

# Metropolitan Nashville and Davidson County

MS4 NPDES  
Permit No. TNS068047

Annual Report  
Permit Cycle 2, Year 6

November 2009





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## **1.0 Introduction**

Metropolitan Nashville Davidson County (Metro) was issued the second cycle of the Municipal Separate Storm Sewer System (MS4) permit in July of 2003. The permit extended for a term of 5 years, thus expiring in July of 2008. Since expiration of the permit, Metro has initiated conversations with Tennessee Department of Environment and Conservation (TDEC) personnel to discuss reissuance of the MS4 permit and to determine what permit compliance activities should be undertaken during the transition period between permit expiration and reissuance. It was determined that Metro would continue to perform all of the permit items listed as ongoing or annual in the permit compliance schedule. In addition, it was discussed that Metro would at least initiate permit compliance activities such as field screening and industrial inspection, which were specifically scheduled to be completed in certain permit years of the MS4 permit.

For reporting purposes, the year following permit expiration is referred to as Permit Year (PY) 6 in the annual report. For purposes of this document, PY6 is the same timeframe as Fiscal Year (FY) 09.

### **Metro's Permit Compliance Approach**

Each year, there are numerous individuals and departments that work toward achieving overall MS4 Permit compliance. As a measure to ensure permit compliance within the various facets of Metro, the National Pollutant Discharge Elimination System (NPDES) Section was created to oversee all permit compliance activities. The NPDES Section, within the Metro Water Services (MWS) Stormwater Division, is responsible for not only performing specific permit requirements such as illicit discharge investigations, sampling, construction site inspections, etc. but is also responsible for coordinating with various other Metro departments to ensure permit compliance measures are being followed Metro-wide.

The following table is a list of individuals that contributed to specific permit compliance activities/information during PY6. For any questions regarding information represented in this report, all inquiries should be directed to the MWS NPDES Section at 1607 County Hospital Road, Nashville, Tennessee, 37218, Phone: 615-880-2420, Fax: 615-880-2425.



**Table 1 - Contact List**

<b>Name</b>	<b>Agency</b>	<b>Position/Responsibility</b>
Scott Potter	Metro Water Services	Director
John Kennedy	Metro Water Services	Assistant Director
Sonia Harvat	Metro Water Services	Public Information Officer
Tom Palko	Metro Water Services	Assistant Director, Stormwater Division
Ricky Swift	Metro Water Services	Program Manager, Stormwater Remedial Maintenance Section
Roger Lindsey	Metro Water Services	Program Manager, Stormwater Development Review and Permitting
Angela Foster	Metro Water Services	Engineer, Stormwater Development Review and Permitting
Kimberly Moore	Metro Water Services	Engineer, Stormwater Codes
Jennifer Hill	Metro Water Services	Administration Service Manager, Stormwater Maintenance Division
Michael Hunt	Metro Water Services	Program Manager, Stormwater NPDES Section
Bonnye Holt	Metro Water Services	Office Support Representative, Stormwater NPDES Section
Dale Binder	Metro Water Services	Construction Inspection Manager , Stormwater NPDES Section
Harold Bryant	Metro Water Services	Construction Site Inspector, Stormwater NPDES Section
Shawn Herman	Metro Water Services	Construction Site Inspector, Stormwater NPDES Section
Katherine O'Hara	Metro Water Services	Construction Site Inspector, Stormwater NPDES Section
Denice Johns	Metro Water Services	Construction Site Inspector, Stormwater NPDES Section
Dr. Steve Winesett	Metro Water Services	Watershed Manager, Stormwater NPDES Section
Megan Sitzler	Metro Water Services	Water Quality Inspector, Stormwater NPDES Section
Michelle Barbero	Metro Water Services	Water Quality Inspector, Stormwater NPDES Section
Rebecca Dohn	Metro Water Services	Water Quality Inspector, Stormwater NPDES Section
Josh Hayes	Metro Water Services	Water Quality Inspector, Stormwater NPDES Section
Mary Garmon	Metro Water Services	Water Quality Inspector, Stormwater NPDES Section
Mark Macy	Department of Public Works	Assistant Director - Engineering Division
David Himes	Department of Public Works	Assistant Director - Operations Division
Donna Ryman	Department of Public Works	Solid Waste Division
Clayton Hand	Department of Public Works	Engineer, Solid Waste Division
Mike Ryman	Department of Public Works	Technician Specialist Hazardous Materials Spill Response
Sonny West	Codes Department	Zoning Administrator
Joey Hargis	Codes Department	Zoning Administrator
Anita McCaig	Metro Planning Department	Planner
Spencer Hissam	Metro Public Health Department	Septic System Oversight
Steve Crosier	Metro Public Health Department	Restaurant Inspection
Greg Ballard	Metro Water Services	Overflow Abatement Program Manager
Jim Paulus	Metro Water Services	System Services Overflow Response Program Manager
Bob Parrish	Metro Parks Department	Parks and Recreation Superintendent
Melissa Phillips	Mayor's Office of Emergency Management	Spill Response Coordinator
Bill Malcolm	Metro Office of Fleet Management	Fleet Services Manager
Hugh Garrison	Metro Water Services	Pretreatment Program Manager
Anna Kuoppamaki	Metro Water Services	GIS Analyst, Stormwater NPDES Office



The following list is a description of commonly used acronyms throughout the document:

BMP	Best Management Practice
DRP	Development Review & Permitting
EMC	Event Mean Concentration
EPA	Environmental Protection Agency
EPSC	Erosion Protection and Sediment Control
FOG	Fats, Oils, and Grease
GIS	Geographic Information System software
GP	Grading Permit
HHW	Household Hazardous Waste
LID	Low Impact Development
MDPW	Metro Department of Public Works
MHD	Metro Health Department
MS4	Municipal Separate Storm Sewer System
MWS	Metro Water Services
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
OEM	Mayor's Office of Emergency Management
PIO	Public Information Officer
PY	Permit Year
ReM	Stormwater Remedial Maintenance Section
RoM	Stormwater Routine Maintenance Section
SSD	System Services Division
SWAC	Stormwater Advisory Committee
SWMP	Stormwater Management Plan
SWO	Stop Work Order
TDEC	Tennessee Department of Environment and Conservation
TMSP	Tennessee Multi Sector Permit for Industrial Stormwater Discharges
TWRA	Tennessee Wildlife Resource Agency
USACOE	U.S. Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
WMD	Waste Management Division



## 2.0 Stormwater Management Program Evaluation

### 2.1 Objective of the Program

The objective of the Stormwater Management Program is to implement specific pollution prevention programs designed to improve the quality of Davidson County’s 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 of impaired streams, whereby, each stream will be ultimately removed from this list. During the first two MS4 permit cycles, Metro implemented major programs to target the various sources of Stormwater pollution (i.e. construction sites, industrial sites, commercial sites, residential sites, etc.). Overall, the implementation of these programs have worked to reduce and minimize pollutants from entering streams from the MS4 drainage system.

### 2.2 Major Findings

Each year the number of major discoveries of pollution to the MS4 drainage system has been dramatically reduced through implementation of the core pollution prevention programs described further in this document. Some of the more notable findings impacting water quality of Davidson County streams during PY6 are described in the following paragraphs:

#### 2.2.1 Illicit Industrial Connection to the MS4

While working on a tip from an anonymous caller, MWS discovered that a building located within Nashville had illegally routed boiler blow-down water to Metro’s MS4. (See Figure 2.2.1) Upon testing the water, MWS determined that the blow-down water represented a threat to water quality as it was high in conductivity, nutrients, and pH. MWS was able to work with the facility to pursue the approvals necessary to re-direct the boiler blow-down water to the sanitary sewer.



Figure 2.2.1 Photos of Boiler Blow-down Water Routing to Storm Drain after Dye Trace



### **2.2.2 Illicit Discharge Found During by the Thermograph Study**

In performing a follow-up field investigation of an anomaly identified during a thermograph flight (using infrared photography), the NPDES Watershed Group found an illicit discharge of sewage material into Sugartree Creek. (See Figure 2.2.2) The discharge was traced to a broken private service line at an apartment complex. NPDES immediately contacted the apartment complex manager and issued them a Notice of Violation (NOV) and monetary penalty requiring them to stop the illicit discharge and remediate the discharged material into the creek. Work was completed and the discharge to the creek was stopped.



**Figure 2.2.2 Photo of the Illicit Discharge**

### **2.2.3 Industrial Illicit Discharge Found During Normal Sampling Activities**

In performing normal field sampling activities the NPDES Watershed Group found an orange substance discharging into a small tributary to Browns Creek. Upon further investigation, NPDES determined that a private sanitary sewer line that receives processed water from an industrial facility was leaking into a nearby storm drain that eventually routes to the Browns Creek tributary. NPDES coordinated with the industrial facility and the situation was corrected immediately.



**Figure 2.2.3 Photos of the Illicit Discharge Before and After Corrective Actions were Implemented**



### **2.2.4 Construction Illicit Discharge Found During Routine Inspection**

During one of the NPDES Section’s routine inspections of grading permitted sites in PY6, an illicit discharge of sediment was discovered. NPDES issued a Notice of Violation with a monetary penalty assessment to the owner of the permitted site. Site EPSC measures were subsequently repaired so as to prevent further loss of sediment from the site. This is just one example of an illicit discharge of sediment found during routine construction site inspections.



**Figure 2.2.4 Photos of the Illicit Discharge from Grading Permit Site**

### **2.3 Major Stormwater Management Program Accomplishments**

MWS has continued to facilitate major accomplishments in the continuing development of the overall Stormwater Management Program. Particular accomplishments performed in PY6 are listed below:

1. In PY6, a dedicated funding source in the form of a Stormwater User Fee was passed by Metro Council, which became effective on July 1, 2009. The stormwater user fee will be assessed on all residential and non-residential properties within Metro. The user fee revenue is dedicated to funding the operations of the MWS Stormwater Division, which will include certain stormwater maintenance activities, engineering activities, and water quality programs. The fee amount for each property is based on the amount of imperviousness. In preparation of the fee implementation, thousands of letters were mailed out to customers in the Spring of 2009 that explained the fee structure and billing process. More information on the stormwater fee can be found at the Clean Water Infrastructure Program Website: [http://www.nashville.gov/water/cwip/stormwater\\_fee.asp](http://www.nashville.gov/water/cwip/stormwater_fee.asp)
2. In an effort to more efficiently and effectively document construction site inspections, the NPDES Department purchased rugged field laptops with wireless cellular access to Metro servers. Prior to purchasing the laptops, inspectors would fill out an inspection form (paper copy) in the field and upon returning to the office would enter the inspection findings into the Metro-wide KIVA database. With the new laptops, the inspectors will now enter inspection findings directly into the KIVA database while in the field, which will eliminate paper waste and make inspection documentation a much more efficient process.
3. During PY6, the MWS Director approved the purchase of equipment necessary to perform source tracking of bacteria collected from pathogen impaired streams around the county. The NPDES Watershed Group, under the direction of Dr. Steve Winesett, will use the equipment to generate host-specific deoxyribonucleic acid (DNA) fingerprints using the polymerase chain reaction (PCR) amplification process. Through use of the PCR analysis, it is MWS’ goal to determine the source



inputs (animal or human) of the bacteria so that targeted pollution prevention programs can be implemented on a watershed basis. The PCR laboratory is expected to be in operation in the first quarter of Permit Year 7.

## 2.4 Enforcement Documentation

Enforcement documentation is an important component of the overall Stormwater Management Program. MWS has a comprehensive enforcement program that includes the issuance of Notices of Violations (NOVs), Stop Work Orders (SWOs), and administrative penalties. MWS also reserves the right to take noncompliant sites to environmental court if NOVs and SWOs fail to bring a site into compliance or are not appropriate for a particular situation. During PY6, Metro issued 150 NOVs, 38 SWOs, and attended 9 Environmental Court proceedings.

## 2.5 Overall Program Strengths

Understanding the strengths and weaknesses is necessary in maintaining a successful Stormwater Management Program. When strengths and weaknesses are identified, strong points can be featured as the program foundation and weaknesses can be addressed and improved upon each permit year.

One obvious strength of Metro's NPDES Program is the ongoing commitment from the Mayor and the MWS Director to not only meet the minimum requirements of the MS4 permit, but to also improve Metro waterways for future generations. This is demonstrated by MWS' efforts to make the NPDES program activities known throughout Metro and to deploy whatever resources are necessary to identify and eliminate sources of pollution to the community waters. This continues to result in cross-departmental cooperation in the protection and improvement of stormwater quality. Interdepartmental communication within Metro concerning stormwater issues has increased each year of the NPDES Program's existence.

## 2.6 Overall Program Weaknesses

MWS consistently prioritizes and examines how to best achieve both our permit objectives and community benefits. The stormwater quality program continues to make necessary changes and improvements to benefit Metro Nashville/Davidson County. However, in the current state of our program, some areas of weakness do exist. The NPDES Office has identified the following items as areas in which improvements can be made:

Currently, as described in the MS4 permit, Metro is required to inspect industrial facilities classified as: municipal landfills, hazardous waste treatment, storage and disposal facilities, industries under SARA Title III, Section 313, and facilities that MWS determines to be substantial loaders to the MS4. These categories only represent a fraction of the more than 150 Tennessee Multi-Sector Permitted (TMSP) industrial sites within Davidson County. The NPDES Section has found that many of the SARA Title III, Section 313 sites have "no-exposure certification" with virtually no potential for contaminated stormwater runoff, while other sites not within the above-mentioned categories actually pose a greater threat to discharging contaminated stormwater. The NPDES Section is currently pursuing other avenues with TDEC for the next permit cycle that will allow the NPDES Section to refine the industrial inspection program to focus more on sites with industrial processes and related pollutants being exposed to stormwater and would also give NPDES enhanced legal ability to require inspected sites to perform compliance measures.

MWS Stormwater's long-term plan is to employ an inspector dedicated to inspecting best management practices (BMPs) such as detention ponds, underground water quality units, etc. As it currently stands, MWS only has the resources necessary to inspect a percentage of the BMPs installed around the county. BMP inspections have been prioritized to look at the underground water quality structures first, as those have been determined to have the highest amount of maintenance issues. MWS Stormwater is also working to create a



better system to map BMPs installed around the county and track their maintenance status. The pollutant loading estimates performed at the end of PY5 and PY6 could not factor in the pollutant reduction values of the various BMPs as accurate mapping of sites per watershed were not available. MWS is working to improve the BMP mapping/maintenance database so as future pollutant loading estimates can factor in stormwater BMPs.

In addition to the lack of quality BMP data, the NPDES wet weather sampling program data has not proven to be particularly usable in calculating Event Mean Concentrations (EMC) for the pollutant loading estimates. NPDES will be working to change the wet weather sampling program to hopefully yield results that can be statistically analyzed to determine EMC values for future loading estimates, which are representative of specific land use types.

## **2.7 Future Direction Of The Program**

The MWS Stormwater NPDES Section continues to define its role in the governmental/regulatory community of Metro Nashville. Communication between governmental agencies has greatly improved and water quality partnerships have been established with other Metro Departments, such as Parks/Greenways and Schools. Open and direct communication is key to these partnerships and to the improvement of stormwater quality in the future. Metro envisions future oversight and educational programs being implemented that will further enhance the community's awareness (public and private) of Stormwater issues so that long-term behavioral changes will occur that benefit water quality in and around the Nashville community.



### 3.0 Overall Permit Compliance Summary

The following table lists the specific permit requirements, compliance schedule, and Metro’s approach to achieving overall permit compliance. Much of the supporting information for each permit requirement can be found in Appendix A or Appendix B.

**Table 2 - Overall Permit Compliance Summary Table**

Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
<b>1. Structural Storm Water Controls and Collection Systems</b>						
<b>A</b>	<b>Update storm water inventory Geographic Information System (GIS)</b>					
	For areas of new development	Ongoing – up to date by end of PY 4 (July 1, 2007)	MWS	Anna Kuoppamaki	MWS Stormwater staff enters MS4 changes/additions performed by areas of development and significant redevelopment based on digitization of approved grading plans. MWS Stormwater hired a contractor to assist in performing updates on a backlog of grading permit plans. It is Stormwater’s goal to, once the contractor project is completed, update GIS within a 6 month period of each project completion.	In PY6, the consultant completed GIS updates to approximately 25% of the backlogged 300 plus grading plans. The updates of the backlogged plans is expected to be completed in PY7.
	For areas of significant redevelopment		MWS	Anna Kuoppamaki		
	For Metro construction projects		MWS & MDPW	Anna Kuoppamaki	Many large Metro Construction projects obtain Grading Permits, in which updates to the MS4 will be depicted on the Grading Plans. For other Metro Projects that alter MS4 infrastructure, NPDES is working on processes to ensure updates are properly submitted to the GIS database editor.	
	For newly created MS4 areas per Metro Water Services records on CSS separations		MWS	Anna Kuoppamaki	MWS hired a consultant to perform field collection of the areas surrounding the Combined Sewer System (CSS) for which the boundary has been refined since the MS4/CSS initial inventory was completed in 1997-2000.	



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
<b>B</b>	<b>Existing System Maintenance</b>					
	As identified by complaints	Ongoing	MWS	Jennifer Hill	MWS Stormwater RoM utilizes Cityworks as a service request/work order tracking database to track all routine maintenance projects. All service request/invoice records are available upon request.	<b>Table 1-B.1</b> (Routine Maintenance PY6 Projects)
	As identified through NPDES MS4 activities		MWS	Michael Hunt	When MWS NPDES inspectors encounter areas that need critical maintenance, issues are forwarded to RoM.	
	Focused on public infrastructure and private infrastructure that directly and significantly impacts public infrastructure as determined by the MWS		MWS	Ricky Swift	MWS Stormwater ReM investigates, prioritizes, and eventually designs and oversees large drainage system rehabilitation projects that sometime involve work on private property.	
<b>C</b>	<b>Inspections</b>					
	Dry Creek detention facility	1/quarter	MWS	Jennifer Hill	MWS RoM performs inspections and necessary maintenance. All inspection and maintenance work is tracked in the Cityworks database.	<b>Table 1-C.1</b> (Dry Creek Inspection/Maintenance)
	Any other identified Metro-operated facilities		MWS	Jennifer Hill	MWS RoM performs inspections/maintenance on the canal system and pump at Metro Center, which primarily functions as a flood control structure, but inadvertently functions as a wet detention pond.	All other inspection and maintenance records are available upon request.



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
<b>Training</b>						
D	Key inspection and maintenance staff in MWS and other Metro departments	PY 2 and 4	MWS	Michael Hunt	MWS NPDES has given numerous presentations to key maintenance staff on water quality issues. NPDES has purchased a video produced by Excal Visual, titled: "Municipal Storm Water Pollution Prevention". The video is geared toward training municipal employees on maintenance issues and water quality.	In PY6 NPDES showed video and gave specific presentations to Stormwater RoM staff. NPDES also shared the video to Central Waste Water Treatment Plant personnel.
	Cross-train key inspection and maintenance staff in water quality issues		MWS	Michael Hunt		
	Train inspection / maintenance staff about changes in process and/or procedure		MWS	Michael Hunt		
<b>Maintenance Procedures</b>						
E	Review for changes that will benefit water quality	PY 2 and 4	MWS	Michael Hunt	MWS NPDES works with other Metro departments on a routine basis to avoid/minimize water quality impacts from municipal maintenance activities.	In PY6 NPDES staff inspected some ditch stabilization projects to ensure proper stabilization techniques were being utilized.
<b>Housekeeping Programs</b>						
F	Solid waste disposal	Ongoing	MDPW	Donna Ryman	Metro Department of Public Works, Waste Management Division (MDPW-WMD) oversees all solid waste disposal activities in the county.	Table 1-F.1 (Solid Waste Disposal Numbers)
	Litter control		MDPW	Donna Ryman	MDPW-WMD publishes educational materials explaining the impacts of illegal dumping and litter. MDPW-WMD actively inspects and enforces on illegal dump sites.	
	Leaf collection		MDPW	Donna Ryman	MDPW-WMD collects residential leaves/brush at certain times of the year. <a href="http://www.nashville.gov/recycle/brush.htm">http://www.nashville.gov/recycle/brush.htm</a>	



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
F	Public Information (per PI&E element)		MDPW	Donna Ryman	MDPW-WMD distributes various public information materials regarding proper solid waste disposal. MWS NPDES also distributes public education materials that discuss illegal dumping and disposal.	Public information materials are available upon request. Also, refer to previous annual reports and the Metro Public Works website: <a href="http://www.nashville.gov/pw/">http://www.nashville.gov/pw/</a>
G	<b>Storm water detention / retention facilities</b>					
	Develop detailed electronic information using existing GIS-based databases	PY 2	MWS	Rebecca Dohn	MWS-NPDES tracks BMP inspections through an internal database and is in the process of transitioning toward the city-wide KIVA database and mapping all BMP locations via GIS.	<b>Table 1-G.1</b> (Summary of BMP Inspection Status)
	Develop system to update database on an ongoing basis given new development, inspections, or other available data		MWS	Rebecca Dohn	MWS-NPDES performs routine updates to the database, based on new development and redevelopment.	
	Evaluate the need and feasibility for long-term, post-construction, private detention/retention facility inspection to help ensure proper maintenance procedures		MWS	Rebecca Dohn	MWS-NPDES has deemed it necessary to continue inspections/enforcement of privately-owned BMPs. Long-term plans include employing a dedicated BMP inspector.	
	Public Information (per PI&E element)		MWS	Rebecca Dohn	MWS-NPDES sent out numerous educational flyers in the past and continues to educate individual sites during inspections and follow-up correspondence.	



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
<b>2. New Development and Significant Redevelopment</b>						
A	<b>Ordinances, Regulations and Guidance</b>					
	Enforce existing ordinances and regulations intended to limit long-term water quality impacts from new construction and significant redevelopment	Ongoing	MWS	Michael Hunt	Metro has comprehensive stormwater management ordinances in place. The MWS-NPDES Section enforces the majority of stormwater code violations.	<b>Table 2-A.1</b> (Program Enforcement Summary) <b>Table 2-A.2</b> (Monetary Penalty Assessments)
	Evaluate 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	PY 2 and 5	MWS	Michael Hunt	MWS Stormwater has performed numerous revisions to the Stormwater Management Manual, which is updated periodically to reflect changing technology and regulations.	Latest Stormwater Regulations available at the following website: <a href="http://www.nashville.gov/stormwater/regs/index.asp">http://www.nashville.gov/stormwater/regs/index.asp</a>
Public Education (per PI&E element)	Ongoing	MWS	Michael Hunt	MWS-NPDES and the Development Review and Permitting have conducted numerous meetings with stakeholder groups on stormwater regulations. MWS stormwater implemented the Stormwater Advisory Council (SWAC), which meets periodically with the development community to discuss stormwater issues.	There were 4 SWAC Meetings held in PY6.	



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
<b>B</b>	<b>Best Management Practices (BMPs)</b>					
	Report any BMP monitoring data collected by/for Metro	Annually	MWS	Rebecca Dohn	MWS-NPDES has not performed any BMP monitoring in recent years. MWS continues to review BMP monitoring data submitted by manufacturers seeking approval for use of their proprietary stormwater quality units in Metro Nashville.	In PY6, Metro continued to pursue the redevelopment of the Green Hills Library grounds that includes retrofitting an existing water quantity basin into a water quality treatment basin that will also contain an educational component. Engineering design is expected to begin in PY7. The NPDES Section has also been working with the Cumberland River Compact to administer the Supplemental Environmental Program with goals of facilitating the planting of 10,000 trees and the installation of 300 rain gardens.
	Report regional facility considerations/activity by/for Metro		MWS	Michael Hunt	Metro has not identified any potential regional BMPs deemed feasible to install.	
	Report BMP retrofitting considerations/activity by/for Metro		MWS	Rebecca Dohn	MWS-NPDES promotes retro-fitting BMPs to other departments and has worked with other departments on potential retrofits.	
<b>C</b>	<b>Master Planning</b>					
	Water quality issues report to Planning Commission	PY 2	MWS	Michael Hunt	Nashville's Planning Department focuses on sustainable development as described in the Community Character Manual, encouraging sustainable development and preservation in the County's fourteen community plans that guide future land use and infrastructure decisions. A foundation of the Community Character Manual is the commitment to create sustainable communities through sustainable development. Key components of the Manual's Guiding Principles include actions to address site location, avoiding sensitive environmental features, which benefits the community by protecting water quality and reducing the impact of development on surrounding infrastructure and the community through the use of best practices in stormwater and wastewater management. In addition, the Community Character Manual includes objectives of the EPA and Metro Nashville's Stormwater Management Program, such as encouraging green infrastructure, minimizing and/or recovering floodplain loss, and retaining natural stream buffers.	In the recent community plan updates for Madison and West Nashville, special land use policies have been included to address conservation of environmentally sensitive features and stormwater management, including Low Impact Development techniques. Another example is a special policy for a developed site along Richland Creek that allows additional intensity for redevelopment if the adjacent floodplain is reclaimed and treated as an amenity for the new development. The Planning Department has also worked with Metro Stormwater to develop the Rural Hill-Moss Road Detailed Design Plan, which incorporates Low Impact Development techniques that include a comprehensive open space network that provides recreation, transportation, and stormwater management for the community.



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
C	Report water quality evaluations performed as part of new water quantity master planning efforts	PY 2 and 5	MWS	Michael Hunt	<p>In 2006, MWS began to initiate watershed specific monitoring programs for the purpose of developing targeted pollution prevention strategies for each watershed. The goal of the program is to improve specific impaired reaches of streams to the point they could be considered for de-listing from the 303(d) list of impaired streams. Watershed-specific monitoring programs include such activities as thermograph investigations, stream walks, the TMDL sampling program, etc. The focus of the initial monitoring programs were on bacterial inputs to the streams. Future monitoring will take into account other impairments such as sediment, nutrients, etc. All data collected in the past couple of years will be analyzed and incorporated in future master planning efforts such as large sanitary sewer rehabilitation projects.</p>	Table 2-C.1 (Watershed Monitoring Programs)
	Report regional water quality practices evaluations performed in any master planning activities		MWS			
	Report watershed prioritization changes		MWS			
	Report water quality master planning performed per prioritized watersheds as fiscal resources allow	PY 2	MWS	Steve Winesett		
D	<b>Training</b>					
	Educate “Grading Permit” plan reviewers and site inspectors on latest techniques and management practices to address long-term water quality, lessons learned, etc.	Annually	MWS	Michael Hunt/Roger Lindsey	All construction site inspectors within the stormwater group are required to attend the Level I Erosion Control Workshop sponsored by TDEC. MWS Stormwater plan review engineers also attend various training classes throughout the year that include the latest technologies in stormwater management.	Training records are available upon request



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
<b>3. Roadways</b>						
<b>Catch Basin Cleaning</b>						
A	Develop program to prioritize catch basin cleaning activities	PY 1	MWS	Jennifer Hill	The MWS Stormwater RoM section performs catch basin cleaning prioritized by severity of complaint. RoM also have identified certain catch basins that frequently need cleaning and do perform routine maintenance on those catch basins.	<b>Table 1-B.1</b> (Routine Maintenance Numbers)
	Report and record location/area, number, and amount of material removed	Annually	MWS	Jennifer Hill	The MWS RoM section documents all catch basin cleaning work through the Cityworks work management program.	In mid-year FY08 (PY5), a change was implemented in the reporting mechanism for RoM projects. Reporting is now based on the number of projects performed. For example, one inlet maintenance project may include numerous inlets being cleaned on the same street. RoM is looking into options within the currently utilized Cityworks database to keep track of the number of catch basins cleaned and amount of material removed.
<b>Downtown Street Sweeping</b>						
B	Urban Services District	Ongoing	MDPW/ReM	David Himes/Ricky Swift	All street sweeping services performed prior to July 1, 2009 were managed by the MDPW. As of July 1st, all contracted-out portions of street sweeping services will be managed by the MWS Stormwater ReM Section, while Public Works will continue to manage all internal street sweeping trucks. All material collected during the street sweeping activities is taken to landfills for proper disposal and quantities of material removed will be tracked.	<b>Table 3-B.1</b> (PY6 Street Sweeping)



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
C	<b>Deicing Chemicals</b>					
	Evaluate Metro application and storage practices	PY 1 and 3	MDPW	David Himes	MWS NPDES routinely monitors salt bin storage facilities and reports any stormwater runoff issues to MDPW. MDPW has implemented technology including automated pavement temperature recordings and spreader control systems that minimize the applied amounts of deicing chemicals.	<b>Table 3-C.1</b> (Deicing Practices)
	Report any modifications in practices		MDPW	David Himes	Any modifications are reported in the annual report.	No Modifications during PY6
D	<b>Herbicides, pesticides and fertilizers</b>					
	Evaluate Metro application and storage practices	PY 1 and 3	MWS	Michael Hunt	MWS-NPDES has coordinated with all pertinent maintenance departments on the proper application and storage of herbicides, pesticides, and fertilizers. NPDES has identified locations where Metro stores such chemicals and has inspected the sites. NPDES will continue to monitor the sites as needed, but is in the process of developing a county-wide Stormwater Management Plan (SWMP) in which each maintenance facility would keep on-site with specific instructions on application/storage of such chemicals.	Refer to the Annual Report for PY5
E	<b>Spills</b>					
	Report Emergency Management Plan modifications	Annually	MWS/OEM/M DPW	Michael Hunt	The Metro Office of Emergency Management (OEM) oversees all emergency response activities. Any changes in policy will be documented in annual reports.	The Metro-Wide Emergency Management Plan was last updated in 2008.



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
E	Report location of spills and any trend analyses		MWS/OEM/MDPW	Michael Hunt	All roadway spills that involve potential runoff impacts are reported to NPDES by OEM. NPDES documents all spills rising to the level of notification and documents remediation responses and water quality impacts in the Cityworks database. The MDPW Hazmat crews respond to wrecks on local road right-of-way that involve clean-up of fluids or other potentially hazardous material.	<p><b>Table 3-E.1</b> (Summary of OEM Spill Calls in PY6)  <b>Table 3-E.2</b> (Summary of Public Works Hazmat Response Spill Calls in PY6)  <b>Table 3-E.3</b> (Summary of NDES Spill Calls in PY6)</p>
<b>Design and Construction</b>						
F	Report modifications to standards and procedures that impact water quality	Each compliance report	MDPW/ MWS	Mark Macy	NPDES has coordinated with MDPW to promote use of Low Impact Design (LID) such as infiltration ditches, bottomless culverts, etc. NPDES will continue this practice and will report any future modifications in annual report submittals.	In PY6, much work was performed on the Green Infrastructure Master plan, which will identify potential BMPs to be installed within the Combined Sewer System (CSS) basin for purposes of, among other things, filtering/absorbing runoff from public roadways. While the initial goal involves preventing rainfall from overwhelming existing CSS pipes, thus causing overflows, it is hopeful that the green infrastructure BMPs such as green streets will be implemented in areas outside of the CSS. A major project that involves implementation of green street BMPs as part of the Deaderick Streetscape Improvement Project is expected to be completed in PY7.



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
<b>4. Landfills and Other Waste Treatment, Storage, or Disposal Facilities</b>						
A	Monitor activities (report on water quality-related issues)	Ongoing	MDPW/MWS	Clayton Hand/Josh Hayes	There are two active landfills within the county, which are classified to receive only construction and demolition (C&D) waste. These two active landfills and other closed landfills are monitored by the MDPW-WMD and any water quality issues are documented in annual reports. NPDES has also worked with MDPW-WMD in the past to require all solid waste haulers to read and certify that their activities will not impact the quality of stormwater runoff.	<b>Table 4-A.1</b> (Public Works Landfill Monitoring Status) <b>Table 4-A.2</b> (Public Works Licensed Waste Haulers)
<b>5. Pesticides, Herbicides, Fertilizers, Oils, and Other Toxic Materials</b>						
A	Operate Household Hazardous Waste Facility	At least 1/quarter	MDPW	Sharon Smith	MDPW-WMD operates the Household Hazardous Waste (HHW) facility located at 941 Richard Adams Road. The HHW facility is open to all residents of Nashville and Davidson County 6 days a week.	<b>Table 1-F.1</b> (Solid Waste Disposal Numbers) Visit the following website for further details: <a href="http://www.nashville.gov/Recycle/hhw.asp">http://www.nashville.gov/Recycle/hhw.asp</a>
<b>Commercial Applicators</b>						
B	Public Information (per PI&E element)	Ongoing	MWS	Sharon Smith	NPDES distributes public education materials through the local public access channel (Metro 3). In addition, MWS has been contributor to the WaterWorks campaign, which airs television and radio advertisements within Metro's service area. NPDES also partners with the Metro Health Department (MHD) to distribute stormwater educational flyers to various food service establishments. When problem areas are identified, such as the occurrence of frequent illicit discharges, NPDES distributes brochures/door hangers discussing pollutant issues and, when applicable, stencil storm drains as "Drains to River".	An estimated 150 brochures were handed out to restaurants. Refer to Appendix A for example brochure.



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
C	<b>Metro Facilities</b>					
	Evaluate management practices at Metro facilities (fleet operations, vehicle maintenance, etc.)	PY 2	MWS	Rebecca Dohn/Josh Hayes	MWS-NPDES has coordinated with all pertinent maintenance departments on minimizing potential water quality impacts from municipal maintenance activities. In the past, NPDES identified locations where Metro stores chemicals and has inspected the sites. NPDES will continue to monitor the sites as needed, but is in the process of developing a county-wide Stormwater Management Plan (SWMP) that will contain a section that each maintenance facility would keep on-site with specific instructions on application/storage of such chemicals.	In PY6, NPDES coordinated with the Waste Water Treatment Plants to, among other things, make sure all management activities were being implemented to minimize contaminated stormwater runoff.
<b>6. Illicit Discharges and Improper Disposal</b>						
A	<b>Ordinances and Enforcement Measures</b>					
	Refine/review procedures to enhance enforcement of existing ordinances, regulations, and policies as necessary	PY 1 and 3	MWS	Michael Hunt	NPDES continually reviews enforcement provisions to ensure enforcement activities are accomplishing set goals of the program.	NPDES is currently working with the Metro Legal Department to increase the amount of monetary penalties that can be assessed per day. MWS is also working to finalize minor changes to the Stormwater Management Manual that are expected to be completed in PY7.



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
<b>B</b>	<b>Dry-weather Field Screening</b>					
	Update ¼ mile grid for current industrial and high-density commercial land use based on current zonings	PY 5	MWS	Josh Hayes	NPDES is in the process of setting up the field screening database for the 3rd permit cycle (yet to be issued). NPDES will utilize the transition permit year(s) between the Cycle II and Cycle III permit periods to develop a more beneficial/effective field screening program that also incorporates public education as a component.	NPDES began to create a database that would be directly embedded in GIS shapefile attribute data. NPDES expects to finalize this database in PY7.
	Prioritize areas of ¼ mile grids by previous field screening results, spills, complaints, etc.		MWS	Josh Hayes	In developing the 3rd permit cycle field screening database, NPDES will prioritize screening based on various factors such as impaired watersheds, historical information, etc.	In Progress
	Update illicit discharge identification procedures		MWS	Josh Hayes	NPDES utilizes the latest technology in detecting illicit discharges.	New field screening equipment was purchased in PY6. MWS Stormwater RoM also began the process of purchasing a pipe rover camera.
	Implement program in ¼ mile grids in priority		MWS	Josh Hayes	All outfalls within the field screening areas will be performed on a watershed-prioritized basis.	22 outfalls were screened in PY6 as a pilot screening program was implemented testing new documentation techniques.
Identify potential discharges to MS4 or “Waters of the State”	MWS		Josh Hayes	In performing dry weather field screening, NPDES will perform follow-up investigations on any identified un-permitted discharges.	3 illicit discharges were identified through field screening activities in PY6.	
<b>C</b>	<b>Illicit Discharge Investigations</b>					
Identify illicit discharge sources	Ongoing	MWS	Josh Hayes/ Rebecca Dohn/ Sonya Erickson	NPDES utilizes various tools to identify illicit discharges. Illicit discharge investigation measures include performing citizen complaint follow-ups, dry-weather field screening, industrial inspections, construction inspections, aerial flight thermograph investigations, stream walk investigations, and routine field reconnaissance by NPDES staff in identified trouble areas.	<b>Table 6-C.1</b> (Illicit Discharge Investigations in PY6)	



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C	Educate responsible parties as appropriate		MWS	Josh Hayes/ Rebecca Dohn/ Sonya Erickson	Once illicit discharges are identified, NPDES educates responsible parties through use of enforcement measures or by distributing public information materials.	<b>Table 6-C.2</b> (Targeted Public Educational Distribution)
	Implement enforcement measures as appropriate		MWS	Josh Hayes/ Rebecca Dohn/ Sonya Erickson	NPDES employs various enforcement techniques to achieve the elimination of identified illicit discharges. Enforcement measures include issuing Notices of Violations (NOVs) with or without monetary penalties, issuing Stop Work Orders (SWOs) to construction sites, and, in some cases, citing the responsible parties in environmental court.	<b>Table 2-A.1</b> (Documented Enforcement Cases in PY6)
	Report significant illicit discharges and enforcement activities to TDEC		MWS	Josh Hayes/ Rebecca Dohn/ Sonya Erickson	NPDES copies TDEC staff on all NOVs, SWOs, and monetary fines issued to sites for violations of Metro's illicit discharge ordinance.	All enforcements were submitted to TDEC via email.
D	<b>Residential / Commercial Areas</b>					
	Public information (per PI&E element)	Ongoing	MWS	Michael Hunt/Josh Hayes	NPDES distributes public education materials through the local public access channel (Metro 3). In addition, MWS has been a contributor to the WaterWorks campaign, which aired television and radio advertisements within Metro's service area. NPDES also partners with the Metro Health Department (MHD) to distribute stormwater educational flyers to various food service establishments. A key component of NPDES educational material includes information on illicit discharges. When problem areas are identified with the occurrence of frequent illicit discharges, NPDES distributes brochures/door hangers discussing pollutant issues and, when applicable, stencil storm drains as "Drains to River".	<b>Appendix B</b> (Public Education Materials)



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
E	<b>Sanitary Sewer Seepage</b>					
	Reevaluate protocols for reporting potential sanitary sewer seepage into the MS4 or “Waters of the State”	PY 1 and 3	MWS	Michael Hunt	NPDES works closely with the MWS System Services Division (SSD) as a resource on sanitary sewer overflow response/clean-up, especially on the overflows that route to the MS4 or community waters. NPDES also responds to and enforces on any private service sanitary sewer overflows. In addition, NPDES has been working with MHD to identify failing septic systems. NPDES will be geo-locating failing septic systems for purposes of analyzing impacts on specific watersheds. The SSD Sewer Overflow Response Plan (SORP) contains specific provisions for the notification of NPDES and the MHD of private sanitary issues.	<p><b>Table 6-E.1</b> (NPDES' Responses to MWS Sanitary Sewer Overflows in PY6)</p> <p><b>Table 6-E.2</b> (Septic System Failures in PY6)</p> <p><b>Table 6-E.3</b> (Overall Sanitary Sewer Overflow Response in PY6)</p> <p><b>Table 6-E.4</b> (Projects Performed to Reduce Overflows in PY6)</p>
<b>7. Industrial and High Risk Runoff (reference Section IV)</b>						
A	<b>Data Management</b>					
	Update industrial site databases (for sites that meet permit criteria)	Annually	MWS	Josh Hayes	Each year, NPDES downloads the list of industrial sites meeting the criteria specified in the permit from the EPA Toxic Release Inventory (TRI) website.	In PY6, NPDES created a new industrial inspection database intended to be used during the yet to be issued, 3rd Cycle of the MS4 permit. NPDES expanded the database to include all TMSP sites, TRI sites, and TSD sites.
B	<b>Inspections</b>					
	Refine procedures/criteria to prioritize sites to be inspected based on SIC code, SARA data, and other information	PY 1, 3, and 5	MWS	Josh Hayes	NPDES will base prioritization of industrial inspections during Cycle III on a combination of SIC code, previous knowledge of the site, and watershed location.	Prior to initiating an aggressive industrial inspection program in PY7. NPDES will develop a prioritization policy.



