00hrs
Date/Time Collected: August 6, 2008/10:55hrs Water Temperature: 67°F
Person Collecting Sample: Bruce Cyr & Matt Blume
Storm Magnitude (inches): 0.75 Storm Duration (hours): 9(approx)
Date of Previous Storm Event: August 2, 2008

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	7.9	Averill Environmental Lab #AEL08006504
Rain pH	SM19 4500H+B	4.4	Averill Environmental Lab #AEL08006504
Hardness	SM 2340 B	81.6 mg/L CaO3	Averill Environmental Lab #AEL08006504
Conductivity	SM19 2510B	220 micromhos/cm	Averill Environmental Lab #AEL08006504
Oil & Grease	EPA 1664A	<1.9 mg/L	Averill Environmental Lab #AEL08006504
COD	EPA 410.4	<20 mg/L	Averill Environmental Lab #AEL08006504
Turbidity	EPA 180.1	6.2 NTU	Averill Environmental Lab #AEL08006504
TSS	SM19 2540D	15.5 mg/L	Averill Environmental Lab #AEL08006504
TP	SM19 4500PE	0.080 mg/L as P	Averill Environmental Lab #AEL08006504
Ammonia	SM19 4500NHD	0.30 mg/L	Averill Environmental Lab #AEL08006504
TKN	SM194500NH3F	<1.0 mg/L	Averill Environmental Lab #AEL08006504
NO ₃ +NO ₂	EPA 300.0	0.83 mg/L	Averill Environmental Lab #AEL08006504
E. coli	SM 9222 B	6700 MPN/100 mL	Averill Environmental Lab #AEL08006504

	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:	Pussell M Date: November 24, 2008



Stormwater Monitoring Report Form

PERMITTEE INFORMATION

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

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2008) R14: Lat 41-43-37.295, Long 72-49-40.528
Located on the north side of Hobart Street, to the rear of #12
Please circle the appropriate area description: Industrial, Commercial, or Residential
Receiving Water (name, basin): Farmington River 4300-00-5+R1
Time of Start of Discharge: 07:00hrs
Date/Time Collected: August 6, 2008/10:29hrs Water Temperature: 65°F
Person Collecting Sample: Bruce Cyr & Matt Blume
Storm Magnitude (inches): 0.75 Storm Duration (hours): 9(approx)
Date of Previous Storm Event: August 2, 2008

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	7.2	Averill Environmental Lab #AEL08006505
Rain pH	SM19 4500H+B	4.4	Averill Environmental Lab #AEL08006505
Hardness	SM 2340 B	14.7 mg/L CaO3	Averill Environmental Lab #AEL08006505
Conductivity	SM19 2510B	57 micromhos/cm	Averill Environmental Lab #AEL08006505
Oil & Grease	EPA 1664A	<2.1 mg/L	Averill Environmental Lab #AEL08006505
COD	EPA 410.4	36 mg/L	Averill Environmental Lab #AEL08006505
Turbidity	EPA 180.1	18 NTU	Averill Environmental Lab #AEL08006505
TSS	SM19 2540D	36.7 mg/L	Averill Environmental Lab #AEL08006505
TP	SM19 4500PE	0.190 mg/L as P	Averill Environmental Lab #AEL08006505
Ammonia	SM19 4500NHD	0.49 mg/L	Averill Environmental Lab #AEL08006505
TKN	SM194500NH3F	1.2 mg/L	Averill Environmental Lab #AEL08006505
NO ₃ +NO ₂	EPA 300.0	0.53 mg/L	Averill Environmental Lab #AEL08006505
E. coli	SM 9222 B	6500 MPN/100 mL	Averill Environmental Lab #AEL08006505

	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:	Date: November 24, 2008



Stormwater Monitoring Report Form

PERMITTEE INFORMATION

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

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2008) R15: Lat 41-43-21.880, Long 72-49-29.564		
Located on the west side of Garden Street, to the rear of #26 (24"RCP outlet)		
Please circle the appropriate area description: Industrial, Commercial, or Residential		
Receiving Water (name, basin): Farmington River 4300-00-5+R1		
Time of Start of Discharge: 07:00hrs		
Date/Time Collected: August 6, 2008/10:39hrs Water Temperature: 65°F		
Person Collecting Sample: Bruce Cyr & Matt Blume		
Storm Magnitude (inches): 0.75 Storm Duration (hours): 9(approx)		
Date of Previous Storm Event: August 2, 2008		

