ARR040000 Recertification Notice of Intent for Regulated Small Municipal Separate Storm Sewer Systems (MS4s) General Permit

version 1.18

(Submission #: HQ4-SXF6-FVN81, version 1)

Details

AFIN	88-00857
Submission ID	HQ4-SXF6-FVN81
Submission Reason	Renewal

Form Input

Permit Information

Recertification Instruction

Please review all fields carefully for typos or inaccurate information. If the information in the corresponding field is incorrect, please update the corresponding field with the correct information by typing over the existing information.

If the Permittee (Legal Name) changes, you will need to also submit a permit transfer form.

The update SWMP must be submitted in accordance with the permit.

Permittee (Legal Name)

The permittee means any person (an individual, association, partnership, corporation, municipality, state, or federal agency) who has the primary management and ultimate decision-making responsibility over the operation of a facility or activity.

Permit No.
ARR040015

AFIN
88-00857

Permittee (Legal Name)
City of Hot Springs

Site Contact Person

Contact Person Information

First Name	Last Name
Aaron	*Graulau*

Title
NONE PROVIDED

Phone Type	Number	Extension
Other	5015394683	

Email
agraulau@cityhs.net

Urbanized/Core Areas
Hot Springs

Receiving Stream
Gulpha Creek, Hot Springs Creek, Molly Creek, Stokes Creek, Lake Hamilton

Is this MS4 identified on the list of the EPA approved Total Maximum Daily Loads (TMDL)?
No

From our database, the Responsible Official are listed in the following

Responsible Official First Name
Bill

Responsible Official Last Name
Burrough

Responsible Official Title
City Manager

Did the Responsible Official Change?
No

Please provide the Responsible Official Email Address
bburrough@cityhs.net

From our database, the Cognizant Official are listed in the following

Cognizant Official First Name
Aaron

Cognizant Official Last Name
Graulau

Cognizant Official Title
Manager

Did the Cognizant Official Change?
No

Please provide the Cognizant Official Email Address
agraulau@cityhs.net

Mailing Address

100 BROADWAY TER
HOT SPRINGS, AR 71901

Is the invoice address the same as the mailing address?
Yes

Attach Updated SWMP and Updated Storm Sewer System Map

Stormwater Management Program 2024-2029.pdf - 07/01/2024 04:55 PM

Comment
Thank you!

CITY OF THE CITY OF HOT SPRINGS STORMWATER DIVISION

Stormwater Management Program 2024-2029

Mission Statement

The Division of Stormwater Management was established to promote the health, safety, and welfare of the City of The City of Hot Springs citizens by preventing the pollution, impairment or destruction of its natural resources.

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INTRODUCTION

The Stormwater Phase II Final Rule was signed by EPA Administrator Carol Browner on October 29, 1999 and it was published in the Federal Register on December 8, 1999.

The following are excerpts from various Environmental Protection Agency web sites and documents, which provide the basis for the development and implementation of the City's Stormwater Management Program.

PROGRAM OVERVIEW

Polluted stormwater runoff is often transported to Municipal Separate Storm Sewer Systems (MS4s) and ultimately discharged into local rivers and streams without treatment. EPA's Stormwater Phase II Rule establishes an MS4 stormwater management program that is intended to improve the Nation's waterways by reducing the quantity of pollutants that stormwater picks up and carries into storm sewer systems during storm events. Common pollutants include oil and grease from roadways, pesticides from lawns, sediment from construction sites, and carelessly discarded trash, such as cigarette butts, paper wrappers, and plastic bottles.

When deposited into nearby waterways through MS4 discharges, these pollutants can impair the waterways, thereby discouraging recreational use of the resource, contaminating drinking water supplies, and interfering with the habitat for fish, other aquatic organisms, and wildlife.

WHAT ARE THE PROGRAM REQUIREMENTS FOR THE CITY?

Operators of regulated small MS4s are required to:

- Apply for National Pollutant Discharge Elimination System (NPDES) permit coverage under general permit number ARR040000. City of The City of Hot Springs applied for its permit and ADEQ issued The City of The City of Hot Springs a regulated small MS4 general permit -ARR040015 effective May 28, 2004.
- Develop a stormwater management program, which includes the six minimum control measures.
- Implement the stormwater management program using appropriate storm water management controls, or "best management practices" (BMPs).
- Develop measurable goals for the program.
- Periodically evaluate effectiveness of the program.

The ultimate objective of this program is to protect water quality. The City of The City of Hot Springs recognizes the need and responsibility to implement a program that achieves

the requirements mandated by NPDES Phase II Final Rule. However, due to limited assets and funding the city may at times not be able to fully meet all the annual goals set forth in this program due to unforeseen issues and budget restraints from other departments of the city.

WHAT ARE THE SIX MINIMUM CONTROL MEASURES?

The Phase II Rule outlines a small MS4 stormwater management program comprising six required program elements that, when implemented in concert, are expected to result in significant reductions of pollutants discharged into receiving water bodies. These six elements, termed minimum control measures, are:

1. **Public Education and Outreach**
   Distributing educational materials and performing outreach to inform citizens about the impacts polluted stormwater runoff discharges can have on water quality.

2. **Public Participation**
   Providing opportunities for citizens to participate in program development and implementation, including effectively publicizing public hearings and/or encouraging citizen representatives on a stormwater management panel.

3. **Illicit Discharge Detection and Elimination**
   Developing and implementing a plan to detect and eliminate illicit discharges to the storm sewer system (includes developing a system map and informing the community about hazards associated with illegal discharges and improper disposal of waste).

4. **Construction Site Runoff Control**
   Developing, implementing, and enforcing an erosion and sediment control program for construction activities that disturb one or more acres of land (controls could include for example, silt fences and temporary storm water detention ponds).

5. **Post-Construction Runoff Control**
   Developing, implementing, and enforcing a program to address discharges of post-construction stormwater 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**
   Developing and implementing 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, reduced pesticide use, or frequent catch-basin cleaning).

WHAT ARE BEST MANAGEMENT PRACTICES (BMP'S)?

Best Management Practices (BMPs) are schedules of activities, prohibitions of practices, maintenance procedures, and other management practices designed to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw sewage. BMPs may include structural devices or nonstructural practices.

The EPA has composed a National Menu of Best Management Practices (BMP's) for Stormwater Phase II. The menu is intended to provide guidance to regulated small MS4s as to the types of practices they could use to develop and implement their storm water management programs. The menu is intended as guidance only. The menu of BMPs is based on Phase II's six minimum control measures.

ADDITIONAL SOURCES OF INFORMATION

Stormwater Phase II Compliance Assistance Guide (EPA)
Small Construction Activities (EPA)

KEY POINTS OF CONTACT

Environmental Protection Agency Region 6

1201 Elm St, Dallas, TX 75270
800-887-6063

U.S. Army Corps of Engineers Vicksburg District

Regulatory Branch
4155 E. Clay Street, Vicksburg, MS. 39183
(601) 631-5053

Arkansas Energy and Environment- Environmental Quality

5301 Northshore Drive, North Little Rock, AR 72118
(501) 682-0616

Arkansas Soil and Water Conservation Commission

101 East Capitol, Suite 350 Little Rock, Arkansas 72201
(501) 682-1611

Arkansas Department of Emergency Management

P.O. Box 758, Conway, Arkansas 72033-0758
Incident reporting hotline: 1-800-322-4012

PUBLIC EDUCATION AND OUTREACH

An informed and knowledgeable community is crucial to the success of a stormwater management program since it helps to ensure the following:

- *Greater support for the program as the public gains a greater understanding of the reason why it is necessary and important. Public support is particularly beneficial when the city attempts to institute new funding initiatives for the program or seek volunteers to help implement the program.*
- *Greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters.*

The city will continue implementation of a public education program to distribute educational materials to the community, or conduct equivalent outreach activities about the impacts of stormwater discharges on local water bodies and the steps that can be taken to reduce stormwater pollution. The City of Hot Springs has determined and will continue to implement the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

OBJECTIVE

The City of Hot Springs recognizes three main action areas as important for successful implementation of a public education and outreach program. Those three areas are:

1. The City of The City of Hot Springs will continue forming partnerships. The City of Hot Springs will continue to work with other government entities within The City of Hot Springs in order to identify tasks best handled through a regional Stormwater Management Program approach. The City of Hot Springs will also continue to seek assistance from non-governmental organizations (e.g. environmental, industrial organizations), since many already have educational materials and perform outreach activities.
2. The City of The City of Hot Springs will continue using educational materials and strategies. The City of Hot Springs has developed and will continue to distribute educational materials and activities that are relevant to local situations and issues, and incorporate a variety of strategies to ensure maximum coverage. The City of The City of Hot Springs will continue to utilize some of the following strategies:
    - Brochures or fact sheets
    - Television and radio public service announcements
    - Recreational guides
    - Alternative information sources
    - A library of educational materials

- Volunteer citizen educators
- Event participation
- Educational programs
- Volunteer storm drain marking program
- Storm water hotlines
- Tributary signage

3. The City of The City of Hot Springs will continue reaching diverse audiences. The public education program uses a mix of appropriate local strategies to address the viewpoints and concerns of a variety of audiences and communities, including minority and disadvantaged communities, as well as children. The City of Hot Springs will continue to print posters and brochures in order to reach audiences less likely to read standard materials. The City of Hot Springs will continue to direct materials and outreach programs toward specific groups of commercial, industrial, and institutional entities likely to have significant storm water impacts. For example, an informative brochure was mailed to restaurants on the effects of grease clogging storm drains and to auto garages on the effects of dumping used oil into storm drains.

MEASURABLE GOALS

Throughout the 5-year permit term The City of Hot Springs will continue to utilize an integrated approach to address the requirements and intent of the public education and outreach Minimum Control Measures. The stormwater education and outreach program shall include more than one mechanism and target at least five different stormwater themes or messages over the permit term. At a minimum, at least one theme or message shall be targeted to the land and development community. According to the 2020 decennial census The City of Hot Springs' total population is 37,930. The Stormwater Public Education and Outreach Program shall reach at least 60 percent of the population over the permit term.

The integrated 5-year approach will include the following measurable goals:

- Continue distribution of educational pamphlets and brochures addressing pollution and prevention measures and develop and distribute new ones as necessary to ensure a broad range of targeted messages are distributed.
- Utilize local government television channel 12 and local morning radio station KZNG to further enhance the success of the Minimum Control Measure.
- Some examples of educational themes already being distributed include:
  - Concrete Truck Wash Out (public, land & development community)
  - Stormwater BMPs and Urban Runoff (public, land & development community)
  - Safe Car Washing (Public)
  - Water Quality/Landscape Maintenance (public, land & development community)

  - Restaurant Guide (food service owners/ managers)
- Stormwater Inspector Certification Class (required prior to issuance of permit)
- Continue to implement and educate the public on the Stormwater Management Program (SWMP).
- Continue to implement and educate the public on the Best Management Practices Manual (BMP).

BEST MANAGEMENT PRACTICES

BMP	Continue implementation of a public education program to distribute educational materials.
Measurable Goal	The City of Hot Springs will continue to distribute and develop pamphlets, booklets and/or utility stuffers that address various types of pollution and prevention measures. The City will also utilize local government channel 12 and local radio PSAs to further achieve the goals of this Minimum Control Measure.
Justification	The City of Hot Springs shall combine traditional methods of education with alternative methods in order to inform as many citizens as possible about the impacts of storm water pollutants. Printed media is an effective method for communicating to citizens that may otherwise not be active in seminars and other organized efforts. Local television and radio is also an effective method for communicating to citizens as these broadcasts have the potential to reach the largest and most diverse portions of the city's population.
BMP	Continue implementation of a public education program to distribute educational materials.
Measurable Goal	Continue to implement and educate the public on the Stormwater Management Program (SWMP).

Justification	A SWMP provides the mechanism to guide The City of Hot Springs in the execution of BMPs and the measurable goals associated with them.
BMP	Continue implementation of a public education program to distribute educational materials.
Measurable Goal	Continue to implement and educate the public on the Best Management Practices Manual, (Attachment D
Justification	A BMP manual provides definitions and descriptions for each of the BMPs and the measurable goals. It details the manner in which The City of Hot Springs executes each of the measurable goals within the SWMP.

MEASURING SUCCESS

The annual reporting shall identify each mechanism used, including each stormwater theme, audience targeted and estimate of how many people were reached by each mechanism. Accurate reporting data shall be collected through educational outreach logs that record the date, mechanism, theme, and number of people reached for each educational event. When media outlets such as television, radio, newspapers, etc. are used, reporting data shall be based on the average listening / viewing audience reported by the media source.

RESPONSIBILITY

The City of The City of Hot Springs' Stormwater Division will be the primary coordinator, creator and distributor of the BMPs related to the Public Education and Outreach Minimum Control Measure. The division will at times collaborate with the City's Sanitation Department and the Garland County Beautification Commission to further enhance the message and distribution of educational literature related to water quality.

Public Participation

The public can provide valuable input and assistance to a regulated small MS4's municipal stormwater management program. Therefore, the public will be given opportunities to play an active role in both the development and implementation of the program. An active and involved community is crucial to the success of a storm water management program because it allows for:

- Broader public support since citizens who participate in the development and decision-making process are partially responsible for the program. This will make the public less likely to raise legal challenges to the program and more likely to take an active role in its implementation.
- Shorter implementation schedules due to fewer obstacles in the form of public and legal challenges and increased sources in the form of citizen volunteers.
- A broader base of expertise and economic benefits since the community can be a valuable, free and intellectual resource.
- A conduit to other programs as citizens involved in the stormwater program development process provide important cross-connections and relationships with other community and government programs. This benefit is particularly valuable when trying to implement a stormwater program on a watershed basis, as encouraged by EPA.

The City of Hot Springs will continue to comply with applicable state and local public notice requirements in the execution of this minimum control measure. The City of Hot Springs has and will continue to determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure. Rationale, BMPs and measurable goals are described below.

OBJECTIVE

The best way to handle common notification and recruitment challenges is to know the audience and think creatively about how to gain its attention and interest. Therefore, The City combines traditional methods of soliciting public input with alternative advertising methods. Newspaper advertising may be combined with radio or television spots, postings at bus stops, announcements in neighborhood newsletters, announcements at civic organization meetings, distribution of flyers, mass mailings, door-to-door visits, telephone notifications, and multilingual announcements.

The City of Hot Springs' notification program will target specific population sectors, including ethnic, minority, low- income communities, academic institutions, educational institutions, neighborhood groups, community groups, outdoor-recreation groups, business and industry. The ultimate goal is to involve a diverse cross-section of people who can offer a multitude of concerns, ideas, and connections.

Some examples of public participation activities that the city has or will implement include:

- Arbor Day Festival
- Volunteer "Leave Your Mark in The City of Hot Springs" stormwater inlet marker program. Volunteer groups place storm drain markers reading "No dumping, drains to lake" on inlets throughout the city.
- The annual "Trash Bash" lake and stream cleanup program event is sponsored by Entergy in cooperation with the city and Beautification Commission.
- Storm Drain Art Program
- Adopt a Stream program
- Annual Hazardous Waste Drop Off Event

The City of Hot Springs Stormwater Division has involved the community in the development of its NOI and SWMP by including input from local engineering firms, developers, and construction companies. The City intends to continue their reliance on these partnerships for further input into a new water quality filtration initiative that will be implemented within the permit term.

MEASURABLE GOALS

The City of Hot Springs will utilize a 5-year integrated approach to address the requirements and intent of the Public Participation Minimum Control Measure. The Stormwater Public Participation Program shall include at least five public involvement activities over the permit term.

The integrated 5-year approach will include the following measurable goals:

- Notify the public of meetings/activities regarding MS4's NPDES activities through media outlets.
- Continue to receive input from the public to assist with the development of SWMP and BMP manual.

BEST MANAGEMENT PRACTICES

BMP	Comply with state and local public notice requirements when implementing a public involvement/participation program.
Measurable Goal	Notify the public of meetings/activities regarding MS4's NPDES activities through media outlets.
Justification	The City of Hot Springs will continue to utilize various forms of media to communicate to the public about opportunities to participate in its stormwater management program. The

	media is an effective method for communicating to citizens.
BMP	Develop a SWMP that allows the public opportunities to participate.
Measurable Goal	Continue to receive input from the public to assist with the development of SWMP and BMP manual.
Justification	The citizens of The City of Hot Springs will better accept their SWMP and BMP manuals if they are allowed to provide input in the development of them. The city has established a means for the citizens of The City of Hot Springs to provide input in the development of the SWMP and BMP.

MEASURING SUCCESS

The annual report shall identify each public involvement/ participation activity conducted, including a brief description of the activity and including an estimate of how many people participated. Accurate reporting data shall be collected through activity logs that record the date, mechanism, activity, and number of people reached for each educational event. When media outlets such as television, radio, newspapers, etc. are used, reporting data shall be based on the average listening / viewing audience reported by the media source.

RESPOSIBILITY

The City of The City of Hot Springs' Stormwater Division will be the primary coordinator, creator and distributor of the BMPs related to the Public Participation Minimal Control Measure.

Illicit Discharge Detection and Elimination

Federal regulations define an illicit discharge as "any discharge to an MS4 that is not composed entirely of storm water" with some exceptions. These exceptions include discharges from NPDES-permitted industrial sources and discharges from fire-fighting activities. Illicit discharges are considered "illicit" because MS4s are not designed to accept, process, or discharge such non-stormwater wastes. Sources of illicit discharges include but are not limited to sanitary wastewater, effluent from septic tanks, car wash wastewaters, improper oil disposal, improper disposal of animals, radiator flushing disposal, laundry wastewaters, spills from roadway accidents and improper disposal of auto and household toxics.

Discharges from MS4s often include wastes and wastewater from non-storm sources. A study conducted in 1987 in Sacramento, California, found that almost one-half of the water discharged from a local MS4 was not directly attributable to precipitation runoff. A significant portion of these dry weather flows was from illicit and/or inappropriate discharges and connections to the MS4.

Illicit discharges enter the system through either direct connection (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, or paint or used oil dumped directly into a drain). 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, wildlife, and human health.

The Environmental Protection Agency recognizes the adverse effects illicit discharges can have on receiving waters. Therefore, the City of Hot Springs has developed and will continue to implement and enforce an illicit discharge detection and elimination program that includes:

- A storm sewer system map, showing the location of major outfalls and the names and location of waters of the United States that receive discharges from those outfalls (completed in 2008).
- A storm sewer system map of the entire MS4 system, including catch basins, pipes, ditches and public and private stormwater facilities (began in 2009).
- An ordinance on non-storm water discharges into the MS4, and appropriate procedures and actions.
- A plan to detect and address non-storm water discharges, including illegal dumping, into the MS4.
- The education of public employees, businesses, and the general public about

the hazards associated with illegal discharges and improper disposal of waste.
- Appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

The City of Hot Springs' Illicit Discharge Detection and Elimination Program addresses various categories of non-storm water discharges or flows if they are identified as significant contributors of pollutants to water bodies in the small MS4. The following may be identified as potential significant contributors:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensation
- Irrigation water
- Springs and uncontaminated ground water infiltration
- Water from crawl space pumps
- Lawn watering
- Individual residential car washing
- De-chlorinated swimming pool discharges
- Street wash water
- Flows from riparian habitats and wetlands
- Flows from emergency firefighting activities

OBJECTIVE

The City of Hot Springs' Illicit Discharge Detection and Elimination Program objective is to gain a thorough awareness of its system in order to determine the types and sources of illicit discharges entering the system and establish the legal, technical and educational means needed to eliminate these discharges. The city uses the following general guidelines in order to meet its objectives.

General Guidelines

The Map

The storm sewer system map is meant to demonstrate a basic awareness of the intake and discharge areas of the system. It helps to determine the extent of discharged dry weather flows, the possible sources of the dry weather flows, and the particular water bodies these flows may be affecting. In 2008 The City of Hot Springs completed the collection of information on outfall locations and conducted field surveys to verify

locations.

Field surveys were conducted using ArcPad 7.1.1 and ArcMap 9.2. The field data was then layered onto the city's existing GIS aerial photographs and topographic map in order to determine major water shed basins and then further divided into sub-water shed basins and waters of the state. This required walking stream banks and shorelines for visual observation and data collection. Throughout the permit term of 2019 through 2024 the city will continue to develop a map of the entire MS4 storm sewer system using the same technique described above. The city will update the map as necessary.

Regulatory Enforcement

The city has established and is enforcing Stormwater Ordinance no. 5378 with Resolution Number 5628 (attachment A "Stormwater Ordinance"), which includes prohibition of illicit discharges and illegal dumping and fines for violations.

