GENERAL PERMIT
AUTHORIZATION TO DISCHARGE STORM WATER ASSOCIATED WITH MUNICIPAL SEPARATE STORM SEWER SYSTEMS UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM PERMIT PROGRAM

PERMIT No: MN R 040000

MINNESOTA POLLUTION CONTROL AGENCY
520 LAFAYETTE ROAD NORTH
ST. PAUL, MN 55155-4194

October 1, 2007

NONDEGRADATION REPORT

STORM WATER POLLUTION PREVENTION PROGRAM FOR THE CITY OF BLOOMINGTON, MINNESOTA

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SECTION I
INTRODUCTION

INTRODUCTION

This Nondegradation Report has been prepared to satisfy the requirements of General Permit MNR040000, Part X. Appendix D. The Nondegradation Report has been developed to address significant new or expanded discharges as identified in the August 2007 Loading Assessment for the City of Bloomington Municipal Separate Storm Sewer System (MS4). This report was completed as required in Part X. Appendix D. for the City of Bloomington as a selected MS4 as defined (Part XI. Appendix E).

BACKGROUND

The City of Bloomington is a selected MS4 based on the size of the community and growth of the City's population for three time periods: from 1990 to 2000, from 2000 to 2003, and from 2000 to 2020.

The purpose of the Nondegradation Report is to determine whether additional control measures can be reasonably taken to minimize the impacts of any significant new or expanded discharge based on two time periods: from 1988 to the present and from the present to 2020. The MS4 must select appropriate Best Management Practices (BMPs) that can reasonably be taken to reduce pollutant loadings of total suspended solids, total phosphorus, and stormwater volume. Upon approval of this Nondegradation Report, the BMPs will be incorporated into the City's Storm Water Pollution Prevention Program.

BMPs identified in this Nondegradation Report address:

- Changes in pollutant loadings as far as reasonable and practical through future development.
- Negative impacts of increased storm water discharge volumes causing increased depth and duration of inundation of wetlands having the potential for a significant adverse impact to a designated use of the wetland.
- Changes in stream morphology that have the potential for a significant adverse impact to a designated use of the stream.

This Nondegradation Report considers the results of the August 2007 Loading Assessment that includes an analysis of flow as well as removal of pollutants by BMPs already in place. In addition, 13 supplementary BMPs have been identified to reasonably reduce pollutant loadings to 1988 levels for average rainfall conditions and land use as defined in Part X. Appendix D.

This report gives high priority to BMPs that address future growth and considers retrofit and mitigation options determined to be reasonable and practical. Upon approval of this Nondegradation Report, the BMPs will be incorporated into a modified SWPPP.

PUBLIC PARTICIPATION

This Nondegradation Report along with the proposed SWPPP modifications, and the August 2007 Loading Assessment were submitted to the local water authorities for the City of Bloomington for review and comment on September 27, 2007. Additionally,

comments were solicited on the City's website and local newspaper in accordance with Part V.G.1.e.3) of General Permit MNR040000. All comments and responses to comments can be found in the Record of Decision. Since the end of the comment period extended beyond the October 1, 2007 date that this report was required to be submitted to the MPCA, an addendum will be forwarded including the final Record of Decision and any modifications resulting from comments. The addendum will be submitted to the MPCA no later than October 19, 2007.

RECORD OF DECISION

The formal record of decision containing public and local water authority comments will be submitted on or before October 19, 2007 to give adequate time for consideration by all parties. Any responses to comments or modifications to this report will be included with the Record of Decision.

Future comments on the Loading Assessment, Nondegradation Report, or Storm Water Pollution Prevention Program will be considered and addressed as outlined in Part V.G.1.e, Part V.G.2, and Part VI. of Permit No: MNR04000.

