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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PHASE II
GENERAL PERMIT FOR SMALL MS4 OPERATORS

5TH ANNUAL REPORT

Submitted By:

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Submitted To:

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Reporting Period - May 1, 2007 - May 1, 2008
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5th Annual Report - NPDES General Permit

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Massachusetts Turnpike Authority
668 South Avenue
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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, I certify that 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.

RICK McCullough 4/30/08
Printed Name Date

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Massachusetts Turnpike Authority – Self-Assessment

The Massachusetts Turnpike Authority (MTA) has completed the required self-assessment for reporting Year 5. The Massachusetts Turnpike (Interstate 90) has urbanized areas in all, or a portion of the following communities: Russell, Westfield, West Springfield, Chicopee, Ludlow, Wilbraham, Palmer, Sturbridge, Charlton, Oxford, Auburn, Millbury, Grafton, Weston, Westborough, Hopkinton, Southborough, Framingham, Natick, Wayland, Weston, Newton, and Boston. Some of the regulated entities within the urbanized areas include interchange facilities, maintenance depots, state police barracks, tunnels, stormwater pump stations, and various leased properties. The receiving waters of the stormwater discharge include: brooks, streams, ponds, rivers, reservoirs, Boston Inner Harbor, and unnamed and or isolated ponds, tributaries, wetlands and streams.

For permit Year 5, the MTA continued with its effort to improve the storm water quality through the implementation of Best Management Practices (BMPs) for the six minimum control measures. The progress to date is detailed within. Implementation of the BMPs requires balancing the priority of available resources, given limited personnel, budgeting, changing priorities due to emergencies and operational needs, and consistently keeping abreast of the daily unforeseen circumstances as an operating transportation agency.

Minimum Control Measure 1 – Public Education and Outreach on Stormwater Impacts BMPs: 1A Educational Display, 1B MTA Website, 1C Informational Pamphlet

Overview and Objectives

The goal is to educate the motoring public and worldwide web surfers about stormwater related practices that they are able to implement to help improve the quality, and potentially reduce the quantity, of stormwater discharge. The MTA will achieve this by placing stormwater related pamphlets and educational displays at some the Tourist Information Centers. Over a half million visitors stop at the Tourist Information Centers each year.

The MTA has updated it's website to include a number of links to websites with a great deal of stormwater related information. A place to receive public comment regarding Construction General Permit NOIs has recently been added. MTA's IS Department estimates that approximately 200,000 worldwide web surfers visit the site per month. The MTA will update the Environmental Information link as required.

BMP Progress

1A Educational Display – The MTA had educational displays located in two of the busiest Tourist Information Centers. The MTA is satisfied with the progress made in Year 5.

1B MTA Website – A place to receive public comment for Construction General Permit NOIs is now available. The goal was partially met and progress was limited due to reduced resources and manpower.

1C Informational Pamphlets – The brochure racks were replenished with informational pamphlets as needed. The MTA is satisfied with the progress made in Year 5.

Data Results

The benefits of these BMPs are quantified in terms of direct or indirect measures. Given that the information provided to the public can not be implemented by the public on the MTA interstate highway, it is not possible to measure the impact of the MTA's efforts. However, it is anticipated that the information provided to the public will have a positive effect in the participating publics' home and neighboring communities.

Minimum Control Measure 1 – Public Education and Outreach on Stormwater Impacts BMPs: 1A Educational Display, 1B MTA Website, 1C Informational Pamphlet, (con't)

Summary of Activities for Year 6

The MTA plans to review the Stormwater Management Program/NOI submitted in 2003 and modify accordingly.

Best Management Practices Changes

The MTA is not proposing any changes at this time.

Relying on Other Entities

The MTA does not rely on other entities to achieve implementation of these BMPs.

Minimum Control Measure 2 – Public Involvement/Participation BMPs: 2A Trash Pick-up, 2B Storm Drain Stenciling

Overview and Objectives

Although the intent of this Minimum Control Measure is to encourage the public's participation, there are limitations with regard to the public's actual physical involvement/participation within and on the Turnpike. The MTA continues to have a presence at public hearings in many of the approximately 32 communities that the Turnpike travels through. Public input, as well as direction from local governing authorities, is evaluated and considered during the design and permitting phases.

The MTA takes great pride in presenting and maintaining a clean road. The Turnpike has eight maintenance depots that have responsibility for trash pick-up beginning at the New York border and ending in East Boston, totaling over 140 miles of road and tunnel. The MTA collects roadside trash 24/7/365. The maintenance department's diligence in trash pick-up aides in minimizing the amount of trash collecting in and traveling through the drainage infrastructure. The MTA has devised and implemented a tracking method for quantifying roadside trash pick-up and has trained personnel at each maintenance depot in using this tracking method. The data will continue to be collected, reviewed, and used to evaluate how best to achieve cleaner outfalls.

Storm drain stenciling is required to take place at three of the leased service areas. During Year 3, the MTA and the service area tenants met with Clearwater Technology to test their heavy duty plastic Ultra-Drain Marker. The product is scratch resistant and claims to have a life span of 7 – 10 years. The tenants purchased the makers and labeled the storm drains at each location as required. The MTA will remain involved in the oversight of storm drain stenciling within the service areas.