The Plan

The plan to detect and address illicit discharges is the central component of the city's illicit discharge detection and elimination program. The plan is dependent upon several factors, including available resources, size of staff, and degree and character of its illicit discharges. The plan will consist of the following four steps:

1. Locate problem areas. The City of Hot Springs continues to identify priority areas for detailed screening of the system based on the likelihood of illicit connections. The city uses various methods such as public complaints, visual screening and, during the permit term, observation of all 524 mapped outfalls during dry weather to locate problem areas. Dry weather is considered 7 sequential days with a rain fall no greater than 1/4 inch. GIS zoning layers also help the city in determining industrial areas that may have a higher likelihood of illicit discharges.

2. Find the source. Additional efforts usually are necessary to determine the source of the problem once a problem area or discharge is found. Using the storm sewer map, illicit discharges will be traced to their source. If necessary the city will utilize a robotic pipe inspection camera to track the discharge to its source. The city may also utilize the wastewater treatment or third-party laboratories for testing of samples suspected to be illicit discharges.
3. Remove/correct illicit connections. The City of Hot Springs will notify ADEQ of verified illicit discharges. The City of Hot Springs utilizes both educational efforts and working with the discharger in resolving the problem. The stormwater ordinance allows for the issuance of fines and citations for continued violations of the illicit discharge ordinance.
4. Document actions taken. The City of Hot Springs will document all actions taken under the plan in order to manage and to illustrate that progress is being made to eliminate illicit connections and discharges. Actions will be documented and records retained. The annual report to ADEQ will include: number of outfalls dry-weather screened, number of dry-weather flows identified, number if illicit discharges identified, number of illicit discharges eliminated, provide schedules for elimination of illicit connections that have been identified, but have yet to be eliminated, and a summary of any storm sewer system updates.

Education and Outreach

E.P.A. 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 as an integral part of the city's illicit discharge detection and elimination program. This action helps gain

support for the city's stormwater program. The city executes various outreach efforts such as developing and distributing informative brochures, designing a program to publicize and facilitate public reporting of illicit discharges, coordinating volunteers for ongoing inspections of outfalls, promoting recycling programs and lake and creek cleanup programs.

MEASURABLE GOALS

The City of Hot Springs will utilize a 5-year integrated approach to address the requirements and intent of the Illicit Discharge Detection and Elimination Minimum Control Measure. The integrated 5-year approach includes the following measurable goals:

- Maintain and continue to develop a storm sewer map, which will be updated as determined necessary.
- Maintain a list and address allowable non-storm water discharges if they become significant contributors of pollutants to the MS4.
- Maintain a point of contact for the public to report illicit discharges.
- Maintain local controls/conditions for incidental non-storm water discharges.
- Maintain an ordinance which includes prohibition of illicit discharges.
- Continue to implement and enforce the ordinance.
- Develop a program to reduce the number of failing septic systems.
- Inform ADEQ of illicit discharges and actions taken to eliminate discharges.
- Educate city agencies about illicit discharges and the procedures for reporting illicit discharges.
- Educate industries, businesses and public about illicit discharges and the means to eliminate them.
- Use public education program to educate/inform public employees and businesses about hazards associated with illicit discharges.

BEST MANAGEMENT PRACTICES

BMP

Maintain and continue to develop a storm sewer system map which shows locations of all outfalls with names/locations of all waters of the United States that receive discharge from this outfall. Continue to build the map to include the entire MS4 storm sewer system.

Measurable Goal

The City of Hot Springs developed a storm sewer map in

2008 which includes all outfalls, major water sheds, sub water sheds, and waters of the US (attachment C). The creation of this map will continue throughout the permit term to include the entire MS4 storm sewer system and will be updated as determined necessary.

Justification

A map is necessary to demonstrate a basic awareness of the intake and discharge areas of the basin and to assist in determining the types and sources of illicit discharges affecting a watershed. A watershed map will serve as a tracking, scheduling, and record keeping mechanism. Mapping will be an ongoing process to initially prepare and continually update changes.

BMP

Prohibit through ordinance non-storm water discharges into the storm sewer system and implement enforcement procedures.

Measurable Goal

Maintain a list and address allowable non-stormwater discharges if they become significant contributors of pollutants to the MS4 (attachment A, pages 8-9).

Justification

Non-storm water discharges like landscape irrigation rising ground waters foundation drains just to name a few can impair water quality, particularly surface water and wells. Substances disposed of directly into storm drains can also lead to water quality impairment. The City of Hot Springs's program combines citizen awareness, citizen reporting, cleanup activities and enforcement to reduce the effects of non-stormwater discharges not already identified as significant pollutant contributors.

BMP

Develop a plan to detect and eliminate illicit discharges in

	industrial and business connections.
Measurable Goal	Maintain a point of contact for the public to report illicit discharges. The point of contact is the city's Stormwater Hotline (501) 321-6778. The hotline is advertised in all educational literature, the government cable network, and City Services Guide.
Justification	The City of Hot Springs is too large an area for city personnel to police. Informed citizens around the city need a means of reporting illicit discharges. A stormwater hotline provides the mechanism to communicate effectively with the City.
BMP	Develop a list of incidental non-stormwater discharges like charity car washes not already addressed as illicit discharges.
Measurable Goal	In 2010 The City of Hot Springs developed local controls/conditions for incidental non-stormwater discharges.
Justification	Incidental non-stormwater discharges can impair water quality, particularly surface water and wells. Substances disposed of directly into storm drains can also lead to water quality impairment. The City of Hot Springs's program will develop local controls/conditions for incidental non-stormwater discharges in order to reduce its effects.
BMP	Prohibit through ordinance non-storm water discharges into the storm sewer system and implement enforcement procedures.

Measurable Goal	In 2004 The City of Hot Springs created and will continue to implement an ordinance that prohibits non-stormwater discharges (attachment A, pages 8-9). The ordinance will be revised and updated as necessary to ensure full compliance with ADEQ and NPDES permit requirements.
Justification	A stormwater management ordinance which prohibits non-stormwater discharges establishes the guidelines and regulations that are necessary to comply with NPDES Phase II Final Rule. This mechanism provides the city with the tool to manage and enforce its stormwater management program.
BMP	Develop and implement a program that addresses non-stormwater discharges into the storm sewer system and implement enforcement procedures.
Measurable Goal	The City of Hot Springs has developed and will continue to implement an ordinance, which includes prohibition of illicit discharges (attachment A, page 8).
Justification	A stormwater management ordinance, which prohibits illicit discharges, establishes the guidelines and regulations that are necessary to comply with NPDES Phase II Final Rule. This mechanism provides the city with the tool to manage and enforce its storm water management program.
BMP	Educate/inform public, employees and businesses about the hazards associated with illicit discharges.
Measurable Goal	The City of Hot Springs Neighborhood Services has developed a program to reduce the number of failing septic

systems.

Justification

An improperly functioning septic system can allow sewer to migrate to the ground surface and into the water bodies of the county. These failures introduce pollutants such as nitrogen and micro-biological pathogens, which contain viruses and bacteria that present health problems for humans, animals and aquatic organisms. Since the Arkansas Department of Health is the agency responsible for septic tank systems the city will take an active role in coordinating efforts to identify and mitigate failing systems.

BMP

Prohibit through ordinance non-storm water discharges into the storm sewer system and implement enforcement procedures.

Measurable Goal

The City of Hot Springs will inform ADEQ of illicit discharges and action taken to eliminate the discharge.

Justification

Illicit discharges into the water bodies of The City of Hot Springs can carry raw sewage, heavy metals, oil and grease, solids, detergents, chlorine, potassium, ammonia, and nutrients, which can cause bacterial contamination, the spread of disease and close waters to fishing and recreation. Heavy metals are also known to be toxic to aquatic organisms. The stormwater management program continues to train city personnel, the public and volunteers on recognition, reporting procedures and corrective actions related to illicit discharges and connections. This program will reduce the effects of illicit discharges and connections on water bodies of the City.

BMP	Develop a plan to detect and address non-stormwater discharges, including illegal dumping.
Measurable Goal	The City of Hot Springs has developed and will continue to enforce an ordinance, which includes prohibition of illegal dumping (attachment A, page 7).
Justification	A storm water management ordinance, which prohibits illegal dumping, establishes the guidelines and regulations that are necessary to comply with NPDES Phase II Final Rule. This mechanism provides the city with the tool to manage and enforce its stormwater management program.
BMP	Develop a plan to detect and eliminate illicit discharges in industrial and business connections.
Measurable Goal	The City of Hot Springs continues to educate city agencies about illicit discharges and the procedures for reporting illicit discharges. The plan for detection and elimination of these discharges has been established (see "The Plan" pages 15-16 in SWMP).
Justification	When educated, city agencies become aware of how to identify potential illicit discharges, the impact they can have on stormwater management, reporting procedures of illicit discharges and how they can be avoided or mitigated. This will reduce the amount of illicit discharges that enter our water bodies.
BMP	Develop a plan to detect and eliminate illicit discharges in industrial and business connections.

Measurable Goal	The City of Hot Springs continues to educate industries, businesses and public about illicit discharges and the means to eliminate them. The plan for detection and elimination of these discharges has been established (see "The Plan" pages 15-16 in SWMP).
Justification	Cross connections can occur inadvertently or intentionally. An illicit cross connection can introduce such contaminants as heavy metals, oil and grease, nutrients or raw sewage into the storm water system. The City of Hot Springs' plan enlightens its citizens, industries and businesses on the adverse consequences, how to identify, test, monitor, avoid and mitigate illicit discharges and connections.
BMP	Educate and inform the public, employees and businesses about the hazards associated with illicit discharges.
Measurable Goal	The City of Hot Springs uses a public education program to educate/inform public employees and businesses about hazards associated with illicit discharges.
Justification	The City of Hot Springs combines traditional methods of education with alternative methods in order to inform as many citizens as possible about the impacts of stormwater pollutants. When educated, the public will become aware of how to identify potential illicit discharges, the impact they can have on stormwater management, reporting procedures of illicit discharges and how they can be avoided or mitigated. Printed media will be an effective method for communicating to citizens that may otherwise not be active in seminars or other organized efforts.

MEASURING SUCCESS

Measuring success of the Illicit Discharge Detection and Elimination Program Minimum Control Measure is accomplished primarily through the number of illicit discharges detected versus the number eliminated. Annual reporting to ADEQ will include: the number of dry weather outfalls screened, number of dry weather flows identified, number of illicit discharges eliminated, schedules for elimination of illicit connections that have been identified, but not yet eliminated, and a summary of any storm sewer system mapping updates.

RESPONSIBILITY

The City of The City of Hot Springs' Stormwater Division will be the primary enforcement authority related to the implementation and success of the Illicit Discharge Detection and Elimination Minimum Control Measure.

Construction Site Runoff Control

Polluted stormwater runoff from construction sites often flows into MS4s and ultimately is discharged into local rivers and streams. Pollutants commonly discharged from construction sites include sediment, solid/sanitary wastes, phosphorous (fertilizer), nitrogen (fertilizer), pesticides, oil/grease, concrete truck washout, construction chemicals and construction debris. Sediment is usually the main pollutant of concern. Sediment runoff rates from construction sites are typically 10 to 20 times greater than those of agricultural lands, and 1,000 to 2,000 times greater than those of forestlands. During a short period of time, construction sites can contribute more sediment to streams than can be deposited naturally during several decades. The resulting siltation, and the contribution of other pollutants from construction sites, can cause physical, chemical, and biological harm to our nation's waters. For example, excess sediment can quickly fill rivers and lakes, requiring dredging and destroying aquatic habitats.

EPA recognizes the adverse effects of construction site runoff. The City of Hot Springs has developed and will continue to implement and enforce a program to reduce pollutants in stormwater runoff to their MS4 from construction activities that result in land disturbance. Through the implementation of this Stormwater Management Program, the city has and will continue to:

- Maintain an ordinance requiring the implementation of proper erosion and sediment controls on applicable construction sites, which includes procedures for site plan review and approval of construction plans that consider potential water quality impacts, and includes procedures for site inspection and enforcement of control measures.
- Include penalties for reported violations to ensure compliance, which are established within the ordinance.
- Establish procedures for the receipt and consideration of information submitted by the public.
- Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

OBJECTIVE

The City's Construction Site Runoff Program's objective is to reduce pollutants in stormwater runoff. The city uses the general guidance described below in order to meet its objective.

Regulatory Mechanism

The City of Hot Springs has established a construction program through the development of an ordinance that controls polluted runoff from all new commercial construction sites regardless of size, residential construction sites adjacent to water bodies which have a "potential to pollute" and projects considered to be "part of a larger common plan of development".

Site Plan Review

The City of Hot Springs' construction program includes requirements for the implementation of appropriate BMPs on construction sites to control erosion and sediment and other waste at the site. The City of Hot Springs reviews all Stormwater Pollution Prevention Plans submitted before ground is broken and a building permit is issued to determine if a construction site is in compliance with the requirements.

Within the SWPPP submittal The City of Hot Springs requires:

- *Stormwater Pollution Prevention Plan using the city's template.*
- *Stormwater QLP Site Notice or ADEQ -NOC for projects larger than 5 acres.*
- *Detention/ retention calculations and details for projects greater than 1 acre.*
- *Detention / retention maintenance agreement signed by owner.*
- *Stormwater post construction water quality plan for all new projects.*
- *Site map with details of flow, controls, buffers, areas undisturbed, etc.*
- *Project stormwater site inspector who has been certified through the City.*

Site plan review aids in compliance and enforcement efforts since it alerts the city early in the process to the planned use or no-use of proper BMPs and provides a way to track new construction activities. The tracking of sites is useful not only for the City's record keeping and reporting purposes, which are required under the NPDES storm water permit, but also for the public interested in ensuring that the sites are in compliance.

Inspections and Penalties

The city's enforcement activities will begin once construction commences to ensure BMPs are in place. The city will utilize site inspections and enforcement of control measures to deter infractions.

Inspection Procedures Include:

- An initial site inspection of the project prior to land disturbance to ensure controls and documentation are properly installed and in place.
- All permitted projects shall be inspected by the city at least once every thirty days or on a greater frequency for non-compliant projects. Monthly inspections are documented and recorded using the city's inspection form template.
- Priority site inspections based upon the construction activity, topography and soils characteristics. The inspection process will also give the city the opportunity to provide additional guidance and education and issue warnings.

Penalties and Enforcement Procedures Include:

- Projects in minor non-compliance which do not have a direct potential to pollute are first given a verbal warning and deadline for compliance.
- Projects with continued non-compliance after verbal warnings are issued a Notice of Violation (NOV). The notice outlines the violations, necessary repairs, and a deadline for compliance. This notice is mailed through certified mail and includes a minimum $50.00 administrative enforcement fee.

- Projects in non-compliance with a direct potential to pollute, land disturbance prior to permitting, or continued non- compliance after NOV are issued a Stop Work Order.
- In most situations the Stop Work Order ensures compliance with stormwater regulations, but if necessary City ordinance allows for the issuance of a criminal citation. If a citation is issued the fine is determined by the Garland County Court and can be a maximum of $1,500.00 for each violation and $250.00 for each day that violations persisted.
- DEQ will be notified for any violations resulting in a NOV, Stop Work Order, or Citation.

Information Submitted by the Public

The City of Hot Springs' construction program consists of procedures for the receipt and consideration of public inquiries, concerns, and information submitted regarding local construction activities. This further reinforces the public participation component of the city's stormwater program and helps to recognize the crucial role that the public can play in identifying instances of non-compliance. The city considers the information submitted and determines the need to follow-up and/or respond. The city will demonstrate acknowledgement and consideration of information submitted. A tracking process in which submitted public information, both written and verbal, is recorded and then given to the construction site inspector for possible follow-up.

Phase I NPDES

Phase I NPDES storm water program requires operators of construction activities that disturb five or more acres to obtain a NPDES construction stormwater permit. General permit requirements include the submission of a Notice of Intent (NOI) and the development of a storm water pollution prevention plan (SWPPP). The SWPPP must include a site description and measures and controls to prevent or minimize pollutants in storm water discharges. The Phase II Final Rule similarly regulates discharges from smaller construction sites disturbing equal to or greater than one acre and less than five acres.

Even though all construction sites that disturb more than one acre are covered nationally by an NPDES storm water permit, the construction site runoff control minimum measure for the city program is needed to induce more localized site regulation and enforcement efforts. It will also enable the city to more effectively control construction site discharges into its MS4s.

To aid operators of regulated construction sites in their efforts to comply with both local requirements and their NPDES permit, the Phase II Final Rule includes a provision that allows the NPDES permitting authority to reference a "qualifying local program" like The City of Hot Springs's program in the NPDES general permit for construction. This means that if a construction site is located in the city limits, then the construction site operator's compliance with the city's program constitutes compliance with their NPDES permit. The City of Hot Springs' Stormwater Management Program for construction is a qualifying local program since it requires a SWPPP, in addition to the requirements summarized in

this document.

The ability to reference other programs in the NPDES permit is intended to reduce confusion between overlapping and similar requirements, while still providing for both local and national regulatory coverage of the construction site. The provision allowing NPDES permitting authorities to reference other programs has no impact on or direct relation to the city's responsibilities under the construction site runoff control minimum measure profiled here.

MEASURABLE GOALS

The City of Hot Springs will utilize a 5 year integrated approach to address the requirements and intent of the Construction Site Runoff Minimum Control Measure. The integrated 5 year approach will include the following measurable goals:

- Create a stormwater maintenance ordinance. (Completed in 2005 and revised 2008)
- Adopt a stormwater maintenance ordinance, which requires erosion and sediment controls with sanctions. (Completed in 2005 and revised 2008)
- Develop and implement a site plan submittal/review process. (Completed in 2005)
- Incorporate erosion and sediment control requirements with the site plan submittal process. (Completed in 2005)
- Include requirements for submittal of required ADEQ permits for sites 5 acre and larger during submittal process. (Completed in 2005)
- Develop procedures for receipt and consideration of information submitted from the public. (Completed in 2005)
- Notify ADEQ upon validation ofreported infractions resulting in an NOV, Stop Work Order or citation. (Began in 2005)
- Develop a construction site inspection program. (Completed in 2005)
- Develop contractor site inspector certification program. (Completed in 2006)
- Establish requirements for contractors to construct and maintain erosion and sediment control measures at the construction activity. (Completed in 2005)
- Conduct education seminars for contractors on waste associated with their profession that may cause adverse impacts to water quality. (Will continue through permit term, see Public Education & Outreach)

BEST MANAGEMENT PRACTICES

BMP	Develop/implement a program to reduce pollutants in any stormwater runoff that enters the small MS4 form construction activities.
Measurable Goal	The City of Hot Springs has created, adopted and will continue to enforce a stormwater maintenance ordinance, which requires erosion and sediment controls with sanctions.
Justification	An ordinance without sanctions is traditionally ignored. The City of Hot Springs will not implement an ordinance that can't be enforced. Siltation and the contribution of other pollutants from construction sites can cause physical, chemical and biological harm to our nation's waters. A stormwater maintenance ordinance establishes the guidelines and regulations that are necessary to comply with NPDES Phase II Final Rule. This mechanism provides the city with the tool to manage and enforce its stormwater management program.

BMP	Develop/implement a program to reduce pollutants in any stormwater runoff that enters the small MS4 form construction activities.
Measurable Goal	The City of Hot Springs has developed a site plan submittal/review process for 100% of projects requiring NPDES permitting, which incorporates erosion and sediment control requirements.
Justification	The City of Hot Springs has developed a site plan submittal/review process, which incorporates erosion and sediment control requirements. Ordinances promote the public welfare by guiding, regulating, and controlling the design, construction, use and maintenance of any

development or other activity that disturbs or breaks the topsoil or results in the movement of earth on land. Erosion and Sediment Control (ESC) ordinances consist of permit application and review, and require an erosion and sediment control plan. A site plan submittal and review process assures the city that developers will design and implement appropriate erosion and sediment controls, as well as other BMP's related to construction sites.

BMP

Develop/implement a program to reduce pollutants in any stormwater runoff that enters the small MS4 form construction activities.

Measurable Goal

The City of Hot Springs includes requirements for submittal of required ADEQ permits for sites five acre and larger during submittal process.

Justification

Siltation and the contribution of other pollutants from construction sites can cause physical, chemical and biological harm to our nation's waters. ADEQ initial requirements for stormwater pollution prevention plans targeted five acre sites and larger. That has been changed to Iacre sites and larger. This is necessary to comply with NPDES Phase II Final Rule. This mechanism provides the city with another tool to help manage and enforce its stormwater management program. Since The City of Hot Springs is considered to be a Qualifying Local Program they will only require ADEQ - NOC proof of coverage for projects five acres or greater.

BMP

Develop/implement a program to reduce pollutants in any stormwater runoff that enters the small MS4 form construction activities.

