Town of Merrimack, New Hampshire

Department of Public Works
P.O. Box 940
Merrimack, New Hampshire 03054

12 Bishop Street
TEL: 603/424-5137
FAX: 603/424-3890

November 30, 2006

Certified Mail # 7004 1350 0000 1340 5582

U.S. Environmental Protection Agency
Water Technical Unit
P.O. Box 8127
Boston, MA 02114

RE: NPDES PII Small MS4 General Permit NHRO41018
Annual Report No. 3

To Whom It May Concern:

Enclosed is the third annual report for activities completed by the Town of Merrimack for the year March 2005 through March 2006 relative to the referenced permit.

Very truly yours,

David C. Lent, P.E.
Deputy Director of Public Works

DCL/rfs

Enclosure

cc: Keith R. Hickey, Town Manager
Edward L. Chase, P.E., Director of Public Works
Walter Warren, Community Development Director

2006 DEC 4 AM 8 50

Town of Merrimack, New Hampshire

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November 30, 2006

Certified Mail # 7004 1350 0000 1340 5599

New Hampshire Department of Environmental Services
Water Division
Wastewater Engineering Bureau
P. O. Box 95
Concord, NH 03302-0095

RE: NPDES PII Small MS4 General Permit NHRO41018
Annual Report No. 3

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Walter Warren, Community Development Director

Town of Merrimack uses recycled paper

Municipality/Organization: **Town of Merrimack, NH**

EPA NPDES Permit Number: NHR041018

MaDEP Transmittal Number: **W-**

Annual Report Number & Reporting Period: **No. 3: March 2005-April 2006**

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: David C. Lent, P.E. Title: Deputy Director of Public Works

Telephone #: (603) 424-5137 Email: dlent@ci.merrimack.nh.us

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: David C. Lent

Printed Name: David C. Lent

Title: Deputy Director of Public Works

Date: Nov. 30, 2006

Part II. Self-Assessment

The Town of Merrimack's self-assessment for the past permit period indicates a continuation of previous efforts in the Town's stormwater system maintenance program and a shifting of emphasis from the items that were anticipated to be completed this year and instead concentrating on completion of the mapping effort. It became obvious that the Town would have difficulty in locating and addressing illicit discharges until the mapping effort was completed. To that end, the base mapping was completed and the Town hired a consultant to provide a GIS Implementation Plan. The plan was presented to the Board of Selectmen by the staff of the Public Works Department with the support of the Community Development Department and received overwhelming support for accelerated funding. Contracts have been awarded to complete the GIS implementation and the proposed schedule will allow for completion during Permit Year 4.

Merrimack DPW contacted NHDES for assistance in locating stormwater discharge points and dry weather flow sampling along the Souhegan and Merrimack Rivers. NHDES provided information that their staff had collected including locations of discharge points (with coordinates), e-coli test results and photos. Testing at one location indicated elevated e-coli counts. Testing had been done at upstream drainage structures that are tributary to this discharge and no additional elevated counts were found. Additional investigation will be done by the Town to determine whether there is a connection to the drain line between structures.

The Town has purchased a new vacuum truck and video camera for use by the WWTF maintenance crews. The old vacuum truck will now be available full time for use by Highway crews for maintenance of the storm drain system in addition to the "clam shell" type cleaner already in use for cleaning drain structures. The new video equipment will also be available to the Highway crew as an additional tool useful in locating illicit connections to the drain system.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
1.1	Informational Brochures for Trash Management and Disposal of Hazardous Waste.	DPW	Develop brochure by Spring of 2004, distribute to all residents by fall of 2004.	Household Hazardous Waste disposal brochures are available at the Town's transfer station. An updated Solid Waste Management (recycling) brochure is being finalized.	Continue with development of storm water BMP brochure for distribution to residents
Revised					
1.2	Classroom Education	DPW	Have guided tour program of the WWTF & Highway Garage available to students by end of year 1.	Tours of the WWTF and Highway Garage continue for students.	Continue student education programs.
Revised					
1.3	Advertisements promoting BMP's to air on local cable station	DPW	Create sleds and secure airtime by fall of 2004. Advertisements to run monthly at a minimum.	Nothing new added this year	Add BMP info to announcements. Investigate availability of videos to air regularly.
Revised					
1.4	Educational pamphlets provided to new residents.	DPW	Distribution of educational materials to begin by end of year 1 and be continuous.	Pamphlets are distributed at the Transfer Station.	Add Town Hall distribution and consider other areas such as library, etc.
Revised					
1.5	Storm water information provided on website	DPW	Develop website information, implement fall 2004	Link to Merrimack Village District (local water company) on Town website. Includes "groundwater basics", drinking water protection, and landscaping BMP's.	The town is still in the planning stage of a major overhaul of its website including new hardware and software. It will include a section on storm water awareness and BMP's.
Revised					
Revised					

