**Municipality/Organization:** **Town of Stoughton, Massachusetts**

**EPA NPDES Permit Number:** MAR041063

**MassDEP Transmittal Number:** **W-**

JUN - 6 2007

**Annual Report Number & Reporting Period:** **April 1, 2006 – March 31, 2007**

# NPDES PII Small MS4 General Permit Annual Report
## (Due: May 1, 2007)

**Part I. General Information**

Contact Person: James E. Miller, PE, PLS Title: Town Engineer

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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: Lawrence J. Barrett

Printed Name: Lawrence J. Barrett

Title: Superintendent of Public Works

Date: May 15, 2007

**Part II. Self-Assessment**

In 2006, year 4 of the NPDES program, Stoughton made progress in Illicit Discharge Detection and Elimination, runoff control, and a townwide mapping project. A Stormwater Management By-Law was passed, and a revolving fund was established to fund maintenance and improvements to the MS4.

Due to a reduction in staff in the Engineering Department, the Public Education and Outreach Program did not achieve its measurable goals. In this report, we have modified these goals so that they are less labor intensive.

**Notice of Intent Section 1 – Public Education and Outreach – BMP's # 2, 4**

The Public Education and Outreach effort included two tasks involving school students. A class at the junior high school was conducted to introduce students to stormwater pollution. It is planned to change the classroom instruction to a presentation that can be made to an assembly at each of the schools. Also, in place of producing a video, there are two local cable television shows which will be contacted to present the program in a discussion format. These changes should allow us to reach more people in a shorter time Also, the Stoughton youth commission has indicated that they will assist with stenciling.

**Notice of Intent Section 3 - Illicit Discharge Detection and Elimination - BMP's # 9, 10:**

The Illicit Discharge Detection and Elimination effort begins with mapping the existing drainage system. At this time, a full time GIS coordinator has been hired with a primary responsibility of inputting drainage mapping information. In 2007, a mapping program will begin with available funding, using a local surveying firm to perform the mapping. It is planned to do one half of the mapping during the summer of 2007, and complete it in fall and winter using money in the revolving fund.

While no testing has been performed, we know that our drainage system and streams and waterways are subjected to a great deal of sedimentation. Steps are being taken to clean drains and eliminate sediment sources. Several of these projects were completed. Street sweeping is being conducted continuously as time permits, and the Public Works Department's use of Ice Ban chemical has significantly reduced road sand as a pollutant.

## 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 4 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 5 |
|---|---|---|---|---|---|
| 1 | Classroom education- | Eng. Bdept. | Make presentation to Elem & Mid. Schools | | Perform in Sep-Dec., 2007, Jan-Feb. 2008 |
| Revised | Modified to Assemblies | | | | |
| 2 | Prepare video | Eng. Dept. | Hold 2 TV forums | | Hold one forum in summer 2007 One forum in Sep-Dec. 2007 |
| Revised | Modified to TV appear-ance | | | | |
| 3. | CB Stencils | PWD | Watershed ID | Ongoing | Utilize youth commission to perform stenciling |
| Revised | | | | | |
| 4. | Create flyers and pamplets | Eng. Dept. | Distribute in fall water bills | | Utilize suggestions from NPDES Web Site, install posters in public buildings |
| Revised | | | | | |
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| Revised | | | | | |
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| Revised | | | | | |

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## 2. Public Involvement and Participation

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 5 |
|---|---|---|---|---|---|
| 5. | Create Stormwater Committee | Selectmen | Create Committee | Complete- began regular meeting schedule | Continue meetings |
| Revised | | | | | |
| 6 | Review NOI | SW Committee | Mission statement | | Hold progress meetings & issue Report to Town Mgr. &Selectmen |
| Revised | | | | | |
| 7 | Create Technical Committee | SW Committee | | Town Meeting Article Passed | Continue Education/Enforcement |
| Revised | | | | | |
| 8 | Tech Comm. Rules/Regs. | Tech. Comm. | | | Publish rules pamplet |
| Revised | | | | | |
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| Revised | | | | | |
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| Revised | | | | | |

## 2a. Additions

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## 3. Illicit Discharge Detection and Elimination