Measurable Goal	The City of Hot Springs has developed procedures for receipt and consideration of information submitted by the public.
Justification	In order to provide a link between the citizens and The City of Hot Springs's government it is necessary to establish methods in which contact is available. The primary method for reporting water quality violations is a hotline for citizens to report by telephone. The city's mailing address is listed on brochures, which provide an additional means for citizens to contact the city. The City of Hot Springs has established procedures that ensure responsiveness to citizen reports. The City of Hot Springs' intent is to ensure all reports are investigated promptly and thoroughly in order to support the efforts of the citizens therefore ensuring success of the program.
BMP	Develop/implement a program to reduce pollutants in any stormwater runoff that enters the small MS4 form construction activities.
Measurable Goal	The City of Hot Springs has implemented a site plan submittal/review process, which incorporates erosion and sediment control requirements (attachment B).
Justification	The City of Hot Springs has developed a site plan submittal/review process, which incorporates erosion and sediment control requirements. Ordinances promote the public welfare by guiding, regulating, and controlling the design, construction, use and maintenance of any development or other activity that disturbs or breaks the topsoil or results in the movement of earth on land. Erosion and Sediment Control (ESC) ordinances consist of permit application and review, and require an erosion and sediment control plan. A site plan submittal and review

process assures the city that developers will design and implement appropriate erosion and sediment controls, as well as other BMP's related to construction sites.

BMP

Develop a contractor -o r i e n t e d program that reduces pollutants from entering stormwater from construction activities equal to one acre or greater to include disturbances less than one acre if part of a larger common plan of development or sale.

Measurable Goal

The City of Hot Springs will contact ADEQ upon validation of reported infractions resulting in a NOV, Stop Work Order or citation.

Justification

The success of this program depends on the cooperation and assistance of all governmental agencies. Enforcement of penalties for reported infractions requires the cooperation of all governmental agencies as well.

BMP

Develop a contractor- o r i e n t e d program that reduces pollutants from entering stormwater from construction activities equal to one acre or greater to include disturbances less than one acre if part of a larger common plan of development or sale.

Measurable Goal

The City of Hot Springs has developed a construction site inspection program.

Justification

To ensure that BMPs are properly installed it is necessary to develop procedures for site inspection and enforcement of

control measures to deter infractions. Inspector training programs can help to enforce compliance by limiting the burden of inspection for local regulatory agencies. By freeing up staff and other resources, more frequent and thorough inspections can be made.

BMP

Develop a contractor-oriented program that reduces pollutants from entering stormwater from construction activities equal to one acre or greater to include disturbances less than one acre if part of a larger common plan of development or sale.

Measurable Goal

The City of Hot Springs developed a contractor certification program.

Justification

Contractors are the individuals ultimately responsible for the proper installation and maintenance of ESC practices on construction. A contractor certification program helps to improve compliance with ESC programs and foster better relationships between contractors and regulators. This program involves training, refresher courses, periodic recertification as well as opportunities for learning new ESC technology.

BMP	Develop a contractor-oriented program that reduces pollutants from entering stormwater from construction activities equal to one acre or greater to include disturbances less than one acre if part of a larger common plan of development or sale. Require proper stormwater construction permits from ADEQ for sites five acres and larger.
Measurable Goal	The City of Hot Springs has established requirements for contractors to construct and maintain erosion and sediment control measures at the construction activity (attachment B, pages 5-8).
Justification	The City of Hot Springs recognizes that erosion and sedimentation from construction sites lead to reduced water quality and other environmental degradation. Ordinances promote the public welfare by guiding, regulating, and controlling the design, construction, use and maintenance of any development or other activity that disturbs or breaks the topsoil or results in the movement of earth on land. ESC ordinances consist of permit application and review, and require an erosion and sediment control plan.
BMP	Develop a contractor-oriented program that reduces pollutants from entering stormwater from construction activities equal to one acre or greater to include disturbances less than one acre if part of a larger common plan of development or sale. Require proper stormwater construction permits from ADEQ for sites five acres and larger.
Measurable Goal	The City of Hot Springs conducts educational seminars for contractors on waste associated with their profession that

may cause adverse impacts to water quality.

Justification

The City of Hot Springs recognizes that wastes from construction sites lead to reduced water quality and other environmental degradation. The City of Hot Springs will continue to conduct educational seminars utilizing both volunteer and city instructors to educate contractors about the impacts of waste associated with their profession on storm water discharges to water bodies and the steps that they can take to reduce pollutants in stormwater runoff.

MEASURING SUCCESS

In general, the success of the Construction Site Stormwater Runoff Control Minimum Control Measure is measured by the ratio of actively permitted projects compared to complaints and non-compliance issues investigated or cited. Annual reporting to ADEQ will include: The number of applicable sites in the MS4's jurisdiction, number of pre-construction site plan reviews performed, number and frequency of site inspections, number of violation letters issued, number of enforcement actions taken and number of complaints received and number followed up on. It is the city's intention to minimize the number of non-compliance issues through education, training, inspections, and enforcement.

RESPONSIBILITY

The City of Hot Spring's Stormwater Division will be the primary enforcement authority related to the implementation and enforcement of the Construction Site Stormwater Runoff Control Minimum Control Measure. The city engineer reviews all detention/ retention plans and calculations. Other city departments are trained to recognize violations and report them to the Stormwater Division. The city also educates and utilizes input/ complaints from citizens to aid in identifying possible stormwater violations.

Post-Construction Runoff Control

Post-construction stormwater management in areas undergoing new 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 stormwater quality management.

There are generally two forms of substantial impacts of post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in stormwater runoff. 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 kind 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 surfaces such as asphalt and concrete 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.

The City of Hot Springs' post-construction runoff program's objective is to reduce pollutants in post-construction runoff from new development and redevelopment projects that result in any land disturbance. The city's program consists of the following items in support of this objective:

- Continue to develop and implement strategies, which include a combination of structural and/or non- structural best management practices (BMPs).
- Maintain an ordinance requiring the implementation of post-construction runoff controls.
- Ensure adequate long-term operation and maintenance of controls.
- Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

OBJECTIVE

The City of Hot Springs' Post-Construction Runoff Control Program's objectives will be met through a combination of both structural and non-structural BMPS. The post-construction program is very similar to the construction site runoff program and therefore will be developed in tandem.

NON-STRUCTURAL BMPS

Planning and Procedures

Runoff problems can be addressed efficiently with sound planning procedures. Master plans, comprehensive plans, and zoning ordinances can promote improved water quality by guiding the growth of a community away from sensitive areas and by restricting certain types of growth to areas than can support it without compromising water quality.

Site-Based Local Controls

These controls can include buffer strip and riparian zone preservation, minimization of disturbance and imperviousness, and maximization of open space.

Low Impact Development (LID)

The City of The City of Hot Springs highly encourages and supports environmentally sustainable building design, construction and planning for low impact development. The city's building and planning codes allow for consideration of any developmental designs which utilize new or existing technologies for energy efficiency, water quality and conservation, air quality, land reuse, etc. Through the 2009-2014 permit term the city will continue to evaluate and establish new initiatives and incentives to promote low impact development. Some proposed examples include:

- Fast tracking LID or LEED projects through the permit and plan review process.
- Reduced building and stormwater permit cost for LID or LEED projects.
- Variances on code standards i.e. relax curb and gutter requirements to encourage use of bio swales.

STRUCTURAL BMPS

Water Quality Practices

All new construction projects regardless of size are required to submit a post construction stormwater quality plan with the SWPPP permit submittal. Although exact specifications for this requirement have not yet been determined, the city reviews each proposed plan to ensure that the quality device is sufficient to remove floatable debris down to approximately the size of a cigarette butt. The city will continue to work with local engineering firms and city officials to determine exact specifications for water quality devices. Some examples of previously approved and installed water quality devices include:

- Curb inlet filtration baskets
- Detention pond outfall trash screens
- Faircloth Skimmers
- Junction box weir walls
- Vegetated bio-swales, rain gardens & vegetated detention ponds

- "Snout" sediment & trash separator
- Vegetated buffer strips for sheet flows

Water Quality Device Maintenance Practices

A post construction water quality and/ or detention pond maintenance agreement is required to be included with the water quality and SWPPP submittal (attachment B, appendix D). This agreement outlines the required maintenance and frequency for the specific device or pond and signed by the owner of the project. The city maintains a permanent easement to water quality devices and / or detention ponds and reserves the right to perform maintenance as necessary if the owner fails to maintain the device in working condition.

Storage Practices

The City of Hot Springs' Stormwater Ordinance requires the construction and maintenance of a detention/ retention facility for all projects which disturb one acre or greater of land. Storage or detention BMPs control stormwater by gathering runoff in wet ponds, dry basins, or multi-chamber catch basins and slowly releasing it to receiving waters or drainage systems. These practices both control stormwater volume and settle out particulates for pollutant removal.

Infiltration Practices

The City of Hot Springs encourages the use of infiltration devices in all new construction and building and planning codes are designed to allow these devices upon approval of the city. Infiltration BMPs are designed to facilitate the percolation of runoff through the soil to ground water, and, thereby, resulting in reduced stormwater quantity and reduced mobilization of pollutants. Examples include infiltration basins/trenches, dry wells, and porous pavement.

Vegetative Practices

Vegetative BMPs are landscaping features that, with optimal design and good soil conditions, enhance pollutant removal, maintain/improve natural site hydrology, promote healthier habitats, and increase aesthetic appeal. Examples include grassy swales, filter strips, artificial wetlands and rain gardens.

Enforcement

The city's code and stormwater ordinance prohibit the discharge of any debris or chemicals into the storm sewer system and gives the city the authority to correct and eliminate illicit discharges through enforcement fines and citations. Restaurants, car washes, automobile repair shops, etc., are monitored to ensure adequate precautions and acceptable methods are utilized for oil disposal, dumpster locations and maintenance and wash water discharge just to name a few.

MEASURABLE GOALS

The City of Hot Springs will utilize a 5-year integrated approach to address the requirements and intent of the Post- Construction Runoff Control Minimum Control Measure. The integrated 5-year approach includes the following measurable goals:

- Maintain a stormwater maintenance ordinance, which includes post-construction runoff control measures.
- Maintain a stormwater maintenance ordinance, which includes a requirement for long term operation and maintenance of BMP's.
- Continue to develop strategies, which include a combination of structural and/or non-structural BMP's.
- Implement a program to address stormwater runoff from all new construction/redevelopment projects regardless of size and land disturbance.

BEST MANAGEMENT PRACTICES

BMP	Maintain a stormwater maintenance ordinance, which includes post-construction runoff control.
Measurable Goal	Create a stormwater maintenance ordinance, which includes post- construction runoff control measures.
Justification	Siltation and the contribution of other pollutants from construction sites can cause physical, chemical and biological harm to our nation's waters. A stormwater maintenance ordinance must address both construction and post-construction runoff control in order to comply with NPDES Phase II Final Rule. This mechanism provides the city with the tool to manage and enforce its stormwater management program.

BMP	Maintain a stormwater maintenance ordinance, which includes post-construction runoff control.
Measurable Goal	Create a stormwater maintenance ordinance, which includes a requirement for long term operation and maintenance of BMP's.
Justification	In order to ensure that long-term operation and maintenance of controls are met the city has developed a stormwater drainage manual, a stormwater ordinance and the means to enforce both.
BMP	Develop and adopt a stormwater maintenance ordinance, which includes post-construction runoff control.
Measurable Goal	Continue to develop strategies, which include a combination of structural and/or non-structural BMP's.
Justification	The City of Hot Springs's Post-Construction Runoff Control Program's objectives will be met through a combination of both structural and non-structural BMPS. The Post-Construction Runoff Control Program is very similar to the Construction Site Runoff Program and therefore will be developed in tandem.
BMP	Develop/implement/enforce a program to address stormwater runoff from new sites and redevelopment projects.
Measurable Goal	Implement a program to address stormwater runoff from new sites/redevelopment projects regardless of size and land

disturbance.

Justification

Siltation and the contribution of other pollutants from construction sites can cause physical, chemical and biological harm to our nation's waters. ADEQ initial requirements for stormwater pollution prevention plans targeted five-acre sites and larger. That has been changed to one-acre sites and larger. The City of The City of Hot Springs regulates stormwater runoff from all construction activities regardless of size. This is necessary to comply with NPDES Phase II Final Rule. This mechanism provides the city with another tool to help manage and enforce its stormwater management program.

MEASURING SUCCESS

Success of the Post-Construction Stormwater Management in New Development and Redevelopment Minimum Control Measure will be measured and achieved by the city's requirement for 100% of all new construction projects regardless of size to install and maintain a water quality device as deemed appropriate by the city's administrative authority. Annual reporting to ADEQ will include; the number of applicable sites requiring post-construction controls, number of pre-construction site plan reviews performed, number of inspections preformed to ensure as-built

per requirements, compliance rates with MS4 requirements and number of long-term operation and maintenance (O&M) plans developed and agreements in place. Due to the city's water quality requirement on all new construction these figures shall represent the total number of new construction projects within the City of Hot Springs' jurisdiction.

RESPONSIBILITY

The City of Hot Spring's Stormwater Division will be the primary administrative authority related to the implementation and enforcement of the Post-Construction Stormwater Management in New Development and Redevelopment Minimum Control Measure. The City's Planning and Building Department will also play a key role in the encouragement and continued development of initiatives, incentives and elimination of impediments for Low Impact Development.

Pollution Prevention/Good Housekeeping

The City of Hot Springs recognizes that pollution prevention/good housekeeping for city operations is a key element of its stormwater management program. This measure will require the city to examine and subsequently alter their own actions to help ensure a reduction in the amount and type of pollution that:

- Collects on streets, parking lots, open spaces, storage areas and vehicle maintenance areas and is discharged into local waterways.
- Results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems.

This measure is meant primarily to improve or protect receiving water quality by altering city or facility operations. It also can result in a cost savings for the city, since proper and timely maintenance of storm sewer systems can help avoid repair costs from damage caused by age and neglect.

The City of Hot Springs recognizes the benefits of pollution prevention practices and has developed a strategy consisting of the following:

- Continue to develop and implement an operation and maintenance program with the ultimate goal of preventing or reducing pollutant runoff from city operations into the storm sewer system.
- Continue employee training on how to incorporate pollution prevention/good housekeeping techniques into city operations such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance.
- Continue to analyze and determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

OBJECTIVE

The City of The City of Hot Springs' objective in developing a pollution prevention/good housekeeping program is to ensure that existing city, state or federal operations are performed in ways that will minimize contamination of storm water discharges. The City of The City of Hot Springs uses the general guidance described below in order to meet its objectives:

- Maintenance activities, maintenance schedules, and long-term inspection procedures for structural and non-structural controls to reduce floatables and other pollutants discharged from the separate storm sewers.
- Controls for reducing or eliminating the discharge of pollutants from areas such as roads and parking lots, maintenance and storage yards and waste transfer stations.

These controls include regular street sweeping and programs that promote recycling, minimize pesticide use and ensure the proper disposal of animal waste.

- Procedures for the proper disposal of waste removed from separate storm sewer systems and areas listed above, including dredge spoil, accumulated sediments, floatables, and other debris.
- Ways to ensure that new flood management projects assess the impacts on water quality and examine existing projects for incorporation of additional water quality protection devices or practices. The City of The City of Hot Springs will coordinate with flood control managers for the purpose of identifying and addressing environmental impacts.

The effective performance of this control measure hinges on the proper maintenance of the BMPs used, particularly for the first two bullets above. For example, structural controls, such as grates on outfalls to capture floatables, typically need regular cleaning, while non-structural controls, such as training materials and recycling programs, need periodic updating.

EMPLOYEE TRAINING

Each city facility will hold training classes and/or training during orientation for eligible employees on how to incorporate pollution prevention/good housekeeping techniques into city operations such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. An eligible employee is any new or veteran employee whose day-to-day work activities have the potential to impact stormwater quality. Eligibility is determined by each facility's department supervisor / director.

Each facility operator will also include and document stormwater training in their normal employee training program and special training for new eligible employees during orientation. Stormwater training DVDs, work books and tests are available from the Stormwater Division's educational library. Some examples of training material available include:

- "Municipal BMPs" DVD
- "Ground Control" DVD
- "Planning for the Future" DVD
- "Stormwater Compliance Training from Harrison County" DVD

Records and documentation of all training will be kept. Documentation should include at a minimum: date, department, employee name(s), training topic, length of training and test results if given.

MEASURABLE GOALS

The City of The City of Hot Springs will utilize a 5-year integrated approach to address the requirements and intent of the pollution prevention/good housekeeping Minimum Control Measure. The integrated 5-year approach will include the following measurable goals:

- Perform biennial site inspections of each city facility with regard to stormwater runoff and materials storage.
- Continue to develop and hold training classes for all eligible MS4 employees to prevent/reduce runoff from MS4 operations.
- Use available training materials in the development of employee stormwater education programs, i.e. prevent or reduce pollution from open space maintenance, new construction, land disturbances and stormwater systems.
- Continue to enforce a program to control and reduce illegal dumping.
- Implement a used oil recycling program.

BEST MANAGEMENT PRACTICES

BMP	Continue to develop and implement an operation and maintenance program that includes a training component to prevent or reduce pollutant runoff from MS4 operations.
Measurable Goal	Perform biennial site inspections of each city facility with regard to stormwater runoff and material storage. All city facilities including those already covered under an Industrial Permit shall be inspected biennially for compliance with stormwater regulations.
Justification	Municipal facilities like sanitation and fleet services can have a great impact on the quality of stormwater runoff if proper training and structural BMPs are not in place and maintained. A biennial site inspection of each city facility helps to ensure that training is being performed and updated as needed and also to ensure that BMPs are in place and maintained.

BMP	Continue to develop and implement an operation and maintenance program that includes a training component to prevent or reduce pollutant runoff from MS4 operations.
Measurable Goal	Each city facility will hold stormwater training classes for all eligible MS4 employees to prevent/reduce runoff from MS4 operations. An eligible employee is any new or veteran employee whose day-to-day work activities have the potential to impact stormwater quality.
Justification	In-house employee training programs are established to teach employees about stormwater management, potential sources of contaminants, and best management practices. Employee training programs should instill all personnel with a thorough understanding of the city's storm water pollution prevention plan, including BMPs, processes and materials they are working with, safety hazards, practices for preventing discharges, and procedures for responding quickly and properly to toxic and hazardous material incidents.
BMP	Develop and implement an operation and maintenance program that includes a training component to prevent or reduce pollutant runoff from MS4 operations.
Measurable Goal	Use available training materials in the development of employee stormwater education programs i.e. prevent or reduce pollution from open space maintenance, new construction, land disturbances and stormwater systems.
Justification	In-house employee training programs are established to teach employees about stormwater management, potential sources of contaminants, and best management practices. Employee training programs should instill all personnel with

	a thorough understanding of the city's stormwater pollution prevention plan, including BMPs, processes and materials they are working with, safety hazards, practices for preventing discharges, and procedures for responding quickly and properly to toxic and hazardous material incidents. The City of The City of Hot Springs will develop and implement an operations and maintenance program with the ultimate goal of preventing or reducing pollutant runoff from city operations into the storm sewer system.
BMP	Develop and implement an operation and maintenance program that includes a training component to prevent or reduce pollutant runoff from MS4 operations.
Measurable Goal	Continue to develop and implement a program to control and reduce illegal dumping through public education and development of a citizen reporting program.
Justification	Illegal dumping of wastes, whether solids or liquid can impair water quality particularly surface water and wells. Substances disposed of directly into storm drains can also lead to water quality impairment. The City of The City of Hot Springs' program combines citizen awareness, citizen reporting, cleanup activities and enforcement to reduce the effects of illegal dumping.

MEASURING SUCCESS

Measuring success of the Pollution Prevention/ Good Housekeeping for Municipal Operations Minimum Control Measure will be measured by the acceptance and compliance with stormwater regulations by city employees and their facilities. Biennial municipal building inspections will ensure that adequate training and maintenance of BMPs are in place. Annual reporting to ADEQ will include a summary of employee training programs implemented with the number of employees that attended and a summary of activities and procedures implemented for the operation and maintenance program.

RESPONSIBILITY

The City of Hot Springs' Stormwater Division will be the primary administrative authority related to the implementation and enforcement of the Pollution Prevention/ Good Housekeeping for Municipal Operations Minimum Control Measure. Each City facility's director/ manager will also play a key role in overseeing compliance with the Minimum Control Measure by continuing employee training and maintenance of various BMPs.

APPENDIX A

GLOSSARY

Aluminum - aluminum is a lightweight, silver-white, metallic element that makes up approximately 7 percent of the Earth's crust. Aluminum is mined in the form of bauxite ore where it exists primarily in combination with oxygen as aluminum. Aluminum is used in a variety of ways, but perhaps most familiarly in the manufacture of soft drink cans.

