

**Municipality/Organization:** City of Westfield

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**EPA NPDES Permit Number:** MAR041236/MaDEP

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**MassDEP Transmittal Number:** W-040836

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**Annual Report Number & Reporting Period:** **Year 10**  
**April 1, 2012 – March 31, 2013**

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## NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2013)

### Part I. General Information

Contact Person: Casey Berube Title: Deputy Superintendent

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#### Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Signature: \_\_\_\_\_

Printed Name: Casey Berube

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Title: Deputy Superintendent of Public Works

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Date: 4/29/2013

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## **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 1-1: The number of mailings fell short of target goal.

BMP 1-3: Stormwater website not updated this reporting period due to creation of new city website.

BMP 3-2: Stream miles were not walked this reporting period.

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. BMP locations need to be added to the City's GIS website.

BMP 6-4: Silt fence and hay bales were not installed around the City snow disposal areas this reporting period.

BMP 6-7: Catch basins were not cleaned this reporting period.

### 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 10 (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	Approximately 6,500 pamphlets distributed this reporting period.	Pamphlet distribution scheduled for 2nd quarter billing cycle in 2013 (Oct, Nov, and Dec).
1-2	Distribute pamphlets to industries	Stormwater Coordinator	250 pamphlets distributed biannually to industries	Pamphlets distributed during 2 <sup>nd</sup> billing cycle (Oct, Nov, Dec) this reporting period.	Pamphlet distribution scheduled for 2nd quarter billing cycle in 2013 (Oct, Nov, and Dec).
1-3	Create and maintain stormwater website	Stormwater Coordinator and IT specialist	Stormwater web page created	Information in the stormwater flyers on the City’s web site included on the Public Works Stormwater Utility web page. Improvements to Stormwater Utility web page postponed due to establishment and release of new city website.	Maintenance and improvement of web site to be a continuing effort. The Stormwater Utility web page will be improved in the coming year to include more educational material.
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 are available and at the City Clerk’s office for residence to pick up during license renewal. A dog waste poster is posted on the first floor of City Hall. Dog waste pamphlets distributed to local veterinary clinics and the Animal Control shelter.	Continue posting distributing dog waste pamphlets. Add dog waste pamphlet to City’s stormwater website.
1-5	Contact local boy/girl scouts concerning volunteer projects	Stormwater Coordinator	Boy/Girl scout troop contacted	Scout Troup 821 clean up and signage posting at Westfield and Granville Reservoirs.	Continue reaching out to scout groups. Earth Day clean up event scheduled for April 20, 2013.
1-6	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.

Revised					
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**1a. Additions**

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	Signage materials ordered and waterways waterway locations identified. Several signs already posted.	Continue to identify and label waterways.

