TOWN OF TEWKSBURY

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Engineering Department

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

Massachusetts Department of Environmental Protection
Division of Watershed Management
627 Main Street
Worcester, MA 01608

From: Lisa E. DeMeo, P.E. Lisa E DeMeo P.E.
Town Engineer

Re: 2005 Tewksbury Annual Stormwater Report

April 29, 2005

Enclosed is The Town of Tewksbury's 2nd Annual NPDES Report.

If there are any questions, please call me at the number above.

Copy to:

David Cressman Town Manager

Municipality/Organization: **Tewksbury, MA**

EPA NPDES Permit Number: **MA-041226**

MaDEP Transmittal Number: **W-035320**

Annual Report Number & Reporting Period: **No. 2: March 04-March 05**

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: David Cressman Title: Town Manager

Telephone #: 978-640-4300 Email: cressmandg@town.tewksbury.ma.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 G Cressman

Printed Name: David G. Cressman

Title: Town Manager

Date: 4/29/05

Part II. Self-Assessment

The Town of Tewksbury has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions, except for the following provisions:

- Employee Training, #3B Town has identified training programs and now needs to implement them.
- Mapping Stormwater Outfalls, #3D Know outfalls are documented. There is a backlog for documentation of new found ones.
- Sampling Programs, #3F Staff spent much time dealing with perchlorate. Sampling was not done as often as planned.
- SWPPP Compliance, #6D Some components are up to date. Sections of the plan need to be reviewed.
- Housekeeping and Spill Prevention, #6E The housekeeping document is being updated but is not complete.
- Landscaping and Lawn care, #6L some progress has been made.

Several organizational changes were contributing factors to these short falls.

The Merrimack River Watershed Council has been inactive for several months. The Town had planned on their support in developing actions for Trull Brook.
As with many communities in Massachusetts, funding and staffing levels have been a constraint on progress.

Many good things happened in Tewksbury this year, as well.
Our Phase II Team met quarterly to review all the progress and what was coming in the next quarter.

SuAsCo (Sudbury, Assabet, and Concord) Watershed Council has been very supportive to our efforts.
Shawsheen Watershed Council has been helpful, as well.
A Stormwater web page is used on the Engineering Department's web site.

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 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
1B	Teach Storm Water Lesson Plan to 5th Grade Students	SuAsCo Watershed Community Council (WCC), Tewksbury School Superintendent	-develop and distribute lesson plan to implement at the Grade 5 level -lesson plan is taught in one or more Grade 5 classrooms in the community	SuAsCo has developed a lesson plan for the Town to implement at the 5th Grade level. Included are maps, puzzles, definitions, teacher notes, writing assessment and more. CD and hard copy School Department Curriculum coordinator has agreed to incorporate this into this year's 5th grade science curriculum.	The media materials were so good, the School Department has investigated buying more copies of the materials for extended use in the future.
Revised					

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
2B	Hold a Storm Water Poster Contest for 5th Grade Students	SuAsCo Watershed Community Council (WCC), Tewksbury School Superintendent	poster contest is held and entries are received, judged and displayed	School Department has received materials from SuAsCo with information on the poster contest. Entries can be sent to SuAsCo for judging. Guidelines for the contest are included in the 5th Grade Lesson Plans.	School Department may continue the poster contest in the future on their own.
Revised					

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
3A	Capital Planning/Budgeting	DPW	-Estimate costs for purchases and maintenance -Capital requests for future purchases	Design of Tight Tank for DPW building completed.	Capital request for construction of tight tank.
Revised					
3B	DPW Employee Training	DPW	-80% of employees trained each year	Negotiating with CEI for training modules for DPW and other municipal employees.	Continue with training. Include any employees who were not included in Year 2 training.
Revised					
3D	Mapping Known Stormwater Outfalls	Engineering and DPW Personnel	-Creation of a map with known outfalls. -Put data in an electronic format	Map is being developed to include known outfalls with new information (submitted or found)	Over the winter season, update all electronic files with new outfall information.
Revised					
3E	Failing Septic Systems	Board of Health	-Review Title 5 Reports to identify problems -Use current reporting system to follow through with rectifying failed systems	Title 5 Report Review is ongoing. 100% of Title 5 Inspection Reports continue to be reviewed as submitted. Failed septic systems are identified and are remediated as appropriate under state regulations.	As the Town's Master Sewer project progresses, there will be fewer residents on septic systems. Failures will continue to be tracked but the numbers should be diminishing.
Revised					
3F	Sampling Programs	Board of Health	-Up to 24 stations sampled 3 times/year	Up to 24 stations have been sampled 2 times per year for bacteria. Said stations include street drainage systems at catch basins, manhole connections, and outfall pipes and associated discharge points.	Continue with sampling program.
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
4A	Site Plan Review	Planning Board	Add stormwater runoff control verification to check list for approval Site inspections will be performed & enforcement mechanisms developed	Stormwater is now part of our Interdepartmental Review (IDR). Inspections are performed by both the Planning Board consultant and by Town Engineer.	Continued use of check list for approvals
Revised					
4B	Runoff By-Law	Planning Board	Draft and present; adjust until accepted Inspection procedures and enforcement rules to be developed	Several sample draft bylaws are being reviewed for use in Town.	Continue drafting and submitting until passed.
Revised					
4D	Inspection Reports	Building Inspector, Conservation Commission, Sewer Inspectors	-Train all inspectors (Plumbing, Sewer, Building) -Create inspection reports -Inspection of all sites greater than 1 acre	Town Engineer performs all sewer and stormwater inspections. Other inspections, i.e., plumbing, building, conservation, water, are being trained in what to look out for. Current process calls for other inspectors to call in Engineer when needed.	Create formal stormwater inspection form for other departments to incorporate into their inspections.
Revised					
4F	Erosion Control Measures	Conservation Commission	Create Inspection Reports Perform and track inspections	Conservation Administrator performs and tracks inspections.	Continue with inspections and reports.
Revised					