BMP Progress

2A Trash Pick-up – Road side trash pick-up in the urbanized areas was performed according to schedule and sporadically recorded. The goal was partially met and progress was limited due to reduced resources and manpower.

2B Storm Drain Stenciling – The stencils are inspected during the semi-annual catch basin cleaning and replaced if necessary. MTA is satisfied with the progress made in Year 5.

Data Results

The maintenance depots continuously pick up trash and to date nearly 5 years of data has been collected. Although the data hasn't been analyzed at this time, we do anticipate devising a reasonable analytical and quantifiable approach to the data.

There is no collected data for catch basin stenciling at this time.

Minimum Control Measure 2 – Public Involvement/Participation
BMPs: 2A Trash Pick-up, 2B Storm Drain Stenciling, (con't)

Summary of Activities for Year 6

The MTA plans to review the Stormwater Management Program/NOI submitted in 2003 and modify accordingly.

Best Management Practices Changes

The MTA is not proposing any changes at this time.

Relying on Other Entities

The three service areas requiring storm drain stenciling are leased and therefore the MTA relies on other entities to fulfill this requirement. The MTA will continue to work with the Real Estate, Patron Services and Legal Departments to assure that the tenants follow through with the required effort to install and maintain storm drain stenciling.

Minimum Control Measure 3 – Illicit Discharge Detection and Elimination
BMPs: 3A Mapping Stormwater Outfalls, 3B Non-Stormwater Discharge Program
3C Develop Illicit Discharge Plan, 3E Educate Public and Employees

Overview and Objectives

The MTA proposed to map and field verify the stormwater infrastructure by the end of Year 5. Every 3 years, the MTA inspects and reports on the condition of the stormwater drainage infrastructure. Ultimately, the MTA's objective is to achieve the creation of a cohesive CAD/GIS database of all MTA urbanized areas. The MTA has over 140 miles of roads and tunnels, a multitude of interchanges, buildings, leased facilities, bridges, pump stations, and vent buildings, of which more than half is within an urbanized area,

The Environmental Engineering Department has obtained from the Real Estate Department, an inventory of all MTA properties including leased properties. During Year 2, the MTA sorted through the inventory list and identified more closely, based on interpolated urbanized area lines, properties that are within the regulated areas. The building inventory list was updated in 2004 and is currently undergoing an update to include all newly acquired Central Artery Project properties. Due to the magnitude of this task, the MTA anticipates continuing to work on this task throughout the permit period. The Environmental Engineering Department reviews all design plans for projects that are to be constructed on MTA property or tie into MTA infrastructure. At that time, proposed connections are reviewed and evaluated for compliance with state and federal regulations. As for the existing stormwater infrastructure, target areas that are more likely to have illicit discharges have been identified.

BMP Progress

3A Mapping Stormwater Outfalls – Another 5+/- miles of road and drainage infrastructure were field verified bringing the total miles of field verified road and drainage infrastructure to at least 96% completion. Additionally, in 2007 the MTA made significant progress in updating their base mapping. Urbanized Area limits taken from The Bureau of Census and all applicable resource area data layers available on MassGIS were successfully transported into the Authority's mapping data base. This task was very complex and required a great deal of resources. Although all the pertinent information is now available, integration of the new data layers will be ongoing. An additional CAD Operator position was created and filled in 2007. This position is dedicated solely to the newly acquired Central

Minimum Control Measure 3 – Illicit Discharge Detection and Elimination BMPs: 3A Mapping Stormwater Outfalls, 3B Non-Stormwater Discharge Program 3C Develop Illicit Discharge Plan, 3E Educate Public and Employees (con't)

Artery Project. Field verification of this newly acquired area began in 2007 and will continue dependant upon financial and manpower resources. The goal was partially met and progress was limited due to reduced resources and manpower.

3B Non-Stormwater Discharge Program – This BMP will be addressed under BMP 3C in the future as it is closely tied to the Illicit Discharge Plan BMP. Combining these two BMPs makes sense from a resource allocation perspective.

3C Develop Illicit Discharge Plan – The MTA recognizes that progress on full implementation of the plan has not met expectations. Given the magnitude of this task in terms of quantity and location of structures, the MTA has been unable to commit the manpower and resources needed to fully implement. The MTA will approach implementation in small, but manageable sections.

3E Educate Public and Employees - As required by the General Permit, in 2006 we proposed voiding BMP 3D and replacing it with this one. The Authority will implement this BMP by providing informational brochures for the public regarding IDDE at the Tourist Information Centers and also by adding a link regarding IDDE to the MTA's website. Employees will be informed about the importance of illicit discharge detection and reporting through an internal e-mail and posting. The link was posted in 2007. The goal was partially met and progress was limited due to reduced resources and manpower.

Data Results

No new data acquired.

Summary of Activities for Year 6

The MTA plans to review the Stormwater Management Program/NOI submitted in 2003 and modify accordingly.

