WEST MEMPHIS STORM WATER MANAGEMENT PROGRAM IMPLEMENTED THROUGH THE SIX MINIMUM CONTROL MEASURES AS PER MUNICIPAL SEPARATE STORM SYSTEM (MS4) PERMIT (ARR040025, 88-00852)

March 19, 2009

This report marks the end of the fifth year of the City's MS4 permit and describes the final version of the developed SWMP. The City has implemented the six minimum control measures through it's approved Storm Water Management Program on a continuing and active basis as per the following:

NOTE: "Plan" indicates the City's original proposed action as included in its MS4 Permit to meet the intent of the indicated EPA's MS4 Minimum Control Measures. Measurable Goals, Accomplishments, and Method of Measurement are intended to describe the city's development path to the current SWMP including actions and accomplishments toward meeting reduction in storm water pollutants to the maximum extent practicable to protect water quality.

Persons and/or agencies in parentheses continue to be responsible for maintaining measurable goals. The Public Works Department is responsible for yearly review and reports compiled from each Department's records.

1. Public Education and Outreach on Storm Water Impacts.

Plan: ***A.*** Use local TV channel spots to inform individuals and households of various measures they can take and activities in which they may participate to reduce storm water pollution.

Measurable Goal: Gather and review informational materials and advertisement for TV Spots, First Year. TV spots to appear daily for 1 week once per quarter beginning the 4th quarter of 2005 with the ultimate goal of monthly spots beginning January, 2008. (Public Works)

Accomplishments: We reached our goal on schedule. In addition to airing the "Storm Water Awareness" flyer, we have included excerpts from Ordinance No. 393, which prohibits the sweeping or dumping of any litter into City gutters, and Ordinance No. 1288, which prohibits any discharge, or dumping of any substance into any ditch within the City limits. These spots are now airing on a monthly basis on the local Cable TV channel.

Method of Measurement: As previously reported, we have no official way to gauge public reaction to our TV spots. We do not have a viewer ship record of the local access

channel, but feel like this is an excellent method of communication to the public due to large local viewership accessibility.

In addition to the above, now included on the City's website, **http://www.ci.west-memphis.ar.us/departments.htm** is a link under the Street Department to Storm Water Best Management Practices. **Drainage Basin and Discharge Locations**, **Land Uses and Storm Water Discharge Points**, and **Storm Water Discharge Points**.

Plan: ***B.*** Place educational material in each public and school library in the City.

Measurable Goal: Gather and review appropriate brochures and material for outreach to Schools and Libraries, 1st Year. Yearly placement at the beginning of the School year in August, 2005 with replacement materials as needed through out the year. (Public Works Department)

Accomplishments: We have not asked the employees of the libraries to keep a log of how many flyers have been taken due to their busy schedules . We have continued this practice and feel it is a good tool for reaching out locally and we encourage them to contact us if they need additional copies. They are always happy to make the material available.

Method of Measurement: In consideration of the libraries' staff's time we have not asked them to keep a log of the quantities taken but we feel this is a worth while effort to get our children aware of the need for storm sewer management.

Plan: **C.** Send to restaurants and service garages information on the impact of grease disposal problems and oil disposal impacts as appropriate.

Measurable Goal: Gather materials and formulate effective notices, 1st Year. Send these notices out once per year beginning December, 2005 to the affected businesses along with Privilege Licence Notices. (Public Works Department and City Clerks Office)

Accomplishments: Licensed restaurants and auto repair shops are mailed letters that include "fact sheets" about the harmful effects improper disposal of grease and oil can have on the environment and encouraged them to help make our City a cleaner and healthier place to live.

Method of Measurement: We have received no positive feedback from the fliers mailed to the restaurants and auto repair shops; nor have we received any negative feedback. The businesses have indicated that they know it is illegal to dump oil/grease into storm drains and ditches, but we feel this is a proper method to keep it on their minds. We have had no reports of illegal dumping from either the public or city employees who monitor this type of activity.

