

# Part 1 Public Education and Outreach

## 1.1 Required Elements

In accordance with the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et seq.), and the Clean Water Act (33 U.S.C. 1251 et seq.) -Permit No., ARR150000: *The permittee must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impact of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.* Part 1 of the SWMP describes how the City of Maumelle will meet this requirement.

**Target Audience.** The City of Maumelle will use a variety of methods to reach a diverse audience. The City will utilize mass media campaigns and use a mix of resources to promote pollution awareness relevant to the SWMP. Our industrial outreach program will build upon existing programs such as IPP, HHW and, recycling to target businesses and industries which significantly impact storm drains (restaurants and garages) through grease and oil releases. Target audiences and the target pollutants for the education and outreach program are:

- General Public- watershed information, general storm water pollution prevention, recycling, proper disposal of used motor vehicle fluids, proper disposal of HHW
- Students/Children – hydrologic cycle, general storm water pollution prevention, value of wetlands and other aquatic resources.
- Businesses – industry specific pollution prevention
- Pesticide Applicators-Integrated Pest Management, proper handling & disposal
- Construction Activity Operators-erosion and sediment control, requirements of the construction general permit

The City estimates that 2,000 to 3,000 contacts will be made annually during the Public Education and Outreach BMPs.

**Program Coordinator.** Unless otherwise noted under a specific BMP, the Director of Planning and Development or designee is responsible for administering and coordinating the implementation of activities in this part of the SWMP.

## 1.2 Best Management Practices

### BMP 1-1 Development of Educational Material

The City of Maumelle has developed educational material that includes information sheets and brochures. The educational material contains different information for the different target audiences. Brochures were developed for the following target audiences: citizens, students, and construction site operators. These brochures (See attachment A) encourage people to cleanup pet waste (general public) and to provide information about sediment control (construction site operators). The City also has a PowerPoint presentation on DVD for citizen education explaining the MS4 (See attachment A). The City considers this BMP fully implemented; however, development of educational material is an ongoing process. Now that the City has general educational material, it will focus on particular water quality problems. The City will assess previously identified water quality problems and prepare a list of issues to be addressed as the educational material is revised, updated and replaced. For example, in 2019 the overall program summary brochure was revised to put a focus on White Oak

Bayou water quality protection. The educational material developed under this BMP may also satisfy the requirement of another BMP, such as the BMP 5-4 Low Impact Development (LID) Education.

Measurable Goal(s):

- Revise or create two targeted brochures for the program within the next 5-year permit cycle.

### **BMP 1-2 Community Events**

Educational material developed in BMP 1-1 will be distributed at public events held within the City of Maumelle. The general public is the target audience for the information. Examples of the type of events at which information will be distributed are the Maumelle Family Fest, Maumelle Fourth of July Festival, and White Oak Bayou wetland management events. Educating the public will encourage them to change their behavior in ways that may reduce storm water pollution.

Measurable Goal(s):

- Distribute information at a minimum of two public events each permit year.

### **BMP 1-3 Public Service Announcements**

The city of will continue use of PSA for the city cable TV provider, posters and utilization of the digital community bulletin board to address storm water pollution prevention as public service announcements. These will address what storm water pollution prevention is and why it is important. The targeted audience will be the general public (residents and visitors), businesses, and construction site personnel. Possible information may include, but will not be limited to, the following issues:

- Car washing;
- Recycling;
- Automotive fluids;
- Pet waste management;
- Restaurant waste management;
- Water conservation;
- Construction site waste management; and
- Littering (floatables).

The video PSA will be shown on the City's cable channel. Posters will be distributed to public places and businesses. The digital bulletin board is situated at the intersection of Maumelle Boulevard (Ark. Hwy. 100) and Millwood Drive.

Measurable Goal(s):

- Place storm water information on the digital bulletin board quarterly.
- Broadcast the storm water PSA annually.
- Place posters quarterly at various high foot traffic locations.

### **BMP 1-4 Maumelle Public Schools Outreach**

The City of Maumelle has created a PowerPoint presentation (See Attachment B) to teach children about the connection between their activities and water quality. Increasing their awareness of the water cycle and their role in it will hopefully change their behavior (particularly with regards to littering) and reduce pollutants in storm water. The target audience is the students; however, children can influence their parents to change their behavior. In the past

City personnel have made presentations in the Physical Science classes at the Maumelle Middle School. Letters will be sent to all school administrators offering the presentation. The school district is a separate entity from the City, and they have the authority to decide whether or not the presentation will be given. Presentations will be given when schools request them and as long as staff time allows.

Measurable Goal(s):

- Offer the storm water presentation to every public elementary and middle school each year.
- Work with the middle school EAST program on environmental issues and water quality on an annual basis.

