Municipality/Organization: **Town of West Springfield**

EPA NPDES Permit Number: **MA041024**

MassDEP Transmittal Number: **W-035938**

Annual Report Number
& Reporting Period: **Year 14** **April 1, 2016 – March 31, 2017**

NPDES PII Small MS4 General Permit
Annual Report
(Due: May 1, 2017)

Part I. General Information

Contact Person: Fred Kapinos Title: Project Manager

Telephone #: (413) 495-1837 Email: fkapinos@townofwestspringfield.org

Mailing Address: 26 Central Street - Suite 17, West Springfield, MA 01089-2763

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: William Reichelt

Title: Mayor

Date: April 27, 2017

Part II. Self-Assessment

The Town of West Springfield has completed the required self-assessment and has determined that our municipality is in compliance with permit conditions where budget and resources allow.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permit
4A Revised	Construction Site Runoff Ordinance	Planning Dept. Build Inspector	Eval Exist Regs Yr 1 Draft Revisions Yr 2 Propose for adoption in Year 3	Landscaping Standards and Parking Lot Stormwater Management Zoning Ordinance Adopted December 2015.	Implementing Ordinance.
4B Revised	Erosion and Sediment Control Plan Review	Planning Dept.	Enforcement under existing Regulations Yr 1-2 Enforcement under adopted ordinance Years 3 to 5	Landscaping Standards and Parking Lot Stormwater Management Zoning Ordinance Adopted December 2015.	Implementing Ordinance.
4C Revised	Inspection Reporting	Conservation Commission	Enforcement under existing Regulations Yr 1-2 Enforcement under adopted ordinance Years 3 to 5	Landscaping Standards and Parking Lot Stormwater Management Zoning Ordinance Adopted December 2015.	Implementing Ordinance.
5A Revised	Post Construction Runoff Ordinance	Planning Dept.	Eval. Exist Std – Yr 1 Draft Revision -Yr 2 Propose Adopt – Yr 3	Landscaping Standards and Parking Lot Stormwater Management Zoning Ordinance Adopted December 2015.	Implementing Ordinance.
5C Revised	Stormwater System Maintenance Plan	Planning Dept.	Enforcement under existing Regulations Yr 1-2 Enforcement under adopted ordinance Years 3 to 5	Landscaping Standards and Parking Lot Stormwater Management Zoning Ordinance Adopted December 2015.	Implementing Ordinance.

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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permit
1A	Educational Displays at the DPW Offices	DPW	1 Display in Municipal Building per year (Year 1 to 5)	Stormwater posters have been installed outside of DPW Offices in the Municipal Office Building.	Posters produced by The Connecticut River Stormwater Committee.
Revised					
1B	Classroom Education	DPW	DPW Classroom Presentation (Year 1 to 5)	The town continues to develop classroom education programs which will be implemented in the new permit cycle.	Continue to participate in Classroom Educational Programs.
1C	Newspaper Press Release	DPW	Press Release to local newspaper –2 per year (Year 1-5)	Working on developing new Press releases and articles to appear in the West Springfield Record and the Springfield Republican periodically through the calendar year.	Continue press releases and articles for the local newspapers.
Revised					
1D	Local Cable Access	DPW	Show Stormwater Video – 2 per year (Year 1-5)	Working with the Town's local cable access channel to have storm water related videos played periodically as well as public service announcements.	Continue with public service announcements and notices, local environmental programs and lectures.
Revised					
1E	Informational Pamphlets	DPW	Develop Pamphlets and distribute with water bills (Year 1,3,5)	Working on developing new informational pamphlets to be sent out with quarterly water bills.	Working on developing new informational pamphlets to be sent out with quarterly water bills.
Revised					
1F	Open House at Transfer Station	DPW	Publicize and Support Annual Event (Year 1 to 5)	Public Presentations are presented by the Connecticut River Stormwater Committee – Think Blue Campaign.	The town will continue to sponsor programs and lectures which highlight the environment.

1. Public Education and Outreach (Continued)

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permit
1G	Community Website	DPW	2 Notices per Year on local "Virtual Town Hall" website (Year 1 to 5)	Working on developing the Town's website to include new NPDES Web pages with updated information and document the town's efforts.	The town is developing a new website starting May 2017. DPW personnel will update the new site with pertinent stormwater info.
Revised					

