

# STATE OF TENNESSEE



## NPDES PERMIT

**No. TNS068047**

Authorization to discharge under the  
National Pollutant Discharge Elimination System (NPDES)

Issued By

**Tennessee Department of Environment and Conservation  
Division of Water Pollution Control  
401 Church Street  
6th Floor, L & C Annex  
Nashville, Tennessee 37243-1534**

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.)

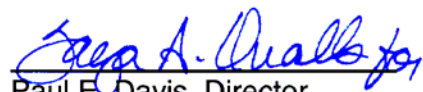
Discharger: **Nashville/Davidson County Municipal Separate Storm Sewer System**

is authorized to discharge storm water runoff, in accordance with the following storm water quality management program(s), effluent limitations, monitoring requirements and other provisions as set forth in Parts I through IX herein, from all portions of the MS4, owned or operated by any permittee listed above, to Waters of the State of Tennessee.

This permit shall become effective on: **July 1, 2003**

This permit shall expire on: **May 30, 2008**

Issuance date: **May 30, 2003**

  
Paul E. Davis, Director  
Division of Water Pollution Control

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**PART I**

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**DISCHARGES AUTHORIZED UNDER THIS PERMIT**

**A. PERMIT AREA**

This permit covers all areas located within the corporate boundary of the metropolitan government of Nashville and Davidson County, Tennessee.

**B. AUTHORIZED DISCHARGES**

Except for discharges prohibited under Part I(E), this permit authorizes existing or new storm water point source discharges to waters of the state of Tennessee from those portions of the Municipal Separate Storm Sewer System (MS4) owned or operated by Metro Nashville/Davidson County.

**C. PERMITTEES**

The following parties are permittees subject to the limits and conditions of this permit:

**Metropolitan Nashville and Davidson County, Tennessee**

**D. RESPONSIBILITIES OF PERMITTEES**

1. Each permittee is individually responsible for the following:
  - a. compliance with permit conditions relating to discharges from portions of the MS4 where they are the operator;
  - b. implementing the Storm Water Management Program (SWMP) on portions of the MS4 where they are the operator;
  - c. where permit conditions are established for specific portions of the MS4, the permittee need only comply with the permit conditions relating to those portions of the MS4 for which they are the operator; and,
  - d. a plan of action to assume responsibility for implementation of storm water management and monitoring programs on their portions of the MS4 should inter-jurisdictional agreements allocating responsibility between permittees be dissolved or in default.
2. Each permittee is jointly responsible for:

- a. submission of annual reporting requirements as specified in Part VI(A);
  - b. collection of monitoring data as required by Part V, and according to such agreements as may be established between the permittees; and,
  - c. insuring implementation of system-wide management program elements, including any system-wide public education efforts.
3. Specific permittees are jointly responsible for compliance with the permit on portions of the MS4 where:
  - a. operational authority or authority to implement SWMPs over portions of the MS4 have been transferred from one permittee to another in accordance with legally binding interagency or inter-jurisdictional agreements. Both the owner and operator are jointly responsible for permit compliance on those portions of the MS4 referenced in such agreements unless specific responsibility provisions have been otherwise outlined in the agreements.

#### **E. LIMITATIONS ON COVERAGE**

The following discharges are not authorized by this permit:

1. Discharges of non-storm water, except where such discharges are as follows:
  - a. in compliance with a separate NPDES permit (or the discharger has applied for such a permit); or,
  - b. identified by and in compliance with 40 CFR 122.26(d)(2)(iv)(B)(1); and,
2. Discharges of materials resulting from a spill, except emergency discharges required to prevent imminent threat to human health or to prevent severe property damage, provided reasonable and prudent measures have been taken to minimize the impact of the discharges.

**PART II**

**DEFINITIONS**

**A. A THROUGH BB**

Definitions contained in the Tennessee Water Quality Control Act and Federal NPDES rules apply where one is not specified below. Unless otherwise specified in this permit, additional definitions of words or phrases used in this permit are as follows:

**A.** “Best Management Practices”, or “BMPs” means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control storm water runoff.

**B.** “CWA” means Clean Water Act, also referred to as “the Act” (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub.L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 6-483 and Pub. L. 97-117, 33 U.S.C. 1251, et.seq., as amended by the WQA of 1987, P.L. 100-4, the “Act.”

**C.** “Director” means the Director of the Tennessee Division of Water Pollution Control, or an authorized representative of that position.

**D.** “Discharge” for the purpose of this permit, unless indicated otherwise, refers to discharges from the Municipal Separate Storm Sewer System (MS4).

**E.** “Flow-weighted composite sample” means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge at the time of sampling.

**F.** “Illicit connection” means any man-made conveyance connecting a non-storm water discharge directly to a municipal separate storm sewer system.

**G.** “Illicit discharge” means any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and other discharges referenced in 40 CFR 122.26(d)(2)(iv)(B)(1).

**H.** “Industrial Land Use” means land utilized in connection with manufacturing, processing, or raw materials storage at facilities identified under 40 CFR 122.26(b)(14).

**I.** “Landfill” means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well, or waste pile.



**J.** “Large Municipal Separate Storm Sewer System” means all municipal separate storm sewers that are either:

- (i)** located in an incorporated place (city) with a population of 250,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities are listed in Appendices F and G of 40 CFR Part 122); or,
- (ii)** located in the counties with unincorporated urbanized populations of 250,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties (these counties are listed in Appendices H and I of 40 CFR Part 122); or,
- (iii)** owned or operated by a municipality other than those described in paragraph (i) or (ii) and that are designated by the Director as part of the large municipal separate storm sewer system.

**K.** “Maintenance” on the municipal separate storm sewer system and associated structural storm water controls includes activities such as inspections of basins and ponds; mowing grass filter strips; regular removal of litter and debris from dry ponds, forebays and water quality inlets; periodic stabilization and revegetation of eroded areas; periodic removal and replacement of filter media from infiltration trenches and filtration ponds; deep tilling of infiltration basins to maintain capacity; vacuuming or jet hosing of porous pavement or concrete grid pavements; removal of litter and debris from wet weather conveyances and catch basins.

**L.** “Medium Municipal Separate Storm Sewer System” means all municipal separate storm sewers that are either:

- (i)** located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities are listed in Appendices F and G of 40 CFR Part 122); or,
- (ii)** located in the counties with unincorporated urbanized populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties (these counties are listed in Appendices H and I of 40 CFR Part 122); or,
- (iii)** owned or operated by a municipality other than those described in paragraph (i) or (ii) and that are designated by the Director as part of the medium municipal separate storm sewer system.

**M.** “MEP” is an acronym for “Maximum Extent Practicable”, the technology-based discharge standard for Municipal Separate Storm Sewer Systems established by CWA §402(p). MEP is achieved, in part, by selecting and implementing effective BMPs and rejecting applicable BMPs only when the BMPs would not be technically feasible, or the cost would be prohibitive and unreasonable.

**N.** “MS4” is an acronym for “municipal separate storm sewer system” and is used to refer to either a Large or Medium Municipal Separate Storm Sewer System (e.g. “The metropolitan government of Nashville - MS4”).

**O.** “Municipal Separate Storm Sewer” means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, and storm drains):

(i) owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State Law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State Law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian Tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

(ii) designed or used for collecting or conveying storm water;

(iii) which is not a combined sewer; and

(iv) which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

**P.** “Permittee” means each individual co-applicant for an NPDES permit who is only responsible for permit conditions relating to the discharge that they own or operate. (Also, See 40 CFR 122.2)

**Q.** “Outfall” means a *point source*, as defined in subpart Q below, at the point where a municipal separate storm sewer discharges to waters of the State of Tennessee and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the State and are used to convey waters of the State.

**R.** “Point Source” means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

**S.** “Severe property damage” means substantial physical damage to property, damage to the treatment facility which causes it to become inoperable, or substantial and permanent loss of natural resources.

**T.** “Storm Sewer”, unless otherwise indicated, refers to a municipal separate storm sewer.

**U.** “Storm Water” means storm water runoff, snowmelt runoff, surface runoff and drainage.

**V.** “Storm Water Discharge Associated with Industrial Activity” is defined at 40 CFR 122.26(b)(14).

**W.** “Storm Water Management Program,” or “SWMP,” refers to a comprehensive program to manage the quality of storm water discharged from the municipal separate storm sewer system. For the purposes of this permit, the Storm Water Management Program is considered a single document, but may actually consist of separate programs (e.g. “chapters”) for each permittee.

**X.** "Storm Water Management Manual," refers to the Nashville Storm Water Management Manual (SWMM).

**Y.** "Time-weighted composite" means a composite sample consisting of a mixture of equal volume aliquots collected at a constant time interval.

**Z.** "Waters of the state" or simply "waters" is defined in the Tennessee Water Quality Control Act and means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through or border upon Tennessee or any portion thereof except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine with or effect a junction with natural surface or underground waters.

**AA.** "Water priority chemicals" means chemicals or chemical categories that are listed at 40 CFR 372.65 pursuant to EPCRA Section 313; and meet at least one of the following three criteria: i. are listed in Appendix D of 40 CFR Part 122 on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols), or Table V (certain toxic pollutants and hazardous substances); ii. are listed as a hazardous substance pursuant to Section 311 (b)(2)(A) of the CWA at 40 CFR 116.4; or iii. are pollutants for which EPA has published acute or chronic toxicity criteria. This list of substances is available from the Division of Water Pollution Control, and is printed in the Federal Register on September 29, 1995, in Addendum F to the EPA's Notice of NPDES Storm Water Multi-Sector General Permit for Industrial Activities.

**BB.** "Wet weather conveyances" are man made or natural watercourses, including natural watercourses that have been modified by channelization, that flow only in direct response to precipitation runoff in their immediate locality and whose channels are above the groundwater table and which do not support fish and aquatic life and are not suitable for drinking water supplies. (Taken from State Water Quality Control Board Rule 1200-4-3-.04 (4)).

## PART III

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### PERMIT CONDITIONS

#### A. AUTHORIZATION

The permittee(s) are authorized to discharge storm water runoff, in accordance with the following storm water quality management program(s), effluent limitations, monitoring requirements and other provisions as set forth in Parts I through VIII herein, from all portions of the MS4, owned or operated by any permittee listed above, to waters of the state of Tennessee.

**B. STORM WATER MANAGEMENT PROGRAM (SWMP) ELEMENTS, 40 CFR  
 122.26(D)(2)(IV)**

Program tasks and implementation dates are given in the following table.

<i>Element</i>	<i>Activities</i>	<i>Schedule</i> <sup>(1)</sup>
<b>1. Structural Storm Water Controls and Collection Systems</b>		
<b>A</b>	Update storm water inventory Geographic Information System (GIS) <ul style="list-style-type: none"> <li>For areas of new development</li> <li>For areas of significant redevelopment</li> <li>For Metro construction projects</li> <li>For newly created MS4 areas per Metro Water Services records on CSO separations</li> </ul>	Ongoing – up to date by end of PY 4
<b>B</b>	Existing System Maintenance <ul style="list-style-type: none"> <li>As identified by complaints</li> <li>As identified through NPDES MS4 activities</li> <li>Focused on public infrastructure and private infrastructure that directly and significantly impacts public infrastructure as determined by the MWS</li> </ul>	Ongoing
<b>C</b>	Inspections <ul style="list-style-type: none"> <li>Dry Creek detention facility</li> <li>Any other identified Metro-operated facilities</li> </ul>	1/quarter
<b>D</b>	Training <ul style="list-style-type: none"> <li>Key inspection and maintenance staff in MWS and other Metro departments</li> <li>Cross-train key inspection and maintenance staff in water quality issues</li> <li>Train inspection / maintenance staff about changes in process and/or procedure</li> </ul>	PY 2 and 4
<b>E</b>	Maintenance Procedures <ul style="list-style-type: none"> <li>Review for changes that will benefit water quality</li> </ul>	PY 2 and 4
<b>F</b>	Housekeeping Programs <ul style="list-style-type: none"> <li>Solid waste disposal</li> <li>Litter control</li> <li>Leaf collection</li> <li>Public Information (per PI&amp;E element)</li> </ul>	Ongoing
<b>G</b>	Storm water detention / retention facilities <ul style="list-style-type: none"> <li>Develop detailed electronic information using existing GIS-based databases</li> <li>Develop system to update database on an ongoing basis given new development, inspections, or other available data</li> <li>Evaluate the need and feasibility for long-term, post-construction, private detention/retention facility inspection to help ensure proper maintenance procedures</li> <li>Public Information (per PI&amp;E element)</li> </ul>	PY 2

