

Town of Windsor
Stormwater Management Plan
2004 Annual Report



January 1, 2005

For questions and comments on this information, contact Duane Martin from the Town of Windsor Engineering Department at (860) 285-1871.

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Executive Summary

In 2004, the Town of Windsor prepared a five-year Phase II Stormwater Management Plan as required by the Connecticut Department of Environmental Protection's General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems.

This plan includes several goals and actions to achieve cleaner stormwater in drainage systems, watercourses, waterbodies, and wetlands throughout the Town.

The General Permit requires the Town to submit annual reports, which demonstrate the plan progress, effectiveness, and upcoming goals and actions. These reports are also produced for residents for review and comment. The following information includes the Town's efforts to date on the plan and what the Town will accomplish throughout the life of the General Permit.

The Town tested water samples from six drainage outfall locations, which represent industrial, commercial, and residential areas. These samples were collected as required by the permit from areas spread over a geographic area to capture different sections of Town and different receiving watercourses, and wetlands. A laboratory tested the water samples to determine the concentrations of contaminants, which were collected by the stormwater as it travels across building roofs, vegetated areas, parking lots, and other areas prior to discharge into the outfall locations. The laboratory results are included in the appendix of this annual report.

2004 Annual Report

The Town of Windsor completed the preparation of the Stormwater Management Plan in May 2004. The Plan is available for public review at the Windsor Main Library, the Wilson Branch Library, the Town Clerk's Office in the Windsor Town Hall, on the internet at www.townofwindsorct.com, or arrangements can be made to receive a copy by contacting Duane Martin in the Engineering Department at (860) 285-1871.

A public information meeting was conducted at the Conservation Commission meeting at the end of May 2004. This meeting allowed the public to review and comment on the Plan. The plan was submitted to the Connecticut Department of Environmental Protection (CTDEP) in July 2004.

As part of the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems, the Town is required to develop and submit annual reports to demonstrate the progress of the Plan.

The first permit year (2004) for the Plan technically began in January of 2004 although the Plan was not formally submitted to CTDEP until July 2004. The first permit year will end on December 31, 2004.

Prior to the issuance of the CTDEP General Permit, the Town already conducted a few activities, which relate to stormwater management. As such, these activities were included in our Plan. The activities completed this year, include the following:

- Catch basin marker installation
- Stormwater website
- Household hazardous waste collection day
- Catch basin cleaning
- Street sweeping
- Vehicle wash area
- Development reviews

As part of the catch basin marker installation program, approximately 340 catch basins were marked with a placard, stating, "Drains to Waterways and the Long Island Sound, No Dumping!" These markers warn people that discharging harmful contaminants into a catch basin has a negative impact on the local waterways and the Long Island Sound. This program will continue throughout the permit years.

The Information Section of the Town's website, www.townofwindsorct.com/information.index.htm was used to provide information regarding the Town's efforts on stormwater management. This information can also be accessed through the introductory screen on the Town of

Windsor's web page at www.townofwindsorct.com. The stormwater section includes the five-year Stormwater Management Plan, the presentation slides for the stormwater management plan that were used at the Conservation Commission meeting, and the 2004 annual report. As the plan progresses, additional stormwater related information would be added to this web page.

The Town continued its coordination efforts for the Metropolitan District Commission's Household Hazardous Waste Collection Day on May 15, 2004. This collection allows residents to properly dispose of household hazardous wastes such as pool chemicals, wood preservatives, and disinfectants. This program is anticipated to remain throughout the life of the permit.

The Town continued its efforts to clean debris out of catch basins and sweep Town-owned roadways and parking areas. All of the town roadways and parking areas were swept between the early spring and summer. Approximately 500 catch basins will be cleaned by the end of the year to remove sand, leaves, and debris accumulated in the sumps. These programs will also continue throughout the five-year stormwater plan.

The Town constructed a vehicle wash area inside the Town Public Works garage in 2003. All of the Town maintenance vehicles and equipment are washed in this area. The water used in the wash area discharges through filters into an oil water separator prior to discharge into the sanitary sewer system. This wash area will continue to be used.

Town staff reviews all proposed developments with respect to stormwater quality impacts. Town staff works with developers and engineers for each individual project to determine the best management practices. This practice will also continue throughout the life of the plan.

