

THE TOWN OF FARMINGTON

INCORPORATED 1645



**TOWN HALL**  
1 MONTEITH DRIVE  
FARMINGTON, CONNECTICUT 06032-1053  
INFORMATION (860) 675-2300  
FAX (860) 675-7140  
"TOWN TALK" (860) 675-2301

January 3, 2005

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

RE: Town of Farmington  
Municipal Storm Sewers

Sir or Madame:

With this letter we are transmitting the 2004 Annual Report required by subsection (i)(2) of Section 6 of the *General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit)*. We have included an Amended Part B Registration Form as part of the report. The Amended Part B Registration effectively updates the data included in Part VIB of the Part B Registration Form officially filed on July 8, 2004. However, you should note that Part I of the Part B Registration Form has also been amended to document that John H. McGrane is no longer the primary contact for departmental correspondence and inquires. I have also enclosed the municipal plan review fee in the amount of \$187.50 as required by subsection (i)(2)(i) of Section 6 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.

Sincerely,

Russell M. Arnold, Jr., P.E.  
Director of Public Works and Development Services

pc Salvatore A. Palaia, P.E., LEA

enclosures

AN EQUAL OPPORTUNITY EMPLOYER



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**2004 ANNUAL REPORT**  
**Municipal Separate Storm Sewer System**  
**Farmington, Connecticut**

**December 2004**

**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. 28FA406.002**

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**ATTACHMENT A – Amended Part B Registration Form**

**ATTACHMENT B – Monitoring Site Location Mapping**

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## 1. PURPOSE AND SCOPE

This Annual Report is required by subsection (i)(2) of Section 6 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 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 report to the DEP Stormwater Permit Coordinator on the status of compliance with the *MS4 General Permit*. Much of the information that must be included in the annual report has been 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 Part B. The updated Part B registration form can be found in Attachment A. The data in the updated Part B will be supplemented by narrative text in Section 2 of this report. The certification required by subsection (e) of Section 7 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 Town Letter that is published and distributed quarterly. It is also posted on the town website. An article covering the municipal stormwater program is being prepared during the winter of 2005. 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 a copy of the video *After the Storm* has been placed in the town library for resident use. Contact has been maintained with other organizations involved with the stormwater program.

### **2.2 Public Participation**

A yearly schedule for the implementation of a public participation program will be developed during the winter of 2005. The Town of Farmington participated in the Annual Farmington Clean-up sponsored by the Farmington Garden Club during the spring, and it continued the practice of annually removing accumulated leaves from private property adjacent to roadway gutters during the fall.

### **2.3 Illicit Discharge Detection & Elimination**

The mapping of municipal storm sewer outfalls within the Town of Farmington is proceeding on schedule. The present plan is to map all public, institutional and private storm sewer outfalls and to differentiate those 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* will be addressed as minimum objectives with respect to time. 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 discharges from storm sewers including non-point sources discharges that directly affect surface water quality or are conveyed by storm sewers or other types of storm water conveyance. As it is presently conceived, the program will rely 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 serving public highways and, in addition, the construction of new privately owned storm sewer outfalls, and presently we do not envision a need to develop or adopt an separate illicit discharge ordinance.



## 2.4 Construction Site Runoff

A review of the Town of Farmington land use regulations has been completed. The existing Zoning Regulations, in Article IV, Section 10, requires the submission and approval of an erosion and sediment control plan whenever more the one half acre of land will be disturbed. The regulations also reference the *Connecticut Guidelines for Soil Erosion and Sediment Control* as amended. Therefore the existing land use regulations are adequate to meet the requirements of the listed "MS4 Permit and E&S Guidelines" BMP on construction site runoff.

## 2.5 Post Construction Runoff Control

As noted above, a review of the Town of Farmington land use regulations has been completed and the regulations judged adequate with respect to the control of construction site runoff. Any post construction runoff control that is needed can be imposed as conditions of approval. Therefore the existing land use regulations are also considered adequate to meet the requirements of the listed "MS4 Permit and E&S Guidelines" BMP on post construction runoff control. During 2005, a post construction best management strategy will be developed and implemented. In conjunction with that effort, the advantages that might be realized by the addition of specific post construction language to the existing regulations will be considered.

## 2.6 Good Housekeeping

There was no commitment by the Town of Farmington to implement new or additional good housekeeping practices during 2004. No modifications of the schedule set forth in the Part B Registration are anticipated.

## 2.7 Monitoring

The monitoring of six outfalls was planned during the summer and completed during the fall of 2004. The monitoring site locations are identified on maps presented in Attachment B, and the sample analysis results are presented in Attachment C. The 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.

<u>Site Location Identifier</u>	<u>Sample Number</u>	<u>Laboratory Number</u>
2004 C-1 (Commercial)	1057473	AEL04010647
2004 C-2 (Commercial)	1057470	AEL04010644
2004 I-1 (Industrial)	1057468	AEL04010642
2004 I-2 (Industrial)	1057469	AEL04010643
2004 R-1 (Residential)	1057471	AEL04010645
2004 R-2 (Residential)	1057472	AEL04010646



The samples were collected during a rain storm that began during the late morning of November 24, 2004. The samples were collected from the identified outfalls between 4:05 PM and 5:17 PM, soon after it was judged that sufficient flow would probably be discharging from the selected outfalls. The rainfall generated by the storm was not constant and it was characterized braids of varying intensity. Local records indicate that the storm only generated 0.02 inches of rainfall during the first three hours, but that by 3:50 PM the amount of rainfall had reached 0.17 inches. Local records also indicate that the rainfall stopped at about 8:00 PM with a total rainfall amount of 0.36 inches. The event was a qualifying event since the preceding rainfall event ended during the morning of November 21, 2004.


The discharge at Site Location R-1 was noted to be murky (brown) with high apparent turbidity, and the flow at Site Location R-2 was quite low so the sample was collected from a pool downstream of the outfall. The measured Escherica coliform levels at both of these residential sampling sites and at the commercial Site Location C-1 were unexpectedly high. These data suggest a need for follow-up investigations to determine the probable causes. The amounts of other measured constituents in the collected outfall samples were not judged to be unusual. The pH of the rainfall reported by the laboratory on the sheet with the data on Site Location C-1 was less acidic that expected. Due to an oversight, no water temperature data was collected.



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.

**LOUREIRO ENGINEERING ASSOCIATES, INC.**

  
Salvatore A. Palaia, P.E.  
Senior Project Manager





**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 ONLY	
Application No.	_____
Permit No.	_____
Town ID	_____

## 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 Manager**

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 with which you will be coordinating implementation of your Stormwater Management Plan for a portion of your MS4 (See Section 6(b)(3) of the general permit). If so, label and attach additional sheet(s) with the required information as supplied above.

2. List primary contact for departmental correspondence and inquiries, if different 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 retained to assist in preparing the registration.

Check here if additional sheets are necessary, and label and attach them 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 Project Manager**

Service Provided: **General Consulting**

## Part II: Site Information

1. Is there any activity included in your Stormwater Management Plan that would adversely affect properties listed or eligible for listing in the National Register of Historic Places?  Yes  No

If yes, the registrant must be in compliance with requirements of the National Historic Preservation Act and must coordinate with the appropriate State Historic Preservation Officer to avoid or minimize impacts from any necessary activities.

2. Is there any activity included in your Stormwater Management Plan that is located within the coastal boundary as delineated on DEP approved coastal boundary maps?  Yes  No

If yes, and this application is for a new authorization or for a modification of an existing permit, you must submit a *Coastal Consistency Review Form* (DEP-APP-004) with your application as Attachment A.

For forms or assistance, please call the Permit Assistance Office at 860-424-3003.

