Statewide Storm Water Management Program

Arkansas State Highway and Transportation Department

August 2014

Arkansas State Highway and Transportation Department
Environmental Division
10324 Interstate 30
P. O. Box 2261
Little Rock, Arkansas 72203
(501) 569-2230

Certification

The Arkansas State Highway and Transportation Department (Department) developed this Statewide Storm Water Management Program (SWMP) in accordance with requirements of the National Pollutant Discharge Elimination System (NPDES) Regulated Small Municipal Separate Storm Sewer Systems (MS4s) Located within the State of Arkansas, Permit Number ARR040000, issued by the Arkansas Department of Environmental Quality (ADEQ) and effective August 1, 2014.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

_____

Lorie H. Tudor
Assistant Chief Engineer-Planning
Arkansas State Highway and Transportation Department

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Date

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ACRONYMS

ADEQ	Arkansas Department Of Environmental Quality
ADH	Arkansas Department Of Health
AHP	Arkansas Highway Police
APC&E	Arkansas Pollution Control and Ecology Commission
BMP	Best Management Practice
CRS	Congressional Research Service
CWA	Clean Water Act
DCE	District Construction Engineer
DE	District Engineer
DME	District Maintenance Engineer
DOT	Department Of Transportation
GPS	Global Positioning System
LTAP	Federal Highway Administration's Local Technical Assistance Program
MEP	Maximum Extent Practicable
MS4s	Regulated Small Municipal Separate Storm Sewer Systems
NEPA	National Environmental Policy Act
NOI	Notice Of Intent
NPDES	National Pollutant Discharge Elimination System
POTW	Publicly Owned Treatment Works
SHPO	State Historic Preservation Office
SPCC	Spill Prevention, Control And Countermeasures
SWMP	Storm Water Management Program
SWPPP	Storm Water Pollution Prevention Plan
T^2	Technology Transfer Program
TMDL	Total Maximum Daily Load
UA	Urbanized Area

1 INTRODUCTION

The Arkansas State Highway and Transportation Department (Department) developed this Statewide Storm Water Management Program (SWMP) in accordance with requirements of the National Pollutant Discharge Elimination System (NPDES) Regulated Small Municipal Separate Storm Sewer Systems (MS4s) Located within the State of Arkansas, Permit Number ARR040000, issued by the Arkansas Department of Environmental Quality (ADEQ) and effective August 1, 2014. The SWMP describes the minimum procedures and practices that are used to reduce the discharge of pollutants in the storm drainage systems owned and operated by the Department. The Department will evaluate the need for revision of the Statewide SWMP at least annually.

This statewide SWMP addresses storm water pollution control related to highway planning, design, construction activities, maintenance activities, and Department facilities throughout the State of Arkansas. In addition, this statewide SWMP addresses responsibilities within the Department for implementing storm water management procedures and practices, as well as training, public education and participation, monitoring, program evaluation, and reporting activities.

The NPDES Storm Water Phase II Final Rule requires nationwide coverage of all regulated operators of small MS4s that are located within the boundaries of the Bureau of the Census-defined urbanized area (UA) based on the last decennial census. The Final Rule also requires that the NPDES permitting authority develop and apply designation criteria to make a final determination of which communities are required to comply with this regulation.

The regulations define the term “municipal separate storm sewer systems” to mean “a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains): (1) Owned or operated by a state, city, town, borough, county, parish, district, association or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the Clean Water Act (33 U.S.C. 1288) that discharges into waters of the United States; (2) Designed or used for collecting or conveying storm water; (3) That is not a combined sewer; and (4) That is not part of a Publicly Owned Treatment Works (POTW).” [Permit ARR040000, Part 6].

1.1 Regulatory Background

The Federal Water Pollution Control Act (the Act), enacted in 1948, was the principal law governing pollution of the nation’s surface waters. It authorized the Surgeon General of the Public Health Service, in cooperation with other federal, state, and local entities, to prepare comprehensive programs for eliminating or reducing the pollution of

interstate waters and tributaries, and improving the sanitary conditions of surface and underground waters.

The Act was totally revised by amendments in 1972, and in 1977 was re-named the Clean Water Act (CWA). The 1972 legislation defined programs for water quality improvement that have since been expanded and are still being implemented by industries and municipalities. In 1991, the CWA was reauthorized. The CWA strives to restore and maintain the chemical, physical, and biological integrity of the nation's water by utilizing a system of water quality standards, discharge limitations and permits. The following table summarizes the evolution of the CWA.

Federal Water Pollution Control Legislation

Table 1-1

Year	Act
1948	Federal Water Pollution Control Act
1956	Water Pollution Control Act of 1956
1961	Federal Water Pollution Control Act Amendments
1965	Water Quality Act of 1965
1966	Clean Water Restoration Act
1970	Water Quality Improvement Act of 1970
1972	Federal Water Pollution Control Act Amendments
1977	Clean Water Act of 1977
1981	Municipal Wastewater Treatment Construction Grants Amendments
1987	Water Quality Act of 1987

Prior to 1987, programs were primarily directed at point source pollution (wastes discharged from discrete sources such as pipes and outfalls). Amendments in that year authorized measures to address non-point source pollution (section 319 of the Act), now estimated to represent more than 50% of the nation's remaining water pollution problems.

To achieve its objectives, the CWA embodies the concept that all discharges into the nation's waters are unlawful, unless specifically authorized by a permit. Thus, industrial and municipal dischargers must obtain permits from EPA or qualified states under the Act's NPDES program (authorized in section 402 of the Act). An NPDES permit requires the discharger to attain technology-based effluent limits. (Congressional Research Service)

The CWA utilizes both water quality standards and technology-based effluent limitations to protect water quality. Technology-based effluent limitations are specific numerical limitations established by EPA and placed on certain pollutants from certain sources. They are applied to industrial and municipal sources through numerical effluent limitations in discharge permits. The Act requires each state to establish water quality standards for all bodies of water in the state. These standards serve as the backup to federally set technology-based requirements by indicating where additional pollutant controls are needed to achieve the overall goals of the Act. In waters where industrial and municipal sources have achieved technology-based effluent limitations, yet water quality standards have not been met, dischargers may be required to meet additional pollution control requirements. (CRS)

In response to the 1987 Amendments to the CWA, the EPA developed Phase I of the NPDES Storm Water Program in 1990. The Phase I program addressed storm water discharge from medium to large MS4s located in incorporated places or in counties with a population of 100,000 or more. It also addresses discharge from 11 categories of industrial activities, including construction activities that disturb five or more acres of land.

The Phase II Rule, published December 8, 1999, addresses storm water discharge from small MS4s located within the boundaries of the Bureau of the Census-defined urbanized areas (UA) serving a population of 100,000 people or less. It also addresses storm water discharges from construction activities disturbing one acre or more of land.

The CWA (as amended) directs EPA to implement federal regulations governing water quality, including discharges from storm water drainage systems. The CWA also allows EPA to delegate NPDES permitting authority to states that have approved regulatory programs. Within the state of Arkansas, ADEQ issues, monitors, and enforces NPDES permits through its legal authority provided by the EPA.

1.2 NPDES Applicability to the Department

Under the federal storm water regulations, portions of the Department's properties, facilities, and activities come under the jurisdiction of the NPDES program for three primary reasons:

1) *The Department's highways and highway-related properties, facilities and activities are served by extensive storm drain systems that are often connected to, and are considered to be, municipal separate storm sewer systems, and are covered explicitly in the federal MS4 storm water regulations.*
2) *Construction of the Department's highways and related activities often result in soil disturbance of one acre or more, for which specific requirements are established under Phase I and II.*
3) *Some of the Department's facilities have non-storm water discharges which are regulated under various NPDES permits.*

1.3 Requirements of the General Small MS4 Permit

The Department is required to develop, implement, and enforce a SWMP designed to reduce the discharge of pollutants from the small MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements and the Clean Water Act. The SWMP should include management practices; control techniques and system, design, and engineering methods; and shall be modified to include provisions as ADEQ determines appropriate after its review of the program for the control of such pollutants. The SWMP shall include the following information for each of the required six minimum control measures described in the Permit:

1) The best management practices (BMPs) that the Department or another entity will or already does implement for each of the storm water minimum control measures;

2) The measurable goals for each of the BMPs, including, as appropriate, the months and years in which the Department will undertake required actions, including interim milestones and the frequency of the action. At a minimum, measurable goals shall be implemented to satisfy the general permit's performance standards;

3) The person or persons, including position title or titles, or just the position title and contact information responsible for implementing or coordinating the BMPs for the SWMP. The SWMP shall include a Table of Organization, including a primary point of contact, which identifies how implementation across multiple positions and departments will occur, and;

4) In addition to the requirements listed above, the Department shall provide a rationale for how and why each of the BMPs was selected. Since the Department had coverage under a previous version of this permit, then the SWMP and its implementation will be revised to satisfy the general permit's performance standards within two years of when the coverage under the current general permit was granted, or by July 31, 2016.

5) BMPs shall be reevaluated in situations where the Department's MS4 discharges to an impaired waterbody if the evaluation of the impairment determines the MS4 is a contributor to the impairment. The enhanced BMPs shall be specifically addressed within the SWMP.

6) BMPs shall be reevaluated in situations where the Department's MS4 discharges to a waterbody with an approved TMDL if the evaluation of the impairment determines the MS4 is a contributor to the impairment. The enhanced BMPs shall be specifically addressed within the SWMP.

1.4 Permit and SWMP Coverage

The Department has determined that a single NPDES storm water permit (Permit) and a comprehensive and consistent SWMP would be the most effective approach to addressing storm water runoff from its facilities, statewide (with the exception of the Little Rock MS4 area currently regulated by NPDES Permit Number ARS000002. Compliance with the Permit will then be attained by implementation of this SWMP.

The Department has developed this SWMP for all Department highways and highway-related properties, facilities, and activities to provide a framework for consistent and efficient implementation of storm water management practices in all ten Districts. This approach will facilitate the development of standardized and uniform internal guidance, contracts, and training. In addition, this SWMP extends storm water management practices outside of the designated Small MS4 areas covered by current federal and state mandated storm water regulatory programs.

1.5 Organization of the Statewide SWMP Plan

Although this statewide SWMP presents programmatic requirements and provides general guidance, it does not contain the level of detailed guidance and requirements that are needed to serve personnel at all positions with the Department whose daily activities may have an impact on storm water quality. Such specific guidance is contained in a variety of other information sources currently utilized by the Department, including manuals, standards, and specifications. A complete list, excluding project-specific documents, is included in Appendix C. New materials and updates will be addressed through the annual SWMP revision process. This allows the Department the flexibility to make necessary modifications and to expand or improve upon the detailed procedures within the framework of the statewide SWMP.

1.5.1 Reporting Requirements

The Department is required to submit reports to ADEQ on the status of compliance with the permit using the ADEQ Small MS4 Annual Reporting Form. The reports are due annually on June 1st during the period 2015-2019. The reports must contain the status of compliance with permit conditions, an assessment of the appropriateness of the best management practices, and the progress toward achieving the measurable goals for each of the minimum control measures. The reports will be posted on the Department website to give citizens an opportunity for involvement and input.

1.6 The Department's Facilities and Separate Storm Sewer System

The primary mission of the Department is to provide a safe, efficient, aesthetically pleasing and environmentally sound intermodal transportation system for the users. This mission involves planning, designing, constructing and maintaining large-scale transportation facilities (e.g., freeways, highways, interchanges, bridges, and tunnels). The Department also has the responsibility of accomplishing its mission in ways that

comply with public policy and applicable regulations, including complying with the NPDES program of the CWA.

The Department's facilities are located in diverse settings, ranging from urbanized to rural areas, including cities, towns, farmland, and forests. Drainage systems that serve the Department's properties and highway facilities ultimately discharge storm water and permitted or exempt non-storm water to diverse surface receiving waters such as intermittent and perennial streams, lakes, reservoirs, and wetlands.

Currently, the Department's water discharges are covered under a variety of permits. Storm water discharges from construction projects located statewide that disturb one acre or more are permitted under ADEQ's General Construction Permit for Operators of Facilities Discharging Storm Water Associated With Construction Activity Located in the State of Arkansas, Number ARR150000. In addition, the Department maintains non-construction NPDES permits in various areas of the state as shown in Table 1-2.

Current Department Non-Construction NPDES Permits

Table 1-2

NPDES Permit No.	Facility	Permit Type	County	AHTD District
AR0044270	Gurdon Rest Area	Wastewater	Clark	7
AR0045799	Waldron Rest Area	Wastewater	Scott	4
AR0048992	District 5 Headquarters	Wastewater	Independence	5
0000WGCW	Baxter County Area Maintenance HQ	Industrial	Baxter	9
ARS000002	City of Little Rock and AHTD MS4	Storm Water	Pulaski	6
ARR040004	AHTD Statewide MS4 System	Storm Water	Statewide	All

The sensitivity of receiving waters to potential impacts from storm water discharges also varies widely, depending on factors such as location, local hydrology, discharges and pollutants from other sources, and the beneficial uses of the receiving waters. The requirement to establish beneficial uses of receiving waters are established under Section 304 (a) of the CWA, and can be found in ADEQ's Regulation 2, Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas. These designated uses include extraordinary resource waters, ecologically sensitive waterbodies, natural and scenic waterways, primary and secondary contact recreation, fisheries, and domestic, agricultural, and industrial water supplies, and other general uses not dependent upon water quality.

To protect public safety and prevent property damage, the Department operates its storm water drainage systems to minimize flooding and prevent the presence of standing water on traveled surfaces. Runoff is typically directed off roadway surfaces (and other paved and non-paved areas within a right of way) via drainage systems within or adjacent to the Department's right of way. At many locations, runoff drains from off-site areas onto the Department's right of way or facilities due to local topography and drainage patterns. In these cases, the Department's drainage systems are designed to convey not only the storm water contributed from the Department's property, but also storm water from off-site areas.

In urban areas, some drainage systems discharge directly to receiving waters, while others discharge to municipal storm drain systems. Highways in urban settings typically have curbs and gutters, whereas freeways and rural highways typically discharge storm water off the shoulder or through median drainage swales.

1.6.1 Coverage of Statewide Storm Water Management Program (SWMP)

The Permit requires a permit for all small MS4s within designated areas of the State of Arkansas. These areas are:

1) *located fully or partially within an urbanized area as determined by the latest Decennial Census; or*
2) *directly discharge to a 303(d) listed Stream with pollutants of concern caused by storm water; or*
3) *directly discharge to an Arkansas Extraordinary Resource Water; or*
4) *has had a 50% population growth rate between the 1990 Census and 2000 Census.*

MS4s designated by these criteria are listed in Table 1-3. In the original Permit NOI, the Department requested statewide coverage for the storm water discharges from the Department's MS4 throughout Arkansas. The exception to this requested coverage is the MS4 area within the City of Little Rock, currently covered by ADEQ Permit Number ARS000002. Details of how the permit requirements will be applied statewide can be found in the discussion of the required six minimum measures.

In addition, the Department requested the optional coverage available under the Permit for discharges associated with MS4 industrial activity. This coverage was for Department facilities statewide. There are seven Department owned and operated facilities that are located within the designated Small MS4 areas, which fall under the requirements of the NPDES Phase II Program. Three other facilities are located within the Little Rock urbanized area. The names and locations of all Department facilities are listed in Appendix A.

The Department did not seek the optional coverage available under the Permit for discharges associated with MS4 construction activity.

