

STORM WATER MANAGEMENT PROGRAM

City of Cave Springs, Arkansas

137 N Main Street
Cave Springs, AR 72718

Small Municipal Separate Storm Sewer Systems (MS4)

Phase II MS4 Permit No. ARR040052

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Acronyms

ADEQ	Arkansas Department of Environmental Quality
BMP	Best Management Practice
CWA	Clean Water Act
EPA	Environmental Protection Agency
MEP	Maximum Extent Practicable
MCM	Minimum Control Measure
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
SWMP	Storm Water Management Program
SWPPP	Storm Water Pollution Prevention Plan

1. BACKGROUND & CONTEXT

The Cave Springs Storm Water Management Program (SWMP) has been developed to provide policy and management guidance for activities affecting stormwater throughout the City of Cave Springs. It is intended to help fulfill certain State and Federal water quality requirements and to meet local water resources management objectives. With the implementation of the policies and management practices embodied in the SWMP, the City of Cave Springs hopes to preserve urban stormwater quality which would otherwise negatively impact local rivers and streams, and to develop and preserve the urban drainage infrastructure in a manner that meets the community's needs for years to come.

While the State and Federal regulatory programs place significant emphasis on improving water quality and the health of Arkansas's watersheds, Cave Springs, as part of the Illinois (Osage Creek-Illinois River) Watershed, further emphasizes the need for local management of urban stormwater and waterways. It becomes even more important that management of these resources occur in a manner that minimizes destructive long-term impacts to drainage infrastructure and the natural features that help protect water quality and control flooding.

2. DESCRIPTION OF THE PERMIT AREA

The City of Cave Springs (The City) currently serves a population of 1,729 people (2010) within the city limits. The geographic boundaries of the MS4 plan are the City limits and the service area for stormwater planning encompasses approximately 7.30 square miles. The City has complete authority and responsibility for planning, building, operating, maintaining and regulating the stormwater drainage system within the city limits. Therefore, the MS4 NPDES permit for which this MS4 plan is submitted covers only the area within the city limits. This area discharges into Osage Creek and its associated tributaries. The City's stormwater management practices have evolved to include efficient and cost-effective approaches that reduce or eliminate stormwater pollution and protect the riparian (stream bank) areas of open waterways. These approaches provide natural pollutant removal and stormwater management capacity. However, the City has never before had a SWMP intended to provide comprehensive stormwater management guidance for the City organization. In 2012, the City Council endorsed the proposed revisions to the Zoning Ordinance (Ordinance 2012-09) which included drainage and storm water management requirements. In addition, the City has worked consistently towards implementing the long-term outcomes that have served as a guide for the City's efforts to develop this SWMP and other related water resource management efforts.

3. PURPOSE, SCOPE, & AREAS OF FOCUS

The purposes of the SWMP are threefold. First, the SWMP characterizes the City's entire stormwater drainage system, including both the open and piped systems, their connections to the streams, and the overall condition of the system. This characterization is necessary to address relevant State and Federal regulatory requirements and it provides baseline information on which to develop focused stormwater management strategies. Second, the SWMP establishes goals, policies and implementation actions that will achieve the City's long-term objectives in a way that is understandable to the public, usable by City staff, and meets regulatory needs. Finally, the SWMP establishes a means for measuring, reporting and adaptively managing the City's water resources, by presenting benchmarks that will ensure meaningful progress, as well as ensuring compliance with applicable laws and permit requirements.

The SWMP addresses stormwater quality management policies and management practices that are, and/or will be implemented in the City. The scope of the SWMP is determined primarily by the Federal MS4 permit requirements, but is intended to address local water resources issues as well. These areas of focus in the SWMP include:

- **Pollution incidents and unlawful (illicit) discharges to the City’s stormwater drainage system.** These discharges can be systematic (recurring) or episodic (occasional or one-time) discharges, and include pollutant runoff from parking lots, discharges from industrial outfalls, accidental spills, poor construction site management, and a variety of ways people dump pollutants into street gutters or catch basin.
- **On-site management of stormwater to reduce the quantity of stormwater and pollution entering the drainage system.** Similar to illicit discharges, events that cause flooding, system surcharges, or ongoing pollutant loading can occur downstream from the city limits, and originate from a variety of causes. These include inadequacies in the type and design of infrastructure, inadequate maintenance, insufficient erosion and/or sediment control practices, and increases in impervious area without provision for on-site infiltration of stormwater into the ground. The City regulates these issues through implementation of the Cave Springs Municipal Code within the city limits.
- **Reduction and prevention of pollution at City facilities and resulting from City activities and business practices.** The City provides services with a potential for creating water pollution, erosion, and sedimentation. These include field activities such as ditch cleaning and excavation/maintenance activities, as well as activities at City facilities, such as vehicle washing and maintenance, painting, and material handling. The Federal NPDES SWMP requires the City to implement pollution prevention practices that reduce or eliminate stormwater pollution from City activities
- **Public education geared toward broad community stewardship of water resources.** The Federal NPDES SWMP places significant emphasis on public education as part of the long term solution to stormwater pollution. As such, education is a required element of the SWMP. The long-term success of the City’s efforts will hinge on increased awareness and stewardship throughout the community. The SWMP will result in formal, organized educational and outreach efforts that are targeted broadly throughout the metropolitan area. Many of these efforts are most effectively approached on a Northwest Arkansas MS4 basis, through cooperative efforts with the University of Arkansas Cooperative Extension Service.
- **Public awareness and involvement in the City’s Stormwater Management Program.** Broad awareness and participation in the development and implementation of the SWMP by residents and local area businesses is a key component to ensure effectiveness of the SWMP. The SWMP includes a public involvement component in its development that meets the Federal NPDES program.
- **ADEQ required Municipal Separate Storm Sewer System (MS4) Plan elements.** The NPDES Stormwater Program requires that the City submit a MS4 plan in order to acquire a MS4 permit to legally discharge stormwater to the waters of the U. S.

The Federal rules and, therefore, ADEQ’s permit requirements, direct that the City’s MS4 plan address six minimum areas, which are termed “Minimum Control Measures.” These areas are broadly titled in the rules as follows:

1. Public Education and Outreach on Stormwater Impacts;
2. Public Involvement/Participation;
3. Illicit Discharges Detection and Elimination;
4. Construction Site Stormwater Runoff Control;
5. Post-Construction Stormwater Management in New Development and Redevelopment; and
6. Pollution Prevention/Good Housekeeping for Municipal Operators.

Under each of these areas described above, the City’s MS4 plan must contain the following information:

- The structural and nonstructural Best Management Practices (BMPs) that the permittee or another entity will implement for each of the stormwater Minimum Control Measures;
- The measurable goals (Benchmarks) for each of the BMPs including, as appropriate, the months and years in which the permittee will undertake required actions, including interim milestones and the frequency of the action; and
- The person or persons responsible for implementing or coordinating the BMPs for the permittee's MS4 plan.

