Municipality/Organization:	City of Westfield
EPA NPDES Permit Number:	MAR041236/MaDEP
MassDEP Transmittal Number:	**W-040836**
Annual Report Number & Reporting Period:	**Year 12** **April 1, 2014 – March 31, 2015**

NPDES PII Small MS4 General Permit Annual Report
(Due: May 1, 2015)

Part I. General Information

Contact Person: Casey Berube Title: Deputy Superintendent

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Mailing Address: 12 Ponders Hollow Road, Westfield, MA 01085

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: Casey Berube

Title: Deputy Superintendent of Public Works

Date: 4/29/15

Part II. Self-Assessment

The City of Westfield has completed the required self-assessment and has determined that our municipality is in compliance with its permit conditions with the following exceptions:

BMP 3-4: Illicit connections identification and removal in priority waters is still underway.
BMP 4-5: Process improvements are needed for erosion and sediment control inspection reports.
BMP 5-3: Inventory of all private and public structural BMPs is still ongoing.

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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1-1	Distribute Educational Pamphlets to municipal employees and households	Stormwater Coordinator and Westfield Gas & Electric Light Department	19,000 pamphlets distributed every two years to all residents and municipal employees	Last pamphlet distribution Jan, Feb, and Mar 2014.	Pamphlet distribution planned for 2015-2016.
1-2	Distribute pamphlets to industries	Stormwater Coordinator	250 pamphlets distributed biannually to industries	Last pamphlet distribution Jan, Feb, and Mar 2014.	Pamphlet distribution planned for 2015-2016.
1-3	Create and maintain stormwater website	Stormwater Coordinator and IT specialist	Stormwater web page created	Additional stormwater resources and site improvements were made to the Department of Public Works Stormwater Utility web page this reporting period, including informational resources for non-English speaking residents.	Maintenance and improvement of web site to be a continuing effort.
1-4	Educate dog owners about picking up dog waste	Animal Control	Info posted on animal control website or fact sheet distributed	Dog waste pamphlets distributed to local veterinary clinics and the Animal Control shelter.	Continue posting/distributing dog waste pamphlets.
1-5	Contact local boy/girl scouts concerning volunteer projects	Stormwater Coordinator	Boy/Girl scout troop contacted	Girl scouts participated in April 26, 2014 Earth Day Clean up event.	Continue reaching out to scout groups. Earth Day clean up event April 25, 2015.
1-6 Revised	Update City Council on progress of Storm Water Management Plan activities	Stormwater Coordinator	Annual update via annual report	MS 4 Annual Report submitted to Public Works Commission and City Council	Continue to update City officials.

1-7	Waterway labeling of various brooks, streams and rivers, to educate the public and increase environmental awareness.	Stormwater Coordinator	Number of signs posted and maintained identifying brooks and streams where they cross under roadways	Remaining significant waterways were labeled this reporting period.	Continue to maintain existing signage.

1a. Additions

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
2-1	Form Stormwater Advisory Committee	City departments in committee	Committee formed and # meetings held per year	The Storm Water Advisory Committee met approximately 40 times as a part of the City's Weekly Round Table meeting.	Continue with meetings.
2-2	Comply with state public notification guidelines	All departments	Notices posted for all meetings as required by state	Ongoing conformance with state public notification requirements. Meeting agendas are posted on the city website.	Continue conformance with state requirements.
2-3	Stencil catch basins with "don't dump" message	DPW	25 catch basins stenciled per year	WRWA organized volunteers to label 1,000 storm drains in this reporting period.	Continued effort with more labeling. Target downtown area roadways undergoing reconstruction.
Revised	Adhere plastic "No Dumping – Drains to River" labels to catch basins.	Stormwater Coordinator	25 catch basins per year		
2-4	Sponsor community participation event	DPW, Health, Police & School Departments	At least one event held annually - # of residents participating	Earth Day and biannual WRWA river clean ups completed.	Continued effort. Planned activities for 2015 include Earth Day clean up, WRWA River cleanup. Arbor Day tree planting .
Revised					
Revised					

