

TOWN HALL 1 MONTEITH DRIVE FARMINGTON, CONNECTICUT 06032-1053

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

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 2006

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 2006 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 can be found in Attachments B and C. Attachment D contains an alternative sampling plan that the town is requesting the Commissioner to approve for future implementation by the town. I have previously forwarded a check for the municipal plan review fee in the amount of \$187.50 as required by subsection 6(i)(2)(i) of the MS4 General Permit, previously. Enclosed with the annual report is a copy of the original check.

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.

Kussell M L

Director of Public Works and Development Services

Town of Farmington

cc: Salvatore A. Palaia, P.E., LEA

enclosures

A CONTONION PROPERTY.

2006 ANNUAL REPORT

Municipal Separate Storm Sewer System Farmington, Connecticut

January 2007

Prepared for

TOWN OF FARMINGTON
1 Monteith Drive
Farmington, Connecticut 06032

Prepared by

LOUREIRO ENGINEERING ASSOCIATES, INC. 100 Northwest Drive Plainville, Connecticut, 06062

An Employee Owned Company

Comm. No. 28FA406.004

Table of Contents

		Page
1.	PURPOSE AND SCOPE	1-1
2.	BEST MANAGEMENT PRACTICES	2-1
2.1	Public Education	2-1
2.2	Public Participation	2-2
2.3	Illicit Discharge Detection & Elimination	2-2
2.4	Construction Site Runoff	2-3
2.5	Post Construction Runoff Control	2-3
2.6	Good Housekeeping	2-3
2.7	Monitoring	2-4
2.8	Alternative Sampling Plan	2-6
3.	CERTIFICATION	3-1

ATTACHMENT A – Amended Part B Registration Form ATTACHMENT B – Stormwater Monitoring Report Forms ATTACHMENT C – Monitoring Site Location Mapping ATTACHMENT D – Alternative Sampling Plan



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.

Attachment D contains an alternative sampling plan that the town is requesting the Commissioner to approve for future implementation by the town.

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 2006 were again limited to notifications concerning spring street sweeping, the spring bulky waste collection program held between April 3rd and April 7th and the Household Hazardous Waste Collection Day held on April 22, 2006. The plan to publish a separate article covering the municipal stormwater program is now scheduled for the fall of 2007.

A number of brochures on stormwater management published by the Environmental Protection Agency (EPA) have been purchased for distribution to local schools and libraries, and three copies of the EPA video After the Storm have been distributed to town libraries for resident use. Three copies of the video After the Storm have also been distributed for use in public schools and the video has been aired by teachers in some public school classrooms. The plan to air the video After the Storm on Public Access TV has not yet been realized.

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. As noted below, a workshop developed by the NEMO staff was conducted during the spring. The workshop was publicized by the distribution of a flyer.

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 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**

A yearly schedule for the implementation of a public participation program was developed by the Planning Division. The schedule prepared during 2006 covered all of the public education and public participation activities implemented during 2006.

The Town of Farmington, the Farmington River Watershed Association and the NEMO staff jointly conducted a public educational workshop on pollution caused by stormwater runoff at the Farmington Public Library on May 23, 2006. The program stressed the means that can be employed to reduce pollution impacts.

During the spring 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.

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 15 inches owned or maintained by the Town of Farmington has been completed 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 in the process of 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.

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 addition, an inventory of privately owned storm sewers is being developed in conjunction with the mapping of all storm sewers within the town. An evaluation of the need for periodic reports being filed with town officials by the private owners of such systems has been initiated.

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 that are sanded for skid control during the winter as soon as practical after snowmelt has been implemented.



The need to sweep paved streets more than once a year is being considered as a function of the development of the Farmington Stormwater Management Plan that is scheduled to be completed before January 9, 2009.

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. Those 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. 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 fall of 2006. 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	Laboratory Number
2006 R-4 (Residential)	R4A-12-1-06	AEL06010628
2006 R-5 (Residential)	R5A-12-1-06	AEL06010629
2006 C-4 (Commercial)	C4A-12-1-06	AEL06010630
2006 C-5 (Commercial)	C5A-12-1-06	AEL06010631
2006 I-4 (Industrial)	I4A-12-1-06	AEL06010632
2006 I-5 (Industrial)	I5A-12-1-06	AEL06010633

All six of the 2006 stormwater samples were collected during a rain storm event that commenced at approximately 5:00 AM during the morning of December 1, 2006. The samples were collected from the identified outfalls between 3:00 PM and 4:03 PM, starting soon after it was judged that sufficient flow would be discharging from the selected outfalls. The rainfall generated by the storm event was not constant and the intensity did not increase significantly until about 2:00 PM. Local records indicate that the storm only generated 0.11 inches of rainfall by 2:00 PM; however, the total rainfall produced by the storm was measured at 0.40 inches. The event was a qualifying event since the preceding rainfall event occurred on November 23, 2006. It should be noted that samples were collected from these same six locations on October 17, 2006, but it was decided to resample the outfalls based on the unusual high coliform counts in many of the samples. We have only reported the results obtained from the second sample event.



In general in may be stated that the analytical results obtained from these six sample locations were not significantly different than the average pollutant concentrations for the majority of the parameters listed in the 2004 Stormwater Quality Manual for urban stormwater runoff. The following is a brief assessment of the stormwater sample results collected from the residential, commercial and industrial land use areas of the town as required under the MS4 General Permit.

The values for total suspended solids, phosphorus and turbidity at both of the residential sampling locations R-4 and R-5 were slightly higher than most of the other outfall locations that were sampled in 2006. The total and Escherichia coliform counts also appeared relatively high when compared to the DEP Water Quality Criteria for the various designated uses of freshwater bodies. This is of particular concern at sample site location R-4, since the discharge is tributary to Batterson Park Pond which is used for swimming and other recreational activities. The other outfall drains to a tributary of Bass Brook below the outlet of Batterson Park Pond. However, it is important to recognize that although indicator bacteria are used to detect the potential presence of contamination by human or animal wastes, due to the inherent uncertainty involved in sampling and analytically determining the bacteria levels, exceedances of the water quality criteria does not always indicate a water quality problem and therefore should be investigated by means of a sanitary survey or other appropriate means to better determine the sources of the elevated bacteria levels.

The total suspended solids, phosphorus, turbidity and coliform levels were particularly high at one of the two commercial sampling locations, C-5. This sampling location is located off Brickyard Road opposite the Dunning Sand and Gravel site. It was apparent that runoff from the entrance to this site has affected the local water quality during this storm event based on the evidence of scour reported at the outfall by the individuals who collected the samples. Dunning Sand and Gravel is not among the industries that are listed as having registered for a General Permit for the Discharge of Stormwater Associated with an Industrial Activity. The sampling results at the other commercial sampling location, C-4, an outfall that discharges overland from the storm sewers serving the properties along Eastview Drive, were nominal. Both stormwater discharges enter an unnamed pond abutting a residential apartment complex in the area. The pond was historically associated with sand and gravel mining operations and it identified as being tributary to Poplar Swamp Brook by the mapping associated with the Gazetteer of Drainage Areas of Connecticut and the drainage area identified on the Stormwater Monitoring Report Form in Appendix B of this report lists the basin number so identified. However, that information is not correct as the ponds on both sides of Brickyard Road are isolated from Poplar Swamp Brook and the feeder canal that coursed through the area occupied by the ponds entering the historical Farmington Canal near the Farmington Canal Aqueduct over the Farmington River



south of the Farmington town line. The eastern section of the pond west of Brickyard Road discharges directly into the adjacent reach of the Farmington River (4300-00-4+R17).

The industrial sampling sites selected were both located within the watershed of Scott Swamp Brook. One of the locations, namely I-4, was previously sampled in 2005 at which time it was considered suspect due to high levels of turbidity and the presence of a septic odor. Odor was detected again this year, but it was described as organic rather than septic which could be a product of the extensive earth mining and grading operations that have been conducted in the area. The sampling results did not reveal a significant problem. The other industrial sampling site, I-5, an outfall from a storm drain system on Hyde Road where it crosses Scott Swamp Brook, revealed somewhat elevated levels of suspended solids, but not commensurately high when compared to the residential and commercial areas that were sampled. The coliform levels were only slightly elevated at this site.

2.8 Alternative Sampling Plan

Serious consideration has been given to implementing an alternative sampling plan during the past year, and that alternative plan is described in Appendix D. At this time it is requested that the Commissioner issue a written approval of the alternative sampling plan that is described.



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., P.E.

Director of Public Works/Town Engineer

finel M Allf

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 of Public Works



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.