SUBMITTALS

This report was submitted to the Minnesota Pollution Control Agency on October 1, 2007 consistent with the schedule outlined in Part XI. Appendix E of General Permit MNR040000. Included in the submittal was:

1. The Loading Assessment
2. The Nondegradation Report
3. Proposed SWPPP modifications addressing nondegradation
4. Public and local water authority comments/Record of Decision *(to be included in October 19, 2007 addendum)*
5. Application to modify the permit *(no application has been provided. Cover letter serves as substitute to an application per direction from the MPCA.)*

SECTION II
LOADING ASSESSMENT CONSIDERATION

SUMMARY OF LOADING ASSESSMENT

A Loading Assessment for the City of Bloomington was completed by Barr Engineering Company, engineer for the Nine Mile Creek Watershed District. The District agreed to assist the City in preparation of the Loading Assessment to utilize already existing watershed data as well as collect new data specific to the City's MS4. The Loading Assessment evaluates the change in storm water discharge loading of total suspended solids, total phosphorus, and runoff volume for the City of Bloomington municipal separate storm sewer system.

The modeling approach includes utilization of the Simple Method to determine pollutant loadings and runoff volumes based on land use within each watershed for the entire MS4. The model estimated average annual loadings for total phosphorus, total suspended solids and runoff volume for 1988, 2007, and 2020. For comparison consistency, based on land use data available, 1989 was assumed to be the base year for the modeling. Impervious surface coverage was estimated using satellite-derived data developed by the University of Minnesota. Impervious surface percentages were assigned to each land use utilizing land use data from the City of Bloomington. More detail on this process can be found in Section 2 of the Loading Assessment.

This approach led to the assessment of the discharge loading for average annual flow volume, total suspended solids, and total phosphorus for the two time periods as outlined in the Permit. These results are summarized below in Table 1.

Further modeling was then conducted to separately analyze the benefit of BMPs already implemented. The P8 model was used to estimate the impacts of typical BMPs installed according to ordinances, rules, and design standards in place during each of the time periods being studied. Results of this modeling are summarized in Table 2.

The Loading Assessment is attached and incorporated into this Nondegradation Report. A summary of the Loading Assessment results for the entire City of Bloomington MS4 are shown in Table 1. It should be noted that Table 1 shows the pollutant loadings for the entire City for total suspended solids, total phosphorus, and total runoff without considering the impacts due to implementation of best management practices. Table 2 summarizes the pollutant loadings for the entire MS4 taking into account past and existing BMPs either constructed or managed to improve storm water quality. BMPs have been implemented by the City, Watershed Districts, and developers/land owners. Additionally, the Loading Assessment includes an estimate of future loadings with the implementation of infiltration and additional water quality BMPs.

TABLE 1
LOADING ASSESSMENT RESULTS BASED ON LAND USE ONLY

YEAR	TOTAL SUSPENDED SOLIDS		TOTAL PHOSPHORUS		RUNOFF VOLUME	
	(LBS)	Percent change from 1988	(LBS)	Percent change from 1988	(ACRE-FEET)	Percent change from 1988
1988	2,185,388	-	11,508	-	25,848	-
2007	2,314,667	+5.9%	12,036	+4.6%	26,678	+3.2%
2020	2,348,439	+7.5%	12,159	+5.7%	26,855	+3.8%

SECTION II
LOADING ASSESSMENT CONSIDERATION

TABLE 2
LOADING ASSESSMENT RESULTS INCORPORATING EXISTING BMPS

YEAR	TOTAL SUSPENDED SOLIDS		TOTAL PHOSPHORUS		RUNOFF VOLUME	
	(LBS)	Percent change from 1988	(LBS)	Percent change from 1988	(ACRE-FEET)	Percent change from 1988
1988	2,185,388	-	11,508	-	25,848	-
2007	2,174,774	-0.5%	11,461	-0.4%	26,678	+3.2%
2020	2,152,908	-1.5%	11,399	-0.9%	26,855	+3.8%

CONCLUSIONS

The results of the Loading Assessment as shown in Table 1 demonstrate an increase in TSS, TP, and average annual flow volume from 1988 to 2007 and from 2007 to 2020. However, Table 2 further demonstrates that through the implementation of BMPs, TSS and TP loading have decreased from 1988 to 2007 and are projected to further decrease from 2007 to 2020.

