TOWN OF MILTON

DEPARTMENT OF PUBLIC WORKS
629 RANDOLPH AVENUE
MILTON, MA 02186
www.townofmilton.org

JOSEPH W. LYNCH
Director of Public Works
PAUL HURLEY
Assistant Director of Public Works
JOHN P. THOMPSON
Assistant Town Engineer

JACK J. CALABRO
Manager of Wires and Maintenance
DALE A. HORSMAN
Civil Engineer
KATHLEEN M.BOWEN
Senior Administrative Clerk - Conservation

April 5, 2010

United States Environmental Protection Agency
Water Technical Unit (WTU)
PO. Box 8127
Boston, Massachusetts 02114

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

RE: NPDES Phase II Small MS4 General Permit
Town of Milton, Massachusetts Annual Reports 5 & 6
EPA Permit Number MAR041079
MADEP Transmittal No. W-039893

To Whom It May Concern:

The Town of Milton, Massachusetts is pleased to provide you with the attached National Pollutant Discharge Elimination System (NPDES) Phase II Small MS4 General Permit Annual Reports 5 & 6 for the periods from March 2007 to April 1, 2009.

Due to a budget reduction and restructuring in the Department of Public Works (DPW) two years ago, the position responsible for reporting Year 5 and Year 6 was eliminated and the reporting has yet to be submitted.

The Town has since filled a new civil engineer position in charge of stormwater permitting and making efforts to get back in compliance by submitting Annual Reports for Year 5 and Year 6. This submittal will bring the Town's NPDES reporting status current. This year's annual report (Year 7) will be submitted by the May 1, 2010 deadline.

Should you have any questions, please do not hesitate to call me at (617) 898-4870.

Sincerely,

Dale A Horsman

Dale Horsman,
Civil Engineer

cc: Joseph Lynch, Director of Public Works
John Thompson, Assistant Town Engineer

Municipality/Organization: TOWN OF MILTON, MA

EP A NPDES Permit Number:MAR041079

MassDEP Transmittal Number: W-039893

Annual Report Number
& Reporting Period: Year 5 **April 1, 2007 - March 31,2008**

NPDES PII Small MS4 General Permit Annual Report
(Due: May 1, 2008)

Part I: General Information

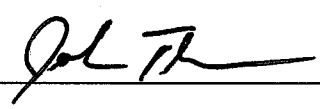
Contact Person: Dale A Horsman Title: CIVIL ENGINEER

Telephone #: 617 898-4870 Email: dhorsman@townofmilton.org

Mailing Address: Milton DPW, 629 RANDOLPH AVENUE, MILTON, MA, 02186

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: JOHN P THOMPSON

Title: ASSISTANT TOWN ENGINEER, DEPT OF PUBLIC WORKS

Date: 04/05/10

Part II: Self-Assessment Narrative

The Town of Milton, Massachusetts has completed the required self-assessment and has determined that our municipality is working toward full compliance within the five-year schedule as submitted to EPA and approved as Milton's NOI to the General Permit issued to Massachusetts under Phase II of the Regulations. A major staff reduction and restructuring within the Department of Public Works was a major reasoning for the following BMP's to not be in compliance.

- BMP 1-3: Keep mutt mitt stations functioning and free from graffiti
  - Although routinely inspected by DPW staff, vandals have defaced the stations with graffiti. Efforts to renew the stations to original condition will be scheduled and inspection of the stations will continued to be performed

- BMP 1-8: Show two cable programs or PSAs on stormwater importance of stormwater management
  - Due to major staff reduction and restructuring, the airing two television programs onto the local cable television failed to be scheduled.

- BMP 2-4: Outreach to Milton school teachers on stormwater issues
  - Due to current staff restructuring a lack of resources affected this BMP. Efforts to reach out to teachers and students regarding stormwater issues within the upcoming year will be performed

- BMP 5-4: Develop a draft zoning bylaw that allows and/or encourages use of low-impact development (LID)
  - A bylaw is currently being considered that encourages use of low-impact development but at this time has not been incorporated.

