

Municipality/Organization: Town of Boylston

EPA NPDES Permit Number: MAR041095

MassDEP Transmittal Number: W-049574

Annual Report Number Year 8
& Reporting Period: April 1, 2010 – March 31, 2011

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2011)

Part I. General Information

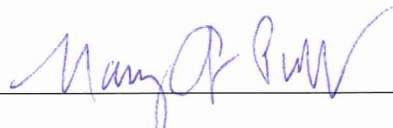
Contact Person: Ms. Nancy Colbert Puff **Title:** Town Administrator

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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: Nancy Colbert Puff

Title: Town Administrator

Date: 4/15/11

Part II. Self-Assessment

The Town of Boylston has completed the required self-assessment and has determined that our municipality has continued to implement BMPs and meet the General Permit requirements.

Some Best Management Practices (BMPs) are still in progress due to budget constraints. The following BMPs will be completed as soon as possible, within the limitations of the Town budget:

- Formal schedule of Municipal O&M activities (GH-5); and
- Comprehensive training for the Highway Department (GH-1).

Planned activities for the next permit term have not been designated unless a BMP under this permit term was not fully completed or is an ongoing effort. Once the General Permit for the next five years is available from EPA, the Town will prepare and submit a Notice of Intent (NOI) for compliance with the new General Permit. During development of this NOI, Boylston will re-assess its stormwater management program to develop an effective program that meets requirements of the next General Permit and best leverages Boylston's limited staff and financial resources to achieve measurable results.

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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
PE-1	Partner with Local Organization	Stormwater Committee/Town Admin.	Y3-5: Identify local group/organization with interest in stormwater to partner with	Continued relationship with DCR on all aspects of stormwater within the Wachusett Watershed. Met with DCR to discuss increased agency involvement with the new General Permit. DCR has agreed to take additional responsibility with regard to public education, public involvement, drainage mapping, construction site inspections, bylaw review and revisions, and municipal employee training.	Measurable goals for 2003 General Permit have been met. Plan to continue working with DCR within the watershed.
PE-2	Stormwater brochure	Town Admin.	Y2-5: Distribute one brochure per year to residents and industries in Boylston	Stormwater budget was not available to distribute a brochure during Permit Year 8. Public education goals were met through outreach associated with BMPs PE-3 and PE-4 through PE-6.	Measurable goals for 2003 General Permit have been met.
PE-3	Provide stormwater information at Town buildings	Town Admin.	Y2-5: Brochures will be available in the Town Hall	DCR coordinated with the Building Department to provide flyers/information at the Town Hall that explains the threats and impacts of improper pet waste disposal. DCR coordinated with the Building Department to provide flyers/information at the Town Hall that explains the EPA Construction General Permit requirements.	Measurable goals for 2003 General Permit have been met.

PE-4 Revised	Pet Waste	Town Admin.	Y1-5: Post signs at public park lands for pet owners to properly dispose of waste	Continued maintenance on signs. Offered "pet waste" educational brochures (see BMP PE-3) at Town Hall.	Measurable goals for 2003 General Permit have been met.
PE-5 Revised	Feature SW info on town public access cable station	Town Admin.	Y2-5: Feature SW info on cable station	No new stormwater information ran on the local cable station this year.	Measurable goals for 2003 General Permit have been met.
PE-6 Revised	Stormwater presentations at schools	Stormwater Committee and DCR	Y2-5: Include stormwater issues in yearly environmental presentations at High School	DCR Rangers and education staff met with Boylston Elementary School 4 th graders on three separate occasions to discuss stormwater: • April 6, 2010. Program: Watershed Model. 57 participants. • April 13, 2010. Program: Watershed Mapping. 57 participants. • June 2, 2010. Program: Watershed Field Trip. 67 participants.	Measurable goals for 2003 General Permit have been met. DCR conducted these educational activities in past permit years and plans to continue as resources are available.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
PP-1	Partner with local organization	Stormwater Committee/Town Administrator	Y3-5: Identify group to partner with (DCR)	Continued cooperation and partnership with DCR (see PE-1).	Measurable goals for 2003 General Permit have been met.
PP-2	Place Traveling Display at various locations	Town Admin.	No activities planned for Y2-5.	No activity planned for Y8.	Measurable goal for 2003 General Permit was met in Y1.
PP-3	Incorporate SW into public meetings	Town Admin.	Y3-5: Present updates to the SWMP. Continue to invite stormwater discussion at one meeting per year.	Stormwater issues were discussed at periodic Stormwater Committee meetings and Conservation Commission meetings, which are open to the public.	Measurable goals for 2003 General Permit have been met.
PP-4	Poster Contest	Town Admin.	Develop concept and approach local scouting troops.	The Stormwater Committee has contacted the scout troops in past years and given them opportunities to participate in the Stormwater Program. They have not been interested. Continued relationship with DCR and work with them on outreach to local school age children (BMP PE-6) to meet intent of this BMP.	Measurable goals for 2003 General Permit have been met. Boylston will continue to work with DCR on local school outreach programs.

