

Municipality/Organization: TOWN OF MILTON, MA

EPA NPDES Permit Number: MAR041079

MassDEP Transmittal Number: W-039893

**Annual Report Number
& Reporting Period:** April 1, 2006 – March 31, 2007

**NPDES PII Small MS4 General Permit
Annual Report
(Due: May 1, 2007)**

Part I. General Information

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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:



Printed Name: WALTER HELLER

Title: DIRECTOR, DEPT OF PUBLIC WORKS

Date: APRIL 27, 2007

Part II. Self-Assessment Narrative

Public Education & Outreach BMPs 1-8: The major emphasis regarding stormwater management in Permit Year #4 for Milton was community outreach and the resulting passage of the Town's Stormwater Management Bylaw in May, 2006. The Dept. of Public Works and the Conservation Commission worked closely together in making presentations to the Board of Selectmen and Town Meeting members to inform them about the parameters of the proposed Bylaw and how its benefits for the Town. The Attorney General's office approved the Bylaw in September but suggested one change in the enforcement clause. That change will be made when the Town promulgates its set of stormwater management regulations during Permit Year #5.

A second education tool was learning about and disseminating information on native plantings for five bio-retention cells located along Pine Tree Brook. The Town worked with the Neponset River Watershed Association (nepRWA) on researching information for the best plantings, and developed a close working relationship with members of the Pine Tree Brook Neighborhood Association. The DPW held its annual Pine Tree Brook cleanup in spring, 2006; at that time, Carly Rocklen from nepRWA gave a walking tour to identify plants along the Brook and native plants that were planted in one of the large bio-cells. Everyone is eager to see which plants return this spring; the plants that adapted to the specific conditions of the bio-cells will be planted in the remaining cells.

Another segment of the Town's stormwater outreach program was the purchasing of 200 storm drain markers by nepRWA. Over the next several months, these markers will be installed on streets that border local waterways such as Pine Tree Brook. Their purpose is to educate residents about where stormwater goes (to the local brook!) and emphasize the importance of keeping the stormwater as clean as possible.

The Town celebrated Arbor Day in December, 2006 and was awarded Tree City, USA status in February, 2007. This is the first time the Milton community became a Tree City, USA community. We will continue to educate residents on the importance of trees and their role in filtering stormwater during Permit Year #5.

The Town's website (www.townofmilton.org) continues to educate residents about the stormwater management issue.

Public Participation BMPs 2-5:

As mentioned above, in Permit Year #4 a major hands-on stormwater management tool was the planting and maintenance of the bio-retention cells along the Brook. At least 35 residents participated in the Pine Tree Brook cleanup last spring. This winter, the DPW began planning "Milton Green Day" which takes place Saturday, May 5. Over thirty community groups and neighborhood associations will participate. As it has done in the past for this event, the DPW will provide trash, leaf, and recyclable cleanup services.

Because of budget limitations and concentration on the Pine Tree Brook area, the DPW has not pursued funding for a baseline survey on Unquity Brook. As mentioned in the cover letter, we believe this BMP should be revised.

Illicit Discharge Detection and Elimination BMPs 3-6:

As we reported in our first annual NPDES report, Milton has an existing GIS-compatible map of its water infrastructure, including the stormwater collection system.

PART III. BEST MANAGEMENT PRACTICES

1. Public Education and Outreach

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)-Permit Year 4	Planned Activities-Permit Year 5
1.1	Educate dog owners about picking up dog waste	Public Works	Develop and print collateral piece on pet waste	Palm card posted on website	Distribute remaining palm cards on stormwater either through schools or in water/sewer billing
1.2	Prioritize areas in Town that have pet waste problems; install up to three mutt mitt stations	Public Works	Prioritize list of mutt mitt installations sites	Some existing mutt mitt stations defaced	Keep mutt mitt stations functioning and free from graffiti
1.3	Develop a draft bylaw that requires dog owners to clean up after their dogs. Present to Town Meeting.	Town Counsel	Draft bylaw; present to Town Meeting	Accomplished	None
1.4	Update stormwater section of Town website 3x a year	Public Works	Update stormwater section of the Town website 3x per year	Updated stormwater section continues to be posted on website	Update stormwater section
1.5	Inspect signs that identify water bodies within town & contact MDC/MHD for repairs	Public Works	Inspect signs	Located and inspected MDC/MHD signs	Inspect all signs
1.6	Provide update of SWMP at Selectmen's meeting	Public Works	Present annual update of SWMP at Selectmen's meeting	No update requested by Selectmen	Present update to Selectmen (if requested)
1.7	Develop two press releases per yr describing importance of stormwater management	Public Works	Publish two newspaper articles/press releases describing importance of SWMP	Two newspaper articles featured details about the proposed Stormwater Management Bylaw	Continue to educate public on stormwater issue through two articles or press releases
1.8	Show two cable programs or PSAs on stormwater importance of stormwater management	Public Works	Two programs or PSA's on local cable TV	Aired "Don't Trash the Grass" DEP video on cable	Will air two stormwater-related PSAs on cable