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permit
2A	Adopt a Road	City Council	Support "Townwide Cleanup" activities – Years 1 to5	Annual "Earth Day Cleanup" activities utilize volunteer groups who help with the cleanup. These groups go along brooks and streams and remove litter and other debris.	The Town will continue to sponsor "Earth Day Cleanup Activities".
2B	Adopt a Stream	DPW	Maintain Signage identifying stream names sponsored by volunteer groups – Years 1 to 5	During "Earth Day Cleanup" volunteers check the signs that identify the names of streams. The signs are replaced if they are damaged.	The Town will continue to sponsor "Earth Day Cleanup Activities".
2C	Attitude Surveys	DPW	Include Stormwater Survey on Website – Years 2 & 5	West Springfield is working with the Connecticut River Stormwater Committee.	The Town will continue to work with and support the Connecticut River Stormwater Committee.
Revised					
2D	Community Hotline	DPW	Place DPW phone number on Town Website for reporting of illicit discharges – Years 1 to 5	Continue to post phone numbers on the Town's Website for reporting stormwater issues.	Continue to post phone numbers on the Town's Website for reporting stormwater issues. Developing new website for May 2017.
Revised					
2E	Storm Drain Stenciling	DPW	Recruit volunteers for stenciling anticipated 100 catchbasins per yr	Catch Basin stenciling has occurred during the course of the permit.	The town will continue to solicit volunteers for catch basin stenciling and investigate catch basin grates inscribed with stormwater information for other locations.
Revised					

2. Public Involvement and Participation (Continued)

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permit
2F	Water Quality Monitoring	DPW	Visual Inspection of priority outfalls by volunteers, 10 per yr (Years 2 & 5)	Field inspected 100% of the known 272 mapped outfalls by Tighe & Bond Consulting Engineers.	Continue monitoring of water quality in streams and brooks. DPW and Conservation Commission will work to monitor outfalls.
Revised					
2G	Watershed Committee	WRA	Support Westfield River Association, inform of DPW activities (Year 1 to 5)	The Town of West Springfield supports the activities of the Westfield River Watershed Association in cleaning up of the town's riverbanks.	The Town of West Springfield will continue to support the Westfield Watershed Association.
Revised					
2H	Hazardous Waste Collection	DPW	Publicize annual event collecting Universal Wastes (Year 1 to 5)	Hazardous Waste Collection conducted on 22 Oct. 2016; 266 Vehicles 30 gal - Used Antifreeze 500 gal - Used Oils 320 gal - Solvents 200 gal & 100 cans – Old paint 11 CF of boxed - mixed pesticides	The Town of West Springfield will continue to conduct Hazardous Waste Collections in the early fall of each year. The next scheduled collection day event is 21 October 2017.
Revised					
2I	Wetlands Planting Remove invasives	DPW	Recruit volunteers for wetlands improv-ments (Year 1 to 5)	Local volunteer groups help with Earth Day Cleanup. Debris is typically removed from local wetland habitats. Earth Day Cleanup was organized by DPW and Conservation Commission and picked up tons of litter, bulk waste and tires, some with metal rims.	West Springfield will continue to support local conservation groups thru town-sponsored activities and the environmental committee.
Revised					

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any) Tighe & Bond Consulting Engineers for 3A, 3B & 3E	Planned Activities – Future Permit
3A	Mapping Stormwater Outfalls	DPW	Develop map of stormwater outfalls, Year 1 Field inspect, Year 2-5 verify 25% per year	Mapped 100% of outfalls in town focusing first on densely populated areas.	DONE
Revised					
3B	Develop Illicit Discharge Plan	DPW	Evaluate Year 1 Draft Plan Year 2 Propose adoption Yr 3 Implement Yrs. 3 to 5	Simultaneously mapped outfalls and system-wide storm and sewer structures (i.e., catch basins, manholes, pipes) for 100% of town. This will provide accurately located structures to help the town immediately and more easily implement the Illicit Discharge Detection and Elimination Program.	Systematic Cleaning and Inspection of Storm Drainage Piping, catch-basins and Manholes
Revised					
3C	Non- Stormwater Ordinance	Planning Board / DPW	Evaluate Year 1 Draft Plan Year 2 Propose adoption Yr 3 Implement Yrs. 3 to 5	Ordinance was adopted April 19, 2005 It has been implemented	DONE
Revised					
3D	Inform Employees, Businesses, Public	DPW	Publicize Illicit Discharge Plan (Year 3 & 5)	Working towards creating a new stormwater page on the Town's website for stormwater documents the public can access.	Continue working towards creating a new stormwater page on the Town's website for stormwater documents the public can access.
Revised					
3E	Video Inspection	DPW	Conduct as needed in conjunction with BMP #3B (Years 1 to 5)	No storm drains were inspected this permit period. Kenyon Pipeline did however inspect and clean 16,606 LF of sanitary sewer collector mains.	Drain pipes and/or Manholes will be repaired based upon results of this study. Also continue working on integrating this into the Town's annual street resurfacing program.
Revised					