Best Management Practices Changes

The MTA is not proposing any changes at this time.

Relying on Other Entities

The MTA does not rely on other entities to achieve implementation of these BMPs.

Minimum Control Measure 4 – Construction Site Stormwater Runoff Control BMPs: 4A Construction Runoff Program, 4B Construction Plan Review

Overview and Objectives

The MTA's objective is to minimally impact stormwater runoff during construction projects having land disturbance of 1 acre or greater. The Authority strives to have MTA construction sites operate safely and efficiently, while raising awareness of the importance of proper erosion and sedimentation control. As part of the Construction Runoff Program, the MTA educates its' personnel, and contractors' personnel, on the importance of installing and maintaining proper erosion and sedimentation control. Staff members from the Environmental Engineering Department are a part of the design review process and the pre-construction meeting. All MTA construction sites are staffed with an MTA construction inspector that monitors the everyday activities of the project. All federal, state and local environmental permits for each project is included in the Contract Documents.

Minimum Control Measure 4 – Construction Site Stormwater Runoff Control
BMPs: 4A Construction Runoff Program, 4B Construction Plan Review, (con't)

In conjunction with educating field personnel, the Environmental Engineering Department will continue to expand its role during the design review process. Additionally, several sections in the Authority's specifications were significantly upgraded to require more stringent stormwater best management practices for all MTA projects. The Authority will continue to update the specifications sections pertaining to stormwater management as needed.

BMP Progress

4A Construction Runoff Program – During Year 5, the MTA had 1 project meeting the Construction General Permit criteria. A member of the Environmental Engineering staff reviewed design plans and attended pre-construction meetings for projects that had environmental permitting. The MTA is satisfied with the progress made during Year 5.

4B Construction Plan Review – During Year 5, the Environmental Engineering staff reviewed projects that required federal, state, and local environmental permitting or had the potential to impact stormwater runoff. Sediment and erosion control measures were added to the projects and also incorporated into the Contract Specifications. Only 1 project met the Construction General Permit threshold of 1 acre or greater land disturbance. The MTA is satisfied with the progress made during Year 5.

Data Results

No data has been collected at this time that can be analyzed or quantified.

Summary of Activities for Year 6

The MTA plans to review the Stormwater Management Program/NOI submitted in 2003 and modify accordingly.

Best Management Practices Changes

The MTA is not proposing any changes at this time.

Relying on Other Entities

In some instances the MTA will rely on other entities to achieve implementation of these BMPs. Criteria to meet the CGP requirements was incorporated into the Contract Specifications and Contract Documents and a bid item was created in order compensate the contractor for the additional work required, prepare a SWPPP and file an NOI. The Environmental Engineering staff reviewed the SWPPP and filed an electronic NOI.

For construction projects meeting these criteria, either by lease or permit, the MTA intends to hold the lessee to the same standard and guideline that the MTA has committed to. The MTA is an integral part of the design review process for construction on leased properties.

Minimum Control Measure 5 – Post-Construction Stormwater Runoff
BMPs: 5A Post-Construction Runoff Program, 5B Site Plan Review, 5C Stormwater System Maintenance Plan

Overview and Objectives

The Environmental Engineering Department will review all design plans. Projects with land disturbance of 1 acre or greater will be reviewed to ensure that long-term structural and or non-structural stormwater control BMPs are considered in the design process. The Environmental

Minimum Control Measure 5 – Post-Construction Stormwater Runoff
BMPs: 5A Post-Construction Runoff Program, 5B Site Plan Review, 5C Stormwater System Maintenance Plan

Engineering Department will evaluate current methods for monitoring post-construction stormwater runoff and improve upon where needed. The MTA will strive to ensure that the BMPs that were identified in the design plan are properly constructed, inspected, maintained and or operated.

The MTA will continue to review plans and require erosion control protection where needed. The Engineering Department will also consult various publications, such as: The MA Erosion and Sediment Control Guidelines for Urban and Suburban Areas, Mass Highway Field Guide on Erosion Prevention and Sediment Control and Mass Highway Storm Water Handbook. The MTA's long-term objective is to ensure that construction projects with land disturbance of 1 acre or greater, have the minimum impact on the stormwater runoff quantity while improving the quality of stormwater runoff. Construction Inspectors are assigned to each construction project and monitor the site conditions, ensuring that resource areas are protected and are a priority. Upon review of projects that meet these criteria, the MTA is committed to preparing and implementing an operation and maintenance plan for these BMPs.

BMP Progress

5A Post-Construction Runoff Program – The implementation phase of this Program has not been completed to date. Tracking of the operation and maintenance program has not been satisfactorily devised yet. Possibilities include incorporating the tracking into an EMS or the Maintenance Management Information System, (MMIS) that is currently in use. The goal was partially met and progress was limited due to reduced resources and manpower.

5B Site Plan Review – Several projects were reviewed for environmental compliance in 2007. Only one project designed in-house required filing for the Construction General Permit. The MTA is satisfied with the progress made during Year 5.