3. Is there any activity included in your Stormwater Management Plan that is located within an area identified as a habitat for endangered, threatened or special concern species as identified on the "State and Federal Listed Species and Natural Communities Map"?

Yes  No Date of Map: 2003

If yes, complete and submit a *Connecticut Natural Diversity Data Base (CT NDDB) Review Request Form* (DEP-APP-007) to the address specified on the form.

When submitting this permit application, please include copies of any correspondence to the NDDB, including copies of the completed CT NDDB Review Request Form, any field surveys, and any other information which may lead you to believe that endangered or threatened species may or may not be located in the area of your existing or proposed permitted activity, as Attachment B.

Has a field survey been conducted to determine the presence of any endangered, threatened or special concern species?  Yes  No If yes, provide:

Biologist's Name:

Address:

and submit a copy of the field survey with your application as an Attachment as specified above.

## Part III: Supporting Documents

Please check the attachments submitted as verification that *all* applicable attachments have been submitted with this application form. When submitting any supporting documents, please label the documents as indicated in this part (e.g., Attachment A, etc.) and be sure to include the applicant's name as indicated on the *Permit Application Transmittal Form*.

- 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)]

**John H. McGrane**  
Name of CEO/PEO or designee (print or type)

**Original Signed - 7/8/2004**  
Date

**Director of Public Works**  
Title (if applicable)

Signature of Preparer (if different than above)

**Salvatore A. Palaia, P.E.**  
Name of Preparer (print or type)

**Original Signed - July 7, 2004**  
Date

**Senior Project Manager**  
Title (if applicable)

Check here if additional signatures are necessary.  
If so, please reproduce this sheet and attach signed copies 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)**

BMP ID	Public Education	Responsible Dept. or Person	Measurable Goal
1-1	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 other organizations: DEP, DOT, FRWA, NEMO	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 implementation
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			
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 implementation
5-4	Develop program to ensure long-term operation and maintenance of BMPs	Planning	Program implementation
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 implemented
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 development
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**

BMP ID	Permit Year One			Permit Year Two			Permit Year Three			Permit Year Four			Permit Year Five			Next Permit					
	Spring 2004	Summer 2004	Fall 2004	Winter 2004	Spring 2005	Summer 2005	Fall 2005	Winter 2005	Spring 2006	Summer 2006	Fall 2006	Winter 2006	Spring 2007	Summer 2007	Fall 2007		Winter 2007	Spring 2008	Summer 2008	Fall 2008	Winter 2008
<b>Public Education</b>																					
1-1																					
1-2			Done																		
1-3																					
1-4																					
1-5																					
1-6																					
1-7																					
1-8																					
1-9																					
1-10																					
<b>Public Participation</b>																					
2-1																					
2-2																					
2-3																					
2-4			Done																		
2-5																					
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2-9																					
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<b>Illicit Discharge Detection &amp; Elimination</b>																					
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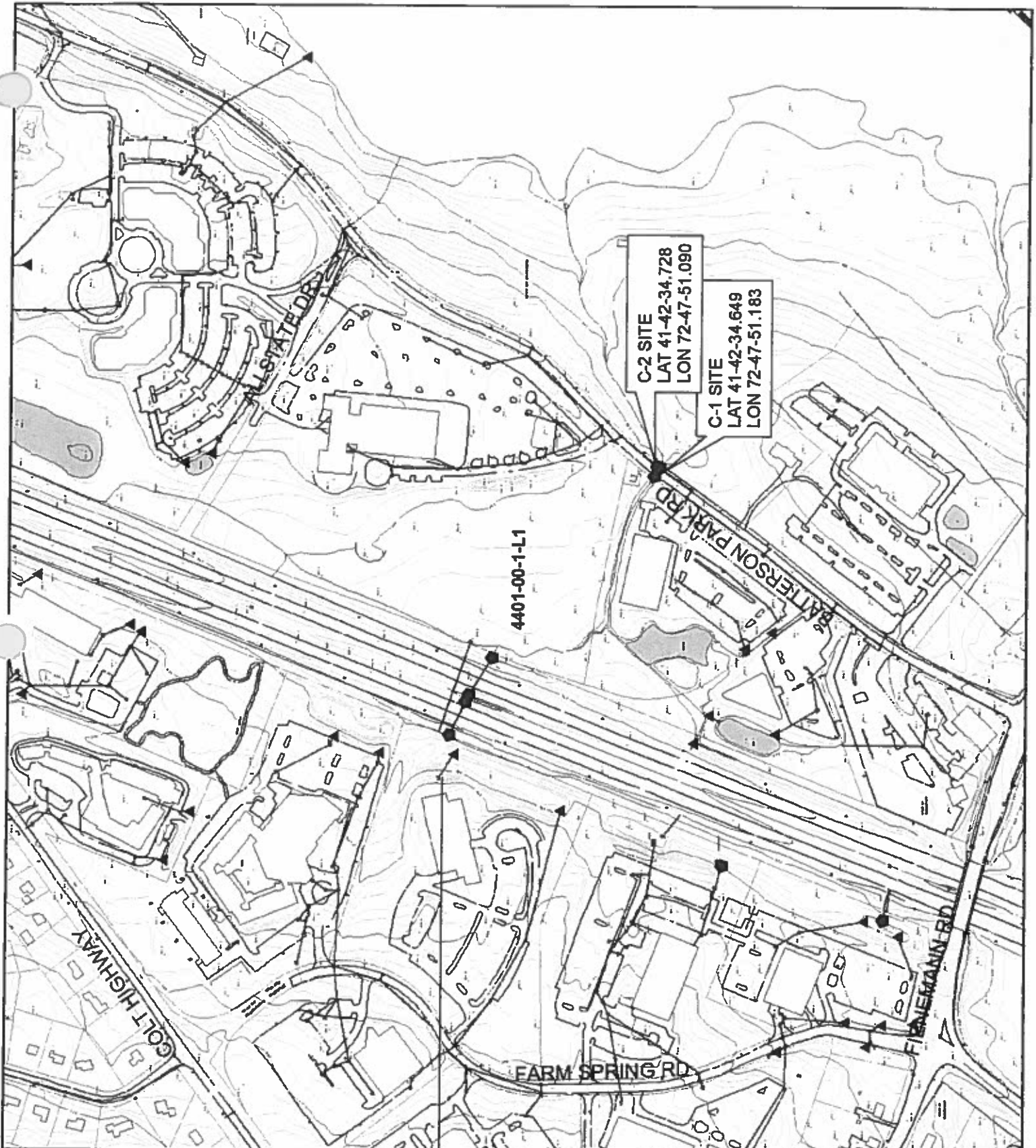
--- Work in Progress      X Task Completed as a One-time Event During that Quarter      Done Task Completed

BMP ID	Permit Year One			Permit Year Two			Permit Year Three			Permit Year Four			Permit Year Five			Next Permit					
	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
<b>Construction Site Runoff Control</b>																					
4-1				Done	Done																
4-2																					
4-3																					
4-4																					
4-5																					
4-6																					
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4-8																					
4-9																					
4-10																					
<b>Post Construction Runoff Control</b>																					
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5-4																					
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6-10																					
<b>Monitoring</b>																					
S-1																					
S-2																					



**ATTACHMENT B**

**Monitoring Site Location Mapping**



**C-2 SITE**  
 LAT 41-42-34.728  
 LON 72-47-51.090

**C-1 SITE**  
 LAT 41-42-34.649  
 LON 72-47-51.183

4401-00-1-L1

**TOWN OF FARMINGTON DRAINAGE OUT FALL SAMPLING AREA C-1 & C-2**

Sampling Sites C-1 & C-2 these two sampling points are both located in Batterson Park road about 1450 feet north of the intersection with Flenemann Road.