- The Town failed to submit Year 5 annual report on or before May 1, 2008
  - Since the restructuring, personnel will be in place to assure the annual report is reported in a timely fashion

Since the NPDES permit inception, the Town has made great efforts by establishing and implementing a stormwater bylaw that continues to permit and incorporate stormwater controls into all construction within the Town. The creation of detailed GIS databases and maps of the Towns' utilities and waterways has provide a valuable tool for the Town to keep track of maintenance and to make updates the Towns infrastructure and resources as they change. The Town continued a successful partnership with the Neponset River Watershed Association (NepRWA) which together have undertaken a stormwater education program, a stormwater sampling program, illicit discharge detection and elimination program, and have completed construction of bio-retention cells along Pine Tree Brook as part of the 319 TMDL Implementation Grant. The following table is a complete list of the Town's Best Management Practices (BMPs), the actions the Town has committed to perform, the progress on the goals, and projected activities for the upcoming year.

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 5	Planned Activities- Permit Year 6
1.1	Educate dog owners about picking up dog waste	Public Works	Develop and print collateral piece on pet waste	Distributed remaining palm cards in water/sewer billing	Continue to post Palm card on website annually
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 installation sites	Keep mutt mitt stations functioning and free from graffiti	Inspect stations regularly to ensure functioning
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	Continue to update stormwater section as required
1.5	Inspect signs that identify water bodies within town & contact DCR/MHD for repairs	Public Works	Inspect signs	Locate and inspected DCR/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 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	The programs were not aired during this permit year.	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 5	Planned Activities- Permit Year 6
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, 2008	Will schedule Town-wide clean-up in spring 2009
2.3	Provide support for the nepRWA 319 TMDL Implementation Grant	Public Works	Assist with wetlands project as requested by nepRWA	Planted remaining bio-retention cells with native species; worked with residents and DPW to provide ongoing maintenance	Continue to maintain bio-retention cells.
2.4	Outreach to Milton school teachers on stormwater issues	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 Uniquity Brook outreach	Public Works	Secure funding to examine flow patterns and possible septic tank leakage into Unquity Brook	Continued to work with nepRWA and Milton Conservation Commission on Unquity Brook outreach	□ontinue 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 5	Planned Activities- Permit Year 6
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	None	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	Create Map	Continued ongoing illicit discharge detection & elimination and supported nepRWA	Continued 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 4	To secure funding to complete sewer rehabilitation in Area 5

4. Construction Site Runoff Control

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)- Permit Year 5	Planned Activities- Permit Year 6
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	By-law 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 1-5 acres	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	All site plans are reviewed by the Engineering Department
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	Inspection 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.	Measurable Goal(s)	Progress on Goal(s)- Permit Year 5	Planned Activities- Permit Year 6
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" was selected in 2004	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 5	Planned Activities- Permit Year 6
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 sheets at DPW
6.3	Sweep all streets once every spring & fall	Public Works	Percent of streets swept twice per year	All streets were swept 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	3815 tons of salt used	Maintain documentation of de-icer amount used
6.5	Minimize impacts from vehicle maintenance	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	1300 catch basins cleaned in Permit Year 4	Ongoing

6. Municipal Good Housekeeping(continued)

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)- Permit Year 5	Planned Activities- Permit Year 6
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 and battery collection per year	HHW Day held on April, 2007	HHW Day will be held in April 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 every year	200 trees planted from March 07-March 08; Town awarded Tree City, USA status; Town awarded MA ReLeaf grant	Apply for MA ReLeaf grant in fall 2009; re-apply for Tree City USA status; implement current MA ReLeaf grant
6.11	Pursue cooperative agreements 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 vacuum purchase; develop litter management program	Accomplished	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 took samples at the following Milton locations in April, May, August, September, and October 2007:

- **PTB028**: Pine Tree Brook at Blue Hills Parkway
- **PTB035**: Pine Tree Brook at Brook Road
- **PTB047**: Pine Tree Brook at Central Avenue.
- **UNB002**: Unquity Brook at Randolph Avenue
- **UNBOI4**: Unquity Brook at Adams Street.
- **UNBOI6**: Unquity Brook at Squantum Street.
- **NER200 :** Neponset River @ Adams St. Bridge
- **NER150:** Neponset River @ Paul's Bridge

In 2007, sampling was performed by nepRWA at each of the eight aforementioned sampling locations five different times between the beginning of April and the end of October. The samples were tested for E.Coli, Total Phosphorus, Total Nitrogen, Chlorophyll, Conductivity, Dissolved Oxygen, pH, and Temperature.

Although sample results naturally vary with the time of year and weather conditions during the time sampled, these results can depict trends at that location overtime. Sampling at these locations has been performed since January, 2002.

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. Testing results indicated that UNB014 and UNB016 exceeded the regulation maximum during every monitoring event. Meanwhile, UNB002 results were below the regulatory standard even in the months when the water temperature was the greatest. All other location had high E.Coli counts during the summer monitoring events and lower counts when the water temperature was cooler. The E.Coli results are consistent with past results and will continue to be monitored for increasing/decreasing trends.

Samples of total nitrogen and phosphorus were taken to identify the concentration of nutrients during the sampling event. Often times, fertilizers and animal waste runoff into the Towns' waterways causing the waters to be nutrient rich. An increase in nutrients in a waterway causes an increase in algae growth. An increased in algae growth will demand excess levels of oxygen in the water which reduces the quality of the water source for the surrounding ecosystem. Sample results show the concentrations of Total Phosphorus were not present in elevated concentrations for any of the samples taken in both the April and May events. Total Phosphorus was present in PTB28, PTB035, PTB047, UNB002 in elevated levels at one or more sampling event from August through October. Total Nitrogen was present in elevated concentrations at NER150 during the April, May, and August sampling rounds. Sample location PTB047 exceeded the regulatory limit in August, September, and October. Education about the proper use of fertilizers and the effects of animal waste runoff are BMP's that remain a priority because it informs residents about harm of excessive concentration nutrients in the Town's waterways.

NepRWA publishes and archives complete sampling results on their website for the entire watershed including the Milton 2007 sampling locations described above at: http://www.neponset.org/CWMNResultsArchive.htm

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, 2007 through March 31, 2008)

Programmatic

(Preferred Units) Response		
Stormwater management position created/staffed	Y/N	YES
Annual program budget	($)	$500,000
Total program expenditures since beginning of permit coverage	($)	$1,107,000
Funding mechanism(s)(General Fund, Enterprise, Utility, etc)		GEN FUND

Education, Involvement, and Training

Estimated number of property owners reached by education programs(s)	(# or %)	9800
Stormwater management committee established	(y/n)	NO
Stream teams established or supported	(# or y/n)	Y
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	Y
Shoreline cleaned since beginning of permit coverage	(mi.)	4
Household Hazardous Waste Collection Days		
▪ days sponsored**	(#)	1
▪ community participated**	(# or %)	250 cars
▪ material collected**	(tons or gal)	1460 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

Number of construction starts (>1-acre)**	(#)	1
Estimated percentages 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	(%)	100
Site inspections (for proper BMP installation & operation) completed**	(# or %)	100
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	N
Low-impact development (LID) practices permitted and encouraged	(y/n)	N

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial /nom-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 drains 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)**	($)	50,000
• Hourly or per basin contract rate**	($/hr or $ per basin)	40
• Disposal cost**	($)	26
Cleaning Equipment		
• Clam shell truck(s) owned	(#)	1
• Vacuum truck(s) owned/leased	(#)	0
• Vacuum trucks specified contracts	(y/n)	1
• % Structures cleaned with clam shells **	(%)	100
• % Structures cleaned with vactor**	(%)	0