2. Public Involvement/Participation

Plan: **A.** Hold a stake holder's meeting with developers, homebuilders and others to inform of the Storm Water II Permit Requirements and receive input for an acceptable Storm Water Management Program.

Measurable Goal: Meetings advertised in the local paper and held at West Memphis City Hall at 12:00 p.m. on April 13, 2004 with eighteen individuals representing several stakeholders. (Community Development/Code Enforcement Office and City Engineer)

Accomplishments: This meeting was held the first year in accordance with our SWMP.

Method of Measurement: The stake holders have continued to cooperate through the permitting process and interaction with the approval, permitting, and inspection process.

Plan: **B.** Hold public meetings to encourage volunteers to participate in outreach and education of others, and to review and improve the local storm water management program.

Measurable Goal: Public meeting to beheld once per year, (beginning February, 2005. (Community Development Office/City Engineer)

Accomplishments: Public meetings are held yearly in conjunction with the Community Development Agency and we continue to encourage public participation. Public Hearings were held January 12 and 26 of this year. Planning Commission public hearings were held monthly (as needed if there was business) during this reporting period.

Method of Measurement: Attendance at public meetings/hearings is not as good as the City would like but additional meetings would not generate more interest or public participation. As previously reported, the monthly planning commission meetings afford plenty of opportunity for public input. Planning Commission Agenda sets the tone for public participation. If a controversial zoning issue is scheduled a large number will show up but if subdivision only approval is on the agenda only the Engineer and Developer usually shows up. But either way we are still able to bring up storm water management as an issue for public and private consideration. The C.D. Public hearings are held at least twice during the year and usually have approximately 10-20 persons attend. Storm Water Management is one of the issues discussed and has resulted in street and drainage improvement projects recommended each funded year.

Plan: **C.** During Planning Commission meeting encourage public participation in review of new Subdivision submittals particularly in the area of storm water management.

Measurable Goal: Review subdivison approval process and coordinate with Construction and Post Construction Storm Water Management, 1st Year. Advertise monthly meetings of the West Memphis Planning Commission beginning August, 2005. (Community Development Office)

Accomplishments: Monthly meetings are advertised on the local access channel. Meeting times are also posted on an

information board at City Hall. Any variance or rezoning request is subject to a public hearing. These hearings are advertised in the local newspaper.

The approval process outlined in our approved permit is administered by the Planning Commission, City Engineer, Code Enforcement, Utility Department, Fire Department, and Street Department. Each department is responsible for reviewing any new or substantial improvement construction plans and either approving said plan, or advising developer/contractor/engineer steps they need to take in order to comply with each department's codes and/or ordinances as related to that particular project.

Our subdivision approval process includes construction and post construction measures for storm water management in new subdivisions and has greatly improved our ability to effectively control the flow of storm water. Each new subdivision plan that is submitted to the Planning Commission must have approved grading plans and appropriate erosion and sedimentation measures including storm water detention requirements. Post construction "as builts" are required from owner's engineer.

The planning department is responsible for issuing building permits after the approval of the city engineer for streets, grading and drainage including erosion control; the floodplain administrator in relation to floor elevations and flood certificates in compliance with our floodplain ordinance. The utility department is responsible for approving various utilities, electrical, sanitary sewer and water easements and improvements. The Fire Department reviews plans for fire safety requirements, and inspections are done by the Fire Department Inspectors to ensure these requirements are met. The City employs two full-time building inspectors who perform on-site inspections; in addition to the inspectors, a uniformed code enforcement police officer is on staff and authorized to write citations to violators who fail to comply with the inspectors' instructions or "stop work" orders.

Method of Measurement: The above permitting procedure has served the City well. Our inspectors are knowledgeable and experienced in their fields of expertise, and have the authority to issue stop orders on any project that does not comply with city codes. Additionally, the city engineer is available for site visits to answer any and all questions related to building site run-off.

