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Municipality/Organization: Town of Ludlow

EPA NPDES Permit Number: MA041014

MaDEP Transmittal Number: W-036097

**Annual Report Number
& Reporting Period:** No. 9: May 1, 2011-April 30, 2012

NPDES Phase II Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Paul Dzubek **Title:** Director of Public Works

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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: Rick Bellucci

Title: Chairman – Ludlow Board of Public Works

Date: April 1, 2012

Part II. Self-Assessment

The Town of Ludlow has completed the required self-assessment of compliance with the Phase II Stormwater Management Program. In accordance with the NPDES Phase II Stormwater requirements, the following topics were evaluated for the completion of the Annual Report

1. Compliance with the Phase II Permit Conditions
2. Appropriateness of the Selected BMPs
3. Progress Towards Achieving the Program's Measurable Goals
4. Results of Any Information that has been Collected and Analyzed
5. Activities for the Next Reporting Cycle
6. Changes in Identified BMPs or Measurable Goals

Regulatory Mechanisms

The Town of Ludlow adopted a General Stormwater Bylaw at the October 2005 Special Town Meeting, Article 18, amended at the October 2006 Special Town Meeting, Article 24. The Bylaw provides mechanisms that 1) prohibit non-allowable, non-stormwater discharges to MS4s; 2) require sediment and erosion control at construction sites; and 3) control post-construction stormwater runoff from development or redeveloped parcels. A copy of the adopted bylaw was provided in permit year IV annual report.

Public Education and Outreach

Since joining the Connecticut River Clean-Up Committee – Stormwater Subcommittee (CRCC-SC) in 2005, the Town of Ludlow has participated in a regional media marketing campaign to educate residents about stormwater. Attachment A of this report contains details of public education and outreach programs accomplished by the CRCC-SC and the Town of Ludlow. The attachment details activities completed during permit year IX.

Illicit Discharge Programs

As outlined in the Permit, the Town of Ludlow has completed its storm sewer system map (100%) in a GIS format and, as mentioned above, Ludlow adopted regulatory mechanisms to prohibit non-stormwater discharges to its MS4. The Town of Ludlow was successful in obtaining a SRF loan in the amount of \$5 million dollars to eliminate the last Combined Sewer Overflow in Town. This work was completed and the last overflow in Town was eliminated in 2010.

Outfall Mapping Requirement

The Town of Ludlow completed the outfall mapping requirement. The database was developed to allow for tracking the frequency of maintenance operations.

It should be noted that some portions of the Town of Ludlow MS4 is interconnected with the MS4 owned and operated by the Massachusetts Turnpike Authority. A total of eight (8) outfalls are located on property with limited access and have stormwater contributions from both the Town of Ludlow and MTA. Therefore, assessing and maintaining these outfalls cannot be accomplished without relying on the MTA.

Certification of Eligibility – Endangered Species Act (ESA) and National Historic Preservation Act (NHPA)

The Town of Ludlow complied with this requirement of the permit during permit year II and was detailed in the annual report.

Discharges into Water Quality Impaired Waters

According to the *Massachusetts Year 2004 Integrated List of Waters*, published by MassDEP, water bodies in Ludlow are categorized as the following: Category 2 Haviland Pond, Red Bridge Impoundment, and Springfield Reservoir; Category 3 Harris Pond and Murphy Pond; Category 4a Minnechoag Pond; and Category 5 Alden Pond and Chicopee River. In addition, the *2004 Integrated List of Waters* lists Minnechoag Pond as the only water body covered by a TMDL within Ludlow.

The Town of Ludlow was successful in obtaining a SRF loan in the amount of \$5 million dollars to eliminate the last Combined Sewer Overflow in Town. This discharged into the Chicopee River. This work was completed in 2010.

Discharges into Waters with Approved Total maximum Daily Load Allocations

The Town of Ludlow's MS4 discharges to Minnechoag Pond for which a TMDL has been approved. Ludlow had design plans completed for the reconstruction of a portion of the drainage system discharging to Minnechoag Pond. The drainage improvement project was constructed in concert with a roadway/intersection improvement project, both of which are being funded by the Commonwealth of Massachusetts. This project was completed including all punch list items in 2011.