Aquatic Life - any indigenous species of plants or animals living in water.

Aquifer - an underground geological formation or group of formations containing usable amounts of groundwater that can supply wells and springs; an underground bed or stratum of sand, gravel, or rock that stores or conveys water below the surface of the soil.

Bacteria - single-celled microorganisms that lack chlorophyll. Some bacteria are capable of causing human, animal or plant diseases; others are essential in pollution control because they break down organic matter in the air and in the water.

Best Management Practice (BMP)- means any program, technology, process, phasing criteria, operational methods or measures, engineered systems, or practice or combination of practices determined to be the best known or most practicable means of preventing, controlling, or reducing pollution to a level compatible with water quality goals.

Clean Water Act (CWA)-Federal Water Pollution Control Act enacted in 1972 and amended by the Water Quality Act of 1987. The Clean Water Act prohibits the discharge of pollutants to waters of the United States unless the discharge is in accordance with an NPDES permit. The 1987 amendment requires that municipalities regulate industrial and construction stormwater discharges and those stemming from development.

Close the Loop - a term used to describe the last, and most important, step in the recycling process. It refers to the point when a consumer buys a recycled product after it has been put into a recycling program and reprocessed into a new item.

Coliforms - any of a number of organisms common to the intestinal tract of animals, the presence in water of which is an indicator of pollution and of potentially dangerous bacterial contamination.

Commercial Development - means any development that is not heavy industrial or residential. The category includes, but is not limited to: hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, plant nurseries, multi-apartment buildings, car wash facilities, mini-malls and other business complexes, shopping

malls, hotels, office buildings, public warehouses and other light industrial complexes.

Compost - composting is nature's way of recycling. Composting refers to a solid waste management technique that uses natural processes to convert organic materials to humus through the action of microorganisms. Compost is a mixture that consists largely of decayed organic matter and is used for fertilizing and conditioning land.

Conservation - conservation is the wise use of natural resources (nutrients, minerals, water, plants, animals, etc.). Planned action or non-action to preserve or protect living and non-living resources.

Constructed Wetlands - an artificial wetland system designed to mitigate the impacts of urban runoff.

Contractor Certification Program - a voluntary program in which the city will provide periodic seminars and training to educate contractors and other professionals on the proper procedures for installation and maintenance of erosion and sediment control measures and related matters. Refer to the City of The City of Hot Springs Best Management Practices manual for additional information.

Control - means to minimize, reduce, eliminate, or prohibit by technological, legal, contractual or other means, the discharge of pollutants from an activity or activities.

Designated Uses - those water uses identified in state water quality standards that must be achieved and maintained as required under the Clean Water Act. Uses can include cold water fisheries, public water supply, agriculture, etc.

Development - means any construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail and other non-residential projects, including public agency projects; or mass grading for future construction. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility; nor does it include emergency construction activities required to immediately protect public health and safety.

Discharge - the volume of water that passes through a given cross section of a channel or sewage outfall during a unit of time.

Discharging Directly - means outflow from a drainage conveyance system that is composed entirely or predominantly of flows from the subject property, development, subdivision, or industrial facility, and not commingled with the flows from adjacent lands.

Dissolved Oxygen (DO) - the amount of free (not chemically combined) oxygen in water; the concentration of oxygen held in solution in water, which is vital to fish and other aquatic

organisms and for the prevention of odors. It us usually measured in mg/L or expressed as a percentage of the saturation value for a given water temperature and atmospheric pressure. In general, oxygen levels decline as pollution increases.

Dissolved Solids - the total amount of dissolved material, organic and inorganic, contained in water or wastes. Excessive dissolved solids make water unpalatable for drinking and unsuitable for industrial uses.

Disturbed Area - means an area that is altered as a result of clearing, grading, and/or excavation.

Effluent - a discharge of pollutants (usually in liquid form) into the environment, partially or completely treated or in its natural state; generally used in regard to discharges into waters; liquid flowing out of a system, such as discharge of stormwater from an urban outfall, liquid waste from a factory, or water leaving a sewage treatment plant.

Erosion - the wearing away of land surfaces by the action of wind or water.

Filtration - in stormwater treatment, a common process that removes particulate matter by separating water from solid material, usually by passing it through sand.

Fossil Fuels - fossil fuels are the remains of plant and animal life that are used to provide energy by combustion; coal, oil, natural gas.

Glass - glass is a hard, brittle, generally transparent or translucent material typically formed from the rapid cooling of liquefied minerals. Most commercial glass is made from a molten mixture of soda ash, sand, and lime.

Good Housekeeping Practice - a common practice related to the storage, use, or cleanup of materials performed in a manner that minimizes the discharge of pollutants. Examples include cleaning up spills and leaks and storing materials in a manner that will contain any leaks and spills.

HOPE - type of high-density polyethylene plastic that is commonly used in milk and water jugs.

Hazardous Material - a material that is easily ignitable under ordinary temperature and pressure; readily supplies oxygen or reactive gas to a fire; is corrosive (highly acidic or caustic); is explosive or generates toxic gas; is acutely toxic to animals if it comes into contact with skin or is inhaled, eaten or drunk; or contains toxic chemicals that can be dissolved in an acidic environment, such as a landfill.

Heavy Metals - metals with high molecular weights that are of concern because they are generally toxic to animal life and health if naturally occurring concentrations are exceeded. Examples include arsenic, chromium, lead, and mercury.

Hillside - means property located in an area with known erosive soil conditions, where the development contemplates grading on any natural slope that is twenty-five percent or greater and where grading contemplates cut or fill slopes.

Household Hazardous Waste - a product that is discarded from a home or a similar source that is either ignitable, corrosive, reactive, or toxic (e.g. used motor oil, oil-based paint, auto batteries, gasoline, pesticides, etc.).

Impervious - a hard surface (such as a parking lot), which prevents or retards the entry of water into the soil, thus causing water to run off the surface in greater quantities and at an increased flow rate.

Industrial/Commercial Facility - any facility involved and/or used in the production, manufacture, storage, transportation, distribution, exchange or sale of goods and/or commodities, and any facility involved and/or used in providing professional and non-professional services.

Infiltration - means the downward entry of water into the surface of the soil or the flow of a fluid through pores or small openings, commonly used in hydrology to denote the flow of water into soil material.

Legal Authority - defined as the ability to impose and enforce statutes, ordinances, and regulations to require control of pollutant sources and regulate the discharge of pollutants to the storm drain system, and to enter into interagency agreements, contracts, and memorandums of understanding.

Litter - waste that is improperly disposed of on the street, sidewalk, lakes and other bodies of water, and in the general environment.

Maximum Extent Practicable (MEP) - standard for implementation of stormwater management programs to reduce pollutants in stormwater. MEP refers to stormwater management programs taken as a whole. It is the maximum extent possible taking to account equitable consideration and competing facts, including, but not limited to, the gravity of the problem, public health risk, societal concern, environmental benefits, pollutant removal effectiveness, regulatory compliance, public acceptance, implement ability, cost and technical feasibility. Section 402(p)(3)(B)(iii) of the Clean Water Act requires that municipal permits shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and systems, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

Municipal Separate Storm Sewer System (MS4) - conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) 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, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control or drainage district, similar entity, and Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the Clean Water Act that discharges to water of the United States.

Municipal Solid Waste - garbage or refuse that is generated by households, commercial establishments, industrial offices or lunchrooms and sludges not regulated as a residual or hazardous waste. This does not include source-separated recyclables.

New Development - means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision.

Non-point Source Pollution - water pollution caused by rainfall moving over and through ground which carries pollutants.

Non-Renewable Resource - a resource that is NOT capable of being naturally restored or replenished; a resource that is exhausted because it has not been replaced (e.g. copper) or because it is used faster than it can be replaced (e.g. oil, coal [what we call fossil fuels]). Their use as material and energy sources leads to depletion of the Earth's reserves and are characterized as such as they do not renew in human relevant periods (They are not being replenished or formed at any significant rate on a human time scale).

Non-structural BMP - a best management practice that does not require construction of a facility to control urban runoff.

NPDES - National Pollutant Discharge Elimination System initiated in 1972 by the amendments to the Federal Water Pollution Control Act (the Clean Water Act or CWA) to address the discharge of pollutants to navigable waters from point sources unless the discharge is authorized by an NPDES permit. The Water Quality Act of 1987 added section 402(p) to the CWA establishing phased and tiered requirements for stormwater discharge under the NPDES program. This manual serves to assist in meeting the requirements of the NPDES Permit.

Operator - a state, city, town or other public entity that discharges to the waters of the United States. The city of The City of Hot Springs is the operator of the small MS4 per NPDES phase II regulations, as permitted by the Arkansas Department of Environmental Quality, and is the entity responsible for implementation and enforcement of its Stormwater Management Program.

Organic - a term that refers to molecules made up of two or more atoms of carbon, generally pertains to compounds formed by living organisms.

Organism - any living plant or animal; a living body made up of cells, tissues and organs.

Packaging - the wrapping material around a consumer item that serves to contain, identify, describe, protect, display, promote, and otherwise make the product marketable and keep it clean.

Paper - a thin material made of pulp from wood, rags, or other fibrous materials and used for writing, printing, or wrapping.

Pathogen - disease-causing organisms.

Plans - a set of drawings that depicts improvements, which require permitting and/or city approval at the planning and/or public works department prior to construction.

Point Source - pollution arising from a well-defined origin, such as a discharge from an industrial plant.

Pollutant - any introduced gas, liquid, or solid that makes a resource unfit for a specific purpose. A substance that pollutes air, water or land. They are defined in Section (502) of the federal Clean Water Act (33 U.S.C. ' 1362(6)), or are incorporated into the California Water Code' 13373. Specifically, pollutants that are carried by runoff from rainstorms or other watering activities. Examples of pollutants include but are not limited to the following:

- Commercial and industrial waste (such as fuels, solvents, detergents, plastic pellets, hazardous substances, fertilizers, pesticides, slag, ash, and sludge);
- Metals such as cadmium, lead, zinc, copper, silver, nickel, and chromium; and non-metals such as phosphorus and arsenic;
- Petroleum hydrocarbons (such as fuels, lubricants, surfactants, waste oils, solvents, coolants, and grease);
- Excessive eroded soils, sediment, and particulate materials in amounts which may adversely affect the beneficial use of the receiving waters, flora, or fauna;
- Animal wastes (such as discharge from confinement facilities, kennels, pens, recreational facilities, stables, and show facilities);
- Substances having characteristics such as pH less than 6 or greater than 9, unusual coloration or turbidity, excessive levels of fecal coliform, fecal

streptococcus, or enterococcus.

Pollutant Loading - the quantity of a pollutant found in stormwater and/or urban runoff expressed in mass per unit of time. Pollutant loadings are commonly expressed in units of tons/year or pounds/year.

Pollution Prevention - eliminating or reducing at the source the use, generation, or release of toxic pollutants, hazardous substances, and hazardous wastes.

Polyethylene Terepthalate - a type of plastic used to make soft drink bottles and other kinds of food containers. PET is also used to make fabric.

Receiving Water - rivers, lakes, oceans, or other bodies that receive runoff.

Redevelopment - land-disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Where redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post development stormwater quality control requirements, the entire project must be mitigated. Where redevelopment results in an alteration to less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post development stormwater qu lity control requirements, only the alteration must be mitigated, and not the entire development. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Existing single-family structures are exempt from the redevelopment requirements.

Runoff - the portion of rainfall or irrigation water and other watering activities also known as dry-weather flows that flow across the ground surface and eventually to receiving waters. Runoff can pick up pollutants from the air or the land and carry them to receiving waters.

Sedimentation - in stormwater treatment, the settling out of solids by gravity; the addition of soils to lakes, a part of the natural aging process, making lakes shallower. The process can be greatly accelerated by human activities.

Significant Contributor - includes not only pollutant loading but also a discharge that destabilizes the physical structure of a water body such that the discharge that may exert detrimental effects on the quality and uses of that water body.

Source Control BMP - means any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices or operational practices that aim to prevent stormwater pollution by reducing the potential for contamination at the source

of pollution.

Storm Drain System - any pipe or conduit used to collect and carry away stormwater runoff from the generating source to receiving streams. A sewer that conveys household and commercial sewage is called a sanitary sewer. A storm drain transports runoff from rain or snow.

Storm Event - means a rainfall event that produces more than 0.1 inch of precipitation and that, which is separated from the previous storm event by at least 72 hours of dry weather.

Stormwater - water which originates from atmospheric moisture (rainfall or snowmelt) and falls onto land, water, or other surfaces.

Stormwater Management Program (SWMP)- Garland County's all encompassing program to meet the requirements of NPDES Phase II Final Rule.

Stormwater Pollution Prevention Plan (SWPPP) - a plan designed to eliminate or reduce at the source the use, generation, or release of toxic pollutants, hazardous substances, and hazardous wastes from entering storm waters.

Structural BMP - a best management practice that involves design and construction of a facility to mitigate the adverse impact of urban runoff the structures often require maintenance.

Surface Water - water on the earth's surface exposed to the atmospheres such as rivers, lakes, streams, and the oceans.

Suspended Solids - small particles that hang suspended in the water column and create turbid, or cloudy, conditions.

Toxicity - the quality or degree of being poisonous or harmful to plant or animal life.

Treatment - means the application of engineered systems that use physical, chemical, or biological processes to remove pollutants. Such processes include, but are not limited to, filtration, gravity settling, media absorption, biodegradation, biological uptake, chemical oxidation and UV radiation.

Treatment Control BMP - means any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

Urban Runoff- stormwater from city streets and gutters that usually contains a great deal of litter and organic and bacterial wastes.

USEPA - United States Environmental Protection Agency, the federal agency that enforces

federal regulations and administers federal programs such as the NPDES program. These regulations require the discharges from defined municipal separate storm drain systems, industrial facilities, and construction activities to comply with the NPDES permit conditions intended to reduce or eliminate the discharge of pollutants from stormwater drainage systems. In California, the USEPA has delegated its authority to issue NPDES permits to the State Water Resource Control Board and the nine Regional Water Quality Control Boards.

Water Pollution - the addition of sewage, industrial wastes, or other harmful or objectionable material to water in sufficient quantities or concentrations to result in measurable degradation of water quality.

Water Quality Criteria - the levels of pollutants that affect the suitability of water for a given use. Generally, water use classifications include public water supply, recreation, propagation of fish and other aquatic life, agricultural use, and industrial use.

Water Quality Standard - acceptable limits on water quality parameters-those criteria set by the State of California, for instance, with review by the EPA, so that when enforced they will meet the goals of the Clean Water Act.

Watershed - area drained by a given stream; an area bounded peripherally by a water divide and draining to a particular water course or body of water. Topography is the primary determinant of watershed boundaries.

Wetland - swamps or marshes, especially areas preserved for wildlife. Wetlands are crucial wildlife habitats and are important for flood control and maintaining the health of surrounding ecosystems.

Wet Pond - pond for urban runoff management that is designed to detain urban runoff and always contain water.

APPENDIX B

CITY FACILITIES

Airport

Hot Springs Memorial Field 525 Airport Road
Airport Terminal Building, 525 Airport Road
Hot Springs Office and Technology Park, Fiber Optic Circle

Hot Springs Municipal Building

Hot Springs Municipal Building, 133 Convention Boulevard
- Board Chambers
- City Manager
- Deputy City Manager/City Clerk Human Resources
- Planning & Development
  - Planning Division
  - Code Compliance Division
  - Community Safety Division
- Public Works
- Engineering Division
- Public Information

City Services Complex

Service Complex Main Gate, 639 Shady Grove Road
Fleet Fuel Island, 118 Fuel Lane
Fleet Truck Wash, 208 A Scalehouse Lane
Fleet Service, 412 Leawood
Fleet Service Surplus Lot, 208 B Scalehouse Lane
Sanitation Commercial Operations Center, 238 Scalehouse Lane
Pre-wash Rack, 125 Scalehouse Lane
Sanitation Scalehouse, 211 Scalehouse Lane
Sanitation Transfer Station, 213 Services Lane
Sanitation Weld Shop, 248 B Services Lane
Sanitation Paint Shop, 254 Services Lane
Street Division Carpenter Shop, 248 A Services Lane
Street Division Covered Storage, 228 Services Lane
Street Division Office, 214 Services Lane
IT Operations Center, 134 Fuel Lane
IT Vehicle Storage, 133 Fuel Lane

District Court

Garland County Courts Building, 607 Ouachita

Finance

Hot Springs Financial Services Building, 349 Malvern Avenue

- Finance
  - Accounting Division
  - Billing Division
  - Customer Service Division
- Purchasing / Treasurer
  - City Treasurer
  - Purchasing
  - Revenue Collection

Fire

Central Fire Station (Station No. 1), 310 Broadway
Park Avenue Fire Station (Station No. 3), 758 Park Avenue
Airport Road Fire Station (Station No. 4), 523 Airport Road
Lakeshore Drive Fire Station (Station No. 6), 220 Lakeshore Drive
Golf Links Road Fire Station (Station No. 7), 1311 Golf Links Road

Hot Springs Intracity Transit

Intracity Transit office, Transportation Depot, 100 Broadway Terrace
IT Operations Center, 134 Fuel Lane, City Services Complex
IT Vehicle Storage, 133 Fuel Lane, City Services Complex

Municipal Annex

Municipal Annex, 111 Opera St

- Parks & Recreation - Suite A
- Municipal Annex Conference Room
- Information Systems - Suite C

Municipal Utilities

Utility Administration, 111 Opera, Suite B

- Utility Engineering
- Water Division
- Wastewater Division

Utility Service Center, 795 Adams
Wastewater Lift, 775 Adams
Wastewater Collection, 745 Adams
Utility Service Center, 798 Adams
Utilities Customer Service, 795 Adams

Utilities Motor Shop, 795 Adams
Utilities Inventory Materials, 775 Adams
Central Wastewater Treatment Plant, 320 Davidson Drive
Lakeside Water Plant, 300 Pineland Drive
Ouachita Water Plant, 860 Cozy Acres Compost Facility, 318 Davidson Drive

Parks & Recreation

Administration - 111 Opera, Suite A
Parks Maintenance - 236 Davidson Drive
Hot Springs Youth Center - 228 Orange Street
City Parks:

- Carpenter Dam Park, 1398 Carpenter Dam Road
- Kenneth Adair Memorial Park, 358 Central Avenue
- Chattanooga Park, 530 Chattanooga Street
- DeSoto Park, 1700 Park Avenue
- Entergy Park, 1400 Carpenter Dam Road
- Family Park, 215 Family Park Road
- Hill Wheatley Park, 688 Majestic Lodge Road
- Hollywood Park, 411 Hollywood
- Jonestown Community Park, 302 Hobson Avenue
- Kimery Park, 271 Kimery Lane
- Linden Park, 381 Walnut Street
- Transportation Plaza Trail, 100 Broadway Terrace Valley Street
- Skatepark, 411 Valley Street
- Wade Street Park, 300 Wade Street
- Whittington City Park, 1201 Whittington Avenue
- Hot Springs Creek Greenway, Phase I
- Friendship Park Jaycee Trail

Planning & Development

Hot Springs Municipal Building

- Code Compliance Division
- Community Safety Division
- Planning Division

Police Department

Police Department 641 Malvern Avenue
Animal Services Division, 319 Davidson Drive

Public Works

Street Division, City Services Complex, 214 Services Lane
Stormwater Division, 100 Broadway Terrace

Traffic Division, 111 Cedar Street
Property Maintenance Division, 433 Oaklawn

Sanitation

Sanitation Administration, 218 Runyon
Sanitation Recycling Center, 218 Runyon
Sanitation Residential Operations Center, 121 Utility
Sanitation Commercial Operations Center, 238 Scalehouse Lane
Sanitation Paint Shop, 254 Services Lane
Sanitation Weld Shop, 248-B Services Lane
Sanitation Transfer Station, 213 Services Lane
Sanitation Scalehouse, 211 Scalehouse Lane

Transportation

Intracity Transit, 100 Broadway Terrace

Other Facilities

Exchange Street Parking Plaza, 128 Exchange Street
Exchange Street surface parking lot
Civic Center parking lots
Church Street lot
Gulpha Street West lot
Gulpha Street East lot
Laurel Street lot
Palm Street West lot
Palm Street East lot

Appendix C
Stormwater Ordinance

TITLE 15: BUILDING AND CONSTRUCTION

CHAPTER 13 STORMWATER MANAGEMENT[1]

ARTICLE I. STORMWATER MANAGEMENT IN GENERAL

DIVISION I. GENERAL PROVISIONS

15-13-1. Stormwater management ordinance—Adoption.