In addition to these ongoing measures, the Town conducted benchmark water testing. The benchmark water testing represents a pre-stormwater management plan condition. With the implementation of the plan, subsequent water sample collection and analysis will be conducted to monitor the benefits of the plan's implementation through structural and non-structural best management practices.

The Town was required by the permit to complete a minimum of six outfall water tests, which represent the overall nature of each respective land use type, including industrial, commercial, and residential land uses. Outfalls are stormwater discharges, typically pipes located at the end of a storm drainage system that allow stormwater to enter into a watercourse, waterbody, wetland etc.

The six outfall water testing locations were selected in an attempt to geographically cover the Town and subsequently cover different watersheds,

watercourses, wetlands, etc. We visited several potential outfalls and selected the following locations due to their geographic location, accessibility, and the nature of the contributing watershed area:

Commercial Outfall Locations

1. 1075 Kennedy Road (Shopping Center with Stop & Shop)
2. 555 Day Hill Road (Day Hill Village Shoppes)

Industrial Outfall Locations

1. 800 Marshall Phelps Road (Industrial Park)
2. 615 Day Hill Road (Baran Institute of Technology)
3. 570 Hayden Station Road – Alternate test location (Industrial Park)

Residential Outfall Locations

1. Between 124 and 128 Harvest Lane
2. Between 21 and 27 Philip Henry Circle

The Town staff collected water samples on the morning of December 1, 2004 during a rain event. These water samples were then transported in a cooler to Phoenix Environmental Laboratory in Manchester, Connecticut and analyzed for the following water quality parameters:

- pH
- Hardness
- Conductivity
- Oil and Grease
- Chemical Oxygen Demand
- Turbidity
- Total Suspended Solids
- Total Phosphorous
- Ammonia
- Total Kjeldahl Nitrogen
- Nitrate plus Nitrite Nitrogen
- E. Coli

The analysis results for each test location are included in the Appendix.

Each of the water test results were compared to the Department of Environmental Protection's, Connecticut Water Quality Standards. These standards rate water quality ranging from Class AA to Class D. An example of Class AA water is water with a high quality intended for a drinking water supply. Examples of Class A water are water that is designated for potential drinking water supply or fish habitat. Class B water could be industrial and agricultural

water supply. Class C water includes combined sewer overflows, urban runoff, and community-wide septic system failures. Class D water is considered highly polluted. The water quality standards state, "The minimum acceptable goal is Class B unless" it can be demonstrated "that one or more Class B uses are not attainable". The Class B uses that cannot be met currently are habitat for fish and other aquatic life and agricultural water supply due mostly to non-point source pollution. The Town of Windsor's goal is to obtain and maintain Class B criteria for our stormwater.

The following indicators pertain to Class B surface water:

- *Escherichia coli* (E. Coli) is acceptable at 576/100 ml for recreational use and 410/100 ml for non-designated swimming. These levels were exceeded at the residential sites, commercial sites, and one of the industrial sites.
- Total suspended solids (TSS) are acceptable up to 10 mg/L above the ambient concentration. This number was exceeded at one residential site and the industrial sites.
- The pH fell below 6.5 (approximate normal pH of adult human saliva) at one residential site, the commercial sites, and one industrial site.
- Turbidity exceeded the allowable Nephelometric Turbidity Unit (NTU's) at the residential sites, one commercial site, and the industrial sites.
- Total phosphorus is high at the residential sites, one commercial site, and the industrial sites.

Based on the testing results the Class B criteria was exceeded by the following:

- The residential outfalls exceeded the criteria for *E. coli*, total coliform, TSS, turbidity, and phosphorus.
- The commercial outfalls exceeded the criteria for *E. coli*, total coliform, pH, phosphorus, and turbidity.
- The industrial outfalls exceeded the criteria for total coliform, phosphorus, TSS, and turbidity.

Further investigation is required by Town staff to locate the sources of these high level indicators and if possible reduce the concentrations of the contaminants.