3. Illicit Discharge Detection and Elimination (Continued)

3F	Failing Septic Systems	Board of Health	Keep records for identification of Problem Areas (Years 1 to 5)	Health Department has records of Septic Systems. These are being entered onto the Town's GIS mapping system.	Continue to enter septic system information onto the Town's GIS mapping system
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permit
4A	Construction Site Runoff Ordinance	Planning Dept. Build Inspector	Eval Exist Regs Yr 1 Draft Revisions Yr 2 Propose for adoption in Year 3	Landscaping Standards and Parking Lot Stormwater Management Zoning Ordinance Adopted December 2015.	Implementing Ordinance.
Revised					
4B	Erosion and Sediment Control Plan Review	Planning Dept.	Enforcement under existing Regulations Yr 1-2 Enforcement under adopted ordinance Years 3 to 5	Landscaping Standards and Parking Lot Stormwater Management Zoning Ordinance Adopted December 2015.	Implementing Ordinance.
Revised					
4C	Inspection Reporting	Conservation Commission	Enforcement under existing Regulations Yr 1-2 Enforcement under adopted ordinance Years 3 to 5	Landscaping Standards and Parking Lot Stormwater Management Zoning Ordinance Adopted December 2015.	Implementing Ordinance.
Revised					

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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permit
5A	Post Construction Runoff Ordinance	Planning Dept.	Eval.Exst Stand – Yr 1 Draft Revision – Yr 2 Propose Adopt - Yr 3	Landscaping Standards and Parking Lot Stormwater Management Zoning Ordinance Adopted December 2015.	Implementing Ordinance.
Revised					
5B	Construction Site Plan Review	Planning Dept.	Enforcement under existing Regs Yr 1-2 Enforcement under adopted ordinance Years 3 to 5	Landscaping Standards and Parking Lot Stormwater Management Zoning Ordinance Adopted December 2015.	Implementing Ordinance.
Revised					
5C	Stormwater System Maintenance Plan	Planning Dept.	Enforcement under existing Regs Yr 1-2 Enforcement under adopted ordinance Years 3 to 5	Landscaping Standards and Parking Lot Stormwater Management Zoning Ordinance Adopted December 2015.	Implementing Ordinance.
Revised					

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permit
6A	Municipal Maintenance Activity Program	DPW	Evaluate and draft additional policies as necessary, Year 1. Comply, Yrs 2-5	DPW maintains 17 parks and ball fields – trash is picked up on a daily basis. Vehicle fleets inspected monthly and oil changes done on a regular basis Catch basins are cleaned as there is a route established to clean them all.	Continue the effort established in previous years.
6B	Employee Training	DPW	Initial Good Housekeeping training Year 1. Annual Refresher Yrs 2-5	Employees are trained in the Municipal Maintenance Activity Program.	Continue the effort established in previous years.
6C	Catch basin Program	DPW	Clean 50% of Catch basins per year	14% of the catch basins were cleaned this year. Collected materials were picked up by private vendor and disposed of appropriately.	Continue the effort established in previous years and increase the % of catch basins cleaned annually.
Revised					
6D	Street Sweeping	DPW	Sweep Streets once per year and Business Districts monthly, spring thru fall Yrs 1-5	The DPW swept the entire town, ~120 miles of roads, once this year. Downtown and main arterial routes were swept an additional 3 times. Street sweepings were collected for use as ground cover at the Springfield Yard Waste Composting Facility.	Continue the effort established in previous years.
6E	Road Salt Program	DPW	Employee Training at Salt-Institute, Yr. 1 Investigate alternative chemicals Yrs 2-5	DPW used 2000 tons of road salt, 100 gallons of Calcium Chloride and 800 tons of sand to mitigate road ice this past winter season.	DPW Continues to use simple salt when possible, calcium chloride for some walkways, using sand only when salt is no longer effective.
Revised					

6. Pollution Prevention and Good Housekeeping in Municipal Operations (Continued)

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permit
6F	Lawncare and Pest Control	DPW	Train 2 Employees for application of controls Yr 1 Implement Practices Yrs 2-5	Continue the effort established in previous years.	Continue the effort established in previous years.
6G	Stormwater Pollution Prevention Plan / MSGP at the City Garage (Town Yard)	DPW	Implementation of SWPPP, Year 1. Comply, yrs 2-5	4 bays of the existing DPW Garage have been reconstructed for use as state of the art repair facility. The town has abandoned plans to build a new facility.	DONE
6H	Used Oil Recycling	DPW	Continue collection and recycling, Years 1-5.	In 2016 the town recycled all 380 gallons of its used oil produced from vehicle and equipment maintenance activities.	Continue to collect and recycle all used oils and lubricants produced through vehicle and equipment maintenance.
Revised					
6I	Illegal Dumping	DPW	Pickup of dumped waste, Yrs 1-5	The DPW picked up illegally dumped materials typically at: Agawam Ave, Bear Hole Reservoir, Circuit Ave, Palmer Ave, Old Westfield Road and 7.2 miles of earthen dike. .	Continue the relationship with bearhole and levee system resident volunteers to keep wildlife areas free of illegally dumped trash, and respond quickly to reports of illegal dumping.
Revised					

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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permit
7A	TMDL for the Connecticut River	DPW, Planning, Health, Bldg Departments	Completion of BMP's under all of the Six Minimum Control Categories	Refer to previous BMP's	
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