The following regulations, designed to lessen or deter hazards to persons, property and the environment caused by increased runoff, obstructions to drainage and introduction of excessive silts, debris and pollutants into the drainage system, lakes, ponds, streams, rivers and other water bodies in the City of Hot Springs, and to otherwise promote the public health, safety and welfare of the public are hereby adopted and this chapter may be referred to as the "Hot Springs Stormwater Management Ordinance."

15-13-1.1. Introduction and findings.

The board of directors finds that uncontrolled stormwater runoff from developed land adversely affects the public health, safety and welfare because:

(1) Impervious surfaces increase the quantity and velocity of surface runoff, which reduces percolation of water through soil and increases erosion and flooding;

(2) Improper stormwater collection and conveyance adversely affects property and increases the incidence and severity of flooding, which can endanger property and human life;

(3) Increased erosion leads to sedimentation in stormwater management systems, which decreases the system's capacity; and

(4) Many future problems can be avoided if land is developed in accordance with sound stormwater runoff management practices.

15-13-1.2. Purpose and definitions.

(a) The purpose of this chapter is to set forth the minimum requirements for construction site erosion control and stormwater management associated with both future land development and existing developed land within the city. These requirements will diminish threats to public health, safety, public and private property and natural resources of the City of Hot Springs by establishing performance standards that:

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[1]Editor's note(s)—The Stormwater Management Program adopted by Resolution No 7340 is on file in the office of the city clerk.

§ 16-4-1, Subdivision Code.

(1) Protect life and property from dangers associated with flooding;

(2) Protect public and private property from damage resulting from runoff or erosion;

(3) Ensure the annual runoff rates and volumes from post development site conditions mimic the annual runoff rates and volumes from pre-development site conditions;

(4) Ensure the site design minimizes the generation of stormwater and maximizes pervious areas for stormwater treatment;

(5) Promote regional stormwater management by watershed;

(6) Provide a single, consistent set of performance standards that apply to all developments;

(7) Protect water quality from nutrients, pathogens, toxic matters, debris and other contaminants;

(8) Promote infiltration and groundwater recharge;

(9) Provide a vegetated corridor (buffer) to protect water resources from development;

(10) Protect functional values of natural water courses and wetlands;

(11) Provide plant and animal habitat and support riparian ecosystems;

(12) Achieve an 80 percent reduction in sediment load rates to the City of Hot Springs waters compared to no controls for all new development, a 40 percent reduction in sediment load rates compared to no controls for all redevelopment and street reconstruction, and a 20 percent reduction in sediment load rates compared to no controls for existing developments;

(13) Minimize sedimentation to the water resources of the City of Hot Springs;

(14) Protect functional values of natural water courses and wetlands;

(15) Protect public and private property from damage resulting from runoff or erosion;

(16) Control soil erosion and sedimentation to minimize soil deposition in streams and other receiving water bodies and storm drainage systems;

(17) Require implementation of best management practices to minimize the discharge of chemicals and other illicit discharges and pollutants, either directly or indirectly into the streams, rivers, lakes and other bodies of water; and into the city's drainage infrastructure; and

(18) Assuring the City of Hot Springs is and will remain in compliance with federal and state law.

(b) The application of this chapter and the provisions expressed herein shall be the minimum stormwater management requirements and shall not be deemed a limitation or repeal of any other powers granted by state statute. In addition, if site characteristics indicate that complying with these minimum requirements will not provide adequate designs or protection for local property or residents, it is the designer's responsibility to exceed the minimum requirements as necessary.

(c) Enforcement and administration of this chapter shall be the responsibility of such office(s) or officer(s) as designated by the city manager, hereinafter termed administrative authority. The administrative authority may appoint such inspectors and assistants as necessary to assist in the performance of these duties. The administrative authority shall also be responsible to address other stormwater issues as they relate to the city's compliance with its Small MS4 Stormwater Permit as issued by DEQ to the City of Hot Springs.

(d) *Definitions.* As used in the Stormwater Management Ordinance, the following words and phrases shall have the following meanings:

Best management practices (BMPs) means erosion and sediment control and water quality management practices that are the most effective and practicable means of controlling, preventing, and minimizing degradation of surface water, including avoidance of impacts, construction-phasing, minimizing the length of time soil areas are exposed, prohibitions, engineered systems, programs and other management practices published by state or designated area-wide planning agencies.

Bio-retention means:

(1) An engineered process to manage stormwater runoff, using the chemical, biological and physical properties afforded by a natural, terrestrial-based community of plants, microbes and soil. Bioretention provides two important functions: water quantity (flood) controls; and improves water quality through removal of pollutants and nutrients associated with runoff.

(2) A method used for flow detention by utilizing infiltration. This method is normally used in small areas.

C.H.S. (CHS) means the City of Hot Springs.

City engineer means the civil engineer responsible for directing the city engineering department in the execution of its duties.

City engineering department means the department responsible for all stormwater management activities and implementation of the provisions of this chapter.

Collector and arterial streets and highways. These are certain streets as depicted on the latest City of Hot Springs Master Street Plan Map for a particular design capacity and purpose.

Commercial development means any development that is not heavy industrial or residential. The category includes, but is not limited to: hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, plant nurseries, multi-apartment buildings, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses and other light industrial complexes.

Common plan of development means a contiguous area where multiple separate and distinct land disturbing activities may be taking place at different times, on different schedules, but under one proposed plan. One plan is broadly defined to include design, permit application, advertisement or physical demarcation indicating that land-disturbing activities may occur.

Constructed wetlands means an artificial wetland system designed to mitigate the impacts of urban runoff.

Construction activity. For this permit, construction activity includes construction activity as defined in 40 C.F.R. part 122.26(b)(14)(x) and small construction activity as defined in 40 C.F.R. part 122.26(b)(15). This includes a disturbance to the land that results in a change in the topography, existing soil cover (both vegetative and non-vegetative), or the existing soil topography that may result in accelerated stormwater runoff, leading to soil erosion and movement of sediment into surface waters or drainage systems. Examples of construction activity may include clearing, grading, filling and excavating. Construction activity includes the disturbance of less than one acre of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb one acre or more.

Construction site erosion control means preventing or reducing soil erosion and sedimentation from land disturbing activity.

Contractor certification program means a voluntary program in which the city will provide periodic seminars and training to educate contractors and other professionals on the proper procedures for installation and maintenance of erosion and sediment control measures and related matters. Refer to the City of Hot Springs Best Management Practices manual for additional information.

Debris means any material including floating woody materials and other trash, suspended sediment, or bed load, moved by a flowing stream.

Detention means the temporary detaining or storage of floodwater in reservoirs, on parking lots, on rooftops and other areas under predetermined and controlled conditions and accompanied by controlled release of the stored water.

Detention basin means an open excavation or depression in the ground surface used for temporary storage of stormwater prior to release downstream.

Detention pond means a stormwater detention facility which maintains a fixed minimum water elevation between runoff events except for the lowering resulting from losses of water due to infiltration or evaporation.

Detention/retention maintenance plan means pre- and post-construction maintenance is the responsibility of the owner or property owners association. Timing and methods must be described in the maintenance plan. Maintenance responsibilities include: sediment removal, outlet cleaning, mowing, herbicide spraying, litter control, and routine inspections.

Develop land means to change the runoff characteristics of a parcel of land in conjunction with residential, commercial, industrial, or institutional construction or alteration.

Developer means any person or entity proposing building or land improvements.

Development means any construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail and other nonresidential projects, including public agency projects; or mass grading for future construction. It does not include routine maintenance to maintain original line and grade, hydraulic capacity. Or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety.

Development should generally mean any of the following actions undertaken by a public or private individual or entity:

(1) The division of a lot, tract or parcel of land into two or more lots, plots, sites, tracts, parcels or other divisions by plat or deed, or

(2) Any land change, including, without limitation, clearing, tree removal, grubbing, stripping, dredging, grading, excavating, transporting and filling of land.

Disturbed area means an area that is altered as a result of clearing, grading, and/or excavation.

Drainage area all land area that contributes runoff to the same discharge point.

Drainage basin all land area contributing to a given discharge point in terms of drainage.

Drainage easement means authorization by a property owner for use by another party or parties for all or any portion of his/her land for a drainage and adjoining utility purposes. Easements shall be dedicated to the city when required or approved by the administrative authority.

Drainage pipe means drainage conduit, which carries stormwater flows in either a closed stormwater sewer system or culverts. RCP, CMP and HDPE are some common drainage pipes used throughout the state.

Duplex means two housing units that share a common wall.

Easement shall mean a grant or reservation by the owner of land for the use of such land by others for a specific purpose or purposes, and which must be included in the conveyance of land affected by such easement.

Elevation or *elevations* means all required elevations shall be based on mean sea level datum.

Emergency flood insurance program or *emergency program* means the program as implemented on an emergency basis in accordance with the NFIP. It is intended as a program to provide a first layer amount of insurance on all insurable structures before the effective date of the initial FIRM.

Engineer means a person who is a registered professional engineer in the State of Arkansas.

Engineer of record means a registered professional engineer in Arkansas. This engineer shall supervise the design and construction of the development project and shall be acceptable to the city engineer.

Erosion means the wearing away of land surfaces by the action of wind or water.

Erosion prevention means measures employed to prevent erosion including, but not limited to: soil stabilization practices, limited grading, mulch, temporary or permanent cover and construction phasing.

Excavation means any act by which organic matter, earth, sand, gravel, rock or any other similar material is cut into, dug, quarried, uncovered, removed, displaced, relocated or bulldozed and shall include the resulting conditions.

Existing development means buildings and other structures and impervious areas existing prior to ordinance adoption.

Existing structure means for the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date.

Fill means any act by which earth, sand, gravel, rock or any other material is deposited, placed, replaced, pushed, dumped, pulled, transported, or moved to a new location and shall include the resulting conditions.

Final stabilization means that either:

(1) All soil disturbing activities at the site have been completed and a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 80 percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed; or

(2) For individual lots in residential construction by either: (a) The homebuilder completing final stabilization as specified above, or (b) the homebuilder establishing temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for, and benefits of, final stabilization; or

(Homeowners typically have an incentive to put in the landscaping functionally equivalent to final stabilization as quick as possible to keep mud out of their homes and off sidewalks and driveways.); or

(3) For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land) final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to surface waters and drainage systems, and areas which are not being returned to their preconstruction agricultural use must meet the final stabilization criteria in (1) or (2) above.

Freeboard means the vertical clearance of the lowest structural member of the bridge superstructure above the water surface elevation of the overtopping flood; the vertical distance between the level of the water surface usually corresponding to the design flow and a point of interest such as levee top or specific location on the roadway grade.

General contractor means the party who signs the construction contract with the owner to construct the project described in the final plans and specifications. Where the construction project involves more than one contractor, the general contractor will be the party responsible for managing the project on behalf of the owner. In some cases, the owner may be the general contractor. In these cases, the owner may contract an individual as the operator who would become the co-permittee.

Good housekeeping practice means a common practice related to the storage, use, or cleanup of materials performed in a manner that minimizes the discharge of pollutants. Examples include cleaning up spills and leaks and storing materials in a manner that will contain any leaks and spills.

Grading shall mean excavating, filling (including hydraulic fill), or stockpiling of earth material, or any combination thereof, including the land in its excavated or filled condition.

Household hazardous waste means a product that is discarded from a home or a similar source that is either ignitable, corrosive, reactive, or toxic (e.g. used motor oil, oil-based paint, auto batteries, gasoline, pesticides, etc.).

Illegal discharge means any direct or indirect non-stormwater discharge to the storm drain system, except as exempted in this chapter.

Illegal/illicit connections. An illicit connection is defined as either of the following:

(1) Any drain or conveyance, whether on the surface of subsurface, which allows illegal discharge to enter the storm drain system including, but not limited to, any conveyances which allow any non-stormwater discharge including, sewage, process wastewater, and wash water to enter the storm drain system and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency or,

(2) Any drain or conveyance connected from and commercial or industrial land use to the storm drain system which has not been documented in plans, maps or equivalent records and approved by an authorized enforcement agency.

Impervious means a hard surface (such as a parking lot), which prevents or retards the entry of water into the soil, thus causing water to run off the surface in greater quantities and at an increased flow rate. Examples include rooftops, sidewalks, patios, driveways, parking lots, storage areas, and concrete, asphalt, or gravel roads.

Infiltration means the downward entry of water into the surface of the soil or the flow of a fluid through pores or small openings, commonly used in hydrology to denote the flow of water into soil material.

Legal authority is defined as the ability to impose and enforce statues, ordinances, and regulations to require control of pollutant sources and regulate the discharge of pollutants to the storm drain system, and to enter into interagency agreements, contracts, and memorandums of understanding.

Litter means waste that is improperly disposed of on the street, sidewalk, lakes and other bodies of water, and in the general environment.

Municipal separate storm sewer system (MS4) means conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) 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, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control or drainage district, similar entity, and Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the Clean Water Act that discharges to water of the United States.

Natural waterways shall mean waterways that are part of the natural topography. They usually maintain a continuous or seasonal flow during the year and are characterized as being irregular in cross-section with a meandering course. Construction channels such as drainage ditches shall not be considered natural waterways.

New structure means structures for which the start of construction commences on or after the effective date of these regulations.

Non-stormwater discharge means any discharge to the storm drain system that is not composed entirely of stormwater.

Non-structural BMP means a best management practice that does not require construction of a facility to control urban runoff.

Notice of intent (NOI) means application form for obtaining coverage under a General Stormwater Permit for construction activities that disturbs one or more acres or for industrial activities.

Notice of termination means a notice to terminate coverage under this permit after construction is complete, the site has undergone final stabilization, and maintenance agreements for all permanent facilities have been established, in accordance with all applicable conditions of this permit.

NPDES means the National Pollutant Discharge Elimination System initiated in 1972 by the amendments to the Federal Water Pollution Control Act (the Clean Water Act or CWA) to address the discharge of pollutants to navigable waters from point sources unless the discharge is authorized by an NPDES permit. The Water Quality Act of 1987 added section 402(p) to the CWA establishing phased and tiered requirements for stormwater discharge under the NPDES program.

Owner means the person or party possessing the title of the land on which the construction activities will occur; or if the construction activity is for a lease holder, the party or individual identified as the lease holder; or the contracting government agency responsible for the construction activity.

Permittee means:

(1) A person, partnership or corporation to whom a permit is granted.

(2) A person or persons, firm, or governmental agency or other institution that signs the application submitted to AEDQ and is responsible for compliance with the terms and conditions of this permit.

Person responsible for the land distributing activity means the person who has or represents having financial or operation control over the land disturbing activity; and/or the landowner or person in possession or control of the land who directly or indirectly allowed the land disturbing activity or has benefitted from it or who has failed to comply with any provision of this chapter.

Point source means pollution arising from a well-defined origin, such as a discharge from an industrial plant.

Pollutant means any introduced gas, liquid, or solid that makes a resource unfit for a specific purpose. A substance that pollutes air, water or land. They are defined in Section (502) of the federal Clean Water Act (33 U.S.C. § 1362(6)). Specifically, pollutants that are carried by runoff from rainstorms or other watering activities. Examples of pollutants include, but are not limited to, the following:

(1) Commercial and industrial waste (such as fuels, solvents, detergents, plastic pellets, hazardous substances, fertilizers, pesticides, slag, ash, and sludge);

(2) Metals such as cadmium, lead, zinc, copper, silver, nickel, and chromium; and non-metals such as phosphorus and arsenic;

(3) Petroleum hydrocarbons (such as fuels, lubricants, surfactants, waste oils, solvents, coolants, and grease);

(4) Excessive eroded soils, sediment, and particulate materials in amounts which may adversely affect the beneficial use of the receiving waters, flora, or fauna;

(5) Animal wastes (such as discharge from confinement facilities, kennels, pens, recreational facilities, stables, and show facilities);

(6) Substances having characteristics such as pH less than six or greater than nine, unusual coloration or turbidity, excessive levels of fecal coliform, fecal streptococcus, or enterococcus.

Post-development refers to the extent and distribution of land cover types anticipated to occur under conditions of full development of the submitted plan. This term is used to match pre- and post-development stormwater peak flows as required by the ordinance.

Pre-developed conditions means those land use conditions that existed prior to the initiation of the land disturbing activity in terms of topography, vegetation, or land use and rate, volume, or direction of stormwater runoff.

Pre-development refers to the extent and distribution of land cover types present before the initiation of land development activity, assuming that all land uses prior to land disturbing activity and in "good" condition as described in the Natural Resources Conservation Service Technical Release 55, Urban Hydrology for Small Watersheds" (commonly known as TR-55). This term is used to match pre- and post-development stormwater peak flows as required by the ordinance. In a situation where cumulative impervious surface created after the adoption of this chapter exceeds the 20,000 square feet threshold, the pre-development conditions shall be those prior to any land disturbance.

Raingarden means: (1) Shallow depressions designed to collect rain on the site - typically runoff from impervious surfaces such as roofs - and allow plants, bacteria and soils to clean the water as it seeps into the ground. (2) A strategically located low area planted with native vegetation that intercepts runoff. Other terms include mini-wetland, stormwater garden, water quality garden, stormwater marsh, backyard wetland or bioretention pond.

Receiving water means rivers, lakes, oceans, or other bodies that receive runoff.

Redevelopment means land-disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Where redevelopment results in an alteration to more than 50 percent of impervious surfaces of a previously existing development, and the existing development was not subject to post development stormwater quality control requirements, the entire project must be mitigated. Where redevelopment results in an alteration to less than 50 percent of impervious surfaces of a previously existing development, and the existing development was not subject to post development stormwater quality control requirements, only the alteration must be mitigated, and not the entire development. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Existing single family structures are exempt from the redevelopment requirements.

Registered landscape architect means a landscape architect properly registered and licensed to conduct work within the State of Arkansas.

Registered land surveyor means a land surveyor properly registered and licensed to conduct work within the State of Arkansas.

Registered professional engineer shall mean a professional engineer properly registered and licensed to conduct work within the State of Arkansas.

Regulatory floodway means the floodplain area that is reserved in an open manner by federal, state or local requirements, i.e., unconfined or unobstructed either horizontally or vertically, to provide for the discharge of the base flood so that the cumulative increase in water surface elevation is no more than a designated amount (not to exceed one foot as established by the Federal Emergency Management Agency (FEMA) for administering the National Flood Insurance Program).

Retention structure means a permanent structure whose primary purpose is to permanently store a give volume of stormwater runoff. Release of the given volume is by infiltration and/or evaporation.

Riparian buffer means a natural or vegetated area adjacent to streams and perennial water bodies through which stormwater flows in a diffuse manner, so that runoff does not become channelized and which provides for the infiltration of runoff and filtering of pollutants. The riparian buffer is measured landward (horizontal distance) from the stream bank on both sides of the stream or from the normal pool elevation of a perennial water body.

Riverine means relating to, formed by, or resembling a river (including tributaries), stream, book, etc.

Runoff means the portion of rainfall or irrigation water and other watering activities also known as dry-weather flows that flow across the ground surface and eventually to receiving waters. Runoff can pick up pollutants from the air or the land and carry them to receiving waters.

Sediment means:

(1) Fragmentary material that originates from weathering of rocks and is transported by, suspended in, or deposited by water.

(2) Solid earth material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity or ice, and has come to rest on the earth's surface at a different site.

Sediment control means methods employed to prevent sediment from leaving the site. Sediment control practices include silt fences, sediment traps, earth dikes, drainage swales, check dams, subsurface drains, pipe slope drains, storm drain inlet protection, and temporary or permanent sedimentation basins.

Stormwater means water which originates from atmospheric moisture (rainfall or snowmelt) and falls onto land, water, or other surfaces.

Stormwater management plan means the set of drawings and other documents that comprise all of the information and specifications for the drainage systems, structures, concepts and techniques that will be used to control stormwater as required by this chapter and the stormwater management manual. Also included are the supporting engineering calculations and results of any computer analysis.

Stormwater management manual means the set of drainage policies, analysis methods, design charts, stormwater runoff methods, and design standards used by the city as the official design guidelines for drainage improvements consistent with this chapter. Any modifications will be made by the administrative authority consistent with the stated policies and intent of the ordinance.

Stormwater pollution prevention plan (SWPPP) means a plan designed to eliminate or reduce at the source the use, generation, or release of silts, toxic pollutants, hazardous substances, and hazardous wastes from entering stormwaters.

Stormwater runoff means water that results from precipitation which is not absorbed by the soil, evaporated into the atmosphere or entrapped by ground surface depressions and vegetation, which flows over the ground surface.

Stream means a body of running water.

Triple fee refers as to this chapter as three times the original cost of a permit which may be imposed on construction sites that have started land disturbance activities without approval or permits from the administrative authority.