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 5 |
|---|---|---|---|---|---|
| 9. | Map Exist. Drainage | Eng. Dept. | Collect Data | Hired GIS Coordinator<br>Prepared RFP, identified funding for mapping ½ of Town, performed survey of Charles Circle. area. | Map ½ of Town by Sep. 2007<br>Map 2'd half of Town by Feb. 2008 |
| Revised | | | | | |
| 10. | GIS Software Application | Eng. Dept. | Create Map & System Model | Hired GIS Coordinator-some data entry From existing plans completed | Complete Map by Feb. 2008 |
| Revised | | | | | |
| 11. | CCTV Inspection | Public Works Dept. | All drains inspected | Replaced failed drainage on Ross Ave. Cleaned sediment from Red Wing Brook (York St. Area) | Continue inspection and correct problems.<br>Reduce sediment in Red Wing Brk. |
| Revised | | | | | |
| | | | | | Eliminate sediment and replace drains on West St. |
| Revised | | | | | |
| 12 | IDDE By-Law | Eng. Dept. | By-Law Adopted | Complete | On-going identification and elimination. Notify businesses and Industry to conduct self evaluation |
| Revised | | | | | |
| 13 | Perform Testing | Eng. Dept. | Establish data inventory | | Develop forms, receive reports from Self evaluations |
| Revised | | | | | |

## 3a. Additions

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## 4. Construction Site Stormwater Runoff Control

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 5 |
|---|---|---|---|---|---|
| 14 | Town Stand. BMP's | TC/Eng. Dept. | Publish Standards | Applied to new development under site plan review By-Law. Ikea, Target, Page Place | Continue application |
| Revised | | | | | |
| 15 | Stormwater Management measures | SW & Tech. Committee | Required by Site plan Review and Cons. Comm | By-Law approved at Town Meeting Several enforcement orders issued by Conserv. Comm. | Require permits for new const., Continue enforcement |
| Revised | | | | | |
| 16 | TC creates erosionc guidelines | TC | Published standards | By-Law Approved at Town Meeting | Hold information meetings with developers, enforce standards |
| Revised | | | | | |
| 17 | Enforcement of guidelines | | Eng. Dept. | Enforcement orders issued, fines imposed | Continue enforcement |
| Revised | | | | | |
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| Revised | | | | | |
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| 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 4 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 5 |
|---|---|---|---|---|---|
| 18 | Educate appointed boards | Tech. Committee | Hold informational meetings with boards | By-Law approved | Meet with Planning bd., Board of Appeals, Board of Health, Selectmen |
| Revised | | | | | |
| 19 | Draft changes | St. Wtr. Committee | Approve By-Law | Complete | |
| Revised | | | | | |
| 20 | Review By-Law Impacts | St. Wtr. Comm. | Evaluate effectiveness | | Prepare reports of current projects at end of construction, and 6 monts follow-up. |
| Revised | | | | | |
| 21 | Require Deed Restrictions | Boards | | Enforced by Board of Appeals | Continue enforcement |
| Revised | | | | | |
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| Revised | | | | | |
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| 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 4 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 5 |
|---|---|---|---|---|---|
| 22 | Catch Basin Cleaning | Pub. Wks. Dept. | Clean all basins annually | complete | Continue cleaning, replace selected problems with oil separators and/or deep sump basins |
| Revised | | | | | |
| 23 | Street Sweeping | Pub. Wks. Dept. | Sweep all streets twice annually | complete | Continue twice annual standard, increase when possible |
| Revised | | | | | |
| 24 | Erosion Control | Eng. Dept. | Inspect all construction & enforce standards | complete | continue |
| Revised | | | | | |
| 25 | Haz Mat Storage | Pub. Wks., Fire Dept., Board of Health | Perform inspections, reports, practice measures in-house | Fire Dept. Licenses all business handling HazMat. Board of Health enforces Aquifer Prot. By-Law. New Public Works Garage exceeds atandards | Continue |
| Revised | | | | | |
| 26 | Pub. Wks. Permit | Pub. Wks., Fire | No exposure rating | met | Continue |
| Revised | | | | | |
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| Revised | | | | | |

