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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. 7: May 1, 2009-April 30, 2010**

## NPDES PII Small MS4 General Permit Annual Report

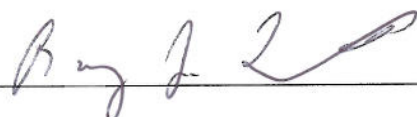
### Part I. General Information

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

**Telephone #:** (413) 583-5625, ext. 15 **Email:** pdzubek@ludlow.ma.us

#### 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:** Barry Linton

**Title:** Chairman – Ludlow Board of Public Works

**Date:** April 20, 2010

## **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 VII.

### 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 is almost complete and should be completed by June 30, 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 received a 319 grant from the MassDEP to reduce primary pollutants for one of the discharges into the Chicopee River. The project will include a series of offline infiltration structures located within the paved roadway, as well as a detention/infiltration facility located on Town owned land abutting the Chicopee River. The construction was completed in permit year VII.

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 is almost complete and should be completed by June 30, 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 currently has design plans completed for the reconstruction of a portion of the drainage system discharging to Minnechoag Pond. The drainage improvement project will be constructed in concert with a roadway/intersection improvement project, both of which are being funded by the Commonwealth of Massachusetts. This project has been funded and construction began in March 2010.

### Stressed Basins

According to the *Stressed Basins in Massachusetts* report published by the Massachusetts Water Resources Commission, the Town of Ludlow is located with in 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.

**Part III. Summary of Minimum Control Measures**

**1. Public Education and Outreach**

| <b>BMP ID #</b> | <b>BMP Description</b>                           | <b>Responsible Dept./Person Name</b> | <b>Measurable Goal(s)</b>                              | <b>Progress on Goal(s) – Permit Year 7<br/>(Reliance on non-municipal partners indicated, if any)</b>                          | <b>Planned Activities – Permit Year 8</b>                                                                   |
|-----------------|--------------------------------------------------|--------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 1a.             | Create website links                             | DPW                                  | Post links to EPA & DEP stormwater information         | Links to DEP and EPA Stormwater information posted on Town of Ludlow website and DPW website.                                  | Update links as necessary and continue EPA and MA DEP stormwater information links.                         |
| 1b.             | Make Stormwater Management Plan available.       | DPW                                  | Have Plan copies available at Town Hall, Library & DPW | The plan is available.                                                                                                         | Keep copies of the plan available & update as necessary.                                                    |
| 1c.             | Hold a household hazardous waste collection day. | DPW                                  | One collection per year.                               | A household hazardous waste day was held in September 2009. 27 Ludlow Residents participated in a regional event in September. | A household hazardous waste collection day is scheduled for September 11, 2010. Document # of participants. |
| 1d.             | Cable access bulletins.                          | 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.                               |
| 1e.             | Regional Public Outreach                         | DPW                                  | Regional Multi-Media Campaign                          | See Attachment A “Connecticut River Stormwater Committee Progress Report Jan. 1 to Dec. 31, 2009                               | Continue participation in CRSS and document outreach materials distributed.                                 |

**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 7 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 8                                                              |
|----------|-------------------------------------------|-------------------------------|----------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 2a.      | Form a stormwater committee.              | Selectmen                     | Begin meeting.                   | Stormwater Committee met in YR VII to review bylaw implementation.                         | Continue to hold committee meetings.                                                            |
| 2b.      | Develop stormwater bylaws.                | Stormwater Committee          | Public hearing held.             | Public meetings held September 2006 for revisions & additional to Ludlow Stormwater Bylaw. | 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.                                                              | Continue stenciling program and recruit volunteers.                                             |
| 2d.      | Town Meeting consideration of Bylaws.     | Selectmen                     | Recorded vote of Town Meeting.   | 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 7<br>(Reliance on non-municipal partners indicated, if any)                                                                        | Planned Activities – Permit Year 8                                                               |
|----------|----------------------------------------------|-------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
|          |                                              |                               |                                                           |                                                                                                                                                                      |                                                                                                  |
| 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. |
| 3c.      | Hubbard Street Area Sewer Separation Project | DPW                           | Eliminate the remaining Combined Sewer Overflow in Town   | Construction almost completed.                                                                                                                                       | Job to be completed June 30, 2010.                                                               |

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 7<br>(Reliance on non-municipal partners indicated, if any)                                       | Planned Activities – Permit Year 8                                                                        |
|----------|-------------------------------------------------------|-------------------------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 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 4 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 7 (Reliance on non-municipal partners indicated, if any)                                     | Planned Activities – Permit Year 8                                                                                                     |
|----------|----------------------------------------------------|-------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 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 in May 2008. Due to budget cuts 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 7                             | Planned Activities – Permit Year 8                                                                                     |
|----------|-------------------------|-------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| 6a.      | Clean catch basins.     | DPW                           | Clean all catch basins once per year.                              | Catch basins were cleaned.                                      | 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 began to utilize a new Vacuum Truck to maintain the MS4 | Utilize Vacuum Truck to maintain MS4 including cleaning drain lines and catch basins. |
|-----|--------------|-----|---------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------------|

6a. Additions - No additions at this time

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

| <b>BMP ID #</b> | <b>BMP Description</b>                                           | <b>Responsible Dept./Person Name</b> | <b>Measurable Goal(s)</b>                                                                         | <b>Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)</b> | <b>Planned Activities – Permit Year 8</b>                                                                               |
|-----------------|------------------------------------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 7a.             | Map drainage to Minnechoag Pond.                                 | DPW                                  | Document drainage to pond & identify all possible sources.                                        | The drainage to Minnechoag Pond has been mapped.                                                  | Complete drainage project. Work was funded and should get completed.                                                    |
| 7a-1.           | 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 has begun on this project in March 2010.                                             | Completion of the drainage system this construction season will remove sediment/phosphorous loading to Minnechoag Pond. |

**7a. Additions - No additions at this time**