Stressed Basins

According to the *Stressed Basins in Massachusetts* report published by the Massachusetts Water Resources Commission, the Town of Ludlow is located within a Low Stress Basin. Therefore, the Town of Ludlow is not required to address the annual loss of recharge to groundwater. However, the Town of Ludlow requires development and redevelopment project to maximize groundwater recharge through the regulator mechanisms adopted by the Town Meeting.

Measurable Goals

As discussed above, most of Ludlow's original measurable goals were met prior to the end of permit year V and have maintained compliance each permit year.

Summary

The Town of Ludlow has nearly completed all activities as presented in the Original Notice of Intent for the implementation of Stormwater Management Program. Over the past five permit years, Ludlow has also added Best Management Practices that provide further resource protection.

The Town of Ludlow purchased a vacuum truck for the purposes of maintaining our MS4 and sanitary sewer system. This purchase will help to meet some BMPs outlined in the Town of Ludlow's Stormwater Management Plan.

The following projects were completed in 2011 that improved stormwater quality.

1. Bowles Avenue project included the installation of 160' of 24" HDPE perforated pipe with a deep sump catch basin.
2. Swan Avenue project included the installation of 120' of 18" HDPE perforated pipe with 2 deep sump catch basins.
3. Stivens Terrace project included the installation of 60' of 18" HDPE perforated pipe with 2 deep sump catch basins.

The following project with stormwater system improvements is scheduled for 2012.

1. Chapin Street reconstruction project.

This project will include the reconstruction of Chapin Street from Center Street to Sportsmens Road and include the elimination of an existing daisy chain stormwater system. The existing system will be replaced with a trunk main system with new deep sump catch basins installed.

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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 10
1a.	Create website links	DPW	Post links to EPA & DEP stormwater information Have Plan copies available at Town Hall, Library & DPW	Links to DEP and EPA Stormwater information posted on Town of Ludlow website and DPW website. The plan is available.	Update links as necessary and continue EPA and MA DEP stormwater information links. Keep copies of the plan available & update as necessary.
1b.	Make Stormwater Management Plan available.	DPW	One collection per year.	A household hazardous waste day was held in September 2011. 24 Ludlow Residents participated in a regional event in September.	A household hazardous waste collection day is scheduled for September 2012. Document # of participants.
1c.	Hold a household hazardous waste collection day.	DPW	Air bulletins each year.	Bulletins aired during the year with upcoming stormwater events.	Continue to run bulletins and update with upcoming stormwater related events.
1d.	Cable access bulletins.	DPW	Regional Multi-Media Campaign	See Attachment A "Connecticut River Stormwater Committee Progress Report Jan. 1 to Dec. 31, 2011	Continue participation in CRSS and document outreach materials distributed.
1e.	Regional Public Outreach	DPW			

1a. Additions – No addition at this time

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 10
2a.	Form a stormwater committee.	Selectmen	Have meetings as necessary.	No meetings held	Continue to hold committee meetings as needed.
2b.	Develop stormwater bylaws.	Stormwater Committee	Public hearing held.	No public meetings held.	Hold public hearings, as needed, to revise/update general bylaw for future Annual Town Meeting.
2c.	Develop a catch basin stenciling program.	DPW	Number of catch basins selected.	Stenciling program developed. None stenciled due to budget constraints.	Continue stenciling program and recruit volunteers as funds allow
2d.	Town Meeting consideration of Bylaws.	Selectmen	Recorded vote of Town Meeting.	No revisions to Stormwater Management Bylaw adopted Article 18 October 2005 Special Town Meeting.	Revise/Update bylaw as necessary.

2a. Additions - No additions at this time

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 10
3a.	Draft a drainage system bylaw.	Stormwater Committee	Draft bylaw ready for Town Meeting in year 2. Record Vote	Language added to existing Stormwater Management Bylaw governing penalties illicit discharge connections. Voted passed: Article 24 October 2006 Special Town Meeting	Revise/update bylaw as needed.
3b.	Map the MS4.	DPW	Completed map.	Map Completed. Continue field verification and inspection project. MTA reliance.	Continue map updates and outfall and receiving water inspections to identify high priority area.