#### **BMP 1-5 Pollution Prevention for Businesses**

The City of Maumelle will educate businesses on storm water pollution prevention by generating and distributing educational material such as brochures, information sheets, posters, and other industry-specific material as described in BMP1-1. Educational material will be focused on the automotive business's, light industry and restaurants, because of the number of such facilities within the City and their potential to contribute to storm water pollution. Codes Enforcement Officers will be given the brochures to distribute at these businesses. Other types of businesses will be evaluated for their pollution potential. Additional industry-specific educational material may be developed as needed. The business license registration process for the City of Maumelle includes information about the type of business. Businesses that register as a restaurant or an automotive service will be given the information brochure for their business. The Maumelle City Clerk is responsible for implementing this BMP using information provided by the Program Coordinator.

Measurable Goal(s):

- By business type, track the number of storm water information brochures distributed each year

#### **BMP 1-6 Construction General Permit Education**

Developers and construction personnel are the target audience for this BMP. The City of Maumelle will identify local building organizations, contractor groups, engineering organizations, and other construction related associations to educate them on storm water pollution prevention for construction sites. The City will contact these associations and will offer presentations relating to storm water and the construction general permit. Educational information such as posters, information sheets, and brochures on storm water pollution prevention for construction sites (See attachment A) will be made available at the Maumelle City Hall Department of Permits and Codes. This information will be accessible to developers and contractors obtaining a building permit. The information will include, but not be limited to, requirements for storm water runoff from construction sites, erosion control plans, and pollution prevention BMPs. The Department of Permits and Codes currently distributes to all construction permit applications information related to Chapter 94 Stormwater Ordinances compliance. (See Attachment C)

Measurable Goal(s):

- Track the number of brochures given to construction site operators each year.
- Give two construction storm water presentations to a construction industry organizations or large construction companies during the five year permit cycle.

### **BMP 1-7 Brochure Dispensers at Public Facilities**

The City of Maumelle currently has brochure dispensers at the Maumelle City Hall and at the public library, Senior Citizens Center, and the Community Center. Educational material may address storm water runoff, storm water management, and methods to prevent pollution from entering storm water systems.

Measurable Goal(s):

- Track the number of information brochures picked up from dispensers each year.

### **BMP 1-8 Pesticide Video**

The City has a video about the correct handling, application and disposal of pesticides. Commercial pesticide applicators already receive this type of training from the state when becoming licensed. The material will specifically target a general homeowner audience. The DVD will be also be incorporated into the municipal training Maumelle Parks and Recreation as well as Public Works. The City will also investigate the possibility of editing segments for use on the City cable channel or identify other means of making the information available to the public.

Measurable Goal(s):

- Identify new ways to use the DVD for public education.
- Integrate key components of the video into the City's website by end of 2021.

### **BMP 1-9 Watershed-Based Education for Potential Bacteria Sources**

The general public is the target audience for this program. As part of the White Oak Basin Watershed the City of Maumelle is situated in or near wetlands areas and is the probable sources of bacteria entering through point sources and many are non-point sources that can be transported by storm water. Reduction of the loading is best accomplished on a watershed basis. In support of the TMDL, the City will explore the potential for a watershed-based public education program directed at bacteria sources. The program would include working with Maumelle Water Management, the watershed authorities, and Maumelle Public Works to identify possible sources of bacteria, then directing public education efforts based on those sources.

Measurable Goal(s):

- Document the City's activities to participate in a watershed-based regional outreach on an annual basis.

### **Program Measurement**

Improvement to Water Quality. The Public Education and Outreach BMPs will improve water quality by educating the target audiences about their role in protecting water quality. Improvements in water quality will be accomplished by changing the behavior of people in a way that reduces the pollutants they contribute to the watershed. The measure of success of the public education program will be tracked by counting the number of contacts each year for the following target audiences: students, general public, construction and businesses. Examples of contacts to be counted are an item of educational material given to an individual or a business; each person attending a presentation; a website hit; etc.

**Implementation:**

Program implementation will occur on a BMP by BMP basis. Measurable goals, timing/schedule and target audience (as needed) are included with each BMP listing.

## Part 2 Public Participation and Involvement

### 2.1 Required Elements

In accordance with the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et seq.), and the Clean Water Act (33 U.S.C. 1251 et seq.) - Permit No., ARR150000: *The permittee must develop and implement a plan to encourage public involvement and participation in the development and implementation of the SWMP.* Part 2 of the SWMP describes how the City of Maumelle will meet this requirement. Support by residents is crucial to the success of the Storm Water Management Program.

- Program Coordinator: Unless otherwise noted under a specific BMP, the Director of Planning and Development or designee is responsible for administering and coordinating the implementation of activities in this part of the SWMP. The majority of activities are executed by the City of Maumelle Code Enforcement Officers under the direction of the Director of Permits and Codes. The Director has the responsibility to implement BMP2-2 with assistance from the Program Coordinator.
- Target Audience: The BMPs will involve all socio-economic groups. Broad public support in the development and decision making process will minimize potential legal challenges and maximize acceptance and cooperation.

### 2.2 Best Management Practices

#### BMP 2-1 Public Notices and Meetings

The City will annually publish a public notice in the Maumelle Monitor Newspaper informing the public of the availability of the SWMP and its annual report for review. The annual report will also be publicly presented to the City Council with an opportunity for public comment.

