

**Municipality/Organization: Town of Hanover, MA**

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**EPA NPDES Permit Number: MA041036**

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**MaDEP Transmittal Number: W-035898**

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**Annual Report Number**

**& Reporting Period: No. 8: April 1, 2010 -March 31, 2011**

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## **NPDES PII Small MS4 General Permit Annual Report**

### **Part I. General Information**

**Contact Person: Victor J Diniak**

**Title: Director of Public Works**

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**Telephone #: 781-826-3189**

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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: John Benevides**

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**Title: Board of Public Works, Chairman**

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**Date: April 27, 2011**

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## **Part II. Self-Assessment**

In general, the Town of Hanover's stormwater management activities for the eighth year of the General Permit (March 2010 through March 2011) were in conformance with the Notice of Intent (Massachusetts DEP form BRP WM 08A) and schedule submitted in July 2003. The Town has developed a Stormwater Management Plan with program priorities for 2003-2008 including:

1. Achieving regulatory compliance, particularly EPA and DEP Phase II NPDES permit requirements;
2. Incorporating storm water protection measures into municipal activities;
3. Focusing activities on target pollution reduction (e.g. Section 303.d. waters and protecting the Town's water supply);
4. Ensuring that the Program is current and innovative; and
5. Providing Program administration.

The Water Quality Stewardship element of the program continues to focus on the protection of the local water supply and addressing the State's Section 303.d waters located within the Town. To this end, staff continues to develop and improve the Program activities to reduce storm water pollution to the maximum extent practicable and eliminate prohibited non-storm water discharges, while facilitating understanding and involvement in storm water management by various Town departments. Program priorities will also focus on increased efforts to reduce target pollutants and restore local water bodies.

The Town is committed to working with local watershed associations to advance their goals and objectives. Another high priority of staff will be to keep abreast of the latest technology and approaches to achieve storm water management. Program activities will also strive to encourage environmental stewardship and continue to build on partnerships with other agencies, neighboring towns, and the community for active participation in accomplishing the Program mission. To these ends, the Town of Hanover has been working on funding for an Assessment of Land Use Activities and Environmental Impacts within the North River Watershed. The funding was initially applied for under a Section 604B Grant, with the support of local regulators and the North and South Rivers Watershed Association (NSRWA), and was eventually funded locally in 2006.

The activities performed during Permit Year Eight also focused on the continued development of a Town-wide Geographic Information System, including the connectivity of the drainage system to (and verification of) structures that have been mapped. The Town also continued with control measures that were initiated during the previous permit year, including improving local good housekeeping programs; and communicating the Town's Plan to local watershed associations.

Hanover is pleased to present the following summary describing the town's success at implementing the eighth year of the Town's Comprehensive Stormwater Program.

**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 8</b><br>(Reliance on non-municipal partners indicated, if any) | <b>Planned Activities – Permit Year 9</b>                                        |
|-----------------|-----------------------------------------------|--------------------------------------|------------------------------------|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| 1<br>Revised    | Partnership with local Watershed Associations | Con. Comm., DPW, BOH                 | Regular Meeting Attendance         | Continued updating through local funding mechanisms, seek alternative funding opportunities          | Continued updating, seek alternative funding opportunities                       |
| 2<br>Revised    | Develop Brochures                             | DPW                                  | Quarterly Mailings                 | Continued water department mailings and water quality updates.                                       | Continued mailings.                                                              |
| 3<br>Revised    | WEB Site Public Service Postings              | IT Dept., DPW                        | WEB Site Publication & Maintenance | Association information transfer and data publication of data, local WEB updates                     | Association information transfer and data publication of data, local WEB updates |
| Revised         |                                               |                                      |                                    |                                                                                                      |                                                                                  |
| Revised         |                                               |                                      |                                    |                                                                                                      |                                                                                  |

**1a. Additions**

|  |                               |                 |  |                                                                                                                                         |                                      |
|--|-------------------------------|-----------------|--|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
|  | Direct education of residents | DPW, Con. Agent |  | Directly educate individual residents on stormwater controls and BMP's when we interact with them to try to solve their drainage issues | Continued interaction moving forward |
|  |                               |                 |  |                                                                                                                                         |                                      |