1a. Additions

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
2.1	Storm Drain Stenciling.	DPW	Stencil designed by year 1, 80% catch basins stenciled by end of year 2, stencil program to run annually.	Stenciling and repainting of stencils continues. Investigating use of traffic marking paint instead of aerosols for longevity.	Continue.
Revised					
2.2	Volunteer program for stream cleanup and water quality monitoring.	Community Development	Work of Souhegan & Lower Merrimack local advisory committees to be monitored by the Town. Monitoring Data to be included in annual report to EPA.	The watershed associations continue their monitoring activities and provide data in hard copy at the Merrimack library as well as providing current data on their respective websites. Water quality reports appear in a local weekly newspaper distributed to every home in Town.	Continue association with these groups.
Revised					
2.3	Greenbelt Program.	Community Development	Greenbelt program is included in master plan, the Town is actively encouraging private participation.	The planning board and conservation commission have continued to review development plans for opportunities to acquire wetlands and buffers along waterways.	The Town boards will continue to work to acquire appropriate parcels to protect the watershed.
Revised					
2.4	Support Watershed Organization.	Community Development	Town will continue to solicit applicants for appointment with the local watershed organizations.	The Town is represented on the watershed committees and those individuals are active in the water quality monitoring.	Continue to participate.
Revised					

2.5	Develop system for public communication.	DPW	Appoint contact person and establish communication methods by fall 2004.	The Town's contact person is in attendance at all preconstruction meetings and is also the staff liaison with the Conservation Commission. He is actively involved with the watershed associations as well.	Consider adding a dedicated phone line for receiving complaints or notices relative to storm water violations.
Revised					
Revised					

2a. Additions

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
3.1	Preparation of Master Drainage Map (delineation of municipal storm sewer system, drainage basins, outfalls & receiving waters).	DPW	Master Drainage Map is prepared by end of year 4. Map is modified as needed annually.	Town issued an RFP for consultants to add parcel and other overlays to the Town's new mapping.	A consultant was selected and will work toward completing the drainage system overlay in a GIS format. DPW will request Council approval to hire another consultant to complete a storm water master plan.
Revised					
3.2	Storm sewer bylaw.	DPW	Storm sewer bylaw in place by year 3.	The Town has been reviewing draft ordinances from other communities.	This item apparently has more potential legal ramifications than were realized when this schedule was drafted. While the Town will continue to work toward creating the bylaw, it is unlikely that it will be completed before the end of the fifth year.
Revised					
3.3	Qualitative observation of discharge at outfalls.	DPW	100% major outfalls from developed areas are screened for pollutants by end of year 2.	The DPW initiated contact with Steve Landry at NHDES who shared the data his agency had collected for most of Merrimack's outfalls on the Souhegan and Merrimack Rivers.	As the Town completes its mapping, any gaps in the NHDES data will be filled.
Revised					
3.4	Dry weather screening of outfalls.	DPW	100% major outfalls from developed areas are screened for dry weather flows pollutants by end of year 1.	The watershed groups continue regular screenings.	The Town will develop a schedule for a formal screening program.
Revised					
3.5	Develop program for the elimination of illicit discharges, if applicable.	DPW	Eliminate all known illicit discharges by end of Year 5, first permit period.	One possible illicit connection has been identified on the Souhegan River.	Investigate to locate the source.
Revised					
Revised					