	DEP USE C	DNLY
Applica	tion:No.	
Permit	Vo.	
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., Director of Public Works &	& Dev. Ser.	
	Mailing Address: 1 Monteith Drive		
	City/Town: Farmington	State: CT	Zip Code: 06032-1053
	Business Phone: 675-2330	ext.	Fax: 675-2319
	E-Mail: ArnoldR@Farmington-CT.org		
	Contact Person: Russell M. Arnold, Jr.	Title: Director	of Public Works
3.	List any engineer(s) or other consultant(s) employed or retain	ined to assist in p	preparing the registration.
	☐ Check here if additional sheets are necessary, and lab	el and attach the	m to this sheet.
	Name: Loureiro Engineering Associates, Inc.		
	Mailing Address: 100 Northwest Drive		
	City/Town: Plainville	State: CT	Zip Code: 06062
	Business Phone: 747-6181	ext.	Fax: 747-8822
	E-Mail: sapalaia@loureiro.com		
	Contact Person: Salvatore A. Palaia, P.E.	Title: Senior Pr	roject Manager

Service Provided: General Consulting

Part II: Site Information

1.		ctivity included in your Stormwater Management Plan that would adversely affect properties e for listing in the National Register of Historic Places?
	and must coor	strant must be in compliance with requirements of the National Historic Preservation Act dinate with the appropriate State Historic Preservation Officer to avoid or minimize impacts ssary activities.
2.		etivity included in your Stormwater Management Plan that is located within the coastal elineated on DEP approved coastal boundary maps?
		application is for a new authorization or for a modification of an existing permit, you must tal Consistency Review Form (DEP-APP-004) with your application as Attachment A.
	For forms or as	ssistance, please call the Permit Assistance Office at 860-424-3003.
3.	identified as a	tivity included in your Stormwater Management Plan that is located within an area habitat for endangered, threatened or special concern species as identified on the "State sted Species and Natural Communities Map"?
	☐ Yes [No Date of Map: 2003
:		e and submit a Connecticut Natural Diversity Data Base (CT NDDB) Review Request Form) to the address specified on the form.
	including copie information whi	ng this permit application, please include copies of any correspondence to the NDDB, sof the completed CT NDDB Review Request Form, any field surveys, and any other ich may lead you to believe that endangered or threatened species may or may not be treatened of your existing or proposed permitted activity, as Attachment B.
	Has a field surv concern specie	vey been conducted to determine the presence of any endangered, threatened or special s?
	Biologist's Nam	e:
	Address:	
	and submit a co	opy of the field survey with your application as an Attachment as specified above.
	• •	ing Documents
this a	application form.	chments submitted as verification that all 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 Permit Application
	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 Coastal Consistency Review Form (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 CT NDDB Request Form (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 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 certify that this permit registration is on complete and accurate forms as prescribed by the Commissioner without alteration of the text.

I also certify under penalty of law that I have read and understand all requirements of the General Permit for the Discharge of Stormwater from a Municipal Separate Storm Sewer System issued on January 9, 2004 and that all requirements for authorization under the general permit are met and that a system is in place to ensure that all terms and conditions of this general permit will continue to be met for all discharges authorized by this general permit for the municipality. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowingly making false statements."

Signature of CEO/PEO or designee [as specified in RCSA Section 22a-430-3(b)(2)(B)]	Original Signed - 7/8/2004 Date
John H. McGrane Name of CEO/PEO or designee (print or type)	Director of Public Works Title (if applicable)
Signature of Preparer (if different than above)	Original Signed - July 7, 2004 Date
Salvatore A. Palaia, P.E. Name of Preparer (print or type)	Senior Project Manager Title (if applicable)
Check here if additional signatures are necessary. If so, please reproduce this sheet and attach signed copi	ies 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

Rev. 05/11/04

Part V: Best Management Practice List (BMP)

BMP		Doenonciblo	
٥	Public Education	Dept, or Person	Measurable Goal
1-1	Publish article in the Town Letter once per year	Plannina	Article published
1-2	Obtain educational videos for Library distribution	Planning	Videos exemples
1-3	Air educational videos in schools and on Public Access TV	Planning	Videos sirod
1-4	Coordinate with others: DEP, DOT, FRWA, NEMO, CCRPA, PRWA	Planning	Videos all ed
1-5		Billing	Allinual summary/report
1-6			
1-7			
1-8			
1-9			
1-10			
BMP		Poemoneiblo	
9	Public Participation	Dept or Person	Measurable Goal
2-1	Develop public involvement/participation program	Planning	Prenare vestive schooling
2-5	Comply with state and local public notice and FOI requirements	Public Works	Maintain compliance
2-3	2-3 Hold meetings/workshops to educate and involve the public	Planning	Hold monting function
2-4	2-4 Organize/implement community clean-up days: Town, FRWA	200	noid meetings/workshops
2-5		Si ilia	noid community clean-ups
2-6			
2-7			
2-8			
2-9			
2-10			
BMP ID	Illicit Discharge Detection & Elimination	Responsible	
3-1	3-1 Map outfalls greater than 15" in Urbanized Area (Year 2)	Engineering	Manning committee
3-2		Engineering	Manning completed
3-3	3-3 Map outfalls greater than 12" in Urbanized Area (Year 4)	Engineering	Manning completed
3-4		Public Works	Program implemention
3-5	3-5 Develop illicit discharge ordinance	Public Works	Dotomin Implemental
3-6		S TO LOS	Defermine need
3-7			
3-8			
3-9			
3-10			

_	
~	Ŧ
-	٩
-	~
-	•
1101	-
$\overline{}$	-
40	Ξ,
94	a
0,50	٦
*	•
- 14	e.
-	~
- 61	'n
- 34	ч
n	r
Dox	-

BMP		Responsible	
Ω	Construction Sife Runoff Control	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			322
4-3			
4-4			
4-5			
4-6			
4-7			
4-8			
4-9			12
4-10			
BMP		Responsible	
2	Post construction Kunoff Control	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	5-4 Develop program to ensure long-term operation and maintenance of BMPs	Planning	Drogram implemention
5-2			
5-6			
2-2			
5-8			
5-9			
5-10			
BMP	Good Housekeeping	Responsible Dept. or Person	Measurable Goat
6-1	Develop training program for municipal employees	Public Works	Program implemention
6-2		Highway	Program implemented
6-3		Public Works	Evaluation completed
6-4		Public Works	Program implementation
9-2		Public Works	Program implementation
9-9			
2-9			
9-9			
6-9			
6-10			
BMP		Reconcible	
0	Monitoring	Dept. or Person	Measurable Goal
ن -	Sample 6	Public Works	Completion
S-2	Alternate sampling plan	Public Works	Consideration completed
DEP-PEC	DEP-PED-REG-8MP-021B		

Part VIA: Best Management Practice Timeline

Spring Summer Fa D 2004 2004 200 Public Education 1-1 Do 1-2 Do 1-3 1-4 1-6 Do	Fall Winter 2004 2004-05		ring Sı	-	11.00	A STREET A STREET		The Real Property lies	в	Ī		-		The state of the s					
	400		002	Spring Summer 2005 2005	Fall 2005	2005-06 2006	Spring 2006	nng summer Fall 306 2006 2006	STATE OF THE PARTY.	Winter 2006-07	Spring 2007	Summer 2007	Fall 7007	te.	Spring	Summer	Fall	Fall Winter	Next
				31				il .								(9)	2000	rue l	
	Do	Done		Done			Done									1			
	Done				Done												-		
	D	Done	_	Done							1								
						Done				Done	1		ı	1			-	T	
																		<u> </u>	
1-7			-																
1-8							T										+	+	
1-9	_								1								\dagger	T	
1-10																			
Public Participation																			
2-1	å	Done	-			Done				Dono								F	
2-2	å	Done				Done				9000							T		
2-3		<u> </u>	-			+	Done											•	
2-4 Done		Ĭ	Done				Done												
-																	b	1	
2-6																			
2-7			_																
2-8																			
2-9																	1	Ť	
2-10																			
Illicit Discharge Detection & Elimination	on & Eli	minatic	l uc																
3-1						Done			1		1	8000	i						
3-2										Done	į	i	1	:			ı		
3-3	_									1	1		i						
3-4											1		i	i	1				
3-5																			
3-6																		T	
3-7																	+	T	
3-8																			
3-9																	,		
3-10																	+	T	