## 2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (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 25 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	Colored plastic labels depicting a fish image and “No Dumping” message outperform stenciling efforts. The WRWA organized volunteers to label 725 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	Westfield Vocational Tech School assisted tree planting. WRWA river clean up completed. Westfield Police Department Prescription Drug Take Back Initiative completed. Health Department Hazardous Waste Collection Day also sponsored.	Continued effort. Planned activities for 2013 include Earth Day clean up, River cleanup, hazardous waste collection, and a Police Dept sponsored prescription drug take back day.
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 10 (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	Initial effort complete with outfalls mapped. Remaining stream miles were not walked this reporting period due to staffing shortage. However, the stormwater system map was further refined this year through routine field inspections by DPW staff.	Continue walking stream miles to locate unknown outfalls and update City map. Stream banks will be GPS'd as they are walked.
3-3	Conduct dry weather outfall screening	Engineering and DPW	Number of Outfalls screened	All known outfalls were initially screened during summer 2009. Samples were collected from all flowing outfalls. Select outfalls were re-inspected in spring/summer 2012 and samples collected.	New outfalls will be screened after they are found.
3-4	Develop and implement a plan to identify & remove non-stormwater discharges	DPW and Engineering	Number of illicit connections found and removed	To date, dye testing of residences in the Outfall 13 drainage area has revealed no illicit connections. A camera inspection of the stormwater line revealed infiltration of water and root growth. Investigation is still underway.	Illicit connection identification and removal will be ongoing effort. Engineering Department looking to improve infrastructure in several outfall areas identified with elevated bacterial levels. Future efforts to focus on Westfield River, Little River, Powdermill Brook, Jacks Brook and Moose Meadow Brook.
3-5	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					
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 10 (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	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 or as needed. Approximately 150 plans and building permits reviewed.	Continuing effort.
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. 20 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 400 construction site inspections.	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 10 (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, implementation is an ongoing effort. List of proprietary treatment structures obtained from Stormceptor vendor. Tracking system for private structures needs improvement.	Continuing effort. Identify key contact persons and building plans to set up inspection schedule. Add BMPs to City's GIS.
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 10 (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	100% of City streets were swept at least once this report period. Downtown area streets were swept multiple times. Vacuum assisted sweeper not purchased due to budgetary constraints.	Continue street sweeping program. Upon retirement of existing sweeper, City to replace it with a vacuum-assisted sweeper.
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 areas.	Install silt fence or hay bales around snow pile each year.
6-5	Minimize impacts from municipal vehicle washing	Individual department heads	Need of additional controls evaluated, installed (if needed)	Use of phosphate-free biodegradable soap for DPW vehicle washings. Commercial car wash used for Water Resource Dept vehicles. Installation of wash rack connected to city sewer delayed due to the presence of environmental contamination (RTN 1-767).	Continued use of phosphate-free, biodegradable soap. A wash rack connected to the City sewer is planned for the Westfield Water Resources Department (WWRD).
6-6	Minimize impacts from municipal vehicle maintenance	Individual department heads	Hazardous material inventory updated	DPW 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	No catch basins were cleaned this reporting period. Procurement of a new vacuum truck was delayed due to financial constraints.	The new vacuum truck is in operation. Number of catch basins cleaned and volume of material removed to be tracked. 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 – Truegreen fertilizer applied five times on 69.3 acres this year.	Continue to research environmentally friendly landscape management techniques. Try to set up a park for organic lawn care management as a trial program.
6-9	Urban forestry program	DPW and Engineering	Urban forestry program developed, # of trees planted	160 new street trees were planted this reporting period.	Continued tree planting.
6-10	Illegal dumping control	Health	Number of signs posted, number of sites cleaned up	Three new dump sites were identified this reporting period. One was cleaned, and coordination of cleanup is underway at the other two. Additional “No Dumping” signs to be posted, and access restricted if necessary.	Continue effort to maintain records of all complaints, responses and clean-up efforts.
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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities
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. The direct mailing of educational materials to residents, businesses, and industrial facilities was completed in September 2012; however, due to a shortage of pamphlets, only 33% of intended recipients received mailings. Pamphlets are displayed and available in the lobby of City Hall and at the Westfield High School. 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 have also been distributed to local veterinary clinics and the City's animal shelter.

Informational door knob hangers are distributed 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 2012 Annual report is included as an attachment to this report.

Local Boy Scout Troop #821 cleaned debris and posted signage around both the Westfield and Granville Reservoirs. The City will continue to reach out to Scout Troops #109, #820 and #821.

Waterway labeling of brooks and streams as they cross under roadways was initiated this reporting period in effort to increase environmental awareness.

Assessment. The City needs to make a greater effort in trying to incorporate stormwater management as part of school curriculum. 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.

The City and others also sponsor community participation events each year. The City's Health Department held a hazardous waste take back day on April 28, 2012. The Police Department held a Prescription Drug Take Back Initiative on October 3, 2012 where 120 pounds of medication was collected. A Volunteer Earth Day Cleanup effort was held on April 20, 2012, in which approximately 15 individuals removed 2 truckloads of trash and debris from the downtown area. In addition, the City also conducted bulk trash pickup for City residents from April 1 through November 30<sup>th</sup> 2012.

The City Public Works Department, students from Westfield Vocational Tech, along with a citizen' arboretum society, planted 100 trees this report period in an area hard hit by the June 2011 tornado. In addition, approximately 60 trees were planted as part of the downtown redevelopment effort.

The Westfield River Watershed Association sponsored a Westfield River clean-up day on September 29, 2012, where approximately 40 volunteers participated and filled 116 trash bags, removed 13 tires, and 40 other large items (mattresses, furniture, etc.). The Westfield River Watershed Association also sponsored several storm drain labeling projects this report period, with volunteers labeling over 725 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. Future year goals should include involvement with the public schools and educating students regarding stormwater management issues.

### **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.

Dye tests and analytical data were collected from the Outfall 13 subcatchment. Residences that were dye tested this reporting period all had their sewer lines properly connected to the sewer system. Analytical data from samples collected indicated elevated bacterial levels in storm drain manholes and catch basins that were sampled. A camera inspection of the storm drain system revealed water infiltration and root penetration of the stormwater system piping. An engineering assessment of the Outfall 13 piping is to be conducted.

Lack of staffing prohibited any additional stream walking this reporting period. GPS mapping of the remaining stream miles still needs to be performed. Newly found outfalls will need to be screened and their upstream piping system determined and added to the storm sewer map.

*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 more devotion of City resources to accomplish.