The majority of the City of Bloomington was fully developed prior to 1989. This is the primary factor resulting in the relatively small increases in TSS, TP and average annual flow volume shown in Table 1. Further, Table 2 shows the changes in loadings due to the implementation of BMPs. Watershed District and City rules (either City Code or surface water management policy) governing stormwater management for development and redevelopment have been in place since 1988 and have generally controlled stormwater quality improvements related to development. Table 2 actually demonstrates reductions of pollutant loadings for TSS and TP for both time periods (1988 to the present and present to 2020).

Additional BMPs addressing volume reduction will need to be considered to meet baseline conditions. Implementation of infiltration-based BMPs was modeled as part of the Loading Assessment. This exercise identified several potential sites for regional infiltration. The Nine Mile Creek Watershed District is currently considering an infiltration requirement for development and redevelopment in the District's 2008 rules. Policy IV.A.10 of the City's Comprehensive Surface Water Management Plan incorporates enhanced infiltration practices for development and redevelopment wherever practical to help control surface water runoff volume. The combination of implementing on-site infiltration for development and redevelopment along with regional infiltration sites are expected to result in a decrease in average annual flow volume close to that of the baseline condition. These results are summarized in Table 3.

TABLE 3
LOADING ASSESSMENT RESULTS FOR VOLUME INCORPORATING PROPOSED BMPS

YEAR	RUNOFF VOLUME	
	Total Runoff Volume (ACRE-FEET)	Percent Change from 1988
1988	25,848	-
2007	26,678	+3.2%
2020	25,960	**+0.4%***

* Additional abstraction measures such as small scale infiltration measures (rain water gardens), evapotranspiration, rain barrels, and storage/reuse may be considered to further reduce runoff volume.

SECTION II
LOADING ASSESSMENT CONSIDERATION

Additional volume reductions are expected beyond those accounted for in Table 3. Abstractions due to the likelihood of rain garden retro-fit projects in both residential and commercial areas will reduce average annual flow volumes. Continuing education programs under the City's SWPPP educating the public on the impacts of stormwater runoff to waterbodies are expected to also result in individual on-site BMPs further reducing runoff volumes. BMPs such as gutter downspout disconnections from impervious surfaces, rain barrel use, and the use of pervious pavers for driveways and patios are becoming more common.

The City of Bloomington is also awaiting the results of a land cover mapping project being led by Hennepin County. Results of this project will provide the City with a detailed inventory of all land cover including its condition and quality. This information can then be used to develop management strategies to preserve high quality natural areas as well as identify areas in need of improvements. Proper management of high quality areas and potential restoration of degraded areas will lead to sustained or increased interception and evapotranspiration abstractions. As this technology evolves, the City may be able to quantify these results more precisely in the future.

IMPLEMENTATION

Section III of this plan outlines Best Management Practices that are proposed to be pursued that can reasonably be taken to address nondegradation. Implementation of many of the BMPs will be dependent on funding, political climate, as well as public receptiveness. All of these factors will be considered when determining actual implementation of BMPs that are reasonable, practical, and appropriate for the community.

SECTION III
BEST MANAGEMENT PRACTICES

EXISTING BEST MANAGEMENT PRACTICES

This Nondegradation Report takes into consideration the results of the Loading Assessment including an analysis of flow, and takes into account removal of pollutants by Best Management Practices already initiated. This typically includes in-place ordinances, rules, and design standards for structural measures such as NURP ponds to address total suspended solids and total phosphorus as well as other water quality parameters. Additionally the June 1, 2006 Storm Water Pollution Prevention Program outlined 48 BMPs to be implemented as a part of the City's SWPPP. The overall goal of these BMPs is to reduce the discharge of pollutants from the City of Bloomington MS4 to protect water quality to the maximum extent practicable. All of the BMPs in the SWPPP are consistent with the requirements of Part X. Appendix D of the permit.

PROPOSED BEST MANAGEMENT PRACTICES

This Nondegradation Report has been prepared to address significant new or expanded discharges with the City of Bloomington Municipal Separate Storm Sewer System (MS4) to maintain permit coverage under NPDES Permit MNR040000. As outlined in previous sections and in detail in the Loading Assessment, the estimated average annual flow volume has increased 3.2% from 1988 to 2007 and is projected to increase another 0.6% by 2020 based on land use and the modeling performed without the implementation of additional BMPs.