Proposed 2005 Permit Year Activities

Several goals and actions are proposed, which will be completed during the second permit year (2005) of the Plan. The following measures will be completed in 2005 with respect to the Minimum Control Measures:

Public Participation/Involvement

- Conduct a community cleanup
- Conduct a public information meeting
- Request involvement from a Town Organization(s)

Public Education and Outreach

- Develop educational brochures
- Develop an educational television campaign

Illicit Discharge Detection and Elimination

- Continue household hazardous waste collection day
- Storm sewer/outfall mapping
- Develop an illicit discharge ordinance
- Employee training

Pollution Prevention/Municipal Stormwater Practices

- Develop employee training materials

Construction Site Runoff Control

- Setup information management system
- Develop a sediment and erosion control ordinance

Post Construction Site Runoff Control

- Develop a list of recommended Best Management Practices
- Develop a post construction runoff control ordinance

Water Testing, Evaluation, and Reporting

- Improved water quality testing (Commercial, Industrial, Residential)
- Evaluation Report

Appendix

WATER TEST RESULTS

Commercial Outfall No. 1

1075 Kennedy Road



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
 December 08, 2004

FOR: Mr. Cyd Groff
 Town of Windsor
 275 Broad Street
 Windsor, CT 06095

DEC 10 2004
 10:55 AM

Sample Information

Matrix: WATER
 Location Code: SPECIAL2
 Rush Request:
 P.O.#:

Custody Information

Collected by: CG
 Received by: DL
 Analyzed by: see "By" below

Date Time
 12/01/04 12:10
 12/01/04 13:35

Laboratory Data

SDG I.D.: GAG05704
 Phoenix I.D.: AG05706

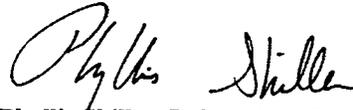
Client ID: STORMWATER PHASE II COMMERCIAL 1

Parameter	Result	RL	Units	Date	Time	By	Reference
Calcium	0.396	0.01	mg/L	12/02/04		EK	200.7/6010
Hardness (CaCO3)	1.34	0.10	mg/L	12/03/04		EK	S2340B
Magnesium	0.085	0.01	mg/L	12/02/04		EK	200.7/6010
Escherichia Coli	100	10	/100 mls.	12/01/04	18:15	C/K	SM9222G
Total Coliform	>600	10	/100 mls.	12/01/04	18:15	C/K	SM 9222B
C.O.D.	BDL	10	mg/L	12/02/04		PJ	SM5220 D
Conductivity	17	1.0	umhos/cm	12/02/04		JD	SM2510B
Ammonia as Nitrogen	0.11	0.02	mg/L	12/06/04		JD	S4500NH3
Nitrite as Nitrogen	BDL	0.01	mg/L	12/01/04	20:11	G/E	300.0
Nitrate as Nitrogen	0.07	0.05	mg/L	12/01/04	20:11	G/E	300.0/9056
Oil and Grease by EPA 1664	BDL	1.4	mg/L	12/06/04		P/G	EPA 1664
pH	6.22	0.10	pH Units	12/01/04	23:00	CD	E150.1/SW9045
Nitrogen Tot Kjeldahl	0.31	0.1	mg/L	12/06/04		JD	E351.1
Phosphorus, as P	0.04	0.01	mg/L	12/03/04		JL	E365.2
Total Suspended Solids	BDL	5	mg/L	12/03/04		CF	SM2540D
Turbidity	3.02	0.05	NTU	12/01/04	23:00	CD	E180.1
Total Metals Digestion	Completed			12/01/04		AG	

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.



Phyllis Shiller, Laboratory Director
December 08, 2004



REU
DEC 8 2004
TOWN
INLET



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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Windsor
 Mailing Address: 275 Broad Street
 Contact Person: Cyd Greff Title: Enviro-Planner Phone: 860-285-1987
 Permit Registration #GSM App: # 200401195

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): Commercial 1
 Please circle the appropriate area description: Industrial, Commercial, or Residential
 Receiving Water (name, basin): Kennedy Rd.
 Time of Start of Discharge: 4:30 AM
 Date/Time Collected: 12-1-04 12:10pm Water Temperature: 52.46°F
 Person Collecting Sample: Cyd Greff
 Storm Magnitude (inches): 1.1" Storm Duration (hours): 7.5
 Date of Previous Storm Event: 11-28-04

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH		6.22	Phoenix Environmental
Rain pH			
Hardness		1.34 mg/L	
Conductivity		17 umhos/cm	
Oil & Grease		BDL mg/L	
COD		BDL mg/L	
Turbidity		3.02 NPTU	
TSS		BDL mg/L	
TP		0.04 mg/L	
Ammonia		0.11 mg/L	
TKN		0.31 mg/L	
NO ₃ +NO ₂		0.07 mg/L	
E. coli		100 /100mls.	