In the event the inspectors do encounter run-off or BMP problems on a construction site, and are unable to mediate the problem, they are instructed to contact the city engineer who will make a site visit and confer with the contractor to determine the problem and effectively eliminate it. Thus far we have not encountered any resistance to our permitting/enforcement policies. Contractors are usually anxious to address any concerns the inspector or engineer has in order to prevent delays in the construction process. There were two subdivisions approved the prior reporting period with one still under construction. This subdivision was required to build a detention pond. One stop order was issued to make a silt fencing correction and corrective action is presently being taken at the detention pond. Our procedures are accomplishing our goals.

3. <u>Illicit Discharge Detection and Elimination</u>

Plan: **A.** A program to detect and eliminate illicit discharge will be implemented to include inspection of discharge points during dry weather periods and industrial and commercial sites if identified as significant contributors of pollutants.

Measurable Goal: Inspect for evidence of illicit discharge at all discharge points once per year during dry weather periods beginning July, 2005 and if evidence is found moving upstream from manhole to manhole to pinpoint source (Street and Drainage Department) Inspect Categorical Industries once per year and non-significant non-categorical classifications once every two years, beginning January 2005. (Director of Environmental Quality) During annual report review the program with involved personnel to assess and evaluate the procedures (yearly). (Public Works

Department and City Engineer)

Accomplishments: The city has developed a successful detection process with the Director of Environmental Quality Control for the West Memphis Utility Commission administering the industrial pretreatment program, an approved Arkansas DEQ program, which include six permitted industries at which samples are taken monthly. Sanitary sewer over flows with corrections are reported with the Commission's Discharge Monitoring Report to ADEQ. City street, and drainage crews, under the Departments Superintendent's direction, inspect ditches and outlets annually. To date no illicit discharges have been observed other than the normal floatables and debris.

Method of Measurement: The Director of Environmental Quality Control regularly inspects the 6 permitted industries per year with samples taken monthly. The Street and Drainage Superintendent has implemented a program for inspecting and cleaning the major 12.2 miles of ditches and drainage structures annually.

Plan: **B.** Complete a storm sewer system map showing the location of outfalls and their discharge points including location of the receiving waters.

Measurable Goal: Complete and maintain updated maps of the storm water system outfall and discharge points.

Accomplishments: Outfall and Discharge Points Map and Storm Sewer System Map – maps have been completed and are updated on a continuing basis.

Method of Measurement: These maps may be viewed on the West Memphis web site at ***www.ci.west-memphis.ar.us/street_dept_.htm*** and by clicking on Storm Water Best Management Practices, ***Drainage Basin and Discharge Locations***, ***Land Uses and Storm Water Discharge Points***, *and* ***Storm Water Discharge Points***.

4. Construction Site Storm Water Runoff Control

Plan: **A.** The City in its MS4 area of service will require all construction sites of five acres or more to obtain the

proper storm water construction permit coverage from the ADEQ. Through the adopted subdivision and building permit regulations, approval for permits will not be issued until proof of the required permit from ADEQ along with erosion control plans are received. For one acre to five acre sites the City will require Construction Site Storm Water Runoff Control Plans to be submitted for approval along with Building Permit and/or Subdivision plan approval.

Measurable Goals A-C:

The City will begin reviewing the permit process and establish procedures including BMPs, 1st Year with the intent of beginning the permit process and inspections in the 2nd Year. The City inspectors will make at least 3 inspection visits for each project listing violation and corrections beginning the 2nd year. (Code Enforcement and City's Engineer) On City Projects required records will be maintained of the locations, acres disturbed, and dates of construction activities commencement and end, and include this information in Annual Reports, beginning 2nd year. (Public Works Department).

Accomplishments:

The City as permittee is relying on ADEQ to satisfy permit obligations for development above 5 acres and is requiring these permits and plans be provided to the City as a part of the permitting and inspection process.