## 6a. Additions

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## 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 4 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 5 |
|---|---|---|---|---|---|
| 27 | ID MS4 Outlets | Eng. Dept. | Map Locations | Began entering subdivision as-built data into GIS Data Base | Complete town wide mapping and produce map |
| Revised | | | | | |
| 28 | ID Pollutants | Eng. Dept. | Test outfalls | Not begun | Begin testing known outfall locations, remove sediment when discovered- begin in industrial areas |
| Revised | | | | | |
| 29 | ID Point Sources | Eng. Dept. | Eliminate source | Not begun | Notify owners of any source found, use enforcement measures in By-Law to eliminate source |
| Revised | *Also includes old BMP 30 - mitigation* | | | | |
| 31 | Draft SW Action Plan | SW Committee | Complete 10 year plan | Established revolving fund, passed by-law, enforced erosion control, completed several improvement projects | Complete plan and submit for approval |
| Revised | | | | | |
| Revised | | | | | |

## 7a. Additions

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## 7b. WLA Assessment

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

The town wide mapping segment of Stoughton's permit is the most challenging to complete. The initial steps have been taken to bring this to conclusion, with partial funding and effort to retain a consultant, and hiring a GIS mapping specialist. Public education/outreach has been evaluated and modified to expedite the process. Several drainage improvement projects were begun or completed which will reduce sedimentation. A Stormwater Management By-Law was approved at the 2006 Town Meeting. The Public Works Department has expanded its street sweeping program, and is using new technology (Ice Ban) to reduce sedimentation. The Conservation Commission has been enforcing the erosion/sediment portion of the by-law. In 2007, enforcement will expand to the Planning, Zoning, and Health Boards.

**Part V. Program Outputs & Accomplishments (OPTIONAL)**

(Since beginning of permit coverage unless specified otherwise by a **, which indicates response is for period covering April 1, 2006 through March 31, 2007)

**Programmatic**

| | (Preferred Units) | Response |
|---|---|---|
| Stormwater management position created/staffed | (y/n) | |
| Annual program budget/expenditures ** | ($) | $50,000 for 06-07 |
| Total program expenditures since beginning of permit coverage | ($) | |
| Funding mechanism(s) (General Fund, Enterprise, Utility, etc) | | Revolving |
| | | |

**Education, Involvement, and Training**

| | | |
|---|---|---|
| Estimated number of property owners reached by education program(s) | (# or %) | |
| Stormwater management committee established | (y/n) | |
| Stream teams established or supported | (# or y/n) | |
| Shoreline clean-up participation or quantity of shoreline miles cleaned ** | (y/n or mi.) | |
| Shoreline cleaned since beginning of permit coverage | (mi.) | |
| Household Hazardous Waste Collection Days | | |

| | | |
|---|---|---|
| ▪ days sponsored ** | (#) | |
| ▪ community participation ** | (# or %) | |
| ▪ material collected ** | (tons or gal) | |
| School curricula implemented | (y/n) | |
| | | |

**Legal/Regulatory**

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

**Mapping and Illicit Discharges**

| | (Preferred Units) | Response |
|---|---|---|
| Outfall mapping complete | (%) | 5% |
| Estimated or actual number of outfalls | (#) | |
| System-Wide mapping complete (complete storm sewer infrastructure) | (%) | 30% |
| Mapping method(s) | | |
| ▪ Paper/Mylar | (%) | 30% |
| ▪ CADD | (%) | |
| ▪ GIS | (%) | |
| Outfalls inspected/screened ** | (# or %) | 5 |
| Outfalls inspected/screened (Since beginning of permit coverage) | (# or %) | 21 |
| Illicit discharges identified ** | (#) | |
| Illicit discharges identified (Since beginning of permit coverage) | (#) | |

| | | |
|---|---|---|
| Illicit connections removed | (# ); and (est. gpd) | Not detected |
| Illicit connections removed (Since beginning of permit coverage) | (#); and (est. gpd) | Not detected |
| % of population on sewer | (%) | 64% |
| % of population on septic systems | (%) | 36% |

**Construction**

| | (Preferred Units) | Response |
|---|---|---|
| Number of construction starts (>1-acre) ** | (#) | 0 for 2006 |
| Estimated percentage of construction starts adequately regulated for erosion and sediment control ** | (%) | 100% |
| Site inspections completed ** | (# or %) | 100% |
| Tickets/Stop work orders issued ** | (# or %) | 4 |
| Fines collected ** | (# and $) | 1-$5,500.00 |
| Complaints/concerns received from public ** | (#) | 17 |
| | | |
| | | |