In addition to the requirements listed above, the permittee must provide a rationale for how and why each of the BMPs is selected and measurable goals for the permittee's SWMP.

Stormwater Best Management Practices (BMPs) is a *catch-all* term for approaches to managing stormwater that reduce negative impacts of runoff on the receiving streams. While the term has become widely used by the regulatory agencies and throughout the stormwater management industry, it does not imply that each BMP is necessarily the "Best" at achieving a particular stormwater management objective. BMPs are alternatives to practices that reduce the water quality and flow management functions and benefits of the open drainage system such as piping, filling or hardening open drainage ways. BMPs include, but are not limited to:

- physical structures or created natural features such as wetlands or ponds that improve water quality and/or attenuate flow;
- maintenance or construction practices that prevent erosion, control sedimentation, and reduce pollution entering runoff;
- educational strategies that inform the public, developers, business/industry, etc. on stormwater pollution prevention;
- regulations and enforcement programs that protect water quality;
- protection of open drainage ways for stormwater treatment and conveyance, and maintaining adjacent (riparian) buffers to provide natural stormwater filtration, cooling and long term channel stability and other stormwater management functions; and the avoidance of piping, filling, or deteriorating the condition of open drainage ways.

4. OVERVIEW OF CAVE SPRINGS' STORMWATER DRAINAGE SYSTEMS

The City is responsible for implementing surface water management activities within its boundaries, including the planning, design, construction, operation, and maintenance of the stormwater drainage system. The City performs all operation and maintenance on the public drainage system that is designed and constructed to City standards and located within easements or rights-of-way, or real property that has been conveyed or dedicated to the City. The City also maintains open channels throughout the city, and public outfalls to natural streams within the City's jurisdiction. The geographic area covered by this program includes approximately 7.30 square miles inside the Cave Springs city limits.

5. STORMWATER DRAINAGE BASIN CHARACTERIZATION

The City's stormwater drainage system ultimately discharges to Osage Creek. The City is further broken down into several separate tributaries to this stream. A drainage basin can be described as a geographic area within which stormwater drains from many small systems converge on a larger drainage way, ultimately culminating in outfalls to the major drainage way. The character and condition of the drainage way varies significantly throughout the basins, depending on surrounding land uses and contributing drainages.

6. GOALS, POLICIES, & IMPLEMENTATION ACTIONS

This section provides overall guidance to the City in performing stormwater management activities in a manner consistent with State and Federal laws, while meeting local goals and the long-term outcomes the City hopes to achieve. The following goals are derived from long-term key outcomes that have been reviewed. The policies provide specific direction, consistent with the local goals, and State and Federal requirements. Implementation actions include BMPs discussed in detail in the MS4 plan and other actions needed to achieve local objectives. The work plan for completion of Implementation Actions is in the SWMP Implementation Action Summary.

GOAL 1: *Protect citizens and property from flooding.*

Policies

- 1.1 Maintain surface drainage in the City to reduce the threat of flooding, through proper maintenance of the stormwater drainage system infrastructure, with practices that are protective of water quality.
- 1.2 Through the development review process, ensure that new development incorporates adequate stormwater management infrastructure to avoid downstream capacity and water quality problems.
- 1.3 Preserve open stormwater drainage where feasible, to best accommodate peak storm flows, maintain flood storage capacity, and promote water quality.
- 1.4 Adhere to standards, policies, and practices which comply with Federal Emergency Management Agency (FEMA) Flood Management Program requirements to ensure that the City maintains flood insurance coverage under this program.

Implementation Actions

- 1.a Continue evaluation of City maintenance practices and implement appropriate BMPs to assure that the City adequately maintains the stormwater drainage system capacity in an environmentally responsible manner.
- 1.b Evaluate and refine the City's drainage program, including educational outreach, inspection, and enforcement components to reduce the negative stormwater impacts from land alteration, erosion, sedimentation, and excessive runoff.
- 1.c Implement BMPs consistent with NPDES Minimum Control Measure #1, Public Education and Outreach on Stormwater Impacts, to ensure that the public is aware of the importance of preventing pollution from entering the streams and water bodies of the State.
- 1.d Implement BMPs consistent with NPDES Minimum Control Measure #4, Construction Site Stormwater Control, to minimize or eliminate erosion and sedimentation in the stormwater drainage system.
- 1.e Implement BMPs consistent with NPDES Minimum Control Measure #5, Post Construction Stormwater Management for New Development and Redevelopment, to ensure that new development is in compliance with flow-regulating management practices, such as detention ponds, on-site stormwater storage, etc.
- 1.f Implement BMPs consistent with NPDES Minimum Control Measure #6, Pollution Prevention in Municipal Operations, to ensure adequate maintenance of the stormwater system.

GOAL 2: *Improve surface and sub-surface waters for aquatic life and other beneficial uses.*

Policies

- 2.1 The City will monitor and implement practices and regulatory programs with the objective of improving surface and groundwater quality to, at a minimum, meet State water quality standards,

adequately protect threatened and endangered wildlife, and meet the State beneficial use guidelines.

- 2.2 The City will maintain its open channels and waterways in a manner that is protective of their natural stormwater management and habitat functions for the benefit of the citizens of the City, local wildlife, including threatened or endangered species, and future generations.

Implementation Actions

- 2.a Promote pollution protection educational efforts, including signage, development project review, and public outreach.
- 2.b Enhance erosion and illicit discharge detection and compliance efforts, including permitting and Code enforcement.
- 2.c Implement BMPs consistent with NPDES Minimum Control Measure #1, Public Education and Outreach on Stormwater Impacts, to enhance citizens' and businesses' knowledge regarding water quality regulations as well as the benefits to the community from properly functioning waterways.
- 2.d Implement BMPs consistent with NPDES Minimum Control Measure #3, Illicit Discharges Detection and Elimination, to eliminate or minimize toxic discharges from business and industry.
- 2.e Implement BMPs consistent with NPDES Minimum Control Measure #4, Construction Site Stormwater Runoff Control, to minimize sedimentation and channel degradation from construction sites.
- 2.f Implement BMPs consistent with NPDES Minimum Control Measure #5, Post-Construction Stormwater Management for New Development and Redevelopment, to ensure long-term functioning of newly-developed sites.
- 2.g Implement BMPs consistent with NPDES Minimum Control Measure #6, Pollution Prevention in Municipal Operations, to ensure that the stormwater drainage system is maintained in properly functioning condition.

GOAL 3: *Preserve and maintain surface waters, wetlands, and riparian areas.*

Policies

- 3.1 Through the development review process, the City will ensure that development is protective of significant open waterways, wetlands, and riparian areas.
- 3.2 The City will implement permitting programs, educational outreach, compliance inspections and enforcement activities as needed to reduce erosion, sedimentation, illicit discharges, and other pollution impacts to the City's waterways.

