

APR 30 2009

**Municipality/Organization:** Town of Northbridge

**EPA NPDES Permit Number:** MAR041144

**MaDEP Transmittal Number:** W-040823

**Annual Report Number  
& Reporting Period:** No. 6: April 1, 2008 – March 31, 2009

## NPDES PII Small MS4 General Permit Annual Report

### Part I. General Information

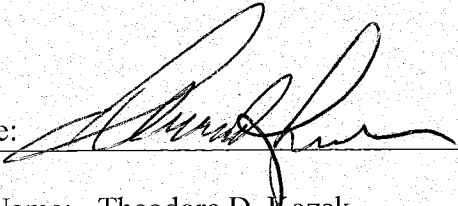
**Contact Person:** Richard R. Sasseville **Title:** Director of Public Works

**Telephone #:** 508-234-3581 **Email:** rsasseville@northbridgemass.org

**Mailing Address:** Northbridge DPW, P.O. Box 88, Whitinsville, MA 01588-0088

#### 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:** Theodore D. Rozak

**Title:** Town Manager

**Date:** APR 29 2009

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

**The following are highlights of the major accomplishments during the prior twelve-month period:**

**Waste motor oil recycling:** During calendar year 2008, the Town's recycling efforts were greatly expanded by establishing of an area wide recycling program operated by the Town of Blackstone. The recycling center located at the Northbridge main fire station, accepts a wide variety of waste products including used motor oil and filters, used paints and varnishes as well as fluorescent bulbs, appliances, electronic equipment and mercury bearing devices. Due to the regional nature of the center, tracking of items from individual communities participating in the program is not conducted. In cooperation with the local Wal-Mart store, the center conducted a collection program for large appliances such as stoves, refrigerators, washers and dryers and air conditioners.

**Winter road sand reduction:** The Winter of 2007-08 was marked by an extreme shortage of road salt. Because the Town could not meet our need for salt, we had to resort to the use of a sand-salt mix. Our goal had been to eliminate the use of sand for treating Town roads during the winter but we were unable to do so this year. Approximately 1,400 tons of sand was used during the winter of 2007-08. The total amount used in 2002-2003 was 2,231.12 tons compared to 1,600 tons used during the winter of 2003-04. During winter 2004-2005, 2,065 tons of sand was used on Town roads. During winter 2005-06, 2,065 tons of sand was used on Town roads. Approximately 100 tons of sand was used during winter 2006-07. While we pursue the goal of completely eliminating the use of winter sand, however, difficulty in getting reliable deliveries of salt set us back this year. As we begin cleaning catch basins this spring we are finding an increase in the amount of sand which is the expected result.

**Public Education and Outreach:** This element of the program has primarily made use of cable TV notices on the Town's local access channel. Notices have provided tips on lawn care including use of fertilizers and other chemicals, proper washing, proper disposal of pets' wastes, proper disposal of motor oils and solvents, maintenance of storm drains, detention basins and similar environmentally responsible practices. These cable notices run continuously and are seasonally adjusted for the time of year. In addition, the Town has partnered with the Blackstone River Association to post links to the association's educational information. The following publications are available:

[A Homeowner's Guide to Protecting Water Quality in the Blackstone River Watershed](#)

[A Small Farm Owner's Guide to Protecting Water Quality in the Blackstone River Watershed](#)

[A Horse Owner's Guide to Protecting Water Quality in the Blackstone River Watershed](#)

**Household Hazardous Waste Collection Event:** A successful collection event was conducted on September 8, 2007. No event was conducted during calendar year 2008. Plans are currently being made for a collection event in the fall of 2009.

**Public Involvement and Participation:** During 2008 the local watershed association conducted a volunteer clean up along portions of the Blackstone and Mumford Rivers as several resource areas. The Town assisted by picking up and disposing of the trash and refuse that had been collected.

**Illicit Discharge Detection and Elimination:** Due to budget reductions this fiscal year, we were unable to complete our GPS survey of undocumented outfalls and drainage structures that was begun in 2006. We had used summer temporary employees for this purpose last year but did not have funding this year. No reports were received and no evidence of illicit discharges was observed. Periodic checks along stretches of the Blackstone and Mumford Rivers revealed no signs of discharges.

