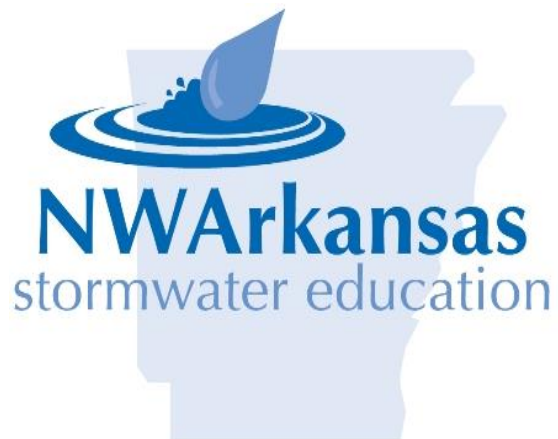


Stormwater Management Plan



CITY OF
FAYETTEVILLE
ARKANSAS



Permit ARR 040010

Updated: July 2020
Approved: September 2020

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STORMWATER MANAGEMENT PLAN (SWMP)

Permit Number ARR040010

August 1, 2019 – July 31, 2024

A. Purpose

Each Municipal Separate Storm Sewer System (MS4) permittee is required to develop and update of a comprehensive SWMP including pollution prevention measures, treatment of removal techniques, use of legal authority, and other appropriate means to control the quality of storm water discharge from the MS4. Controls and activities in the SWMP shall identify areas of permittee responsibility on a jurisdiction, applicability, or specific area basis. The SWMP shall cover the term of the permit and shall be updated as necessary, or as required by the City Engineer, to ensure compliance with the statutory requirement of Section 402(p)(3)(B) of the Clean Water Act. Implementation of the revised and updated SWMP may be achieved through participation with other permittees, public agencies or private entities in corporative efforts.

The Fayetteville Stormwater Management Plan (SWMP) has been developed to provide policy and management guidance for activities affecting stormwater throughout the City. It is intended to aid in the compliance efforts of the municipality with the Clean Water Act, as well as other state and federal guidelines, and provide a means for helping to preserve the quality of the surrounding streams and water bodies. With ever increasing population, this effort becomes even more imperative as the natural surroundings contribute greatly to the quality of life for the approximately 85,257 residents. These natural surroundings provide many recreational and educational opportunities as well as provide vital services for the citizens of Fayetteville and the region.

Fayetteville is home to many streams and water bodies and is near the upstream end of two main watersheds, the Beaver Lake Watershed and the Illinois River Watershed. The unique nature of the surrounding landscape has led to many opportunities for the City to improve on regulations that directly impact water quality. These efforts have included the adoption of a low impact development ordinance in 2010, a streamside protection ordinance in 2011 and a new drainage criteria manual in 2014. The approaches to development spelled out in these documents provide natural pollutant removal which promotes water quality throughout Fayetteville and the surrounding region as well as providing for stormwater system capacity management and flood prevention.

B. Scope

The SWMP addresses stormwater quality management policies and practices that are, and/or will be implemented in the City. These areas of focus in the Stormwater Plan include the six minimum control measures emphasized in the MS4 National Pollutant Discharge Elimination System (NPDES) Permit which are generalized below, however, additional detailed information can be found later in this plan.

1. Public education and Outreach

The Federal NPDES Stormwater Program 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 and should be geared toward broad community stewardship of water resources. The long-term success of the City's efforts will hinge on increased awareness and stewardship throughout the community. A portion of the SWMP will focus on 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 Northwest Arkansas Regional Planning Commission and the University of Arkansas Cooperative Extension Service.

2. Public Involvement and Participation

Continuing with the emphasis on education to bolster the program, the permit requires the MS4 to involve the public in both the development and implementation of the program. To that extent, as more individuals become education on the requirements for stormwater, they can help tremendously with items such as illicit discharge reporting.

3. 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, vehicular accident discharges, poor construction site management, and a variety of ways people dump pollutants into street gutters or catch basins.

4. Construction site stormwater runoff control 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 Fayetteville Municipal Code within the city limits.

5. Post-Construction Stormwater Management in development

As described in item 4, developments can cause pollutant loading during construction which is typically a relatively brief amount of time. However, many developments can continue to contribute pollutant loading for years to come. To that end, measures are required to try and reduce the impact that developments can have over the life of the development. These include implementing strategies such as a combination of structural and/or non-structural BMPs appropriate for the community.

6. 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, fertilizer and nutrient management, bug and weed chemicals management, as well as activities at City facilities, such as vehicle washing and maintenance, painting, and material handling such as street sweeper

dumping and processing. The Federal NPDES Stormwater Program requires the City to implement pollution prevention practices that reduce or eliminate stormwater pollution from City activities. Beyond this regulatory motivation, it is important that the City lead by example in areas where similar practices and behaviors from citizens and businesses are required.