In development of proposed BMPs for this Nondegradation Report, BMPs implemented by other parties, retrofit and mitigation options, and BMPs that address future growth have been considered.

1. Future Growth – High priority is given for BMPs that address impacts of future growth. The existing SWPPP contains a number of BMPs that address the impacts of future growth. This Nondegradation report identifies a number of additional BMPs aimed at addressing new and expanded discharges as defined in the Permit.
2. Retrofit and Mitigation – High priority is given for BMPs that address new or expanded discharges as defined in the Permit by identification of retrofit or mitigation opportunities. Since retrofit and mitigation BMPs almost always entail construction, individual feasibility studies will need to be conducted to evaluate cost, actual pollutant reduction, political and/or social acceptance, and other environmental factors. Once feasibility studies are completed and a retrofit/mitigation project is prudent, a construction budget and schedule will be developed.

This Nondegradation Report looked at the potential to implement retrofit and mitigation BMPs instantly, however due to the requirement of large capital expenditures and potential need to acquire property or significantly alter existing land uses of public places; it became apparent that implementation is dependent on site specific, individual analyses. While it is appropriate to identify retrofit and mitigation opportunities, the timeline outlined in Part X. Appendix D and Part XI. Appendix E. of Permit No: MNR04000 was not sufficient for actual construction. Therefore a process has been

defined to pursue the preliminarily identified opportunities as outlined at the end of this section.

As required in Part X. Appendix D. C., this Nondegradation report identifies BMPs that address, as far as is reasonable and practical, the negative impacts of increased stormwater discharge volumes that cause increased depth and duration of inundation of wetlands having the potential for significant adverse impact to a designated use of the wetland or changes in stream morphology that have the potential for a significant adverse impact to a designated use of the stream. BMP #X.13 specifically addresses Nine Mile Creek and outlines the continual efforts on the part of the City of Bloomington and the Nine Mile Creek Watershed District to maintain designated uses and minimize the potential for future erosion and other negative impacts due to runoff. The remaining new BMPs addressing future growth address impacts to wetlands. More specifically, an updated Wetland Protection and Management Plan (BMP # X.1) will further explore the relationship between the Wetland Conservation Act, Minn R. 8420, and Minn 7050 (specifically 7050.0186).

Based on this analysis the following BMPs have been developed to address the increase in average annual flow volume. Due to financial, social, political, and environmental factors, some of these BMPs cannot be fully implemented until the feasibility for each has been explored. Pending approval of this plan, these BMPs will be incorporated into the City's Storm Water Pollution Prevention Program. It is anticipated that BMP implementation will be per the schedule outlined for each individual BMP. The overall goal of these BMPs, this Nondegradation Report, and the Loading Assessment is to reduce loading levels to those consistently attained in 1988 or to mitigate the effects of increased loadings in a way that is reasonable and practical and consistent with General Permit MNR040000 and the City's SWPPP.

SECTION III
BEST MANAGEMENT PRACTICES

Permit Section: X. Appendix D

Nondegradation for selected MS4s

BMP Number: X.1

Title: Wetland Protection and Management Plan Update

Description: In 1997, the City of Bloomington completed a Wetland Protection and Management Plan (WPMP). The WPMP, approved by the BWSR pursuant to Minnesota Rules, Chapter 8420, Part 8420.0650 is consistent with pertinent goals and policies of the watershed districts/management organization having jurisdiction in portions of the City. It also addresses the requirements of Hennepin County and the Metropolitan Council. The plan addresses the management of the wetlands in the City, inventoried, classified, and ranked wetlands based on their functions and values. The plan recommends specific actions be taken to provide for appropriate management of the wetlands in the future to preserve actual beneficial and identified functions and values.

An updated WPMP will be completed to evaluate any changes to existing functions and values as well as their susceptibility to storm water and snow melt runoff.

Specifically, Minn R. 7050.0186 and its provisions will be a consideration in the WPMP update to fully comply with Permit No: MNR040000 and Part X. Appendix D.

