

# **City of Pine Bluff**

## **Storm Water Management Plan**



**Permit No. ARR 040042**

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# City of Pine Bluff

## Storm Water Management Plan

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## **I. Introduction**

The Stormwater Phase II Final Rule was promulgated by the EPA and became effective in 1999.

## **II. Program Summary**

Polluted stormwater runoff often finds its way into the storm drain system. These drainage systems, known as Metropolitan Separate Storm Sewer Systems (MS4s), drain into the local rivers and streams without any treatment. The Phase II Rule established an MS4 storm water management plan that seeks to improve the water quality in the nation's waterways by reducing the amount of polluted runoff that enters the system, thereby entering the local waterways. Water picks up pollutants such as motor oil and grease, erosion sediment from construction sites, improperly disposed trash, lawn pesticides and fertilizers and even cigarette butts as it moves across the surface of the land making its way to the storm drain inlet or drainage ditch. Once this accumulated material makes its way to the local waterways, it has the ability to degrade the waterways, thereby reducing the ecological and esthetic quality of the water. This may ultimately reduce the waterway's value as a recreational resource or as a source of potential drinking water.

## **III. Phase II Program Requirements**

Operators of regulated small MS4s must:

- Apply for National Pollutant Discharge Elimination System (NPDES) permit coverage under general permit number ARR040000.
- Develop a Storm Water Management Program (SWMP) which includes the six (6) minimum control measures.
- Implement the SWMP using appropriate storm water management controls, or "best management practices" (a.k.a. BMPs).
- Develop measureable goals for the program.
- Periodically evaluate effectiveness of the program.

This SWMP seeks to improve the quality of storm runoff before it enters the storm drain system, and thus, the local waterways. The City of Pine Bluff recognizes the need to improve water quality as required by the Phase II Rule. However, due to limited financial resources and budget constraints, Pine Bluff may at times not be able to fully meet all annual goals outlined in this SWMP due to unforeseen economic conditions and budget constraints from other City departments.

## **IV. The Six Minimum Control Measures**

The Phase II Rule outlines a small MS4 storm water management program which contains six (6) required elements which, when executed together, should significantly reduce the amounts of

pollutants which ultimately enter the area waterways. These six (6) elements are described as follows:

**1. Public Education & Outreach**

Distribute educational materials and perform outreach activities to inform citizens about the negative impacts of polluted storm water on area waterway quality.

**2. Public Participation/Involvement**

Provide opportunities for citizens to participate in program development and implementation, including providing effective notice of public hearing and/or encouraging citizen representatives on a stormwater management panel.

**3. Illicit Discharge Detection & Elimination**

Develop and implement a plan to detect and eliminate illicit discharges to the storm sewer system (includes development of a system map and informing the community about hazards associated with illegal discharges and improper disposal of waste).

**4. Construction Site Runoff Control**

Develop, implement and enforce an erosion and sediment control program for construction activities that disturb one or more acres of land (controls could include, e.g., silt fences and temporary storm water detention ponds).

**5. Post-Construction Runoff Control**

Develop, implement and enforce a program to address discharges of post-construction storm water runoff from new development and redevelopment areas. Applicable controls could include preventative actions such as protecting sensitive areas (e.g. wetlands) or the use of structural BMPs such as grassed swales or porous pavement.

**6. Pollution Prevention/Good Housekeeping**

Develop and implement a program with the goal of preventing or reducing pollutant runoff from municipal operations. The program must include municipal staff training on pollution prevention measures and techniques (e.g. regular street sweeping, reduction in the use of pesticides or street salt, or frequent catch basin cleaning).

## **Minimum Control Measures**

### **No. 1: Public Education and Outreach**

#### **BMP's to address Public Education and Outreach in Pine Bluff**

A. **Storm Water Education Material** – The UA Cooperative Extension Service, with assistance from the City of Pine Bluff, will prepare and distribute storm water information to the general public, public and private schools, and other groups to inform them of storm water issues.