<i>Element</i>	<i>Activities</i>	<i>Schedule <sup>(1)</sup></i>
<b>2. New Development and Significant Redevelopment</b>		
<b>A</b>	Ordinances, Regulations and Guidance <ul style="list-style-type: none"> <li>Enforce existing ordinances and regulations intended to limit long-term water quality impacts from new construction and significant redevelopment</li> <li>Evaluate the guidance materials to ensure that they are up-to-date with the current state of the technology and reflect local plan review and site inspection experiences</li> <li>Public Education (per PI&amp;E element)</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing</li> <li>PY 2 and 5</li> <li>Ongoing</li> </ul>
<b>B</b>	Best Management Practices (BMPs) <ul style="list-style-type: none"> <li>Report any BMP monitoring data collected by/for Metro</li> <li>Report regional facility considerations/activity by/for Metro</li> <li>Report BMP retrofitting considerations/activity by/for Metro</li> </ul>	Annually
<b>C</b>	Master Planning <ul style="list-style-type: none"> <li>water quality issues report to Planning Commission</li> <li>Report water quality evaluations performed as part of new water quantity master planning efforts</li> <li>Report regional water quality practices evaluations performed in any master planning activities</li> <li>Report watershed prioritization changes</li> <li>Report water quality master planning performed per prioritized watersheds as fiscal resources allow</li> </ul>	<ul style="list-style-type: none"> <li>PY 2</li> </ul> PY 2 and 5
<b>D</b>	Training <ul style="list-style-type: none"> <li>Educate "Grading Permit" plan reviewers and site inspectors on latest techniques and management practices to address long-term water quality, lessons learned, etc.</li> </ul>	Annually
<b>3. Roadways</b>		
<b>A</b>	Catch Basin Cleaning <ul style="list-style-type: none"> <li>Develop program to prioritize catch basin cleaning activities</li> <li>Report and record location/area, number, and amount of material removed</li> </ul>	<ul style="list-style-type: none"> <li>PY 1</li> <li>Annually</li> </ul>
<b>B</b>	Downtown Street Sweeping <ul style="list-style-type: none"> <li>Urban Services District</li> </ul>	Ongoing
<b>C</b>	Deicing Chemicals <ul style="list-style-type: none"> <li>Evaluate Metro application and storage practices</li> <li>Report any modifications in practices</li> </ul>	PY 1 and 3
<b>D</b>	Herbicides, pesticides and fertilizers <ul style="list-style-type: none"> <li>Evaluate Metro application and storage practices</li> </ul>	PY 1 and 3
<b>E</b>	Spills <ul style="list-style-type: none"> <li>Report Emergency Management Plan modifications</li> <li>Report location of spills and any trend analyses</li> </ul>	Annually
<b>F</b>	Design and Construction <ul style="list-style-type: none"> <li>Report modifications to standards and procedures that impact water quality</li> </ul>	Each compliance report

<i>Element</i>	<i>Activities</i>	<i>Schedule <sup>(1)</sup></i>
<b>4. Landfills and Other Waste Treatment, Storage, or Disposal Facilities</b>		
<b>A</b>	Monitor activities (report on water quality-related issues)	Ongoing
<b>5. Pesticides, Herbicides, Fertilizers, Oils, and Other Toxic Materials</b>		
<b>A</b>	Operate Household Hazardous Waste Facility	At least 1/quarter
<b>B</b>	Commercial Distributors <ul style="list-style-type: none"> <li>Public Information (per PI&amp;E element)</li> </ul>	Ongoing
<b>C</b>	Metro Facilities <ul style="list-style-type: none"> <li>Evaluate management practices at Metro facilities (fleet operations, vehicle maintenance, etc.)</li> </ul>	PY 2
<b>6. Illicit Discharges and Improper Disposal</b>		
<b>A</b>	Ordinances and Enforcement Measures <ul style="list-style-type: none"> <li>Refine/review procedures to enhance enforcement of existing ordinances, regulations, and policies as necessary</li> </ul>	PY 1 and 3
<b>B</b>	Dry-weather Field Screening <ul style="list-style-type: none"> <li>Update ¼ mile grid for current industrial and high-density commercial land use based on current zonings</li> <li>Prioritize areas of ¼ mile grids by previous field screening results, spills, complaints, etc.</li> <li>Update illicit discharge identification procedures</li> <li>Implement program in ¼ mile grids in priority</li> <li>Identify potential discharges to MS4 or "Waters of the State"</li> </ul>	PY 5
<b>C</b>	Illicit Discharge Investigations <ul style="list-style-type: none"> <li>Identify illicit discharge sources</li> <li>Educate responsible parties as appropriate</li> <li>Implement enforcement measures as appropriate</li> <li>Report significant illicit discharges and enforcement activities to TDEC</li> </ul>	Ongoing
<b>D</b>	Residential / Commercial Areas <ul style="list-style-type: none"> <li>Public information (per PI&amp;E element)</li> </ul>	Ongoing
<b>E</b>	Sanitary Sewer Seepage <ul style="list-style-type: none"> <li>Reevaluate protocols for reporting potential sanitary sewer seepage into the MS4 or "Waters of the State"</li> </ul>	PY 1 and 3

<i>Element</i>	<i>Activities</i>	<i>Schedule <sup>(1)</sup></i>
<b>7. Industrial and High Risk Runoff (reference Section IV)</b>		
<b>A</b>	Data Management <ul style="list-style-type: none"> <li>Update industrial site databases (for sites that meet permit criteria)</li> </ul>	Annually
<b>B</b>	Inspections <ul style="list-style-type: none"> <li>Refine procedures/criteria to prioritize sites to be inspected based on SIC code, SARA data, and other information</li> <li>Train inspectors</li> <li>Inspect facilities that meet criteria</li> <li>Coordinate inspection and enforcement activities with TDEC staff as determined to be appropriate</li> <li>Report inspection locations</li> </ul>	<ul style="list-style-type: none"> <li>PY 1, 3 and 5</li> <li>PY 2 and 4</li> <li>Once by PY 5</li> <li>Ongoing</li> <li>Annually</li> </ul>
<b>C</b>	Restaurant Impacts <ul style="list-style-type: none"> <li>Report activities aimed at reducing water quality impacts</li> </ul>	Annually

<i>Element</i>	<i>Requirement</i>	<i>Schedule <sup>(1)</sup></i>
<b>8. Construction Site Runoff (reference Section IV)</b>		
<b>A</b>	Ordinances, Regulations and Guidance <ul style="list-style-type: none"> <li>Enforce existing ordinances and regulations intended to limit construction-phase water quality impacts from new construction and significant redevelopment</li> <li>Refine procedures to enhance enforcement of existing ordinances, regulations, and policies</li> <li>Evaluate the guidance materials to ensure that they are up-to-date with the current state of the technology and reflect local plan review and site inspection experiences</li> <li>Public Education (per PI&amp;E element)</li> <li>Require applicants for grading permits, for projects of one acre or more, to give proof of coverage under the state's construction general permit – this requirement becomes void if the state implements procedures that recognize an operator's compliance with Metro's construction site runoff control program to be compliance with the state program</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing</li> <li>PY 1 and 3</li> <li>PY 1 and 3</li> <li>Ongoing</li> <li>Ongoing</li> </ul>
<b>B</b>	Training <ul style="list-style-type: none"> <li>Educate "Grading Permit" plan reviewers and construction site inspectors on latest techniques and management practices to address construction-phase water quality, lessons learned, etc.</li> </ul>	Annually
<b>C</b>	Records Management <ul style="list-style-type: none"> <li>Maintain database for erosion prevention and sediment control (EP&amp;SC) inspections and enforcement activities</li> </ul>	Ongoing
<b>D</b>	Plan Review and Inspection Resources <ul style="list-style-type: none"> <li>Provide resources for plan review such that they have adequate time to effectively review plans for pre and post-construction water quality considerations</li> <li>Provide resources for construction site inspection staff such that they have adequate time to effectively inspect</li> </ul>	Ongoing

	sites and enforce water quality related ordinances, regulations and policies	
<b>E</b>	Metro Activities <ul style="list-style-type: none"> <li>Evaluate construction practices implemented by Metro Departments to limit erosion and sedimentation impacts (Metro projects, work on sanitary sewers, utility lines, etc.)</li> </ul>	PY 2

**9. Habitat Improvement**

<b>A</b>	Report habitat improvement activities/projects	Annually
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**10. Public Information and Education (PI&E)**

<b>A</b>	<ul style="list-style-type: none"> <li>(1A) Inform the public on the impacts on water quality from general housekeeping maintenance/activities</li> <li>(1G) Inform home owner associations and other operators of detention/retention ponds of the importance of maintenance activities</li> <li>(2A/D) Educate the local engineering and development community about the ordinances, regulations and guidance materials related to long-term water quality impacts</li> <li>(5B) Inform the public, sellers, distributors, application services, and selected users about proper pesticides, herbicides, and fertilizers use, storage, and disposal techniques</li> <li>(5B) Inform the public, sellers, distributors, and selected users about proper oil and other automotive-related fluids use, storage, and disposal techniques</li> <li>(6A) Inform the public about identifying and reporting procedures for illicit connections/discharges, sanitary sewer seepage, spills, etc.</li> <li>(8A) Educate the local engineering, development, and construction community about the ordinances, regulations and guidance materials related to construction phase water quality impacts</li> <li>Other not yet identified opportunities.</li> </ul>	Ongoing – at least one activity per year
<b>B</b>	World Wide Web site <ul style="list-style-type: none"> <li>Enhance Metro Public Works NPDES World Wide Web (Internet) site to include updated information about the NPDES MS4 program activities, inform the public about their impacts to water quality, educate the public on how they can limit water quality impacts, etc.</li> <li>Provide mechanism that the public can use to report potential illicit discharges, spills, etc. via the internet</li> <li>Set up an area dedicated to promoting/recognizing those in the community that are found to have implemented exceptionally successful/resourceful/innovative pollution prevention strategies</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing</li> <li>Ongoing</li> <li>PY 4</li> </ul>



<b>11. Reporting</b>		
<b>A</b>	Compliance Report <ul style="list-style-type: none"> <li>• Summary of program element activities and revisions</li> <li>• Quantitative and qualitative controls assessment (as appropriate)</li> </ul>	End of each PY (+ 6 months)
<b>B</b>	Propose Third Permit Cycle Activities	End of PY 4 (+ 6 months)

*Notes:*

*(1) The schedule date indicates the end of the permit year (PY) unless otherwise noted.*

**C. AREA-SPECIFIC SWMP REQUIREMENTS**

1. Water Quality Controls for Discharges to Impaired Waterbodies. The annual report submitted to the division must include a section describing how the SWMP will control the discharge of the pollutants of concern.. This section must identify the measures and BMPs that will collectively control the discharge of the pollutants of concern. The measures should be presented in order of priority with respect to controlling the pollutants of concern.
  
2. Consistency with Total Maximum Daily Load (TMDL). Where a TMDL has been approved for any waterbody into which Metro discharges, Metro must follow the procedure below and report on these activities in annual reports to the division:
  - a. Determine whether the approved TMDL is for a pollutant likely to be found in storm water discharges from your MS4.
  - b. Determine whether the TMDL includes a pollutant wasteload allocation (WLA), implementation recommendations, or other performance requirements specifically for storm water discharges from your MS4.
  - c. Determine whether the TMDL addresses a flow regime likely to occur during periods of storm water discharge.
  - d. After the determinations above have been made and if it is found that the MS4 must implement specific provisions of the TMDL, Metro shall evaluate whether the implementation of existing storm water control measures is meeting the TMDL provisions, or if additional control measures are necessary.
  - e. Metro shall document all control measures currently being implemented or planned to be implemented, including a schedule of implementation for all planned controls. The rationale (e.g., calculations, assessments, reports and/or other evidence) should be included, showing that Metro will comply with the TMDL provisions. For control measures that are expected to be implemented and evaluated beyond the term of this permit, include a longer schedule of implementation as necessary to describe the control measure.

- f. Describe a method to evaluate whether the storm water controls are adequate to meet the requirements of the TMDL.
- g. If the evaluation shows that additional or modified controls are necessary, describe the type and schedule for the control additions/revisions.