Rev. 05/11/04

The Party of the P	ш			ma.	214		remini real infee	- Cal	nree			Permit Year Four		ď.	Permit Year Five	ear Five	
Fall 2004	Winter 4 2004-05		Spring Summer 2005 2005	ALC: UNKNOWN	Fall Winter 2005 2005-06	Spring 2006	Summer 2006	Fall	Winter 2006-07	Spring S	Summer	Fall W	Winter Si	Spring Su	Summer F	Fall Winter	Next
Joff	Construction Site Runoff Control	ĺ									⊕H		2			2008 2008-09	_
Done	e Done						į					-	-	-	-		
														+			
												+					
									Ī			+	 		+	+	
												+			+		
										T	†	+		+	+		
										\dagger		+	+	+			
									T			+	t	+	-		
					,					+			<u> </u>	+	+		
													1		-		
unof	Post Construction Runoff Control	_												-			
Done	e Done			L								_	-				
	-	Done	Done						Ì				1	+			
		Done	\vdash	l	•	•							+	+	+		
												+	+	+	+		
											1	-	1	-	-		
									Ī		+		T	+			
										+		+	+	+	+		
										\dagger		+	1	+	+		
												-	+			1	
Good Housekeeping																	
	1		ļ	1										H		-	
		Done				ı						-	+		-		
	_			Done				Done			 				-		
				Done									<u> </u>		<u> </u>		
				Done							 -	+	1	<u> </u>	la .		
	_												T	-		· ·	
									T	\dagger			1	+	+		
													1	+			
												-			+		
												-		+	-		
										-						- -	
×				×				×		-		-			-		
												-		_	-	-	
		:									-		Į				

Part VIB: Sample Best Management Practice Timeline

Winter Spring Summer Fall Winter Fall Winter Spring Summer Fall Winter Fal	Education	OM OM	Perm		One		Permit	Year	WO		Permit Year Three	ear Th	ree	1	Permit Year Four	ear F	our	P. Carlotte	Permit Year Five	Year	ive	
			ng Summ)4 2004	A STATE OF THE PARTY OF		Spring 2005	3005 2005	Fall 2005		S		CORP. SEC. S. Sec.	The second second	Spring 2007	Summer 2007	Fall 2007	Winter 2007-08	(V)	ummer	Fall	Winter	Next
Note Control	X X	ıblic Ed	ucation															0004	2000	2000	*000-03	
Note	X	1-1		Done														-				
X	None	1-2			•	*	•	l	1	Done								+				
X	X	\perp	\dashv				•	Done													T	
## Company of the com	## Comparison of the compariso		1	×	×	×	×	×		×	×	×	×	×	×	×	×	×	>	>	>	
### A Company ### A Company<	## X X X X X X X X X X X X X X X X X X	1-5								•	i	i			Т	Done		,	<	<	<	
## A Company of the c	## X X X X X X X X X X X X X X X X X X	1-6		_											Т							
X	## X X X X X X X X X X X X X X X X X X	1-7																+				
Elimination SElimination SE Similar at on the control of the con	8. Elimination A. S.	1-8														T	ļ					
## X X X X X X X X X X X X X X X X X X	## X X X X X X X X X X X X X X X X X X	1-9													T		T					
X X	X X	-10																				
X X	X X	iblic Pa	rticipation	_		,																
X X	X X	2-1			*		×				×				>			-	,			
& Ellmination </td <td>& Ellmination Done <td></td><td></td><td></td><td></td><td>×</td><td></td><td></td><td></td><td>×</td><td></td><td></td><td></td><td>×</td><td><</td><td>†</td><td>Ì</td><td>></td><td><</td><td></td><td></td><td></td></td>	& Ellmination Done <td></td> <td></td> <td></td> <td></td> <td>×</td> <td></td> <td></td> <td></td> <td>×</td> <td></td> <td></td> <td></td> <td>×</td> <td><</td> <td>†</td> <td>Ì</td> <td>></td> <td><</td> <td></td> <td></td> <td></td>					×				×				×	<	†	Ì	>	<			
& Ellmination A Ellmination <td< td=""><td>& Ellmination A contraction <t< td=""><td>2-3</td><td></td><td></td><td></td><td>-</td><td>-</td><td></td><td>-</td><td>ı</td><td></td><td> </td><td>i</td><td>: 1</td><td></td><td></td><td></td><td><</td><td></td><td></td><td></td><td></td></t<></td></td<>	& Ellmination A contraction <t< td=""><td>2-3</td><td></td><td></td><td></td><td>-</td><td>-</td><td></td><td>-</td><td>ı</td><td></td><td> </td><td>i</td><td>: 1</td><td></td><td></td><td></td><td><</td><td></td><td></td><td></td><td></td></t<>	2-3				-	-		-	ı			i	: 1				<				
& Elimination <td>& Ellmination <td>2-4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td><td>ı</td><td>I</td><td>ı</td><td>1</td><td></td><td></td><td></td><td>0000</td><td></td><td></td><td></td><td></td></td>	& Ellmination <td>2-4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td>ı</td> <td>I</td> <td>ı</td> <td>1</td> <td></td> <td></td> <td></td> <td>0000</td> <td></td> <td></td> <td></td> <td></td>	2-4								1	ı	I	ı	1				0000				
& Elimination <	& Elimination Done <td>2-5</td> <td>-</td> <td></td> <td> </td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	2-5	-																			
& Elimination <td>& Elimination Done <</td> <td>9-2</td> <td>+</td> <td></td>	& Elimination Done <	9-2	+																			
& Elimination B. Elimination Construction Construction Construction Construction <td>& Elimination B. Elimination <t< td=""><td>2-7</td><td></td><td>\downarrow</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td></t<></td>	& Elimination B. Elimination <t< td=""><td>2-7</td><td></td><td>\downarrow</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td></t<>	2-7		\downarrow																1		
& Elimination Elimination .	& Elimination & Elimination Done	8-7		-																-		
& Elimination Section of the content of the conten	& Elimination <td>6-3</td> <td></td> <td>\dagger</td> <td></td> <td>+</td> <td></td> <td>1</td> <td></td> <td></td>	6-3														\dagger		+		1		
& Elimination <td>Bone </td> <td>10</td> <td></td> <td>Ì</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Bone	10															Ì					
Done X X X X X X X X X X X X X X X X X X X	Done X X X X X X X X X X X X X X X X X X X	it Disc	harge De	tection		ation																
None	x	3-1							Done							-						
x x x x x x x x x x x x x x x x x x x	x x x x x x x x x x x x x x x x x x x	3-2								ı	i		Done					+				
X	X X X X X X X X X X X X X X X X X X X	\perp	+												1	1	Done				T	
x x x x x x x x x x x x x x x x x x x	X X X X X X X X X X X X X X X X X X X	\perp	-							1		1		-		i		1	1	1	1	
x	X X X X X X X X X X X X X X X X X X X		-		e Con																	
8-9 1-0	Work in Progress	2 00	<				×				×				×				×			
3-9	Work in Progresses	8														1						
10	Work in Progresses	9-6														+						
	Work in Progress	-10										1					1					

Spring Summer Fall Wither Fall Wither Fall Wither Spring Summer Fall Wither			Permit Year One	Year			Permit Year Two	Year T	WO		Permit Year Three	ear Tr	Tree	010	Permit Year Four	Year	iour		Darmit	Voor Ein		
2004 2004 2005 2005 2005 2005 2006		Spring	Summer	Fall	Winter	Sprinc	Summer	Fall	Winter	Spring		Fell	l	Spring	militi. M				200 Bi -	ב ב ב		
Control Cont		2004	2004	2004	2004-05	2005	2005	2002	2005-06	2006	2006	2006	2006-07	2007	2007	2007	2007-08	Spring 2008	Summer 2008	Fall 2008		Next
In the control of t	Cons	truction	ι Site Ru	noff C	ontrol																21	
Unoff Control X X X X X X X X X X X X X	4-1				-	1	Done														-	Ī
Interference Inte	4-2							1	1	ı	Done									+	1	
The first control Cont	4-3													I		Ī	Done					
The control of the	4																			+	+	
Minoff Control	4-5																			+		
Unoff Control Control	4-6																				1	T
Interfection Control	4-7																					
The control	4-8																			+	1	T
Minoff Control Mino	4-9												T							-	$\frac{\perp}{1}$	
The control	4-10													-							1	T
X X X X X X X X X X X X X	Post (Constr	iction Ru	Juoff C	ontrol															-		
Note	5-1					Done														}		
X	5.2						L															
X	7 0								Done													
X	, ,	\uparrow							T	!		•	Done									
X X X X X X X X X X X X X X X X X X X	5-4		1													1	Done			-		
	5-5			×				×				×				×				×	-	Ī
	5-6																			-	T	T
	2-7																			-	1	
X	2-8				}															-		
X	5-9																					
X	5-10																			+		Ī
X	Good	House	keeping																			
Note	6-1	i	i	-	•				×				×				×			-	>	
x x y x y x y x y x y x y x y x y x y x	6-2	×				×				×				×				×			<u> </u>	
X X DOUG DOUG DOUG	6-3																			Done		Ī
And a	4				•	i				×		_		×				×				Ī
	6-5											1	Done							<u> </u>	1	
	9-9											-								-	<u> </u>	
	2-9																	1				T
	8-9																	1		+	T	
	6-9																				1	
2000	6-10														,							
2000 Hann Anna Anna Anna Anna Anna Anna Anna	Monit	oring																				
	S-1		1																	-		T
7.0	0												Ì						i			
	7-0																					