Any development over 1 acre, but under 5 acres, is subject to local permitting and appropriate storm water control plans. Any such developer is provided with the requirements for best management practices inclusive of construction exit, maintenance, sediment basin, etc. In the event the Inspector encounters resistance to the BMPs by the developer, the City Engineer will step in to ensure proper measures are followed. (See Page 4, Plan C for detailed construction permitting process.)

Construction site storm water runoff control is not a new concept in West Memphis. In 1989, the City's land subdivision and development code was amended by the following language:

"At the time other construction plans are submitted for

review and approval, a grading plan must be included. The grading plan must ensure that no water will be trapped behind houses and that all yards will drain properly. Unless an established drainage system already exists, backyard drainage, with or without easements, will not be permitted. The City engineer is responsible for determining what is and what is not an established drainage system. Before the two-year maintenance period for improvements can begin, the developer's engineer must submit a letter stating that the grading plan has been completed. This completion is subject to the City Engineer's inspection. The maintenance period will not commence until the City is satisfied that the required and approved grading plan has been completed in all respects."

In 1994, the City adopted a new comprehensive drainage manual to cover both minor and major drainage areas. We have worked diligently to develop policies and procedures specific to our flat terrain in order to provide efficient and effective storm water management.

These policies and procedures along with the MS4 requirements comprise the City's Storm Water Management Plan and are included in the permitting process with plan approval from the City Engineer.

Due to economic conditions, we had only one subdivision over 5 acres begun during last year that is still in progress. As per the city MS4 inspection program, they are still under construction but are required to have an on-site detention basin. There has been two stop orders issued by the City Engineer due to improper silt fencing issues and detention outlet construction.

Plan:

B. With the receipt of appropriate permits and in accordance with approved plans, the City code enforcement office and the City engineer's office will review plans and will perform site inspections on each site. These City representatives, by local regulations, have authority to issue stop work orders and withhold issuance of certificates of occupancy including utility hookups.

Accomplishments: The City building inspectors make regular visits to new construction sites. Again, as previously reported, any problem with construction site runoff is referred to the City Engineer. Our policies are well known in the development/construction community, and we have had little or no problems with runoff. Our usual complaints are from residents and are related to construction trucks tracking mud onto the streets. A phone call to the developer making them aware of the problem is usually all that is necessary. Developers/ contractors know they are responsible for cleaning up any mud their trucks leave on City streets. Neither of the inspectors have noted any run-off problem on job sites they have inspected other than silt fence location and repair. Each construction or developed project greater than 1 acre is required to provide on-site detention and approved storm water run-off plans. City Inspectors are required to make 10 inspections to each site at various stages of construction.

Plan: **C.** The City of West Memphis' construction projects will also be required to meet the minimum controls equivalent to the requirements for this area. Each public project of one acre or more will be required to submit to the code enforcement office and/or City engineer erosion control and related storm water prevention plans that are standard to other similar construction projects for the area.

Accomplishments: The City construction projects fall under the jurisdiction of the City Engineer and the minimum requirements, applicable ordinances, and storm water BMP's are included.

5. Post-Construction Storm Water Management in New Development and Redevelopment

Plan: **A.** 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 plan or development, will be developed. The initial plan is to add storm water management requirements including grading plans and structural and/or non-structural best management practices to the

requirements for building permits which will remain in effect until proper controls are reasonably established for long-term protection. Non-compliance with requirements may be enforced by issuing a conditional certificate of occupancy (short term) or by withholding the certificate of occupancy (utility service).

Measurable Goal:

Begin review of Building Permit requirements including applicable ordinances to address adding Storm Water Management and check-off list to the Building Permit Process, 1st Year. Implement Ordinance changes as necessary, 2nd Year. Implement changes and Permit Process as required, 3rd Year. Inspections begin when adopted. The process will be reviewed yearly and there after to ensure that the requirements are responsive to the constantly changing storm water technologies, developments and improvements in control technologies. (Code Enforcement, City Engineer and Public Works)

Accomplishments:

A check off list for storm water management has been adopted to the building permit process and inspections begin when building permits are issued. The process is reviewed yearly to ensure that the requirements are responsive to the constantly changing storm water technologies, developments and improvements in control technologies

The City requires post development approval plans to be submitted by the owner's engineer, including "as builts". Grading plans for lots are also submitted for commercial and industrial developments with Design Review Commission approval of layouts, including landscaping, sodding, and seeding requirements. Each site has a final inspection with deficiencies corrected prior to issuing Certificate of Occupancy.