3a. Additions No additions at this time

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 10
4a.	Develop construction site runoff control regulations.	Stormwater Committee	Interdepartmental policy in place	General Stormwater Bylaw adopted in October 2005 Special Town Meeting, Article 18. Encompasses development construction activities.	Revise/update bylaw to include more stringent enforcement options for violations.
4b.	Multi-Departmental Pre-Project Release Form	Building Department	Institute Multi-Department Release Form	Draft form adopted in October 2005. Use for every development project in Ludlow.	Revise/update development form as needed.
4c.	Pre-Construction Stormwater Permit	DPW	Record number of Permits Filed	Conducted 2 permit reviews and site inspections	Continue to review permits and site plans for adequate stormwater controls for any construction activity.

4a. Additions - No additions at this time

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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 10
5a.	Adopt bylaw.	Stormwater Committee	Prepare for Town Meeting.	Revise General Stormwater Bylaw adopted in October 2005. Encompasses development construction activities.	Revise/update bylaw to include more stringent enforcement clauses for violations.
5b.	Detention/Retention/Infiltration Basin Inspections	DPW	Inspection Log	Developed maintenance plan of action to be accomplished. Due to budget constraints these inspections could not all occur.	Develop inspection program for all detention, retention, and infiltration basins to ensure proper function during future storm events.

5a. Additions - No additions at this time

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 9	Planned Activities – Permit Year 10
6a.	Clean catch basins.	DPW	Clean all catch basins once per year.	Most Catch basins were cleaned due to budget constraints.	Catch basins will be cleaned.
6b.	Sweep streets.	DPW	Sweep all streets.	All streets were swept.	All streets will be swept subject to funding.
6c.	Management Education	DPW	Remain up-to-date with current Stormwater policies and regulation.	Stormwater seminars attended by staff.	Attend Stormwater management classes and/or seminars.
6d.	Catch Basin Replacement	DPW	Document No. of Catch Basins Replaced	7 deep sump catch basins were installed, when old Cb's replaced	Replace existing non deep sump, non-hooded catch basin with deep sump and hood catch basins throughout urbanized area.

6e.	Vacuum Truck	DPW	Purchase Vacuum Truck to Maintain MS4	The DPW utilize the Vacuum Truck to maintain the MS4	Utilize Vacuum Truck to maintain MS4 including cleaning drain lines and catch basins.
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6a. Additions - No additions at this time

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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 10
7.	Reconstruct drainage system to Minnechoag Pond from East Street.	DPW	Reduce sediment load reaching the pond from a major street via flow from a substantial discharge.	Construction was completed on this project.	The completion of the drainage system this past construction season removed sediment/phosphorous loading to Minnechoag Pond.

7a. Additions - No additions at this time

Part IV. Summary of Information Collected and Analyzed

No significant amount of information has yet been collected.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	No
Annual program budget/expenditures **	(\$)	~120,000
Total program expenditures since beginning of permit coverage	(\$)	~753,000
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General Fund

Education, Involvement, and Training

	(Preferred Units)	Response
Estimated number of property owners reached by education program(s)	(# or %)	~1500
Stormwater management committee established	(y/n)	Yes
Stream teams established or supported	(# or y/n)	No
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	Yes
Shoreline cleaned since beginning of permit coverage	(mi.)	0.25
Household Hazardous Waste Collection Days		
<ul style="list-style-type: none"> ▪ days sponsored ** ▪ community participation ** ▪ material collected ** 	(#) (# or %) (tons or gal) (y/n)	1 24 households ~685 gal No
School curricula implemented		

Legal/Regulatory

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

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	2
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100
Site inspections completed **	(%)	100
Tickets/Stop work orders issued **	(#)	0
Fines collected **	(# and \$)	0
Complaints/concerns received from public **	(#)	4