Measurable Goal(s):

- Publish a public notice of the SWMP and annual report each year.
- Present the SWMP annual report to City Council each year.
- Hold one public meeting within the first 18 months of the permit cycle to present the revised SWMP.

#### BMP 2-2 Storm Water Report Line

The City's Stormwater Hotline phone number is used as the storm water report line. The City of Maumelle publishes the phone number in educational and outreach material to encourage citizens to report concerns they have about storm water quality, construction site discharges, and illicit discharges. The number is also given to anyone calling City Hall and receiving the voice answering notice. The phone number will also be added to the City's website. The Codes Enforcement Supervisor is responsible for ensuring that storm water reports are tracked and responded to correctly with assistance from the Program Coordinator.

Measurable Goal(s):

- Track the number of storm water calls received on the report line each year.

### **BMP 2-3 Website Availability of the SWMP**

The City of Maumelle has established a website (See <http://maumelle.dina.org>) with a storm water pollution prevention page. The page contains general information about storm water and a link to an entire page of resources for compliance with the Construction General Permit.

The website is constantly being updated and revised. A link will be provided for viewing the SWMP. Information that may be posted on the storm water page will be brochures and information sheets discussed in the Public Education and Outreach BMPs. The page may also be used for public notices and meetings about storm water pollution prevention, construction site permit requirements, and information for commercial/industrial businesses. An e-mail comment form is available to allow citizens to comment on the SWMP or report someone dumping or discharging to the storm drain system.

Measurable Goal(s):

- Track the number of hits on the storm water pollution prevention.
- Track the number of comment forms submitted.
- Provide a link to the revised SWMP by mid 2020.

### **BMP 2-4 Community Clean-Up Activities**

The City of Maumelle will sponsor community clean-up activities to involve citizens in removing pollutants from the watershed. Advertising material for the activities will include information about the connection to storm water quality. Clean-up activities will focus on street rights-of-way and ditches that are part of the storm drainage system. Examples of community clean-up activities that the City may sponsor and participate in are Maumelle Spring Cleanup and the Great American Clean-up.

Measurable Goal(s):

- Sponsor and advertise one community clean-up activity each year.
- Track the quantity of material collected during clean-up events.

## **2.3 Program Measurement**

**Improvement to Water Quality.** The Public Participation and Involvement BMPs will improve water quality by using citizens as an extension of the City staff. Citizens can locate and report illicit discharges, construction site discharges and pollution problems that City staff may not find or be aware of. Community clean-up events will also assist the City by removing pollutants from the storm drain system. The measures of improvement will be the number of enforcement actions resulting from citizen reports each year and the amount of material removed from the storm drain system during community clean-up events.

Implementation

Program implementation will occur on a BMP by BMP basis. Measurable goals, timing/schedule and target audience (as needed) are included with each BMP listing.

## Part 3 Illicit Discharge Detection and Elimination

### 3.1 Required Elements

In accordance with the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et seq.), and the Clean Water Act (33 U.S.C. 1251 et seq.) -Permit No., ARR150000: *The permittee must develop, implement and enforce a program to detect and eliminate illicit discharges into the small MS4.* Part 3 of the SWMP describes how the City of Maumelle will meet this requirement. Allowable Non-Storm Water Discharges. An illicit discharge is any discharge to the City's MS4 that is not composed entirely of storm water, except for discharges authorized by an NPDES permit (other than the NPDES permit for discharges from the City's MS4). The City believes the following categories of non-storm water discharges are not significant contributors of pollutants to the MS4. As such, they are not considered illicit discharges and are "allowable" non-storm water discharges under the City's MS4 permit:

- Water line flushing (excluding discharges from water lines disinfected by super-chlorination or other means unless the discharges contains no harmful quantity of chlorine or any other chemical used in line disinfection);
- Residential landscape irrigation;
- Diverted stream flows;
- Rising ground waters;
- Uncontaminated ground water infiltration (as defined in 40 CFR Section 35.2005(20));
- Uncontaminated pumped ground water;
- Discharges from potable water sources not containing any harmful substance or material from the cleaning or draining of a storage tank or other container;
- Uncontaminated water from foundation drains;
- Air conditioning condensate that is unmixed with water from a cooling tower, emissions scrubber, emissions filter, or any other source of pollutants;
- Crop irrigation water;
- Springs;
- Uncontaminated water from crawl space pumps;
- Uncontaminated water from footing drains;
- Residential lawn watering;
- Individual residential vehicle washing;
- Uncontaminated flows from wetlands and riparian habitats;
- De-chlorinated swimming pool discharges;
- Street wash water provided the water is not contaminated with any harmful cleaning substance;
- Discharges or flows from emergency fire fighting activities (does not include discharges from fire fighting training activities); and
- Other similar occasional incidental non-storm water discharges (e.g. non-commercial or charity car washes, etc.).

