

**ANNUAL
MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
REPORT**

**NPDES STORMWATER PERMIT
NUMBER ALR040045
Chickasaw, Alabama
Volkert Job Number 436500.06**

Prepared for:

**The City of Chickasaw
Mayor Byron Pittman
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March 2014

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1.0 CERTIFICATION AND INTRODUCTION

1.1 Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

The Honorable Byron Pittman
Mayor, City of Chickasaw



Signature



Date

1.2 List of Contacts

The following individuals may be contacted to address questions or concerns regarding this report:

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1.3 General Introduction

On November 16, 1990, the U.S. Environmental Protection Agency (EPA) promulgated regulations, under the Water Quality Act of 1987, setting forth application requirements for National Pollutant Discharge Elimination System (NPDES) storm water permits. The Alabama Department of Environmental Management (ADEM) administers the storm water program for the State of Alabama. The City of Chickasaw along with other smaller cities in Mobile and Baldwin Counties were originally included in a Phase I permit with the City of Mobile. In March 2012 the City of Chickasaw requested to be removed from the MS4 program or at a minimum be revised to a Phase II permittee. The request was based on the following factors: population, land use, receiving stream water quality, and documented history of water quality monitoring of the major outfall. On December 27, 2013, ADEM approved the City of Chickasaw's request to participate in the Phase II permit for smaller systems in lieu of the Phase I permit, as required for municipalities with a population of 100,000 or more. The City of Chickasaw is submitting this report as part of an annual requirement for the NPDES Permit Number ALR040045. Therefore, this report includes activities from the last Phase I permitting period of October 2012 to the current Phase II permitting period of March 31, 2014.

1.4 Overview

On November 16, 1990, the Environmental Protection Agency (EPA) ruled that municipalities and industry share the responsibility to improve the water quality of the “Waters of the United States”. In accordance with this rule, the EPA created regulations for NPDES Storm Water Permits for municipalities and permits associated with industrial activity. These regulations are aimed at reducing the amount of non-point source pollution that is currently the leading cause of water pollution.

The Water Quality Act involves a two-phased municipal permitting program that requires municipalities of certain populations to establish discharge controls to the Maximum Extent Practicable (MEP), to effectively prohibit non-storm water discharges to the municipal separate storm sewer systems, and where necessary, to contain applicable water quality based controls. Compliance with the maximum extent practicable requirement can be attained by developing a storm water management plan that addresses the six minimum control measures described in the storm water regulations and detailed in fact sheets developed and provided by EPA.

The City utilizes current personnel to administer the storm water program elements. Additional assistance is provided by local engineering firms and Mobile County, as needed during crises or emergencies such as floods, spills, or hazardous waste incidents.

Storm water is managed by several City departments and by community activities which involve volunteer work. The City does not have the financial resources to dedicate personnel solely to storm water quality, however these responsibilities are shared by employees and considered part of the effort to protect our streams and waterways from degradation.

2.0 PROGRAM EVALUATION

2.1 Objective of the Program

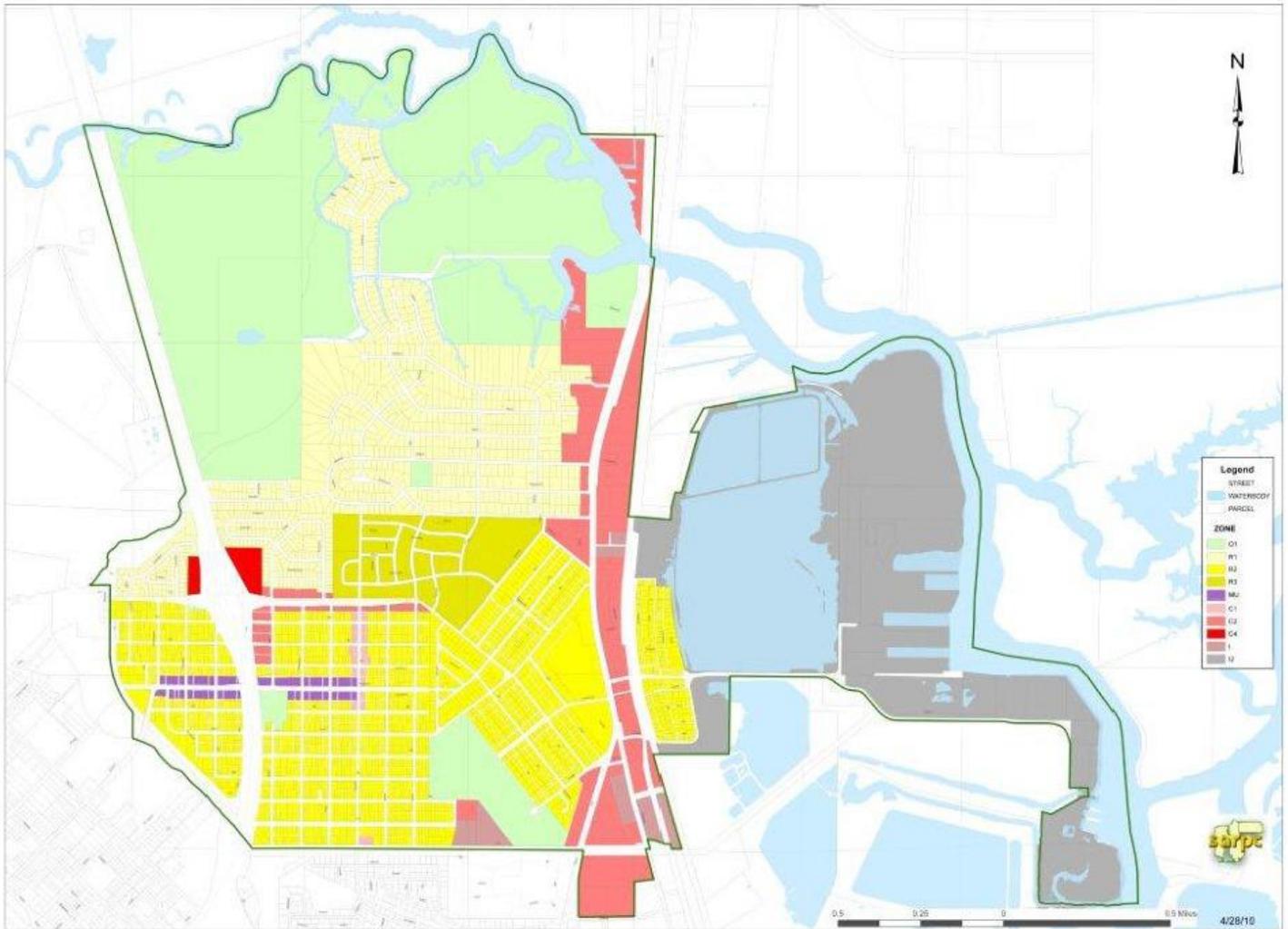
On December 27, 2013, The City of Chickasaw was granted coverage under the MS4 Phase II General Permit ALR040045, replacing the Phase I General Permit ALS00002. The intent of the (National Pollutant Discharge Elimination System) NPDES permit is to reduce and eliminate pollutants in storm water that are discharged from municipal separate storm sewer systems (MS4s). Due to the transfer of coverage from the Phase I to the Phase II permit, the reporting period for items contained in this report is October 2012 through March 2014.