## 2. Public Involvement and Participation

| BMP ID # | BMP Description        | Responsible Dept./Person Name | Measurable Goal(s)                                          | Progress on Goal(s) – Permit Year 8<br>(Reliance on non-municipal partners indicated, if any)                      | Planned Activities – Permit Year 9                                   |
|----------|------------------------|-------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| 4        | Water Quality Testing  | DPW                           | 2 Rounds of Water Quality Sampling of Priority Water Bodies | Obtained funding for the Wastewater and Land Use Study in the North River watershed area and source identification | Act upon the Wastewater and Land Use Study for the South end of Town |
| Revised  |                        |                               |                                                             |                                                                                                                    |                                                                      |
| 5        | Community Cleanup Days | DPW                           | Annually                                                    | Conducted in Spring 2010.                                                                                          | Scheduled for Spring 2011.                                           |
| Revised  |                        |                               |                                                             |                                                                                                                    |                                                                      |
| Revised  |                        |                               |                                                             |                                                                                                                    |                                                                      |
| Revised  |                        |                               |                                                             |                                                                                                                    |                                                                      |
| Revised  |                        |                               |                                                             |                                                                                                                    |                                                                      |
| Revised  |                        |                               |                                                             |                                                                                                                    |                                                                      |

### 2a. Additions

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**3. Illicit Discharge Detection and Elimination**

| <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 8</b><br>(Reliance on non-municipal partners indicated, if any)                           | <b>Planned Activities – Permit Year 9</b>                                         |
|-----------------|-------------------------------------------------|--------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 6<br>Revised    | Catch Basin/Outfall and Receiving Water Mapping | DPW                                  | GIS Mapping                                       | April 15, 2001 aerial photography serving as basis for mapping updates of local developments and drainage system connectivity. | Continued mapping updates of local developments and drainage system connectivity. |
| 4<br>Revised    | Water Quality Testing                           | DPW                                  | Testing of Priority Water Bodies                  | Obtained funding for the Wastewater and Land Use Study in the North River watershed area and source identification             | Act upon the Wastewater and Land Use Study for the South end of Town              |
| 7<br>Revised    | Regulatory Review                               | DPW, Planning Board, BOH, Con. Comm. | Regulatory Revisions and Action                   | Implemented local regulatory revisions.                                                                                        | Continue to implement regulations and revise as appropriate                       |
| 8<br>Revised    | Permit Enforcement                              | DPW, Planning Board, BOH, Con. Comm. | Local Construction Site Oversight and Enforcement | Ongoing to comply with local bylaws, state and federal requirements.                                                           | Ongoing to comply with local bylaws, state and federal requirements.              |
| 9<br>Revised    | Misconnection/Illegal Dumping and Correction    | DPW, BOH                             | Connectivity Mapping, Bylaw Enforcement and Fines | Continued local bylaw enforcement                                                                                              | Continue local bylaw enforcement                                                  |

**3a. Additions**

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**4. Construction Site Stormwater Runoff Control**

| <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 8</b><br>(Reliance on non-municipal partners indicated, if any) | <b>Planned Activities – Permit Year 9</b>                           |
|-----------------|--------------------------|--------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| 7               | Regulatory Review        | DPW, Planning Board, BOH, Con. Comm. | Regulatory Revisions to Bylaws as Necessary       | Implemented local regulatory revisions.                                                              | Continue to implement regulations and revise as appropriate         |
| Revised         |                          |                                      |                                                   |                                                                                                      |                                                                     |
| 8               | Permit Enforcement       | DPW, Planning Board, BOH, Con. Comm. | Local Construction Site Oversight and Enforcement | Ongoing to comply with local bylaws, state and federal requirements                                  | Ongoing to comply with local bylaws, state and federal requirements |
| Revised         |                          |                                      |                                                   |                                                                                                      |                                                                     |
| 10              | Improved As-Built Review | DPW, Planning Board                  | Electronic As-Built Submittals on Town GIS System | Continued GIS mapping                                                                                | Develop protocol for submitting as-builts electronically            |
| Revised         |                          |                                      |                                                   |                                                                                                      |                                                                     |
| Revised         |                          |                                      |                                                   |                                                                                                      |                                                                     |
| Revised         |                          |                                      |                                                   |                                                                                                      |                                                                     |