**Program Coordinator.** Unless otherwise noted under a specific BMP, the Director Planning and Development or designee is responsible for administering and coordinating the implementation of activities in this part of the SWMP. The Permits and Codes Supervisor has been designated to administer and coordinate the implementation of SWMP activities. The majority of activities are executed by the Code Enforcement Officers under the direction of the Director of Permits and Codes. Other positions that have implementation responsibilities for IDDE BMPs are:



- Director of Maumelle Water Management (BMP3-2, BMP3-5)
- Fire Chief (BMP3-1);
- Director of Public Works (BMP3-1, BMP3-4)
- City Attorney and City Council (BMP3-3).

### **3.2 Best Management Practices**

#### **BMP 3-1 Visual Inspection/Screening**

This illicit discharge detection measure will involve both inspections by City staff and response to citizen reports. Refer to BMP2-2 for a discussion of the citizen report process. Several City departments have staff that are routinely in the field and could potentially see illicit discharges. The staff includes:

- Maumelle Water Management Field Staff
- Streets Systems Field Crews;
- Codes Enforcement Officers;
- Public Works Employees
- Building Inspectors; and
- Fire Marshal.

The above staff is trained and will continue to receive training in recognizing illicit discharges and reporting them for appropriate investigation and enforcement. Sign-in sheets will be used to document the training. Maumelle Water Management Field Staff performs an annual inspection of storm drainage structures as part of the City's participation in the National Flood Insurance Program (NFIP). During these inspections, they also visually inspect for any discharges. Any discharge found is investigated to determine if it is an illicit discharge. If so, the discharge is reported to Codes Enforcement for further investigation and enforcement. The Code Enforcement is responsible for responding to potential illicit discharges that are found by City staff or reported by citizens within 15 days of receiving the report. An IDDE field data sheet was developed to document each potential illicit discharge that is reported. The data sheet may include the following:

- Name and/or position of the person making the initial report;
- Description of the initial report;
- Name of the Codes Enforcement Officer that responds to the report;
- Date and time the initial report is received by Codes Enforcement;
- Date and time of the first and all following responses by Codes Enforcement;
- Discussion of the investigation and findings;
- Report of the type and results of any field observations;
- Owner and address of the discharge source, if identified, and
- Summary of actions taken, including any enforcement actions.

A tracking system (using Excel, GIS or other computer application) is established to track locations and types of illicit discharges. The Director of Planning and Development will initiate discussions with the Maumelle Fire Department and Maumelle Water Management regarding the potential to assist Code Enforcement with screening for illicit discharges at businesses. A dry weather screening program will be implemented as part of the City's SWMP Monitoring/Assessment Plan. In summary, this BMP has several components:

- Training of City employees to recognize potential illicit discharges and to report them to Codes
- Enforcement for investigation;
- Responding to citizen complaints of discharges; and
- Visual screening for illicit discharges during the annual inspection of storm drainage structures under the NFIP.

The Director of Planning and Development has overall responsibility for coordinating and providing information needed to perform the activities under this BMP; however, the Directors of Public Works and Maumelle Water Management, are responsible for ensuring their field employees are trained in the identification of illicit discharges.

Measurable Goal(s):

- Track the number of illicit discharges reported by citizens each year.
- Track the number of illicit discharges found during the NFIP infrastructure inspections each year.
- Track the number of illicit discharges found by City employees while performing their field duties each year.
- Develop a form that can be used by Public Works and Maumelle Water Management to screen for illicit discharges during their routine inspections. Complete by the end of 2020.

### **BMP 3-2 GIS Mapping**

A Geographic Information System (GIS) will be utilized by the City of Maumelle to map the location of storm drain lines, outfalls, ponds, connections to other MS4s, and waters of the U.S. that receive storm water discharges. This information will be made available through the City-wide network and GIS software. The Maumelle Water Management already maintains a map of the storm drain system. Approximately 100% of the existing subsurface system and 90% of the basins are currently mapped (See Attachment D). Outfalls that discharge into a recognized water body and connections to other MS4s will be field-verified and mapped utilizing Global Positioning System (GPS) survey equipment. Additional components of the storm water system (catch basins, pipes, culverts, and other storm water structures) will also be added to the GIS map as data is available. Updates to the system map will be created for each annual report.

Measurable Goal(s)

- Produce a current system map at the end of each permit year.
- Update the field-verified and GPS surveyed map of the City's outfalls to waters of the U.S. and connections to other MS4s by the end of 2021.

### **BMP 3-3 Ordinance to Remove/Correct Illicit Discharges**

Maumelle City Code, Zoning Regulations, Chapter 94-Stormwater, Pollution Prevention, and Erosion Control -Article V- Storm Water Management prohibits non-storm water discharges to the MS4. It also gives the City authority to enforce the prohibitions through a series of escalating actions that include verbal and written Administrative Warnings, Stop Work Orders, Citations, and Criminal Penalties. The City uses this authority to remove and correct an illicit discharge. The enforcement actions that will be taken against those properties found to be in non-compliance, or that refuse to allow access to their facilities, are varied. They range from cease-and-desist orders, suspension of water or sewer service, criminal and civil penalties including, charging

the owner of the property for the cost of abatement.

The jurisdiction of the City of Maumelle for enforcing prohibitions on illicit discharges is its city limits.