The City of Chickasaw is dedicated to achieving the conditions of this permit, which will ultimately improve water quality by reducing pollutants in receiving waters. The City's goals are to educate the municipal employees and the general public on the storm water management program and focus on a unified approach to the identification and correction of problem areas. Additionally, the City has established the legal authority to manage and enforce the requirements of the program.

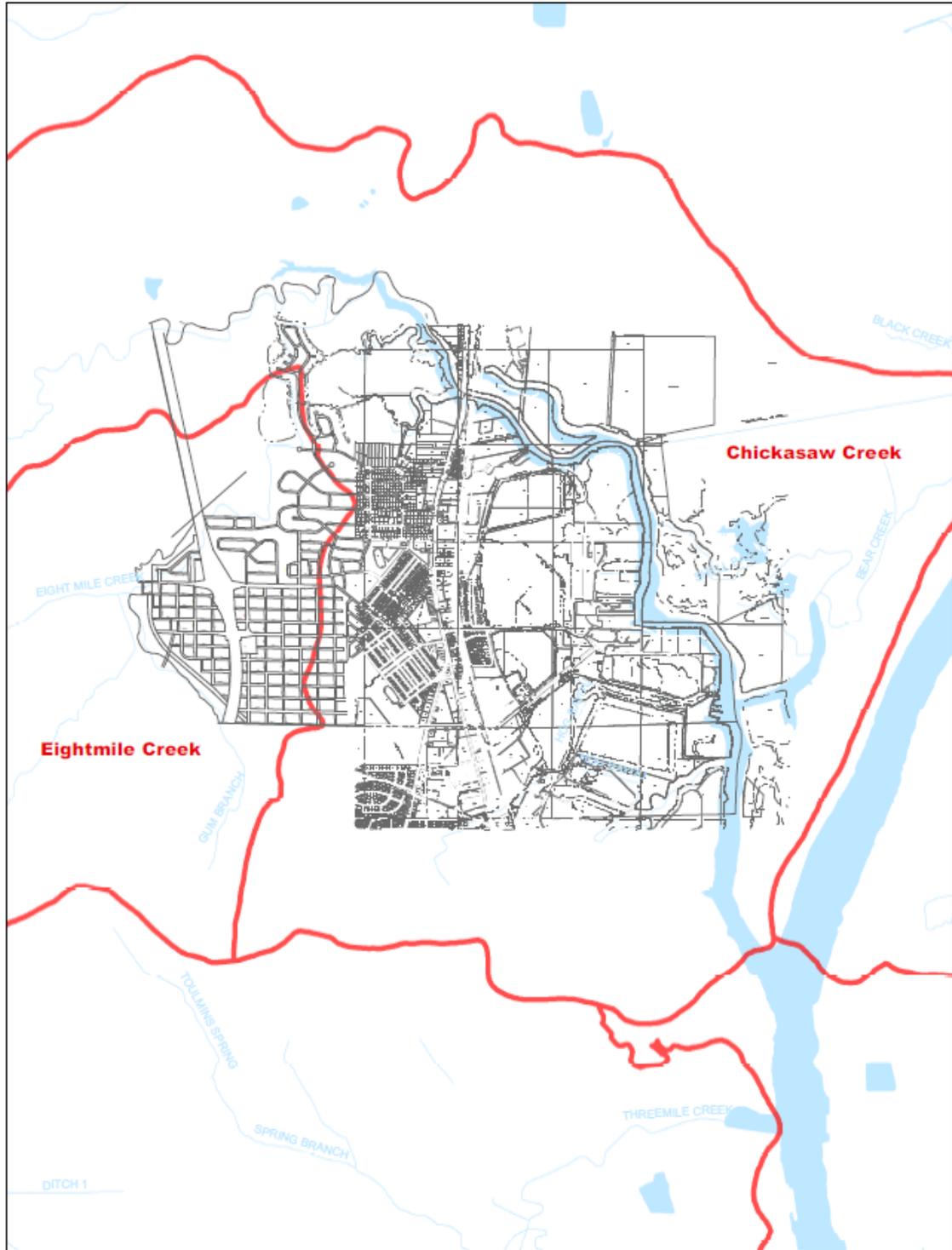
The City of Chickasaw with a population of 6,023, according to the 2012 U.S. Census, consists primarily of residential land use. See Map 2.1 for the City's Zoning designations.