Prepared By: P. Young  
 as Inped By: F. Young/Mattawa Buttrick  
 Date: 11/20/04

UTM REFERENCE: NAD 1983  
 County of Orange System, contours where  
 1000' intervals are shown. Contour  
 elevations are based on the original  
 field data which was obtained from soil  
 boring logs and other data. The  
 data is not to be used for any other  
 purpose without the written consent  
 of the Town of Farmington.

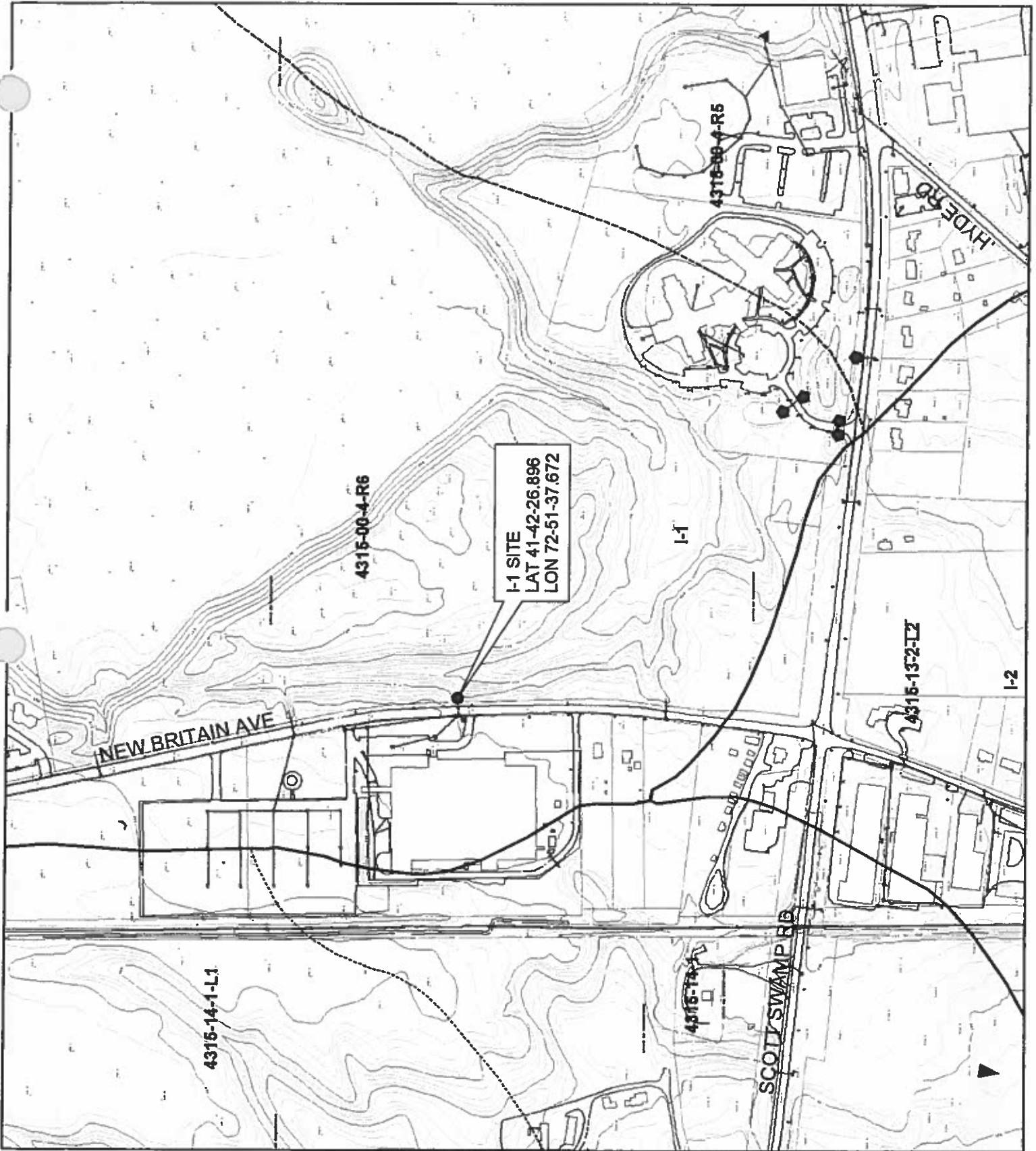
Map Area Boundary: US Census Bureau  
 Census Tract Boundary: US Census  
 Census Tract Boundary: US Census  
 Census Tract Boundary: US Census  
 Other Data By: Town of Farmington

**UT FALL LEGEND**

STRUCTURE TYPE
FLARED END
PIPE END
END WALL
STORM LINE
TOWN LINE
RAINAGE BASIN CLASSIFICATION
1 MAJOR
2 REGIONAL
3 SUBREGIONAL
4 LOCAL
5 STREAM REACH
6 LAKE IMPOUNDMENT
7 STREAM DIVERSION

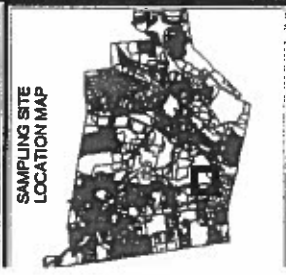
0 100 200 400 Feet





**TOWN OF FARMINGTON DRAINAGE OUT FALL SAMPLING AREA I-1**

This sampling site lies east of New Britain Avenue about 1200 feet north of Route 6 (Scott Swamp Road) opposite the Hamilton Standard plant.



**NOTE:**  
 Vertical Reference: NAD 1987  
 Accuracy of Drawing: System within 1 meter  
 Date Input By: F. Young/Muhammad  
 Date: 10/29/04  
 This drawing was prepared using the original data sets collected from field drawings and as a result of a partial catch basin inventory performed: STORMDRAINAGE ACD, dated 8/1/04.  
 Town Area Boundary: By US Census Bureau (2000)  
 Village Basin Boundary: By Connecticut DEP  
 Other Data: By Town Of Farmington

**OUT FALL LEGEND**

STRUCTURE TYPE	
▲	FLARED END
●	PPE END
▾	END WALL
—	STORM LINE
—	TOWN LINE
DRAINAGE BASIN CLASSIFICATION	
■	1 MAJOR
▨	2 REGIONAL
▩	3 SUBREGIONAL
▧	4 LOCAL
---	5 STREAM REACH
---	6 LAKE IMPONEMENT
---	7 STREAM OVERFLOW





**TOWN OF FARMINGTON DRAINAGE OUT FALL SAMPLING AREA I-2**

This sampling site lies southeast of Hyde Road at the intersection with New Britain Avenue.