PP-5	Stormwater Committee	Town Admin.	Y1-5: Review SWMP each year and coordinate efforts of all Town offices.	The Town's local stormwater bylaws are enforced by the Board of Health and the Conservation Commission. The Stormwater Committee continued to work together to manage the overall stormwater program and met as needed to implement planned stormwater management activities. One meeting was held on November 15, 2010. The Committee also communicates frequently throughout the year by email and phone.	The Stormwater Committee will continue to work together to manage the overall stormwater program.
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3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
ID-1	Drainage Mapping	Stormwater Committee	Y5: Update map with outfall locations in priority areas.	Drainage system mapping was conducted by a consultant on July 24, August 7, August 18 and August 19, 2009. A GPS unit was used to locate 171 drainage structures, including 14 outfalls, in the Urbanized Area outside of the Wachusett Reservoir Watershed. Structure locations and features were uploaded to the computer to generate a GIS-based map of the drainage system. This builds on DCR's mapping efforts in Boylston. They have mapped 365 drainage structures within the Wachusett Reservoir watershed, which is largely outside of the Urbanized Area at this time. The Highway Superintendent and the Town's stormwater consultant conducted one additional day of field investigation on October 14, 2010. This investigation focused on the potential outfall locations identified in 2009. Field personnel GPS-located seven (7) additional outfalls, four additional (4) drain manholes, and nine additional (9) catch basins. In total, the Town has located 191 drainage structures, including 20 outfalls. (It was determined that one outfall from 2009 was actually a culvert.)	Measurable goals for the 2003 General Permit have been met. All known outfalls in the Urbanized Area have been mapped.

ID-2 Revised	Eliminate Illicit Discharges	DPW and Board of Health	Y3-Y5: Implement Plan	All outfalls in Boylston's regulated urbanized area have been inspected during dry weather conditions. No illicit discharges are suspected at this time.	Measurable goals for 2003 General Permit have been met. The Town's IDDE Program is ongoing.
ID-3 Revised	Develop and implement an illicit discharge by-law	Board of Health and Stormwater Committee	Y4: Present by-law at Town meeting and finalize Y5: Implement and enforce by-law.	The Illicit Discharge By-law was adopted at Annual Town Meeting on May 4, 2009. The Board of Health is responsible for implementing and enforcing the by-law.	Measurable goals for 2003 General Permit have been met. Continue to implement and enforce the Illicit Discharge By-law.
ID-4 Revised	Educate citizens	Board of Health	Y3: Notify public of IDDE plan Y4: Notify public of upcoming IDDE by-law Y5: Notify public of new by-law in place Y6: Notify public of upcoming IDDE by-law	No additional activities planned for Permit Year 8.	Measurable goals for 2003 General Permit have been met.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
CS-1 Revised	Develop and implement Construction Site Runoff Control Program	Con. Com.	Y3-Y5: Implement Construction Site Runoff Control Program	The Stormwater regulations were adopted by the Conservation Commission on December 17, 2007. Construction site runoff control measures are implemented through the stormwater permitting process. DCR staff inspected a large construction site (Tower Hill Botanical Gardens) monthly for compliance with Stormwater standards. No problems were found.	Measurable goals for 2003 General Permit have been met.
CS-2 Revised	Develop and implement Erosion and Sediment Control By-law	Con. Com	Y5: Implement by-law	The Stormwater regulations were adopted by the Conservation Commission on December 17, 2007. Construction site runoff control measures are implemented through the stormwater permitting process.	Measurable goals for 2003 General Permit have been met.

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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
PC-1	Develop and implement Post-Construction Runoff Control Program	Con. Com.	Y3-5: Implement Post-Construction Runoff Control Program	The Stormwater regulations were adopted by the Conservation Commission on December 17, 2007. Post-construction runoff control measures are implemented through the stormwater permitting process.	Measurable goals for 2003 General Permit have been met.
Revised					
PC-2	Develop and implement post-construction runoff regulations	Planning Board & Con. Com.	Y4: Implement by-law. Y5: Review effectiveness of by-law and enhance if necessary.	The Stormwater regulations were adopted by the Conservation Commission on December 17, 2007. Post-construction runoff control measures are implemented through the stormwater permitting process.	Measurable goals for 2003 General Permit have been met. As the Conservation Commission continues to issue and enforce Stormwater Control Permits, the by-law and regulations will be enhanced as deemed necessary.
Revised		Con. Com.			