This statewide SWMP describes the minimum procedures and practices used to reduce the discharge of pollutants from storm water drainage systems owned or operated by the Department. Department facilities or properties that may be sources of pollutants are:

1) *Road surfaces and shoulders (highway rights of way);*
2) *Highway related facilities, including such things as maintenance facilities, park-and-ride lots, rest areas, scenic vista points, weigh stations, and welcome centers;*
3) *Construction and maintenance activities conducted within highway rights of way; and*
4) *Potential material spills on roadways.*

Arkansas Regulated Small MS4s

Table 1-3

MS4	County
Alexander	Pulaski, Saline
Alma	Crawford
Arkansas State Highway & Transportation Department	Statewide
Arkansas State University	Craighead
Austin	Lonoke
Barling	Sebastian
Bella Vista	Benton
Benton	Saline
Benton County	Benton
Bentonville	Benton
Bethel Heights	Benton
Brookland	Craighead
Bryant	Saline
Cabot	Lonoke
Cave Springs	Benton
Centerton	Benton
Conway	Faulkner
Crawford County	Crawford
Elkins	Washington
Elm Springs	Benton and Washington
Farmington	Washington
Fayetteville	Washington
Fort Smith	Sebastian
Garland County	Garland

Arkansas Regulated Small MS4s

Table 1-3

MS4	County
Greenland	Washington
Haskell	Saline
Hot Springs	Garland
Jacksonville	Pulaski
Jefferson County	Jefferson
Johnson	Washington
Jonesboro	Craighead
Little Flock	Benton
Little Rock Air Force Base	Pulaski
Lowell	Benton
Marion	Crittenden
Maumelle	Pulaski
Mayflower	Faulkner
North Little Rock	Pulaski
Pea Ridge	Benton
Pine Bluff	Jefferson
Prairie Grove	Washington
Pulaski County	Pulaski
Rogers	Benton
Saline County	Saline
Shannon Hills	Saline
Sherwood	Pulaski
Springdale	Benton and Washington
Texarkana, Arkansas	Miller
Tontitown	Washington
University of Arkansas	Washington
University of Arkansas at Little Rock	Pulaski
University of Arkansas at Pine Bluff	Jefferson
University of Arkansas for Medical Sciences	Pulaski
Van Buren	Crawford
Ward	Lonoke
Washington County	Washington
West Memphis	Crittenden
White Hall	Jefferson

1.6.2 Non-storm Water Discharges.

The following non-storm water discharges have been determined not to be a significant contributor of pollutants into the Department's MS4 system and may be discharged: waterline flushing; landscape irrigation; rising ground waters; uncontaminated ground water infiltration (infiltration is defined as water other than wastewater that enters a sewer system, including sewer service connections and foundation drains, from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.); uncontaminated pumped ground water; discharges from potable water sources; foundation drains; uncontaminated air conditioning condensate; irrigation water; springs; water from crawl space pumps; footing drains; lawn watering; individual residential car washing; flows from riparian habitats and wetlands; dechlorinated swimming pool discharges; street wash water; and discharges or flows from emergency fire fighting activities. (Permit Para. 1.2.6.2).

1.6.3 Limitations on Coverage.

The Permit does not authorize several types of discharges and the following discussion details the Department's plan to comply with these limitations:

a. *The Permit prohibits discharges that are mixed with sources of non-storm water unless such non-storm water discharges are in compliance with a separate National Pollutant Discharge Elimination System (NPDES) permit, or determined by ADEQ not to be a substantial contributor of pollutants to surface waters of the State.*

   The Department has other discharges which are covered by separate individual or general NPDES permits. These discharges are discussed in Section 1.6 of the SWMP.

b. *The Permit prohibits storm water discharges associated with industrial activity as defined in 40 CFR 122.26(b)(14)(i)-(xi) that are not in compliance with a separate NPDES permit. This includes storm water discharges associated with construction activity as defined in 40 122.26(b)(14)(x) or 40 CFR 122.26(b)(15).*

   The Department has facilities which conduct activities described in 40 CFR 122.26(b)(14) which are not required to obtain Industrial Stormwater General Permits. A Pollution Prevention Plan has been prepared and implemented for these facilities as required by the previous version of the Permit. The facilities are shown in Appendix A of the SWMP.

c. *The Permit prohibits discharges which will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard.*

No discharges of this description are known. If notified that such discharges exist, the Department will either: eliminate the discharge; obtain a separate NPDES permit; or modify the SWMP as necessary to bring the discharges into compliance with water quality standards as required by the Permit.

d. The Permit prohibits discharges to 303(d) listed and TMDL waters unless certain conditions are met.

The Department has storm water outfalls which discharge to waters on the current 303(d) list prepared by ADEQ. The current listing of impaired waters can be found at http://www.adeq.state.ar.us/water/branch_planning/default.htm. The Department will survey the areas of the MS4 which contribute storm water to these outfalls and identify any potential significant sources of the pollutants of concern. If such sources are found, the Department will comply with Part 3.4.5 of the Permit to reduce the impact of the discharge.

The Department also has storm water outfalls which discharge to waters with approved TMDLs. The current listing of waters with TMDLs can be found at http://www.adeq.state.ar.us/water/tmdls/default.aspx. Part 3.5 of the Permit requires monitoring in certain cases to determine if the storm water controls are adequate to maintain compliance with the MS4s wasteload allocation. Since the Department had not been assigned a wasteload allocation in the TMDL documents, no monitoring is required.

1.7 Emergency Response

Throughout the year, conditions may arise that require the Department to conduct emergency activities that protect public health, safety, and property. Because of factors beyond the reasonable control of the permittee, conditions during the emergency activities may prevent the Department from implementing elements of the SWMP.

1.8 Storm Water Quality Issues

Highway runoff pollutants generally come from vehicular contributions, atmospheric deposition, and roadbed material. A variety of constituents including nutrients, organics, oil and grease and heavy metals come from these sources (Irish et al. 1995). Pollutants can be found in both soluble and particulate forms and may impact receiving waters differently depending on the pollutant form present.

In various areas of the State, waters of the United States pass through, over or under the Department's property and facilities. In those circumstances, the Department will be responsible only for pollutants contributed from its property and not for the pollutants present in those waters when they enter the Department's right of way.

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2 PROGRAM MANAGEMENT

2.1 Legal Authority

The administrative control of the Arkansas State Highway and Transportation Department is vested in the State Highway Commission. (Arkansas Code Annotated § 27-65-102). Arkansas Code Annotated § 27-65-107 generally details the powers and duties of the State Highway Commission.

The Department has legal authority to manage storm water discharges occurring from Department owned and maintained facilities and properties located within the highway right of way. Legal authority for storm water and wastewater discharges from privately held land and lands outside the Department owned right of way is exercised by local municipalities, counties, and agencies.

As a designated Small MS4, the Department is not required to comply with other local MS4 regulations, but instead is governed by the regulations established by the Arkansas Pollution Control and Ecology Commission and NPDES Permits issued by ADEQ.

2.2 Department Organization

The Department headquarters is located at 10324 Interstate 30 in Little Rock, Arkansas. The Department's functions are divided between Headquarters and its ten Districts. The Department Headquarters provides statewide oversight, coordination, functional program management, and resource sharing. Figure 2-1 shows the overall Department Organization Chart.

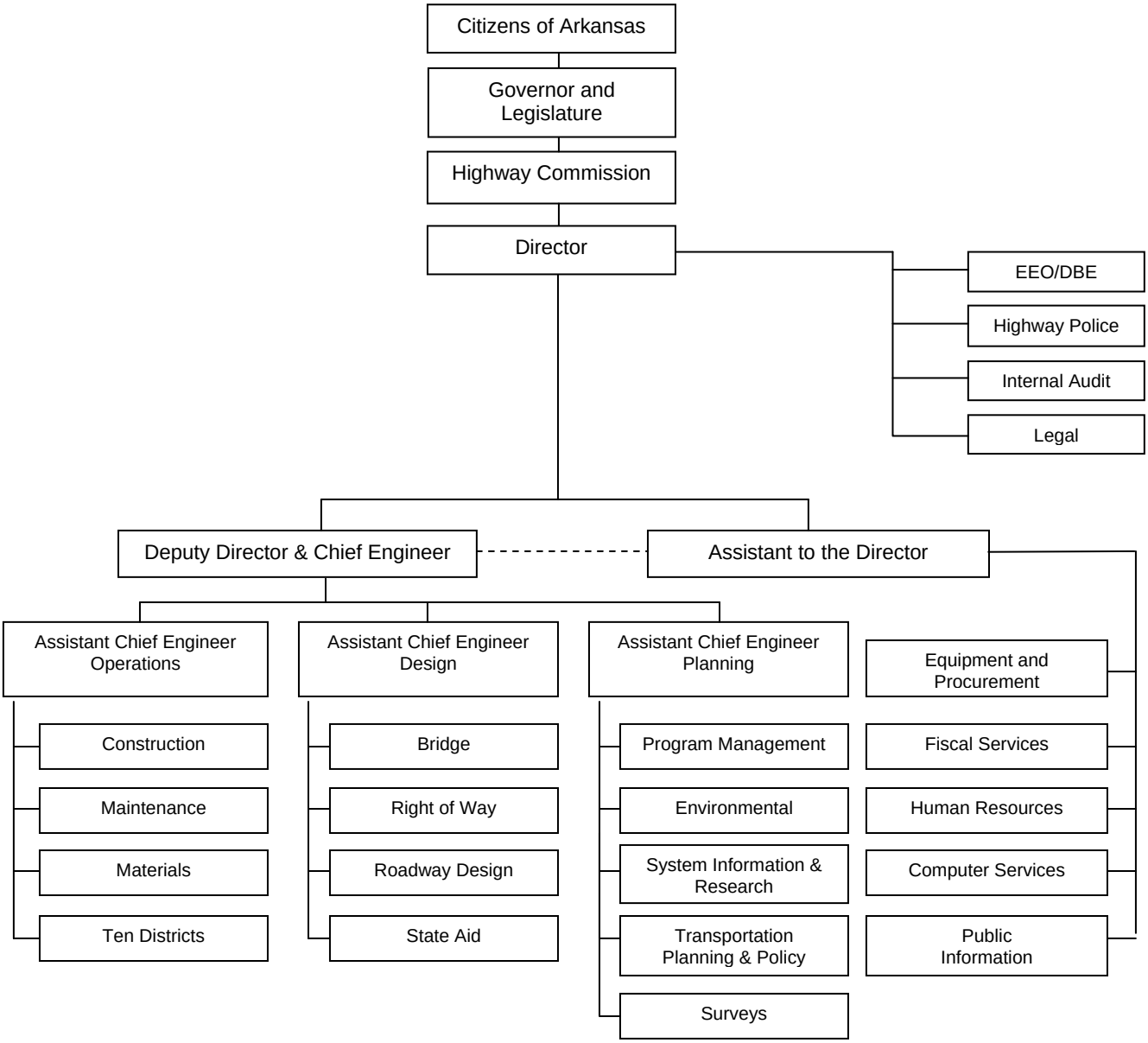
The State Highway Commission establishes the total program of Department activities. The Director of Highways, appointed by the Highway Commission, is the constitutional and statutory chief executive officer of the Department and has direct control and management of affairs relating to the state highway system, subject to the Commission's approval. He is aided by the Chief Engineer and Deputy Director, the Assistant to the Director, and by an advisory group including the General Counsel and the Internal Auditor. The Assistant to the Director is responsible for the overall supervision of administrative functions, while the Deputy Director and Chief Engineer is responsible for overall supervision of the three engineering functions of the Department, including planning, design, and operations.

In addition to the various Divisions of the central office complex, the State is divided into ten Districts in order that proper supervision and control may be exercised at the operations level. The administrative head of each District is the District Engineer (DE), who supervises all construction, maintenance, and other Department activities in a six to eight county area. Their functional program management consists of the District Construction Engineer (DCE) and District Maintenance Engineer (DME). Figure 2-2

shows the geographic areas of the Districts and the location of the District Headquarters. Contact information for each District is located in Appendix D.

Arkansas State Highway and Transportation Department Organization

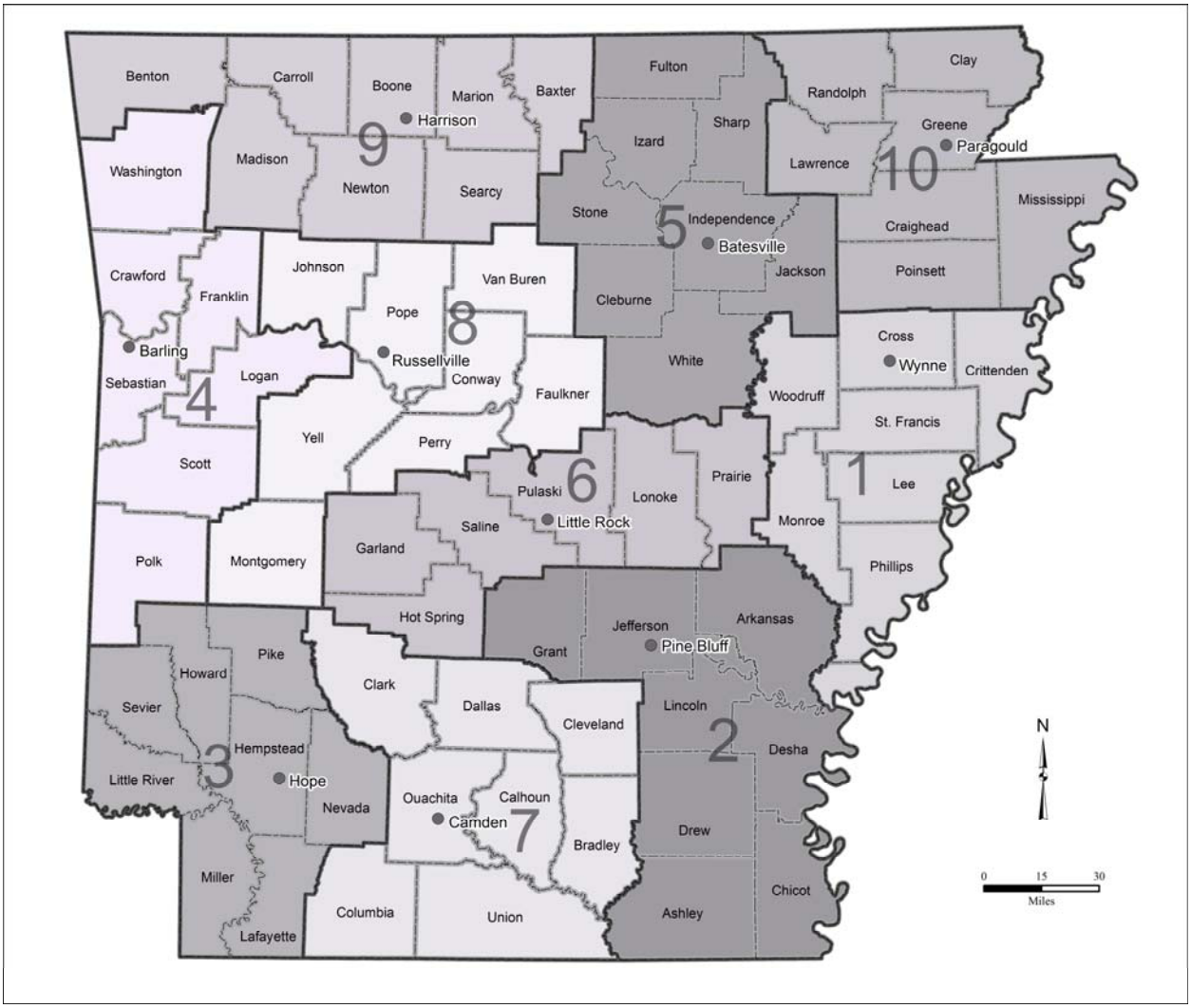
Figure 2-1



Arkansas State Highway and Transportation Department

Highway Districts and District Headquarters

Figure 2-2



2.3 Storm Water Management Within The Department

The Permit requires the signature of a principal executive officer on the Notice of Intent (NOI) and the designation of a cognizant official. This person is the Department's Assistant Chief Engineer-Planning. The NOI also designates the NPDES Section Head in the Environmental Division as the contact person for the Permit.

An interdisciplinary standing committee functions as the main working group for development and review of the SWMP and related permitting requirements. Members of the Committee are listed in Table 2-1.