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<b>B</b>	Train inspectors	PY 2 and 4	MWS	Josh Hayes	The main industrial inspector within the NPDES program has been through an industrial inspection workshop and has coordinated with TDEC staff to perform joint inspections, thus refining knowledge of what to look for at different sites.	In PY6, an NPDES inspector watched the EPA webcast on industrial stormwater.
	Inspect facilities that meet criteria	Once by PY 5	MWS	Josh Hayes	NPDES will inspect all qualifying facilities by the end of the 3rd permit cycle.	In PY6, NPDES performed only one industrial inspection as more time was devoted to developing a new database and list of sites to inspect. NPDES also began and will continue to pursue coordination with TDEC to better improve Metro's jurisdiction over industrial facilities that currently do not fall under MS4 permit criteria. NPDES will pursue a more aggressive industrial inspection schedule in PY7.
	Coordinate inspection and enforcement activities with TDEC staff as determined to be appropriate	Ongoing	MWS	Josh Hayes	NPDES copies TDEC on all follow-up industrial inspection correspondence. NPDES also coordinates with TDEC staff when Tennessee Multi-Sector Permit (TMSP) compliance issues are found at the site.	NPDES is pursuing coordination with TDEC in PY7 to better coordinate inspection and enforcement processes.
	Report inspection locations	Annually	MWS	Josh Hayes		TDEC is notified via email.
<b>C</b>	<b>Restaurant Impacts</b>					
	Report activities aimed at reducing water quality impacts	Annually	MWS	Michael Hunt/ Hugh Garrison	NPDES works closely with the MWS Fats, Oils, & Grease (FOG) program as they perform inspections of food service establishments that include documenting potential impacts to stormwater from failing grease interceptors, poorly maintained grease bins, etc. In addition, NPDES partners with the MHD to distribute public information brochures to food service establishments during their rigorous inspection program.	The Metro Health Department distributed an estimated 150 stormwater brochures to Nashville area restaurants. <b>Table 7-C.1</b> (FOG-related Stormwater Finds)



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<b>8. Construction Site Runoff (reference Section IV)</b>						
A	<b>Ordinances, Regulations and Guidance</b>					
	Enforce existing ordinances and regulations intended to limit construction-phase water quality impacts from new construction and significant redevelopment	Ongoing	MWS	Dale Binder/ Kimberly Moore	MWS Stormwater's Grading Permit requires sites to submit engineered plans that must be approved by MWS Stormwater review engineers for construction phase Erosion, Prevention, and Sediment Control (EPSC) measures. NPDES Inspectors hold Pre-construction meetings to discuss EPSC measures and require EPSC measures to be installed prior to issuing the Grading Permit. Once the grading permit is issued, NPDES inspects each site periodically to verify proper maintenance of EPSC measures. NPDES performs enforcement actions on those sites not compliant with the grading permit. For single family homes requiring grading permits, a Tier II Grading Permit is issued and inspected by the Development Review and Permitting Section. For single family homes not requiring grading permits, sites are still required to submit a site plan detailing EPSC measures and a signed stormwater checklist.	<b>Table 8-A.1</b> (Construction Site related Inspections in PY6) <b>Table 8-A.2</b> (Grading Permit Statistics) <b>Table 8-A.3</b> (NPDES Construction Complaints in PY6) <b>Table 8-A.4</b> (Stormwater Plan Review) <b>Table 8-A.5</b> (Stormwater Oversight on Single Family Homes)
	Refine procedures to enhance enforcement of existing ordinances, regulations, and policies	PY 1 and 3	MWS	Dale Binder	MWS Stormwater routinely reviews stormwater ordinances and guidance manuals for necessary improvements.	In PY6 MWS NPDES initiated various meetings with the Metro Legal Department for purposes of increasing the amount of monetary fines that can be assessed. During the next year, it is anticipated that Metro's Code will be amended to allow a maximum of \$5,000 per day civil penalty for violations of Metro's stormwater regulations.



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
A	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	PY 1 and 3	MWS	Dale Binder	MWS Stormwater routinely reviews stormwater ordinances and guidance manuals for necessary improvements, including changes to reflect the latest technology.	NPDES continuously reviews guidance manuals for necessary revisions. MWS is currently implementing minor changes to the Stormwater Management Manual, which is expected to be finalized in PY7.
	Public Education (per PI&E element)	Ongoing	MWS	Michael Hunt	NPDES distributes public education materials through the local public access channel (Metro 3), which explains grading permit requirements. In addition, MWS has been a contributor to the WaterWorks campaign which aired television and radio advertisements within Metro's service area. MWS Stormwater also facilitates periodic SWAC meetings with the local development community.	There were 4 SWAC Meetings held in PY6
	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	Ongoing	MWS	Dale Binder	The MWS Development Review and Permitting will not approve any grading plans for any site requiring coverage under TDEC's construction stormwater general permit, if they can not produce the proper TDEC Notice of Coverage.	Performed on every grading project over 1 acre in size.



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B	<b>Training</b>					
	Educate “Grading Permit” plan reviewers and construction site inspectors on latest techniques and management practices to address construction-phase water quality, lessons learned, etc.	Annually	MWS	Roger Lindsey	MWS Stormwater staff attends various training classes, seminars, and conferences throughout the year, that include the latest technology in stormwater management.	Training records are available upon request.
C	<b>Records Management</b>					
	Maintain database for erosion prevention and sediment control (EP&SC) inspections and enforcement activities	Ongoing	MWS	Dale Binder	NPDES tracks all grading permit plan approvals and construction phase inspections through the city-wide permitting database called KIVA.	Metro used the KIVA database for all inspection documentation in PY6.
D	<b>Plan Review and Inspection Resources</b>					
	Provide resources for plan review such that they have adequate time to effectively review plans for pre and post-construction water quality considerations	Ongoing	MWS	Tom Palko	Stormwater Development Review & Permitting (DRP) maintains a staffing level of generally 5 engineers devoted to development review. In the past when DRP was overwhelmed with plan submittals, they have contracted out some plan review responsibility to ensure proper plan review takes place.	During PY 6, MWS Stormwater employed 5 engineers devoted to stormwater development and review.
	Provide resources for construction site inspection staff such that they have adequate time to effectively inspect sites and enforce water quality related ordinances, regulations and policies		MWS	Michael Hunt	NPDES maintains a staffing level of generally 7 construction site inspectors, mostly dedicated to inspection of grading permitted sites or sites found to be grading without a permit.	Toward the end of PY6, NPDES lost two inspectors that were dedicated to inspecting construction sites. Those inspection resources are expected to be replenished in PY7, bringing the total construction stormwater inspection staff back to 7.



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E	<b>Metro Activities</b>					
	Evaluate construction practices implemented by Metro Departments to limit erosion and sedimentation impacts (Metro projects, work on sanitary sewers, utility lines, etc.)	PY 2	MWS	Michael Hunt	NPDES educates various Metro departments on implementation of appropriate EPSC measures during Metro soil disturbing activities. Most Metro departments actually apply for grading permits for their larger projects and NPDES gives the same level of scrutiny to those sites as they would for privately-developed sites.	NPDES will be working to complete a SWMP in PY7 that will give specific guidance to Metro departments or contractors for ground disturbance activities that don't rise to the level of requiring a grading permit.
<b>9. Habitat Improvement</b>						
A	Report habitat improvement activities/projects	Annually	MWS	Josh Hayes	Any projects performed by Metro that improve aquatic habitat are noted in the annual report.	NPDES facilitated discussions between the Tennessee Stream Mitigation Program (TSMP) and the Tennessee Fairgrounds to pursue a stream restoration project on Metro Fairgrounds Property. NPDES also assisted in coordination between TDEC, TDOT, and the Metro Parks Department to determine if a wetland mitigation project could be implemented on the Bells Bend Park property.
<b>10. Public Information and Education (PI&amp;E)</b>						
A	(1A) Inform the public on the impacts on water quality from general housekeeping maintenance/activities	Ongoing – at least one activity per year	MWS	Michael Hunt/Sonia Harvat	NPDES distributes public education materials through the local public access channel (Metro 3), which details grading permit requirements, illicit discharges, pollution from poor housekeeping, etc.. In addition, MWS has been a contributor to the WaterWorks campaign which airs television and radio advertisements within Metro's service area. NPDES and the MWS PIO officer also performs various Public Education Events throughout the year. Also within Metro, The Parks Department and the Public Works Solid Waste Management perform various public education events that promote good housekeeping activities.	Toward the end of PY6, MWS added another education specialist that will assist the MWS PIO in performing additional public educational activities that include stormwater education. <b>Appendix B</b> (Public Education Materials) <b>Table 10-A.1</b> (PY6 Presentations given by the NPDES in PY6) <b>Table 10-A.2</b> (Presentations given by the MWS PIO in PY6)



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
A	(1G) Inform home owner associations and other operators of detention/retention ponds of the importance of maintenance activities		MWS	Dale Binder/ Rebecca Dohn	NPDES performed mail-out educational campaigns in the past only to yield few responses. NPDES has since adopted an approach that involves educating sites individually through inspection and necessary enforcement/follow-up procedures.	<p><b>Table 1-G.1</b> (BMP Inspection/Owner Notification Program)</p> <p>During PY6, Metro Stormwater facilitated 4 SWAC meetings.</p> <p><b>Appendix B</b> (Public Education Materials)</p>
	(2A/D) Educate the local engineering and development community about the ordinances, regulations and guidance materials related to long-term water quality impacts		MWS	Michael Hunt	MWS Stormwater facilitates coordination with the local development community during any proposed changes to stormwater ordinances through holding stakeholder meetings, SWAC meetings, posting information on the website, etc.	
	(5B) Inform the public, sellers, distributors, application services, and selected users about proper pesticides, herbicides, and fertilizers use, storage, and disposal techniques		MWS	Michael Hunt		
	(5B) Inform the public, sellers, distributors, and selected users about proper oil and other automotive-related fluids use, storage, and disposal techniques		MWS	Michael Hunt		
	(6A) Inform the public about identifying and reporting procedures for illicit connections/discharges, sanitary sewer seepage, spills, etc.		MWS	Michael Hunt	NPDES performs these activities through the above-mentioned Metro 3 broadcasts, website postings, WaterWorks program, and individual distribution of public information materials (flyers, brochures, door hangers, etc.)	



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A	(8A) Educate the local engineering, development, and construction community about the ordinances, regulations and guidance materials related to construction phase water quality impacts		MWS	Michael Hunt	MWS Stormwater facilitates coordination with the local development community during any proposed changes to stormwater ordinances through holding stakeholder meetings, SWAC meetings, posting information on the website, etc.	Also during PY6, a new “Change Management Process” was implemented. The “Change Management Process” is intended to ensure that public notification is a major component of any major regulation/process change proposed by Metro. During PY6, Metro Stormwater facilitated 4 SWAC meetings.
	Other not yet identified opportunities.		NA	NA	MWS Public Information Officer initiated an "Adopt A Stream" program	Refer to: <a href="http://www.nashville.gov/water/adoptastream/adopt_a_stream.asp">http://www.nashville.gov/water/adoptastream/adopt_a_stream.asp</a>
<b>World Wide Web site</b>						
B	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.	Ongoing	MWS	Michael Hunt, Anna Kuoppamaki/ Metro Web team	MWS' Stormwater manages its own website in which ample amount of public information is available.	<b>Appendix B</b> (Public Education Materials) Refer to the following website: <a href="http://www.nashville.gov/stormwater/">http://www.nashville.gov/stormwater/</a>
	Provide mechanism that the public can use to report potential illicit discharges, spills, etc. via the internet	Ongoing	MWS	Michael Hunt/ Anna Kuoppamaki, Metro Web team	MWS' Stormwater website allows general public to submit complaint emails over the web or provides web users with the number to call to report illicit discharges.	NPDES began working in PY6 and (completed in PY7) a mechanism for which the general public can enter information into a website and automatic emails will be generated and sent to NPDES to be disseminated to inspectors.



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
B	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	PY 4	MWS	Michael Hunt/Anna Kuoppamaki	MWS' main web page promotes the "Adopt a Stream" program, which details the type of stewardship work various companies have been performing in their respective adopted stream segments.	Refer to: <a href="http://www.nashville.gov/water/adoptastream/adopt_a_stream.asp">http://www.nashville.gov/water/adoptastream/adopt_a_stream.asp</a>
<b>11. Reporting</b>						
A	<b>Compliance Report</b>					
	Summary of program element activities and revisions	End of each PY (+ 6 months)	MWS	Josh Hayes	NPDES has submitted annual reports within 6 months from the end of each permit year. NPDES will continue to submit the annual reports even during the transition period between the Cycle II and Cycle III permits. NPDES is migrating toward a much more concise annual report that contains all of the necessary data. NPDES is also working to develop a more-official county-wide Stormwater Management Plan in which each pertinent Metro department will have a copy on-site and will be responsible for following their respective sections.	Submitted
	Quantitative and qualitative controls assessment (as appropriate)		MWS	Steve Winesett	NPDES will continue to look for ways to improve program assessment measures. NPDES performs loading calculations at the end of each permit cycle. NPDES is looking for ways to improve the loading calculations to make them much more representative of local data and conditions.	<b>Table 11-A.1</b> (SWMP Quantitative Stats) <b>Table 11-A.2</b> (PY7 Budget Projections)
B	Propose Third Permit Cycle Activities	End of PY 4 (+ 6 months)	NA	NPDES Office	NPDES submitted proposed 3rd cycle activities in the Cycle 2, Permit Year 4 Annual Report and is eagerly awaiting TDEC's response and coordination for developing the 3rd cycle of the permit.	Submitted in PY4's Annual Report



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
<b>Monitoring Requirements</b>						
Element	Requirement	Schedule (1)				
A	<b>Ambient</b>					
	Sample at eight or more in-stream locations	Bi-monthly	MWS	Steve Winesett	NPDES performs the bi-monthly sampling at 8 locations during ambient conditions.	<b>Table A-1</b> (Ambient Sampling Results in PY6)
	Sample at least six times per site to reflect seasonal trends	Annually	MWS	Steve Winesett	NPDES performs the ambient sampling at each site 6 times annually. All sampling results are documented in each annual report.	
B	<b>Wet-Weather</b>					
	Sample at three or more in-stream locations	Annually	MWS	Steve Winesett	Midway through the Cycle II permit, NPDES coordinated with TDEC to change two of the wet weather sampling locations to be located at MS4 major outfall points. The existing sampling locations include two MS4 outfalls points and one in-stream location. The NPDES division plans to submit an additional request to TDEC to further alter the wet weather sampling program. NPDES intends to alter wet weather sampling to better represent major land use categories, so the wet weather values can be used in the calculation of EMCs.	<b>Table B-1</b> (Wet Weather Sampling Results in PY6)
	Sample at least twice at each location to reflect seasonal trends		MWS	Steve Winesett	NPDES is performing seasonal wet weather sampling twice at each site.	



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
C	<b>Industrial</b>					
	Based on need as determined during inspections, etc.	Ongoing	MWS	Josh Hayes	In the past, the NPDES section has sampled unpermitted processed water from various industrial sites found during inspections. NPDES intends to perform future wet weather monitoring of specific industrial category sites in which runoff issues appear problematic.	No monitoring performed in PY6
	Report data	Annually	MWS	Josh Hayes	Any monitoring data is reported in annual reports.	
D	<b>Bioassessment</b>					
	Perform RBP III at the two designated bioassessment sites	Annually	MWS	Steve Winesett	NPDES performs the required Biological Assessments at designated sites twice a year to reflect seasonal changes.	Table D-1 (Bioassessment Scoring Results)
	Perform RBP III at one or more reference sites	Annually	MWS	Steve Winesett	NPDES performs the required Biological Assessments at the Reference site twice a year to reflect seasonal changes.	
	Refine procedures for performing a “quick assessment” that can be performed in association with other program activities	PY 1	MWS	Steve Winesett	NPDES utilizes RBP III protocol for all bioassessments, therefore, did not refine procedures to develop a less detailed assessment.	
Perform “quick assessments” as deemed necessary	Annually	MWS	Steve Winesett	In the past, additional quick assessments were not performed. In the future, NPDES plans to perform quick assessments (RBP II) on certain 303(d) listed streams.		



Element	Activities	Compliance Schedule <sup>(1)</sup>	Responsible Department	Responsible Person(s)	Description of Permit Compliance Activities	Permit Year (PY) 6 Data/Activities
E	<b>Loadings Estimates</b>					
	Report changes in estimated Event Mean Concentrations (EMCs)		MWS	Josh Hayes	In the 5th year of the 2nd permit cycle, NPDES had to utilize EMCs from a national average and from values calculated in the first permit cycle. Since wet weather sampling sites were changed mid-way through the cycle, there were not enough sampling results present to run statistical analysis.	<b>Table E-1</b> (EMC Values for Loading Estimates)
	Report changes in estimated annual volume and loadings for the MS4	PY 5	MWS	Josh Hayes	NPDES was unable to locate the original loading estimates performed in the 1st permit cycle. Additionally, NPDES used a different method to calculate the loading estimates in the 2nd permit cycle, which was based on the simple method. NPDES plans on improving the loading calculation by mapping/delineating all BMPs, altering wet weather sampling to better represent land use categories for EMC calculation, and improve the MS4 GIS database so modeling can be performed.	<b>Table E-2</b> (Impervious Areas per Watershed) <b>Table E-3</b> (Land Use Areas per Watershed) <b>Table E-4</b> (Annual Runoff Calculation) <b>Table E-5</b> (Pollutant Loading Calculations) <b>Table E-6</b> (Summary of Pollutant Loading Estimates) Note: In this year's calculation, the only variable that changed was rainfall and the Annual Runoff volume. The estimation still does not take into account the pollutant reduction values of numerous BMPs installed across the County. NPDES is still working on improving mechanisms for calculating pollutant loadings. The available GIS coverages for impervious areas and land-use did not change enough from previous years to warrant a recalculation.



**Metropolitan Nashville – Davidson County  
NPDES-MS4 Permit No. TNS068047  
Cycle 2, Year 6  
November 2009**

## **Appendix A - Supporting Program Data**

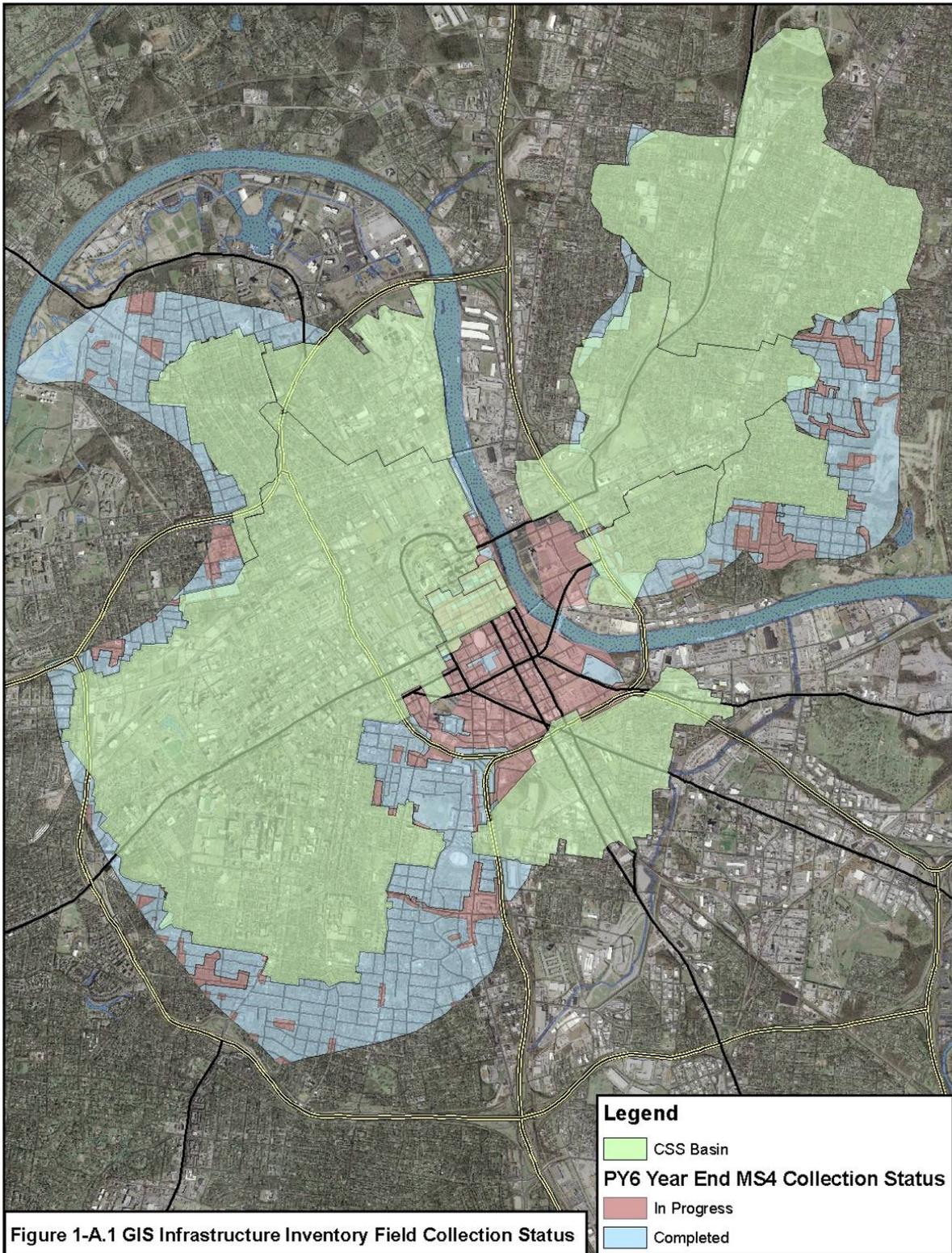


Figure 1-A.1 GIS Infrastructure Inventory Field Collection Status



**Table 1-B-1 Routine Maintenance Numbers**

Maintenance Activity	Type	PY1	PY2	PY3	PY4	PY5	PY6
<b>Ditch Maint.</b>	Routine	84	66	14	3	0	23
	Complaint	557	374	403	445	559	362
	Class C	1	39	18	0	0	0
		<b>642</b>	<b>479</b>	<b>435</b>	<b>448</b>	<b>559</b>	<b>385</b>
<b>Walls &amp; HW</b>	Routine	17	11	1	0	0	5
	Complaint	211	161	183	187	69	28
	Class C	0	0	1	0	0	0
		<b>228</b>	<b>172</b>	<b>185</b>	<b>187</b>	<b>69</b>	<b>33</b>
<b>DW Pipes</b>	Routine	106	48	5	816	45	12
	Complaint	249	279	286	165	95	77
	Class C	0	0	0	0	0	0
		<b>355</b>	<b>327</b>	<b>291</b>	<b>981</b>	<b>140</b>	<b>89</b>
<b>Cross Drains</b>	Routine	74	78	66	0	192	13
	Complaint	135	114	171	148	61	25
	Class C	0	10	8	0	0	0
		<b>209</b>	<b>202</b>	<b>245</b>	<b>148</b>	<b>253</b>	<b>38</b>
<b>Flooding</b>	Routine	4	10	4	0	0	41
	Complaint	14	15	1	0	19	17
	Class C	0	2	2	0	0	0
		<b>18</b>	<b>27</b>	<b>7</b>	<b>0</b>	<b>19</b>	<b>58</b>
<b>Debris Removal</b>	Routine	26	26	23	0	0	73
	Complaint	29	28	41	1	140	113
	Class C	1	1	0	0	0	0
		<b>56</b>	<b>55</b>	<b>64</b>	<b>1</b>	<b>140</b>	<b>186</b>
<b>Erosion</b>	Routine	2	1	1	0	0	4
	Complaint	7	6	1	0	11	17
	Class C	0	1	0	0	0	0
		<b>9</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>11</b>	<b>21</b>
<b>Mud Removal</b>	Routine	8	7	51	3	0	1
	Complaint	3	8	71	144	0	0
	Class C	0	0	0	0	0	0
		<b>11</b>	<b>15</b>	<b>122</b>	<b>147</b>	<b>0</b>	<b>1</b>
<b>Misc</b>	Routine	590	396	219	1,013	0	29
	Complaint	95	75	86	1,035	86	10
	Class C	0	3	1	0	0	0
		<b>685</b>	<b>474</b>	<b>306</b>	<b>2048</b>	<b>86</b>	<b>39</b>
<b>Inlet Maint.</b>	Routine	33,495	37,296	35,258	20,125	4,840	316
	Complaint	416	353	263	3,088	243	191
	Class C	0	5	0	0	0	0
		<b>33,911</b>	<b>37,654</b>	<b>35,521</b>	<b>23,213</b>	<b>5083</b>	<b>507</b>
<b>Sinkhole</b>	Routine	0	0	0	0	0	0
	Complaint	0	0	2	3	0	0
	Class C	0	0	0	0	0	0
		<b>0</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>0</b>

\*Note- In mid-year FY08, a change was implemented in the reporting mechanism for Routine Maintenance projects. Reporting is now based on the number of projects performed. For example, one inlet maintenance “project” may include numerous inlets being cleaned on the same street.



**Table 1-C.1 Summary of Maintenance Performed at the Dry Creek Regional Detention Basin**

<b>Work Oder ID</b>	<b>DATE</b>	<b>TASK NAME</b>
11947	07/11/08	Inspection
30502	09/24/08	Cleaned Debris
30502	10/10/08	Cleaned Debris
30502	10/10/08	Haul Debris
30502	11/25/08	Inspection
30502	12/05/08	Inspection
31055	01/14/09	Inspection
31055	03/12/09	Clean Debris & Haul
31055	03/31/09	Inspection
31055	05/15/09	Cleaned Debris
31055	05/21/09	Cleaned Debris
31055	05/21/09	Spread Rock
31055	06/02/09	Cleaned Debris
31055	06/05/09	Add Crusher Run
31055	06/05/09	Haul Debris
31055	06/29/09	Cleaned Debris



**Table 1-F.1 Summary of Public Works Solid Waste Collection Numbers (tons)**

Items Recycled	July	August	September	October	November	December	January	February	March	April	May	June	Total
<b>Recycling</b>													
<i>Curbside Recycling/Inhouse Recycling/Recycling Dumpsters</i>													
Mixed Recyclables	1,031.90	1,224.13	1,083.27	1,047.85	1,196.13	1,109.01	1,196.83	1,099.83	1,005.17	1,041.39	1,180.10	1,088.13	13,303.73
<i>Monthly Totals</i>	<b>1,031.90</b>	<b>1,224.13</b>	<b>1,083.27</b>	<b>1,047.85</b>	<b>1,196.13</b>	<b>1,109.01</b>	<b>1,196.83</b>	<b>1,099.83</b>	<b>1,005.17</b>	<b>1,041.39</b>	<b>1,180.10</b>	<b>1,088.13</b>	<b>13,303.73</b>
<i>Household Hazardous Waste Facility</i>													
Oil	4	3	2.1	2.8	3	1.4	0	5.26	3.4	3.02	2.8	4.6	35.38
Anti Freeze	0	0	0	0	0	0	0	0	0	0	0	0	0
Electronics	0	8.93	0	0	10.6	5.51	7.54	0	49.7	38.08	10.5	42.8	173.66
Batteries	0.69	1.22	0.83	1.11	0.71	0.43	0.67	0	0.6	0.84	0	0.59	7.69
Tanks	0.42	0.29	0	0	0	0	0	0	0	0	0	0	0.71
Clean Harbors	0	15.49	0	0	8.58	0	1.53	0	0	7.1	0	0.46	31.16
<i>Monthly Totals</i>	<b>5.11</b>	<b>28.93</b>	<b>2.93</b>	<b>3.91</b>	<b>22.89</b>	<b>7.34</b>	<b>9.74</b>	<b>5.26</b>	<b>53.7</b>	<b>49.04</b>	<b>13.3</b>	<b>48.45</b>	<b>248.6</b>
<i>Drop Off Recycling Centers &amp; Convenience Centers</i>													
Carpet/Carpet Pad	16.79	17.52	19.72	17.52	17.52	17.52	17.52	26.28	23.36	32.12	35.04	23.36	264.27
Aluminum & Tin	11.05	9.62	9.95	10.82	10.83	12.69	13.31	11.89	13.91	12.39	11.33	11.38	139.17
Glass	190.67	158.74	171.64	165.40	146.69	191.08	181.90	171.22	183.51	175.10	165.13	209.01	2,110.05
Mixed Paper	334.76	322.79	340.75	327.83	324.29	365.80	326.32	296.51	298.31	285.05	289.11	277.51	3,789.07
OCC	179.14	169.97	163.79	165.06	131.92	173.19	162.83	136.51	161.54	150.39	160.18	174.47	1,929.26
Plastic	32.61	30.84	32.48	33.39	29.70	25.15	33.72	33.00	31.63	32.88	31.11	45.42	391.93
Plastic Bottles & Metal Cans	36.22	34.04	36.36	40.79	33.68	37.04	37.73	34.70	55.36	38.19	41.30	41.96	467.07
Scrap Metal	55.90	44.81	41.49	49.12	35.17	25.31	32.93	33.72	45.77	53.95	46.85	47.15	513.33
Tires	96.23	597.46	445.74	1,104.74	94.30	563.21	810.20	942.09	565.89	520.99	943.27	1,317.79	8,001.91
<i>Monthly Totals</i>	<b>953.37</b>	<b>1,385.79</b>	<b>1,261.92</b>	<b>1,914.67</b>	<b>824.10</b>	<b>1,410.99</b>	<b>1,616.46</b>	<b>1,685.92</b>	<b>1,379.28</b>	<b>1,301.06</b>	<b>1,723.32</b>	<b>2,148.05</b>	<b>17,606.06</b>
<b>Waste Collection</b>													
Total Metro Public Works Trash Collection	4,391.41	3,712.96	3,579.03	4,005.03	3,346.85	3,936.64	3,686.57	3,252.00	3,691.98	3,993.11	3,889.55	3,918.79	45,403.92
Total Convenience Center Trash	1,102.51	956.61	867.55	896.03	744.94	685.28	727.98	723.13	899.82	906.19	980.07	1,067.43	10,557.54
Contracted Residential	8,706.66	8,119.07	7,367.77	7,753.67	6,760.33	8,213.04	7,426.53	6,591.05	7,499.01	8,400.49	8,355.69	8,320.02	93,513.33
<i>Monthly Totals</i>	<b>14,200.58</b>	<b>12,788.64</b>	<b>11,814.35</b>	<b>12,654.73</b>	<b>10,852.12</b>	<b>12,834.96</b>	<b>11,841.08</b>	<b>10,566.18</b>	<b>12,090.81</b>	<b>13,299.79</b>	<b>13,225.31</b>	<b>13,306.24</b>	<b>149,474.79</b>
<b>Brush Collection</b>													
Unground -- Grapple Hook	1146.9	541.78	1204.5	1324.21	550.01	512.43	658.06	647.64	929.46	786.55	1114.01	1263.94	10679.49
Unground -- Dropped Off	1312.37	1813.34	1361.32	1486.28	1453.66	1141.04	1209.26	1084.35	1218.48	2056.93	1613.3	1613.12	17363.45
Unground -- Contractor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ground -- Dropped Off	129.16	173.14	117.79	102.91	55.94	89.7	180.32	157.88	146.12	113.02	128.51	138.54	1533.03
Leaves -- Metro	0.00	0.00	0.00	0.00	9.71	160.15	92.63	0.00	0.00	0.00	0.00	0.00	262.49
Leaves -- Dropped Off	0.00	0.00	0.00	0.00	140.63	717.24	242.79	21.46	8.30	3.05	0.00	0.28	1133.75
<i>Monthly Totals</i>	<b>2,588.43</b>	<b>2,528.26</b>	<b>2,683.61</b>	<b>2,913.40</b>	<b>2,209.95</b>	<b>2,620.56</b>	<b>2,383.06</b>	<b>1,911.33</b>	<b>2,302.36</b>	<b>2,959.55</b>	<b>2,855.82</b>	<b>3,015.88</b>	<b>30,972.21</b>



**Table 1-G.1 Summary of BMP Inspection Status**

<b>BMP Type</b>	<b>Number of BMPs as of June 30, 2009</b>	<b>Number Inspected in PY6</b>
Detention Ponds	1478	22
Water Quality Units	408	94
Underground Detention	59	8
Swales	46	2
Bioretention	12	0
Sand Filter/Infiltration	12	0
Catch Basin Insert	82	4
Other	19	1

Note: These are the numbers of BMPs, not the number of sites with BMPs. Some sites have more than one BMP. A total of 32 Enforcement NOVs requiring BMP maintenance were sent to sites in PY6.



**Table 2-A.1 Summary of NPDES Enforcement Cases**

	Notice of Violation (NOV)	Stop Work Order (SWO)	Env. Court Cases
<b>Total FY02</b>	11	1	0
<b>Total FY03</b>	47	23	0
<b>Total FY04</b>	132	96	0
<b>Total FY05</b>	151	46	5
<b>Total FY06</b>	219	64	9
<b>Total FY07</b>	140	50	1
<b>Total FY08</b>	284	58	12
<b>Total FY09</b>	150	38	9
<b>Total</b>	<b>1134</b>	<b>376</b>	<b>36</b>

**Table 2-A.1 Summary of NPDES Monetary Penalty Assessment**

Year	NOV	SWO	Monthly Total
PY 1 Total	\$19,850	\$17,950	\$37,800
PY2 Total	\$68,550	\$50,600	\$43,550
PY 3 Total	\$39,250	\$12,000	\$51,250
PY4 Total	\$27,000	\$9,400	\$36,400
PY5 Total	\$36,150	\$10,000	\$46,150
PY6 Total	\$24,120	\$11,351	\$35,471
<b>Grand Total</b>	<b>\$214,920</b>	<b>\$111,301</b>	<b>\$250,621</b>



**Table 2-C.1 Summary of Watershed Monitoring Programs in PY6**

Thermographs					
Watersheds Flown	Anomalies Found	Anomalies Inspected	Anomalies of Concern	Anomalies Resolved	Anomalies Ongoing
8	59	51	9	6	3
Stream Assessments					
Stream Name	Miles Walked	Illicit Discharges Found	Sanitary Sewer Issues Found	Notes	
Trace Creek	3.1	0	0	This program was modified in May 2009 to include S.C.O.R.E. assessments along with the Maryland Protocol.	
TMDL Monitoring					
Stream Name	Number of Samples Taken	E. coli '08 Summer	E. coli Fall '08	E. coli Winter '09	E. coli '09 Spring
MANSKERS CREEK 1	20	159.2	127.4	45.8	99.7
WALKERS CREEK	20	104.6	64.6	35.5	150
LUMSLEY FORK	20	314.9	403.1	42.0	115.7
MANSKERS CREEK 2	20	45.7	58.8	41.5	144.5
DRY CREEK	20	1127.1	801.8	189.7	222.2
DRAKES BRANCH	17	293.9	70.9	60.9	252.8
WHITES CREEK	20	5.5	17.2	29.3	119.0
PAGES BRANCH 1	10	160.9	87.3	159.1	606.3
PAGES BRANCH 2	20	Dry	Dry	Dry	Dry
SHASTA BRANCH	20	Not Sampled	Not Sampled	Not Sampled	1803.4
SEVENMILE CREEK 1	20	509.9	93.0	68.4	424.6
SEVENMILE CREEK 2	20	160.8	46.4	203.3	381.6
FINLEY BRANCH	15	Dry	65.7	191.9	991.4
PAVILLION BRANCH	20	521.5	53.9	43.9	295.7
SIMS BRANCH	20	371.4	120.4	97.2	287.4
303(d) Monitoring					
Stream Name	Number of Samples Taken	E. coli Geomean Summer '08 (CFU)	E. coli Geomean Fall '08	E. coli Geomean Winter '09	E. coli Geomean Spring '09
WEST FORK BROWNS CREEK	20	404.7	792.9	116.5	120.9
EAST FORK BROWNS CREEK	20	193.5	264.1	96.0	140.4
BROWNS CREEK 1	20	205.2	168.5	198.6	591.9
BROWNS CREEK 2	20	194.5	258.4	102.3	152.5
MIDDLE FORK BROWNS CREEK	18	730.5	Dry	90.7	156.2
SUGARTREE CREEK	20	102.6	381.8	2326.0	321.4
BOSLEY SPRINGS BRANCH	20	363.4	280.4	985.3	661.7
GIBSON CREEK	10	Dry	Dry	Dry	119.1
NEELEYS BRANCH	16	Dry	381.1	303.4	1581.4
COOPER CREEK	20	372.9	486.3	59.4	213.5
MCCRORY CREEK 1	20	326.4	120.2	59.2	332.1
MCCRORY CREEK 2	20	78.3	104.2	21.0	86.2
STONERS CREEK	20	203.5	132.5	62.6	326.0
HOLT CREEK	20	358.9	86.3	62.0	406.6
INDIAN CREEK	15	Dry	69.2	123.7	131.5
VAUGHNS GAP BRANCH 1	20	234.2	172.3	81.4	349.8
VAUGHNS GAP BRANCH 2	20	100.3	100.2	57.8	994.5
JOCELYN HOLLOW BRANCH	16	Dry	112.8	60.8	967.5
RICHLAND CREEK 1	20	73.9	48.0	67.4	535.6
MURPHY ROAD BRANCH	20	21.3	41.4	118.9	69.7
RICHLAND CREEK 2	20	108.1	69.1	75.2	304.3
LITTLE HARPETH RIVER	20	158.5	120.7	84.3	111.6
Davidson Branch-1	20	206.3	80.3	57.3	417.6
Davidson Branch-2	15	Dry	38.2	22.8	531.1

Note: Yellow highlighted cells represent geomeans below 126 CFU's.