B. **Regional Public Education Program** – The City of Pine Bluff will actively participate in maintaining a regional public education and outreach program involving Pine Bluff, White Hall, and Jefferson County in a cooperative manner through a contract with the UA Cooperative Extension Service to develop and implement the program. The methods may include fact sheets, brochures, posters, displays, press releases, PSAs, and/or website postings as appropriate.

This effort will also educate the public on pollution prevention activities such as proper use and storage of fertilizers; proper use and storage of pesticides; pet waste management; disposal of household hazardous waste; managing yard debris and composting; water conservation; litter prevention; and many others as well provide training to reduce pollution to construction personnel.

C. **Storm Water Education Programs** – The UA Cooperative Extension Service, with assistance from the City of Pine Bluff, will develop and present education programs for elementary schools and other targeted groups within the city, such as local area service organizations like the Kiwanis Club of Pine Bluff.

D. **Business and Industry Program** – The UA Cooperative Extension Service, with assistance from the City of Pine Bluff, will prepare and distribute Best Management Practice (BMP) materials and other informational brochures and fact sheets that business and industry can use to better manage their own storm water-related issues and design plans to implement to reduce pollution into the storm water system.

E. **Inter-Agency Outreach Coordination** – The UA Cooperative Extension Service facilitates an Urban Storm Water Steering Committee. This committee meets regularly at the UA Cooperative Extension Service offices to discuss ongoing efforts, hear progress reports and develop new strategies related to the minimum control measures that the UA Cooperative Extension Service staff assist the member agencies. Committee members include Jefferson County, Pine Bluff, White Hall and University of Arkansas at Pine Bluff and the Pine Bluff/Jefferson County Clean & Beautiful Commission.

#### **Responsible Parties**

University of Arkansas Cooperative Extension Service  
The City of Pine Bluff

#### **Summary of Measurable Goals**

UA Cooperative Extension Service staff may use a combination of public events, periodic neighborhood surveys and consultation with community and citizen group leaders to obtain public feedback on specific education and outreach efforts. The specific goals identified in the contract agreement will be described in detail in the Extension Service's Annual Report to the City of Pine Bluff, which will be included as an attachment to the City's Annual Report. A copy of the UA Extension Service Education Proposal is attached.

### **No. 2 Public Involvement/Participation**

#### **BMP's to address Public Involvement/Participation in Pine Bluff**

A. **Regional Public Involvement/Participation Plan** – The City of Pine Bluff will actively participate in maintaining a regional public involvement/participation program involving Pine Bluff, White Hall and Jefferson County in cooperative manner through a contract with the UA Extension Service to provide means to carry out the program. This plan is coordinated by the

UA Cooperative Extension Service and is guided by the Urban Storm Water Steering Committee.

As mentioned in the first minimum control measure, this committee coordinates the actions undertaken by its members and the UA Cooperative Extension Service staff to use the materials and strategies created and identified during implementation of the first minimum control measure to effectively engender public involvement in the City's storm water management plan (SWMP) and policy development.

**B. Public Meetings** -- With the assistance of the UA Cooperative Extension Service, the City of Pine Bluff will conduct public interest meetings to inform the various interest groups about storm water issues.

**C. City-Wide Clean Day** -- The UA Cooperative Extension Service will work with the City of Pine Bluff and the Pine Bluff/Jefferson County (PB/JC) Clean & Beautiful Commission to establish and implement a fall and spring city-wide program with emphasis placed on cleaning up the storm water system.

**D. Public Review of the SWMP** – The city has posted the draft Storm Water Management Plan (SWMP) on its website and invited public review and comment on it. A telephone number is provided for the public to call in with their questions and an address is provided to which they may send any comments.

#### **Responsible Parties**

University of Arkansas Cooperative Extension Service

The City of Pine Bluff

The Pine Bluff/Jefferson County Clean & Beautiful Commission

#### **Summary of Measurable Goals**

The public will be provided with opportunities to provide their input into the storm water management program. They have been invited to review and comment on the draft SWMP which has been posted on the city's website at [www.cityofpinebluff.com](http://www.cityofpinebluff.com). The University of Arkansas County Extension Service will work with the PB/JC Clean & Beautiful Commission to schedule citizen participation in the annual spring and fall clean-ups in the city. The Commission also schedules annual electronic recycling events where the public is invited to dispose of electronic waste free of charge at the City's Recycling Center for hazardous waste. The City will track its participation in and the activities of these various activities on an annual basis.

