



March 2013



KYTC Storm Water Quality Management Plan

Kentucky Transportation Cabinet

Preface

The KYTC Storm Water Quality Management Plan (SWQMP) is a guide for KYTC to comply with stormwater permit programs that stem from the Clean Water Act. KYTC's Municipal Separate Storm Sewer System (MS4) "Stormwater" Permit requires awareness and participation across the KYTC organization, including the Central Office and District Offices. The SWQMP is designed to disseminate permit responsibilities and tracking throughout the KYTC organization and support the organization in meeting the requirements of the stormwater permit. The SWQMP does not establish new regulatory requirements, but is to be utilized as a guide for compliance with the Permit. This Plan will be used by KYTC Divisions and District Offices, to implement practices, programs, policies and procedures to improve the water quality of stormwater runoff discharged to receiving Waters of the Commonwealth.

Table of Contents

- I. Acronyms**

- II. Introduction**
 - A. Regulatory Background**
 - B. Stormwater Quality Management Plan Overview**

- III. Minimum Control Measures**
 - A. MCM I – Public Education and Outreach Requirements**
 - B. MCM II – Public Involvement and Participation Requirements**
 - C. MCM III – Illicit Discharge Detection and Elimination**
 - D. MCM IV – Construction Site Stormwater Runoff Control Requirements**
 - E. MCM V – Post-Construction in New Development and Redevelopment**
 - F. MCM VI – Pollution Prevention/Good Housekeeping**
 - G. MCM VII – Reporting**

- IV. Appendices**
 - A. KYTC Contacts**
 - B. IDDE Program Document**
 - C. Post-construction Program Document**
 - D. Pollution Prevention / Good Housekeeping Program Document**

I. Acronyms

BMP	Best Management Practice
DEA	Division of Environmental Analysis
IDDE	Illicit Discharge Detection and Elimination
KDOW	Kentucky Division of Water
KEEN	Kentucky Engineering Education Network
KPDES	Kentucky Pollutant Discharge Elimination System
KSA	Kentucky Stormwater Association
KYG50	KPDES Permit for Stormwater for Highway Maintenance Facilities
KYR10	KPDES Permit for Stormwater Runoff from a Construction Site
KYTC	Kentucky Transportation Cabinet
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
OHRM	Office of Human Resource Management
PP/GH	Pollution Prevention / Good Housekeeping
ROW	Right of Way
SOP	Standard Operating Procedures
SPCC	Spill Prevention Control and Countermeasures
SWPPP	Stormwater Pollution Prevention Plan
SWQMP	Stormwater Quality Management Program
TMDL	Total Maximum Daily Load
UKT2	University of Kentucky Transportation Technology Center

II. Introduction

This Kentucky Transportation Cabinet's (KYTC) Municipal Separate Storm Sewer System (MS4) Stormwater Quality Management Plan (SWQMP) was developed to address the Kentucky Pollutant Discharge Elimination System (KPDES) MS4 Phase II program requirements as specified in KYTC's KPDES Permit KYS000003. The Kentucky Division of Water (KDOW) Regulates KYTC's MS4 Program. The SWQMP does not establish new regulatory requirements, but is to be utilized as a guide for compliance with the Permit.

A. Regulatory Background

The Clean Water Act (CWA) (1972) was amended to prohibit the discharge of any pollutant to the waters of the United States from a point source unless authorized by a National Pollutant Discharge Elimination System (NPDES) permit. Since amending the CWA in 1987, there is increasing evidence that there are additional and more diffuse sources of surface water pollution. Specifically, stormwater runoff draining large surface areas (agriculture and urban lands) were found to be major causes of water quality impairment and non-attainment of designated beneficial uses.

The term "designated use" is a goal, defined for a water body as the uses society, through various units of governments, determines should be attained in the water body. The primary federal regulation pushing communities towards the goal of "fishable and swimmable water" is the Clean Water Act. Sections of the Clean Water Act which specifically are relevant to stormwater address:

- Regulation of stormwater discharges
- Water quality standards for water bodies receiving stormwater runoff
- Implications of non-attainment of water quality standards

As part of the MS4 Phase II Final Rule promulgated by the U.S. Environmental Protection Agency (EPA) in 1999 (40 CFR 122.32), Departments of Transportation were identified as regulated MS4 entities. The KDOW regulated KYTC under the general stormwater permit (KYG20) as a co-permittee with other MS4s until the issuance of KYTC's individual stormwater permit (KYS000003) effective October 1, 2012. Pursuant to KYS000003, KYTC is a Phase II regulated entity with authorization to discharge stormwater runoff into receiving waters of the Commonwealth. The permit applies to KYTC's MS4 conveyances and outfalls to the Waters of the Commonwealth for KYTC facilities and rights-of-way located within the urbanized boundaries of the MS4s across the Commonwealth of Kentucky.

The primary objective of the permit is the reduction of pollutant discharges to the Maximum Extent Practicable (MEP) from facilities and rights-of-way covered under KYTC's MS4 permit. KYTC is required under the 2012 MS4 Stormwater permit to address the following Minimum Control Measures (MCMs) by developing and implementing Best Management Practices (BMPs) which will allow KYTC to document its methods for improvements in runoff water quality and/or decreases in pollutants being discharged. The MCMs are listed below:

1. Public Education and Outreach Requirements
2. Public Involvement and Participation Requirements
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control Requirements
5. Post-Construction in New Development and Redevelopment
6. Pollution Prevention/Good Housekeeping
7. Reporting and Records Retention

KYTC is to implement the practices, policies, procedures and stormwater controls contained in the permit and addressed in this plan throughout the regulated area. KYTC is required to develop and administer a Storm Water Quality Management Plan (SWQMP) and update as necessary to maintain compliance with the KPDES permit.

Other regulatory requirements also impact KYTC's MS4 program. The Total Maximum Daily Load (TMDL) program, established under Section 303(d) of the Clean Water Act (33 USC 1313) focuses on identifying and restoring polluted rivers, streams, lakes and other surface waters. A TMDL is a written, quantitative assessment of water quality problems in a water body and contributing sources of pollution. The TMDL specifies the minimum amount of a pollutant that can exist in a waterbody for it to achieve its designated use and meet Water Quality Standards (WQS), allocates pollutant load reductions, and provides the basis for taking actions needed to restore the water quality.

B. Stormwater Quality Management Plan Overview

The KYTC MS4 permit (KPDES No. KYS000003) was issued with an effective date of October 1, 2012 for a term of five years. The bulk of the permit requirements are given under Part II, Stormwater Quality Management Program, which includes seven (7) tables. This plan expands the Permit Tables to also include other Requirements in Parts I, II and III of the Permit.

KYTC is responsible for the maintenance of thousands of short sections of pipes, culverts, ditches and bridges that allow drainage to flow off of or under the roadway. KYTC is to meet the requirements of the MS4 permit through a combination of standards, contracts, orders or inter-jurisdictional agreements between KYTC and other regulated MS4s. In addition, KYTC is to comply with KPDES General Permits for Stormwater Discharges Associated with Construction Activities (KYR10) and Stormwater Point Sources from Highway Maintenance and Equipment Facilities (KYG50).

KYTC is required to develop a stormwater quality management program that is designed to reduce the discharge of pollutants to the maximum extent practicable (MEP). Rather than numeric limits, the MEP standard involves applying BMPs that are effective in reducing the discharge of pollutants in stormwater runoff through the use of known, available, and reasonable methods. MEP is an iterative standard, which evolves over time as urban runoff management knowledge increases. As such, KYTC will continually assess the Ms4 program to incorporate improved programs, control measures, BMPs, etc.

To the extent allowable by law, KYTC will ensure legal authority to control discharges to and from those portions of the MS4 over which it has jurisdiction. This legal authority may be a combination of policy, statute, standard, permit, contract, order, or inter-jurisdictional agreements between permittees. As a State Department of Transportation, KYTC is responsible for portions of its roads running through MS4 communities and may not have legal authority to enforce against stormwater discharges into its MS4 where the source of the discharge is outside of their right-of-way. In order to alleviate some of this issue, KYTC has entered partnership agreements or cooperative arrangements with the local MS4 to reach a resolution. For this reason, KYTC's partnerships and communication with local MS4s is a key aspect of permit implementation.

KYTC is required to develop and implement a SWQMP with the objective of reducing the discharge of pollutants to the MEP. The SWQMP is a planning tool to define how the MS4 stormwater permit program will be administered. While it is not a part of the permit, it provides a more detailed description of the activities in the permit. The SWQMP addresses the seven Minimum Control Measures (MCMs). Partnerships with other MS4 entities are utilized by KYTC to comply with the MCMs.

The SWQMP covers the following:

- Public Education and Outreach – KYTC will develop and implement a program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps the public can take to reduce pollutants in stormwater runoff.
- Public Involvement and Participation – Activities may include representation on local storm water management work groups, public hearings, education volunteers, assisting with program coordination and monitoring efforts, per applicable state and federal requirements.
- Illicit Discharge Detection and Elimination Program – KYTC will develop, implement and enforce a program to detect and eliminate illicit discharges into the Cabinet's owned and operated portions of the MS4. For illicit discharges to the storm sewer system via an adjacent or interconnected MS4, outside KYTC's jurisdiction, KYTC is only required to promptly inform the neighboring MS4 and document these notifications in the annual report.
- Construction Site Runoff Control – KYTC will develop, implement and enforce a program to reduce pollutants in any stormwater runoff from construction activities that result in land disturbance of greater than or equal to one acre.
- Post-construction Site Runoff Control – KYTC will develop, implement and enforce a program that addresses stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre.
- Pollution Prevention/Good Housekeeping – KYTC will develop and implement an operations and maintenance program that includes a training component and has a goal of preventing or reducing polluted runoff from their daily operations, including maintenance.
- Reporting and records retention, the seventh MCM, outlines the annual reporting requirements to KDOW and retention of supporting documents.

An annual review of the SWQMP is required as part of the Annual Report submittal. During this time, the prior year's activities and the need for changes in implementation strategies and schedules should be assessed. The MS4 stormwater permit specifies that the SWQMP may be modified over time by KYTC to facilitate implementation of permit requirements. Modifications are to be made based on lessons learned and the effectiveness of the various BMPs.

According to the EPA, a TMDL is the calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. An allocation of that load among the various sources of that pollutant, which is a waste load allocation (WLA), is determined as part of the designation. To improve the effectiveness of stormwater management programs and reduce pollutant impacts to receiving waters from stormwater runoff, KDOW will utilize permits to implement TMDL WLAs. KDOW has included TMDL language in KYTC's MS4 stormwater permit as a regulatory tool to implement TMDLs in the Commonwealth and make tangible improvements to water quality.

The MS4 stormwater permit specifies that KYTC in its MS4 achieve reduced pollutant discharges for parameters listed in the TMDL through the implementation of their SWQMP. As with other requirements in the permit, success is measured for TMDLs to the MEP. KYTC is responsible for their MS4 system within urbanized boundaries of MS4s that have effective TMDLs. Per the permit, where WLAs are assigned for a TMDL, KYTC will not be assigned a separate WLA. KYTC will collaborate with the local MS4 community regarding its contribution to the MS4s WLA.

For waters within KYTC-jurisdictional areas with an approved or established TMDL, KYTC will evaluate its BMPs in the SWQMP with respect to MS4 discharges for pollutants of concern related to KYTC-specific activities' impact to impaired waterbodies. Impaired waterbodies are listed in the KDOW publication entitled, "2010 Integrated Report to Congress on the Condition of Water Resources in Kentucky Volume I. 305(b) Report".

KDOW requires that KYTC annually prepare a report for the MS4 stormwater permit program. KDOW prescribes that the annual report be submitted by April 15th after the end of each permit year.

III. Minimum Control Measures

Each Minimum Control Measure is presented with an overview, activities and references. The overview is a general perspective of each MCM. The Activities in each MCM are addressed specifically and responsible entities within KYTC are identified. A KYTC Contact List of responsible entities is provided in Appendix A. KYTC utilizes many support documents to voluminous to include in this plan. Resource references are provided for each MCM.

There are several offices within KYTC that have a direct responsibility to the MS4 Program. This includes positions in the Central Office and the District Offices. The Division of Environmental Analysis coordinates the effort.

A. MCM I – Public Education Requirements

Program Overview

Phase II MS4s are required to educate their community on the pollution potential of common activities and increase awareness of the direct links between land activities, rainfall-runoff, storm drains, and their local water resources.

Educating the public is an ongoing challenge in establishing a link between an individual's actions and their impact on local streams, rivers and lakes. The goal of this minimum control measure is to foster understanding of stormwater quality in the community, and thereby enhance personal responsibility and stewardship in the community as a whole. KYTC has a history of public education campaigns and will continue implementation strategies as well as partnerships with local MS4 communities to comply with the permit.