**Table 3-B.1 Summary of Public Works Street Sweeping Numbers**

	July	August	September	October	November	December	January	February	March	April	May	June	Total
<b>Debris Collected (tons)</b>	349.04	306.61	295.29	313.74	295.27	435.63	284.34	285.79	322.13	312.92	267.33	261.88	3,729.97
<b>Miles of Street Swept</b>	1,743.49	1,719.67	1,700.47	1,743.86	1,734.66	1,718.81	1,826.23	1,588.66	1,712.70	1,714.38	1,719.42	1,997.89	20,920.24

**Table 3-C.1 Summary of Public Works De-icing Program**

	July	August	September	October	November	December	January	February	March	April	May	June	Total
<b>Amount of Salt/brine applied to Roadways (tons)</b>	0.00	0.00	0.00	0.00	0.00	0.00	20.25	7.00	113.05	0.00	0.00	0.00	140.30
<b>Number of Brine Trucks Used</b>	0.00	0.00	0.00	0.00	0.00	0.00	20.00	4.00	25.00	0.00	0.00	0.00	49.00
<b>Number of Employees</b>	0.00	0.00	0.00	0.00	0.00	0.00	34.00	12.00	26.00	0.00	0.00	0.00	72.00



**Table 3-E.1 Summary of OEM Spill Calls in PY6**

ADDRESS	RESPONDERS	DATE
504 ARBOR LAKE BLVD	PW	9/3/08
NOLENSVILLE RD& MCMURRAY DR	PW	9/4/08
2909 POSTON AV	PW	9/5/08
I 440 W& WEST END	STATE	9/5/08
401 FESSLERS LA	OEM, PW	9/5/08
704 8TH AV S	PW	9/6/08
FOSTER AV & PEACHTREE ST	PW	9/9/08
LEBANON PK & SPENCE LA	PW	9/10/08
DONELSON PK & I 40 W EXIT RAMP	PW	9/10/08
5447 EATONS CREEK RD	WATER	9/13/08
OLD HICKORY BLVD & I 24 E	PW	9/21/08
I 65 N & OLD HICKORY BLVD	OEM	9/21/08
I 24 E MM 47	OEM, TDOT	9/24/08
LEBANON PK & GRAYLYNN DR	PW	9/24/08
STATE RT 45 & MCAURTHUR DR	PW	9/26/08
CLARKSVILLE PK & BUENA VISTA	PW	9/30/08
CEDARMONT DR & OLD HICKORY BLVD	PW	10/3/08
BRILEY PKWY & MCGAVOCK PK	PW	10/3/08
I 440 W & WEST END	OEM, WATER, TDOT	10/7/08
930 OVERTON LEA RD	PW	10/10/08
I 24 E MM 34	OEM, STATE	10/11/08
803 DICKERSON PK	WATER	10/16/08
CLARKSVILLE PK & OLD CLARKSVILLE PK	PW	10/20/08
S GALLATIN RD & E WEBSTER ST	OEM, PW, STATE	10/27/08
HART LA & BEN ALLEN RD	PW	10/28/08
PARK CIRCLE & OLD HICKORY BLVD	PW	10/30/08
N GALLATIN PK & ANDERSON LA	PW	10/31/08
S 1ST ST & WOODLAND ST	PW	11/2/08
IVERSON AV & CONEY ST	PW	11/4/08
424 DONELSON PK	PW	11/7/08
2001 BELMONT BLVD	WATER, PW	11/12/08
NAWAKWA TRAIL & NEELY'S BEND RD	PW	11/13/08
N 8TH ST & MAIN ST	PW	11/13/08
CHURCH ST & I 40 W	PW	11/14/08
3855 CLARKSVILLE PK	PW	11/18/08
ELLINGTON PKWY & E TRINITY LA	PW	11/22/08
HOBBS RD & ESTES RD	PW	11/25/08
1332 14TH AV S	PW	11/27/08
IRMA DR & MCBRIDE RD	PW	11/28/08
CENTRAL PK & LEBANON RD	PW	12/3/08
21ST AV S & WEDGEWOOD AV	PW	12/8/08
5929 S NEW HOPE RD	PW	12/8/08
I 440 E& I 65 S	STATE	12/9/08
4TH AV N & ARCADE AL	PW	12/12/08



**Table 3-E.1 Summary of OEM Spill Calls in PY6 (Continued)**

ADDRESS	RESPONDERS	DATE
HARBORWOOD CIRCLE& HARBORWOOD PO	PW	12/18/2008
531 DONELSON PK	WATER, PW	12/23/2008
BRILEY PKWY & CENTENNIAL BLVD	OEM	12/24/2008
7619 HWY 70 S	PW	12/30/2008
1211 MEDICAL CENTER DR	PW	1/9/2009
480 ANNEX AV	WATER	1/12/2009
SMITH SPRINGS RD & CASTELGATE	PW	1/13/2009
275 STEWARTS FERRY PK	OEM, PW, WATER	1/17/2009
112 BROOK HOLLOW RD	OEM	1/19/2009
7316 SMOKEY HILL RD	PW	1/23/2009
I 24 E& HARDING PL	OEM	1/28/2009
I 65 N & RIVERGATE PKWY	STATE	2/2/2009
5655 FRIST BLVD	OEM	2/4/2009
721 GALLATIN PK	PW	2/9/2009
I 65 S MM 81	OEM, STATE	2/10/2009
JAMES ROBERTSON PKWY & 2ND AV	PW	2/11/2009
TANKSLEY AV & SIMMONS AV	PW	2/11/2009
OLD HICKORYU BLVD & INDUSTRIAL DR	PW	2/11/2009
19TH AV N & HERMAN ST	PW	2/15/2009
2535 POWELL AV	PW	2/15/2009
I 65 S& I 440 E	OEM, STATE	2/19/2009
VERITAS ST & SEABOARD DR	OEM, CSX	2/20/2009
SHELBY AV & S 2ND ST	PW	2/21/2009
167 WELWORTH ST	PW	2/22/2009
SHELBY AV & S 2ND ST	PW	2/23/2009
TUGGLE AV & THOMPSON LA	PW	2/23/2009
I 40 E MM 199	OEM, STATE	2/23/2009
BELL RD & ELM HILL PK	PW	3/15/2009
BELL RD & ELM HILL PK	PW	3/15/2009
1008 PATRICIA DR	PW	3/16/2009
1008 PATRICIA DR	PW	3/16/2009
1909 8TH AV S	WATER	3/16/2009
830 GLASTONBURY RD	PW	3/18/2009
DAVIDSON RD & HARDING PK	PW	3/18/2009
ACKLEN AV & 26TH AV S	PW	3/26/2009
4925 LEBANON RD	PW	3/30/2009
19TH AV N & HAYES ST	PW	3/30/2009
GALLATIN RD & RIVERWOOD DR	PW	3/31/2009
525 NAWAKWA TRAIL	PW	3/31/2009
WEST END AV & 21ST AV S	PW	4/1/2009
COCKRILL BEND BLVD & CENTENNIAL	PW	4/2/2009
OLD HICKORY BLVD & DALEMERE DR	PW	4/8/2009
601 12TH AV S	PW	4/8/2009



**Table 3-E.1 Summary of OEM Spill Calls in PY6 (Continued)**

ADDRESS	RESPONDERS	DATE
GREENWOOD AV & GALLATIN AV	PW	4/11/2009
CHURCH ST & I 40 E ENTRANCE RAMP	PW	4/11/2009
GALLATIN PK & ADREE AV	PW	4/14/2009
4220 HARDING PK	PW	4/17/2009
3200 CLARKSVILLE PK	WATER	4/18/2009
BRILEY PKWY & I 40 W EXIT RAMP	PW, WATER	4/19/2009
THOMPSON PL & MURFREESBORO RD	PW	4/20/2009
25TH AV N & WEST END	OEM, PW	4/25/2009
I 440 W & NOLENSVILLE RD	STATE	4/28/2009
OLD HICKORY BLVD & FIRESTONE PKWY	PW	4/29/2009
GRANNY WHITE PK & RICHLAND WOODS	PW	5/5/2009
5303 CHARLOTTE AV	PW, WATER	5/8/2009
1000 DRY CREEK RD	OEM, ESU, WATER	5/9/2009
COUCHVILLE PK & DONELSON PK	PW	5/20/2009
1135 BELL RD	PW	5/26/2009
604 4TH AV N	PW	6/1/2009
BROADMOOR DR & DICKERSON PK	PW	6/3/2009
APPLE VALLEY RD & HAMBLEN DR	PW	6/13/2009
BRILEY PKWY & I 24 W RAMP	OEM, STATE	6/16/2009
3433 COUNTRY WAY RD	PW	6/19/2009
5110 S GALLATIN RD	PW	6/21/2009
I 24 E & HARDING PL	PW	6/23/2009
N 9TH ST & RAMSY ST	PW	7/2/2009
I 65 S MM 94	OEM, STATE, WATER	7/5/2009
BRILEY PKWY & SAUNDERS AV	PW	7/7/2009
I 65 N ENTRANCE RAMP & W TRINITY LA	STATE	7/8/2009
OLD HICKORY BLVD W& E MARTHONA	PW	7/12/2009
1120 FOSTER AV	PW, WATER	7/13/2009
NOLENSVILLE RD & ZOO RD	PW	7/13/2009
8136 WHITES CREEK PK	PW	7/13/2009
HOBBS RD & ESTES RD	PW	7/15/2009
2792 WINDCREST TRAIL	PW	7/16/2009
ANTIOCH PK & HAYWOOD LA	WATER	7/16/2009
I 24 E& I440 W	STATE	7/17/2009
I 24 E EXIT 48	STATE	7/17/2009
700 AIRWAYS CIRCLE	PW	7/21/2009
I 24 E&I 40 E	OEM, STATE	7/22/2009
OLD HICKORY BLVD & I 40 E	PW	7/24/2009
ATHENS WAY & GREAT CIRCLE RD	PW	7/24/2009
I 40 E MM 211	OEM,WATER,STATE	7/28/2009
I 440 W MM 2/4	OEM,WATER,STATE	8/5/2009
OLD HICKORY BLVD & I 24 E	WATER	8/9/2009
NOLENSVILLE RD & I 440 E	PW	8/27/2009



**Table 3-E.2 Summary of Public Works Hazmat Response Spill Calls in PY6**

Date	Origin	Notified	Location	Situation	Personnel	Arrived	Actions	Departed	Agencies	Liability	Contact #	Report By
7/17/2008	EOC	15:00:00	West Cedar @ Main St. Goodlettsville	Approx 50-60 Gallon Hydraulic Oil On Road	Elliott	15:10:00	Dammed Storm Drain And Cover Spill	18:00:00	PW/FD/GOOD. PD	Tristar	242-6300	Elliott
7/25/2008	EOC	22:00:00	1st Ave S	Oil Spill	Allen/Hatcher	22:33:00	Put Down 100 Lbs Spill Gone	23:15:00	PW/PD	Unknown	None	Allen
8/4/2008	EOC	14:34:00	14th Ave @ Demonbreun	Oil Spill Approx 5-Gallons	Elliott	14:41:00	Covered With 25 Lbs Spill Gone	14:49:00	PW/PD	Unknown	None	Elliott
8/16/2008	EOC	12:40:00	Donelson @ Colonial Cir.	2 Quarts Of Oil In Roadway	Elliott	13:11:00	Covered With 10lbs Spill Gone	13:19:00	PD,PW	Unknown	None	Elliott
8/23/2008	EOC	13:00:00	Wedgewood @ I-65	Oil Spill ( Approx 10 Gal )	Allen	13:20:00	Broomed Cleaned Up And Put In Sealed Containers	14:15:00	FD/PD/PW	Unknown	None	Allen
8/25/2008	EOC	15:28:00	Spence Ln @ I-40	Diesel Spill Approx 10 Gals	Elliott/Gann	15:50:00	Covered With 200 Lbs Spill Gone	16:20:00	PW/PD	Unknown	None	Elliott
9/3/2008	EOC	11:53:00	Arbor Lake ( In Front Of Building #5	Ambulance Lost Approx. 10 Gallons Of Antifreeze	Escue	12:10:00	Covered And Cleaned Up With 50 Lbs Of Spill Gone	12:30:00	FD/PW	Unknown	None	Escue
9/9/2008	EOC	11:19:00	Foster @ Peachtree	1-Gal Of Oil In Roadway	Elliott	11:36:00	Covered With 50lbs Spill Gone	11:50:00	PW	Unknown	None	Elliott
9/10/2008	MIKE RYMAN	10:00:00	215 River Hills Dr.	Oil Spill	Allen / Escue	10:13:00	Put Down 1300 Lbs Spill Gone	11:30:00	PW/PD	Elliott Crane (Truck 112-08)	Jimmy Winters 883- 3900	Allen
9/16/2008	EOC	11:40:00	Donelson Pk. @ Lebanon Rd.	5-Gal. Paint In Roadway	Elliott	12:06:00	Covered With 50lbs Spill Gone	12:15:00	PW	Unknown	None	Elliott
9/17/2008	EOC	0:00:00	1225 Howard Ave.	Oil In Road Approx 5-Gal	Allen/Escue	0:20:00	Covered With Spill Gone	1:00:00	PD/PW	Unknown	None	Allen
9/21/2008	EOC	13:50:00	Old Hickory Blvd. @ I-24 E. ( Whites Creek )	Oil In Road	Allen	14:15:00	Covered Product With 50 Lbs Spill Gone	14:46:00	PW/PD	Unknown	None	Allen
9/26/2008	EOC	18:50:00	Ohb @ Myatt Dr.	Gas Spill ( Approx 20 Gallons )	Allen/Gann	19:05:00	Covered With Spill Gone And Broomed And Put In A 5 Gallon Bucket	21:15:00	PD/PW	Unknown	None	Allen
9/30/2008	EOC	12:40:00	Clarksville Pk At Buena Vista Pk	Oil Spill	Allen Elliott	12:50:00	Put Down Absorbent	13:50:00	MNRIR	Unknown	None	Elliott
11/3/2008	COSTUMER SERVICE	11:00:00	Morton Mill @ Harpeth View Dr.	Oil Spill Approx 5- Gallons, Trailed On A Couple Of Roads	Elliott	11:33:00	Covered With Spill Gone And Swept Up And Put In Bucket	11:46:00	PW	Unknown	None	Elliott
11/7/2008	EOC	10:45:00	Donelson Pk @ Lakeland Dr.	Fuel Tank On A Van, Leaking Gas , Approx 10 Gallons	Escue	10:54:00	Plugged Hole In Tank And Covered Product On Ground With Spill Gone, Used 50 Lbs Of Spill Gone	11:30:00	PW/PD/FD	Unknown	None	Escue
11/12/2008	FD DISTRICT 6	17:05:00	Belmont @ Portland ( In Front Of Circle K )	10-15 Gallons Of Gas Spilled	Elliott	17:20:00	Covered With Spill Gone ( Provided By The Fire Dept )	18:00:00	PW/PD/FD	Unknown	None	Elliott
11/12/2008	EOC	16:15:00	Tusculum @ Hickory Glade	Approx. 15 Gals Of Diesel Spilled	Elliott	16:35:00	Covered With Approx 1500 Lbs Of Spill Gone	17:05:00	PW/PD/FD	Unknown	None	Elliott
11/27/2008	EOC	13:44:00	1332 14th Ave. South	Approx 15-20 Gal Of Oil	Elliott	14:09:00	Covered With 300 Lbs Spill Gone	14:30:00	PW/PD	Unknown	None	Elliott



**Table 3-E.2 Summary of Public Works Hazmat Response Spill Calls in PY6 (Continued)**

Date	Origin	Notified	Location	Situation	Personnel	Arrived	Actions	Departed	Agencies	Liability	Contact #	Report By
11/28/2008	EOC	8:20:00	Irma @ McBride	Hydraulic Oil Spill ( Approx 20-30 Gal )	Elliott/Gann	9:00:00	Covered With 450 Lbs Spill Gone	11:00:00	PW	Unknown	None	Elliott
12/18/2008	EOC	17:06:00	Harborwood Dr. @ Harborwood Cir.	Oil All Over Road	Gann/Elliott	17:28:00	Covered With 1500 Lbs Of Spill Gone	19:30:00	PD/FD/PW	Unknown	None	Gann
12/30/2008	EOC	10:13:00	Neelys Bend @ Gallatin Rd.	Oil On Road ( Approx 5 Gallons)	Escue, Don Allen Escue	10:48:00	Covered With 75 Lbs Spill Gone	11:03:00	PW	Unknown	None	Escue
1/9/2009	EOC	11:15:00	Vandy--E.R.	Oil Spill.....Approx 15 Quarts Of Oil	Elliott	11:31:00	Covered W/Spill-Gone And Swept Up And Put In 5 Gal Bucket (50lbs )	12:40:00	PW	Fire Ambulance Med. 10	None	Elliott
1/17/2009	EOC	22:00:00	Clover Bottom Stewarts Ferry Rd.	Diesel Spill	Escue/Elliott/Allen/Gann	22:24:00	None..First Response Did The Clean Up	23:15:00	PW/OEM/WATER	Unknown	None	Escue
1/22/2009	EOC	1:00:00	Parris @ Murfreesboro Rd.	Fuel Leak In A Creek	Elliott	1:19:00	Put Down 2 Absorbent Booms In Creek And Stood By With Oem	3:05:00	PW/OEM/METRO WOATER	Unknown	None	Elliott
2/19/2009	ESCUE EOC	15:20:00	I 65 South At Armory Dr	Fuel Spill	Elliott Escue	15:48:00	Covered Spill With Absorbent 900 Lbs	16:10:00	PW TDOT PD FD OEM	Unknown	None	Elliott
3/27/2009	EOC	19:21:00	Shutes Ln @ Old Hickory Blvd.	Slick Substance On Roadway	Elliott / Gann	20:00:00	Covered With 800 Lbs Spill Gone	21:30:00	PD/PW	Unknown	None	Elliott
4/4/2009	EOC	22:30:00	Anderson Rd. @ Smith Springs Rd	1 Gallon Oil On Road	Gann	23:04:00	Put 75 Lbs Spill Gone Product	0:06:00	PW	Unknown	None	Gann
4/5/2009	EOC	20:15:00	Harding Pl @ I-24	Clean Up Gas/Absorbent On Road From A M.V.A. That The Fire Dept Put Down.	Gann	20:38:00	Put In 5 Gal Bucket	21:44:00	FD/PD/PW	Unknown	None	Gann
4/8/2009	EOC	19:05:00	12th Ave. S. @ Demonbreum St	OIL ON RD.	Elliott/Gann	19:21:00	Put 600 Lbs Absorbent On Rd	20:45:00	FD/PW	MTA BUS	None	Gann
4/8/2009	EOC	23:00:00	Greenwood Ave. @ Gallatin Rd.	Diesel Spill	Allen	23:30:00	Put Down Absorbent And Broomed Heavy Spots	0:30:00	PW/FD/PD	Unknown	None	Allen
4/11/2009	EOC	11:15:00	14 Th Ave @ Church ( To I-40 Ramp)	Approx 10-15 Gals Of Cooking Oil On Road	Elliott/Gann	11:45:00	Covered With Approx 500 Lbs Of Spill Gone	12:30:00	PW/PD	Unknown	None	Elliott
4/14/2009	EOC	15:59:00	Gallatin Rd. @ Ardee Ave	Approx 20 To 30 Gallons Of Hydraulic Oil On Road	Gann	16:14:00	Put 500 Lbs Spill Gone On Product	17:14:00	PW/PD	RR Waste Solutions Truck # 106 Tag #- ( H806371 )	615-650-6968	Gann
4/16/2009	EOC	20:30:00	South 4th @ Shelby	OIL IN ROADWAY	Allen/Gann	20:50:00	Put Down Absorbent With Spreader Truck Approx 300 Lbs	21:30:00	PD/PW	Unknown	None	Allen
4/25/2009	EOC	5:00:00	West End @25th Ave	Hydraulic Oil Spill	Elliott,Allen,Gann	5:45:00	Put Down Absorbent And Broomed Up And Put In Buckets	10:00:00	OEM,PW,PD	Unknown	None	Allen



**Table 3-E.2 Summary of Public Works Hazmat Response Spill Calls in PY6 (Continued)**

Date	Origin	Notified	Location	Situation	Personnel	Arrived	Actions	Departed	Agencies	Liability	Contact #	Report By
5/5/2009	EOC	20:00:00	Richland Dr. @ Granny White Pk	Oil On Roadway	Allen	20:30:00	Put Down Absorbent	21:00:00	PW/PD	Unknown	None	Allen
5/16/2009	EOC	16:30:00	N. Graycroft @ Apple Valley Dr.	Fuel Spill From Mva-46	Elliott	16:54:00	Covered With 150 Lbs Spill Gone	17:50:00	PW/PD	Unknown	None	Elliott
6/19/2009	EOC	19:10:00	3429 Country Way Rd	Oil On Roadway Approx 5 Gallons	Gann/Elliott	19:40:00	Covered With 200 Lbs Spill Gone	21:45:00	PW/NES	NES	NES	Elliott
6/21/2009	EOC	11:45:00	Gallatin Pk @ Walton Ln	OIL SPILL	Allen	12:21:00	Put Down 50 Lbs Of Spill- Gone And Broomed	13:00:00	PD/PW	Unknown	None	Allen

Note: This table was completed by Public Works field personnel.



**Table 3-E.3 Summary of NPDES Office Response to Spill Calls in PY6**

ID	Date/Time Initiated	Dispatched To	Problem Address	Date/Time Closed
164254	7/15/2008 7:02	BINDER, DALE	323 HONEYHILL DR	7/15/2008 7:08
166864	8/4/2008 7:07	BINDER, DALE	2515 EUGENIA	8/4/2008 7:16
171237	9/8/2008 6:45	BINDER, DALE	I440 & WOODLAWN	9/8/2008 6:57
171568	9/9/2008 13:43	HAYES, JOSH	13011 OLD HICKORY BOULEVARD	9/25/2008 6:07
172041	9/12/2008 10:31	OWENS, AMANDA	610 MERRIT AVE	9/12/2008 10:34
172061	9/12/2008 11:50	SITZLAR, MEGAN	4901 DAKOTA AVE	11/19/2008 8:21
172126	9/15/2008 6:40	BINDER, DALE	5417 EATONS CREEK ROAD	9/15/2008 7:15
173148	9/23/2008 12:14	SITZLAR, MEGAN	I 65 NORTHBOUND AT OLD HICKORY	9/29/2008 15:45
174404	10/3/2008 11:56	OWENS, AMANDA	104 QUEENS AVE	10/3/2008 11:57
174861	10/8/2008 7:28	BINDER, DALE	1440 WEST AT WOODLAWN	10/8/2008 7:35
175298	10/13/2008 6:36	JOHNS, DENICE D	I -24 E MM34	10/14/2008 7:00
175750	10/16/2008 8:46	DOHN, REBECCA	991 THOMPSON PL	12/12/2008 14:13
175838	10/16/2008 13:57	DOHN, REBECCA	5832 PETTUS RD	12/31/2008 7:48
175999	10/20/2008 7:08	JOHNS, DENICE D	803 DICKERSON PK	10/20/2008 7:21
176714	10/27/2008 8:00	BINDER, DALE	629 OLD HICKORY BLVD	10/28/2008 7:06
177374	11/3/2008 6:56	HAYES, JOSH	1901 ED TEMPLE BLVD	12/1/2008 13:02
177502	11/3/2008 14:02	BARBERO, MICHELLE	2296 LEBANON PIKE	11/3/2008 14:05
178040	11/10/2008 7:30	BINDER, DALE	4982 EDMONDSON PIKE	11/10/2008 7:40
178782	11/17/2008 13:03	BINDER, DALE	2001 BELMONT BLVD	11/17/2008 13:10
180034	12/3/2008 14:52	DOHN, REBECCA	0 ENCLAVE CIR	12/12/2008 14:16
181215	12/17/2008 13:16	JACKSON, MICKEY	1000 ST. LUKE DRIVE	2/27/2009 17:38
181532	12/29/2008 7:23	BINDER, DALE	531 DONELSON PK	12/29/2008 8:13
182604	1/7/2009 10:09	HAYES, JOSH	480 ANNEX	1/20/2009 6:36
183705	1/20/2009 7:37	BINDER, DALE	275 STEWARTS FERRY PK	1/27/2009 8:21
188455	3/9/2009 9:31	ERICKSON, SONYA	DRY FORK CREEK & BUENA VISTA PIKE	3/12/2009 9:15
189128	3/16/2009 9:34	BINDER, DALE	1909 8TH AVE SOUTH	3/16/2009 10:29
192833	4/20/2009 9:01	BINDER, DALE	3200 CLARKSVILLE PK	4/20/2009 9:07
192846	4/20/2009 9:27	BINDER, DALE	BRILEY & I40	4/20/2009 9:48
193922	4/29/2009 9:14	ERICKSON, SONYA	110 NORTH FIRST STREET	4/29/2009 9:35
194426	5/4/2009 11:50	BINDER, DALE	0 WILLIAMS	5/4/2009 12:04
195114	5/8/2009 12:48	ERICKSON, SONYA	5303 CHARLOTTE PK	5/8/2009 12:52
195192	5/9/2009 10:26	ERICKSON, SONYA	1000 OLD DRY CREEK RD	7/16/2009 9:40
197495	5/28/2009 7:58	BINDER, DALE	FESSLERS LANE & I40	5/28/2009 9:20
198447	6/4/2009 11:12	ERICKSON, SONYA	BRILEY PKWY AND I-65	6/18/2009 15:05



**Table 4-A.1 Summary of Public Works Landfill Monitoring Program**

List of Active Landfills within Davidson County			
Landfill Name	Landfill Type	Address	Notes:
MS-COT Services	Construction/Demolition	3530 Central Pike, Suite 105	N/A
Southern Services Landfill	Construction/Demolition	4651 Amy Lynn Drive	N/A
List of Closed Landfills within Davidson County			
Landfill Name	Landfill Type	Address	Notes:
Bordeaux Landfill	Municipal Solid Waste	1400 County Hospital Road	Approximately 100 acres were planted with native grasses. The species include Big and Little Bluestem, Indiangrass and Switchgrass. These grasses require less maintenance and provide a more diverse habitat for wildlife.
Thermal Ash Monofill	Municipal Combustor Ash Monofill	1915 Cement Plant Road	N/A
Due West Landfill	Municipal Solid Waste	Old Due West Avenue	Approximately 10 acres were planted with native grasses.
Lebanon Road Landfill	Municipal Solid Waste	1450 Lebanon Pike	N/A
River Hills Monofill	Municipal Combustor Ash Monofill	1821 River Hills Drive	N/A
List of Permitted Waste Transfer Stations in Davidson County			
Transfer Facility Name	Address		Notes
Waste Management/Antioch Pike Transfer Station	1428 Antioch Pike		N/A
Allied Waste/BFI	Freightliner Drive		N/A
Tennessee Waste	3211 Franklin-Limestone Rd.		N/A

Note: All landfills operated by Metro have been closed and no longer have Tennessee Multi-Sector Permits, therefore, no surface runoff monitoring is required. Some of the landfills are monitored for subsurface parameters. Note: All waste transfer stations were routinely inspected and no concerns for stormwater runoff were noted at each facility in Permit Year 6.



**Table 4-A.2 Public Works Licensed Haulers**

Issued to	Address	City
Waste Removal Services, LLC	164-B Old Carters Creek Pike	Franklin, TN 37064
Gray's Disposal	522 Thompson Lane	Nashville, TN 37204
Clean Earth Sanitation, Inc.	320 Century Court	Franklin, TN 37064
Crick Disposal Services, Inc.	2635 Hart Street	Nashville, TN 37207
Welsh Disposal	325 Hillcrest Drive	Madison, TN 37115
Hudgins Disposal Service	2510 Hart Street	Nashville, TN 37207
Waste Management, Inc.	1428 Antioch Pike	Antioch, TN 37013
Waste Management, Inc.	1428 Antioch Pike	Antioch, TN 37013
J. E. McMurtry	103 Donald Street	Nashville, TN 37207
TRI STAR Waste Systems, Inc.	701 41st Avenue N.	Nashville, TN 37209
Red River Service Corp.	120 Ewing Drive	Nashville TN, 37207
Shamrock Rolloff, LLC	3530 Central Pike	Hermitage, TN 37076
Mercie Threadkill	4571 Clarksville Hwy.	Nashville, TN 37202-4153
MS-COT Services LLC	PO Box 145/3516 Central Pk	Hermitage, TN 37076
Landscape Services, Inc.	204 River Hills Drive	Nashville, TN 37210
Southeastern Recycling	15 Fairfield Avenue	Nashville, TN 37210
H. E. Parmer Co., Inc.	1635 County Hospital Rd	Nashville, TN 37218
Waste Management, Southern Services Landfill	4651 Amy Lynn Drive	Nashville, TN 37218
City of Goodlettsville	215 Cartwright Street	Goodlettsville, TN 37072
Trash Express	4016 Brick Church Pike	Nashville, TN 37207
Allied Waste Services of Nashville	700 Murfreesboro Road	Nashville, TN 37210
Cordell Johnson	315 Hickory Street	Madison, TN 37116
Clarksville Disposal	50 Reynolds Street	Clarksville, TN 37040
Olympic Disposal, INC.	148 Volunteer Drive	Hendersonville, TN 37075
Odom - Vooy's Partnership	148 Volunteer Drive	Hendersonville, TN 37075
Seventh Transport, Inc.	2542 Sullins Rd	Athens, TN 37303
PDQ Disposal, Inc.	625 Hamilton Avenue	Nashville, TN 37203
Burnice Winfrey Disposal, Inc.	1600 Emerald Drive	Nashville, TN 37128
Waste Industries, Inc.	7320 Centennial Blvd	Nashville, TN 37209
MLT Disposal	4571 Clarksville Hwy.	Nashville, TN 37218
Sweeping Corp of Amerca, Inc.	713 Mel Park Dr	Nashville, TN 37204
BFI/AAA Transfer Station	7320 Centennial Blvd	Nashville, TN 37210
AAA Transfer Station	1160 Freightliner Drive	Nashville TN 37210



**Table 3-E.3 Summary of NPDES Water Quality Complaint Investigations Initiated in PY6**

ID	DateTimeInit	DispatchTo	ProbAddress	DateTimeClosed
162406	7/1/2008 7:31	HAYES, JOSH	4401 MICHIGAN AVE	9/8/2008 10:26
163230	7/8/2008 8:24	SEREMET, MIKE	134 46TH AVE N	7/8/2008 8:26
163632	7/10/2008 6:36	DOHN, REBECCA	2831 GALLATIN RD	8/1/2008 15:04
164472	7/16/2008 7:34	DOHN, REBECCA	7043 HIGHWAY 70S	2/27/2009 10:15
164683	7/17/2008 9:05	DOHN, REBECCA	4001 GALLATIN RD	7/31/2008 12:09
165564	7/24/2008 7:16	DOHN, REBECCA	1016 MCCLURKAN	7/24/2008 7:20
165718	7/25/2008 8:02	DOHN, REBECCA	4233 VALLEY GROVE RD	8/1/2008 15:05
165723	7/25/2008 8:08	OWENS, AMANDA	2618 GRANDVIEW DR	9/12/2008 10:53
165762	7/25/2008 10:50	DOHN, REBECCA	92 WHITE BRIDGE RD	8/22/2008 8:28
165955	7/28/2008 12:15	DOHN, REBECCA	2535 POWELL AVE	9/2/2009 8:12
167312	8/6/2008 7:12	DOHN, REBECCA	630 GALLATIN PK. S	9/5/2008 12:33
167629	8/7/2008 15:19	OWENS, AMANDA	3904 DICKERSON PIKE	8/7/2008 15:19
167636	8/7/2008 15:30	OWENS, AMANDA	3221 DICKERSON RD	2/3/2009 15:56
167637	8/7/2008 15:31	OWENS, AMANDA	3304 DICKERSON PK	8/7/2008 15:31
167639	8/7/2008 15:32		3127 DICKERSON PIKE	8/7/2008 15:32
167641	8/7/2008 15:33	OWENS, AMANDA	229 TRINITY LANE	8/7/2008 15:33
167646	8/7/2008 15:47	OWENS, AMANDA	15532 OLD HICKORY BLVD	8/7/2008 15:47
167648	8/7/2008 15:49	OWENS, AMANDA	123 EWING DR	8/7/2008 15:49
168131	8/12/2008 11:31	HAYES, JOSH	3636 BELL ROAD	11/3/2008 6:41
168175	8/12/2008 14:01	DOHN, REBECCA	1605 COUNTY HOSPITAL RD	8/14/2008 15:08
168327	8/13/2008 12:21	HUNT, MICHAEL		8/13/2008 12:24
169068	8/19/2008 13:43	OWENS, AMANDA	7476 HWY 70 SOUTH	9/30/2008 11:27
169215	8/20/2008 11:46	DOHN, REBECCA	4403 SUNNYBROOK DR	8/22/2008 8:32
169549	8/22/2008 13:37	DOHN, REBECCA	1805 CHURCH ST	9/5/2008 7:44
169786	8/26/2008 7:25	DOHN, REBECCA	606 LAWRENCE	8/26/2008 7:33
170516	9/2/2008 9:49	DOHN, REBECCA	5252 HICKORY HOLLOW PARKWAY	9/16/2008 14:37
170535	9/2/2008 10:29	DOHN, REBECCA	505 32ND AVENUE SOUTH	9/5/2008 12:44
171916	8/29/2008 13:46	BARBERO, MICHELLE	4320 HARDING PIKE	9/11/2008 13:59
171919	9/8/2008 14:08	BARBERO, MICHELLE	4901 DAKOTA AVE	11/13/2008 14:14
171941	9/10/2008 14:46	BARBERO, MICHELLE	4601 MURPHY RD	2/27/2009 17:21
171964	7/15/2008 15:33	BARBERO, MICHELLE	917 GALLATIN PK	8/27/2009 9:12
172645	9/17/2008 14:44	BARBERO, MICHELLE	CUMBERLAND RIVER AT BRILEY	2/27/2009 17:23
172906	9/19/2008 14:56	HAYES, JOSH	3007 AMBROSE AVE	11/3/2008 6:42
172907	9/19/2008 15:00	HAYES, JOSH	WHITE BRIDGE AT HARDING RD	7/7/2009 13:44
173221	9/24/2008 7:59	HAYES, JOSH	200 HOWERTON ST	11/3/2008 6:48
173671	9/29/2008 8:34	HAYES, JOSH	29TH AVE & BIRCH	9/30/2008 7:23
173672	9/29/2008 8:38	HAYES, JOSH	1011 WEST EASTLAND	11/3/2008 6:49
173844	9/29/2008 15:43	HAYES, JOSH	3926 Lebanon Pike	11/3/2008 6:50
173866	9/30/2008 7:16	HAYES, JOSH	6601 CENTENNIAL BLVD	7/7/2009 13:43
174096	10/1/2008 10:46	DOHN, REBECCA	53 WILLOW ST	10/1/2008 10:54
174104	10/1/2008 10:58	DOHN, REBECCA	5705 CHARLOTTE	10/1/2008 11:01
174627	10/6/2008 12:59	HAYES, JOSH	6949 CHARLOTTE PIKE	11/20/2008 9:29
175419	10/13/2008 15:33	OWENS, AMANDA	4175 CREEK TRAIL	10/15/2008 16:23
175848	10/16/2008 14:42	DOHN, REBECCA	2006 GLADSTONE AVE	11/20/2008 13:57
176141	10/20/2008 14:17	BARBERO, MICHELLE	1209 PINE ST	2/27/2009 17:22
177369	10/31/2008 16:09	HUNT, MICHAEL	20TH & WEST END AVENUE	10/31/2008 16:10
177508	11/3/2008 14:20	DOHN, REBECCA	4233 HARDING PIKE	11/3/2008 14:22
178788	11/17/2008 13:21	BINDER, DALE	5734 HICKORY PLZ	11/17/2008 13:23



**Table 3-E.3 Summary of NPDES Water Quality Complaint Investigations Initiated in PY6  
 (continued)**

ID	DateTimeInit	DispatchTo	ProbAddress	DateTimeClosed
178835	11/18/2008 8:39	ERICKSON, SONYA	CEMENT PLANT ROAD & 2ND AVE.	12/1/2008 11:22
178973	11/19/2008 7:48	ERICKSON, SONYA	8058 HWY 100/CORNER PUB	5/1/2009 10:43
179065	11/19/2008 14:48	HAYES, JOSH	6535 PREMIER DR	12/16/2008 10:13
179081	11/19/2008 15:43	BARBERO, MICHELLE	6700 CABOT DR	2/4/2009 17:28
179210	11/21/2008 7:32	HAYES, JOSH	1200 49TH AVE. N.	3/31/2009 8:25
180261	12/8/2008 8:01	BARBERO, MICHELLE	852 LAKEMONT	1/6/2009 8:24
180577	12/10/2008 12:46	DOHN, REBECCA	2402 DICKERSON PIKE	12/31/2008 10:33
180580	12/10/2008 12:55	DOHN, REBECCA	350 HART LN	6/4/2009 8:51
180910	12/15/2008 15:14	BARBERO, MICHELLE	4340 HARDING PIKE	12/16/2008 14:57
181104	12/17/2008 12:59	WINESETT, STEVE	2412 ANTIOCH PIKE	1/13/2009 15:56
182109	1/2/2009 11:42	DOHN, REBECCA	501 DONELSON PIKE	4/15/2009 12:24
183136	1/12/2009 14:22	DOHN, REBECCA	4300 CLARKSVILLE PIKE	3/6/2009 8:39
183746	1/20/2009 9:45	ERICKSON, SONYA	6057 CLARKSVILLE PIKE	2/3/2009 9:38
184006	1/21/2009 15:13	ERICKSON, SONYA	330 EAST OLD HICKORY BLVD.	2/27/2009 17:12
184268	1/23/2009 13:05	ERICKSON, SONYA	727 FESSLERS LANE	8/12/2009 9:01
184607	1/27/2009 15:19	GARMON, MARY	2116 HOBBS RD	1/28/2009 14:01
184615	1/27/2009 15:47	ERICKSON, SONYA	758 Pippin Dr	3/9/2009 13:28
184875	1/30/2009 8:24	ERICKSON, SONYA	118 CHEROKEE CT	3/9/2009 13:29
185159	2/3/2009 10:23	GARMON, MARY	1410 BRICK CHURCH PIKE	2/3/2009 10:29
185734	2/9/2009 13:34	ERICKSON, SONYA	3736 ANNEX ROAD SUITE #107/TEQUILAS	3/9/2009 13:38
185818	2/10/2009 9:17	ERICKSON, SONYA	4210 ANDREW JACKSON PKY	3/9/2009 13:38
186134	2/12/2009 8:15	ERICKSON, SONYA	20 CULVERT ST/AKZO	3/9/2009 13:38
186947	2/19/2009 14:44	HUNT, MICHAEL	1406 COUNTY HOSPITAL RD	2/27/2009 17:12
187303	2/24/2009 12:50	ERICKSON, SONYA	2417 ANTIOCH PIKE	3/9/2009 13:40
187578	2/26/2009 13:09	DOHN, REBECCA	5212 HARDING PIKE	4/15/2009 12:31
187725	2/27/2009 13:18	DOHN, REBECCA	3621 SPERRY AVE	2/27/2009 13:22
188462	3/9/2009 9:50	ERICKSON, SONYA	1800 NOLENSVILLE PIKE	3/10/2009 7:59
188720	3/10/2009 14:03	DOHN, REBECCA	468 PONDER	
188803	3/11/2009 9:57	DOHN, REBECCA	2927 HARLIN DRIVE	6/18/2009 15:34
188947	3/12/2009 10:48	ERICKSON, SONYA	4735 OLD HYDES FERRY PIKE	5/22/2009 17:06
188952	3/12/2009 11:04	ERICKSON, SONYA	5581 DORY DR	3/12/2009 11:08
188955	3/12/2009 12:09	ERICKSON, SONYA	4940 BARCLAY SQUARE DR	3/12/2009 12:34
188962	3/12/2009 13:09	SITZLAR, MEGAN	6001 CENTENNIAL BLVD/TDOT MH	9/8/2009 9:56
190552	3/27/2009 14:53	DOHN, REBECCA	5307 CHARLOTTE AVE	4/8/2009 8:42
190583	3/30/2009 8:31	DOHN, REBECCA	4900 CENTENNIAL	
190934	4/1/2009 9:29	ERICKSON, SONYA	LEBANON ROAD	4/10/2009 10:34
191072	4/2/2009 8:43	DOHN, REBECCA	4612 NOLENSVILLE	
192250	4/14/2009 8:03	MOORE, RANDAL	3018 PENN MEADE WAY	5/4/2009 14:22
192340	4/14/2009 13:37	ERICKSON, SONYA	2607 VANCE AVE	4/14/2009 13:37
192656	4/16/2009 15:35	MATHIS, TIM	3721 WEST END AVENUE	5/8/2009 15:33
193128	4/21/2009 14:21	ERICKSON, SONYA	1111 MARY EVELYN CT	4/21/2009 14:21
193288	4/22/2009 14:42	DOHN, REBECCA	0 LITTLE MARROWBONE RD	4/22/2009 14:46
193324	4/23/2009 7:32	ERICKSON, SONYA	741 THOMPSON LN	5/27/2009 7:43
193871	4/28/2009 16:18	ERICKSON, SONYA	407 CRAIGHEAD ST	5/6/2009 9:19



**Table 3-E.3 Summary of NPDES Water Quality Complaint Investigations Initiated in PY6  
 (continued)**

ID	DateTimeInit	DispatchTo	ProbAddress	DateTimeClosed
193882	4/28/2009 17:16	ERICKSON, SONYA	1116 POLK AVE	4/29/2009 14:29
193999	4/29/2009 13:46	ERICKSON, SONYA	815 FESSLERS LN	5/22/2009 17:02
194181	5/1/2009 8:24	ERICKSON, SONYA	MT. VIEW RD. AND ASHEFORD RD	5/1/2009 8:29
194223	5/1/2009 10:42	ERICKSON, SONYA	1018 OLD HICKORY BLVD	
194280	5/1/2009 15:12	ERICKSON, SONYA	1787 GALLATIN ROAD NORTH	5/1/2009 15:34
194287	5/1/2009 15:38	ERICKSON, SONYA	1699 GALLATIN PIKE N	6/4/2009 16:53
194691	5/6/2009 7:57	ERICKSON, SONYA	214 SHADY GROVE RD	5/27/2009 14:19
194798	5/6/2009 13:43	ERICKSON, SONYA	7821 FARMINGTON PLACE	5/7/2009 12:08
194816	5/6/2009 14:30	ERICKSON, SONYA	7061 HWY 70 S	6/18/2009 15:11
194873	5/7/2009 8:09	DOHN, REBECCA	1556 BELL RD	
195152	5/8/2009 14:40	ERICKSON, SONYA	TIMBER VALLEY DR	6/18/2009 15:06
195264	5/11/2009 9:33	ERICKSON, SONYA	2929 SELENA DR	5/13/2009 14:34
196005	5/15/2009 7:21	ERICKSON, SONYA	3939 OLD HICKORY BLVD	5/22/2009 17:00
196007	5/15/2009 7:48	ERICKSON, SONYA	7515 OLD CHARLOTTE PIKE	5/20/2009 15:05
196351	5/18/2009 13:46	DOHN, REBECCA	6311 ST. HENRY	5/18/2009 13:50
196740	5/20/2009 15:26	ERICKSON, SONYA	275 STEWARTS FERRY PIKE	6/16/2009 7:15
197211	5/26/2009 14:38	ERICKSON, SONYA	4900 CENTENNIAL BLVD	
197733	5/29/2009 10:59	HUNT, MICHAEL	VANDERBILT POWER PLANT	5/29/2009 11:02
197954	6/1/2009 12:26	DOHN, REBECCA	6439 NOLENSVILLE PIKE	6/11/2009 7:27
197962	6/1/2009 12:40	DOHN, REBECCA	631 WHISPERING HILLS DR	
198043	6/2/2009 7:47	ERICKSON, SONYA	1141 ANTIOCK PK	6/16/2009 7:18
198105	6/2/2009 10:30	ERICKSON, SONYA	3918 WEST VALLEY	6/4/2009 16:26
198215	6/2/2009 16:38	ERICKSON, SONYA	1312 BLAIRFIELD DRIVE	
198463	6/4/2009 12:23	ERICKSON, SONYA	813 MASSMAN DR.	6/16/2009 7:28
198904	6/9/2009 8:02	ERICKSON, SONYA	0 JOHN A MERRITT BLVD	
199132	6/10/2009 9:41		4928 EDMONDSON PK	6/10/2009 9:48
199283	6/11/2009 7:10	DOHN, REBECCA	100 JACKSON DOWNS	6/11/2009 7:20
199552	6/12/2009 11:51	ERICKSON, SONYA	6526 CLARKSVILLE PIKE	
199584	6/12/2009 13:43	ERICKSON, SONYA	1034 WESTCHESTER DR	7/28/2009 16:53
200034	6/16/2009 16:51	ERICKSON, SONYA	715 MASSMAN DRIVE	8/26/2009 13:37
200220	6/18/2009 8:03	DOHN, REBECCA	1419 ELM HILL PIKE	7/17/2009 12:32
200260	6/18/2009 9:16	ERICKSON, SONYA	116 DUE WEST AVE	7/9/2009 7:38
200358	6/18/2009 14:53	ERICKSON, SONYA	1200 FORREST PARK DR	7/8/2009 15:10
200865	6/23/2009 12:54		319 FESSLERS LANE	
201116	6/24/2009 15:51	ERICKSON, SONYA	NOLENSVILLE AND NORTHCREST	7/21/2009 13:25
201192	6/25/2009 10:55	ERICKSON, SONYA	4600 CENTENNIAL BLVD	
201268	6/25/2009 16:12	ERICKSON, SONYA	5005 OLD HICKORY BLVD	7/31/2009 16:34
201414	6/26/2009 16:21	ERICKSON, SONYA	7840 HEATON WAY	6/26/2009 16:27
201614	6/29/2009 14:53	DOHN, REBECCA	4401 ANDREW JACKSON PKWY	8/21/2009 14:26
201662	6/30/2009 8:27		1408 GRANDVIEW	6/30/2009 8:38
201774	6/30/2009 14:20	ERICKSON, SONYA	1303 GALLATIN PK N	7/21/2009 8:16

Note: This list only refers to potential illicit discharges that rose to the level of initiating a detailed investigation. Many other reports of potential illicit discharges never rise to the level of full blown investigation and are, therefore, not documented in the database.