C. Goals

In order to develop a policy to meet the needs of the residents of Fayetteville, it is important to understand the goals beyond just focusing on compliance with the permit. The following goals aid in the compliance aspect, however, identify broad areas of importance to ensure the long-term success of the program. All of these goals working in unison help meet the requirements of the MS4 permit which include the reduction pollutants such as sediment and nutrients, reduction of floatable debris including oils, scums, foams and grease, elimination of discharge containing non-stormwater elements (Illicit Discharges) and reduction in the discharge of sediment from construction activities.

- **Protect citizens and property from flooding**

This item includes both the maintenance of existing facilities as well as the development of new facilities.

Maintenance:

Maintenance is a multi-pronged effort with some of the responsibility falling to the City and some of the responsibility falling to the property owners. The City continues to maintain all public facilities, including above and below ground storm drainage, in good working order and repair those facilities when required. When needed, the City of Fayetteville will address waterways located within the city limits by removing debris, sediments and other items that may inhibit effective conveyance of stormwater runoff. However, in many instances this maintenance activity dependent on the existence of a drainage easement surrounding the structures and waterways in question. If no drainage easement exists and/or if the portion of the storm drainage system is private, it becomes the responsibility of the property owner or owners to maintain that portion of the system. This is also applicable for stormwater detention basins as the maintenance responsibility is placed on the property owner or in some instances the Property Owner's Association (POA). This individual(s) responsible for the maintenance of the detention basin is noted on the final plat for the development in most instances.

The City of Fayetteville Transportation Department also manages the cleaning out of curb inlets to remove sediment and debris that could potentially clog storm drains as well as managing the debris in the streets through the use of street sweepers. They manage roadside ditches and continually clean and reshape the ditches to maintain positive drainage. They also clean culverts as necessary to maintain a functioning public system.

New Development

The City reviews all new development plans for compliance with the City of Fayetteville Code of Ordinances and other applicable regulations. These regulations include, but are not limited to, the City of Fayetteville Drainage Criteria Manual and

the flood damage prevention code which includes provisions for streamside protection. These two documents make up the bulk of the criteria to protect citizens and property from damage due to increased flood waters.

The drainage criteria manual applies to all new development meeting the criteria and addresses both water quality and quantity. The manual has requirements pertaining to water quality, channel protection, overbank flood protection and extreme flood protection. All of these items work together to reduce the impact of development on downstream properties.

Floodplain Management

The City of Fayetteville participates in the National Flood Insurance Program (NFIP) and has adopted a flood prevention ordinance in order to help protect residents and comply with the program. We also participate in the Community Rating System which recognizes City's efforts that are above and beyond the minimum required. All development that occurs within the Special Flood Hazard Area (SFHA) within the City requires a floodplain development permit and must comply with the requirements set forth in Chapter 168, Flood Damage Prevention, of the City of Fayetteville Code of Ordinances.

- **Improve the quality of surface and sub-surface drainage**

The City of Fayetteville recognizes the importance of water quality for the residents of Fayetteville as well as the region. In an effort to maintain that water quality the City has taken the lead in the region by adopting streamside protection provisions that require all new and re-developments to maintain a buffer around these protected resources.

As stated, the drainage criteria manual also has provisions for water quality for new developments. This provision focuses on reduction of total suspended solids (TSS) through preservation of natural vegetation, implementation of alternative stormwater conveyance such as vegetated channels, groundwater recharge zones and low impact development (LID) features.

- **Preserve and maintain surface waters, wetlands and riparian areas**

As a portion of compliance with the streamside protection provisions within the flood damage prevention code, new developments are required to maintain buffers around the protected water resources within the City. This serves multiple purposes that include protecting surface waters and conveyances which in turn reduce flood damage potential. This also helps protect riparian areas and allows streams to function more naturally rather than continue to be heavily impacted by surrounding development. The City of Fayetteville, through a grant with the Environmental Protection Agency, was also able to document many unique riparian habitats and other features throughout our watersheds and catalog them within our GIS review tools.

- **Educate citizens and businesses to understand the need to protect water quality**

Education of the citizen is perhaps the most vital portion of the SWMP. As more and more residents and businesses begin to understand the importance of the natural

resources in the area and the policies in place to protect them, the programs currently in place will continue to evolve and improve.

- **Provide means for citizens to dispose of hazardous materials, recycled materials and other solid waste**

Providing residents a means to dispose of materials that would otherwise potentially pollute streams and waterways an important step for compliance. Citizens of Fayetteville and Washington County have multiple methods to dispose of general waste materials including household hazardous waste, recyclable materials, yard waste and other debris as well as general household waste.

Fayetteville's Compost Operations

The Fayetteville Composting Facility is located at 1708 S. Armstrong Avenue in southeast Fayetteville and leaves, grass, brush and tree limbs are accepted at the Facility. The service is free for City of Fayetteville residents for curbside pickup as well as drop-off during facility operating hours. Washington County residents and commercial business are also able to drop yard waste only for a small fee. Compost and mulch created by this program are available for purchase when available throughout the year.