Prepared By: F. Young  
 Data Acquired By: F. Young/Matthew Butterfield  
 Date: 10/25/04

NOTE:  
 DATUM REFERENCE: NAD 1987  
 Location of Drainage System entities shown obtained from the corrected drawing file entitled: S01DWG.DWG, dated 10/04.  
 Attribute data was obtained from seed drawing file and data collected by a parcel catch basin inventory file entitled: STORMDRAINAGE.MXD, dated 8/15/04.  
 Urban Area Boundary By: US Census Bureau (2000)  
 Drainage Basin Boundary By: Connecticut DEP  
 All Other Data By: Town Of Farmington

**OUT FALL LEGEND**

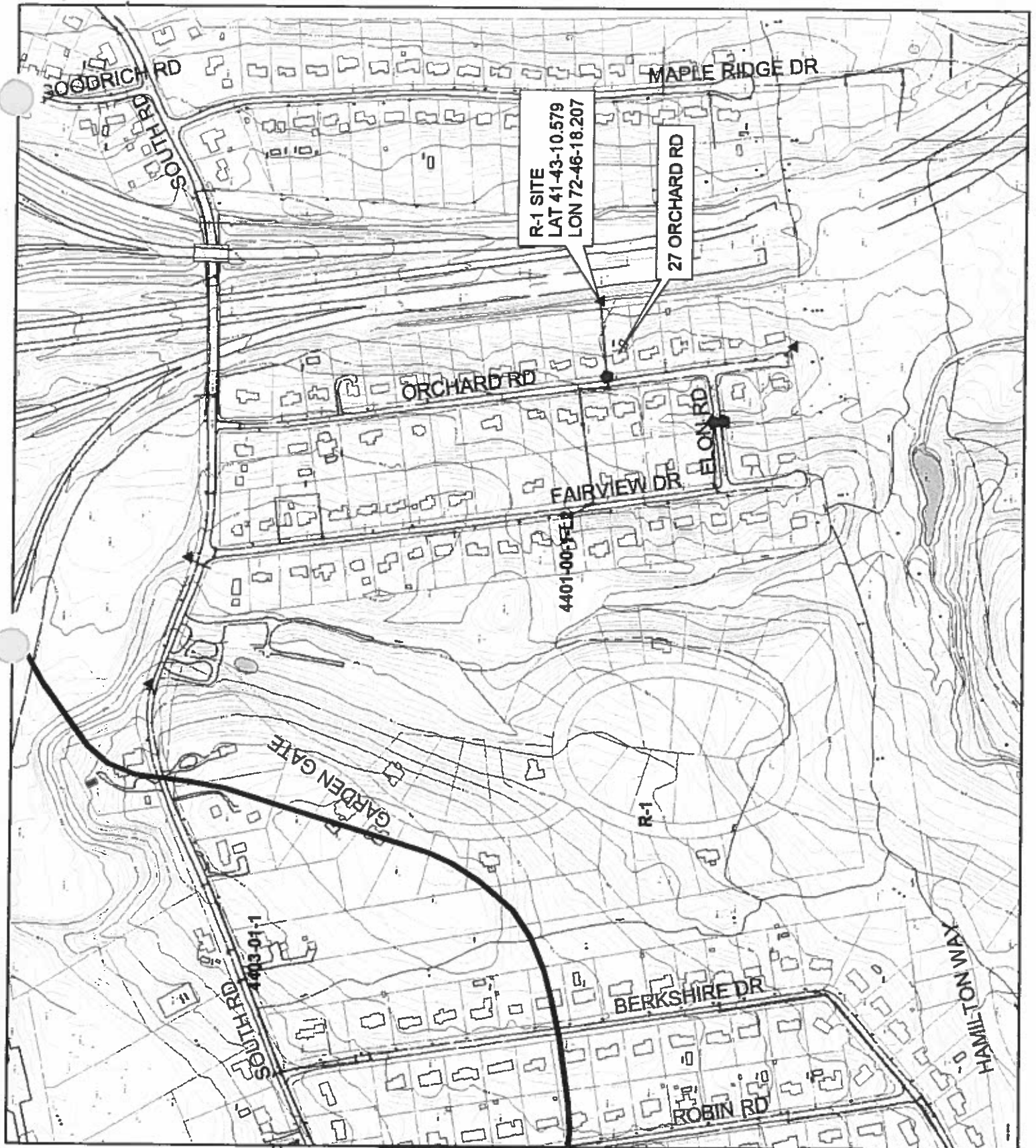
**STRUCTURE TYPE**

- ▲ FLARED END
- PIPE END
- ◐ END WALL
- ▬ STORM LINE
- ▬ TOWN LINE

**DRAINAGE BASIN CLASSIFICATION**

- 1 MAJOR
- 2 REGIONAL
- 3 SUBREGIONAL
- 4 LOCAL
- 5 STREAM REACH
- 6 LAKE IMPOUNDMENT
- 7 STREAM DIVERSION





**TOWN OF  
FARMINGTON  
DRAINAGE  
OUT FALL  
SAMPLING  
AREA R-1**

This sampling site is located on Orchard Road about 1250 feet south of the intersection with South Road.

SAMPLING SITE  
LOCATION MAP



Prepared by: F. Young  
Reviewed by: F. Young/Matthew B. G. et al  
Date: 10/20/04

OTE:

AUTUMN REFERENCE: NAD 1927  
Elevations of Contour Lines, Ditches, walls, etc. were obtained from the field during the construction of the map. The elevations of the contours were obtained by a partial chain bearing inventory of the area. The contours were obtained from the 1927 U.S. Geological Survey map of Farmington, Vermont. The map is dated 1927.

Waste Area Boundary By: US Census Bureau (2000)  
Waste Area Boundary By: Connecticut DEP  
Other Data By: Town Of Farmington