The City of Chickasaw is almost entirely located within the Chickasaw Creek watershed as shown on Map 2.2 on the following page.

CHICKASAW ZONING MAP



MAP 2.1: CITY OF CHICKASAW ZONING MAP



MAP 2.2: WATERSHEDS WITHIN OR SURROUNDING THE CITY OF CHICKASAW

2.2 Program Execution

The City has developed and implemented many programs to help minimize storm water related pollutant loads. City Ordinance 1540, passed in 1998, establishes procedures to control discharges from commercial and industrial facilities and construction sites. A Drainage Master Plan was established in 1999 that identified problem areas and prioritized construction projects to address these areas. The Director of Public Works responsibilities include maintaining this prioritized list of projects. The projects are evaluated to ensure the areas with the highest needs are properly identified and prioritized. The City is progressively addressing these projects as funds become available.

The City's Director of Public Works and Code Inspector are responsible for the majority of the various program elements. Employees in all City departments have received instruction on the program objectives and are provided with opportunities to attend educational programs. A review of each department's role will be included in preparing the revised Storm Water Management Plan (SWMP) as required for the Phase II MS4 permit.

The prediction of the long-range financial requirements needed to support the storm water program is difficult. Funding for expanding the storm water management program is currently unavailable. The City officials address the financial needs and make budget allocations on a year-to-year basis that are prioritized based on the needs of the entire City operations.

2.3 Future Direction of the Program

By June 2014, The City of Chickasaw will develop a Storm Water Management Plan (SWMP) designed to reduce the discharge of pollutants to the maximum extent practicable (MEP). The SWMP will include Best Management Practices (BMP's) that address the six minimum control measures as outlined in Section III.B of the Phase II NPDES Permit. The BMP's will consist of the City's current ordinances and programs while incorporating new, simple, and sustainable approaches to storm water management. Each BMP will include measurable goals and the personnel responsible for its overall management and implementation.

The six minimum control measures are:

1. Public Education and Outreach on Storm Water Impacts
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination (IDDE)
4. Construction Site Storm Water Runoff Control
5. Post-Construction Storm Water Management in New Development and Redevelopment
6. Pollution Prevention/Good Housekeeping for Municipal Operations

3.0 SUMMARY TABLE

3.1 Storm Water Management Plan Element Status/Compliance

CITY OF CHICKASAW

Program Element	Requirement	Activity Schedule			Comments
		Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
Structural Controls	Major Channels Inspections	7 Channels, once/month	Yes	7 Channels, once/month	Additionally, Before/After Heavy Rains
	Major Channels Maintenance	7 Channels, as needed	Yes	7 Channels, as needed	Additionally, Before/After Heavy Rains
	Storm Inlets Inspected	Approx. 1400 inlets, once/3 mths	Yes	Approx. 1400 inlets, once/3 mths	Additionally, Before/After Heavy Rains
	Detention Ponds Maintained	3 Ponds, once/year	Yes	3 Ponds, once/year	Or, more often as needed.
Monitoring	Representative	N/A	N/A	N/A	Not required.
	Wet Weather Screening	N/A	N/A	N/A	Not required.
	Dry Weather Screening	10 sites, once/year	Yes	10 sites, once/year	Section 4.3b
Illicits	SSO's	Record/report occurrences	Yes	3 violations	Reported to ADEM, and on MWPP.
	Investigations	Investigate reports/complaints	Yes	None Reported	None reported
Construction	Site Inspections	Frequently during construction	Yes	11 res., 2 comm.	No citation issued
Industrial	Inspections	As Needed	Yes	5 inspections	No citation issued
Education	Litter Campaign	Maintain Program	Yes	Keep Mobile Beautiful and Coastal Clean up	Chickasaw Community Patrol
	Public Information	Maintain Program	Yes	Maintained City's Website	

4.0 NARRATIVE REPORT

4.1 Public Education and Outreach on Storm Water Impacts

Permit Requirement: The Permittee must implement a public education and outreach program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of discharges on water bodies and the steps that public can take to reduce pollutants in storm water runoff to the maximum extent practicable.