#### **No. 3 Illicit Discharge Detection & Elimination**

**A. Storm Water Drainage Map** – The City of Pine Bluff Street Department is currently preparing a map showing the storm drainage system and targeted outfalls of the existing storm water drainage system. This map will be analyzed and areas of the city will be characterized by the age of their storm sewer system age. This will provide a method for prioritizing where to inspect first. We intend to input this map and other related information into our new GIS system

to better be able to examine the system. The system map will be used to trace illicit discharges back to their source.

**B. Locate Problem Areas** – Pine Bluff will identify priority areas for detailed screening of the system based on the likelihood of illicit connections. In addition to older areas, GIS zoning layers identify the industrial areas of the city that may have a higher likelihood of illicit discharges.

**C. Dry Weather Outfall Screening** – The City will develop the procedures and documentation process needed to perform dry weather screening for storm drainage system outfall mapping and inventory efforts. Each outfall will be screened visually to determine if a dry weather discharge exists or if there is an indication that contaminated discharges existed in the past. Any suspect discharges will be reported to the Inspection & Zoning Department, which will take the appropriate actions to eliminate them. The city may also use the wastewater treatment or third-party laboratories for testing of samples suspected to be illicit discharges.

**D. Review and revise, if necessary, the city's ordinance to reflect current state legal requirements.** The Pine Bluff Inspection Department and the Regional Planning Organization will conduct a review of current city code as it relates to the most current Phase II requirements. If changes are needed to the code, such changes will be generated after a review of city law and the current requirements. Any necessary amendments will be prepared and presented to the city council for adoption.

**E. Public Awareness of Hazards Associated with Illicit Discharges --** The University of Arkansas Cooperative Extension Service will proceed with implementation of its Stormwater Education Program Tasks and Objectives. The EPA recognizes the importance of educational outreach to public employees, businesses, property owners, the general community and elected officials regarding ways to detect and eliminate illicit discharges. The city executes various efforts such as coordinating volunteers for creek and roadside ditch clean-up efforts regularly during the year. The city works with the UA Cooperative Extension Service to develop and distribute informative brochures explaining the importance of avoiding illegal discharges into the storm sewer system and area waterways.

**F. Enforcement of Illicit Storm Water Discharge Regulations** – The Pine Bluff Inspection Department will establish a citizen hotline to report suspected illicit discharges or make other complaints regarding illicit discharges. This hotline will be advertised on the City website as well as the municipal cable TV channel. The Inspection Department will perform inspections on all reported incidents and violation notices will be issued. The city uses both educational efforts and working with the discharger in resolving the problem. Where necessary, the stormwater ordinance allows for the issuance of citations and fines as a result of continued violations of the illicit discharge ordinance.

### **Responsible Parties**

Pine Bluff Street Department  
Pine Bluff Inspection & Zoning Department  
Southeast Arkansas Regional Planning Organization  
UA Cooperative Extension Service

## **Summary of Measurable Goals**

The Annual Report will include the following:

1. Progress report on the production of the storm water drainage system map.
2. A list of any ordinance changes, with copies of amended ordinances, that have been undertaken to comply with Phase II EPA rules regarding storm water.
3. A list of all illicit discharges identified.
4. Copies of all violation notices sent.
5. A list of all illicit discharges eliminated.

## **No. 4 Construction Site Storm Water Runoff Control**

A. **Storm Water Permit Required** -- A city permit will be required for construction site activities and those activities associated with excavation, grading, and removal of trees and vegetation. The permit shall be required for only those sites where one (1) acre or more of the land is disturbed. *(A copy of the complete city code ordinance governing storm water is included in the appendix of this plan.)* The permit will only be issued after a review of the required documents as indicated in the storm water ordinance. No zoning and building permit shall be issued for said site until the applicant has received his stormwater permit.