Washington County Solid Waste

Washington County realizes that there are other forms of waste that will need to be disposed. Washington County falls in the Boston Mountain Solid Waste District (BMSWD) area of the state. BMSWD, together with Washington County and Cities, work to address solid waste issues throughout region. Listed below are the different items, locations, and phone numbers accepted by the Solid Waste District.

BMSWD also works with local solid waste haulers to license and monitor for compliance with solid waste regulations of Arkansas. Washington County has trash service available to all residents of the County.

Recycling opportunities are plentiful in Washing County and typically include items such as aluminum cans, glass, office paper, #1 & #2 plastics bottles, newspaper, and corrugated cardboard. However, the accepted items vary depending on the facility. There is usually no charge for dropping off recyclable items at these facilities for Fayetteville residents.

Recycling Drop-Off and Drive Locations Operated by the City of Fayetteville

- City of Fayetteville Recycling Drop Off, 1560 S. Happy Hollow Road, Open 24 hours a day, 7 days a week
- Marion Orton Recycling Center; 735 North Street; operating hours vary

Household Hazardous Waste (HHW)

These items include automotive products, pool chemicals, paint products, lawn & garden products, cleaning products, batteries, thermometers, florescent bulbs, etc. Items can be recycled at a local HHW collection center at no charge for most items in household quantities. Available to residents only. For more information on Household Hazardous Waste, please visit the EPA website or Water Environment Federation website.

- Boston Mountain Household Hazardous Waste Drop-Off, 2615 Brink Drive, citizens can call (479) 846-3005 to obtain latest operating hours.

Electronics

In Washington County we are fortunate to have an electronics recycling program in place to meet the growing demand for disposal. A small fee covers the cost of disposal. The following items are accepted at the Boston Mountain Household Hazardous Waste Drop-Off.

- Computers- includes monitor, CPU, keyboard, speakers & mouse
- Handheld devices such as PDA's and iPods
- Media storage- CD's, DVD's, videotapes, floppy disks (free)
- TVs
- VCRs
- Printers
- Copiers
- Scanners
- Microwaves
- Home Stereos
- UPS's
- Cell Phones (free)

Other Special Waste Types

For information on disposing of special wastes such as TV's, printer cartridges, building materials, appliances, or tires please call Boston Mountain Household Hazardous Waste number noted above.

D. Detailed Minimum Control Measures

Minimum Control Measure #1:

Public Education and Outreach on Stormwater Impacts

Permit Requirements: The permittee shall:

- 1. Implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.***

Decision Process

The NWA Stormwater Compliance Group meets to discuss stormwater pollution prevention and provide input on education activities. The NWA Stormwater Education Steering committee (public membership comprised of diverse backgrounds/interests) 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 pollutants, education needs, target audiences, program methods, and public relations strategies.

Public Education/Outreach BMPs

Develop and distribute 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 are identified, materials will be developed, adapted, and/or gathered for distribution at public meetings, in support of presentations, and with educational displays. Examples may include fact sheets, videos, social media content, website content, newsletters, press releases, and PSAs.

Measurable Goals:

- Mechanism types and numbers of educational materials will be documented.
- Develop 5 educational materials across the permit term.
- Attendance of MS4 Stormwater Compliance Group and Education Steering Committee meetings will be documented.

Conduct stormwater education activities

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 following table.

Measurable Goal:

- Stormwater education programs will be conducted and documented.

Responsible Party

The Northwest Arkansas Regional Planning Commission and the University of Arkansas Cooperative Extension Service have contracted with the municipality to be responsible for the development and implementation of the public education efforts. A copy of that agreement is included in this plan.

Performance Standard:

Urban stormwater outreach/education programs will reach at least 50% of the urbanized area population.

**Minimum Control Measure #1:
5 Year Implementation Schedule**

2020	2021	2022	2023	2024
<i>Topic Emphases:</i> Storm drain awareness/dumping	<i>Topic Emphasis:</i> Litter	<i>Topic Emphasis:</i> Sediment control	<i>Topic Emphasis:</i> Yard waste	<i>Topic Emphasis:</i> Automotive maintenance and Household Hazardous Waste (HHW)

<i>Target Audience:</i> General Public	<i>Target Audience:</i> General Public	<i>Target Audience:</i> Land development community	<i>Target Audience:</i> General public and green industry	<i>Target Audience:</i> General public and vehicle owners
<i>Rationale:</i> Pollutants entering the storm drain system degrade water quality	<i>Rationale:</i> Improper handling and disposal of litter can allow it to enter the storm drain system and degrade water quality	<i>Rationale:</i> Sediment leaving construction sites can enter the storm drain system and degrade water quality	<i>Rationale:</i> Improper yard waste disposal can clog drainage ways and excess fertilizer and pesticide applications can enter the storm drain system and degrade water quality	<i>Rationale:</i> Improper vehicle maintenance and HHW disposal can allow pollutants to enter the storm drain system and degrade water quality

**Minimum Control Measure #2:
Public Involvement/Participation**

Permit Requirements: *The permittee shall:*

- 1. Comply with the State and local public notice requirements when implementing a public involvement/participation program.*

Decision Process

The NWA Stormwater Compliance Group meets to discuss stormwater pollution prevention and provide input on education activities. The NWA Stormwater Education Steering committee (public membership comprised of diverse backgrounds/interests) 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 pollutants, education needs, target audiences, program methods, and public relations strategies.