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, 2015 through March 31, 2016)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	Y part-time
Annual program budget/expenditures **	($)	$ 41,800
Total program expenditures since beginning of permit coverage	($)	$ 1,255,219
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General Fund

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	-
Stormwater management committee established *(Connecticut River Stormwater Committee)*	(y/n)	Y
Stream teams established or supported *(Westfield River Watershed Association)*	(# 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.)	
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	1
▪ community participation **	(# or %)	266 vehicles
▪ material collected **	(tons or gal)	See BMP ID# 2H
School curricula implemented	(y/n)	Y

Legal/Regulatory

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

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(#)	272
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	100%
Outfalls inspected/screened **	(# or %)	
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	272
Illicit discharges identified **	(#)	
Illicit discharges identified (Since beginning of permit coverage)	(#)	9 very likely 19 maybe
Illicit connections removed **	(#); and (est. gpd)	
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	

% of population on sewer	(%)	95%
% of population on septic systems	(%)	5%

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	0
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	1
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)	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)	.2
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	.2
Qty of structures cleaned **	(#)	288
Qty. of storm drain cleaned **	(%, LF or mi.)	.5 miles
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	7.2+ tons
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	landfill

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	($)	$ 10,640.00
• Hourly or per basin contract rate **	($/hr or $ per basin)	$133.00/hour
• Disposal cost** [line item included with trash collection contract $50/ton]	($)	$ 360.00
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	0
• Vacuum truck(s) owned/leased	(#)	1
• Vacuum trucks specified in contracts	(y/n)	None
• % Structures cleaned with clam shells **	(%)	None
• % Structures cleaned with vactor **	(%)	100%

	(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)	4
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	1,800 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Compost
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)** Operator & Truck - $77.00/hr	($)	$30,800.00
• Hourly or lane mile contract rate ** No Contractual Services this year. Done in-house	($/hr. or ln mi.)	N/A
• Disposal cost** [included with trash collection contract]	($)	$ 0.00
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	1
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	N
• % 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 *4 Ballfields x 4 applications*	(lbs. or %)	8,215 lbs
▪ Herbicides *By Contract 7.2 miles of earthen dike has vegetation control*	(lbs. or %)	2X
▪ Pesticides	(lbs. or %)	N/A
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	69% 3% 28%
Pre-wetting techniques utilized **	(y/n or %)	N
Manual control spreaders used **	(y/n or %)	N
Zero-velocity spreaders used **	(y/n or %)	N
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	0%
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)	(%)	50%
Storage shed(s) in design or under construction	(y/n or #)	3
100% of salt/chemical pile(s) covered in storage shed(s) by May 2017	(y/n)	1

Water Supply Protection

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

Connecticut River Stormwater Committee
Annual Report
April 1, 2016 to March 31, 2017

The Connecticut River Stormwater Committee

The Connecticut River Stormwater Committee is an intergovernmental compact, now grown to include 17 municipalities, that is organized to collaborate in meeting NPDES MS4 permit requirements for stormwater education and outreach (Minimum Control Measure #1). Facilitated and staffed by the Pioneer Valley Planning Commission, the Committee also works together to meet other permit compliance activities where appropriate and needed. Member communities are shown in Table 1 below.

Table 1: Connecticut River Stormwater Committee Member Communities

Member Community	Committee Representatives and Departments
Agawam	Tracey DeMaio, Department of Public Works
Belchertown*	Steve Williams, Department of Public Works
Chicopee	Quinn Lonczak, Department of Public Works
East Longmeadow*	Robert Peirent, Department of Public Works
Easthampton	Dan Murphy, Department of Public Works
Granby	Dave Derosiers, Highway Department
Hadley*	Marlo Warner, Department of Public Works
Holyoke	Michael McManus, Department of Public Works
Longmeadow	Mario Mazza, Department of Public Works
Ludlow	Jim Goodreau, Department of Public Works
Northampton	Doug McDonald, Department of Public Works
Southwick	Randall Brown and Richard Grannells, Department of Public Works
South Hadley	Melissa LaBonte, Department of Public Works
Springfield	Kevin Chaffee, Planning/Conservation
West Springfield	Jim Czach, Department of Public Works
Westfield	Casey Berube, Department of Public Works
Wilbraham*	Tonya Basch, Department of Public Works

* Member that joined Committee this year.

Education and Outreach over the Past Year

With the rigors of the new MS4 permit requirements, the Stormwater Committee has been in a transition phase, where it has continued education and outreach under the requirements of the 2003 permit, but is also taking important steps in preparing for forthcoming requirements that begin July 1, 2017. In some cases, the work of preparing for the forthcoming permit has served to provide education and outreach under the 2003 permit.