Implementation Actions

- 3.a The City will review and refine its drainage program as necessary, which addresses erosion, sedimentation, and the impacts of land alteration, including permitting, inspections, technical educational and outreach, and enforcement.
- 3.b The City will review development proposals for impacts on open drainage ways, wetlands, and riparian areas, and protect the functions and benefits of these areas as provided for in the Code of Ordinances.
- 3.c The City will work cooperatively with citizens, businesses, and agencies to protect and improve surface waterways, seek opportunities for stewardship partnerships, further enhance educational opportunities, and continue participation in intergovernmental work groups.
- 3.d The City will implement and continue to refine/improve BMPs for City activities with potential to impact water quality and/or the functions of waterways, wetlands, and riparian areas.

- 3.e The City will implement BMPs consistent with NPDES Minimum Control Measure #4, Construction Site Stormwater Runoff Control, to reduce or eliminate sedimentation from construction sites as a contributor to poor water quality and quantity management.
- 3.f The City will implement BMPs consistent with NPDES Minimum Control Measure #5, Post-Construction Stormwater Management for New Development and Redevelopment, so new development at a minimum maintains the functioning of the stormwater drainage system, and doesn't contribute to future degradation.
- 3.g The City will implement BMPs consistent with NPDES Minimum Control Measure #6, Pollution Prevention in Municipal Operations, which is critical to maintaining properly functioning wetland and riparian areas and open channels.

GOAL 4: *To further Citizens, Businesses, and Industries understanding of the need to protect water quality*

Policies

- 4.1 The City will develop targeted education and outreach and technical assistance programs regarding practices and obligations for keeping debris and pollutants out of the stormwater drainage system and train stakeholder groups in appropriate erosion control and sediment prevention practices, as well as stormwater management BMPs.
- 4.2 The City will seek to form partnerships with neighborhoods or groups interested in providing stewardship of local waterways.
- 4.3 The City will develop, implement, and enforce appropriate building, design, and Municipal Codes to address water quality compliance issues, including pollution, habitat, and aesthetic issues, to encourage the development of urban waterways that are positive amenities in the community.

Implementation Actions

- 4.a The City will continue to support outreach and education efforts regarding water quality, riparian and wetland areas, including business, contractor, and developer outreach programs to educate these parties about their impacts on stormwater quality.
- 4.b The City will continue to maintain enforcement and compliance activities, including inspections, technical assistance, and Code enforcement.
- 4.c The City will implement BMPs consistent with NPDES Minimum Control Measure #1, Public Education and Outreach on Stormwater Impacts, to engage the public in the efforts to create positive urban amenities.
- 4.d The City will implement BMPs consistent with NPDES Minimum Control Measure #3, Illicit Discharges Detection and Elimination, to ensure that waterways are safe, meet State water quality standards, and can function as positive amenities.

Goal 5: *Urban drainage ways become community amenities*

Policies

- 5.1 The City will conduct education and outreach activities to appropriate target groups to increase understanding of the importance of maintaining safe and clean drainage ways, and to seek volunteers to be caretakers for water features near them.
- 5.2 The City will, through its Code of Ordinances, protect existing significant open waterways and encourage site planning and landscaping that enhances the attractiveness and natural functions of the water features.
- 5.3 The City will maintain urban drainage ways in a manner that provides for safe and attractive conditions within the limits of its fiscal constraints.

Implementation Actions

- 5.a Enhance the City's erosion control program, including educating developers and the community regarding the positive aspects of open waterways to promote acceptance, and integrating effective compliance and enforcement components.
- 5.b Provide adequate funding within the City's restraints for public maintenance of the stormwater drainage system, and ensure ongoing maintenance of private stormwater features through development agreements.
- 5.c Increase educational outreach to schools to increase awareness of children regarding the need to keep litter and pollutants out of urban drainage ways.
- 5.d Implement all six of the NPDES Minimum Control Measure BMPs. Implementing all of the provisions of the SWMP will ultimately result in improved water quality and quantity management, improved habitat and resource protection, and, ultimately, enhance urban waterways as desirable community amenities.

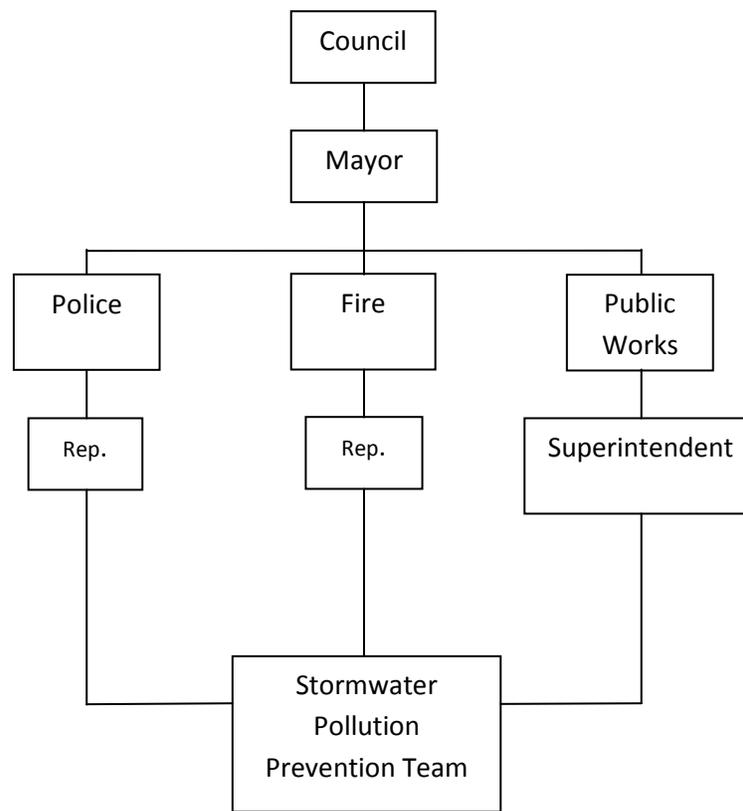
7. CAVE SPRINGS' NPDES MS4 PROGRAM

City Stormwater Management Program Responsible Parties:

The City is responsible for implementing surface water management activities within its boundaries, including the planning, design, construction, operation and maintenance of the stormwater drainage system. In response to the NPDES Phase II stormwater requirements, the City has developed a MS4 plan addressing each of the six required Minimum Control Measures, as specified in the Federal-NPDES Phase II rules. The City's stormwater management program is the responsibility of the Public Works Department. However, the implementation of the City's MS4 plan will extend throughout the City organization by implementing a Stormwater Pollution Prevention Team with representatives from Police, Fire and Public Works Departments. Each department's task would be recognizing the stormwater issues of their facility, the field work they do, and documenting data for both positive and negative events that are stormwater related that previously went unnoted. Negative findings will be enforced by various Departments of City Enforcement and the City Code of Ordinances.