Target Audience

The audience for public involvement programs and activities will be the public and may include businesses, trade associations, environmental groups, homeowners, and civic organizations.

Public Involvement/Participation BMPs

Engage Residents in Public Participation/Involvement Activities

Input from both the MS4 Stormwater Compliance Group and Education Steering Committee guides the emphases of educational materials, educational programs, and public involvement efforts. Residents will participate in public involvement activities. Examples may include stormwater compliance meetings, stormwater steering meetings, clean ups, etc.

Measurable Goal:

Public participation activities will be documented.

Responsible Party

The Northwest Arkansas Regional Planning Commission and the University of Arkansas Cooperative Extension Service have contracted with the municipality to be responsible for the development and implementation of the public involvement efforts. A copy of that agreement is included in this plan.

Performance Standard

At least 5 public participation and involvement activities will be coordinated over the permit term.

Minimum Control Measure #3:

Illicit Discharges Detection and Elimination

Permit Requirements: *The permittee shall:*

- 1. Develop, implement and enforce a program to detect and eliminate illicit discharges [as defined in 40 CFR §122.26(b)(2)] into the permittee's small MS4;*
- 2. Develop a storm sewer system map, showing the location of all outfalls and the names and location of all waters 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 actions. 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 public of hazards associated with illegal discharges and improper disposal of waste; and*
- 6. Address the following categories of non-storm water discharges or flows (illicit discharges) if the permittee identifies them as significant contributors of pollutants to the permittee's small MS4: uncontaminated 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, uncontaminated foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, de-chlorinated swimming pool discharges, uncontaminated street wash water and splash pads. Discharges or flows from emergency fire fighting activities are excluded from the effective prohibition.*
- 7. The permittee may 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.*

Applicable City of Fayetteville BMPs

Illicit Discharge Detection and Elimination (IDDE):

IDDE1 -- Illicit Discharges Reporting and Tracking System

IDDE2 -- Illicit Discharges Response and Enforcement

IDDE3 -- Outfall Inventory and Mapping

IDDE4 -- Citywide Illicit Discharge Detection and Elimination

IDDE5 -- Non-Stormwater Discharge Assessment

Rationale

Fayetteville selected the above five BMPs to address the permit requirements due to the fact the BMPs were utilized in previous permit cycles and have performed reasonably well. **IDDE1 and IDDE2** describe the City's processes for responding to and documenting complaints regarding water quality, including illicit discharges, in fulfillment of Requirement 8 above.

IDDE1, reporting and tracking, has several methods in which presumed illicit spills, sightings or discharges may be reported. The City's personnel, while doing their daily jobs, can report potential illicit discharges to the Stormwater Coordinator. Residents can also call or email the City to report suspected illicit discharges. Contact information for illicit discharges are listed on the City's website. Minor infractions will be brought to the owner's attention, logged into the City's database with pictures, if applicable, and investigation results. Larger incidents will be enforced through Chapter 170 of the City of Fayetteville Code of Ordinances. The City's website lists an email address and phone number for reporting suspected illicit discharges.

IDDE2, the City has adopted Chapter 170 of the Fayetteville Code of Ordinances which addresses Stormwater Management, Drainage and Erosion Control. Chapter 170.13 includes provisions prohibiting illicit discharges and illicit connections as well as requirements to mitigate any release of contaminants. In lieu of the responsible party's voluntary mitigation actions, section 153 of the Fayetteville Code of Ordinances allows for enforcement measures taken by the City against the responsible party.

Known infractions will be investigated and the appropriate measures taken to enforce these provisions of the code. Efforts will be made to trace the source of any illicit discharge which may include techniques such as visual inspections, storm drain mapping research, inspection of nearby facilities, dye tracing or camera inspections as deemed appropriate for the situation.

The City of Fayetteville has also adopted a Streamside Protection provision within the Flood Damage Prevention Code. This provision will help to limit the number of direct outfalls to the stream which should also aid in the direct discharge of pollutants into the City's waterways.

IDDE3, outfall Inventory and Mapping is a completed project that the City will maintain during the permit period in accordance with Requirement 2 above. The map was created by using GPS in the field to identify outfalls and other system features. The GPS information was then brought into GIS and converted into a usable format. The map is updated as needed by the GIS Division. This information may also be utilized to determine areas of town that may need more focus due to the number or type of outfalls. The GIS system also includes mapping of the City's sanitary sewer systems which can help identify potential illicit discharge sources or illicit connections.