The narrative below summarizes the work of the Connecticut River Stormwater Committee during the 2016-2017 reporting year, which includes the following:

1. Reached out to dog owners on pet waste disposal practices
2. Expanded understanding about stormwater issues and permit compliance
3. Promoted Soak up the Rain stormwater education campaign
4. Defined program of effective stormwater messaging for the next five-year permit term
5. Continued planning for website education in the Pioneer Valley
6. Collaborated with Massachusetts state-wide coalition of stormwater coalitions
7. Designed and constructed demonstration rain garden at the Renaissance School in Springfield
8. Led project in Chicopee, Ludlow, and Springfield to reduce urban flows into Chicopee River
9. Led urban tree planting project in Chicopee, Holyoke, and Springfield
10. Led project in Holyoke to reduce urban flows into Day Brook

In addition to these public education and outreach activities described in fuller detail below, members of the Stormwater Committee have joined PVPC in other MS4 permit related activities, including:

- Collaborating in understanding new permit requirements through dialogue with MassDEP and U.S. EPA and through use of Committee time to review and dialogue about specific sections of the permit together. These conversations are helping members understand how they might most effectively proceed in permit compliance as individual permittees on certain elements, but also in collaboration with others for important cost savings on other elements.

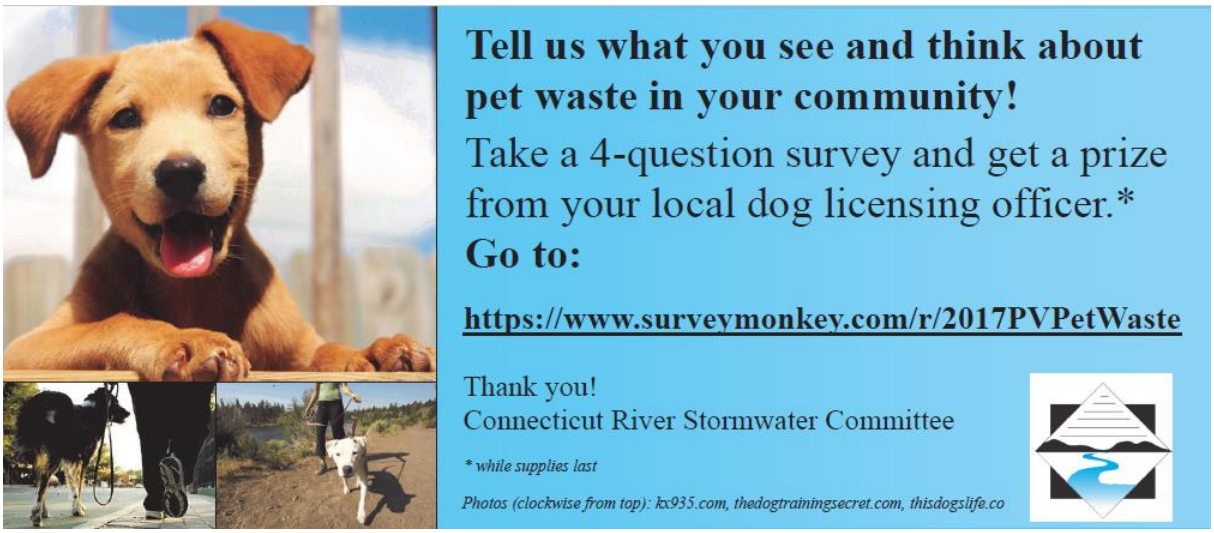
- Reviewing and updating municipal land use code to comply with new MS4 permit requirements. This is occurring through both fee for service in one community and through a Massachusetts Department of Administration and Finance's Efficiency and Regionalization grant and match from District Local Technical Assistance for another nine communities.

- Preparing for Illicit Discharge Detection and Elimination and Good Housekeeping trainings for municipal staff with funding from the Massachusetts Department of Administration and Finance's Efficiency and Regionalization grant. The trainings, to be conducted this coming year, will be videotaped to enable future trainings to occur as required and needed with new staff.

- Collaborated on defining needs for integrating stormwater system mapping with data collection requirements through funding from the Massachusetts District Local Technical Assistance program. A consultant has been hired to provide this integration so that data collection (outfall screening and sampling, manhole inspections, catch basin cleaning, etc.) can occur easily in the field and then uploaded to reference with geographically specific locations within Arc GIS mapping of the storm system for analysis in defining priority catchments and annual reporting to EPA.

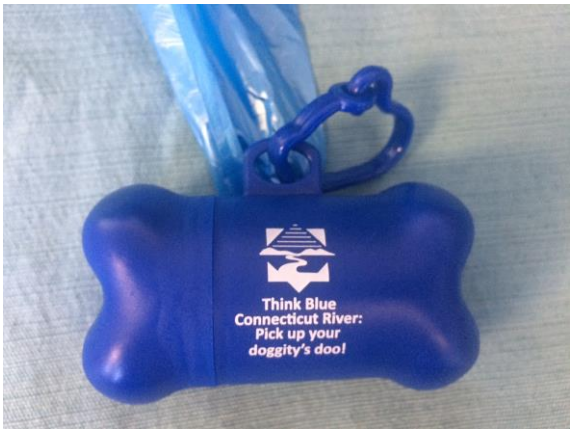
1. Reached out to dog owners on pet waste disposal practices

Based on the bacteria messaging research completed last year, the Committee began this year to finalize an outreach program to dog owners on proper management of pet waste. Work this year focused on working with Town Clerks/Dog Licensing Officers in each member community to distribute a survey with three questions that will enable targeting of the program in each community. This survey is being distributed through Town Clerks/Dog Licensing Officers, starting in January 2017, via a glossy flyer that accompanies dog licenses. The flyer includes a link to the electronic survey and dog owners are incentivized to take the survey with a small prize that promotes better pet waste management practices.