(Preferred Units) Response

Average Frequency of street sweeping (non-commercial/non-arterial streets)**	(times/yr)	2X
Average frequency of sweeping (commercial/arterial or other critical streets)**	(times/yr)	10X
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)**	($)	80,000
• Hourly or lane mile contract rate**	($/hr or $ In 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 %)	NA
▪ Herbicides	(lbs. or %)	NA
▪ Pesticides	(lbs. or %)	NA
Integrated Pest Management (IPM)Practices Implemented	(y/n)	Y

Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	%NaCl % CaCl2 % MgCl2 % CMA % Kac % KCl % Sand	95 5 Trace
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/ln mi. or %)	NA
Estimated net reduction or increase in typical year sand application rate**	(± lbs/ln 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 #)	NA
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	100

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

Municipality/Organization: TOWN OF MILTON, MA

EP A NPDES Permit Number:MAR041079

MassDEP Transmittal Number: W-039893

Annual Report Number
& Reporting Period: Year 6 **April 1, 2008 - March 31,2009**

NPDES PII Small MS4 General Permit
Annual Report
(Due: May 1, 2009)

Part I: General Information

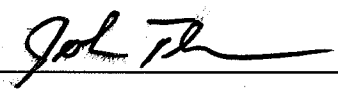
Contact Person: Dale A Horsman Title: CIVIL ENGINEER

Telephone #: 617 898-4870 Email: dhorsman@townofmilton.org

Mailing Address: Milton DPW, 629 RANDOLPH AVENUE, MILTON, MA, 02186

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: JOHN P THOMPSON

Title: ASSISTANT TOWN ENGINEER, DEPT OF PUBLIC WORKS

Date: 4/5/10

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  - A bylaw is currently being considered that encourages use of low-impact development but at this time has not been incorporated.

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The Town continued a successful partnership with the Neponset River Watershed Association (NepRWA) which together have undertaken a stormwater education program, a stormwater sampling program, illicit discharge detection and elimination program, and have completed construction of bio-retention cells along Pine Tree Brook as part of the 319 TMDL Implementation Grant. NepRWA and the Town are in the process of designing and bidding a new 319 TMDL Implementation Grant project consisting of the installation of 14 tree filter boxes within Brook and Lincoln streets which drain into Pinetree Brook.

The following table is a complete list of the Town's Best Management Practices (BMPs), the actions the Town has committed to perform, the progress on the goals, and projected activities for the upcoming year.

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 6	Planned Activities- Permit Year 7
1.1	Educate dog owners about picking up dog waste	Public Works	Develop and print collateral piece on pet waste	Distributed remaining palm cards in water/sewer billing	Continue to post Palm card on website annually
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 installation sites	Keep mutt mitt stations functioning and free from graffiti	Inspect stations regularly to ensure functioning
1.3	Develop a draft by-law that requires dog owners to clean up after their dogs. Present to Town Meeting.	Town Counsel	Draft bylaw; present to Town Meeting	Accomplished	None
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2. Public Participation and Involvement

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)- Permit Year 6	Planned Activities- Permit Year 7
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, 2009	Will schedule Town-wide clean-up in spring 2009
2.3	Provide support for the nepRWA 319 TMDL Implementation Grant	Public Works	Assist with wetlands project as requested by nepRWA	Planted remaining bio-retention cells with native species; worked with residents and DPW to provide ongoing maintenance	Continue to maintain bio-retention cells.
2.4	Outreach to Milton school teachers on stormwater issues	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 Uniquity Brook outreach	Public Works	Secure funding to examine flow patterns and possible septic tank leakage into Unquity Brook	Continued to work with nepRWA and Milton Conservation Commission on Unquity Brook outreach	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 6	Planned Activities- Permit Year 7
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	None	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	Create Map	Continued ongoing illicit discharge detection & elimination and supported nepRWA	Continued 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 5	To secure funding to complete sewer rehabilitation in Area 6