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: _____

Signature: Cyd R. Greff

Date: 12/21/04

Commercial Outfall No. 2

555 Day Hill Road



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
 December 08, 2004

FOR: Mr. Cyd Groff
 Town of Windsor
 275 Broad Street
 Windsor, CT 06095

Sample Information

Matrix: WATER
 Location Code: SPECIAL2
 Rush Request:
 P.O.#:

Custody Information

Collected by: CG
 Received by: DL
 Analyzed by: see "By" below

Date Time
 12/01/04 11:35
 12/01/04 13:35

Laboratory Data

SDG I.D.: GAG05704
 Phoenix I.D.: AG05707

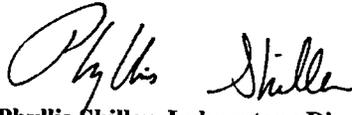
Client ID: STORMWATER PHASE II COMMERCIAL 2

Parameter	Result	RL	Units	Date	Time	By	Reference
Calcium	1.18	0.01	mg/L	12/02/04		EK	200.7/6010
Hardness (CaCO3)	3.5	0.10	mg/L	12/03/04		EK	S2340B
Magnesium	0.135	0.01	mg/L	12/02/04		EK	200.7/6010
Escherichia Coli	>600	10	/100 mls.	12/01/04	18:15	C/K	SM9222G
Total Coliform	>600	10	/100 mls.	12/01/04	18:15	C/K	SM 9222B
C.O.D.	BDL	10	mg/L	12/02/04		PJ	SM5220 D
Conductivity	59	1.0	umhos/cm	12/02/04		JD	SM2510B
Ammonia as Nitrogen	0.15	0.02	mg/L	12/06/04		JD	S4500NH3
Nitrite as Nitrogen	BDL	0.01	mg/L	12/01/04	20:19	G/E	300.0
Nitrate as Nitrogen	0.39	0.05	mg/L	12/01/04	20:19	G/E	300.0/9056
Oil and Grease by EPA 1664	BDL	1.4	mg/L	12/06/04		P/G	EPA 1664
pH	3.95	0.10	pH Units	12/01/04	23:00	CD	E150.1/SW9045
Nitrogen Tot Kjeldahl	0.52	0.1	mg/L	12/06/04		JD	E351.1
Phosphorus, as P	0.07	0.01	mg/L	12/03/04		JL	E365.2
Total Suspended Solids	7	5	mg/L	12/06/04		CF	SM2540D
Turbidity	7.65	0.05	NTU	12/01/04	23:00	CD	E180.1
Total Metals Digestion	Completed			12/01/04		AG	

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.



Phyllis Shiller, Laboratory Director
December 08, 2004





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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Windsor
 Mailing Address: 275 Broad Street
 Contact Person: Cyd Groff Title: Enviro-Planner Phone: 860-285-1987
 Permit Registration # GSM App. # 200401195

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): Commercial 2
 Please circle the appropriate area description: Industrial, Commercial or Residential
 Receiving Water (name, basin): Marathon Phelps Day Hill Rd.
 Time of Start of Discharge: 4:30 AM 50.6°F
 Date/Time Collected: 12-1-04 11:35 AM Water Temperature: 10.0C
 Person Collecting Sample: Cyd Glenn
 Storm Magnitude (inches): 1.1" Storm Duration (hours): 7.0
 Date of Previous Storm Event: _____

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH		3.95	Phoenix Environmental
Rain pH			
Hardness		3.5 mg/L	
Conductivity		59 umhos/cm	
Oil & Grease		BDL mg/L	
COD		BDL mg/L	
Turbidity		7.65 NTU	
TSS		7 mg/L	
TP		0.07 mg/L	
Ammonia		0.15 mg/L	
TKN		0.52 mg/L	
NO ₃ +NO ₂		0.39 mg/L	
E. coli		>600 /100mls	

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: _____
 Signature: Cyd R. Groff Date: 12/21/04

Industrial Outfall No. 1
800 Marshall Phelps Road



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
 December 08, 2004

FOR: Mr. Cyd Groff
 Town of Windsor
 275 Broad Street
 Windsor, CT 06095

Sample Information

Matrix: WATER
 Location Code: SPECIAL2
 Rush Request:
 P.O.#:

Custody Information

Collected by: CG
 Received by: DL
 Analyzed by: see "By" below

Date Time

12/01/04 10:40
 12/01/04 13:35

SDG I.D.: GAG05704

Phoenix I.D.: AG05708

Laboratory Data

Client ID: STORMWATER PHASE II INDUSTRIAL 1

Parameter	Result	RL	Units	Date	Time	By	Reference
Calcium	0.347	0.01	mg/L	12/02/04		EK	200.7/6010
Hardness (CaCO3)	1.68	0.10	mg/L	12/03/04		EK	S2340B
Magnesium	0.197	0.01	mg/L	12/02/04		EK	200.7/6010
Escherichia Coli	<10	10	/100 mls.	12/01/04	18:15	C/K	SM9222G
Total Coliform	220	10	/100 mls.	12/01/04	18:15	C/K	SM 9222B
C.O.D.	BDL	10	mg/L	12/02/04		PJ	SM5220 D
Conductivity	12	1.0	umhos/cm	12/02/04		JD	SM2510B
Ammonia as Nitrogen	0.08	0.02	mg/L	12/06/04		JD	S4500NH3
Nitrite as Nitrogen	BDL	0.01	mg/L	12/01/04	21:11	G/E	300.0
Nitrate as Nitrogen	BDL	0.05	mg/L	12/01/04	21:11	G/E	300.0/9056
Oil and Grease by EPA 1664	BDL	1.4	mg/L	12/06/04		P/G	EPA 1664
pH	6.10	0.10	pH Units	12/01/04	23:00	CD	E150.1/SW9045
Nitrogen Tot Kjeldahl	0.98	0.1	mg/L	12/06/04		JD	E351.1
Phosphorus, as P	0.05	0.01	mg/L	12/03/04		JL	E365.2
Total Suspended Solids	24	5	mg/L	12/06/04		CF	SM2540D
Turbidity	12.1	0.05	NTU	12/01/04	23:00	CD	E180.1
Total Metals Digestion	Completed			12/01/04		AG	

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.



Phyllis Shiller, Laboratory Director
December 08, 2004





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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Windsor
Mailing Address: 275 Broad Street
Contact Person: Cyd Groff Title: Enviro-Planner Phone: 860-285-1987
Permit Registration # GSM App. # 200401195

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): Ind. 1
Please circle the appropriate area description: Industrial, Commercial, or Residential
Receiving Water (name, basin): Marshall Phelps
Time of Start of Discharge: 4:30 AM
Date/Time Collected: 12-1-04 10:40 Water Temperature: 51.5°F
Person Collecting Sample: Cyd Glenn
Storm Magnitude (inches): 1.1" Storm Duration (hours): 6
Date of Previous Storm Event: 11-28-04

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH		6.10	Phoenix Environmental
Rain pH			
Hardness		1.68 mg/L	
Conductivity		12 umhos/cm	
Oil & Grease		BDL mg/L	
COD		BDL mg/L	
Turbidity		12.1 NTU	
TSS		24 mg/L	
TP		0.05 mg/L	
Ammonia		0.08 mg/L	
TKN		0.98 mg/L	
NO ₃ +NO ₂		BDL mg/L	
E. coli		<10 /100 mls	

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: _____
Signature: Cyd Groff Date: 12/21/04

Industrial Outfall No. 2

615 Day Hill Road



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report
 December 08, 2004

FOR: Mr. Cyd Groff
 Town of Windsor
 275 Broad Street
 Windsor, CT 06095

Sample Information

Matrix: WATER
 Location Code: SPECIAL2
 Rush Request:
 P.O.#:

Custody Information

Collected by: CG
 Received by: DL
 Analyzed by: see "By" below

Date Time
 12/01/04 9:15
 12/01/04 13:35

SDG I.D.: GAG05704

Phoenix I.D.: AG05709

Laboratory Data

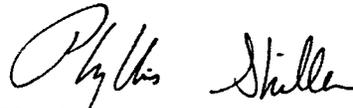
Client ID: STORMWATER PHASE II INDUSTRIAL 2