KYTC focuses activities for MCM 1 Public Education and Outreach on programs for which KYTC has direct responsibility and also by providing resources for use by partners for delivery of a consistent message statewide.

For KYTC direct programs, the education and outreach initiatives may include, but are not limited to:

- Web-based information to all persons involved in KYTC programs and projects;
- Media Outreach Program airing radio and TV spots statewide;
- The annual partnering conference for highway design personnel;
- Road Master and Road Scholar training administered through the University of Kentucky Transportation Center;
- Kentucky Erosion Prevention and Sediment Control – Roadway Inspectors (KEPSC-RI) training administered through the University of Kentucky Transportation Center;
- Annual resident and construction crew training;
- Maintenance crew specific environmental training addressed within the KYTC Environmental Handbook for Management of Highways and Transportation Facilities(;
- Supplemental training provided by the Division of Environmental Analysis to district personnel; and
- Kentucky Engineering Exposure Network (KEEN), a volunteer group of KYTC employees, gives presentations to schools through the state.

For our partnering local MS4s, KYTC has recognized its ability to effectively bring educational resources together and make them available for broader education initiatives. In doing so, KYTC has developed a body of educational resources that have been delivered to the communities in the form of physical toolkits, electronic files and web based materials (www.stormwater.kytc.ky.gov). These resources have been delivered to the communities through workshops and one-on-one meetings. These resources address the EPA target audiences as outlined in the guidance “Getting in Step with MS4”.

This MCM also encompasses education and training of KYTC staff on stormwater management along KYTC rights-of-way and facilities. The current in-house education program utilizes the KYTC Environmental Handbook. This Handbook was developed to be used by KYTC, local agencies and contractors.

Permit Activities

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
1.1a	Education	Beginning Permit Year Three (3), evaluate every other year and revise if necessary	The permittee shall revise the Environmental Handbook to reflect changes in the policies, staff, contact information, permitting processes, and standard operations and procedures. The permittee shall make this revised Environmental Handbook available in an editable format for its partnering entities. The permittee shall update the KYTC’s website to include the revised Environmental Handbook.	DEA MS4 Coordinator, DEA Facilities Coordinator & Division of Maintenance

The Environmental Handbook, is used to educate KYTC staff, agencies and contractors. Starting in Permit Year 3 (PY3), the handbook will be updated by the DEA and Division of Maintenance to incorporate new permitting processes and standard operating procedures. As the handbook is updated, addendums will be communicated to staff and contractors through annual training. The handbook editable files will also be provided to partner communities as requested and will be published on the website.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
1.1b		Effective upon permit issuance, the number of crew that receives training as outlined in KYTC’s Environmental Handbook	The permittee shall have an in-house education program for KYTC employees regarding stormwater management for the existing highway system and its maintenance. The permittee shall manage training of employees at the crew level as outlined in KYTC’s Environmental Handbook.	DEA Facilities Coordinator & OHRM

KYTC conducts annual training through the DEA and Office of Human Resources Management (OHRM). Trainings will be tracked by the DEA Facilities Coordinator and OHRM.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
1.1c		Effective upon permit issuance, the number of individuals participating in training course	The permittee shall offer external courses to educate KYTC employees and contractors regarding stormwater management for the existing highway system and its maintenance. The permittee shall continue to require training through the Transportation Center at the University of Kentucky or an effective equivalent. The Road Master and Road Scholar programs shall include training in Environmental Awareness, Pesticide Operator Training and Certification, Erosion Prevention and Sediment Control and Snow and Ice Operations.	OHRM

The Transportation Center at the University of Kentucky uses the Road Master and Road Scholar training programs to train KYTC staff and contractors on a variety of topics, including Environmental Awareness, Pesticide Operator Training and Certification, Erosion Prevention and Sediment Control and Snow and Ice Operations. KYTC OHRM will track the number of individuals trained.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
1.1d		Effective upon permit issuance, the number of contractors trained, number of preconstruction meetings held	The permittee shall educate highway contractors by continuing to require contractor education through the Kentucky Erosion and Sediment Control classes offered by the Transportation Center at the University of Kentucky or an effective equivalent. The permittee shall include stormwater management in preconstruction meetings.	OHRM, District TEMB & Division of Construction

The Transportation Center at the University of Kentucky will continue to offer KEPSC-RI training for KYTC staff and contractors. KYTC OHRM will document the number of participants in KEPSC-RI annually. KYTC includes an agenda item for stormwater management in our pre-construction meetings on projects that require a KYR10 permit. The District Transportation Engineering Branch Manager for the Project Delivery & Preservation Branch will track the number of pre-construction meetings held.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
1.1e		The number of conferences attended with stormwater management related information and the number of individuals trained	The permittee shall educate highway design professionals through participation in partnering conferences; conduct training for design professionals through American Council of Engineering Companies (ACEC), Transportation Center at the University of Kentucky, or an effective equivalent. The permittee shall maintain design information on the KYTC website.	DEA MS4 Coordinator, Division of Highway Design, Division of Construction & OHRM

KYTC will continue to educate highway design professionals about stormwater management through presentations at their annual Highway Design Partnering Conference, trainings sponsored through ACEC, KSA meetings and other stormwater related conferences and trainings conducted through the Transportation Center. The Division of Highway Design, Division of Construction and the OHRM will track the number of conferences attended and/or the number of individuals trained.

KYTC will continue to make the Drainage Manual and Standard Specifications available on the website.

Cooperative Efforts (KYTC provides supportive or other non-lead role)				
Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
1.2	Kentucky Stormwater Association (KSA)	The number of meetings	The permittee shall support the KSA by making facilities available for meetings to discuss the MS4 program and make program information available for the MS4s via the KYTC website and/or an effective equivalent.	DEA MS4 Coordinator

KYTC will continue to attend the quarterly and annual KSA meetings (<http://www.kystormwater.org>), as their schedules allow. The DEA MS4 Coordinator will track the number of meetings held and the number that KYTC was able to attend. The DEA MS4 Coordinator will also track the number of times that KSA requests use of their facilities and the number of times that they were able to provide use. The DEA MS4 Coordinator will coordinate with the Office of Information Technology to make program information available on the KYTC Stormwater web page (www.stormwater.ky.gov).

Cooperative Efforts (KYTC provides supportive or other non-lead role)				
Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
1.3	Support MS4 programs in program development and implementation	Resources made available to the MS4 entities	The permittee shall make the KYTC Education Toolkits available for use by partners that were developed for partners in the last permit cycle, while existing supplies last.	DEA MS4 Coordinator

KYTC will continue to make toolkits available for partnered MS4s. The DEA MS4 Coordinator will annually track the number of toolkits dispersed to partner MS4s.

Cooperative Efforts (KYTC provides supportive or other non-lead role)				
Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
1.4	Support MS4 program in Education Outreach	Beginning in Permit Year Two (2), the permittee shall report the number of television and radio ads aired and the number of hits the webpage received, reported annually to the partnering MS4s and included in the Annual Report to the Division of Water.	The permittee shall continue to provide television and radio ads or an effective equivalent which educates the citizens of the Commonwealth on stormwater pollution prevention or an effective equivalent. The permittee shall track and report the number of airings of these ads and report the numbers to their partnering MS4s and in the annual report.	DEA MS4 Coordinator

KYTC will continue to develop and air television and radio ads which educate the citizens of the Commonwealth about stormwater. The DEA MS4 Coordinator will provide the number of airings of these ads and the number of website hits to their partnering MS4s for use in their annual report.

Cooperative Efforts (KYTC provides supportive or other non-lead role)				
Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
1.5	Maintain KYTC Website	Revise as needed	The permittee shall update the KYTC website to include the accurate contact information for each of the MS4 programs. The KYTC website shall be enhanced to include links to partnering MS4s' websites, the Environmental Handbook, and links to KYTC public education and outreach partner initiatives. The permittee shall also establish a counter for the stormwater website to gage the number of visitors.	DEA MS4 Coordinator

KYTC will revise as needed the website to include updated contact information for each of the MS4 programs. Web links will be included on KYTC's website to the Environmental Handbook and links to public education and outreach partner initiatives. A counter is on the KYTC website. KYTC will revise this information and provide any updates to the Environmental Handbook as needed. The DEA MS4 Coordinator will coordinate with the Office of Information Technology to accomplish this work.

Cooperative Efforts (KYTC provides supportive or other non-lead role)				
Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
1.6	Community/public stakeholder task force and watershed public meetings	Requested participation and requests fulfilled	The permittee shall participate in meeting(s) discussing stormwater quality issues of the MS4 community as requested by the MS4 community. The District MS4 Coordinators' requests and participation shall be tracked and reported in the annual report.	District MS4 Coordinators & DEA MS4 Coordinator

KYTC partners with other MS4 communities to participate as a stakeholder in local MS4 activities. Each MS4 District Coordinator will work with the local community MS4 coordinators in their respective Districts and participate as requested. Typical activities include being a member of the community stormwater advisory committee, community stormwater activities, earth day events, etc. The District MS4 Coordinators are to report their activities to the DEA MS4 Coordinator.

Cooperative Efforts (KYTC provides supportive or other non-lead role)				
Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
1.7	Outreach Strategy	Beginning in Permit Year Two (2), the permittee shall report the types of outreach mechanisms used to disseminate stormwater quality message shall be provided to the partnering communities and in the annual report.	The permittee shall develop a coordinated campaign to educate the general public on stormwater quality issues. The outreach and educational topics shall be determined through consultation with KYTC's partnering MS4 entities. The education outreach shall be developed by the permittee and submitted for review and approval by KDOW. The permittee may employ various educational outreach mechanisms to distribute information to its partnering MS4 entities and the general public, such as, public service announcements, newspaper inserts, brochures, and recognition programs. The permittee shall apply an iterative approach to advance the KYTC MS4 outreach for the benefit of its partnering MS4 entities. The permittee shall assess the current KYTC outreach initiatives for gaps and modify KYTC strategy and resources to better meet program needs.	DEA MS4 Coordinator & Office of Public Information

KYTC's outreach strategy includes a number of programs. The Media Outreach is the primary effort, which is coordinated with our partner communities and the KDOW. KYTC contracts with an ad agency and the Kentucky Broadcasters Association to develop and air audio and video spots across the Commonwealth. The radio and television spots include a note to view KYTC's stormwater website for further information. The website includes a variety of topics and information both in general and specific to stormwater. The outreach strategy is supported by a statewide survey conducted by KYTC via the University of Kentucky. This effort will be coordinated by the DEA MS4 Coordinator and the Office of Public Information.

MCM I References

Reference	Reference Name	KYTC Division/ Organization
Environmental Awareness Handbook	Environmental Handbook for Management of Highways and Transportation Facilities, 2008	DEA Facilities Coordinator
Division of Construction Website	Erosion Control	Construction
Outreach Materials and Brochures	Public Outreach Toolbox	DEA MS4 Coordinator
Stormwater Website		DEA MS4 Coordinator
Inter Local Agreements		DEA MS4 Coordinator
303d List	Final 2010 Integrated Report to Congress on the Condition of Water Resources in Kentucky - Volume II. 303(d) List of Surface Waters	DEA Water Quality SME
TMDLs	*VARIOUS*	DEA Water Quality SME
FAQ	District MS4 Coordinator FAQ	DEA MS4 Coordinator
Clean Storm Water Brochure	Clean Storm Water - Everyone's Business	DEA MS4 Coordinator
Reference	Reference Name	KYTC Division/ Organization
Preconstruction Meeting Agenda		Construction
Drainage Design Manual (Chapter 10)	Drainage Guidance Manual - Chapter 10 - Erosion Control	Highway Design
Understanding Storm Water Brochure	When It Rains It Drains - Understanding Storm Water	OHRM
UKT2 Training	Road Master Training	OHRM
UKT2 Training	Road Scholar Training	OHRM
UKT2 Training	Environmental Awareness Training	OHRM
UKT2 Training	KEPSC-RI Training	OHRM
UKT2 Training	Pesticide Operator Training	OHRM
UKT2 Training	Snow and Ice Operations Training	OHRM
Toolkits	Toolkits of Education and Outreach Material	DEA MS4 Coordinator

B. MCM II Program – Public Involvement and Participation Requirements

Program Overview

A single regulatory agency or municipal office working alone cannot be as effective in reducing stormwater pollution as if it has the participation, partnership, and combined efforts of other groups in the community all working towards the same goal. The point of public involvement is to build on community capital—the wealth of interested citizens and groups—to help spread the message on preventing stormwater pollution, to undertake group activities that highlight storm drain pollution, and contribute volunteer community actions to restore and protect local water resources. KYTC initiated and continues to maintain partnerships with other regulated MS4 communities to achieve this goal.