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 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
5A	Design Standards	Planning Board and DPW	Create a list of design standards Draft and present to incorporate into sub-division standards	Town Engineer has compiled a list of BMP's (both structural and non-structural) to be presented to Planning Board for acceptance as design standards.	Continue drafting and submitting until passed.
Revised					

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 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
6A	CB/Drain System/Parking Lot Cleaning	DPW	-Clean 50% of Catch Basins annually -Clean 100% of parking lots annually -Clean 50% of streets annually	100% of all CB were cleaned this year. 100% of all parking lots were cleaned this year. 100% of the streets were cleaned this year.	Continue with a contractor to assist with CB cleaning Continue at the same rate with parking lot cleaning. Continue at the same rate with street cleaning.
Revised					
6D	Stormwater Pollution Prevention Plan (SPPP)	DPW	-Compliance with town's SPPP	New DPW Superintendent becoming familiar with SPPP. Some items (garage bay floor drains, tight tank) are currently being addressed.	DPW become familiar with the SPPP to ensure compliance.
Revised					
6E	Housekeeping Policies	DPW	-publication of housekeeping document -Performance of items in document	Components of a housekeeping document have been completed. Some sections are still being drafted.	DPW to publish housekeeping document and track procedures.
Revised					
6F	Hazardous Material Storage	DPW	-Inspection Reports of Storage areas -Review of current storage procedures	All reports are kept in DPW superintendent's office. In compliance with DEP regulations.	Continue to be in compliance with regulations.
Revised					
6G	Used Oil Recycling	DPW	-DPW will participate in Town recycling program -DPW will track amount of oil recycled	Completed and compiled Clean Harbors Waste Oil Removal came in 4 times and collected 3,000 gallons of waste oil to be recycled.	Continue to recycle and remove waste oil from the DPW.
Revised					
6I	Road Salt Application and Storage	DPW	-Maintain Storage shed/area -keep pile covered	Storage Shed has been completed and is being utilized.	Utilize storage shed and continue to keep pile covered.
Revised					

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
6J	Spill Response and Prevention	DPW	-develop plans describing spill prevention and control procedures by the end of year 1 -Conduct annual spill prevention and response training sessions for all municipal employees	Spill Prevention and control documents have been created and distributed among DPW employees.	DPW to conduct annual spill prevention training for employees.
Revised					
6K	Illegal Dumping and Storage	Board of Health	-Investigate as reported	Complaints of illegal dumping are investigated, with appropriate action being taken. Property owners are required to clean, and the DPW is asked to remove waste on municipal property.	Continue to investigate and track complaints.
Revised					
6L	Landscaping and Lawn Care	DPW/Parks	-In the first year, develop a pollution prevention workshop for all municipal employees responsible for grounds maintenance and landscaping at public facilities. -Once per year, hold an additional workshop for new employees and crew managers -Achieve a 25% reduction in fertilizer and pesticide use after year 3.	After a reorganization moved the Parks Department out of the DPW and in with the Recreation Department, the Director began to track procedures. There is little previous data to compare to. This year will be used as the baseline to compare future results to.	Continue to review procedures and requirements with current administrator of the Park Department.
Revised		Park Dept. is no longer in DPW			

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
6M	Hazardous Waste Collection	Board of Health	-Annual Collection Day, as funded -Record and track amount collected	Two regular collections of hazardous and special waste were held in calendar year 2004.	Continue to run collection days as long as funded.
Revised					