#### **D. RECEIVING WATER LIMITATIONS**

This SWMP shall reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) and shall not cause or contribute to violations of State water quality standards of the receiving streams. If exceedance(s) of water quality objectives or water quality standards (collectively, WQS) persist notwithstanding implementation of the SWMP and other requirements of this permit, the permittees shall comply with the following procedure:

- a. Upon a determination by either the permittees or the Division of Water Pollution Control that discharges are causing or contributing to an exceedance of an applicable WQS, the permittees shall promptly notify and thereafter submit a report to the Division that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of WQSs. The report may be incorporated in the annual update to the SWMP unless the Division directs an earlier submittal. The report shall include an implementation schedule. The Division may require modifications to the report.
- b. Submit any modifications to the report required by the Division within 30 days of notification.
- c. Within 30 days following approval of the report described above by the Division, the permittees shall revise the SWMP and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, implementation schedule, and any additional monitoring required.
- d. Implement the revised SWMP and monitoring program in accordance with the approved schedule. So long as the permittees have complied with the procedures set forth above and are implementing the revised SWMP, the permittees do not have to repeat the same procedure where continuing or recurring exceedances of the same water quality standards unless directed by the Division to develop additional BMPs.

#### **E. DEADLINES FOR COMPLIANCE**

Except as provided in Part IV, compliance with the storm water management program shall be required 180 days from the effective date of the permit.

## **F. ROLES AND RESPONSIBILITIES OF PERMITTEES**

The storm water management program, together with any attached interagency agreements or interagency agreements developed subsequent to the effective date of the permit, shall clearly identify the roles and responsibilities of each permittee. Following the effective date of the permit, interagency agreements developed and implemented must be included in the Annual Report that covers the permit year in which the agreement became effective.

## **G. LEGAL AUTHORITY**

To the extent allowed by law, each permittee shall ensure legal authority to control discharges to and from those portions of the MS4 over which it has jurisdiction. This legal authority may be a combination of statute, ordinance, permit, contract, order or inter-jurisdictional agreements between permittees with adequate existing legal authority to accomplish items i.-vi. below:

- i.** to control the contribution of pollutants to the MS4 by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity;
- ii.** to prohibit illicit discharges to the MS4;
- iii.** to control the discharge of spills and the dumping or disposal of materials other than storm water (e.g. industrial and commercial wastes, trash, used motor vehicle fluids, leaf litter, grass clippings, animal wastes, etc.) into the MS4;
- iv.** to control through interagency or inter-jurisdictional agreements between the metropolitan government of Nashville and related MS4 permittees, if any, the contribution of pollutants from one portion of the MS4 to another;
- v.** to require compliance with conditions in ordinances, permits, contracts or orders;  
and
- vi.** to carry out all inspection, surveillance and monitoring procedures necessary to determine compliance with permit conditions.

## **H. SWMP RESOURCES**

Each permittee shall provide adequate finances to implement their activities under the Storm Water Management Program. Each permittee shall also have a source of funding for implementing all other requirements included within this NPDES storm water permit.

## **I. SWMP REVIEW AND MODIFICATION**

### **1. Program Review**

Each permittee shall participate in an annual review of the current Storm Water Management Program (SWMP) in conjunction with preparation of the Annual Report required under subparts VII(A), (B), and (C) of this permit.

### **2. Program Modification**

The permittee(s) may modify the SWMP during the life of the permit in accordance with the following procedures:

**a.** Modifications that add, but neither subtract nor replace, components, controls, or requirements to the approved SWMP may be made by the permittee(s) at any time. A description of the modification shall be included in the subsequent Annual Report.

**b.** Modifications that replace an ineffective or infeasible BMP, which is specifically identified in the SWMP along with an alternate BMP, may be made by the permittee(s) at any time. A description of the replacement BMP shall be included in the subsequent Annual Report along with the following information:

**(i)** an analysis of why the former BMP was ineffective or infeasible (including cost-prohibitive);

**(ii)** expectations on the effectiveness of the replacement BMP; and

**(iii)** an analysis of why the replacement BMP is expected to achieve the goals of the BMP which was replaced.

**c.** Modifications to adjust the schedule for maintenance activities or the frequency of inspections or monitoring identified in the SWMP may be made by the permittee(s) on an annual basis. The permittees must include in the subsequent Annual Report a description of the adjustment to schedule along with the following information:

**(i)** an analysis of why the former schedule was ineffective or infeasible;

**(ii)** expectations on the effectiveness of the replacement schedule; and

**(iii)** an analysis, if applicable, of why the replacement schedule will ensure the optimization of equipment use.

**d.** Modifications that subtract components, controls, or requirements of the SWMP may not be made by the permittee(s) unless it can be clearly demonstrated that with the elimination of this component, the SWMP will continue to achieve a reduction in pollutants to the MEP and shall not cause or contribute to violations of State water quality standards in the receiving stream. In the case where this type of modification is appropriate, the permittee(s) may make the required modification and shall include in

the subsequent Annual Report a description of the component which has been eliminated along with the following information:

- (i) an analysis of why the component was ineffective or infeasible; and
- (ii) a detailed explanation of why, with the elimination of this component, the SWMP will continue to achieve a reduction in pollutants to the MEP and shall not cause or contribute to violations of State water quality standards in the receiving stream.

e. Modifications included in the Annual Report shall be signed in accordance with subpart VIII(K) by all permittees affected by that modification, and shall include a certification that all affected permittees were given an opportunity to comment on proposed changes.

**3. *Transfer of Ownership, Operational Authority, or Responsibility for Storm Water Management Program Implementation***

The permittee(s) shall implement the SWMP on all new areas added to their portion of the municipal separate storm sewer system (or for which they become responsible for implementation of storm water quality controls) as expeditiously as practicable. Implementation of the program in any new area shall consider the plans in the SWMP of the previous MS4 ownership.

Prior to annexation of land, the permittee shall include a schedule for extending the SWMP to the annexed areas. At least 30 days prior to transfer of operational authority or responsibility for implementing the SWMP, all parties shall prepare a single schedule for transfer of responsibility for implementing the SWMP on the affected portions of the MS4. This schedule shall be included in the Annual Report.

**PART IV**

**MONITORING REQUIREMENTS**

This table summarizes the monitoring requirements of the permit.

Element	Requirement	Schedule (1)
A	Ambient <ul style="list-style-type: none"> <li>• Sample at eight or more in-stream locations</li> <li>• Sample at least six times per site to reflect seasonal trends</li> </ul>	<ul style="list-style-type: none"> <li>• Bi-monthly</li> <li>• Annually</li> </ul>
B	Wet-Weather <ul style="list-style-type: none"> <li>• Sample at three or more in-stream locations</li> <li>• Sample at least twice at each location to reflect seasonal trends</li> </ul>	Annually

<b>C</b>	Industrial <ul style="list-style-type: none"> <li>• Based on need as determined during inspections, etc.</li> <li>• Report data</li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing</li> <li>• Annually</li> </ul>
<b>D</b>	Bioassessment <ul style="list-style-type: none"> <li>• Perform RBP III at the two designated bioassessment sites</li> <li>• Perform RBP III at one or more reference sites</li> <li>• Refine procedures for performing a “quick assessment” that can be performed in association with other program activities</li> <li>• Perform “quick assessments” as deemed necessary</li> </ul>	<ul style="list-style-type: none"> <li>• Annually</li> <li>• Annually</li> <li>• PY 1</li> <li>• Annually</li> </ul>
<b>E</b>	Loadings Estimates <ul style="list-style-type: none"> <li>• Report changes in estimated Event Mean Concentrations (EMCs)</li> <li>• Report changes in estimated annual volume and loadings for the MS4</li> </ul>	PY 5

**A. IN-STREAM AMBIENT MONITORING**

The permittee shall maintain its existing ambient monitoring program or submit to the division a revised program for review within six months of the effective date of this permit. The division will have 30 days to review the proposed program before permittees begin sampling.

**B. WET WEATHER MONITORING**

**1. Procedures**

Sites, tests, and monitoring frequencies shall be selected with a view toward evaluating program compliance, the appropriateness of identified BMPs, and improving impaired waters. The permittee(s) should submit a list of sites to the division for review, prior to beginning monitoring related to waters deemed impaired by the state.

The seasonal sampling program shall be developed and submitted to the division for review within six (6) months of issuance of the permit. The state may approve the program as submitted, or require revisions as to parameters, sites and protocol, by showing good cause for revisions. If the state does not act on Metro’s submittal within 30 days, the program shall be considered approved as submitted. Sampling shall proceed beginning six (6) months following the issuance of this permit and continue through the term of the permit.

Items 2 and 3 below show the parameters and the methods of sampling in effect, unless Metro describes a different plan as above.

**2. Default monitoring program**

a. In the absence of a revised monitoring plan, the permittee shall continue monitoring under the terms of the previous permit for the parameters listed below:

<b>TABLE V(1)</b>	
<b>PARAMETERS FOR ROUTINE WET WEATHER MONITORING</b>	
PH	biochemical oxygen demand (BOD <sub>5</sub> )
total suspended solids (TSS)	chemical oxygen demand (COD)
total dissolved solids (TDS)	total recoverable cyanide
total ammonia nitrogen (as N)	total recoverable lead
total ammonia plus organic nitrogen	total recoverable zinc
nitrate plus nitrite nitrogen (as N)	dissolved phosphorus
total nitrogen	total phosphorus
<b>SPECIAL ANALYSES</b>	
<i>E. coli</i> (1 storm/year)	

b. Sampling methodology shall be according to the EPA storm water application regulations at 40 CFR 122.26 (November 16, 1990).

**C. INDUSTRIAL SAMPLING**

Industrial sampling is not required except as determined – as through complaints or evidence from field inspections -- by Metro or the state in order to determine and document industrial sites that are contributing a substantial loading of pollutant(s) to the MS4 or receiving streams.

**D. BIOLOGICAL SAMPLING**

The metropolitan government of Nashville shall maintain a program of periodic biological assessments of at least two urban streams and one reference stream. The choice of streams must be approved by the Director of the Division of Water Pollution Control. The division intends that these streams be ones that are not meeting classified uses because of, or likely because of, the impact of urban runoff. The protocol for sampling shall be that found in EPA's Rapid Bioassessment Protocols. The level of protocol for each sampling shall be RBP III.

Additionally, Metro shall develop a quick assessment protocol that can be used in conjunction with field work such as inspections., and shall perform and document such quick assessments as Metro or the state deems necessary.

## E. ESTIMATES OF SEASONAL LOADINGS AND EVENT MEAN CONCENTRATIONS

1. The permittees shall provide estimates of the seasonal pollutant load and of the event mean concentration of representative storms for the parameters listed in Table V(1), excluding pH, for each major watershed within the MS4. The permittee shall document the method used to prepare these estimates.
2. The location of all *known* major outfalls shall be inventoried in the Annual Report, with updates describing any additionally identified major outfalls in each subsequent Annual Report.
3. The seasonal pollutant load and event mean concentration for each major watershed may be estimated from the representative monitoring locations, from regional NURP or State data, or from pooling results from other Tennessee MS4 monitoring activities and shall take into consideration land uses and drainage areas for the outfall. The conclusions of the USGS sampling and pollutant loading report shall be used. Reference United States Geological Survey (USGS) Open-File Report 94-68 titled "Rainfall, Streamflow, and Water-Quality Data for Five Small Watersheds, Nashville, Tennessee, 1990-92" and USGS Water-Resources Investigations Report 95-4140 (in press), as an example.
4. The estimates of seasonal loadings and event mean concentrations shall be included in the Annual Reports. For the purposes of this permit, a "major outfall" is defined as follows:
  - a pipe (or closed conveyance) system with a cross-sectional area equal to or greater than 7.07 square feet (e.g., if a single circular pipe system, an inside diameter of 36 inches or greater);
  - a single conveyance other than a pipe, such as an open channel ditch, which is associated with a drainage area of more than 50 acres;
  - a pipe (or closed conveyance) system, draining industrial land use, with a cross-sectional area equal to or greater than 0.79 square feet (e.g., if a single circular pipe system, an inside diameter of 12 inches or greater); or
  - a single conveyance other than a pipe, such as an open channel ditch, which is associated with an industrial land use drainage area of more than 2 acres.

For the purposes of this permit, a "major watershed" is defined as follows:

- an area bounded peripherally by a parting, i.e. ridge, which directs flowing water in different directions and draining to a particular water course or body of water. A major watershed shall encompass a named, current USGS, waterbody. A major watershed may contain one or more major outfalls.