The City of Chickasaw has made a concerted effort to develop and implement Best Management Practices (BMP's) focused on educating the citizens of Chickasaw and city employees about activities that can reduce pollutants in storm water run-off to the maximum extent practicable. The persons primarily responsible for storm water public education and outreach are city employees from multiple departments.

The following BMP's regarding Public Education and Outreach were implemented during the reporting period of October 2012 to March 2014:

A. Education & Outreach through Web and Print Media

The City of Chickasaw's website includes a document entitled "The Solution to Stormwater Pollution: A Homeowner's Guide to Healthy Habits for Clean Water." The guide explains why it's important for the public to assist with keeping storm water free of pollutants and also provides Best Management Practices (BMP's) the homeowner can employ in areas such as vehicle maintenance, lawn and garden upkeep, home repair and improvement, pet care, swimming pool maintenance, and septic system management. A copy of this document is included with this report in Appendix C. The City also produces a newsletter every two months announcing upcoming City events, including storm water related events. The newsletter is mailed to the City's residents, included in utility bills, and is also available in City buildings.

B. Educational Opportunities for City Employees

The City Code Inspector attends the monthly meetings of the Code Officials of Lower Alabama Association, annual meeting of the Code Officials of Alabama, annual COLA mid-winter conference, and the annual meeting of the Alabama Association of Plumbing, Gas, and Mechanical Inspectors. Public Safety officers have been trained in hazardous materials handling. The Utilities Supervisor attends various seminars related to water and wastewater management at events such as Alabama Water Environmental Association Conference. Twice a year,

formal meetings are held with Public Works Department personnel and the City's Environmental Officer to discuss the City's efforts to ensure a clean flow of water into their storm water system.

4.2 Public Involvement/Participation

Permit Requirement: The permittee shall implement ongoing activities for public involvement through mechanisms such as advisory councils, watershed associations, committees, participation on rate structures, stewardship programs, and environmental related activities. The permittee shall also implement a process to facilitate opportunities for direct action, education, and volunteer programs such as storm drain stenciling, urban stream cleanup, and volunteer monitoring.

Public involvement and participation has been vital in controlling litter throughout Chickasaw. The City of Chickasaw utilizes local organizations to involve their citizens in improving the water through several organized activities. The persons primarily responsible for storm water public involvement/participation are City employees from multiple departments.

The following BMP's regarding Public Involvement/Participation were implemented during the reporting period of October 2012 to March 2014:

A. Beautification Program/Clean-Up Events

To assist with controlling litter the City participates in the Keep Mobile Beautiful Program, the Coastal Clean-Up Program, and an annual non-hazardous waste/garbage collection day called "Clean Sweep" for city residents at no extra charge. This year the Big Fall Clean Sweep was combined with the Coastal Clean-up. The City provided five drop off locations and encouraged their residents to clean up their waterways, garages, sheds, yards, and back alleys by bringing their old junk, scrap metal, appliances, tree limbs, yard debris and old tires to these drop locations. The City properly disposes of these items at a permitted landfill. The City notified their residents of the "Clean Sweep" event with notices in utility bills, newsletters, and flyers in the City Hall. The 2012 event was held in September and the City collected 160 tires and approximately 3,000 lbs of trash. The 25th Annual Coastal Clean-Up encourages volunteers to bring their boat, canoe, kayak etc. and help clean up the waterways. The event took place at 27 sites in



Mobile and Baldwin Counties. Necessary supplies are provided at registration. The Coastal Clean-up encouraged attendance by providing free t-shirts and a pair of gloves.



The Big Fall Clean Sweep collected 160 tires and approx. 3000 lbs of trash.

B. Chickasaw Community Patrol

The Chickasaw Community Patrol is a volunteer citizen group that monitors the streets of Chickasaw day and night looking for any issues that the City needs to address. These issues include break-ins, burglars, flooded streets, street repairs, littered streets, overgrown vegetation, etc. During this reporting period, the Community Patrol submitted reports of drainage stoppage due to tree limbs or leaves. Once the volunteers report any issues to the City docket, it is determined whether the police should get involved immediately or if a work order should be initiated.

4.3 Illicit Discharge Detection and Elimination (IDDE)

Permit Requirement: The Permittee must develop an SWMP that includes an ongoing program to detect and eliminate illicit discharges into the Permittee's small MS4, and improper disposal, including spills not under the purview of another responding authority, into the MS4 owned or operated by the Permittee, to the maximum extent possible.

The City of Chickasaw responds to illicit discharges and continues to inspect, investigate, and enforce violations. In July 2013, the City of Chickasaw hired an Environmental Officer for the purpose of assisting with investigations and responses to complaints of potential illegal discharges. The role of the Environment Officer will be reviewed in the preparation of the revised Storm Water Management Plan (SWMP) required for the Phase II MS4 permit. There were no citations issued during this reporting period for illicit discharges.

The City has in place ordinances that provide enforcement measures to assure compliance with their SWMP. Article II of Ordinance 1540 makes it unlawful for any person, firm, or corporation to allow any liquid to run continuously into the streets and the storm drain system or to discharge a pollutant to the City's storm water system that will have a deleterious impact on the environment, with the exception of discharges covered by an NPDES permit. Article II also authorizes the City to enter the grounds of any facility suspected of an illicit discharge; the City has the authority to halt and to be reimbursed for the ceasing of a discharge from a facility that is suspected of being harmful to human health or the environment.