5C Stormwater System Maintenance Plan – Storm water maintenance of the Authority's roadway and tunnels is an ongoing, regular and continuous process that occurs primarily for safety of the motoring public as well as structural integrity and other reasons. The MMIS creates preventative maintenance requirements for stormwater infrastructure on a weekly basis which are then distributed to and acted upon by the maintenance personnel in the Boston area. Plans for the newly constructed infrastructure in the Boston area have been catalogued, indexed and made available. Not all stormwater related maintenance tasks have been incorporated into the MMIS at this time. The goal was partially met and progress was limited due to reduced resources and manpower.

Data Results

No data exists at this time that can be analyzed or quantified.

Summary of Activities for Year 6

The MTA plans to review the Stormwater Management Program/NOI submitted in 2003 and modify accordingly.

Best Management Practices Changes

The MTA is not proposing any changes at this time.

Minimum Control Measure 5 – Post-Construction Stormwater Runoff
BMPs: 5A Post-Construction Runoff Program, 5B Site Plan Review, 5C Stormwater System Maintenance Plan, con't

Relying on Other Entities

For projects meeting these criteria, in some instances, the MTA will rely on other entities to achieve implementation of these BMPs. Projects meeting these criteria, either by lease or permit, will be expected to meet the standards established by the Authority. The MTA is already involved in, and will remain involved in, the design review process for construction on leased properties.

Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping for Municipal Operations
BMPs: 6A Training of Employees, 6B Catch Basin Cleaning Program, 6C Street Sweeping, 6D Landscaping and Lawn Care

Overview and Objectives

The overview for this particular MCM, is to employ good housekeeping practices in the field and educate employees about good housekeeping practices. The MTA is very conscientious about providing a clean and safe environment for the motoring public. Catch basin cleaning and street sweeping occurs regularly throughout the year on the Turnpike. Since these two BMPs are performed regularly, a tracking program was created and implemented to measure the volumes collected in both operations. The method used to gather data and measure the effect of the clean-up work will be evaluated and revised as needed.

Two of the BMPs, catch basin cleaning and street sweeping, are implemented at the three leased service areas in addition to MTA properties. The MTA will continue to work with the Patron Services and Legal Departments to ensure that these required tasks are also successfully performed at leased properties within the regulated areas. In order to see this goal to fruition, the MTA anticipates working with the previously mentioned departments to create new language that is specific to these NPDES requirements to be included in future leases.

The Environmental Engineering Department reviewed the Authority's training programs and prepared a training program that ensured that stormwater BMPs got addressed. When training is performed by the Environmental Engineering Department, good housekeeping practices will also be covered in the training session as time allows.

The MTA resumed herbicide spraying in 2007.

BMP Progress

6A Training of Employees – A stormwater BMP training program outline was devised. The goal was partially met and progress was limited due to reduced resources and manpower.

6B Catch Basin Cleaning Program - Catch basin cleaning was performed throughout the Turnpike and on leased properties according to schedule and sporadically recorded. The MTA would like to improve upon the recording and analyzing aspect of this BMP. The goal was partially met and progress was limited due to reduced resources and manpower.

6C Street Sweeping – Street sweeping was performed throughout the Turnpike and on leased properties according to schedule and sporadically recorded. The MTA would like to improve upon the recording and analyzing aspect of this BMP. The goal was partially met and progress was limited due to reduced resources and manpower.

6D Landscaping and Lawn Care – Herbicide spraying was performed on the Turnpike right-of-way. in accordance with the Authority's approved Vegetative Management Plan (VMP). Spraying of herbicides was done by qualified Authority personnel and was kept to a minimum. The MTA uses herbicides that are DAR approved for sensitive area spraying. Proper permitting was obtained.

Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping for Municipal Operations
BMPs: 6A Training of Employees, 6B Catch Basin Cleaning Program, 6C Street Sweeping, 6D Landscaping and Lawn Care, con't

Data Results

The data hasn't been analyzed at this time.

Summary of Activities for Year 6

The MTA plans to review the Stormwater Management Program/NOI submitted in 2003 and modify accordingly.

Best Management Practices Changes

The MTA is not proposing any changes at this time..

Relying on Other Entities

Two of the BMPs, catch basin cleaning and street sweeping also occurs at the three leased service areas. Therefore, the MTA does rely on other entities to perform these tasks.

Minimum Control Measure 7 – TMDL

Overview and Objectives

The goal of the MTA is to discharge storm water run off that is compliant with Total Maximum Discharge Limits where established. Priority areas have been established, data layers depicting impaired water bodies and drainage basin limits were acquired and will be integrated into the Authority's base mapping as manpower allows. Priority areas will certainly be mapped first in order to receive the attention needed. When work is undertaken in a priority area, storm water run off will be evaluated and subsequently determined whether or not the discharge is in compliance with established TMDLs.

BMP Progress

The MTA has identified and mapped impaired waterways along the roadway. A list of pollutants has been created for each waterway. The goal was partially met and progress was limited due to reduced resources and manpower.

Data Results

At this time, no TMDL data has been collected along the roadway.