2a. Additions

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3-1	Develop ordinances for illicit connections and discharges	Planning	Ordinance developed and presented to City Council	Ordinance adopted by City Council in June of 2005.	Done
3-2	Map stormwater system, outfalls and receiving waters	Engineering	Map created	Updates and revisions made to the City's stormwater system map this year through routine field inspections.	Continue to locate unknown outfalls and update City stormwater system on GIS.
3-3	Conduct dry weather outfall screening	Engineering and DPW	Number of Outfalls screened	All known outfalls were initially screened during summer 2009. No new outfalls were screened this year.	Newly found outfalls require screening.
3-4	Develop and implement a plan to identify & remove non-stormwater discharges	DPW and Engineering	Number of illicit connections found and removed	No new illicit connections found this reporting period.	Illicit connection identification and removal is ongoing effort. Future efforts to focus on outfalls discharging to the Westfield River, Little River, Powdermill Brook, Jacks Brook, and Moose Meadow Brook.
3-5 Revised	Investigate discharge locations of floor drains at fire dept.	DPW and Fire Department	Discharge location determined, connections to MS4 removed if necessary	None	None
 Revised					

3a. Additions

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4-1	Develop construction site E&S control ordinance	DPW and Building/Zoning and Planning	Final ordinance developed and presented to City Council	Ordinance adopted by City Council on June 2005.	Done
Revised					
4-2	Require a waste management plan at construction sites>1 acre	DPW and Building/Zoning, and Planning	Requirement developed, # of waste management plans reviewed	Construction site waste management plans are required by ordinance at sites disturbing greater than one acre. Approximately 25 plans reviewed.	Continuing effort.
4-3	Review site plans for stormwater impacts	DPW, Engineering, Building/Zoning, Conservation	Internal protocol developed, # of plans reviewed	Continuing pre-permit practice of reviewing site plans by City departments and during a City Round Table meeting. Meetings are held weekly.	Continuing effort.
Revised					
4-4	Consider public input during project's planning phase for projects >1 acre	DPW, Engineering, and Planning	Number of public review and comment periods held	Continuing pre-permit practice. Public comment available during site plan approval process at Planning Board meetings. 19 meetings held.	Continuing effort.
Revised					
4-5	Inspect Erosion and Sediment Controls	DPW, Engineering, Con. Comm & Building.	Number of Inspections conducted	City personnel conducted approximately 200 construction site inspections this reporting period.	Continuing effort.
Revised		Add Health Dept			
Revised					

4a. Additions

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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
5-1	Apply standard 2,3,4,7,9 of Mass. Stormwater Policy for Projects >1 acre	DPW	Final ordinance developed and presented to City Council	Included in stormwater management ordinance (BMP 4-1). Ordinance adopted by City Council.	Done.
5-2	Specify Stormwater BMP	DPW	BMP manual selected	BMP manual selected in 2004 and included in stormwater management ordinance (BMP 4-1). Ordinance adopted by City Council.	Done.
5-3	Develop procedure to track and schedule maintenance on BMPs	DPW	Procedure developed to track and plan regular maintenance on private structural BMPs	Procedure is developed. . However, long term BMP maintenance is an ongoing effort. Tracking system for private structures needs improvement.	Continuing effort. Identify key contact persons and building plans to set up inspection schedule. Add private BMP structures to City's GIS.
Revised					
Revised					
Revised					
Revised					

5a. Additions

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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6-1	Conduct good housekeeping training	DPW	Training held for staff who could potentially impact stormwater	Training module given to key employees of the Department of Public Works. Municipal Airport employees are trained in accordance with the Airport Stormwater Pollution Protection Plan (SWPPP).	Continue development of training modules and training of more City employees.
6-2	Street sweeping	DPW	Percent of streets swept	Due to reliability issues, the City sweeper was auctioned off, and all sweeping was done through private vendor. Approximately 73% (190 miles) of City streets were swept this reporting period.	City in process of purchasing a new street sweeper which should be in operation for May 2015.
6-3	Roadway deicing	DPW	Alternative deicers evaluated, amount of alternative deicers used	Cryotech NAAC alternative used on airport runways for de-icing. Alternative de-icers were not used on City streets this year due to budgetary constraints.	Continue to use alternative deicers when possible.
6-4	Snow removal	DPW	Install silt fence or hay bales around disposal area	Silt fence and hay bales were not installed around municipal snow disposal area, as City snow was stored in a field outside of aquifer area with no storm system or wetlands present.	Install silt fence or hay bales around snow pile where runoff may enter storm system as necessary.
6-5	Minimize impacts from municipal vehicle washing	Individual department heads	Need of additional controls evaluated, installed (if needed)	Installation of wash rack connected to city sewer completed this reporting period. Phosphate-free biodegradable soap used for vehicle washings.	Continued use of phosphate-free, biodegradable soap.
6-6	Minimize impacts from municipal vehicle maintenance	Individual department heads	Hazardous material inventory updated	Hazardous material inventory is in place and up to date.	Continue to update hazardous material inventory. Conduct hazardous materials/waste training for employees.
6-7	Catch basin cleaning and storm drain maintenance	DPW	Number of CBs cleaned, condition of system recorded	214 catch basins inspected/cleaned, and approximately 220 tons of sediment removed.	Continued effort. Catch basin inspection reports linked to GIS.