KYTC complies with public notice requirements whenever conducting public involvement/participation program activities. Activities may include representation on local stormwater management work groups, public hearings, development of the Six Year Road Plan, legislation enacted by the General Assembly and Governor, KYTC education volunteers via KEEN, utilizing the KYTC website for citizen input and working with other MS4 coordinators. Additional activities such as continuing KYTC’s statewide public survey provide a mechanism to track educational behavior changes by measuring the public’s knowledge of key issues and effectiveness of the program through public response and results analyses.

Permit Activities

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
2.1a	KYTC Outreach Program	Effective upon permit issuance, the number of KYTC outreach programs	The permittee shall utilize the Adopt-A-Highway public outreach program to include stormwater quality issues.	Office of Public Information

KYTC utilizes the Adopt-a-Highway program for outreach and incorporates stormwater quality issues as appropriate. KYTC has one Statewide Adopt-A-Highway Coordinator in Central Office and twelve Adopt-A-Highway District Coordinators throughout the state to coordinate the program. The KYTC Annual Adopt-A-Highway Poster Contest is held to educate school age children on the importance of a clean environment. The contest has a large number of entries from elementary, middle and high schools across the state. The Office of Public Information summarizes the activities to the DEA MS4 Coordinator.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
2.1b	KYTC Outreach Program	Effective upon permit issuance, the number of KYTC outreach programs	The permittee shall utilize the State Fair public outreach program to include stormwater quality issues.	DEA MS4 & Office of Public Information

KYTC utilizes the State Fair program for outreach and incorporates stormwater quality issues as appropriate. The KYTC includes community stormwater quality information through displays and brochures in its booth at the State Fair. The DEA provides materials to the Office of Public Information prior to the State Fair.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
2.1c		Beginning in Permit Year Two (2)	The permittee shall assess and append where appropriate the content of educational materials at rest areas and associated public outreach programs to include stormwater quality issues.	DEA MS4 Coordinator & Division of Maintenance

Beginning in Permit Year Two, rest areas will be assessed for opportunities to distribute educational materials. Content for these materials will include stormwater quality issues where appropriate. The DEA will work with the Division of Maintenance (DM) on this assessment.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
2.1d		Beginning in Permit Year Two (PY2)	The permittee shall assess the utilization of the KEEN program in schools regarding stormwater messages.	DEA MS4 Coordinator & KEEN Coordinator

The KYTC Kentucky Engineering Exposure Network (KEEN) is a unique partnership between the Commonwealth of Kentucky's school system and the Kentucky Transportation Cabinet. KEEN has been involved in presenting discussions on stormwater during some of their presentations. The KEEN Central Office coordinator and District KEEN coordinators provide an annual summary of the number of school programs conducted relating to stormwater. Assessment for improving the KEEN stormwater program will take place beginning in Permit Year Two (PY2). The DEA MS4 and KEEN Coordinators will perform the assessment.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
2.2	Public Survey	Track educational and behavior changes through analysis of survey results during Permit Year Four (4)	The permittee shall measure public knowledge of key issues and effectiveness of program through public response to the survey and results analyses. The permittee shall complete on-going base survey and share results with partner MS4 entities. The permittee shall perform a survey in the 4 th year of the permit term to assess progress and planning for the next permit cycle.	DEA MS4 Coordinator & DEA Director

KYTC conducted a statewide survey via the University of Kentucky in 2008 that was designed to measure public knowledge, attitudes and behavior (with respect to stormwater issues) among the general public in the MS4 communities. The purpose of the survey was for the communities and KYTC to use the results to set benchmarks and to monitor the ongoing effectiveness of resources and strategies they are implementing for public education. Comprehensive results of the statewide survey were released in 2009 and are posted on the KYTC web site.

Another survey will be conducted in Permit Year Four. The results will be shared with partner MS4 entities for assessment of progress and planning for the next MS4 permit cycle. DEA will coordinate the survey.

Cooperative Efforts (KYTC provides supportive or other non-lead role)				
Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
2.3	Stakeholder/ Partner Involvement	Participation as requested	The permittee's District MS4 Coordinators shall participate and be actively involved as a stakeholder in local MS4 activities upon request.	District MS4 Coordinators

KYTC partners with other MS4 communities to participate as a stakeholder in local MS4 activities. Each MS4 District Coordinator is to work with the local community MS4 Coordinators (see Appendix B) in their respective Districts and participate as requested. Typical activities include being a member of the community stormwater advisory committee, community stormwater activities, earth day events, etc. The District MS4 Coordinators are to report their activities to the DEA MS4 Coordinator.

MCM II References

Reference	Reference Name	KYTC Division/ Organization
Inter Local Agreements		DEA MS4 Coordinator
303d List	Final 2010 Integrated Report to Congress on the Condition of Water Resources in Kentucky - Volume II. 303(d) List of Surface Waters	DEA Water Quality SME
Clean Storm Water Brochure	Clean Storm Water - Everyone's Business	DEA MS4 Coordinator
Understanding Storm Water Brochure	When It Rains It Drains - Understanding Storm Water	DEA MS4 Coordinator
Adopt-A-Highway	KYTC Adopt-A-Highway Program	Office of Public Information
TMDLs	*VARIOUS*	DEA Water Quality SME
FAQ	District MS4 Coordinator FAQ	DEA MS4 Coordinator
Public Survey	Kentucky Stormwater Survey Results - A Telephone Survey of Residents in MS4 Phase II Communities and Counties: Assessing Knowledge, Attitudes, Behaviors, and Education Venues	DEA MS4 Coordinator
KEEN	KYTC Kentucky Engineering Exposure Network	KEEN Coordinator

C. MCM III Program – Illicit Discharge Detection and Elimination

Program Overview

Under the KYS000003 permit, KYTC is to develop, implement and enforce a program for detection and elimination of illicit discharges. Two components of the IDDE program involve the location and continual inspection of outfalls for illicit discharges. KYTC has entered into partnerships with all but a few permitted MS4 communities in Kentucky to address IDDE. KYTC defers the mapping and inspection component to our partner communities. KYTC will address the location and inspection of major outfalls within KYTC Rights-of-way in the communities where no partnership exists.

Mapping and illicit discharge detection and elimination should be accomplished on a single, locally managed system for consistency. KYTC entered into partnerships with most of the MS4 communities during their first permit term to coordinate our efforts for compliance with the MS4 Program. KYTC and the communities assist one another in meeting the requirements of the EPA MS4 Program in a more feasible and efficient manner to have a greater impact on overall pollutant reduction in stormwater runoff. KYTC works with partner communities, and the partner communities will maintain the mapping and perform inspections. The mapping, intended to be developed in cooperation with MS4 partnering communities wherever possible, is required to display the location of all known major outfalls and the names and locations of all Waters of the Commonwealth that receive discharges from those outfalls. The purpose of the map development is to become aware of system conditions and be able to detect and trace illicit discharges to the separate storm sewer system. KYTC is unlike municipalities in that we do not generate industrial waste or have a varying/complex network of storm sewers. There are instances where the storm sewer systems from adjoining communities have discharges onto KYTC right-of-way.

In areas where KYTC and the communities do not partner, the District Offices in coordination with the DEA MS4 Coordinator will develop and maintain an IDDE data base. KYTC has developed an Illicit Discharge Detection and Elimination Program Document for detection of non-stormwater discharges to the MS4 systems (Appendix B). A component of this plan and procedures is education and training of KYTC staff and contractors of the hazards and regulatory concerns with illegal discharges and improper waste disposal. KYTC will assess the Environmental Awareness Handbook and training for any additional materials. Also included in the IDDE Program Document is a mapping protocol for locating major outfalls in MS4 areas where KYTC has not partnered.

KYTC recognizes that the portions of the separate storm sewer system that were built by KYTC to serve the state highways system are owned by KYTC. These storm sewers serve to carry stormwater runoff from the highways to keep them safe for the traveling public. As a related matter, KYTC has established highway maintenance agreements with local governments. These highway maintenance agreements set out the responsibilities for maintaining the highway system within the state right-of-way. The KYTC MS4 program and its initiatives work in conjunction with, but do not in any way alter, existing local highway maintenance agreements.

It is important to note that related requirements for stormwater management at KYTC facilities are included in the KYG500000 permit. District managers are responsible for the implementation of this permit.

Permit Activities

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
3.1	Illicit Discharge Detection and Non-Stormwater Discharges	Beginning in Permit Year Three (PY3)	The permittee shall develop an illicit discharge detection and elimination practice. This practice shall address KYTC's responsibilities to address illicit discharges in partnering communities and non-partnering communities. This material shall be used to address appropriate KYTC staff.	DEA MS4 Coordinator and District MS4 Coordinators

IDDE practices are occurring at KYTC facilities utilizing the Environmental Handbook fact sheets and inspection forms. IDDE practices at rest areas/welcome centers is performed by those entities contracted by KYTC. IDDE practices along roadways within partnered MS4s will be managed by the local MS4 and in non-partnered areas will be investigated by the District MS4 Coordinator. KYTC has developed the KYTC IDDE Program Document (Appendix B).

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
3.2	Illicit Discharges	Beginning in Permit Year Three (PY3), report the number of illicit discharges discovered and eliminated	The permittee shall train KYTC personnel on the identification, reporting, and elimination of illicit discharges at KYTC facilities as part of and as observed during routine maintenance.	District MS4 Coordinators & OHRM

Maintenance personnel will continue to be trained annually as a component of the Environmental Awareness class offered through the University of Kentucky Transportation Center training (<http://www.kyt2.com/training>). The OHRM will monitor the training attendance, document the number of participants annually, and submit it to the DEA MS4 Coordinator. The District MS4 Coordinators will investigate any reports of illicit discharges and submit an IDDE Report Form to the DEA MS4 Coordinator.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
3.3	Separate Storm Sewer Mapping	Beginning in Permit Year Three (3), summarize annually and provide a copy of the map to the Division of Water with the Annual Report	The permittee shall coordinate with partner MS4 entities to map the separate storm sewer system. In the event that a partner MS4 program is not available, the permittee shall perform the mapping of the MS4 within the KYTC's rights-of-way in the Urbanized Area.	District MS4 Coordinators & DEA MS4 Coordinator

District MS4 Coordinators will work with partnered MS4s to assist them in mapping outfalls when requested to do so. Major outfalls within non-partnered MS4s will be identified by KYTC District Offices in coordination with the DEA MS4 Coordinator. Mapping activities by the District Offices will be coordinated with the DEA MS4 Coordinator. The District MS4 Coordinators are to summarize the mapping activities annually and submit it to the DEA MS4 Coordinator. When new community MS4s are designated by the KDOW, the DEA MS4 Coordinator will contact the community to discuss partnering.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
3.4	MS4 Partnerships	Number of agreements established/modified	The permittee shall continue/establish/modify and implement additional agreements, as necessary, with the local MS4 jurisdiction regarding mapping. The permittee shall make data about the KYTC drainage systems available to requesting partner MS4 programs. Otherwise, the permittee shall enable and authorize right-of-entry to MS4s to determine the process for identifying infrastructure owned by KYTC. In the event that the MS4 does not enter into an agreement with the permittee, KYTC shall be responsible for the mapping of the MS4 within KYTC's rights-of-way in the Urbanized Area.	DEA MS4 Coordinator & District MS4 Coordinators

District MS4 Coordinators will work with partnered MS4s to assist them in mapping outfalls when requested to do so and report annually. The DEA MS4 Coordinator will keep an updated list of partnered and non-partnered MS4s. Mapping information that KYTC has available will be made available to partnering MS4s by contacting the local District MS4 Coordinator. KYTC will continue to provide right-of-entry permission to MS4s that request it for mapping purposes.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
3.5	Illicit Discharge Detection and Non-Stormwater Discharges and Sanitary Sewer Exfiltration	Beginning in Permit Year Three (3), the number of responses and notifications indicating a potential discharge	The permittee shall establish/modify and implement additional agreements, as necessary, with the local MS4 jurisdiction regarding IDDE protocols. As partnering MS4s identify potential illicit discharges that originate or pass through the KYTC right-of-way, KYTC District Office MS4 Coordinators shall participate in follow-up investigations to determine if source of illicit discharge is KYTC's responsibility. KYTC District MS4 Coordinators shall track reports and investigate results. The KYTC District MS4 Coordinators shall notify the partnering MS4 when information about potential illicit discharges becomes available. KYTC District MS4 Coordinators shall track potential illicit discharge identification and partnering MS4 notification. In the event that the MS4 does not enter into an agreement with the permittee, KYTC shall be responsible for illicit discharge detection, including IDDE plan development that detects and addresses non-storm water discharges including illegal dumping.	District MS4 Coordinators

Reports of illicit discharge received by KYTC will be directed to District MS4 Coordinators. The District MS4 Coordinators are to contact the DEA MS4 Coordinator when they receive a report of an illicit discharge. The District MS4 Coordinator is to work with partnered MS4s for follow-up and will further investigate the reports in non-partnered MS4s (Appendix B). District MS4 Coordinators will follow-up with partnered MS4s to determine resolution of the reported illicit discharge. KYTC will utilize various district staff and contractors to identify any illicit discharges in KYTC MS4 areas as they perform their regular activities. District MS4 Coordinators will track the number of illicit reports received, the follow-up conducted, resolution and complete the IDDE Reporting Form.