**Table 6-C.2 Summary of Targeted Public Education Handouts for Specific Illicit Discharge Responses**

Business Name	Address	Date	Inspector	Vehicle Repair	Oil Disposal	Restaurant	Lawn & Garden	Carpet Wash	Car Wash	Swimming Pool	Demolition	Metro Land Maint.	"Protect" brochure	Door Hanger
Ms. Winners	3127 Dickerson Pike	8/7/2008	AO			X								
Sonic	3909 Dickerson Pike	8/7/2008	AO			X								
604, 606, 608	Lawrence Street	8/25/2008	MS		X									
Corner Pub	8058 Hwy 100	12/28/2008	RD			X								
Bar-B-Cutie	Donelson Pike	1/2/2009	RD			X								
Stover & Sons	330 E OHB	1/22/2009	SRE											
Lakeside Cove Subdivision	Dory Drive (18 homes)	3/12/2009	SRE		X									
Don Kennedy Roofing	815 Fesslers Lane	4/29/2009	SRE											
Bar-B-Cutie	Rivergate	4/30/2009	SRE			X								
Buffalo Wild Wings	Rivergate	4/30/2009	SRE			X								
Dalton's Grill	Bellevue	4/30/2009	SRE			X								
7821 Farmington Place	7821 Farmington Place	5/7/2009	SRE											X
2929 Selena Drive	Kingwood Condos	5/13/2009	SRE							X				
1677 Cherokee	1607 Cherokee	5/29/2009	BO				X							X
Residence	1030 Westchester	6/16/2009	SRE				X							X
Residence	114 Due West Ave	6/18/2009	SRE				X							X
Residence	116 Due West Ave	6/18/2009	SRE				X							X
Residence	118 Due West Ave	6/18/2009	SRE				X							X
Residence	1181 Brookmeadow	6/29/2009	RD											X
Residence	1038 Westchester	7/8/2009	SRE				X							X
Shopping Plaza	4537 Nolensville Road	7/27/2009	JH			X								X
Residence	2002 Richard Jones Rd	8/4/2009	SRE				X							
Kroger	2131 Abbott Martin Rd (Kroger)	8/10/2009	SRE			X								
Residence	243 Willow ln	9/17/2009	SRE	X	X									
Comercial Area	730 Gallatin rd	9/17/2009	Boots											



**Table 6-E.1 Summary of NPDES Response to MWS Sewer Overflows**

ID	Date Time Initiated	Dispatched To	Problem Address	DateTimeClosed
179856	12/2/2008 12:22	ERICKSON, SONYA	3414 BRICK CHURCH PIKE	2/3/2009 9:38
183738	1/20/2009 9:30	HAYES, JOSH	2715 WHITES CREEK PIKE	2/26/2009 9:37
183915	1/21/2009 10:08	ERICKSON, SONYA	1105 NELSON DRIVE	2/3/2009 9:39
184188	1/23/2009 8:09	ERICKSON, SONYA	4819 SHADOW LAWN DRIVE	2/3/2009 9:40
184191	1/23/2009 8:17	ERICKSON, SONYA	MOCKINGBIRD LANE	2/3/2009 9:40
184593	1/27/2009 14:42	ERICKSON, SONYA	500 BROOKSBORO TERRACE	2/3/2009 9:41
184631	1/28/2009 8:25	GARMON, MARY	1474 BELLSHIRE TERRACE DRIVE	
184635	1/28/2009 9:05	ERICKSON, SONYA	924 SUN VALLEY DRIVE	2/3/2009 9:41
184642	1/28/2009 9:46	ERICKSON, SONYA	220 BRATTLESBORO PLACE	3/12/2009 9:28
184643	1/28/2009 9:48	ERICKSON, SONYA	108 COASTAL COURT WEST	3/9/2009 13:29
184644	1/28/2009 9:50	ERICKSON, SONYA	2895 CREEKBEND DRIVE	3/12/2009 10:29
184645	1/28/2009 9:52	ERICKSON, SONYA	1551 SHINING ORE DRIVE	2/3/2009 9:41
184726	1/28/2009 14:50	ERICKSON, SONYA	707 ROWAN DRIVE	2/3/2009 9:42
184878	1/30/2009 8:48	ERICKSON, SONYA	3258 BRICK CHURCH PK	3/12/2009 10:29
184887	1/30/2009 9:13	ERICKSON, SONYA	3300 BRILEY PARK BLVD S	3/12/2009 10:30
184897	1/30/2009 9:55	ERICKSON, SONYA	516 BASSWOOD AVE	3/9/2009 13:29
184978	2/2/2009 8:17	ERICKSON, SONYA	501/519 BISMARK	7/16/2009 10:39
184983	2/2/2009 8:39	ERICKSON, SONYA	4112 NOLENSVILLE RD/370 WALLACE RD	3/12/2009 10:30
184985	2/2/2009 8:51	ERICKSON, SONYA	889 GRANADA AVE/APEX ST.	2/3/2009 9:43
184989	2/2/2009 9:02	ERICKSON, SONYA	720 CENTER ST	3/9/2009 13:36
184991	2/2/2009 9:15	ERICKSON, SONYA	3811 MOSS ROSE DR/COOPER LN	2/3/2009 9:43
184995	2/2/2009 9:24	ERICKSON, SONYA	408 HOLLYDALE DR	3/12/2009 10:31
184999	2/2/2009 9:33	ERICKSON, SONYA	7115 COCKRILL BEND BLVD/TDOT MANHOLE	3/9/2009 13:37
185009	2/2/2009 9:55	ERICKSON, SONYA	149 BARKER RD/222 BARKER RD	2/3/2009 9:44
185423	2/5/2009 10:28	ERICKSON, SONYA	6303 HENRY FORD DR	3/9/2009 13:37
185424	2/5/2009 10:32	ERICKSON, SONYA	1318 CHICKERING RD	3/9/2009 13:37
185973	2/11/2009 9:28	ERICKSON, SONYA	HOLIDAY TRAVEL SPS	3/9/2009 13:38
186256	2/12/2009 15:15	ERICKSON, SONYA	811 NELLA DRIVE	3/9/2009 13:39
186257	2/12/2009 15:15	ERICKSON, SONYA	811 NELLA DRIVE	3/9/2009 13:39
186774	2/18/2009 14:46	ERICKSON, SONYA	JOELTON SPS	3/9/2009 13:39
186775	2/18/2009 14:54	ERICKSON, SONYA	SUNLINER SPS	3/9/2009 13:40
187958	3/3/2009 10:43	ERICKSON, SONYA	PEPPERTREE SPS	4/10/2009 10:29
188058	3/4/2009 7:40	ERICKSON, SONYA	DRY CREEK BASIN	
188520	3/9/2009 11:43	ERICKSON, SONYA	149/222 BARKER RD	3/9/2009 13:06
189035	3/13/2009 9:45	ERICKSON, SONYA	CENTRAL BASIN SITES	
189090	3/13/2009 15:19	ERICKSON, SONYA	WHITES CREEK BASIN	
189376	3/17/2009 13:07	ERICKSON, SONYA	510 BASSWOOD	7/28/2009 16:44
190248	3/25/2009 11:44	ERICKSON, SONYA	3504 DICKERSON PIKE	3/31/2009 13:27
190250	3/25/2009 11:51	ERICKSON, SONYA	1621 BRIDGECREST WAY	5/19/2009 8:05
190437	3/26/2009 14:27	ERICKSON, SONYA	ROLLING HILLS SPS #2	4/21/2009 14:03
190573	3/30/2009 7:32	ERICKSON, SONYA	729 MCMURRAY DR	4/10/2009 10:33
191290	4/3/2009 13:17	HAYES, JOSH	1600 2ND AVE N	4/3/2009 13:24
191335	4/3/2009 15:25	ERICKSON, SONYA	500 HICKORY HOLLOW TERRACE	4/6/2009 14:44
193098	4/21/2009 12:39	ERICKSON, SONYA	1412 ROSEBANK	6/2/2009 17:12
196730	5/20/2009 14:52	ERICKSON, SONYA	926 W. TRINITY LANE	6/16/2009 7:15
196886	5/21/2009 17:21	ERICKSON, SONYA	BRENTWOOD SPS	6/16/2009 7:15
197398	5/27/2009 12:29	ERICKSON, SONYA	140 VOLCANO CT	6/4/2009 16:32
198250	6/3/2009 9:25	ERICKSON, SONYA	5652 CLOVERMEADE DR	6/16/2009 7:21
199282	6/11/2009 6:18	HAYES, JOSH	5404 HICKORY WOODS	7/7/2009 13:33
199449	6/11/2009 16:19	ERICKSON, SONYA	132 SANITARIUM RD	6/16/2009 7:32
200856	6/23/2009 12:17	ERICKSON, SONYA	711 LEBANON PK	8/28/2009 7:53

Note: The NPDES Section only responds to Sewer Overflows when requested by the System Services Division to provide containment and cleanup guidance.



**Table 6-E.2 Summary of Failing Septic Systems in PY6**

Map & Parcel	Date Received	Street Name	Last Name	Job Description	Environmental	Sewage on Ground	Notice Issued	Citation	Abatement	Comments
01500020500	1/3/2008	Morgan Road	Davies	repair	SL	1/8/2008	4/3/2008		9/25/2008	
13700000000	5/7/2008	Hobson Pike	State of Tenn	repair	WC	5/20/2008	5/20/2008		7/1/2008	
12713002600	6/12/2008	Merrymount Drive	Dishner	repair	WC	6/18/2008	6/18/2008		7/2/2008	
02800012600	6/20/2008	Grays Pt Road	Sosh	repair	SL	7/3/2008	7/7/2008		8/11/2008	
03404001200	9/29/2008	East Hill Rd.	Hutchinson	repair	SL	10/2/2008	10/15/2008		11/20/2008	
00800020100	10/1/2008	Whites Creek Pk	Stackelback	repair	SL	10/2/2008	10/13/2008		2/12/2009	
00600016000	10/6/2008	Greer Rd.	Burdette	repair	SL	10/10/2008	10/20/2008		11/25/2008	
03900009600	11/11/2008	Simpkins Road	Whitley	Complaint	SL	11/14/2008	12/9/2008	3/16/2009	4/2/2009	Water Conservation
01700031900	12/22/2008	Lickton Pike	Mayes	repair	SL	12/30/2008	12/31/2008		1/22/2009	
05414003400	12/29/2008	Rising Sun Lane	Rodriguez	repair	SL	12/31/2008	1/5/2009		1/16/2009	
03100013600	12/30/2008	Lickton Pike	Johnson	repair	SL	12/31/2008	1/2/2009		1/20/2009	
01600025600	1/16/2009	Saddleback Rd	Iserman	Failure	SL	1/22/2009	1/23/2009	3/16/2009	6/17/2009	
01700030000	1/20/2009	Greer Rd.	Ferguson	Complaint	SL	1/22/2009	2/5/2009		3/24/2009	
11300008900	2/9/2009	Old Charlotte Pike		Subdivision	JH	2/9/2009	2/9/2009		3/3/2009	
05315000400	2/12/2009	Meadows Street	Franklin	Complaint	SL	2/18/2009	3/3/2009		5/5/2009	Connect to Sewer
06800004200	3/11/2009	Old Hydes Ferry Pk	Brown	Complaint	SF	3/19/2009	3/25/2009		6/30/2009	Vacant
18100003100	3/13/2009	Old Hickory Blvd	Ditavong	repair	SF/SL	4/1/2009	5/25/2009		7/15/2009	Water Conservation
01600000500	4/9/2009	Union Hill Road	Jones	Complaint	SF	4/14/2009	4/15/2009		5/1/2009	
01100010700	4/15/2009	Greer Rd.	Alexander	repair	SF	4/17/2009	4/20/2009		5/4/2009	
11200002400	4/15/2009	Old Charlotte Pike	Scott	repair	JH	4/24/2009	4/28/2009		6/4/2009	
01500020600	4/22/2009	Morgan Road	Washington	Complaint	SL	5/1/2009	5/5/2009		6/8/2009	
03900007200	4/30/2009	Clarksville Pike	Curtis	Addition	SF	5/6/2009	5/18/2009	5/29/2009	6/1/2009	
01200010500	5/8/2009	Baker Road	Blankenship	Failure	SF	5/11/2009	5/12/2009		5/21/2009	
02900020000	5/7/2009	Alessio Road	Shay	Failure	JH	5/18/2009	5/20/2009		6/9/2009	
00800020600	5/7/2009	Baxter Road	Baker	Failure	SF	5/18/2009	5/19/2009		6/29/2009	
01500018500	5/14/2009	Whites Creek Pk	Oldham	Failure	SF	5/18/2009	5/19/2009		6/8/2009	
06304004100	6/16/2009	Laura Avenue	Gaines	Complaint	SF	6/24/2009	6/25/2009			30 Day Notice - Connect to Sewer



**Table 6-E.3 Summary of MWS System Services Sewer Overflow Responses**

Overflow Description	July	August	September	October	November	December	January	February	March	April	May	June	Total
<b>Wet Weather Overflows - CSO Permitted</b>	16	8	9	10	7	25	15	20	14	24	36	26	<b>210</b>
<b>Wet Weather Overflows - sewer (non pumps)</b>	0	0	0	7	0	17	19	3	1	14	22	1	<b>84</b>
<b>Wet Weather Overflows - Pump Stations</b>	1	0	0	4	0	27	27	4	14	23	29	3	<b>132</b>
<b>Wet Weather Overflows - TOTAL</b>	17	8	9	21	7	69	61	27	29	61	87	30	<b>426</b>
<b>Dry Weather Overflows - sewer (non-pumps)</b>	7	6	9	8	11	17	11	4	8	9	6	7	<b>103</b>
<b>Dry Weather Overflows - Pump Stations</b>	4	2	0	0	0	0	1	2	0	1	1	3	<b>14</b>
<b>Dry Weather Overflows - TOTAL</b>	11	8	9	8	11	17	12	6	8	10	7	10	<b>117</b>
<b># of Overflows that Required Remediation</b>	3	1	2	5	1	5	7	1	2	1	5	0	<b>33</b>
<b># of Overflows that Reached Creeks - Sewer</b>	1	1	5	10	4	11	23	3	9	19	28	1	<b>115</b>
<b># of Overflows that Reached Creeks - Pump Stations(All)</b>	5	2	0	4	0	27	28	6	14	24	30	6	<b>146</b>
<b># of Overflow Response Staff / per sewer event</b>	2	2	2	2	2	2	2	2	2	2	2	2	<b>2</b>
<b># of Sewer Vac Trucks / per sewer event</b>	1	1	1	1	1	1	1	1	1	1	1	1	<b>1</b>

Note: Numbers are estimates provided by the MWS System Services Division.



**Table 6-E.4 Overflow Reduction Work in PY6**

Type of Projects	# of Projects	Miles of Sanitary Lines	Money Spent
28th Avenue North Rehabilitation (91-SC-36B)	1	2.00	\$1,266,268
Sewer Rehabilitation Projects in FY09	1	2.00	\$1,266,268
Sewer Line Replacements	0	0	0
<b>Other projects that benefit water quality by reducing the number of sewer overflows:</b>			
Boscobel - Village Court CSO Improvements (94-SG-5F) - \$1,445,104 - 2000 feet of rehabilitated, 1200 feet of replacement, and 2200 feet of new combined sewer lines and combined sewer regulator improvements (including screening of solids and floatables from discharges) to reduce the number of CSO discharges into the Cumberland River.			
Hurricane Creek WWPS Improvements (90-SC-75A) - \$1,385,983 - Replacement of 4 pumps with control systems, grinders, and appurtenances to improve reliability and reduce the prospect of wastewater overflows from this pumping station.			
Dry Creek WWTP - Pumping Station Improvements (97-SG-8-2&3) - \$3.6M - Improvements to the on site pumping station at the Dry Creek WWTP to increase pumping capacity and reduce likelihood of overflows from the MWS collection system during wet weather peak flow.			



**Table 7-C.1 Stormwater Issues Found During Inspections of Grease Control Equipment**

<b>Permit Year</b>	<b>Stormwater Noncompliance Issues</b>
Permit Year 2	51
Permit Year 3	61
Permit Year 4	74
Permit Year 5	43
Permit Year 6	32
<b>Total</b>	<b>261</b>

These numbers reflect non-compliance conditions found at Food Service Establishments (FSE) such as fats, oils, and grease observed on the ground.



**Table 8-A.1 Summary of Construction Related Inspections**

Inspection Type	Initial EPSC	Bond Reduction	Bond Release	Temp U&O	Final U&O	Routine General Permit	Initial Complaint	Follow-up Complaint	Total
Year Previous to Cycle II PY1	198	61	28	46	113	2,235	0	0	2,681
<b>PY1</b>	270	80	44	53	122	4,139	0	0	4,708
<b>PY2</b>	271	23	59	56	177	4,923	0	0	5,509
<b>PY3</b>	273	100	85	85	244	4,799	69	66	5,721
<b>PY4</b>	257	112	143	90	157	5,349	190	254	6,552
<b>PY5</b>	176	132	141	107	174	4,581	382	634	6,327
<b>PY6</b>	124	195	224	104	172	4,480	230	631	6,160
<b>Total</b>	<b>1,569</b>	<b>703</b>	<b>724</b>	<b>541</b>	<b>1,159</b>	<b>30,506</b>	<b>871</b>	<b>1,585</b>	<b>37,658</b>

Note: The shaded columns represent the inspections performed on non-permitted construction sites. For years previous to PY3, inspections of non-permitted sites were counted in the routine Grading Permit column. Inspection numbers obtained from the NPDES Office “Results Matter” spreadsheet.



Metropolitan Nashville – Davidson County  
NPDES-MS4 Permit No. TNS068047  
Cycle 2, Year 6  
November 2009

**Table 8-A.2 Summary of Grading Permits Processed**

Year	Preconstruction Meetings	Grading Permits Issued	Permits Completed
Total FY03	257	198	102
Total FY04	305	270	159
Total FY05	284	271	220
Total FY06	296	252	196
Total FY07	251	239	188
Total FY08	222	165	205
Total FY09	136	109	238
<b>Total</b>	<b>1,751</b>	<b>1,504</b>	<b>1,308</b>



**Table 8-A.3 Summary of Construction Complaint Investigations Initiated in PY6**

ID	DateTimeInit	DispatchTo	ProbAddress	DateTimeClosed
162943	7/3/2008 14:53	OWENS, AMANDA	2001 LEBANON RD	7/3/2008 14:53
163448	7/9/2008 6:27	OWENS, AMANDA	1124 MYATT DR.	9/10/2008 15:24
163461	7/9/2008 8:30	FITZGERALD, JIMMIE	621 HIDDEN ACRES	7/9/2008 8:31
163530	7/9/2008 11:02	OWENS, AMANDA	4301 AMY LYNN DR	8/6/2008 8:24
163546	7/9/2008 11:32	OWENS, AMANDA	1345 MURFREESBORO PK	8/7/2008 7:07
163548	7/9/2008 11:37	OWENS, AMANDA	NOLESNVILLE RD	7/9/2008 12:13
163571	7/9/2008 13:03	OWENS, AMANDA	3840 DICKERSON PIKE	12/2/2008 13:13
163785	7/10/2008 13:44	OWENS, AMANDA	5817 VINE RIDGE	7/10/2008 13:45
163791	7/10/2008 13:58	OWENS, AMANDA	2404 PLUM ST	5/13/2009 14:14
164017	7/11/2008 15:30	OWENS, AMANDA	6205 HARDING RD	7/11/2008 15:31
164025	7/11/2008 16:08	OWENS, AMANDA	622 DAVIDSON DR	9/23/2008 9:46
164469	7/16/2008 7:22	OWENS, AMANDA	529 MYATT	8/6/2008 8:28
164839	7/18/2008 7:48	OWENS, AMANDA	4370 GRAYS POINTE	10/23/2008 8:32
165331	7/22/2008 14:21	OWENS, AMANDA	410 HAYNIE CT	9/18/2008 7:34
165397	7/23/2008 6:02	BINDER, DALE	2530 WILLOWBRANCH DRIVE	7/23/2008 6:08
166269	7/30/2008 6:16	OWENS, AMANDA	0 BAKER STATION RD	7/30/2008 6:23
166335	7/30/2008 10:18	OWENS, AMANDA	2966 CLAY LICK RD	7/31/2008 10:06
166751	8/1/2008 11:23	OWENS, AMANDA	7910 CHARLOTTE PIKE	8/28/2008 14:58
168178	8/12/2008 14:21		6951 OLD HICKORY	8/12/2008 14:22
168463	8/14/2008 10:10	JOHNS, DENICE D	63 HERMITAGE AVE	3/2/2009 12:32
169596	8/22/2008 15:20	OHARA, KATHERINE	521 CHERRY GROVE	8/26/2008 12:55
169916	8/26/2008 14:14	OWENS, AMANDA	5540 CLARKSVILLE PIKE	9/18/2008 14:53
169924	8/26/2008 14:47	OHARA, KATHERINE	501 CRUTCHER STREET	9/11/2008 9:23
171809	9/11/2008 7:12	OWENS, AMANDA	3455 TISDALL DR	9/11/2008 7:12
171810	9/11/2008 7:21	OWENS, AMANDA	WINDING WAY	9/11/2008 7:21
171905	9/11/2008 13:01	BINDER, DALE	0 2ND AVE N	4/27/2009 14:01
172749	9/18/2008 14:06	OWENS, AMANDA	5446 LICKTON PIKE	4/3/2009 7:03
173255	9/24/2008 9:54	BINDER, DALE	41 JONES CR	10/1/2008 15:28
173634	9/26/2008 14:43	OHARA, KATHERINE	5027 ASHLAND CITY	7/23/2009 15:23
174025	10/1/2008 7:33	OWENS, AMANDA	0 JENNIE BROWN LN	10/1/2008 10:19
174026	10/1/2008 7:39	OWENS, AMANDA	1100 COUNTY HOSPITAL RD	10/1/2008 10:19
174084	10/1/2008 10:15	OWENS, AMANDA	1610 CORPORATE PL	10/28/2008 11:04
174199	10/2/2008 8:01	OWENS, AMANDA	9650 S HARPETH	11/13/2008 14:46
174200	10/2/2008 8:01	OWENS, AMANDA	9650 S HARPETH	10/2/2008 8:03
174406	10/3/2008 12:05	OWENS, AMANDA	0 DICKERSON PIKE	11/14/2008 14:08
174410	10/3/2008 12:42	OWENS, AMANDA	1116 DARBYTOWN DR	10/3/2008 12:43
174564	10/6/2008 10:06	MOORE, KIMBERLY	3300 MURFREESBORO PK.	9/2/2009 14:47
174818	10/7/2008 12:56	OWENS, AMANDA	412 43RD AVE	10/9/2008 9:04
174824	10/7/2008 14:01	OWENS, AMANDA	0 STEWART LANE	1/21/2009 13:48
174998	10/9/2008 6:41	OWENS, AMANDA	0 EATONS CREEK RD	10/9/2008 6:42
175138	10/9/2008 15:11		4224 PRINCESS LANE	10/17/2008 15:59
175482	10/14/2008 10:00	MOORE, KIMBERLY	4906 NEBRASKA AVE	11/19/2008 13:07
175584	10/15/2008 7:18	OWENS, AMANDA	3134 DICKERSON PIK	1/21/2009 10:19
176177	10/21/2008 7:54	OWENS, AMANDA	21 EDENWOLD RD	4/3/2009 11:51
176179	10/21/2008 8:01	OWENS, AMANDA	1306 RURAL HILL ROAD	10/21/2008 13:17
176278	10/21/2008 13:25	OWENS, AMANDA	5252 HICKORY HOLLOW PKWY	10/21/2008 13:26
178351	11/12/2008 6:59	OWENS, AMANDA	2316 EDGE O LAKE DR	11/12/2008 6:59
179382	11/24/2008 12:03	ERICKSON, SONYA	22 EAST THOMPSON LANE	3/31/2009 7:18
179384	11/24/2008 12:15	ERICKSON, SONYA	5734 HICKORY PLAZA	2/27/2009 17:15
179385	11/24/2008 12:18	ERICKSON, SONYA	269 GRAYLYNN DRIVE	3/9/2009 13:06
179387	11/24/2008 12:28	ERICKSON, SONYA	604 MT. PISGAH COURT	2/27/2009 17:21
179389	11/24/2008 12:30	ERICKSON, SONYA	424 CEDARVALLEY DRIVE	3/31/2009 7:17
179804	12/2/2008 9:46	OHARA, KATHERINE	3322 MOOREWOOD DR	12/19/2008 8:53



**Table 8-A.3 Summary of Construction Complaint Investigations Initiated in PY6 (Continued)**

ID	DateTimeInit	DispatchTo	ProbAddress	DateTimeClosed
179853	12/2/2008 12:18	OWENS, AMANDA	3522 DICKERSON PIKE	2/5/2009 7:27
180467	12/9/2008 13:43	OWENS, AMANDA	4401 CATO RD	12/9/2008 13:43
180470	12/9/2008 13:48	OWENS, AMANDA	6764 OLD HICKORY BLVD	12/9/2008 13:48
180472	12/9/2008 13:58	OWENS, AMANDA	3603 W HAMILTON RD	1/9/2009 6:17
180635	12/11/2008 8:55	OWENS, AMANDA	1239 DICKERSON PK	3/4/2009 13:51
180708	12/11/2008 14:19	OWENS, AMANDA	CLAY LICK	12/11/2008 14:19
181224	12/18/2008 14:05	OWENS, AMANDA	4140 CENTRAL PIKE	1/29/2009 13:36
181227	12/18/2008 14:15	BRYANT, HAROLD	4124 CENTRAL PIKE	
181278	12/19/2008 9:25	OWENS, AMANDA	0 MONTICELLO DR	2/3/2009 6:42
181978	12/31/2008 10:42	HOLT, BONNYE	420 POWDER MILL DRIVE	1/23/2009 14:47
182453	1/6/2009 9:50	OWENS, AMANDA	2280 CLAYLICK RD	4/2/2009 14:13
182529	1/6/2009 14:38	OWENS, AMANDA	2427 BRICK CHURCH PIKE	3/4/2009 13:50
182531	1/6/2009 14:41	OWENS, AMANDA	2510 BRICK CHURCH PIKE	2/12/2009 10:37
182670	1/7/2009 13:40	OWENS, AMANDA	1605 HUDSON RD	1/26/2009 12:35
184525	1/27/2009 9:32	BINDER, DALE	860 VISCO DRIVE	2/26/2009 10:08
184970	2/2/2009 7:34	BRYANT, HAROLD	3244 HAMILTON CHURCH RD	3/3/2009 9:07
185471	2/5/2009 13:42	OWENS, AMANDA	8281 OLD SPRINGFIELD	3/13/2009 9:15
185597	2/6/2009 14:42	OWENS, AMANDA	7305 RIVER PARK DR	2/6/2009 14:43
185899	2/10/2009 14:47	MOORE, KIMBERLY	0 OLD HICKORY BLVD	
186632	2/18/2009 6:55	HAYES, JOSH	3502 DICKERSON PK	
186690	2/18/2009 10:30	OWENS, AMANDA	3844 OLD HICKORY BLVD	2/19/2009 10:06
186927	2/19/2009 13:05	OWENS, AMANDA	6827 OLD HICKORY BLVD	2/19/2009 13:05
186928	2/19/2009 13:07	OWENS, AMANDA	4461 EATONS CREEK	2/19/2009 13:08
186929	2/19/2009 13:10	OWENS, AMANDA	1741 ED TEMPLE BLVD	2/19/2009 13:39
186930	2/19/2009 13:15	OWENS, AMANDA	2901 DICKERSON PIKE	2/19/2009 13:15
186934	2/19/2009 13:41	OWENS, AMANDA	JACKMAN RD	3/3/2009 8:45
187036	2/20/2009 13:00	OWENS, AMANDA	5796 CRAFT DR	4/30/2009 8:42
187943	3/3/2009 10:14	OWENS, AMANDA	5135 OLD HICKORY BLVD	3/11/2009 6:06
187945	3/3/2009 10:19	OWENS, AMANDA	2319 WOODRIDGE DR	3/4/2009 7:00
187946	3/3/2009 10:19	OWENS, AMANDA	2319 WOODRIDGE DR	3/3/2009 10:19
187964	3/3/2009 11:10	OWENS, AMANDA	4989 TRANHAM	3/3/2009 11:10
188040	3/3/2009 15:53	PACE, TIFFANY	5128 LANA RENEE CT	
189026	3/13/2009 9:05	OWENS, AMANDA	4010 BRICK CHURCH PIKE	4/22/2009 12:35
190332	3/26/2009 8:00	OWENS, AMANDA	5958 LICKTON PK	3/26/2009 8:13
190334	3/26/2009 8:05	OWENS, AMANDA	3701 DICKERSON PK	3/26/2009 8:13
192459	4/15/2009 11:21	OWENS, AMANDA	711 LEBANON PIKE	4/15/2009 11:23
193007	4/21/2009 8:52	OWENS, AMANDA	2432 BRICK CHURCH	5/14/2009 12:18
193020	4/21/2009 9:20	OWENS, AMANDA	3710 HOMELAND DR	4/22/2009 12:34
193021	4/21/2009 9:20	OWENS, AMANDA	3710 HOMELAND DR	4/21/2009 9:20
193177	4/22/2009 6:35	PACE, TIFFANY	57 HARBOR COVE	6/12/2009 14:35
196471	5/19/2009 10:27	ERICKSON, SONYA	3909 DEVONSHIRE	5/19/2009 13:36
197803	5/29/2009 15:10	BRYANT, HAROLD	330 HURST DRIVE	5/29/2009 15:13
197948	6/1/2009 12:04	OHARA, KATHERINE	2280 CLAYLICK ROAD	7/17/2009 14:04
198358	6/3/2009 15:47	MATHIS, TIM	VEIMAR PROPERTY - CENTENNIAL PI	6/29/2009 15:18
198869	6/8/2009 14:49	MATHIS, TIM	DEAD END OF RIVER FORK ROAD	6/8/2009 15:05
200810	6/23/2009 9:32	OHARA, KATHERINE	2422 BRICK CHURCH PIKE	7/17/2009 14:07



**Table 8-A.4 Summary of Stormwater Engineering Plan Review Numbers**

	July	August	September	October	November	January	February	March	April	May	June	Total
Number of Plan Submittals	150	176	177	173	141	95	121	122	120	98	109	1600
Number of Plan Approvals	49	84	76	72	71	42	52	45	58	41	43	687

\* Plan Submittal Numbers Include: Access database tracked Preliminary PUDs and also KIVA tracked Grading Plans and As-Builts. It is all initial submittals, resubmittals and additional information submitted. The Access database query is called 'Results Matter\_In\_All Submitted'. The KIVA report is called "SWGR DECISIONS BY ACT / EMPL".

\* Plan Approvals Numbers include review results of Approved, Conditionally Approved (Approved Except as Noted) and No Permit Required. Plans Approved Numbers Exclude review results of Returned for Corrections, Withdrawn, Hold or Denied. The KIVA report is called "SWGR SUMMARY BY ACTIVITY". For the Preliminary PUDs, the query is "Results Matter\_Out\_All Approved".

\*In the previous year's Annual Report, a row for "Projects Incorporating LID" was mistakenly completed with erroneous numbers. That column has been omitted from this year's report.

**Table 8-A.5 Summary Tier II Grading Permits and Single Family Home Grading Checklists**

Oversight Activity on Smaller Grading Sites	Number of Activities in PY6
Submitted Checklists for Building Permit Signoffs	114
Checklists Distributed During Demolition Permit Sign-offs	99
Single Family Residential Requiring Tier II Grading Permit	12
Building Permit Sign-off for New Construction	101
Site Inspections for Single Family Residential Construction	266



**Table 10-A.1 Presentations Given by NPDES in PY6**

Date	Forum/Outreach Group	Title/Description of Outreach	Presenter	Estimated Audience Size
9/10/2009	TDEC Level One Erosion Control Workshop	Grading Permit Process and Erosion Control in Davidson County	Dale Binder	130
6/20/2009	Vanderbilt Center for Env. Management, Green Hills neighbors	Storm drain stenciling of VCEMSSA adopted stream segment - NPS pollution prevention	Watershed Group - Michelle Barbero	20
6/6/2009	The Water Festival/Catfish Rodeo at Shelby Park	Stream Model Booth	Watershed Group - Michelle Barbero	300
5/20/2009	Stormwater Routine Maintenance	Rain Garden Webcast	Webcast	7
5/19/2009	TDEC Level One Erosion Control Workshop	Grading Permit Process and Erosion Control in Davidson County	Dale Binder	130
5/12/2009	Percy Priest Environmental Awareness Day	Taught schools kids about stormwater and benthic collection	Megan Sitzlar, Mary Garmon, Steve Winesett	120
5/9/2009	Percy Priest Clean Up	Volunteered trash boat for island cleanup, 40 cu yds of trash, 75 tires	Mary Garmon, Megan Sitzlar, Steve Winesett, Boots O'Hara, Shawn Herman	200
4/20/2009	SNAP	Adopt a Stream & Brown's Creek Restoration presentation	Rebecca Dohn	15
4/18/2009	Earth Day Festival	Stream Model Booth	Watershed Group - Mary Garmon, Megan Sitzlar, Steve Winesett	100
4/17/2009	AWRA Conference	Metro Nashville Water Services Watershed Management Public Outreach Component	Watershed Group - Michelle Barbero	40
3/3/2009	Fair Board	Brown's Creek Restoration @ Fairgrounds	Rebecca Dohn	20
2/26/2009	Water Quality Advisory Committee of the Cumberland River Compact.	Watershed Sampling Plan	Watershed Group - Mary Garmon	20
2/19/2009	Stormwater Routine Maintenance Crew Leaders	Introduction to the Metro -Tune Airport Fill Site	Josh Hayes	10
2/19/2009	Rich Reibeling, Buck Dozier	Brown's Creek Restoration @ Fairgrounds	Rebecca Dohn	5
2/19/2009	TDEC Level One Erosion Control Workshop	Grading Permit Process and Erosion Control in Davidson County	Dale Binder	112
2/14/2009	TWISTER (women in science) @ Adventure Sci. Cen.	Davidson County Watershed Management	Watershed Group - Michelle Barbero, Megan Sitzlar	40
1/30/2009	TDEC Field Office Staff	Metros MS4 Permit Program	Josh Hayes/Steve Winesett	8
1/15/2009	Stormwater Routine Maintenance Staff	Maintenance procedures and Water Quality	Josh Hayes	40
12/10/2008	TDEC Level One Erosion Control Workshop	Grading Permit Process and Erosion Control in Davidson County	Dale Binder	100
11/17/2008	Green Ribbon Committee	Water Quality/Conservation Highlights from the Southeast	Rebecca Dohn	
11/14/2008	Career Day Presentation @ West End Middle School	Chemistry and Biology in the Environmental Field	Sonia Harvat, Watershed Group - Michelle Barbero	30
11/10/2008	Routine Maintenance Supervisors	MS4 Permit Compliance Refresher	Michael Hunt	5
10/25/2008	Warner Park Nature Center - 35th celebration event	Booth set up with Envriospace, nonpoint source pollution information to community	Watershed Group - Michelle Barbero	450
10/24/2008	Metro Planning Commission + Channel 3 audience	Metro Stormwater Management and Low Impact Development	Michael Hunt	30 + TV audience
10/23/2008	Hillwood APES class	Macroinvertebrate Lab for High School students at the WPNC	Watershed Group - Michelle Barbero	30
10/1/2008	Hume Fogg Biology class - Water Cycle Lab	Water Cycle, Watershed, Benthic and Chemical testing for biology lab students	Watershed Group-Michelle Barbero/Megan Sitzlar	60
9/30/2008	Hume Fogg Biology class - Water Cycle Lab	Water Cycle, Watershed, Benthic and Chemical testing for biology lab students	Watershed Group-Michelle Barbero/Mary Garmon	60
9/23/2008	Water Quality Lab Ensworth AP Env Sci class	Water Quality/Chemical testing lag for High School students at WPNC	Watershed Group-Michelle Barbero/Mary Garmon	15
9/4/2008	TDEC Level One Erosion Control Workshop	Grading Permit Process and Erosion Control in Davidson County	Dale Binder	120
9/4/2008	Hume Fogg AP Env class Lab	Macroinvertebrate Lab for High School students at the WPNC	Watershed Group-Michelle Barbero/Mary Garmon/Megan Sitzlar	25
7/23/2008	Warner Park River Romp group	Watershed education to 6-12 year old	Watershed Group-Michelle Barbero/Mary Garmon/Megan Sitzlar	50

Note: Some of the presentations given by MWS NPDES personnel are also documented in the MWS PIO table (10-A.2) of presentations.