Post-Development Stormwater Management

	(Preferred Units)	Response
Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100
Site inspections (for proper BMP installation & operation) completed **	(%)	100
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	Y
Low-impact development (LID) practices permitted and encouraged	(y/n)	Y

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	100 paper 100 electronic
Estimated or actual number of outfalls	(#)	310
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100
Mapping method(s)		
▪ Paper/Mylar	(%)	100
▪ CADD	(%)	0
▪ GIS	(%)	100
Outfalls inspected/screened **	(# or %)	0
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	0
Illicit discharges identified **	(#)	0
Illicit discharges identified (Since beginning of permit coverage)	(#)	0
Illicit connections removed **	(#); and (est. gpd)	0
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	0
% of population on sewer	(%)	60
% of population on septic systems	(%)	40

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	~1
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1
Qty of structures cleaned **	(#)	~175
Qty. of storm drain cleaned **	(%, LF, mi.)	100 lf
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	150 cy
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Disposal
Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$100,000
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	\$300/hr
• Disposal cost**	(\$)	\$
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	0
• Vacuum truck(s) owned/leased	(#)	1
• Vacuum trucks specified in contracts	(y/n)	Yes
• % Structures cleaned with clam shells **	(%)	0
• % Structures cleaned with vacor **	(%)	100
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	1
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	3
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	300cy
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Compost
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	~\$25,000
• Hourly or lane mile contract rate **	(\$/hr. ln mi.)	\$
• Disposal cost**	(\$)	
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	1
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	no

Operations and Maintenance (cont)

• % Roads swept with rotary brush sweepers **	%	100
• % Roads swept with vacuum sweepers **	%	0
Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	
▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	
Integrated Pest Management (IPM) Practices Implemented	(y/n)	Y
Average Ratio of Anti-/De-Icing products used **		
(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl	90
	% CaCl ₂	5
	% MgCl ₂	
	% CMA	
	% Kac	
	% KCl	
	% Sand	5
Pre-wetting techniques utilized **	(y/n or %)	Yes
Manual control spreaders used **	(y/n or %)	Yes
Zero-velocity spreaders used **	(y/n or %)	Yes
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	No change
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	No change
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100
Storage shed(s) in design or under construction	(y/n or #)	N
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	Yes

Water Supply Protection

	# or y/n	None
Storm water outfalls to public water supplies eliminated or relocated		None
Installed or planned treatment BMPs for public drinking water supplies and their protection areas		None
<ul style="list-style-type: none"> <li data-bbox="315 569 328 997">• Treatment units induce infiltration within 500-feet of a wellhead protection area 		None

Attachment A

**Connecticut River Stormwater Committee Progress Report
January 1 to December 31, 2011**

Attachment B

2011 Household Hazardous Waste Day Results

**CONNECTICUT RIVER STORMWATER COMMITTEE
2011 ANNUAL REPORT
JANUARY 1 TO DECEMBER 31, 2011**

The following is a summary of the work of the Connecticut River Stormwater Committee during the 2011 calendar year:

Member Community	Committee Representative and Department
Agawam	Tracey DeMaio, Department of Public Works
Chicopee	Joe Kietner, Waste Water Treatment Division
Easthampton	Stuart Beckley, Planning Department
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	Charles Darling, Water Resources Department

NPDES MS4 Notice of Intent and Scope of Work for Education and Outreach Measure

The Draft 2010 NPDES MS4 Permit for the Merrimack, Interstate and South Coastal regions was issued October 24, 2010. The Pioneer Valley region is covered under the "Interstate".

A draft scope of work for addressing the 2010 Draft MS4 Permit requirements was developed for review at the January 2011 meeting. In general, businesses and developers will be targeted in years 1, 3 and 5; residential and industrial facilities in years 2 and 4.