The Northwest Arkansas Regional Planning and the University of Arkansas Cooperative Extension Service has contracted with the City to be responsible for the development and implementation of the public education efforts. However, the City recognizes their services are only partial coverage and the City is ultimately responsible for the control measures.

City Organization Chart



8. NPDES PHASE II BMP REQUIREMENT

Specific BMPs are proposed for each Minimum Control Measure, which are intended to support the reduction of discharges of pollutants in stormwater runoff to the maximum extent practicable (MEP) as required by the Federal NPDES Phase II rules. In this section, a summary sheet is provided for each Minimum Control Measure, which includes a list of the selected BMPs, the rationale for their development and selection, and a summary of the measurable goals and implementation schedule. The summary sheet is followed by a fact sheet for each of the selected BMPs. Together, the summary sheets and the fact sheets provide the following information in accordance with the Federal rules:

1. A list of the responsible parties for the BMP implementation;
2. A brief description of the BMP;
3. A description of existing conditions;
4. The proposed MS4 plan activities;
5. Measurable goals; and
6. An implementation schedule.

The BMP development/implementation schedule shows when certain activities will be completed on a fiscal year basis. The NPDES Phase II rules provide for a five-year implementation schedule starting from May of 2013, which is when the City submitted its original MS4 permit application materials. Therefore, the BMP implementation schedule lays out a five-year schedule starting with fiscal year 2013.

A. Minimum Control Measure #1 - Public Education and Outreach on Stormwater Impacts

REGULATORY REQUIREMENTS

Regulation 40 CFR 122.34(b)(1): "The permittee must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff."

PUBLIC EDUCATION (PE) SELECTED BMPs

- PE-1** Develop and distribute electronic and printed educational materials - Input from both the MS4 Stormwater Compliance Group and Education Steering Committee guides the emphases of electronic and printed educational materials. Once topics have been identified, fact sheets, podcasts, e-learning modules, website content, newsletters, press releases, and PSAs will be developed, adapted, and/or gathered for distribution at public meetings, in support of presentations, and with educational displays. Stormwater management and pollution prevention messages will be provided to participating MS4s for inclusion in municipal utility bill mailings to their residents
- PE-2** Create displays and staff educational booths - Displays highlighting the annual topics of emphasis will be created and set up/staffed at libraries, banks, schools, local festivals, county fairs, etc.
- PE-3** Conduct stormwater programs for adult audiences - Educational presentations will be given to illustrate stormwater dynamics, identify potential pollutants and pathways, describe techniques to reduce stormwater pollution and encourage voluntary BMP implementation according to the annual topic/audience emphases outlined in the SWMP.
- PE-4** Conduct hand-on youth stormwater/water quality education programs - Educational programs for school youth will focus on the water cycle, watersheds, stormwater dynamics, water quality and pollution prevention using the EnviroScape surface runoff model, groundwater simulator, hands-on exercises from Project WET, Project WILD, and Project Learning Tree and creek-side classrooms. Programs conducted will support the Arkansas State Frameworks required curriculum.

RATIONALE

In order to cover a wide range of audiences including government staff, the general public, and youth, multiple outreach genres and methods must be used (booths and materials at local festivals, newspaper articles, school programs, etc.). The contract with Northwest Arkansas Regional Planning Commission and the University of Arkansas Cooperative Extension Service allows for more educational activities to be pursued while providing a unified message for the residents of Northwest Arkansas. There is also a great need to partner with various organizations to maximize the educational impact. Coordinating with other agencies like the Cities of Fayetteville, Rogers, and Bentonville, Washington and Benton Counties, Illinois River Watershed Partnership, and others, helps to keep government staff informed and educated on regional stormwater related issues, such as existing materials and information available for common use (e.g., monitoring data and results of BMP evaluations), and issues such as Endangered Species Act (ESA) implications for city stormwater management activities. The Cooperative Extension Service also partners with these organizations and uses media outlets and Extension Service listings to promote volunteer opportunities for stream clean ups and water monitoring. Cave Springs' strategy for developing and distributing the public education materials is to start with information such as the most typical sources of pollutants in stormwater runoff and the impacts associated with those pollutants, and making this information available as educational handouts, flyers, and mailings handled by the

University of Arkansas Cooperative Extension Service. Future activities will include outreach presentations, advertisements, and workshops for the public, businesses, industry, and various other stakeholders, to educate them on impacts that the City's stormwater management program may have, and what they can do to improve stormwater quality. Outreach presentations, advertisements, and workshops can target development businesses to utilize new technology methods for stormwater runoff control and encourage Low Impact Development (LID) within development planning. Numerous topics can be covered by these outreach methods and will include recommendations for topics of interest via steering committees. Topic areas are coordinated to target populations that are defined by the different committees. These multiple partners, venues, and materials allow for at least 50% of the population of the MS4 areas to be reached.

The City of Cave Springs participates in monthly meetings of the NWA Stormwater Compliance Group (SCG) and has representation on the NWA Regional Stormwater Education Steering Committee. They also have representation on the Stormwater Education Steering committee (public membership comprised of diverse backgrounds/interests) which convenes at least once each year to review and evaluate program accomplishments and plan next steps. Both groups provide the localized input used to identify critical stormwater issues, target audiences, program methods and public relations strategies.

RESPONSIBLE PARTIES

The Northwest Arkansas Regional Planning Commission and the University of Arkansas Cooperative Extension Service has contracted with the City of Cave Springs to be responsible for the development and implementation of the public education efforts.

SUMMARY OF MEASURABLE GOALS

University of Arkansas Cooperative Extension Service Staff may use public events, periodic neighborhood surveys, and consultation with community and citizen group leaders to solicit feedback on specific education/outreach efforts. Specific goals are outlined in the contract agreement with Cave Springs and will not be mentioned here to save space, but will be described in detail on the annual report.

DEVELOPMENT/IMPLEMENTATION SCHEDULE SUMMARY

BMP#	PERMIT YEAR				
	YR 2013	YR 2014	YR 2015	YR 2016	YR 2017
PE-1	Utilize SCG and education steering committee to plan outreach/education methods, measurable goals, and evaluate program impacts.				
	Continue meeting with the stormwater compliance group on a monthly basis to receive feedback on educational efforts and regional training needs.				
PE-2	Use multiple outreach methods to reach the general public highlighting season specific and media driven stormwater management and pollution prevention topics.				
PE-3	<i>Topic Emphasis:</i> Pet waste management	<i>Topic Emphasis:</i> Household hazardous waste (electronics, tires, etc.) handling, storage and proper disposal	<i>Topic Emphasis:</i> Yard and garden management (yard waste disposal, proper fertilization, integrated pest management, etc.)	<i>Topic Emphasis:</i> Automotive management (guidelines for washing, leaks/repairs, fluids disposal, etc.)	<i>Topic Emphasis:</i> Septic system and pool maintenance
PE-3	<i>Target Audience:</i> MS4 residents and University students	<i>Target Audience:</i> Industrial and commercial businesses and households	<i>Target Audience:</i> Homeowners and garden enthusiasts	<i>Target Audience:</i> Vehicle owners	<i>Target Audience:</i> Homeowners with septic systems/pools
	<i>Rationale:</i> Recent newsletters, displays and presentations have revealed an ignorance of the volume and impact of pet waste pollutants on urban stormwater quality	<i>Rationale:</i> Misuse and improper disposal (in sink, toilet, storm drain, and ditch) continue to be a source of stormwater pollution	<i>Rationale:</i> Improper yard waste disposal can clog storm drains and excess fertilizer and pesticide applications can contaminate stormwater with nutrients and chemicals	<i>Rationale:</i> Leaking automotive fluids and washing vehicles on paved surfaces allow oil, grease and chemicals to be carried in stormwater to local waterways	<i>Rationale:</i> Malfunctioning septic systems, improper handling and disposal of pool chemicals and emptying chlorinated pool water can impact stormwater quality
PE-4	Conduct hands-on activities with youth through school enrichment, library, and camp programs				