Above is an image of the glossy flyer distributed by Town Clerks/Dog Licensing Officers in member communities in issuing dog licenses. It provides a link to the electronic survey and offer of a prize for taking the survey.

At right is an image of the prize offered to those completing the survey.



The survey contains four simple questions:

- In what Town do you license your dog?
- What are specific locations or types of place sin your tonw/city where you notice accumulation of or problems with pet waste? (Town/City Parks-please specify below, along rivers/streams in town- please specify below, along streets and sidewalks- please specify below)
- What do you believe most likely happens to pet waste left on the ground in these problem areas? (decomposes into the ground, washes into streams and rivers, cleaned up by municipal officials/landowners, others)
- Which graphic/message below is most likely to encourage people to pick up their dogs' waste? (rank from 1 to 5, with 1 being most likely)

Once dog licensing is complete in member communities (there is a some variation on procedure and timetable from one municipality to another), survey results will be compiled. These results will help in providing an important base line in measuring the effectiveness of the 5-year education and outreach program to come. The Committee will likely be looking to two metrics: how much change there is in knowledge about what happens to pet waste left on the ground and the degree to which specific known problem pet waste locations within municipalities improve. The program will go hand-in-hand with a

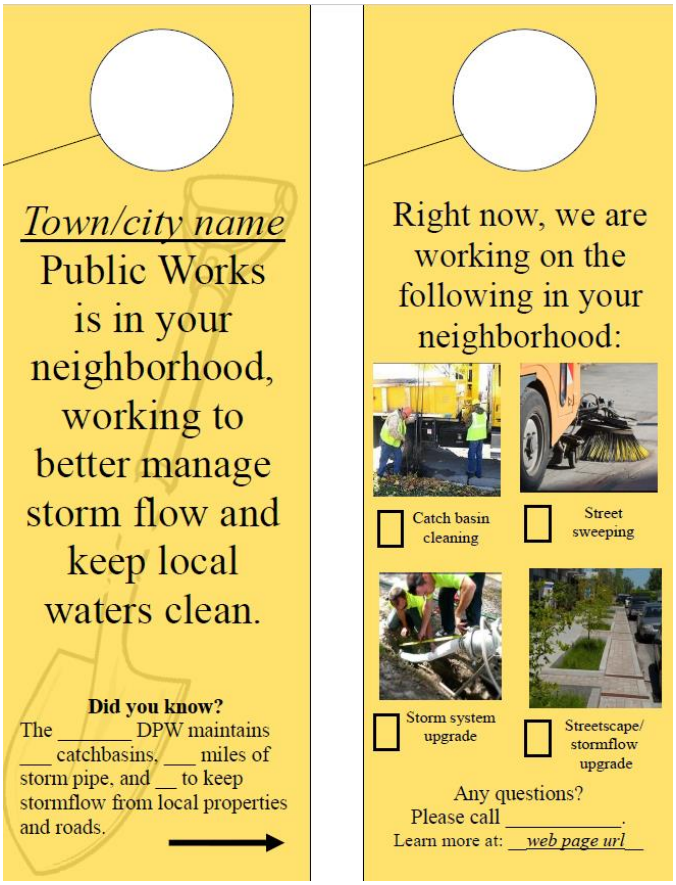
review and update of pet waste ordinances that will be referenced in educational materials during the new permit term.

2. Expanded understanding about stormwater issues and permit compliance

With renewed need for building understanding about stormwater issues and winning support for permit compliance budgets, the Committee undertook three activities this year to promote greater awareness in the region.

Door hanger for use in neighborhoods to highlight stormwater work

When public works or highway crews are out maintaining, fixing, or upgrading the municipal stormwater system, the work typically goes unseen. The only visible evidence to residents and businesses may be some traffic flow inconvenience around a manhole or along a trench. To highlight this "invisible" work, the Committee designed door hangers that can be used when crews are working in a given neighborhood. This idea is borrowed from Chicopee, where the simple act of using doorhangers played a vital role in helping people to understand the value of stormwater work and the need to establish dedicated funding for their program.



Door hangers, image shown above, were designed to be modified for use in each member community to elevate the visibility and increase understanding about stormwater among residents and businesses.