**Table 10-A.2 Presentations Documented by the MWS PIO in PY6**

Date	Type	Event or School	Location	Presenter	Subject
1/13/2009	T	Ensworth High School: Tour of Whites Creek WWTP	Whites Creek WWTP		waste water treatment
2/6/2009	T	Media	George Reyer Pumping Station	Mayor Dean	WCIP Press Conference
2/9/2009	T	Murfreesboro	Central WWTP	David Binkley	
2/19/2009	T	Information Systems Tour	Omo WTP, 8th Ave. Resv., K.R.H. WTP, Browns Creek SP, Driftwood CSO, CSC ITS, Central WWTP, & Biosolids	Doug Summers, Brent Freeman, Martha Segal, David Tucker & Ron Taylor & Gilbert Nave	MWS Operations & Technology
2/14/2009	C	TWISTER	Adventure Science Center	Michelle Barbero	Water Quality
2/20/2009	T	St. Paul Christian Academy	K.R. Harrington WTP	Lee Luton	water treatment
2/26/2009	C	District Meeting	Madison Senior Center	Sonia Harvat	CWIP
2/27/2009	C	Neighbors Reaching Out	Mt. Nebo Missionary Baptist Church	Sonia Harvat	CWIP
2/27/2009	T	Roto Rooter	HK.R. Harrington	Sonia Harvat	water treatment
3/2/2009	T	Vanderbilt School of Science & Math	K.R. Harrington WTP	Lee Luton	water treatment
3/2/2009	T	Vanderbilt School of Science and Math	Whites Creek WWTP	Johnny McDonald	waste water treatment
3/2/2009	T	World Wildlife Fund	Omohundro WTP	Sonia Harvat	water treatment
3/5/2009	C	Community Meeting	Cane Ridge Comm. Center	Sonia Harvat	CWIP
3/9/2009	C	Town Hall Meeting	Vine Hill Towers	Sonia Harvat	CWIP
3/10/2009	T	Hume Fogg High School	Whites Creek WWTP	Johnny McDonald	waste water treatment
3/10/2009	T	Hume Fogg High School	K.R. Harrington WTP	Lee Luton	water treatment
3/11/2009	S	Apollo Middle School Career Day	Apollo Middle School	Sandra Derrick	MWS Jobs & Careers
3/11/2009	T	Hume Fogg High School	K.R. Harrington WTP	Lee Luton	water treatment
3/11/2009	T	Trades Advisory Council	Biosolids Facility		mtg & tour
3/19/2009	C	Community Meeting	McGavock High School	James Ray	AMR
3/21/2009	C	Wetland Clean up	TSU		
3/24/2009	T	Mayor's Office Tour	Omo WTP, 8th Ave. Resv., Brown's Creek SP, Driftwood CSO Driveby, Central WWTP, & Biosolids	Tommy Melton, Oline North, Brent Freeman, David Tucker, Ken Cox & Ron Taylor	Facilities tours
3/24/2009	S	Julia Green Elementary	Julia Green Elementary	Sandra Derrick	Enviroscape
3/25/2009	S	Julia Green Elementary	Julia Green Elementary	Sonia Harvat	Enviroscape
3/25/2009	T	Hume Fogg High School	Whites Creek WWTP	Johnny McDonald	waste water treatment
3/26/2009	S	Julia Green Elementary	Julia Green Elementary	Sandra Derrick	Enviroscape
3/26/2009	c	W. Inglewood Neighbors Association	Weast Police Precinct	Sonia Harvat	CWIP
3/27/2009	S	Julia Green Elementary	Julia Green Elementary	Sandra Derrick	Enviroscape
3/27/2009	T	Vanderbilt	Omohundro WTP	Scott Potter	
3/28/2009	C	Earth Hour	Downtown	Sonia Harvat	
3/31/2009	T	Harpeth Hall School: WWTP Tour	Whites Creek WWTP	Johnny McDonald	waste water treatment
4/7/2009	C	Nazarene Trevecca	Trevecca	Sonia Harvat	SW pollution
4/8/2009	C	Shrine Club	Picadilly Cafeteria	Sonia Harvat	SW pollution
4/15/2009	S	Fall-Hamilton Elementary Enhanced Option-presentation	Fall-Hamilton Elementary	Sandra Derrick	Enviroscape & Journey of Your Water Video
4/15/2009	C	Liquid Assets Viewing	Downtown Library	Sonia Harvat	Infrastructure
4/16/2009	C	TAPHCC Trade Show	LP Field	Mary Ellen Jackson	Trades Advisory Council
4/17/2009	C	Sturgeon Release	Shelby Boat Ramp/Nature Center	Sonia Harvat	Cumberland River Quality



**Table 10-A.2 Presentations Documented by the MWS PIO in PY6 (Continued)**

Date	Type	Event or School	Location	Presenter	Subject
4/18/2009	C	Earth Day - Centennial Park	Centennial Park	Sonia, Sandra, & Stormwater Staff	Stream Model, Toxic Dude, Rain Forrest info, and Rain Barrel info
4/21/2009	T	TN Plumbers Assoc	Biosolids Bldg	Mary Ellen Jackson	Biosolids
4/22/2009	C	Shrine Club	Picadilly Cafeteria	Sonia Harvat	water treatment
4/25/2009	C	Music City Marathon	Nashville Area	MWS volunteer	distribute water to runners
4/29/2009	C	Shrine Club	Picadilly Cafeteria	Sonia Harvat	Wastewater Treatment
4/29/2009	T	Council Office Tour	K.R.H. WTP, Brown's Creek SP, 8th Ave. Resv., Central WWTP, and Biosolids	Lee Luton, Brent Freeman, Gilbert Nave, and Ron Taylor	MWS Operations & Technology
5/2/2009	C	Percy Priest Lake Clean Up	Percy Priest Lake	Sandra Derrick/stormwater staff	water tower
5/6/2009	C	Shrine Club	Picadilly Cafeteria	Sonia Harvat	History
5/8/2009	S	Career Day	Hermitage Elementary	Sonia Harvat	Careers in Biology
5/8/2009	T	Drinking Water Week-Tour of K.R.H. WT Plant for Employees	K.R. Harrington WTP	Lee Luton	water treatment
5/12/2009	C	Environmental Awareness Day	Percy Priest Lake	Sonia Harvat & NPDES staff	Macro-invertebrates
5/14/2009	C	Great American Clean up	Bi-Centennial Mall	Sonia Harvat & Sandra Derrick	Scoop the Poop
5/15/2009	C	Great American Clean-Up Celebration	Bicentennial Mall	Sandra Derrick	water tower
5/16/2009	C	Tour De Nash-LP Field	LP Field	Sonia Harvat	water tower
5/18/2009	S	Hermitage Elementary Field Day Event	Hermitage Elementary	Sonia Harvat & Sandra Derrick	water tower
6/6/2009	C	Catfish Rodeo	Shelby Park pond	Sonia Harvat	water tower
6/6/2009	C	Water festival	Shelby Nature Center	Sonia Harvat, Sandra Derrick, SW staff	water truck, Scoop the Poop, stream model, 303(d) info, water treatment, wastewater treatment
6/10/2009-6/14/2009	C	CMMA	downtown	Sandra Derrick & Sonia Harvat	misting tents
6/17/2009	T	Greater Nashville Area Realtors Environmental Committee Tour	K.H. Harrington WTP	Lee Luton	water treatment
6/20/2009	C	Taste of Music City	Korean Veterans Bridge	Sandra Derrick & Sonia Harvat	water tower
7/4/2008	C	Hot Chicken Festival	East Park		Water Truck
7/11/2008	T	Water Plant Tour: Tennessee State University	K.R. Harrington WTP		Water Treatment
7/11/2008	T	Wastewater Plant Tour: Tennessee State University	Whites Creek WWTP		Wastewater Treatment
7/14/2008	T	Vandy Young Scholars Medical Program	Omohundro WTP		Water Treatment
7/14/2008	T	Tour of K.R. Harrington-Sulzer Pump Representative	K.R. Harrington WTP	Lee Luton	Water Treatment Tour
7/23/2008	C	Warner Park River Romp Group: Watershed Education	Warner Park	Michelle Barbero, Mary Garmon, Megan Sitzler	Watershed Education
7/22-24/2008	C	North American Baptist Conference- Roadside Cleanup and Sign Off Project	Nashville Areas		Water Truck
7/26/2008	C	Music City Brewers Festival - Hall of Fame Park	Hall of Fame Park		Water Truck
7/30/2008	T	Wastewater Tour - Vandy Earth & Env. Sciences	Whites Creek WWTP		Wastewater Treatment
7/30/2008	T	Councilman Claiborne	KRH, Omohundro & Central		Facility tours
8/3/2008	C	Mayor's First Day Festival	Sommet Center		2-Water Trucks & 2-
8/5/2008	C	Night Out Against Crime	Glenciff H.S. in Antioch		Water Truck & Misting tent
8/9/2008	C	Neighborhood Event	Murfreesboro Road		Water Truck & Misting tent
8/23/2008	C	Dragon Boat Races	Riverfront Park		Water Truck & Misting tent
8/27/2008	T	Tour of K.R. Harrington-Representative McKim & Creed Consultants	K.R. Harrington WTP	Lee Luton	Water Treatment Tour



**Table 10-A.2 Presentations Documented by the MWS PIO in PY6 (Continued)**

Date	Type	Event or School	Location	Presenter	Subject
9/4/2008	S	Hume Fogg AP Environment Lab Class: Macroinvertebrate Lab	Hume Fogg High School -WPNC	Michelle Barbero, Mary Garmon, Megan Sitzler	Macroinvertebrate Lab
9/4/2008	C	TDEC Level One Erosion Control Workshop		Dale Binder	Grading Permit Process and Erosion Control in Davidson County
9/5-9/14/2008	C	TN State Fair	Fair Grounds		Water Truck Tower
9/16/2008	C	Every Child Matters - Pennington Elementary	Pennington Elementary School		Water Truck Tower
9/20/2008	C	Wine on The River	Shelby Street Bridge		Water Truck
9/23/2008	S	Water Quality Lab Ensworth AP Environment Class	High School Lab at WPNC	Michelle Barbero & Mary Garmon	Water Quality-chemical testing lab
9/26/2008	T	Tour of K.R. Harrington-FM Global Insurance pre-inspection	K.R. Harrington WTP	Lee Luton	Water Treatment Tour
9/27/2008	C	NADHS-Richland Creek Clean-up	Richland Creek-TDOT		River Clean-up
9/30/2008	S	Hume Fogg Biology Class -Water Cycle Lab	Hume Fogg School-Biology Class	Michelle Barbero & Mary Garmon	Water Cycle, Watershed, Benthic & Chemical Testing
9/30/2008	C	Davidson Soil Conservation Field Day	The Hermitage		Water Truck Tower
10/1/2008	S	Hume Fogg Biology Class-Water Cycle Lab	Hume Fogg School-Biology Class	Michelle Barbero & Megan Sitzler	Water Cycle, Watershed, Benthic & Chemical Testing
10/1/2008	S	Water Presentation: MLK Magnet School	MLK Magnet School		Water Presentation
10/1/2008	T	Tour of K.R. Harrington-FM Global Insurance pre-inspection	K.R. Harrington WTP	Lee Luton	Water Treatment Tour
10/3/2008	C	Senior Awareness Day - Bordeaux Hospital	Bordeaux Seniors Home		Table Top Display
10/3/2008	C	Senior Awareness Day - Knowles Home	Knowles Home		Table Top Display
10/7/2008	C	Engage Green	Lipscomb University		Dedicated SW fee
10/8/2008	S	Glenclyff Elementary School	Glenclyff Elementary School		SW pollution/Water Treatment
10/13/2008	C	TDEC Watershed Mgmt plan Event	Shelby Nature Center		delisting of 303(d) streams
10/14/2008	T	Tour for: Chamber of Commerce	MWS Facilities	Leanne Scott	Tour of MWS Facilities
10/16/2008	T	JATC Plumbers	K. R. Harrington		WWTP Tour
10/16/2008	T	K.R. Harrington WP Tour - Big Picture School	K. R. Harrington WTP		Water Plant Tour
10/16/2008	T	Whites Creek WWTP- Rose Park Magnet	Whites Creek WWTP		Wastewater Plant Tour
10/21/2008	T	K.R. Harrington WP Tour - Big Picture School	K. R. Harrington WTP		Water Plant Tour
10/22/2008	T	Tours for: Nashville Area of Commerce Economic Development/Existing Business Group	Driftwood CSO,Brown's Creek SP,Omo. WTP,Airport WPS,Ocala Reservoir,Love Circle Reservoir,8th Ave. Reservoir,W C WWTP,Central WWTP	Sue Amos	Tours of MWS Facilities
10/23/2008	S	Apollo Middle School	Apollo Middle School		SW pollution/Water Treatment
10/23/2008	C	Master Composter Class	PW- S. 5th		BioSolids
10/23/2008	T	K.R. Harrington WP Tour - Big Picture School	K. R. Harrington WTP		Water Plant Tour
10/23/2008	S	Hillwood High School APES class	Hillwood High school-at WPNC	Michelle Barbero	Macroinvertebrate Lab
10/24/2008	S	West End Elementary	West End Middle School		SW pollution/Water Treatment
10/24/2008	C	Metro Planning Commission & Metro Ch 3	Metro Planning Commission	Michael Hunt	Metro Stormwater Management & Low Impact Development
10/25/2008	C	Warner Park 35th Birthday Celebration	Warner Nature center		Enviroscape, Non-Point Source Pollution Info
10/30/2008	S	School Presentation-Neelys's Bend Middle	Neely's Beend Middle School		Water Presentation (In Gym)
11/1/2008	C	HHW Collection Day	DuPont-Hadley recycle site		
11/1/2008	C	Tennessee State University Homecoming Parade	TSU Campus & Community		Parade



**Table 10-A.2 Presentations Documented By the MWS PIO in PY6 (Continued)**

Date	Type	Event or School	Location	Presenter	Subject
11/3/2008	T	Finance Dept., Budget Analyst - Facilities Tour	Driftwood CSO, Brown's Creek SP, Omo. WTP, K.R. WTP, Airport WPS, Ocala Reservoir, Love Circle Reservoir, 8th Ave. Reservoir, W C WWTP, Central WWTP, Dry Creek WWTP	Sue Amos	MWS Facilities Tour
11/4/2008	T	TSU Dental hygienists	K.R. Harrington WTP	Sonia Harvat	Water Plant Tour
11/6/2008	C	League of Women Voters	Hillwood High School	Sonia Harvat	Stormwater Business Plan
11/12/2008	T	MLK High School -WTP tour	K.R. Harrington WTP	Sonia Harvat	Water Plant Tour
11/14/2008	S	Care Day Presentation-West End Middle School	West End Middle School	Sonia & Michelle Barbero	Careers: Chemistry & Biology in Environmental Field
11/5/2008	T	Whites Creek WWTP- TSU Environment Class	Whites Creek WWTP		Wastewater Plant Tour
11/19/2008	C	First Unitarian Universalist Church	Church	Sonia Harvat	All things MWS
11/19/2008	S	GIS Day-Geography Awareness Day: West End Middle School	West End Middle School	Anna Kuoppakaki	Stormwater's GIS Inventory
11/20/2008	T	Tour for: Urban Land Institute Infrastructure Committee	Driftwood CSO, Brown's Creek SP, Omo. WTP, Airport WPS, Ocala Reservoir, Love Circle Reservoir, 8th Ave. Reservoir, W C WWTP, Central WWTP, Dry Creek WWTP	Leanne Scott & Sue Amos	Tour of MWS Facilities
11/20/2008	T	Tour of K.R. Harrington-Department of Homeland Security	K.R. Harrington WTP	Lee Luton	Water Plant Tour

Note: Some the presentations documented by the MWS PIO are also documented in the NPDES presentation table (10-A.1) when NPDES personnel were involved in the presentations.

- S = School Event
- T = Plant Tour
- C = Community Event



**Table 11-A.1 Summary of Quantifiable Stats from Stormwater Management Program**

Categories	Permit Year 1	Permit Year 2	Permit Year 3	Permit Year 4	Permit Year 5	Permit Year 6
Recycled Oil	16 tons	9.1 tons	17.82 tons	20.27 tons	26.88 tons	35.38 tons
Recycled Plastic	266 tons	300.42 tons	1233.28 tons	1244.86 tons	1374.04	1391.93
Recycled Paper	4,477 tons	2,573.84 tons	2,954.69 tons	3,333.47 tons	24,083.74	23,789.07
Recycled Glass	1,798 tons	1,052.7 tons	1,107.05 tons	1,116.52 tons	1,607.48	2,110.05
Total Brush Collection	25,613.10 tons	31,702.78 tons	30,498.85 tons	30,269.40 tons	27,785.25	30,972.21
Total Waste Collected	159,595.04 tons	157,622.99 tons	150,972.54 tons	152,430.24 tons	153,266.01	149,474.79
# of Water Quality Complaints (non-construction) Investigations Initiated in Database	161	213	287	156	135	133
# of Construction Stormwater Related Inspections	4,708	5,509	5,721	6,552	6,327	6,160
# of Grading Permits Issued	270	271	252	239	165	109
# of Engineered Plans Submitted to Stormwater Development and Review	868	1,562	1,427	1,505	1,970	1600
# of Construction Plans Approved or Declared No Permit Needed by Stormwater Development and Review	387	449	507	619	871	687
# of Stormwater Enforcements (NOVs and SWOs)	228	197	283	190	342	188

<sup>1</sup>The recycled plastic total does not include plastic bottles collected with metal cans.

<sup>2</sup>The recycled paper number does not include paper material collected in mixed recyclables from the curbside pick-up.



**Table 11-A.2 Summary of Stormwater FY2010 Budget Expenditure Projections**

<b>Stormwater Division</b>		<b>Annual Expenditure "Projected" FY2010</b>
<b>Normal Operating Budget</b>	<b>Administration</b>	\$2,091,800
	<b>Development Review and Permitting</b>	\$1,096,000
	<b>NPDES Water Quality</b>	\$1,248,200
	<b>Pumping Stations</b>	\$2,500
	<b>Remedial Maint.</b>	\$771,900
	<b>Routine Maint.</b>	\$3,269,600
	<b>Master Planning</b>	\$1,175,000
	<b>Street Sweeping Contracted Services</b>	\$750,000
	<b>Class C Remedial Maintenance Projects</b>	\$2,000,000
	<b>Stormwater Fleet Additions</b>	\$250,000
<b>Stormwater Capital (Bond Funded)</b>		\$10,000,000

Note: These numbers represent the projected expenditures. The actual expenditures are subject to change if revenue sources change.



Table A-1 Ambient Sampling Results for PY6

Watershed Units	Site ID	Date	Time	Temp °C	pH	TKN mg/L Results	BOD5 mg/L Results	COD mg/L Results	Lead mg/L Results	Nickel mg/L Results	Copper mg/L Results	Zinc mg/L Results	TSS mg/L Results	Nitrate+Nitrite mg/L Results	Fecal Coliform colony/100 ml Results	Fecal Strep colony/100 ml Results	Tot Ammonia mg/L Results	TDS mg/L Results	Tot Phosphorus mg/L Results	Diss. Phosphorus mg/L Results	Chromium mg/L Results	Total Nitrogen mg/L Results	Fluoride mg/L Results	Enterococcus colony/100 ml Results	E-coli colony/100 ml Results
Field Blank	9882	8/6/2008	9:45:00 AM			0.27	<2	<20	<.0005	<.0007	0.001	0.009	4	0.66	36	<1	0.04	6	0.096	0.096	<.0002	0.93	0.02	<1	0
Sugartree	9883	8/6/2008	9:45:00 AM	23.3	7.3	<.10	<2	<20	<.0005	<.0007	0.0008	0.1015	6	0.62	180	660	0.09	395	1.063	1.063	<.0002	<.07	0.38	580	140
Sugartree, South	9885	8/6/2008	10:30:00 AM	24.5	7.76	<.10	<2	<20	<.0005	<.0007	0.0026	0.161	18	1.43	1400	1144	0.06	461	0.577	0.577	<.0002	<1.5	0.52	720	1100
Sugartree-dup	9884	8/6/2008	9:50:00 AM	23.2	7.29	<.10	<2	<20	<.0005	<.0007	0.001	0.1107	15	1.43	230	670	0.09	396	0.936	0.936	<.0002	<1.5	0.37	520	170
Trip Blank	9881	8/6/2008	8:30:00 AM			<.10	<2	<20	<.0005	<.0007	0.0005	0.0046	4	0.9	3	<1	0.04	11	0	0	<.0002	<1.0	0.03	<1	0
Ewing	10254	8/13/2008	9:30:00 AM	21.8	7.9	<.10	<2	<20	<.0005	0.0025	0.001	0.0079	2	0.76	140	171	0.09	515	0.545	0.545	<.0002	<0.9	0.51	153	30
Ewing, North	10256	8/13/2008	9:55:00 AM	21.1	8.0	<.10	<2	<20	<.0005	<.0007	0.0009	<.0003	5	0.9	10	335	0.07	534	0.601	0.601	<.0002	<1.0	0.4	280	10
Ewing, South	10255	8/13/2008	9:50:00 AM	21.4	8.2	0.34	<2	<20	<.0005	<.0007	0.0007	0.0039	72	0.72	250	390	0.07	484	0.617	0.617	<.0002	1.06	0.7	350	90
Sevenmile	10599	8/20/2008	8:40:00 AM	21.6	7.97	<.10	<2	<20	<.0005	<.0007	<.0004	<.0003	6	0.78	320	350	<.03	336	0.27	0.27	<.0002	<0.9	0.44	350	260
Sevenmile, East	10598	8/20/2008	8:00:00 AM	20.7	8.1	<.10	<2	<20	<.0005	<.0007	<.0004	<.0003	26	0.5	300	1100	<.03	412	1.051	1.051	<.0002	<0.6	0.47	900	300
Sevenmile, West	10597	8/20/2008	8:00:00 AM	20.1	7.88	0.87	<2	<20	<.0005	<.0007	<.0004	0.0022	21	0.64	200	730	<.03	414	0.949	0.949	<.0002	1.51	0.48	690	170
Field Blank	12441	10/1/2008	9:00:00 AM			<.1	<2	<20	<.0005	0.0069	<.0004	<.0003	<1	<.03	<1	<2	<.03	31	0.04	0.04	<.0002	<0.13	0.01	<2	<1
Sugartree	12442	10/1/2008	9:00:00 AM	15.7	7.2	<.10	<2	<20	<.0005	0.0076	0.0005	0.018	2	0.31	2800	5700	0.03	481	1.376	1.376	<.0002	<0.4	0.32	91000	2600
Sugartree, South	12444	10/1/2008	9:30:00 AM	17.2	7.94	<.10	<2	<20	<.0005	<.0007	0.0009	0.02	3	0.11	2300	4100	<.03	538	0.462	0.462	<.0002	<0.2	0.54	7300	2300
Sugartree-dup	12443	10/1/2008	9:00:00 AM	15.6	6.94	<.10	<2	<20	<.0005	0.0044	0.0007	0.015	2	0.31	3500	5700	<.03	505	0.815	0.815	<.0002	<0.4	0.33	150000	3300
Trip Blank	12440	10/1/2008	8:30:00 AM			<.1	<2	<20	<.0005	0.0012	<.0004	<.0003	<1	<.03	<1	<2	<.03	12	0.016	0.016	<.0002	<0.13	0.02	<2	<1
Ewing	12763	10/8/2008	9:10:00 AM	18.8	7.7	1.10	3	<20	0.0005	<.0007	0.0009	0.028	83	LA	74000	29000	0.14	232	2.352	2.352	<.0002	LA	0.32	49000	29000
Ewing, North	12762	10/8/2008	8:45:00 AM	18.6	7.5	0.76	3	<20	0.0008	<.0007	0.0018	0.019	129	LA	94000	21000	0.11	196	3.072	3.072	<.0002	LA	0.25	30000	14000
Ewing, South	12761	10/8/2008	8:30:00 AM	19.4	7.6	1.00	4	<20	<.0005	<.0007	0.0004	0.017	41	LA	11000	29000	0.14	369	1.469	1.469	<.0002	LA	0.27	36000	3800
Sevenmile	13109	10/15/2008	10:25:00 AM	19.4	7.34	<.1	<2	<20	<.0005	<.0007	0.0006	0.0029	4	LA	460	275	<.03	385	0.884	0.884	<.0002	LA	0.45	240	360
Sevenmile, East	13107	10/15/2008	10:00:00 AM	19.4	6.8	<.1	<2	<20	0.0009	<.0007	0.0014	0.018	18	LA	360	650	<.03	472	1.209	1.209	<.0002	LA	0.34	630	230
Sevenmile, West	13108	10/15/2008	10:05:00 AM	18.7	7.1	<.1	<2	<20	<.0005	0.0012	0.0006	0.016	5	LA	470	400	<.03	429	0.89	0.89	<.0002	LA	0.46	370	350
Sugartree	15335	12/3/2008	10:20:00 AM	11.5	7.3	0.33	<2	<20	0.0011	<.0007	0.0006	0.0046	4	1.1	<1	410	<.03	408	0.8	0.8	<.0002	1.43	0.36	260	<1
Sugartree, South	15337	12/3/2008	10:55:00 AM	9.5	8.05	0.28	<2	<20	<.0005	<.0007	0.0015	0.004	12	0.3	144	140	<.03	496	0.5	0.5	<.0002	0.58	0.49	110	110
Sugartree-dup	15336	12/3/2008	10:20:00 AM	11.4	7.24	0.49	<2	<20	<.0005	<.0007	<.0004	0.1	4	1.2	<1	360	<.03	406	0.8	0.8	<.0002	1.69	0.36	340	<1
Ewing	15666	12/10/2008	10:05:00 AM	11.0	7.3	0.81	<2	65	0.0014	<.0007	0.0013	0.013	23	2	23000	6200	<.03	392	1.4	1.4	<.0002	2.81	0.32	5400	15000
Ewing, North	15667	12/10/2008	10:30:00 AM	10.9	7.8	0.91	<2	36	0.0021	<.0007	0.0017	0.095	8	2	1600	6800	<.03	328	1.7	1.7	<.0002	2.91	0.3	6400	1100
Ewing, South	15668	12/10/2008	10:50:00 AM	11.6	7.8	0.59	<2	<20	0.0019	<.0007	0.0012	0.009	<1	2.6	11000	3000	<.03	593	0.9	0.9	<.0002	3.19	0.39	3500	7000
Field Blank	15977	12/17/2008	10:25:00 AM			0.14	<2	<20	<.0005	<.0007	<.0004	<.0003	<1	<.03	<1	<2	<.03	107	0.03	0.03	<.0002	<0.17	0.03	<2	<1
Sevenmile	15980	12/17/2008	10:25:00 AM	10.22	5.02	0.70	<2	<20	<.0005	<.0007	0.0018	0.0079	<1	1.8	1600	550	<.03	434	0.9	0.9	<.0002	2.5	0.3	440	1000
Sevenmile, East	15979	12/17/2008	9:40:00 AM	10.5	7.7	0.58	<2	<20	<.0005	<.0007	0.0004	0.0024	1	1.9	64	340	<.03	457	0.9	0.9	<.0002	2.48	0.32	290	64
Sevenmile, West	15978	12/17/2008	9:40:00 AM	9.2	7.8	1.10	<2	<20	<.0005	<.0007	<.0004	0.006	4	1.5	150	290	<.03	498	0.9	0.9	<.0002	2.6	0.37	240	150
Trip Blank	15976	12/17/2008	8:10:00 AM			0.15	<2	<20	<.0005	<.0007	<.0004	0.0067	4	0.03	<1	<2	<.03	91	0.03	0.03	<.0002	0.18	0.03	<2	<1
Field Blank	1517	2/4/2009	9:15:00 AM			0.12	<2	<20	<.0005	<.0007	0.0004	<.0003	<1	<.04	<1	<2	<.03	18	0.175	0.175	<.0002	<0.15	0.04	<2	<1
Sugartree	1519	2/4/2009	9:40:00 AM	5.7	7.68	0.80	<2	26	<.0005	<.0007	0.0005	<.0003	4	1.88	220	135	<.03	379	0.849	0.849	<.0002	2.68	0.37	117	50
Sugartree, South	1518	2/4/2009	9:15:00 AM	2.6	7.67	0.31	<2	<20	<.0005	<.0007	0.0008	0.0008	1	0.82	90	36	<.03	389	0.896	0.896	<.0002	1.13	0.37	18	70
Sugartree-dup	1520	2/4/2009	9:40:00 AM	6	7.59	0.66	<2	<20	<.0005	<.0007	<.0004	<.0003	2	1.94	110	36	<.03	366	0.803	0.803	<.0002	2.6	0.36	36	64
Sevenmile	1911	2/11/2009	10:15:00 AM	14.1	7.84	0.51	<2	<20	0.0013	0.0034	0.0019	0.011	1	0.91	91	45	<.03	310	0.709	0.709	<.0002	1.42	0.47	36	64
Sevenmile, East	1909	2/11/2009	9:30:00 AM	13.4	7.64	0.52	<2	<20	0.0015	0.0015	0.0014	0.085	1	0.85	190	54	<.03	341	0.716	0.716	<.0002	1.37	0.36	18	190
Sevenmile, West	1910	2/11/2009	9:35:00 AM	13.5	7.28	0.46	<2	<20	0.0006	0.0022	0.0009	0.1	<1	0.78	200	122	<.03	381	0.743	0.743	<.0002	1.24	0.49	45	170
Trip Blank	1908	2/11/2009	8:00:00 AM			0.19	<20	<20	<.0005	<.0007	<.0004	<.0003	<1	0.08	<1	<2	<.03	<1	0.723	0.723	<.0002	0.27	0.02	<2	<1
Ewing	2204	2/18/2009	8:05:00 AM	8.3	7.98	0.84	3	49	0.0021	<.0007	<.0004	0.014	95	0.75	2800	5200	0.07	246	1.04	1.04	0.0007	1.59	0.26	4000	2300
Ewing, North	2202	2/18/2009	7:30:00 AM	8.4	7.73	1.00	3	54	0.0017	<.0007	<.0004	0.023	80	0.44	2100	3500	0.07	240	1.06	1.06	0.0012	1.44	0.25	5000	1600
Ewing, South	2203	2/18/2009	8:00:00 AM	9	7.84	0.55	<2	24	0.0011	<.0007	<.0004	0.008	24	0.41	660	1200	<.03	317	0.74	0.74	0.001	0.96	0.32	3900	480
Field Blank	4039	4/1/2009	9:15:00 AM			<.1	<2	<10	<.0005	<.0007	<.0004	<.0003	<1	<.03	<1	<1	<.03	7	0.075	0.075	<.0002	<0.13	0.03	<1	<1
Sugartree	4040	4/1/2009	9:15:00 AM	11.6	7.56	0.42	<2	<10	<.0005	<.0007	0.0005	<.0003	2	1.2	110	99	<.03	341	0.569	0.569	<.0002	1.62	0.4	100	110
Sugartree, South	4042	4/1/2009	9:50:00 AM	11.8	8.2	0.25	<2	<10	<.0005	<.0007	0.0015	<.0003	2	0.8	100	160	<.03	371	0.53	0.53	<.0002	1.05	0.41	210	80
Sugartree-dup	4041	4/1/2009	9:15:00 AM	11.6	7.61	0.51	<2	<10	<.0005	<.0007	0.0008	<.0003	1	1.2	110	70	<.03	343	0.556	0.556	<.0002	1.71	0.		



Note: LA=Lost Analysis

Table B-1 Wet Weather Sampling Data Collected in PY6

Site	Date	BOD		COD		Cyanide		NH3-N		NO3-NO2		TKN		Total P		Diss P		TDS		TSS		Chromium		Copper		Lead		Nickel		Zinc		E.coli	
		Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit
Stoners FF	6/11/2009	<b>43.30</b>	mg/L	<b>345.0</b>	mg/L	0.0050	mg/L	<b>0.348</b>	mg/L	<b>1.020</b>	mg/L	<b>4.240</b>	mg/L	<b>17.0</b>	mg/L	<b>11.220</b>	mg/L	<b>238.0</b>	mg/L	<b>282.0</b>	mg/L	<b>10.00</b>	ug/L	<b>75.4</b>	ug/L	<b>37.9</b>	ug/L	<b>13.70</b>	ug/L	<b>726</b>	ug/L	<b>2950</b>	colonies/100mL
Stoners Comp	6/11/2009	<b>3.25</b>	mg/L	20.0	mg/L	0.0050	mg/L	<b>0.143</b>	mg/L	0.250	mg/L	0.500	mg/L	<b>2.69</b>	mg/L	<b>1.340</b>	mg/L	<b>50.0</b>	mg/L	<b>51.2</b>	mg/L	2.00	ug/L	<b>5.11</b>	ug/L	<b>2.20</b>	ug/L	5.00	ug/L	<b>51.3</b>	ug/L	<b>3130</b>	colonies/100mL
Harpeth FF	6/11/2009	<b>25.7</b>	mg/L	<b>130.0</b>	mg/L	0.0050	mg/L	<b>0.348</b>	mg/L	<b>1.870</b>	mg/L	<b>7.170</b>	mg/L	<b>8.19</b>	mg/L	<b>9.020</b>	mg/L	<b>185.0</b>	mg/L	<b>103.0</b>	mg/L	2.00	ug/L	<b>25.2</b>	ug/L	<b>2.85</b>	ug/L	5.00	ug/L	<b>533</b>	ug/L	<b>410</b>	colonies/100mL
Harpeth Comp	6/11/2009	<b>5.12</b>	mg/L	<b>33.2</b>	mg/L	0.0050	mg/L	<b>0.18</b>	mg/L	0.250	mg/L	<b>0.530</b>	mg/L	<b>1.310</b>	mg/L	<b>1.890</b>	mg/L	<b>24.0</b>	mg/L	<b>29.2</b>	mg/L	2.00	ug/L	<b>4.79</b>	ug/L	1.50	ug/L	5.00	ug/L	<b>56.9</b>	ug/L	<b>3950</b>	colonies/100mL
Sugartree FF	6/11/2009	<b>17.50</b>	mg/L	<b>130.0</b>	mg/L	0.0050	mg/L	<b>0.259</b>	mg/L	<b>0.686</b>	mg/L	<b>2.210</b>	mg/L	<b>26.6</b>	mg/L	<b>8.300</b>	mg/L	<b>128.0</b>	mg/L	<b>258.0</b>	mg/L	<b>7.91</b>	ug/L	<b>29.7</b>	ug/L	<b>12.2</b>	ug/L	<b>5.62</b>	ug/L	<b>94.3</b>	ug/L	<b>141360</b>	colonies/100mL
Sugartree FF dup	6/11/2009	<b>13.90</b>	mg/L	<b>97.2</b>	mg/L	0.0050	mg/L	<b>0.261</b>	mg/L	<b>0.697</b>	mg/L	<b>1.980</b>	mg/L	<b>23.6</b>	mg/L	<b>9.020</b>	mg/L	<b>145.0</b>	mg/L	<b>282.0</b>	mg/L	<b>5.06</b>	ug/L	<b>25.5</b>	ug/L	<b>10.1</b>	ug/L	5.00	ug/L	<b>83.1</b>	ug/L	<b>120330</b>	colonies/100mL
Sugartree Comp	6/11/2009	<b>10.40</b>	mg/L	<b>56.2</b>	mg/L	0.0050	mg/L	<b>0.201</b>	mg/L	<b>0.473</b>	mg/L	<b>1.890</b>	mg/L	<b>11.1</b>	mg/L	<b>6.820</b>	mg/L	<b>106.0</b>	mg/L	<b>119.0</b>	mg/L	<b>4.99</b>	ug/L	<b>22.7</b>	ug/L	<b>7.95</b>	ug/L	5.00	ug/L	<b>82.7</b>	ug/L	<b>27550</b>	colonies/100mL
Trip Blank	6/11/2009	2.00	mg/L	20.0	mg/L	0.0050	mg/L	0.06	mg/L	0.250	mg/L	0.500	mg/L	<b>0.0270</b>	mg/L	0.100	mg/L	<b>25.0</b>	mg/L	4.0	mg/L	2.00	ug/L	4.00	ug/L	1.50	ug/L	5.00	ug/L	5.00	ug/L	N/A	colonies/100mL
Field Blank	6/11/2009	5.00	mg/L	20.0	mg/L	0.0050	mg/L	0.06	mg/L	0.250	mg/L	0.500	mg/L	<b>0.0308</b>	mg/L	<b>0.0608</b>	mg/L	<b>40.0</b>	mg/L	4.0	mg/L	2.00	ug/L	4.00	ug/L	1.50	ug/L	5.00	ug/L	5.00	ug/L	N/A	colonies/100mL
Trip Blank	12/9/2008	2.0	mg/L	20.0	mg/L	0.0050	mg/L	0.2	mg/L	0.250	mg/L	0.500	mg/L	<b>0.028</b>	mg/L	0.02	mg/L	<b>41.0</b>	mg/L	4.0	mg/L	2.0	ug/L	5.0	ug/L	1.5	ug/L	5.0	ug/L	<b>7.8</b>	ug/L	1	colonies/100mL
Field Blank	12/9/2008	2.0	mg/L	20.0	mg/L	0.0050	mg/L	0.2	mg/L	0.250	mg/L	0.500	mg/L	0.020	mg/L	0.02	mg/L	<b>33.0</b>	mg/L	<b>5.6</b>	mg/L	2.0	ug/L	5.0	ug/L	1.5	ug/L	5.0	ug/L	<b>9.5</b>	ug/L	1	colonies/100mL
Sugartree FF	12/9/2008	<b>7.7</b>	mg/L	<b>37</b>	mg/L	0.0050	mg/L	0.10	mg/L	<b>0.62</b>	mg/L	<b>2.3</b>	mg/L	<b>0.92</b>	mg/L	<b>0.22</b>	mg/L	<b>320</b>	mg/L	<b>56</b>	mg/L	<b>2.8</b>	ug/L	<b>11</b>	ug/L	<b>4.9</b>	ug/L	5.0	ug/L	<b>56</b>	ug/L	<b>410</b>	colonies/100mL
Sugartree FF dup	12/9/2008	<b>10.0</b>	mg/L	<b>55</b>	mg/L	0.0050	mg/L	0.10	mg/L	<b>0.50</b>	mg/L	<b>1.1</b>	mg/L	<b>0.60</b>	mg/L	<b>0.21</b>	mg/L	<b>120</b>	mg/L	<b>92</b>	mg/L	<b>2.7</b>	ug/L	<b>12</b>	ug/L	<b>4.4</b>	ug/L	5.0	ug/L	<b>60</b>	ug/L	<b>520</b>	colonies/100mL
Sugartree Comp	12/9/2008	<b>7.1</b>	mg/L	<b>42</b>	mg/L	0.0050	mg/L	0.10	mg/L	<b>0.33</b>	mg/L	<b>1.6</b>	mg/L	<b>0.90</b>	mg/L	<b>0.14</b>	mg/L	<b>130</b>	mg/L	<b>80</b>	mg/L	<b>4.1</b>	ug/L	<b>13</b>	ug/L	<b>5.7</b>	ug/L	5.0	ug/L	<b>77</b>	ug/L	<b>1750</b>	colonies/100mL
Stoners FF	10/16/2008	<b>25</b>	mg/L	<b>190</b>	mg/L	0.0050	mg/L	<b>0.71</b>	mg/L	<b>0.69</b>	mg/L	<b>4.0</b>	mg/L	<b>0.530</b>	mg/L	<b>0.097</b>	mg/L	<b>253.0</b>	mg/L	<b>59</b>	mg/L	<b>4.3</b>	ug/L	<b>31</b>	ug/L	<b>9.1</b>	ug/L	<b>6.7</b>	ug/L	<b>280</b>	ug/L	<b>27550</b>	colonies/100mL
Stoners Comp	10/16/2008	<b>9.4</b>	mg/L	<b>72</b>	mg/L	0.0050	mg/L	<b>0.34</b>	mg/L	<b>1.8</b>	mg/L	<b>2.3</b>	mg/L	<b>0.22</b>	mg/L	<b>0.052</b>	mg/L	<b>77</b>	mg/L	<b>26</b>	mg/L	<b>2.4</b>	ug/L	<b>15</b>	ug/L	<b>6.4</b>	ug/L	5.0	ug/L	<b>180</b>	ug/L	<b>17300</b>	colonies/100mL
Harpeth FF	10/16/2008	<b>16</b>	mg/L	<b>180</b>	mg/L	0.0050	mg/L	<b>0.33</b>	mg/L	<b>0.57</b>	mg/L	<b>2.7</b>	mg/L	<b>0.60</b>	mg/L	<b>0.15</b>	mg/L	<b>440</b>	mg/L	<b>64</b>	mg/L	<b>3.3</b>	ug/L	<b>37</b>	ug/L	<b>4.1</b>	ug/L	<b>5.0</b>	ug/L	<b>1100</b>	ug/L	<b>980</b>	colonies/100mL
Harpeth Comp	10/16/2008	<b>4.4</b>	mg/L	<b>52.0</b>	mg/L	0.0050	mg/L	<b>0.34</b>	mg/L	0.250	mg/L	<b>1.7</b>	mg/L	<b>0.200</b>	mg/L	<b>0.078</b>	mg/L	<b>120</b>	mg/L	<b>8.0</b>	mg/L	2.0	ug/L	<b>9.7</b>	ug/L	1.5	ug/L	5.0	ug/L	<b>180</b>	ug/L	<b>100</b>	colonies/100mL
Sugartree FF (had to include with PY05)	10/7/2008	<b>13.0</b>	mg/L	<b>67.0</b>	mg/L	0.0050	mg/L	<b>0.25</b>	mg/L	<b>0.94</b>	mg/L	<b>1.4</b>	mg/L	<b>0.49</b>	mg/L	<b>0.46</b>	mg/L	<b>150.0</b>	mg/L	<b>15.0</b>	mg/L	2.0	ug/L	<b>18</b>	ug/L	<b>2.0</b>	ug/L	5.0	ug/L	<b>44</b>	ug/L	<b>15530</b>	colonies/100mL
Sugartree FF dup	10/7/2008	<b>12.0</b>	mg/L	<b>79.0</b>	mg/L	0.0050	mg/L	<b>0.21</b>	mg/L	<b>0.94</b>	mg/L	1.0	mg/L	<b>0.55</b>	mg/L	<b>0.54</b>	mg/L	<b>120.0</b>	mg/L	<b>16.0</b>	mg/L	2.0	ug/L	<b>18</b>	ug/L	<b>2.0</b>	ug/L	5.0	ug/L	<b>45</b>	ug/L	<b>24890</b>	colonies/100mL
Sugartree Comp	10/7/2008	<b>7.00</b>	mg/L	<b>62.0</b>	mg/L	0.0050	mg/L	<b>0.25</b>	mg/L	<b>0.45</b>	mg/L	1.0	mg/L	<b>0.79</b>	mg/L	<b>0.64</b>	mg/L	<b>65.0</b>	mg/L	<b>82.0</b>	mg/L	<b>3.6</b>	ug/L	<b>26</b>	ug/L	<b>9.4</b>	ug/L	5.0	ug/L	<b>110</b>	ug/L	<b>14210</b>	colonies/100mL
Harpeth FF	7/9/2008	<b>13.0</b>	mg/L	<b>56.0</b>	mg/L	<b>0.0050</b>	mg/L	<b>0.19</b>	mg/L	<b>1.5</b>	mg/L	<b>1.30</b>	mg/L	<b>0.63</b>	mg/L	<b>0.11</b>	mg/L	<b>130.0</b>	mg/L	<b>120.0</b>	mg/L	<b>2.7</b>	ug/L	<b>41</b>	ug/L	<b>5.9</b>	ug/L	5.0	ug/L	<b>650</b>	ug/L	<b>600</b>	colonies/100mL
Harpeth Comp	7/9/2008	>210	mg/L	<b>550.0</b>	mg/L	0.0050	mg/L	<b>0.22</b>	mg/L	<b>0.31</b>	mg/L	1.0	mg/L	<b>0.13</b>	mg/L	<b>0.06</b>	mg/L	<b>51.0</b>	mg/L	<b>20.0</b>	mg/L	2.0	ug/L	<b>11</b>	ug/L	<b>1.9</b>	ug/L	5.0	ug/L	<b>93</b>	ug/L	<b>380</b>	colonies/100mL
Trip Blank	7/9/2008	2.0	mg/L	20.0	mg/L	0.0050	mg/L	0.20	mg/L	0.40	mg/L	1.0	mg/L	0.020	mg/L	0.020	mg/L	20.0	mg/L	4.0	mg/L	2.0	ug/L	5.0	ug/L	1.5	ug/L	5.0	ug/L	5.0	ug/L	1	colonies/100mL
Field Blank	7/9/2008	2.0	mg/L	20.0	mg/L	0.0050	mg/L	0.20	mg/L	0.40	mg/L	1.0	mg/L	0.020	mg/L	0.020	mg/L	20.0	mg/L	4.0	mg/L	2.0	ug/L	5.0	ug/L	1.5	ug/L	5.0	ug/L	5.0	ug/L	1	colonies/100mL

Notes:  
 An extra sample of the Sugartree creek was collected in PY6 to make up for one missed in PY5.  
 Values in bold text are results that exceeded the method detection limit (mdl), while non-bold values are values that did not exceed mdl.