NPDES Standing Committee
Table 2-1

Member	Title	Agency / Division
Kevin White	Staff Construction Engineer	AHTD Construction
Trinity Smith	Division Head	AHTD Roadway Design
Ray Gruver, Jr.	Section Head-Facilities Management	AHTD Maintenance
Randal Looney	Environmental Coordinator	FHWA
Gene Kuettel, Jr.	Section Head-Utilities	AHTD Right of Way
Brenda Price	Assistant Division Head	AHTD Environmental
Steve Frisbee	District Engineer	AHTD District 3
Ronnie Smith	Section Head	AHTD State Aid
John Bettis	Staff Maintenance Engineer	AHTD Maintenance
David Henning	District Engineer	AHTD District 2
Michelle Davenport	Staff Attorney	AHTD Legal

2.4 Coordination with Other MS4 Storm Water Permittees

In many cases, discharges from the Department storm water drainage systems flow to storm water drainage systems owned and operated by other entities, such as counties or municipalities, and vice versa. These entities and the Department are ultimately responsible for the quality of discharge from their own storm water drainage systems. To comply with its Permit, the Department will strive to ensure pollutants are reduced or controlled in discharges from the Department's storm water drainage systems into other MS4s. Permitted MS4 entities will be encouraged to do the same for discharges from their facilities into the Department's storm drain system.

The Department coordinates storm water management activities with municipalities, counties, ADEQ, Arkansas Department of Health (ADH), and other entities as necessary or appropriate. Coordination is implemented through formal and informal discussions, meetings, agreements, and procedures. The coordination takes place as follows:

2.4.1 Cooperative Agreements

On an ongoing basis, the Department implements projects to improve or expand the state highway system and support facilities. When local entities' facilities (including storm water drainage systems) are involved or otherwise impacted, the Department may enter into project-specific cooperative agreements with the local counties and cities that outline both short and long-term roles and responsibilities.

2.4.2 Activities by Other Entities on Department Right of Way

Individuals, corporations, utilities, cities, counties, and other governmental agencies conduct a variety of activities within the Department's highway rights of way. After obtaining Department approval for such work, all agencies, developers, or other entities proposing to conduct any activity within a Department right of way are directed to obtain any required storm water permits and implement all BMPs required by the permit.

2.4.3 Information Sharing

To accomplish this goal, the Department actively seeks opportunities to share information with other entities and agencies involved with storm water issues. This coordination includes attendance at formal and informal meetings, storm water conferences and one-on-one interaction between Department personnel involved with storm water management and their counterparts at other agencies.

2.4.4 The Technology Transfer Program (T^2)

The Technology Transfer Program is available to assist cities and counties in the implementation of transportation related technology. The objective is a safer, more efficient, and more economical road and street program. Targeted operations include construction and maintenance, materials, administration, and computer programs. This program will be utilized to share information about storm water issues with cities and counties statewide.

The Arkansas Technology Transfer Program is a cooperative effort of the Department, the Federal Highway Administration's Local Technical Assistance Program (LTAP) and the University of Arkansas at Fayetteville.

2.4.5 Coordination with ADEQ

The NPDES Phase II Permit was issued by ADEQ, and ADEQ is the agency primarily responsible for administration of the NPDES Program in the State. The Department seeks to work closely with ADEQ to resolve issues on an informal basis, when possible. Coordination will be accomplished through several mechanisms, including:

a. Annual reporting
b. Notification of noncompliance (notification and follow-up reports for reportable noncompliance)
c. Notification of spills
d. Meetings
e. Informal one-on-one interaction

2.4.6 Coordination with the Public

The Department point of contact for storm water issues is the NPDES Section, Arkansas State Highway and Transportation Department, P.O. Box 2261, Little Rock, Arkansas 72203, (501) 569-2230, or email stormwater@arkansashighways.com. Public interaction concerning storm water will occur through the following primary mechanisms:

1) A storm water section of the Department website to present information on storm water issues, including the statewide SWMP, annual reports, and how the public can participate in storm water clean-up activities, such as Adopt A Highway litter control. This site will also offer the opportunity for public comments, complaints, suggestions, and requests.
2) The statewide SWMP updates will be made available for a public comment period.
3) Public initiated contact with the ten District offices regarding local complaints, suggestions and requests.
4) Public input on proposed projects during the environmental evaluation process. Typically, one or more public meetings are held for major highway projects. Comments received from the public will be addressed through the environmental and design process.
5) Published educational material on storm water related issues for Department employees, contractors, and personnel using Department facilities. The mechanisms will include the *Center Line* newsletter and the *Arkansas Highways* magazine for Department employees, storm water education handouts for employees and contractors, and information for the traveling public at Welcome Centers.

3 BEST MANAGEMENT PRACTICES

A storm water best management practice (BMP) is a technique, measure or structural control that is used for a given set of conditions to manage the quantity and/or improve the quality of storm water runoff in the most cost-effective manner.

The BMPs chosen for this SWMP were selected and implemented to reduce the discharge of pollutants from the Department's storm sewer system to the "maximum extent practicable" (MEP). The term "BMP" is used in this document to refer to operational activities or physical controls that are applied to storm water or other runoff to reduce the discharge of pollutants. Accordingly, BMP refers to both structural and non-structural controls that have direct or indirect effects on the release, transport, or discharge of pollutants.

3.1 Structural BMPs

These are engineered and constructed systems that are designed to provide for water quantity and/ or water quality control of storm water runoff. They include the following general categories:

- **Infiltration systems** capture a volume of runoff, allowing it to infiltrate into the ground.
- **Detention systems** capture a volume of runoff and temporarily retain that volume for subsequent release. Detention systems do not retain a significant permanent pool of water between runoff events.
- **Retention systems** capture a volume of runoff and retain that volume until it is displaced in part or in total by the next runoff event. Retention systems therefore may maintain a significant volume of water between runoff events.
- **Constructed wetland systems** are similar to retention and detention systems, except that a major portion of the BMP water surface area (in pond systems) or bottom (in meadow-type systems) contains wetland vegetation. This group also includes wetland channels.
- **Filtration systems** use some combination of a granular filtration media such as sand, soil, organic material, carbon or membrane to remove constituents found in runoff.
- **Vegetated systems (biofilters)** such as swales and filter strips are designed to convey and treat either shallow flow (swales) or sheet flow (filter strips) runoff.
- **Minimizing directly connected impervious surfaces** describes a variety of practices that can be used to reduce the amount of surface area directly connected to the storm drainage system by minimizing or eliminating traditional curb and gutter.

- **Miscellaneous and vendor-supplied systems** include a variety of proprietary and miscellaneous systems that do not fit under any of the above categories. These include catch basin inserts, hydrodynamic devices and filtration devices.

3.2 Non-Structural BMPs

These are institutional and pollution prevention practices designed to prevent pollutants from entering storm water runoff or reduce the volume of storm water requiring management. Non-structural BMPs in use at the Department fall into the following categories:

- **Education** of Department employees and the public can be an effective and inexpensive storm water management strategy. When effectively implemented, education programs can help to clarify common misconceptions of storm water issues and raise awareness of the valuable functions that a storm water management program could provide to communities in Arkansas.
- **Source control** information can be provided to Department employees and the public to identify sources of non-point source pollution, control measures available, and the steps that employees and the public can take to reduce the impacts of their activities on water quality. Most communities are unaware of the sources and control measures for urban non-point source pollution.
- **Recycling** is another activity that can significantly reduce the impacts to water quality.
- **Maintenance practices** are necessary in order to reduce the pollutant contribution from Department facilities and roadways and to ensure that storm water collection and treatment systems are operating as designed.

3.3 BMP Adoption Procedures

Many of the BMPs described in this SWMP have been in use for several years and others have been adopted more recently. The Department periodically evaluates BMPs and adds or deletes practices based on the most current information available in order to do the best job at the lowest possible cost.

The NPDES Standing Committee has the responsibility to evaluate all proposed temporary BMPs before recommending promising candidates to the Specification Committee for possible adoption. Some criteria used to accept or reject a BMP include the effectiveness of the BMP at the subject site, a cost/benefit comparison, technical feasibility, safety, maintenance requirements, effects on other resources, and adherence to local, state, and federal regulations. A description of each consideration is provided as follows:

- **BMP effectiveness** - A proposed BMP should meet its goal for pollution control benefits the BMP was designed to provide. The suitability of the project site to

the BMP should be considered. Some important site characteristics are soil type, watershed area, depth to bedrock, site size, and water table. If these conditions are not suitable, then the BMP can lose its effectiveness, require excessive maintenance or quit working after a short while.

- **BMP cost/benefit comparison** - The pollution control benefits should have a reasonable relationship to the cost of the BMP. Economics is an important consideration in the selection of BMPs that will achieve the water quality goal at the least cost. To properly compare alternatives, all costs for the design life of a BMP should be included. These include expected maintenance costs as well as initial costs for land, engineering and construction. Other economic considerations may be applicable, including increased property value as a result of the construction of an attractive detention pond, or incidental wildlife or recreational benefits.
- **Technical feasibility and safety** - The Department should be able to implement the BMP utilizing Department resources and within a reasonable amount of time. In addition, the Department should be able to implement the BMP without compromising the safety of Department workers or the public.
- **Maintenance requirements** - The initial design phase of a BMP should take maintenance considerations into account. Most structural BMPs will require periodic maintenance, such as disposal of sediment and debris. Locations for the disposal of sediment and debris should be considered during this phase of planning a BMP.
- **Adherence to regulations** - A proposed BMP should not adversely affect the Department's compliance with local, state and federal regulations.
- **Effects on other resources** - A BMP can directly affect other resources. Without proper design and planning, a BMP can simply shift a water quality problem elsewhere. Improperly designed BMPs can affect groundwater, wildlife, stream quality, and aesthetics.

3.4 BMP Implementation

No single BMP can address all storm water problems. Each type has certain limitations based on drainage area served, available land space, cost, pollutant removal efficiency, as well as a variety of site-specific factors such as soil types, slopes, depth of groundwater table, etc. Careful consideration of these factors is necessary in order to select the appropriate BMP or group of BMPs for a particular location.

Under the Phase II regulations, the Department is required to implement a storm water management program that includes, at a minimum, the six minimum control measures listed below:

- **Public Education and Outreach**
- **Public Involvement and Participation**
- **Pollution Prevention and Good Housekeeping**
- **Illicit Discharge Detection and Elimination**
- **Control of Construction Site Runoff**
- **Post-Construction Storm Water Management**

The rule gives the Department the flexibility to choose the BMPs for each measure as appropriate for operations. However, the chosen BMPs and measurable goals must result in effective control of pollutants in storm water runoff. Otherwise, the permitting authority may require changes in the chosen mix of BMPs and measurable goals to result in a more effective program. The BMPs that have been selected by the Department to implement these minimum measures, along with their related measurable goals, are described in Section 4 through Section 9 of this document.

4 PUBLIC EDUCATION AND OUTREACH

An informed and knowledgeable community is important for the success of a storm water management program. When the public understands why storm water management is necessary and important, it ensures greater support for the program. An awareness of the individual actions that they can take to protect or improve the quality of area waters encourages public action that will tend to reduce storm water impacts.

4.1 Permit Requirements

The Department will implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities. These will include but are not limited to the impact of storm water discharges and pollution prevention steps the public can take to reduce polluted runoff. As a non-traditional MS4, the Department is required to provide educational materials and outreach to its employees, contractors, and individuals using the Department's facilities.

4.2 Rationale Statement

As a non-traditional MS4, the Department's audiences for the purpose of this minimum measure are Department employees, contractors working on construction and maintenance projects within the Department's right of way, and the motorists who utilize Department facilities. The Department uses multiple mechanisms to achieve the goals of this minimum measure since a targeted approach is likely to reach and be relevant to the maximum number of people comprising these groups.

The storm water section of the Department's website, the Department's recurring publications, and distribution of educational material will be used for Department employees. Contractors, who actually perform the majority of earth disturbing activities on Department projects, can best be reached through educational handouts and training opportunities which emphasize erosion and sediment control and waste management on construction jobs. The general public who use the Welcome Centers are a transient population and can best be reached through the distribution of educational material emphasizing proper disposal of waste, control of oil leaks from vehicles, and litter control. The Department is an active member of the Keep Arkansas Beautiful Commission and normally makes a substantial cash contribution to the Keep Arkansas Beautiful Foundation for use in conducting the Great Arkansas Cleanup Campaign. Additionally, storm drain outfalls which discharge off-site at all Welcome Centers and rest areas have permanent decals affixed which contain warnings against dumping waste.

All printed educational material and the Department's website contain hotline numbers and information necessary to report littering and provide a means for contacting the Department with concerns, questions, or suggestions about environmental matters.

While not a part of the formal MS4 program, the Department will use opportunities to reach other segments of the State's population through the distribution of educational material at the Arkansas State Fair and central Arkansas libraries and by presentations to students during Earth Day activities.

The success of this minimum measure is subjective, but feedback from the target audiences, a decrease in the pollution from targeted sources, construction site visit reports and citizen participation in the form of hotline or website communications will be used in the evaluation. Each BMP will be reviewed annually to determine if the practice needs to be revised or replaced.

The Permit requires the Department to estimate the number of people to be contacted through the outreach strategy. The Department goal for the Public Education and Outreach program is to reach at least 8000 people during the life of the Permit.

4.3 Public Education and Outreach-Implementation Plan

The Department will implement the following BMPs to achieve compliance with the requirements of Minimum Measure One, Public Education and Outreach.

4.3.1 BMP 1.1: Storm Water Educational Material

BMP Contact:	NPDES Section
Target Audience:	District construction and maintenance personnel, contractors, traveling public
Target Pollution Sources:	Illicit discharges, sediment and waste from construction activities, litter, motor oil
Description:	Informational handouts will be developed and distributed to District construction and maintenance personnel, general contractors for construction projects and the public at Welcome Centers, Earth Day events, selected central Arkansas libraries, and the Arkansas State Fair. Selected material will also be posted on the Department's website.
Measurable Goals:	Years 1-5. Provide AHTD Storm Water Brochure for the public at all Welcome Centers; make annual distribution of brochures to Arkansas State Fair patrons; maintain brochures at selected Central Arkansas libraries. Provide targeted handouts to at least 90% of District construction and maintenance personnel during formal training.

Year 2, create Illicit Discharge Handout for District maintenance personnel. Distribute to at least 90% of target audience.

Year 1. Create handout targeting erosion and sediment control and construction waste management for AHTD contractors.

Distribute to at least 90% of pre-certified contractors in Years 2 and 4 of the Permit.

4.3.2 Storm Information on Website (BMP 1.2)

BMP Contact: NPDES Section

Target Audience: Department employees, general public

Target Pollution Sources: Sediment, vehicle fluids, litter, illicit discharges

Description: The internet is an effective method of public education and involvement through the distribution of storm water program information to internal and external audiences. The website will contain the Department's SWMP and educational material for various audiences on the effects of pollution from storm water discharges.

Measurable Goals: Current Department storm water educational material will be maintained on the website. New material will be posted as it is developed.

4.3.3 Public Hotline (BMP 1.3)

BMP Contact NPDES Section

Target Audience Department employees, general public

Target Pollution Sources Various

Description A public hotline is available so employees or the general public can comment or express concerns regarding Department storm water management. A staff member answers this number during normal work hours. The hotline number is published in educational brochures and is included on the Department's website.

Measurable Goals	Document and respond to all hotline calls.

4.3.4 Spanish Storm Water Material (BMP 1.4)

BMP Contact	NPDES Section
Target Audience	Spanish speaking members of the public
Target Pollution Sources	Various
Description	Spanish translations of selected storm water material will be made available on the Department's website.
Measurable Goals	Years 1-5. At least three Spanish language publications will be maintained on the Department's website.