Article III of Ordinance 1540 makes it unlawful to release or threaten release of hazardous materials into the environment or to transport, store, and offer to transport any hazardous materials unless such material is properly packaged, marked, and accompanied by proper documentation. Any expenses incurred by the City as a result of an emergency action for the release or threatened release of hazardous materials will be reimbursed by the person or entity responsible for the release.

The City of Chickasaw implements the following BMP's to detect and eliminate illicit discharges:

A. Illicit Discharge Response

The Chief Building Official responds to illicit discharge complaints and keeps records of the complaints and the activities taken for response

including issuing tickets if needed. No illicit discharge complaints were received during this reporting period.

B. Dry Weather Screening

Routine dry weather screening is handled by the City's Drainage Department. Field screening locations were selected based upon their proximity to major stream systems, drainage basins, and urban development. Field screening stations were examined during dry conditions to verify that flow exists only during rainfall events. The major outfall and the ten field screening locations were reviewed for evidence of illicit discharges during the permit period. No illicit discharges were noted during these inspections.

The City's Phase II permit does not require monitoring therefore no water sampling data was collected. The City's one major outfall discharges into Chickasaw Creek which is listed on the 2012 Alabama §303(d) List for impaired waterways. The listed cause for the impairment is an elevated concentration of the metal Mercury from atmospheric deposition.

Table 4.3 on the following page is a list of the field screening locations and the major outfall site. These locations are also shown on the map in Appendix D.

C. Handling of Spills

The Chickasaw Police Department has developed and implemented a Procedural General Order (PGO) for the reporting and handling of hazardous and/or toxic materials spills and incidents. Public Service Officers are first responders trained in hazardous materials and their containment. The City has mutual aid agreements with the City of Mobile and the City of Chickasaw Fire Departments which includes their Haz-Mat units. Also, the City of Saraland is home to HazMat 6, a statewide HaMat team that is able to respond to both large and small incidents within the City of Chickasaw. There were no spills reported during the permit period.

The Public Safety Department (PSD) of the City has made a concerted effort to insure that the PSD is ready to respond to manmade or natural disasters. The PSD strives to maintain a strong working relationship with Federal and State agency, local EMA, and surrounding municipalities.

Screening Sites	Location	GPS Coordinates
MO-1	Sam Rawls Gazebo @ Chickasaw Creek loading dock near US 43 Bridge Crossing	30° 46' 54.839 N 88° 04' 24.787 W
FS-1	500 Viaduct Rd @ Arc Terminals @ Railroad Track	30° 45' 48.680 N 88° 03' 43.322 W
FS-2	South end of Howell Street near UOP Gate 3 sign located just pass the railroad and Southern St. next to 15 mph signage.	30° 45' 39.92 N 88° 04' 16.851 W
FS-3	Intersection of Thompson Dr. & Hopi Dr. (2nd drain, east side) A.O. Smith Water & Heater-Eddins Plumbing Inc.	30° 45' 48.374 N 88° 05' 18.634 W
FS-4	1002 Thompson Blvd at bridge crossing across from Central Electrical Substation	30° 45' 39.786 N 88° 05' 53.673 W
FS-5	Intersection of Fox Ave and 9th Avenue	30° 45' 33.709 N 88° 05' 34.805 W
FS-6	North end of Mauvilla Drive South, adjacent to I-65 bridge	30° 46' 20.398 N 88° 05' 41.933 W
FS-7	Hillsdale Drive across from 507 Hillsdale Drive	30° 46' 23.728 N 88° 05' 17.909 W
FS-8	Drop inlets at 220/222 Casche Circle	30° 46' 49.897 N 88° 05' 07.803 W
FS-9	Drop inlets at 312 Idlewood	30° 46' 40.039 N 88° 05' 13.657 W
FS-10	Across from 321 Grant Avenue just west of Craft Hwy	30° 46' 03.057 N 88° 04' 33.510 W

TABLE 4.3 - DRY WEATHER SCREENING LOCATIONS

4.4 Construction Site Storm Water Runoff Control

Permit Requirement: Within 730 days from the effective date of coverage under this permit, all Permittees must develop, implement, and enforce a program to reduce, to the maximum extent practicable, pollutants in any storm water runoff to the regulated MS4 from qualifying construction sites.

The City of Chickasaw requires submission of all potential construction project plans to the City Building Inspector for review to ensure compliance with the City's SWMP. The City requires Best Management Practices (BMP's) for all construction projects per ADEM regulations. Once a permit is obtained, the builder must request inspections during different stages of construction. Inspectors generally visit each site several times during the construction process. These multiple inspections allow a city inspector to ensure compliance with the city codes which includes storm water management.

The City of Chickasaw has in place an ordinance that provides enforcement measures for reducing, to the maximum extent practicable, pollutants in any storm water runoff from construction sites. Article IV of Ordinance 1540 requires contractors with projects that include land-disturbing activities of two or more acres must submit a construction site storm water management plan to the City Building Inspector for review and approval. For those land-disturbing activities that involve two acres or less, a simplified storm water management plan must be developed and followed during construction. Additionally, the City confirms that the ADEM NPDES permit for land disturbing activities for one acre or more has been obtained. The Ordinance also outlines the required components of the storm water management plan, in addition to examples of structural and nonstructural storm water management facilities. Storm water management plans can be rejected by the city building inspector if they incorporate structures and facilities that will demand considerable maintenance, will be difficult to maintain, or utilize numerous small structures if other alternatives are physically possible.