3a. Additions

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
4.1	Preparation of Town Ordinance to address: BMP erosion & sediment controls for all new construction, preparation of SWPPPs for land disturbances greater than 1 acre, building setbacks from waters of the state and disposal of discarded building materials	Community Development	Complete ordinance and implement as allowable under State law	The consultant did not work on the ordinance. A new RFQ was developed to select another consultant. In the interim SWPPP's are being checked by Town staff as required.	Hire a new consultant to develop an ordinance or combination of ordinance , by-laws and planning regulations as allowed by State law. It is likely that this will not be completed until the end of the permit period.
Revised					
4.2	Develop procedures for Site Inspection, enforcement and penalties for non-compliance	Community Development	Summarize inspections and violations.	The Town's inspection staff continued regular site inspection on new construction. Requested assistance from NHDES at one site to bring the contractor into compliance.	Until the Town's regulatory measures are adopted, staff will continue to inspect and request outside assistance as necessary to assure compliance with erosion measures during construction. Develop a reporting procedure as a measurable goal.
Revised					
4.3	Appoint contact person and establish communication methods by fall of 2005.	Community Development	Develop system for public communication (for reporting violations) and track reports	The contact person has been identified, but a system has not been developed.	The staff's intent is to dedicate an incoming phone line for reporting violations. Messages would go into a voice mail system which would regularly be checked by the contact person but could readily be accessed by other staff.
Revised					
Revised					

Revised					
Revised					

4a. Additions

5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
5.1	Revision to Town Site Plan and Subdivision review regulations to address: Structural BMP's for land disturbances greater than 1 acre, and perpetual maintenance of BMP's.	Community Development	Regulations to be revised and adopted by fall of 2004.	The Town continues to evaluate its planning regulations and whether additional structural BMP's are appropriate.	The Town will continue to evaluate structural BMP's and add those that prove beneficial.
Revised					
5.2	Develop procedures for review of structural BMP's	Community Development	To be part of revised regulations by fall 2004.	No new structural BMP's were added during this permit year.	Same comment as 5.1 above.
Revised					
5.3	Promote open drainage systems and groundwater recharge through infiltration systems.	Community Development	To be part of revised regulations by fall 2004.	The Town has required through its subdivision and site plan review process that developers provide test pit data to determine depth to water and ledge or impermeable material.	It is apparent from data being received that much of the Town is not conducive to ground water recharge. Staff will continue to evaluate those areas that appear to be.
Revised					
5.4	Develop procedures for site inspection and enforcement.	Community Development	Internal inspection procedures in place by fall of 2004.	Although inspections are ongoing, no enforcement is available until new ordinances, by-laws, regulations are adopted.	A policy will be prepared concurrent with development of the ordinance, etc.
Revised					
Revised					
Revised					

5a. Additions

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
6.1	Prepare Operation and Maintenance program for storm sewer system	DPW	33% of structures are cleaned and inspected each year. O&M plan developed by end of year 3. Plan to be revised as necessary.	Catch basin cleaning continues with the addition of a used "Vactor" to the clamshell type cleaner already in use. Catch basins were cleaned on 11 of 16 routes this year, substantially more than the 33% programmed.	Continue mapping to identify and number all catch basins. Continue cleaning starting with those routes that were not done this year.
Revised					
6.2	Implement Employee Training Program to include: vehicle maintenance, building maintenance, oil recycling policy, calibration of salt spreaders, hazardous material storage, spill response and prevention, and erosion control for new construction.	DPW	Employee Training program to be developed by end of year 1, and conducted annually for all DPW employees.	The DPW has a contracted annual training program for its Highway, Equipment Maintenance and Park Maintenance Divisions that deals with material storage and spill controls. Five of the Department's sixteen salt spreaders have computerized ground speed controls and pre-wetting tanks targeted at reducing NaCl use.	Have at least four Department employees attend the UNH T2 training workshop on erosion control. Continue annual training on spill control and respose.
Revised					
Revised					
Revised					
Revised					
Revised					

6a. Additions

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) *<<if applicable>>*

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
7.1	Qualitative Observation of Outfall Discharge	DPW	Determine Outfall Locations & Screen for pollutants by year 1	DPW contacted NHDES to request their data on dry weather observation of outfalls on the Souhegan and Merrimack Rivers and received the information.	Plot the outfall locations from NHDES survey on new Town mapping and determine whether all outfalls have been identified.
Revised					
7.2	Dry Weather Screening of Outfall	DPW	Screen outfall during dry weather flows by end of year 1	NHDES data referenced above included screening for E. Coli. Results are attached.	Rescreen outfalls.
Revised					
7.3	Develop Program for elimination of illicit discharges within drainage area of outfall, if applicable	DPW	Eliminate illicit discharge, if found and if applicable	NHDES started screening structures upstream of location SGR-025 on the Souhegan River where the highest E. Coli count was found but found no elevated counts in upstream structures.	The DPW's Wastewater Division will be enlisted to perform camera inspections and dye testing upstream to detect possible connections between structures. A standard procedure for IDDE will be developed from this investigation.
Revised					
Revised					
Revised					
Revised					

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed
See attached sheets from NHDES survey of dry weather flows at Souhegan and Merrimack River outfalls.