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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
GH-1	Employee training program	Highway Dept.	Y2-Y5: Hold one good housekeeping workshop per year at Highway Department	During daily meetings with personnel, good housekeeping measures (such as drain system maintenance and identifying illicit discharges) are discussed as they relate to stormwater practices. The Highway Superintendent attended the Massachusetts Highway Association 2010 Annual Meeting on May 6 where Thelma Murphy of EPA presented <i>EPA's New MS4 Stormwater Permit – Understanding the new Regulations.</i>	Measurable goals for 2003 General Permit have been met.
Revised					
GH-2	Catch basin cleaning	Highway Dept.	Y1-Y5: Highway Department will clean each catch basin in the urbanized area of Town once per year.	The Highway Dept. cleaned catch basins twice per year and as needed. Outfalls are also cleaned as needed – approximately two in the last year. Two catch basins were also rebuilt in the last year.	Continue to clean catch basins at least once per year in the urbanized area of Town.
Revised					
GH-3	Street sweeping	Highway Dept.	Y1-Y5: Highway Dept. will sweep every street in the urbanized area once per year.	Highway Dept. swept streets once in Spring and as needed.	Continue to sweep streets in the urbanized area at least once per year.
Revised					

GH-4 Revised	Recycling program	Highway Dept.	Y1-Y5: Continue Town's waste oil collection	Continued to collect waste oil at the Town Barn to burn in the furnace. Residents of the seven Wachusett towns, including Boylston, may bring recycling and bulk items to the Wachusett Watershed Regional Recycling Center. Two Household Hazardous Waste Collections were held on September 18 and November 20, 2010. Because of budget constraints, a formal schedule for municipal activities was not developed.	Continue acceptance of waste oil at the Highway Barn. Continue partnership with regional collection center.
GH-5 Revised	Municipal Operation and Maintenance Plan	Highway Dept.	Develop schedule for municipal maintenance activities		Plan to formalize municipal operation and maintenance program and schedule in the next permit term.
GH-6 Revised	Reporting	Highway Dept.	Record stormwater management activities	The Highway Superintendent prepares a weekly report of Highway Dept. activities for the Town Administrator, which includes stormwater related activities.	Measurable goals for 2003 General Permit have been met. Continue Highway Department weekly reporting to the Town Administrator.

Note: BMP GH-7 "Route 70 / Mile Hill Road Drainage Improvements" was removed from this report. These drainage modifications will improve water quality through Stormwater management, but the project is located outside of the regulated urbanized area.

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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
TMDL-1	Check current impairment lists	DPW	Y1: There are no completed TMDL studies for receiving waters in Boylston's urbanized area. Y2-Y5: Check current MA Integrated List of Waters each Winter for newly listed waters	Reviewed Proposed Massachusetts 2010 Integrated List of Waters and MassDEP TMDL website. Draft pathogen TMDL report available for the Nashua River Watershed, which includes Malagasco Brook. However, Malagasco Brook is no longer listed as Category 5 for pathogens based on new assessment. Is it still listed as impaired for macroinvertebrates and nutrients/ eutrophication.	Measurable goals for 2003 General Permit have been met.
Revised					
TMDL-2	Malagasco Brook Pathogens	Stormwater Committee	Y3: Partner with DCR	TMDL of Phosphorus for Selected Northern Blackstone Lakes, including Newton Pond, is final. Outfalls along the Brook have been located and mapped. DCR continues to monitor the brook.	Since bacteria are no longer the cause of impairment, Boylston will address other pollutants of concern through the Stormwater Program.
Revised					

7b. WLA Assessment: N/A

Per Part I.D.3. of the General Permit, “if the MS4 is required to implement storm water waste load allocation provisions of the TMDL, the permittee must assess whether the WLA is being met through implementation of existing storm water control measures or if additional control measures are necessary. The permittee’s assessment of whether the WLA is being met is expected to focus on the adequacy of the permittee’s storm water controls (implementation and maintenance), not on the response of the receiving water.”

There is a final TMDL of Phosphorus for Selected Northern Blackstone Lakes, including Newton Pond within Boylston and Shrewsbury. Because the TMDL is for a pollutant likely to be found in storm water discharges from Boylston’s MS4, their Stormwater Management Program includes BMPs that address the load allocation. The TMDL includes a target in-lake total

phosphorus concentration is 25 ppb and a load allocation of 257 kg/year, as shown below in Table 4k from the TMDL report.