Priority/Impact: High / future growth

Measurable Goals: Updated Wetland Protection and Management Plan

Implementation Schedule: Begin update process in 2008

Responsible Department: Public Works

Budget: 2008: $25,000
2009: $25,000

SECTION III
BEST MANAGEMENT PRACTICES

Permit Section: X. Appendix D

Nondegradation for selected MS4s

BMP Number: X.2

Title: Infiltration requirements for new development/redevelopment

Description: The City of Bloomington is represented on a technical advisory committee to develop and update rules for the Nine Mile Creek Watershed District. One of the significant new rules addresses an infiltration requirement for all development and redevelopment. The Nine Mile Creek Watershed District covers approximately 47% of the City of Bloomington. The proposed new rule will result in an infiltration requirement of between 0.5 inch and 1.0 inch for all new development and redevelopment.

Priority/Impact: High / future growth

Measurable Goals: Number of new developments or redevelopments constructed subject to the infiltration rule or actual volume proposed to be infiltrated.

Implementation Schedule: 2008

Responsible Department: Nine Mile Creek Watershed District

Budget: N/A

SECTION III
BEST MANAGEMENT PRACTICES

Permit Section: X. Appendix D

Nondegradation for selected MS4s

BMP Number: X.3

Title: BMPs for Pavement Management Program

Description: The Public Works Department will be developing a program aimed specifically at residents included in pavement management program street reconstruction projects. The program will at a minimum distribute information on residential best management practices to reduce pollutants in stormwater runoff including on-site retention, abstractions, and other volume reducing practices. The program will explore the feasibility of assistance with the construction of residential rain gardens, installation of rain barrels, disconnection of rooftops from impervious surfaces, etc.

Priority/Impact: High / future growth

Measurable Goals: Number of PMP projects including residential stormwater BMP program.

Implementation Schedule: 2009

Responsible Department: Public Works, Engineering Division

Budget: $5,000 - $25,000

SECTION III
BEST MANAGEMENT PRACTICES

Permit Section: X. Appendix D

Nondegradation for selected MS4s

BMP Number: X.4

Title: Regional Infiltration Site – Upper Nine Mile Creek #1

Description: Potential locations for regional infiltration basins were identified in the Loading Assessment based on available open space and were targeted in watersheds that produced the largest portion of loads from the MS4. The feasibility of each site must be considered prior to implementing a regional facility. Factors used in determining the feasibility will be environmental factors, political environment, and community or social influence. Site specific information will be developed for each site and a determination made on whether or not it is a reasonable and practical form of mitigation.

Any/all information used in the final determination of the feasibility of this regional infiltration site will be included in the annual report for the year in which it is studied. If a site is determined to be feasible, construction will be scheduled as soon a practicable taking into account budgets and workload.

Priority/Impact: High / retrofit and mitigation

Measurable Goals: Site specific analysis

Implementation Schedule: 2008-2011

Responsible Department: Public Works, Engineering Division

Budget: $50,000

SECTION III
BEST MANAGEMENT PRACTICES

Permit Section: X. Appendix D

Nondegradation for selected MS4s

BMP Number: X.5

Title: Regional Infiltration Site – Smith Pond #10

Description: Potential locations for regional infiltration basins were identified in the Loading Assessment based on available open space and were targeted in watersheds that produced the largest portion of loads from the MS4. The feasibility of each site must be considered prior to implementing a regional facility. Factors used in determining the feasibility will be environmental factors, political environment, and community or social influence. Site specific information will be developed for each site and a determination made on whether or not it is a reasonable and practical form of mitigation.

Any/all information used in the final determination of the feasibility of this regional infiltration site will be included in the annual report for the year in which it is studied. If a site is determined to be feasible, construction will be scheduled as soon a practicable taking into account budgets and workload.

Priority/Impact: High / retrofit and mitigation

Measurable Goals: Site specific analysis

Implementation Schedule: 2008-2011

Responsible Department: Public Works, Engineering Division

Budget: $50,000

SECTION III
BEST MANAGEMENT PRACTICES

Permit Section: X. Appendix D

Nondegradation for selected MS4s

BMP Number: X.6

Title: Regional Infiltration Site – Smith Pond #12

Description: Potential locations for regional infiltration basins were identified in the Loading Assessment based on available open space and were targeted in watersheds that produced the largest portion of loads from the MS4. The feasibility of each site must be considered prior to implementing a regional facility. Factors used in determining the feasibility will be environmental factors, political environment, and community or social influence. Site specific information will be developed for each site and a determination made on whether or not it is a reasonable and practical form of mitigation.