5. The flow basis of the seasonal loadings shall be reported along with the estimates. In addition, an estimate for total runoff from all separate storm sewer system outfalls for the entire City of Nashville area for the year shall be reported in each Annual Report.

(Go to next page.)

**PART V**

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**REPORTING REQUIREMENTS**

**A. ANNUAL REPORTING**

**1. Preparation of annual report required**

**a.** Each permittee shall contribute to the preparation of an annual system-wide report to be submitted by no later than six months following the period covered by the report. The Annual Report shall cover the 12 month period beginning on the effective date of this permit and annually thereafter.

**b.** The preparation and submittal of a system-wide Annual Report shall be coordinated by a committee. The committee shall include a member or designated representative from each municipal entity covered by this permit. Each permittee shall be individually responsible for providing information on the portions of the MS4 for which they are the operator and for providing information for the system-wide report in a timely manner. Joint responsibility for the Annual Report submission shall be limited to the following: (1) participation in preparation of the overview for the entire system; and (2) inclusion of the identity of any permittee who failed to provide input to the report. Each permittee shall sign and certify the Annual Report in accordance with subpart VIII(K) of this permit, and shall include a statement or resolution that the permittee's governing body or agency (or delegated representative) has reviewed or has been appraised of the content of the Annual Report.

**c.** The Annual Report shall include the following sections:

- Contacts List
- SWMP Evaluation
- Summary Table
- Narrative Report
- Monitoring Section
- Summary of SWMP and Monitoring Modifications
- Fiscal Analysis
- Appendices

**2.** The following items describe in more detail the specific requirements for the Annual Report.

**a.** Provide a list of contacts and responsible parties (e.g.: agency, name, phone number) who had input to and are responsible for the preparation of the Annual Report.

**b.** Provide an overall evaluation of the Storm Water Management Program including: Objective of Program; Major Findings (e.g.: water quality improvements or degradation); Major Accomplishments; Overall Program Strengths / Weaknesses; and Future Direction of Program.

**c.** Provide a Summary Table of Storm Water Management Program Elements.

**i.** A Summary Table of appropriate SWMP annual activities for each permittee shall be provided. The purpose of the Summary Table is to document in a concise form the program activities and permittees' compliance status with quantifiable permit requirements. Program elements that are administrative (e.g.: planning procedures, program development and pilot studies) are inappropriate for the summary table and shall be discussed in the narrative section of the Annual Report. The following are examples of SWMP activities to be included in the Summary Table:

**(1)** Structural Controls- maintenance and/or inspection activities of existing structural controls

**(2)** Roadway Maintenance- street sweeping, litter control activities, and maintenance on storm water structures & roadside ditches

**(3)** Municipal Waste TSD Facilities- inspections, monitoring, and implementation of control measures

**(4)** Pesticide, Herbicide, and Fertilizer Application -certification training and public education

**(5)** Illicits- facility inspections, investigations, enforcement actions, illicit (dry weather) screening, illicit public reporting, oil/household hazardous waste collection, and storm sewer inlet stenciling

**(6)** High Risk Industrial Facilities- inspection activities and monitoring

**(7)** Construction- training of inspectors, inspections, and enforcement actions

**(8)** Storm Water Treatment Projects- description of municipal storm water treatment projects that have been completed, including a brief description of the affected drainage basin

**ii.** The Summary Table shall indicate each permittee's SWMP activities and accomplishments. The content of this information shall adhere to the example shown in Table VI(1) contained herein. Formatting of the table may vary. Items to be reported include:

**(1)** Activity description;

- (2) Number of activities (with frequency) that were scheduled for implementation and/or accomplishment in program element discussion (i.e., once/6 months, 100%/5 years, 5 sites monitored once/year, all sites inspected/permit term). Enter "Not Applicable" (N/A) if no specific schedule was specified;
- (3) Status of schedule for year ("yes" for schedule was adhered to, or "no" for schedule was not adhered to);
- (4) Number of activities which were accomplished; and
- (5) The availability of documentation (i.e., inspection reports) for those activities which were accomplished and comments describing the reason(s) for any non-compliance.

**SAMPLE SUMMARY TABLE FOR STORM WATER MANAGEMENT**  
**PROGRAM ELEMENT STATUS & COMPLIANCE (EXAMPLE ONLY)**  
 TABLE VI(I)

PROGRAM ELEMENT	TASK	ACTIVITY SCHEDULE			Comments
		Activities Required by SWMP	Complied With?	Activities Accomplished During Calendar Year	
STRUCTURAL CONTROLS	Major channels inspected	15 channels, once/6 months	YES	15 channels, once/6 months	Copies of inspection report forms available upon request.
	Major channels maintained	As needed	N/A	7 channels maintained	
	Grate inlets inspected	1500 inlets, once/year	NO	1000 inlets	Ambitious projection. Reducing to 1000 next year due to resources.
	Detention ponds maintained	1 pond once/month	YES	1 pond once/month	Sediment removed after spring rains.
	Storm drain inlets inspected	35 inlets, once/6 months	YES	35 inlets, once/6 months	Copies of inspection report forms available upon request.
MONITORING	Municipal landfills	2 facilities, once/6 months	YES	2 facilities, once/6 months	Copies of inspection report forms available upon request.
	POTW's	3 facilities, once/year	NO	2 facilities	Copies of inspection report forms available upon request.
	Industrial - Hazardous	5 facilities, once/6 months	YES	5 facilities, once/6 months	Copies of inspection report forms available upon request.
	SARA Title III	3 facilities, once/6 months	YES	3 facilities, once/6 months	Copies of inspection report forms available upon request.
	Others	2 facilities, once/year	YES	2 facilities,	Copies of inspection report forms available upon request.
	Dry weather screening	100% system, once/5 years	YES	20% system	Copies of screening field reports - Appendix B.
	Floatable assessment	100 sections surveyed/year	YES	140 section surveyed	Copies of field survey available upon request.

d. The Annual Report shall contain a Narrative Report that succinctly discusses the SWMP Elements which were not included within the SWMP Summary Table. Those SWMP elements required to be developed under Parts III and IV of the permit shall be discussed within this section of the Annual Report following development.

i. The permittees shall include a brief discussion of the following applicable SWMP Elements:

- (1) Structural Controls Maintenance
- (2) Development Planning Procedures
- (3) Roadway Maintenance
- (4) Flood Management
- (5) Municipal Facilities
- (6) Pesticides, Herbicides, and Fertilizers
- (7) Illicits Inspection/Investigation/Enforcement
- (8) Field Screening
- (9) Investigation of illicit discharges where reasonable potential exists
- (10) Spill Response
- (11) Public Reporting of Illicit Discharges
- (12) Oil and Household Hazardous Waste
- (13) Sanitary Sewer Seepage
- (14) High Risk Industrial Facility Inspection
- (15) Monitoring program for high risk facilities
- (16) Construction Planning Procedures
- (17) Structural and non-structural BMPs
- (18) Prioritizing of site inspections
- (19) Educational activities

ii. The format for the Narrative Report section of the Annual Report shall be a brief discussion of the SWMP element. It may be in table form or a combination of a table and corresponding narrative to facilitate concise conveyance of the information. The aspects of each permittee's activities concerning a SWMP Element shall be succinctly discussed in the section of the Narrative Report dedicated to that element. The discussion shall include the following:

- (1) Objective of SWMP Element;
- (2) SWMP Element activities completed and those in progress;
- (3) General discussion of element. Explanation of all Element activity deficiencies (e.g.: activities described in the program that have not been fully implemented or completed). Results of activities shall be summarized and discussed (e.g.: maintenance caused by inspection, pollutants detected by monitoring, investigations as a result of dry and wet weather screening, number and nature of enforcement items, education activities participation);
- (4) Status of SWMP Element with compliance, implementation, and augmentation schedules in Part IV of the permit;
- (5) SWMP Element strengths and weaknesses;

**(6)** Assessment of controls; including assessment of accuracy in recording and following up on investigations, in recording results of follow-up; and in providing estimates of pollutant loading, with a view toward setting up the system to report by program and at least by watershed, if not by outfall;

**(7)** Discussion of Element revisions that are summarized elsewhere in the Annual Report.

**e.** The Annual Report shall contain a Monitoring Section which discusses the progress and results of the monitoring programs required under Part V (Wet weather monitoring) of the permit.

**i.** If the default monitoring applies, the Monitoring Section of the Annual Report shall include the following information as required in subpart VI(A) of the permit:

**(1)** Inventory of all *known* major outfalls, with updates describing additionally identified major outfalls in each subsequent Annual Report;

**(2)** Estimates of seasonal pollutant loadings and event mean concentrations (EMC) for each major watershed required by Item V(A)(3) of the permit; the basis for estimates shall be clearly given; and

**(3)** Based on total rainfall for the year, imperviousness of different land uses, etc., an estimate of the total volume of urban runoff discharged in the metropolitan government of Nashville for the year.

**ii.** The Monitoring Section of the Annual Report shall include a summary of the monitoring program developed and implemented under subpart V(B) (Ambient monitoring) of the permit. The details to be discussed include:

**(1)** For each of the Annual Reports, an explanation and rationale for the type of ambient monitoring program the permittee(s) conducted during the reporting period;

**(2)** Summary chart of the data from any monitoring completed;

**(3)** Discussion of any results or conclusions derived from the monitoring completed;

**(4)** For each of the Annual Reports, an explanation and rationale for a program of biological assessments of at least two urban streams during this reporting period, the report shall include as appendices, the results of the assessments; and

**(5)** Discussion of monitoring program revisions that are summarized elsewhere in the Annual Report.

- f.** Provide estimated reductions in loadings of pollutants from discharges of pollutants from the MS4 expected as the result of the municipal storm water management program. This assessment shall identify known impacts of storm water controls for the year on ground water quality. 40 CFR 122.26(d)(2)(v).
- g.** Provide a summary of the SWMP and modifications in the monitoring program made during the permit year.
- h.** List and discuss any changes that the permittee(s) is expected to make to the storm water management programs for the year following the report year.
- i.** Provide a fiscal analysis for each permittee's program implementation, both for the past calendar year and the next. The analysis shall indicate budgets and funding sources.
- j.** The following information shall be included as Appendices within the Annual Report:

  - i.** Analytical data collected from the monitoring program;
  - ii.** Results of illicit connections screening or dry weather screening; and
  - iii.** Any other data specifically requested by the division to substantiate statements and conclusions reached in the Annual Reports.

## **B. CERTIFICATION AND SIGNATURE REPORTS**

All reports required by the permit and other information requested by the Director shall be signed and certified in accordance with subpart VII(K) of the permit.

## **C. TIME AND PLACE OF REPORT SUBMITTAL**

- 1.** As required by subpart VI(A), monitoring results obtained during each annual reporting period beginning on the effective date of this permit and annually thereafter shall be submitted on Discharge Monitoring Report Form(s) in the Annual Report for year five of the permit. A separate Discharge Monitoring Report Form is required for each event monitored.
- 2.** Signed copies of the Annual Report required by subpart VI(A) and all other reports required herein, shall be submitted to:

Division of Water Pollution Control  
Attention: Compliance Review  
L & C Annex, 6th Floor  
401 Church Street  
Nashville, Tennessee 37243-1534

#### **D. RETENTION OF RECORDS**

The permittees shall retain the latest version of the Storm Water Management Program developed in accordance with Part III of this permit for at least three years after the expiration date of this permit. The permittees shall retain all records of all monitoring information, copies of all reports required by this permit, and records of all other data required by or used to demonstrate compliance with this permit, until at least three years after the expiration date of this permit. This period may be explicitly modified by alternative provisions of this permit or extended by request of the Director at any time.

## **PART VI**

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### **STANDARD PERMIT CONDITIONS**

#### **A. DUTY TO COMPLY**

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of applicable State and Federal laws and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

#### **B. DUTY TO REAPPLY**

The permittee is not authorized to discharge after the expiration date of this permit. If the permittee wishes to continue discharges after the expiration date, the permittee must reapply, with necessary information and forms, for reissuance of the permit, at least 180 days prior to the expiration date.



**C. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**D. DUTY TO MITIGATE**

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

**E. PROPER OPERATION AND MAINTENANCE**

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

**F. PERMIT ACTIONS**

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

**G. PROPERTY RIGHTS**

This permit does not convey any property rights of any sort in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

**H. DUTY TO PROVIDE INFORMATION**

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and

reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

## **I. INSPECTION AND ENTRY**

The permittee shall allow the Director, or an authorized representative of the EPA, including a contractor acting as a representative of the EPA Administrator, upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by State law or the Clean Water Act, any substances or parameters at any location.