#### **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 has been 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:* The Public Works Department has developed and implemented an operation and maintenance program which includes a training component for City employees. This report period the training module was delivered to the key employees of the Department of Public Works involved with stormwater management. Municipal Airport employees and tenants receive training in accordance with the Airport's Stormwater Pollution Prevention Plan (SWPPP). 100% of City streets were swept this year, and downtown area street were swept several additional times. Alternative de-icers were not used during due to budgetary constraints. Silt fence and hay bale installation around the snow disposal sites were not completed this report period. The City intends to install a vehicle wash rack connected to the sewer system in 2013. Due to finances, procurement of the new catch basin cleaning vacuum truck was postponed until the end of the reporting period. DPW staff attended an organic lawn care workshop in March 2012, and is currently assessing the feasibility of conducting an organic lawn care experiment at one of the City's parks. With assistance from Westfield Vocational Tech students 100 trees were planted in the Munger Hill School area. There was also a net gain of approximately 60 more trees in the downtown area as part of redevelopment activities. Illegal dump sites are cleaned as they are discovered and "No Dumping" signs posted as appropriate. Three dump sites were found this year. One has been cleaned, and efforts are underway in cleaning the other two. 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 to be reviewed at least annually to assure that all BMP's are being implemented for the most impact on stormwater management efforts.

**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. Provide information regarding proper disposal of dog waste with the issuance of dog licenses.
2. Improve the City website containing stormwater information.
3. Deliver by direct mail commercial stormwater pamphlets.
4. Deliver informational door know hangers during catch basin cleaning events.
5. Continue Stormwater Advisory Committee meetings.
6. Continue membership in the Connecticut Valley Regional Stormwater Committee.
7. Label at least 25 new catch basins.
8. Conduct Hazardous Waste Disposal Day.
9. Conduct a prescription and non-prescription medication drug take back day.
10. Conduct walking stream miles and locate unknown outfalls.
11. Continue to target possible illicit connections on Westfield River, Little River, Powdermill Brook, Jack's Brook, and Moose Meadow Brook.
12. Continue building an inventory of all public and private stormwater structural BMPs. The City's GIS system will be used in this process.
13. Develop DPW inspection procedures and begin conducting city inspections of public and private structural BMPs.
14. Place silt fencing or hay bales around the City' snow removal sites.
15. Continue annual maintenance of city structural BMPs and clean at least one third of the City's catch basins

- 16. Continue city employee good housekeeping and stormwater management training.
- 17. Procedural improvement of construction site inspection report review and approval.

**Conclusion:**

At the completion of year 10 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 1-1: The number of mailings fell short of target goal.
- BMP 1-3: Stormwater website not updated this reporting period due to creation of new city website.
- BMP 3-2: Stream miles were not walked this reporting period.
- 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. BMP locations need to be added to the City’s GIS website.
- BMP 6-4: Silt fence and hay bales were not installed around the City snow disposal areas this reporting period.
- BMP 6-7: Catch basins were not cleaned this reporting period.

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 vector **	(%)	

	(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 In 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 <sub>2</sub> % MgCl <sub>2</sub> % 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/l <sub>n</sub> mi. or %)	
Estimated net reduction or increase in typical year sand application rate **	(±lbs/l <sub>n</sub> 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  
2012 ANNUAL REPORT  
JANUARY 1 TO DECEMBER 31, 2012**

The following is a summary of the work of the Connecticut River Stormwater Committee during the 2012 calendar year:

<b>Member Community</b>	<b>Committee Representative and Department</b>
Agawam	Tracey DeMaio, Department of Public Works
Chicopee	Joe Kietner, Waste Water Treatment Division
Easthampton	Stuart Beckley, Planning Department; Jim Gracia, DPW
Granby	Dave Derosiers, Highway Department
Holyoke	Matt Sokop, Department of Public Works
Longmeadow	Chris Reed, Department of Public Works
Ludlow	Jim Goudreau, Department of Public Works
Southwick	Richard Grannells, Department of Public Works
South Hadley	Melissa Labonte, Department of Public Works
Springfield	Kevin Chaffee, Conservation Commission
West Springfield	Jim Lyons, Department of Public Works
Westfield	Casey Berube, Department of Public Works

**Low Impact Development Code (LID) Review for Chicopee and Ludlow**

The Pioneer Valley Regional Ventures Center (PVRVC) was provided mitigation funds in the amount of \$24,000 as the result of Clean Water Action’s Notice of Complaint against Ginmar Enterprises Inc. for use on projects related to stormwater benefiting water quality in the Chicopee River. The SEP addressed stormwater pollution for the improvement of water quality in the Chicopee River through: 1) education and outreach to chief elected officials in Chicopee and abutting communities; 2) develop innovative strategies for expanding green infrastructure for stormwater management including performance standards to reduce stormwater impacts from development; and 3) education and outreach to operators of industrial facilities within the Chicopee River watershed about proper best management practices for stormwater to reduce runoff and water quality degradation.