There are several new requirements for Education and Outreach in the 2010 draft NPDES MS4 Permit. These requirements are as follows:

- Four target audiences:
Residents, businesses, institutions, and commercial facilities
- Define goals of the outreach program and objectives for behavior change and knowledge/awareness
- Distribute a minimum of two (2) educational messages over the permit term to each audience
- Messages to each audience must be spaced at least a year apart
- Show evidence of focused messages and audiences as well as demonstrate the defined goal of the program has been achieved
- Identify methods to evaluate effectiveness of program (behavior modification and increased awareness)

Given these new requirements a Draft Scope of Work for the Stormwater Committee for the new 5-year permit term was developed. The following approach has been identified to meet permit requirements, and will be revised upon issuance of the final permit:

- Define each of our target audiences more specifically. For example, residents = pet owners and lawn owners; two distinct groups of residents generating different pollutants.
- Define behavior by target audience and pollutant associated with behavior.
- Define message and outreach/delivery methodology
- Determine mode for measuring effectiveness of outreach at: behavior modification, and pollutant load reduction.

Pilot Projects

PVTA Buses

The Think Blue campaign launched new outreach this year on the Pioneer Valley Transit Authority's (PVTA) buses in February 2011. The program included the Think Blue cigarette butt and dog waste PSAs formatted horizontally as billboards on both the outside and inside of the buses. The exterior billboards are 30"x80" full color mounted on the passenger-side of the bus. The interior billboards are 11"x28" full color mounted on the interior of the bus.

The campaign ran February 1 – July 1, 2011 out of the Northampton PVTA garage (Routes R42 Northampton to Williamsburg; R43 Northampton to Amherst; and R48 Northampton to Holyoke) and July 1, 2011 – January 31, 2012 out of the Springfield Garage. The Springfield garage operates 115 buses on 22 Routes in approximately 16 cities and towns and tracking which buses the signs were on is not possible. However, the routes operated out of the Springfield garage are as follows:

G1	Chicopee Center/Chicopee Big Y/Sumner Allen
G2	Belmont/Dwight Road/Carew/East Springfield
G3	King/Westford/Walnut/Springfield Plaza via Liberty
B4	Plainfield Street
G5	Dickinson/Longmeadow/Jewish Home/SBT
B6	Ludlow via Bay
B7	State/Boston Road/Walmart/Eastfield Mall
G8	Orange/Plumtree/SBT
R10	W. Springfield/Westfield State College
P11	Holyoke Community College Express
B12	Stony Brook Express
B13	Maple Street/East Longmeadow
R14	Feeding Hills/Springfield
B15	Eastfield Mall via Worthington/Wilbraham Rd/Parker St
B17	Eastfield Mall via Worthington/Wilbraham Rd/Parker St

G19	Springfield Plaza/Fairview via Chicopee Big Y/Westover
P20	Holyoke/Springfield via Holyoke Mall - Riverdale
P21	Holyoke/Springfield via Chicopee
R22	Holyoke/Chicopee Big Y via Aldenville
B23	Holyoke/Westfield via HCC
R24	Essex/Appleton via Cabot/Sargent/Holyoke Hospital
R25	Holyoke/South Hadley/Granby
R27	Wilbraham/Eastfield Mall/Sixteen Acres

Cost for the campaign is \$6,731 for one year and includes 50 free interior PSAs (and printing costs). Funding for the bus sign pilot was paid for as part of an EPA Targeted Watershed Initiative Grant awarded to PVPC. A portion of the EPA grant is to conduct outreach about stormwater pollution (Task B-1 Stormwater Compact). Given this projects potential to reach a very wide audience across the Pioneer Valley, it was deemed an appropriate use of EPA funds. *Leveraged Funds: \$6,500 EPA Targeted Watershed Initiative*

Municipal Park Organic Landcare Transition Pilot Project

PVPC received a Toxics Use Reduction Institute Grant (TURI) from UMASS Lowell to transition five municipal parks to organic land care programs. This grant is in support of our Greenscapes program and was awarded in September 2011 – June 30, 2012. Municipal parks to be transitioned to an organic program under this project include:

- *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 addition to the actual land care programs, each park will participate in an extensive public awareness and promotion campaign including display banners, lawn signs, brochures, and promotion at local park events. Additional regional education and outreach programs and events will include:

- Collaborate with Smith College video department to create a “how to video”, and post on partner websites;
- Deliver “how to” workshop at each park for the general public;
- In partnership with Valley Green (regional landscape product distributor), deliver workshop about organic land care to landscape professionals;
- Host a screening of the film: “The Truth About Cats, Dogs and Lawn Chemicals” at park events
- Promote the project through community supported organization networks, and PVPC and Safeground media outlets;
- Collaborate with Smith College GIS lab to create a case study to about pollution from lawn chemicals and the impact to stormwater quality in the region; and,
- Produce radio PSA on how to reduce the impact on stormwater by using organic methods for land care.