4.3.5 Storm Drain Marking at Area Maintenance Headquarters (BMP 1.5)

BMP Contact	NPDES Section
Target Audience	Department Employees
Target Pollution Sources	Materials produced by vehicle maintenance activities
Description	Make staff visits to at least 50 Area Maintenance Headquarters (AMH) during the term of the Permit and affix permanent decals with storm water education messages onto storm water outfalls which discharge off site.
Measurable Goals	Visit 10 AMHs during each year of the Permit and install permanent decals at storm water outfalls which discharge off-site.

4.3.6 Department Recurring Publications (BMP 1.6)

BMP Contact	NPDES Section
Target Audience	All Department Employees
Target Pollution Sources	Dependent on subjects selected
Description	The Department publishes recurring publications which are distributed to all Department employees. Information on a subject of general environmental interest will be included in one of these publications on at least an annual basis.
Measurable Goals	Provide Department employees with information on a subject of general environmental interest at least annually through Department publications during each year of the Permit.

4.4 Public Education and Outreach Summary and Schedule

A summary of the information regarding Minimum Measure One including the months and years in which the Department will undertake the required actions is shown below in Table 4-1.

PUBLIC EDUCATION AND OUTREACH
BMPS AND MEASURABLE GOALS
TABLE 4-1

BMP Number/Name	Measurable Goal	Start Date	End Date
1.1 Storm Water Educational Handouts	Informational handouts will be developed and distributed to at least 90% of designated construction and maintenance personnel, 90% of pre-certified contractors for new construction projects, and offered to the public at all Welcome Centers and other venues. Selected material will also be posted on the Department's website.	August 1, 2014	July 31, 2019
1.2 Storm Water Information on Website	Storm water material will be maintained on the Department's website. The website explains storm water management, sources and types of pollution, current state and federal regulations, and measures the public can take to minimize polluted storm water runoff.	August 1, 2014	July 31, 2019
1.3 Public Hotline	A public hotline will be maintained and publicized so citizens or employees may comment, ask questions or express concerns about storm water issues. All calls will be documented and tracked until resolved.	August 1, 2014	July 31, 2019
1.4 Spanish Storm Water Educational Material	At least three Spanish language publications will be maintained on the Department website.	August 1, 2014	July 31, 2019
1.5 Storm Water Discharges at Maintenance Facilities	Visit at least 10 area maintenance facilities during each year of the Permit and affix a storm water reminder to significant storm water outfalls.	August 1, 2014	July 31, 2019
1.6 Department Recurring Publications	During each year of the Permit, information of general environmental interest will be included in a publication distributed to all Department employees.	August 1, 2014	July 31, 2019

5 PUBLIC INVOLVEMENT AND PARTICIPATION

An active and involved community is important to the success of the storm water management program. It allows for broader public support, since citizens who participate in the development or implementation of the SWMP are partners in the program and thus are more likely to take an active role in preventing storm water pollution. In addition, involved citizens are likely to provide cross-connections and relationships with other community and government programs to the benefit of the Department's storm water program.

5.1 Permit Requirements

The Department will at a minimum, comply with State and local public notice requirements when implementing a public involvement/participation program. As a non-traditional MS4, the Department will involve employees, on-site contractors, and individuals using the Department's facilities.

5.2 Rationale Statement

As a non-traditional MS4, the Department's audiences for this minimum measure are Department employees, contractors working on construction projects within the Department's right of way, and the public who use Department facilities. Because of the diverse nature of the audiences, several avenues for public involvement and participation have been selected to implement this measure. The SWMP will be posted on the Department website and public notice of the plan will be published in a newspaper of statewide circulation. This will give the general public, employees, and contractors the opportunity to review the document and submit comments.

Within the Department, the NPDES Standing Committee will continue to be the focal point for oversight of the AHTD storm water program since it brings together representatives from the functional areas within the Department involved in activities which can impact storm water discharges. This group includes designers, construction staff and field personnel, maintenance staff and field personnel, utilities, and facilities management, among others. This diversity insures the major stakeholders in storm water management within the Department have joint ownership of the Program.

The general public is afforded the opportunity to partner with the Department in pollution prevention and remediation through two programs. The first is the AHTD Litter Hotline whereby the public can report littering to the Arkansas Highway Police, resulting in a letter to the suspected violator. The second is the Adopt A Highway Program which encourages groups of citizens to adopt a section of roadway and remove litter from the area on a periodic basis.

Since the majority of earth disturbing activities within the Department's right of way are performed by contractors, their involvement in storm water management is important to

the success of the program. The Department has pre-construction conferences for contracted projects which have District oversight so the contractor and Department personnel may coordinate their plan for compliance with the Construction Storm Water Permit on each project. This allows potential problems to be identified before work commences and gives the contractor a voice in the Storm Water Pollution Prevention Plan (SWPPP) implementation.

The success of this minimum measure is generally subjective but BMPs with quantifiable goals will be judged individually based on actual versus planned achievements. Each BMP will be assessed before the submission of the annual report to determine if there is any evidence that the practice needs to be revised or replaced.

5.3 Public Involvement and Participation-Implementation Plan

The Department will implement the following BMPs to achieve compliance with the requirements of Minimum Measure Two, Public Involvement and Participation:

5.3.1 Public Notice of Storm Water Management Program (BMP 2.1)

BMP Contact	NPDES Section
Target Audience	Department employees, general public, contractors
Target Pollution Sources	N/A
Description	The Department will publish a public notice of the Storm Water Management Program in a newspaper with statewide circulation, requesting comments on the Program. The completed draft of the document will be available on the Department website during the life of the Permit. These measures will give the public an opportunity to comment on the program. The Department will consider all public comments and incorporate valid ideas into the SWMP.
Measurable Goals	SWMP provided for public comment.

5.3.2 Involvement with Other Entities (BMP 2.2)

BMP Contact	NPDES Section
Target Audience	Storm water related public and private entities
Target Pollution Sources	N/A

Description To accomplish this goal, the Department will seek opportunities to share information with other entities and agencies involved with storm water issues. This coordination will include attendance at formal and informal meetings, storm water conferences, and one-on-one interaction between Department personnel involved with storm water management and their counterparts at other agencies.

Measurable Goals The Department will sponsor or participate in at least eight activities with other public or private groups during each year of the permit.

5.3.3 Maintain SWMP on Website (BMP 2.3)

BMP Contact NPDES Section

Target Audience Department employees, general public, contractors

Target Pollution Sources N/A

Description The SWMP, annual reports, and associated material will be maintained on the Department website during the life of the permit. This will let the public, Department employees and contractors educate themselves on the goals and activities of the Program and will provide a forum for participation by any interested parties.

Measurable Goals SWMP and associated documents available on the Department website during the life of the permit.

5.3.4 Sponsor Adopt A Highway Program (BMP 2.4)

BMP Contact District Engineer

Target Audience General public

Target Pollution Sources Floatables, other litter

Description The Department sponsors the Adopt A Highway program which enables volunteer groups to adopt a section of State highway for the purpose of litter control. The object of the program is to increase public awareness of the litter problem, to promote public involvement, and to help prevent floatables and other litter from entering State waters. As sponsor for the program, the Department

coordinates the cleanup activities with the adopting group, furnishes safety vests and litter bags, disposes of the litter and erects signs to provide public recognition for the adopting group.

Measurable Goals The Department will publicize the program through the website, distribution of applications at public meetings, and on highway signs. The goal is to keep at least 6500 people involved in the program over the life of the Permit.

5.3.5 Litter Hotline (BMP 2.5)

BMP Contact Arkansas Highway Police

Target Audience Driving public, Department employees

Target Pollution Sources Floatables, other litter

Description A 24-hour, toll-free public telephone hotline called the Litter Reporting Hotline will be maintained. Any driver witnessing a littering violation along any State highway can call 1-866-811-1222 to report it. The Arkansas Highway Police (AHP) answer calls and reported incidents are documented. A letter is then sent to the owner of the vehicle regarding the suspected violation if a valid license plate number is included with the complaint. Information about recurring violations by the same vehicle will be tracked and could result in a visit by an AHP officer to investigate the problem. Although the goal is to stop the roadside littering, not to issue citations, repeat offenders can be subject to enforcement action through Arkansas' anti-litter laws.

Measurable Goals All calls to the hotline will be documented and a letter will be sent to each reported violator where the identity and address of the driver can be ascertained.

5.3.6 NDPES Standing Committee (BMP 2.6)

BMP Contact	Committee Chair, Environmental Division
Target Audience	Department employees
Target Pollution Sources	All storm water pollutants
Description	The NPDES Standing Committee is an interdisciplinary group which serves as the focal point for storm water management within the Department. The group meets as necessary to propose and evaluate changes to storm water policy and procedures and, where appropriate, to recommend their adoption to the Department's senior management. Members of the Committee are shown in Table 2-1
Measurable Goals	All SWMP activities, including required annual reports and other MS4 permit related actions will be reviewed and approved by the committee before adoption. Minutes of the meetings will be maintained.

5.3.7 Pre-Construction Conference With Contractors (BMP 2.7)

BMP Contact	District Construction Engineer
Target Audience	Department employees, contractors
Target Pollution Sources	Sediment, construction wastes
Description	The Resident Engineer will host a Pre-Construction Conference before work begins on contracted jobs with District oversight. During the meeting, NPDES requirements and any potential problems with storm water management will be discussed.
Measurable Goals	A Pre-Construction Conference to be held for all contracted jobs with District oversight.

5.4 Public Involvement and Participation Summary and Schedule

A summary of the information regarding Minimum Measure Two including the months and years in which the Department will undertake the required actions is shown below in Table 5-1.

PUBLIC INVOLVEMENT AND PARTICIPATION
BMPS AND MEASURABLE GOALS
TABLE 5-1

BMP Number/Name	Measurable Goal	Start Date	End Date
2.1 Public Notice	The Department will give public notice of and provide for public comment on the Department's draft SWMP.	October 1, 2014	November 1, 2014
2.2 Involvement With other Entities	Participate in at least eight cooperative events or activities each year with other public entities, MS4s and related groups on storm water or pollution prevention issues.	August 1, 2014	July 31, 2019
2.3 Maintain SWMP on Website	The SWMP and related documents will be maintained on the Department website to help educate the public and Department employees about the Program.	October 1, 2014	July 31, 2019
2.4 Adopt A Highway Program	The Department will publicize the Program through various means with the goal of involving at least 6500 people during the life of the Permit.	August 1, 2014	July 31, 2019
2.5 Litter Hotline	Program to receive and document litter complaints and follow-up with a letter to reported violators.	August 1, 2014	July 31, 2019
2.6 NPDES Standing Committee	Interdisciplinary Committee to initiate, review, and make recommendations about storm water management initiatives within the Department.	August 1, 2014	July 31, 2019
2.7 Pre-Construction Meeting with Contractors for New Projects	The Department will host a Pre-Construction Conference with contractors before work begins on all contracted jobs with District oversight.	August 1, 2014	July 31, 2019

6 ILLICIT DISCHARGE DETECTION AND ELIMINATION

The NPDES Final Phase II Rule requires small MS4s to develop, implement, and enforce an illicit discharge detection and elimination program. Illicit discharges can enter the storm drain system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or by other means (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, paint or used oil dumped directly into a drain). In either case, the result is untreated discharges that contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses and bacteria to receiving water bodies. Pollutant levels from these illicit discharges have been shown in EPA studies to be high enough to significantly degrade receiving water quality and threaten aquatic life and human health.

6.1 Permit Requirements

The Department shall develop, implement and enforce a program to detect and eliminate illicit discharges, as defined in Part 6 of this permit, into the small MS4 (for illicit discharges to the MS4 via an adjacent, outside of the MS4's jurisdiction, interconnected MS4, the MS4 are only required to inform the neighboring MS4 and ADEQ in the annual report submission, of their existence);

The Department shall develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all surface waters of the State that receive discharges from those outfalls. Within five years of when the coverage under this general permit was granted, the storm sewer system map shall also include the entire MS4 system, including catch basins, pipes, ditches and public and private storm water facilities. MS4s with urbanized area increases resulting from the 2010 census must update their storm sewer maps by the expiration of this permit;

The Department shall to the extent allowable under State or local law, effectively prohibit, through ordinance, or other regulatory mechanism, illicit discharges into the storm sewer system and implement appropriate enforcement procedures and actions;

The Department shall develop and implement a plan to detect and eliminate non-storm water discharges, including illegal dumping, to the system.

The Department shall inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste; and

The Department shall address the following categories of non-storm water discharges or flows (i.e., illicit discharges) only if the MS4 identifies them as significant contributors of pollutants to the small MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)), uncontaminated pumped ground water, discharges from potable

water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, de-chlorinated swimming pool discharges, street wash water, and discharges or flows from emergency fire fighting activities (by definition, not an illicit discharge).

The Department may also develop a list of other similar occasional incidental non-storm water discharges (e.g., non-commercial or charity car washes, etc.) that will not be addressed as illicit discharges. These non-storm water discharges must not be reasonably expected (based on information available) to be significant sources of pollutants to the MS4, because of either the nature of the discharges or conditions the MS4 have established for allowing these discharges to the MS4 (e.g., a charity car wash with appropriate controls on frequency, proximity to sensitive water bodies, BMPs on the wash water, etc.). The MS4 must document in the SWMP any local controls or conditions placed on the discharges. The MS4 must include a provision prohibiting any individual non-storm water discharge that is determined to be contributing significant amounts of pollutants to the MS4.

6.2 Rationale Statement

The Department's plan to implement this minimum measure will rely on both the detection/elimination of existing discharges and minimizing future problems through employee training, storm drain marking, and distribution of educational material.

The Department has completed the collection of data for all storm water outfalls in its MS4 system within the designated small MS4 areas defined by the 2000 census. Additionally, the mapping of the drainage system within these areas was completed during the term of the previous Permit using hand-held Global Positioning System (GPS) units, with the resulting data downloaded into a *GeoMedia* mapping program. Using this information, maps of the MS4 system to include outfalls and receiving waters have been completed.

The 2010 Census expanded the boundaries of some Urbanized Areas within the State and the Department plans to map storm water outfalls and the drainage system in these new areas during the first four years of this Permit. Changes to the MS4 collection system caused by new construction, modifications to existing roadways, or any other reason will be documented and the system maps will be updated accordingly, prior to the expiration of the Permit.

Initial screening of the MS4 system for illicit discharges has been completed and screening of the additional areas resulting from the 2010 Census will be completed during Years 1-4 of the Permit. The maintenance personnel who work on the Department's roadways on a daily basis will spearhead the ongoing effort to identify and eliminate future illicit discharges. Any dry weather flow where the source is questionable will be evaluated in the field for such things as color, odor, and clarity. Field testing for selected parameters will be done by the NPDES team members using

portable test equipment as circumstances dictate. If these measures indicate a probable illicit discharge, the location will be recorded on GPS units by the inspection team along with any other pertinent information needed for follow-up.

Since the Department doesn't have regulatory authority to eliminate illicit discharges into its MS4 system, it relies on assistance from agencies which do have such authority. A Memorandum of Understanding (MOU) has been signed and is in effect with the Arkansas Department of Health (ADH) to deal with discharges from septic systems or home sewage treatment systems. The ADEQ assists in the investigation of other kinds of discharges when necessary. Since the source of many discharges will be located within the boundary of another Regulated Small MS4 System, the Department may seek the assistance of the MS4 operator to help eliminate these discharges. Specific procedures are shown in the Department's Illicit Discharge Reporting Protocol.

Dry weather screening for illicit discharges is a permit requirement and a good initial step toward the goals of the program but it will not detect new discharges over the long term. To do this, the Department will rely primarily on maintenance personnel who work on the roadways on a daily basis. The illicit discharge training program and educational handouts have given these employees the knowledge they need to perform this function. The training for this Minimum Measure is conducted along with the Facility PPP and SPCC Training BMP under the Pollution Prevention/Good Housekeeping Minimum Measure. In addition, the training covers how to prevent or correct situations at Department facilities which might lead to illicit discharges and how to remediate spills and leaks if they occur.