The Draft 2010 NPDES MS4 Permit for the Merrimack, Interstate and South Coastal regions issued October 24, 2010 requires MS4s to perform a local code review to assess the feasibility of implementing Low Impact Development (LID) techniques in new development and re-development at all scales. To address this requirement, PVPC developed a Green Infrastructure Checklist to use in reviewing local codes. The code review checklist was then implemented in the City of Chicopee and the Town of Ludlow, both communities share a border with the Chicopee River. From the checklist, two assessment and recommendation reports were generated for each community:

- Street and Parking Standards and Recommendations for Implementing Low Impact Development
- Local Regulation Review for the Feasibility of Having Low Impact Development

These reports present our assessments and recommendations regarding the landscaping of right-of-ways and parking lots, the curb and grade requirements of roadways and parking lots, and the dimension and layout requirements of streets, sidewalks, driveways, and parking spaces that influence the creation of impervious surfaces in right of ways, residential and nonresidential lots. The reports propose changes to the existing language of the zoning ordinances and subdivision regulations to allow for or encourage the use of LID integrated management practices. In making our recommendations of street, sidewalk, driveway, and parking lot dimensions, we referenced LID standards proposed in:

- Massachusetts Low Impact Development Toolkit by the Metropolitan Area Planning Council (MAPC), and
- “Better Site Design: A Handbook for Changing Development Rules in Your Community” by the Center for Watershed Protection, from which MAPC based their recommendations.

For Ludlow, the following bylaws and regulations were reviewed:

- a. Zoning Bylaws (version: May 14, 2012)
- b. Subdivision Rules and Regulations (effective: May 24, 2012)
- c. Smart Growth Overlay District Bylaw
- d. Design Standards for the town of Ludlow Chapter 40R Smart Growth Overlay District (version: May 13, 2011)
- e. Regulations for Construction within the Public Way (version: October 2012)

For Chicopee, the following ordinances and regulations were reviewed:

- a. current City Code Chapter 275
- b. Subdivision Regulations (April 7, 2005 version) for the right of way and parking lot guidelines that influence the creation of impervious cover

For each community the reports were submitted to the Planning Department and Department of Public Works for review and comment. The green infrastructure checklist and reports will also be presented to the Connecticut River Stormwater Committee at their February 12, 2013 meeting.

### **Outreach to Industrial Facilities**

Also funded under the Clean Water Action SEP, PVPC performed outreach to industrial facilities with a NPDES Multi-Sector General Permit. The U.S. EPA Region 1 office provided a list of the NPDES Multi Sector General Permit holders in Hampshire and Hampden counties. During the summer of 2012, PVPC reviewed electronic submissions of their annual NPDES reports, and conducted phone interviews with a representative at each company to discuss their MSGP annual report submittals and to identify if training and/or outreach was needed to help them comply. Surprisingly, each of the representatives spoken to could not identify further training

and/or assistance needed. Overall, there seemed to be a lack of interest, or perhaps a wariness, to talk with a representative outside of their company about this regulatory compliance issue despite the fact that we emphasized that we were not a regulatory or enforcement entity. This wariness should be considered when conducting future outreach, and some means to incentivize the discussion needs to be considered.

### **Building Inspectors Workshop Planning**

In follow up to the two workshops sponsored by PVPC on Green Infrastructure and Low Impact Development for municipal officials (1/30/12 Best Management Practices; 2/13/12 Exploring the Possibilities: Building Green Infrastructure in Your Community), we attempted to plan a third workshop targeting building inspectors. Building Inspectors are generally the Zoning Code Enforcement Officers as well as the entity that signs off on Building Permits. It is important that they are knowledgeable about green infrastructure, local stormwater bylaws, and the NPDES MS4 requirements and overview. Our intention is to work with the Western Mass Building Inspectors Association to co-host this workshop at one of their existing meetings to draw a larger crowd. It is our intention to offer CEUs for the workshop. However the Association contacts have been unresponsive for 8 months now. The Southwick Building Inspector offered to help contact the organization as he is a member, but he has not been able to connect us with the Association. This effort has been tabled until further notice.