**OUT FALL LEGEND**

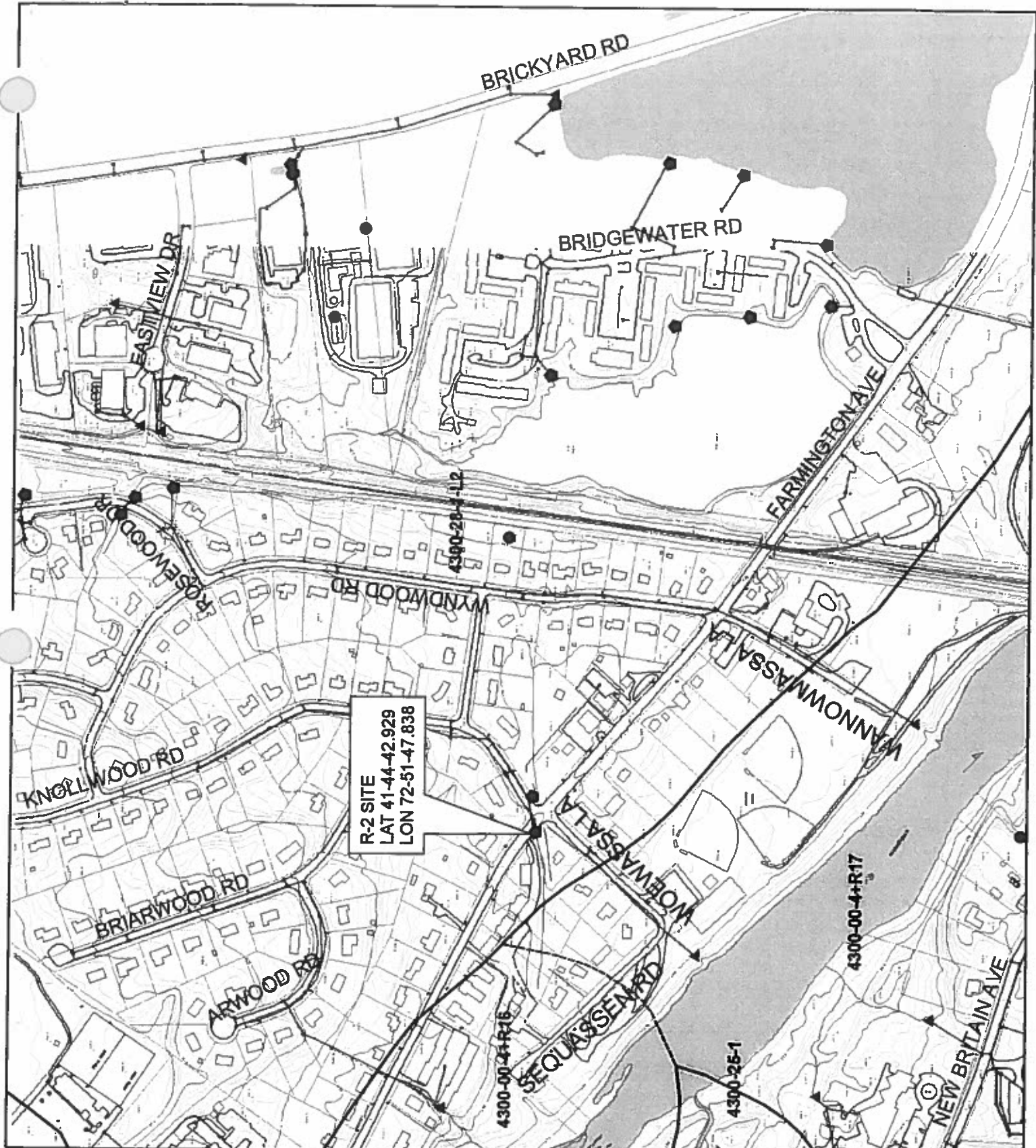
**STRUCTURE TYPE**

- 1 FLARED END
- 2 PIPE END
- 3 END WALL
- 4 STORM LINE
- 5 TOWN LINE

**RAINAGE BASIN CLASSIFICATION**

- 1 MAJOR
- 2 REGIONAL
- 3 SUBREGIONAL
- 4 LOCAL
- 5 STREAM REACH
- 6 LAKE IMPOUNDMENT
- 7 STREAM DIVERSION





**R-2 SITE**  
 LAT 41-44-42.929  
 LON 72-51-47.838

**TOWN OF FARMINGTON DRAINAGE OUT FALL SAMPLING AREA R-2**

This sampling site is located on the south side of Route 4 Farmington Avenue) opposite and to the west of the outlet of Knollwood Road.



Prepared by: F. Young  
 as input by: F. Young/Johnathan Buttrick  
 Date: 10/20/04

DATE: 10/20/04

PROJECT REFERENCE: MAD 1037

Location of Outfalls by State and/or other sources listed from the completed drawing file without 10/20/04.

These data were obtained from field surveying the site and are not to be used for any other purpose without the written consent of the State of Connecticut.

Site Area Boundary By: US Census Bureau (2000) State Basin Boundary By: Connecticut DEP Other Data By: Town Of Farmington

**UT FALL LEGEND**

**STRUCTURE TYPE**

- FLARED END
- PIPE END
- END WALL
- STORM LINE
- TOWN LINE

**RAINAGE BASIN CLASSIFICATION**

- 1 MAJOR
- 2 REGIONAL
- 3 SUBREGIONAL
- 4 LOCAL
- 5 STREAM REACH
- 6 LINE IMPOUNDMENT
- 7 STREAM DIVERSION

0 100 200 400 Feet

**ATTACHMENT C**

**Sample Analysis Results**



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

**Stormwater Monitoring Report Form**

**PERMITTEE INFORMATION**

Town: <u>Farmington</u>
Mailing Address: <u>1 Monteith Drive</u>
Contact Person: <u>Russell Arnold, Jr.</u> Title: <u>Director DPW</u> Phone: <u>860-675-2330</u>
Permit Registration # <u>GSM</u>

**SAMPLING INFORMATION**

Discharge Location (Lat/Long or other description): <u>Lat 41-42-34.649 / Long 72-47-51.183</u> <u>C-1</u>
Please circle the appropriate area description: Industrial <input type="radio"/> <u>Commercial</u> <input checked="" type="radio"/> or Residential <input type="radio"/>
Receiving Water (name, basin): <u>Bass Brook, 4401-00-1-L1</u>
Time of Start of Discharge: <u>3:55 PM (Approx.)</u>
Date/Time Collected: <u>November 24, 2004/4:28</u> Water Temperature: _____
Person Collecting Sample: <u>Ryan Hines</u>
Storm Magnitude (inches): <u>0.36 inches</u> Storm Duration (hours): <u>9 hours (approx.)</u>
Date of Previous Storm Event: <u>November 21, 2004</u>

**MONITORING RESULTS**

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	6.5	Averill Environmental Lab. #AEL04010647
Rain pH	EPA 150.1	6.8	Averill Environmental Lab. #AEL04010647
Hardness	SM 2340 B	8.0 mg/L CaCO3	Averill Environmental Lab. #AEL04010647
Conductivity	EPA 120.1	35 micromhos/cm	Averill Environmental Lab. #AEL04010647
Oil & Grease	EPA 1664A	< 1.7 mg/L	Averill Environmental Lab. #AEL04010647
COD	EPA 410.4	< 20 mg/L	Averill Environmental Lab. #AEL04010647
Turbidity	EPA 180.1	16 NTU	Averill Environmental Lab. #AEL04010647
TSS	EPA 160.2	26.5 mg/L	Averill Environmental Lab. #AEL04010647
TP	EPA 365.2	0.084 mg/L as P	Averill Environmental Lab. #AEL04010647
Ammonia	EPA 350.2	0.73 mg/L	Averill Environmental Lab. #AEL04010647
TKN	EPA 351.3	1.7 mg/L	Averill Environmental Lab. #AEL04010647
NO <sub>3</sub> +NO <sub>2</sub>	EPA 300.0	< 0.20 mg/L	Averill Environmental Lab. #AEL04010647
E. coli	EPA SM 9222 B	8000 per 100 mL	Averill Environmental Lab. #AEL04010647

**STATEMENT OF ACKNOWLEDGMENT**

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official:	<u>Russell M. Arnold, Jr., P.E. Director of Public Works/Town Engineer</u>
Signature:	<u>Russell M. Arnold</u> Date: <u>3/22/05</u>





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

**Stormwater Monitoring Report Form**

**PERMITTEE INFORMATION**

Town: Farmington

Mailing Address: 1 Monteith Drive

Contact Person: Russell Arnold, Jr. Title: Director DPW Phone: 860-675-2330

Permit Registration #GSM

**SAMPLING INFORMATION**

Discharge Location (Lat/Long or other description): Lat 41-42-34.728 / Long 72-47-51.090  
C-2

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

Receiving Water (name, basin): Bass Brook, 4401-00-1-L1

Time of Start of Discharge: 4:00 PM (approx.)

Date/Time Collected: November 24, 2004 / 4:34 Water Temperature: NA

Person Collecting Sample: Ryan Hines

Storm Magnitude (inches): 0.36 inches Storm Duration (hours): 9 hours (approx.)

Date of Previous Storm Event: November 21, 2004

**MONITORING RESULTS**

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	6.7	Averill Environmental Lab. #AEL04010647
Rain pH	EPA 150.1	6.8	Averill Environmental Lab. #AEL04010647
Hardness	SM 2340 B	8.5 mg/L CaCO3	Averill Environmental Lab. #AEL04010647
Conductivity	EPA 120.1	39 micromhos/cm	Averill Environmental Lab. #AEL04010647
Oil & Grease	EPA 1664A	< 2.6 mg/L	Averill Environmental Lab. #AEL04010647
COD	EPA 410.4	< 33 mg/L	Averill Environmental Lab. #AEL04010647
Turbidity	EPA 180.1	30 NTU	Averill Environmental Lab. #AEL04010647
TSS	EPA 160.2	56.0 mg/L	Averill Environmental Lab. #AEL04010647
TP	EPA 365.2	0.149 mg/L as P	Averill Environmental Lab. #AEL04010647
Ammonia	EPA 350.2	1.00 mg/L	Averill Environmental Lab. #AEL04010647
TKN	EPA 351.3	L 1.1 mg/L	Averill Environmental Lab. #AEL04010647
NO <sub>3</sub> +NO <sub>2</sub>	EPA 300.0	< 0.20 mg/L	Averill Environmental Lab. #AEL04010647
E. coli	EPA SM 9222 B	300 per 100 mL	Averill Environmental Lab. #AEL04010647