Table 4k. Newton Pond MA511110 TMDL Load Allocation.

Source	Current TP Loading (kg/yr)	Target TP Load Allocation (kg/yr)
Forest	88	88
Agriculture	10	7
Open Land	30	21
Residential (Low den.)	33	23
Residential (High den.)	128	90
Comm. Indust.	33	23
Septic System	8	5
Other	0	0
Total Inputs	330	257

At this time, Boylston is making steady progress towards meeting the load allocation through implementation of existing BMPs. Boylston’s Stormwater Management Program includes a number of existing stormwater control measures, as reported in the above Annual Report, that address pollutants of concern in water quality impaired waters and total phosphorus. The BMPs identified under Minimum Control Measures (MCMs) 1 through 6, including, but not limited to, those relating to public education, pet waste, illicit discharges, construction and post-construction inspections, employee training, and the good housekeeping measures such as street sweeping and catch basin cleaning, all help prevent phosphorus from entering water bodies in Town.

At this time, the Town does not plan to add any BMPs to address the load allocation, but will consider additional BMPs to address the TMDL during development of the next NOI.

Part IV. Summary of Information Collected and Analyzed

DCR routine monitoring in Boylston is unchanged. Weekly monitoring for turbidity, temperature, E.coli, and conductivity occurred at four tributaries in town including one (Malagasco Brook) within the regulated urbanized area. Nutrients are collected six times per year at French Brook and Malagasco Brook.

The Town of Boylston did not collect/analyze any additional water quality data for the Stormwater Management Plan during Permit Year 8.

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, 2008 through March 31, 2011)

Programmatic

(Preferred Units)		Response
Stormwater management position created/staffed	(y/n)	N
Annual program budget/expenditures **	(\$)	
Total program expenditures since beginning of permit coverage	(\$)	
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General Fund, grants from EOE A

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	100% residential
Stormwater management committee established	(y/n)	Y
Stream teams established or supported	(# or y/n)	Y
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	N
Shoreline cleaned since beginning of permit coverage	(mi.)	-
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	2
▪ community participation **	(# or %)	
▪ material collected **	(tons or gal)	
School curricula implemented	(y/n)	Y

Legal/Regulatory

Regulatory Mechanism Status (indicate with "X")				
In Place Prior to Phase II	Reviewing Existing Authorities	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				N/A
▪ Erosion & Sediment Control				X
▪ Post-Development Stormwater Management				X

Mapping and Illicit Discharges

(Preferred Units)		Response
Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(#)	20 in UA
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100% in UA
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	100%
▪ GIS	(%)	100%
Outfalls inspected/screened **	(# or %)	7
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	20
Illicit discharges identified **	(#)	0
Illicit discharges identified (Since beginning of permit coverage)	(#)	1
Illicit connections removed **	(#); and (est. gpd)	0
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	1
% of population on sewer	(%)	0
% of population on septic systems	(%)	100

Construction

	(Preferred Units)	Response
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 (for proper BMP installation & operation) completed **	(# or %)	
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	Y
Low-impact development (LID) practices permitted and encouraged	(y/n)	Y

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
Qty of structures cleaned **	(#)	
Qty. of storm drain cleaned **	(%, LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	
Basin Cleaning Costs		

Annual budget/expenditure (labor & equipment)**	(\$)	\$35,000 for catch basin cleaning and street sweeping combined
Hourly or per basin contract rate **	(\$/hr or \$ per basin)	
Disposal cost**	(\$)	
Cleaning Equipment		
Clam shell truck(s) owned/leased	(#)	1
Vacuum truck(s) owned/leased	(#)	0
Vacuum trucks specified in contracts	(y/n)	
% Structures cleaned with clam shells **	(%)	100%
% Structures cleaned with vacor **	(%)	0%

(Preferred Units) Response		
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)	
Annual Sweeping Costs		
Annual budget/expenditure (labor & equipment)**	(\$)	Included in catch basin budget
Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	
Disposal cost**	(\$)	
Sweeping Equipment		
Rotary brush street sweepers owned/leased	(#)	1 - owned
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 %)	N/A
▪ Herbicides	(lbs. or %)	N/A
▪ Pesticides	(lbs. or %)	N/A
Integrated Pest Management (IPM) Practices Implemented	(y/n)	

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used **	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	NaCl – 500 tons Sand – 2,000 cubic yards Protected area is along Rt 70, maintained by MassDOT.
(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)		
Pre-wetting techniques utilized **	(y/n or %)	
Manual control spreaders used **	(y/n or %)	
Zero-velocity spreaders used **	(y/n or %)	
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	
% 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)	Y

Water Supply Protection

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