Beginning in permit year 3, the District MS4 Coordinators are to conduct inspections on each major outfall in their Districts where KYTC does not partner with a local MS4. "Dry-Weather" inspections are to be conducted once a permit cycle for all major outfalls. "Dry Weather" inspections are to be submitted to the DEA MS4 Coordinator for non-partnered communities.

Additional Permit Activities				
Activity Number	Page/ Paragraph	Measure of Success/ Frequency	Activity Required	Responsible Entity
3.6	Illicit Discharge Elimination	The number of illicit discharges resolved	The permittee's District Coordinators shall engage local partner MS4s to determine the process of elimination of illicit discharges when the source of the discharge is determined to originate on KYTC's rights-of-way or result from KYTC activities. The permittee shall enable and authorize right-of-entry to local partner MS4 entities for purposes of illicit discharge compliance activities as necessary. In the event that the MS4 does not enter into an agreement with the permittee, KYTC shall be responsible for illicit discharge elimination within KYTC's legal authority.	District MS4 Coordinators & DEA MS4 Coordinator

Illicit discharge reports received by KYTC should be directed to District MS4 Coordinators. Should further investigation by the District MS4 Coordinator indicate that the source of the illicit discharge is within KYTC's rights-of-way or its facilities, the District MS4 Coordinator will notify the DEA MS4 Coordinator for resolution.

Additional Permit Activities				
Activity Number	Page/ Paragraph	Measure of Success/Frequency	Activity Required	Responsible Entity
3.7	II-2, B.3.c	Prohibit discharges	Effectively prohibit through policy, contract, or other regulatory mechanism, non-stormwater discharges into the separate storm sewer system, define allowable discharges, and implement appropriate enforcement procedures and actions.	DEA MS4 Coordinator

KYTC prohibits discharges through contractual requirements with Contractors and service personnel. Enforcement action is also routinely included in construction contracts. Otherwise, KYTC has no jurisdiction over adjoining community MS4 areas, and will defer to the local MS4 or the KDOW, if necessary. The DEA MS4 Coordinator will summarize annually any actions for this activity.

Additional Permit Activities				
Activity Number	Page/ Paragraph	Measure of Success/Frequency	Activity Required	Responsible Entity
3.8	II-2, B.3.e	Develop information	Inform KYTC employees and contractors of hazards associated with illegal discharges and improper disposal of waste.	DEA MS4 Coordinator

KYTC will continue training of staff and Contractors through in-house and Transportation Center offered training to inform KYTC employees and contractors. The DEA MS4 Coordinator will review the training reports.

MCM III References

Reference	Reference Name	KYTC Division/ Organization
Environmental Awareness Handbook	Environmental Handbook for Management of Highways and Transportation Facilities, 2008	DEA Facilities Coordinator
Pesticide Training Manual	Maintenance Guidance Manual and Field Operations Guide	Maintenance
Snow & Ice Training Manual	Field Operations Guidance Manual- Chapter 10: Snow and Ice, Maintenance Guidance Manual	Maintenance
	KYTC Inspection Checklists - Snow & Ice	Maintenance
	KYTC Inspection Checklist - Facility Quarterly	Maintenance
	KYTC Inspection Checklist - Facility Annual	Maintenance
	KYTC Inspection Checklist - Rest Area	Maintenance
Rest Area Policies	Maintenance Guidance Manual, January, 2009 Field Operations Guidance Manual, October, 2011	Maintenance
Inter Local Agreements		DEA MS4 Coordinator
Facility Maintenance BMP Plans	KYG50 Implementation (KYG50, DMRs, Quarterly & Annual Reports)	DEA MS4 Coordinator
KYG50	Facilities Permit	DEA Facilities Coordinator
Environmental Viewer		DEA MS4 Coordinator
FAQ	District MS4 Coordinator FAQ	DEA MS4 Coordinator
303d List	Final 2010 Integrated Report to Congress on the Condition of Water Resources in Kentucky - Volume II. 303(d) List of Surface Waters	DEA Water Quality SME
TMDLs	*VARIOUS*	DEA Water Quality SME

D. MCM IV Program – Construction Site Stormwater Runoff Control Requirements

Program Overview

The MS4 program requires KYTC to develop, implement, and enforce a program to reduce pollutants in stormwater runoff to their MS4 from construction activities that result in a land disturbance greater than or equal to one acre. The KYTC stormwater construction program involves the Division of Construction, the Division of Highway Design, the Division of Environmental Analysis and the District Offices.

The KYTC Construction Site Stormwater Control Program is comprised of the following elements:

- A review for water quality impacts and a determination whether an individual stormwater construction permit is needed or coverage by the KYR10 General Stormwater construction permit is sufficient;
- Development of an erosion protection and sediment control (EPSC) plan;
- Site inspections;
- Corrective actions and penalties, if needed;
- Quality assurance inspections;
- Project final inspections;
- Documentation utilizing inspection forms, daily work reports and Site Manager ; and
- Training.

The KYTC utilizes the documents listed in the References at the end of this section for this program.

Permit Activities

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
4.1	Construction permit implementation	Construction General Permit (KYR10) requirements implementation	The permittee shall implement standards and procedures for management of construction as enumerated in the Construction General Permit (KYR10) or an individual permit for construction.	Division Of Construction & Division of Highway Design

KYTC complies with the requirements of the KPDES Stormwater General Permit for Construction (KYR10) or Individual Stormwater Construction permits for construction through a system of standard specifications, manuals, guides, memorandums, policies, training, permitting, reports, contractual obligations, inspections, sanctions and other items (see References at the end of this section). These standards and procedures are used by planning, design and construction professionals to understand and comply with KYR10 or individual construction stormwater permits. KYTC will continue assessing documents or create new ones to adjust to any requirements or improve our practices.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
4.2	Develop and Implement Construction Practices	The number of practices implemented by Permit Year Three (PY3)	The permittee shall develop and implement construction practices which shall require erosion prevention and sediment control practices and sanctions to insure compliance; procedures for site plan review which incorporate consideration of potential water quality impacts; and procedures for site inspections and enforcement.	Division Of Construction

KYTC will continue to incorporate EPSC measures and enforce the proper use of these measures in the design and construction of its projects through implementation of Sections 212 and 213 of the KYTC Standard Specifications, liquidated damages in contractual language with construction contractors, and implementation of numerous design and construction memos (see references); preparation of SWPPPs by inspectors and resident engineers with oversight by the Central Office Division of Construction; and site inspection performed by qualified inspectors and resident engineers with oversight by the Central Office Division of Construction.

Atypically, a highway project may be constructed in an area with potential to affect sensitive water resources and have an impact not covered under the KYR10. In such cases, an individual KPDES construction stormwater discharge permit may be required by KDOW. Under these circumstances, EPSC plans may be developed to include enhanced BMPs. Individual permit development is the responsibility of the DEA, which shall coordinate development of the EPSC plan with the Division of Highway Design and the Division of Construction. Proposals to include post construction BMPs are to be coordinated with the Division of Maintenance. The Division of Construction will submit a summary of the construction practices and procedures implemented to the DEA MS4 Coordinator by the end of each year starting in 2013.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
4.3	Qualify KYTC employees and contractors as inspectors	The number of employees and contractors trained beginning in Permit Year Two (2).	The permittee shall include training for KYTC and contractor inspectors involved in highway construction stormwater inspections. The permittee shall use KYTC-developed training, KEPSC, or an effective equivalent. The contractor will be required to have a qualified inspector (KEPSC or effective equivalent program) to conduct erosion prevention and sediment control inspections per the Construction General Permit (KYR10) or individual permit and the KYTC Standard Specifications.	OHRM and Division of Construction

KYTC staff and a consultant developed the Kentucky Erosion Protection and Sediment Control for Roadway Inspectors (KEPSC-RI) class which (1) complies with the MS4 permit, (2) provides guidance on complying with the KYR10 General Permit or Individual Construction Stormwater Permit, (3) is specific to our construction methods and (4) satisfies the International Erosion Control Association (IECA) training module. The curriculum includes: project development; KYR10 permit overview; temporary and post-construction BMPs; SWPPP development; Preconstruction Meetings; pre-disturbance inspections; inspector responsibilities; Best Management Practices for projects; and hands on participation in completing inspection reports. KYTC staff and contractors are required to complete the class and pass an exam for certification. KYTC projects require the contractor to employ a certified inspector. KEPSC-RI is offered through the

University of Kentucky Transportation Center, which administers the certification and tracks the number of attendees. The OHRM will provide the annual number of attendees to the DEA MS4 Coordinator.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
4.4	Provide training opportunities for implementation of KPDES permit requirements on highway project and maintenance project plans	The number of employees, contractors or consultants trained beginning in Permit Year Two (PY2).	The permittee shall provide training opportunities through ACEC, Partnering Conference or other venues to train individuals on preparation of properly prepared Stormwater Pollution Prevention Plans (SWPPPs) for erosion prevention and sediment control, including developing drainage sheets, erosion control sheets, and the BMP template.	DEA MS4 Coordinator, Division of Highway Design & Division of Construction

KYTC has been involved in the development of the most recent SWPPP Preparers Class offered by UKT2. The KEPSC-RI also includes SWPPP development components. Periodically KYTC trains employees, contractors and/or consultants through various venues. The DEA, Division of Highway Design and the Division of Construction will track the number of attendees for any session they have during the year and submit it to the DEA MS4 Coordinator.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
4.5	Encroachment permits	The number of individuals informed about the Construction General Permit (KYR10)	The permittee shall inform all applicants requesting KYTC encroachment permits of the need to obtain a KPDES Construction General Permit (KYR10) and the possibility of other local EPSC requirements.	Division of Maintenance

Per the May 8, 2007 Memorandum “Encroachment, KPDES, and Earth Disturbance Permits” (see References at the end of this section), applicants applying to KYTC for an encroachment permit to use highway rights-of-way are informed of their obligation to comply with KYR10 should their activity disturb one acre or more. This includes developing and implementing a SWPPP consistent with KYR10. The Division of Maintenance is to report to the DEA MS4 Coordinator the annual number of encroachment permits issued.

Cooperative Efforts (KYTC provides supportive or other non-lead role)				
Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
4.6	Project coordination with MS4s	Number of NOIs	The permittee shall coordinate with local MS4 jurisdictions of KYTC land-disturbing activities that require KYR10 coverage within KYTC jurisdictional areas bordered by another local MS4, when requested. The permittee shall incorporate partnering MS4 jurisdiction's standards in project designs, where feasible and not in conflict with KYTC's design practices.	Division of Highway Design, District MS4 Coordinators, District TEBM-PD&PB & Division of Construction

KYTC coordinates with other MS4s for projects through various means, including development of the Six Year Road Plan, legislative review and notice of projects on our web page. KYTC can involve local MS4s if requested to do so. The Division of Highway Design and the District MS4 Coordinators are to report annually to the DEA MS4 Coordinator any projects that have involved local input regarding the MS4 program.

The Notice of Intent (NOI) for KYR10 permit coverage is typically initiated per Design Memo No. 06-09 & Construction Memo No. 08-09 (see References at the end of this section). As the standard practice, the District TEBMs are to have the NOI dates and entered into Site Manager under "Key Dates". The Division of Construction is to provide an annual report of NOIs to the DEA MS4 Coordinator.