Part V. Program Outputs & Accomplishments (OPTIONAL)
Not completed this year.
Programmatic

Stormwater management position created/staffed	(y/n)	
Annual program budget/expenditures	($)	

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	
Stormwater management committee established	(y/n)	
Stream teams established or supported	(# or y/n)	
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	
▪ community participation	(%)	
▪ material collected	(tons or gal)	
School curricula implemented	(y/n)	

PART IV

E.Coli CTS/100ML. DATA FROM NHDE

Stationid	Town	Latitude	Longitude	Startdate	Qualifer and Results	
MER-325	MERRIMACK	42 48 19.1	-71 28 25	6/16/2003	<10	
MER-345	MERRIMACK	42 48 24	-71 28 27.2	6/16/2003	<10	
MER-365	MERRIMACK	42 48 24.8	-71 28 28.2	6/16/2003	50	
MER-385	MERRIMACK	42 49 14.6	-71 28 52.5	6/16/2003	30	
MER-405	MERRIMACK	42 49 22.8	-71 28 53.2	6/16/2003	<10	
MER-425	MERRIMACK	42 49 46.9	-71 28 52.8	6/16/2003	10	
MER-440	MERRIMACK	42 50 2.5	-71 29 .09	6/17/2003	10	
MER-460	MERRIMACK	42 51 30.7	-71 29 10.5	6/17/2003	<10	
SGR-025	MERRIMACK	42 51 45	-71 29 28.7	6/18/2003	1000	*
SGR-027	MERRIMACK	42 51 47.3	-71 29 35.9	8/20/2003	<10	
SGR-028	MERRIMACK	42 51 47.3	-71 29 35.9	8/20/2003	DELETE	
SGR-029	MERRIMACK	42 51 48.4	-71 29 36.9	8/20/2003	<10	
SGR-030	MERRIMACK	42 51 47.1	-71 29 36.9	8/20/2003	<10	
SGR-031	MERRIMACK	42 51 49.6	-71 29 36.9	8/20/2003	<10	
SGR-032	MERRIMACK	42 51 1.2	-71 29 37.1	8/20/2003	DELETE	
SGR-035	MERRIMACK	42 51 41.7	-71 29 31.7	6/18/2003	<10	
SGR-045	MERRIMACK	42 51 41.4	-71 29 31.8	6/18/2003	60	
SGR-065	MERRIMACK	42 51 27.3	-71 29 46.7	6/26/2003	50	
SGR-310	MERRIMACK	42 52 0	-71 30 34.8	6/26/2003	10	
SGR-320	MERRIMACK	42 51 47.3	-71 31 5.4	6/26/2003	390	*
SGR-330	MERRIMACK	42 51 41.4	-71 30 36.1	6/26/2003	10	
SGR-340	MERRIMACK	42 51 33.6	-71 30 34.6	6/26/2003	<5	
SGR-450	MERRIMACK	42 50 23.3	-71 33 31.2	7/3/2003	20	