**Table D-1 Biological Assessment Scoring Results**

Date	Test Stream	Reference Stream	Biological Score %
<b>Sevenmile Creek</b>			
5/3/2000	Sevenmile	Whites 5/4/00	52
11/20/2000	Sevenmile	"too dry, not done"	---
5/7/2001	Sevenmile	Whites 5/11/01	90
10/9/2001	Sevenmile	Whites 10/10/01	57
5/3/2002	Sevenmile	Whites 6/4/02	52
10/21/2002	Sevenmile	Whites 10/21/02	52
5/13/2003	Sevenmile	Whites 5/13/03	57
10/21/2003	Sevenmile	Whites 10/22/03	52
5/11/2004	Sevenmile	Whites 5/11/04	67
10/14/2004	Sevenmile	Whites 10/15/04	86
5/10/2005	Sevenmile	Whites 5/11/05	62
10/17/2005	Sevenmile	Whites 10/18/05	76
5/15/2006	Sevenmile	Whites 5/16/06	76
10/17/2006	Sevenmile	Whites 10/18/06	78
5/9/2007	Sevenmile	Whites 5/8/07	62
10/15/2007	Sevenmile	Season Too Dry - Assessment Not done	
5/19/2008	Sevenmile	Whites 5/19/08	81
10/14/2008	Not sampled due to need of ESA permit (while being processed by USFWS)		
5/19/2009	Not sampled due to need of ESA permit (while being processed by USFWS)		
<b>Browns Creek</b>			
5/29/2001	Browns	Whites 5/11/01	52
10/9/2001	Browns	Whites 10/10/01	38
5/30/2002	Browns	Whites 6/4/02	48
10/23/2002	Browns	Whites 10/21/02	33
5/13/2003	Browns	Whites 5/13/03	29
10/23/2003	Browns	Whites 10/22/03	38
5/10/2004	Browns	Whites 5/11/04	24
10/13/2004	Browns	Whites 10/15/04	62
5/11/2005	Browns	Whites 5/11/05	33
10/17/2005	Browns	Not done-severe illicit discharge made conditions hazardous to health	
5/15/2006	Browns	Whites 5/16/06	43
10/17/2006	Browns	Whites 10/18/06	67
5/9/2007	Browns	Whites 5/8/07	52
10/15/2007	Browns	Season Too Dry - Assessment Not done	
5/19/2008	Browns	Whites 5/19/08	43
10/14/2008	Browns	Whites 10/14/08	43
5/20/2009	Browns	Whites 5/19/09	38

Note: These values represent the score of the two assessed streams as compared to the reference reach of Whites Creek.



**Table E-1 Summary of Event Mean Concentrations Used In Seasonal Loading Calculation**

Land Use	Fecal coliform	TSS	TDS	Total Phosphorus	Dissolved Phosphorus	NO2/NO3 Nitrogen	COD	BOD(5)	Zinc	Lead	Cadmium	Copper	TKN
Industrial	2400 <sup>1</sup>	90 <sup>1</sup>	84 <sup>1</sup>	.27 <sup>1</sup>	0.17 <sup>2</sup>	0.75 <sup>1</sup>	61 <sup>1</sup>	9 <sup>1</sup>	.220 <sup>1</sup>	.0237 <sup>1</sup>	.0019 <sup>1</sup>	.0218 <sup>1</sup>	.0014 <sup>1</sup>
Commercial	3000 <sup>1</sup>	48 <sup>1</sup>	74 <sup>1</sup>	.23 <sup>1</sup>	0.17 <sup>2</sup>	0.62 <sup>1</sup>	60 <sup>1</sup>	12 <sup>1</sup>	.150 <sup>1</sup>	.017 <sup>1</sup>	.0009 <sup>1</sup>	.015 <sup>1</sup>	.0016 <sup>1</sup>
Residential	7750 <sup>1</sup>	50 <sup>1</sup>	69 <sup>1</sup>	.31 <sup>1</sup>	0.29 <sup>2</sup>	0.58 <sup>1</sup>	55.5 <sup>1</sup>	9.05 <sup>1</sup>	.073 <sup>1</sup>	.012 <sup>1</sup>	.0005 <sup>1</sup>	.0111 <sup>1</sup>	.00142 <sup>1</sup>
Open Area/Vacant Land/Misc.	5000 <sup>1</sup>	72.3 <sup>2</sup>	134 <sup>2</sup>	.33 <sup>2</sup>	0.14 <sup>2</sup>	0.85 <sup>2</sup>	71.6 <sup>2</sup>	25.4 <sup>2</sup>	.033 <sup>2</sup>	.020 <sup>2</sup>	.001 <sup>2</sup>	.007 <sup>2</sup>	.0010 <sup>2</sup>
Transportation	1700 <sup>1</sup>	99 <sup>1</sup>	77.5 <sup>1</sup>	0.25 <sup>1</sup>	1.93 <sup>2</sup>	0.28 <sup>1</sup>	100 <sup>1</sup>	8 <sup>1</sup>	.200 <sup>1</sup>	.0275 <sup>1</sup>	.001 <sup>1</sup>	.035 <sup>1</sup>	.002 <sup>1</sup>

Note: The Event Mean Concentrations for each land use were obtained from two sources as identified by the superscript: (1) The median values from a study conducted by the University of Alabama and the Center of Watershed Protection, which was titled "Evaluation of NPDES Phase I Municipal Stormwater Monitoring Data." (2) The Event Mean Concentrations used for the calculations for the end of the 1st permit cycle which were derived from the Nashville MS4 Wet Weather sampling program. The Fecal coliform number for Open Area/Vacant land is Medium value of all land uses from source 1. The same parameters used in the EMC calculation in the 1<sup>st</sup> permit cycle were used for this permit cycle.



**Table E-2 Impervious Areas per Watershed**

Watershed	Building Footprint (Acres)	Paved Parking Lot (Acres)	Unpaved Parking Lot (Acres)	Paved Roadway (Acres)	Unpaved Roadway (Acres)	Unpaved Roadways Considered to be Impervious (50% of total area) (Acres)	Sidewalk (Acres)	Greenway (Acres)	Surface Water (Acres)	Total Impervious Area (Acres)	Total Watershed Area (Acres)	Total Watershed Land Area (Acres)	Percent Impervious Per Watershed
Back Creek	3.55	0	0	14.88	0	0	0	0	24.64	18.43	1,620.26	1,595.62	1.16%
Browns Creek	826.67	971.03	137.11	668.97	18.3	9.15	24.58	6.79	42.67	2,644.30	8,847.37	8,804.70	30.03%
Bull Run Creek	9.21	0	0	32.86	5.62	2.81	0	0	39.05	44.88	2,952.05	2,913.00	1.54%
Cooper Creek	233.12	73.12	8.33	173.41	0.29	0.145	8.62	7.65	17.74	504.4	2,373.63	2,355.89	21.41%
Cub Creek	4.76	0.52	0	16.88	0	0	0	0	23.87	22.16	1,605.16	1,581.29	1.40%
Cumberland River	2,353.56	2,109.86	386.66	2,172.48	188.73	94.37	209.48	19.84	4,905.00	7,346.25	51,093.76	46,188.76	15.90%
Davidson Branch	114.25	58.36	0.51	125.92	0.85	0.425	0.93	9.08	15.56	309.48	2,391.79	2,376.23	13.02%
Dry Creek	283.3	210.43	42.36	267.22	16.96	8.48	3.81	6.75	39.58	822.35	5,635.37	5,595.79	14.70%
Ewing Creek	373.61	287.46	37.43	521.34	14.43	7.215	10.2	23.18	110.01	1,260.44	9,003.38	8,893.37	14.17%
Gibson Creek	265.27	255.27	16.18	213.19	0.6	0.3	11.57	5.29	12.89	767.07	2,749.19	2,736.30	28.03%
Gizzard Branch	138.65	246.68	0.3	101.41	1.89	0.945	2.54	3.91	18.93	494.44	1,466.61	1,447.68	34.15%
Harpeth River	622.06	307.02	4.34	676.39	27.49	13.75	23.67	8.17	369.88	1,655.40	18,170.91	17,801.03	9.30%
Indian Creek	10.25	0.83	0	30.92	2.96	1.48	0	0	80.17	43.48	3,929.99	3,849.82	1.13%
Island Creek	0.61	0	0	9.77	0	0	0	2.89	6.36	13.27	516.92	510.56	2.60%
Little Harpeth River	189.23	74.09	1.37	278.78	56.79	28.4	3.71	4.41	139.94	579.98	8,889.23	8,749.29	6.63%
Loves Branch	95.9	64.16	0.75	131.38	14.7	7.35	1.82	5.29	16.8	306.65	1,457.59	1,440.79	21.28%
Marrowbone Creek	67.06	16.13	4.72	171.24	10.68	5.34	0	0	253.98	264.49	12,182.46	11,928.48	2.22%
Mansker Creek	300.76	290.7	8.79	422.47	16.37	8.185	6.93	32.36	191.78	1,070.20	13,075.79	12,884.01	8.31%
Mill Creek Lower	1734	1969.56	112.7	1399.78	49.72	24.86	37.04	22.58	256.28	5,300.52	13,376.47	13,120.19	40.40%
Mill Creek Upper	489.66	337.17	9.79	533.42	11.94	5.97	26.03	25.6	198.68	1,427.64	14,479.56	14,280.88	10.00%
Overall Creek	87.76	65.93	6.73	168.2	10.68	5.34	1.92	7.86	59.62	343.74	4,950.36	4,890.74	7.03%
Pages Branch	142.8	122.44	92.95	156.61	15.1	7.55	7.54	2.52	14.2	532.41	2,068.73	2,054.53	25.91%
Percy Priest Lake, Lower	352.62	356.66	41.93	310.52	11.09	5.545	9.97	18.26	2,319.63	1,095.51	13,376.47	11,056.84	9.91%
Percy Priest Lake, Upper	531.95	238.71	9.62	501.26	37.85	18.925	15.35	2.09	7,122.69	1,317.91	19,575.01	12,452.32	10.58%
Pond Creek	3.27	0	0.41	9.25	2.88	1.44	0	0	19.17	14.37	1,688.32	1,669.15	0.86%
Richland Creek	1109.39	595.24	67.22	984.18	52.6	26.3	39.85	7.05	111.1	2,829.23	14,680.11	14,569.01	19.42%
Sevenmile Creek	959.38	643.34	25.04	793.74	8.1	4.05	28.08	3.51	97.3	2,457.14	10,962.35	10,865.05	22.62%
South Harpeth River, Lower	33.07	2.04	2.35	122.63	33.91	16.955	0	0	180.1	177.05	9,256.78	9,076.68	1.95%
Stoner Creek	494.48	351.59	38.02	501.52	6.81	3.405	17.17	9.74	85.12	1,415.93	7,543.58	7,458.46	18.98%
Stones River	370.52	463.4	43	435.98	19.79	9.895	12.22	20.1	262.27	1,355.12	9,258.64	8,996.37	15.06%
Sugartree Creek	315.25	171.34	0	203.72	2.62	1.31	6.88	0	16.09	698.5	3,030.72	3,014.63	23.17%
Sulpher Creek	19.92	3.81	0	79.59	4.5	2.25	0	0.43	58.08	106	3,839.61	3,781.53	2.80%
Sycamore Creek	98.91	37.56	1.77	279.05	17.34	8.67	0.1	13.16	224.81	439.22	13,066.82	12,842.01	3.42%
Whites Creek	478.75	194.27	68.69	809.71	37.3	18.65	6.01	38.7	489.76	1,614.78	31,738.54	31,248.78	5.17%
<b>Overall County</b>	<b>14,524.74</b>	<b>11,594</b>	<b>1,297.87</b>	<b>14,389.09</b>	<b>795.1</b>	<b>397.55</b>	<b>764.01</b>	<b>389.41</b>	<b>18,012</b>	<b>43,356.76</b>	<b>329,224.00</b>	<b>311,212.00</b>	<b>13.93%</b>

Note: This calculation was performed by extracting GIS coverages of known impervious areas (roads, buildings, sidewalks, etc.). Impervious areas not captured in GIS would not be covered in this calculation. For calculation purposes, approximately 50% of the unpaved roads (gravel) were considered to be impervious. Impervious calculations were not performed on the Combined Sewer System drainage areas. The impervious areas were not recalculated in the PY6 annual report as many of the GIS coverages used to run the calculation have not been updated since the PY5 calculation.



**Table E-3 Land Use Per Watershed**

Watershed	Percent Commercial	Percent Industrial	Percent Residential	Percent Open Space/Natural/Misc.	Percent Transportation	Total Watershed Land Area (Acres)	Estimated Commercial Land Area (Acres)	Estimated Industrial Land Area (Acres)	Estimated Residential Land Area (Acres)	Estimated Open Space/Natural Land Area (Acres)	Estimated Transportation Land Area (Acres)
Back Creek	0.00%	0.00%	89.22%	9.87%	0.92%	1,595.62	0	0	1,423.61	157.49	14.68
Browns Creek	9.75%	8.94%	49.08%	24.20%	8.03%	8,804.70	858.46	787.14	4,321.35	2,130.74	707.02
Bull Run Creek	0.02%	0.00%	44.04%	54.64%	1.30%	2,913.00	0.58	0	1,282.89	1,591.66	37.87
Cooper Creek	8.38%	1.27%	65.22%	17.81%	7.32%	2,355.89	197.42	29.92	1,536.51	419.58	172.45
Cub Creek	0.61%	0.00%	74.83%	23.51%	1.05%	1,581.29	9.65	0	1,183.28	371.76	16.6
Cumberland River (Overall)	13.31%	5.17%	38.39%	37.19%	5.93%	46,188.76	6,147.72	2,387.96	17,731.86	17,177.60	2,738.99
Davidson Branch	5.58%	0.92%	72.87%	15.33%	5.30%	2,376.23	132.59	21.86	1,731.56	364.28	125.94
Dry Creek	5.54%	4.91%	52.88%	31.58%	5.09%	5,595.79	310.01	274.75	2,959.05	1,767.15	284.83
Ewing Creek	7.41%	4.97%	44.22%	37.45%	5.95%	8,893.37	659	442	3,932.65	3,330.57	529.16
Gibson Creek	14.78%	1.07%	60.37%	16.00%	7.78%	2,736.30	404.43	29.28	1,651.90	437.81	212.88
Gizzard Branch	31.23%	1.69%	35.53%	24.52%	7.04%	1,447.68	452.11	24.47	514.36	354.97	101.92
Harpeth River	3.33%	0.05%	45.58%	47.16%	3.87%	17,801.03	592.77	8.9	8,113.71	8,394.97	688.9
Indian Creek	1.01%	0.00%	56.95%	41.18%	0.86%	3,849.82	38.88	0	2,192.47	1,585.36	33.11
Island Creek	0.00%	0.00%	29.22%	68.89%	1.89%	510.56	0	0	149.19	351.72	9.65
Little Harpeth	5.77%	0.07%	45.37%	45.01%	3.78%	8,749.29	504.83	6.12	3,969.55	3,938.06	330.72
Loves Branch	6.97%	0.49%	49.22%	33.30%	10.02%	1,440.79	100.42	7.06	709.16	479.78	144.37
Marrowbone Creek	0.69%	0.14%	45.74%	51.93%	1.49%	11,928.48	82.31	16.7	5,456.09	6,194.46	177.73
Mansker Creek	3.26%	1.76%	59.22%	32.41%	3.36%	12,884.01	420.02	226.76	7,629.91	4,175.71	432.9
Mill Creek Lower	19.81%	9.29%	40.70%	23.00%	7.21%	13,120.19	2,599.11	1,218.87	5,339.92	3,017.64	945.97
Mill Creek Upper	5.70%	1.10%	47.81%	41.62%	3.77%	14,280.88	814.01	157.09	6,827.69	5,943.70	538.39
Overall Creek	5.48%	4.76%	52.33%	33.79%	3.64%	4,890.74	268.01	232.8	2,559.32	1,652.58	178.02
Pages Branch	17.58%	6.64%	34.17%	33.31%	8.30%	2,054.53	361.19	136.42	702.03	684.36	170.53
Percy Priest Lake Lower	2.90%	6.14%	24.48%	64.07%	2.40%	11,056.84	320.65	678.89	2,706.71	7,084.12	265.36
Percy Priest Lake Upper	1.92%	0.12%	22.81%	72.39%	2.75%	12,452.32	239.08	14.94	2,840.37	9,014.23	342.44
Pond Creek	0.09%	0.00%	62.81%	36.38%	0.72%	1,669.15	1.5	0	1,048.39	607.24	12.02
Richland Creek	10.89%	2.89%	56.41%	22.60%	7.22%	14,569.01	1,586.57	421.04	8,218.38	3,292.60	1,051.88
Sevenmile Creek	10.19%	1.47%	60.35%	20.67%	7.31%	10,865.05	1,107.15	159.72	6,557.06	2,245.81	794.24
South Harpeth River Lower	0.59%	0.00%	46.34%	51.38%	1.69%	9,076.68	53.55	0	4,206.13	4,663.60	153.4
Stoners Creek	10.34%	3.17%	54.24%	25.52%	6.74%	7,458.46	771.2	236.43	4,045.47	1,903.40	502.7
Stones River	32.81%	1.23%	30.94%	30.09%	4.92%	8,996.37	2,951.71	110.66	2,783.48	2,707.01	442.62
Sugartree Creek	8.97%	0.03%	65.58%	18.61%	6.81%	3,014.63	270.41	0.9	1,976.99	561.02	205.3
Sulpher Creek	0.50%	0.11%	56.96%	40.24%	2.19%	3,781.53	18.91	4.16	2,153.96	1,521.69	82.82
Sycamore Creek	0.75%	0.01%	59.08%	37.89%	2.27%	12,842.01	96.32	1.28	7,587.06	4,865.84	291.51
Whites Creek	3.07%	0.56%	19.97%	73.72%	2.67%	31,248.78	959.34	174.99	6,240.38	23,036.60	834.34

Note: There are a variety of land uses within Davidson County. In order to determine the major categories, NPDES used GIS to lump a majority of the diverse land uses into one of the five major categories. The percentages were estimated based on total watershed area. Using the estimated percentages, the land use acres were calculated from the total watershed land area. The Open Space/Natural/Misc. includes park land, rural residential, agriculture, undeveloped land, etc. Due to the lack of major change to the GIS land use coverage from the previous years, the calculation was based on the PY5 numbers.



**Table E-4 Annual Runoff Calculation for PY6**

Watershed	(P) Rainfall Total (in.)	(Pj) Fraction of Rain Events Producing Runoff	(Ia) Percent Impervious per Watershed	(Rv) Runoff Coefficient (Rv=0.05+0.9Ia)	Annual Runoff (in.) R=P*Pj*Rv	Annual Runoff (ft)	Total Watershed Land Area (acres)	Total Watershed Land Area (ft <sup>2</sup> )	Estimated Total Runoff Volume (ft <sup>3</sup> )
Back Creek	48.79	0.9	1.16	0.06	2.65	0.22	1,595.62	69,505,207.20	15,372,124.02
Browns Creek	48.79	0.9	30.03	0.32	14.06	1.17	8,804.70	383,532,732	449,480,417.24
Bull Run Creek	48.79	0.9	1.54	0.06	2.80	0.23	2,913.00	126,890,280	29,651,683.20
Cooper Creek	48.79	0.9	21.41	0.24	10.66	0.89	2,355.89	102,622,568.40	91,135,345.21
Cub Creek	48.79	0.9	1.4	0.06	2.75	0.23	1,581.29	68,880,992.40	15,778,503.49
Cumberland River	48.79	0.9	15.9	0.19	8.48	0.71	46,188.76	2,011,982,385.60	1,421,669,117.74
Davidson Branch	48.79	0.9	13.02	0.17	7.34	0.61	2,376.23	103,508,578.80	63,321,726.56
Dry Creek	48.79	0.9	14.7	0.18	8.00	0.67	5,595.79	243,752,612.40	162,602,803.46
Ewing Creek	48.79	0.9	14.17	0.18	7.80	0.65	8,893.37	387,395,197.20	251,662,245.15
Gibson Creek	48.79	0.9	28.03	0.30	13.27	1.11	2,736.30	119,193,228	131,837,424.12
Gizzard Branch	48.79	0.9	34.15	0.36	15.69	1.31	1,447.68	63,060,940.80	82,460,566.41
Harpeth River	48.79	0.9	9.3	0.13	5.87	0.49	17,801.03	775,412,866.80	379,364,328.54
Indian Creek	48.79	0.9	1.13	0.06	2.64	0.22	3,849.82	167,698,159.20	36,923,289.76
Island Creek	48.79	0.9	2.6	0.07	3.22	0.27	510.56	22,239,993.60	5,973,416.53
Little Harpeth River	48.79	0.9	6.63	0.11	4.82	0.40	8,749.29	381,119,072.40	152,946,874.94
Loves Branch	48.79	0.9	21.28	0.24	10.61	0.88	1,440.79	62,760,812.40	55,466,880.07
Marrowbone Creek	48.79	0.9	2.22	0.07	3.07	0.26	11,928.48	519,604,588.80	133,057,389.15
Mansker Creek	48.79	0.9	8.31	0.12	5.48	0.46	12,884.01	561,227,475.60	256,277,683.97
Mill Creek Lower	48.79	0.9	40.4	0.41	18.16	1.51	13,120.19	571,515,476.40	864,969,127.70
Mill Creek Upper	48.79	0.9	10	0.14	6.15	0.51	14,280.88	622,075,132.80	318,685,980.16
Overall Creek	48.79	0.9	7.03	0.11	4.97	0.41	4,890.74	213,040,634.40	88,301,774.00
Pages Branch	48.79	0.9	25.91	0.28	12.44	1.04	2,054.53	89,495,326.80	92,740,696.51
Percy Priest Lake, Lower	48.79	0.9	9.91	0.14	6.11	0.51	11,056.84	481,635,950.40	245,312,123.87
Percy Priest Lake, Upper	48.79	0.9	10.58	0.15	6.38	0.53	12,452.32	542,423,059.20	288,241,598.56
Pond Creek	48.79	0.9	0.86	0.06	2.54	0.21	1,669.15	72,708,174	15,362,153.45
Richland Creek	48.79	0.9	19.42	0.22	9.87	0.82	14,569.01	634,626,075.60	521,996,583.90
Sevenmile Creek	48.79	0.9	22.62	0.25	11.13	0.93	10,865.05	473,281,578	439,163,946.67
South Harpeth River, Lower	48.79	0.9	1.95	0.07	2.97	0.25	9,076.68	395,380,180.80	97,730,997.29
Stoner Creek	48.79	0.9	18.98	0.22	9.70	0.81	7,458.46	324,890,517.60	262,523,099.45
Stones River	48.79	0.9	15.06	0.19	8.15	0.68	8,996.37	391,881,877.20	266,063,202.07
Sugartree Creek	48.79	0.9	23.17	0.26	11.35	0.95	3,014.63	131,317,282.80	124,229,550.97
Sulpher Creek	48.79	0.9	2.8	0.08	3.30	0.28	3,781.53	164,723,446.80	45,327,873.31
Sycamore Creek	48.79	0.9	3.42	0.08	3.55	0.30	12,842.01	559,397,955.60	165,354,799.56
Whites Creek	48.79	0.9	5.17	0.10	4.24	0.35	31,248.78	1,361,196,856.80	480,812,030.02
<b>Overall County</b>	<b>48.79</b>	<b>0.9</b>	<b>13.93</b>	<b>0.18</b>	<b>7.70</b>	<b>0.64</b>	<b>311,212.00</b>	<b>13,556,394,720</b>	<b>8,699,445,849.18</b>

Note: The average rainfall was calculated from averaging numerous MWS operated rain gauges at various locations around the county. The simple method was used to calculate the runoff volume:  $R = P * P_j * R_v$ , Where: P = Annual rainfall (inches); P<sub>j</sub> = Fraction of annual rainfall events producing runoff (assumed to be 0.9); and R<sub>v</sub> = Runoff coefficient.



Table E-5 PY6 Pollutant Loading Estimates

Watershed	Annual Runoff (inches)	Fecal coliform (mpn/100ml)	TSS (mg/l)	TDS (mg/l)	Total P (mg/l)	DP (mg/l)	NO2/NO3 (mg/l)	COD (mg/l)	BOD(5) (mg/l)	Zn (mg/l)	Pb (mg/l)	Cd (mg/l)	Cu (mg/l)	TKN (mg/l)	Total Watershed Land Area Per Land Use	Fecal coliform (billion colonies)	TSS (pounds)	TDS (pounds)	Total P (pounds)	DP (pounds)	NO2/NO3 (pounds)	COD (pounds)	BOD(5) (pounds)	Zn (pounds)	Pb (pounds)	Cd (pounds)	Cu (pounds)	TKN (pounds)	
<b>Back Creek</b>																													
Industrial	2.65	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	2.65	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Residential	2.65	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	1,423.61	30,159.75	42,694.04	58,917.78	264.70	247.63	495.25	47,390.38	7,727.62	62.33	10.25	0.43	9.48	1.21	
Open/Vacant Land	2.65	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	157.49	2,152.57	6,829.64	12,657.97	31.17	13.22	80.29	6,763.51	2,399.35	3.12	1.89	0.09	0.66	0.09	
Transportation	2.65	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	14.68	68.22	871.70	682.392	2.20	16.99	2.47	880.51	70.44	1.76	0.24	0.01	0.31	0.02	
<b>Total</b>																<b>32,380.54</b>	<b>50,395.38</b>	<b>72,258.14</b>	<b>298.08</b>	<b>277.84</b>	<b>578.01</b>	<b>55,034.40</b>	<b>10,197.41</b>	<b>67.21</b>	<b>12.38</b>	<b>0.53</b>	<b>10.45</b>	<b>1.32</b>	
<b>Browns Creek</b>																													
Industrial	14.06	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	787.14	27,364.66	225,160.66	210,149.95	675.48	425.30	1,876.34	152,608.89	22,516.07	550.39	59.29	4.75	54.54	3.50	
Commercial	14.06	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	858.46	37,305.09	130,966.23	201,906.27	627.55	463.84	1,691.65	163,707.79	32,741.56	409.27	46.38	2.46	40.93	4.37	
Residential	14.06	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	4,321.35	485,118.63	686,732.30	947,690.57	4,257.74	3,983.05	7,966.09	762,272.85	124,298.55	1,002.63	164.82	6.87	152.45	19.50	
Open/Vacant Land	14.06	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	2,130.74	154,321.80	489,628.61	907,472.10	2,234.82	948.11	5,756.35	484,888.08	172,013.37	223.48	135.44	6.77	47.41	6.77	
Transportation	14.06	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	707.02	17,410.53	222,466.65	174,153.19	561.78	4,336.98	629.20	224,713.79	17,977.10	449.43	61.80	2.25	78.65	4.49	
<b>Total</b>																<b>721,520.53</b>	<b>1,754,954.45</b>	<b>2,441,372.09</b>	<b>8,357.37</b>	<b>10,157.27</b>	<b>17,919.63</b>	<b>1,788,191.40</b>	<b>369,546.64</b>	<b>2,635.20</b>	<b>467.73</b>	<b>23.10</b>	<b>373.98</b>	<b>38.64</b>	
<b>Bull Run Creek</b>																													
Industrial	2.80	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	2.80	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	0.58	5.03	17.64	27.20	0.08	0.06	0.23	22.05	4.41	0.06	0.01	0.00	0.01	0.00	
Residential	2.80	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	1,282.89	28,716.44	40,650.89	56,098.23	252.04	235.78	471.55	45,122.49	7,357.81	59.35	9.76	0.41	9.02	1.15	
Open/Vacant Land	2.80	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	1,591.66	22,985.81	72,928.84	135,165.48	332.87	141.22	857.39	72,222.75	25,620.92	33.29	20.17	1.01	7.06	1.01	
Transportation	2.80	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	37.87	185.94	2,375.97	1,859.98	6.00	46.32	6.72	2,399.97	192.00	4.80	0.66	0.02	0.84	0.05	
<b>Total</b>																<b>51,893.22</b>	<b>115,973.34</b>	<b>193,150.89</b>	<b>590.99</b>	<b>423.37</b>	<b>1,335.89</b>	<b>119,767.27</b>	<b>33,175.14</b>	<b>97.49</b>	<b>30.60</b>	<b>1.44</b>	<b>16.93</b>	<b>2.21</b>	
<b>Cooper Creek</b>																													
Industrial	10.66	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	29.92	788.20	6,485.41	6,053.05	19.46	12.25	54.05	4,395.67	648.54	15.85	1.71	0.14	1.57	0.10	
Commercial	10.66	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	197.42	6,500.92	22,822.65	35,184.92	109.36	80.83	294.79	28,528.31	5,705.66	71.32	8.08	0.43	7.13	0.76	
Residential	10.66	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	1,536.51	130,707.20	185,028.68	255,339.57	1,147.18	1,073.17	2,146.33	205,381.83	33,490.19	270.14	44.41	1.85	41.08	5.25	
Open/Vacant Land	10.66	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	419.58	23,027.52	73,061.19	135,410.78	333.47	141.47	858.95	72,356.42	25,667.42	33.35	20.21	1.01	7.07	1.01	
Transportation	10.66	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	172.45	3,217.91	41,118.01	32,188.34	103.83	801.59	116.29	41,533.34	3,322.67	83.07	11.42	0.42	14.54	0.83	
<b>Total</b>																<b>164,241.76</b>	<b>328,515.93</b>	<b>464,176.66</b>	<b>1,713.30</b>	<b>2,109.31</b>	<b>3,470.41</b>	<b>352,192.97</b>	<b>68,834.48</b>	<b>473.73</b>	<b>85.83</b>	<b>3.84</b>	<b>71.39</b>	<b>7.96</b>	
<b>Cub Creek</b>																													
Industrial	2.75	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Commercial	2.75	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	9.65	81.97	287.76	443.62	1.38	1.02	3.72	359.70	71.94	0.90	0.10	0.01	0.09	0.01	
Residential	2.75	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	1,183.28	25,964.15	36,754.76	50,721.57	227.88	213.18	426.36	40,797.79	6,652.61	53.66	8.82	0.37	8.16	1.04	
Open/Vacant Land	2.75	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	371.76	5,262.81	16,697.72	30,947.36	76.21	32.33	196.31	16,536.05	5,866.14	7.62	4.62	0.23	1.62	0.23	
Transportation	2.75	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	16.60	79.90	1,020.94	799.22	2.58	19.90	2.89	1,031.25	82.50	2.06	0.28	0.01	0.36	0.02	
<b>Total</b>																<b>31,388.82</b>	<b>54,761.17</b>	<b>82,911.77</b>	<b>308.05</b>	<b>266.43</b>	<b>629.27</b>	<b>58,724.78</b>	<b>12,673.19</b>	<b>64.25</b>	<b>13.83</b>	<b>0.61</b>	<b>10.23</b>	<b>1.31</b>	
<b>Cumberland River</b>																													
Industrial	8.48	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	2,387.96	50,053.12	411,844.81	384,388.49	1,235.53	777.93	3,432.04	279,139.26	41,184.48	1,006.73	108.45	8.69	99.76	6.41	
Commercial	8.48	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	6,147.72	161,075.01	565,482.74	871,785.90	2,709.60	2,002.75	7,304.15	706,853.43	141,370.69	1,767.13	200.28	10.60	176.71	18.85	
Residential	8.48	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	17,731.86	1,200,186.73	1,698,980.28	2,344,592.79	10,533.68	9,854.09	19,708.17	1,885,868.11	307,515.43	2,480.51	407.76	16.99	377.17	48.25	
Open/Vacant Land	8.48	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	17,177.60	750,110.62	2,379,933.51	4,410,941.77	10,862.77	4,608.45	27,979.85	2,356,891.27	836,103.89	1,086.28	658.35	32.92	230.42	32.92	
Transportation	8.48	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	2,738.99	40,666.07	519,624.57	406,776.81	1,312.18	10,130.05	1,469.65	524,873.31	149,975.14	144.34	5.25	183.71	10.50		
<b>Total</b>																<b>2,202,091.55</b>	<b>5,575,865.92</b>	<b>8,418,485.76</b>	<b>26,653.77</b>	<b>27,373.27</b>	<b>59,893.86</b>								



Table E-5 PY6 Pollutant Loading Estimates (Continued)