ATTACHMENT B

Stormwater Monitoring Report Forms



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	n #GSM

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2006) R4: Lat41-42-55.982, Long72-47-15.334				
Located on Batterson Park Road 500ft south of Two Mile Road near Entrance to Batterson Park Pond				
Please circle the appropriate area description: Industrial, Commercial, or Residential				
Receiving Water (name, basin): Batterson Park Pond, 4401-00-1-L1				
Time of Start of Discharge: 12:00pm				
Date/Time Collected: December 1, 2006/15:20hrs Water Temperature: 50°F				
Person Collecting Sample: Bruce Cyr & Stephen Doyon				
Storm Magnitude (inches): 0.4 Storm Duration (hours): 10(approx)				
Date of Previous Storm Event: November 23, 2006				

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	7.2	Averill Environmental Lab #AEL06010628
Rain pH	EPA 150.1	4.54	
Hardness	SM 2340 B	44.7 mg/L CaO3	Averill Environmental Lab #AEL06010628
Conductivity	EPA 120.1	100 micromhos/cm	Averill Environmental Lab #AEL06010628
Oil & Grease	EPA 1664A	<1.9 mg/L	Averill Environmental Lab #AEL06010628
COD	EPA 410.4	83 mg/L	Averill Environmental Lab #AEL06010628
Turbidity	EPA 180.1	77 NTU	Averill Environmental Lab #AEL06010628
TSS	EPA 160.2	91.0 mg/L	Averill Environmental Lab #AEL06010628
TP	EPA 365.2	0.196 mg/L as P	Averill Environmental Lab #AEL06010628
Ammonia as N	EPA 350.2	0.19 mg/L	Averill Environmental Lab #AEL06010628
TKN as N	EPA 351.3	2.5 mg/L	Averill Environmental Lab #AEL06010628
NO₃+NO₂ as N	EPA 300.0	< 0.99 mg/L	Averill Environmental Lab #AEL06010628
E. coli	SM 9222 B	600 per 100 mL	Averill Environmental Lab #AEL06010628

I certify that the dat 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 trate and complete.
Authorized Official:	Russell M. Arnold, Jr., P/E/ Director of Public Works/Town Engineer
Signature:	Date: January 3, 2006



Stormwater Monitoring Report Form

PERMITTEE INFORMATION

own: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 #GSM	_

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2006) R5: Lat 41-42-53.845, Long 72-46-52.549				
Located on Batterson Park Road, south of Berkshire Dr., on the NW wing wall of Bridge# 51-006				
Please circle the appropriate area description: Industrial, Commercial, or Residential				
Receiving Water (name, basin): Batterson Park Pond, 4401-00-1-L1				
Time of Start of Discharge: 12:00pm				
Date/Time Collected: December 1, 2006/15:30hrs Water Temperature: 50°F				
Person Collecting Sample: Bruce Cyr & Stephen Doyon				
Storm Magnitude (inches): 0.4 Storm Duration (hours): 10(approx)				
Date of Previous Storm Event: November 23, 2006				

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	7.3	Averill Environmental Lab #AEL06010629
Rain pH	EPA 150.1	4.54	
Hardness	SM 2340 B	28.8 mg/L CaO3	Averill Environmental Lab #AEL06010629
Conductivity	EPA 120.1	77 micromhos/cm	Averill Environmental Lab #AEL06010629
Oil & Grease	EPA 1664A	<2.0 mg/L	Averill Environmental Lab #AEL06010629
COD	EPA 410.4	52 mg/L	Averill Environmental Lab #AEL06010629
Turbidity	EPA 180.1	48 NTU	Averill Environmental Lab #AEL06010629
TSS	EPA 160.2	85.0 mg/L	Averill Environmental Lab #AEL06010629
TP	EPA 365.2	0.218 mg/L as P	Averill Environmental Lab #AEL06010629
Ammonia as N	EPA 350.2	<0.10 mg/L	Averill Environmental Lab #AEL06010629
TKN as N	EPA 351.3	1.7 mg/L	Averill Environmental Lab #AEL06010629
NO ₃ +NO _{2 as N}	EPA 300.0	< 0.63 mg/L	Averill Environmental Lab #AEL06010629
E. coli	SM 9222 B	3000 per 100 mL	Averill Environmental Lab #AEL06010629

I certify that the date 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:	funel M Date: January 3, 2006



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 #GSM	

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2006) C4: Lat 41-44-51.849, Long 72-51-28.171				
Located to the rear (south) of #9 Eastview Drive				
Please circle the appropriate area description: Industrial Commercial, or Residential				
Receiving Water (name, basin): Unnamed Brook, 4300-28-1-L2				
Time of Start of Discharge: 12:00pm				
Date/Time Collected: <u>December 1, 2006/15:50hrs</u> Water Temperature: <u>50°F</u>				
Person Collecting Sample: Bruce Cyr & Stephen Doyon				
Storm Magnitude (inches): 0.4 Storm Duration (hours): 10(approx)				
Date of Previous Storm Event: November 23, 2006				

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	6.7	Averill Environmental Lab #AEL06010630
Rain pH	EPA 150.1	4.54	
Hardness	SM 2340 B	32.3 mg/L CaO3	Averill Environmental Lab #AEL06010630
Conductivity	EPA 120.1	110 micromhos/cm	Averill Environmental Lab #AEL06010630
Oil & Grease	EPA 1664A	<1.8 mg/L	Averill Environmental Lab #AEL06010630
COD	EPA 410.4	< 20 mg/L	Averill Environmental Lab #AEL06010630
Turbidity	EPA 180.1	5.3 NTU	Averill Environmental Lab #AEL06010630
TSS	EPA 160.2	5.3 mg/L	Averill Environmental Lab #AEL06010630
TP	EPA 365.2	0.046 mg/L as P	Averill Environmental Lab #AEL06010630
Ammonia as N	EPA 350.2	< 0.10 mg/L	Averill Environmental Lab #AEL06010630
TKN as N	EPA 351.3	< 0.1 mg/L	Averill Environmental Lab #AEL06010630
NO ₃ +NO _{2 as} N	EPA 300.0	< 0.54 mg/L	Averill Environmental Lab #AEL06010630
E. coli	SM 9222 B	650 per 100 mL	Averill Environmental Lab #AEL06010630

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:	Sunell M Alf Date: January 3, 2006		



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 #GSM		

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2006) C5: Lat 41-44-42.574, Long 72-51-15.901			
Located on the west side of Brickyard Road 1800lf North of Rte 4, South of driveway into Lakeshore Dr.			
Please circle the appropriate area description: Industrial Commercial or Residential			
Receiving Water (name, basin): Unnamed Pond, 4300-28-1-L2			
Time of Start of Discharge:12:00pm			
Date/Time Collected: December 1, 2006/16:03hrs Water Temperature: 50°F			
Person Collecting Sample: Bruce Cyr & Stephen Doyon			
Storm Magnitude (inches): 0.4 Storm Duration (hours): 10(approx)			
Date of Previous Storm Event: November 23, 2006			

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	7.3	Averill Environmental Lab #AEL06010631
Rain pH	EPA 150.1	4.54	
Hardness	SM 2340 B	25.9 mg/L CaO3	Averill Environmental Lab #AEL06010631
Conductivity	EPA 120.1	58 micromhos/cm	Averill Environmental Lab #AEL06010631
Oil & Grease	EPA 1664A	<1.9 mg/L	Averill Environmental Lab #AEL06010631
COD	EPA 410.4	70 mg/L	Averill Environmental Lab #AEL06010631
Turbidity	EPA 180.1	170 NTU	Averill Environmental Lab #AEL06010631
TSS	EPA 160.2	103 mg/L	Averill Environmental Lab #AEL06010631
TP	EPA 365.2	0.232 mg/L as P	Averill Environmental Lab #AEL06010631
Ammonia as N	EPA 350.2	< 0.10 mg/L	Averill Environmental Lab #AEL06010631
TKN as N	EPA 351.3	1.1 mg/L	Averill Environmental Lab #AEL06010631
NO ₃ +NO _{2 as} N	EPA 300.0	< 0.35 mg/L	Averill Environmental Lab #AEL06010631
E. coli	SM 9222 B	60000 per 100 mL	Averill Environmental Lab #AEL06010631