IDDE4, Citywide detection relies on various city department employees, residents and the City’s educational program to identify and report any suspected illicit discharge to the appropriate governing authority. Each City Department’s task would be education on recognition of illicit discharge issues of their facility and the field work that they perform daily. This also includes alerting the Stormwater Coordinator of the activity so that it can be properly documented and remediation actions recorded. This ties directly to annual stormwater education that is performed for the various department within the City as well as the public education and outreach measures.

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. This assessment and appropriate follow up will be conducted as **IDDE5**. Requirement 8 is covered by public knowledge of the email address and appropriate phone numbers for city personnel. Complaints phoned in regarding an incident are forwarded to the appropriate City personnel.

Responsible Parties

The City’s Engineering Division with cooperation from the Water and Sewer Division.

Summary of Measurable Goals

The measurable goals of the illicit discharges detection and elimination program will include:

- Continue to document the findings and method of eliminating illicit discharges located through surveys and public reporting.
- Continue to document the location, type of illicit discharge, response required, and any enforcement administered.
- Document an annual review of outfall maps of the storm sewer system to ensure they are up-to-date, including dry weather screening.
- Monitor the number of commercial/industrial uses assessed for possible illicit discharges and document resolution of illicit discharges identified.
- Complete an assessment of non-stormwater discharges along with implementing local controls where identified as needed.

Summary of Development/Implementation Schedule

<i>BMP#</i>	PERMIT YEAR				
	2020	2021	2022	2023	2024
IDDE1	Operate, publish and promote email address, and record contacts each year.	Monitor and revise as necessary	Monitor and revise as necessary	Monitor and revise as necessary	Monitor and revise as necessary
IDDE2	Implement protocols for responding to complaints annually and maintaining complaint data base.	Monitor and revise as necessary	Monitor and revise as necessary	Monitor and revise as necessary	Monitor and revise as necessary

IDDE3	Conduct dry inspections of existing outfalls 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 previously developed paper maps.				
IDDE4	Review protocols, reports, etc. to improve the reporting and detecting processes.	Review protocols, reports, etc. to improve the reporting and detecting processes.	Review protocols, reports, etc. to improve the reporting and detecting processes.	Review protocols, reports, etc. to improve the reporting and detecting processes.	Review protocols, reports, etc. to improve the reporting and detecting processes.
IDDE5	Monitor and revise as necessary	Monitor and revise as necessary	Monitor and revise as necessary	Monitor and revise as necessary	Monitor and revise as necessary

Minimum Control Measure #4:

Construction Site Stormwater Runoff Control

Permit Requirements: *The permittee must develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the permittee’s small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre must be included in the permittee’s 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 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 prevent or control waste that may cause adverse impacts to water quality such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site;***
- 4. Procedures for site plan review and land division that incorporate measures to prevent or control 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.***

Applicable City of Fayetteville BMPs

Construction Site Waste (CSW):

CSW1 -- Erosion and Sediment Control Regulations

CSW2 -- City Staff Erosion Control Training

CSW3 -- Inspections and Enforcement

Rationale

The City selected the above BMPs to address each component of the construction site runoff control requirements. Regulatory authority for implementation and enforcement of the City's erosion and sediment control program is provided in both the Stormwater Ordinance and other Code of Ordinances. These Codes provide a framework for oversight of construction that requires erosion and sediment control measures during construction or redevelopment of sites disturbing greater than one acre. Specific requirements for construction site operators are addressed during the Site Plan Review, Technical Plat Review and Construction Plan Review and are included in the City's Engineering Drainage Criteria Manual, which is referenced in the Unified Development Code. The Stormwater Ordinance requires the development of erosion and sediment control plans. Taken together, these adopted Codes and programs fulfill Requirements 1 through 4 described above. Training of City staff to recognize and correct erosion problems on construction sites and to enforce the provisions of the City's adopted ordinances is a critical component of the stormwater management program. This program is intended to fulfill Requirement 6.

The public is also engaged in this process by the continual education of citizens to recognize and report potential violations. This ties directly into minimum control measures 1 and 2 as education of the general public is crucial to the success of the program. Notifications from the public are received by the Engineering Division and further investigated. Any remedial action is discussed with the responsible party and any necessary enforcement action pursued.

Responsible Parties

The City's Engineering Division maintains the City Code of Ordinances related to construction and reviews the site and drainage plan. Enforcement of these areas of the City's Codes is conducted in coordination with the Office of the City Attorney if necessary.

Summary of Measurable Goals

Staff will review the Unified Development 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.

All construction plans that are submitted for City approval will be reviewed for compliance with the City of Fayetteville Stormwater Management, Drainage and Erosion Control Ordinance. Plans reviewed will be required to have Best Management Practices (BMPs) that will reduce erosion and sediment in storm water runoff. The site plan will indicate where BMPs will be installed, including details that indicate the correct way to install each practice. The permittee is responsible for the Storm Water Pollution Prevention Plan (SWPPP) and the Notice of Intent (NOI) if required from the Arkansas Department of Environmental Quality (ADEQ).