**4a. Additions**

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### 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 8<br>(Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 9                                  |
|----------|--------------------|--------------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| 7        | Regulatory Review  | DPW, Planning Board, BOH, Con. Comm. | Regulatory Revisions to Bylaws as Necessary       | Implemented local regulatory revisions.                                                       | Continue to implement regulations and revise as appropriate         |
| Revised  |                    |                                      |                                                   |                                                                                               |                                                                     |
| 8        | Permit Enforcement | DPW, Planning Board, BOH, Con. Comm. | Local Construction Site Oversight and Enforcement | Ongoing to comply with local bylaws, state and federal requirements                           | Ongoing to comply with local bylaws, state and federal requirements |
| Revised  |                    |                                      |                                                   |                                                                                               |                                                                     |
| Revised  |                    |                                      |                                                   |                                                                                               |                                                                     |
| Revised  |                    |                                      |                                                   |                                                                                               |                                                                     |
| Revised  |                    |                                      |                                                   |                                                                                               |                                                                     |
| Revised  |                    |                                      |                                                   |                                                                                               |                                                                     |

#### 5a. Additions

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## 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 8<br>(Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 9                                 |
|---------------|--------------------------------|-------------------------------|-------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| 11<br>Revised | Improved Street Sweepings      | DPW                           | Semi-annual Collections | Annual Collections with additional sweepings on an as needed basis.                           | Annual Collections with additional sweepings on an as needed basis |
| 12<br>Revised | Improved Catch Basin Cleanings | DPW                           | Semi-annual Collections | Annual Collections with additional sweepings on an as needed basis                            | Annual Collections with additional sweepings on an as needed basis |
| 13<br>Revised | Household Hazardous Waste Days | DPW                           | Annual Collections      | Semi-annual Collections                                                                       | Semi-annual Collections                                            |
| 14<br>Revised | Drain Stenciling               | DPW                           | Aquifer Protection Area | Stenciled drains previously mapped in Aquifer Protection Area                                 | Continue to stencil drains in Aquifer Protection Area              |
| Revised       |                                |                               |                         |                                                                                               |                                                                    |

### 6a. Additions

|    |                   |     |                    |                                                                                                      |                                                                                                      |
|----|-------------------|-----|--------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| 18 | Employee Training | DPW | Seminar Attendance | Attend Good Housekeeping and SWMP Training Seminars Sponsored by Plymouth County Highway Association | Attend Good Housekeeping and SWMP Training Seminars Sponsored by Plymouth County Highway Association |
|    |                   |     |                    |                                                                                                      |                                                                                                      |



**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 8</b><br>(Reliance on non-municipal partners indicated, if any)                         | <b>Planned Activities – Permit Year 9</b>                            |
|-----------------|-------------------------------------|--------------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| 6<br>Revised    | GIS Mapping                         | DPW                                  | GIS Mapping of Priority Waters and Drainage Patterns | April 15, 2001 aerial photography serving as basis for Assessor Mapping updates and connectivity of drainage system mapping. | Continued development of GIS mapping                                 |
| 4<br>Revised    | Water Quality Testing               | DPW                                  | Semi-Annual Water Quality Testing                    | Obtained funding for the Wastewater and Land Use Study in the North River watershed area and source identification           | Act upon the Wastewater and Land Use Study for the South end of Town |
| 15<br>Revised   | Stormwater Modeling                 | DPW                                  | Needs Assessment for Category 5 Water Bodies         | Obtained funding for the Wastewater and Land Use Study in the North River watershed area and source identification           | Act upon the Wastewater and Land Use Study for the South end of Town |
| 16<br>Revised   | Misc. Structural BMPs as Needed     | DPW                                  | i.e. Construction Improvements                       | None to date (scheduled for future permit years as appropriate)                                                              | To be determined                                                     |
| 17<br>Revised   | Misc. Non-Structural BMPs as Needed | DPW                                  | i.e. Bylaw Enforcement, Fees and Fines               | None to date (scheduled for future permit years as appropriate)                                                              | To be determined                                                     |

**7a. Additions**

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## **7b. WLA Assessment**

To date, the Town has focused on completing GIS mapping of the drainage system and receiving waters, as approved by the DEP, and water quality screening and testing from the outfall locations that have been mapped in the vicinity of the North River watershed area. The data findings confirm past conclusions that the North River and its tributaries (i.e. the Indian Head River) are impaired from excessive levels of Total Coliform and e-coli, and the impairment shall be addressed. To this end, in 2006 the Town of Hanover issued a local approval to conduct a Wastewater and Land Use Study in the southeast section of Town that lies within the North River watershed. It is anticipated that the study shall be completed in 2011/2012.