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:	funer M Date: January 3, 2006		



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 #GSM		

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2006) I-4: Lat 41-41-46.490, Long 72-51-25.068			
Located on the west side of Executive Dr. at the end of the cul-de-sac			
Please circle the appropriate area description: Industrial Commercial, or Residential			
Receiving Water (name, basin): Unnamed Pond on Scott Swamp Brook, 4315-13-2-L2			
Time of Start of Discharge: 12:00pm			
Date/Time Collected: December 1, 2006/15:10hrs Water Temperature: 50°F			
Person Collecting Sample: Bruce Cyr & Stephen Doyon			
Storm Magnitude (inches): 0.4 Storm Duration (hours): 10(approx)			
Date of Previous Storm Event: November 23, 2006			

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	6.6	Averill Environmental Lab #AEL06010632
Rain pH	EPA 150.1	4.54	
Hardness	SM 2340 B	16.8 mg/L CaO3	Averill Environmental Lab #AEL06010632
Conductivity	EPA 120.1	98 micromhos/cm	Averill Environmental Lab #AEL06010632
Oil & Grease	EPA 1664A	<1.8 mg/L	Averill Environmental Lab #AEL06010632
COD	EPA 410.4	20 mg/L	Averill Environmental Lab #AEL06010632
Turbidity	EPA 180.1	25 NTU	Averill Environmental Lab #AEL06010632
TSS	EPA 160.2	35 mg/L	Averill Environmental Lab #AEL06010632
TP	EPA 365.2	0.089 mg/L as P	Averill Environmental Lab #AEL06010632
Ammonia as N	EPA 350.2	0.21 mg/L	Averill Environmental Lab #AEL06010632
TKN as N	EPA 351.3	1.2 mg/L	Averill Environmental Lab #AEL06010632
NO ₃ +NO _{2 as} N	EPA 300.0	< 0.81 mg/L	Averill Environmental Lab #AEL06010632
E. coli	SM 9222 B	50 per 100 mL	Averill Environmental Lab #AEL06010632

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:	Punel M Date: January 3, 2006		



Stormwater Monitoring Report Form

PERMITTEE INFORMATION

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

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2006) I 5: Lat 41-41-50.623, Long 72-52-02.366			
On the south side of Hyde Road, west of 111 Hyde Road, in vicinity of Box Culvert			
Please circle the appropriate area description Industrial Commercial, or Residential			
Receiving Water (name, basin): Scott Swamp Brook, 4315-13-2-L2			
Time of Start of Discharge: 12:00pm			
Date/Time Collected: December 1, 2006/15:00hrs Water Temperature: 50°F			
Person Collecting Sample: Bruce Cyr & Stephen Doyon			
Storm Magnitude (inches): 0.4 Storm Duration (hours): 10(approx)			
Date of Previous Storm Event: November 23, 2006			

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	7.0	Averill Environmental Lab #AEL06010633
Rain pH	EPA 150.1	4.54	
Hardness	SM 2340 B	39.0 mg/L CaO3	Averill Environmental Lab #AEL06010633
Conductivity	EPA 120.1	250 micromhos/cm	Averill Environmental Lab #AEL06010633
Oil & Grease	EPA 1664A	<2.0 mg/L	Averill Environmental Lab #AEL06010633
COD	EPA 410.4	32 mg/L	Averill Environmental Lab #AEL06010633
Turbidity	EPA 180.1	28 NTU	Averill Environmental Lab #AEL06010633
TSS	EPA 160.2	89.0 mg/L	Averill Environmental Lab #AEL06010633
TP	EPA 365.2	0.121 mg/L as P	Averill Environmental Lab #AEL06010633
Ammonia as N	EPA 350.2	0.29 mg/L	Averill Environmental Lab #AEL06010633
TKN as N	EPA 351.3	1.5 mg/L	Averill Environmental Lab #AEL06010633
NO ₃ +NO _{2 as} N	EPA 300.0	<1.02 mg/L	Averill Environmental Lab #AEL06010633
E. coli	SM 9222 B	1050 per 100 mL	Averill Environmental Lab #AEL06010633

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 /Director of Public Works/Town Engineer					
Signature:	Date: January 3, 2006					

AVERILL ENVIRONMENTAL LABORATORY, INC.

CT Laboratory ID No. PH-0513

100 Northwest Drive, Pfainville, Connecticut 06062

NH Laboratory ID No. 2506

CT Laboratory ID No. PH-0513 MA Laboratory ID No. M-CT0513 NY Laboratory ID No. 11599

(860) 747-0676 Fax: (860) 747-9264 Lawton S. Avenili - Director

CT ONLY 1-(800) 870-7904 Alan G. Jacobs - Co-Director NH Laboratory ID No. 2506 ME Laboratory ID No. CT029 EPA Laboratory ID No. C700029

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering

1 Monteith Drive

Farmington, CT 06034-0948

Report Date: Friday, December 15, 2006 Received Date: Friday, December 01, 2006

Collect Date: Friday, December 01, 2006

Collect Time: 3:20 PM

ATTN: Russ Arnold

AEL Lab#: AEL06010628

Client Sample ID: R4A-12-1-06

Source: Batterson Road, Farmington, CT

Sample ID: Stormwater Sample

Sample Matrix: Surface Water

Test	30. A	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids		91.0	mg/L	CC	12/5/06	EPA 160.2
Nitrate Nitrogen as N		0.87	mg/L	CC	12/6/06	EPA 300.0
Nitrite Nitrogen as N	<	0.122	mg/L	CC	12/6/06	EPA 300.0
pH		7.2	units	AGJ	12/1/06	EPA 150.1
Specific Conductivity		100	micromhos/cm	MTK	12/6/06	EPA 120.1
Hardness, Calculated		44.7	mg/L CaCO3	RR	12/6/06	SM 2340 B
Chemical Oxygen Demand		83	mg/L	JF	12/11/06	EPA 410.4
Ammonia Nitrogen as N	L	0.19	mg/L	CC	12/4/06	EPA 350.2
Phosphorus, Total as P		0.196	mg/L as P	JM	12/8/06	EPA 365.2
E. Coli		600	per 100 mL	AGJ/JF	12/1/06	SM 9222 B
Total Coliform		200000	per 100 mL	AGJ/JF	12/1/06	SM 9222 B
Total Kjeldahl Nitrogen		2.5	mg/L	CC	12/14/06	EPA 351.3
Turbidity		77	NTU	CC/MAP	12/5/06	EPA 180.1
Calcium		11.6	mg/L	RR	12/6/06	EPA 200.7
Magnesium		3.82	mg/L	ŘR	12/6/06	EPA 200.7
Oil & Grease, Hexane Ext. Material	<	1.9	mg/L	WCH	12/11/06	. EPA 1664A

Cauter J. Laul (MAP)

Laboratory Director

L- Flag results above MDL and less than quantitation Limit as estimated.

H- Flag results above calibration range as estimated.

ENVIRONMENTAL LABORATORY, INC. 100 Northwest Drive, Plainville, Connecticut 06062

CT Laboratory ID No. PH-0513 MA Laboratory ID No. M-CT0513 NY Laboratory ID No. 11599

(860) 747-0676 Fax: (860) 747-9264 Lawton S. Averill - Director

CT ONLY 1-(800) 870-7904 Alan G. Jacobs - Co-Director NH Laboratory ID No. 2506 ME Laboratory ID No. CT029 EPA Laboratory ID No. CT00029

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering 1 Monteith Drive Farmington, CT 06034-0948

Report Date: Friday, December 15, 2006 Received Date: Friday, December 01, 2006

Collect Date: Friday, December 01, 2006

Collect Time: 3:30 PM

ATTN: Russ Arnold

AEL Lab#: AEL06010629

Client Sample ID: R5A-12-1-06

Source: Batterson Road, Farmington, CT

Sample ID: Stormwater Sample

Sample Matrix: Surface Water

Test	¥ _ 11		Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids		88	85.0	mg/L	CC	12/5/06	EPA 160.2
Nitrate Nitrogen as N			0.51	mg/L	CC	12/6/06	EPA 300.0
Nitrite Nitrogen as N		<	0.122	mg/L	CC	12/6/06	EPA 300.0
pH			7.3	units	AGJ	12/1/06	EPA 150.1
Specific Conductivity			77	micromhos/cm	MTK	12/6/06	EPA 120.1
Hardness, Calculated			28.8	mg/L CaCO3	RR *	12/6/06	SM 2340 B
Chemical Oxygen Demand			52	mg/L	JF	12/11/06	EPA 410.4
Ammonia Nitrogen as N		<	0.10	mg/L	CC	12/4/06	EPA 350.2
Phosphorus, Total as P			0.218	mg/t. as P	JM	12/8/06	EPA 365.2
E. Coli			3000	per 100 mL	AGJ/JF	12/1/06	SM 9222 B
Total Coliform			390000	per 100 mL	AGJ/JF	12/1/06	SM 9222 B
Total Kjeldahl Nitrogen			1.7	mg/L	CC	12/14/06	EPA 351.3
Turbidity			48	NTU	CC/MAP	12/5/06	EPA 180.1
Calcium			7.89	mg/L	RR	12/6/06	EPA 200.7
Magnesium			2.21	mg/L	RR	12/6/06	EPA 200.7
Oil & Grease, Hexane Ext. Material		<	2.0	, mg/L	WCH	12/11/06	EPA 1664A

L-Flag results above MDL and less than quantitation Limit as estimated.