The City of Fayetteville requires that a Pre-Construction Conference be held with the City prior to the start of all land disturbing activities for the construction of new water/sewer utilities, industrial, commercial or institutional facilities, multi-family residential units and residential subdivisions. Some larger franchise utility projects may also be subject to this requirement. In order to schedule a Pre-Construction conference, several documents must be provided:

- *Erosion Control Site Plan:* Drawings identifying the placement of all planned BMP's with installation instructions & details including the Stormwater Pollution Prevention Plan.

- *Staff Approval of Construction Plans*

In addition, prior to issuance of a grading permit, the BMPs must be inspected for proper placement and installation.

During the construction phase of a project, the City of Fayetteville Public Works Inspector will have access to the site and its records for discussion with the owner/operator or designer. Each site will be inspected at least on a monthly basis. Priority sites are sites with previous deficiencies and sites with challenging features such as steep slopes. If deficiencies exist, the City will require corrections in accordance with the appropriate ordinances/policies.

Summary of Development/Implementation Schedule

<i>BMP#</i>	PERMIT YEAR				
	2020	2021	2022	2023	2024
CSW1	Review existing Municipal Code and Development Code 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.
CSW2	Conduct staff training on an ongoing basis; update as needed.		Continue to update/improve as warranted.		
CSW3	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.

Minimum Control Measure #5:

Post-Construction Stormwater Management for New Development and Redevelopment

Permit Requirements: *The permittee must:*

- 1. Develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb one acre or more, or less than one acre if they are part of a larger common plan of development or sale, and discharge into the permittee’s small MS4. The permittee’s program must ensure that controls are in place that would prevent or minimize water quality impacts.*
- 2. Develop and implement strategies that include a combination of structural or non-structural BMPs appropriate for the permittee’s community.*
- 3. 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.*
- 4. Ensure adequate long-term operation and maintenance of BMPs; and ensure adequate enforcement of ordinance or alternative regulatory program.*

Applicable City of Fayetteville BMPs

Development Standards (DS):

DS1 -- City Code of Ordinances, Engineering Drainage Criteria Manual

DS2 -- Post Construction Stormwater System Maintenance Inspections and Compliance

DS3 -- Reinforce Low Impact Development (LID) technical guidance

Rationale

The City selected the above BMPs to meet the post-construction Minimum Control Measure requirements. The City Code of Ordinances requires that new development projects do not exceed pre-development peak flow rates to reduce the impacts associated with stormwater runoff generated at the site. BMP DS1 provides for maintenance of the appropriate Code of ordinances and the more specific design requirements included in the Drainage Criteria Manual, and sets forth a goal that pollutants from stormwater runoff from new development are reduced to minimize water quality impacts, in partial compliance with the requirements of this Minimum Control Measure. The 2014 Drainage Criteria Manual (DCM) also sets more specific goals such as 80% total suspended solids (TSS) removal through the use of the Water Quality Volume concept. This concept promotes pollutant removal through the encouragement of natural area preservation and the use of LID or more traditional methods of stormwater quality measures such as retention basins. Larger storm events will typically be handled through detention/retention basins with outfall structures to reduce peak flows. Extended detention is also a requirement of qualifying projects and is referred to as the Channel Protection Volume within the 2014 DCM.

BMP DS2 and DS3 are also addressed in the City of Fayetteville 2014 DCM. As stated previously, the DCM requires that all qualifying developments maintain a TSS removal goal of 80% by utilizing various methods. However, the preferred methods outlined are through the use of natural area preservation and Low Impact Development (LID). The 2014 DCM sets forth the criteria by which LID features are to be designed moving forward in order to meet the City's water quality goals.

Along with the goals for pollutant removal, the 2014 DCM sets forth guidelines for an operation and maintenance plan to be executed by the appropriate "financially responsible party" prior to final acceptance of a development. This will help to ensure the continued operation and maintenance of the features installed to protect water quality and continued compliance with the MS4 program.

Responsible Parties

The City's Development Services is responsible for implementing these BMPs

Summary of Measurable Goals

The regulatory framework for control of post-construction stormwater runoff is contained in the City's Code of Ordinances, the Drainage Criteria Manual. This framework will be refined and expanded as needed to improve the City's capability to achieve reductions in stormwater pollution from new developments.

Summary of Development/Implementation Schedule

BMP#	PERMIT YEAR				
	2020	2021	2022	2023	2024
DS1	Continue enforcing existing Codes/ Drainage Manual associated with the installation of BMPs	Continue enforcing existing Codes/ Drainage Manual associated with the installation of BMPs	Continue enforcing existing Codes/ Drainage Manual associated with the installation of BMPs	Continue enforcing existing Codes/ Drainage Manual associated with the installation of BMPs	Continue enforcing existing Codes/ Drainage Manual associated with the installation of BMPs
DS2	Maintain inspection and compliance activities				
DS3	Reinforce Low Impact Development (LID) technical guidance as necessary				

Minimum Control Measure #6:

Pollution Prevention in Municipal Operations

Permit Requirements: *The permittee must:*

1. *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*
2. *Using training materials that are available from the ADEQ, EPA, or other organizations, the permittee’s program must include employee training to prevent and reduce stormwater pollution from activities including, but not limited to, park and open space maintenance, fleet and building maintenance, new municipal facility construction and related land disturbances, design and construction of street and storm drain systems, and stormwater system maintenance.*
3. *Shall include a list of industrial facilities owned or operated by the MS4 that are subject to ADEQ’s Industrial Stormwater General Permit or individual NPDES permits for discharges of stormwater associated with industrial activity that ultimately discharge to the MS4*

Applicable City of Fayetteville BMPs

Operation and Maintenance (OM):

OM1 -- Operation and maintenance program that includes a training component

OM2 – Training Program

OM3 -- Pollution Control Manuals for City Operations

OM4 -- Street Sweeping for Stormwater Pollution Control

OM5 – List of facilities with industrial permits

Rationale

The City selected the above BMPs to address Minimum Control Measure #6 - Pollution Prevention in Municipal Operations. As part of the contract with Northwest Arkansas Regional Planning and the University of Arkansas Cooperative Extension Service, Cooperative Extension service employees will provide training at least once a year to MS4s to address both OM1 and OM2. The training sessions have included items such as information on construction sites, park & open space maintenance, and fleet & building maintenance and will continue to cover topical

and pertinent subjects. 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.

The goal of BMP OM3 is to reduce the potential for contaminants to enter the storm sewer system from municipal operations. This includes and pollutants such as floatable, oils, grease, hydraulic fluids, nutrients, etc... In order to accomplish this goal, the SWMP includes:

- Implementation of pollution control manuals or procedures for the appropriate City department/divisions.
- Continue scheduled evaluations of City practices, such as those associated with the Transportation, Parks and Recreation, Recycling and Trash Collection and Water and Sewer Departments activities.

Evaluation of City Departments' activities with potential to impact stormwater along with appropriate revisions to the pollution control plan will also be included in BMP OM3.

BMP OM4 addresses street sweeping as a pollution control practice, and includes an assessment and evaluation of existing practices and implementing improved practices as appropriate. This also includes the disposal of any waste generated from street sweeping or other maintenance activities in accordance with local, State and Federal Regulations. Specific areas of disposal will be further described within the Stormwater Pollution Prevention Plan (SWPPP) for the appropriate City departments/divisions.

BMP OM5 includes a list of those City owned facilities that currently have an Industrial Stormwater General Permit.

- Fayetteville Compost Facility: ARR000210
- Fayetteville West Side WWTP: ARR000390 (no exposure)
- Fayetteville Executive Airport-Drake Field: ARR00C299
- Fayetteville Noland Treatment Plant: ARR00C377 (no exposure)

Responsible Departments

- Development Services
- University of Arkansas Cooperative Extension
- Transportation
- Parks and Recreation
- Recycling and Trash Collection
- Water and Sewer Operations

Summary of Development/Implementation Schedule

BMP#	PERMIT YEAR				
	2020	2021	2022	2023	2024
OM1	Review and update materials as needed				
OM2	Conduct annual training for employees.				

OM3	Review and update Pollution Control Plan and conduct training as appropriate.
OM4	Maintain street sweeping operations
OM5	Update industrial permit list as necessary

E. Additional Considerations/Information

1. Pesticides, Herbicide and Fertilizer Application Program

The Parks and Recreation Department applies fertilizer to all athletic fields and the sod farm which totals about 37 acres of Bermuda turf. Fertilizer application is based on soil test recommendations for warm season turf grass (Bermuda). Soil is sampled annually, typically in early spring. Phosphorus applications are avoided unless soil tests indicate a deficiency in phosphorus. When soil tests indicate phosphorus fertilizer is needed, the state recommended protective rate for grasses is applied. Nitrogen is typically applied at a rate of 1 pound of nitrogen per 1000 square feet every 6 weeks during the growing season. Potassium and lime are applied as needed. The parks department core aerifies, verticuts, and top dresses their fields a couple of times a year. They bag and remove clippings when clippings are excessive and accumulate on the mowed turf.

A few parks have irrigated areas that are occasionally fertilized when time and budget permit. However, as a general practice, fertilizer is only applied routinely to the athletic fields and sod farm.

2. Spills Response Program

Any spill in the City of Fayetteville are handled by the City of Fayetteville Fire Department or the Washington County Emergency Response.

3. Flood Management Projects

The City is tasked with monitoring and maintaining the MS4 system as required. This generally includes cleaning inlets, storm pipes and channels as well as repairs to older portions of the system. However, maintenance of the overall drainage system is a partnership between private development and the City. Most of the flood control facilities such as detention basins are privately owned. The City does retain the ability to enter the facilities and perform routine maintenance if the owner fails to do so and the failure is a threat to life or property. Maintenance of detention facilities is divided into two components. The first is long-term maintenance that involves removal of sediment from the basin and outlet control structure. Maintenance to an outlet structure is likely minimal due to the initial design of permanent concrete or pipe structures.