Members of the NPDES Section will visit 50 of the Department's maintenance facilities during the term of the Permit. During the visits, they will work with maintenance supervisors to identify and eliminate any potential or actual discharges of chemicals or other pollutants from the facility. Additionally, markers containing a reminder that the drain leads to a water body will be affixed near selected storm water outfalls during these visits.

The Department will involve the general public in this effort by providing a hotline number and a website form to report illicit discharges to the agency. If a complaint is valid, it will be handled according to the Illicit Discharge Reporting Protocol. The web address and hotline numbers are included in the storm water educational material intended for distribution to the general public. The driving public is targeted through educational and storm drain marking BMPs designed to satisfy the requirements of the Public Education and Outreach Minimum Measure. Brochures with information on such problems as dumping of waste into storm drains and proper disposal of used motor oil are distributed at Welcome Centers and other venues such as central Arkansas libraries and the Arkansas State Fair. The storm drain outfalls which discharge off-site at Welcome Centers and rest areas have been marked with a reminder that the drain leads to a waterbody to encourage responsible behavior in the disposal of wastes.

The success of this minimum measure will be measured by miles of MS4 system mapped each year, the number of outfalls screened, number of personnel trained, and number of maintenance facilities visited. Over time, the Department would expect the program to result in fewer illicit discharges within its MS4 system or at its facilities.

6.3 Illicit Discharge Detection and Elimination-Implementation Plan

The Department will implement the following BMPs to achieve compliance with the requirements of Minimum Measure Three, Illicit Discharge Detection and Elimination:

6.3.1 Storm Sewer System Outfall Collection and Mapping (BMP 3.1)

BMP Contact	NPDES Section
Target Audience	N/A
Target Pollution Sources	N/A
Description	The Department will use GPS units to map storm water outfalls and the storm sewer drainage system located in the MS4 urbanized areas added as a result of the 2010 Census.
Measurable Goals	The Department will map storm water outfalls and the drainage system for approximately one-fourth of the additional MS4 areas resulting from the 2010 Census each year during Years 1-4 of the Permit.

6.3.2 Dry Weather Inspections of Outfalls (BMP 3.2)

BMP Contact	NPDES Section
Target Audience	N/A
Target Pollution Sources	Illicit discharges
Description	The Department will perform dry weather screening of the storm sewer system located in the additional urbanized areas which were added as a result of the 2010 census. Dry weather flows suspected of being illicit discharges will be evaluated using field screening and testing of selected parameters. The location of actual illicit discharges will be recorded and actions taken to terminate the discharge.

Measurable Goals The Department will dry weather screen approximately one-fourth of the additional MS4 areas resulting from the 2010 Census each year during Years 1-4 of the Permit. Action will be taken to eliminate illicit discharges.

6.3.3 Statewide Employee Training Program (BMP 3.3)

BMP Contact NPDES Section and
District Maintenance Engineer

Target Audience District maintenance employees

Target Pollution Sources Illicit Discharges

Description Annual illicit discharge training will be provided for District maintenance personnel during each year of the Permit.

Measurable Goals NPDES Section Personnel will provide illicit discharge training for at least 90% of eligible personnel during each year of the permit.

6.3.4 Citizen Reporting of Suspected Illicit Discharges (BMP 3.4)

BMP Contact NPDES Section

Target Audience General public

Target Pollution Sources Illicit discharges, dumping

Description A public hotline and website reporting form will be available and publicized for citizens to communicate with the Department about known or suspected illicit discharges within the Department's MS4.

Measurable Goals NPDES personnel will record all complaints and follow the Illicit Discharge Reporting Protocol to eliminate actual illicit discharges.

6.3.5 Statewide Department Facility Staff Assistance Visits (BMP 3.5)

BMP Contact NPDES Section

Target Audience Area maintenance supervisors

Target Pollution Sources Actual or potential illicit discharges

Description The Department's NPDES Section will visit 50 maintenance facilities during the term of the Permit to provide staff assistance on the facility pollution prevention plan implementation. During the visits, an illicit discharge survey of the facility will be performed in conjunction with maintenance supervisors.

Measurable Goals NDPES staff to visit 10 of the Department's maintenance facilities during each year of the Permit.

6.3.6 Field Test Equipment Purchase (BMP 3.6)

BMP Contact NPDES Section

Target Audience N/A

Target Pollution Sources Illicit discharges

Description The Department will purchase additional field testing equipment to perform sampling of dry weather flows.

Measurable Goals Year 1, the NPDES section will research and request funds for the purchase of additional field testing equipment to be used in dry weather screening.

Years 2-5, new equipment will be purchased during Year 2 and used to sample suspected illicit discharges for the remainder of the Permit term.

6.4 Illicit Discharge Detection and Elimination Summary and Schedule

A summary of the information regarding Minimum Measure Three including the months and years in which the Department will undertake the required actions is shown below in Table 6-1.

ILLICIT DISCHARGE DETECTION AND ELIMINATION
BMPS AND MEASURABLE GOALS
TABLE 6-1

BMP Number/Name	Measurable Goal	Start Date	End Date
3.1 Storm Sewer System Mapping	The Department will map approximately one-fourth of the additional MS4 areas resulting from the 2010 Census each year during Years 1-4 of the Permit.	August 1, 2014	July 31, 2018
3.2 MS4 System Dry Weather Field Screening	The Department will dry weather screen approximately one-fourth of the additional MS4 areas resulting from the 2010 Census each year during Years 1-4 of the Permit. Action will be taken to eliminate any identified illicit discharges.	August 1, 2014	July 31, 2018
3.3 Maintenance Employee Training	Provide annual training for at least 90% of eligible maintenance personnel on illicit discharge detection and reporting procedures.	August 1, 2014	July 31, 2019
3.4 Hotline and Website Reporting for Public	A public hotline and reporting form on the Department website will be available for employees or citizens to report suspected illicit discharges within the Department's statewide MS4.	August 1, 2014	July 31, 2019
3.5 Maintenance Facility Staff Visits	Staff assistance visits by members of the NPDES Section to 10 area maintenance facilities during each year of the Permit.	August 1, 2014	July 31, 2019
3.6 Field Test Equipment Purchase and Personnel Training	The Department will purchase additional test equipment and perform field sampling of selected parameters.	August 1, 2014	July 31, 2019

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7 CONSTRUCTION SITE STORM WATER MANAGEMENT

The Department has a well-established process to obtain construction storm water permits and to develop and implement Storm Water Pollution Prevention Plans (SWPPPs) for each eligible construction job. To a large extent, the Department relies on this process to ensure the goals of the NPDES Phase II construction program are met. For contracted jobs, the Roadway Design Division or State Aid Division work to insure the SWPPP contains everything required to accomplish the goal of minimizing the discharge of sediment from construction sites. For construction or maintenance jobs performed by Department personnel, a similar process occurs with Districts developing the SWPPP in coordination with the Environmental Division. After the construction commences, the Districts are responsible for implementing the SWPPP, performing inspections of the site, and making changes as necessary to meet the requirements of the NPDES Phase II regulations.

7.1 Permit Requirements

The Department will develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of pollutants in storm water discharges from construction activity disturbing less than one acre shall be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. If ADEQ waives requirements for storm water discharges associated with small construction from a specific site(s), the Department is not required to enforce the program to reduce pollutant discharges from such site(s). The program shall include the development and implementation of, at a minimum:

An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State or local law. The ordinance or other regulatory mechanism shall be at least as stringent and not conflicting with the criteria set forth in the current, at time of issuance of this permit, ADEQ NPDES General Stormwater Permit for Construction Activities applicable for the permit area. This would include the statewide NPDES General Stormwater Permit for Construction Activities. If initially coverage was under a previous version of this permit then the ordinance or other regulatory mechanism, if needed, shall be revised within two years of coverage under this general permit was granted;

Requirement to implement appropriate erosion and sediment control BMPs;

Requirement to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;

Procedures for site plan review which incorporate consideration of potential water quality impacts;

Procedures for receipt and consideration of information submitted by the public;

Procedures for site inspection and enforcement of control measures.

7.2 Rationale Statement

The Department will continue established procedures to ensure compliance with the requirements of this minimum measure and the NPDES Construction Storm Water Permit. In most cases, this process begins with the project designer who develops a storm water pollution prevention plan (SWPPP) as part of the design process. Designers use information from many sources to insure the plan is effective in preventing the discharge of sediment to waters of the State while the project is underway. Typically, the SWPPPs are reviewed at several levels to assure adequacy. They are prepared by engineers, reviewed and certified by a supervisory engineer, and further reviewed by the Resident Engineer or District Maintenance Engineer before work begins.

After the project design and SWPPP are complete, the Department submits a Notice of Intent to ADEQ to obtain NPDES coverage for large jobs, with small jobs proceeding under the automatic coverage provision of the construction storm water permit.

The large majority of construction projects undertaken by the Department are done by contractors who install and maintain BMPs and implement construction waste control in accordance with the SWPPP. Once the job is contracted, it is under the oversight of a Resident Engineer with on-site inspectors to insure the contractor complies with the SWPPP requirements for installation and maintenance of BMPs and the control of construction waste. The Department inspectors complete a formal inspection of each job with NPDES Construction Storm Water Permit coverage at least every seven days from the commencement of construction until the Notice of Termination is approved by ADEQ. The results of the inspections are documented on a Department inspection form and a copy is given to the contractor to use in correcting deficiencies. If the district personnel find the SWPPP is not working as designed, they have the authority and responsibility to initiate changes to correct any deficiencies. If a contractor isn't following the requirements of the SWPPP or NPDES construction storm water permit, the Department has sanctions available to correct the problem including stop work orders, monetary penalties, and temporary cessation of other project work until the site is in compliance.

On projects undertaken by Department forces, the requirements of the NPDES Permit are the responsibility of District personnel who develop a SWPPP, submit an NOI when required, install BMPs, perform inspections, and oversee all phases of the job until it is completed.

The Department relies on a well trained work force to implement the construction storm water program. In 2009, the Department completed an agreement with the University of Arkansas (U. of A.) *Center for Training Transportation Professionals (CTTP)* to conduct erosion and sediment control training and certification for Department construction personnel and contractors. This training began in 2010 with a goal of training and certifying all persons authorized to perform construction site storm water inspections on Department projects every five years. The training is also offered to contractors. This training is supplemented by annual training provided by personnel from the Department's NPDES Section.

Since Department construction projects are distributed among the ten Districts throughout the State, a means of identifying common problems or innovative ideas on the projects and communicating these to the construction community is desirable. To help fulfill this goal, members of the NPDES Section will visit at least ten construction or maintenance projects during each year of the Permit, survey the jobs with District personnel, and prepare a short report on the results. At the end of each calendar year a summary of common problems or innovative ideas is submitted to the NPDES Standing Committee for approval and then provided to the Districts.

The general public may become involved in the construction process by submitting comments, questions, or concerns on any Department job in progress through the public hotline or the Department's website.

The goal of this minimum measure is to improve the Department's compliance with the NPDES Permit and the success will be determined by a low number of citizen or regulatory agency complaints, as well as few problems found during staff assistance visits to job sites. For those BMPs with quantifiable goals, success will be measured by actual versus planned accomplishments for the BMP.

7.3 Construction Site Storm Water Runoff Control-Implementation Plan

The Department will implement the following BMPs to achieve compliance with the requirements of Minimum Measure Four, Construction Site Storm Water Runoff Control.

7.3.1 Training and Certification Program for Department Personnel (BMP 4.1)

BMP Contact	Assistant Chief Engineer-Operations
Target Audience	District construction and maintenance personnel
Target Pollution Sources	Sediment, construction waste
Description	The Department will provide annual training for all construction personnel whose daily duties could impact storm water. The training will be done in-house by the NPDES Section or through the University of Arkansas.

Measurable Goals Provide annual training to all construction personnel whose daily duties could impact storm water.

7.3.2 New Standard Features and Methods for Construction BMPs (BMP 4.2)

BMP Contact NPDES Section-Research
State Construction Engineer-Testing
NPDES Standing Committee and Specifications Committee-Review for possible adoption

Target Audience N/A

Target Pollution Sources Sediment

Description Research and test construction BMPs adopted by other state Departments of Transportation and adopt promising items through inclusion in the Standard Specifications or through a Special Provision.

Measurable Goals Adopt three new erosion and sediment control BMPs through the Standard Specifications or Special Provisions during the term of the Permit.

7.3.3 Erosion and Sediment Control Design and Construction Manual (BMP 4.3)

BMP Contact State Construction Engineer

Target Audience Designated district construction and maintenance personnel

Target Pollution Sources Sediment, construction waste

Description Maintain an Erosion and Sediment Control Design and Construction Manual.

Measurable Goals A manual will be maintained on all construction and maintenance jobs which require coverage under the Construction Storm Water General Permit. A copy will also be maintained on the Department's website to be used by other personnel, as necessary.

7.3.4 Means for Public Comment on AHTD Construction Activities (BMP 4.4)

BMP Contact NDPES Section-Tracking and validation
State Construction Engineer-Resolution

Target Audience	General public
Target Pollution Sources	Sediment, construction waste
Description	Maintain and publicize a hotline number and website reporting form so citizens can express concerns or ask questions about Department construction or maintenance projects.
Measurable Goals	All communications will be documented and responded to within three business days of receipt. Valid concerns will be relayed to the Construction Division for resolution.

7.3.5 Contractor Erosion and Sediment Control Training (BMP 4.5)

BMP Contact	State Construction Engineer
Target Audience	Department contractors
Target Pollution Sources	Sediment, construction waste
Description	Offer CTTP Erosion and Sediment Control Training to Department contractors.
Measurable Goals	Training will be offered to Department contractors through the “Notices to Contractors” portion of the AHTD website and by mailings to all pre-certified contractors during Years 2 and 4 of the Permit.

7.3.6 Staff Assistance Visits to Department Projects (BMP 4.6)

BMP Contact	NDPES Section
Target Audience	N/A
Target Pollution Sources	Sediment, construction waste
Description	The NPDES Section will visit at least ten projects during each year of the Permit to assist in permit compliance and to identify innovative ideas. Projects which discharge to waters impaired for turbidity will receive special emphasis and a written record of the visits will be provided to the Districts and the Construction Division. At the end of each calendar year, a summary of visit findings will be provided to the Districts and the Construction Division.

Measurable Goals

Visit at least ten projects during each year of the Permit, with a report of results to appropriate managers, and provide an overall assessment to the Districts and the Construction Division at the end of each calendar year.

7.4 Construction Site Storm Water Management Summary and Schedule

A summary of the information regarding Minimum Measure Four including the months and years in which the Department will undertake the required actions is shown below in Table 7.1.

CONSTRUCTION SITE STORM WATER MANAGEMENT
BMPS AND MEASURABLE GOALS
TABLE 7-1

BMP Number/Name	Measurable Goal	Start Date	End Date
4.1 Training Program for Construction Personnel	The Department will provide annual training to eligible construction employees during the term of the Permit.	August 1, 2014	July 31, 2019
4.2 New Standard Features and Methods for Construction BMPs	Research construction BMPs adopted by other state departments of transportation (DOTs) for effectiveness and feasibility. Work to adopt three new BMPs for use on Department projects during the term of the Permit.	August 1, 2014	July 31, 2019
4.3 Erosion and Sediment Control Manual	Maintain a current Erosion and Sediment Control Manual on all projects which require coverage under the Construction Storm Water Permit. The manual will also be posted on the Department's website.	August 1, 2014	July 31, 2019
4.4 Means for Public Comment on AHTD Activities	A public hotline and web site report form will be maintained so citizens may express concerns or ask questions about erosion and sediment control activities on AHTD projects. All communications will be answered within three days of receipt.	August 1, 2014	July 31, 2019
4.5 Contractor Erosion and Sediment Control Training	Erosion and sediment control training course will be offered to contractors through advertisement on the Department website and through mailing to pre-certified contractors during Permit Years 2 and 4.	August 1, 2014	July 31, 2019
4.6 Staff Assistance Visits to AHTD Projects	Members of the Department's NPDES Staff will visit ten projects during each year of the Permit to assist District personnel in overall NPDES program compliance. Special emphasis will be given to projects which discharge to waters impaired by turbidity and to special category waters identified by ADEQ.	August 1, 2014	July 31, 2019

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8 POST-CONSTRUCTION STORM WATER MANAGEMENT

Post-construction storm water management in areas undergoing development or redevelopment is necessary because runoff from these areas has been shown to significantly affect receiving water bodies. Many studies indicate that prior planning and design for the minimization of pollutants in post-construction storm water discharges is the most cost-effective approach to storm water 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 storm water runoff. As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e.g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such as lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans.