Urban forestry means:

(1) The management of trees for their contribution to the physiological, sociological, and economic well-being of urban society. Urban forestry deals with woodlands, groups of trees, and individual trees, where people live - it is multifaceted, for urban areas it includes a great variety of habitats (streets, parks, derelict corners, etc.) where trees bestow a great variety of benefits and problems.

(2) The art, science and technology of managing trees, forests, and natural systems in and around urban areas for the health and well being of communities.

Waters of the state means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof. The definitions of certain words and phrases as used throughout this chapter are included in Appendix A hereof.

DIVISION II. STORMWATER CONCEPT AND PLAN

15-13-1.3. Performance standards and design criteria.

(a) The City of Hot Springs Stormwater Management Manual, as adopted by this chapter, shall be the source for design criteria and performance standards with respect to stormwater management.

(b) Stormwater concept and stormwater management plans and design reports that are incidental to the overall or ongoing site design shall be prepared and certified by an engineer, landscape architect, or a soil and erosion control specialist with sufficient training and education in erosion control prevention and with approval by the administration authority. In addition, the person must verify that the plans have been designed in accordance with this chapter and the standards and criteria stated or referred to in this chapter.

15-13-1.4. Stormwater management permit.

The stormwater management permit does not authorize:

(1) Discharges mixed with sources of non-stormwater unless the non-stormwater discharges are determined not to be a significant contributor of pollutants as defined in Part VII of the Arkansas General Permit No. ARR040000 to waters of the United States;

(2) Stormwater discharges associated with industrial activity as defined in 40 CFR 122.26(b)(14)(I)-(ix) and (xi), except as allowed under Part I.B.2.b;

(3) Stormwater discharges associated with construction activity as defined in 40 CFR 122.26(b)(14)(x) or 40 CFR 122.26(b)(15), except as allowed under Part I.B.2.a;

(4) Stormwater discharges currently covered under an individual or other general NPDES permit;

(5) Stormwater discharges whose direct, indirect, interrelated, interconnected, or interdependent impacts would jeopardize a listed endangered or threatened species or adversely modify designated critical habitat as defined by the U.S. Fish & Wildlife Services (USF&WS). http://endangered.fws.gov/ ;

(6) Stormwater discharges or implementation of the stormwater management plan, which adversely affect properties listed or eligible for listing in the National Register of Historic Places, unless you are in compliance with requirements of the National Historic Preservation Act and have coordinated any necessary activities to avoid or minimize impacts with the appropriate State Historic Preservation Officer;

(7) Stormwater discharges that will cause or contribute to non-attainment of water quality standards, including failure to protect and maintain existing designated uses of receiving waters. DEQ may require an application for an individual NPDES permit to authorize discharges of stormwater from any activity that DEQ determines to cause or makes a contribution to exceed a water quality standard or that DEQ determines to cause or contribute to the loss of a designated use of receiving waters;

(8) Discharges to waters for which there is an approved total maximum daily load and/or implementation plan (TMDL/IP) addressing discharges of stormwater associated with MS4s, unless the MS4 operator develops and certifies a SWMP that is consistent with the assumptions and allocations in the approved TMDL/IP. To be eligible for coverage under this general permit, operators must incorporate into their SWMP any conditions applicable to their discharges necessary for consistency with the assumptions and allocations of the TMDL/IP within any time frames established in the TMDL/IP. If a specific numeric waste load allocation has been established that would apply to the project=s discharges, the operator must incorporate that allocation into its SWMP and implement necessary steps to meet that allocation. Information regarding existing and proposed TMDLs can be obtained from the Water Quality Section of the DEQ Water Division at (501) 682-0660 or from the DEQ website at the following address: http://www.adeq.state.ar.us/water/planning/ ;

(9) Stormwater discharges which are prohibited for permitting in 40 CFR 122.4 of the federal regulation.

15-13-1.5. Stormwater submittal requirements.

(a) Large, and small construction sites as described below are required to submit the following documents prior to any earth moving activities:

(1) Stormwater management plan.

(2) Stormwater pollution prevention plan (SWPPP).

(3) Stormwater detention/retention plan (includes maintenance plan).

(4) Stormwater quality plan.

(5) A copy of the approved DEQ NPDES permit.

(b) Special construction sites as described below are required to submit the following documents prior to any earth moving activities:

(1) Post on-site (CHS) stormwater construction notice.

(2) Develop stormwater pollution prevention plan (SWPPP).

(3) Submit copy of SWPPP to CHS prior to construction for review.

(4) Use best management practices (BMPs) to reduce runoff.

(5) Maintain SWPPP on-site and inspect stormwater controls weekly.

(6) Remove all unnecessary BMPs after final stabilization.

(7) Maintain a solid waste dumpster located at the site to properly dispose of building materials and solid waste.

(c) Construction sites are defined as follows:

(1) Large construction sites include any construction sites that will result in the disturbance (e.g., clearing, grading, excavating, etc.) of five or more acres of total land area.

(2) Small construction sites include any construction activity that will result in the disturbance (e.g., clearing, grading, excavating, etc.) of greater than or equal to one acre and less than five acres of total land area or less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb one acre or more, but less than five acres. Provided, however, that any new commercial construction site under one acre which includes construction activity that will result in the disturbance (e.g, clearing, grading, excavating, etc.) will meet the requirements of a small construction site.

(3) *Special construction sites:* Any construction activity that meets the following definition:

a. Any construction activity (e.g., clearing, grading, excavating, etc.) less than one acre of land with the potential to pollute, which is adjacent to any lake, stream, tributary, creek or other flowing body of water.

b. Road, pipeline, and utility maintenance activities are not regulated under this permit unless one or more acres of underlying and/or surrounding soil are cleared, graded or excavated as part of the operation.

c. Road, pipeline and utility maintenance activities are regulated when bordering lakes or streams under either the small, medium or large construction site category.

15-13-1.6. Stormwater and urban runoff pollution control.

(a) *Illegal dumping/disposal.* No person shall throw, deposit, place, leave, maintain, or keep or permit to be thrown, placed, left, maintained or kept, any refuse, rubbish, garbage, or any other discarded or abandoned objects, articles, or accumulations, in or upon any street, alley, sidewalk, storm drain, inlet, catch basin, conduit or drainage structure, business place, or upon any public or private plot of land in the city, so that the same might be or become a pollutant, except in containers, recycling bags, or other lawfully established waste disposal facility.

(b) *Disposal in storm sewer.* No person shall intentionally dispose of grass, leaves, dirt, or other landscape debris into a water resource buffer, street, road, alley, catch basin, culvert, curb, gutter, inlet, ditch, natural watercourse, flood control channel, canal, storm drain or any fabricated natural conveyance.

(c) *Illicit discharges and connections.* No person shall cause any illicit discharge to enter the municipal stormwater system unless such discharge: (1) consists of non-stormwater that is authorized by an NPDES point source permit; or (2) is associated with fire fighting activities.

(d) *Storage of materials, machinery and equipment.* Objects, such as motor vehicles including parts, containing grease, oil or other hazardous substances, and unsealed receptacles containing hazardous materials, shall not be stored in areas susceptible to runoff as is prohibited in areas identified by FEMA as designated floodplain areas identified as shown on current FEMA FIRM maps. Any machinery or equipment that is to be repaired or maintained in areas susceptible to runoff shall be placed in a confined area to contain leaks, spills or discharges.

(e) *Removal of debris and residue.* Debris and residue shall be removed, as noted below:

(1) All motor vehicle parking lots shall be swept, at a minimum of twice a year to remove debris. Such debris shall be collected and properly disposed. However, parking lots are not required to be swept for one month following a day on which precipitation of one-half inch or more occurs.

(2) Fuel and chemical residue or other types of potentially harmful material, such as animal waste, garbage or batteries, which is located in an area susceptible to runoff, shall be removed as soon as possible and disposed of properly. Household hazardous waste may be disposed of through city collection programs or at any other appropriate disposal site and shall not be placed in a trash container.

(f) *Non-stormwater discharges.* All discharges covered by this permit shall be composed entirely of stormwater except the following non-stormwater discharges that are combined with stormwater may be authorized by this permit:

(1) Discharges from firefighting activities; fire hydrant flushings; water used to wash vehicles (where detergents are not used) or control dust; potable water sources including uncontaminated waterline flushings; irrigation drainage; routine external building wash down which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled materials have been removed) and where detergents are not used; uncontaminated air conditioning or compressor condensate; uncontaminated springs; uncontaminated ground water; foundation or footing drains where flows are not contaminated with process materials such as solvents; and uncontaminated excavations dewatering.

(2) Except as described in (f)(1) above, discharges of material other than stormwater must be in compliance with an individual NPDES permit issued for the discharge.

(g) *Good housekeeping provisions.* Any owner or occupant of property within the city shall comply with the following good housekeeping requirements:

(1) *Discharges.* No person shall leave, deposit, discharge, dump, or otherwise expose any chemical or septic waste in an area where discharge to streets or storm drain system may occur. This section shall apply to both actual and potential discharges.

(2) Pools are not allowed to discharge chlorinated water into the stormwater system. Pool discharges should utilize a water filtering device if possible.

(3) All large, medium, small and special construction sites must have solid waste dumpsters located at the site to properly dispose of building materials and solid waste.

(h) *Construction site stormwater runoff control.* Any owner, developer or occupant of property within the city shall install and maintain erosion and sediment controls during land disturbing activities (section 15-13-1.4) in order to reduce pollutants from stormwater from entering waterways.

(i) *Post-construction stormwater runoff control.* Any owner, developer or occupant of property within the city shall install and maintain erosion and sediment controls during land disturbing activities (section 15-13-1.4) from new development and redevelopment projects in order to reduce pollutants from stormwater from entering waterways.

(j) *Runoff.* Runoff of water from residential property shall be minimized to the maximum extent practicable. Runoff of water from the washing down of paved areas in commercial or industrial property is prohibited unless necessary for health or safety purposes and not in violation of any other provisions in community codes.

15-13-1.7. Stormwater management manual.

(a) To assist in the design and evaluation of stormwater management facilities in the City of Hot Springs, a stormwater management manual is hereby adopted. This manual contains the submittal requirements for development within the City of Hot Springs. The required submittal documents prior to earthmoving activities within the City of Hot Springs, which are addressed in the manual, are:

(1) Stormwater management plan.

(2) Stormwater pollution prevention plan.

(3) Detention/retention plan (includes maintenance plan).

(4) Stormwater quality plan.

(b) The City of Hot Springs will allow the use of the following software for the analysis of stormwater detention facilities: Pond 2, HEC-1, HEC-HMS or an acceptable equal approved by the administrative authority.

(c) Stormwater detention pond outlets shall be designed to limit the peak stormwater discharge rate of the two-, ten-, 25-, 50-, and 100-year storm frequencies after development to pre-development rates. The principal outlet will be designed to safely convey the runoff resulting from a 25-year event chance storm. A second outlet, the emergency outlet, will be designed to safely convey the runoff resulting from a 100-year event storm.

(d) All private systems must be designed to discharge at pre-developed rates unless approved by the administrative authority. New stormwater drainage systems cannot tie into existing systems of lesser capacity. In other words, a larger pipe cannot discharge into a smaller pipe of lesser capacity.

15-13-1.8. Permits and fees required.

(a) A stormwater management permit will be required for construction site activities and those activities associated with excavation, filling, grading and removal of trees or surface vegetation unless otherwise exempt by this chapter. The permit application and required submittal documents, when applicable, shall include a copy of the permit coverage for large construction sites issued from the Arkansas Department Energy and Environment, Division of Environmental Quality (DEQ). Approvals shall be secured per size of development from the City of Hot Springs and DEQ, as applicable prior to starting any clearing or earth work. It is the developer's responsibility to determine if other permits are required and to secure them.

(b) The following permit requirements must be met:

(1) No final occupancy permit shall be issued without the following:

a. Recorded easements for stormwater management facilities.

b. Receipt of an as-built plan which includes a certification of the storm drainage system.

(2) No site grading permit shall be issued or modified without the following:

a. Right of entry for emergency maintenance, if necessary.

b. Right of entry for inspections.

c. Any off-site easements needed.

d. An approved stormwater management plan.

(c) The approved stormwater management plan shall contain certification by the applicant that all land clearing, construction, development and drainage will be done according to the stormwater management plan or previously approved revisions. Any and all site grading permits may be revoked at any time if the construction of stormwater management facilities is not in strict accordance with approved plans.

(d) In addition to the plans and permits required from the city, applicants shall obtain all state and federal permits for the proposed development. The applicant shall also be responsible for determining the existence and limits of any wetlands and/or floodways as may be applicable, and be responsible for securing permits and approvals from the U.S. Army Corps of Engineers and Federal Emergency Management Agency as required.

(e) *Permit fees.* The permit and rates associated with the implementation of this chapter will be based on the disturbance for more than 4,000 square feet of land as stated in this chapter. Such fees shall be established by resolution of the board of directors.

(f) *Triple fees.* A triple fee penalty may be imposed on the original cost of the permit if land disturbance activities occur prior to receiving approval from the administrative authority.

15-13-1.9. Exemptions.

(a) Any land disturbing activity with the potential to pollute less than one acre within 100 feet of a stream or a lake is not exempt from this chapter.

(b) The following activities are exempt from requirements of this chapter:

(1) Land use for agricultural purpose.

(2) Land where timber extraction takes place, provided that it is to be re-seeded as timber land.

(3) Construction activity on an area less than one acre that is not adjacent to a stream or lake and not for commercial use.

(4) Reserved.

(5) One commercial or industrial project built on an individual lot that is part of a larger subdivision that has been issued an approved drainage control permit when the proposed project is demonstrated to be in compliance with the overall subdivision drainage permit.

(6) Existing commercial and industrial structures where additional structural improvements are less than 500 square feet.

(7) Maintenance or clearing activity that does not change or affect the quality, rate, volume, or location of stormwater flows on the site, or runoff from the site.

(8) Any activity directly related to the planting, growing and harvesting of agricultural crops.

(9) Action taken under emergency conditions, either to prevent imminent harm or danger to persons, or to protect property from imminent danger of fire, violent storms or other hazards.

15-13-1.10. Permit conditions, application and processing.

(a) *Permit conditions.* Each permit issued shall be subject to the following conditions:

(1) *Area.* The development, including associated construction, shall be conducted only within the area specified in the approved permit.

(2) *Execution.* Activities requiring a stormwater management permit shall not commence until the permit is in the possession of the permittee. The approved permit shall be on file with the administrative authority and a copy on file with the contractor at the project site, and available for review and inspection upon request.

a. The plan shall be implemented prior to the start of any land disturbing activity and shall be maintained over the duration of the project. Stormwater components of the plan shall be maintained in perpetuity.

b. The permittee is responsible for successful completion of the erosion control plan and the stormwater management plan. The permittee shall be liable for all costs incurred, including environmental restoration costs, resulting from noncompliance with an approved plan.

c. Application for a permit shall constitute express permission by the permittee and landowner for the local approval authority to enter the property for purposes of inspection or curative action. The application form shall contain a prominent provision advising the applicant and landowner of this requirement.

d. All incidental mud-tracking off-site onto adjacent thoroughfares shall be cleaned up and removed by the end of each working day using proper disposal methods.

(3) *Inspections.* A schedule of inspections to be carried out during the construction phase of permitting shall be established by the administrative authority as a condition to the permit.

a. Application for a permit under this chapter shall constitute permission by the applicant and landowner for the local approval authority to enter upon the property and inspect during the construction phase prior to the inspections pursuant to paragraphs (4) and (5), as necessary to confirm compliance with the requirements of this chapter.

b. Applicant and landowner for the local approval authority to enter upon the property and inspect during the construction phase prior to the inspections as necessary to confirm compliance with the requirement of this chapter.

c. As part of the plan approval process, the administrative authority shall determine the minimum number of inspections required to assure compliance. The site of any regulated land disturbing activity should be inspected once every 30 days, or more frequently as determined by the administrative authority during the construction phase.

d. The permittee shall notify the administrative authority before construction activity begins.

e. The administrative authority shall inspect the property to verify compliance with the erosion control plan within ten days of notification of soil stabilization.

(4) *Duration.*

a. Unless revoked or otherwise modified, the duration of a stormwater management permit issued pursuant to this chapter shall be one year.

b. If the permitted project discharge structure is not completed prior to expiration, the stormwater management permit duration can be extended to cover the project duration subject to approval of the administrative authority.

(5) *Maintenance.* Maintenance activities, as specified in the approved maintenance plan, shall be executed routinely, with scheduled reporting documents kept current, stored on the project site, and available for review and inspection upon request.

(6) *Modifications.* If the activity authorized by the permit is not completed according to the approved schedule and permit conditions, the administrative authority shall be notified. For

revisions resulting in a schedule extension of more than 30 days, or if deviations from the permit conditions are expected to occur, approval of a permit modification is required by the administrative authority.

(7) *Transfer.* No transfer, assignment or sale of the rights granted by virtue of an approved permit shall be made without prior written approval from the administrative authority.

(8) *Special.* Any additional special conditions, as deemed appropriate by the administrative authority, shall be established to address specific project needs or circumstances.

(b) *Permit application.* A stormwater permit application shall be submitted to the administrative authority using appropriate forms as provided. A permit application shall contain sufficient information and plans to allow the administrative authority to determine whether the project complies with the requirements of this chapter. The specific items to be submitted for a permit application shall be in the form and follow the procedures as described in the stormwater management manual and this chapter.

(c) *Approval process.*

(1) The administrative authority shall verify that the permit application is complete and in accordance with this chapter.

(2) Within the time frame set by the administrative authority, plan review staff shall either approve the submitted plan or notify the applicant of any deficiencies.

(3) The administrative authority shall notify the applicant in writing of any deficiency in the proposed plan and the applicant shall be given an opportunity to correct any deficiency.

(4) Upon approval of the administrative authority, the stormwater management permit shall be issued by the administrative authority after the applicant has met all other requirements of this chapter.

DIVISION III. MAINTENANCE, CONSTRUCTION AND INSPECTION

15-13-1.11. Public and private maintenance responsibilities under the stormwater management system.

(a) *Owner inspections and maintenance.* The owner shall be responsible for inspections and maintenance on the site.

(1) Inspections and maintenance must be documented and readily available for review. Inspections are required as follows:

a. Once every seven days on exposed soil areas.

b. Within 24 hours after a one-half inch rain event over 24 hours.

c. Once every 30 days on stabilized areas.

d. As soon as runoff occurs or prior to resuming construction on frozen ground.

(2) Maintenance is required as follows:

a. When sediment reaches one-half the height of the BMP on perimeter control devices, sediment must be removed within 48 hours.

b. If the perimeter control device is not functional it must be repaired or replaced within 48 hours.

c. Temporary sediment basins shall be maintained when sediment reaches one-half the outlet height or one-half the basin storage volume. Basin must be drained or sediment removed within 72 hours.

d. Construction site vehicle entrance and exit locations sediment must be removed from paved surfaces within 24 hours of discovery.

e. Immediate maintenance may be required by the administrative authority if the conditions of the site are a public hazard or has the potential to cause environmental damage or pollution.

(b) *Public responsibilities:*

(1) Administration of these regulations shall be by the administrative authority, who shall review to determine approval, disapproval or modification of stormwater management plans as provided herein.

(2) All areas and/or structures to be dedicated to the city must be dedicated by plat or separate instrument and accepted by a formal letter from the administrative authority.

(3) *Operation and maintenance of publicly-owned facilities.* The administrative authority shall be responsible after written approval and acceptance for the operation and maintenance of all drainage structures and improved courses which are part of the drainage structures and improved courses which are part of the stormwater runoff management system under public ownership and which are not constructed and maintained by or under the jurisdiction of any state or federal agency.

(c) *Private responsibilities:*

(1) Each developer of land within the corporate limits of the city has a responsibility to provide on the developer's property all approved stormwater runoff management facilities to ensure the adequate drainage and control of stormwater on the developer's property both during and after construction of such facilities.

(2) Each developer, owner or property owners association has a responsibility and duty before and after construction to properly operate and maintain any on-site stormwater runoff control facility which has not been accepted for maintenance by the public. Such responsibility is to be transmitted to subsequent owners through appropriate covenants.

(3) All private systems not dedicated to the city shall have adequate easement to permit the administrative authority to inspect and, if necessary, to take corrective action should the responsible entity fail to properly maintain the system.

(4) All private stormwater facilities shall be maintained in proper condition consistent with the performance standards for which they were originally designed.

(5) All private systems must be designed to discharge at pre-developed rates unless approved by the administrative authority. New stormwater drainage systems cannot tie into existing systems of lesser capacity. In other words, a larger pipe cannot discharge into a smaller pipe of lesser capacity. See HSC 15-13-1.7(a)(3) for detention plan requirements.