B. **Site Plan Review Required** – Construction plans that are submitted for city approval will be reviewed to determine whether or not they will result in the disturbance of one acre or more of land. The storm water permit shall be required for only those sites where one (1) acre or more of the land is disturbed. The permit application for sites between one (1) acre and five (5) acres shall consist of documentation the applicant has filed his notice of intent (NOI) that is filed with the Arkansas Department of Environmental Quality (ADEQ) and providing the program administrator with a copy of the SWPPP for the construction site that meets ADEQ and the city BMP's practices and procedures as determined by the program administrator. The city permit application for sites of five (5) acres or more shall consist of documentation that ADEQ has approved the construction site SWPPP and that a copy of said plan and documentation is submitted to the program administrator along with documentation as to complying with the city BMP's practices and procedures as determined by the program administrator. It is estimated that only 5% to 15% of construction projects in Pine Bluff may trigger the one-acre threshold. This might be represented by three or four sites.

C. **Inspection Procedures** – Inspections will be performed on a monthly basis for active construction sites with Pine Bluff Storm Water permits. Sites in violation will be notified by the program administrator. All inspections will be based on the SWPPP which is on file with the city as a condition for issuance of a storm water permit. Sites which disturb over five acres in size will be prioritized for inspection.

D. **Enforcement** -- Whenever the program administrator finds that an organization has violated a prohibition or failed to meet a requirement of this article, the program administrator may order compliance by written notice of violation to the responsible person. This notice will describe the steps required to bring the site into compliance.

E. **Sanctions** – In the event a construction site fails to properly implement the required BMPs as outlined in its SWPPP, the storm water coordinator will contact the responsible party and provide written notice of the deficiencies. Should identified problems remain uncorrected, the storm water coordinator may issue a stop work order which will remain in effect until the situation has been resolved. If work continues, the storm water coordinator may issue a citation to the responsible party.

F. **Create and/or adopt a Best Management Practices (BMP) manual** – This manual will be developed for the use of contractor's in the preparation of their Storm Water Pollution Prevention Plans (SWPPPs) for applicable construction sites. This manual shall include BPMs for the control of construction site waste, concrete truck washouts, chemicals, litter and sanitary waste.

G. **Hire and Train a Storm Water Coordinator** – Bring new staff on board to coordinate storm water activities. Seek CESSWI certification or other suitable certification for this employee.

H. **Information Submitted by the Public** – The public is provided the opportunity to review storm water-related information such as the city's storm water ordinance and Storm Water Management Plan (SWMP) on the city's website. A telephone number is provided for public inquiries and comments are requested in writing to be sent to the Inspection & Zoning Department's office address.

#### **Responsible Parties**

Pine Bluff Inspection & Zoning Department  
Southeast Arkansas Regional Planning Organization

#### **Summary of Measurable Goals**

The Annual Report will include the following:

1. The number of projects receiving storm water permits
2. Number and frequency of site inspections
3. Number of violation letters issued
4. An update on the progress of a BMP manual
5. Number of enforcement actions taken
6. Number of complaints received and number inspected
7. Number of Stop Work orders issued
8. Number of Citations issued
9. Include Storm water coordinator contact information in Annual Report

### **No. 5 Post-Construction Storm Water Management for New Development and Redevelopment**

A. **Create and/or adopt a Best Management Practices (BMP) manual** – This manual will be developed for the use of contractor's in the preparation of their Storm Water Pollution Prevention Plans (SWPPPs) for applicable construction sites. This manual will discuss structural BMPs (such as detention ponds) as well as non-structural BMPs to address the operation and

maintenance of such features, e.g. O&M agreements between the permittee and post-development landowners. The development of this manual will review other communities with similar geography, population size and economic circumstances for regionally appropriate solutions.

B. **Site Plan Review Required** -- Screen plan review submittals for those projects which propose disturbance of one acre or more of ground. These projects will be subject to the issuance of a storm water permit and review for the use of appropriate post-construction BMPs.