6-8	Park and landscape maintenance	DPW	Obtain amounts of pesticides, fertilizers used by contractor	Use of herbicides, pesticides and fertilizers is set by School Department IPM Plan. Maintaining records of chemical usage. City parks and field fertilization contractor treated approximately 75 acres on four separate occasions this year.	Continue to research environmentally friendly landscape management techniques, and implement where feasible. Nitrogen and phosphorous reductions in areas near wetland buffer and storm water systems to be assessed.
6-9	Urban forestry program	DPW and Engineering	Urban forestry program developed, # of trees planted	17 new City trees were planted this reporting period with assistance from the Westfield Vocational Technical School.	Continued tree planting. Arbor day planting 4-24-15.
6-10	Illegal dumping control	Health	Number of signs posted, number of sites cleaned up	Continued illegal dumping monitoring and clean up. 4-26-14 Earth Day and WRWA clean ups held.	Continue effort to maintain records of all complaints, responses and clean-up efforts. 4-25-15 Earth Day and WRWA cleanup efforts targeting historic dumping sites and areas of windswept trash deposit sites.
6-11	Spill prevention and response	Individual department heads	Number of training sessions held; number of employees attending	Annual training performed for the Fire Department relating to hazardous materials and response to hazmat incidents. The Local Emergency Planning Committee (LEPC) met 7 times last year.	Continue hazmat trainings and holding LEPC meetings.

6a. Additions

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) *<<if applicable>>*

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

The City of Westfield has been operating its Municipal Separate Storm Sewer System (MS4) under a five year National pollution Discharge Elimination System (NPDES) permit as authorized by the US EPA NPDES Phase II Stormwater Regulations. This permit expired on April 30, 2008 and the EPA is in the process of drafting a new general permit for MS4 to take its place. The City has continued in its efforts to meet all of the permit requirements in this interim period.

Under the expired permit, the City was required to develop a Stormwater Management Program that included six minimum control measures. The following is a report on the City's current status pertaining to these six control measures and an assessment of their effectiveness.

Control Measure 1 – Public Education and Outreach

This measure requires the City to educate the public on the impacts of their activities on stormwater and on the impact of polluted stormwater on water quality.

Status – The City has initiated a public education program to distribute educational materials to the public. This program includes the distribution of educational pamphlets to residents with the City's combined utility bills, and the direct mailing of educational pamphlets to businesses and industrial facilities. Pamphlet distribution is done every other year. Educational materials were not mailed this reporting period, but are scheduled to be distributed in 2015-2016. Educational pamphlets are displayed and available at City Hall and at the several City schools. Stormwater information for public review is maintained on the City's website.

Dog brochures detailing pet waste concerns are made available to dog owners upon renewal of their dog licenses. Dog brochures and have also been distributed to local veterinary clinics and the City's animal shelter.

Informational door knob hangers have been created for distribution in neighborhoods where catch basin cleaning is performed.

The City is also a member of the regional Connecticut River Stormwater Committee. Membership in this committee gives the City access to regional media campaigns that may be more effective in helping educating the public. With its larger resources, the Connecticut River regional stormwater committee provides the City with access to public education programs that would be difficult for the City to undertake on its own. The City intends to continue its participation in the regional stormwater committee in the coming year. The Stormwater Committee's 2014 Annual report is included as an attachment to this report.

In effort to increase environmental awareness, waterway labeling of brooks and streams where they cross under roadways was completed this reporting period

Assessment. The City is still looking to incorporate stormwater management as part of school curriculum; however, this is an ongoing effort. Based on the performance of all other educational and outreach measures, the City is in compliance with Control Measure 1.

Control Measure 2 – Public Participation and Involvement

This measure requires the City to promote public involvement in developing and implementing its Stormwater Management Program.

Status: The public is given an opportunity to participate in all Planning Board, City Council, Board of Public Works and Conservation Commission meetings where projects are being considered. Public participation is always welcome and encouraged.

A Volunteer Earth Day Cleanup was held in conjunction with the Westfield River Watershed Associations (WRWA) on April 26, 2014, in which individuals removed over 100 bags of trash and several tons of bulk items from 13 different locations throughout the City. The WRWA conducted a fall 2014 clean up on

September 27, 2014 and collected 55 bags of trash and many bulk trash items. The City conducted bulk trash pickups for City residents between April 1 and November 30th 2014.