### **TURI Grant – Organic Landcare at 5 Municipal Parks – Spring Outreach Events**

2012 was the second half of a one year grant (September 2011 – June 30, 2012) from the Toxics Use Reduction Institute (TURI) at UMASS Lowell to promote organic landcare at municipal parks. PVPC received a Toxics Use Reduction Institute Grant (TURI) from UMASS Lowell to transition five municipal parks to organic land care programs. Participating parks included:

- *School Street Park, Agawam* - Within walking distance of the Connecticut River, School Street Park features 50 acres of land with four multi-purpose athletic fields, a handicap accessible playscape, a basketball court, shuffleboard and bocce ball courts, walking trails, picnic tables, and a historic barn. The park has a high volume of adult and children using the park.
- *Look Park, Northampton* – Look Park offers recreational opportunities for walkers, runners, bikers, etc. One of the focal points of the park is a grass 2,200 person capacity outdoor concert theatre. Earlier this year, through the use of a TURI grant this outdoor theater transitioned to a petrochemical and pesticide free venue.
- *Greenwood Park, Longmeadow* – The Park abuts Greenwood Center which houses the Council on Aging and the Longmeadow Park and Recreation Childcare Center. The Childcare Center uses Greenwood Park daily for its outdoor activities, as does the Council on Aging for certain seasonal events.
- *Town Center Park, Ludlow* – The Town plans to, with the help of this grant, transition a park where the summer community concert series is held pesticide and petrochemical free. The park is located in a highly visible area in the center of Town and the concert series is well attended.
- *Wistariahurst Museum grounds, Holyoke* - In 1959, Wistariahurst was given to the City of Holyoke for cultural and educational purposes. The grounds contain extensive

ornamental gardens and an expansive lawn. The Museum is home to the Master Gardener's Association and hosts weekly meetings and multiple plant sales and regional conferences throughout the year.

In 2012, the following outreach events were held:

- Friday, March 16, 2012 - Going Organic for Landscape Contractors 8am-noon – workshop for traditional landscape contractors, co-sponsored by Valley Green in Holyoke.
- Tuesday, April 24, 2012 – Week of the Young Child Parade, Ludlow –Think Blue display booth, donated the story walk “All the Way to the Ocean” by Joel Harper.
- Saturday, April 28, 2012 -Agawam Little League Jamboree and Earth Day celebration Think Blue display booth
- Saturday, May 12, 2012 – Look Park Lawnathon with Paul Tukey of Safelawns Foundation
- Saturday, May 19, 2012 – Longmeadow Days on the Town Common – Think Blue display booth with the DPW

### **EPA Soak Up the Rain Campaign**

EPA has requested our assistance in promoting their new “Soak Up the Rain Campaign” by promoting rain gardens and other LID systems in the Pioneer Valley. PVPC is in negotiation with EPA about establishing a contract for programming in 2013.

### **Outreach and Training Events**

“Skip the Scotts” at the Western Mass Master Gardener’s Annual Symposium on Saturday, March 31, 2012 at Dean Technical High School in Holyoke. This workshop targeted residential lawn owners about how to transition to organic lawn care practices.

The Green Infrastructure Workshop presentations (1/30/12 BMPs; 2/13/12 Exploring the Possibilities: Building Green Infrastructure in Your Community) are available at: <http://www.sustainableknowledgecorridor.org/site/content/green-infrastructure>

### **Updated Greenscapes Guide**

In collaboration with the Greenscapes Coalition, the Greenscapes Guide was updated. Copies were distributed to member communities for distribution at town offices, and are available at outreach events.

### **Community Innovation Challenge Grant Application**

PVPC submitted a \$500,000 grant application to the MA Department of Finance and Administration’s Community Innovation Challenge Grant Program for the following services:

Task 1: Storm sewer database software implementation with mobile device application

Task 2: Outfall Mapping, Monitoring, and Illicit Detection Program

Task 3: Model Stormwater Pollution Prevention Plans (SWPPP) for MS4 Owned Facilities

Task 4: Pilot Cost Optimization Modeling for Nitrogen Removal

Task 5: Regional Education and Outreach Utilizing PVPC’s Think Blue Campaign

The grant was not funded due to a significant budget cut by the Governor.

**General Administration**

- FY12 Work Plan and Budget (July 1, 2012 – June 30, 2013)
- Many Stormwater Committee members also participated in the development of the Pioneer Valley Green Infrastructure Plan, coordinated by Patty Gambarini at PVPC. The GI Plan provides a detailed analysis of opportunities for green infrastructure in the Pioneer Valley, and sets for the plan for implementing more projects in the coming years. The Stormwater Committee will continue to participate in promoting green infrastructure.
- Meeting Dates – The Stormwater Committee met four times in 2012:

February 3, 2012

April 5, 2012

June 8, 2012

September 10, 2012