## **J. MONITORING AND RECORDS**

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.
3. Records of monitoring information shall include:
  - a. The date, place, and time of sampling or measurements;
  - b. The individual(s) who performed the sampling or measurements;
  - c. The date(s) analyses were performed;
  - d. The individual(s) who performed the analyses;

- e. The analytical techniques or methods used; and
  - f. The results of such analyses.
4. Monitoring results must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in the permit.
5. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by fines and imprisonment described in Section 309 of the Clean Water Act.

## **K. SIGNATORY REQUIREMENTS**

1. All applications, reports, or information submitted to the Director shall be signed and certified.

**a. Applications**

All permit applications shall be signed (for a municipality, State, Federal, or other public agency) by either a principal executive officer or ranking elected official.

**b. Reports and other information**

All reports required by this permit, and other information requested by the Director shall be signed by a person described in subitem a of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

i. The authorization is made in writing by a person described in subitem a of this section;

ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of director or assistant director, manager or superintendent, or position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

iii. The written authorization is submitted to the Director.

c. If an authorization under subitem b above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of sub-item b of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

**d. Certification**

Any person signing a document under subitem a or b of this section shall make the following 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.

- 2.** The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

**L. REPORTING REQUIREMENTS**

**1. Planned changes**

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- a.** The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in § 122.29(b); or
- b.** The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under § 122.42(a)(1).
- c.** The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;

**2. Anticipated noncompliance**

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

### **3. Transfers**

This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the State law and the Federal Clean Water Act.

### **4. Monitoring reports**

Monitoring results shall be reported at the intervals specified elsewhere in this permit.

- a.** Monitoring results must be reported in an organized format in the annual report, unless the Director requires submittal on particular forms (e.g., Discharge Monitoring Report) and/or at other times.
- b.** If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
- c.** Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

### **5. Twenty-four hour reporting**

- a.** The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- b.** The following shall be included as information which must be reported within 24 hours under this paragraph.
  - i.** Any unanticipated bypass which exceeds any effluent limitation in the permit. (See § 122.41(g).)
  - ii.** Any upset which exceeds any effluent limitation in the permit.
  - iii.** Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. (See § 122.44(g).)

c. The Director may waive the written report on a case-by-case basis for reports under paragraph (L)(5)(ii) of this section if the oral report has been received within 24 hours.

**6. Other noncompliance**

The permittee shall report all instances of noncompliance not reported under paragraphs (L) (4) and (5) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (L)(5) of this section.

**7. Other information**

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

**M. SEVERABILITY**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

**N. LIABILITIES**

**1. Civil and Criminal Liability**

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this permit, it shall be the responsibility of the permittee to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

**2. Liability Under State Law**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or the Federal Water Pollution Control Act, as amended.

**PART VII**

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**PERMIT MODIFICATION**

**A. MODIFICATION OF THE PERMIT**

The permit may be reopened and modified during the life of the permit to:

1. Address impacts on receiving water quality caused, or contributed to, by discharges from the MS4;
2. Address changes in State or Federal statutory or regulatory requirements;
3. Include the addition of a new permittee who is the owner or operator of a portion of the Municipal Separate Storm Sewer System; or
4. Include other modifications deemed necessary by the Director to comply with the goals and requirements of the Clean Water Act.

All modifications to the permit will be made in accordance with 40 CFR 122.62, 122.63, and 124.5 and applicable State regulations.

**B. TERMINATION OF COVERAGE FOR A SINGLE PERMITTEE**

Permit coverage may be terminated, in accordance with the provisions of 40 CFR 122.64 and 124.5, for a single permittee without terminating coverage for other permittees.

**C. MODIFICATION OF STORM WATER MANAGEMENT PROGRAMS (SWMPS)**

Only those portions of the Storm Water Management Programs specifically required as permit conditions shall be subject to the modification requirements of 40 CFR 124.5. Replacement of an ineffective or infeasible BMP implementing a required component of the Storm Water Management Program with an alternate BMP expected to achieve the goals of the ineffective or infeasible BMP shall be considered minor modifications to the Storm Water Management Program and not modifications to the permit. (See also Part III(H)(2))

**D. CHANGES IN MONITORED OUTFALLS**

This permit is issued on a system-wide basis in accordance with CWA §402(p)(3)(B)(i) and authorizes discharges from all portions of the municipal separate storm sewer system.

Since all outfalls are authorized, changes in monitoring outfalls, if any, shall be considered minor modifications to the monitoring program and not modifications to the permit. (See also Part VI(A)(2)(g)).



**RATIONALE**

**Nashville/Davidson County Municipal Separate Storm Sewer System  
NPDES PERMIT NO. TNS068047  
Davidson COUNTY, TENNESSEE**

**Permit Writer: Robert L. Haley**

**I. DISCHARGER(S)**

This permit and rationale sheet address the discharge of storm water runoff to the municipal separate storm sewer system (MS4) owned and operated by the metropolitan government of Nashville and Davidson County, Tennessee.

**The application was submitted by:**

**The Metropolitan Government of Nashville and  
Davidson County**

**Contact: Mr. Michael Hunt, NPDES  
Program Mgr  
615-880-2420**

**Address: Metro Water Services (MWS)  
1607 County Hospital Road  
Nashville, Tennessee 37218**

**II. PERMIT STATUS**

The present permit was issued April, 1996, and expired June 30, 2001. Application for reissuance of the permit was made along with the 4<sup>th</sup> year's annual report, submitted December, 2000.

The present permit was based on the EPA large and medium MS4 regulatory program, and on the storm water management program proposed and submitted by the applicant in 1992, and as revised during the issuance of the permit in 1996.

### III. MS4 DESCRIPTION(S)

#### A. EPA Definitions

The Environmental Protection Agency (EPA), in 40 CFR §§122.26(b)(8) and 122.26(b)(4), defines a *Municipal Separate Storm Sewer* and a *Large Municipal Separate Storm Sewer System* as follows:

*“Municipal Separate Storm Sewer”* means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, and storm drains):

- (i) owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State Law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State Law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian Tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
- (ii) designed or used for collecting or conveying storm water;
- (iii) which is not a combined sewer; and
- (iv) which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

*“Large Municipal Separate Storm Sewer System”* means all municipal separate storm sewers that are either:

- (i) located in an incorporated place (city) with a population of 250,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities are listed in Appendices F and G of 40 CFR Part 122); or,
- (ii) located in the counties with unincorporated urbanized populations of 250,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties (these counties are listed in Appendices H and I of 40 CFR Part 122); or,
- (iii) owned or operated by a municipality other than those described in paragraph (i) or (ii) and that are designated by the Director as part of the large municipal separate storm sewer system.

#### B. Nashville's system described

1. Metropolitan Nashville-Davidson County owns and/or maintains an extensive separate storm sewer system within the 533 square miles encompassed by its boundary. This system includes all conveyances or systems of conveyances in Davidson County except those located within the boundaries of several (seven) incorporated places in Davidson County.

Storm water runoff in the county drains eventually to the Cumberland River, which meanders through the center of the county flowing from east to west. An area of combined sewers (sanitary and storm) intercepts approximately 15 square miles of storm water in the central portion of the county (downtown Nashville).

2. On the matter of the seven incorporated places in the county, these incorporated places are specifically named as regulated under the Phase II storm water program. This draft permit for Metro Nashville/Davidson County is being forwarded to these places, with information on how to become a copermitttee with Metro.
3. The drainage network throughout most of the county consists of natural open channel conveyance systems. Large storm sewer networks are almost nonexistent outside the combined sewer system. Thus, most of the points where storm water exits the Nashville MS4 and enters waters of the State are open drainage ways.

**C. Tennessee Department of Transportation (TDOT) roadways and associated storm drains**

Storm sewers owned or operated by TDOT are publicly owned storm drains in Nashville and constitute a regulated MS4. Some of the TDOT sewers join waters of the State directly. Others join storm sewers owned by Metro Nashville and do not discharge directly into waters of the State.

The TDOT has submitted a statewide permit application for TDOT storm sewers in Phase I and Phase II municipalities. TDEC will issue TDOT its own NPDES permit(s).

**IV. RECEIVING WATERS**

**A. Introduction**

Water that exits the storm sewer eventually enters waters of the State. Waters of the State are defined in the Tennessee Water Quality Control Act as follows:

"Waters" means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through, or border upon Tennessee or any portion thereof except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine or effect a junction with natural surface or underground waters.

Wet weather conveyances are conveyances that flow in direct response to precipitation. Wet weather conveyances are not protected under the TN WQCA to

the same extent as other waters of the State. The definition of wet weather conveyance follows:

"Wet weather conveyances" are man made or natural watercourses, including natural watercourses that have been modified by channelization, that flow only in direct response to precipitation runoff in their immediate locality and whose channels are above the groundwater table and which do not support fish and aquatic life and are not suitable for drinking water supplies. (Taken from State Water Quality Control Board Rule 1200-4-3-.04 (4)).

**B. List of streams and designated uses**

Nashville originally (November, 1992) identified 26 major watersheds for the purpose of the NPDES permit application and ongoing storm water master planning:

- |                    |                     |
|--------------------|---------------------|
| 1 Back Creek       | 14 Loves Branch     |
| 2 Browns Creek     | 15 Mansker Creek    |
| 3 Bull Run         | 16 Marrowbone Creek |
| 4 Cooper           | 17 Mill Creek       |
| 5 Cub Creek        | 18 Overall Creek    |
| 6 Cumberland River | 19 Pages Branch     |
| 7 Davidson Creek   | 20 Pond Creek       |
| 8 Dry Creek        | 21 Richland Creek   |
| 9 Gibson Creek     | 22 Sandy Creek      |
| 10 Gizzard Branch  | 23 Stones River     |
| 11 Harpeth River   | 24 Sulpher Creek    |
| 12 Indian Creek    | 25 Sycamore Creek   |
| 13 Island Creek    | 26 Whites Creek     |

The designated uses of these streams include: domestic water supply, industrial water supply, fish and aquatic life, livestock watering and wildlife, recreation and navigation.

**C. Streams that do not meet classified uses**

The following stream segments in Davidson County did not meet their classified uses as of publication of the Status of Water Quality in Tennessee/ Year 2000 305(b) Report.

Metro will focus efforts to enhance water quality in those watersheds where there are waters not fully supporting classified uses.

Waterbody	Stream Miles <sup>1</sup>		Reasons for Use Nonsupport <sup>2</sup>								
	PS	NS	PS	CS	S W	S	UI	A	LD	CH	IP C
Browns Creek		6.5		✓	✓	✓					✓
Cumberland	30.7		✓	✓			✓				

River											
Cumberland River		24.3	✓	✓	✓	✓					
East Fork Hamilton Creek		1.9	✓								
Hurricane Creek		10.3	✓		✓	✓			✓	✓	
Marrowbone Lake		60.0 <sup>3</sup>						✓			
Mill Creek	24.6				✓						
Richland Creek		10.5		✓	✓	✓					
Stones River	6.7						✓				

<sup>1</sup> PS Partially Supporting Designated Uses  
 NS Non Supporting Designated Uses

<sup>2</sup> PS Municipal Point Source  
 CS Combined Sewer Overflows  
 SW Urban Storm Water Runoff  
 S Spills  
 UI Upstream Impoundment  
 A Aquaculture  
 LD Land Development Practices  
 CH Channelization  
 IPC In-Place Contamination

<sup>3</sup> Value reported is acres of lake surface.

**D. Streams impaired for which TMDLs have been promulgated**

Two TMDLs have been promulgated, to date, affecting the Nashville MS4:

**1. A Harpeth River TMDL, issued May 10, 2002:**

For Siltation & Habitat Alteration In The Harpeth River Watershed (HUC 05130204) Cheatham, Davidson, Dickson, Hickman, Rutherford, & Williamson County, Tennessee

**2. A Stones River TMDL, issued July 29, 2002:**

For Siltation & Habitat Alteration In The Stones River Watershed (HUC 05130203) Cannon, Davidson, Rutherford, & Wilson County, Tennessee

**3. The implementation plans include language as follows:**

For regulated discharges from municipal separate storm sewer systems, WLAs will be implemented through Phase II MS4 permits. These permits will require the development and implementation of a Storm Water Management Plan (SWMP) that will reduce the discharge of pollutants to the "maximum extent practicable" and not cause or contribute to violations of State water quality standards. The individual permittees will be responsible for identifying the specific BMPs to be applied to attain appropriate reduction in sediment loads. The SWMP will also include a number of programs/activities to identify sources of pollutants in municipal storm water runoff and verify SWMP effectiveness.