**Post-Development Stormwater Management**

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

**Operations and Maintenance**

| | | |
|---|---|---|
| Average frequency of catch basin cleaning (non-commercial/non-arterial streets) ** | (times/yr) | 2 |
| Average frequency of catch basin cleaning (commercial/arterial or other critical streets) ** | (times/yr) | 2 |
| Qty of structures cleaned ** | (#) | App. 2,500 |

| | | |
|---|---|---|
| Qty. of storm drain cleaned ** | (%, LF or mi.) | 100% |
| Qty. of screenings/debris removed from storm sewer infrastructure ** | (lbs. or tons) | See below |
| Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) ** | (location) | Presently stockpiled, waiting for testing – qty will be determined when disposal takes place at Carney Bros. Landfill |

| | | |
|---|---|---|
| Basin Cleaning Costs | | |
| • Annual budget/expenditure (labor & equipment)** | ($) | |
| • Hourly or per basin contract rate ** | ($/hr or $ per basin) | $78.51 |
| • Disposal cost** | ($) | |
| Cleaning Equipment | | |
| • Clam shell truck(s) owned/leased | (#) | 1-owned |
| • Vacuum truck(s) owned/leased | (#) | none |
| • Vacuum trucks specified in contracts | (y/n) | none |
| • % Structures cleaned with clam shells ** | (%) | 100% |
| • % Structures cleaned with vactor ** | (%) | 0 |

| | (Preferred Units) | Response |
|---|---|---|
| Average frequency of street sweeping (non-commercial/non-arterial streets) ** | (times/yr) | 2 |
| Average frequency of street sweeping (commercial/arterial or other critical streets) ** | (times/yr) | 2 |
| Qty. of sand/debris collected by sweeping ** | (lbs. or tons) | 438 Ton |
| Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) ** | (location) | Rear 1740 Central St. |
| Annual Sweeping Costs | | |
| • Annual budget/expenditure (labor & equipment)** | ($) | |
| • Hourly or lane mile contract rate ** | ($/hr. or ln mi.) | $84.20/Ln mi |
| • Disposal cost** | ($) | |
| Sweeping Equipment | | |
| • Rotary brush street sweepers owned/leased | (#) | 2- owned |
| • Vacuum street sweepers owned/leased | (#) | None |
| • Vacuum street sweepers specified in contracts | (y/n) | N/a |
| • % Roads swept with rotary brush sweepers ** | % | 100% |
| • % Roads swept with vacuum sweepers ** | % | N/a |

| Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination) | | |
|---|---|---|
| ▪ Fertilizers | (lbs. or %) | N/a |
| ▪ Herbicides | (lbs. or %) | N/a |
| ▪ Pesticides | (lbs. or %) | N/a |
| Integrated Pest Management (IPM) Practices Implemented | (y/n) | N/a |
| | | |

| | (Preferred Units) | Response |
|---|---|---|
| Average Ratio of Anti-/De-Icing products used **<br><br>(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas) | %NACL<br>%CaCL2<br>%MGCL2<br>%CMA<br>%Kac<br>%KCL<br>%Sand<br>%Ice Ban | 50%<br>0%<br>0%<br>0%<br>0%<br>0%<br>25%<br>25% |
| Pre-wetting techniques utilized ** | (y/n or %) | Y |
| Manual control spreaders used ** | (y/n or %) | Y |
| Zero-velocity spreaders used ** | (y/n or %) | N |
| Estimated net reduction or increase in typical year salt/chemical application rate | (±lbs/ln mi. or %) | +25% (Ice Ban) |
| Estimated net reduction or increase in typical year sand application rate ** | (±lbs/ln mi. or %) | -25% |
| % 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) | Y |
| | | |
| | | |

**Water Supply Protection**

| | | |
|---|---|---|
| Storm water outfalls to public water supplies eliminated or relocated | # or y/n | N |
| Installed or planned treatment BMPs for public drinking water supplies and their protection areas | # or y/n | Y |
| • Treatment units induce infiltration within 500-feet of a wellhead protection area | # or y/n | Y |