Leveraged Funds - \$25,000 TURI Grant

Connecticut River Water Quality Monitoring Project

PVPC has been involved in on-going E. coli monitoring of the CT River for the past three years with various partners. Monitoring in 2008 and 2009 was funded under an EPA Targeted Watershed Initiative Grant. Monitoring in 2010 and Spring 2011 was funded by a MA DEP 604b ARRA grant. For the remainder of the 2011 season, EPA TWI funds were used. The project involves monitoring E. coli bacteria at 8 recreational access sites on the main stem of the Connecticut River from mid-May to mid-October, and locational source tracking for E. coli bacteria on major tributaries. The project has resulted in four years of bacteria data to inform recreational users of whether or not the water is safe for swimming or boating on a weekly basis. Additionally, source tracking activities have identified a failing septic system (Springfield), a broken sewer pipe (Easthampton), illicit sewer connections (Northampton), and suspected agricultural sources (Hadley). Monitoring will continue in 2012. Data can be found at:

<http://www.umass.edu/tei/mwwp/ctrivermonitoring.html>

Leveraged Funds – DEP 604b grant \$51, 246 (2010 and 2011); EPA Targeted Watershed initiative Grant \$52,300 (2008-2011)

Regionalizing Stormwater Services

Again in FY11, PVPC attempted to coordinate a regional bid for stormwater services. Elsewhere in New England and around the country, communities are successfully working cooperatively to solicit equipment, materials and services for a range of highway department services at a cost-savings. The project included outreach about this concept through the Joint Transportation Committee (JTC) in 2011. Unfortunately, this concept has not gained traction and there was relatively no interest in participating in a regional bid through PVPC at this time.

Leveraged funds - DLTA FY11 \$10,500

Community Outreach

Local Mall Postings

In April 2011, eight 22"x28" mounted lightweight poster boards of the cigarette butts PSA were posted at the Hampshire Mall on Russell Street in Hadley and the Holyoke Mall at Ingleside in Holyoke.

Cable Access Stations and Town Websites

PVPC contacted the local cable access stations and town website managers in each of the Committee towns to ensure Think Blue and Greenscapes links were active and video and print PSAs running.

Movie Theaters

The Stormwater Committee once again revisited the idea of running Think Blue PSAs in local movie theaters prior to the movie previews. Price quotes were considerably higher than anticipated at \$8,000 for 13 weeks. This included cinemas in West Springfield, Springfield Plaza and the Eastfield Mall. Because of the high cost and limited network, the Committee decided not to proceed with this outreach media at this time.

Stormwater Training Events

LID Stormwater Training Session

On September 20, 2011 VHB and Horsely Whiten Group presented a ½ day workshop at PVPC on Low Impact Development, better site design, and operation and maintenance of LID BMPs. Workshop topics were selected based on feedback from a questionnaire distributed by PVPC to the 22 MS4s in the region. Funding for the workshop was provided by a DEP Section 319 Grant to VHB and co-hosted by the Connecticut River Stormwater Committee. This was one of sixteen training sessions held statewide. Attendance included 22 municipal officials.

Leveraged Funds - \$5,000 DEP 319 Grant

Mapping Storm Sewers with GPS

EPA Region 1 staff presented a workshop on May 25, 2011 from 9-12am at PVPC about how to map storm sewers with GPS. The workshop was co-hosted by the Connecticut River Stormwater Committee. Approximately 12 local officials attended.