(d) *Maintenance agreement (privately-owned facilities only):*

(1) A proposed inspection and maintenance agreement shall be submitted to the administrative authority for all private on-site stormwater discharge control facilities prior to the approval of the stormwater management plan. Such agreement shall be in a form and content acceptable to the administrative authority and shall be the responsibility of the private owner. Such agreement shall provide for access to the facility by virtue of a non-exclusive perpetual easement in favor of

the city at reasonable times for regular inspection by the administrative authority. This agreement will identify who will have the maintenance responsibility. Possible arrangements for this maintenance responsibility might include the following:

a. Use of homeowner associations;

b. Arrangements to pay the city for maintenance;

c. Private maintenance by development owner(s), or contracts with private maintenance companies.

(2) All maintenance agreements shall contain or uphold, without limitation, the following provisions:

a. A description of the property on which the stormwater management facility is located and all easements from the site to the facility;

b. Size and configuration of the facility;

c. A statement that properties which will be served by the facility are granted rights to construct, use, reconstruct, repair and maintain access to the facility;

d. A statement that each lot served by the facility is responsible for repairs and maintenance of the facility and any unpaid ad valorem taxes, public assessments for improvements, and unsafe building and public nuisance abatement liens charged against the facility, including all interest charges together with attorney fees, costs and expenses of collection. If an association is delegated these responsibilities, then membership into the association shall be mandatory for each parcel served by the facility and any successive buyer. The association shall have the power to levy assessments for these obligations, and that all unpaid assessments levied by the association shall become a lien on the individual parcel;

e. All stormwater facilities must be designed to minimize the need for maintenance, to provide easy vehicle and personnel access for maintenance purposes, and be structurally sound. It shall be the responsibility of the applicant to obtain any necessary easements or other property interests to allow access to the facilities for inspection or maintenance;

f. All settled materials from ponds, sumps, grit chambers and other devices, including settled solids, shall be removed and properly disposed of as needed to ensure the proper functioning of the stormwater facility as per its design capacity.

15-13-1.12. Inspection authority.

Inspections will be performed by the administrative authority on a regular basis during construction to ensure that the stormwater management plan measures are properly installed and maintained. The administrative authority shall inspect all stormwater facilities during the first year of operation, and at least once every five years thereafter. In all cases the inspectors will attempt to work with the applicant or developer to maintain proper stormwater management.

15-13-1.13. Bonds, maintenance assurances and final approval.

(a) *Maintenance agreement.* A maintenance agreement approved by the administrative authority assuring perpetual maintenance of stormwater management improvements shall be agreed upon by the administrative authority and the applicant.

(b) Maintenance of detention ponds (wet type) shall be the responsibility of the owner of record and/or the property owners' association.

(c) Maintenance of detention basins (dry type) shall be the responsibility of the owner of record and/or property owners' association. The owner of record and/or property owners' association shall be responsible for all other maintenance, plantings, reseeding, or resodding. The owner shall also be responsible for removing and replacing any landscaping, playground equipment or other facilities within the basin.

(d) *Maintenance bond.* A one year maintenance bond against defects in workmanship shall be required by the administrative authority for any portion of the stormwater management improvements dedicated to the public, said maintenance bond to be provided by cashiers check, irrevocable letter of credit or acceptable surety authorized to do business in the State of Arkansas. All forms of maintenance bonds shall be subject to approval by the administrative authority and the city attorney. The value of bond shall be an amount equal to 100 percent of the value of the stormwater system improvements.

DIVISION IV. MISCELLANEOUS PROVISIONS

15-13-1.14. Variances and appeals.

(a) *Variances from requirements.*

(1) The administrative authority may grant on a case-by-case basis a variance from the requirements of this chapter if there are exceptional circumstances applicable to the site such that strict adherence to the provisions of the ordinance will result in unnecessary hardship and not fulfill the intent of the ordinance.

(2) An applicant may include in the application a request for a variance. No variance shall be granted unless applicant demonstrates and the administrative authority finds that all of the following conditions are present:

a. Enforcement of the standards set forth in this chapter will result in unnecessary hardship to the landowner.

b. The hardship is due to exceptional physical conditions unique to the property.

c. Granting the variance will not adversely affect the public health, safety or welfare, nor be contrary to the spirit, purpose and intent of this chapter.

d. The project will have no adverse impact upon any of the stated purposes of this chapter.

e. The applicant has proposed an alternative to the requirement from which the variance is sought that will provide equivalent protection of the public health, safety and welfare, the environment and public and private property.

f. The net cumulative effect of the variance will not impact downstream conditions.

g. Existing regional facilities are shown to meet the performance standards of this chapter.

(3) If all of the conditions of paragraph (2) are met, a variance may only be granted to the minimum extent necessary to afford relief from the unnecessary hardship with primary consideration given to water quality.

(4) The content of a variance shall be specific and shall not affect other approved provisions of a SWPPP.

(5) Economic hardship is not sufficient reason for granting a variance.

(6) A written request for a variance shall be required and shall state the specific variance sought and the reasons, with supporting data, for the granting. The request shall include descriptions,

drawings, calculations and any other information that is necessary to evaluate the proposed variance.

(7) Any substantial variance from the stormwater management plan shall be referred to all agencies which reviewed the original plan.

(b) *Appeals.*

(1) Any person aggrieved by a decision of the administrative authority (including any decision with reference to the granting or denial of a variance from the terms of this chapter) may appeal same by filing a written notice of appeal with the administrative authority within 30 calendar days of the issuance of said decision by the administrative authority. The administrative authority can then reverse his/her decision or send this notice to the board of directors with comments. A notice of appeal shall state the specific reasons why the decision of the administrative authority should be reconsidered and the administrative authority shall prepare and send to the board of directors and appellant, with 15 days of receipt of the notice of appeal, a written response to said notice of appeal.

(2) All such appeals shall be heard by the board of directors which is hereby granted specific authority to hear and determine such appeals in a quasi-judicial capacity. Said appeal shall be heard by the board of directors at its next regularly scheduled meeting date, not to exceed 30 days after receipt of the notice of appeal, or at such other time as may be mutually agreed upon in writing by the appellant and the chairperson of the board of directors. The board of directors will then render a decision within 15 days after the appeal has been heard.

(3) The board of directors may, in conformity with the provisions of this chapter, reverse or affirm, wholly or partly, or modify the order, requirement, decision or determination appealed from and may make such order, requirement, decision or determination as ought to be made, and shall have all the powers of the officer from whom the appeal is taken.

(4) The concurring vote of a majority of the board of directors shall be necessary to reverse the decision of the administrative authority.

(5) Each party to the appeal shall be entitled to a hearing before the board of directors under judicial forms of procedure, at which hearing each party shall have the right to present evidence and sworn testimony of witnesses, to cross-examine witnesses, and to cause a transcription of the proceeding to be prepared.

(6) Should either party be dissatisfied with the decision of the board of directors, any appeal of said decision may be appealed to a court of competent jurisdiction in accordance with the laws of Garland County and the State of Arkansas.

15-13-1.15. Alternative methods.

(a) *Alternatives to on-site detention.* Where on-site detention is deemed inappropriate due to local topographical or other physical conditions, alternate methods for accommodating increases in stormwater runoff may at the administrative authority's discretion be considered. The methods may include:

(1) Off-site detention or comparable drainage improvements.

(2) In-lieu monetary contributions to be specifically used for channel or drainage system improvements, or off-site detention improvements by the city within the same watershed. Channel improvements shall only be used if they are an integral part of a detailed watershed study.

(b) *In-lieu contributions to regional or sub-regional detention.* An owner or developer may contribute to the construction of a regional or sub-regional detention site constructed or to be constructed in lieu of constructing on-site detention. However, no in-lieu contributions are allowed when existing flooding occurs downstream from the development, or if the development will cause downstream flooding.

(c) *In-lieu fees.* The in-lieu fee contribution shall be based upon an amount of $10,000.00 per-acre-foot of stormwater storage.

(d) *Watershed facility improvement funds.* In-lieu contributions paid to the city shall be budgeted by contributing to a "Watershed Facility Improvement Fund." Said funds shall be appropriated only for planning, design and construction for correction of existent drainage problems within the watershed from which the contribution is generated.

(e) *Regional or sub-regional detention sites.* The acquisition of regional or sub-regional detention sites and construction of facilities thereon will be financed by the city. Monies contributed by the owners as above provided shall be used for regional and sub-regional detention site studies, land acquisition and facility construction thereof in the watershed in which the development is located.

(f) *Watershed boundaries.* The boundaries of watersheds and priority in construction of detention facilities and drainage improvement construction shall be as established by the administrative authority and approved by the board of directors.

15-13-1.16. Violations.

(a) *Violations and penalties.* A site grading permit may be suspended or revoked by the administrative authority if one or more of the following violations have been committed:

(1) Violation(s) of the conditions of the stormwater management plan approval.

(2) Construction not in accordance with the intent of the approved plans.

(3) Non-compliance with correction notice(s) or stop work order(s).

(4) The existence of an immediate danger in a downstream area in the judgement of the administrative authority.

(b) If one or more of these conditions is found, a written notice of violation(s) shall be served upon the owner or authorized representative and an immediate stop-work order may be issued. The notice shall set forth the measures necessary to achieve compliance with the plan. Correction of these violations must be started immediately and completed within seven working days of original notification or the owner shall be deemed in violation of this chapter.

(c) The city attorney may institute injunctive, mandamus, or other action or proceedings at law or equity for the enforcement of this chapter or to correct violations of this chapter, and any court of competent jurisdiction shall have the right to issue restraining orders, temporary or permanent injunctions, mandamus or other appropriate forms of remedy or relief.

(d) It shall be a violation of this chapter for any owner, operator or contractor to commence any soil disturbance activity that requires permit coverage without prior approval from the administrative authority. Failure to obtain approval may result in enforcement fees, citations, court cost and/or fines.

(e) *Enforcement/stop work order.* Whenever the administrative authority finds any noncompliance with the provisions of this chapter, the administrative authority shall attempt to communicate with the owner or person performing the work to obtain immediate and voluntary compliance if such person is readily available. If the owner or person performing the work is not readily available or if that person refuses to voluntarily comply immediately or the noncompliance presents an imminent danger or will

cause or threatens to cause bodily injury or damage to off-site property including, but not limited to, off-site run-off, the administrative authority shall post in a conspicuous place on the premises, a stop work order which shall cause all activity not necessary to correct the noncompliance to cease until noncompliance is corrected.

(f) The stop work order shall provide the following information: Date of issuance, project name and permit number and reason for issuance and the signature of the inspector that issues the order.

(g) It shall be a violation of the ordinance for the unauthorized removal of the stop work order from the premises when posted on the project site.

(h) In addition to posting a stop work order, the local approval authority shall provide notification to the owner or contractor by personal service, written notice by certified mail, or facsimile transmission. The permittee, landowner and contractor shall have 72 hours from the time and date of notification by the administrative authority to correct any noncompliance with the plan.

(i) *Inspection.* The administrative authority shall be responsible for determining whether the stormwater management plan is in conformance with the requirements specified by the city's stormwater management manual. Also, the administrative authority shall be responsible for determining whether the development site is proceeding in accordance with the approved drainage plan. Periodic inspection of the development site shall be made the administrative authority. Through such periodic inspections, the administrative authority shall ensure that the stormwater management plan is properly implemented and that the improvements are maintained.

(j) *Remedial work.* If it is determined through inspection that the development is not proceeding in accordance with the approved stormwater management plan and drainage and/or building permit, the administrative authority shall immediately issue written notice to the permittee concerning the alleged noncompliance, accompanied by documentary evidence demonstrating noncompliance and specifying what remedial work is necessary to bring the project into compliance. The permittee, upon notification, shall immediately, unless weather conditions or other factors beyond the control of the permittee prevent immediate remedial action, commence the recommended remedial action and shall complete the remedial work within 72 hours or within a reasonable time as determined in advance by the administrative authority. Upon satisfactory completion of remedial work, the administrative authority shall issue a notice of compliance and the development may proceed.

(k) *Enforcement fee.* Where code enforcement action is needed to bring a site into compliance with the Clean Water Act, fees will be charged to the permit holder and or the property owner. The enforcement fee shall be established by resolution of the board of directors.

15-13-1.17. Penalty.

The penalty for violation of this chapter shall, upon conviction in the Hot Springs District Court, or any other court of competent jurisdiction, be such fines and penalties as established by the general penalty clause for the Hot Springs Code of Ordinances as may now or hereafter be enacted by the Hot Springs Board of Directors.

15-13-1.18. Conflict resolution and interpretation.

(a) *Interpretation.* In their interpretation and application, the provisions of these regulations shall be held to be the minimum requirements for the promotion of the public health, safety and general welfare.

(b) *Conflict with other laws.* Whenever the provision of this chapter impose more restrictive standards than are required in or under any other ordinance, the regulations herein contained shall prevail.

Whenever the provisions of any other ordinance require more restrictive standards than are required herein, the requirements of such shall prevail.

15-13-1.19. Disclaimer of liability.

(a) The performance standards and design criteria set forth herein and in the stormwater management manual establish minimum requirements which must be implemented with good engineering practice and workmanship. Use of the requirements contained herein shall not constitute a representation, guarantee or warranty of any kind by the city or its officers and employees of the adequacy or safety of any stormwater management structure or use of the land. Nor shall the approval of the stormwater management plan imply that the land uses that are permitted will be free from damages caused by stormwater runoff. The degree of protection required by these regulations is considered reasonable for regulatory purposes and is based on historical records, engineering and scientific methods of study. Larger storms may occur or stormwater runoff heights may be increased by man-made or natural causes. These regulations, therefore, shall not create liability on the part of the city or any officer or employee with respect to any legislative or administrative decision lawfully made hereunder.

(b) Neither approval of a plan under the provisions of this chapter nor the compliance with the provisions of this chapter shall relieve any person from the responsibility for damage to any person or property otherwise imposed by law.

15-13-1.20. Amendments.

For the purpose of providing for the public health, safety and general welfare, the board of directors may, from time to time, amend the provisions of these regulations. This chapter may be amended in the manner as prescribed by law for its original adoption. Before the board of directors considers an amendment to this chapter, it must seek the advice of the administrative authority who will make a recommendation for each amendment within 30 days of this request.

15-13-2. Pre-existing projects.

Any applicant or owner of a parcel of land within the jurisdiction of the City of Hot Springs who has constructed a required stormwater management facility or who is in the application process shall be held to the requirements in effect at the time the permit was approved.

15-13-3. Severability.

The provisions of this chapter are severable. If any term, requirement or provision of this chapter or the application thereof to any person or circumstance shall, to any extent, be found invalid or unenforceable, the remainder of this chapter or the application of such terms, requirements and provisions to persons or circumstances other than those to which it is held invalid or unenforceable, shall not be affected thereby and each term, requirement or provision of this chapter shall be valid and be enforced to the fullest extent permitted by law. The city hereby declares that it would have enacted the remainder of these regulations even without any such part, provision or application found to be unlawful or invalid.

ARTICLE II. STORMWATER FEES

DIVISION I. PERMIT FEE SCHEDULE

15-13-4. Stormwater management—Fee schedule.

The following fee schedule is hereby adopted:

STORMWATER MANAGEMENT ORDINANCE FEE SCHEDULE

(a) Permit Fees

Single family dwelling or part of larger common plan	$25.00
Multiple family dwelling (4 units or less)	100.00
Multiple family dwelling (5 units or more)	250.00
Commercial & industrial buildings:	
(Less than 10,000 sq. ft.)	100.00
(10,000 sq. ft. or larger)	250.00
Commercial and industrial building additions:	
(Less than 10,000 sq. ft.)	50.00
(10,000 sq. ft. or larger)	100.00
Parking lots (Less than 4,000 sq. ft.)	50.00
Parking lots (4,000 sq. ft.—9,999 sq. ft.)	75.00
Parking lots (10,000 sq. ft. or more)	100.00
Subdivisions (up to 5 lots)	100.00
Subdivisions (6 to 12 lots)	200.00
Subdivisions (13 or more lots)	400.00
Land disturbance only (1 to 5 acres)	100.00
Land disturbance only (more than 5 acres)	150.00
Any activity with the potential to pollute (adjacent to awater body)	75.00

(b) Enforcement Fees.

Administration Enforcement fee for monitoring and processing violation compliance (1 hr. minimum)	$50.00/hr.
Street Sweeper (minimum)	100.00
Other equipment or action (minimum)	100.00

Triple Fee Penalty (Triple the original cost of the stormwater permit for starting construction before permitting if the site was required to meet compliance with stormwater requirements).

DIVISION II. STORMWATER UTILITY FUND

15-13-5. Stormwater utility fund.

15-13-5.1. Creation.

There is hereby created a fund to be entitled the "stormwater utility fund" and all revenues generated by or on behalf of the stormwater drainage utility fees shall be deposited in said stormwater utility fund and shall be used exclusively for the operation of the City of Hot Springs Stormwater Management Program and other storm-related equipment, construction, materials, supplies or services, including, but not limited to, storm-related disaster recovery and emergency preparedness provided to the community.

15-13-5.2. Stormwater utility fee.

From and after the effective date of the ordinance, there shall be added to each municipal utility account (water, wastewater and/or solid waste), within the corporate limits of the city, a Stormwater utility fee based on impervious surface area in square feet (s.f.), as follows:

		Cost Per Month					
		Current	June-2016	Jan-2017	Jan-2018	Jan-2019	Jan-2020
Residential		$3.00	$4.00	$4.00	$4.00	$4.25	$4.25
Commercial	0—9,999	6.00	8.00	10.00	12.00	12.00	12.00
Impervious Surface in Square Feet	10,000—49,999	6.00	10.00	12.00	21.60	28.80	36.00
	50,000—99,999	6.00	12.00	30.00	54.00	72.00	90.00
	100,000—249,999	6.00	28.00	70.00	126.00	168.00	210.00
	250,000—Above	6.00	60.00	150.00	270.00	360.00	450.00

15-13-5.3. Billing and collection.

For purposes of billing and collection, the stormwater utility fee shall be considered a municipal utility fee and shall be billed and collected in the same manner and subject to the same procedures as all other municipal utilities (water, wastewater and sanitation) pursuant to the Uniform Municipal Utility Billing Procedure Ordinance.

15-13-5.4. Effective date.

The stormwater utility fee, authorized in section 15-13-5.2 hereof, shall be effective on all municipal utility bills rendered from and after August 1, 2016.

ARTICLE III. HOT SPRINGS CREEK TUNNEL REGULATIONS

15-13-6. Hot Springs Creek Tunnel regulations.

The following regulations are hereby adopted and shall govern the location, installation and maintenance of certain facilities located within the Hot Springs Creek Tunnel.

15-13-6.1. Short title.

This chapter shall be known and cited as the "Hot Springs Creek Tunnel Regulations."

15-13-6.2. Purpose and scope.

The primary purpose of the Hot Springs Creek Tunnel is to provide stormwater drainage and flood control. In this regard, no facilities, utility lines, structures or obstacles of any kind or nature whatsoever shall be placed within the tunnel except as permitted by this chapter. This chapter shall govern the location,

installation and maintenance of all facilities permitted to be located within the tunnel. Any thermal water collection lines and facilities as installed and maintained by the National Park Service and within that portion of the tunnel within the federally exclusive jurisdiction and boundary of Hot Springs National Park are hereby exempt from the requirements of this chapter.

15-13-6.3. Definitions.

The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning.

Administrative authority means such employees of the city as designated by the city manager with the authority and responsibility to administer this chapter.

Applicant means the person, firm or corporation submitting a permit application pursuant to the provisions of this chapter.

City means the municipal corporation known as the City of Hot Springs, Arkansas. The words "the city" or "this city" shall be construed as if the words "of Hot Springs, Arkansas" follow and shall extend to and include its several officers, board of directors, agents and employees.

City engineer means the employee of the city designated by the city manager as the city engineer or acting in the capacity of the city engineer.

Facilities means such piping, lines, supports and materials installed, or proposed to be installed, within the tunnel for provision of a given utility.

Permittee means the person, firm or corporation to whom a permit has been issued pursuant to the requirements of this chapter and who has installed facilities within the tunnel.

Tunnel means that portion of Hot Springs Creek and its tributaries as contained within and flowing through man-made structures, located within public rights-of-way and private and public property commencing on Park Avenue (east branch - 1,560 feet in length) and Whittington Avenue (west branch - 750 feet in length), and following underneath and adjacent to Central Avenue, Malvern Avenue and Broadway Street and terminating in the 100 block of Broadway Terrace (4,620 feet in length) and including a tributary within the Fountain Street right-of-way approximately 504 feet in length running northeast from Central Avenue.