**Construction Site Stormwater Runoff Control:** There remain a number of active projects in the Town. Particular emphasis has been given to insure that the various projects are aggressively complying with the erosion control provisions of their project approvals. Frequent site visits are conducted by the Planning Department, DPW and Town consultants, particularly during and following storm events to insure that all erosion control and stormwater measures are in place. When problems have been identified contact has been made with appropriate project management to relate deficiencies and seek corrections. The Planning Board utilizes outside consultants to perform periodic inspections and document compliance with requirements. We are requiring compliance with the "General Construction Permit" and require that developers submit a copy of their Notice of Intent required under the General Permit. Additionally, we are requiring them to submit an erosion control operations and maintenance plan prior to start of work on the project.

**Post Construction Stormwater Management in New Development and Redevelopment:** A local Stormwater Management by-law, developed by the Northbridge Planning Board was adopted by the Town at the spring annual town meeting on May 6, 2008. This by-law establishes a local Stormwater Authority. The Stormwater Authority is now finalizing implementing regulations which will implement the program. This has been a multi-year effort which is now rapidly approaching completion. Additionally, the Planning Board is presently considering Post-Construction Stormwater Management provisions and Stormwater Management Disturbance Bylaws, which shall be ready for local adoption for the Fall Town Meeting.

The Planning office has solicited Requests for Quotations from consultants for a Best Development Practices Guidebook. The Best Development Practices Guidebook will be a set of guidelines for developers, designers and project reviewers intended to improve the quality of development. The Guidebook will describe the required and preferred design & construction practices relating to stormwater management, erosion & sediment control, landscape design, and site planning

**Pollution Prevention and Good Housekeeping in Municipal Operations:** Planning is moving forward on a project to construct an new public works facility for the department. The new facility will include all of the required environmental protection features lacking in the current facility. Town Meeting has appropriated funds to conduct a “scoping study and site analysis” and a design consultant has been selected. It is hoped that a scope with construction estimates can be completed in time for the Fall 2009 Town Meeting so that action may be taken to proceed with the final design and construction.

**General Comments and Observations:** This program requires a significant level of effort for the Town. No additional resources have been provided to meet the requirements of the program. Reliance on volunteers, both individual and in the form of existing and new committees is a major component of the effort. There is a level of technical expertise required to review program requirements and analyze data. Some communities have chosen to contract for that expertise, in tight financial circumstances it is beyond the resources of many localities. Within existing constraints, the Town is fully committed to meeting the terms of the NPDES permit and implementing the Stormwater Management Plan.

### 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 6<br>(Reliance on non-municipal partners indicated, if any)                         |  |
|----------------|--------------------------------------|-------------------------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------|--|
| 1-1<br>Revised | Business/industry contacts           | DPW                           | Number of contacts         |                                                                                                                       |  |
| 1-2<br>Revised | Community Organizations              | DPW                           | Number of contacts         | Local watershed association has been active with river and stream cleanup efforts.                                    |  |
| 1-3<br>Revised | School contact                       | DPW                           | Number of student contacts | High school environmental group has been performing water testing and stream monitoring.                              |  |
| 1-4<br>Revised | Storm drain stenciling               | DPW                           | Number of drains stenciled | It is felt that this effort is not needed. There has been no evidence of dumping in storm drains during recent times. |  |
| 1-5<br>Revised | Household hazardous waste collection | DPW/Recycling Committee       | Number of pounds collected | No collection event conducted in 2008. Plan for events on a biannual basis with the next one scheduled in 2009        |  |

#### 1a. Additions

|     |                                       |     |                                                                                        |                                                                                                                                    |  |
|-----|---------------------------------------|-----|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--|
| 1-6 | Pollution Prevention Tips on Cable TV | DPW | Number of notices per year: Notices run continuously. Approximately 10 notices rotate. | DPW has posted pollution prevention tips on local cable channel. Various tips, seasonally appropriate are run on cable year round. |  |
|     |                                       |     |                                                                                        |                                                                                                                                    |  |