Understanding about stormwater and permit requirements among other local officials

For the Committee, PVPC prepared a powerpoint presentation that outlines the major requirements of the new stormwater permit and the water quality elements specific to the region. PVPC staff presented this material in May to the Valley Development Council, a group of municipal planners in Hampshire and Hampden Counties (as well as representatives of the home builders, real estate and housing communities) that meet quarterly to discuss issues and share ideas on planning and smart growth. The presentation is available to all Stormwater Committee members as they work with colleagues and constituents to move forward on discussions about stormwater issues. MassDEP Stormwater Coordinator Fred Civian has offered his assistance to Committee members in promoting understanding about permit compliance and to date has joined PVPC staff in visiting with municipal officials in Hadley.

3. Promoted "Soak up the Rain" stormwater education campaign

The Connecticut River Stormwater Committee continued to develop and promote the "Pioneer Valley Soak up the Rain" education campaign (a local version of the EPA's New England campaign). The campaign, a call to action for property owners to reduce stormwater runoff through strategies that soak up the rain, involves two outreach efforts for the Connecticut River:

Pioneer Valley Soak up the Rain Website www.pvpc.org/soakuptherain/

The Stormwater Committee continues to maintain the Pioneer Valley Soak up the Rain website, which promotes a range of practices, including tree plantings, rain gardens, permeable pavements, dry wells, and green roofs. An occasional blog that includes photos and video provides examples from the region. Property owners throughout the Pioneer Valley are also invited to submit projects that they know of to feature on the website. A "Cool resources" heading provides connection to the latest information and a "resources" menu item links to a library of informational resources. In the past year, the website had 24,164 hits with 17,115 of these hits resulting in information requests being sent to the user.

Soak up the Rain signs for rain gardens and porous paving projects

Soak up the Rain signs for rain gardens and porous paving continue to be available for municipal use and distribution to residential and commercial property owners to highlight local projects. Sign messages currently focus on "Keeping our Rivers Clean." A variation of the sign design is underway for specific use around local lakes in the region, "Keeping our Lake Clean."

4. Defined program of effective stormwater education messaging for the next five-year permit term

The Committee carefully reviewed all stormwater education and outreach requirements in the forthcoming permit and created a table that it has shared widely within the region and across the state through the state-wide coalition. Drawing on this understanding of requirements and several other resources, including research PVPC conducted last year on stormwater education messaging and a survey of Committee members on specific local issues, PVPC staff prepared a program for effective stormwater education messaging for the next five-year permit term. This plan is currently in draft form and will be finalized by Committee members in the coming months and integrated as appropriate with Notice of Intents and Stormwater Management Program Plans in each member community.

5. Continued planning for website education and outreach for the Pioneer Valley

Given the various websites/pages the Stormwater Committee communities have been using to promote work under the 2003 permit, including Think Blue and Greenscapes, and the expanded education and requirements of the forthcoming permit, PVPC has been working to retool and update web materials. This began with a newly proposed website framework under "Think Blue: Clean Water Begins with You," that attends to the various stormwater issues and audiences under the new permit. It will bring together education and outreach materials together with metrics for understanding the effectiveness of messages and movement away from behavior and practices that negatively impact the health of the Connecticut River. PVPC is currently working with its webmaster to determine how this website can be accommodated under the Commission's current website framework.

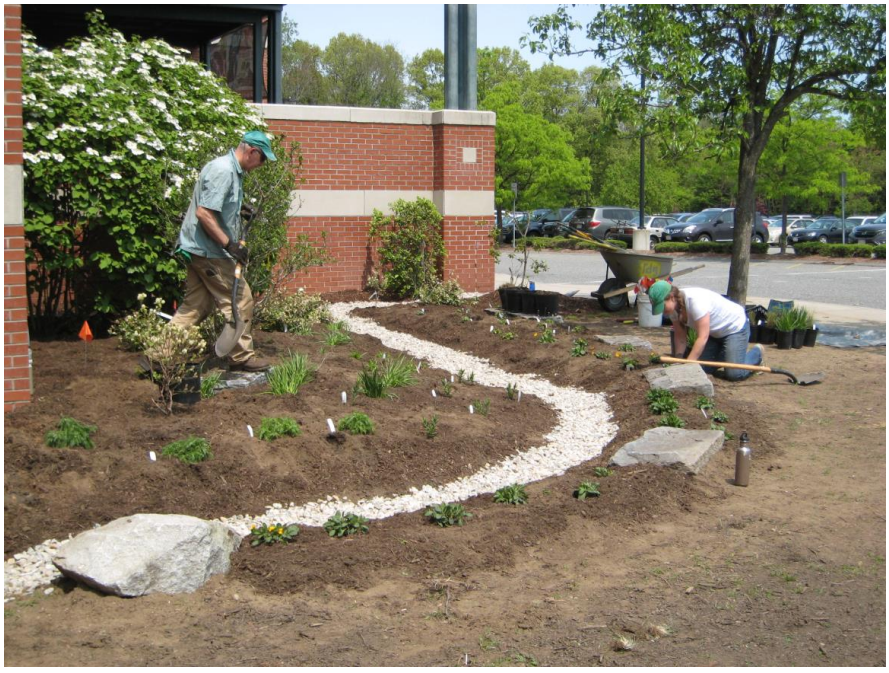
6. Collaborated with Massachusetts state-wide coalition of stormwater coalitions