Summary of Activities for Year 6

In anticipation of the upcoming revised permit conditions, the MTA plans to review the Stormwater Management Program/NOI submitted in 2003 and modify accordingly.

Best Management Practices Changes

The MTA is not proposing any changes at this time.

END OF REPORT

Massachusetts Turnpike Authority – Self-Assessment

The Massachusetts Turnpike Authority (MTA) has completed the required self-assessment for reporting Year 5. The Massachusetts Turnpike (Interstate 90) has urbanized areas in all, or a portion of the following communities: Russell, Westfield, West Springfield, Chicopee, Ludlow, Wilbraham, Palmer, Sturbridge, Charlton, Oxford, Auburn, Millbury, Grafton, Weston, Westborough, Hopkinton, Southborough, Framingham, Natick, Wayland, Weston, Newton, and Boston. Some of the regulated entities within the urbanized areas include interchange facilities, maintenance depots, state police barracks, tunnels, stormwater pump stations, and various leased properties. The receiving waters of the stormwater discharge include: brooks, streams, ponds, rivers, reservoirs, Boston Inner Harbor, and unnamed and or isolated ponds, tributaries, wetlands and streams.

For permit Year 5, the MTA continued with its effort to improve the storm water quality through the implementation of Best Management Practices (BMPs) for the six minimum control measures. The progress to date is detailed within. Implementation of the BMPs requires balancing the priority of available resources, given limited personnel, budgeting, changing priorities due to emergencies and operational needs, and consistently keeping abreast of the daily unforeseen circumstances as an operating transportation agency.

Minimum Control Measure 1 – Public Education and Outreach on Stormwater Impacts BMPs: 1A Educational Display, 1B MTA Website, 1C Informational Pamphlet

Overview and Objectives

The goal is to educate the motoring public and worldwide web surfers about stormwater related practices that they are able to implement to help improve the quality, and potentially reduce the quantity, of stormwater discharge. The MTA will achieve this by placing stormwater related pamphlets and educational displays at some the Tourist Information Centers. Over a half million visitors stop at the Tourist Information Centers each year.

The MTA has updated it's website to include a number of links to websites with a great deal of stormwater related information. A place to receive public comment regarding Construction General Permit NOIs has recently been added. MTA's IS Department estimates that approximately 200,000 worldwide web surfers visit the site per month. The MTA will update the Environmental Information link as required.

BMP Progress

1A Educational Display – The MTA had educational displays located in two of the busiest Tourist Information Centers. The MTA is satisfied with the progress made in Year 5.

1B MTA Website – A place to receive public comment for Construction General Permit NOIs is now available. The goal was partially met and progress was limited due to reduced resources and manpower.

1C Informational Pamphlets – The brochure racks were replenished with informational pamphlets as needed. The MTA is satisfied with the progress made in Year 5.

Data Results

The benefits of these BMPs are quantified in terms of direct or indirect measures. Given that the information provided to the public can not be implemented by the public on the MTA interstate highway, it is not possible to measure the impact of the MTA's efforts. However, it is anticipated that the information provided to the public will have a positive effect in the participating publics' home and neighboring communities.

Minimum Control Measure 1 – Public Education and Outreach on Stormwater Impacts BMPs: 1A Educational Display, 1B MTA Website, 1C Informational Pamphlet , (con't)

Summary of Activities for Year 6

The MTA plans to review the Stormwater Management Program/NOI submitted in 2003 and modify accordingly.

Best Management Practices Changes

The MTA is not proposing any changes at this time.

Relying on Other Entities

The MTA does not rely on other entities to achieve implementation of these BMPs.

Minimum Control Measure 2 – Public Involvement/Participation BMPs: 2A Trash Pick-up, 2B Storm Drain Stenciling

Overview and Objectives

Although the intent of this Minimum Control Measure is to encourage the public's participation, there are limitations with regard to the public's actual physical involvement/participation within and on the Turnpike. The MTA continues to have a presence at public hearings in many of the approximately 32 communities that the Turnpike travels through. Public input, as well as direction from local governing authorities, is evaluated and considered during the design and permitting phases.

The MTA takes great pride in presenting and maintaining a clean road. The Turnpike has eight maintenance depots that have responsibility for trash pick-up beginning at the New York border and ending in East Boston, totaling over 140 miles of road and tunnel. The MTA collects roadside trash 24/7/365. The maintenance department's diligence in trash pick-up aides in minimizing the amount of trash collecting in and traveling through the drainage infrastructure. The MTA has devised and implemented a tracking method for quantifying roadside trash pick-up and has trained personnel at each maintenance depot in using this tracking method. The data will continue to be collected, reviewed, and used to evaluate how best to achieve cleaner outfalls.

Storm drain stenciling is required to take place at three of the leased service areas. During Year 3, the MTA and the service area tenants met with Clearwater Technology to test their heavy duty plastic Ultra-Drain Marker. The product is scratch resistant and claims to have a life span of 7 – 10 years. The tenants purchased the makers and labeled the storm drains at each location as required. The MTA will remain involved in the oversight of storm drain stenciling within the service areas.