* FIELD REPORT ATTACHED

Shade in the box if a sample was collected at this site

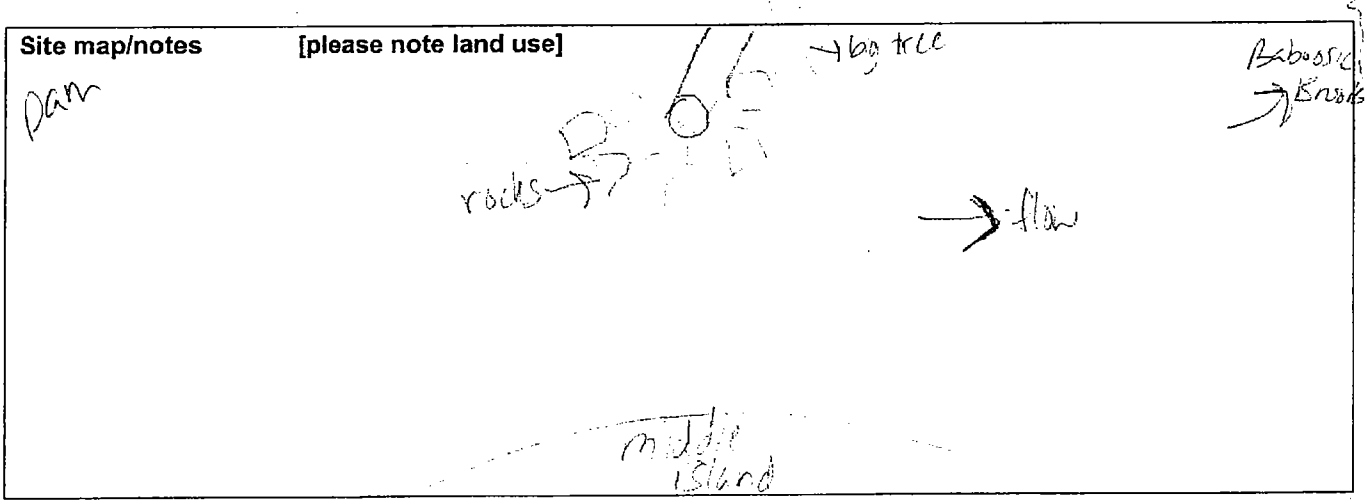
2003 MERRIMACK SHORELINE SURVEY SHEET
NH DES Watershed Management Bureau, Watershed Assistance Section

Date 6/18/03	Time 11:25	**Contact:** Andrea Donlon (x 8862) or Steve Landry (x 2969)	
Town name Merrimack		Direct waterbody affected Souhegan	Downstream waterbody affected MERRIMACK RIVER
Collected by S. Landry, T. O'Hare, S. Neff		Rainfall/weather past 48 hours dry	Latitude/longitude N42°51'45.0 W71°29'28.7"
Street and location information Railroad Ave		Field measurements (temperature, conductivity, etc.) E. coli	

Physical Observations:

Outfall type: ☒ pipe ☐ box ☐ culvert ☐ seep ☐ swale ■ diameter: 15"
Outfall material: ☐ granite ☐ cast iron ☐ corrug. metal ☐ corrug. plastic ☒ concrete ☐ white PVC ☐ green PVC ☐ red clay ☐ asbestos ☐ other: _____
Functioning? ☐ no ☐ possibly ☒ yes ■ Note condition: good
Flow amount: ☐ dry ☐ moist ☐ drip ☐ trickle ☒ moderate ☐ standing water
Odor: ☐ none ☐ sewage ☐ oil/gas ☐ laundry ☐ sulfide ☒ other: construction odor
Color: ☐ none ☐ gray ☒ brown ☐ yellow ☐ green ☐ other: _____
Turbidity: ☐ none ☒ cloudy ☐ opaque ☐ comments: _____
Floatables: ☒ none ☐ sewage ☐ oil sheen ☐ soap suds ☐ other: _____
Deposits/stains: ☐ none ☐ black ☒ brown ☐ yellow ☐ white ☐ describe: Heavy iron bacteria deposits
Veg. growth: ☒ normal ☐ excessive ☐ inhibited ☐ describe: _____

Site map/notes **[please note land use]**



If samples collected, fill out sample info below

Sample ID #	Date/Time Sampled	Parameter	RESULTS	Other/Notes
SHG-D25	6/18/03 11:25	E. coli	1000 cfs/100mL	
SGR-D25				

results in Dec 7/13

Shade in the box if a sample was collected at this site ■

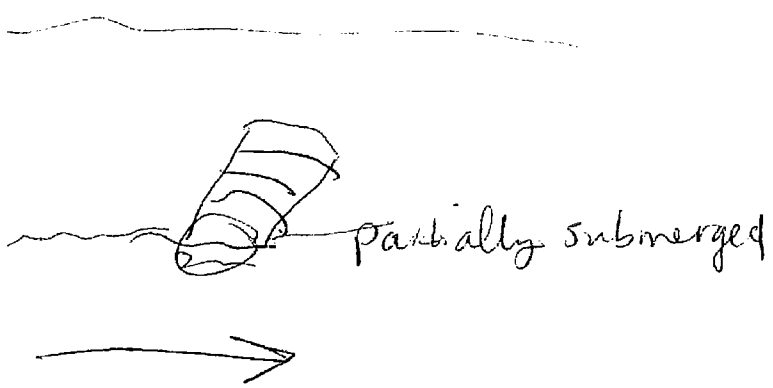
2003 MERRIMACK SHORELINE SURVEY SHEET
NH DES Watershed Management Bureau, Watershed Assistance Section