B. Minimum Control Measure #2 – Public Involvement/Participation

REGULATORY REQUIREMENTS

Regulation 40 CFR 122.34(b)(2): The permittee shall, at a minimum, comply with State and local public notice requirements when implementing a public involvement/participation program.

PUBLIC INVOLVMENT (PI) SELECTED BMPs

- PI-1** Engage Residents in Stormwater Policy Development - Information will be included through multiple outlets (website, newsletters, press releases, etc.) to encourage public input/involvement as MS4 stormwater management policy evolves.
- PI-2** Train and Utilize Volunteer Educators - “Train-the-trainer” processes will be used to engage public volunteers and educators in teaching stormwater and pollution prevention (e.g. Benton and Washington County Master Gardeners, Master Naturalists, Lake Smart Leaders, etc.)
- PI-3** Conduct Public Participation/Involvement Events - Citizen and youth groups will participate in public involvement events (litter pick up, establishing demonstration rain gardens, planting riparian vegetation, stenciling storm drain inlets, etc.).

RATIONALE

The City selected the above four BMPs to address the Public Involvement/Participation Minimum Control Measure #2 and complement its public education efforts. The City is working through the Northwest Arkansas Regional Planning Commission to contract with the University of Arkansas Cooperative Extension Service to continue a public involvement/participation program addressing PI-1, PI-2 & PI-3. Components of this program will include organizing citizen participation in periodic creek cleanup efforts, storm drain stenciling, or assisting with educational or interpretive events.

RESPONSIBLE PARTIES

The Public Works Department is responsible for the development and implementation of the public involvement and participation efforts, utilizing the services of the University of Arkansas Cooperative Extension Service (contracted through the Northwest Arkansas Regional Planning Commission).

SUMMARY OF MEASURABLE GOALS

The City will provide opportunities for public input on the stormwater management program on an annual basis in various forms, including surveys and/or public events. Additionally, the administration will be periodically updated on the stormwater plan and efforts to meet State water quality standards. Feedback from the administration on annual progress will guide modifications to the stormwater plan as appropriate. The City will track these activities on an annual basis. In addition, the University of Arkansas Cooperative Extension Service will utilize Master Gardeners and community volunteers for creek clean-ups, storm drain stenciling, and assisting with PE-2 and PE-3 programs.

DEVELOPMENT/IMPLEMENTATION SCHEDULE SUMMARY

BMP#	PERMIT YEAR				
	YR 2013	YR 2014	YR 2015	YR 2016	YR 2017
PI-1	Identify and implement public involvement activities in implementing stormwater policies, implementation actions and BMPs.				
PI-2	Incorporate stormwater pollution prevention into annual Master Gardener training and use trained volunteers for further public outreach and education programs for PE1, PE-2 and PE-3.				
PI-3	<i>Program Emphasis:</i> Partner with the Beaver Water District to conduct citizen-based water quality monitoring	<i>Program Emphasis:</i> Partner with the Illinois River Watershed Partnership stream clean-ups	<i>Program Emphasis:</i> Coordinate citizen volunteers for storm drain stenciling	<i>Program Emphasis:</i> Coordinate citizen volunteers for storm drain stenciling	<i>Program Emphasis:</i> Coordinate citizen volunteers for storm drain stenciling
	<i>Target Audience:</i> MS4 residents and University students	<i>Target Audience:</i> Volunteer groups and youth organizations	<i>Target Audience:</i> General public and civic organizations	<i>Target Audience:</i> MS4 residents and University students	<i>Target Audience:</i> Homeowners with septic systems/pools
	<i>Rationale:</i> Connects construction runoff, over-fertilization and pet waste with stormwater nutrients and bacteria	<i>Rationale:</i> Improper containment, use and disposal of hazardous products continues to be a source of stormwater pollution	<i>Rationale:</i> Storm drain stenciling raises awareness about how yard waste disposal can clog storm drains and excess fertilizer and pesticide applications can contaminate stormwater with nutrients and chemicals	<i>Rationale:</i> Connects improper vehicle maintenance with stormwater quality	<i>Rationale:</i> Increase public awareness of the connection between home/property management decisions and the quality of regional water resources

C. Minimum Control Measure #3 – Illicit Discharge Detection and Elimination

REGULATORY REQUIREMENTS

Regulation 40 CFR 122.34(b)(3): The permittee must:

1. *Develop, implement and enforce a program to detect and eliminate illicit discharges [as defined at 40 CFR 122.26(b)(2)] into the permittee's small MS4.*
2. *Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those outfalls;*
3. *To the extent allowable under State or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into the permittee's storm sewer system and implement appropriate enforcement procedures and action. Possible sanctions include non-monetary penalties (such as stop work orders), fines, bonding requirements, and/or permit denials for non-compliance;*
4. *Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to the permittee's system;*
5. *Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste;*
6. *Address the following categories of non-storm water discharges or flows (i.e., illicit discharges) only if the permittee identifies them as significant contributors of pollutants to the permittee's small MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (discharges or flows from fire fighting activities are excluded from the effective prohibition).*
7. *The permittee must also develop a list of other similar occasional incidental non-storm water discharges (e.g. non-commercial or charity car washes) that will not be addressed as illicit discharges. These non-storm water discharges must not be reasonably expected (based on information available to the permittees) to be significant sources of pollutants to the MS4, either because of the nature of the discharges or conditions the permittee have established for allowing these discharges to the permittee's MS4 (e.g., a charity car wash with appropriate controls on frequency, proximity to sensitive water bodies, BMPs on the wash water). The permittee must document in the permittee's storm water management program plan any local controls or conditions placed on the discharges. The permittee must include a provision prohibiting any individual non-storm water discharge that is determined to be contributing substantial amounts of pollutants to the permittee's MS4.*
8. *The permittee must develop a process to respond to and document complaints relating to illicit discharges.*