Watershed	Annual Runoff (inches)	Fecal coliform (mpn/100ml)	TSS (mg/l)	TDS (mg/l)	Total P (mg/l)	DP (mg/l)	NO2/NO3 (mg/l)	COD (mg/l)	BOD(5) (mg/l)	Zn (mg/l)	Pb (mg/l)	Cd (mg/l)	Cu (mg/l)	TKN (mg/l)	Total Watershed Land Area Per Land Use	Fecal coliform (billion colonies)	TSS (pounds)	TDS (pounds)	Total P (pounds)	DP (pounds)	NO2/NO3 (pounds)	COD (pounds)	BOD(5) (pounds)	Zn (pounds)	Pb (pounds)	Cd (pounds)	Cu (pounds)	TKN (pounds)	
<b>Harpeth River</b>																													
Industrial	5.87	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	8.90	129.16	1,062.79	991.93	3.19	2.01	8.86	720.33	106.28	2.60	0.28	0.02	0.26	0.02	
Commercial	5.87	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	592.77	10,753.49	37,752.06	58,201.09	180.90	133.71	487.63	47,190.07	9,438.01	117.98	13.37	0.71	11.80	1.26	
Residential	5.87	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	8,113.71	380,244.68	538,273.08	742,816.85	3,337.29	3,121.98	6,243.97	597,483.12	97,427.43	785.88	129.19	5.38	119.50	15.29	
Open/Vacant Land	5.87	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	8,394.97	253,823.08	805,323.96	1,492,578.29	3,675.75	1,559.41	9,467.85	797,526.91	282,921.56	367.58	222.77	11.14	77.97	11.14	
Transportation	5.87	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	688.90	7,081.86	90,490.83	70,838.78	228.51	1,764.11	255.93	91,404.87	7,312.39	182.81	25.14	0.91	31.99	1.83	
<b>Total</b>																<b>652,032.27</b>	<b>1,472,902.71</b>	<b>2,365,426.94</b>	<b>7,425.64</b>	<b>6,581.22</b>	<b>16,464.24</b>	<b>1,534,325.30</b>	<b>397,205.67</b>	<b>1,456.84</b>	<b>390.75</b>	<b>18.17</b>	<b>241.51</b>	<b>29.53</b>	
<b>Indian Creek</b>																													
Industrial	2.64	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	2.64	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	38.88	317.42	1,114.37	1,717.99	5.34	3.95	14.39	1,392.96	278.59	3.48	0.39	0.02	0.35	0.04	
Residential	2.64	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	2,192.47	46,240.86	65,458.41	90,332.60	405.84	379.66	759.32	72,658.83	11,847.97	95.57	15.71	0.65	14.53	1.86	
Open/Vacant Land	2.64	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	1,585.36	21,571.90	68,442.83	126,851.17	312.39	132.53	804.65	67,780.18	24,044.92	31.24	18.93	0.95	6.63	0.95	
Transportation	2.64	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	33.11	153.18	1,957.29	1,532.23	4.94	38.16	5.54	1,977.07	158.17	3.95	0.54	0.02	0.69	0.04	
<b>Total</b>																<b>68,283.37</b>	<b>136,972.90</b>	<b>220,433.98</b>	<b>728.52</b>	<b>554.29</b>	<b>1,583.90</b>	<b>143,809.04</b>	<b>36,329.65</b>	<b>134.25</b>	<b>35.58</b>	<b>1.64</b>	<b>22.20</b>	<b>2.88</b>	
<b>Island Creek</b>																													
Industrial	3.22	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	3.22	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Residential	3.22	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	149.19	3,838.38	5,433.60	7,498.37	33.69	31.51	63.03	6,031.29	983.48	7.93	1.30	0.05	1.21	0.15	
Open/Vacant Land	3.22	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	351.72	5,838.13	18,523.08	34,330.47	84.55	35.87	217.77	18,343.74	6,507.42	8.45	5.12	0.26	1.79	0.26	
Transportation	3.22	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	9.65	54.46	695.89	544.76	1.76	13.57	1.97	702.92	56.23	1.41	0.19	0.01	0.25	0.01	
<b>Total</b>																<b>9,730.97</b>	<b>24,652.57</b>	<b>42,373.59</b>	<b>119.99</b>	<b>80.95</b>	<b>282.77</b>	<b>25,077.95</b>	<b>7,547.13</b>	<b>17.79</b>	<b>6.62</b>	<b>0.32</b>	<b>3.25</b>	<b>0.42</b>	
<b>Little Harpeth River</b>																													
Industrial	4.82	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	6.12	72.86	599.46	559.50	1.80	1.13	5.00	406.30	59.95	1.47	0.16	0.01	0.15	0.01	
Commercial	4.82	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	504.83	7,512.16	26,372.79	40,658.04	126.37	93.40	340.65	32,965.98	6,593.20	82.41	9.34	0.49	8.24	0.88	
Residential	4.82	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	3,969.55	152,595.38	216,013.50	298,098.63	1,339.28	1,252.88	2,505.76	239,774.98	39,098.44	315.38	51.84	2.16	47.95	6.13	
Open/Vacant Land	4.82	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	3,938.06	97,667.65	309,877.64	574,323.70	1,414.38	600.04	3,643.10	108,864.34	141.44	85.72	4.29	30.00	4.29		
Transportation	4.82	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	330.72	2,788.74	35,634.06	27,895.35	89.98	694.68	100.78	35,994.00	2,879.52	71.99	9.90	0.36	12.60	0.72	
<b>Total</b>																<b>260,636.78</b>	<b>588,497.44</b>	<b>941,535.22</b>	<b>2,971.82</b>	<b>2,642.14</b>	<b>6,595.28</b>	<b>616,018.70</b>	<b>157,495.45</b>	<b>612.69</b>	<b>156.96</b>	<b>7.31</b>	<b>98.94</b>	<b>12.03</b>	
<b>Loves Branch</b>																													
Industrial	10.61	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	7.06	185.09	1,522.94	1,421.41	4.57	2.88	12.69	1,032.21	152.29	3.72	0.40	0.03	0.37	0.02	
Commercial	10.61	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	100.42	3,290.83	11,553.04	17,810.94	55.36	40.92	149.23	14,441.30	2,888.26	36.10	4.09	0.22	3.61	0.39	
Residential	10.61	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	709.16	60,035.70	84,986.34	117,281.14	526.92	492.92	985.84	94,334.83	15,382.53	124.08	20.40	0.85	18.87	2.41	
Open/Vacant Land	10.61	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	479.78	26,204.50	83,141.01	154,092.61	379.48	160.99	977.45	29,208.60	37.95	23.00	1.15	8.05	1.15		
Transportation	10.61	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	144.37	2,680.96	34,256.82	26,817.21	86.51	667.83	96.89	34,602.85	2,768.23	69.21	9.52	0.35	12.11	0.69	
<b>Total</b>																<b>92,397.07</b>	<b>215,460.14</b>	<b>317,423.30</b>	<b>1,052.83</b>	<b>1,365.54</b>	<b>2,222.10</b>	<b>226,747.24</b>	<b>50,399.91</b>	<b>271.06</b>	<b>57.40</b>	<b>2.59</b>	<b>43.01</b>	<b>4.66</b>	
<b>Marrowbone Creek</b>																													
Industrial	3.07	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	16.70	126.86	1,043.79	974.21	3.13	1.97	8.70	707.46	104.38	2.55	0.27	0.02	0.25	0.02	
Commercial	3.07	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	82.31	781.55	2,743.78	4,230.00	13.15	9.72	35.44	3,429.73	685.95	8.57	0.97	0.05	0.86	0.09	
Residential	3.07	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	5,456.09	133,834.39	189,455.51	261,448.60	1,174.62	1,098.84	2,197.68	210,295.61	34,291.45	276.61	45.47	1.89	42.06	5.38	
Open/Vacant Land	3.07	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	6,194.46	98,029.76	311,026.54	576,453.07	1,419.62	602.26	3,656.61	308,015.22	109,267.97	141.96	86.04	4.30	30.11	4.30	
Transportation	3.07	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	177.73	956.30	12,219.45	9,565.73	30.86	238.22	34.56	12,342.88	987.43	24.69	3.39	0.12	4.32	0.25	
<b>Total</b>																<b>233,728.86</b>	<b>516,489.08</b>	<b>852,671.60</b>	<b>2,641.38</b>	<b>1,951.01</b>	<b>5,932.99</b>	<b>534,790.90</b>	<b>145,337.17</b>	<b>454.38</b>	<b>136.15</b>	<b>6.39</b>	<b>77.60</b>	<b>10.04</b>	



Table E-5 PY6 Pollutant Loading Estimates (Continued)

Watershed	Annual Runoff (inches)	Fecal coliform (mpn/100ml)	TSS (mg/l)	TDS (mg/l)	Total P (mg/l)	DP (mg/l)	NO2/NO3 (mg/l)	COD (mg/l)	BOD(5) (mg/l)	Zn (mg/l)	Pb (mg/l)	Cd (mg/l)	Cu (mg/l)	TKN (mg/l)	Total Watershed Land Area Per Land Use	Fecal coliform (billion colonies)	TSS (pounds)	TDS (pounds)	Total P (pounds)	DP (pounds)	NO2/NO3 (pounds)	COD (pounds)	BOD(5) (pounds)	Zn (pounds)	Pb (pounds)	Cd (pounds)	Cu (pounds)	TKN (pounds)	
<b>Percy Priest Lake, Lower</b>																													
Industrial	6.11	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	678.89	10,257.21	84,397.92	78,771.39	253.19	159.42	703.32	57,203.03	8,439.79	206.31	22.22	1.78	20.44	1.31	
Commercial	6.11	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	320.65	6,055.79	21,259.95	32,775.76	101.87	75.30	274.61	26,574.94	5,314.99	66.44	7.53	0.40	6.64	0.71	
Residential	6.11	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	2,706.71	132,057.18	186,939.70	257,976.78	1,159.03	1,084.25	2,168.50	207,503.06	33,836.09	272.93	44.87	1.87	41.50	5.31	
Open/Vacant Land	6.11	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	7,084.12	222,984.41	707,479.74	1,311,234.93	3,229.16	1,369.95	8,317.53	700,630.01	248,547.52	322.92	195.71	9.79	68.50	9.79	
Transportation	6.11	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	265.36	2,839.90	36,287.78	28,407.10	91.64	707.43	102.63	36,654.33	2,932.35	73.31	10.08	0.37	12.83	0.73	
<b>Total</b>																<b>374,194.49</b>	<b>1,036,365.09</b>	<b>1,709,165.96</b>	<b>4,834.89</b>	<b>3,396.34</b>	<b>11,566.59</b>	<b>1,028,565.37</b>	<b>299,070.73</b>	<b>941.90</b>	<b>280.41</b>	<b>14.20</b>	<b>149.91</b>	<b>17.85</b>	
<b>Percy Priest Lake, Upper</b>																													
Industrial	6.38	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	14.94	235.50	1,937.77	1,808.58	5.81	3.66	16.15	1,313.37	193.78	4.74	0.51	0.04	0.47	0.03	
Commercial	6.38	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	239.08	4,710.87	16,538.37	25,496.65	79.25	58.57	213.62	20,672.96	4,134.59	51.68	5.86	0.31	5.17	0.55	
Residential	6.38	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	2,840.37	144,581.79	204,669.50	282,443.90	1,268.95	1,187.08	2,374.17	227,183.14	37,045.18	298.82	49.12	2.05	45.44	5.81	
Open/Vacant Land	6.38	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	9,014.23	296,029.93	939,236.87	1,740,770.96	4,286.97	1,818.72	11,042.20	930,143.29	329,967.03	428.70	259.82	12.99	90.94	12.99	
Transportation	6.38	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	342.44	3,823.58	48,857.12	38,246.74	123.38	952.47	138.18	49,350.63	3,948.05	98.70	13.57	0.49	17.27	0.99	
<b>Total</b>																<b>449,381.68</b>	<b>1,211,239.62</b>	<b>2,088,766.83</b>	<b>5,764.36</b>	<b>4,020.50</b>	<b>13,784.32</b>	<b>1,228,663.39</b>	<b>375,288.63</b>	<b>882.64</b>	<b>328.88</b>	<b>15.88</b>	<b>159.28</b>	<b>20.37</b>	
<b>Pond Creek</b>																													
Industrial	2.54	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	2.54	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	1.50	11.75	41.26	63.60	0.20	0.15	0.53	51.57	10.31	0.13	0.01	0.00	0.01	0.00	
Residential	2.54	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	1,048.39	21,218.36	30,036.64	41,450.57	186.23	174.21	348.43	33,340.68	5,436.63	43.85	7.21	0.30	6.67	0.85	
Open/Vacant Land	2.54	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	607.24	7,928.99	25,156.91	46,625.52	114.82	48.71	295.76	24,913.34	8,837.97	11.48	6.96	0.35	2.44	0.35	
Transportation	2.54	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	12.02	53.36	681.86	38,246.74	1.72	13.29	1.93	688.75	55.10	1.38	0.19	0.01	0.24	0.01	
<b>Total</b>																<b>29,212.47</b>	<b>55,916.67</b>	<b>88,673.48</b>	<b>302.97</b>	<b>236.36</b>	<b>646.65</b>	<b>58,994.34</b>	<b>14,340.02</b>	<b>56.84</b>	<b>14.37</b>	<b>0.66</b>	<b>9.36</b>	<b>1.22</b>	
<b>Richland Creek</b>																													
Industrial	9.87	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	421.04	10,273.13	84,528.92	78,893.66	253.59	159.67	704.41	57,291.82	8,452.89	206.63	22.26	1.78	20.47	1.31	
Commercial	9.87	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	1,586.57	48,389.23	169,879.08	261,896.92	814.00	601.66	2,194.27	212,348.85	42,469.77	530.87	60.17	3.19	53.09	5.66	
Residential	9.87	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	8,218.38	647,524.40	916,633.35	1,264,954.03	5,683.13	5,316.47	10,632.95	1,017,463.02	165,910.64	1,338.28	219.99	9.17	203.49	26.03	
Open/Vacant Land	9.87	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	3,292.60	167,369.84	531,027.12	984,199.65	2,423.78	1,028.27	6,243.06	525,885.78	186,557.25	242.38	146.90	7.34	51.41	7.34	
Transportation	9.87	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	1,051.88	18,179.56	232,295.52	181,847.50	586.60	4,528.59	657.00	234,641.93	18,771.35	469.28	64.53	2.35	82.12	4.69	
<b>Total</b>																<b>891,736.16</b>	<b>1,934,363.99</b>	<b>2,771,791.75</b>	<b>9,761.10</b>	<b>11,634.65</b>	<b>20,431.68</b>	<b>2,047,631.42</b>	<b>422,161.90</b>	<b>2,297.44</b>	<b>513.84</b>	<b>23.83</b>	<b>410.59</b>	<b>45.05</b>	
<b>Sevemille Creek</b>																													
Industrial	11.13	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	159.72	4,396.39	36,174.17	33,762.56	108.52	68.33	301.45	24,518.05	3,617.42	88.43	9.53	0.76	8.76	0.56	
Commercial	11.13	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	1,107.15	38,093.71	133,734.81	206,174.50	640.81	473.64	1,727.41	167,168.51	33,433.70	417.92	47.36	2.51	41.79	4.46	
Residential	11.13	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	6,557.06	582,822.63	825,041.75	1,138,557.62	5,115.26	4,785.24	9,570.48	915,796.34	149,332.56	1,204.56	198.01	8.25	183.16	23.43	
Open/Vacant Land	11.13	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	2,245.81	128,785.97	408,609.14	757,311.54	1,865.02	791.22	4,803.84	404,653.03	143,550.10	186.50	113.03	5.65	39.56	5.65	
Transportation	11.13	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	794.24	15,485.54	197,871.71	154,899.57	499.68	3,857.50	559.64	199,870.42	15,989.63	399.74	54.96	2.00	69.95	4.00	
<b>Total</b>																<b>769,584.24</b>	<b>1,601,431.58</b>	<b>2,290,705.79</b>	<b>8,229.29</b>	<b>9,975.94</b>	<b>16,962.82</b>	<b>1,712,006.35</b>	<b>345,923.41</b>	<b>2,297.15</b>	<b>422.90</b>	<b>19.17</b>	<b>343.23</b>	<b>38.10</b>	
<b>South Harpeth River, Lower</b>																													
Industrial	2.97	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	2.97	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	53.55	490.81	1,723.09	2,656.43	8.26	6.10	22.26	2,153.86	430.77	5.38	0.61	0.03	0.54	0.06	
Residential	2.97	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	4,206.13	99,591.05	140,980.75	194,553.43	874.08	817.69	1,635.38	156,488.63	25,517.52	205.83	33.84	1.41	31.30	4.00	
Open/Vacant Land	2.97	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	4,663.60	71,240.54	226,030.33	418,922.04	1,031.67	437.68	2,657.34	228,841.93	79,407.61	103.17	62.53	3.13	21.88	3.13	
Transportation	2.97	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	153.40	796.73	10,180.47	7,969.56	25.71	198.47	28.79	10,283.30	822.66	20.57	2.83	0.10	3.60	0.21	
<b>Total</b>																													



**Table E-5 PY6 Pollutant Loading Estimates (Continued)**

Watershed	Annual Runoff (inches)	Fecal coliform (mpn/100ml)	TSS (mg/l)	TDS (mg/l)	Total P (mg/l)	DP (mg/l)	NO2/NO3 (mg/l)	COD (mg/l)	BOD(5) (mg/l)	Zn (mg/l)	Pb (mg/l)	Cd (mg/l)	Cu (mg/l)	TKN (mg/l)	Total Watershed Land Area Per Land Use	Fecal coliform (billion colonies)	TSS (pounds)	TDS (pounds)	Total P (pounds)	DP (pounds)	NO2/NO3 (pounds)	COD (pounds)	BOD(5) (pounds)	Zn (pounds)	Pb (pounds)	Cd (pounds)	Cu (pounds)	TKN (pounds)
<b>Sycamore Creek</b>																												
Industrial	3.55	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	1.28	11.22	92.35	86.19	0.28	0.17	0.77	62.59	9.24	0.23	0.02	0.00	0.02	0.00
Commercial	3.55	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	96.32	1,055.73	3,706.32	5,713.92	17.76	13.13	47.87	4,632.90	926.58	11.58	1.31	0.07	1.16	0.12
Residential	3.55	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	7,587.06	214,827.38	304,108.91	419,670.29	1,885.48	1,763.83	3,527.66	337,560.89	55,043.71	444.00	72.99	3.04	67.51	8.64
Open/Vacant Land	3.55	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	1,865.84	34,084.65	108,142.97	200,430.96	493.60	209.41	1,271.39	107,095.95	37,992.14	49.36	29.92	1.50	10.47	1.50
Transportation	3.55	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	291.51	1,810.58	23,135.25	18,110.93	58.42	451.02	65.43	23,368.94	1,869.52	46.74	6.43	0.23	8.18	0.47
<b>Total</b>																<b>251,789.55</b>	<b>439,185.81</b>	<b>644,012.29</b>	<b>2,455.53</b>	<b>2,437.56</b>	<b>4,913.13</b>	<b>472,721.27</b>	<b>95,841.18</b>	<b>551.90</b>	<b>110.66</b>	<b>4.84</b>	<b>87.34</b>	<b>10.72</b>
<b>Whites Creek</b>																												
Industrial	4.24	2400	90	84	0.27	0.17	0.75	61	9	0.22	0.0237	0.0019	0.0218	0.0014	174.99	1,833.57	15,086.89	14,081.10	45.26	28.50	125.72	10,225.56	1,508.69	36.88	3.97	0.32	3.65	0.23
Commercial	4.24	3000	48	74	0.23	0.17	0.62	60	12	0.15	0.017	0.0009	0.015	0.0016	959.34	12,565.12	44,112.11	68,006.17	211.37	156.23	569.78	55,140.14	11,028.03	137.85	15.62	0.83	13.79	1.47
Residential	4.24	7750	50	69	0.31	0.29	0.58	55.5	9.05	0.073	0.012	0.0005	0.0111	0.00142	6,240.38	211,147.33	298,899.45	412,481.24	1,853.18	1,733.62	3,467.23	331,778.39	54,100.80	436.39	71.74	2.99	66.36	8.49
Open/Vacant Land	4.24	5000	72.3	134	0.33	0.14	0.85	71.6	25.4	0.033	0.02	0.001	0.007	0.001	23,036.60	502,876.39	1,595,514.49	2,957,108.45	7,282.43	3,089.52	18,757.78	1,580,066.90	560,526.53	728.24	441.36	22.07	154.48	22.07
Transportation	4.24	1700	99	77.5	0.25	1.93	0.28	100	8	0.2	0.0275	0.001	0.035	0.002	834.34	6,192.48	79,126.57	61,942.52	199.81	1,542.57	223.79	79,925.83	6,394.07	159.85	21.98	0.80	27.97	1.60
<b>Total</b>																<b>734,614.89</b>	<b>2,032,739.51</b>	<b>3,513,619.48</b>	<b>9,592.05</b>	<b>6,550.43</b>	<b>23,144.31</b>	<b>2,057,136.82</b>	<b>633,558.11</b>	<b>1,499.22</b>	<b>554.67</b>	<b>27.00</b>	<b>266.24</b>	<b>33.86</b>

The "Simple Method" was used to calculate the Pollutant Loading Estimates:

For Chemical Parameters;

$$L = 0.226 * R * C * A$$

Where:

0.226 = Unit conversion factor

L = Annual load (pounds)

R = Annual runoff (inches)

C = Pollutant concentration (Event Mean Concentrations) (mg/l)

A = Watershed land area (acres)

For the Biological Parameters:

$$L = 0.00103 * R * C * A$$

Where:

L = Annual load (billion colonies)

0.00103 = Unit conversion factor

R = Annual runoff (inches)

C = Pollutant concentration (Event Mean Concentration) (colonies/100ml)

A = Watershed land area (acres)

The same EMC values used in PY5's calculation were used for PY6. Refer to Annual Report for PY 5 for more details of the calculation.



**Table E-6 Summary for Pollutant Loadings Estimates Per County**

Watershed	Fecal coliform (billion colonies)	TSS (pounds)	TDS (pounds)	Total P (pounds)	DP (pounds)	NO2/NO3 (pounds)	COD (pounds)	BOD(5) (pounds)	Zn (pounds)	Pb (pounds)	Cd (pounds)	Cu (pounds)	TKN (pounds)
Back Creek	32,380.54	50,395.38	72,258.14	298.08	277.84	578.01	55,034.40	10,197.41	67.21	12.38	0.53	10.45	1.32
Browns Creek	721,520.53	1,754,954.45	2,441,372.09	8,357.37	10,157.27	17,919.63	1,788,191.40	369,546.64	2,635.20	467.73	23.10	373.98	38.64
Bull Run Creek	51,893.22	115,973.34	193,150.89	590.99	423.37	1,335.89	119,767.27	33,175.14	97.49	30.60	1.44	16.93	2.21
Cooper Creek	164,241.76	328,515.93	464,176.66	1,713.30	2,109.31	3,470.41	352,192.97	68,834.48	473.73	85.83	3.84	71.39	7.96
Cub Creek	31,388.82	54,761.17	82,911.77	308.05	266.43	629.27	58,724.78	12,673.19	64.25	13.83	0.61	10.23	1.31
Cumberland River	2,202,091.55	5,575,865.92	8,418,485.76	26,653.77	27,373.27	59,893.86	5,753,625.38	1,368,164.35	7,390.40	1,519.17	74.45	1,067.77	116.92
Davidson Branch	120,264.47	221,843.62	314,725.60	1,202.63	1,364.54	2,402.02	239,017.81	45,987.36	312.42	56.91	2.52	47.52	5.50
Dry Creek	279,031.74	621,476.92	920,964.84	3,106.55	3,174.39	6,687.15	641,512.92	144,976.94	792.83	163.66	7.84	119.08	13.42
Ewing Creek	410,046.74	988,770.72	1,487,923.13	4,794.55	4,959.78	10,571.02	1,015,051.90	240,142.63	1,231.34	264.33	12.79	185.00	20.52
Gibson Creek	227,443.56	472,066.56	664,531.53	2,431.88	3,074.49	4,987.15	511,050.28	98,659.27	734.08	125.99	5.69	106.66	11.69
Gizzard Branch	118,784.53	302,768.93	448,490.86	1,463.43	1,690.11	3,288.31	329,004.86	71,394.50	506.58	86.32	4.14	67.65	7.26
Harpeth River	652,032.27	1,472,902.71	2,365,426.94	7,425.64	6,581.22	16,464.24	1,534,325.30	397,205.67	1,456.84	390.75	18.17	241.51	29.53
Indian Creek	68,283.37	136,972.90	220,433.98	728.52	554.29	1,583.90	143,809.04	36,329.65	134.25	35.58	1.64	22.20	2.88
Island Creek	9,730.97	24,652.57	42,373.59	119.99	80.95	282.77	25,077.95	7,547.13	17.79	6.62	0.32	3.25	0.42
Little Harpeth River	260,636.78	588,497.44	941,535.22	2,971.82	2,642.14	6,595.28	616,018.70	157,495.45	612.69	156.96	7.31	98.94	12.03
Loves Branch	92,397.07	215,460.14	317,423.30	1,052.83	1,365.54	2,222.10	226,747.24	50,399.91	271.06	57.40	2.59	43.01	4.66
Marrowbone Creek	233,728.86	516,489.08	852,671.60	2,641.38	1,951.01	5,932.99	534,790.90	145,337.17	454.38	136.15	6.39	77.60	10.04
Mansker Creek	465,918.97	949,638.39	1,448,543.65	4,965.14	4,634.99	10,559.10	996,621.63	229,919.19	1,107.44	247.05	11.43	173.77	20.89
Mill Creek Lower	1,287,065.50	3,338,115.13	4,682,641.34	15,657.01	18,247.97	34,693.94	3,436,809.41	717,064.61	5,486.13	917.43	46.33	734.97	75.35
Mill Creek Upper	546,875.50	1,219,323.34	1,921,079.26	6,171.80	5,580.06	13,595.37	1,273,705.89	317,117.26	1,332.25	323.96	15.18	211.00	25.34
Overall Creek	152,476.31	335,973.59	507,210.43	1,694.82	1,576.27	3,686.65	346,722.47	80,790.74	414.10	88.50	4.26	62.16	7.19
Pages Branch	135,298.40	368,374.77	538,315.24	1,703.09	2,004.10	3,830.18	379,421.51	86,171.97	539.95	101.66	5.03	75.72	7.84
Percy Priest Lake, Lower	374,194.49	1,036,365.09	1,709,165.96	4,834.89	3,396.34	11,566.59	1,028,565.37	299,070.73	941.90	280.41	14.20	149.91	17.85
Percy Priest Lake, Upper	449,381.68	1,211,239.62	2,088,766.83	5,764.36	4,020.50	13,784.32	1,228,663.39	375,288.63	882.64	328.88	15.88	159.28	20.37
Pond Creek	29,212.47	55,916.67	88,673.48	302.97	236.36	646.65	58,994.34	14,340.02	56.84	14.37	0.66	9.36	1.22
Richland Creek	891,736.16	1,934,363.99	2,771,791.75	9,761.10	11,634.65	20,431.68	2,047,631.42	422,161.90	2,787.44	513.84	23.83	410.59	45.05
Sevenmile Creek	769,584.24	1,601,431.58	2,290,705.79	8,229.29	9,975.94	16,962.82	1,712,006.35	345,923.41	2,297.15	422.90	19.17	343.23	38.10
South Harpeth River, Lower	172,119.13	378,914.63	624,101.46	1,939.72	1,459.94	4,343.77	392,767.72	106,178.56	334.95	99.80	4.67	57.32	7.39
Stoner Creek	445,484.55	981,640.67	1,424,583.07	4,928.67	5,656.36	10,432.09	1,033,835.99	219,931.95	1,372.61	261.11	12.21	202.80	22.39
Stones River	377,458.64	976,524.78	1,504,000.81	4,742.43	4,715.60	10,959.96	1,061,349.20	246,558.09	1,561.68	280.82	13.64	206.27	22.87
Sugartree Creek	225,545.98	443,330.87	635,211.33	2,339.25	2,807.36	4,744.69	479,005.46	95,023.18	627.69	115.99	5.13	95.27	10.81
Sulphur Creek	83,359.79	169,552.05	269,179.62	892.59	747.36	1,925.97	177,739.22	44,083.42	169.98	44.01	2.02	28.23	3.57
Sycamore Creek	251,789.55	439,185.81	644,012.29	2,455.53	2,437.56	4,913.13	472,721.27	95,841.18	551.90	110.66	4.84	87.34	10.72
Whites Creek	734,614.89	2,032,739.51	3,513,619.48	9,592.05	6,550.43	23,144.31	2,057,136.82	633,558.11	1,499.22	554.67	27.00	266.24	33.86
Overall County	13,068,013.02	30,914,998.30	46,910,457.70	151,835.49	153,727.77	335,065.22	32,127,640.60	7,587,089.83	39,216.40	8,316.27	398.87	5,836.65	657.13



Metropolitan Nashville – Davidson County  
NPDES-MS4 Permit No. TNS068047  
Cycle 2, Year 6  
November 2009

## Appendix B – Example Public Educational Materials



Photograph of trash collected from Percy Priest clean-up event. NPDES assisted in coordinating.



Metropolitan Nashville – Davidson County  
NPDES-MS4 Permit No. TNS068047  
Cycle 2, Year 6  
November 2009

**NPT Presents**

# **Liquid Assets:** **The Story of Our Water Infrastructure**

**Opening Remarks by Mayor Karl Dean**

**Wednesday, April 15, 2009**

**5:30 pm - 7:30 pm**

**The Downtown Library**

615 Church Street

Nashville, TN 37219

Moderator

**Laurel Creech**, Team Green

and a Cumberland River Compact Board Member

Panel Members

**Scott Potter**, MWS Director

**Councilman Parker Toler**, District 31

**Pete DeLay**, President/CEO of Sherman Dixie Concrete  
representing TN Infrastructure Alliance

**Andrew Swank**, Vice President for W.L. Hailey & Co.  
representing Associated General Contractors

rsvp to [Sonia.Harvat@nashville.gov](mailto:Sonia.Harvat@nashville.gov)



**Npt**  
Nashville Public Television



A Local Public Television Station Event



Did you know... a Grading Permit is required for most land disturbance activities in Metro Nashville

The Addition, Removal, and/or Disturbance of > 100 cubic yards of material requires a Grading Permit

Clearing, grubbing, and/or stripping vegetation from an area > 10,000 sq. ft. (approximately 1/4 acre)

ANY Development Activity in the Floodway and/or 100-year Floodplain

Failure to obtain a Grading Permit can result in Monetary Penalties  
 Please call 615-880-2420  
 or visit [www.nashville.gov/stormwater](http://www.nashville.gov/stormwater)  
 for further information

Slides Aired on Channel 3



Improper Waste Disposal Can Cause Water Pollution

- > Inspect Dumpster Areas for Cleanliness Daily.
- > Lids Should be Closed and all Drain Plugs Should be in Place.
- > Report Leaky Dumpsters to the Waste Company



Poor Site Housekeeping Can Cause Water Pollution

- > There should be no unpermitted discharges to storm drains or creeks.
- > Storage of materials/chemicals/equipment should not contaminate stormwater runoff
- > Routinely inspect storm drains and stormwater outfalls.
- > If applicable, make sure all Industrial Stormwater permits are being followed.



Wash Water is Water Pollution

Industrial/Commercial Facilities Should:

- > Routinely inspect and clean parking lot for trash.
- > Never pressure wash the parking lot without collecting the wash water and routing it to the sanitary sewer.
- > Never dump dirty mop water outside. Dirty mop water should be disposed in the sanitary sewer.
- > Never wash commercial or industrial vehicles in areas that drain to storm drains or creeks.



Slides Aired on Channel 3



Did You Know... Poor site housekeeping and management practices could result in pollution in our streams tomorrow?

Our storm drains and ditches are designed to route **clean stormwater** to our streams. Pollutants that are washed or dumped into our storm drains or ditches route directly to our streams. Per State, Federal, and Local regulations, dumping any pollutant into a storm drain or ditch is **illegal!**

When it rains, stormwater washes away any pollutants left exposed to the environment, transporting these pollutants to our streams through storm drains and ditches.

These sources of pollution can result in the issuance of a "Notice of Violation".

What can Business Owners do to help keep our streams unpolluted?

- Keep your site clean!
- Review your site's housekeeping practices and procedures with your employees.
- Keep all potential pollutants in locations not exposed to rainfall or stormwater runoff.
- Review educational materials that can be found on our website (see next slide).

For more information, go to [www.nashville.gov/stormwater](http://www.nashville.gov/stormwater)

Click this link...

Slides Aired on Channel 3



## Shelby Bottoms Nature Center

# May & June 2009 Program Schedule

Shelby Bottoms Nature Center is open Tuesday through Friday From 12 to 4 p.m. and Saturday 9 a.m. to 4 p.m.

Shelby Bottoms Greenway is open 7 days a week from dawn to dusk.

**Mailing Address:**  
 Shelby Bottoms Nature Center  
 1900 Davidson St  
 Nashville, TN 37206

**Phone:** 615-862-8539  
**Fax:** 615-262-0245

**Email:**  
 shelbybottomsnature@nashville.gov  
**Web:** www.nashville.gov/parks/nature



Requests for ADA accommodation should be directed to the Nature Center at (615) 862-8539.



Spring turns to summer, a multitude of wildflowers are in full bloom, birds are nesting, school is coming to an end, and play time is on many family's minds! If you have yet to visit the nature center this year, now is the time. There's so much fun planned for spring and summer at the Nature Center! Rain barrel workshops are full, but never fear. *We have planned a second workshop most days, so*

*give us a call back and we can probably get you in!* And don't miss Fairytales and Nature Children's Picnic, sure to be a hit with the young at heart of all ages. Find treasures, learn about geocaching and how to use a GPS at *Treasure Hunting in the Bottoms*; imitate frog calls and go on a frog search with an expert at *Frog Walk with Froghaven Farm*; cook with raw foods; celebrate the wonders of migration; hear nature stories by the river and more! Once again this year, **WATER FEST** is back! And this summer it is even bigger because it has merged with the extremely popular **CATFISH RODEO** free youth fishing day, offered by TN Wildlife Resources Agency and Cumberland River Compact previously held at Centennial Park. Look for a whole day of activities and fun! And finally, don't miss our next art exhibit opening! Doug Walpus: Reflections in Wildlife will open in May with a on-site demonstration by the artist.

### MAY

<b>Welcome back, swallows!</b>	Saturday, May 2 2-3 p.m. Age level: All ages Call 862-8639 to register	After a long winter... spring is here! And with it comes the return of our beloved migratory birds that belong to the swallow family. Come discover more about tree swallows, purple martins and others! Leader: Christie Wisner
<b>Rain Barrel Workshop</b>	Saturday, May 9 10-11 a.m. Age level: Adults; children welcome Call 862-8539 to register	Complete your own 55 gallon rain barrel to take home! Learn how to capture rainwater to use on your landscaping and house plants while you save energy used to process drinking water and slow storm water runoff. \$35 materials fee. Leader: Mekayle Houghton, Cumberland River Compact
<b>Fairytales and Nature Children's Picnic</b> 	Saturday, May 9 11 a.m.-2 p.m. Age level: All ages Call 862-8539 to register Free	Take this wonderful opportunity to bring a picnic lunch and a blanket to the Shelby Bottoms Nature Center for a fun-filled day of puppet shows, stories, face painting, games, and guided nature hikes through an "enchanted forest"! This will be a great chance for families and friends to enjoy a FREE event that incorporate the whimsy of nature and fairytales, while spending time in the park! Hosted by Shelby Bottoms Nature Center and Tammy Derr of Fairytales Children's Bookstore

Registration is required! Programs could be cancelled due to inclement weather or low registration, so sign up today!



Example Parks Educational Flyer (Other Metro Parks Publish Similar Materials)



## Shelby Bottoms Nature Center May 2009 programs

MAY		
Continued...		
<b>Spring time Scavenger Hunt</b>	Tuesday, May 12 5-6 p.m. Age level: 6-12 years Call 862-8539 to register	Join me in a search for all the wonderful things that make Spring such a long awaited season! Leader: Christie Wiser
<b>Rain Barrel Workshop</b>	Friday, May 15 12-1 p.m. & 1:30-2:30 p.m. Age level: Adults; children welcome Call 862-8539 to register	Complete your own 55 gallon rain barrel to take home! Learn how to capture rainwater to use on your landscaping and house plants while you save energy used to process drinking water and slow storm water runoff. \$35 materials fee. Leader: Mekayle Houghton, Cumberland River Compact
<b>Where is Wildlife?</b>	Friday, May 15 6-7 p.m. Age level: All ages Call 862-8539 to register	Come celebrate endangered species day at the Nature Center. We will learn about wildlife and what you can do to protect all of our wonderful creatures. Leader: Robin Mahoney
<b>May Family Hike</b>	Saturday, May 16 10-11 a.m. Age level: All ages Call 862-8539 to register	May is a great time to enjoy the greenway. Enjoy a leisurely walk as we search for mudbugs at the Bottoms. Leader: Robin Mahoney
<b>Painting on the Porch</b>	Saturday, May 16 2-3 p.m. Age level: All ages Call 862-8539 to register	Let the beautiful things in nature that surround us this time of year inspire you to create your own masterpiece! Come create a nature painting! Beginners are encouraged to attend, but all skill levels welcome. Leader: Christie Wiser
<b>Frog Walk with Froghaven Farm's Lisa Powers</b>	Friday, May 22 7:30-9 p.m. Age level: All ages 862-8539 to register	Amphibians are active on warm spring nights in the Bottoms! Come walk the greenway with amphibian expert Lisa Powers as we discover which frogs call Tennessee home, search for the frogs who call the Bottoms home and have fun trying to imitate frog calls! Leader: Lisa Powers with Froghaven Farms and Denise Weyer
<b>Get that Garden Planted!</b>	Saturday, May 23 10-11 a.m. Age level: All ages Call 862-8539 to register	Time is ticking... and growing season is here! Help us get our "teaching garden" planted at the Nature Center! Everyone that helps gets to take home some seeds to plant! Leader: Christie Wiser
<b>Migration Celebration</b>	Saturday, May 23 2-3 p.m. Age level: All ages Call 862-8539 to register	Migration is not always easy for the birds that spend their spring and summer in Tennessee. Come see for yourself as we encounter many of the <i>Bird Hurdles</i> our feathered friends must worry about. Leader: Robin Mahoney
<b>Field day fun for the little ones!</b>	Thursday, May 28 1-2 p.m. Age level: 3-5 years Call 862-8539 to register	Let's have a little fun with some "field day" games that have a spin on them that involves nature! If the weather's right, we will be in the field. If it rains, we will still have fun in the classroom. Leader: Christie Wiser
<b>Cooking with Raw Foods!</b>	Friday, May 29 5-6 p.m. Age level: Adults; children welcome Call 862-8539 to register	As funny as "cooking with raw foods" may sound, there are some wonderful dishes that can be created without heat involved. Let's take advantage of some wonderful produce that is available in Tennessee this time of year by learning how to prepare a few "tasty" dishes.... just in time for picnic season! Leader: Christie Wiser

Registration is required! Programs could be cancelled due to inclement weather or low registration, so sign up today!



Example Parks Educational Flyer (Other Metro Parks Publish Similar Materials)



## Shelby Bottoms Nature Center



## May & June 2009 programs

### MAY continued...

<b>Stories by the River</b>	Saturday, May 30 10-11 a.m. Age level: All ages Call 862-8539 to register	Discover <i>Where the Wild Things Are</i> at Shelby Bottoms. Join Volunteer Naturalist Yvonne on the Nature Center's back porch for a story and nature walk. Leader: Yvonne Saunders, Volunteer Naturalist
<b>Treasure Hunting in the Bottoms</b>	Saturday, May 30 11 a.m. - 1 p.m. Age level: All ages Call 862-8539 to register	Come join Dr. Chris Vanags, from Vanderbilt's Center for Science Outreach, and Jacob Thornton, Vanderbilt GIS Coordinator, for a modern day treasure hunt in the park! You'll be introduced to geocaching and will learn how to use a handheld GPS, or global positioning system, to locate hidden treasures in this friendly group competition! Leaders: Chris Vanags and Jacob Thornton, Vanderbilt
<b>Doug Walpus: Reflections in Wildlife</b>	Saturday, May 30 2-4 p.m. Age level: Adults; children welcome	This collection includes prints and sculptures created by artist, Doug Walpus. Inspired by a love of the outdoors and nature, Doug has been creating art focused on nature throughout most of his life. Some of Doug's accomplishments include: commission work for Ducks Unlimited in Gallatin, Tennessee; entries in the Federal Duck Stamp and the Wildlife Habitat State Competitions. Doug has also done commission work for conservation groups and parks in other states such as Nebraska and Texas. This exhibit will close August 29, 2009. Come to this opening to get a chance to meet the artist and see him create one of his works of art!
<b>Exhibit opening and demonstration by artist</b>	<b>No registration required</b>	

### JUNE

<b>Water Festival and Catfish Rodeo</b>	Saturday, June 6 8:30 a.m. - 2 p.m. Age level: All ages Call 862-8539 for more info	Join the naturalists of Shelby Bottoms and our partners at TN Wildlife Resources Agency, Cumberland River Compact, and Nashville Public Television for the 2nd annual Water Festival and the 7th annual Catfish Rodeo which has moved from Centennial Park to Shelby Park's Lake Sevier for the first time! Other guests for the day will include: Metro Water Services, Nashville Zoo, Vanderbilt Center for Science Outreach, Metro Beautification, US Coast Guard and so many more! We will celebrate that which is so precious to everyone: WATER!! Free youth fishing, games, exhibits, animals, activities, face painting and more!  We will also Hike the Aquatic Habitats on this <b>National Trails Day!</b>  <b>For more information about registering for the youth free fishing rodeo call 837-1151</b>
<b>Learnin' About Sturgeon</b>	Thursday, June 11 1-2 p.m. Age level: All ages Call 862-8539 to register	Come to the nature center to learn all about that ancient fish, endangered in TN, now swimming in the Cumberland River: the Lake Sturgeon! TN Wildlife Resources Agency with other partners including SNBC, released 70 young sturgeon on April 17! They can live to be over 150 and grow to 8 feet! Come learn more! Leader: SBNC Staff
<b>Batty Facts</b>	Friday, June 12 Time: 7:30-9 p.m. Age: All ages Call 862-8539 to register	Bats eat bugs! Bats aren't blind! Bats don't even get caught in your hair. Learn all about these and other bat facts as well as a serious new threat to their health and how we can help. With luck, we will see a few of these mysterious winged mammals tonight! Leader: SBNC staff

Registration is required! Programs could be cancelled due to inclement weather or low registration, so sign up today!