Date	Time	Contact: Andrea Donlon (x 8862) or Steve Landry (x 2969)	
6/26/03	12:35		
Town name: Merrimack		Direct waterbody affected: Souhegan	Downstream waterbody affected: MERRIMACK RIVER
Collected by: A. Donlon, R. Wilkins		Rainfall/weather past 48 hours: none	Latitude/longitude: 42°51'47.3" 71°31'5.4"
Street and location information: Off Beacon Drive		Field measurements (temperature, conductivity, etc.)	

Physical Observations:

Outfall type: ☒ pipe ☐ box ☐ culvert ☐ seep ☐ swale ■ diameter: 15"
Outfall material: ☐ granite ☐ cast iron ☒ corrug. metal ☐ corrug. plastic ☐ concrete ☐ white PVC ☐ green PVC ☐ red clay ☐ asbestos ☐ other: _____
Functioning? ☐ no ☐ possibly ☐ yes ■ Note condition: _____
Flow amount: ☐ dry ☐ moist ☐ drip ☒ trickle ☐ moderate ☐ standing water
Odor: ☒ none ☐ sewage ☐ oil/gas ☐ laundry ☐ sulfide ☐ other: _____
Color: ☒ none ☐ gray ☐ brown ☐ yellow ☐ green ☐ other: _____
Turbidity: ☒ none ☐ cloudy ☐ opaque ☐ comments: _____
Floatables: ☒ none ☐ sewage ☐ oil sheen ☐ soap suds ☐ other: _____
Deposits/stains: ☒ none ☐ black ☐ brown ☐ yellow ☐ white ☐ describe: _____
Veg. growth: ☒ normal ☐ excessive ☐ inhibited ☐ describe: _____

Site map/notes **[please note land use]**



If samples collected, fill out sample info below

Sample ID #	Date/Time Sampled	Parameter	RESULTS	Other/Notes
SGR-320	6/26/03 12:35	E.coli x10	390	

Legal/Regulatory

	In Place Prior to Phase II	Under Review	Drafted	Adopted
Regulatory Mechanism Status (indicate with "**X**")				
▪ Illicit Discharge Detection & Elimination				
▪ Erosion & Sediment Control				
▪ Post-Development Stormwater Management				
Accompanying Regulation Status (indicate with "**X**")				
▪ Illicit Discharge Detection & Elimination				
▪ Erosion & Sediment Control				
▪ Post-Development Stormwater Management				

Mapping and Illicit Discharges

Outfall mapping complete	(%)	
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete	(%)	
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	
Outfalls inspected/screened	(# or %)	
Illicit discharges identified	(#)	
Illicit connections removed	(#) (est. gpd)	
% of population on sewer	(%)	
% of population on septic systems	(%)	

Construction

Number of construction starts (>1-acre)	(#)	
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	
Site inspections completed	(# or %)	
Tickets/Stop work orders issued	(# or %)	
Fines collected	(# and $)	
Complaints/concerns received from public	(#)	

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	
Site inspections completed	(# or %)	
Estimated volume of stormwater recharged	(gpy)	

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	
Total number of structures cleaned	(#)	
Storm drain cleaned	(LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		
Cost of screenings disposal	($)	

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	

Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	
Qty. of sand/debris collected by sweeping	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	
Cost of sweepings disposal	($)	
Vacuum street sweepers purchased/leased	(#)	
Vacuum street sweepers specified in contracts	(y/n)	

Reduction in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	
▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	

Anti-/De-Icing products and ratios	% NaCl % $CaCl_2$ % $MgCl_2$ % CMA % Kac % KCl % Sand	
Pre-wetting techniques utilized	(y/n)	
Manual control spreaders used	(y/n)	
Automatic or Zero-velocity spreaders used	(y/n)	
Estimated net reduction in typical year salt application	(lbs. or %)	
Salt pile(s) covered in storage shed(s)	(y/n)	
Storage shed(s) in design or under construction	(y/n)	