The WRWA also sponsored several storm drain labeling projects this report period, with volunteers labeling approximately 1,000 storm drains in various neighborhoods. Due to its better performance, a colorful adhesive tab depicting a fish icon and the message reading "No Dumping – Drains to River" has been used in place of stenciling on catch basins.

The City's Stormwater Advisory Committee met as a part of the City's weekly Round Table meetings to comment on proposed developments and re-developments.

The City continued its membership in the regional Barnes Aquifer Protection Advisory Committee where all projects to be sited in the Barnes drinking water aquifer were reviewed and comments furnished to the appropriate City Committees. Stormwater management is a prime concern of this committee.

Assessment: The City's outreach and public participation and outreach continue to meet permit requirements.

Control Measure 3 – Illicit Discharge and Detection

This measure requires the City to develop a Stormwater System Map and a program to find and remove illicit connections to the stormwater system.

Status: The City Council has adopted an ordinance governing illicit connections and their removal. The City has mapped the known storm sewer system and outfalls and a separate sewer separation investigation has been completed. A dry weather screening of all known outfalls in the City has also been completed.

The upstream piping system for new outfalls still needs to be investigated and added to the City's storm sewer map, and newly found outfalls still need to be screened.

Assessment: The City's efforts on this control measure have been met for the most part. Locating and removing illicit connections will be an ongoing effort requiring increased departmental coordination and additional City resources to accomplish. The network of piping comprising the City's stormwater system requires additional investigations and continual updating. In order to better satisfy the illicit discharge and detection, the City is looking to employ Westfield State University students to assist in mapping and sampling the stormwater system. Additionally, the City is evaluating the use of optical brighteners as a cost effective method for illicit discharge detection.

Control Measure 4 – Construction Site Runoff Control

This measure requires the City to develop and enforce an erosion and sediment control program for construction activities that disturb greater than one acre of land.

Status: An ordinance was adopted by the City Council requiring erosion and sediment control at construction sites that disturb greater than one acre. This ordinance also provides for construction site waste management and has provisions for inspection and enforcement. Third party erosion and sediment control inspections have proved to be unfeasible. The City has limited resources to conduct all of the required inspections of erosion and sediment controls; however, site inspections were performed by the DPW, Building, Health, and Conservation personnel this reporting period.

Assessment: The required ordinances are in place and all site plans and special permits are reviewed for stormwater impacts and construction site erosion and

sediment controls. Better interdepartmental coordination and communication is needed in conducting inspections. More will need to be done to assure that construction site inspections are completed as required by ordinance.

Control Measure 5 – Post Construction Stormwater Management

This measure requires the City to develop, implement and enforce a program addressing discharges of post construction stormwater runoff from developed and redeveloped sites.

Status: An ordinance was adopted by the City Council in 2005 to address stormwater runoff from new development and redevelopment sites. The ordinance covers long-term operation and maintenance of Stormwater Best Management Practices (BMPs) and ensures that controls are in place to prevent or minimize impacts to water quality. A procedure has been developed to track public and private structural BMPs; however, development of an inventory of existing private structural BMPs as well as tracking maintenance on private BMP's is an ongoing effort.

Assessment: Control measures are in place; however, additional resources are still needed to track and control private structural BMPs. Resources also needed to conduct inspections of private BMPs and review maintenance records.

Control Measure 6 – Municipal Pollution Prevention and Good Housekeeping

This measure requires the City to develop and implement a program to prevent or reduce pollutant runoff from municipal operations.

Status: Municipal Airport employees and tenants receive training in accordance with the Airport's Stormwater Pollution Prevention Plan (SWPPP). Approximately 70% of City streets were swept this year, and downtown area street were swept several additional times in preparation for events. A new City sweeper is scheduled for delivery in May 2015 to assist with sweeping operations. Alternative de-icers were not used on City streets during due to budgetary constraints. Silt fence and hay bale installation around the snow disposal sites were not completed this reporting period as snow was trucked to a City owned field that is outside the aquifer zone, borders no wetlands, and does not drain to municipal stormwater infrastructure. A vehicle wash rack connected to the sewer system was completed this reporting period, and the City continues to use phosphate free soap. Hazardous material inventory is complete. Approximately 214 catch basins were inspected and cleaned this reporting period. Our City park and landscape fertilization contract is currently under review, in effort to reduce nitrogen and phosphorous loading, and evaluate environmentally friendlier products and practices. 17 new City trees were planted this reporting period, with collaboration from the vocational technical school. Illegal dump sites are cleaned as they are discovered and "No Dumping" signs posted as appropriate. Hazardous material training was held by Westfield Fire Department, and the Local Emergency Planning Committee met seven times this reporting period.