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA)

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 2 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 3
7B	Long Pond	Board of Health	Develop sampling protocol for testing tributaries. Implement sampling protocol. Develop response based on sampling	We are evaluating the best techniques and controls for the TMDL's for the watershed of Long Pond.	Progress on the sewer program is reducing the resident input and nutrient loading in the area.
Revised					
7C	Round Pond	Conservation Commission	-Develop Study Protocol -Seek funding to conduct study -If funded, conduct study -If funded, develop response plan	We are evaluating the best techniques and controls for the TMDL's for the watershed of Round Pond. We are actively pursuing applicable funding.	When funded, conduct a study of the watershed and develop a long term plan.
Revised					
7D	Trull Brook	DPW, Engineering, Conservation, Board of Health	-Meet w/ MRWC to discuss and review earlier review -Develop plan for further study. -Seek funding for study. -If funded, conduct study. -If funded, develop response plan.	The Merrimack River Watershed Council (MRWC) has met only sporadically due to their own financial constraints. We continue to work with them on an ongoing basis to develop a plan of action No work on this BMP has been completed, due to work load, lack of staff, and need to spend more time on Bioterrorism planning.	Investigate other avenues for support.
Revised					

We now collect SPPP's from developers/engineers for new projects. These plans are being used to formulate each individual stormwater inspection for the construction site. Individual inspection checklists are created using the project's SWPPP submittal as a guide.

Stormwater outfalls (>20) have been identified and now need to be recorded. We estimated that we would investigate 25%/year. The Town can not confirm yet if we reached that limit. The Town is using electronic means to document the outfalls. Both AutoCAD and ArcGIS are being used for this.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	N
Annual program budget/expenditures	($)	0

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	<1%
Stormwater management committee established	(y/n)	N
Stream teams established or supported	(# or y/n)	N
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	N
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	2
▪ community participation	(%)	<1%
▪ material collected	(tons or gal)	?
School curricula implemented	(y/n)	Y

Legal/Regulatory

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

Mapping and Illicit Discharges

Outfall mapping complete	(%)	70
Estimated or actual number of outfalls	(#)	>75
System-Wide mapping complete	(%)	45
Mapping method(s)		
▪ Paper/Mylar	(%)	80
▪ CADD	(%)	15
▪ GIS	(%)	5
Outfalls inspected/screened	(# or %)	0
Illicit discharges identified	(#)	2
Illicit connections removed	(#) (est. gpd)	2
% of population on sewer	(%)	45
% of population on septic systems	(%)	55

Construction

Number of construction starts (>1-acre)	(#)	1
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	100
Site inspections completed	(# or %)	100
Tickets/Stop work orders issued	(# or %)	0
Fines collected	(# and $)	0
Complaints/concerns received from public	(#)	0

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	60
Site inspections completed	(# or %)	0
Estimated volume of stormwater recharged	(gpy)	?

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	1
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	1
Total number of structures cleaned	(#)	>1500
Storm drain cleaned	(LF or mi.)	0
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.)		vendor
Cost of screenings disposal	($)	0

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	1
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	1
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	(#)	0
Vacuum street sweepers specified in contracts	(y/n)	Y

Reduction in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	15
▪ Herbicides	(lbs. or %)	n/a
▪ Pesticides	(lbs. or %)	5

Anti-/De-Icing products and ratios	% NaCl % $CaCl_2$ % $MgCl_2$ % CMA % Kac % KCl % Sand	
Pre-wetting techniques utilized	(y/n)	N
Manual control spreaders used	(y/n)	Y
Automatic or Zero-velocity spreaders used	(y/n)	N
Estimated net reduction in typical year salt application	(lbs. or %)	15
Salt pile(s) covered in storage shed(s)	(y/n)	Y
Storage shed(s) in design or under construction	(y/n)	Y

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Watershed Management

BRP WM 08A NPDES Stormwater General Permit Notice of Intent for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)

F. Example Storm Water Management Program TIME FRAMES

Transmittal Number W035320

Facility ID (if known)

Page 1 of 1

	PERMIT YEAR ONE				PERMIT YEAR TWO				PERMIT YEAR THREE				PERMIT YEAR FOUR				PERMIT YEAR FIVE				
BMP ID #	Spring 03	Summer 03	Fall 03	Winter 03-04	Spring 04	Summer 04	Fall 04	Winter 04-05	Spring 05	Summer 05	Fall 05	Winter 05-06	Spring 06	Summer 06	Fall 06	Winter 06-07	Spring 07	Summer 07	Fall 07	Winter 07-08	Next Permit
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Tewksbury, MA