H- Flag results above calibration range as estimated.

ERILL ENVIRONMENTAL LABORATORY, INC.

MA Laboratory ID No. M-CT0513 NY Laboratory ID No. 11599

Fax: (860) 747-9264 (860) 747-0676 Lawton S. Averill - Director

CT ONLY 1-(800) 870-7904 Alan G. Jacobs - Co-Director ME Laboratory ID No. CT029 EPA Laboratory ID No. CT00029

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering 1 Monteith Drive Farmington, CT 06034-0948

Report Date: Friday, December 15, 2006 Received Date: Friday, December 01, 2006 Collect Date: Friday, December 01, 2006

Collect Time: 3:50 PM

ATTN: Russ Arnold

AEL Lab#: AEL06010630

Client Sample ID: C4A-12-1-06

Source: Eastview Drive, Farmington, CT

Sample ID: Stormwater Sample

Sample Matrix: Surface Water

Test	8/20	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids		5.3	mg/L	CC	12/5/06	EPA 160.2
Nitrate Nitrogen as N		0.42	mg/L	CC	12/6/06	EPA 300.0
Nitrite Nitrogen as N	<	0.122	mg/L	CC	12/6/06	EPA 300.0
pH		6.7	units	AGJ	12/1/06	EPA 150.1
Specific Conductivity		110	micromhos/cm	MTK	12/6/06	EPA 120.1
Hardness, Calculated		32.3	mg/L CaCO3	RR	12/6/06	SM 2340 B
Chemical Oxygen Demand	<	20	mg/L	JF	12/11/06	EPA 410.4
Ammonia Nitrogen as N	<	0.10	mg/L	CC	12/4/06	EPA 350.2
Phosphorus, Total as P		0.046	mg/L as P	JM	12/8/06	EPA 365.2
E. Coli		650	per 100 mL	AGJ/JF	12/1/06	SM 9222 B
Total Coliform		78500	per 100 mL	AGJ/JF	12/1/06	SM 9222 B
Total Kjeldahl Nitrogen	<	1.0	mg/L	CC	12/14/06	EPA 351.3
Turbidity		5.3	טדא	CC/MAP	12/5/06	EPA 180.1
Calcium		11.6	mg/L	RR	12/6/06	EPA 200.7
Magnesium		0.80	mg/L	RR	12/6/06	EPA 200.7
Oil & Grease, Hexane Ext. Material	<	1.8	mg/L	WCH	12/11/06	EPA 1664A

L- Flag results above MDL and less than quantitation Limit as estimated.

H- Flag results above calibration range as estimated.

ERILL ENVIRONMENTAL LABORATORY, INC. 100 Northwest Drive, Plainville, Connecticut 06062

CT Laboratory ID No. PH-0513 MA Laboratory ID No. M-CT0513 NY Laboratory ID No 11599

Fax: (860) 747-9264 (860) 747-0676 Lawton S. Averill - Director

CT ONLY 1-(800) 870-7904 Alan G. Jacobs - Co-Director NH Laboratory ID No. 2506 ME Laboratory ID No. CT029 EPA Laboratory ID No. CT00029

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering

1 Monteith Drive

Farmington, CT 06034-0948

Report Date: Friday, December 15, 2006 Received Date: Friday, December 01, 2006

Collect Date: Friday, December 01, 2006

Collect Time: 4:03 PM

ATTN: Russ Arnold

AEL Lab#: AEL06010631

Client Sample ID: C5A-12-1-06

Source: Brickyard Road, Farmington, CT

Sample ID: Stormwater Sample

Sample Matrix: Surface Water

Test		Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	12	103	mg/L	CC	12/5/06	EPA 160.2
Nitrate Nitrogen as N	<	0.23	mg/L	CC	12/6/06	EPA 300,0
Nitrite Nitrogen as N	<	0.122	mg/L	CC	12/6/06	EPA 300.0
рН		7.3	units	AGJ	12/1/06	EPA 150.1
Specific Conductivity		58	micromhos/cm	MTK	12/6/06	EPA 120.1
Hardness, Calculated		25.9	mg/L CaCO3	RR	12/6/06	SM 2340 B
Chemical Oxygen Demand		70	mg/L	JF	12/11/06	EPA 410.4
Ammonia Nitrogen as N	<	0.10	mg/L	CC	12/4/06	EPA 350.2
Phosphorus, Total as P		0.232	mg/L as P	JM	12/8/06	EPA 365.2
E. Coli		60000	per 100 mL	AGJ/JF	12/1/06	SM 9222 B
Total Coliform		335000	per 100 mL	AGJ/JF	12/1/06	SM 9222 B
Total Kjeldahl Nitrogen		1:1	mg/l.	CC	12/14/06	EPA 351.3
Turbidity		170	NTU	CC/MAP	12/5/06	EPA 180.1
Calcium		6.69	mg/L	RR	12/6/06	EPA 200.7
Magnesium		2.22	mg/L	RR	12/6/06	EPA 200.7
Oil & Grease, Hexane Ext. Material	<	1.9	mg/L	WCH	12/11/06	EPA 1664A

L-Flag results above MDL and less than quantitation Limit as estimated.

H- Flag results above calibration range as estimated.

LL ENVIRONMENTAL LABORATORY, INC.

CT Laboratory ID No. PH-0513 MA Laboratory ID No. M-CT0513 NY Laboratory ID No. 11599

100 Northwest Drive, Plainville, Connecticut 06062 (860) 747-0676 Fax: (860) 747-9264

CT ONLY 1-(800) 870-7904 Lawton S. Avenil - Director Alan G. Jacobs - Co-Director NH Laboratory ID No. 2506 ME Laboratory ID No. CT029 EPA Laboratory ID No. CT00029

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering 1 Monteith Drive Farmington, CT 06034-0948

Report Date: Friday, December 15, 2006 Received Date: Friday, December 01, 2006 Collect Date: Friday, December 01, 2006

Collect Time: 3:10 PM

ATTN: Russ Arnold

AEL Lab#: AEL06010632

Client Sample ID: 14A-12-1-06

Source: Executive Drive, Farmington, CT

Sample ID: Stormwater Sample

Sample Matrix: Surface Water

Test	<u> </u>	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids		35.0	mg/L	CC	12/5/06	EPA 160.2
Nitrate Nitrogen as N		0.69	mg/L	CC	12/6/06	EPA 300.0
Nitrite Nitrogen as N	<	0.122	mg/L	CC	12/6/06	EPA 300.0
рН		6.6	units	AGJ	12/1/06	EPA 150.1
Specific Conductivity		98	micromhos/cm	MTK	12/6/06	EPA 120.1
Hardness, Calculated		16.8	mg/L CaCO3	RR	12/11/06	SM 2340 B
Chemical Oxygen Demand		20	mg/L	JF	12/11/06	EPA 410.4
Ammonia Nitrogen as N	L	0.21	mg/L	CC	12/4/06	EPA 350.2
Phosphorus, Total as P		0.089	mg/L as P	ML	12/8/06	EPA 365.2
E. Coli		50	per 100 mL	AGJ/JF	12/1/06	SM 9222 B
Total Coliform		18600	per 100 mL	AGJ/JF	12/1/06	SM 9222 B
Total Kjeldahl Nitrogen		1.2	mg/L	CC	12/14/06	EPA 351.3
Turbidity		25	NTU	CC/MAP	12/5/06	EPA 180.1
Calcium		5.11	mg/L	RR	12/11/06	EPA 200.7
Magnesium		0.98	mg/L	RR	12/11/06	EPA 200.7
Oil & Grease, Hexane Ext. Material	<	1.8	mg/L	WCH	12/11/06	EPA 1664A

L- Flag results above MDL and less than quantitation Limit as estimated.

H- Flag results above calibration range as estimated.