On behalf of the Connecticut River Stormwater Committee, two municipal Committee representatives and PVPC staff have been attending quarterly meetings of the state-wide stormwater coalition to identify and advance efficiencies that could be achieved through state-wide collaboration on certain MS4 permit compliance activities. PVPC staff is also participating in one of the subcommittees organized to give careful examination to education and outreach compliance activities and best possibilities for state-wide collaboration. The state-wide coalition through the Central Massachusetts Regional Planning Commission has a MassDEP grant to develop some tools and resources for permit compliance.

The following three projects, while specific to certain municipalities, are expanding awareness regionally about stormwater. They also serve to build capacity and know-how in planning, design, and construction of better stormwater management practices. Each project has its own outreach and education component.

7. Designed and constructed regional demonstration rain garden at Renaissance School, Springfield

PVPC staff continued work with the Regenerative Design Group to design and construct a 4th regional demonstration rain garden. The new rain garden at the Renaissance School captures flow from a rooftop at the school's entrance. The rain garden soaks up storm flow that previously entered a catch basin tied to a pipe that empties into Abbey



Brook. Abbey Brook is impacted significantly by urban storm flows which enter the brook at high volumes and velocities whenever it rains.

Sited near the main entrance to the Renaissance School, the rain garden is highly visible. Above image shows the rain garden under construction. Image below shows students asking questions of Landscape Architect and rain garden designer Tom Benjamin.

8. Led project in Chicopee, Ludlow, and Springfield to reduce urban flows to the Chicopee River

PVPC staff collaborated with the Connecticut River Watershed Council and the Chicopee River Watershed Association to evaluate the degree to which urban storm flows are contributing to the bacteria impairment in the Chicopee River. A water quality sampling program during the summer of 2016 involved 10 volunteers who collected samples from local tributaries and storm outfalls on the mainstem during 3 dry and 3 wet weather events. Follow up entailed source tracking at locations showing high bacteria during wet weather. Those results are now in turn leading to preliminary stormwater management facility design in two locations, a park plagued by geese in Chicopee and a small mixed use neighborhood in Ludlow.

9. Led urban tree planting project in Chicopee, Holyoke, and Springfield

PVPC is leading an effort to promote urban tree planting in the region's 3 major cities in partnership with the US Forest Service, Massachusetts Executive Office of Energy and Environmental Affairs, the Valley Opportunity Council, Nuestras Raices, ReGreen Springfield, Conway School of Design, Mass DCR, and the Cities of Chicopee, Holyoke, Springfield. Aimed at reducing stormwater flows to combined sewer areas and promoting greater climate reslience, the project involves an integrated community outreach process involving multiple neighborhood workshops and workshops for public works officials. Once completed, the project will provide the following major deliverables:

- installation of 2,200 trees on local streets and yards
- final engineering design for a green streets in each municipality
- model stormwater tree rebate ordinance

The project is made possible thanks to a $239,000 grant award to PVPC from the US Forest Service under the State and Private Forestry FY15 Northeastern Area Landscape Scale Restoration Program.

10. Led project in Holyoke to reduce urban flows into Day Brook

Through an EPA Urban Small Waters Grant PVPC is developing a green infrastructure plan for Day Brook in Holyoke, which flows from west to east, remaining above-ground from Anniversary Hill Park and Community Field before being conveyed underground beneath the City and routed through the Waste Water Treatment Plant. During large precipitation events, Day Brook's volume contributes to Combined Sewer Overflows into the Connecticut River.

Conceptual design work of this project will recommend ways to reduce inflow into Day Brook through green infrastructure stormwater facilities. The project also aims to increase awareness of this "secret stream" running unseen through the urban landscape. This fall the project began with an arts and science project at Sullivan School located close to the upper reaches of Day Brook. PVPC's partner in this project, Enchanted Circle Theater Group, led a six-week lesson series that taught third and fifth graders about stormwater and CSOs, and resulted in a mural and walk that relates the story of Day Brook in Holyoke. Both the mural and storywalk will be installed in public parks along the path of Day Brook in the summer. Meanwhile, geology students at Holyoke Community College assisted PVPC in conducting percolation tests at several publicly owned sites along the path of Day Brook to determine whether they would be suitable sites for green infrastructure stormwater installations. The City of Holyoke provided equipment and staff to aid in the perc tests, and also conducted GIS mapping of the Day Brook watershed. Next steps include holding two public workshops in the spring and summer (including unveiling the mural), a family-oriented workshop on stormwater at Beaudoin Village, and later in 2017, the development of the conceptual designs and plans.