BMP Progress

2A Trash Pick-up – Road side trash pick-up in the urbanized areas was performed according to schedule and sporadically recorded. The goal was partially met and progress was limited due to reduced resources and manpower.

2B Storm Drain Stenciling – The stencils are inspected during the semi-annual catch basin cleaning and replaced if necessary. MTA is satisfied with the progress made in Year 5.

Data Results

The maintenance depots continuously pick up trash and to date nearly 5 years of data has been collected. Although the data hasn't been analyzed at this time, we do anticipate devising a reasonable analytical and quantifiable approach to the data.

There is no collected data for catch basin stenciling at this time.

Minimum Control Measure 2 – Public Involvement/Participation
BMPs: 2A Trash Pick-up, 2B Storm Drain Stenciling, (con't)

Summary of Activities for Year 6

The MTA plans to review the Stormwater Management Program/NOI submitted in 2003 and modify accordingly.

Best Management Practices Changes

The MTA is not proposing any changes at this time.

Relying on Other Entities

The three service areas requiring storm drain stenciling are leased and therefore the MTA relies on other entities to fulfill this requirement. The MTA will continue to work with the Real Estate, Patron Services and Legal Departments to assure that the tenants follow through with the required effort to install and maintain storm drain stenciling.

Minimum Control Measure 3 – Illicit Discharge Detection and Elimination
BMPs: 3A Mapping Stormwater Outfalls, 3B Non-Stormwater Discharge Program
3C Develop Illicit Discharge Plan, 3E Educate Public and Employees

Overview and Objectives

The MTA proposed to map and field verify the stormwater infrastructure by the end of Year 5. Every 3 years, the MTA inspects and reports on the condition of the stormwater drainage infrastructure. Ultimately, the MTA's objective is to achieve the creation of a cohesive CAD/GIS database of all MTA urbanized areas. The MTA has over 140 miles of roads and tunnels, a multitude of interchanges, buildings, leased facilities, bridges, pump stations, and vent buildings, of which more than half is within an urbanized area,

The Environmental Engineering Department has obtained from the Real Estate Department, an inventory of all MTA properties including leased properties. During Year 2, the MTA sorted through the inventory list and identified more closely, based on interpolated urbanized area lines, properties that are within the regulated areas. The building inventory list was updated in 2004 and is currently undergoing an update to include all newly acquired Central Artery Project properties. Due to the magnitude of this task, the MTA anticipates continuing to work on this task throughout the permit period. The Environmental Engineering Department reviews all design plans for projects that are to be constructed on MTA property or tie into MTA infrastructure. At that time, proposed connections are reviewed and evaluated for compliance with state and federal regulations. As for the existing stormwater infrastructure, target areas that are more likely to have illicit discharges have been identified.

BMP Progress

3A Mapping Stormwater Outfalls – Another 5+/- miles of road and drainage infrastructure were field verified bringing the total miles of field verified road and drainage infrastructure to at least 96% completion. Additionally, in 2007 the MTA made significant progress in updating their base mapping. Urbanized Area limits taken from The Bureau of Census and all applicable resource area data layers available on MassGIS were successfully transported into the Authority's mapping data base. This task was very complex and required a great deal of resources. Although all the pertinent information is now available, integration of the new data layers will be ongoing. An additional CAD Operator position was created and filled in 2007. This position is dedicated solely to the newly acquired Central

Minimum Control Measure 3 – Illicit Discharge Detection and Elimination BMPs: 3A Mapping Stormwater Outfalls, 3B Non-Stormwater Discharge Program 3C Develop Illicit Discharge Plan, 3E Educate Public and Employees (con't)

Artery Project. Field verification of this newly acquired area began in 2007 and will continue dependant upon financial and manpower resources. The goal was partially met and progress was limited due to reduced resources and manpower.

3B Non-Stormwater Discharge Program – This BMP will be addressed under BMP 3C in the future as it is closely tied to the Illicit Discharge Plan BMP. Combining these two BMPs makes sense from a resource allocation perspective.

3C Develop Illicit Discharge Plan – The MTA recognizes that progress on full implementation of the plan has not met expectations. Given the magnitude of this task in terms of quantity and location of structures, the MTA has been unable to commit the manpower and resources needed to fully implement. The MTA will approach implementation in small, but manageable sections.

3E Educate Public and Employees - As required by the General Permit, in 2006 we proposed voiding BMP 3D and replacing it with this one. The Authority will implement this BMP by providing informational brochures for the public regarding IDDE at the Tourist Information Centers and also by adding a link regarding IDDE to the MTA's website. Employees will be informed about the importance of illicit discharge detection and reporting through an internal e-mail and posting. The link was posted in 2007. The goal was partially met and progress was limited due to reduced resources and manpower.

Data Results

No new data acquired.

Summary of Activities for Year 6

The MTA plans to review the Stormwater Management Program/NOI submitted in 2003 and modify accordingly.

Best Management Practices Changes

The MTA is not proposing any changes at this time.

Relying on Other Entities

The MTA does not rely on other entities to achieve implementation of these BMPs.