Of course, there is also much importance placed on construction site runoff control, by way of the state's construction general permit.

And the following statement regarding evaluation of implementation:

The effectiveness of the TMDL will be assessed within the context of the State's rotating watershed management approach. Watershed monitoring and assessment activities will provide information by which the effectiveness of sediment loading reduction measures can be evaluated. This monitoring will be guided by the results of a Harpeth River watershed sediment study, conducted by the Harpeth River Watershed Association and the Cumberland River Compact. Monitoring data, ground-truthing, and source identification actions will also enable implementation of particular types of BMPs to be directed to specific areas in the subwatersheds. These TMDLs will be reevaluated during subsequent watershed cycles and revised as required to assure attainment of applicable water quality standards.

## **V. PERMIT DEVELOPMENT AND METHODOLOGY**

### **A. Introduction**

The Water Quality Act of 1987, which set up the present NPDES permit requirements for discharges of urban runoff, requires that the NPDES permit issued to Metro Nashville/Davidson County:

- a. include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and
- b. require the permittees to reduce pollutants in discharges from the MS4 to the "Maximum Extent Practicable" (MEP).

This permit will impose Best Management Practices (BMP's), in the form of required source control measures and a comprehensive Storm Water Management Program (SWMP), as the mechanism to implement the statutory requirements.

While Section 402(p)(3)(B)(iii) of the CWA includes structural controls as a component of MEP, the state recognizes that a municipality may first implement pollution prevention measures and reserve more costly structural controls for higher-priority watersheds or where source controls are unfeasible or ineffective and where pilot studies have been done to prove the effectiveness of the structural control.

**B. Necessary MS4 program Elements**

The minimum program elements enumerated in EPA regulations are the following. These are listed here for quick reference. In section VII. of this rationale sheet, there is a short description of each of these elements.

<u>REQUIRED PROGRAM ELEMENT</u>	<u>REGULATORY REFERENCES</u>
Operation and maintenance of structural controls .....	40 CFR 122.26(d)(2)(iv)(A)(1)
Control of discharges from areas of new development and significant redevelopment.	40 CFR 122.26(d)(2)(iv)(A)(2)
Operation and maintenance of public streets, roads, and highways	40 CFR 122.26(d)(2)(iv)(A)(3)
Ensuring flood control projects consider water quality impacts .....	40 CFR 122.26(d)(2)(iv)(A)(4)
Identification, monitoring, and control of discharges from municipal waste treatment, storage, or disposal facilities.	40 CFR 122.26(d)(2)(iv)(A)(5)
Control of pollutants related to application of pesticides, herbicides, and fertilizers.	40 CFR 122.26(d)(2)(iv)(A)(6)
Implementation of an inspection program to enforce ordinances which prohibit illicit connections and illegal dumping into the MS4.	40 CFR 122.26(d)(2)(iv)(B)(1)
Field screening the MS4 for illicit connections and illegal dumping ....	40 CFR 122.26(d)(2)(iv)(B)(2)
Implementation of standard investigative procedures to identify and terminate sources of illicit connections or discharges.	40 CFR 122.26(d)(2)(iv)(B)(3)
Prevention, containment, and response to spills that may discharge into the MS4.	40 CFR 122.26(d)(2)(iv)(B)(4)
Limit the infiltration of sanitary seepage into the MS4 .....	40 CFR 122.26(d)(2)(iv)(B)(7)
Identification, monitoring, and control of discharges from municipal landfills; hazardous waste treatment, storage, disposal and recovery facilities; facilities that are subject to EPCRA Title III, Section 313; and any other industrial or commercial discharge the permittee determines are contributing a substantial pollutant loading to the MS4.	40 CFR 122.26(d)(2)(iv)(C)(1)
Control of pollutants in construction site runoff .....	40 CFR 122.26(d)(2)(iv)(D)(1)
Public education .....	40 CFR 122.26(d)(2)(iv)(A)(6) 40 CFR 122.26(d)(2)(iv)(B)(5) 40 CFR 122.26(d)(2)(iv)(B)(6)

## **VI. STORM WATER MANAGEMENT PROGRAM DEVELOPMENT**

### **A. Introduction**

The first Metropolitan Nashville and Davidson County's (Metro's) NPDES MS4 permit cycle (July 1, 1996 through June 30, 2001) was intended to establish the NPDES program and has yielded a better understanding of Metro's storm water quality and the issues of storm water quality and control. Much has been learned, and this provides a basis for determining what measures are needed to manage receiving water quality. The following section is mostly taken from Metro's application for reissuance of its MS4 permit.

### **B. Proposed Objective and Goals**

Metro's objective is to implement an NPDES MS4 permit that will help it to maintain or improve the quality of Davidson County water resources and "Waters of the State of Tennessee" to the Maximum Extent Practicable (MEP). This leads to an overall goal of achieving water quality improvements in every Davidson County stream reach included on TDEC's 303(d) list such that at some point in the future, no streams in Davidson County will be included on the list. To accomplish this objective and overall goal, several smaller goals were established in the first permit cycle (1996 – 2001) to serve as a fundamental basis for developing a variety of storm water management programs that address specific issues. The following is a list of refined goals established to facilitate ongoing management programs improvements and implementation.

- Emphasize public education, awareness, and reporting as the primary non-structural Best Management Practice (BMP)
- Minimize construction phase water quality impacts through developer/engineer education, continued improvement of the plans review process, construction site inspections and monitoring
- Minimize long-term water quality impacts through effective, fair, equitable, and feasible site-design requirements and guidance
- Implement an effective, fair, equitable, and feasible enforcement program that will reduce water quality impacts from accidental and/or intentional discharge of pollutants into the MS4
- Gain a greater knowledge of any water quality problems within Metro to support the Capital Improvement Projects (CIP) decision process
- Base programs on current storm water management theory and acceptable practices
- Prioritize efforts on the worst problems in the worst areas
- Identify problems that can be corrected with reasonable effort and fiscal commitment



- Establish/implement the financial, organizational, and legal foundations to support the other program goals

### **C. Proposed Program Elements**

The following program elements were refined to reflect the above goals and Metro's experiences in implementing the first permit cycle initiatives.

1. Structural Storm Water Controls and Collection Systems
2. New Development and Significant Redevelopment
3. Roadways
4. Landfills and Other Waste Treatment, Storage, or Disposal Facilities
5. Pesticides, Herbicides, Fertilizers, Oils, and Other Toxic Materials
6. Illicit Discharges and Improper Disposal
7. Industrial and High Risk Runoff
8. Construction Site Runoff
9. Habitat Improvement
10. Monitoring
11. Public Information and Education (PI&E)
12. Reporting

### **D. Rationale and Narrative Description**

This section is intended to convey Metro's rationale for proposing the specific program element activities.

#### **1. Structural Storm Water Controls and Collection System**

This program element's objective is to maintain an understanding of the collection system and its performance as a basis for maintenance activities that are intended to benefit storm water quality. This program element focuses on optimizing the water quality benefits generated through the proper operation, inspection, and maintenance of the existing storm drainage system under the public domain. The proposed program element activity only pertains to storm water infrastructure that directly and significantly impacts public infrastructure.

- a. **Update storm water infrastructure inventory (GIS format)** – This activity is intended to maintain the storm water system GIS developed in the first cycle of the permit. Activity will focus on updating the GIS in areas of new development, significant redevelopment and for Metro drainage construction/modification activities performed since the initial infrastructure inventory. It is anticipated that this will be performed on an ongoing basis during the second permit term, but at a minimum, the GIS storm water infrastructure data will be revised by the end of year 4 of the second permit cycle.

- b. **Existing System Maintenance** – Metro proposes to continue to maintain the existing public storm water drainage infrastructure. These activities will be performed on public infrastructure and limited private infrastructure that directly impacts public infrastructure. Metro proposes that this decision be made on a case-by-case basis with potential projects identified through customer complaints and otherwise noted through Metro Water and Sewer and/or NPDES MS4 permit-related activities.
- c. **Inspections** – Metro recognizes the need to maintain its storm water Best Management Practices (BMPs). The only facility that Metro is currently required to maintain is the Dry Creek Detention Facility. Metro proposes to continue maintaining this facility as prescribed in the first cycle MS4 permit. Metro proposes that any other detention/retention facilities that come under Metro ownership will be maintained accordingly.
- d. **Training** – Metro recognizes that periodic training is critical to the success of any program to benefit water quality. For this program element, Metro proposes to train key inspection and maintenance staff from MWS and other Metro departments to identify potential water quality impacts and how procedural changes could be identified and implemented to minimize or eliminate those impacts.
- e. **Maintenance Procedures** – Metro proposes that it be required to review the existing maintenance procedures to identify potential changes that would benefit water quality.
- f. **Housekeeping Programs** – Metro proposes that the NPDES Program further develop its cooperative working relationship with the MDPW Solid Waste Division. This pertains especially to incorporating water quality considerations into the fulfillment of the recently unveiled Metro Solid Waste plan. This would result in an effort to formulate Metro policies consistent with reducing nonpoint source contaminant contributions from areas that fall under MDPW Solid Waste jurisdiction. It is anticipated that this will include a coordinated public information effort aimed at educating the public on the big-picture benefits the various programs/activities provide and how they can participate.
- g. **Storm Water Detention / Retention Facilities** – Metro recognizes that planning and acting upon an understanding of location and function of storm water detention / retention facilities is important to managing water resources. Metro proposes that it expand upon the information collected in the first permit cycle and re-evaluate long-term maintenance strategies. Metro anticipates that any long-term operation and maintenance strategy adopted will need to include educating the public on proper maintenance procedures/schedules for privately owned facilities.

## 2. New Development and Significant Redevelopment

This program element's objective is to minimize the long-term impacts of new development and significant redevelopment on water quality. Metro intends to accomplish this goal by enforcing ordinances and regulations that are supported by guidance materials for the proper placement of BMPs and educating local stakeholders about their role in minimizing long-term water quality impacts.

- a. **Ordinances, Regulations and Guidance** – Metro took significant steps in the first MS4 permit cycle to improve local regulatory mechanisms in order to enhance water quality. It now intends to take additional steps to more effectively enforce these measures. Metro also intends to periodically make local stakeholders aware of regulations, policies, and guidance materials as explained in the PI&E program element.

The development of a “Stormwater Quality Best Management Practices (BMP) Manual”, as presented in the SWMM Volume 4, was a significant step towards limiting water quality impacts from areas of new development and significant redevelopment. Metro intends to periodically evaluate this document to determine if changes should be made to more effectively explain a BMP, to convey the current state of technology, or reflect MWS plan review and inspection staff experiences.

- b. **Best Management Practices (BMPs)** – Metro proposes to inform TDEC of publicly operated BMPs. This is to include regional or retrofitted facilities and available monitoring data. Metro recognizes that regional facilities and the facilities retrofitted to improve pollutant capture efficiencies are important to the long-term success of an MS4 program. It has been determined that fiscal resource limitations preclude it from committing to implementing any type (number, specific type, or size) of permanent, regional, or retrofit water quality facilities. However as fiscal resources become available for such measures, Metro is committed to reporting any of these activities as performed on a prioritized basis.
- c. **Master Planning** – Metro's philosophy about master planning is similar to its approach to BMPs. It recognizes that it is essential to the long-term success of a water quality management program, but does not feel it is prudent to commit to a specifically outlined water quality master planning effort. Metro understands that the Metro Planning Department is a critical facilitator in this area and related processes. Therefore, MWS intends to work closely with Metro Planning Department staff to help facilitate this process. The division proposes that Metro:
  - Produce a report to be delivered to the Chair and Members of the Metro Planning Commission. The purpose of the report shall be to set forth how water quality issues can be considered and incorporated into the municipality's land use planning process. The report shall be completed and delivered to the Commission members within 24 months of the effective date of this permit; and

- Initiate meetings with Planning Department regarding water quality issues of master planning.
- d. **Training** – Metro wishes to avoid sudden changes that drastically slow grading permit plan preparation by local developers and plan review by MWS staff. Metro proposes to help avoid this situation by periodically training the plan review staff in minor changes to policy. Metro intends to periodically train grading permit plan reviewers on the latest techniques and management practices to address long-term water quality issues. This will include lessons learned both locally and from other communities across the nation. The intent being that grading permit plan review policy can gradually grow to account for the current state of the technology and reflect MWS plan review and inspection staff experiences.