**STATEMENT OF ACKNOWLEDGMENT**

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Russell M Arnold Jr PE, Director of Public Works / Town Engineer

Signature: Russell M Arnold Jr Date: 3/22/05



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

### Stormwater Monitoring Report Form

#### PERMITTEE INFORMATION

Town: <u>Farmington</u>
Mailing Address: <u>1 Monteith Drive</u>
Contact Person: <u>Russell Arnold, Jr.</u> Title: <u>Director DPW</u> Phone: <u>860-675-2330</u>
Permit Registration # <u>GSM</u>

#### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>Lat 41-42-26.896 / Long 72-51-37.672</u> <u>I-1</u>	
Please circle the appropriate area description: <u>Industrial</u> Commercial, or Residential	
Receiving Water (name, basin): <u>Pequabuck River, 4315-00-4-R6</u>	
Time of Start of Discharge: <u>5:00 PM (approx.)</u>	
Date/Time Collected: <u>November 24, 2004 / 5:31</u> Water Temperature: <u>NA</u>	
Person Collecting Sample: <u>Ryan Hines</u>	
Storm Magnitude (inches): <u>0.36 inches</u> Storm Duration (hours): <u>9 hours (approx.)</u>	
Date of Previous Storm Event: <u>November 21, 2004</u>	

#### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	5.0	Averill Environmental Lab. #AEL04010647
Rain pH	EPA 150.1	6.8	Averill Environmental Lab. #AEL04010647
Hardness	SM 2340 B	1.3 mg/L CaCO <sub>3</sub>	Averill Environmental Lab. #AEL04010647
Conductivity	EPA 120.1	11 micromhos/cm	Averill Environmental Lab. #AEL04010647
Oil & Grease	EPA 1664A	< 1.7 mg/L	Averill Environmental Lab. #AEL04010647
COD	EPA 410.4	< 20 mg/L	Averill Environmental Lab. #AEL04010647
Turbidity	EPA 180.1	3.8 NTU	Averill Environmental Lab. #AEL04010647
TSS	EPA 160.2	2.6 mg/L	Averill Environmental Lab. #AEL04010647
TP	EPA 365.2	0.025 mg/L as P	Averill Environmental Lab. #AEL04010647
Ammonia	EPA 350.2	< 0.10 mg/L	Averill Environmental Lab. #AEL04010647
TKN	EPA 351.3	< 1.0 mg/L	Averill Environmental Lab. #AEL04010647
NO <sub>3</sub> +NO <sub>2</sub>	EPA 300.0	< 0.20 mg/L	Averill Environmental Lab. #AEL04010647
E. coli	EPA SM 9222 B	< 50 per 100 mL	Averill Environmental Lab. #AEL04010647

#### STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>Russell M. Arnold Jr., P.E. Director of Public Works / Town Engineer</u>	
Signature: <u>Russell M. Arnold Jr.</u>	Date: <u>2/22/05</u>



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

## Stormwater Monitoring Report Form

### PERMITTEE INFORMATION

Town: <u>Farmington</u>
Mailing Address: <u>1 Monteith Drive</u>
Contact Person: <u>Russell Arnold, Jr.</u> Title: <u>Director DPW</u> Phone: <u>860-675-2330</u>
Permit Registration # <u>GSM</u>

### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>Lat 41-41-59.172 / Long 72-51-39.682</u> <u>I-2</u>
Please circle the appropriate area description: <u>Industrial</u> Commercial, or Residential
Receiving Water (name, basin): <u>Pequabuck River, 4315-13-2-L2</u>
Time of Start of Discharge: <u>4:55 PM (approx.)</u>
Date/Time Collected: <u>November 24, 2004 / 5:47</u> Water Temperature: <u>NA</u>
Person Collecting Sample: <u>Ryan Hines</u>
Storm Magnitude (inches): <u>0.36 inches</u> Storm Duration (hours): <u>9 hours (approx.)</u>
Date of Previous Storm Event: <u>November 21, 2004</u>

### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	5.9	Averill Environmental Lab. #AEL04010647
Rain pH	EPA 150.1	6.8	Averill Environmental Lab. #AEL04010647
Hardness	SM 2340 B	2.4 mg/L CaCO <sub>3</sub>	Averill Environmental Lab. #AEL04010647
Conductivity	EPA 120.1	17 micromhos/cm	Averill Environmental Lab. #AEL04010647
Oil & Grease	EPA 1664A	< 1.6 mg/L	Averill Environmental Lab. #AEL04010647
COD	EPA 410.4	< 20 mg/L	Averill Environmental Lab. #AEL04010647
Turbidity	EPA 180.1	11 NTU	Averill Environmental Lab. #AEL04010647
TSS	EPA 160.2	9.5 mg/L	Averill Environmental Lab. #AEL04010647
TP	EPA 365.2	0.066 mg/L as P	Averill Environmental Lab. #AEL04010647
Ammonia	EPA 350.2	< 0.10 mg/L	Averill Environmental Lab. #AEL04010647
TKN	EPA 351.3	< 1.0 mg/L	Averill Environmental Lab. #AEL04010647
NO <sub>3</sub> +NO <sub>2</sub>	EPA 300.0	< 0.20 mg/L	Averill Environmental Lab. #AEL04010647
E. coli	EPA SM 9222 B	200 per 100 mL	Averill Environmental Lab. #AEL04010647

### STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official:	<u>Russell M Arnold Jr., P.E., Director of Public Works / Town Engineer</u>
Signature:	<u>Russell M Arnold Jr.</u> Date: <u>3/22/05</u>



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

**Stormwater Monitoring Report Form**

**PERMITTEE INFORMATION**

Town: <u>Farmington</u>
Mailing Address: <u>1 Monteith Drive</u>
Contact Person: <u>Russell Arnold, Jr.</u> Title: <u>Director DPW</u> Phone: <u>860-675-2330</u>
Permit Registration # <u>GSM</u>

**SAMPLING INFORMATION**

Discharge Location (Lat/Long or other description): <u>Lat 41-43-10.579 / Long 72-46-18.207</u> <u>R-1</u>
Please circle the appropriate area description: Industrial, Commercial, <u>Residential</u>
Receiving Water (name, basin): <u>Bass Brook, 4401-00-1-L2</u>
Time of Start of Discharge: <u>3:25 PM (approx.)</u>
Date/Time Collected: <u>November 24, 2004 / 4:05</u> Water Temperature: <u>NA</u>
Person Collecting Sample: <u>Ryan Hines</u>
Storm Magnitude (inches): <u>0.36 inches</u> Storm Duration (hours): <u>9 hours (approx.)</u>
Date of Previous Storm Event: <u>November 21, 2004</u>

**MONITORING RESULTS**

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	7.1	Averill Environmental Lab. #AEL04010647
Rain pH			
Hardness	SM 2340 B	42.5 mg/L CaCO3	Averill Environmental Lab. #AEL04010647
Conductivity	EPA 120.1	84 micromhos/cm	Averill Environmental Lab. #AEL04010647
Oil & Grease	EPA 1664A	< 1.9 mg/L	Averill Environmental Lab. #AEL04010647
COD	EPA 410.4	210 mg/L	Averill Environmental Lab. #AEL04010647
Turbidity	EPA 180.1	91 NTU	Averill Environmental Lab. #AEL04010647
TSS	EPA 160.2	250 mg/L	Averill Environmental Lab. #AEL04010647
TP	EPA 365.2	0.647 mg/L as P	Averill Environmental Lab. #AEL04010647
Ammonia	EPA 350.2	L 0.22 mg/L	Averill Environmental Lab. #AEL04010647
TKN	EPA 351.3	3.5 mg/L	Averill Environmental Lab. #AEL04010647
NO <sub>3</sub> +NO <sub>2</sub>	EPA 300.0	< 0.20 mg/L	Averill Environmental Lab. #AEL04010647
E. coli	EPA SM 9222 B	3000 per 100 mL	Averill Environmental Lab. #AEL04010647