Short-term maintenance or annual maintenance is the second component and is the responsibility of the Developer, owner or property owners association (POA). The items considered short-term maintenance are as follows:

- 1.Minor dirt and mud removal.
- 2.Outlet cleaning
- 3.Mowing
- 4.Herbicide spraying (in strict conformance with state and federal law)
- 5.Liter control

Alteration of the approved drainage system is generally not allowed without City approval. The owner must also certify that the system is completed per the approved plans and specifications as well as provide as-built drawings for City records.

F. Supporting Departments and Resources

Fire Department

Spill prevention and response is a requirement in Fayetteville's MS4 permit ARR150000. The City of Fayetteville Fire Department HAZMAT Unit works to prevent, contain and respond to spills that have a potential to pollute the City's MS4. The spill response program includes a combination of spill response by each permittee and legal requirements for private entities within the permittees municipal jurisdiction.

Mayor and City Council

The Mayor and Fayetteville City Council approve ordinances, changes to ordinances, contracts, fees and annual budgets.

Transportation Division

The Transportation Division works to sweep the streets, clean and maintain roadside ditches and culverts, and clean inlets.

Parks & Recreation Department

Parks employees maintain all City facilities including landscaped areas where pesticides, herbicides, and fertilizer are used. The Parks Department provides pet waste disposal sites in City parks and along trails.

Recycling and Trash Collection Department

The Recycling and Trash Collection Department monitors the Fayetteville Recycling and Composting Facilities to ensure that there is room for the citizens to dispose of accepted materials and that the citizens will have access to the compost and mulch that is produced.

Water and Sewer Department

The Water and Sewer maintenance staff work to eliminate sanitary sewer and water line breaks and overflows and make repairs.

Planning Department

The Planning Department places a high priority on implementing new and innovative environment friendly development techniques to protect sensitive public and private water supplies.

Legal Authority and SWMP Resources

Each permittee shall ensure legal authority to control discharges to and from those portions of the MS4 over which it has jurisdiction. This legal authority may be a combination of stature, ordinance, permit, contract, order or inter-jurisdictional agreements with permittees with existing legal authority to control contribution of pollutants into the MS4:

- To prohibit discharges into the MS4;
- Control the discharge of spills, dumping or disposal of materials other than storm water into the MS4;

- Compliance with ordinances, permits and orders;
- To carry out inspections, surveillance, enforcement and monitoring procedures necessary to determine compliance with permit conditions.

City of Fayetteville Unified Development Code

- Chapter 153: Enforcement
- Chapter 158: Bonds & Guarantees (Specifically 158.03 (B))
- Chapter 168: Flood Damage Prevention Code
- Chapter 169: Physical Alteration of Land
- Chapter 170: Stormwater Management, Drainage, and Erosion
- Chapter 177: Landscape Regulations (Specifically 177.06 and .07)

G. Monitoring

Total Maximum Daily Loads (TMDL)

Portions of the City of Fayetteville also discharge to waters listed on the States 303d list for impaired waterways. Clear Creek runs along the City’s north side and has been assigned a TMDL and specific wasteload allocations for pathogens. Due to the TMDL, additional requirements are listed in the MS4 permit, specifically section 3.4.5, which is designed to improve discharges to waters with approved TMDLs. This also includes evaluation of the waters identified on the 303(d) list including monitoring to determine the effectiveness of the measures to control the discharge of pollutants.

Clear Creek: River Reach AR11110103-029					
NPDES Permit #	Facility	PCR-S FC	PCR-W/SCR FC	PCR-S E Coli	PCR-W-SCR E Coli
Wasteload Allocation – cfu/day					
AR0020010	Fayetteville WWTP outfall 002 (flow = 6.0 MGD)	9.08E+10	4.54E+11	9.31E+10	4.66E+11
ARR040010	City of Fayetteville MS4	1.09E+11	5.43E+11	1.12E+11	5.59E+11
ARR040038	City of Johnson MS4	1.60E+10	8.00E+10	1.64E+10	8.24E+10
ARR040019	City of Springdale MS4	5.25E+10	2.62E+10	5.38E+10	2.70E+11
ARR040023	Washington County MS4	4.65E+10	2.32E+11	4.77E+10	2.39E+11

The City of Fayetteville sampling plan has been approved. Based on the sampling plan, future annual reports will include the sampling results. If modifications to the plan are deemed necessary to maintain compliance the City of Fayetteville will submit a revised sampling plan for approval.

H. SWMP Review and Update

Each permittee shall participate in an annual review of the current SWMP in conjunction with preparation of the annual report required by ADEQ. The SWMP may change during the life of the permit.

I. Retention of SWMP Records

The permittee(s) shall retain the SWMP development for at least three (3) years after coverage under this permit terminates.

J. City of Fayetteville Organizational Chart

Each division within the City of Fayetteville that holds some responsibility regarding the monitoring and enforcement of this program can be found on the following organizational chart.