ILLICIT DISCHARGE (IDDE) SELECTED BMPs

IDDE-1 Illicit Discharges Reporting and Tracking System

IDDE-2 Illicit Discharges Response and Enforcement

IDDE-3 Citywide Illicit Discharge Detection and Elimination

IDDE-4 Non-Stormwater Discharge Assessment

IDDE-5 Storm Sewer Inventory and Mapping

RATIONALE

Cave Springs has selected the above five BMPs to address MCM #3. BMPs IDDE-1 and IDDE-2 describe the City's processes that respond to and document complaints regarding water quality, including illicit discharges, in fulfillment of Requirements 1, 3 and 8 above. BMP IDDE-1 will provide methods for reporting and tracking of presumed illicit spills, sightings and discharges. Most of the City's personnel, while doing their daily jobs, will report potential illicit problem areas to the Public Works Department. In addition, the public will have the opportunity to report potential illicit problem areas to City Hall. The reported problem area will be investigated soon or immediately depending on the situation. The public phone calls received and the reports submitted by City personnel will be tracked with Illicit Complaint files. BMP IDDE-2 will provide methods for the response to reported potential illicit discharges and any necessary enforcement. . The reported illicit discharges will be traced upstream by following the discharge within the piping system. Once the illicit discharge is narrowed down to a particular building testing procedures such as dye testing will be utilized to pinpoint the source of the illicit discharge. Minor infractions will be brought to the owner's attention, followed up on, and a complete investigation report will be included in the Illicit Complaint files with pictures and the investigation results. Larger incidents within water bodies (such as fish kills with unknown circumstances) will be reported to the State Fish and Wildlife and/or the ADEQ for their expertise and water quality measurement capabilities. These two BMPs include a phone number for complaints and protocols for the most efficient and effective follow-up actions in response to calls. BMP IDDE-2 will be enforced, as necessary, with the use of the City Code of Ordinances. The planned sequence for addressing all violations will be as follows:

1. Site visit and discussion with the owner/operator or contractor to discuss issue.
2. The City will verbally request for the entity to cease any illicit discharge. The entity will be asked to immediately cease the illicit discharge and will be given 7 days to show good faith effort to correct and clean up site.
3. After 7th day with no effort visible, a written notice will be delivered which states that fines or legal action may be taken and another 7 days will be given for response or activity on site. In a construction case, a Stop Work Order would be given at this point.
4. After the 10th day, a letter from the City Attorney would be requested by the Mayor and formal legal action would be started.

BMP IDDE-3 consists of a comprehensive program to detect and eliminate illicit discharges throughout the City and addresses Requirement 4. This will include performing dry inspections of approximately 20% of the storm sewer outfalls per year over the next five years. This BMP will be implemented in conjunction with BMP IDDE-5 which will provide an inventory of all outfalls within City limits. Dry inspections will be performed by physically walking to each drain and inspecting the outfall for any signs of illicit discharge. Any outfalls which are discovered to have potential illicit discharges will be investigated as described in BMP IDDE-2. Records for all inspections will be kept on file and reviewed regularly to allow for the prioritization of any areas with reoccurring issues.

Any outfalls which are discovered to have potential illicit discharges will be investigated as described in BMP IDDE-2.

Requirement 5 to inform the public regarding the hazards of illicit discharges is implemented through several of the public education BMPs such as Clean Water In to Storm Curb Drain and Door Hangers.

Requirements 6 and 7, addressing non-stormwater discharges, will require that the City assess these discharges, and determine if they adversely impact the stormwater system. If they are found to cause an adverse impact, appropriate management practices or regulations will be used or developed and implemented with BMP IDDE-4.

Requirement 8 is covered by public knowledge of phone numbers of City Hall and Police Dispatch. Complaints phoned in regarding an incident are forwarded to the appropriate City personnel that can address the particular type of situation. Several of the public education BMPs as well as IDDE-1 will also help educate the public about illicit discharges and provide the phone numbers to report them to.

BMP IDDE-5 will meet Requirement 2 above by completing the mapping and inventory of the City's storm sewer system including all outfalls. This map will be updated with any new storm sewer systems and/or outfalls that are created through development.

RESPONSIBLE PARTIES

Public Works -Coordinate Management and Implementation of the IDDE Control Measures, respond and investigate citizen complaints and tips, assess and enforce as necessary.

Police – Respond to accidental illicit discharges (car accidents or other spills on or near public streets and public places). Report discharge to appropriate department for enforcement/cleanup.

Fire- Respond to accidental illicit discharges (car accidents or other spills on or near public streets and public places). Report discharge to appropriate department for enforcement/cleanup.

SUMMARY OF MEASURABLE GOALS

The measurable goals of the illicit discharges program will include:

1. Monitor the number and document the type of calls received and the actions taken in response each year.
2. Create storm sewer maps for areas within city limits. Document an annual review of maps to ensure they are up-to-date.
3. Monitor the number of illicit discharges that are encountered and document enforcement procedures that are conducted.
4. Track the number of commercial/industrial uses assessed for possible illicit discharges and document resolution of illicit discharges identified.
5. Complete an assessment of non-stormwater discharges as required by Minimum Control Measure #3, Requirement 6 and 7, along with implementing local controls where they are identified as being needed.

SUMMARY OF DEVELOPMENT/IMPLEMENTATION SCHEDULE

BMP#	PERMIT YEAR				
	YR 2013	YR 2014	YR 2015	YR 2016	YR 2017
IDDE-1	Operate, publish and promote phone number, and document calls received each year within Illicit Discharge file.	Implement program improvements as warranted.	Monitor and revise as necessary	Monitor and revise as necessary	Monitor and revise as necessary
IDDE-2	Implement protocols for responding to complaints annually, and document within Illicit Discharge file.	Monitor and revise as necessary	Monitor and revise as necessary	Monitor and revise as necessary	Monitor and revise as necessary
IDDE-3	Conduct dry inspections of existing outfalls, covering 20% of the total number. Identify and inspect new outfalls as they are constructed or found. Add new inlets & outfalls to storm sewer maps	Conduct dry inspections of existing outfalls, covering an additional 20% each year until all are inspected by the end of the permit. Identify and inspect new outfalls as they are constructed or found. Add new outfalls to storm sewer maps. Add last year's developments or revisions as additions to storm sewer maps for each year's update.			
IDDE-4	Assess impact of non-stormwater discharges. If impact is significant create & implement program to address	Continue ongoing program assessment, implementation and revisions.	Continue ongoing program assessment, implementation and revisions.	Continue ongoing program assessment, implementation and revisions.	Continue ongoing program assessment, implementation and revisions.