2. Public Participation and Involvement

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)-Permit Year 4	Planned Activities-Permit Year 5
2.1	Comply with state public notification guidelines	Town Clerk	Post notice as required	No public hearings held	Will post notice as required if public hearing is held
2.2	Provide trash pickup on Milton Pride Day	Public Works	Trash pickup required each year	Planning Town-wide cleanup in spring, 2007	Will schedule Town-wide clean-up in spring, 2008
2.3	Provide support for the nepRWA 319 TMDL Implementation Grant	Public Works	Assist with wetlands project as requested by nepRWA	Planted native plants in first bio-remediation cell along Pine Tree Brook; worked with residents and DPW to provide ongoing maintenance of this area	Will plant remaining bio-retention cells with native species; work with residents and DPW to provide ongoing maintenance in this area
2.4	Outreach to Milton school teachers on stormwater issue	Public Works	Increased awareness among Milton families about stormwater issue	No outreach done with schools	Contact schools to offer teachers stormwater information for environmental curriculums
2.5	Work with nepRWA on Unquity Brook outreach	Public Works	Secure funding to examine flow patterns and possible septic tank leakage into Unquity Brook	Letters sent to all Unquity Brook abutters by Milton Conservation Commission re: proper yard waste disposal	Continue to work with nepRWA and Milton Conservation Commission on Unquity Brook outreach

3. Illicit Discharge Detection and Elimination

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)-Permit Year 4	Planned Activities-Permit Year 5
3.1	Remove sewer underdrains if found during routine maintenance	Public Works	Document number of underdrains found and removed	None found	Remove as needed
3.2	Map stormwater outfalls and receiving waters; identify outfalls and other structures owned by other entities; evaluate structures on state-owned Town roads	Public Works	Create map	GIS map completed in fall, 2005.	Continue to use map in day-to-day stormwater-related activities
3.3	Digitize stormwater collection system in a GIS-compatible format	Public Works	Create map	GIS map completed in fall, 2005.	Continue to use map in day-to-day stormwater-related activities
3.4	Develop and implement a plan to identify and remove non-stormwater discharges to the MS4	Public Works	None	Identified house on Libby Rd. and discharge from High School; both found through sampling and both corrected	Continue ongoing illicit discharge detection & elimination
3.5	Develop bylaw requiring inspection of new construction for correct connection to the sanitary sewer	Town Counsel	Develop bylaw requiring inspection of new construction for correct connection to the sanitary sewer	Sewer regulations and permit requirements revised and implemented in 4/03	Implemented
3.6	Conduct a Town-wide sewer rehabilitation program	Public Works	Implement program	Funding secured; sewer rehabilitation completed in Area 3	To secure funding to complete sewer rehabilitation in Area 4

4. Construction Site Runoff Control

BMP ID#	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s)-Permit Year 4	Planned Activities-Permit Year 5
4.1	Develop a Construction Site Erosion & Sediment Control bylaw for all construction sites requiring a building permit (7500 sq ft or over)	Public Works	Pass the Bylaw	Bylaw passed	Implement Bylaw
4.2	Require a waste management plan at construction sites 1-5 acres	Conservation Commission, Building Dept., Public Works	Implement regulation or bylaw requiring a waste management plan at construction sites 1-	Regulatory mechanism in place for requiring a waste management plan for all construction sites	Continue to implement
4.3	Review site plans not already subject to Conservation Commission or Planning Board review	Conservation Commission, Public Works (Engineering)	Implement protocol for site plan review	Site plans reviewed as part of DPW Permitting Process	Regulations will be drafted & implemented as part of approved Stormwater Management Bylaw
4.4	Consider public input for new construction sites not subject to the jurisdiction of Conservation Commission or Planning Board	Planning Board, Conservation Commission	Discuss plan for public input	Public input sought for successful passage of Stormwater Bylaw	Accomplished
4.5	Inspect erosion and sediment controls at construction sites involving wetlands	Conservation Commission	Number of inspections conducted	100 inspections (this includes duplicate visits to one site)	Continue inspections as needed