Example Parks Educational Flyer (Other Metro Parks Publish Similar Materials)



## Shelby Bottoms Nature Center June 2009 programs

### JUNE continued

#### Picking up After People!



Saturday, June 13  
 10-11 a.m.  
 Age level: All ages  
 Call 862-8539 to register

Join the naturalists of Shelby Bottoms on a quest to find as much litter as possible while we learn about the history of how humans used the land that is now the park. Why do people leave behind trash? Have they always done that? We will clean up the park today and leave it better for tomorrow! All ages welcome!  
 Leader: SBNC staff

#### Beautiful Bugs!

Saturday, June 13  
 2-3 p.m.  
 Age level: All ages  
 Call 862-8539 to register

With all the wonders of summer time, insects are a favorite here at the Nature Center! Come learn interesting facts about our six-legged friends. We will also take a hike in search of butterflies, dragonflies and other insects.  
 Leader: Christie Wiser



#### Rain Barrel Workshop

Thursday, June 18  
 12-1 p.m. & 1:30-2:30 p.m.  
 Age level: Adults;  
 children welcome  
 Call 862-8539 to register

Complete your own 55 gallon rain barrel to take home! Learn how to capture rainwater to use on your landscaping and house plants while you save energy used to process drinking water and slow storm water runoff. \$35 materials fee.  
 Leader: Mekayle Houghton, Cumberland River Compact

#### Delightful Dads

Saturday, June 20  
 2-3 p.m.  
 Age level: All ages  
 Call 862-8539 to register

In honor of "father's day" we will explore a few ways that some male creatures take part in parenthood. It even occurs with certain birds that live here in the park!  
 Leader: Christie Wiser

#### A River of Trees

Saturday, June 20  
 10-11 a.m.  
 Age: All Ages  
 Call 862-8539 to register

Have you ever wondered why there are always so many trees along the river? This is your chance to find out just how important these trees really are. Food, animal homes and erosion control are just a few of the things you will discover on your Shelby Bottoms tree adventure.  
 Leader: Robin Mahoney

#### Weed or Wildflower?



Thursday, June 25  
 1-2 p.m.  
 Age: 6-12 years  
 Call 862-8539 to register

We love to look at the wildflowers when they bloom! Did you know some of these beautiful flowers are the same ones we consider weeds? Join in the fun and learn all about weeds!  
 Leader: SBNC staff



#### Dragonflies are Awesome!

Friday, June 26  
 6-7 p.m.  
 Age level: All ages  
 Call 862-8539 to register

Come learn more about this "super-star" insect of Shelby Bottoms. Not only are they fun to watch, they also help control harmful insect populations such as mosquitoes.  
 Leader: Christie Wiser

#### Stories by the River



Saturday, June 27  
 10-11 a.m.  
 Age level: All ages  
 Call 862-8539 to register

Let's meet on the porch with a view of the river. We will use our imaginations while we enjoy nature stories then perhaps a short hike around the Nature Center grounds.  
 Leader: Yvonne Saunders, Volunteer Naturalist

#### Treats off the Trail

Saturday, June 27  
 2-3 p.m.  
 Age level: All ages  
 Call 862-8539 to register

Bring your favorite treat to the Nature Center to enjoy on the back porch. We will discover some of the "treats" that different wildlife enjoy this time of year, and then hike around to see a few.  
 Leader: Christie Wiser

**Registration is required! Programs could be cancelled due to inclement weather or low registration, so sign up today!**

Be sure to check out a program at Warner Park Nature Center, Bells Bend Outdoor Center and Beaman Park Nature Center!

Go to [www.nashville.gov/parks/nature](http://www.nashville.gov/parks/nature) for more info.



Example Parks Educational Flyer (Other Metro Parks Publish Similar Materials)



Trash clean-up coordinated by NPDES and TSU Students



Trash clean-up coordinated by NPDES and TSU Students



Trash clean-up coordinated by NPDES and TSU Students



# Hazardous Waste Education & Collection Day Saturday, November 1, 2008 9am – 1pm

At these recycling drop off locations:

Hillsboro High School

Bellevue at the MTA Park & Ride  
Coley Davis Road and Highway 70 S.

Dupont Hadley Middle School

Joelton Middle School

Elysian Fields Kroger



## These items will be accepted:

- Small batteries (A, AA, AAA, C, D, 9-volt, button)
- Compact Fluorescent Bulbs (CFLs) & Fluorescent tubes
- Cell phones
- Mercury Thermometers can be exchanged for a digital thermometer
- Unused and out of date medications (Metro Police will be present)

## These items will NOT be accepted.

Car Batteries~Tires~Paint ~Other Hazardous Waste Not Listed Above

Please take these items to the East Convenience Center  
943-A Dr. Richard G. Adams Dr, 862-8631

**RESIDENTIAL WASTE ONLY.  
NO BUSINESS WASTE WILL BE ACCEPTED**



Educational Event Sponsored by Metro and State Agencies



Example Public Education Event for School Children NPDES Participated in.



Example Public Education Event for School Children NPDES Participated in.



The 7<sup>th</sup> Annual Catfish Rodeo and The Water Festival events were held at Shelby Bottoms Park on June 6, 2009. The two events engaged the community to connect with local waters through games, fishing, scavenger hunts, and water education activities. Nearly 2,000 pounds of catfish were stocked into Lake Sevier at Shelby Bottoms Park for eager people of all ages to test their fishing skills.

Metro Water Services contributed heavily with three booths and two water stations. Educational information was provided to the festival patrons on: proper pet waste disposal, Davidson County impaired streams, adopt-a-stream information, water treatment, and water quality indicators through macroinvertebrates, posters, charts and an interactive stream model. As always, the stream model provided a popular educational tool with people of all ages. People discovered species of aquatic life that reside in area streams and gained understanding of how water quality greatly impacts ecosystems. The Water Festival proved to be an excellent opportunity to educate the community of the environmental programs within Stormwater.



NPDES Write-up on Two Educational Events they Participated in  
(Note: The events actually occurred just prior to the start of the permit year.)



# GREEN HILLS NEWS



VOLUME 21

JUNE 25, 2009

NUMBER 26



Vanderbilt graduate students and friends who have adopted Sugartree Creek are (l-r): Dane Vick, Lydia Ward, Rachel Ward Vick, Elliott Ward, Sandy Ewing and Michelle Barbero.  
 Photo by Joey Garrison

## VU graduate students, neighbors confront Sugartree Creek pollution

By Joey Garrison  
 Staff Writer

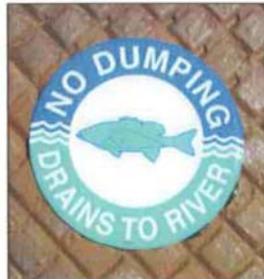
Vanderbilt University graduate students are leading the way to ensure Sugartree Creek in Green Hills sees cleaner days.

Joined by a handful of area residents, students walked the commercial heart of Green Hills Saturday morning, branding about 50 sewer drains with stickers urging citizens to consider the nearby creek before littering.

"We're reaching out and working with the community," said student organizer Michelle Barbero. "This is really about bringing environmental awareness to the area."

The task, known as stenciling, was the first of several projects to be undertaken by Vanderbilt's Center for Environmental Management, a doctorate graduate program whose student association recently adopted the congested one-mile stretch of Sugartree Creek from Hobbs Road to Hilldale Drive through Metro Water Services Adopt-a-stream program. Step one may seem minor, but organizers say it's a necessary starting point.

"It gives them a connection of the streets and the streams," Barbero said  
 See Sugartree on Page 7



Stickers are placed on storm drains.

## New law will open charter school enrollment to most Metro students

By Joey Garrison  
 Staff Writer

"She pulled a rabbit out of the hat," glowed Kipp Academy Principal Randy Dowell.

That's the way the elated charter school leader explained how state Rep. Beth Harwell (R-Nashville) unexpectedly passed her bill last week, lifting state charter school restrictions.

Three weeks ago, Harwell's legislation to expand the number of students eligible to attend charter schools seemed all but dead, stalled in the House Education Committee at the hands of House Democrats. But days before the 106th General Assembly adjourned, legislators revived the bill,

voting for it overwhelmingly.

With its approval, any student in Tennessee who qualifies for free and reduced lunches can apply to charter schools. In Nashville, that means 75 percent of the school district's students can seek entrance to Metro's five charter schools.

Supporters like Dowell may call the victory a miracle. More accurately, it appears Democrats, many of whom had opposed the bill from the beginning, listened to pressure from Washington, while the Tennessee Education Association, the state teachers' union, changed its stance.

"I'm very pleased that we were able

See Charter on Page 3

## Harding water main project is underway

By James Nix  
 Staff Writer

Originally set to begin last Monday, a project to replace about 15,500 feet of water main along Harding Place began this week near Belle Meade Boulevard.

Officials pushed the start date back to this Monday and posted electronic signs notifying drivers of the pending work. Monday morning Belle Meade Police closed one lane of Harding Place just east of Belle Meade Boulevard while workers began cutting into the

road.

The project will eventually replace the water main along Harding from Belle Meade Boulevard to Granny White Pike.

"They don't at this point know how much of the road they'll tear up (at once)," said Metro Water Services spokeswoman Sonia Harvat. "It depends on how fast they're able to work, but they'll tear up a section and

See Water on Page 13



A one-lane section of Harding Place in Belle Meade closed this week as workers cut up the road preparing to replace a water main. Photo by James Nix

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June 25, 2009, *The News*, Page 7

## Sugartree ...

From Page One

of stenciling. "A lot of people don't realize that what goes off the street and what goes into storm drains actually does end up in the stream. There's no treatment process or anything; it just goes straight there."

For Sugartree Creek, the unencumbered flow of non-point source pollutants – runoff, sediment, pathogens and nutrients – has caused its waters and the surrounding Richland Creek watershed to be labeled "impaired" according to section 303(d) of the federal Clean Water Act.

"Because (Green Hills) is such a commercial area, there is a lot of impervious surface and there's a lot of water that flows during rain events," Barbero said. "It picks up every bit of the oil, anti-freeze, dirt, plastic bottles, cigarette butts – every bit of that, you name it."

"I like to call it every remnant of our lives," said volunteer Renee Gaudreau, who learned of the project at the Green Hills Family YMCA.

"We have these amazing, beautiful places in Green Hills, but they're not going to be if you have a polluted river running through it," she said.

In all, environmentalists consider 300 of Davidson County's 2,500 miles of streams to be impaired. The goal for the Vanderbilt students is to add

Sugartree Creek to the 61 miles of streams d-listed by Metro Water in recent years for improved water quality.

With the stenciling process now complete, future assignments for the crew of Vanderbilt volunteers include establishing a day to remove trash from the creek and knocking on doors of nearby businesses and residences to bring awareness to their cause.

A concentrated clean-up effort has long been needed to address the concerns of folks like Bob Henry, a volunteer and Green Hills resident who lives on Cross Creek Road.

"We've recently become victims of drainage overflows in our front yard," Henry said. "A lot of the new development that's taken place has kind of thwarted a lot of the natural drainage patterns. A lot of people have ended up with overflow in their backyards and front yards."

Councilman Sean McGuire, who represents Green Hills, said he walks his dog everyday along Sugartree Creek, which has allowed him to detect problems with the "overgrowth" of vegetation and the collection of refuse.

"Certainly, if you drive by, you can see a good bit of trash," he said. "It does kind of need to be generally cleaned up. People getting involved and volunteering their time to clean up the creek is a great thing."

But for people who don't live near Sugartree Creek, the watershed can go unnoticed.

"When you have a built human environment, people stop noticing that there's a stream right there that they drive across every single day," said student Sandy Ewing. "There's a lack of awareness of the impairment of our waters and how it all connects to our well-being."

As students and volunteers hit the pavement over the weekend, several curious onlookers asked about the project. The interest is encouraging, organ-

izers say.

"In order to hit the nonpoint source pollution problem – which is everywhere – community involvement and education is 100 percent what it's going to take," Barbero said.

Launched in 1995, VCEMS seeks to promote the alliance among industry, government and academia to study the relationship of environmental policy to business management and operations, according to its Web site. Courses combine aspects of

engineering, law and business.

Besides VCEMS, nearly 20 organizations, including the Shriners, Father Ryan High School and Lighting 100's Team Green, have signed on for a two-year commitment to adopt a stream through Metro Water Services.

To learn how to adopt a stream, visit [www.nashville.gov/water](http://www.nashville.gov/water)



Michelle Barbero places a sticker on a storm drain along Hillsboro Circle to remind potential litterers of nearby Sugartree Creek.

Photo by Joey Garrison

Local Newspaper Article Continued (Note: The article was published just prior to the start of the permit year.)



NASHVILLECITYPAPER.COM

TheCityPaper THURSDAY February 26, 2009 25

## CityNews

SPECIAL REPORT

# Stormwater stress

A look at the politics, and potential political ramifications, behind the new fee proposal

(Second of two parts)

By Nate Rau  
 nrau@nashvillecitypaper.com

Not long after Mayor Karl Dean's first budget was passed by Metro Council last year, the city's two most-recent finance directors found themselves together in conversation.

David Manning, finance director during former mayor Bill Purcell's administration, asked his replacement, Richard Riebeling, how in the world he managed to put off dealing with stormwater for another year.

### Catching up

To read the first installment of *The City Paper's* series on stormwater, visit [nashvillecitypaper.com/news.php?viewStory=59218](http://nashvillecitypaper.com/news.php?viewStory=59218).

### Political fallout

Elected leaders ponder the political dangers on taking action on stormwater fees.  
 Page 26

It wouldn't have been unfair for Riebeling to ask Manning that very same question for the years before Dean took office.

In early 2008, Riebeling said the goal was to have a new capital plan for water, sewer and stormwater projects in place to coincide with the budget in July.

But as Dean's administration began studying the issue, it became clear more than a few months would be needed to develop a comprehensive plan to bring to Metro Council.

Dean joked last year that if he were to raise water and sewer rates without explaining the need, people would show up in front of the historic downtown courthouse with lanterns and pitchforks.

But now, a 7.5 percent increase in water and sewer rates, along with a first-ever stormwater fee, which will be \$3 for most residents, are on the fast-track to be in place this summer.

And the decision to raise Nashville's water bills for the first time in more than a decade will forever be on Dean's political resume.

### Years late in getting here?

"Rate increases are always politically challenging," Manning said. "And adding a new fee adds both political and communication complexity that can result in extended debates often pointing out the new complexities and perceived inequities brought about by the new proposal."

Some on the Metro Council, such as at-large Councilman Charlie Tygard, have used the proposed rate increases and new stormwater fee as another opportunity to antagonize the Purcell administration, stating the capital plan ought to have been in place years earlier.

But Manning points out that a new stormwater fee would



have been difficult to justify to ratepayers, because water department revenues were not in short supply.

Although Council studies dating back to the administration of then-Mayor Phil Bredesen showed the need to overhaul and fully fund a stormwater program, no action was ever taken. In fact, Water revenues were actually raided and used to fund the bonds issued to build what is now LP Field.

"I want to be convinced that they don't have any more bonding capacity and they need to raise rates to do this," District 4 Councilman Michael Craddock said. "There's still this big bone that's called the \$4 million we pay to the stadium, and it still sticks in my craw."

### A tough proposition

Observers point out it would have been a difficult political maneuver for Bredesen to raise rates in the 1990s, after voters had approved by referendum the plan to use Water revenues for the stadium construction.

But the backlog of citizen projects began to build before

Dean ever took office, meaning the same conundrum faced Purcell. Manning said steady Water Department revenues made asking for a stormwater fee a tough proposition.

"It was Mayor Purcell's approach in this and all other areas to manage well the resources we already had before going back to the taxpayers, in this case ratepayers, for additional resources," Manning said.

By Purcell's last year in office the calls from citizens with flooding houses and thousands of dollars in property damage began to pour in and still no action was taken. As of today, there are about 2,000 known stormwater repairs backlogged, ranging from a flooded driveway to homes so damaged they need to be torn down.

Although it was apparent that action was imminently needed in 2007, at least part of the issue, Manning conceded, was the

With resident complaints mounting, the Dean administration will likely implement the first-ever stormwater fee for Metro.

CONTINUED ON PAGE 26 >

Matthew Williams/The City Paper

Local Newspaper Article



# CityNews

## SPECIAL REPORT – STORMWATER STRESS

<< Stormwater FROM PAGE 25

fact that introducing a new stormwater fee would have been nearly impossible in an election year.

And Purcell, for his part, didn't exactly ignore the problem.

He moved stormwater from Public Works to the water department and planned to increase its annual funding from \$7 million to \$21 million.

That move has been applauded by the strongest advocates of improving stormwater services on the Council.

In the months leading up to Dean's water reform plan, there were whispers that maybe Public Works should again oversee the Type C projects, which are classified by stormwater as the least severe.

Riebeling acknowledged that was considered by the administration, but as of yet, no move has been made.

The benefits of passing the stormwater fee will go beyond cleaning up inlets and drains so backyards don't flood. Metro has participated in the Federal Emergency Management Agen-

cy's home buyout program since 2002.

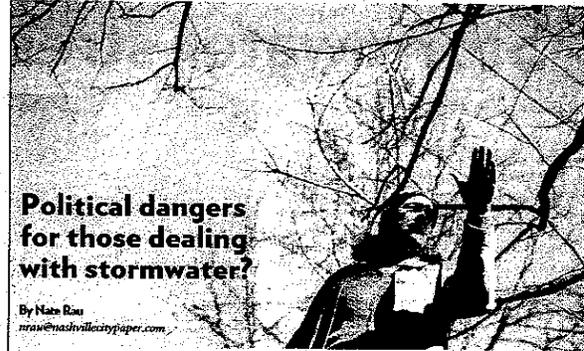
FEMA's program allows a local government to pay 25 percent of the cost to purchase a home that floods extensively. To date, Metro has purchased 48 homes and there are 70 more on the FEMA buyout list eligible as part of the program.

But lack of stormwater funding meant there were no more funds to participate in the program and that will change once the fee is passed by Council, according to Stormwater Director Tom Palko.

### 'Just want it fixed'

And as Council ponders the political fallout from passing a stormwater fee during a time of a history-making poor economy, hundreds of Nashvillians hope and pray the next heavy rain-fall doesn't ruin their lifelong investment.

"I can't find my backyard," Inglewood resident Rhonda Gant said. "Whenever it rains, my patio floods completely. My patio I can't even use, it's muddy, it's rocky. It's ridiculous. When I pull in my driveway, I have to be careful, because it's rock. I just want it fixed." ■



## Political dangers for those dealing with stormwater?

By Nate Rau  
 nraue@nashvillecitypaper.com

Metro Council's Emily Evans

As Metro Council begins to consider a stormwater fee for the first time ever, Metro leaders are left to acknowledge the political dangers of taking the unprecedented action. The thousands of people who have near daily stormwater problems, such as south Nashville resident Garrett Dawson, will be happy to pay the new fee. But Dawson said he'll expect his issues to be taken care of in return.

If Mayor Karl Dean and Council members whose districts have the largest stormwater issues don't return constituents with a reliable service, they'll be held politically responsible.

"I'm happy to pay \$4 or \$5 a month," said Dawson, whose flooding problem has advanced to the point his recently remodeled basement is now threatened. "It's cheaper than new carpet or new furniture. But, I want my problem taken care of, too."

Dawson was one of hundreds of Nashvillians who have received a letter saying it could be years, even after funding is in place, before their problem is addressed. And while Dean's administration has issued assurances that repairing the known issues will be a foremost priority, the reality is that much of the infrastructure repairs accomplished by dedicated stormwater funding will never be seen by the typical Davidson County resident.

"Part of the problem in this whole plan is that a lot of the improvements that are going to have to be made to the system are not something people see," said Metro Finance Director Richard Riebeling. "They're behind the scenes, you know, replacing pipes. They're not very sexy, to be candid. Truthfully some of the stormwater money will address more directly some of the citizens' concerns.

"Some of the people are going to see [that] there will be money to get their problems solved in the near future," he said.

Some local politicians, on the other hand, view handling the stormwater problems as a winning political issue. Chief among them is District 23 Councilwoman Emily Evans, who has made stormwater overhaul a sort of personal crusade.

Councilman Michael Craddock joked earlier this year that he would gladly consider backing a stormwater fee, so long as it was introduced by Dean's administration and not Evans.

"Every time I look up, there's Emily Evans holding some sort of meeting on stormwater," Craddock said.

Evans said she came to care about stormwater when she entered office in the middle of the last term. It became clear that it was one of the biggest issues in her affluent Belle Meade district. She's held so many public meetings across the county on the issue, that she can't even keep track how many times she's stood up and advocated for a stormwater fee.

"You definitely don't want to just run out and slap fees on things as a first response," Evans said. "I think it should have been done sooner. Let me add to that — had it been done sooner I'm not sure the sense of urgency and collaboration would have been in there within the government.

"But people I talk to understand the need for this and they want it done." ■

Matthew Williams/The City Paper



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## Bill holds promise of needed action

By Emily Evans • February 12, 2009

Post a Comment Recommend Print this page Email this article Share

On Feb. 6, Mayor Karl Dean submitted his long-anticipated bill for funding of our water, sewer and storm-water system. In so doing, he ushered in a new approach — watershed management — for that most precious of resources: water.

Nashville has been well served first by a water department that has brought clean drinking water from the Cumberland River to our residents and businesses for more than 150 years. With the passage of the federal Clean Water Act in 1971, we got serious about treating our sewage before discharging it into the Cumberland. Now we recognize, through parity funding, a third system of storm water that also is vital to the health of our city.

**ADVERTISEMENT** Storm-water management is so much more than the cleaning of storm sewers, ditches and culverts. Since 1996, when the Environmental Protection Agency and the Tennessee Department of Environment and Conservation issued our first permit regulating storm-water runoff, our responsibilities have grown from data collection on illicit charges and documenting our system to a robust program that includes engineering services, public education, stream testing and, yes, cleaning ditches and culverts.

### Storm-Water Issues Long Overlooked

Despite the additional unfunded regulatory burdens placed on us by state and federal government, we have been hesitant to recognize that storm-water management is a system as important as water and wastewater. From 1996 until 2002, we did our best to fund it through property taxes at Public Works. In 2002, when we moved responsibility for storm-water management to Metro Water Services, we first acknowledged the role the program played in our natural water cycle. But, as if to say that storm-water management was important but not that important, we decided to fund it through excess sewer revenues.

Using table scraps from the wastewater fund meant we weren't spending as much as we should on our sewer infrastructure, and we didn't have enough money for our storm-water program. To make matters worse, the burden for storm-water management was being placed almost exclusively on the backs of homeowners and large water users like hotels, hospitals and our residential colleges.

With time and the increase that naturally occurs with the cost of things like chemicals and electricity, the excess revenues were depleted, and the storm-water program had begun to compromise our ability to invest in our sewer system.

Working together, Metro Council members, environmental groups, neighborhood associations, business leaders and members of the administration have spent the past 18 months educating the public on the need for rate reform that provides an equitable, dedicated funding source for storm water on parity with water and sewer fees. The introduction of Mayor Karl Dean's proposal is the



Emily Evans

Residents should back proposed rate increases (02/12/2009)  
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culmination of that effort and, I think, for the most part meets the community's needs.

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Certainly, the council must thoughtfully deliberate the proposal. Like so many things we do, this proposal won't be viewed as perfect by all. So that perfect will not be the enemy of the possible, let us not lose sight of the fact that we are taking yet another step in the long road back to a healthy, clean and beautiful city at the heart of the Cumberland River watershed.

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**Emily Evans is a member of the Metro Council, representing the 23rd District.**

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## Neighbors plant rain garden to improve stream's health

Plants will filter pollutants, make water cleaner

BY GLORIA BALLARD • FOR THE TENNESSEAN • NOVEMBER 11, 2008

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Whitland neighborhood volunteers gathered at the bank of Kingfisher Branch creek on a recent Saturday morning with an abundance of enthusiasm and bundles of garden tools. Their mission: Plant a garden to help clean up a stream.

The Cumberland River Compact's Project Blue Streams worked with the Whitland Area Neighborhood Association to plan and plant a rain garden, which is designed to filter pollutants that wash down the street when it rains before they get into the stream.

The Whitland Rain Garden is the first of 300 rain gardens the Cumberland River Compact plans to install over the next five years to improve the water quality of small streams in Nashville.

Because of the impervious streets, sidewalks and other pavement, neighborhood streams are often the final destination for a variety of pollutants and pathogens, said Mekayle Houghton, Project Blue Streams program director.

"Storm water gushes into these small neighborhood streams and carries everything with it. We're trying to slow down the water and give the rain a chance to sink into the ground," she said. "It will keep the water cleaner year round."

### Garden Is Bowl-Shaped

In the Whitland neighborhood, Robinson Regen added that building and development in the area over the past several years have added to the amount of runoff that rushes into Kingfisher Branch.

"With the added pavement, there is more water, and the water runs faster into the creek," she said.

The Whitland Rain Garden is a large, bowl-shaped planting bed, graded with a slightly higher berm on the bowl's creek-side edge. Trees and shrubs are planted around the edges of the bowl.

Next spring, volunteers will lay a footpath and plant a variety of perennials, as well.

Now, when rainwater runs down the streets and sidewalks, it will be caught in the bowl-shaped garden and seep into the ground instead of rushing into the stream.

### Groups Team Up

The Whitland Area creek and the neighborhood association are a good pairing for this project, Houghton said.

In the Whitland area, Kingfisher Branch runs alongside Rolland Road, under South Wilson Boulevard, and eventually joins Richland Creek.



GLORIA BALLARD / FOR THE TENNESSEAN

Steve Schuttheis, left, and Joel Covington work in the Whitland Rain Garden.

Proposed home restrictions divide street's neighbors

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Local Newspaper Article



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"The neighborhood association contacted us when they found out the stream was impaired for pathogens," Houghton said. "They called us because they wanted to know how they could take care of it better."

Through a grant and a cost-sharing arrangement, and with help from Gardens of Babylon landscaping and the neighborhood volunteers, the rain garden began to take shape.

"The park is the lowest point in 1,000 acres, and it's publicly owned land, so it was the coming together of some really good things that made it perfect for the rain garden," Houghton said.

**More Plants To Come**

Neighbors gathered on Saturday, Nov. 1, to plant sweet bay magnolia and redbud trees, oak leaf hydrangeas, Annabelle hydrangeas and dwarf inkberry shrubs. In the spring they will do additional planting.

Improving the health of the creek also provides habitat for the area's urban wildlife, said Regen, who along with neighbor Rhonda White spearheaded the rain garden project for the neighborhood association.

Once planted, the Blue Streams Project and the neighborhood association will continue to make sure the garden is effective.

"We're going to have to watch it to see how much debris comes down the street into the garden," Houghton said. "It's sort of an ongoing partnership to see how it will handle the runoff."

**In Your Voice**

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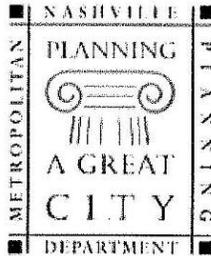
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**Metro Planning Department**

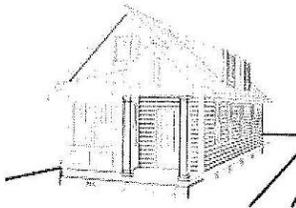


*The Planning Commission guides growth and development as Nashville and Davidson County evolve into a more socially, economically and environmentally sustainable community, with a commitment to preservation of important assets, efficient use of public infrastructure, distinctive and diverse neighborhood character, free and open civic life, and choices in housing and transportation.*

Questions and Comments

Hours and Directions

**First green building permit issued**



An affordable single-family home in North Nashville will be the first one built under Codes' new green permit. J2K Builders and Quirk Designs filed plans for a 920-square-foot home at 1223 Phillips Street, with construction scheduled to start in March.

"Building green is the thing to do," J2K co-owner and Planning



Commission chairman Jim McLean says. "It will cost a little more for us to build it, but the homeowner will save in the long run."

Jimmy, Kerry and Jim McLean of J2K receive the permit from Codes chief plans examiner Joey Hargis

<http://www.nashville.gov/mpc/index.htm>

2/17/2009



- [plan drawing](#)
- [Details of the Green Permit program](#)

**Planning Commission sets three work sessions**



All three will be held immediately before regular Planning Commission meetings in the Madison Room at Metro Southeast, 1417 Murfreesboro Pike. The April 14 Commission meeting was moved from April 9 to avoid conflict with the first day of Passover.

2:00 - 4:00 pm Thursday, February 26

Topics: Madison Community Plan; MDHA presentation on the Downtown Convention Center

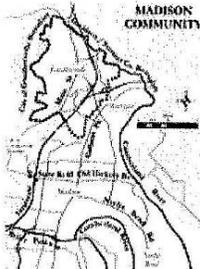
3:15 - 4:00 pm Thursday, March 12

Topic: Downtown Code

3:15 - 4:00 pm Tuesday, April 14

Topics: West Nashville Community Plan; Rural Hill/Moss Road Community Character Plan

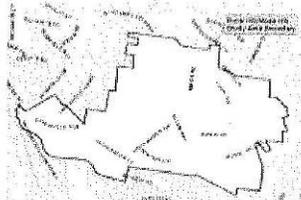
**Draft Madison Community Plan policies are now online; meetings continue Feb. 19**



Read those policies, and details of previous public meetings, on our [Madison community page](#); the final meeting in that series is scheduled for 6 pm Thursday, February 19, at the Madison Community Center, 301 Madison Street.

[Questions or comments](#)

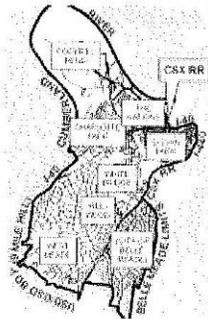
**Draft Rural Hill/Moss Road Community Character Plan policies are now online; meetings continue Feb. 19**



Read those policies, and details of previous public meetings, on our [Antioch/Priest Lake community page](#); the next community discussion there is scheduled for 6 pm February 19 at St. Ignatius Catholic Church, 601 Bell Road.

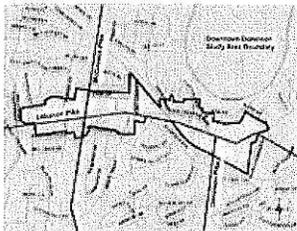
[Questions or comments](#)

**West Nashville Community Plan meetings continue March 2**



New information from the February 2 draft policy review meeting is now on our [West Nashville community webpage](#). The next public discussion of the West Nashville Community Plan update is scheduled for 6 pm Monday, March 2, at St. Ann Catholic Community, 5101 Charlotte Pike.

**Public meetings on Downtown Donelson plan continue March 24**



Community discussions began Feb. 9 on a design plan for the "corridor" along Lebanon Pike east of Briley Parkway in Donelson; at that meeting, planners heard community members' input on how the area should grow, and how it should look several years in the future. Planners' presentation from that meeting is now posted on our Donelson/Old Hickory/Hermitage community webpage. A "concept plan" based on the Feb. 9 discussion and on best planning practices will be presented March 24 at McGavock High School.

- [Meeting schedule and map of the area](#)
- [Donelson/Hermitage/Old Hickory community webpage](#)
- [Questions or comments](#)



# The City Paper

Thursday, February 19, 2009

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## SPECIAL REPORT: Stormwater stress

By: Nate Rau, nrau@nashvillecitypaper.com

Posted: Thursday, February 19, 2009 12:47 am

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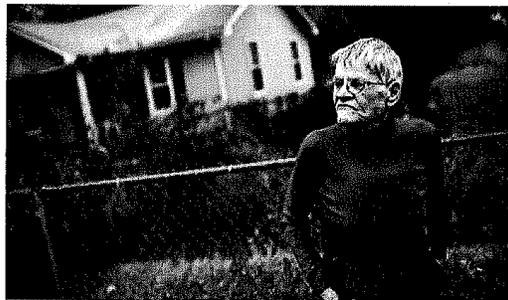
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Inglewood resident Starr Stewart said she was terrified when water began pouring into her home years ago. *Matthew Williams/The City Paper*  
*(first in a series)*

This summer, Nashvillians will likely get a water bill in the mail containing a first-ever line item for a stormwater fee, and many may ask themselves, "What is that and why am I paying it?"

It's a fair question, because even at \$3 — which is the proposed stormwater fee for the typical Nashville residential ratepayer — times are tight and utility bills are skyrocketing. So, why a stormwater fee now?

The answer lies as much in the past as the present, but for now new information provided by Metro Water illustrates the full effect of the stormwater issue. A lack of funding has led to a backlog of more than a thousand of stormwater projects classified by Metro from minor (flooded backyards) to serious (threat to person and property). What's more, there are hundreds of unclassified complaints as well.

While Mayor Karl Dean inherited a years-old problem, his office was not completely aware of the scope of stormwater issues until it began studying the issue of water infrastructure reform.

"A lot of what I think this administration needed to learn about was stormwater issues," Metro Director of Finance Richard Riebeling said. "I didn't have as much experience and knowledge of stormwater issues as a lot of people did and I think it took extra time getting up to speed on that."

Here's what the Mayor's office learned: The issue dates back to the 1860s, which is when much of the downtown combined sewer and stormwater system infrastructure was put in place. It extends to today when the Stormwater Division of Metro Water Services has accumulated a hefty backlog of necessary repairs that have not been made.

If customers were to let the department know their backyard floods every time it rains, a very professional letter will likely arrive that essentially reads: "Sorry about your luck. We'll get to it when we can. But, there's simply no money, so it could be years."

Because of that, Starr Stewart is one water customer who understands why a new fee is needed. Stormwater issues are a daily annoyance and a real threat to her property and personal safety.

In a city where portions of a road can collapse because of sagging stormwater infrastructure and few people notice, there sits a 72-year-old Inglewood woman who is moved to tears just thinking about her stormwater problem.

Not long after Stewart bought her modest one-bedroom home on Delmas Avenue a decade ago, heavy rains came. The massive drainage ditch that runs right by her home flooded over and water began pouring into her home. Stewart said she was terrified.

"I called this guy at two in the morning. I didn't care," she remembered. "He said, 'Well calm down, calm down.' I said, 'Calm down? I've got water up to my ankles in the house. How can I calm down?'"

So, she purchased flood insurance and began to cope as Metro Water and the Tennessee Department of Transportation performed routine maintenance that alleviated the problem to varying

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degrees. A rock wall lining the drainage ditch helped some, but it has started to deteriorate. A larger drainage pipe from the roadway also helped, but large amounts of rain still lead to flooding in her home.

Last year, Stewart battled cancer and lost 70 pounds in the process. She wonders what might have happened if a dangerous flood swept into her home while she was too sick and weak.

"By this time, I had taken up flood insurance, thank God. All this while I'm contacting the mayor's office and this and that," Stewart said. "These guys are useless. Last year I contacted my Councilwoman (Karen Bennett) for this area, well, she wouldn't come out and take a look.

"This is my home. I'm 72-years old, and this is my home. I wanted to live here, it's not much but it's all I got, and I wanted to live here maybe for the rest of my life."

Stewart's issue is by no means unique — it's one of hundreds of anecdotes Nashville residents have to tell about stormwater issues and the numbers from Metro Water back that up.

As of last week, there were 861 Class C projects, described by the department as less severe problems. In ascending order of severity there are 295 listed as Class B, 28 as Class A, according to water department information.

Class A projects are defined as a threat to person and property, but in recent years, most Class A work has been idle due to lack of funding — including last year when no Class A projects were undertaken.

In fact, department numbers show that only 14 projects were undertaken in 2006 and 2007 combined. Prior to that, the stormwater division conducted an average of more than 30 Class A repairs per year.

Then there are the unclassified requests totaling 782, according to the department's public information officer, Sonia Harvat. So it's hard to argue with Dean's fee proposal to create dedicated funding to take care of these issues.

"Once funding is finally received, it will possibly be years before some complaints will be addressed," a letter to stormwater customers states.

So even if the department still was averaging 30 repairs a year, it would take more than 25 years to get to them.

The net effect of delaying the most serious repairs is unclear, but the director of the Stormwater Division of Metro Water insists there aren't any pending problems that people should be afraid of.

"If we don't fix them today are they going to fail tomorrow? I don't know of any projects that we've put off where we're risking catastrophic failure — a sudden failure," Director Tom Palko said. "I don't know of any project we've delayed where I wouldn't feel safe driving down the roadway."

Palko admitted that he was unaware of a stormwater problem at Rio Vista Road, near Madison, which partially collapsed in early 2008. In that instance, corrugated metal pipe running under the road for stormwater drainage caved in and led to the road collapse.

When it did, Stormwater worked with Public Works to repair the pipe and the road, but the reality is neither department was on top to fix a road that ultimately collapsed. One source familiar with Metro stormwater issues said there are "dozens" of examples in Davidson County where outdated stormwater infrastructure needs to be replaced in order to avoid a road collapse.

The Rio Vista incident wasn't the only one where deteriorated stormwater pipes led to a collapse. Another incident took place along a parking lot area near the intersection of Nolensville Road and Old Hickory Boulevard, according to the Metro Legal department, although it did not ultimately result in a claim against Metro.

"In some regards, it's a 'pay me now, pay me later' type of proposition," Palko said. "I'm an engineer so I like to do things orderly and it would be preferable to do these projects as they come to us and let us schedule them, coordinate with other utilities and make sure we're not closing roads at critical times."

Of course, flooding leads to various personal safety issues. A public records request to the Metro Office of Emergency Management showed literally hundreds of calls over the last three years to the department regarding road and property flooding scares.

OEM spokeswoman Amanda Sluss said the department contacts Metro Water whenever a flood-related car warrants. Stormwater sends crews into the field to repair stormwater clogs causing flooding on roadways, but Palko reiterated there weren't any issues the department knew of which weren't getting the department's immediate attention.

"We've got the ability using our maintenance crews to do the work that needs to be done," Palko said.

But, Metro Council members in districts where stormwater-related flooding is a common concern say it's their hope dedicated funding leads to safer roads and less property damage.

District 31 Councilman Parker Toler said there are several roads in his south Nashville district that get closed due to heavy rainfall.

"There are various places where bridges are being damaged because of stormwater issues," Toler said. "In the flooding safety issues, those are very serious — people driving on the roads that are flooded due to stormwater issues. It's something we need to get a handle on and we need to start a process of how we fix these problems."

Even with a fee hike likely to be in place soon to address the many repairs, it will take time to collect stormwater fees, and those affected by the issue every day wonder when their problem will get fixed.

The letters from Metro Water state that it could be years before their repairs are addressed, so a question remains: Did Metro act soon enough?

"The answer is I don't know," said Belle Meade resident Patsy Williams, whose backyard retaining wall is crumbling because of constant flooding. "But I can't just keep pumping money into something that's not going to go away. Pretty soon, I'm going to be up a creek."

*Next installment: A look at the political machinations of establishing a plan to deal with the stormwater*

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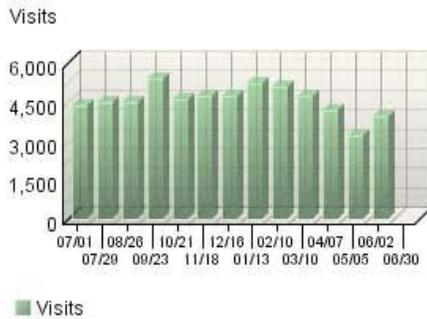
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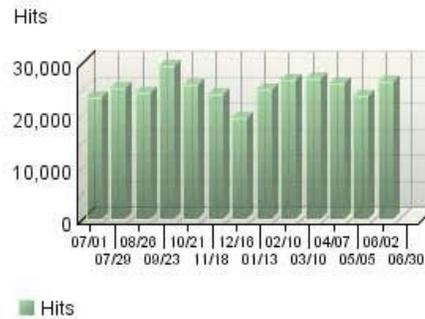
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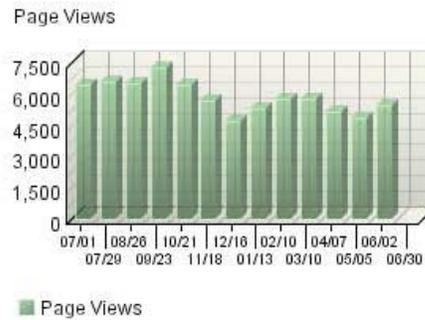
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