Parameter	Result	RL	Units	Date	Time	By	Reference
Calcium	0.884	0.01	mg/L	12/02/04		EK	200.7/6010
Hardness (CaCO ₃)	3.43	0.10	mg/L	12/03/04		EK	S2340B
Magnesium	0.297	0.01	mg/L	12/02/04		EK	200.7/6010
Escherichia Coli	300	10	/100 mls.	12/01/04	18:15	C/K	SM9222G
Total Coliform	>600	10	/100 mls.	12/01/04	18:15	C/K	SM 9222B
C.O.D.	16	10	mg/L	12/02/04		PJ	SM5220 D
Conductivity	20	1.0	umhos/cm	12/02/04		JD	SM2510B
Ammonia as Nitrogen	0.18	0.02	mg/L	12/06/04		JD	S4500NH3
Nitrite as Nitrogen	BDL	0.01	mg/L	12/01/04	21:20	G/E	300.0
Nitrate as Nitrogen	0.06	0.05	mg/L	12/01/04	21:20	G/E	300.0/9056
Oil and Grease by EPA 1664	2.0	1.4	mg/L	12/06/04		P/G	EPA 1664
pH	6.53	0.10	pH Units	12/01/04	23:00	CD	E150.1/SW9045
Nitrogen Tot Kjeldahl	0.51	0.1	mg/L	12/06/04		JD	E351.1
Phosphorus, as P	0.12	0.01	mg/L	12/03/04		JL	E365.2
Total Suspended Solids	30	5	mg/L	12/06/04		CF	SM2540D
Turbidity	27.9	0.05	NTU	12/01/04	23:00	CD	E180.1
Total Metals Digestion	Completed			12/01/04		AG	

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.



Phyllis Shiller, Laboratory Director
December 08, 2004





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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Windsor
 Mailing Address: 275 Broad Street
 Contact Person: Cyd Groff Title: Enviro-Planner Phone: 860-285-1987
 Permit Registration # GSM App. # 200401195

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): Ind. 2
 Please circle the appropriate area description: Industrial, Commercial, or Residential
 Receiving Water (name, basin): Day Hill Rd.
 Time of Start of Discharge: 4:20 AM
 Date/Time Collected: 12-1-04 9:15 Water Temperature: 9.5c = 49.7°F
 Person Collecting Sample: Cyd Groff
 Storm Magnitude (inches): 1.1" Storm Duration (hours): 4.5 Approx
 Date of Previous Storm Event: 11-28-04

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH		6.53	Phoenix Environmental
Rain pH			
Hardness		3.43 mg/L	
Conductivity		20 umhos/cm	
Oil & Grease		2.0 mg/L	
COD		16 mg/L	
Turbidity		27.9 NTU	
TSS		30 mg/L	
TP		0.12 mg/L	
Ammonia		0.18 mg/L	
TKN		0.51 mg/L	
NO ₃ +NO ₂		0.06 mg/L	
E. coli		300 /100 mls.	

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: _____
 Signature: Cyd Groff Date: 12/21/04

Residential Outfall No. 1
Between 124 and 128 Harvest Lane



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06106
 Tel. (860) 645-1102 Fax (860) 645-0823

PEC
 DEC 2004
 TOWN OF WINDSOR
 275 BROAD STREET
 WINDSOR, CT 06095

Analysis Report

December 08, 2004

FOR: Mr. Cyd Groff
 Town of Windsor
 275 Broad Street
 Windsor, CT 06095

Sample Information

Matrix: WATER
 Location Code: SPECIAL2
 Rush Request:
 P.O.#:

Custody Information

Collected by: CG
 Received by: DL
 Analyzed by: see "By" below

Date Time

12/01/04 11:00
 12/01/04 13:35

Laboratory Data

SDG I.D.: GAG05704
 Phoenix I.D.: AG05704

Client ID: STORMWATER PHASE II RESIDENTIAL 1

Parameter	Result	RL	Units	Date	Time	By	Reference
Calcium	3.91	0.01	mg/L	12/02/04		EK	200.7/6010
Hardness (CaCO3)	15.8	0.10	mg/L	12/03/04		EK	S2340B
Magnesium	1.46	0.01	mg/L	12/02/04		EK	200.7/6010
Escherichia Coli	>600	10	/100 mls.	12/01/04	18:15	C/K	SM9222G
Total Coliform	>600	10	/100 mls.	12/01/04	18:15	C/K	SM 9222B
C.O.D.	30	10	mg/L	12/02/04		PJ	SM5220 D
Conductivity	44	1.0	umhos/cm	12/02/04		JD	SM2510B
Ammonia as Nitrogen	0.35	0.02	mg/L	12/06/04		JD	S4500NH3
Nitrite as Nitrogen	0.01	0.01	mg/L	12/01/04	19:54	G/E	300.0
Nitrate as Nitrogen	0.74	0.05	mg/L	12/01/04	19:54	G/E	300.0/9056
Oil and Grease by EPA 1664	BDL	1.4	mg/L	12/06/04		P/G	EPA 1664
pH	6.93	0.10	pH Units	12/01/04	23:00	CD	E150.1/SW9045
Nitrogen Tot Kjeldahl	1.4	0.1	mg/L	12/06/04		JD	E351.1
Phosphorus, as P	0.25	0.01	mg/L	12/03/04		JL	E365.2
Total Suspended Solids	8	5	mg/L	12/03/04		CF	SM2540D
Turbidity	12.0	0.05	NTU	12/01/04	23:00	CD	E180.1
Total Metals Digestion	Completed			12/01/04		AG	

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.



Phyllis Shiller, Laboratory Director
December 08, 2004



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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Windsor
 Mailing Address: 275 Broad Street
 Contact Person: Cyd Groff Title: Enviro-Planner Phone: 860-285-1987
 Permit Registration # GSM App: # 200401195

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): Residential 1
 Please circle the appropriate area description: Industrial, Commercial, or Residential
 Receiving Water (name, basin): Harvest Lane
 Time of Start of Discharge: 4:30 AM 50.6°F
 Date/Time Collected: 12-1-04 11:00 AM Water Temperature: 10.0 c
 Person Collecting Sample: Cyd Groff
 Storm Magnitude (inches): 1.1" Storm Duration (hours): 6.25
 Date of Previous Storm Event: 11-28-04

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH		6.93	Phoenix Environmental
Rain pH			
Hardness		15.8 mg/L	
Conductivity		44 umhos/cm	
Oil & Grease		BDL mg/L	
COD		30 mg/L	
Turbidity		12 NTU	
TSS		8 mg/L	
TP		0.25 mg/L	
Ammonia		0.35 mg/L	
TKN		1.4 mg/L	
NO ₃ +NO ₂		0.75 mg/L	
E. coli		>600 /100mls	

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: Cyd R. Groff, Environmental Planner
 Signature: Cyd R. Groff Date: 12/21/04

Residential Outfall No. 2
Between 21 and 27 Philip Henry Circle



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06111
 Tel. (860) 645-1102 Fax (860) 645-0823



DEC 2004

Analysis Report

December 08, 2004

FOR: Mr. Cyd Groff
 Town of Windsor
 275 Broad Street
 Windsor, CT 06095

Sample Information

Matrix: WATER
 Location Code: SPECIAL2
 Rush Request:
 P.O.#:

Custody Information

Collected by: CG
 Received by: DL
 Analyzed by: see "By" below

Date Time
 12/01/04 12:50
 12/01/04 13:35

SDG I.D.: GAG05704
 Phoenix I.D.: AG05705

Laboratory Data

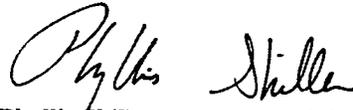
Client ID: STORMWATER PHASE II RESIDENTIAL 2

Parameter	Result	RL	Units	Date	Time	By	Reference
Calcium	5.22	0.01	mg/L	12/02/04		EK	200.7/6010
Hardness (CaCO3)	21.4	0.10	mg/L	12/03/04		EK	S2340B
Magnesium	2.03	0.01	mg/L	12/02/04		EK	200.7/6010
Escherichia Coli	>600	10	/100 mls.	12/01/04	18:15	C/K	SM9222G
Total Coliform	>600	10	/100 mls.	12/01/04	18:15	C/K	SM 9222B
C.O.D.	50	10	mg/L	12/02/04		PJ	SM5220 D
Conductivity	65	1.0	umhos/cm	12/02/04		JD	SM2510B
Ammonia as Nitrogen	0.26	0.02	mg/L	12/06/04		JD	S4500NH3
Nitrite as Nitrogen	BDL	0.01	mg/L	12/01/04	20:02	G/E	300.0
Nitrate as Nitrogen	0.17	0.05	mg/L	12/01/04	20:02	G/E	300.0/9056
Oil and Grease by EPA 1664	BDL	1.5	mg/L	12/06/04		P/G	EPA 1664
pH	6.49	0.10	pH Units	12/01/04	23:00	CD	E150.1/SW9045
Nitrogen Tot Kjeldahl	1.2	0.1	mg/L	12/06/04		JD	E351.1
Phosphorus, as P	0.36	0.01	mg/L	12/03/04		JL	E365.2
Total Suspended Solids	120	5	mg/L	12/03/04		CF	SM2540D
Turbidity	90.9	0.05	NTU	12/01/04	23:00	CD	E180.1
Total Metals Digestion	Completed			12/01/04		AG	