MCM IV References

Reference	Reference Name	KYTC Division/ Organization
KEPSC RI Training Manual		DEA MS4 Coordinator
KY Standard Specs for Roadway Design	Standard Specifications for Road and Bridge Construction - Edition of 2012, Section 212 & 213	Construction
Drainage Design Manual (Chapter 10)	Drainage Guidance Manual - Chapter 10 - Erosion Control	Highway Design
Daily Work Report (DWR)		Construction
Inspection Sheets	KYTC Inspection Checklists - Work in a Stream	DEA Water Quality SME
KYTC BMP Plan	Kentucky Pollutant Discharge Elimination System - Permit KYR10 - Best Management Practices Plan	Construction
Erosion Control Inspection Form		Construction
Division of Construction Website	Erosion Control	Construction
Construction Memos	Construction Memo No. 5-04 "Improvement of the Erosion Control Plan Development Process" 2004. Construction Memo No. 02-06 "Standard Specifications Section 213.03.03 KPDES BMP Inspection and Maintenance" 2006. Construction Memo No. 03-07 "Kentucky Pollution Discharge Elimination System Permit Coverage and Spill Protection Control and Countermeasure Plan" 2007. Construction Memo No. 6-09 "Turf Reinforcement Mat Specification, Special Notes and Standard Drawing Sepia", 2009. Construction Memo No. 8-09 "NOI eForm Policy", 2009. Construction Memo No. 2-10 "Final Inspection Project Completion Notice", 2010. Construction Memo 4-11 "KPDES Permits Obtained by the Contractor", 2011.	Construction
Preconstruction Checklist		Construction
BMP Technical Manual Field Guide	Kentucky Construction Site Best Management Practices (BMP) for Controlling Erosion, Sediment, and Pollutant Runoff From Construction Sites - Planning and Technical Specifications Manual	DEA Water Quality SME

Karst Policy	Design Memorandum No. 12-05 - Policy on Best Management Practice to be used for Karst and Significant Resource Areas, 2005	Highway Design
Encroachment Permit	May 8, 2007 Memo "Encroachment, KPDES, and Earth Disturbance Permits"	Maintenance & DEA MS4 Coordinator
Encroachment Permit	TC 99-1A - Kentucky Transportation Cabinet Department of Highways Permits Branch - Application for Encroachment Permit TC 99-1B - Kentucky Transportation Cabinet Department of Highways Permits Branch - Encroachment Permit	Highway Design
Six Year Road Plan		MS4 Coordinator

Reference	Reference Name	KYTC Division/ Organization
KYR10	Kentucky Pollutant Discharge Elimination System (KPDES) General Permit for Stormwater Discharges Associated with Construction Activities (KYR10)	DEA MS4 Coordinator
303d List	Final 2010 Integrated Report to Congress on the Condition of Water Resources in Kentucky - Volume II. 303(d) List of Surface Waters	DEA Water Quality SME
TMDLs	*VARIOUS*	DEA Water Quality SME
FAQ	District MS4 Coordinator FAQ	DEA MS4 Coordinator
DR 202 - 3,4,5,11	DR 202 - 3 Water Quantity Issues DR 202 - 4 General Goals of Drainage Facility Designs DR 202 - 5 Stormwater Disposal DR 202 - 11 Post Construction Best Management Practice (BMP)	Highway Design
Sediment and Erosion Control Initiatives - Partnering Conference 2008	1_Partnering Conference Compliance Report 2_Erosion Control Plans 3_KPDES BMP Plans	DEA MS4 Coordinator

E. MCM V Program – Post-Construction in New Development and Redevelopment

Program Overview

For the past two decades the rate of land development across the country has been more than two times greater than the rate of population growth. If unchecked, the increased impervious surfaces associated with this development will increase stormwater volume and degrade water quality, which can harm lakes, rivers, streams, and coastal areas. The best way to mitigate stormwater impacts from all of the new impervious surfaces is to use practices to treat, store, and infiltrate runoff at the source before it can affect water bodies downstream. Innovative site designs that reduce imperviousness and promote infiltration are excellent ways to achieve the goals of reducing flows and improving water quality.

Design practices and specifications (see references) for road construction from new and redevelopment projects disturbing greater than one acre have already been established. KYTC will continue to implement and enforce these practices and specifications and ensure that controls are in place that prevent or minimize water quality impacts. Additional appropriate structural and non-structural strategies may also be developed to the Maximum Extent Practicable (MEP). This newly developed menu of BMPs for new highways or existing highway upgrades is required to be implemented in Permit Year two. In all cases, KYTC is required to ensure adequate long-term operation of all BMPs implemented. KYTC’s post-construction approach is detailed in the Post-Construction Program Document (Appendix C).

Permit Activities

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
5.1	Design Standards and Karst Policy implementation	Continued implementation throughout permit cycle	The permittee shall continue to implement and enforce the design standards and specifications for road construction and the Karst policy to address post-construction stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development. The program must ensure that controls are in place that would prevent or minimize water quality impacts.	Division of Highway Design & Division of Construction

The Division of Highway Design and the Division of Construction will continue to implement the Karst Policy and Sections 212 and 213 of the Standard Specifications for post-construction water quality management.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
5.2	KYTC staff and project delivery team post-construction training/outreach	The number of individuals participating in training or number of sessions conducted	The permittee shall include post-construction stormwater quality and quantity discussions in training KYTC staff and contract staff.	OHRM & DEA MS4 Coordinator

KYTC will continue to provide training opportunities for Contractors and KYTC staff through in-house and Transportation Center sponsored training. The KEPSC-RI class includes post-construction BMP training as does the Environmental Awareness Class. The Environmental Handbook will be revised during this permit term and include more information on post-construction activities. Other venues of training may be done by the Division of Highway Design and the DEA. OHRM will annually report the attendance for the Environmental Awareness classes and KEPSC-RI classes to the DEA MS4 Coordinator.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
5.3	Operate and maintain existing KYTC post-construction strategy	Summarize annually and include in annual report	The permittee shall utilize maintenance crews at its District offices to operate and maintain post-construction BMPs. The permittee may also utilize maintenance agreements with local MS4 programs or other entities to operate and maintain post-construction BMPs, as deemed appropriate.	Division of Maintenance

The current practice for maintaining post-construction BMPs is included in our standard practice of maintaining all road facilities. KYTC will refine this practice by developing an inventory of the post-construction BMPs across the state. The DEA and the Division of Maintenance will continue to develop a program for inventorying the post-construction BMPs across the state. Once an inventory is developed, a means for inspections will be established and reporting duties for this permit will be established. The inspections will include a determination whether maintenance is required on the BMPs. The Division of Maintenance will report on this activity annually to the DEA MS4 Coordinator.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
5.4	Develop and Implement post-construction strategy	Summary of changes made to Operation and Maintenance, BMPs, Fact Sheets, and related documents shall be included in annual report	The permittee shall annually assess whether changes in the Environmental Handbook are necessary to facilitate implementation of long-term maintenance activities for highway BMPs; update manuals to allow operation and maintenance activities to be communicated and enabled at the staff level. The permittee shall update KYTC Drainage Design Manual to include post-construction design requirements	DEA MS4 Coordinator, Division of Maintenance, & Division of Highway Design

The Environment Handbook will be assessed for inclusion of new requirements in KYTC’s Post-Construction Program Document (Appendix C) by the DEA. The Division of Maintenance will review their procedures for the operation and maintenance of post-construction BMPs. The Division of Highway Design will update the design practices for Post-Construction stormwater management in the KYTC Drainage Manual. Any updates will be communicated to KYTC staff and Contractors through annual training in-house or the Environmental Awareness Class. Changes in Design would be communicated by Design Memorandum.

The Division of Highway Design and the Division of Maintenance will report annually to the DEA MS4 Coordinator on the status of their respective activities.

Cooperative Efforts (KYTC provides supportive or other non-lead role)				
Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
5.5	Post-construction strategy communication	The number and type of BMPs installed through cooperative efforts with MS4s	The permittee shall communicate KYTC’s post-construction policy to local MS4 programs through presentations at the MS4 Workgroup and availability via the website. The policy reflects KYTC’s post-construction standards and its role in the project delivery process. The permittee shall consider incorporating partnering MS4 jurisdiction’s standards for post-construction BMPs, where feasible and not in conflict with KYTC’s design practices.	Division of Highway Design, District MS4 Coordinators, District TEBMs, Division of Maintenance & DEA MS4 Coordinator

The DEA MS4 Coordinator, with the help of the Office of Information Technology, will make KYTC’s Post-Construction Program Document (Appendix C) available on the KYTC Stormwater website (www.stormwater.ky.gov). The DEA MS4 Coordinator will communicate the post-construction protocol to partnering MS4s through training at the Partnering Conference or KSA Meetings.

The Division of Highway Design and District Office TEBMs will discuss the Post-Construction Protocol with local partnering MS4s when requested and consider incorporating the local requirements into the design, where feasible and not in conflict with KYTC’s design practices.

The Division of Highway Design will maintain a report annually for the number and type of post-construction BMPs they have worked on with other MS4s through a cooperative effort. The report will be provided annually to the DEA MS4 Coordinator.

The District MS4 Coordinators will work with the District Transportation Engineer Branch Managers on maintaining a list of post-construction BMPs installed through cooperative efforts with MS4s. A list of the number and type is to be provided annually to the DEA MS4 Coordinator.

The DEA MS4 Coordinator will report to the Division of Maintenance any new post-construction BMPs for inclusion in the post-construction BMP inventory.

Additional Permit Activities				
Activity Number	Page/ Paragraph	Measure of Success/ Frequency	Activity Required	Responsible Entity
5.6	FS-4, 7.F	Non-structural & Structural BMPs	<p>Non-Structural BMPs</p> <ul style="list-style-type: none"> Standards and Practices Review - The permittee is required to review its design practices to promote and encourage the implementation of non-structural BMP's including green infrastructure, low impact and cluster developments and disconnection of impervious areas from riparian zones, where applicable. <p>Structural BMPs</p> <ul style="list-style-type: none"> The permittee is required to develop and/or adopt structural BMP selection and design guidelines to aid in the planning and design of an appropriate BMP relative to its intended water-quality protection function, ease of maintenance and overall community acceptance. 	Division of Highway Design

The Division of Highway Design will review and modify, the Drainage Design Manual for inclusion of post-construction stormwater strategies, and provide selection and design criteria for specific post-construction BMPs. Any modifications will be communicated to the DEA MS4 Coordinator annually.

Additional Permit Activities				
Activity Number	Page/ Paragraph	Measure of Success/Frequency	Activity Required	Responsible Entity
5.7	II-3, B.5.b	BMP strategies	Develop and implement strategies, which include a combination of structural and non-structural BMPs appropriate for the area.	Division of Highway Design & Division of Construction

The KYTC Post-Construction Program Document (Appendix C) includes modifying the Drainage Design Manual for Post-Construction BMPs. Any changes in the post-construction protocol by the Division of Highway Design or the Division of Construction will be reported to the DEA MS4 Coordinator.

Additional Permit Activities				
Activity Number	Page/ Paragraph	Measure of Success/Frequency	Activity Required	Responsible Entity
5.8	II-3, B.5.c	Regulatory authority	Use a policy, contract, and standards and practices or other mechanisms to address erosion and sediment control, buffer zones, riparian areas, and other water-quality related activities from new development and redevelopment projects.	Division of Highway Design & Division of Construction

Through project specifications, Standard Specifications and contractual language, the Division of Highway Design and the Division of Construction will establish and enforce post-construction requirements. Any policy modifications developed by the Division of Highway Design or the Division of Construction via memorandums or other means will be reported to the DEA MS4 Coordinator.

Additional Permit Activities				
Activity Number	Page/ Paragraph	Measure of Success/Frequency	Activity Required	Responsible Entity
5.9	II-3, B.5.d	Update design practices	Develop a menu of structural and non-structural BMPs that can be applied to new highways or upgrades of existing highways. Update design practices to reflect the menu of implemented structural post-construction BMPs in permit year two (2).	Division of Highway Design

The Division of Highway Design will update design practices for post-construction BMPs that will be included in the Drainage Design Manual by PY 2. The Division of Highway Design will report to the DEA MS4 Coordinator the status of the update.