## 2. Public Involvement and Participation

| BMP ID #       | BMP Description             | Responsible Dept./Person Name | Measurable Goal(s)                              | Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)                         |  |
|----------------|-----------------------------|-------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--|
| 2-1<br>Revised | Volunteer stream cleanup    | DPW/Conservation Commission   | Number of participants                          | Local watershed association conducted event in spring 2008..                                                       |  |
| 2-2<br>Revised | Volunteer stream monitoring | DPW/Conservation Commission   | Number of volunteer hours partnership with BRWA | Cable TV solicitation for volunteers have been run without response. No direct organizational contact made to date |  |
| 2-3<br>Revised | Stormwater video            | DPW/Conservation/Cable TV     | Complete Jan 2005                               | The video “After the Storm” has been shown on local cable tv several times.                                        |  |
| 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 6<br>(Reliance on non-municipal partners indicated, if any)                                                                                                               |  |
|----------------|----------------------------------------------------------|-------------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 3-1<br>Revised | Storm sewer map                                          | DPW                           | Completion by Dec 03                 | Participated in the states MassGIS buy-up program for 2009 aerial of Northbridge—in preparation certain drainage structures were marked in the field to assist in the completion of the storm drain mapping |  |
| 3-2<br>Revised | Map updates                                              | DPW                           | Complete 2006                        | Undocumented drainage structures have been marked for easy identification/location following aerial photography in spring 2009.                                                                             |  |
| 3-3<br>Revised | Stormwater by-law                                        | Planning/DPW                  | Complete Jan 06<br>Completed May 08  | Stormwater Bylaw adopted locally – Planning Board holding public hearing on stormwater management regulations (draft on file)                                                                               |  |
| 3-4<br>Revised | Non-storm discharges<br><i>Illicit connection by-law</i> | DPW<br>DPW                    | Complete Jan 06<br>Completed June 06 | I                                                                                                                                                                                                           |  |
| 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 6<br>(Reliance on non-municipal partners indicated, if any)                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------|---------------------------------------|-------------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4-1<br>Revised | Sedimentation & Erosion Control Guide | Building/Planning Depts.      | Completion Spring 2008<br>Adoption & Compliance | Existing Erosion Control Zoning By-Law to be reviewed and amended. Copies of similar documents from other municipalities have been obtained and are under review.               | Continue development of local guidebook leading to completion and implementation by planned date.                                                                                                                                                                                                                                                                                        |
| 4-2<br>Revised | Erosion Control By-law                | Building/Planning Depts.      | Update -Spring 2008<br>Adoption & Compliance    | Existing by-law has been reviewed and identified for update and revision.                                                                                                       | Prepare by-law revisions and updates for Town Meeting action. Seek technical assistance from regional planning commission.                                                                                                                                                                                                                                                               |
| 4-3<br>Revised | Inspection & Enforcement              | Building/Planning Depts.      | Number of inspections                           | Most project sites are inspected on a weekly basis or more often as conditions warrant. Inspections done by Planning Dept., Building Dept, consultant, Conservation Commission. | Continue site inspections, documenting conditions and directing corrective actions as needed.                                                                                                                                                                                                                                                                                            |
|                |                                       |                               |                                                 |                                                                                                                                                                                 | Planning office released RFQ for Best Development Practices Guidebook –describe the required and preferred design, construction & maintenance practices relating to Stormwater Management, Erosion & Sediment control, Landscape Design, and Site Planning. Guidebook shall include sample diagrams, photographs and typical design/details in an easy to read and user-friendly format. |