Any/all information used in the final determination of the feasibility of this regional infiltration site will be included in the annual report for the year in which it is studied. If a site is determined to be feasible, construction will be scheduled as soon a practicable taking into account budgets and workload.

Priority/Impact: High / retrofit and mitigation

Measurable Goals: Site specific analysis

Implementation Schedule: 2008-2011

Responsible Department: Public Works, Engineering Division

Budget: $50,000

SECTION III
BEST MANAGEMENT PRACTICES

Permit Section: X. Appendix D

Nondegradation for selected MS4s

BMP Number: X.7

Title: Regional Infiltration Site – Oxboro Lake 13b/13c

Description: Potential locations for regional infiltration basins were identified in the Loading Assessment based on available open space and were targeted in watersheds that produced the largest portion of loads from the MS4. The feasibility of each site must be considered prior to implementing a regional facility. Factors used in determining the feasibility will be environmental factors, political environment, and community or social influence. Site specific information will be developed for each site and a determination made on whether or not it is a reasonable and practical form of mitigation.

Any/all information used in the final determination of the feasibility of this regional infiltration site will be included in the annual report for the year in which it is studied. If a site is determined to be feasible, construction will be scheduled as soon a practicable taking into account budgets and workload.

Priority/Impact: High / retrofit and mitigation

Measurable Goals: Site specific analysis

Implementation Schedule: 2008-2011

Responsible Department: Public Works, Engineering Division

Budget: $50,000

SECTION III
BEST MANAGEMENT PRACTICES

Permit Section: X. Appendix D

Nondegradation for selected MS4s

New or Existing: New

BMP Number: X.8

Title: Regional Infiltration Site – Hampshire Pond #6

Description: Potential locations for regional infiltration basins were identified in the Loading Assessment based on available open space and were targeted in watersheds that produced the largest portion of loads from the MS4. The feasibility of each site must be considered prior to implementing a regional facility. Factors used in determining the feasibility will be environmental factors, political environment, and community or social influence. Site specific information will be developed for each site and a determination made on whether or not it is a reasonable and practical form of mitigation.

Any/all information used in the final determination of the feasibility of this regional infiltration site will be included in the annual report for the year in which it is studied. If a site is determined to be feasible, construction will be scheduled as soon a practicable taking into account budgets and workload.

Priority/Impact: High / retrofit and mitigation

Measurable Goals: Site specific analysis

Implementation Schedule: 2008-2011

Responsible Department: Public Works, Engineering Division

Budget: $50,000

SECTION III
BEST MANAGEMENT PRACTICES

Permit Section: X. Appendix D

Nondegradation for selected MS4s

BMP Number: X.9

Title: Regional Infiltration Site – Smith Pond #9

Description: Potential locations for regional infiltration basins were identified in the Loading Assessment based on available open space and were targeted in watersheds that produced the largest portion of loads from the MS4. The feasibility of each site must be considered prior to implementing a regional facility. Factors used in determining the feasibility will be environmental factors, political environment, and community or social influence. Site specific information will be developed for each site and a determination made on whether or not it is a reasonable and practical form of mitigation.

Any/all information used in the final determination of the feasibility of this regional infiltration site will be included in the annual report for the year in which it is studied. If a site is determined to be feasible, construction will be scheduled as soon a practicable taking into account budgets and workload.

Priority/Impact: High / retrofit and mitigation

Measurable Goals: Site specific analysis

Implementation Schedule: 2008-2011

Responsible Department: Public Works, Engineering Division

Budget: $50,000

SECTION III
BEST MANAGEMENT PRACTICES

Permit Section: X. Appendix D

Nondegradation for selected MS4s

New or Existing: New

BMP Number: X.10

Title: Regional Infiltration Site – Oxboro Lake #14

Description: Potential locations for regional infiltration basins were identified in the Loading Assessment based on available open space and were targeted in watersheds that produced the largest portion of loads from the MS4. The feasibility of each site must be considered prior to implementing a regional facility. Factors used in determining the feasibility will be environmental factors, political environment, and community or social influence. Site specific information will be developed for each site and a determination made on whether or not it is a reasonable and practical form of mitigation.