If an illicit discharge found within the City is determined to have originated in jurisdiction of an adjacent MS4 operator, the City will contact their IDDE program coordinator. If the adjacent MS4 operator does not have authority to address the illicit discharge in a manner that the City believes is protective of water quality within the City, the City will report the discharge to the ADEQ.

Measurable Goal(s)

- Track all instances of illicit discharges, enforcement actions, and outcome with annual reporting to the city council.

### **BMP 3-4 Household Hazardous Waste Recycling**

The City has a citizen recycling program. This program includes household hazardous waste. The program will facilitate proper disposal of HHW and discourages illegal dumping. A recycling program is already publicized on the City's website. Public Education BMPs in Part 1 of the SWMP will include information about proper disposal of HHW. The City operates a recycling center at the Public Works facility. Hours of operation include Saturday for citizens who work. Currently the only types of HHW accepted by the recycling center includes computers and other electronic components including TVs. The recycling center also accepts steel and aluminum cans, glass, plastics, plastic bags, corrugated cardboard, catalogs, newspaper, magazines, phonebooks, and paper/junk mail. The Director of Public Works is responsible for implementing this BMP.

Measurable Goal(s)

- Track the type and quantity of HHW collected at the recycling center each year.

### **BMP 3-5 Septic Tank Identification and Prioritization**

As needed, Maumelle Water Management will complete Septic Tank Identification and Prioritization Studies to assist in planning sanitary sewer projects. The study can be used to prioritize new sewer lines projects where a large number of properties are on septic systems or are on systems known to be failing. Removing septic tank systems will decrease the potential for illicit discharges of sewage. These discharges are also a probable contributor of bacteria that may be discharged into the wetlands area around Maumelle.

Measurable Goal(s)

- Track the number of properties that are taken off of a septic system.

### **3.3 Program Measurement**

Improvement to Water Quality. The IDDE BMPs will improve water quality by enabling the City to identify and eliminate illicit discharges of pollutants to receiving waters. The measure of improvement will be the number of illicit discharges found each year and the percentage which were investigated, identified, and eliminated.

Implementation

Program implementation will occur on a BMP by BMP basis. Measurable goals,

timing/schedule and target audience (as needed) are included with each BMP listing.

## Part 4 Construction Site Runoff Control

### 4.1 Required Elements

In accordance with the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et seq.), and the Clean Water Act (33 U.S.C. 1251 et seq.) - Permit No., ARR150000: *The permittee must 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.* Part 4 of the SWMP describes how the City of Maumelle will meet this requirement.

**Program Coordinator.** Unless otherwise noted under a specific BMP, the Director of Planning and Development or designee is responsible for administering and coordinating the implementation of activities in this part of the SWMP. The Director has designated the Director of Permits and Codes as the designee to administer and coordinate the implementation of SWMP activities. The BMPs are coordinated by the Code Enforcement Officers. The following positions are responsible for implementing all or part of the indicated Construction Site Runoff Control BMPs:

- Maumelle City Engineer and Permits and Codes Supervisor (BMP4-1);
- Director Permits and Codes (BMP4-2);
- Director of Planning and Development (BMP4-2 and BM4-3); and
- Permits and Codes Supervisor (BMP4-2).

### 4.2 Best Management Practices

#### BMP 4-1 Plan Review

The City of Maumelle recognizes that construction sites can discharge a significant amount of sediment in a short period of time. The City has adopted an ordinance to control erosion and reduce sediment and other pollutants in storm water runoff from construction sites. Maumelle City Code, Chapter 94 – Stormwater, Pollution Prevention and Erosion Control, Article V- Storm Water Management requires the operators of a land disturbance of one or more acres to submit an Erosion and Sediment Control Plan (ESCP) to the City for review. Operators disturbing less than one acre are also required to submit an ESCP if the site is part of a common plan of development.

The City's Design Standards require that all construction plans for subdivision (residential) and commercial permits comply with the requirements of Maumelle City Code, Chapter 94- Stormwater, Pollution Prevention and Erosion Control, Article V. The ESCP is reviewed by the Permits and Codes Department and stamped as the "Permit Set" prior to issuance of a subdivision or commercial permit for construction. The City's ordinance gives it the authority to deny permits if the ESCP is not acceptable. The City's plan reviewers have been trained in review of erosion and sediment controls during. The Director of Permits and Codes is the position responsible for implementing this BMP.

#### Measurable Goal(s)

- Track the number of Erosion and Sediment Control Plans that are reviewed each year.

#### **BMP 4-2 Inspection and Enforcement**

Maumelle City Code, Chapter 94- Stormwater, Pollution Prevention and Erosion Control, Article V- The Permits and Code Enforcement Department requires construction site operators to install and maintain the erosion and sediment controls in the ESCP stamped as part of the "Permit Set." Code Enforcement Officers inspect construction sites for compliance with the "Permit Set" during construction of public infrastructure in a subdivision. After acceptance of the subdivision infrastructure, the Permits and Code Enforcement Department is then responsible for inspection during home construction. The Building Inspectors also inspect commercial construction.