Utility means the piping, lines, supports and ancillary equipment of such public and private utilities (natural gas, telephone, electricity, water, wastewater and thermal water) that may now or hereinafter exist within the tunnel.

Utility company or owner means such person, firm or corporation as may own, maintain or otherwise be responsible for facilities placed within the tunnel.

15-13-6.4. Permit applications.

Any applicant desiring to place facilities within the tunnel, access the tunnel for repairs, maintenance, or inspection or otherwise enter the tunnel shall make application with the administrative authority on such forms as may be prescribed by the administrative authority. The application forms for tunnel access shall include the following information together with such other information as the administrative authority may require including name and contact information for all persons to be entering the tunnel, the purpose of their entry and the expected duration. Applications for placement of new facilities or replacement of existing facilities shall, in addition, include such information as the administrative authority shall deem necessary to ascertain the purpose of the facilities and compliance with the requirements of this chapter.

15-13-6.5. Access notification required.

Any person entering the tunnel, for any purpose whatsoever, shall obtain a confined space entry permit from the Hot Springs Fire Department not less than 24 hours prior to entering the tunnel. On the date of entry, the permit holder shall notify the fire department not less than one hour prior to their anticipated entry time. The permit holder will state the number of persons entering the tunnel and the anticipated duration of each entry. The permit holder shall notify the fire department immediately upon exiting the tunnel. If the entry includes any sections within the federally exclusive jurisdiction and boundary of Hot Springs National Park, such person(s) shall also notify the Superintendent of Hot Springs National Park. The administrative authority shall provide copies of any construction permit applications to the Fire Department and Superintendent of Hot Springs National Park when entry is anticipated.

15-13-6.6. Construction permit required.

A construction permit, issued by the administrative authority, shall be obtained prior to constructing, repairing, or otherwise placing or maintaining any facilities within the tunnel or entering the tunnel for any purpose. All construction, maintenance or repair commenced pursuant to a construction permit shall be accomplished in accordance with the requirements of this chapter. Should the administrative authority detect any construction deficiencies, the owner shall be given a reasonable time to correct such deficiencies. Failure to do so will result in the removal of any deficient facilities from the tunnel by the city.

15-13-6.7. Other permits.

The applicant shall, in addition, obtain such other permits and authorizations as may be required for activities within the boundary of Hot Springs National Park.

15-13-6.8. Facility permit required.

Once facilities are constructed and installed by the owner and inspected and approved as meeting the requirements of this chapter by the administrative authority, a permanent facility permit shall be granted. Facilities may not be located or maintained within the tunnel without a valid facility permit issued by the administrative authority. A permitted facility is hereby considered to be conditional from year-to-year and, therefore, subject to annual renewal and inspection by the administrative authority. The administrative authority shall maintain a record of all such facility permits on such forms and in such manner as the administrative authority may prescribe. It is the permittee's responsibility to keep their contact and permit information current.

15-13-6.9. Maintenance required.

All facilities shall be maintained in good working order by the owner at all times. The administrative authority shall inspect the tunnel not less than annually and shall provide to the owner a "notice of repair" if any deficiencies are found. The owner shall accomplish all required repairs within 90 days of such notification. Failure to make necessary repairs will result in such facilities being declared abandoned and subject to removal by the city.

15-13-6.10. Additional facilities.

Additional facilities shall not be added to the tunnel unless an existing facility is removed or utilized for such additional facility. Provided, however, additional facilities may be permitted in the main tunnel and

tributary branches after the tunnel capacity has been determined by the city engineer to have available capacity and the installation thereof is approved by the board of directors.

15-13-6.11. Required materials.

The following materials and construction methods shall apply to all facilities placed within the tunnel after the effective date of this chapter.

(1) Facility materials shall be of a type that will not promote additional maintenance due to excessive corrosion or calcification of pipe cross sectional area as approved by the city engineer. Prohibited pipe materials are black steel, clay, concrete, and any other material not approved by the city engineer.

(2) Thermal water utility pipe shall have the minimum necessary thermal insulation, when needed, with a hard continuous smooth cover with no loose joints that could inhibit the stormwater flow and with the ability to stay intact under stormwater conditions as approved by the city engineer for permitted use.

(3) Facility attachments to the tunnel wall should be located in a manner that does not block any stormwater pipe outfall into the tunnel, provides the least obstruction to stormwater flow with no protruding pipe hangers and a solid connection to the upper tunnel wall section as approved by the city engineer.

(4) Facility attachments may be located in the tunnel arch section against reinforced concrete material but not attached to the stone-arched sections.

(5) All facilities shall have the smallest cross section area as possible to serve the intended use.

15-13-6.12. Abandoned facilities.

Any facilities determined by the administrative authority to be abandoned may be removed by the city not less than 30 days after issuance of a "notice of removal." For purposes of this section, abandoned facilities includes the following:

(1) Any facility determined as not being in active service for a period of one year or longer; or

(2) Any facility which is not repaired within 90 days after a "notification to repair" has been issued by the administrative authority; or

(3) Any facility for which the annual permit has not been renewed within three months of the expiration thereof.

15-13-6.13. Training required.

Any persons entering the tunnel must be properly trained in the safety procedures of working in an underground environment, defined by OSHA as a "confined space" or in the company of such duly trained person(s).

15-13-6.14. Pre-existing facilities.

Facilities existing within the tunnel prior to the effective date of this chapter (pre-existing facilities) shall be inspected and granted a facility permit. The owners of such facilities shall be notified of any needed repairs. Such repairs shall be made within 90 days of such notification, or such facilities shall be considered abandoned. Pre-existing facilities will not be required to meet the material standards as required by the

ordinance except and unless such facilities are replaced. Pre-existing facilities shall otherwise be subject to the provisions of this chapter.

15-13-6.15. Notice.

All notices as required herein shall be in writing to the address of record on the facility permit. Notice of repair shall be by regular first-class mail. Notice of removal shall be by certified mail, return receipt requested. Should written notice not be accepted or otherwise accomplished by mail, a legal notice shall be placed in a newspaper of general circulation.

15-13-6.16. Penalty.

The penalty for violation of this chapter shall, upon conviction in the Hot Springs District Court, or any other court of competent jurisdiction, be such fines and penalties as established by the general penalty clause of the Hot Springs Code of Ordinances as may now or hereafter be enacted by the Hot Springs Board of Directors.

Appendix D

Best Management Practices Manual

The Best Management Practice Manual is to large to attach. The manual can be found on the city's website.

Appendix E
Example Stormwater Pollution Prevention Plan

Stormwater Pollution Prevention Plan (SWPPP)

For

Construction Activity

National Pollution Discharge Elimination System

General Permit #ARR150000

Prepared for

XXXX

Date: XXXX

Prepared by

XXXX

Stormwater Pollution Prevention Plan (SWPPP)

General Permit #ARR150000

General Information:

EXAMPLE: Construction of approximately a XXXX square feet building with approximately XXXX square feet of associated parking, driveways, storm drain and other appurtenances.

Project Name:
XXX

Physical Address of Site:
XXX

Latitude: http://itouchmap.com/latlong.html
XX.XXX (decimal format, not DMS)

Longitude:
XX.XXX (decimal format, not DMS)

Owner / Operator Name, Address, Phone and Email: (No PO Boxes)
XXX
XXXXXX
XX, XX XXXXX
()XXX-XXXX
xx@xxxx.com

Contractor Name, Address, Phone and Email: (No PO Boxes)
XXX
XXXXXX
XX, XX XXXXX
()XXX-XXXX
xx@xxxx.com

A. Site Description

1. Pre-Construction Topographic View: Attached

2. Project Description and Intended Use after Notice of Termination is filed and City's permit is closed:

   The site is proposed to be developed for a new XXXX square foot building to serve as XXXX. The site will have a XXX square foot asphalt parking area with associated driveway.

3. Sequence of Activities: (UPDATE THIS INFO—Must Be Project Specific)

   Initial Development
   - Meet all City of Hot Springs and ADEQ stormwater requirements
   - Install erosion and sediment controls
   - Contact City of Hot Springs Stormwater Division prior to any land disturbing activities for an initial site inspection
   - Clearing and grubbing
   - Grading

   Final Development
   - Install building foundation, gravel parking area, and drives
   - Install landscape and sod

4. Total Acres Available / Total Acres Disturbed:

   Of the total XX acres, approximately XX acres will be disturbed by construction activities.

   Commercial Properties Only:
   Total amount of planned impervious surface including roof top, driveways, and parking lots: _____ square feet

5. Existing Site Information:

   a. Runoff Coefficient based on coefficient values from the CHS Stormwater Management Manual Section 400

RUNOFF COEFFICIENTS ARE NOT REQUIRED FOR SINGLE FAMILY RESIDENCE LESS THAN 1 ACRE

Before construction starts, the site has a runoff coefficient of _____.
After construction is completed, the site will have a runoff coefficient of _____.

b. Soil Information: The existing soil conditions are sandy clay and topsoil.

B. Responsible Parties for Stormwater Pollution Prevention:

The stormwater controls will be installed and maintained by _____.
The stormwater controls will be inspected by _____.

C. Receiving Waters:

The following bodies of water receive runoff from the construction site:

The site's stormwater drains into XXX Creek, thence Lake Hamilton, thence into Lake Catherine, and ultimately into the Ouachita River.

D. TMDL and 303 (d) lists:

The stormwater from the construction site discharges to Lake Hamilton, ultimately into the Ouachita River. This water body is not on the 303(d) list of impaired water bodies for siltation/turbidity. Since this water body is not impaired, a TMDL is not applicable to this construction project.

E. Attainment of Water Quality Standards after Authorization:

The water quality standards for any receiving waters of this project's stormwater runoff will be continually monitored. In the case that the water quality standards change and the receiving water body becomes impaired and is listed on the 303(d) list the SWPPP will be updated to include measures necessary to meet the TMDL requirements.

F. Site Map:

The site map shall show, at a minimum, the following items:

1. Direction of stormwater flow
2. Areas of soil disturbance and areas not to be disturbed
3. Location of major structural and nonstructural controls

4. Main construction entrance and exit
5. Location where stabilization practices are expected to occur
6. Location of offsite materials, storage, waste or borrow areas
7. Locations used for concrete truck wash out
8. Locations of portable toilets and any other hazardous materials
9. Location of all surface water bodies (including wetlands)
10. Locations where stormwater is discharged to a surface water and / or municipal separate stormwater sewer system, if applicable
11. Locations where stormwater is discharged off-site (should be continuously updated)
12. Areas where final stabilization has been accomplished and no further construction will take place
13. Location of detention / retention facility (include detail with elevations and profiles of outfall / overflow devices)

G. Stormwater Controls

This section should be revised with project specific BMP's. Language in red should only be considered as an example.

1. Erosion and Sediment Controls Best Management Practices (BMP's):

    a. Initial clearing and land disturbance will be limited to that which is necessary for the installation of erosion and/or sediment controls.

    b. Wire backed silt fence will be installed along the perimeter of the site to reduce the likelihood of sediment discharge onto adjacent properties or into waters of the State. Other structural controls, such as velocity dissipation, diversion berms, swales or approved equivalent will be installed as necessary to reduce or eliminate the runoff from the site to the waters of the state, municipal storm sewer system, and adjacent properties.

    c. Any off-site accumulation of sediment, including off site tracking, will be cleaned immediately if necessary, but no later than 48 hours after discovery.

    d. There are/are not offsite material storage or borrow areas to be covered within this permit.

2. Stabilization Practices:

    a. Temporary seeding and mulch will be used no later than 14 days from the last construction activity on exposed soil areas. Temporary seeding will be conducive to the season. Seeding in the winter months will be annual rye applied at 200 pounds

per acre (ppa). Seeding at all other times of the year will be a mixture of perennial rye (300 ppa) and common Bermuda (30 ppa). A commercial type fertilizer (10-10-10) will be applied to all seeded areas. Seeded area will also be mulched with 4,000 PPA straw reasonably free from noxious and foreign matter detrimental to the seeded grass.

b. A 25-foot buffer zone **will** be maintained for projects adjacent to any water body including streams, wetlands, creeks, rivers, and lakes. A 50-foot buffer **will** be maintained if the water body is listed as an impaired 303 (d) or exceptional water body.

c. Records of all stabilization activities and buffer zone conditions shall be kept and noted on weekly inspection reports.

d. Permanent stabilization of disturbed areas will be achieved by installing additional landscaping, asphalt and building infrastructure.

H. Other Controls:

All items in this section are required. A statement as to why a control measure will not be implemented should be included for anything that is inapplicable to the site.

1. A stabilized construction exit will be installed to help reduce vehicle tracking of sediments from leaving the site. The construction exit will be shown on the SWPPPP sitemap. Exit will be installed after excavation work has been completed, in order to ensure positive drainage of the site's runoff.

2. Once waste is being generated at the site, solid waste containment will be implemented to properly dispose of solid waste materials, including trash and construction debris. The solid waste dumpster will be shown on the SWPPP sitemap.

3. Prior to any concrete work being performed, a designated concrete truck washout area will be located and maintained on-site to reduce hazardous concrete washout from entering the storm sewer system and will be shown on the SWPPP site map. The washout will be distinguished with a sign to assure visibility to concrete truck drivers.

4. A portable restroom facility will be delivered and located in an area to reduce the chance of a hazardous spill into the storm sewer system. The temporary restroom will be shown on the SWPPP site map and will be maintained in accordance with applicable sanitary waste disposal regulations.

5. There will/will not be hazardous materials or wastes stored onsite. If yes, provide detail or include information for compliant secondary containment.

I. Non-Stormwater Discharges:

Allowable Non-Stormwater Discharges: Choose only the discharges that are applicable to this construction site.

1. Firefighting activities.
2. Fire hydrant flushing.
3. Water used to wash vehicles (where detergents or other chemicals are not used) or control dust in accordance with Part II. A.I.2 of ADEQ Permit #ARR150000.
4. Potable water sources including uncontaminated waterline flushing.
5. Landscape irrigation.
6. Routine external building wash down which does not use detergents or chemicals.
7. Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spill materials have been removed) and where detergents or other chemicals are not used.
8. Uncontaminated air conditioning, compressor condensate
9. Uncontaminated springs, excavation dewatering and groundwater
10. Foundation or footing drains where flows are not contaminated with process material such as solvents.
11. Swimming pool discharge where chlorine has been allowed to evaporate for 3-4 days prior to draining.

J. Post Construction Stormwater Management:

Post construction water quality will be achieved by diverting stormwater runoff through adequate XXX control measure, which will filter out floatable debris down to ½ inch size.

K. State or Local Plans:

The City of Hot Springs in which the construction activity occurs will be contacted to determine if there are erosion control and / or stormwater runoff requirements in the city code, city ordinances or city permits. All applicable requirements will be met. Documentation of compliance will be attached to this SWPPP for submittal to ADEQ.

L. Inspections:

The following are the minimum inspection, maintenance, and reporting practices that will be used to maintain erosion and sediment controls at our construction site:

1. Erosion and sediment controls will be inspected every 7 days and within 24 hours after any storm event of 1/2 inch or greater to make sure the controls are in effect and do not require any maintenance. Inspections will be performed by an inspector who has obtained certification by the Hot Springs Stormwater Division.

2. Inspection results will be documented on an inspection report and maintained on site for review by state and local inspectors.

3. A rain gauge will be kept on site and daily records of rain fall will be kept with inspection reports.

4. City of Hot Springs Inspection Form will be used. (Attachment B)

5. All controls will be inspected to ensure that they meet manufacture's specifications.

6. Sediment basins and sediment traps will be cleaned when they reach 50% of the original capacity.

7. All site entrances and exits will be checked to ensure no off-site tracking.

8. All inspection reports will be maintained for a minimum of 3 years after permit termination.

9. In addition to inspections, records will be kept of the following:
   a. Dates when major grading activities occur
   b. Dates when construction activities cease in an area, temporarily or permanently
   c. Dates when an area is stabilized, temporarily or permanently

M. Maintenance of Controls:

1. Any repairs or replacement will be done as soon as possible but no later than 48 hours after the inspection. Repairs and replacements will be documented on the inspection report.

2. Sediment deposits will be removed once sediment has reached one half (1/2) the height of a wire backed silt fence.

3. Sediment deposits will be removed once sediment has reached one half (1/2) the height of any other BMP such as check dams, storm wattles, rock bags, sediment basin or traps, or any other device.

N. Completion of Job:

1. After the completion of the job all sediment and erosion controls will be removed and the street will be cleaned to make sure it is free of debris.

2. The City of Hot Springs will be contacted to schedule a final inspection of the site and to terminate the City of Hot Springs Stormwater Permit.

O. Employee Training:

The City of Hot Springs requires each project to be inspected by an individual who has passed the City of Hot Springs Stormwater Site-Inspector Certification Course. The Certified Inspector will be qualified to provide training to other pertinent contractors or employees working at this site. The owner/operator is responsible to ensure that the certified individual provides adequate training to other employees, contractors and/or subcontractors to implement and comply with conditions of the Permit.

P. Contractors:

All contractors should be identified in the plan. Plan can be updated as contracts are issued.

Contractor Printed Name:		Contractor Signature:	
Contractor Phone Number:			

Contractor Printed Name:		Contractor Signature:	
Contractor Phone Number:			

Contractor Printed Name:		Contractor Signature:	
Contractor Phone Number:			

Contractor Printed Name:		Contractor Signature:	
Contractor Phone Number:			

Q. Stormwater Site Inspector Information:

All stormwater site inspectors must be certified through the City of Hot Springs.

Inspector Printed Name:		Inspector Signature:	
Inspector Phone Number:		CHS Certification #	Expiration:

Inspector Printed Name:		Inspector Signature:	
Inspector Phone Number:		CHS Certification #	Expiration:

Certification Statement:

"I certify under penalty of law that this document and all attachments, such as inspection forms, 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 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."

Owner / Operator Printed Name: _____

Owner / Operator Signature: _____ Date: _____

Contractor's Printed Name: _____

Contractor's Signature: _____ Date: _____

Detention / Retention Maintenance Plan

City of Hot Springs

Stormwater Division

Project Name:
Project Address:

General Maintenance Requirements:

The owner or property owner's association (POA) shall maintain the stormwater detention/retention facilities in good working order in accordance with their design functions. Maintenance of the facilities is a continuous responsibility of the owner or POA. The owner shall keep a log of all maintenance activities, including the date and type of maintenance performed. The reports and maintenance log shall be made available to the City of Hot Springs for review upon request.

Primary maintenance activities include, but are not limited to:

- Mowing and general landscape maintenance
- Remove any trash that may have accumulated
- Remove and unclog restrictions from outlet control device(s)
- Check pond embankment stability
- Cleaning out accumulated sediment
- Herbicide spraying (in strict conformance with the City's policies and procedures)
- Alternative detention i.e., underground or bio-swales, shall be cleaned and maintained as necessary to ensure the systems functionality

Certification Statement:

I understand that maintenance of the detention/retention facility on my property is an integral part of the program for the entire city stormwater drainage system. I understand that I must inspect the detention/retention facility for compliance on an annual basis and that I will maintain an inspection log with the results of the inspections. I understand that the City's Stormwater Division has the authority to inspect and review private maintenance actions to ensure that private maintenance is being provided.

Owner Signature: _____ Date: _____

Print: _____

Appendix F
Submittal Requirements

CITY OF HOT SPRINGS, ARKANSAS
STORMWATER PERMIT SUBMITTAL PACKAGE

Requirements for all submittal packages:

- Stormwater Pollution Prevention Plan (SWPPP)
  - Must use the most current version (July 2017) of the CHS SWPPP Template
- QLP Site Notice
- Stormwater Permit Application and Fee Calculator
- Each Plan (SWPPP, SWMP, SWQP, SWDP) shall be submitted as a separate plan and titled appropriately
  - All plans shall be completed and signed by a licensed/design professional
- Each permitted site must have a Stormwater Inspector that has been certified by the CHS Stormwater Division
  - Must use the most current version of the CHS Inspection Form

Requirements for Land disturbance 1 acre or more or Any New Commercial Project regardless of size:

- Stormwater Management Plan (SWMP)
- Stormwater Quality Plan/with post maintenance plan (SWQP)
- Stormwater Detention/Retention Plan
- Large sites 5 acres or more must obtain a ADEQ Permit (NOI) prior to receiving a CHS Stormwater Permit

City of Hot Springs
Stormwater Division
501-321-6743

https://www.cityhs.net/Stormwater-Management

The ultimate objective of this program is to protect water quality. The City of Hot Springs recognizes the need and responsibility to implement a program that achieves the requirements mandated by NPDES Phase II Final Rule.

Appendix G
Stormwater Management Manual

The Stormwater Management Manual is to large to attach. The manual can be found on the city's website.