4. Construction Site Runoff Control

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)- Permit Year 6	Planned Activities- Permit Year 7
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 By-law	By-law passed	Implement By-law
4.2	Require a waste management plan at construction sites 1-5 acres	Conservation Commission; Building Dept., Public Works	Implement regulation or by-law requiring a waste management plan at construction sites 1-5 acres	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	All site plans are reviewed by the Engineering Department
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 By-law	Accomplished
4.5	Inspection erosion and sediment controls at construction sites involving wetlands	Conservation Commission	Number of Inspections conducted	65 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.	Measurable Goal(s)	Progress on Goal(s)- Permit Year 6	Planned Activities- Permit Year 7
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 by-law and present to Town Meeting until passed	By-law 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 in 2004	Accomplished
5.3	Develop a draft by-law that ensures long-term maintenance of private structural BMPs	DPW	Include in stormwater by-law and present to Town Meeting	By-law adopted at Town Meeting in May 2006	Implement Bylaw
5.4	Develop a draft zoning by-law that allows and/or encourages use of low-impact development (LID)	Planning Board	Draft by-law 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 6	Planned Activities- Permit Year 7
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 sheets 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	Swept all streets twice during permit year
6.4	Continue existing road salting procedures	Public Works	Maintain documentation of de-icer amount used	3748 tons of salt used	Maintain documentation of de-icer amount used
6.5	Minimize impacts from vehicle maintenance	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	1300 catch basins cleaned in Permit Year 5	Ongoing

6. Municipal Good Housekeeping(continued)

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)- Permit Year 6	Planned Activities- Permit Year 7
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 and battery collection per year	HHW Day held on April, 2008	HHW Day will be held in spring 2009
6.10	Plant a new tree to replace every tree removed each year	Public Works, Tree Warden	Plant more trees than are cut down every year	83 trees planted from March 08-March 09; Town awarded Tree City, USA status; Town awarded MA ReLeaf grant	Apply for MA ReLeaf grant in fall 2009; re-apply for Tree City USA status; implement current MA ReLeaf grant
6.11	Pursue cooperative agreements 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 vacuum purchase; develop litter management program	Accomplished	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 took samples at the following Milton locations in April, March, June, August, September, and October 2007:

- **PTB028**: Pine Tree Brook at Blue Hills Parkway
- **PTB035**: Pine Tree Brook at Brook Road
- **PTB047**: Pine Tree Brook at Central Avenue.
- **UNB002**: Unquity Brook at Randolph Avenue
- **UNBOI4**: Unquity Brook at Adams Street.
- **UNBOI6**: Unquity Brook at Squantum Street.
- **NER200 :** Neponset River @ Adams St. Bridge
- **NER150:** Neponset River @ Paul's Bridge

In 2008, sampling was performed by NepRWA at each of the eight aforementioned sampling locations, six different times between the beginning of April and the end of October. The samples were tested for E.Coli, Total Phosphorus, Total Nitrogen, Chlorophyll, Conductivity, Dissolved Oxygen, pH, and Temperature.

Although sample results naturally vary with the time of year and weather conditions during the time sampled, these results can depict trends at that location overtime. Sampling at these locations has been performed since January, 2002.

According to NepRWA, per 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. Testing results indicated that UNB014 and UNB016 exceeded the regulation maximum during every monitoring event except during the April monitoring event when water temperatures were at the lowest. UNB002 exceeded the regulated count during every monitoring event except for May. It is also worth noting that the three Unquity Brook sampling locations showed elevated concentrations for conductivity at nearly every event during the year (except August 2008). UNB002 also was below regulatory standards for dissolved oxygen concentrations for every event.