**STATEMENT OF ACKNOWLEDGMENT**

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official:	<u>Russell M. Arnold Jr., P.E. Director of Public Works / Town Engineer</u>
Signature:	<u>Russell M. Arnold</u> Date: <u>3/22/05</u>



Re-mailed 3/20/05

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

## Stormwater Monitoring Report Form

### PERMITTEE INFORMATION

Town: Farmington

Mailing Address: 1 Monteith Drive

Contact Person: Russell Arnold, Jr. Title: Director DPW Phone: 860-675-2330

Permit Registration #GSM

### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): Lat 41-44-42.929 / Long 72-51-47.838  
R-2

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

Receiving Water (name, basin): Farmington River, 4300-28-1-L2

Time of Start of Discharge: 4:15 PM (approx.)

Date/Time Collected: November 24, 2004 / 5:00 Water Temperature: NA

Person Collecting Sample: Ryan Hines

Storm Magnitude (inches): 0.36 inches Storm Duration (hours): 9 hours (approx.)

Date of Previous Storm Event: November 21, 2004

### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	EPA 150.1	6.3	Averill Environmental Lab. #AEL04010647
Rain pH	EPA 150.1	6.8	Averill Environmental Lab. #AEL04010647
Hardness	SM 2340 B	8.2 mg/L CaCO3	Averill Environmental Lab. #AEL04010647
Conductivity	EPA 120.1	60 micromhos/cm	Averill Environmental Lab. #AEL04010647
Oil & Grease	EPA 1664A	< 1.8 mg/L	Averill Environmental Lab. #AEL04010647
COD	EPA 410.4	65 mg/L	Averill Environmental Lab. #AEL04010647
Turbidity	EPA 180.1	42 NTU	Averill Environmental Lab. #AEL04010647
TSS	EPA 160.2	44.0 mg/L	Averill Environmental Lab. #AEL04010647
TP	EPA 365.2	0.240 mg/L as P	Averill Environmental Lab. #AEL04010647
Ammonia	EPA 350.2	0.76 mg/L	Averill Environmental Lab. #AEL04010647
TKN	EPA 351.3	2.0 mg/L	Averill Environmental Lab. #AEL04010647
NO <sub>3</sub> +NO <sub>2</sub>	EPA 300.0	< 0.20 mg/L	Averill Environmental Lab. #AEL04010647
E. coli	EPA SM 9222 B	5000 per 100 mL	Averill Environmental Lab. #AEL04010647

### STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Russell M. Arnold Jr., P.E. Director of Public Works / Town Engineer

Signature: Russell M. Arnold Jr. Date: 3/22/05

# AVERILL 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  
Lawton S. Averill - Director

NH Laboratory ID No. 2506  
ME Laboratory ID No. CT029  
EPA Laboratory ID No. CT00029

## REPORT ON LABORATORY EXAMINATIONS

To Client: Loureiro Engineering Associates  
100 Northwest Drive  
Plainville, CT 06062

Report Date: Wednesday, December 15, 2004  
Received Date: Wednesday, November 24, 2004  
Collect Date: Wednesday, November 24, 2004  
Collect Time: 4:28 PM  
Collected By: LEA

ATTN: Ryan Hines

C-1

AEL Lab#: AEL04010647

Project#: 28FA406

Client Sample ID: 1057473

Source: Farmington, CT

Sample ID: Stormwater Discharge Sample

Sample Matrix: Wastewater

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	26.5	mg/L	CC	11/30/04	EPA 160.2
Nitrate Nitrogen as N	< 0.20	mg/L	CC	12/1/04	EPA 300.0
pH	6.5	units	JF	11/24/04	EPA 150.1
pH of Rain	6.8	units	JF	11/24/04	EPA 150.1
Specific Conductivity	35	micromhos/cm	MTK	12/1/04	EPA 120.1
Hardness, Calculated	8.0	mg/L CaCO3	MAP	12/7/04	SM 2340 B
Chemical Oxygen Demand	< 20	mg/L	MTK	12/8/04	EPA 410.4
Ammonia Nitrogen as N	0.73	mg/L	CC	11/30/04	EPA 350.2
Phosphorus, Total as P	0.084	mg/L as P	JM	11/30/04	EPA 365.2
E. Coli	8000	per 100 mL	JF	11/29/04	SM 9222 B
Total Kjeldahl Nitrogen	1.7	mg/L	CC	12/10/04	EPA 351.3
Turbidity	16	NTU	JF	11/24/04	EPA 180.1
Calcium	2.17	mg/L	RR	12/6/04	EPA 200.7
Magnesium	0.62	mg/L	RR	12/6/04	EPA 200.7
Oil & Grease, Hexane Ext. Material	< 1.7	mg/L	WCH	12/8/04	EPA 1664A

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

H- Flag results above calibration range as estimated.

  
Lawton S. Averill (MAP)  
Laboratory Director

# AVERILL 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  
Lawton S. Averill - Director

NH Laboratory ID No. 2506  
ME Laboratory ID No. CT029  
EPA Laboratory ID No. CT00029

## REPORT ON LABORATORY EXAMINATIONS

To Client: Loureiro Engineering Associates  
100 Northwest Drive  
Plainville, CT 06062

Report Date: Wednesday, December 15, 2004  
Received Date: Wednesday, November 24, 2004  
Collect Date: Wednesday, November 24, 2004  
Collect Time: 4:34 PM  
Collected By: LEA

ATTN: Ryan Hines

C-2

AEL Lab#: AEL04010644

Project#: 28FA406

Client Sample ID: 1057470

Source: Farmington, CT

Sample ID: Stormwater Discharge Sample

Sample Matrix: Wastewater

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	56.0	mg/L	CC	11/30/04	EPA 160.2
Nitrate Nitrogen as N	< 0.20	mg/L	CC	12/1/04	EPA 300.0
pH	6.7	units	JF	11/24/04	EPA 150.1
Specific Conductivity	39	micromhos/cm	MTK	12/1/04	EPA 120.1
Hardness, Calculated	8.5	mg/L CaCO3	MAP	12/7/04	SM 2340 B
Chemical Oxygen Demand	33	mg/L	MTK	12/8/04	EPA 410.4
Ammonia Nitrogen as N	1.00	mg/L	CC	11/30/04	EPA 350.2
Phosphorus, Total as P	0.149	mg/L as P	JM	11/30/04	EPA 365.2
E. Coli	> 300	per 100 mL	JF	11/29/04	SM 9222 B
Total Kjeldahl Nitrogen	< L 1.1	mg/L	CC	12/10/04	EPA 351.3
Turbidity	30	NTU	JF	11/24/04	EPA 180.1
Calcium	2.05	mg/L	RR	12/6/04	EPA 200.7
Magnesium	0.82	mg/L	RR	12/6/04	EPA 200.7
Oil & Grease, Hexane Ext. Material	< 2.6	mg/L	WCH	12/8/04	EPA 1664A

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

H- Flag results above calibration range as estimated.