6. Pollution Prevention/Good Housekeeping for Municipal Operation

Plan:

A. The City will develop and implement an operation and maintenance program to effectively reduce and prevent runoff from municipal operations. Employee training relating to pollution prevention and good housekeeping in regards to municipal operations such

as parks, open spaces, maintenance yards, storm water system maintenance, new construction, and land disturbances will be provided.

Measurable Goals A-C:

The City will begin gathering training materials and develop a training program for appropriate employees involved in operation and maintenance, and develop a pollution prevention plan for street sweeping, major ditches and catch basins clean out, first year. Employee training will be provided and regular street sweeping, ditch cleanout and catch basin schedules will be begun, second year. By year four, have begun cycle to have major ditches inspected and/or cleaned out, identified problem catch basins cleaned, and all curbed streets swept at least once every four years unless inspections determine not needed. Year four, review BMPs and scheduling to determine effectiveness and revise accordingly. (Public Works)

Accomplishments and Method of Measurement:

The City Engineer meets yearly, with the street, sanitation, and shop personnel, concerning the implementation of our best management practices, to review and further educate them on the importance of pollution prevention and good housekeeping practices. The training sessions included distribution of written literature gathered from *stormwater center.com*, as well as verbal instruction by the engineer to make them more aware of the problems our environment faces due to pollution, and to encourage them to be more proactive during their every-day duties.

Plan:

B. The City will inspect and maintain its storm sewer system including major ditches in its effort to reduce floatables and other pollutants discharged from the system.

Accomplishments Method of Measurement:

The street department has developed a very effective ditch clean-out program. Since our drainage system consists of open ditches throughout the City, it imperative that the department be efficient in its efforts. The city keeps file copies of ditch clean-out reports furnished by the street superintendent at City Hall for public review. During periods of moderate to heavy rain, Street Department personnel perform drive-by inspections of storm water inlets for signs of

obstruction. Most of these problems are caused by residents sweeping or blowing grass clippings, leaves, or other debris into the drains. Once the obstruction is cleared, the street superintendent will try to determine who has caused the problem and deliver a copy of ordinance no. 393, that prohibits sweeping litter into gutters to the offender. Most offenders are unaware of the adverse effect their actions have on our drainage system, and are happy to comply with the law after being made aware of it. We have no knowledge of any resident refusing to comply with our request to cease this practice. The City Crews maintain and clean 12.2 miles of major open ditches and 750 junction boxes and inlets on a regular basis.

Plan:

C. The City will provide street sweeping operations on curbed streets to collect dirt, floatables and related pollutants prior to entering local streams.

Accomplishments and Method of Measurement:

The Street Department operates 3 street sweepers each week, cleaning approximately 225 miles of streets at least once per month and weather and time permitting, twice per month for the problematic streets. Our street sweeping program has been in place for approximately 10 years, and it continues to operate efficiently. No changes are planned for this operation. Weekly street sweeping reports are on file at City Hall.

The above report describes the city's MS4 program in its final version and as such the City has and will continue to follow the minimum control measures/best management practices as outlined in its plan in compliance with the MS4 NPDES Permit requirements. A copy of this report may be reviewed at the West Memphis web site at www.ci.west.memphis.ar.us/streetdept.htm and by clicking on Storm Water Best Management Practices. Drainage Basin and Discharge Locations, Land Uses and Storm Water Discharge Points, and Storm Water Discharge Points.

If you have any questions or comments, please do not hesitate to contact me.

Submitted by: Eddie E. Brawley

Eddie E. Brawley, P.E.
Acting City Engineer
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