Residential construction requires a minimum of five (5) inspections, while commercial construction requires seven (7) inspections. The City approved 11 new residential sites, for a total of 55 inspections, and 2 new commercial sites, for a total of 14 inspections, during this reporting period. No citations for improper storm water management were issued for any of the sites.

4.5 Post-Construction Storm Water Management in New Development and Redevelopment

Permit Requirement: Post-Construction Storm Water Management refers to activities that take place after construction occurs, and includes structural and non-structural controls to obtain permanent storm water management over the life of the property's use. All Permittees must implement the requirements of Part III.B.5 within 730 days from the effective date of coverage.

Within the City of Chickasaw's Ordinance 1540 are guidelines for post-construction storm water management. Appendix A includes a very extensive list of requirements for storm water management plans that are to be submitted to the City Building Inspector for land-disturbing activities disturbing more than two acres. The following are some of the requirements related to post-construction storm water management:

- a. The location of temporary and permanent vegetative and structural storm water management control measures.
- b. Storm water management plans shall include designation of all easements needed for inspection and maintenance of the drainage system and storm water management facilities
- c. To improve the water quality aspects of the drainage system, the storm water management plan shall include best management practices to control the water quality of the runoff during the land-disturbing activities and during the life of the development.
- d. Construction and design details for structural controls.

Ordinance 1540 also requires responsible parties to calculate the impact that their land disturbing activities will have on the City's drainage capacity and to implement controls if the analysis shows that the quantity of water generated during storm flows by the development will negatively impact the City's drainage capacity or downstream property. The City Building Inspector may then require the following:

- Water surface profiles plotted for the conditions of pre- and post-development for a 10-year design storm.
- Water surface profiles plotted for the conditions of pre- and post-development for the 100-year design storm.
- Elevations of all structures potentially damaged by 10- and 100-year flows.

Appropriate storm water management facilities are required by the City based on the findings of these profiles and evaluations. The City reviews any reported flood/drainage problems and takes appropriate action based on the severity of the problem.

The City of Chickasaw will review these requirements as part of the Storm Water Management Plan (SWMP) submittal and develop the necessary procedures to meet the new Phase II permit requirements.

4.6 Pollution Prevention/Good Housekeeping for Municipal Operations

Permit Requirement: The Permittee must develop and implement a program for pollution prevention/good housekeeping for municipal operations.

The City of Chickasaw's Public Works Department is primarily responsible for the City's operation and maintenance program. The City employs the following BMP's to prevent or reduce pollutant runoff from municipal operations:

A. Structural Controls Maintenance

The City of Chickasaw's structural controls include storm drains, three (3) detention ponds, and storm water pumps. One detention pond is located between Sutherland Drive and Spruce Drive in the middle of the city. The other two ponds are located on the east side of the City near the Tensaw River and are used as treatment pods for sewer. Also located in that area is a 300 acre site used for storm water runoff; the storm water then travels along a 1.5 mile canal to a drainage pump house that contains two (2) pumps that are capable of pumping 20,000 GPM into the Tensaw River.



Storm water pumps in drainage pump house

The City cleans and removes debris from all drains as necessary in order to maintain proper drainage. The Public Works Department maintains a regular inspection and maintenance schedule. Weekly progress logs are filed in the Public Works Director's office. Storm inlets and detention ponds are inspected at least once every three months and all necessary maintenance is performed. Also, elements of the drainage system are inspected before and after heavy rains and repairs are performed as needed. The City cleans the debris that accumulates on the screens at the storm water pumps as needed to maintain proper operation. The City completed pump repairs, ditch cleaning, and miscellaneous repairs during the reporting period at a cost of \$15,000. Planned future projects include a drainage repair at 12th Avenue at an estimated cost of \$650,000 and ditch repair on Grant Street, with an estimated cost of \$1,750,000.

B. Roadway Maintenance

To the fullest extent possible, the construction of public streets, roads and highways under the jurisdiction and control of the City are designed to follow natural ridgelines. By using this design, disruption of existing grades and natural drainage areas are minimized. Natural drainage ways are maintained, preserved, and utilized in road design. In order to minimize the possibility of potential pollutant releases, road repairs are performed to the extent practicable during the dry season.

The Chickasaw Public Works Department performs smaller roadway maintenance projects, while larger projects are designed by local engineering firms or accomplished through Mobile County “Pay As You Go” programs. Ten (10) street overlay projects were completed for a cost of \$275,000 under the “Pay As You Go” program. Additionally, two street overlay projects were completed through a Community Development Block Grant (CDBG) at a cost to the City of \$125,000. The “Safe Route to Schools” project at a cost of \$180,000 is currently underway and consists of piping, inlets, and a five (5) ft. sidewalk along Kansas Street.

The City has a street sweeper which is utilized on an as-needed basis. Typically this correlates to quarterly use for the traveled roadways in the City of Chickasaw. The City also cleans the major roadways before and after City events such as the Christmas parade and the Clean Sweep. Additionally the street sweeper will be used when large construction trucks inadvertently lose materials such as dirt or following a large storm event.