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

BMP ID#	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s)-Permit Year 4	Planned Activities-Permit Year 5
5.1	Develop a draft bylaw to apply Standards 2,3,4 and 7 of MSP to entire Town; present bylaw to Town Meeting	DPW	Develop bylaw and present to Town Meeting until passed	Bylaw adopted at Town Meeting in May 2006	Implement Bylaw
5.2	Specify a stormwater BMP manual to be used for consistent design and performance standards	DPW	Select BMP manual	MA DEP and CZM "Stormwater Management, Vol 2: Stormwater Technical Handbook" selected	Accomplished
5.3	Develop a draft bylaw that ensures long-term maintenance of private structural BMPs	DPW	Include in stormwater bylaw and present to Town Meeting	Bylaw adopted at Town Meeting in May 2006	Implement Bylaw
5.4	Develop a draft zoning bylaw that allows and/or encourages use of low-impact development (LID)	Planning Board	Draft bylaw developed and presented to Town Meeting	Not considered this year	Under consideration

6. Municipal Good Housekeeping

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)-Permit Year 4	Planned Activities-Permit Year 5
6.1	Identify sensitive receptors within Town	Public Works	Develop list of sensitive receptors; notify staff	Accomplished	Accomplished
6.2	Funding to develop employee training program	Public Works	Keep DPW staff informed on importance of stormwater management	Posted MSDS sheets at DPW	Will continue to post MSDS sheet at DPW
6.3	Sweep all streets once every spring & fall	Public Works	Percent of streets swept twice per year	Swept all streets twice during permit year	Sweep all streets twice during permit year
6.4	Continue existing road salting procedures	Public Works	Maintain documentation of de-icer amount used	3800 tons of salt used	Maintain documentation of de-icer amount used
6.5	Minimize impacts from vehicle washing	Public Works	Build containment area for vehicle washing; switch to phosphate-free biodegradable soap	Accomplished	Accomplished
6.6	Minimize impacts from vehicle maintenance	Public Works	Hold employee training	Vehicle maintenance area workers aware of good maintenance protocol	Re-train if needed
6.7	Maintain storm drain system	Public Works	Clean all catch basins once every 3 years; inspect & clean drain pipes as needed; keep daily record of catch basin residuals volumes; prioritize large volume catch basins for more frequent cleaning	1100 catch basins cleaned in Permit Year 4	Ongoing

6. Municipal Good Housekeeping (con't)

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)-Permit Year 4	Planned Activities-Permit Year 5
6.8	Train staff to minimize chemical applications in recreational areas	Public Works	Hold training; minimize use of chemical pesticides, fertilizer, & herbicides; keep maintenance records	Kept records of all DPW chemical applications	Keep records of all DPW chemical applications
6.9	Hold biennial HHW Day	Public Works	Hold at least one HHW Day every other year; hold one tire & battery collection per year	HHW Day held on April 28, 2007	HHW Day will be held in spring, 2008
6.10	Plant a new tree to replace every tree removed each year	Public Works, Tree Warden	Plant more trees than are cut down each year	220 trees planted from March 06-March 07; Town awarded Tree City, USA status; Town awarded MA ReLeaf grant	Apply for MA ReLeaf grant in fall, 2007; re-apply for Tree City USA status; implement current MA ReLeaf grant
6.11	Pursue cooperative agreement with Milton garden clubs to implement litter management program	Public Works	Work with Milton Garden Club and Amateur Gardeners of Milton to raise funds for litter vac purchase; develop litter management program	Milton clubs successfully raised money to help purchase litter vac; litter management program developed	Accomplished
6.12	Identify stormwater outfalls within Milton owned by other entities and inform them of their management responsibility	Public Works	Outfalls assessed; state agencies notified	Identified which roads and stormwater outfalls are State-owned; notified appropriate agency of their responsibility	Accomplished

Part IV. Summary of Information Collected and Analyzed

NepRWA and DPW staff performed testing on the following Milton sites in May, July, September, and November 2006:

PTB028: Pine Tree Brook @ Blue Hills Pkway
PTB035: Pine Tree Brook @ Brook Rd
PTB047: Pine Tree Brook @ Central Ave.
TUR001: Turners Pond
UNB002: Unquity Brook @ Randolph Ave.
UNB014: Unquity Brook @ Adams St.
UNB016: Unquity Brook @ Squantum St.