<p>IDDE-5</p>	<p>Inventory existing storm sewer maps. Update per inspections required for IDDE-3</p>	<p>Verify outfalls and update storm sewer map per inspections required for IDDE-3.</p>	<p>Verify outfalls and update storm sewer map per inspections required for IDDE-3.</p>	<p>Verify outfalls and update storm sewer map per inspections required for IDDE-3.</p>	<p>Verify outfalls and update storm sewer map per inspections required for IDDE-3.</p>
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D. Minimum Control Measure #4 - Construction Site Storm Water Runoff Control

REGULATORY REQUIREMENTS

Regulation 40 CFR 122.34(b)(4):

The permittee shall develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. For stormwater discharges associated with small construction activity in accordance with 40 CFR 122.26(b)(15)(i), the permittee will develop, implement, and enforce a program to reduce pollutant discharges from such sites. The permittee's program must include the development and implementation of, at a minimum:

- 1. An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State, Tribal, or local law;*
- 2. Requirements for construction site operators to implement appropriate erosion and sediment control best management practices;*
- 3. Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;*
- 4. Procedures for site plan review which incorporate consideration of potential water quality impacts;*
- 5. Procedures for receipt and consideration of information submitted by the public, and*
- 6. Procedures for site inspection and enforcement of control measures.*

CONSTRUCTION SITE WASTE (CSW) SELECTED BMPs

CSW-1 Erosion and Sediment Control Regulations

CSW-2 City Staff Erosion Control Training

CSW-3 Land Drainage Program

CSW-4 Inspections and Enforcement

RATIONALE

The City selected the above BMPs to address each component of the construction site runoff minimum control measures. The regulatory authority for BMP CSW-1 is currently provided for in Chapter 10.12 of the Zoning Ordinance (Ordinance 2012-9) of the City's Code of Ordinances. This ordinance helps to satisfy Requirements 1, 2 and 3 by providing regulatory authority for implementation and enforcement of the erosion and sediment control measures for construction or redevelopment of sites disturbing, greater than one acre. The planned sequence for addressing all violations will be as follows:

1. Site visit and discussion with the owner/operator or contractor to discuss issue.
2. The City will verbally request for the entity to cease any illicit discharge. The entity will be asked to immediately cease the illicit discharge and will be given 7 days to show good faith effort to correct and clean up site.
3. After 7th day with no effort visible, a written notice will be delivered which states that fines or legal action may be taken and another 7 days will be given for response or activity on site. In a construction case, a Stop Work Order would be given at this point.
4. After the 10th day, a letter from the City Attorney would be requested by the Mayor and formal legal action would be started.

Specific requirements for construction site operators are addressed during the development approval process as well as the issuance of Building Permits. The Zoning Ordinance requires the development of

erosion and sediment control plans and will be updated to include future regulatory requirements. The Zoning Ordinance also details the procedures for development approval including Technical Plan Review. In addition to City staff participating in plan review, the City has also contracted a consulting engineering firm for this purpose. Taken together, these adopted Codes and programs fulfill Requirements 1 through 4 described above. All large scale development plans are reviewed and critiqued by city officials and a consulting engineering firm prior to any construction approval to ensure that required EPA, ADEQ and local regulations are met. All construction sites other than individual home construction sites, will be inspected for compliance at least once per month and a report completed to provide confirmation of said inspections. Any sites which are non-compliant will be addressed as detailed above. As mentioned, all sites will be inspected at least monthly, however certain sites which are have reoccurring violations will be prioritized and will be inspected more often.

BMP CSW-2 involves the training of City staff to recognize and correct erosion problems on construction sites and to enforce the provisions of the City's adopted ordinances. This BMP is a critical component of the stormwater management program. This is being addressed through the development of specific, dedicated staff for permitting, inspections, enforcement and the implementation of the City Stormwater Pollution Prevention Team. This program is ongoing, and is intended to address Requirement 6. Currently, the City has scheduled for members of the Public Works department to attend training to become "Stormwater Site Inspectors."

During the development approval process, BMP CSW-3 will be implemented by the systematic review of plans with the use of checklists and/or other methods to ensure that the Drainage and Development Ordinance and all ADEQ requirements have been met. These checklists will ensure that minimum control measures such a construction entrances, concrete washouts, silt fence and others are included in the plans. The long term stability of storm water improvements will also analyzed during plan review. In addition to City staff participating in plan review, the City has also contracted a consulting engineering firm for this purpose.

After construction has started, BMP CSW-4 will be implemented with the initiation of regular site inspections by certified City personnel. These inspections will be documented, as well as any violations that are observed. If necessary, the City Code of Ordinances will be used for any enforcement actions.

Requirement 5 is covered by public knowledge of phone numbers of City Hall and Police Dispatch. Complaints phoned in regarding an incident are forwarded to the appropriate City personnel that can address the particular type of situation. Several of the public education BMPs will help educate the public about illicit discharges and provide the phone numbers to report them to.

RESPONSIBLE PARTIES

The City's Public Works Department maintains the City Code of Ordinances related to construction, coordinates the Site Plan Review process and coordinates the construction site inspections. Enforcement of these sections of the City's Code is conducted in coordination with the Office of the City Attorney, if necessary.

SUMMARY OF MEASURABLE GOALS

Staff will review the Municipal Code provisions related to erosion control and construction site runoff during the permit period and revise as necessary. The measurement of success of the program will be based on tracking of compliance and avoidance of impacts to water quality from land alteration and construction.

SUMMARY DEVELOPMENT/IMPLEMENTATION SCHEDULE

BMP#	PERMIT YEAR				
	YR 2013	YR 2014	YR 2015	YR 2016	YR 2017
RC-1	Review existing Drainage Regulation and Development Code sections for erosion and construction site runoff control effectiveness	Review, modify and enforce provisions as necessary.	Review, modify and enforce provisions as necessary.	Review, modify and enforce provisions as necessary.	Review, modify and enforce provisions as necessary.
RC-2	Conduct staff training on an ongoing basis; update as needed.		Evaluate the effectiveness of the training and update/improve as warranted.		
RC-3	Implement the land drainage and alteration program on an ongoing basis.	Conduct land drainage and alteration program training as needed.	Track land drainage and alteration compliance and impacts to water quality on an annual basis.	Evaluate Municipal Code and amend as needed to achieve compliance with CWA and ESA.	Program review and assessment.
RC-4	Conduct inspections on an ongoing basis.	Implement existing Code authority on an ongoing basis.	Review and amend the Code as appropriate.	Review and amend the Code as appropriate.	Review and amend the Code as appropriate.

E. Minimum Control Measure #5 - Post Construction Storm Water Management in New Development and Redevelopment

REGULATORY REQUIREMENTS

Regulation 40 CFR 122.34(b)(5): The permittee must:

- A. Develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the small MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts;*
- B. Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for the community;*
- C. Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law; and*
- D. Ensure adequate long-term operation and maintenance of BMPs.*

DEVELOPMENT STANDARD (DS) SELECTED BMPs

DS-1 Implementation of City Code of Ordinances and Development of BMP Manual

DS-2 Post Construction Stormwater System Maintenance Inspections and Compliance

RATIONALE

The City selected the above BMPs to meet the post-construction Minimum Control Measure requirements. The City's Zoning Ordinance requires that new developments incorporate stormwater management BMPs to reduce the impacts associated with stormwater runoff generated at the site. BMP DS-1 provides for maintenance of the appropriate Code of ordinances such that pollutants from stormwater runoff from new development are reduced to the maximum extent practicable, in partial compliance with the requirements of this Minimum Control Measure. In addition, the City will develop a BMP Manual which details available BMPs and indicates the best place for their use.