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	7.6	Averill Environmental Lab #AEL08006506
Rain pH	SM19 4500H+B	4.4	Averill Environmental Lab #AEL08006506
Hardness	SM 2340 B	37.6 mg/L CaO3	Averill Environmental Lab #AEL08006506
Conductivity	SM19 2510B	98 micromhos/cm	Averill Environmental Lab #AEL08006506
Oil & Grease	EPA 1664A	<2.0 mg/L	Averill Environmental Lab #AEL08006506
COD	EPA 410.4	45 mg/L	Averill Environmental Lab #AEL08006506
Turbidity	EPA 180.1	27 NTU	Averill Environmental Lab #AEL08006506
TSS	SM19 2540D	52.0 mg/L	Averill Environmental Lab #AEL08006506
TP	SM19 4500PE	0.202 mg/L as P	Averill Environmental Lab #AEL08006506
Ammonia	SM19 4500NHD	0.36 mg/L	Averill Environmental Lab #AEL08006506
TKN	SM194500NH3F	1.3 mg/L	Averill Environmental Lab #AEL08006506
NO ₃ +NO ₂	EPA 300.0	0.55 mg/L	Averill Environmental Lab #AEL08006506
E. coli	SM 9222 B	8600 MPN/100 mL	Averill Environmental Lab #AEL08006506

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:	funel M bell	Date: November 24, 2008



Stormwater Monitoring Report Form

PERMITTEE INFORMATION

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

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2008) R16: Lat 41-44-31.283, Long 72-54-03.748			
Located on the west side of Lido Road, to the rear of #97 (outfall to lake)			
Please circle the appropriate area description: Industrial, Commercial, or Residential			
Receiving Water (name, basin): Farmington River 4300-20-1-L2			
Time of Start of Discharge: 07:00hrs			
Date/Time Collected: August 6, 2008/11:42hrs Water Temperature: 70°F			
Person Collecting Sample: Bruce Cyr & Matt Blume			
Storm Magnitude (inches):			
Date of Previous Storm Event: August 2, 2008			

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	6.8	Averill Environmental Lab #AEL08006508
Rain pH	SM19 4500H+B	4.4	Averill Environmental Lab #AEL08006508
Hardness	SM 2340 B	5.0 mg/L CaO3	Averill Environmental Lab #AEL08006508
Conductivity	SM19 2510B	21 micromhos/cm	Averill Environmental Lab #AEL08006508
Oil & Grease	EPA 1664A	<1.9 mg/L	Averill Environmental Lab #AEL08006508
COD	EPA 410.4	<20 mg/L	Averill Environmental Lab #AEL08006508
Turbidity	EPA 180.1	12 NTU	Averill Environmental Lab #AEL08006508
TSS	SM19 2540D	10.5 mg/L	Averill Environmental Lab #AEL08006508
TP	SM19 4500PE	0.123 mg/L as P	Averill Environmental Lab #AEL08006508
Ammonia	SM19 4500NHD	0.39 mg/L	Averill Environmental Lab #AEL08006508
TKN	SM194500NH3F	<1.0 mg/L	Averill Environmental Lab #AEL08006508
NO ₃ +NO ₂	EPA 300.0	0.39 mg/L	Averill Environmental Lab #AEL08006508
E. coli	SM 9222 B	23000 MPN/100 mL	Averill Environmental Lab #AEL08006508

	ta 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 urate and complete.
Authorized Official:	Rûssell M. Arnold, Jrg, P.E. Director of Public Works/Town Engineer
Signature:	Date: November 24, 2008



Stormwater Monitoring Report Form

PERMITTEE INFORMATION

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

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2008) C6: Lat 41-44-52.638, Long 72-51-18.621		
Sample taken from CB on west side of Brickyard Road 170lf +/- south of Eastview Drive.		
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:07:00hrs		
Date/Time Collected: August 6, 2008/11:42hrs Water Temperature: 70°F		
Person Collecting Sample: Bruce Cyr & Matt Blume		
Storm Magnitude (inches): 0.75 Storm Duration (hours): 9(approx)		
Date of Previous Storm Event: August 2, 2008		

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	7.5	Averill Environmental Lab #AEL08006507
Rain pH	SM19 4500H+B	4.4	Averill Environmental Lab #AEL08006507
Hardness	SM 2340 B	57.4 mg/L CaO3	Averill Environmental Lab #AEL08006507
Conductivity	SM19 2510B	76 micromhos/cm	Averill Environmental Lab #AEL08006507
Oil & Grease	EPA 1664A	<1.8 mg/L	Averill Environmental Lab #AEL08006507
COD	EPA 410.4	290 mg/L	Averill Environmental Lab #AEL08006507
Turbidity	EPA 180.1	870 NTU	Averill Environmental Lab #AEL08006507
TSS	SM19 2540D	515 mg/L	Averill Environmental Lab #AEL08006507
TP	SM19 4500PE	0.940 mg/L as P	Averill Environmental Lab #AEL08006507
Ammonia	SM19 4500NHD	0.50mg/L	Averill Environmental Lab #AEL08006507
TKN	SM194500NH3F	1.9 mg/L	Averill Environmental Lab #AEL08006507
NO ₃ +NO ₂	EPA 300.0	<0.23 mg/L	Averill Environmental Lab #AEL08006507
E. coli	SM 9222 B	4300 MPN/100 mL	Averill Environmental Lab #AEL08006507

Authorized Official:	Russell M. Arnold, Jr., P.E., Director of Public Works/Town Engineer
Signature:	Date: November 24, 2008

ATTACHMENT C

Monitoring Site Location Mapping