Maumelle City Code, Chapter 94- Stormwater, Pollution Prevention and Erosion Control, Article V - Stormwater, Pollution Prevention, and Erosion Control authorizes the following types of penalties for non-compliance: (See attachment E)

- Verbal Administrative Warnings;
- Written Administrative Warnings;
- Stop Work Orders;
- Criminal citations; and
- Criminal penalties of up to \$500.00.

The City has developed written inspection procedures that include inspection forms and guidance on proper use of escalating penalties. The procedures include frequency of inspection for erosion and sediment controls, documentation of inspection findings, type of warning or other penalty issued, and follow-up inspections to verify implementation of corrective actions.

The city inspectors will put a particular emphasis on inspections directly adjacent to White Oak Bayou or main tributaries of the Bayou. These sensitive areas are the foundation of the important aquatic resources in Maumelle.

Inspectors in the Permits and Codes Enforcement Department are trained in the inspection, enforcement and follow-up procedures. Inspectors can issue administrative warnings and stop work orders. The written inspection procedures include procedures for enforcement escalation to criminal citations or criminal penalties at a construction site.

#### Measurable Goal(s)

- Track the number of documented ESCP inspections each year.
- Track the number and types of penalties issued during inspections.
- Track the percentage of inspections that result in no enforcement action.

#### **BMP 4-3 Public Reports of Construction Site Problems**

The storm water report line described in BMP 2-3 will be used to receive public reports of construction site problems. At least one of the public service announcements described in BMP 1-3 and the website described in BMP 2-4 will be used to encourage the public to report

pollution problems at construction sites. Upon receipt of a public report, the report will be given the Permits and Codes Department depending on whether the construction activity is for public infrastructure or a building, respectively. The responding inspector will visit the construction site and perform a documented inspection following the procedures developed under BMP 4-2.

Measurable Goal(s)

- Track the number of public reports of construction site problems each year.

#### **4.3 Program Measurement**

**Improvement to Water Quality.** The Construction Site Runoff Control BMPs will improve water quality by requiring construction activity operators to design and implement erosion and sediment controls on areas of disturbed soil that are one acre in size or larger or are part of a common plan of development. Implementing these controls will reduce the amount of sediment, trash and other pollutants transported from construction sites by storm water runoff. City review of Erosion and Sediment Control Plans will verify that the ESCP meets the requirements of Maumelle City Code, Chapter 94- Stormwater, Pollution Prevention and Erosion Control, Article V - Storm Water Management. City inspectors will check that controls specified in the ESCP stamped as part of the "Permit Set" are installed and maintained as designed. The measure of improvement will be the number of reviewed Erosion and Sediment Control Plans each year, the number of documented ESCP inspections each year, and the percentage of the inspections that result in no enforcement action (meaning the controls are installed and operating properly).

Implementation

Program implementation will occur on a BMP by BMP basis. Measurable goals, timing/schedule and target audience (as needed) are included with each BMP listing.

## Part 5 Post-Construction Storm Water Management

### 5.1 Required Elements

In accordance with the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et seq.), and the Clean Water Act (33 U.S.C. 1251 et seq.) - Permit No., ARR150000- The permittee must develop, implement and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, and discharge into the small MS4. Part 5 of the SWMP describes how the City of Maumelle will meet this requirement.

**Priority Areas.** The existing corridor stormwater drainage ditches are priority areas. Structural BMPs include design standards to prevent increased erosion of these corridors, such as requiring new development to limit the volume and rate of storm water runoff to pre-development conditions. Non- structural BMPs include plans to preserve these corridors as pervious areas and restore them with native vegetation. Areas directly adjacent to White Oak Bayou or its major tributaries are one of the main focus areas for these BMPs.

**Program Coordinator.** Unless otherwise noted under a specific BMP, the Director of Public Works or designee is responsible for administering and coordinating the implementation of activities in this part of the SWMP. The BMPs are coordinated by the Maumelle City Engineer under the direction of the Administrator; however, the engineer's role under this MCM is primarily advising and coordinating activities that are implemented by others in the Department of Public Works, the Department of Planning and Development. The following positions are responsible for implementing all or part of the indicated Post-Construction Storm Water Management BMPs:

- Public Works Engineering Services Administrator (BMP5-1 and BMP5-4);
- Director of Facilities (BMP5-1);
- Public Works Street Systems Administrator (BMP5-1 and BMP5-4);
- Director of Community Development (BMP5-2 and BMP5-5); and
- Public Works Project Development Administrator (BMP5-3).

### 5.2 Best Management Practices

#### BMP 5-1 Structural BMPs

The City has already implemented ordinances that address drainage design for development and redevelopment. Maumelle City Codes, Chapter 54- Planning, Article V- Master Drainage Facility Plan; Chapter 70- Subdivisions, Article III- Design Standards; Chapter 94- Stormwater, Pollution Prevention and Erosion Control, Article V -Stormwater, Pollution Prevention, and Erosion Control includes the following requirements:

- On-site retention or detention of rainfall allowing the pre-developed flow or less to flow off the development (i.e. no increase in runoff);
- Erosion control on the side slopes of ponding areas;
- Low maintenance landscaping for a perimeter buffer on pending areas;
- Drainage outfalls designed in such a manner that it will not increase erosion downstream;
- Riprap for erosion control downstream of culverts; and
- Velocity limits and lining protect channels from erosion.