### 3. Roadways

This program element's objective is to reduce the impacts of roadway design, construction, and maintenance on water quality. This is accomplished by examining and implementing several programs including catch basin cleaning, downtown street sweeping, spill response and cleanup, deicing chemical BMPs, and herbicide and pesticides BMPs.

- a. **Catch Basin Cleaning** – Metro recognizes that catch basin cleaning may benefit water quality. However, it understands that benefits of cleaning catch basins must not be found to yield insignificant benefits when compared to the fiscal commitment needed to perform the task. Therefore, Metro proposes that catch basin cleaning be focused on areas where complaints have been issued or it is otherwise determined that cleaning is warranted through studies or otherwise determined by MWS, related NPDES field visits (such as dry weather field screening), or other valid sources of information.
- b. **Downtown Street Sweeping** – Metro proposes that the downtown street sweeping progress as in the present permit. Specifically, Metro intends to sweep every curb and gutter system (2,800 miles) in the Urban Services District once per month.
- c. **Deicing Chemicals** – Metro proposes that the NPDES office evaluate Metro deicing chemical application and storage practices to determine if any additional or alternative measures might benefit water quality from roadway runoff and salt bin storage locations.
- d. **Herbicides, pesticides and fertilizers** – Metro proposes that the NPDES office evaluate its chemical application and storage practices to determine if any additional or modified procedures would benefit water quality considerations within Metro.
- e. **Spills** – Metro proposes that it pursue/report any necessary water quality-based modifications to Metro's Emergency Management Plan. Metro intends to continue documenting and updating spill location data for the Metro area (GIS)

and be aware of and act upon any trends that might be ascertained from that data.

- f. **Design and Construction** – Metro proposes that it report any modifications to the standards and procedures applied to reviewing proposed roads to be constructed by developers and those applied to Metro road construction projects. This will be performed to demonstrate modifications that are found to be necessary to benefit water quality.

#### 4. **Landfills and Other Waste Treatment, Storage, or Disposal Facilities**

This program element's objective is to minimize the impacts of municipal facilities on storm water quality. This includes the investigation of closed and open municipal landfills and other treatment, storage or disposal facilities for municipal waste, such as transfer stations, maintenance and storage yards for waste transportation fleets, POTWs, and sludge application sites. Metro proposes that this program continue as stipulated in the first permit. In that regard, Metro plans to continue periodic inspections of licensed solid waste haulers of municipal waste in Davidson County. It also plans to continue requiring a signed certification statement from the haulers stipulating that their operations will be conducted in such a way that will not create or contribute to water pollution in Davidson County.

#### 5. **Pesticides, Herbicides, Fertilizers, Oils, and Other Toxic Materials**

This program element's objective is to help ensure that Metro and the public manage pesticides, herbicides, fertilizers, oils, and other toxic materials in an environmentally responsible manner. This is to be accomplished by giving the public reasonable opportunity to dispose of such wastes and educating them on proper use, handling, storage, and disposal practices. Finally, Metro intends to accomplish this objective by evaluating related Metro facilities that use, handle, or store these types of materials.

- a. **Household Hazardous Waste Facility (HHWF)** – Metro proposes to operate a HHWF that will be open to the public at least once per quarter. Metro proposes to reserve the flexibility to operate the facility more frequently than quarterly based on customer usage and seasonal trends.
- b. **Commercial Distributors**– Metro proposes to implement an NPDES-based educational program aimed at commercial distributors of pesticides, herbicides, fertilizers, oils, and other toxic materials. This program will function to bring attention to the water quality impacts created by the retail distribution process of such products and implement measures that would act to lessen those impacts. Reference the PI&E element for additional discussion of this activity.
- c. **Metro Facilities** – Metro proposes that storm water management practices utilized at Metro operated or owned facilities be evaluated. This would include

visiting facilities such as fleet operations and vehicle maintenance that are not discussed in program element 4.

## 6. Illicit Discharges and Improper Disposal

This program element's objective is to detect and facilitate the elimination (or require the discharger to eliminate) of illicit discharges and improper disposal of wastewater or other pollutants into the separate storm sewer system. Metro intends to accomplish this objective by continuing to enforce Metro ordinances and regulations, screening areas with high potential for illicit connections, facilitate the removal of illicit connections, informing the public about what constitutes and how to report illicit discharges, and seeking locations of sanitary sewer seepage.

- a. **Ordinances and Enforcement Measures** – Metro took significant steps in the first permit cycle to enhance local regulatory mechanisms that function to improve water quality. It now intends to take additional steps to more effectively enforce these regulations. This will include a periodic enforcement procedures evaluation and refinement to more effectively apply the ordinances/regulations and policies in an effort to ensure expedited compliance on the part of offenders.
- b. **Dry-weather Field Screening** – Metro made a significant effort in the first permit cycle by field screening some 4,274 sites. After careful evaluation and consideration, Metro is proposing changes to the field screening program for the second permit cycle that will maximize effectiveness and efficiency. The following discussion outlines the proposed dry-weather field screening procedures for the second permit cycle.

Based on the location and type of illicit discharges identified in the first permit cycle, Metro proposes that dry-weather field screening need only be performed in heavy commercial and industrial land use/zoned areas. It should be noted that the field screening effort in areas with land uses other than commercial and industrial land use/zoned areas during the first permit cycle served to identify very few, if any, illicit discharges. NPDES does not view field screening, in these mainly residential areas of the county, as the best use of resources given the fiscal resources required to perform extensive field screening. This is in sharp contrast to issues identified through the screening activities in the heavy commercial and industrial areas, which led to the elimination of numerous significant illicit discharges.

Given this trend, Metro proposes during the second permit cycle that field screening will only be conducted in commercial and industrially zoned areas (¼ mile grid). In order to do this, a new ¼ mile grid will be created from an updated GIS-based land use/zoning data (from Metro Planning Commission) to guide and monitor dry-weather field screening activity just as was done in cycle one of the permit. Metro believes that any needed illicit discharge identifications/reporting in areas other than the heavy commercial and industrial areas can be

accomplished via citizen complaints based on Metro's illicit discharge public education effort (as discussed in element 11A).

Metro intends to schedule and prioritize the dry-weather field screening activities based on the location and types of illicit discharges identified in the first permit cycle. Lastly, Metro plans to update the illicit discharge identification procedures based on NPDES office Best Professional Judgment (BPJ). To more effectively make use of field personnel time, this judgment will include considering illicit locations and types of sources identified.

- c. **Illicit Discharge Investigations** – Metro proposes that the illicit discharge program continue in much the same way it did in the first permit cycle. This includes identifying the sources of the illicit discharges identified in element 6B and educating and/or enforcing measures as appropriate based on the type, size and actual or potential impact from the discharge. Metro intends to report and coordinate these activities with the TDEC-WPC central and/or field office as appropriate.
- d. **Sanitary Sewer Seepage** – Metro intends to periodically evaluate the protocols for reporting potential sanitary sewer seepage into the MS4 or “Waters of the State”. This will be done to determine if there are more effective ways to identify and rectify any sanitary sewer seepage into the storm water system.

## 7. Industrial and High Risk Runoff

This program element's objective is to minimize the impacts of high-risk storm water runoff from industrial facilities and restaurants. This is to be accomplished through inspection of industrial sites, landfill and waste disposal sites, transfer and storage facilities, and working to reduce restaurant storm water/water quality impacts.

- a. **Data Management** – It is important to adequately manage sampling, lab, inspection, and other correspondence data when managing impacts from industrial and other high-risk runoff facilities. Metro proposes that the data management mechanisms it developed in the first permit cycle be routinely maintained and updated to reflect current activities. This includes GIS and database information on the site locations, inspection history, potential facilities to be included, sampling data, correspondence, and enforcement actions.
- b. **Inspections** – Metro proposes that it periodically refine procedures to prioritize sites to be inspected based on SIC code, SARA Title III Section 313 data, and other pertinent information. The intent is to maintain an up-to-date list of facilities that should be evaluated for water quality impacts so that all “current” or “active” facilities can be inspected by the end of the second permit term. Furthermore, Metro plans to periodically train the inspection staff to recognize potential water quality impacts and ensure that staff adheres to new and existing inspection procedures.

- c. **Restaurant Impacts** – Metro proposes that it continue to move forward on this issue through cooperative efforts between various Metro Departments (Health, Codes, Water Services, and Public Works) and other community stakeholders.

## 8. Construction Site Runoff

This program element's objective is to limit the short-term (construction phase) water quality impacts. Metro intends to accomplish this objective by more effectively enforcing ordinances, regulations and policies for site planning, site inspection, and educating local stakeholders about their role in minimizing the water quality impacts.

- a. **Ordinances, Regulations and Guidance** – Metro took significant steps in the first MS4 permit cycle to improve the local regulatory mechanism to improve water quality. It now intends to take steps to more effectively enforce these measures. Metro also intends to periodically make local stakeholders aware of regulations, policies, and guidance materials as explained in the PI&E program element.

The development of a “Stormwater Quality Best Management Practices (BMP) Manual”, as presented in the SWMM Volume 4, was a significant step towards limiting water quality impacts from construction in areas of new development and significant redevelopment. Metro intends to periodically evaluate the document to determine if changes should be made to more effectively explain BMPs, to convey the current state of technologies, or reflect MWS plan review and inspection staff experiences.

- b. **Training** – Metro wishes to avoid sudden changes that drastically slow the grading permit plan preparation, review and inspection process. Metro proposes to help avoid this situation by periodically training the plan review and inspection staff in minor changes to policy. Metro intends to periodically train the grading permit plan reviewers and inspectors on the latest techniques and management practices to address construction phase water quality. This will include lessons learned both locally and from the experiences of municipalities from across the United States. The intent being that grading permit plan review and inspection policy can gradually grow to account for the current state of the technology and reflect MWS plan review and inspection staff experiences.
- c. **Records Management** – Metro recognizes that it is critical that appropriate records be maintained to effectively monitor construction sites for pollutant discharges and that sediment loss/transport is the largest water pollution problem originating from construction sites today. Metro proposes that it maintain and report from the existing Erosion Prevention and Sediment Control (EP&SC) database of inspections and enforcement.
- d. **Plan Review and Inspection Resources** – Metro is committed to maintaining an inspection staff of adequate number and expertise to effectively review proposed grading plans and inspect sites for construction-related water quality



impacts. It proposes to evaluate the number and expertise of the staff required to effectively carry out Metro's responsibilities to limit the water quality impacts from construction sites. Furthermore, Metro will consider a cost-recovery mechanism such as a grading permit plan review fee to help offset the costs of new staff. It is anticipated that the evaluation will determine that more staff are required, but Metro does not wish to commit to any specific increases in personnel or plan review fees until that evaluation has been completed.

- e. **Metro Activities** – Metro is committed to making sure that the same level of effort required by private developers, engineers, and contractors is applied to Metro construction projects with regard to EP&SC. Metro proposes that the NPDES program evaluate procedures applied in different Metro departments to determine if they adequately address the EP&SC standards that are being applied through the grading permit process. Per NPDES policy, the names and locations of any non-Metro-related governmental entities found to be lacking in their EP&SC efforts will be forwarded to the TDEC-Tennessee Division of Water Pollution Control for possible enforcement direction.

## 9. Habitat Improvement

This program element's objective is to make TDEC-WPC aware of habitat improvement activities in the permit area. It should be noted that Metro is committed to habitat improvement activities as demonstrated by recently adopted regulations concerning waterway buffers and several greenways projects reported in the NPDES MS4 annual reports (Section IV-10).

In relation to this item, Metro requests that it receive a written policy statement from TDEC-WPC regarding the policy/procedure by which entities such as Metro can secure, if needed, individual Aquatic Resource Alteration Permits (ARAP) for projects that function to improve habitat. This would include such information as application costs and application review periods.

## 10. Public Information and Education (PI&E)

- a. **Various tasks** – Metro recognizes that PI&E is the most effective means of improving water quality over the long-term. This is accomplished by limiting the potential water quality impacts as citizens become aware of the nonpoint source pollution issues and develop a corresponding sensitivity to the impact each individual's activities create. Over time, this will also increase the probability that people will recognize and "take ownership" of water quality problems and report existing or even potential issues. Metro proposes to perform a series of PI&E tasks through the second permit cycle term. There are seven specific tasks identified in the compliance activities table in appendix 1 and one open-ended activity. Metro proposes a list of seven specific tasks and that at least one of the seven specific (or not yet identified) activities be performed each year of the permit term with all seven specific activities accomplished by the end of the permit term.