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.



Phyllis Shiller, Laboratory Director
December 08, 2004



RECEIVED
DEC 10 2004
TOWN OF PHOENIX
PHOENIX, AZ



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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Windsor
 Mailing Address: 275 Broad Street
 Contact Person: Cyd Groff Title: Enviro-Planner Phone: 860-285-1987
 Permit Registration # GSM App: # 200401195

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): Residential 2
 Please circle the appropriate area description: Industrial, Commercial, or Residential
 Receiving Water (name, basin): Phillie Henry Circle
 Time of Start of Discharge: 4:30 AM 53.4°F
 Date/Time Collected: 12-1-04 12:50 Water Temperature: 11.5c
 Person Collecting Sample: Cyd Groff
 Storm Magnitude (inches): 1.1" Storm Duration (hours): 8
 Date of Previous Storm Event: 11-27-04

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH		6.49	Phoenix Environmental
Rain pH			
Hardness		21.4 mg/L	
Conductivity		65 umhos/cm	
Oil & Grease		BDL mg/L	
COD		50 mg/L	
Turbidity		90.9 NTU	
TSS		120 mg/L	
TP		0.36 mg/L	
Ammonia		0.26 mg/L	
TKN		1.2 mg/L	
NO ₃ +NO ₂		0.17 mg/L	
E. coli		>600 /100ml	

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: _____
 Signature: Cyd R. Groff Date: 12/21/04



CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
 Email: service@phoenixlabs.com Fax (860) 645-0823

Client Services (860) 645-8726

Temp _____ Pg _____ of _____

Data Delivery (check one):
 Fax #:
 Email:
 Format: Excel Pdf Gis Key

Project P.O.: _____
 Phone #: 860-285-1987
 Fax #: 860-285-1809

Project: Storm water phase 2
 Report to: "
 Invoice to: "

- Soil VOA Val [methanol] 150 Burette
- GL soil container () oz
- 40 ml VOA Val [As Is] HCl
- PL As Is [250ml] [500ml] [1000ml]
- PL H2SO4 [250ml] [500ml] [1000ml]
- PL HNO3 250ml
- Bacteria Bottle

Analysis Request	Date		Time	
	12/1/04	11:00 AM		
	12/1	12:50 PM		
	12/1	12:10 PM		
	12/1	11:35 AM		
	12/1	10:40 AM		
	12/1	9:15 AM		

Item #	Phoenix Sample #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled
	05704	Residential-1		12/1	11:00 AM
	05705	Residential-2		12/1	12:50 PM
	05706	Commercial-1		12/1	12:10 PM
	05707	Commercial-2		12/1	11:35 AM
	05708	Industrial-1		12/1	10:40 AM
	05709	Industrial-2		12/1	9:15 AM

Client Sample - Information - Identification

Sampler's Signature: *[Signature]* Date: 12/1/04

Matrix Code: WW=wastewater S=soil/solid O=Oil
 DW=drinking water A=air X=Other
 GW=groundwater SL=sludge

Relinquished by: *[Signature]* Date: 12-1-04 13:35

Accepted by: *[Signature]*

Turnaround:
 1 Day*
 2 Days*
 3 Days*
 Standard
 Other

* Surcharge Applies

Requirements for CT/RI:
 Res. Criteria
 GW Protection
 GA Mobility
 GB Mobility
 SW Protection
 Res. Vol.
 Ind. Vol.

Requirements for MA:
 GW-1
 GW-2
 GW-3
 S-1
 S-2
 S-3
 MCP Certification
 Other

Comments, Special Requirements or Regulations:
 DEC 1 2004
 TOWN OF WINDSOR
 ISLAND WETLANDS 2