Pending areas are the primary structural BMPs used by the City. Maumelle City Code, Chapter 70 - Subdivisions, Article III- Design Standards requires grading and drainage plans be submitted to the City for review before starting construction. During review, the City confirms that pending areas are designed according to the Design Standards and are protective of the drainage system and any downstream natural features, wetlands areas. Construction is not authorized until the City stamps the plans as the "Permit Set." The City has the authority to deny a permit if the construction plans do not meet the Design Standards. The City Engineer, Director of Public Works, Director of Planning and Development, and Director of Permits and Codes are responsible for implementing this BMP.

Measurable Goal(s)

- Track the number of new retention pond areas,
- Update and revise the GIS inventory of existing pond areas by the end 2022.

#### **BMP 5-2 Open Space Program (Non-Structural BMP)**

The open space program seeks to reduce the amount of impervious cover by increasing natural land set-asides for conservation and by using pervious areas for more effective storm water management. The program includes several initiatives to reduce pervious area in new development and remove pervious area from existing development.

The City of Maumelle Planning and Development Department has looked at ways to reduce the amount of runoff in new subdivisions. One such way has been the evaluation of the drainage design standards to encourage ponds and parks. This will provide additional pervious area and native flora and fauna. The net increase of scenic features will positively impact the neighborhood's aesthetic and increase residential property values. Maumelle City Code, Chapter 94- Zoning Regulations, Article III, Districts and District Regulations, Division 6, OS Open Space and Division 7, FW Floodway District- authorizes the Planning Commission to require more than minimum storm water standards on a site to be developed or immediately downstream of the site showing evidence of increased flooding, accelerated erosion, channel erosion of sedimentation, as a direct result of conditions on the site. These additional requirements may include open space such as buffer zones, re-vegetation of highly eroded areas, and drainage ditch restoration or other erosion control measures within highly eroded channels. The Director of Planning and Development and the Director of Public Works are responsible for implementing this BMP.

Measurable Goal(s):

- Document activities each year that support implementation of Open Space areas
- Track the number of plats approved by the City that include a regional park/pond, stream buffer zone or dedicated open space.
- Document the acreage that is dedicated and preserved as open space.

#### **BMP 5-3 MS4 Operation and Maintenance Program**

The Maumelle Public Works Department is responsible for the public drainage infrastructure and operators of private drainage systems. The Public Works has set annual inspection schedules and maintenance schedules. As part of the FEMA National Flood Insurance Program, the City of Maumelle inspects the City's storm drain system and drainage structures at least once a year to determine maintenance needs. Routine maintenance includes cleaning of storm drains and inlets. The City of Maumelle utilizes a Storm Drain Vacuum Truck to clean systems. A street sweeping program is also in place to remove pollutants before they are washed into the storm

drain system. The Street Systems Section of the Public Works Department makes minor repairs to the storm drain system. If needed repairs are beyond the resources of the Street Systems Section, the project is recommended for inclusion in the Capital Improvements Program.

Maumelle City Code, Chapter 94- Stormwater, Pollution Prevention and Erosion Control, Article V- Storm Water Management requires maintenance of private drainage systems. Owners are required to maintain private drainage ditches, swales, and natural areas of stormwater flow. The Code allows an assessment of penalties if the private owner is in violation. Maumelle Public Works and Permits and Code Enforcement are responsible for coordinating and implementing this BMP.

Measurable Goal(s):

- Track the linear feet of public storm drain cleaned each year.
- Track the miles of public streets swept each year.
- Track the number of public pending areas cleaned each year (i.e., Lake Willestien and Valencia)
- Measure the quantity of material (sediment, debris and floatables) removed from the system each year.

#### **BMP5-4 Low Impact Development (LID) Education**

Developing community understanding and support of development designs that minimize water quality impacts can create a market demand that encourages developers to utilize low impact development principles. Educating developers about the potential cost savings of LID can result in developers choosing LID over traditional development methods.

Measurable Goal(s)

- Track the number of LID brochures distributed.
- Track the number of developments that include a LID element in their construction plans
- Complete one public seminar on LID during the 5-year permit cycle with a focus on developers and contractors.

### **5.3 Program Measurement**

**Improvement to Water Quality.** The Post-Construction Storm Water Management BMPs will improve water quality by requiring structural and non-structural BMPs for areas of development and redevelopment to control peak storm flows that can cause erosion. These BMPs will decrease the amount of pollutants that reach receiving waters in storm water runoff. The City's operation and maintenance program also removes pollutants from the storm drain system before they reach the receiving waters. The measures of water quality improvement will be the amount of sediment, debris and floatables removed from the drainage system each year, the percentage of the City's land area that is within the watershed of a pending area (reduction of runoff), and the percentage of the City's land area that is set aside as open space (reduction of impervious area).