The second type of post-construction runoff impact occurs by increasing the quantity of water delivered to the water body during storms. Increased impervious surfaces interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, water is collected from paved surfaces and routed to drainage systems where large volumes of runoff quickly flow to the nearest receiving water. The effects of this process include stream bank scouring and downstream flooding, which often lead to a loss of aquatic life and damage to property.

An effective post-construction runoff control program will minimize water quality impacts and attempt to maintain pre-development runoff conditions.

8.1 Permit Requirements

The Department shall develop, implement, and enforce a program to address storm water 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 or sale, that discharge into a small MS4. The program shall ensure that controls are in place that will prevent or minimize water quality impacts;

The Department shall develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for the community;

The Department shall use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law. The ordinance or other regulatory mechanism shall be at least as stringent as the criteria set forth in the current, at time of issuance of this permit, ADEQ NPDES General Stormwater Permit for Construction Activities

applicable for a permitted area. This would include the statewide NPDES General Stormwater Permit for Construction Activities. Of specific note is that a goal of at least 80% removal of total suspended solids from these flows which exceed predevelopment levels should be used in designing and installing storm water management controls (where practicable). If initially coverage was under a previous version of this permit, then the ordinance or other regulatory mechanism, if needed, shall be revised within two years of when coverage under this general permit was granted; and

The Department shall ensure adequate long-term operation and maintenance of BMPs.

8.2 Rationale Statement

The Department will rely on a combination of non-structural and structural BMPs to implement this minimum measure.

Non-structural BMPs used by the Department include: establishment of permanent vegetation on construction sites; contract special provisions to preserve existing vegetation; maintaining vegetated buffer zones along streams when possible; protection of wetlands during construction; personnel training for post-construction BMP maintenance; and source control measures such as the implementation of maintenance facility pollution prevention plans, litter collection and street sweeping which are implemented through the Pollution Prevention/Good Housekeeping minimum measure.

The Department uses numerous structural BMPs which are selected by design engineers to meet the requirements outlined in the Construction Stormwater Permit. All plans are reviewed and approved by engineering supervisors before the project is let to contract and by Resident Engineers before, during, and after construction. The primary structural BMPs used and their target pollutants are shown below:

BMP	Target Pollutants
Concrete spillways/grouted riprap/other outlet structures	Erosion control, debris
Detention/Retention ponds	Sediment
Grassed swales and channels	Sediment, litter, oil, heavy metals
Vegetated filter strips	Sediment, litter, oil, heavy metals
Rip rapped slopes and channels	Sediment
Inlet grating	Litter
Hard Surface ditches/channels/drains	Sediment
Velocity dissipaters	Erosion control, sediment

After the project is complete, Resident Engineers insure 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 BMPs become 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.

The overall success of this minimum measure will be determined by few problems on Department roadways or facilities which can be attributed to inadequate or improperly maintained permanent storm water BMPs. A formal assessment will be developed during Permit Year 5 by the NPDES Section and presented to the NPDES Standing Committee for their action. For those BMPs with quantifiable goals, success will be measured by actual verses planned accomplishments for the BMP.

8.3 Post-Construction Storm Water Management in New Development and Redevelopment-Implementation Plan

The Department will implement the following BMPs to achieve compliance with the requirements of Minimum Measure Five, Post-Construction Storm Water Management in New Development and Redevelopment.

8.3.1 Post-Construction Features and Methods (BMP 5.1)

BMP Contact	NPDES Section-Research State Construction Engineer-Testing
Target Audience	N/A
Target Pollution Sources	Sediment
Description	The Department will continue to research post-construction BMPs adopted by other state DOTs and government entities for effectiveness and feasibility, and use them as a basis for developing new or updated BMPs.
Measurable Goals	Present possible BMP candidates to the NPDES Standing Committee for consideration and possible testing on Department projects.

8.3.2 BMP Inspection and Maintenance (BMP 5.2)

BMP Contact	District Maintenance Engineer
Target Audience	N/A
Target Pollution Sources	Sediment, floatables

Description	Routine BMP maintenance needs for post-construction BMPs are identified during regular surveys of the roadways by District maintenance personnel.
Measurable Goals	Perform follow-up maintenance to keep BMPs in good working order.

8.3.3 Employee Training (BMP 5.3)

BMP Contact	NPDES Section-Course Development District Maintenance Engineer-Training
Target Audience	Area Maintenance Supervisors
Target Pollution Sources	Sediment, floatables
Description	The Department will provide training on the inspection and maintenance of the MS4 drainage system.
Measurable Goals	Provide training for Area Maintenance Supervisors in Years 2 and 4 of the Permit.

8.3.4 Review Plans for New Facilities (BMP 5.4)

BMP Contact	NPDES Section/Facilities Management
Target Audience	N/A
Target Pollution Sources	Sediment, petroleum products and other chemicals
Description	All plans for new facilities will be reviewed early in the design process for inclusion of permanent BMPs.
Measurable Goals	Review all new facility plans and recommend the incorporation of permanent BMPs when warranted.

8.3.5 Department Facility Permanent BMP Survey (BMP 5.5)

BMP Contact	NPDES Section
Target Audience	N/A
Target Pollution Sources	Sediment, petroleum products, other chemicals.
Description	Members of the NPDES Staff will visit 50 Department maintenance facilities during the term of the Permit, meet

with District maintenance personnel, and conduct a joint survey of the facilities for possible retrofit of permanent BMPs.

Measurable Goals Ten maintenance facilities to be surveyed during each year of the Permit with recommendations provided to the Districts for their consideration.

8.3.6 Post Construction BMP Review (BMP 5.6)

BMP Contact NPDES Section

Target Audience N/A

Target Pollution Sources Sediment, floatables

Description The Department will conduct a review of existing post construction BMPs on two completed projects during each year of the permit to determine if they are still effective in reducing the discharge of pollutants to the maximum extent practicable. The research used in BMP 5.1 will be used as a basis for recommending new or revised BMPs to better fulfill the requirements where necessary. At the end of Permit Year 5, an assessment of post construction BMP effectiveness will be provided to the NPDES Standing Committee.

Measurable Goals A field survey of post-construction BMPs to be conducted on two completed projects during each year of the permit with an overall assessment prepared and presented to the NPDES Standing Committee in Permit Year 5.

8.4 Post-Construction Storm Water Management in New Development and Redevelopment Summary and Schedule

A summary of the information regarding Minimum Measure Five including the months and years in which the Department will undertake the required actions is shown below in Table 8-1.

POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT BMPS AND MEASURABLE GOALS TABLE 8-1

BMP Number/Name	Measurable Goal	Start Date	End Date
5.1 Research and Implement New Post-Construction BMPs	Research post-construction BMPs adopted by other state DOTs and government entities for effectiveness and feasibility, and use them as a basis to develop new or updated BMPs.	August 1, 2014	July 31, 2019
5.2 Maintenance of Permanent BMPs	Maintenance to be performed as needed on permanent storm water management BMPs on Department roadways.	August 1, 2014	July 31, 2019
5.3 Employee Training	Provide maintenance supervisors with training on maintenance of permanent storm water BMPs.	August 1, 2015	July 31, 2018
5.4 Review Plans of New Facilities	The Department will review all new facility plans for possible inclusion of permanent BMPs to treat storm water prior to discharge.	August 1, 2014	July 31, 2019
5.5 Review Existing Facilities	Survey 10 existing facilities during each year of the Permit for possible retrofit of permanent BMPs.	August 1, 2014	July 31, 2019
5.6 Post-Construction BMP Review	The Department will survey post construction BMP effectiveness on 2 projects during each year of the permit. During Permit Year 5, a summary of findings will be presented to the NPDES Standing Committee.	August 1, 2014	July 31, 2019

9 POLLUTION PREVENTION / GOOD HOUSEKEEPING

The Pollution Prevention/Good Housekeeping minimum control measure is a key element of the small MS4 storm water management program. This measure requires the Department to examine current practices and alter its actions to help ensure a reduction in the discharge of pollutants from all Department roadways, storm water drainage systems, and vehicle maintenance and storage areas. This measure will also address pollution that results from actions such as environmentally damaging land development and flood management practices.

While this measure is primarily intended to accomplish the goal of improving or protecting the quality of receiving water, it can also result in a cost savings for the Department, since timely maintenance of drainage systems can help avoid repair costs from damage caused by age or neglect.

9.1 Permit Requirements

The Department will develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations;

Using training materials that are available from EPA, ADEQ, other organizations or developed in-house, the program shall include employee training to prevent and reduce storm water pollution from activities such as open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance;

The Department shall include a list of industrial facilities owned or operated by the MS4 that are subject to ADEQ's Industrial Stormwater General Permit or individual NPDES permits for discharges of storm water associated with industrial activity that ultimately discharge to the MS4. Include the ADEQ permit number or a copy of the Industrial NOI form for each facility. For the municipal facilities that conduct activities described in 40 CFR 122.26(b)(14) that are not required to obtain Industrial Stormwater General Permit coverage a Stormwater Pollution Prevention Plan (SWPPP) shall be developed and implemented within twelve months of coverage being granted under this permit. The SWPPP shall conform to the requirements of ADEQ's Industrial Stormwater General Permit in effect at the time coverage under this permit is granted.

9.2 Rationale Statement

The BMPs selected for this minimum measure include a mix of remediation, training, inspections, and written plans, all intended to complement each other with the goal of reducing the amount of storm water pollution from roadways and maintenance facilities.

The Department emphasizes litter reduction through the Litter Hotline, educational handouts, and anti-littering signs on State roadways under Minimum Measures 1 and 2.

Despite these efforts, littering still occurs. The Department will reduce the potential for this material to enter State waterways through litter collection by Department forces, contractors, and Adopt A Highway volunteers. The goal is to collect 25,000 cubic yards of debris from State roads during each year of the Permit. In addition to the litter collection program, the Department practices street sweeping on an as-needed basis on State roadways within small designated MS4 areas throughout the State. The material collected from all sources is properly disposed of in approved landfills.

The Department NPDES Section delivers annual training in several areas to Area Maintenance Supervisors and other key maintenance employees. The program includes an internally developed *Power Point* presentation on the requirements of the facility pollution prevention plans (PPPs), spill prevention control and countermeasures, the NPDES Pesticide General Permit, and illicit discharge detection and reporting which is tracked under Minimum Measure 3. In addition, several commercial DVDs covering topics relating to this Minimum Measure have been purchased and are used as appropriate during training sessions.

Facility pollution prevention plans have been developed and distributed to all Department maintenance facilities (Appendix A). These plans serve as the master document that each facility uses to implement the requirements of the Permit in such things as maintenance activities, material storage and handling, illicit discharge prevention, and spill prevention/countermeasures. During the term of this Permit, the NPDES section will conduct a staff assistance visit to 50 of the Department's maintenance facilities. During the visits, the staff will work with the supervisors on effective implementation of the PPPs, with an emphasis on documentation. During the visit, a walk-through of the facility will be conducted with the supervisors to find areas for possible improvement and to record innovative ideas which could be used system-wide.

An important part of the program for this minimum measure is a periodic survey of the Department's MS4 drainage system within the Regulated Small MS4 areas. This is an informal practice which is done quarterly by the Area Maintenance Supervisor assigned to each county who regularly drive the State roads within their county to find portions of the MS4 drainage system needing maintenance.

Vegetation management is a concern because indiscriminate use of herbicides or fertilizer can cause a water quality impact. The Department personnel who apply herbicides on the right of way receive training through the University of Arkansas Cooperative Extension Service and are certified by the Arkansas State Plant Board every three years. This is supplemented by annual NPDES Pesticide Permit training provided by the Department's NPDES Section. Fertilizer application is normally limited to construction activities and is done in accordance with the application rates in the Department's Standard Specifications for Highway Construction.

The success of this minimum measure will be determined by few if any reportable spills at Department facilities, successful implementation of facility PPPs, and satisfactory results from staff assistance to the facilities. Although meeting the litter collection goal

is important, over time the hope would be to greatly reduce the amount of litter to be collected through public education and involvement. For those BMPs with quantifiable goals, success will be measured by actual versus planned accomplishments for the BMP.

9.3 Pollution Prevention/Good Housekeeping for Municipal Operations-Implementation Plan

The Department will implement the following BMPs to achieve compliance with the requirements of Minimum Measure Six, Pollution Prevention/Good Housekeeping for Municipal Operations.

9.3.1 Collect and Dispose of Litter from AHTD Right of way (BMP 6.1)

BMP Contact	District Maintenance Engineer
Target Audience	N/A
Target Pollution Sources	Litter
Description	Using Department resources and volunteers, the Department will collect and dispose of litter from State roadways. This will reduce the amount of pollutants entering the State's waters and help to keep the Department's structural storm water systems in good working order. A secondary but important benefit is to keep the roadsides attractive for motorists.
Measurable Goals	Collect and properly dispose of 25,000 cubic yards of litter during each year of the Permit.

9.3.2 Street Sweeping (BMP 6.2)

BMP Contact	District Maintenance Engineer
Target Audience	N/A
Target Pollution Sources	Debris, floatables, organic material
Description	Continue street sweeping within the designated small MS4 areas as required. Sweeping produces a water quality benefit by reducing the amount of materials that can be washed into the storm water drainage system. The frequency of sweeping will depend on traffic, weather and available resources. Collected debris will be

disposed of in accordance with solid waste disposal regulations

Measurable Goals Sweep streets within designated MS4 areas as required.

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9.3.3 Drainage System Surveys (BMP 6.3)

BMP Contact District Maintenance Engineer

Target Audience N/A

Target Pollution Sources Sediment, debris, litter

Description Department maintenance personnel will survey the storm drainage system within small MS4 areas once each quarter and assess the need for repair, cleaning or clearing. This will be done as part of the Area Maintenance Supervisor's normal survey of the highways in their area of responsibility.

Measurable Goals Quarterly check of drainage system to continue within small designated MS4 areas.

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9.3.4 Pollution Prevention Plans (PPPs) Implemented for Department Facilities Statewide (BMP 6.4)

BMP Contact NPDES Section-Development
District Maintenance Engineer-Implementation

Target Audience N/A

Target Pollution Sources Chemicals, sediment, petroleum products

Description PPPs fully implemented and updated as necessary for all eligible Department maintenance facilities throughout the state.

Measurable Goals Implementation of PPPs will continue for all Department maintenance facilities. The plans will be updated as necessary.

9.3.5 Staff Assistance Visits to Department Maintenance Facilities (BMP 6.5)

BMP Contact NPDES Section

Target Audience Area Maintenance Supervisors

Target Pollution Sources Chemicals, sediment, oil and petroleum products.

Description Personnel from the NPDES Section will visit 50 maintenance facilities to provide assistance on PPP compliance and to help area maintenance personnel with any specific problems.

Measurable Goals Visit 10 maintenance facilities each year during the term of the Permit.

9.3.6 Maintenance Employee Training (BMP 6.6)

BMP Contact NPDES Section-Development
District Maintenance Engineer-Training

Target Audience District Maintenance Personnel

Target Pollution Sources Chemicals, sediment, petroleum products, floatables

Description Employee training is an important factor in the reduction of storm water pollution from Department facilities. Annual training will be provided to maintenance employees emphasizing such things as good housekeeping practices, spill prevention and control, waste storage and disposal, and proper documentation. The training will also include illicit discharge training which will be tracked under BMP 3.3 in the Illicit Discharge Detection and Elimination Minimum Measure. Additionally, Illicit Discharge Education Handouts will be provided to attendees and tracked as part of BMP 1.1, Storm Water Educational Material, in the Public Education and Outreach minimum measure.