BMP DS-2 provides for the development of a long-term inspection and enforcement program, which is still needed to meet all the requirements noted above. The City has scheduled for members of the Public Works department to attain certification as "Stormwater Site Inspectors." These staff members will perform the stormwater inspections and will continue to perform Post-Construction System Maintenance Inspections to ensure compliance.

RESPONSIBLE PARTIES

Public Works Department

SUMMARY OF MEASURABLE GOALS

The regulatory framework for control of post-construction stormwater runoff is contained in the City's Code of Ordinances. This framework will be refined and expanded as needed to improve the City's capability to achieve reductions in stormwater pollution from new developments through periodic evaluations and updates to the Codes. Measurable goals will include to:

1. Monitor Technical Plat Review and Land Division approvals for adequacy of stormwater quality management;
2. Monitor Stormwater Pollution Plans for adequacy of stormwater quality management;
3. Monitor compliance achieved in private maintenance of Stormwater management systems required in the development approval process; and
4. Monitor as needed any new stormwater drainage infrastructure that incorporates stormwater quality improvement facilities where practicable.

SUMMARY OF DEVELOPMENT/IMPLEMENTATION SCHEDULE

BMP#	PERMIT YEAR				
	YR 2013	YR 2014	YR 2015	YR 2016	YR 2017
DS-1	Review Codes and propose amendments as appropriate. Seek City Council approval & adoption of amendments. Develop BMP Manual and amend as needed.	Continue enforcing existing Codes and monitor/analyze effectiveness at achieving BMPs that comply with pollutant reduction MEP requirement and update as needed.	Continue enforcing existing Codes and monitor/analyze effectiveness at achieving BMPs that comply with pollutant reduction MEP requirement and update as needed.	Continue enforcing existing Codes and monitor/analyze effectiveness at achieving BMPs that comply with pollutant reduction MEP requirement and update as needed.	Continue enforcing existing Codes and monitor/analyze effectiveness at achieving BMPs that comply with pollutant reduction MEP requirement and update as needed.
DS-2	Maintain inspection and compliance activities and monitor/analyze program effectiveness and success/failure of BMPs observed over time	Maintain inspection and compliance activities and monitor/analyze program effectiveness and success/failure of BMPs observed over time	Maintain inspection and compliance activities and monitor/analyze program effectiveness and success/failure of BMPs observed over time	Maintain inspection and compliance activities and monitor/analyze program effectiveness and success/failure of BMPs observed over time	Maintain inspection and compliance activities and monitor/analyze program effectiveness and success/failure of BMPs observed over time

F. Minimum Control Measure #6 - Pollution Prevention/Good Housekeeping for Municipal Operations

REGULATORY REQUIREMENTS

Regulation 40 CFR 122.34(b)(6): The permittee must:

- A. *Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations; and*
- B. *Using training materials that are available from EPA, ADEQ, other organizations, or developed in-house, the program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.*

OPERATION AND MAINTENANCE (OM) BMPs

- OM-1** Prepare and implement Operation and Maintenance Program that includes a training component - By Year 3 of the program, the City will have prepared an Operations and Maintenance Program that will address operation and maintenance for all City fleet vehicles and facilities. This program will include a reoccurring training component for City Staff .
- OM-2** Train MS4 employees -MS4 employees will be equipped with a knowledge and understanding of how to reduce the potential impact of their municipal operations activities on stormwater quality.

RATIONALE

The City operates its own fire, police, street and water departments. Each of these departments have their own facilities and fleet vehicles. In addition, the city also has other miscellaneous fleet vehicles in additional departments. Currently, each department maintains their fleet vehicles by fueling and maintaining them at a commercial facility. In addition, each department uses a commercial washing facility for all vehicle cleaning. The operations and maintenance of the fleet vehicles and the municipal facilities will be included in BMP OM-1 which will include the preparation of an Operation and Maintenance Program. This program will also include, but not be limited to:

- a list of municipal operations that are impacted by the operation and maintenance program,
- maintenance activities, maintenance schedules, and long-term inspection procedures for controls to reduce floatable and other pollutants to the MS4,
- controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, and salt/sand storage locations and snow disposal areas the permittee operates, and
- procedures for the proper disposal of waste removed from the MS4 and the municipal operations, including dredge spoil, accumulated sediments, floatables, and other debris.

The City does not currently have any flood management projects planned. If projects of this type come up, the SWMP will be updated with procedures to ensure they are assessed for impacts on water quality.

As part of the contract with Northwest Arkansas Regional Planning Commission and the University of Arkansas Cooperative Extension Service, Cooperative Extension service employees will provide training at least once a year to MS4s. The training will use materials provided by ExCal Visuals and others that include information on construction sites, park & open space maintenance, and fleet & building maintenance. This training will be used to implement operation and maintenance programs for City facilities and specific operations. These policies will be reviewed annually to ensure that no adjustments

need to be made. Jurisdictional-specific ordinances, policies, and mandates will also be addressed during these trainings and specific system maintenance as departmentally appropriate. Training will stress how the employees are the “eye and ears” of the city and that they should learn to recognize signs of illicit discharge and how to properly report these instances. Recommendations from the employees are also addressed during the regional stormwater compliance committee’ monthly meetings and these recommendations help to shape the educational outreach messages.

In addition, City personnel will participate in the occasional MS4 orientated webinars offered by the EPA.

RESPONSIBLE PARTIES

The University of Arkansas Cooperative Extension is responsible for preparing and providing training to City staff. Each City Department (Fire, Police, Public Works, etc.) is responsible for applying the training in the field and reporting illicit discharges.

SUMMARY OF MEASURABLE GOALS

Operation and maintenance policies which are implemented will be evaluated and reported annually. In addition, the number of employee training programs given each year will be reported along with the number of employees participating.

SUMMARY OF DEVELOPMENT/IMPLEMENTATION SCHEDULE

BMP#	PERMIT YEAR				
	YR 13-14	YR 14-15	YR 15-16	YR 16-17	YR 17-18
OM-1	Obtain training DVD's	Review and update materials	Review and update materials	Review and update materials	Review and update materials
	Develop Operation and Maintenance Program for City activities and facilities		Complete and Implement Operation and Maintenance Program for City activities and facilities	Review and revise policies as appropriate	Review and revise policies as appropriate
OM-2	Conduct annual training for employees.	Conduct training as necessary for new hires.	Conduct annual training for employees.	Conduct training as necessary for new hires.	Conduct annual training for employees.