Any/all information used in the final determination of the feasibility of this regional infiltration site will be included in the annual report for the year in which it is studied. If a site is determined to be feasible, construction will be scheduled as soon a practicable taking into account budgets and workload.

Priority/Impact: High / retrofit and mitigation

Measurable Goals: Site specific analysis

Implementation Schedule: 2008-2011

Responsible Department: Public Works, Engineering Division

Budget: $50,000

SECTION III
BEST MANAGEMENT PRACTICES

Permit Section: X. Appendix D

Nondegradation for selected MS4s

BMP Number: X.11

Title: Water Quality Model Analysis/Regional Stormwater Quality Facility Review

Description: Through the Loading Assessment process a P8 water quality model was created to assess the performance of existing BMPs as well as estimate the pollutant loading for given watersheds under redevelopment scenarios. It will be necessary to specifically evaluate regional BMPs in the future to ensure that the continued predicted performance is consistent with area redevelopment and maintenance practices.

Priority/Impact: High / future growth

Measurable Goals: Regional Water Quality Model

Implementation Schedule: 2010

Responsible Department: Public Works, Engineering Division

Budget: $150,000

SECTION III
BEST MANAGEMENT PRACTICES

Permit Section: X. Appendix D

Nondegradation for selected MS4s

BMP Number: X.12

Title: Natural Resources Inventory Project

Description: The City of Bloomington is participating with Hennepin County Environmental Services to create a Natural Resources Inventory or Land Cover Classification System. The classification system will provide important land cover information to help guide future land use decisions. One aspect of the classification system will be to identify patterns and relationships to imperviousness to water infiltration. The inventory will provide the city with the needed data to supplement the loading assessment, CSWMP, and WPMP in the future implementation of BMPs.

Priority/Impact: High / future growth

Measurable Goals: Natural Resources Inventory

Implementation Schedule: 2008

Responsible Department: Public Works, Engineering Division

Budget: $20,000

SECTION III
BEST MANAGEMENT PRACTICES

Permit Section: X. Appendix D

Nondegradation for selected MS4s

BMP Number: X.13

Title: Nine Mile Creek Maintenance

Description: In 1990, the Nine Mile Creek Watershed District undertook the Nine Mile Creek Lower Valley Bank Stabilization and Restoration Project. The project was prompted by record rainfalls that impacted that area during the summer of 1987. The project consisted of 18 separate sites between Old Shakopee Road and the Minnesota River to repair washouts and erosion and stabilize and protect the channel and creekbank areas. The cost of that project was approximately $2,000,000.00. In 1993 the District and City of Bloomington implemented Operation and Maintenance responsibilities for the Lower Valley Project area. The City is responsible for the operation and maintenance of the Lower Valley Area and the District is responsible for managing the water resources of the watershed.

The Watershed District has established a Creek Maintenance fund available to the City of Bloomington for maintenance projects not only within the Lower Valley, but along the entire reach of Nine Mile Creek in Bloomington. The City routinely inspects areas of the Creek for erosion or other problems potentially impacting the use or ecology of the Creek.

Additionally, past implementation of upstream water storage facilities as part of the District's Water Management Plan have minimized the impacts due to urbanization within the watershed.

Priority/Impact: High / future growth

Measurable Goals: Natural Resources Inventory

Implementation Schedule: 2008 / Annually based on inspection results

Responsible Department: Public Works, Engineering Division

Budget: $50,000 annually

REFERENCES

REFERENCES

Nondegradation Load Assessment Report Prepared for City of Bloomington, August 2007, Barr Engineering Company

Operation and Maintenance Manual, Lower Valley Bank Stabilization and Restoration Project, Nine Mile Creek Watershed District and the City of Bloomington, October 1993

General Permit No: MNR040000, Minnesota Pollution Control Agency

Draft Comprehensive Surface Water Management Plan, June 2006, WSB and Assoicates

Wetland Protection and Management Plan, City of Bloomington, Minnesota, June 1997