#### 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 6<br>(Reliance on non-municipal partners indicated, if any)                                                                                  |  |
|----------------|-------------------|--------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 5-1<br>Revised | Develop Guidebook | Building/Planning<br>Depts/ConCom/DPW/BoH. | Completion &<br>Enforcement | Hiring of consultant to develop the guidebook is underway. Funding secured with RFQ announced and accepting bids.                                                              |  |
| 5-2<br>Revised | By-law Revisions  | Building/Planning Depts.                   | Adoption                    | Stormwater Management bylaw has been adopted by Town Meeting looking to adopt Post-Construction Stormwater Management provisions and Stormwater Management Disturbance Bylaws. |  |
| 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 6<br>(Reliance on non-municipal partners indicated, if any)                                    |                                                                                                                       |
|----------------|---------------------------------|-------------------------------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 6-1<br>Revised | Employee Education              | DPW                           | Number of man-hours of training             | Development of standard operating procedures begun.                                                                              |                                                                                                                       |
| 6-2<br>Revised | SPCCP Update                    | DPW                           | Completion July 2005<br>Completion Jul 2008 | Funding not provided to complete update.                                                                                         |                                                                                                                       |
| 6-3<br>Revised | Motor oil recycling             | DPW                           | Number of gallons<br>Approx 110 Gal         | All used motor oil from Department activities has been recycled. Has been added to oil collected by the Recycling Committee      |                                                                                                                       |
| 6-4<br>Revised | Reduce winter sand use          | DPW                           | Average tons per storm                      | Total use of sand halved since last winter                                                                                       | Winter 08-09<br>Salt: 3178 tons<br>Sand: 633 tons                                                                     |
| 6-5<br>Revised | Construct vehicle wash facility | DPW/Town Meeting              | Complete Nov 2007<br>Complete 2010.         | Funding for preliminary study approved at spring 2008 town meeting. Design of this facility will be included in new DPW facility | Construction of DPW facility delayed due to financial difficulties and possible site suitability issues. Under study. |
| 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 6 (Reliance on non-municipal partners indicated, if any) |                                                                                             |
|----------------|--------------------------------|-------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| 7-1<br>Revised | Stream monitoring              | DPW/Conservation/BoH          | Completion date:<br>Two times per year                 | No volunteers have come forward.                                                           |                                                                                             |
| 7-2<br>Revised | Locate MS4 discharges          | DPW                           | Completion date:<br>January 1, 2004<br>July 2006       | Summer 2006 located approximately 200 additional drainage structures                       | This effort will be included in 3-2 above.                                                  |
| 7-3<br>Revised | Survey agricultural activities | DPW/Conservation              | Completion date:<br>September 15, 2004<br>July 1, 2005 | Contact made with 8 agricultural property owners. No replies to date.                      | Will provide follow up information on improving agricultural activity impact on stormwater. |
| 7-4<br>Revised | Septic system survey           | DPW/Board of Health           | Completion Date:<br>N/A                                | Board of Health relies on Title V inspection guidelines                                    |                                                                                             |
|                |                                |                               |                                                        |                                                                                            |                                                                                             |

**7a. Additions**

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**7b. WLA Assessment**

No data available at this time.

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

The town has completed a GIS based map of the stormwater collection system. Development of the map made use of existing record drawings and other documentation. It is estimated that approximately 80 percent of the system is covered by the new map. GIS locating equipment has been procured that will be used to locate undocumented stormwater collection system components. Particular emphasis will be placed on identifying outfalls not heretofore documented. It is anticipated that the Town will be completed in quadrants over the next two to three years and the system map will be updated periodically as information is gathered. At this point we need to obtain additional training on use of the GIS equipment and on how to update the maps. Using temporary employees, drainage structures in areas of town that were not mapped were surveyed and structures were painted for ease of location. Aerial survey of the Town is planned in April 2009 and will be used to identify and locate these drainage structures

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

##### Programmatic

|                                                |                  |  |
|------------------------------------------------|------------------|--|
| Stormwater management position created/staffed | No               |  |
| Annual program budget/expenditures             | No fixed amount. |  |

##### Education, Involvement, and Training

|                                                                                                            |                                         |                                              |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------|----------------------------------------------|
| Estimated number of residents reached by education program(s). <i>Primarily by Cable TV notices</i>        | 70%                                     |                                              |
| Stormwater management committee established                                                                | No                                      |                                              |
| Stream teams established or supported                                                                      | None                                    |                                              |
| Shoreline clean-up participation or quantity of shoreline miles cleaned                                    | None                                    |                                              |
| Household Hazardous Waste Collection Days <ul style="list-style-type: none"> <li>days sponsored</li> </ul> | Collection event held in September 2007 | Intent is to conduct such events biannually. |
| <ul style="list-style-type: none"> <li>community participation</li> </ul>                                  | 200 families                            | 2007                                         |
| <ul style="list-style-type: none"> <li>material collected</li> </ul>                                       | N/A                                     |                                              |
| School curricula implemented                                                                               | No                                      |                                              |

## Legal/Regulatory

|                                                                 |   | In Place<br>Prior to<br>Phase II | Under<br>Review | Drafted       | Adopted |
|-----------------------------------------------------------------|---|----------------------------------|-----------------|---------------|---------|
| Regulatory Mechanism Status (indicate with "X")                 |   |                                  |                 |               |         |
| ▪ Illicit Discharge Detection & Elimination                     |   |                                  |                 |               | X       |
| ▪ Erosion & Sediment Control                                    | X |                                  |                 | To be revised |         |
| ▪ Post-Development Stormwater Management                        |   |                                  | x               |               |         |
| Accompanying Regulation Status (indicate with "X")              |   |                                  |                 |               |         |
| ▪ Illicit Discharge Detection & Elimination (included in bylaw) |   |                                  |                 |               | x       |
| ▪ Erosion & Sediment Control                                    | X |                                  | X               |               |         |
| ▪ Post-Development Stormwater Management                        |   |                                  | X               |               |         |