MCM V References

Reference	Reference Name	KYTC Division/ Organization
Environmental Awareness Handbook	Environmental Handbook for Management of Highways and Transportation Facilities, 2008	DEA Facilities Coordinator
KY Standard Specs for Roadway Design	Standard Specifications for Road and Bridge Construction - Edition of 2012, Section 212 & 213	Construction
KYTC BMP Plan	Kentucky Pollutant Discharge Elimination System - Permit KYR10 - Best Management Practices Plan	Construction
BMP Technical Manual Field Guide	Kentucky Construction Site Best Management Practices (BMP) for Controlling Erosion, Sediment, and Pollutant Runoff From Construction Sites - Planning and Technical Specifications Manual	DEA Water Quality SME
Karst Policy	Design Memorandum No. 12-05 - Policy on Best Management Practice to be used for Karst and Significant Resource Areas, 2005	Highway Design
Rest Area Contracts		Maintenance
Special Notes	Special Notes for Water Pollution and Erosion Control	Highway Design
Inter Local Agreements		DEA MS4 Coordinator
TMDLs	*VARIOUS*	DEA Water Quality SME

Reference	Reference Name	KYTC Division/ Organization
DR 202 - 3,4,5,11	DR 202 - 3 Water Quantity Issues DR 202 - 4 General Goals of Drainage Facility Designs DR 202 - 5 Stormwater Disposal DR 202 - 11 Post Construction Best Management Practice (BMP)	Highway Design
303d List	Final 2010 Integrated Report to Congress on the Condition of Water Resources in Kentucky - Volume II. 303(d) List of Surface Waters	DEA Water Quality SME
Design Memos	Design Memo No. 15-04 "Project Development Guidance on Environmental Considerations" 2004. Design Memo No. 3-05 "Drainage Manual-Revisions in the Erosion Control Plan Development Process" 2005. "Design Manual Chapter 10 - Erosion Control" 2005. Design Memo No. 3A-05 "Drainage Manual - Revisions in the Erosion Control Plan Development Process" 2005. Design Memo No. 12-05 "Policy on Best Management Practice (BMP) to be used for Karst and Significant Resource Areas" 2005. Design Memo No. 02-06/Construction Memo No. 05-06 "Policy for KPDES Permit Documentation" 2006. Memo "KPDES Permit and Earth Disturbance" 2007. Memo "Work Near Areas of Environmental Concern" 2007. Design Memo No. 2-09 " Turf Reinforcement Mat Specification, Special notes and Standard Drawing Sepia", 2009. Design Memo No. 4-09 "Drainage Manual, DR-200 Stormwater and Floodplain Management, DR-700 Inlets and Storm Sewers, DR-900 Storage", 2009. Design Memo No. 1-10 "Drainage Manual, DR-500 Open Channels DR-600 Culverts, DR-900 Bridges", 2010. Design Memo 4-10 "Drainage Manual, DR-400 Hydrology, DR- 1101 Temporary Drainage Structures", 2010. Design Memo 7-10 "Water Related Impacts Summary Update of DR-200 of Drainage Manual", 2010. Design Memo 1-11 "Drainage Manual, DR-100 Introduction and DR-300 Drainage Folder", 2011.	Highway Design

F. MCM VI Program – Pollution Prevention/Good Housekeeping (PP/GH)

Program Overview

The Pollution Prevention/Good Housekeeping minimum control measure is a key element of the small MS4 stormwater management program. This measure requires the MS4 operator to examine and subsequently alter their own actions to help ensure a reduction in the amount and type of pollution that collects on roads, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways. Controls for reducing or eliminating the discharge of pollutants from areas such as roads and parking lots, maintenance and storage yards (including salt/sand storage and snow disposal areas) are to be considered. These controls could include programs that promote recycling (to reduce litter), minimize pesticide use, and ensure the proper disposal of animal waste.

For KYTC facilities, including rest areas, truck weighing/inspection stations, maintenance facilities, and District Offices, there are a number of programs with similar goals. It is the intent of KYTC to use these existing programs as the basis for most of the activities in this MCM. The related programs include the:

- KPDES permit program for Highway Maintenance Facilities (KYG50);
- Spill Prevention Control and Countermeasures (SPCC) permit program;
- Groundwater Protection Plans;
- Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) program and KDOW permit;
- Superfund Amendments and Reauthorization Act (SARA) Title III; and
- Resource Conservation and Recovery Act (RCRA).

These programs operate under similar programmatic goals, but under different schedules and reporting requirements, ranging from implementation of plans made available upon request to quarterly monitoring reports. The Pollution Prevention/Good Housekeeping Program Document (Appendix D) summarizes how KYTC will implement MCM VI.

KYTC delivered environmental awareness training to all maintenance engineers and facility superintendents in each district. Over 260 managers received this training. In December 2008, updates were made to the Environmental Handbook and associated checklists. One example of the updates is the addition of a sample stormwater Best Management Practices (BMP) Plan. An abbreviated handbook was also produced and distributed to district maintenance personnel. This abbreviated handbook was condensed to include information that was only applicable to maintenance-specific activities.

KYTC is committed to cooperating with local MS4 operators who request assistance in training their staff to reduce stormwater pollution, as some of the municipal operations are similar to KYTC's facilities and maintenance operations. KYTC is addressing Environmental Awareness Program training for its employees by continuing to have new maintenance employees attend the UKT2 class as well as having the DEA Facility Coordinator make presentations each year across the state at the maintenance facilities.

KYTC has developed “BMP Plans” for the facilities in accordance with the KPDES Permit for Highway Maintenance Facilities (KYG50). The ultimate goal is to reduce the release of pollutants to the environment from the work area. Facility personnel conduct quarterly audits while District Office staff conduct annual audits. The DEA Facility Coordinator makes several inspections across the Commonwealth during the year. These plans address the location and potential discharge of pollutants to the stormwater drainage system. The permit program that requires the plan’s development also requires monitoring and reviewing the program’s effectiveness to determine if further controls are needed or if existing controls are adequate. The facility specific BMP Plan addresses maintaining conveyance, source control, water quality treatment infrastructure, and devices that limit or eliminate pollutants (including sediment, automotive waste fluids, deicing and anti-icing chemicals, herbicides, pesticides, fertilizers and other debris) from being released to the environment.

i. Permit Activities

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
6.1	Facility Inventory and Inspection	Submit in the annual report at the end of Permit Year Two (PY2)	The permittee shall inventory and inspect KYTC-owned and operated facilities to determine whether activities and materials at these facilities may be contributing to pollutants to stormwater runoff. Facilities that could contribute to polluting stormwater include, but are not limited to: welcome centers, rest areas, and District KYTC offices, and other areas not covered by the KPDES Permit KYG50.	District MS4 Coordinators

KYTC contracts with the Rest Area operators and includes requirements for stormwater pollutant control. These practices include: litter control; pet waste stations; oil spill remedial measures; maintaining a supply of oil absorbent; proper storage of deicing materials; providing trash cans; and general grounds maintenance.

The District MS4 Coordinators will inspect all of the Rest Areas/Welcome Centers and Truck Weighing/Inspection Stations with the person in their respective Districts who is responsible for overseeing the rest area contracts. District MS4 Coordinators will inspect their respective District Office grounds. The inspections forms are to be completed and submitted to the DEA MS4 Coordinator during permit yea two.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
6.2	Implementation of BMP plans	Beginning in Permit Year Two (PY2), the permittee shall summarize the BMP activities outlined in the Environmental Handbook and submit annually.	The permittee shall implement the BMP plans in the Environmental Handbook that includes inspections, trainings, and reports. The permittee shall assess implementation effectiveness and modify as needed.	DEA Facilities Coordinator

The Environmental Handbook includes a number of activities under Highway Maintenance and Operations; Facility Based Operations; Waste Management; and Spills and Emergencies. Refer to the Environmental Handbook Table of Contents. The DEA Facilities Coordinator will review twelve or more facilities annually to assess implementation effectiveness of the program and make modifications as needed.

The DEA Facilities Coordinator will summarize the BMP activities and submit the report annually to the DEA MS4 Coordinator in permit year two.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
6.3	Train staff and implement BMP plans at KYTC facilities	Beginning in Permit Year Two (PY2), the permittee shall summarize the number of stormwater management requirements implemented and submit annually	The permittee shall implement facility specific BMP plans and modify as necessary per the KYTC Environmental Handbook.	District MS4 Coordinators and DEA Facilities Coordinator

Each facility has an individually tailored Best Management Practices (BMP) Plan, as outlined in the Environmental Handbook, that is kept at the Facility. Each District Office designates someone to conduct the Facility Annual Environmental Inspection (FAEI). The FAEI is a review of the Best Management Practices Plan for the facility. Any needed modifications to the BMP Plan are to be addressed.

The FAEI is to be reviewed by the District MS4 Coordinator with the person who conducted the inspection. They will summarize the number of stormwater management requirements implemented at the facility. The District MS4 Coordinators will annually summarize the BMPs in their respective Districts.

Cooperative Efforts (KYTC provides supportive or other non-lead role)				
Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
6.4	Facility staff training materials: Environmental Handbook	Beginning in Permit Year Two (PY2) KYTC's Environmental Handbook will be available on the website	The permittee shall make the updated Environmental Handbook available for the partner MS4 entities via the KYTC website. The permittee shall continue to offer Environmental Awareness Training to staff and the county maintenance.	DEA MS4 Coordinator

KYTC will continue to provide training opportunities for KYTC staff through in-house and the University of Kentucky Transportation Center sponsored training. Beginning in Permit year two, KYTC will make the Environmental Handbook available on the website.

MCM VI References

Reference	Reference Name	KYTC Division/ Organization
KEPSC RI Training Plan		DEA MS4 Coordinator
Environmental Awareness Handbook	Environmental Handbook for Management of Highways and Transportation Facilities, 2008	DEA Facilities Coordinator
Environmental Awareness Handbook	Environmental Handbook for Management of Highways and Transportation Facilities, 2008	DEA Facilities Coordinator
Pesticide Training Plan	Maintenance Guidance Plan and Field Operations Guide	Maintenance
Snow & Ice Training Plan	Field Operations Guidance Plan- Chapter 10: Snow and Ice, Maintenance Guidance Plan	Maintenance
Inspection Sheets	KYTC Inspection Checklists - Work in a Stream	DEA Water Quality SME
	KYTC Inspection Checklists - Snow & Ice	Maintenance
	KYTC Inspection Checklist - Facility Quarterly	Maintenance
	KYTC Inspection Checklist - Facility Annual	Maintenance
	KYTC Inspection Checklist - Rest Area	Maintenance
Karst Policy	Design Memorandum No. 12-05 - Policy on Best Management Practice to be used for Karst and Significant Resource Areas, 2005	Highway Design

Reference	Reference Name	KYTC Division/ Organization
Rest Area Contracts		Maintenance
Special Notes	Special Notes for Water Pollution and Erosion Control	Highway Design
Rest Area Policies	Maintenance Guidance Plan, January, 2009 Field Operations Guidance Plan, October, 2011	Maintenance
Inter Local Agreements		DEA MS4 Coordinator
Facility Maintenance BMP Plans	KYG50 Implementation	DEA Facilities Coordinator
KYG50	Facilities Permit	DEA Facilities Coordinator
303d List	Final 2010 Integrated Report to Congress on the Condition of Water Resources in Kentucky - Volume II. 303(d) List of Surface Waters	DEA Water Quality SME
TMDLs	*VARIOUS*	DEA Water Quality SME
FAQ	District MS4 Coordinator FAQ	DEA MS4 Coordinator
DR 202 - 3,4,5,11	DR 202 - 3 Water Quantity Issues DR 202 - 4 General Goals of Drainage Facility Designs DR 202 - 5 Stormwater Disposal	Highway Design

G. MCM VII Program – Reporting and Records Retention

Program Overview

An annual system-wide report is required to be completed for the previous calendar year’s activities and submitted to KDOW by April 15th of the following year. The annual report covers a period beginning January 1st through December 31st and is intended to be an overall evaluation of the SWQMP developments and progress and provide a status update of each of the program elements. The report also includes any proposed changes to the SWQMP. The annual report will be posted on the KYTC Stormwater website. All KYTC staff identified in the “Responsible Entity” column of Sections MCM I thru MCM VII of this Plan are responsible for collecting data throughout the year and reporting their respective information.

Permit Activities

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
7.1	Reporting	The permittee shall submit an annual Report to KDOW by April 15th of the following year.	The permittee shall submit a report to the Division of Water as requested or required by the MS4 permit. The permittee shall make the most current annual report available via their website.	DEA MS4 Coordinator & ALL RESPONSIBLE ENTITIES

All KYTC staff identified in the “Responsible Entity” column of Sections MCM I thru MCM VII of this Plan are responsible for collecting data throughout the year and reporting their respective information. The DEA MS4 Coordinator will assemble the data and prepare an annual report by April 15th of the following year and deliver to KDOW.

Activity Number	Element Task	Measure of Success/Frequency	Activity Required	Responsible Entity
7.2	Retain reports and other records	Maintain supporting document for annual report	The permittee shall make records available to the public and regulators for a period of at least three years.	DEA MS4 Coordinator

The DEA MS4 Coordinator will maintain the supporting documents for the Annual Report for a period of three years.