Pinetree Brook sampling locations also had exceedences for fecal coliform counts. PTB 035 had elevated coliform counts during the warmest four events, PT 028 and PTB 047exceeded the threshold limit during one event and two events, respectively. Sampling results for ortho-phosphate, which is an indicator of fertilizer runoff was above regulatory limits at PTB035 during June and August and PTB 028 during August. PTB047 had elevated concentrations of Total Nitrogen during the June and August sampling events

The Neponset River also had exceedences at the sampling locations NER150 and NER200 during 2008. These exceedences occurred during the April, August, and October events for NER 200 and the during the June and October events for NER150. NER150 had an all time maximum (13,000 MPN100) coliform count during the October wet weather sampling event. Samples of total nitrogen and phosphorus were taken to identify the concentration of nutrients during the sampling event. Often times, fertilizers and animal waste runoff into the Towns' waterways causing the waters to be nutrient rich. An increase in nutrients in a waterway causes an increase in algae growth. An increased in algae growth will demand excess levels of oxygen in the water which reduces the quality of the water source for the surrounding ecosystem. Total Nitrogen was present in elevated concentrations at NER150 during the April, May, and August sampling rounds and NER 200 exceeded the regulatory limits for Total Nitrogen during April and August events

NepRWA publishes and archives complete sampling results on their website for the entire watershed including the Milton 2008 sampling locations described above at: http://www.neponset.org/CWMNResultsArchive.htm

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, 2007 through March 31, 2008)

Programmatic

(Preferred Units) Response		
Stormwater management position created/staffed	Y/N	YES
Annual program budget	($)	$500,000
Total program expenditures since beginning of permit coverage	($)	$1,327,000
Funding mechanism(s)(General Fund, Enterprise, Utility, etc)		GEN FUND

Education, Involvement, and Training

Estimated number of property owners reached by education programs(s)	(# or %)	9800
Stormwater management committee established	(y/n)	NO
Stream teams established or supported	(# or y/n)	Y
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	Y
Shoreline cleaned since beginning of permit coverage	(mi.)	4.5
Household Hazardous Waste Collection Days		
▪ days sponsored**	(#)	2
▪ community participated**	(# or %)	220 cars
▪ material collected**	(tons or gal)	1670 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

Number of construction starts (>1-acre)**	(#)	1
Estimated percentages 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	(%)	100
Site inspections (for proper BMP installation & operation) completed**	(# or %)	100
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	N
Low-impact development (LID) practices permitted and encouraged	(y/n)	N

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial /nom-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 drains 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)**	($)	50,000
• Hourly or per basin contract rate**	($/hr or $ per basin)	40
• Disposal cost**	($)	26
Cleaning Equipment		
• Clam shell truck(s) owned	(#)	1
• Vacuum truck(s) owned/leased	(#)	0
• Vacuum trucks specified contracts	(y/n)	1
• % Structures cleaned with clam shells **	(%)	100
• % Structures cleaned with vactor**	(%)	0

(Preferred Units) Response

Average Frequency of street sweeping (non-commercial/non-arterial streets)**	(times/yr)	2X
Average frequency of sweeping (commercial/arterial or other critical streets)**	(times/yr)	10X
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)**	($)	80,000
• Hourly or lane mile contract rate**	($/hr or $ In 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 %)	NA
▪ Herbicides	(lbs. or %)	NA
▪ Pesticides	(lbs. or %)	NA
Integrated Pest Management (IPM)Practices Implemented	(y/n)	Y

Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	%NaCl	95
	% CaCl2	5
	% MgCl2	
	% CMA	
	% Kac	
	% KCl	
	% Sand	Trace
Pre-wetting techniques utilized**	(y/n or %)	Y
Manual control spreaders used**	(y/n or %)	Y
Zero-velocity spreaders used**	(y/n or %)	N
Estimated net reduction or increase in typical year salt/chemical application rate	(± lbs/ln mi. or %)	NA
Estimated net reduction or increase in typical year sand application rate**	(± lbs/ln mi. or %)	0
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100
Storage shed(s) in design or under construction	(y/n or #)	NA
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	Y

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