City of Chickasaw Street Sweeper

B. Yard/Right-of-Way/Municipal Maintenance

The City of Chickasaw has an Ordinance for regulation of unsightly growth on residential and commercial properties. This assists with maintaining proper storm water drainage throughout the City within natural lined ditches by reducing the excessive vegetation growth that impedes the flow of storm water through the ditches. The City’s ordinance also makes it unlawful to for any person to place, throw, or

dump leaves, tree limbs, trash, rubbish, lumber, bricks, or other obstacles in the ditches, streets and gutters of the City. An Ordinance on Nuisances makes it unlawful to store or keep on the premises any scrap iron, junk, wrecked vehicles, or unsightly debris within the city limits. Public Works Department personnel are always on alert for unsightly debris. Improperly disposed tires on residential property are particularly common; these tires are collected and stockpiled by personnel throughout the year and hauled to a permitted landfill approximately twice a year.

The City also sprays rights-of-way and ditch shoulders on an as-needed basis utilizing an ADEM approved herbicide. The herbicide is sprayed by qualified Maintenance Personnel with training on acceptable types of approved chemicals and their applications and quantities. Typically the growing season is from spring to fall and the herbicides are sprayed approximately every six (6) to eight (8) weeks during this time.

The City of Chickasaw is committed to cleaning their parks after every sporting event, cookouts, and concerts by removing litter and inspecting the facilities, including site drainage, to ensure they are in working condition. The City also does weekly cleaning of each of the parks during its active season.

The Public Works Department also receives assistance through a work release program. Up to five (5) workers are utilized weekly to assist with general cleaning and maintenance.

C. Sanitary Sewer Overflow Prevention

Through an ongoing review of the sanitary sewer system infrastructure, various pipe replacements and pump station repairs are completed as needed. Activities in these areas are in an effort to reduce sewer overflows and inflow/infiltration. During this reporting period, The City cleaned and videoed approximately 12,000 linear feet of sanitary sewer mains at an approximate cost \$15,490.80. Other projects include Insituform pipe lining and open-cut repairs throughout the city for total of \$14,600.

The Utilities Board of the City of Chickasaw (Board) owns and operates a 1.5 million gallon per day (MGD) facultative lagoon system used for wastewater treatment. In order to consistently meet the total suspended solids (TSS) and carbonaceous biological oxygen demand (cBOD) permit limits, the Board implemented a treatment improvement project that included the installation of a dissolved air floatation (DAF) system for the purpose of algae removal from the lagoon effluent. Implementation of this

project has resulted in a reduction in the effluent TSS and cBOD concentrations. With the DAF in operation, the average effluent TSS and BOD concentrations will consistently meet or exceed the permit concentration and percent removal limits, thus improving the water quality of the receiving stream, Chickasaw Creek. Total cost of the DAF construction was approximately \$530,000.

A total of three (3) Sanitary Sewer Overflows (SSO's) were reported during this reporting period. The overflows were attributed to inflow/infiltration during heavy rain events. All SSO's were promptly addressed by the Sewer Department and reported in accordance with ADEM guidelines.

5.0 SUMMARY

This report includes a history and overview of the City of Chickasaw's MS4 Program, screening results and locations, and a review of the programs elements and activities. The City has implemented and performs the EPA recommended program elements as part of their ADEM MS4 Permit. The intent of the program is to reduce pollutants in storm water that is discharged from the storm water system and to prevent the degradation of receiving streams. The receiving stream for the City of Chickasaw is Chickasaw Creek which is listed on the 2012 Alabama §303(d) List for impaired waterways. The listed cause for the impairment is an elevated concentration of the metal Mercury from atmospheric deposition.

The City of Chickasaw will continue to focus on storm water management and look for ways to enhance their current program. By June 2014, the City will submit a Storm Water Management Plan (SWMP) as required by the new Phase II permit.

Appendix A

ORDINANCE NO. 1540

An ordinance to create a comprehensive
Stormwater Discharge Plan
An ordinance establishing procedures for regulation and control of
precipitation and other liquid discharges from vehicles, commercial and
industrial facilities, construction sites and individual residential
sites; providing a penalty for violation.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHICKASAW,
ALABAMA, AS FOLLOWS:

ARTICLE I

General Provisions

Section 1. The purpose of this ordinance is to provide for
the protection of human health and the environment through the
establishment of procedures to control discharges from commercial and
industrial facilities, construction sites, and individual residences.
This ordinance provides measures that will conserve water quality, and
the application of this ordinance shall not be deemed a limitation or
repeal of any State statute.

Section 2. DEFINITIONS: For the purpose of this ordinance,
the following terms shall have the meaning given herein:

(a) Best management practices shall mean a wide range of
management procedures, schedules of activities, prohibitions on
practices and other management practices which have been demonstrated
to effectively control the quality and/or quantity of storm water
runoff and which are compatible with the planned land use.

(b) **Development** shall generally mean any of the following action undertaken by a public or private individual or entity:

-the division of a lot, tract or parcel of land into two or more lots, plots sites, tracts, parcels or other divisions by plat or deed,

-any land change, including, without limitation, clearing, tree removal, grubbing, stripping, dredging, grading, excavating, transporting and filling of land.

(c) **Develop land** shall mean to change the runoff characteristics of a parcel of land in conjunction with residential, commercial, industrial, or institutional construction or alteration.