## Implementation

Program implementation will occur on a BMP by BMP basis. Measurable goals, timing/schedule and target audience (as needed) are included with each BMP listing.

## Part 6 Municipal Pollution Prevention/Good Housekeeping

### 6.1 Required Elements

In accordance with the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et seq.), and the Clean Water Act (33 U.S.C. 1251 et seq.) - Permit No., ARR150000: *The permittee must 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 due to activities, including but not limited to, park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm sewer system maintenance.* Part 6 of the SWMP describes how the City of Maumelle will meet this requirement. Municipal Operations Included in the Program, Public Works Department, and Maumelle Parks and Recreation have operations with the potential to generate storm water pollution. The pollution prevention and good housekeeping BMPs in this control measure will be applicable to the following operations within these departments:

- Fleet Management (Public Works);
- Parks Management (Parks and Recreation);
- Street Systems (Public Works);
- Recycling Services (Public Works);

This program also includes a component to ensure flood management projects do not adversely affect storm water infrastructure or water quality. It is mandated by state law that the floodplain administrator receive the training from FEMA and AFMA to make sure flood projects do not effect water quality, among other things. The Director of Planning is the Floodplain Administrator. He reviews all layouts and assess them for these issues. Maumelle also has an environmental consultant reviewing the same projects for drainage and flooding concerns and if found they are addressed during the site approval stage.

**Program Coordinator.** Unless otherwise noted under a specific BMP, the Director of Public Works or designee is responsible for administering and coordinating the implementation of activities in this part of the SWMP. The majority of activities are executed by the Assistant to the Director of Public Works under the direction of the Administrator. The BMPs under this control measure are applicable to the to the Public Works Department and Parks and Recreation Department. The Program Coordinator will provide the information necessary to implement the BMPs; however, it is the responsibility of the Directors of the other departments to ensure the BMPs are implemented within their department. The City's Risk Manager is responsible for activities under BMP 6-2. Human Resources Department has a role in implementing BMP 6-3.

### 6.2 Best Management Practices

#### **BMP 6-1 Good Housekeeping Procedures**

During each 5-year permit cycle the City of Maumelle will review operations and facilities within the departments listed in Part 6.1. Each department will prepare a revised list of outdoor activities and material storage that is exposed to storm water. These operations have the potential to negatively impact storm water quality. For each activity or storage area, the potential pollutants and waste streams will be listed. The City will then take an adaptive management approach to revise written Good Housekeeping Procedures and BMPs as necessary for each potential pollutant and waste streams. Written procedures will decrease the potential for activities to result in storm water pollution and will ensure proper disposal of wastes. Written procedures will also aid consistency in

pollution prevention and facilitate knowledge transfer when employees performing an activity change.

Measurable Goal(s):

- Revision of written Good Housekeeping Procedures by the end of 2023.

#### **BMP 6-2 Hazard Communication Program**

Under the OSHA regulations in 29 CFR 1910.1200, employers have the duty to inform employees of the hazardous chemicals stored and handled within the employee's work area. The City of Maumelle has implemented a Hazard Communication Program in accordance with this requirement. The program includes an explanation of Material Safety Data Sheets, which include practices for preventing and responding to material spills. By training employees in spill prevention and response, the City can reduce the potential for spills entering the storm drainage system.

Measurable Goal(s):

- All employees handling chemicals are trained in spill prevention and response each year.
- Record and document employees, training date, and type of training annually

#### **BMP 6-3 Municipal Employee Training**

The City of Maumelle utilizes visual training and/or training videos such as *"Stormwater Pollution Prevention for Municipal Employees."* This training will be given to all employees in the targeted departments. In addition, the training and materials will be given to Human Resources to show as part of the new employee orientation. Employees with responsibility for Good Housekeeping Procedures will receive annual training. Sign-in sheets will be used to document the training.

Measurable Goal(s)

- Provide storm water training to 100% of employees in the targeted departments annually.

#### **BMP 6-4 Pesticide, Herbicide and Fertilizer Management**

The Public Works Department will evaluate ways to improve its pesticide, herbicide and fertilizer application program and decrease the amount of each that are used. Where possible, an Integrated Pest Management program will be implemented.

Measurable Goal(s):

- Document a avoidance and minimization in the quantity of pesticides, herbicides and fertilizers applied at City facilities by the end of the 5-year permit cycle.
- All City applicators or contract applicators are appropriately licensed, and proof of license is provided annually.

### **6.3 Program Measurement**

**Improvement to Water Quality.** The Good Housekeeping BMPs will improve water quality by reducing the potential for pollutants to enter storm water runoff from City facilities and operations. The measure of improvement will be a reduction in the number of municipal activities that occur exposed to storm water without BMPs and a reduction in the quantity of pesticides, herbicides and fertilizers applied outside of buildings.

Implementation:

Program implementation will occur on a BMP by BMP basis. Measurable goals, timing/schedule and target audience (as needed) are included with each BMP listing.