- b. **World Wide Web site** – The World Wide Web is rapidly becoming a viable aspect of PI&E programs. Metro recognized and took advantage of this opportunity in the first permit cycle. It proposes to further enhance the MWS NPDES web site to better educate and inform the public about the NPDES program/initiatives and their roles in managing water quality. One specific aspect is the ability for the public to report potential illicit discharges, spills, etc. via the Internet. Metro's aim is to make their NPDES site more dynamic, expansive, useful, and user friendly.

## 11. Reporting

- a. **Compliance Report** – Metro proposes that it continue to report permit activities annually. It intends to submit an expanded version of the compliance activities table in appendix 1 to concisely convey to TDEC the program activities. Metro does not intend to submit comprehensive narratives as have been presented in the first cycle annual reports. Metro feels that this format will facilitate the relating of program activities in sufficient detail for TDEC to adequately confirm permit compliance.
- b. **Propose Third Permit Cycle Activities** – Metro proposes that it prepare a summary table and brief narrative rationale to support its intent for the third permit term activities (July 1, 2008 through June 30, 2013) six months after year four of the second permit term (December 31, 2012).

## E. Cooperation Between TDEC and Metro

Metro and TDEC have some overlapping functions with respect to inspection, monitoring and enforcement of ordinances, regulations, and policies in this ever-evolving area of nonpoint source pollution control. Metro is committed to meeting the NPDES MS4 permit requirements through cooperation on activities common to both organizations. Metro and TDEC have in previous discussions identified some of these overlapping responsibilities during the implementation of the permit's first cycle (1996-2001). Some of the more complicated coordination problems that Metro would like to formally address and resolve relate to:

- a. Industrial Sites

In the first cycle of Metro's NPDES MS4 permit, the industrial inspection site determination criteria required Metro to inspect and monitor industrial sites that had a potential to impact water quality. A large percentage of these sites (mainly those falling under the SARA Title III Section 313 regulations) are already required to maintain a TMSP general NPDES permit through TDEC. In previous discussions between TDEC and Metro on this issue, the problems presented by Metro inspecting sites for compliance on issues covered under a TDEC permit have been considered.

Given this situation, Metro proposes that the previous permit requirements be brought forward into the second permit cycle with the slight revisions, and that the state and Metro -WPC and NPDES staff. NPDES requests that these define a cooperative industrial inspection/monitoring/enforcement policy within the Metro permit coverage area. This policy would allow for establishment of a standard procedure by which specific inspection, monitoring, and enforcement standards and responsibilities are designated between TDEC and NPDES.

b. Construction Sites

In the first cycle NPDES MS4 permit, Metro was required to inspect and monitor construction sites that had the potential to impact water quality in the performance of development activities under Metro's Grading Permit system. Most, if not all, of the larger, more-impacting sites were also required to secure and maintain general construction permit coverage through TDEC. Such sites that are then found at some point to be losing unacceptable amounts of sediment during rain events are technically violating both their State and Metro regulatory requirements. TDEC has additionally contended that such situations may put Metro in violation of its MS4 permit, even though the site is in violation of its TDEC permit also. This entire situation has been clouded further now that construction sites are required to pay TDEC a (in some instances substantial) fee for State permit coverage.

Given this situation, Metro proposes that the previous permit requirements be brought forward into the second permit cycle with the slight modifications described in Sections II and III. However, Metro requests that between July 1, 2001 and December 31, 2001, meetings be held between TDEC-WPC and NPDES staff. NPDES requests that these meetings be used to formulate a cooperative construction site inspection/monitoring/enforcement policy within the Metro permit coverage area. This policy would allow for establishment of a standard procedure by which specific inspection, monitoring, and enforcement standards and responsibilities are designated between TDEC and NPDES for areas in the MS4 and for those sites draining directly into waters of the state.

c. Discharges directly to waters of the state

In the first cycle NPDES MS4 permit, Metro was required to implement program elements to benefit water quality mainly on the basis of issues that impact waters of the state via discharges from areas that are served by the Metro MS4 drainage system. In some situations, the delineation of what is MS4 and what is a waters of the state is not easily discernible. This situation can present jurisdictional/regulatory uncertainty in some cases where Metro is not entirely sure if an issue falls under its jurisdiction (in the MS4) or that of TDEC-WPC (in a waters of the state).

Given this situation, Metro proposes that meetings be held between TDEC-WPC and NPDES staff to clearly delineate what is the MS4, and more importantly what is a waters of the state in terms of specific narrative and geographically defined service areas. This clearly defined understanding would allow for

standard procedures by which specific activities and enforcement responsibilities are designated between TDEC and Metro NPDES for issues found in areas within the MS4 and/or in areas only contributing to waters of the state. This would facilitate more complete and effective program procedures in which all water quality issues would be effectively and efficiently dealt with by TDEC and/or Metro NPDES.

**F. Fiscal Commitment**

Metro has been and remains to be committed not only to meeting, but exceeding, its MS4 NPDES compliance obligations. Toward that end, Metro will continue to fund the NPDES program to the levels achieved during the first permit cycle (reference “Fiscal Analysis” section in body of report). It is anticipated that as the NPDES Program works to develop more advanced public education-oriented initiatives, the “PI&E” obligation of the NPDES program’s annual budget will see a slight increase in funding over the term of the second permit cycle. Annual NPDES budgets, a budget history, any changes in funding sources, or changes in the method of funding will be reported to TDEC per the previous permit requirements.

**VII. SAMPLING AND MONITORING REQUIREMENTS**

This program element’s objective is to implement the following items.

**A. Ambient**

Metro intends to continue the program it developed in the first permit term. This includes sampling at eight or more in-stream locations annually for temperature, pH, TKN, BOD5, COD, Lead, Nickel, Zinc, Chromium, Copper, total dissolved solids, fecal coliform, E-coli, enterocococcus, total suspended solids, total nitrogen, nitrate and nitrite nitrogen, total ammonia, total phosphorus, and dissolved phosphorus.

**B. Wet-Weather**

Metro proposes to modify the wet weather sampling program for the second cycle of the permit based on personnel safety, minimal numbers of qualifying rain events (especially during the summer months), and sampling equipment operation and maintenance cost and operation issues. Employee safety during nighttime sampling has effectively precluded staff from being able to collect nighttime samples.

Two main issues indicate that the benefit of the present program is not worth the cost:

- A significant amount of time and resources in sampling events that are eventually identified as non-qualifying events (rain duration or amount does not meet “qualifying rain event” criteria). The “flashy” rainfall weather patterns that occur in the Nashville/Davidson County area, which include quick-forming, short-duration thunderstorms, often make it difficult to be reasonably sure that an event is going to be “qualifying.” This usually

happens in the period from late spring to early fall, leaving very few wet weather sampling opportunities for Metro staff to safely collect seasonally distributed wet weather samples.

- Operation and maintenance costs associated with the sampling equipment are high; some specific sampling equipment losses incurred over the last four years include the loss of three flow measurement probes (that allow MWS NPDES staff to calculate flow-weighted composite samples) at the approximate replacement cost of \$1500 each. Given site observations, it is our belief that floating debris, such as tree limbs, is ripping the flow probes from their streambed anchors. NPDES has exhaustively researched alternative ways of installing/affixing these probes to no avail.

Considering the aforementioned issues, Metro would like to propose reducing the required number of wet weather sampling events at each of our three wet weather sampling locations from five events per year to two events per year. The samples would preferentially be taken during the spring and again during the fall.

Metro's observations over the past four years indicate that those seasonal periods are the best times to acquire good storm water runoff data (occurrence of rain events that are at least 0.1" and are of a duration of at least three hours). Metro would also like to propose a sampling procedure change that would eliminate the use of flow measurement probes for our wet weather sampling (and therefore flow-weighted composite samples). This proposed change would include one of the two following options; take a grab sample once a qualifying rain event is measured (as defined by receiving at least 0.1 inch of rainfall), or take a three-hour time-weighted composite sample beginning once a qualifying rain event is measured. Either of these methods would serve to provide continuing wet weather background data that could be used as a point of reference for our Ambient and Bioassessment sampling data (that we do not propose to change from the first permit cycle). From a program standpoint, this change in our wet weather sampling regime would also serve to "save" Metro staff time and program finances that could be utilized in more beneficial Metro NPDES program initiatives.

### **C. Industrial**

It is Metro's opinion that the industrial monitoring requirements in the first permit cycle did not result in any significant water quality benefits that could not have been achieved via compliance actions resulting from site inspections. Metro proposes that the industrial wet weather sampling requirements of the first permit term be removed in the next permit cycle. Metro does plan to continue wet weather sampling at industrial facilities where site inspections conclude water quality is impacted by site runoff. This proposal is intended to focus limited fiscal resources toward sampling data that is more likely to contribute to Metro efforts that benefit water quality. Metro also proposes that it work closely with TDEC to facilitate more complete TMSP facility submittals to Metro NPDES (as stipulated in the TMSP for sites in applicable areas), which should include each site's wet weather sampling data.

**D. Bioassessment**

Metro proposes a more robust bioassessment program. It intends to annually perform bioassessments at the one reference site and two sampling sites established in the first permit cycle. It plans to expand the program by refining and performing "quick bioassessment" procedures, which are a less intensive screening than the "full" bioassessment procedures, but are robust enough to provide valuable analytical data in association with other NPDES permit activities such as field inspections, screenings, and various sampling activities.

**E. Loadings Estimates**

Metro intends to report any changes in the Event Mean Concentrations and loadings estimates developed in the first permit term. This will be accompanied by estimates of runoff volume from the permit area at the end of permit year five (or reported as deemed appropriate).

**VIII. ASSESSMENT OF CONTROLS**

**A. Need for assessments**

The division believes an MS4 city needs to assess the effectiveness of its storm water quality management program for a number of reasons. These assessments serve many purposes such as:

- a step in determining whether the most cost effective best management practices are included in the storm water management program;
- a means to ensure the operator of the MS4 is accountable to the public and other users of the MS4;
- to assist in designing on going monitoring, inspection and surveillance programs that help refine estimates of program effectiveness;
- a baseline and ongoing measuring stick of the progress of the program; and
- in developing a strategy to evaluate progress toward achieving water quality goals.

**B. Definition of assessments**

EPA's Part 2 Guidance Manual states: "For some components of a proposed management program, such as structural controls (e.g., vegetative streambank stabilization, sediment pond or basin, etc.), the effect on pollution in storm water runoff is observable, and pollutant removal efficiencies can be estimated directly. For other components, pollutant reductions may be difficult to quantify. Applicants may need to use indirect estimates. For example, a program component may address source controls such as changing the behavior of citizen in the community, or improving the municipal control of industrial or commercial runoff." So there are direct measurements of program effectiveness and indirect measurements.

Examples of some direct measurements:

- expected pollutant load reductions (part 2 application)
- removal efficiencies of BMPs
- reductions in the volume of storm water discharged
- reductions in event mean concentrations

Examples of indirect measurements:

- gallons of used oil recycled
- amount of household hazardous waste collected
- number of education brochures distributed
- number of reports of illicit discharges or illegal dumping
- number of construction and erosion and sediment control plans submitted and approved

**C. Division's proposed permit conditions**

The division will require an assessment of controls in the permit, primarily by reiterating the federal regulations concerning the annual reporting requirements, which include the requirement for reporting on assessments. These are the same provisions as in the present permit.

**IX. NEW PERMIT LIMITS AND CONDITIONS**

The body of the permit contains a list of the proposed activities, as described above, and the schedule of implementation.

**X. PUBLIC NOTICE AND OPPORTUNITY FOR COMMENT**

The Division of Water Pollution Control proposes to issue this permit with the described effluent limitations, monitoring and reporting requirements and standard conditions. These conditions are tentative and open to comment. Interested persons are invited to submit comments for consideration.

Comments should be submitted to the following address:

Division of Water Pollution Control  
ATTN: Robert L. Haley, III  
6th Floor, L & C Annex  
401 Church Street  
Nashville, Tennessee 37243-1534

And/or by e-mail to [robert.haley@state.tn.us](mailto:robert.haley@state.tn.us).