ERILL ENVIRONMENTAL LABORATORY, INC. 100 Northwest Drive, Plainville, Connecticut 06062

CT Laboratory ID No. PH-0513 MA Laboratory ID No. M-CT0513 NY Laboratory ID No. 11599

(860) 747-0676 Fax: (860) 747-9264 Lawton S. Averili - Director

CT ONLY 1-(800) 870-7904 Alan G. Jacobs - Co-Director NH Laboratory ID No. 2506 ME Laboratory ID No. CT029 EPA Laboratory ID No. CT00029

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering

1 Monteith Drive

Farmington, CT 06034-0948

Report Date: Friday, December 15, 2006 Received Date: Friday, December 01, 2006

Collect Date: Friday, December 01, 2006

Collect Time: 3:00 PM

ATTN: Russ Amold

AEL Lab#: AEL06010633

Client Sample ID: 15A-12-1-06

Source: Hyde Road, Farmington, CT

Sample ID: Stormwater Sample

Sample Matrix: Surface Water

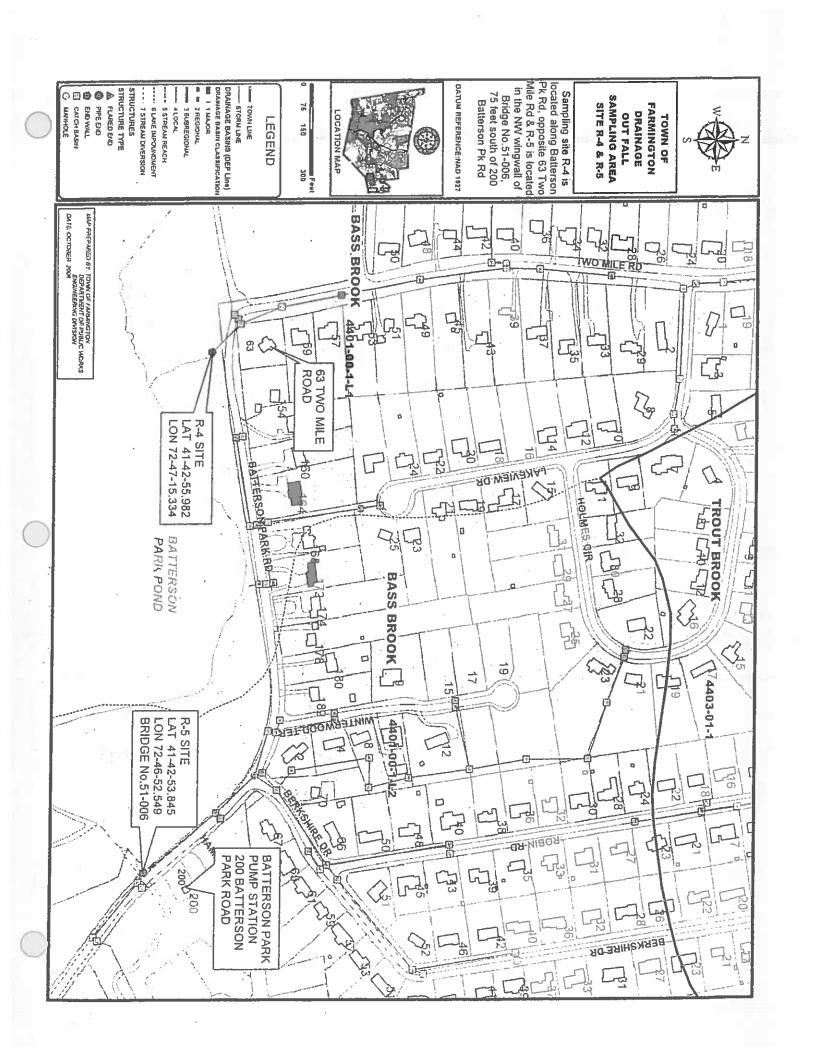
Test		Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids		89.0	mg/L	CC	12/5/06	EPA 160.2
Nitrate Nitrogen as N		0.90	mg/L	CC	12/6/06	EPA 300.0
Nitrite Nitrogen as N	<	0.122	mg/L	CC	12/6/06	EPA 300.0
рН		7.0	units	AGJ	12/1/06	EPA 150.1
Specific Conductivity		250	micromhos/cm	MTK	12/6/06	EPA 120.1
Hardness, Calculated		39.0	mg/L CaCO3	RR	12/11/06	SM 2340 B
Chemical Oxygen Demand		32	mg/L	JF	12/11/06	EPA 410.4
Ammonia Nitrogen as N	L	0.29	mg/L	CC	12/4/06	EPA 350.2
Phosphorus, Total as P		0.121	mg/L as P	JM	12/8/06	EPA 365.2
E. Coli		1050	per 100 mL	AGJ/JF	12/1/06	SM 9222 B
Total Coliform		122000	per 100 mL	AGJ/JF	12/1/06	SM 9222 B
Total Kjeldahl Nitrogen		1.5	mg/L	CC	12/14/06	EPA 351.3
Turbidity		28	NTU	CC/MAP	12/5/06	EPA 180 1
Calcium		11.5	mg/L	RR	12/11/06	EPA 200.7
Magnesium		2.48	mg/L	RR	12/11/06	EPA 200.7
Oil & Grease, Hexane Ext. Material	<	2.0	mg/L	WCH	12/11/06	EPA 1664A

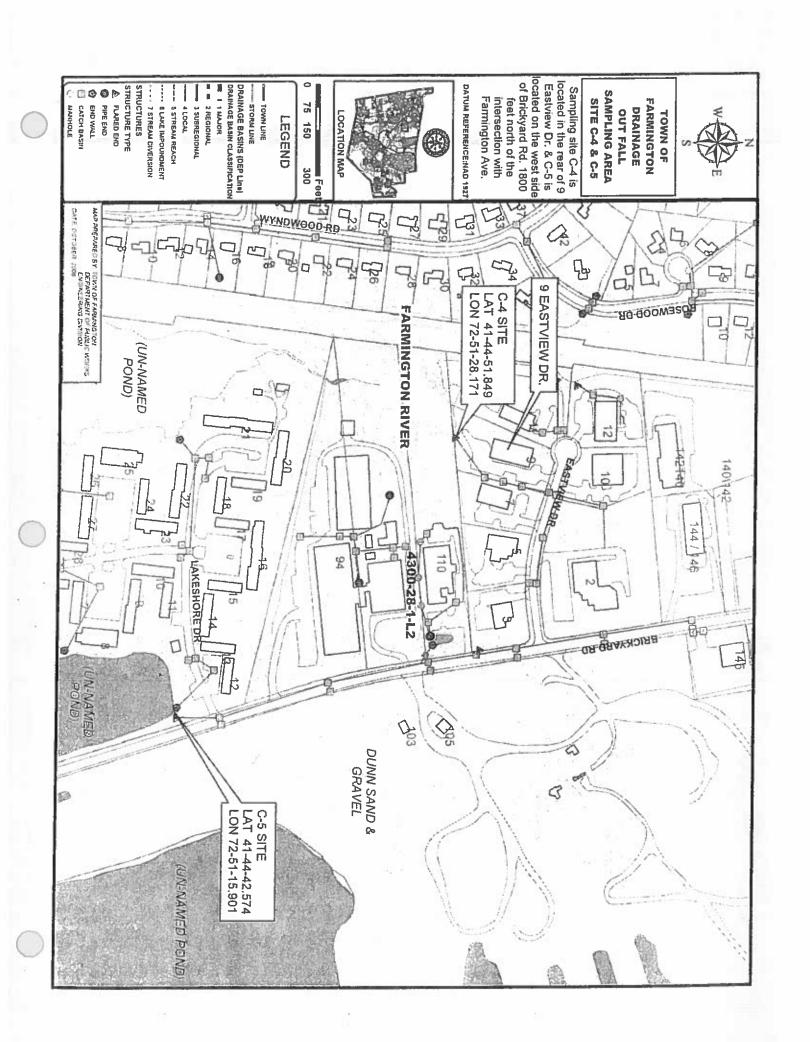
L- Flag results above MDL and less than quantitation Limit as estimated.