Assessment: Efforts under this control measure will be ongoing and need periodic review to assure that all BMP's are being implemented to the most practicable extent.

Planned activities for the upcoming year:

The City of Westfield will continue to operate its municipally separate storm sewer system in accordance with the expired NPDES MS-4 permit until a new permit is issued and new permit conditions established. Planned activities for the coming year include:

1. Increase awareness of proper disposal of dog waste.
2. Continued improvement to the City website stormwater information.
3. Deliver informational door know hangers during catch basin cleaning events.
4. Continue Stormwater Advisory Committee meetings.
5. Continue membership in the Connecticut Valley Regional Stormwater Committee.
6. Label catch basins on newly paved streets.
7. Continue to target possible illicit connections to outfalls on the Westfield River, Little River, Powdermill Brook, Jack's Brook, and Moose Meadow Brook.
8. Continue building an inventory of all public and private stormwater structural BMPs. The City's GIS system will be used in this process.
9. Continue conducting city inspections of public and private structural BMPs.
10. Install silt fencing and/or hay bales around the City' snow removal sites as necessary.
11. Continue annual maintenance of city structural BMPs.
12. Continue city employee good housekeeping and stormwater management training.
13. Procedural improvement of construction site inspection report review and approval.

Conclusion:

At the completion of year 12 of the City's Stormwater Management EPA NPDES MS-4 Permit, the City of Westfield is in compliance with the conditions of this permit with the following exceptions:

BMP 3-4: Illicit connections identification and removal in outfalls discharging to priority waters is still underway.
BMP 4-5: Process improvements are needed for erosion and sediment control inspection reports.
BMP 5-3: Inventory of all private and public structural BMPs is still ongoing.

The BMPs selected for the City's stormwater management program have been appropriate and no changes are recommended at this time.

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, 2010 through March 31, 2011)

Programmatic

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

Education, Involvement, and Training

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

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					
▪ Erosion & Sediment Control					
▪ Post-Development Stormwater Management					
Accompanying Regulation Status (indicate with "**X**")					
▪ Illicit Discharge Detection & Elimination					
▪ Erosion & Sediment Control					
▪ Post-Development Stormwater Management					

Mapping and Illicit Discharges

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

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)	
Low-impact development (LID) practices permitted and encouraged	(y/n)	

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	
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)**	($)	
• Hourly or per basin contract rate **	($/hr or $ per basin)	
• Disposal cost**	($)	
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	
• Vacuum truck(s) owned/leased	(#)	
• Vacuum trucks specified in contracts	(y/n)	
• % Structures cleaned with clam shells **	(%)	
• % Structures cleaned with vactor **	(%)	

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	
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)**	($)	
• Hourly or lane mile contract rate **	($/hr. or ln mi.)	
• Disposal cost**	($)	
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	
• Vacuum street sweepers owned/leased	(#)	
• Vacuum street sweepers specified in contracts	(y/n)	
• % Roads swept with rotary brush sweepers **	%	
• % Roads swept with vacuum sweepers **	%	

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

▪ Fertilizers	(lbs. or %)	
▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	
Integrated Pest Management (IPM) Practices Implemented	(y/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	
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)	(%)	
Storage shed(s) in design or under construction	(y/n or #)	
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	

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	
Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	

Connecticut River Stormwater Committee
Annual Report
January 1, 2014 to March 31, 2015

The Connecticut River Stormwater Committee

The Connecticut River Stormwater Committee is an intergovernmental compact of 13 municipalities organized to collaborate on education and outreach about stormwater impacts on the Connecticut River. Facilitated and staffed by the Pioneer Valley Planning Commission, committee work helps NPDES MS4 regulated member communities meet stormwater education and outreach permit requirements. Based on the Memorandum of Agreement under which the committee was formed in 2008, work also helps member communities with related bylaws/ordinances and other compliance measures. Member communities are shown in Table 1 below. The City of Northampton joined the committee in this past year.

Table 1: Connecticut River Stormwater Committee Member Communities

Member Community	Committee Representative and Department
Agawam	Tracey DeMaio, Department of Public Works
Chicopee	Joe Kietner, Department of Public Works
Easthampton	Jim Gracia, Department of Public Works
Granby	Dave Derosiers, Highway Department
Holyoke	Matthew Sokop, Department of Public Works
Longmeadow	Yem Lip, Department of Public Works
Ludlow	JT Gaucher, Department of Public Works
Northampton	Doug McDonald, Department of Public Works
Southwick	Richard Grannells, Department of Public Works
South Hadley	Jim Reidy, Department of Public Works
Springfield	Kevin Chaffee, Conservation Commission
West Springfield	Jim Lyons, Department of Public Works
Westfield	Casey Berube, Department of Public Works

Education and Outreach over the Past Year

To challenge individual behaviors that negatively impact the health of the Connecticut River, the Stormwater Committee continued to use a variety of strategies over the past year. The bulk of work has been focused on promoting green infrastructure stormwater management practices, though the Committee continued its collaboration with the Greenscapes program and began to respond to forthcoming requirements with some initial research toward developing outreach on bacterial contamination in stormwater.