C. **Post-Construction Program** -- Develop procedures and/or ordinances where needed to require that all post-development BMPs are installed, maintained and operated properly. City code and policies will be reviewed with the goal of seeking ways to encourage infill development in areas where infrastructure, including storm sewer systems, is already in place. This review will consider ways to direct development away from the various sensitive water bodies which surround Pine Bluff. The post-construction program will require, as part of the pre-construction site plan review for all applicable projects that all required post-construction controls are installed and that long-term operation and maintenance (O&M) agreements are in place.

D. **Post-Construction Enforcement** -- Develop and implement an enforcement program to inspect storm water facilities to ensure compliance. This enforcement will entail physical inspection of BMPs as well as enforcement of all O&M agreements in effect.

E. **Low Impact Development (LID)** – City codes and policies will be reviewed in order to identify impediments to low impact development strategies.

#### **Responsible Parties**

Pine Bluff Inspection & Zoning Department  
Southeast Arkansas Regional Planning Organization

#### **Summary of Measurable Goals**

The Annual Report will include the following:

1. Progress report on the preparation of a best management practices (BMP) manual. This manual will include BMPs for both new development and redevelopment.
2. Submission of the manual when it is completed.
3. Progress report on any work being done to revise city code where necessary to incorporate BMPs into applicable post-construction sites.

#### **No. 6 Pollution Prevention/Good Housekeeping for Municipal Operations – BMPs**

A. **City Operations Assessment** -- Conduct an evaluation of City operations, where applicable, to determine what improvements can be made to reduce illicit storm water discharges. Such discharges could include detergents and other cleansers in car or truck washing operations, fertilizer or pesticide from landscape maintenance functions, and oil, gasoline, antifreeze and other product associated with vehicle maintenance functions.

**B. Annual Employee Training** -- With UA Extension Service assistance, employees will be provided with training to make them aware of methods for improving City operations to reduce illicit storm water discharges, in other words, they will be instructed in best management practices (BMPs) relevant to their work functions. Such training will be conducted on an annual basis.

**C. Roadway Operations and Maintenance Program** -- The Pine Bluff Street Department oversees the cleaning out of curb inlets to remove sediment and debris in order to maintain their proper functioning. They also operate street sweepers and manage the cleaning and maintenance of city roads.

**Responsible Agencies**

UA Cooperative Extension Service  
Inspection & Zoning Department  
Pine Bluff Street Department  
Pine Bluff Fire Department  
Pine Bluff Police Department  
Pine Bluff Parks and Recreation Department

**Summary of Measurable Goals**

The Annual Report will include, at a minimum:

1. Progress report on review and preparation of departmental operations manuals
2. Manuals when they become available
3. Records of annual employee training sessions regarding best management practices (BMPs) applicable to departmental operations.

**V. Legal Authority**

Code of Ordinances of City of Pine Bluff

[http://library2.municode.com/default-test/home.htm?infobase=11096&doc\\_action=whatsnew](http://library2.municode.com/default-test/home.htm?infobase=11096&doc_action=whatsnew)

Chapter 28 – Article 4 – Stormwater Regulations (Ord. No. 6191, § 1, 8-21-06)

The purpose of this article is to regulate discharges to the stormwater drainage system as required by federal and state law. This article establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) Phase II permit process. This article also sets forth the minimum requirements for construction site activities and those activities associated with excavation, grading, and removal of trees and vegetation. The objective of this article is:

- (1) To regulate the contribution of pollutants to the municipal separate storm sewer system by stormwater discharges by any user.
- (2) To regulate dust, silt and other construction site non-point pollution.

- (3) To prohibit illicit connections and discharges to the municipal separate stormwater system.
- (4) To establish legal authority and a permitting fee to carry out inspections, surveillance and monitoring procedures necessary to ensure compliance with this article.
- (5) To establish and collect fees for services provided for education, maintenance and construction of the city stormwater systems.

DRAFT