Minimum Control Measure 4 – Construction Site Stormwater Runoff Control BMPs: 4A Construction Runoff Program, 4B Construction Plan Review

Overview and Objectives

The MTA's objective is to minimally impact stormwater runoff during construction projects having land disturbance of 1 acre or greater. The Authority strives to have MTA construction sites operate safely and efficiently, while raising awareness of the importance of proper erosion and sedimentation control. As part of the Construction Runoff Program, the MTA educates its' personnel, and contractors' personnel, on the importance of installing and maintaining proper erosion and sedimentation control. Staff members from the Environmental Engineering Department are a part of the design review process and the pre-construction meeting. All MTA construction sites are staffed with an MTA construction inspector that monitors the everyday activities of the project. All federal, state and local environmental permits for each project is included in the Contract Documents.

Minimum Control Measure 4 – Construction Site Stormwater Runoff Control BMPs: 4A Construction Runoff Program, 4B Construction Plan Review, (con't)

In conjunction with educating field personnel, the Environmental Engineering Department will continue to expand its role during the design review process. Additionally, several sections in the Authority's specifications were significantly upgraded to require more stringent stormwater best management practices for all MTA projects. The Authority will continue to update the specifications sections pertaining to stormwater management as needed.

BMP Progress

4A Construction Runoff Program – During Year 5, the MTA had 1 project meeting the Construction General Permit criteria. A member of the Environmental Engineering staff reviewed design plans and attended pre-construction meetings for projects that had environmental permitting. The MTA is satisfied with the progress made during Year 5.

4B Construction Plan Review – During Year 5, the Environmental Engineering staff reviewed projects that required federal, state, and local environmental permitting or had the potential to impact stormwater runoff. Sediment and erosion control measures were added to the projects and also incorporated into the Contract Specifications. Only 1 project met the Construction General Permit threshold of 1 acre or greater land disturbance. The MTA is satisfied with the progress made during Year 5.

Data Results

No data has been collected at this time that can be analyzed or quantified.

Summary of Activities for Year 6

The MTA plans to review the Stormwater Management Program/NOI submitted in 2003 and modify accordingly.

Best Management Practices Changes

The MTA is not proposing any changes at this time.

Relying on Other Entities

In some instances the MTA will rely on other entities to achieve implementation of these BMPs. Criteria to meet the CGP requirements was incorporated into the Contract Specifications and Contract Documents and a bid item was created in order compensate the contractor for the additional work required, prepare a SWPPP and file an NOI. The Environmental Engineering staff reviewed the SWPPP and filed an electronic NOI.

For construction projects meeting these criteria, either by lease or permit, the MTA intends to hold the lessee to the same standard and guideline that the MTA has committed to. The MTA is an integral part of the design review process for construction on leased properties.

Minimum Control Measure 5 – Post-Construction Stormwater Runoff BMPs: 5A Post-Construction Runoff Program, 5B Site Plan Review, 5C Stormwater System Maintenance Plan

Overview and Objectives

The Environmental Engineering Department will review all design plans. Projects with land disturbance of 1 acre or greater will be reviewed to ensure that long-term structural and or non-structural stormwater control BMPs are considered in the design process. The Environmental

Minimum Control Measure 5 – Post-Construction Stormwater Runoff
BMPs: 5A Post-Construction Runoff Program, 5B Site Plan Review, 5C Stormwater System Maintenance Plan

Engineering Department will evaluate current methods for monitoring post-construction stormwater runoff and improve upon where needed. The MTA will strive to ensure that the BMPs that were identified in the design plan are properly constructed, inspected, maintained and or operated.

The MTA will continue to review plans and require erosion control protection where needed. The Engineering Department will also consult various publications, such as: The MA Erosion and Sediment Control Guidelines for Urban and Suburban Areas, Mass Highway Field Guide on Erosion Prevention and Sediment Control and Mass Highway Storm Water Handbook. The MTA's long-term objective is to ensure that construction projects with land disturbance of 1 acre or greater, have the minimum impact on the stormwater runoff quantity while improving the quality of stormwater runoff. Construction Inspectors are assigned to each construction project and monitor the site conditions, ensuring that resource areas are protected and are a priority. Upon review of projects that meet these criteria, the MTA is committed to preparing and implementing an operation and maintenance plan for these BMPs.

BMP Progress

5A Post-Construction Runoff Program – The implementation phase of this Program has not been completed to date. Tracking of the operation and maintenance program has not been satisfactorily devised yet. Possibilities include incorporating the tracking into an EMS or the Maintenance Management Information System, (MMIS) that is currently in use. The goal was partially met and progress was limited due to reduced resources and manpower.

5B Site Plan Review – Several projects were reviewed for environmental compliance in 2007. Only one project designed in-house required filing for the Construction General Permit. The MTA is satisfied with the progress made during Year 5.