## Mapping and Illicit Discharges

|                                                                              |  |            |  |
|------------------------------------------------------------------------------|--|------------|--|
| Outfall mapping complete                                                     |  | 80%        |  |
| Estimated or actual number of outfalls ( <i>Estimated</i> )                  |  | 134        |  |
| System-Wide mapping complete                                                 |  | 80%        |  |
| Mapping method(s)                                                            |  |            |  |
| ▪ Paper/Mylar                                                                |  |            |  |
| ▪ CADD                                                                       |  |            |  |
| ▪ GIS. <i>Paper maps and record drawings used to develop stormwater map.</i> |  | 80%        |  |
| Outfalls inspected/screened                                                  |  | None       |  |
| Illicit discharges identified                                                |  | None       |  |
| Illicit connections removed                                                  |  | None       |  |
| % of population on sewer ( <i>estimated</i> )                                |  | 75%(9,900) |  |
| % of population on septic systems ( <i>estimated</i> )                       |  | 25%(3,325) |  |

|                                                                                                                           |                                               |  |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--|
|                                                                                                                           |                                               |  |
| <b>Construction</b>                                                                                                       |                                               |  |
| Number of construction starts (>1-acre)                                                                                   | 12                                            |  |
| Estimated percentage of construction starts adequately regulated for erosion and sediment control                         | 90%                                           |  |
| Site inspections completed. <i>On the average all sites are inspected weekly.</i>                                         | 100%                                          |  |
| Tickets/Stop work orders issued                                                                                           | 0                                             |  |
| Fines collected                                                                                                           | 0                                             |  |
| Complaints/concerns received from public                                                                                  | 9                                             |  |
|                                                                                                                           |                                               |  |
| <b>Post-Development Stormwater Management</b>                                                                             |                                               |  |
| Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control. | N/A                                           |  |
| Site inspections completed                                                                                                | N/A                                           |  |
| Estimated volume of stormwater recharged                                                                                  | N/A                                           |  |
|                                                                                                                           |                                               |  |
| <b>Operations and Maintenance</b>                                                                                         |                                               |  |
| Average frequency of catch basin cleaning (non-commercial/non-arterial streets)                                           | 1/yr                                          |  |
| Average frequency of catch basin cleaning (commercial/arterial or other critical streets)                                 | 1/yr                                          |  |
| Total number of structures cleaned ( <i>Approximate number</i> )                                                          | 750                                           |  |
| Storm drain cleaned ( <i>Not documented</i> )                                                                             | N/A                                           |  |
| Qty. of screenings/debris removed from storm sewer infrastructure                                                         | 150CY                                         |  |
| Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)                            | Stockpiled awaiting beneficial use decisions. |  |
| Cost of screenings disposal                                                                                               | N/A                                           |  |

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|--------------------------------------------------------------------------------------|------|--|
| Average frequency of street sweeping (non-commercial/non-arterial streets)           | 1/yr |  |
| Average frequency of street sweeping (commercial/arterial or other critical streets) | 3/yr |  |
| Qty. of sand/debris collected by sweeping                                            | N/A  |  |
| Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)                |      |  |
| Cost of sweepings disposal                                                           | N/A  |  |

|                                                                                                                                          |                                              |  |
|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|--|
| Anti-/De-Icing products and ratios. <i>Significant reduction in use of sand versus last year. Approximately 50% less than prior year</i> | 75% NaCl<br>5% CaCl <sub>2</sub><br>20% Sand |  |
| Pre-wetting techniques utilized. <i>Liquid CaCl<sub>2</sub> applied at spinner discharge of spreader</i>                                 | Yes                                          |  |
| Manual control spreaders used                                                                                                            | Yes                                          |  |
| Automatic or Zero-velocity spreaders used                                                                                                | No                                           |  |
| Estimated net reduction in typical year salt application                                                                                 | None                                         |  |
| Salt pile(s) covered in storage shed(s). <i>Mixed sand/salt in working pile uncovered</i>                                                | Yes                                          |  |
| Storage shed(s) in design or under construction. <i>Will be included in design of new Public Works facility.</i>                         | No                                           |  |
| <i>Estimated net reduction in typical year road sand application (5 year average)</i>                                                    | 95%                                          |  |