Measurable Goals Provide annual training to at least 90% of eligible maintenance employees.

9.3.7 Vegetation Management (BMP 6.7)

BMP Contact State Maintenance Engineer

Target Audience District maintenance personnel

Target Pollution Sources Herbicides, fertilizers

Description Department vegetation management practices on its roadways include limited use of herbicides in areas where

mowing is physically impossible or dangerous and the application of fertilizers on new construction or maintenance areas to help establish vegetation. The Department strives to limit the amount of herbicides applied to the minimum necessary to do the job because over-application of these chemicals is both a needless expense and harmful to the environment. Personnel whose job includes the application of herbicides will receive training through the U. of A. Cooperative Extension Service and be re-certified every three years. Fertilizer is applied on the right of way according to the rates established in the AHTD Standard Specifications for Highway Construction. During annual training, personnel will receive refresher training to help them comply with the NPDES Pesticide General Permit.

Measurable Goals

Require Cooperative Extension Service training and certification for herbicide applicators every three years.

Provide annual refresher training for maintenance employees on the requirements of the NPDES Pesticide General Permit.

9.3.8 Litter Tracking System (BMP 6.8)

BMP Contact State Maintenance Engineer

Target Audience N/A

Target Pollution Sources Litter

Description The Department will maintain a record of litter collected using the Maintenance Management System.

Measurable Goals Maintain a record of litter collected on the Department right of way by both Department forces and volunteers, Statewide.

9.4 Pollution Prevention/Good Housekeeping for Municipal Operations Summary and Schedule

A summary of the information regarding Minimum Measure Six including the months and years in which the Department will undertake the required actions is shown below in Table 9-1.

POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS BMPS AND MEASURABLE GOALS
TABLE 9-1

BMP Number/Name	Measurable Goal	Start Date	End Date
6.1 Collect and Dispose of Litter from Right of way	Collect and properly dispose of 25,000 cubic yards of litter from roadsides statewide each year.	August 1, 2014	July 31, 2019
6.2 Street Sweeping	Within the designated Small MS4 areas, continue street-sweeping on state highway routes as needed. Collected material will be disposed of in accordance with current regulations.	August 1, 2014	July 31, 2019
6.3 Drainage System Surveys	The Department's drainage system within the designated Small MS4 areas will be checked quarterly for required maintenance.	August 1, 2014	July 31, 2019
6.4 Pollution Prevention Plans for Department Facilities	Continue to implement pollution prevention plans at all Department maintenance facilities statewide.	August 1, 2014	July 31, 2019
6.5 Staff Assistance Visits to Maintenance Facilities	The NPDES Staff will make Staff Assistance Visits to 50 maintenance facilities during the term of the Permit.	August 1, 2014	July 31, 2019
6.6 Employee Training	Offer annual training for maintenance employees.	August 1, 2014	July 31, 2019
6.7 Vegetation Management	Continue Cooperative Extension Service training and certification program for herbicide applicators. Offer annual training on NPDES Pesticide General Permit requirements to maintenance employees.	August 1, 2014	July 31, 2019
6.8 Litter Tracking System	Maintain tracking system for litter removed from AHTD ROW, statewide	August 1, 2014	July 31, 2019

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10 MONITORING AND REPORTING

10.1 Compliance Monitoring and Evaluation

This section of the SWMP describes how the Department will comply with Permit requirements regarding monitoring and reporting. The Department's overall strategy for maintaining compliance with the Permit and the storm water management program is a process of continuous improvement and refinement. The compliance monitoring and evaluation program will serve as a quality control mechanism to help the Department determine how well the activities called for in this SWMP are being implemented. It will be an iterative process; a continuous loop of gathering information, evaluating and learning from the information and making changes with a goal of steady improvement over the life of the Permit.

As part of its storm water management program, the Department will regularly review its activities, inspect its facilities, train and guide its personnel, and assess the effectiveness of storm water BMPs to better utilize the resources available to implement storm water management activities. The objective will be to direct available resources to support those storm water management practices that have the greatest likelihood of being effective.

The Department will conduct a review of the storm water management program annually. This review will be done in conjunction with the preparation of the annual report so any proposed modifications to the SWMP can be included in the report for ADEQ review and approval as required by the Permit.

10.2 Reporting

The Permit requires the Department to submit annual reports to ADEQ during the life of the Permit. The first report will be due June 1, 2015, covering activities during the period of August 1, 2014, through May 31, 2015. Subsequent reports will be due on June 1st of each year for the term of the Permit (and continuing into any administrative continuance of the Permit, should it not be reissued prior to expiration). The reports will be available on the Department website. The report will be used by the Department and ADEQ to evaluate program compliance and will include, as a minimum:

a. The status of compliance with Permit conditions, assessment of the selected BMPs for appropriateness, and the progress toward achieving measurable goals.
b. The results of any monitoring data or other information collected and analyzed to assess the success of the program.
c. A summary and schedule of the storm water activities the Department plans to undertake during the next reporting cycle.
d. Any proposed changes to the SWMP.

e. Description and schedule for implementation of additional BMPs that may be necessary, based on monitoring results, to ensure compliance with applicable TMDLs and implementation plans.
f. Notice that the Department is relying on other government entities to satisfy any permit obligations, if applicable.

The reports will be submitted using an approved ADEQ reporting form.

Appendix A: Department Statewide Facility List, by District

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DISTRICT ONE FACILITIES Table A-1		
FACILITY NAME	CITY	COUNTY
Crittenden County #1 Area Headquarters & RE Office #14	West Memphis	Crittenden
Crittenden County #2 Area Headquarters	Lehi	Crittenden
Cross County Area Headquarters and RE Office #13	Wynne	Cross
District 1 Headquarters	Wynne	Cross
**Forrest City Rest Area-Eastbound	Palestine	St. Francis
**Forrest City Rest Area-Westbound	Forrest City	St. Francis
****** Helena Welcome Center	Helena	Phillips
Lee County Area Headquarters	Marianna	Lee
**Lehi Weigh Station (I-40 East and Westbound)	Lehi	Crittenden
****** Marion Weigh Station (I-55 Southbound)	Marion	Crittenden
Monroe County Area Headquarters	Brinkley	Monroe
Phillips County Area Headquarters	Walnut Corner	Phillips
** Radio Tower-Storm Creek	West Helena	Phillips
** Radio Tower-Wynne	Wynne	Cross
**RE Office #11	West Helena	Phillips
St. Francis County Area Headquarters	Forrest City	St. Francis
** West Memphis Welcome Center	West Memphis	Crittenden
** West Memphis Weigh Station (I-40 Westbound)	West Memphis	Crittenden
** West Memphis Weigh Station (I-55 Northbound)	West Memphis	Crittenden
Woodruff County Area Headquarters	McCrory	Woodruff
**I-40 & I-55 Park & Ride Lot	West Memphis	Crittenden

Notes:

1. Shaded names identify facilities that lie within a Regulated Small MS4 Area.
2. Double asterisks identify facilities that, because of their function, do not require the preparation of a facility SWPPP.

DISTRICT TWO FACILITIES Table A-2		
FACILITY NAME	CITY	COUNTY
Arkansas County #1 Area Headquarters	Stuttgart	Arkansas
Arkansas County #2 Area Headquarters	DeWitt	Arkansas
Ashley County Area Headquarters	Hamburg	Ashley
Chicot County Area Headquarters	Lake Village	Chicot
** Dermott Rest Area	Dermott	Chicot
Desha County Area Headquarters and RE Office #24	McGehee	Desha
District 2 Headquarters and RE Office #23	Pine Bluff	Jefferson
Drew County Area Headquarters and RE Office #21	Monticello	Drew
Grant County Area Headquarters	Sheridan	Grant
Jefferson County Area Headquarters	Pine Bluff	Jefferson
** Lake Village Welcome Center	Lake Village	Chicot
Lincoln County Area Headquarters	Star City	Lincoln
** Radio Tower-Fountain Hill	Fountain Hill	Ashley
** Radio Tower-Preston Ferry	Preston Ferry	Arkansas
** Radio Tower-Redfield	Redfield	Jefferson
** Radio Tower-Star City	Star City	Lincoln
**Jct. I-530 & St. Hwy. 270 (Exit 34) Park & Ride Lot	White Hall	Jefferson

Notes:

1. Shaded names identify facilities that lie within a Regulated Small MS4 Area.
2. Double asterisks identify facilities that, because of their function, do not require the preparation of a facility SWPPP.

DISTRICT THREE FACILITIES Table A-3		
FACILITY NAME	CITY	COUNTY
District 3 Headquarters and RE Office #32	Hope	Hempstead
** Glenwood Rest Area	Glenwood	Pike
** Guernsey Weigh Station (I-30 East and Westbound)	Hope	Hempstead
Hempstead County Area Headquarters	Hope	Hempstead
Howard County Area Headquarters and RE Office #31	Nashville	Howard
Lafayette County Area Headquarters	Lewisville	Lafayette
Little River County Area Headquarters	Ashdown	Little River
Miller County Area Headquarters and RE Office #34	Texarkana	Miller
Nevada County Area Headquarters	Prescott	Nevada
Pike County Area Headquarters	Murfreesboro	Pike
** Radio Tower-Hope	Hope	Hempstead
** Radio Tower-Texarkana	Texarkana	Miller
** Red River Welcome Center	Ashdown	Miller
** Red River Weigh Station (Highway 71 North and Southbound)	Ashdown	Little River
Sevier County Area Headquarters	DeQueen	Sevier
** Texarkana Welcome Center	Texarkana	Miller
**1.5 Miles North of Fouke on U.S. 71 Park & Ride Lot	Fouke	Miller

Notes:

1. Shaded names identify facilities that lie within a Regulated Small MS4 Area.
2. Double asterisks identify facilities that, because of their function, do not require the preparation of a facility SWPPP.

DISTRICT FOUR FACILITIES Table A-4		
FACILITY NAME	CITY	COUNTY
** Alma Weigh Station (I-40 East and Westbound)	Alma	Crawford
Crawford County #1 Area Headquarters	Alma	Crawford
Crawford County #2 Area Headquarters	Mountainburg	Crawford
District 4 Headquarters	Alma	Sebastian
Franklin County Area Headquarters	Ozark	Franklin
Logan County Area Headquarters	Paris	Logan
** Ozark Rest Area (I-40 Eastbound)	Ozark	Franklin
** Ozark Rest Area (I-40 Westbound)	Ozark	Franklin
Polk County Area Headquarters	Mena	Polk
** Radio Tower-Bunyard-Bobby Hopper Tunnel	Winslow	Washington
** Radio Tower-Mt. Magazine	Mt. Magazine State Park	Logan
** Radio Tower-Ouachita National Forest		Polk
** Radio Tower-Winslow	Sunset	Washington
**RE Office #42	Van Buren	Crawford
Scott County Area Headquarters and RE Office #41	Waldron	Scott
Sebastian County #1 Area Headquarters	Greenwood	Sebastian
Sebastian County #2 Area Headquarters	Barling	Sebastian
** Springdale Weigh Station (I-540 Northbound)	Springdale	Washington
** Springdale Weigh Station (I-540 Southbound)	Springdale	Washington
** Van Buren Welcome Center	Van Buren	Crawford
** Waldron Rest Area	Waldron	Scott
Washington County #1 Area Headquarters	Lincoln	Washington
Washington County #2 Area Headquarters and RE Office #43	Fayetteville	Washington
**Jct. St Hwy 23 & I-40 (Exit 35) Park & Ride Lot	Ozark	Franklin
**South of Jct I-40 & St Hwy. 219 on 219 (Exit 37) Park & Ride Lot	Ozark	Franklin
**U.S. 71 & Hwy. 10 Spur Park & Ride Lot	Greenwood	Sebastian

Notes:

1. Shaded names identify facilities that lie within a Regulated Small MS4 Area.
2. Double asterisks identify facilities that, because of their function, do not require the preparation of a facility SWPPP.

DISTRICT FIVE FACILITIES Table A-5		
FACILITY NAME	CITY	COUNTY
Cleburne County Area Headquarters	Heber Springs	Cleburne
District 5 Headquarters, Independence County Area Headquarters, and RE Offices #52 and 53	Batesville	Independence
Fulton County Area Headquarters	Salem	Fulton
Izard County Area Headquarters	Melbourne	Izard
Jackson County Area Headquarters	Newport	Jackson
** Radio Tower-Almond	Almond	Cleburne
** Radio Tower-Ash Flat	Ash Flat	Fulton
** Radio Tower-Drasco	Drasco	Cleburne
** Radio Tower-Oakland	Bradford	Jackson
** Salado Creek Rest Area	Pleasant	Independence
Sharp County Area Headquarters	Hardy	Sharp
Stone County Area Headquarters	Mountain	Stone
White County #1 Area Headquarters and RE Office #55	Searcy	White
White County #2 Area Headquarters	Bald Knob	White
**Jct. St Hwy. 9 and St Hwy. 56 Park & Ride Lot	Brockwell	Izard

Notes:

1. Shaded names identify facilities that lie within a Regulated Small MS4 Area.
2. Double asterisks identify facilities that, because of their function, do not require the preparation of a facility SWPPP.

DISTRICT SIX FACILITIES Table A-6		
FACILITY NAME	CITY	COUNTY
*Central Complex, District 6 Headquarters, Pulaski County #3 Area Headquarters, & RE Office # 65 Headquarters	Little Rock	Pulaski
*Central Shop, Maintenance Headquarters, and Materials Lab Annex	Little Rock	Pulaski
Garland County Area Headquarters and RE Office #64	Hot Springs	Garland
Hot Springs County Area Headquarters	Malvern	Hot
Lonoke County Area Headquarters	Lonoke	Lonoke
** Lonsdale Rest Area	Lonsdale	Garland
Prairie County Area Headquarters	Hazen	Prairie
Pulaski County #1 Area Headquarters and RE Office #61	North Little Rock	Pulaski
Pulaski County #2 Area Headquarters and RE Office #62	Little Rock	Pulaski
** Radio Tower-Carlisle	Carlisle	Lonoke
** Radio Tower-Ouachita National Forest		Garland
** Radio Tower-Rolla	Rolla	Hot Spring
** Radio Tower-Shinall (KARK & KTHV TV)	Little Rock	Pulaski
Saline County Area Headquarters	Benton	Pulaski
** Social Hill Rest Area	Social Hill	Hot Spring
** White River Rest Area	DeValls Bluff	Prairie
**U.S. 67 & St. Hwy 89 (Exit 19) Park & Ride Lot	Austin	Lonoke
**I-30 & Mabelvale West (Exit 128) Park & Ride Lot	Little Rock	Pulaski
**I-430 & I-630 Park & Ride Lot	Little Rock	Pulaski
**I-630 & University Street Park & Ride Lot	Little Rock	Pulaski
**I-530 & St. Hwy 338 (Exit 3) Park & Ride Lot	Little Rock	Pulaski
**I-40 & Crystal Hill Rd. Park & Ride Lot	North Little Rock	Pulaski
**I-40 & St Hwy. 161 Park & Ride Lot	North Little Rock	Pulaski
**I-30 & St. Hwy 183 (Exit 123) Park & Ride Lot	Bryant	Saline
**I-30 & Alcoa Rd. Park & Ride Lot	Benton	Saline

Notes:

1. Shaded names identify facilities that lie within a Regulated Small MS4 Area.
2. Double asterisks identify facilities that, because of their function, do not require the preparation of a facility SWPPP.
3. A single asterisk identifies Department facilities which are located within the City of Little Rock MS4 area and which are covered under NPDES Permit ARS000002.