The following is a summary of the work of the Connecticut River Stormwater Committee during the 2014 reporting year. This includes part of the 2014 calendar year as well because the Committee is transitioning from a calendar year reporting timeline to make these reports better line up with permit timelines:

Continued collaboration with the Greenscapes Program *www.Greenscapes.org*

The committee continues to participate in Greenscapes coalition to advance the Greenscapes program. The program's website and publications promote understanding about the connection between better lawn and garden care practices and reduced impacts on water resources and human and environmental health. On the coalition's website, there are clear instruction and links to resources about how to make these important changes in practice. Links to this website are on all member community stormwater web pages.

Initiated research to develop effective messaging on bacterial contamination

The committee defined goals and objectives relative to the forthcoming stormwater permit and other regulatory requirements and local needs. Beginning with the goals and objectives relative to bacteria, the committee began its effort to develop effective messaging with the creation of a survey that will be distributed in spring-summer 2015 to pet owners. The survey will collect information about this target audience and help to define messaging going forward that is aimed at helping to reduce bacterial contamination in the Connecticut River. At the same time, the survey itself should elevate awareness about practices and the possibility of making changes to practices that promote improved water quality.

Promoted "Soak up the Rain" stormwater education campaign

The Connecticut River Stormwater Committee continued to devote time to developing and promoting 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 — involved several outreach efforts for the Connecticut River this year.

- ***Demonstration workshops and event tabling for homeowners and businesses***

  September 20, Central High School Springfield - Led by staff from PVPC and the Regenerative Design Group, this workshop described the nature of stormwater impacts on the Connecticut River and covered a range of techniques appropriate for residential and commercial sites, including rain barrels and cisterns, porous pavers, rain gutter downspout diversion, and rain gardens. In a post-workshop evaluation, the event's 18 participants gave the event high marks. Promoting the workshop entailed reaching out to: Springfield's neighborhood associations, Western Massachusetts Master Gardener Association, Ecological Landscape Alliance, local public libraries, and notice placements with area newspapers and social media resources. This was the second of two half-day workshops supported with $7,000 in funding from EPA. (*See program flyer next page.*)

soak up the rain Pioneer Valley

Soak up the Rain:

Benefits for Your Home and Business

Save Money • Beautify Your Landscape •
Prevent Pollution • Reduce Flooding

Demonstration Workshop for Homeowners and Businesses

Saturday, September 20, 8:30 am – 1 pm
Central High School, 1840 Roosevelt Ave., Springfield, MA

Come learn how to better manage rainfall at your home or business at a demonstration workshop. Presenters include Landscape Architect Thomas Benjamin, Ecological Designer Keith Zaltzberg, and Stormwater Specialist Patty Gambarini. The workshop will cover a range of techniques appropriate for residential and commercial sites, including:

rain gardens • cisterns • rain barrels • drywells •
porous pavers • rain gutter downspout diversion

The workshop is part of "Soak up the Rain Pioneer Valley," a campaign to encourage and showcase the use of green infrastructure stormwater management practices around the region. It is brought to you by the Pioneer Valley Planning Commission and Connecticut River Stormwater Committee under contract with U.S. Environmental Protection Agency, Region 1.

Registration is required by September 16th to Patty Gambarini at pgambarini@pvpc.org or (413) 781-6045. Visit soakuptherain.pvpc.org to see the workshop agenda and learn more about green infrastructure stormwater management practices in the Pioneer Valley.

Cistern - Center Pepin Elementary School, Easthampton

Rain garden – Northampton VA

(photo courtesy Thomas Benjamin)

Flyer that was widely distributed for Soak up the Rain program in September 2014.

November 8, Holyoke Public Library, Holyoke – PVPC joined the Enchanted Circle Theater and other organizations for a stormwater education and advocacy event that included the unveiling of stormdrain art created by students. PVPC's table at the event highlighted ways to Soak up the Rain on residential properties with an interactive model showing the differences between impermeable and permeable surfaces in a typical neighborhood. The model will be further developed for future events.