  
Lawton S. Averill (MAP)  
Laboratory Director

# AVERILL 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  
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: Loureiro Engineering Associates  
100 Northwest Drive  
Plainville, CT 06062

Report Date: Wednesday, December 15, 2004  
Received Date: Wednesday, November 24, 2004  
Collect Date: Wednesday, November 24, 2004  
Collect Time: 5:31 PM  
Collected By: LEA

ATTN: Ryan Hines

AEL Lab#: AEL04010642

Project#: 28FA406

Client Sample ID: 1057468

Source: Farmington, CT

Sample ID: Stormwater Discharge Sample

Sample Matrix: Wastewater

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	2.6	mg/L	CC	11/30/04	EPA 160.2
Nitrate Nitrogen as N	< 0.20	mg/L	CC	12/1/04	EPA 300.0
pH	5.0	units	JF	11/24/04	EPA 150.1
Specific Conductivity	11	micromhos/cm	MTK	12/1/04	EPA 120.1
Hardness, Calculated	1.3	mg/L CaCO3	MAP	12/7/04	SM 2340 B
Chemical Oxygen Demand	< 20	mg/L	MTK	12/8/04	EPA 410.4
Ammonia Nitrogen as N	< 0.10	mg/L	CC	11/30/04	EPA 350.2
Phosphorus, Total as P	0.025	mg/L as P	JM	11/30/04	EPA 365.2
E. Coli	< 50	per 100 mL	JF/CC	11/24/04	SM 9222 B
Total Kjeldahl Nitrogen	< 1.0	mg/L	CC	12/10/04	EPA 351.3
Turbidity	3.8	NTU	JF	11/24/04	EPA 180.1
Calcium	< 1.00	mg/L	RR	12/6/04	EPA 200.7
Magnesium	< 0.50	mg/L	RR	12/6/04	EPA 200.7
Oil & Grease, Hexane Ext. Material	< 1.7	mg/L	WCH	12/2/04	EPA 1664A

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

H- Flag results above calibration range as estimated.

 (MAP)  
Laboratory Director



# AVERILL 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  
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: Loureiro Engineering Associates  
100 Northwest Drive  
Plainville, CT 06062

Report Date: Wednesday, December 15, 2004  
Received Date: Wednesday, November 24, 2004  
Collect Date: Wednesday, November 24, 2004  
Collect Time: 5:47 PM  
Collected By: LEA

ATTN: Ryan Hines

AEL Lab#: AEL04010643

Project#: 28FA406

Client Sample ID: 1057469

I-2

Source: Farmington, CT

Sample ID: Stormwater Discharge Sample

Sample Matrix: Wastewater

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	9.5	mg/L	CC	11/30/04	EPA 160.2
Nitrate Nitrogen as N	< 0.20	mg/L	CC	12/1/04	EPA 300.0
pH	5.9	units	JF	11/24/04	EPA 150.1
Specific Conductivity	17	micromhos/cm	MTK	12/1/04	EPA 120.1
Hardness, Calculated	2.4	mg/L CaCO3	MAP	12/7/04	SM 2340 B
Chemical Oxygen Demand	< 20	mg/L	MTK	12/8/04	EPA 410.4
Ammonia Nitrogen as N	< 0.10	mg/L	CC	11/30/04	EPA 350.2
Phosphorus, Total as P	0.066	mg/L as P	JM	11/30/04	EPA 365.2
E. Coli	200	per 100 mL	JF/CC	11/24/04	SM 9222 B
Total Kjeldahl Nitrogen	< 1.0	mg/L	CC	12/10/04	EPA 351.3
Turbidity	11	NTU	JF	11/24/04	EPA 180.1
Calcium	< 1.00	mg/L	RR	12/6/04	EPA 200.7
Magnesium	< 0.50	mg/L	RR	12/6/04	EPA 200.7
Oil & Grease, Hexane Ext. Material	< 1.6	mg/L	WCH	12/2/04	EPA 1664A

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

H- Flag results above calibration range as estimated.

  
Lawton S. Averill (MAP)  
Laboratory Director

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## REPORT ON LABORATORY EXAMINATIONS

To Client: Loureiro Engineering Associates  
100 Northwest Drive  
Plainville, CT 06062

Report Date: Wednesday, December 15, 2004  
Received Date: Wednesday, November 24, 2004  
Collect Date: Wednesday, November 24, 2004  
Collect Time: 4:05 PM  
Collected By: LEA

ATTN: Ryan Hines

AEL Lab#: AEL04010645

Project#: 28FA406

Client Sample ID: 1057471

Source: Farmington, CT

Sample ID: Stormwater Discharge Sample

Sample Matrix: Wastewater

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	250	mg/L	CC	11/30/04	EPA 160.2
Nitrate Nitrogen as N	< 0.20	mg/L	CC	12/1/04	EPA 300.0
pH	7.1	units	JF	11/24/04	EPA 150.1
Specific Conductivity	84	micromhos/cm	MTK	12/1/04	EPA 120.1
Hardness, Calculated	42.5	mg/L CaCO3	MAP	12/7/04	SM 2340 B
Chemical Oxygen Demand	210	mg/L	MTK	12/8/04	EPA 410.4
Ammonia Nitrogen as N	L 0.22	mg/L	CC	11/30/04	EPA 350.2
Phosphorus, Total as P	0.647	mg/L as P	JM	11/30/04	EPA 365.2
E. Coli	3000	per 100 mL	JF	11/29/04	SM 9222 B
Total Kjeldahl Nitrogen	3.5	mg/L	CC	12/10/04	EPA 351.3
Turbidity	91	NTU	JF	11/24/04	EPA 180.1
Calcium	10.0	mg/L	RR	12/2/04	EPA 200.7
Magnesium	4.22	mg/L	RR	12/2/04	EPA 200.7
Oil & Grease, Hexane Ext. Material	< 1.9	mg/L	WCH	12/8/04	EPA 1664A

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H- Flag results above calibration range as estimated.

 (MAP)  
Laboratory Director

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## REPORT ON LABORATORY EXAMINATIONS

To Client: Loureiro Engineering Associates  
100 Northwest Drive  
Plainville, CT 06062

Report Date: Wednesday, December 15, 2004  
Received Date: Wednesday, November 24, 2004  
Collect Date: Wednesday, November 24, 2004  
Collect Time: 5:00 PM  
Collected By: LEA

ATTN: Ryan Hines

AEL Lab#: AEL04010646

Project#: 28FA406

Client Sample ID: 1057472

12-2

Source: Farmington, CT

Sample ID: Stormwater Discharge Sample

Sample Matrix: Wastewater

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	44.0	mg/L	CC	11/30/04	EPA 160.2
Nitrate Nitrogen as N	< 0.20	mg/L	CC	12/1/04	EPA 300.0
pH	6.3	units	JF	11/24/04	EPA 150.1
Specific Conductivity	60	micromhos/cm	MTK	12/1/04	EPA 120.1
Hardness, Calculated	8.2	mg/L CaCO3	MAP	12/7/04	SM 2340 B
Chemical Oxygen Demand	65	mg/L	MTK	12/8/04	EPA 410.4
Ammonia Nitrogen as N	0.76	mg/L	CC	11/30/04	EPA 350.2
Phosphorus, Total as P	0.240	mg/L as P	JM	11/30/04	EPA 365.2
E. Coli	5000	per 100 mL	JF	11/29/04	SM 9222 B
Total Kjeldahl Nitrogen	2.0	mg/L	CC	12/10/04	EPA 351.3
Turbidity	42	NTU	JF	11/24/04	EPA 180.1
Calcium	2.09	mg/L	RR	12/6/04	EPA 200.7
Magnesium	0.73	mg/L	RR	12/6/04	EPA 200.7
Oil & Grease, Hexane Ext. Material	< 1.8	mg/L	WCH	12/8/04	EPA 1664A

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Lawton S. Averill (MAP)  
Laboratory Director