According to nepRWA, per new state water quality regulations, a single sample reading for E.Coli at a site should not exceed 235 colonies per 100 milligrams. A five-sample average should not exceed 126 colonies per 100 milligrams.

In July 2006, testing results indicated that UNB002, UNB014 and UNB016 had high E.coli readings of 921, 1120, and 770 respectively. This was a wet testing event. During this testing period, low dissolved oxygen readings were also reported for PTB028, PTB035, and UNB002. Dissolved oxygen may be an indicator of pollution since oxygen is being consumed by algae instead of by appropriate aquatic life. In July, connectivity (the amount of ions that can carry an electrical charge within a water body) also tested high at the following sites: PTB-28, PTB035, and UNB002. The ortho-phosphate (an indicator of fertilizer runoff) count was also high at: PTB047.

Although results vary with time of year and weather tests were taken in dry or wet weather, these test readings indicate that the Town of Milton must continue investigations at these sites to address these findings.

Part V. Program Outputs & Accomplishments (OPTIONAL)

(Since beginning of permit coverage unless specified otherwise by a **, which indicates response is for period covering April 1, 2006 through March 31, 2007)

Programmatic

(Preferred Units) Response

Stormwater management position created/staffed	Y/N	YES
Annual program budget	(\$)	\$500,000
Total program expenditures since beginning of permit coverage	(\$)	\$887,000
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		GEN FUND

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	9800
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.)	YES
Shoreline cleaned since beginning of permit coverage	(mi.)	3
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	1
▪ community participation **	(# or %)	275
▪ material collected **	(tons or gal)	1875 gal
School curricula implemented	(y/n)	NO

Legal/Regulatory

	In place prior to Phase II	In Review by Existing Authority	Drafted	Draft in Review	Adopted
▪ 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		

Construction

(Preferred Units) Response

Number of construction starts (>1-acre) **	(#)	0
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	95
Site inspections completed **	(# or %)	#2
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	(%)	100
Site inspections (for proper BMP installation & operation) completed **	(# or %)	100
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	NO
Low-impact development (LID) practices permitted and encouraged	(y/n)	YES

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	1/3 PER YR
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1/3 PER YR
Qty of storm drain structures	(#)	3900
Qty. of storm drains cleaned **	(%, LF or mi.)	1300
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	275T (est)
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	COMPOST

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$75,000
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	\$5.76 PER BASIN
• Disposal cost**	(\$)	NA
Cleaning Equipment		
• Clam shell truck(s) owned	(#)	1
• Vacuum truck(s) owned/leased	(#)	0
• Vacuum trucks specified in contracts	(y/n)	0
• % Structures cleaned with clam shells **	(%)	98
• % Structures cleaned with vector **	(%)	2

(Preferred Units) Response

Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	2X
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	2X
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	25T
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	COMPOST
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$75,000
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	\$36 PER HOUR
• Disposal cost**	(\$)	NA
Sweeping Equipment		
• Rotary brush street sweepers owned	(#)	1
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	0
• % Roads swept with rotary brush sweepers **	%	100
• % Roads swept with vacuum sweepers **	%	0

Reduction (since beginning of permit coverage) in application on public land of:
 ("N/A" = never used; "100%" = elimination)

▪ Fertilizers	(lbs. or %)	0
▪ Herbicides	(lbs. or %)	0
▪ Pesticides	(lbs. or %)	0
Integrated Pest Management (IPM) Practices Implemented	(y/n)	N

(Preferred Units) Response

Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	100
Pre-wetting techniques utilized **	(y/n or %)	NA
Manual control spreaders used **	(y/n or %)	NA
Zero-velocity spreaders used **	(y/n or %)	NA
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/l _n mi. or %)	NA
Estimated net reduction or increase in typical year sand application rate **	(±lbs/l _n mi. or %)	NA
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100
Storage shed(s) in design or under construction	(y/n or #)	N
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	100

Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	NA
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	NA
• Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	NA