Additional Permit Activities				
Activity Number	Page/ Paragraph	Measure of Success/Frequency	Activity Required	Responsible Entity
7.3	FS-2/II-5, 6/D.1	BMPs and Approved TMDLs	<p>For waters within KYTC-jurisdictional areas with an approved or established TMDL, the permittee shall evaluate its BMPs in the SWQMP with respect to MS4 discharges for pollutants of concern related to KYTC-specific activities to impaired waterbodies listed in the Division of Water publication entitled, "2010 Integrated Report to Congress on the Condition of Water Resources in Kentucky Volume I. 305(b) Report", and subsequent publications, found at www.water.ky.gov/sw/swmonitor/305b, to assess their effectiveness in achieving pollutant reductions in impaired water bodies in KYTC-jurisdictional areas only.</p> <p>The requirements of this section apply only to receiving waters within KYTC- jurisdictional areas within the urbanized boundary of the MS4 with adopted or established TMDLs and associated allocations that receive the permittee's MS4 discharges. It is the intent of this section to ensure that pollutant discharges for those parameters listed in the TMDL are reduced to the MEP through the implementation of the permittee's SWQMP. Adequate progress toward achieving assigned wasteload allocations (WLAs) will be demonstrated through the implementation of structural and nonstructural BMPs and other program activities that result in TMDL-related pollutants from KYTC-specific activities within watersheds that contain KYTC jurisdictional areas within the urbanized boundary of the MS4.</p>	DEA Water Quality SME & DEA MS4 Coordinator

When an approved or established TMDL is developed for waters within a KYTC-jurisdictional area, the DEA will evaluate the BMPs in the SWQMP to assess their effectiveness for addressing the pollutant of concern. The SWQMP will be modified if warranted.

Additional Permit Activities				
Activity Number	Page/ Paragraph	Measure of Success/Frequency	Activity Required	Responsible Entity
7.4	II-1, Introduction/B	Stormwater Quality Management Program (SWQMP)	Develop, implement and enforce a Stormwater Quality Management Program (SWQMP) using best management practices (BMPs). Within 180 days of the effective date of this permit, the permittee shall submit a revised SWQMP that is more reflective of the issued permit, including any necessary compliance schedules.	DEA MS4 Coordinator

The DEA MS4 Coordinator will update the SWQMP and notify other KYTC staff by March 30, 2013.

Additional Permit Activities				
Activity Number	Page/ Paragraph	Measure of Success/Frequency	Activity Required	Responsible Entity
7.5	II-4, C.1 & 2	Annual SWQMP review and modification	Perform annual SWQMP review and update in conjunction with the annual report and address any necessary modifications to BMPs, schedules or control. Modifications must be made per permit procedure. Permittee shall implement the SWQMP on all new areas added to their portion of the MS4.	DEA MS4 Coordinator

During preparation of the annual report, the DEA MS4 Coordinator will review the collected data to determine the effectiveness of the various SWQMP activities and make modifications as needed to improve the program. Any recommended modifications will be noted in the annual report.

Additional Permit Activities				
Activity Number	Page/ Paragraph	Measure of Success/Frequency	Activity Required	Responsible Entity
7.6	II-5, D.2	Identification of impaired stream segment (s) and/or tributaries to stream segments	After establishment of an approved TMDL for a pollutant of concern during the permit term, the permittee shall identify impaired stream segment (s) and/or tributaries to stream segments and the location of all known MS4 major outfalls discharging a pollutant of concern under the TMDL.	DEA Water Quality SME

Once KYTC is notified of the establishment of an approved TMDL within their jurisdictional area, the DEA Water Quality SME will coordinate with the local MS4 and the District MS4 Coordinators to determine if KYTC discharges the pollutant of concern from any of their facilities and operations. The DEA Water Quality SME will report any activity to the DEA MS4 Coordinator.

Additional Permit Activities				
Activity Number	Page/ Paragraph	Measure of Success/Frequency	Activity Required	Responsible Entity
7.7	II-5, D.3	Impaired water bodies	For impaired water bodies that lack a TMDL, the permittee shall evaluate BMPs in the SWQMP with respect to any new or expanded MS4 discharges for pollutants of concern that substantially change the discharge to impaired waterbodies listed on the 303(d) list.	DEA Water Quality SME & District MS4 Coordinator

Within a year after a new 305b report is prepared by the KDOW, the DEA Water Quality SME, in conjunction with the District MS4 Coordinators, will review the list of impaired waterbodies and determine if any operational modifications have occurred to facilities that drain to these impaired waters. If operational modifications have occurred, the DEA Water Quality SME and the District MS4 Coordinator will determine if these modifications could be contributing more of the pollutant of concern than previously discharged. The DEA Water Quality SME will report any needed modifications to the DEA MS4 Coordinator.

MCM VII References

Reference	Reference Name	KYTC Division/ Organization
Website		
303d List	Final 2010 Integrated Report to Congress on the Condition of Water Resources in Kentucky - Volume II. 303(d) List of Surface Waters	DEA Water Quality SME
TMDLs	*VARIOUS*	DEA Water Quality SME

Appendix A

KYTC Contact Information

KYTC Contact Information

KYTC MS4 Contacts			
Location	Name	Unit	Position
Central Office	David Waldner	Division Environmental Analysis	Director
Central Office	John Drake	Division Environmental Analysis	MS4 Coordinator
Central Office	Ed McCracken	Division Environmental Analysis	Facilities Coordinator
Central Office	Dave Harmon	Division Environmental Analysis	Water Quality SME
Central Office	Stephanie Teasley	Office of Human Resources Management	Program Coordinator
Central Office	David Cornett	Division Maintenance	Assistant Director
Central Office	Bob Lewis	Department of Highways	Assistant State Highway Engineer
Central Office	Ron Matar	Division Highway Design	TEBM Drainage Branch
Central Office	Nasby Stroop	Division Construction	TEBM Contract Support Branch
Central Office	Miranda Thacker	Office of Public Information	Executive's Staff Advisor
Central Office	Jennifer McCleve	Division of Right-of-Way and Utilities	KEEN Coordinator
Central Office	Nancy Albright	Division Maintenance	Director
Central Office	John Roberts	Office of Human Resources Management	Assistant Director
Central Office	Rachel Mills	Division Construction	TEBM Technical Support Branch
Central Office	Jeff Jasper	Division Highway Design	Director
District 1	Jessica Herring	Project Dev Br Planning Section EIT II	District MS4 Coordinator
District 2	Charlotte Cotton	Project Dev Br Design Section Tech II	District MS4 Coordinator
District 3	Renee Slaughter	Project Dev Br Environmental Scientist II	District MS4 Coordinator
District 4	Joseph Ferguson	Project Dev Br Environmental Scientist II	District MS4 Coordinator
District 5	Jeff Schaefer	Project Dev Br Environmental Scientist II	District MS4 Coordinator
District 6	Mike Bezold	Project Dev Br Design Section Supervisor	District MS4 Coordinator
District 7	Becky Barrick	Project Dev Br Environmental Scientist I	District MS4 Coordinator
District 8	Danny Anderson	Project Dev Br Design Section Supervisor	District MS4 Coordinator
District 9	Karen Mynhier	Project Dev Br Environmental Scientist II	District MS4 Coordinator
District 10	Jeff Allen	Project Dev Br Environmental Scientist II	District MS4 Coordinator
District 11	Robert Perkins	Project Del & Prsrvtn Br Supervisor	District MS4 Coordinator
District 12	Paul Montgomery	Project Dev Br Environmental Scientist II	District MS4 Coordinator

Appendix B

Illicit Discharge Detection and Elimination Program

Illicit Discharge Detection and Elimination Program

The Illicit Discharge Detection and Elimination (IDDE) Program is to be utilized to comply with the KYTC MS4 permit requirements. The IDDE Program's purpose is to identify and remediate sources of illicit discharges. KYTC facilities (roads) are primarily pass thru areas for stormwater drainage. KYTC does not generate any residential, commercial or industrial waste within the right of way and therefore most illicit discharges originate in adjoining MS4 communities.

EPA and Kentucky Division of Water (KYDOW) encourage partnerships as a way to maximize resources of the entities permitted under the MS4 program. KYTC partners with most MS4s across the Commonwealth. KYTC performs MS4 activities that our partners utilize for compliance with their respective permits as well as compliance with our own permit. Some of these activities include the stormwater website, media outreach program, statewide stormwater survey and offering facilities for meetings. In return the partner communities perform the mapping and inspection aspects of the requirements for KYTC. This IDDE Plan addresses appropriate means for compliance with permitting requirements both for areas where partnering agreements exist, as well as where they do not.

The major elements of the Illicit Discharge Detection and Elimination Program are listed below:

- I. Storm Sewer System Mapping
- II. Prohibiting Illicit Discharges
- III. Illicit Discharge Detection and Elimination Plan
- IV. Training
- V. Documentation and Reporting

I. Storm Sewer System Mapping

The stormwater system consists of drainage in the Kentucky Transportation Cabinet's (ROW) within communities that are required to have a MS4 permit. Stormwater system mapping is one of the basic building blocks of the IDDE program. The stormwater system map documents the location of discharges of the stormwater system to Waters of the Commonwealth. This information is useful for identifying possible flow paths of discharges into the storm sewer system.

KYTC is required to map major outfalls and identify the names and location of all Waters of the Commonwealth that receive discharges from these outfalls. The permit defines a "major outfall" as:

- A pipe (or closed conveyance) system with a cross-sectional area equal to or greater than 7.07 square feet (e.g., a single circular pipe system with an inside diameter of 36 inches or greater); if applicable. Simple culverts within the rights-of-way are excluded.
- A single conveyance other than a pipe, such as an open channel ditch, which is associated with a drainage area of more than 50 acres; if applicable.

The KYTC Mapping Program consists of the following major elements:

- A. Partnerships with other Local MS4s
- B. KYTC Map the Separate Storm Sewer System (Non-partnered MS4s)

A. Partnerships with Other Local MS4s

KYTC has agreements with most of the local MS4s for various aspects of the maintenance and operation of the highway system. The DEA developed MS4 cooperative agreements with most of the regulated communities during the previous permit term. The DEA MS4 Coordinator keeps a list of the MS4s across the Commonwealth and whether KYTC has a mapping agreement with them or not. If there is an agreement, then the MS4 is considered “partnered”, and if not, they are “non-partnered”. If a MS4 is partnered, then they will perform the mapping, and if they are non-partnered, then KYTC will perform the mapping. The DEA MS4 Coordinator will notify the District MS4 Coordinators of any changes with MS4s and partnering. As new MS4s are added to the Stormwater Phase II program, the DEA MS4 Coordinator will contact them to discuss partnering opportunities.

The District MS4 Coordinators are to assist the partnered MS4s with mapping activities as they are requested. KYTC will allow partnered MS4s right-of-entry to perform their mapping efforts.

B. KYTC Map the Separate Storm Sewer System (Non-partnered MS4s)

In the non-partnered MS4 urbanized areas, KYTC is responsible to perform the mapping themselves. Developing a stormwater system map typically consists of performing a desktop review of existing records of outfall locations using project plans, drainage maps, storm drain maps, and topographic maps. The desktop review is then followed by field mapping of outfall locations. The field mapping efforts will be performed by the District Office using a global positioning system (GPS) device. In some cases, it may be necessary to perform additional drainage analysis of the outfall locations to determine if 50-acres or more drain to the outfall in question. The District MS4 Coordinators will review the mapping effort with the DEA MS4 Coordinator. The information gathered is to be recorded on a spreadsheet and include: District; County; Route; Mile Marker; outfall size; flow direction; receiving stream; longitude, and; latitude. The mapping information is to be submitted to the DEA MS4 Coordinator. While the mapping is being conducted the Dry Weather Observation Form is to be completed for each outfall.

II. Prohibiting Illicit Discharges

KYTC is responsible for effectively prohibiting non-stormwater discharges to the MS4 system under the Cabinet's jurisdiction. KYTC does not enact ordinances, like most MS4 communities, to comply with this requirement. It is simply KYTCs policy that most, if not all, illicit discharges originate in adjoining MS4s and KYTC refers any reported illicit discharges to the appropriate MS4. Spills or discharges of chemicals, debris, animal carcasses, trash or other materials along roadways are to be handled under existing procedures. If any illicit discharges originate in KYTC ROW, KYTC will handle them on a case by case basis.

III. Detection and Elimination Plan

It is envisioned that KYTC will support implementation of existing IDDE plans in partnering MS4 communities. As such, KYTC may assist with implementation of components of the plan that address detection and elimination of illicit discharges.

In non-partnering MS4s, KYTC will be responsible for implementing this IDDE Plan by Permit Year 3. KYTC District Offices will map major outfalls, inspect major outfalls and follow-up on reports of illicit discharges.

Basic components of the IDDE plan for partnering and non-partnering MS4s is outlined below.