DISTRICT SEVEN FACILITIES Table A-7		
FACILITY NAME	CITY	COUNTY
Bradley County Area Headquarters	Warren	Bradley
** Buena Vista Rest Area	Buena Vista	Ouachita
Calhoun County Area Headquarters	Hampton	Calhoun
Clark County Area Headquarters and RE Sub-Office #73	Arkadelphia	Clark
Cleveland County Area Headquarters	Rison	Cleveland
Columbia County Area Headquarters	Magnolia	Columbia
Dallas County Area Headquarters	Fordyce	Dallas
District 7 Headquarters and RE Office #74	Camden	Ouachita
** El Dorado Welcome Center	El Dorado	Union
**Gurdon Rest Area (I-30 Eastbound)	Gurdon	Clark
**Gurdon Rest Area (I-30 Westbound)	Gurdon	Clark
Ouachita County Area Headquarters	Camden	Ouachita
** Radio Tower-Banks	Banks	Bradley
** Radio Tower-Camden	Camden	Ouachita
** Radio Tower-El Dorado	Parkers Chapel	Union
** Radio Tower-Okolona	Okolona	Clark
** Radio Tower-Ramsey	Ramsey	Dallas
** Radio Tower-Waldo	Waldo	Columbia
**RE Office #73	Camden	Ouachita
** Rison Rest Area	Rison	Cleveland
Union County Area Headquarters and RE Office #76	El Dorado	Union

Notes:

1. Shaded names identify facilities that lie within a Regulated Small MS4 Area.
2. Double asterisks identify facilities that, because of their function, do not require the preparation of a facility SWPPP.

DISTRICT EIGHT FACILITIES Table A-8		
FACILITY NAME	CITY	COUNTY
** Big Piney Rest Area (I-40 Eastbound)	Russellville	Johnson
** Big Piney Rest Area (I-40 Westbound)	Russellville	Pope
Conway County Area Headquarters	Morrilton	Conway
District 8 Headquarters and RE Office #86	Russellville	Pope
Faulkner County Area Headquarters and RE Office #84	Conway	Faulkner
Johnson County Area Headquarters and RE Office #82	Clarksville	Johnson
Montgomery County Area Headquarters	Pencil Bluff	Montgomery
Perry County Area Headquarters	Perryville	Perry
Pope County Area Headquarters	Russellville	Pope
** Radio Tower-Buffalo	Guy	Faulkner
** Radio Tower-Conway	Conway	Faulkner
** Radio Tower-Mt. Nebo	Mt. Nebo State Park	Yell
** Radio Tower-Peterman	Hector	Pope
Van Buren County Area Headquarters	Clinton	Van Buren
Yell County Area Headquarters	Danville	Yell
**I-40 & St Hwy. 92 in Plummerville (Exit 112) Park & Ride Lot	Plummerville	Conway
**I-40 & St Hwy. 89 in Mayflower (Exit 135) Park & Ride Lot	Mayflower	Faulkner
**I-40 & St Hwy 60 (Exit 129) Park & Ride Lot	Conway	Faulkner

Notes:

1. Shaded names identify facilities that lie within a Regulated Small MS4 Area.
2. Double asterisks identify facilities that, because of their function, do not require the preparation of a facility SWPPP.

DISTRICT NINE FACILITIES Table A-9		
FACILITY NAME	CITY	COUNTY
Baxter County Area Headquarters	Mountain Home	Baxter
** Bella Vista Welcome Center	Bella Vista	Benton
Benton County #1 Area Headquarters	Garfield	Benton
Benton County #2 Area Headquarters	Gentry	Benton
Boone County Area Headquarters	Harrison	Boone
Carroll County Area Headquarters	Berryville	Carroll
District 9 Headquarters and RE Office #92	Harrison	Boone
** Harrison Welcome Center	Harrison	Boone
Madison County Area Headquarters	Huntsville	Madison
Marion County Area Headquarters and RE Office #95	Yellville	Marion
Newton County Area Headquarters	Jasper	Newton
Peel Ferry Maintenance Building	Peel	Marion
** Radio Tower-Gaither	Gaither	Boone
** Radio Tower-Henderson Ferry	Henderson	Baxter
** Radio Tower-Hindsville	Hindsville	Madison
** Radio Tower-Marshall	Marshall	Searcy
** Radio Tower-RE Office #94	Bentonville	Benton
**RE Office #94	Bentonville	Benton
Searcy County Area Headquarters	Marshall	Searcy
** Siloam Springs Welcome Center	Siloam Springs	Benton

Notes:

1. Shaded names identify facilities that lie within a Regulated Small MS4 Area.
2. Double asterisks identify facilities that, because of their function, do not require the preparation of a facility SWPPP.

DISTRICT TEN FACILITIES Table A-10		
FACILITY NAME	CITY	COUNTY
** Bardstown Rest Area (I-55 Southbound)	Bardstown	Mississippi
** Blytheville Welcome Center	Blytheville	Mississippi
Clay County Area Headquarters	Corning	Clay
** Corning Welcome Center	Corning	Clay
Craighead County Area Headquarters and RE Office #06	Jonesboro	Craighead
District 10 Headquarters and RE Office #04	Paragould	Greene
Greene County Area Headquarters	Paragould	Greene
** Hilton Rest Area (I-55 Northbound)	Osceola	Mississippi
** Imboden/Black Rock Rest Area	Black Rock	Lawrence
Lawrence County Area Headquarters	Walnut Ridge	Lawrence
Mississippi County #2 Area Headquarters	Osceloa	Mississippi
Poinsett County Area Headquarters	Marked Tree	Poinsett
** Radio Tower-Harrisburg	Harrisburg	Poinsett
** Radio Tower-Paragould	Paragould	Greene
** Radio Tower-Osceola	Osceola	Mississippi
** Radio Tower-Ravenden	Ravenden Springs	Randolph
Randolph County Area Headquarters	Pocahontas	Randolph
**RE Office #05	Osceola	Mississippi

Notes:

1. Shaded names identify facilities that lie within a Regulated Small MS4 Area.
2. Double asterisks identify facilities that, because of their function, do not require the preparation of a facility SWPPP.

Appendix B: Highway Mileage Within Phase II Regulated Small MS4 Areas

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AHTD Highway System
Miles Within Phase II Regulated Small MS4 Areas (2010 Census)
Table B-1

Regulated MS4 Area	Regulated Interstates (Miles)	Regulated US Routes (Miles)	Regulated State Routes (Miles)	Total Miles
Conway Designated Area	25.54	23.98	36.7	86.22
Fayetteville Urbanized Area	33.92	124.64	180.74	339.3
Fort Smith Urbanized Area	38.42	74.84	61	174.26
Hot Springs Urbanized Area	0	66.06	43.26	109.32
Jonesboro Urbanized Area	0	43.32	61.68	105
Little Rock Urbanized Area *	82.68	76.22	268.64	427.54
Pine Bluff Urbanized Area	14.06	41.06	35.76	91.52
Texarkana Urbanized Area	33.56	30.38	34.92	98.86
West Memphis Urbanized Area	27.84	14.48	22.10	64.42
Totals	256.02	494.98	744.8	1495.8

Notes:

The mileage within each MS4 area was computed using *GeoMedia* software. For mapping purposes, each side of a divided highway is considered to be a discrete section of roadway.
Any changes found during storm water outfall mapping will be noted and this Appendix will be updated after the mapping is concluded. The access roads will be mapped as part of the drainage system but since these roadways sometimes change ownership they were not included in the data shown.

For sections of highway that are under construction when the MS4 area is mapped, the location is recorded and tracked for mapping when the construction is complete

*The mileage shown for the Little Rock urbanized area does not include those miles of highway that fall within the City of Little Rock, which are covered under NPDES Permit ARS000002.

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Appendix C: Sources of Information Used In AHTD Storm Water Management

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Sources of Information Used in AHTD Storm Water Management

AHTD *Standard Specifications for Highway Construction, Edition of 2014*

AHTD *2009 Erosion and Sediment Control Design and Construction Manual*

AHTD *Statewide Storm Water Management Program, August 2014,* NPDES Permit ARR00004

AHTD Website

AHTD Illicit Discharge Detection and Reporting Protocol

Arkansas Pollution Control and Ecology Commission Regulation 2; Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas as revised, effective November 25, 2007.

EPA Spill Prevention, Control and Countermeasures (SPCC) Regulation, February 2003

Individual AHTD Facility Storm Water Pollution Prevention Plans

NPDES General Construction Storm Water Permit ARR150000, November 2011

NPDES General Permit ARR040000; Regulated Small Municipal Separate Storm Sewer Systems (MS4s) Located within the State of Arkansas, August 2014

NPDES Pesticide General Permit, ARG870000, April 1, 2013

Storm Water Quality Management Program, June, 2006, NPDES Permit ARS000002

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Appendix D: Storm Water Management Program Table of Organization and District Contact Information

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AHTD Storm Water Management Program Table of Organization Table D-1			
BMP No.	**BMP Description**	**BMP Point of Contact**	**Contact Number**
	Minimum Measure 1 Public Education and Outreach		
1.1	Storm water educational handouts	NPDES Section	(501) 569-2230/ 2553
1.2	Stormwater information on AHTD website	NPDES Section	(501) 569-2230/ 2553
1.3	AHTD public storm water hotline	NPDES Section	(501) 569-2230/ 2553
1.4	Spanish storm water educational material	NPDES Section	(501) 569-2230/ 2553
1.5	Storm drain marking at Welcome Centers and Rest Areas	NPDES Section	(501) 569-2230/ 2553
1.6	Department Newsletter	NPDES Section	(501) 569-2230/ 2553
	Minimum Measure 2 Public Involvement/Participation		
2.1	Public notice of Storm Water Management Program (SWMP)	NPDES Section	(501) 569-2230/ 2553
2.2	Involvement with other entities	NPDES Section	(501) 569-2230/ 2553
2.3	Maintain Storm Water Management Program on website	NPDES Section	(501) 569-2230/ 2553
2.4	Adopt A Highway Program	District Engineers	See District Contact List
2.5	Litter Hotline	Arkansas Highway Police	(501) 569-2681
2.6	NPDES Standing Committee	Committee Chair-Environmental Division	(501) 569-2285
2.7	Pre-construction meeting with contractors	District Construction Engineer	See District Contact List
	Minimum Measure 3 Illicit Discharge Detection and Elimination		
3.1	Storm Sewer System Outfall Collection and Mapping	NPDES Section	(501) 569-2230/ 2553
3.2	MS4 dry weather field screening	NPDES Section	(501) 569-2230/ 2553
3.3	Maintenance employee training	District Maintenance Engineer	See District Contact List
3.4	Hotline and website reporting for public	NPDES Section	(501) 569-2230/ 2553
3.5	Maintenance facility staff assistance visits	NPDES Section	(501) 569-2230/ 2553
3.6	Field Test Equipment Purchase	NPDES Section	(501) 569-2230/ 2553

AHTD Storm Water Management Program Table of Organization Table D-1			
BMP No.	**BMP Description**	**BMP Point of Contact**	**Contact Number**
	Minimum Measure 4 Construction Site Storm Water Runoff Control		
4.1	Erosion and sediment control training and certification program	Assistant Chief Engineer-Operations	(501) 569-2221
4.2	New standard features and methods for construction BMPs	NPDES Section/State Construction Engineer	(501) 569-2230/ (501) 569-2251
4.3	Erosion and Sediment Control Manual	State Construction Engineer	(501) 569-2251
4.4	Method for public comments on AHTD activities	NPDES Section	(501) 569-2230/ 2553
4.5	Contractors erosion and sediment control training	State Construction Engineer	(501) 569-2251
4.6	Staff assistance visits to AHTD construction sites	NPDES Section	(501) 569-2230/ 2553
	Minimum Measure 5 Post Construction Storm Water Management in New Development and Redevelopment		
5.1	Research and implement new post-construction BMPs as needed	NPDES Section/State Construction Engineer	(501) 569-2230/ (501) 569-2251
5.2	Maintenance of Permanent BMPs	District Maintenance Engineers	See District Contact List
5.3	Employee training	NPDES Section/District Maintenance Engineers	(501) 569-2230/ See District Contact List
5.4	Review plans of new facilities	NPDES Section	(501) 569-2230/ 2553
5.5	Review existing facilities	NPDES Section	(501) 569-2230/ 2553
5.6	Post construction BMP review	NPDES Section	(501) 569-2230/ 2553

AHTD Storm Water Management Program Table of Organization Table D-1			
BMP No.	**BMP Description**	**BMP Point of Contact**	**Contact Number**
	Minimum Measure 6 Pollution Prevention/Good Housekeeping for Municipal Operations		
6.1	Collect and dispose of litter from right of way	District Maintenance Engineer	See District Contact List
6.2	Street sweeping	District Maintenance Engineer	See District Contact List
6.3	Drainage system surveys	District Maintenance Engineer	See District Contact List
6.4	Pollution prevention plans for Department facilities	NPDES Section/District Maintenance Engineer	(501) 569-2230/ See District Contact List
6.5	Staff assistance visits to maintenance facilities	NPDES Section	(501) 569-2230/ 2553
6.6	Maintenance employee training	NPDES Section/District Maintenance Engineers	(501) 569-2230/ See District Contact List
6.7	Vegetation management	State Maintenance Engineer	(501) 569-2233
6.8	Litter Tracking	State Maintenance Engineer	(501) 569-2233

District Contact Information

District 1

2701 Highway 64, P.O. Box 278, Wynne, Arkansas 72396-0278
Telephone: (870) 238-8144 Fax: (870) 238-2994
Counties: Crittenden, Cross, Lee, Monroe, Phillips, St. Francis and Woodruff

District 2

4900 Highway 65 South, P.O. Box 6836, Pine Bluff, Arkansas 71611-6836
Telephone: (870) 534-1612 Fax: (870) 534-2038
Counties: Arkansas, Ashley, Chicot, Desha, Drew, Grant, Jefferson and Lincoln

District 3

2911 Highway 29 North, P.O. Box 490, Hope, Arkansas 71802-0490
Telephone: (870) 777-3457 Fax: (870) 777-3489
Counties: Hempstead, Howard, Lafayette, Little River, Miller, Nevada, Pike and Sevier

District 4

808 Frontier Road, P.O. Box 11170, Barling, Arkansas 72917-1170
Telephone: (479) 484-5306 Fax: (479) 484-5300
Counties: Crawford, Franklin, Logan, Polk, Scott, Sebastian and Washington

District 5

1673 Batesville Boulevard, P.O. Box 2376, Batesville, Arkansas 72503-2376
Telephone: (870) 251-2374 Fax: (870) 251-2393
Counties: Cleburne, Fulton, Independence, Izard, Jackson, Sharp, Stone and White

District 6

8900 Mabelvale Pike, P.O. Box 190296, Little Rock, Arkansas 72219-0296
Telephone: (501) 569-2266 Fax: (501) 569-2366
Counties: Garland, Hot Spring, Lonoke, Prairie, Pulaski and Saline

District 7

2245 California Avenue, P.O. Box 897, Camden, Arkansas 71711-0897
Telephone: (870) 836-6401 Fax: (870) 836-4864
Counties: Bradley, Calhoun, Clark, Cleveland, Columbia, Dallas, Ouachita and Union

District Contact Information

District 8

372 Aspen Lane, P.O. Box 70, Russellville, Arkansas 72811-0070
Telephone: (479) 968-2286 Fax: (479) 968-4006
Counties: Conway, Faulkner, Johnson, Montgomery, Perry, Pope, Van Buren and Yell

District 9

4590 Highway 65, P.O. Box 610, Harrison, Arkansas 72602-0610
Telephone: (870) 743-2100 Fax: (870) 743-4630
Counties: Baxter, Benton, Boone, Carroll, Madison, Marion, Newton and Searcy

District 10

2510 Highway 412 West, P.O. Box 98, Paragould, Arkansas 72451-0098
Telephone: (870) 239-9511 Fax: (870) 236-1156
Counties: Clay, Craighead, Greene, Lawrence, Mississippi, Poinsett and Randolph

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