March 21, Western Massachusetts Master Gardener Symposium, Frontier Regional High School, Deerfield – Invited to this event to talk about Soak up the Rain strategies for around the home and garden, PVPC gave a slide-show presentation that covered drainage analysis of a property, soil evaluation techniques, and several strategies to improve stormwater management, including rain gutter downspout diversions, trees, rain barrels and cisterns, rain gardens, and porous paving. While the event was held in Deerfield, a show of hands in the workshop revealed that all but one participant was from Hampshire or Hampden County, where the stormwater committee is active. The presentation is posted on the Pioneer Valley Soak up the Rain website and will be adapted for use at other events in stormwater committee communities.

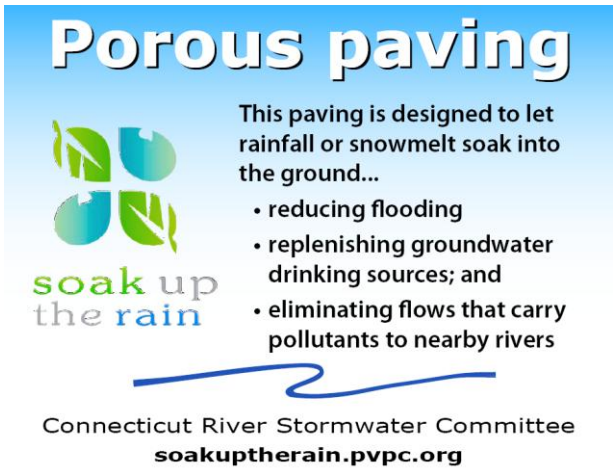
- ***Design of Soak up the Rain porous paving and rain garden signs***

PVPC completed its work with EPA in September 2014 to develop sign templates for use at rain garden and porous paving stormwater locations. This work was supported with $3,000 in funding from EPA. The designs for the signs have since been revised based on feedback from workshop participants and stormwater committee members to be more legible and more instructive about how a system functions. Each of the signs have two different sides to them, giving property owners the option to display a message that connotes pride in having such a facility or a more involved message that describes what the system does. Signs are currently being fabricated for use at residential, business, and municipal sites throughout the region. *See sign design on next page.*

- ***Pioneer Valley Soak up the Rain website www.pvpc.org/soakuptherain/***

The Pioneer Valley Soak up the Rain website 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. Links to this website are on all member community stormwater web pages.

Rain garden signs – both sides



Porous paving signs – both sides

Rain gardens design and installation project

PVPC is working with Springfield officials and a hired consultant, the Regenerative Design Group, to design and build up to 10 rain gardens in the City. To date, 3 sites have been selected where the equivalent of 5 gardens will be constructed. These sites include the Springfield Museums, Gardening the Community's new site on Walnut and James Street, and a private residence in the northern part of the City. A hands-on training session has been scheduled to teach people how to construct rain gardens, using the Springfield Museums site. From these trainees a corps of volunteers will be deployed to work with the consultant and PVPC in building the other gardens in the City. This work is made possible through a settlement agreement reached by Clean Water Action. It is hoped that based on the materials, contracts,

and know-how developed through this work in Springfield, that the project can be easily duplicated in other stormwater committee member communities for the future.

Green infrastructure workshop and vendor's fair

A survey from last year's stormwater workshop events identified two of the more significant barriers to greater use of green infrastructure stormwater management as being the need for better understanding of:

1. Proper design, construction, and oversight of green infrastructure stormwater management facilities; and
2. Where to acquire materials needed for building green infrastructure facilities

As such, PVPC partnered with EPA region 1, EPA Office of Research and Development (ORD), and the University of Massachusetts Water Resources Research Center to co-hold a workshop entitled "Nuts & Bolts of Green Infrastructure Design and Construction for Developers, Designers, Contractors, and Municipal Officials." Held on March 17, 2014, at Holyoke Community College's Kittredge Center, the day-long event drew 47 participants, including 15 engineers, 10 planners, 6 architects and designers, and 6 regulatory officials. This number does not include the 17 vendors or 10 workshop organizers also in attendance. Morning sessions included:

- Design and construction considerations and process on green infrastructure BMPs, a session let by Engineer Richard Claytor of Horsley Witten Group
- The nitty gritty of design and construction on three green infrastructure projects
  - Streetside Bioretention in a Downtown (*Douglas Clark, P.E., City of Pittsfield and Jon Dietrich, Fuss & O'Neill)*
  - Porous Paving and Bioretention on a University Campus (*Edward Marshall, ASLA, Stephen Stimson Associates*)
  - Gravel Wetlands in a Municipal Park (*Michael F. Clark, Polaris Consultants LLC*)

The afternoon involved a fair with vendors and contractors representing the range of materials and services used for stormwater green infrastructure projects. Participants were divided into groups to "speed date" with the vendors, a technique used to promote learning about the full breadth of New England's network of materials, resources, and contractors involved in green infrastructure.