NPDES MS4 Permit and LID Workshop

On June 22, 2011 EPA Region 1 hosted a full-day workshop on the NPDES MS4 permit and LID @ Holyoke Community College. Workshop topics included:

- Overview of the new NPDES MS4 permit requirements – Thelma Murphy, EPA
- Think Blue Public Education Program – Anne Capra, PVPC
- Fundamentals of LID – Martin Pillsbury, MAPC

- Developing LID Bylaws, Incorporating LID Standards into local zoning codes and design standards – Anne Capra, PVPC
 - New IDDE and Monitoring Requirements- Newton Tedder, EPA
 - Funding Stormwater Programs – Anne Capra, PVPC and Martin Pillsbury, MAPC
 - Tools and Methodologies for Tracking and Reducing Impervious Cover – Ray Cody, EPA
- Attendance included 55 municipal officials from the Pioneer Valley and statewide. The workshop was co-hosted by the Connecticut River Stormwater Committee.

Training Sessions for Building Inspectors and Engineers

As identified for the FY12 Work Plan developed at the May 10 and July 21, 2011 Stormwater Committee meetings, we would like to develop outreach programming for the new target audiences in the draft permit, specifically those entities designing systems and overseeing their construction and enforcement from a permitting perspective: local building inspectors and engineers. We began outreach to the Western MA Building Inspectors Association to seek their partnership and participation as a host for a workshop about the NPDES MS4 permits and the new LID requirements. A potential agenda is as follows:

- NPDES MS4 Permit overview
- What is LID
- Local and state building/plumbing codes and how they relate to LID systems – codes promote or hinder LID
- Discussion
 - What level of review, oversight, and/or enforcement do you have for stormwater in your community?
 - What issues do you see relative to stormwater in your community relative to your responsibilities as BI?
 - Is there education needed in your community to implement LID systems in your community?

The workshop will offer CE credits for the MA Building Official Certification from the MA Board of Building Regulations and Standards – 1 CE for each hour of instruction – for a 2-3 hour workshop. Workshop would be in March/April 2012 and advertised as part of a series being held by PVPC as part of the HUD Sustainable Knowledge Corridor Green Infrastructure Plan. A second workshop targeting industrial facilities is also being considered. It is anticipated that in conducting outreach to building inspectors, issues and concerns related to stormwater at facilities locally will be identified and programming developed to address them.

Other Outreach Events

Western Mass Master Gardener's Association Annual Conference, April 2, 2011: Organic Lawn Care Workshop - PVPC staff Anne Capra presented a 2 hour workshop about how to transition to an organic lawn care program to reduce fertilizer and pesticide pollution in stormwater runoff. The workshop was attended by 50 area residents.

Assessment of Campaign Effectiveness

A Stormwater Survey was posted on Survey Monkey from April through August, 2011 to assess the effectiveness of the outreach conducted to date. Assessment is a requirement of the 2003 permit. Such an assessment could also be used as a baseline for evaluating outreach performed under the 2012 permit term. The model provided by the state of Maine was utilized, distributing the survey to municipal officials through the chief elected official(s) in each Stormwater Committee member community. Received 230 responses.

General Administration

- FY11 Work Plan and Budget (July 1, 2011 – June 30, 2012)
- NPDES MS4 Notice of Intent and Scope of Work for Education and Outreach Measure - A Draft Work Plan for the 2010/2011 NPDES MS4 Permit has been developed. The work plan targets Businesses, commercial facilities and developers in years 1, 3 and 5 and residents and industrial facilities in years 2 and 4. A final permit is expected to be issued by EPA in 2012. A final permit has been delayed for almost two years.
- Meeting Dates – The Stormwater Committee met five times in 2011, and on two other dates about relevant business:

January 26, 2011

March 14, 2011

May 10, 2011

July 21, 2011

November 10, 2011

**September 10, 2011
Regional HHW Event Data**

Town	total cars	1/2 car (10 gal) \$28	full car (25 gal) \$48	1/2 car cost \$28	full car cost \$48	Total disposal \$	shared/fixed costs	Total cost
East Longmeadow	91	54	53	\$1,512	\$2,544	\$4,056	202	4,258
Hampden	16	8	13	\$224	\$624	\$848	202	1,050
Longmeadow	109	70	51	\$1,960	\$2,448	\$4,828 *	202	5,030
Ludlow	24	16	21	\$448	\$1,008	\$1,456	202	1,658
Wilbraham	29	18	26	\$504	\$1,248	\$1,752	202	1,954
Sub-totals	269	166	164	\$4,648	\$7,872	\$12,520		
Set up						\$900		
28 sm propane tanks						\$420 *		
Clean Harbors Total						\$13,840		
Event Total								13,950
Fixed Costs								
set up		\$900.00			pd by Longmeadow			
trash disposal		\$111.30			pd by Longmeadow			
roll-off pull		\$0.00			donated by BFI			
flyers		\$0.00			donated			
<u>East LM Fire over-time</u>		<u>\$0.00</u>			<u>donated by LM +ELM</u>			
Total:		\$1,011.30				\$260.32		

September 10, 2011
Regional HHW Event Data

5 way share

\$202.26



2011 HOUSEHOLD HAZARDOUS WASTE REGIONAL COLLECTION DAY



(Residential Waste Only)

~ East Longmeadow ~ Hampden ~ Longmeadow ~ Ludlow ~ Wilbraham ~

Saturday, September 10, 2011 --- 9:00 a.m. – 1:00 p.m.

**** LOCATION** East Longmeadow Fire Station Parking Lot (150 Somers Road, Route 83 off the Rotary)**

Collections are by appointment only. ~ Appointments are made on a first-come, first-served basis. ~ Proof of residency is required.

Appointments **MUST** be scheduled Tuesday/Wednesday/Thursday – September 6th, 7th & 8th, 2011 **ONLY**.

To schedule an appointment or for more info call:

- ! In East Longmeadow: 525-5400, press #1 (9:00 am - 12:00 noon)
- ! In Hampden: 566-2151, ext.102 (8:00 am - 2:00 pm)
- ! In Longmeadow: 567-3400 (9:00 am - 4:00 pm)
- ! In Ludlow: 583-5625, ext. 17 (9:00 am - 4:00 pm)
- ! In Wilbraham: 596-2800, ext. 208 (8:30 am - 4:30 pm)

For Wilbraham, Car Sticker Required.

NOTE: LATEX PAINT IS NOT HAZARDOUS WASTE.

Please DO NOT Bring to this event.

SPECIAL COLLECTION

A thermometer exchange will be offered again this year. Exchange your mercury thermometer for a new, "FREE" digital thermometer.

Operated by: Clean Harbors

Printed on Recycled Paper

Items to Bring

- | | |
|------------------------------|--|
| Aerosol Cans | Metal Polish |
| Ammonia Solution | Moth Balls |
| Antifreeze | Motor Oil |
| Art Supplies | Muriatic Acid |
| Bleach | No-Pest Strips |
| Brake Fluid | Oven Cleaner |
| Carburetor Cleaner | <u>Paint (lead & oil based only)</u> |
| Chlordane | Paint Thinner |
| Craft Supplies | Pesticide |
| Creosote | Photo Chemicals |
| Degreaser | Pool Chemicals |
| Drain Cleaner | Rechargeable Batteries |
| Driveway Sealant (oil based) | Rodent Killer |
| Engine Degreaser | Rust Preventative |
| Fertilizer | Sealant |
| Floor Cleaner | Solvent |
| Furniture Polish | Thermometers |
| Gasoline | Wood Preservative |
| Herbicide | Wood Stain |
| Insect Spray | Wood Stripper |
| Kerosene | |
| Mercury Bearing Waste | |

Please DO NOT BRING:

- Asbestos
- Biological Waste
- Commercial Waste
- CRTs (TVs & Computers)
- Driveway Sealant (Latex)
- Empty Containers
- Explosives
- Fluorescent Bulbs
- Industrial Waste
- Latex Paint (dry out & put with trash)
- Radioactive Waste (Smoke Detectors)
- Tires -----Propane tanks
- Unused Medications
- Water Reactive Material