5C Stormwater System Maintenance Plan – Storm water maintenance of the Authority's roadway and tunnels is an ongoing, regular and continuous process that occurs primarily for safety of the motoring public as well as structural integrity and other reasons. The MMIS creates preventative maintenance requirements for stormwater infrastructure on a weekly basis which are then distributed to and acted upon by the maintenance personnel in the Boston area. Plans for the newly constructed infrastructure in the Boston area have been catalogued, indexed and made available. Not all stormwater related maintenance tasks have been incorporated into the MMIS at this time. The goal was partially met and progress was limited due to reduced resources and manpower.

Data Results

No data exists at this time that can be analyzed or quantified.

Summary of Activities for Year 6

The MTA plans to review the Stormwater Management Program/NOI submitted in 2003 and modify accordingly.

Best Management Practices Changes

The MTA is not proposing any changes at this time.

Minimum Control Measure 5 – Post-Construction Stormwater Runoff
BMPs: 5A Post-Construction Runoff Program, 5B Site Plan Review, 5C Stormwater System Maintenance Plan, con't

Relying on Other Entities

For projects meeting these criteria, in some instances, the MTA will rely on other entities to achieve implementation of these BMPs. Projects meeting these criteria, either by lease or permit, will be expected to meet the standards established by the Authority. The MTA is already involved in, and will remain involved in, the design review process for construction on leased properties.

Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping for Municipal Operations
BMPs: 6A Training of Employees, 6B Catch Basin Cleaning Program, 6C Street Sweeping, 6D Landscaping and Lawn Care

Overview and Objectives

The overview for this particular MCM, is to employ good housekeeping practices in the field and educate employees about good housekeeping practices. The MTA is very conscientious about providing a clean and safe environment for the motoring public. Catch basin cleaning and street sweeping occurs regularly throughout the year on the Turnpike. Since these two BMPs are performed regularly, a tracking program was created and implemented to measure the volumes collected in both operations. The method used to gather data and measure the effect of the clean-up work will be evaluated and revised as needed.

Two of the BMPs, catch basin cleaning and street sweeping, are implemented at the three leased service areas in addition to MTA properties. The MTA will continue to work with the Patron Services and Legal Departments to ensure that these required tasks are also successfully performed at leased properties within the regulated areas. In order to see this goal to fruition, the MTA anticipates working with the previously mentioned departments to create new language that is specific to these NPDES requirements to be included in future leases.

The Environmental Engineering Department reviewed the Authority's training programs and prepared a training program that ensured that stormwater BMPs got addressed. When training is performed by the Environmental Engineering Department, good housekeeping practices will also be covered in the training session as time allows.

The MTA resumed herbicide spraying in 2007.

BMP Progress

6A Training of Employees – A stormwater BMP training program outline was devised. The goal was partially met and progress was limited due to reduced resources and manpower.

6B Catch Basin Cleaning Program - Catch basin cleaning was performed throughout the Turnpike and on leased properties according to schedule and sporadically recorded. The MTA would like to improve upon the recording and analyzing aspect of this BMP. The goal was partially met and progress was limited due to reduced resources and manpower.

6C Street Sweeping – Street sweeping was performed throughout the Turnpike and on leased properties according to schedule and sporadically recorded. The MTA would like to improve upon the recording and analyzing aspect of this BMP. The goal was partially met and progress was limited due to reduced resources and manpower.

6D Landscaping and Lawn Care – Herbicide spraying was performed on the Turnpike right-of-way. in accordance with the Authority's approved Vegetative Management Plan (VMP). Spraying of herbicides was done by qualified Authority personnel and was kept to a minimum. The MTA uses herbicides that are DAR approved for sensitive area spraying. Proper permitting was obtained.

Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping for Municipal Operations
BMPs: 6A Training of Employees, 6B Catch Basin Cleaning Program, 6C Street Sweeping, 6D Landscaping and Lawn Care, con't

Data Results

The data hasn't been analyzed at this time.

Summary of Activities for Year 6

The MTA plans to review the Stormwater Management Program/NOI submitted in 2003 and modify accordingly.

Best Management Practices Changes

The MTA is not proposing any changes at this time..

Relying on Other Entities

Two of the BMPs, catch basin cleaning and street sweeping also occurs at the three leased service areas. Therefore, the MTA does rely on other entities to perform these tasks.

Minimum Control Measure 7 – TMDL

Overview and Objectives

The goal of the MTA is to discharge storm water run off that is compliant with Total Maximum Discharge Limits where established. Priority areas have been established, data layers depicting impaired water bodies and drainage basin limits were acquired and will be integrated into the Authority's base mapping as manpower allows. Priority areas will certainly be mapped first in order to receive the attention needed. When work is undertaken in a priority area, storm water run off will be evaluated and subsequently determined whether or not the discharge is in compliance with established TMDLs.

BMP Progress

The MTA has identified and mapped impaired waterways along the roadway. A list of pollutants has been created for each waterway. The goal was partially met and progress was limited due to reduced resources and manpower.

Data Results

At this time, no TMDL data has been collected along the roadway.

Summary of Activities for Year 6

In anticipation of the upcoming revised permit conditions, the MTA plans to review the Stormwater Management Program/NOI submitted in 2003 and modify accordingly.

Best Management Practices Changes

The MTA is not proposing any changes at this time.

END OF REPORT