A more detailed WLA assessment and Land Use Evaluation will follow.

## **Part IV. Summary of Information Collected and Analyzed**

### **Permit Year 1 Activities and Information**

During the previous Permit Year, the Town reviewed the local, state and federal bylaws relative to stormwater and aquifer protection, and determined that they appeared to be adequately regulated and in conformance with the Massachusetts Stormwater Management Policy. Minor revisions may be required for informing local project proponents of the Phase II one-acre NPDES requirement.

### **Permit Year 2 Activities and Information**

During Permit Year 2, outfall mapping and water quality screening/testing continued in the North River drainage basin. Assessor mapping was performed to determine the public/private impacts to its storm drainage system.

The Town will continue to provide updates to the public through water bill mailings and postings on the local website, and will continue to work with local watershed associations on possible funding sources and ways in which to promote volunteerism. The Town has taken part in employee training seminars sponsored by the Plymouth County Highway Association and Baystate Roads and will continue to improve its good housekeeping programs.

### **Permit Year 3 Activities and Information**

During Permit Year 3, outfall mapping and water quality screening/testing continued in the North River drainage basin. Assessor mapping was updated and the Town focused on the connectivity of its drainage system.

The Town will continue to provide updates to the public through water bill mailings and postings on the local website, and will continue to work with local watershed associations on possible funding sources and ways in which to promote volunteerism. The Town has taken part in employee training seminars sponsored by the Plymouth County Highway Association and Baystate Roads and will continue to improve its good housekeeping programs.

#### **Permit Year 4 Activities and Information**

During Permit Year 4, the Town obtained funding for a Wastewater and Land Use Study in the southeast section of Town where, previous outfall mapping and water quality screening/testing indicated that the North River drainage basin is impaired. Assessor maps continued to be updated and the connectivity of the drainage system was further mapped.

The Town continues to provide updates to the public through water bill mailings and postings on the local website, and will continue to work with local watershed associations on possible funding sources and ways in which to promote volunteerism. In addition, Town employees have taken part in employee training seminars sponsored by the Plymouth County Highway Association and Baystate Roads and the Town continues to improve its good housekeeping programs.

#### **Permit Years 5 and 6 Activities and Information**

During Permit Years 5 and 6, Assessor maps continued to be updated and the connectivity of the drainage system was further mapped.

The Town continues to provide updates to the public through water bill mailings and postings on the local website, and will continue to work with local watershed associations on possible funding sources and ways in which to promote volunteerism. In addition, Town employees have taken part in employee training seminars sponsored by the Plymouth County Highway Association and Baystate Roads and the Town continues to improve its good housekeeping programs.

#### **Permit Years 7 and 8 Activities and Information**

During Permit Years 7 and 8, the Town obtained local approval to conduct a Wastewater and Land Use Study in the southeast section of Town that lies within the North River watershed. It is anticipated that the study shall be completed in 2011/2011.

The Town continues to provide updates to the public through water bill mailings and postings on the local website, and will continue to work with local watershed associations on possible funding sources and ways in which to promote volunteerism. In addition, Town employees have taken part in employee training seminars sponsored by the Plymouth County Highway Association and Baystate Roads and the Town continues to improve its good housekeeping programs.

Note that the Town has completely eliminated the use of sand in its snow and ice operations and in addition has modified its snow and ice control measures to reduce salt application by 40-50%, further reducing pollution loads. This activity has occurred over a number of years, starting with around permit year 3 and continuing to date with incremental improvements every year. This reduction in pollutants is the direct result of the application of new technologies and careful program management that were stressed in programs sponsored by Baystate Roads and the Plymouth County Highway Association.