Mike Clark from Polaris Consulting talks about the details of design and construction of a gravel wetlands he built at a park in Leominster, Massachusetts.

Sounding the drums was the signal for "speed daters" to proceed to the next vendor. This method gave workshop participants the opportunity to spend 5 minutes with each vendor, but also get to every vendor to learn about the full breadth of New England's network of materials, resources, and contractors involved in green infrastructure

Stormwater financing workshop

The Pioneer Valley Planning Commission (PVPC) collaborated with EPA-New England staff to develop and present a one-day workshop on funding municipal stormwater management programs. Work in developing and presenting the workshop was supported with $6,000 in funding from EPA. The workshop, held on September 24, 2014 at Holyoke Community College's Kittredge Center, drew 36 participants, representing 11 municipalities from throughout the region. Participants included 9 "decision makers" (DPW directors, city councilors, selectboard member), 2 private consultants, with the balance representing municipal public works and engineering staff.

The morning program was designed with municipal decision makers in mind and included:

- Annie Kitchell , Senior Planner for the Horsley Witten Group, who described stormwater management requirements and realistic funding options
- Richard Niles of AMEC who described stormwater utilities and provided pointers for moving forward
- Four municipal officials - City of Westfield DPW Superintendent David Billips; Northampton Chair of Board of Public Works Terry Culhane; Portland City Councilor Edward Suslovic; and City of Chicopee DPW Project Supervisor Tom Hamel—who all provided good information about their personal experiences with stormwater funding from their municipalities.

The afternoon program went into more detail with a program to suit interested decision makers, as well as providing more "how to" information for stormwater managers. The program included:

- Carri Hulet, Senior Associate with The Consensus Building Institute, talked about the importance of community engagement and how to design and implement a collaborative process
- Virginia Roach, Vice President of CDM Smith, and Jim Laurila, Northampton City Engineer, drew from Northampton's recent experience in developing a stormwater utility to talk about how to evaluate your community's stormwater management funding needs
- All workshop presenters, plus the addition of City of Westfield Deputy DPW Superintendent Casey Berube, then came together as a panel for a conversation about making the case for stormwater program funding

Pioneer Valley Green Infrastructure Plan and Toolkit

Working with an advisory committee that included members from six stormwater committee municipalities, PVPC finalized the "Pioneer Valley Green Infrastructure Plan: Promoting Clean Water, Greening our Streets and Neighborhoods." The plan is meant to assist communities in the region as they continue the journey toward a more environmentally sustainable stormwater management program. The plan identifies the three existing infrastructures

(stormwater, combined sewers, and roads) where green infrastructure might best be integrated; describes useful criteria for mapping potential green infrastructure facility locations; explores important opportunities and challenges; and proposes workable strategies for local and regional actions that will help to address polluted stormwater flows and meet forthcoming stormwater permit requirements. An executive summary of the plan has been widely distributed throughout the region. A companion toolkit for the plan includes fact sheets on 16 pertinent topics, including best management practices, model regulations and policies, and financing. The plan and toolkit were part of a larger regional sustainability initiative funded through a Sustainable Communities Initiative grant from the U.S. Department of Housing and Urban Development.

Grants

Community Innovation Challenge Grant

PVPC prepared and submitted a grant for the Massachusetts Community Innovation Grant program, requesting $193,000 to develop three stormwater permit compliance tools and to help several communities explore establishment of local stormwater utilities. Chief elected officials from all 13 Connecticut River Stormwater Committee member communities signed on to the application. Unfortunately, the grant program was eliminated by the governor as part of mid-year cuts to close a $329 million state budget deficit.

State and Private Forestry FY15 Northeastern Area Landscape Scale Restoration Program

PVPC has received a $239,000 grant award to coordinate a project to implement tree planting as part of a green infrastructure stormwater management approach. Funded under the State and Private Forestry FY15 Northeastern Area Landscape Scale Restoration Program, the project involves the municipalities of Chicopee, Holyoke, and Springfield, the Executive Office of Energy and Environmental Affairs, and a number of local grassroots organizations. The project includes: outreach and education to better inform local residents about the stormwater benefits of trees in streetscapes; development of green street design templates for use by public works departments in street construction projects; engineering design for tree box filter installations at nine locations; installation of 1,220 trees in street reconstruction projects; and development of a stormwater street tree model ordinance.