IDDE Plans should address the following four elements:

1. Identifying Illicit Discharges: Maintenance personnel will be trained in the Environmental Awareness class to identify potential illicit discharges and report them to the District MS4 Coordinator. The public can report any suspected illicit discharges by calling the District office or utilizing the contact information on the KYTC website. These calls will be routed to the District MS4 Coordinator for action. The District MS4 Coordinator is to perform a "dry weather" inspection of every outfall in non-partnered MS4 ROW, during the term of the permit utilizing the Dry Weather Observation Form.
2. Responding to Illicit Discharge Report: Once a report of an illicit discharge is received, the District MS4 Coordinator will investigate the site and complete the IDDE Reporting Form. The District MS4 Coordinator will submit the Form to the DEA MS4 Coordinator and discuss the situation for any necessary action.
3. Tracing Sources of Illicit Discharges: If it can be readily determined that the illicit discharge is originating outside the KYTC ROW, the District MS4 Coordinator will contact the adjoining community MS4 Coordinator. While investigating illicit discharges that are determined to be KYTC responsibility, the District MS4 Coordinator will assess the situation to determine whether the discharge is large and / or potentially hazardous. If so, appropriate emergency response personnel and DEA personnel will be contacted, per the Environmental Handbook. If the District

MS4 Coordinator determines that it is safe to proceed with the investigation, the following tracing tools will be applied: visual observation and tracing the observed illicit discharge upstream in the stormwater system to its source. If appropriate, field testing using colorimetric test kits or meters and/ or illicit discharge sample collection may be used to further characterize the discharge.

4. Remediating Illicit Discharges: KYTC will assist adjoining MS4 communities in the remediation of the illicit discharge. Discharges within KYTC responsibility will be handled on a case-by-case basis. Additional assistance from KDOW or local health department may be requested to resolve the discharge.

IV. Training

District Maintenance Staff will be trained in the Environmental Awareness class to identify potential illicit discharges, and to notify the District MS4 Coordinator. KYTC personnel may also attend IDDE training sponsored by the local MS4 or through other resources such as the Kentucky Stormwater Association. As appropriate, KYTC Districts may invite partnering MS4s to participate in training sponsored by KYTC for Environmental Handbook training.

V. Documentation and Reporting

A summary of the stormwater system mapping efforts will be included in the Annual Report to the KDOW. District MS4 Coordinators will annually submit a summary of mapping activities, whether by the partnered MS4 (if requested) or KYTC within non-partnered MS4s, to the DEA MS4 Coordinator.

In non-partnered communities outfall inspections are to be reported by the District MS4 Coordinator. Each outfall is to have a dry weather screening at least once during the five year permit term utilizing the Dry Weather Observation Form.

The IDDE Form is to be completed by the District MS4 Coordinator for any reported illicit discharge and submitted annually to the DEA MS4 Coordinator. If there are subsequent investigations, the District MS4 Coordinator is to make a report and submit them to the DEA MS4 coordinator annually.

The following reporting is required beginning in Permit Year 3. The District MS4 Coordinators will maintain the information and send a copy to the DEA MS4 Coordinator at the end of the year.

- Summary of Mapping Activities
- Outfall Inspections (Non-partnered MS4s only)
- IDDE Reporting Forms
- Dry Weather Observation Forms

Appendix C

Post-construction Program Document

Post-construction Program Document

Post-construction storm water management in areas undergoing development or redevelopment is necessary because runoff from these areas has been shown to affect receiving water bodies. Many studies indicate that prior planning and design for the minimization of pollutants in post-construction stormwater discharges is a cost-effective approach to stormwater quality management. There are generally two forms of substantial impacts of post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in stormwater runoff. The second impact occurs by increasing the quantity of water delivered to the water body during storms. KYTC will minimize water quality impacts and attempt to maintain pre-development runoff conditions to the maximum extent practicable.

KYTC will rely on a combination of non-structural and structural BMPs to implement this minimum control measure to the MEP. Non-structural BMPs used by KYTC may include: 1) establishment of permanent vegetation on construction sites; 2) contract special provisions to preserve existing vegetation; 3) maintaining vegetated buffer zones along streams; 4) protection of wetlands during construction; 5) personnel training for post-construction BMPs; and 6) source control measures such as the implementation of maintenance facility pollution prevention plans, litter collection and street sweeping.

KYTC uses numerous structural BMPs, which are selected by design engineers, to meet the requirements outlined in the Construction Stormwater Permit. All plans for post-construction BMPs are reviewed and approved by engineers before the project is let to contract and by Resident Engineers before, during, and after construction. After the project is complete, Resident Engineers ensure the structural measures have been built according to the design. Once this is confirmed and the project is stabilized, the Notice of Termination (NOT) is submitted and the long term operation and maintenance of the post-construction BMPs becomes the responsibility of the District Maintenance Engineers. To accomplish this, an Area Maintenance Supervisor assigned to each county regularly travels the State roadways in their area to identify items needing maintenance. Repairs are normally done by District maintenance personnel or contractors. The overall success of this minimum control measure will be determined by few problems on Department roadways or facilities, which can be attributed to inadequate or improperly maintained post-construction storm water BMPs. A formal assessment will be made during the permit term for an inventory of post-construction BMPs.

The major elements of the Post-construction Program are listed below:

- I. Inventory and Inspect Post-construction BMPs
- II. Training
- III. Review and Modify Design, Construction, and Maintenance Documents
- IV. Interaction with Other MS4s
- V. Documentation and Reporting

I. Inventory and Inspect Post-construction BMPs

KYTC will inspect their post-construction BMPs to help ensure that post-construction stormwater quality goals are met. The Division of Environmental Analysis (DEA) MS4 Coordinator will work with various Divisions to assemble an inventory of the post-construction BMPs. Once the inventory list is prepared, the Division of Maintenance will develop an inspection schedule. The inspections will utilize an inspection form that will indicate whether the practice is operating properly and whether it needs maintenance. The Division of Maintenance will summarize the inspections and submit this to the DEA MS4 Coordinator.

II. Training

KYTC employees will continue to be trained annually about post-construction stormwater management through in-house and University of Kentucky Transportation Center (UKT2) training courses such as the Kentucky Erosion Prevention and Sediment Control Roadway Inspector (KEPSC-RI) and Environmental Awareness Classes. District MS4 Coordinators, Division of Highway Design, Division of Maintenance, and DEA will provide an annual summary of any training they conduct with the number of attendees. The Office of Human Resources Management (OHRM) will also provide training participation.

III. Review and Modify Design, Construction, and Maintenance Documents

KYTC utilizes numerous documents for this minimum control measure. The Divisions of Environmental Analysis, Design, Construction and Maintenance will annually report updates of existing documents or new documents to the DEA MS4 Coordinator for any changes in the program.

IV. Interaction with Other MS4s

KYTC will provide the other MS4s information on the Post-construction program. KYTC will do this as a presentations at Kentucky Stormwater Association (KSA) Meeting, the Partnering Conference, or other conferences, as well as by posting the program on the website.

The Division of Highway Design and District Transportation Engineer Branch Managers will work with the local MS4s to explain KYTC's post-construction BMPs for specific projects and to ascertain the MS4's post-construction protocol, when requested. Where appropriate and feasible, KYTC will try to incorporate other MS4 post-construction requirements into their designs.

V. Documentation and Reporting

The following documentation and reporting is required beginning in Permit Year 2. The Division of Maintenance will track the following information and send a report to the DEA MS4 Coordinator in January for the previous calendar year.

- List of BMP inspections performed;
- Summary of trainings they conducted for KYTC staff and Contractors; and
- Summary of review of and modifications to post-construction documents.

The Division of Highway Design will track the following information and send a report to the DEA MS4 Coordinator in January for the previous calendar year.

- Summary of trainings they conducted for KYTC staff and Contractors;
- Summary of review of and modifications to post-construction documents; and
- Number of post-construction BMPs they worked on cooperatively with other MS4s.

The Division of Construction will track the following information and send a report to the DEA MS4 Coordinator in January for the previous year.

- Summary of trainings they conducted for KYTC staff and Contractors; and
- Summary of review of and modifications to post-construction documents.

The OHRM will track the trainings and send a summary to the DEA MS4 Coordinator in January for the previous year.

The DEA Facilities Coordinator will track the following information and send a report to the DEA MS4 Coordinator in January for the previous calendar year.

- Summary of trainings conducted for KYTC staff and Contractors and
- Summary of trainings conducted for other MS4s

Appendix D

Pollution Prevention/Good Housekeeping Program Document

Pollution Prevention / Good Housekeeping Program

The major elements of the Pollution Prevention / Good Housekeeping Program are listed below:

- I. Inventory and inspect KYTC owned and operated facilities, including welcome centers/rest areas, truck weighing/inspection stations, District Offices, and other facilities not covered by the KYG50 permit
- II. Develop and assess implementation effectiveness of BMP Plans at these facilities
- III. Train KYTC staff and Contractors on BMP Plans and the Environmental Handbook
- IV. Develop operation and maintenance program
- V. Document and report

I. Inventory and Inspect KYTC Owned and Operated Facilities

KYTC is required to inventory and inspect maintenance facilities (covered under KYG50) and other facilities not covered under KYG50. Each District Office designates someone to conduct the Facility Annual Environmental Inspection (FAEI) at the maintenance facilities (covered by KYG50). The maintenance facility inspections (FAEI) are to be summarized by the DEA MS4 coordinator for the MS4 Annual Report.

Non-KYG50 facilities are to be inventoried and inspected to determine whether activities may be contributing pollutants to stormwater runoff. The District MS4 Coordinators and DEA MS4 Coordinator will work together to develop an inventory of each of the KYTC facilities within a District. Facilities that will be considered will include but are not limited to the following:

1. Welcome Centers/Rest Areas
2. Truck Weighing/Inspection Stations
3. District Offices

The District MS4 Coordinators are to inspect the rest areas/welcome centers with the person in their respective Districts who is responsible for overseeing the rest area contracts. KYTC currently contracts with the Rest Area operators and includes requirements for stormwater pollutant control at these facilities. The Rest Area BMPs typically include: litter control; pet waste stations; oil spill remedial measures; maintaining a supply of oil absorbent; proper storage of deicing materials; providing trash cans; and general grounds maintenance. The District MS4 Coordinators will also inspect their respective District Office grounds utilizing the Pollution Prevention / Good Housekeeping Inspection Form. The DEA Facilities Coordinator will make spot inspections of at least twelve of the facilities throughout the year, while he is conducting training.

II. Develop and Assess Implementation Effectiveness of BMP Plans

Each facility has an individually tailored Best Management Practices (BMP) Plan that was developed using the BMPs from the Environmental Handbook. This BMP Plan is to be implemented by the Facilities Manager and a copy kept at the facility. Typical BMPs can range from employee training regarding good housekeeping practices to capital improvement projects that improve salt storage facilities. Typical elements of a BMP Plan include the following:

1. Pollution prevention team of qualified personnel who will be responsible for preparing the plan and implementing BMPs at the facility
2. Site description (including a site map with drainage pattern)
3. Assessment of potential stormwater pollution sources
4. Description of BMPs
5. Schedules and Procedures
 - a. Operation and Maintenance Procedures
 - b. Operation and Maintenance Activities

KYTC continues to implement Pollution Prevention and Good Housekeeping measures at KYTC owned and operated facilities. KYTC developed the Environmental Handbook to provide guidance on a number of environmental programs and permits and to provide the forms for facilities to document efforts at the site. The Environmental Handbook includes a number of activities under Highway Maintenance and Operations; Facility Based Operations; Waste Management; and Spills and Emergencies.

The Facility BMP Plans are assessed on an ongoing basis, using quarterly and annual inspection forms that are completed by District staff. In addition, the DEA Facilities Coordinator will make spot inspections of at least twelve facilities throughout the year. The inspection results are used to identify areas of possible improvement in the BMP Plans.

III. Training

KYTC employees will continue to be trained annually through in-house and University of Kentucky Transportation Center (UKT2) sponsored training courses related to the Environmental Handbook and other training programs. In-house sign-in sheets will be maintained by the District MS4 Coordinator for any training they conduct. The annual summary will be submitted to the DEA MS4 Coordinator. The Office of Human Resources will obtain training participation from UKT2 and submit it to the DEA MS4 Coordinator annually.

IV. Operation and Maintenance Program Development

The Environmental Handbook and the Field Operation Guide are the basis of KYTC's Operation and Maintenance program. KYTC utilizes various training classes such as Road Master, Environmental Awareness, and Pesticide to train staff and contractors on these topics.

V. Documentation and Reporting

The following reporting is required beginning in Permit Year 2 and copies will be sent to the DEA MS4 Coordinator. District MS4 Coordinators will submit:

- Completed Pollution Prevention / Good Housekeeping Inspection Form for all non-KYG50 facilities;
- Summary Report of BMP activities noted in the Facility Annual Environmental Inspection (FAEI) for each KYG50 facility; and
- Summary of training they conduct.

The DEA Facilities Coordinator will maintain the following information and send a copy to the DEA MS4 Coordinator beginning in permit year two.

- Copy of facility reviews and proposed modifications, and
- Training conducted.