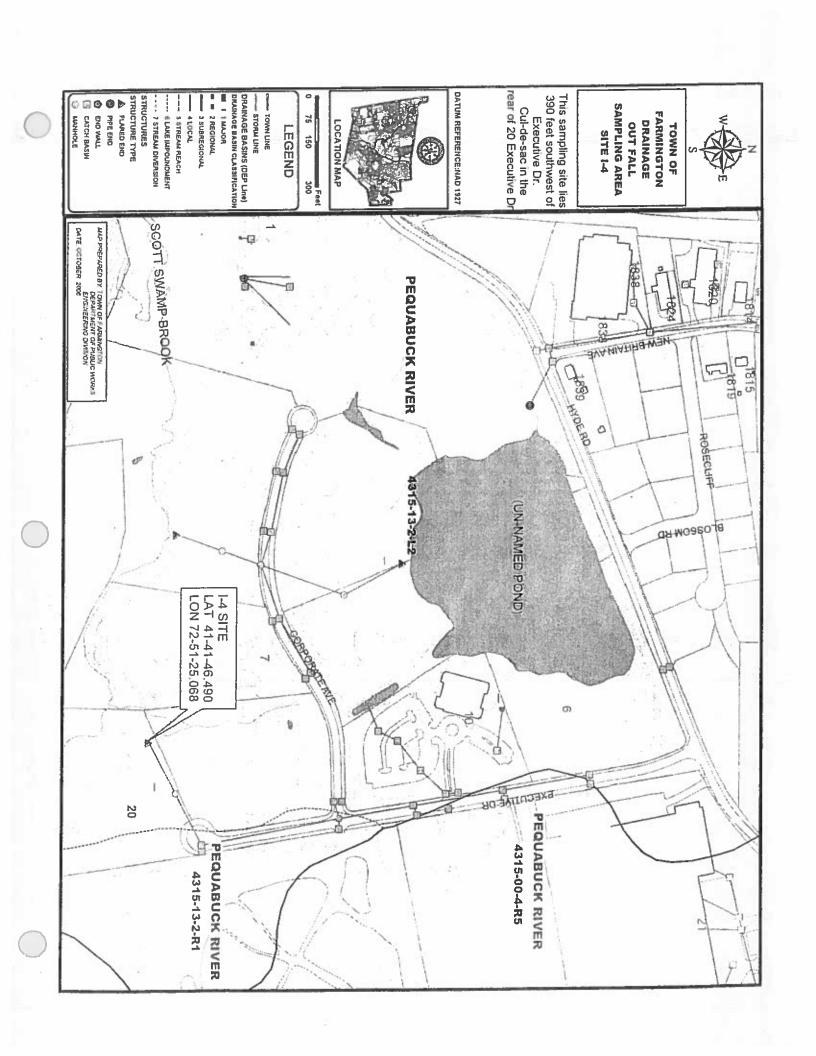
H- Flag results above calibration range as estimated.

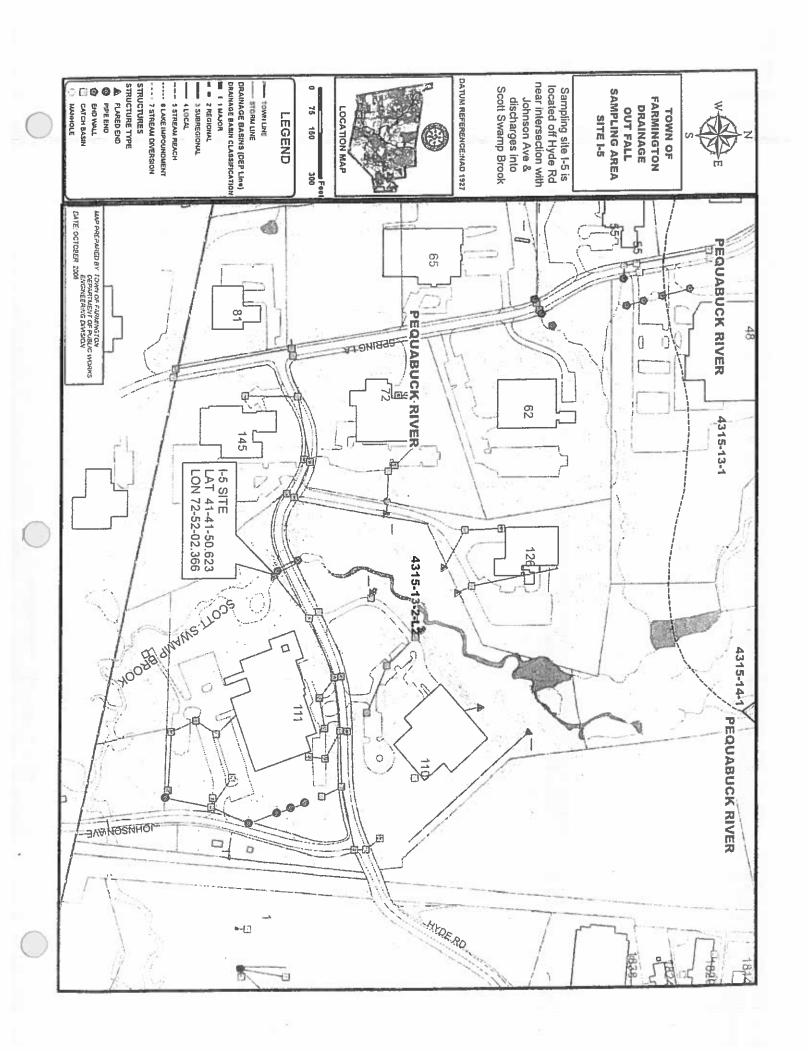
ATTACHMENT C

Monitoring Site Location Mapping









ATTACHMENT D

Alternative Sampling Plan

Alternative Sampling Plan

The nominal objective of any monitoring program is to document progress toward a stated goal or to identify, document and provide a basis for corrective action with respect to conditions that may be preventing the achievement of that goal. As noted in subsection 3.2 of this plan, the goal set forth in subsection (b) of Section 5 of the general permit states "The permittee shall develop, implement, and enforce a stormwater management plan designed to reduce the discharge of pollutants from the Small MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements under the Clean Water Act." These are very broad objectives, the achievements of which are obviously difficult to document by a monitoring program. However, as can be noted from the requirements of the general permit outlined above and specified in the general permit, the monitoring requirements set forth in the general permit are very specific and rigid unless an alternative sampling plan is defined and submitted for the written approval of the Commissioner.

Based on the experience implementing the stormwater monitoring program as set forth in the general permit within the Town of Farmington, it has been concluded that the specified monitoring program is not a very useful means of attempting to document progress toward the objectives and goal of the general permit. Part of the reason is the fractured nature of the town owed stormwater collection systems serving the town. Most of the storm sewers serving industrial and commercial properties do not discharge into town owned storm sewers making the selection of sampling locations at town owned outfalls a very strained process of trying to identify sampling locations that are compliant with the written requirements of the general permit rather than objectives of the permit program. In addition, the town is compelled to the sampling of outfalls that serve specific land use areas without regard to their relative importance.

Under the alternative sampling plan, attention will be focused on the water quality of the stormwater discharges within subordinate drainage basins that collect runoff from limited areas of the town and discharge across town boundaries into neighboring municipalities or discharge into the major river systems coursing through the town, namely the Farmington and the Pequabuck Rivers. Examples of the drainage areas that drain limited areas within Farmington are the upper reaches of Trout Brook, a minor tributary of the Quinnipiac River, streams within the Trout Brook Basin that drain into Woodridge Lake and reservoirs managed by the Metropolitan District, streams that flow into the Bass Brook Basin which is dominated by Batterson Park Pond, and Copper Mine Brook that drains into public water supply watersheds in Bristol. An example of a stream that drains a significant area within the Town of Farmington dominated historically by earth mining and presently by industrial development is Scott Swamp Brook which discharges into the Pequabuck River just south of the town boundary with Plainville.

The alternative sampling plan that has been developed is to collect a minimum of six samples each year from either individual storm sewer outfalls or selected sampling locations on streams or water bodies located within one or more selected drainage basins and identify the land use prevalent in the drainage area rather than basing the selection of sampling locations on the type of land use. This will allow a more systematic assessment of each of the storm sewer systems located within specific drainage basins.

The samples may also be taken at select outfalls or directly from streams before expected storm events that will be sampled in an attempt to quantify adverse effects that can be attributed to runoff induced by storm events. By introducing this type of flexibility into the monitoring program, the town staff can direct its available resources and efforts to known or suspected problem areas to identify the potential sources of contamination. Further field investigations and inspections can then be initiated to identify specific causes of such contamination.

As presently defined, it is not intended that the wet weather stormwater monitoring procedures will be significantly varied from those specified in paragraphs (h)(3)(A), (B) and (C) of Section 6 of the general permit. Those paragraphs require samples to be collected during the first 6 hours of a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours after any previous storm event of 0.1 inches or greater. Run-off events resulting from snow or ice melt will also not be sampled, grab samples will be used and, if possible, all the stormwater samples to be submitted to the DEP as monitoring compliant with the approved alternate sampling plan shall be collected during the same storm event. These provisions are consistent with the existing monitoring requirements of the general permit.