(d) **Hazardous substance or material** shall mean any substance or material defined as hazardous by the US Department of Transportation, the US Environmental Protection Agency, the Alabama Public Service Commission, the Alabama Department of Environmental Management or any other federal or state agency, including but not limited to the definitions and illustrations given in the Code of Federal Regulations. Title 40, Section 171.8, as may be amended from time to time.

(e) **Person** shall mean an individual, partnership, association, syndicate, company, firm, trust, corporation, business, government entity, or any entity recognized by law.

(f) **Illicit discharge** shall mean any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other the the NPDES permit for discharges for the municipal separate storm sewer) and discharges resulting from fire fighting activities.

(g) Pollutant shall mean those pollutants specified in Code of Alabama 1975, Section 22-22-1(b)(3) and any other effluent characteristics specified in a NPDES permit.

(h) Storm water management shall mean the collection, conveyance, storage, treatment and disposal of storm water runoff in a manner to minimize accelerated channel erosion, increased flood damage, and/or degradation of water quality and in a manner to enhance and ensure the public health, safety, and general welfare.

(i) Storm drain or storm sewer shall mean a drain or sewer for conveying precipitation from a storm event.

(j) Storm water runoff shall mean the direct response of a watershed to precipitation and includes the surface and subsurface runoff that enters a ditch, stream, storm drain or other concentrated flow during and following precipitation.

(k) Ten-year storm shall mean a storm that is capable of producing rainfall expected to be equaled or exceeded on the average of one in 10 years. It may also be expressed as an exceedance probability with a 10 percent chance of being equaled or exceeded in any given year.

(l) Twenty-five year storm shall mean a storm that is capable of producing rainfall expected to be equaled or exceeded on the average of one in 25 years. It may also be expressed as an exceedance probability with a 4 percent chance of being equaled or exceeded in any given year.

(m) Two-year storm shall mean a storm that is capable of producing rainfall expected to be equaled or exceeded on the average of one in 2 years. It may also be expressed as an exceedance probability with a 50 percent chance of being equaled or exceeded in any given year.

(n) Water quality shall mean those characteristics of storm water runoff that relate to the physical, chemical, biological, or radiological integrity of the water.

(o) Watershed shall mean the drainage area contributing storm water runoff to a single point.

ARTICLE II

Illicit Discharges

Section 1. It shall be unlawful for any person, firm, or corporation to allow water or any other liquid to run or flow continuously from a private premises in the City of Chickasaw, Alabama, into, on, or upon the streets or into the storm drain system, excepting however, rain, sleet or snow falling on said private premise by an Act of God.

Section 2. It shall be unlawful for any person, firm, or corporation to discharge a pollutant to the City's storm water system that will have a deleterious impact on the environment. Any pollutant, associated with an industrial or commercial activity that is covered by the National Pollutant Discharge Elimination System as dictated by 40 CFR 122.26, can be discharged to the City storm water system only if the discharge is covered by an NPDES permit for storm water.

Section 3. Where an illicit discharge is suspected by the City of originating from a facility, it shall be the right of the City to designate employees, bearing proper credentials and identification, to enter facility grounds for the purpose of inspection, observation, measurement, sampling and testing in accordance with this ordinance.

Section 4. Authority is hereby granted to the City to halt any discharge from a facility that is suspected by the City of being potentially harmful to human health or the environment.

Section 5. All costs incurred by the City in association with the ceasing of a potentially harmful discharge will be reimbursed by the discharging facility.

ARTICLE III

Releases from Hazardous Materials Transportation Vehicles

Section 1. The release or threatened release of hazard materials into the environment in violation of this ordinance shall be considered a nuisance. It shall be unlawful for any person to permit, cause, or maintain any such nuisance within the City.

Section 2. All persons, companies, other legal entities and all motor vehicles engaged in transportation operations for commercial purposes shall comply with all federal and state laws and regulations. These regulations shall include but are not limited to regulations enacted by the US Department of Transportation, Federal Highway Administration, the US Environmental Protection Agency, the Alabama Department of Environmental Management and the Alabama Public Service Commission, as fully set out and incorporated herein. Any violation of the above laws or regulations shall be a violation of this ordinance. The City police department is hereby authorized to stop and inspect any vehicles suspected of engaging in improper transportation operations which can potentially lead to a release in order to ensure compliance with this ordinance.

Section 3. It shall be unlawful for any person or other legal entity to transport, convey, store or offer for transportation any hazardous material as defined herein, unless such material is properly packaged, marked, labeled and accompanied by the proper documentation as required by Title 49 of the Code of Federal Regulation.

Section 4. Any person responsible for a release or threatened release of hazardous materials into the environment which results in an emergency action shall be liable to the City for the City's recoverable expenses resulting from such action.

The staffs of each City department involved in an emergency action to stabilize a release shall keep a detailed record of its recoverable expenses resulting from the emergency action. Promptly after completion of the emergency action, the staff shall certify those expenses with the City Clerk. The City Clerk shall mail an invoice to the person responsible for the emergency action. The invoice shall be payable within thirty days and if payment is not received within thirty days the City may initiate a civil action for the collection of the claim. This civil action shall be in addition to and not in lieu of any criminal prosecution or penalty.

The recoverable expenses resulting from an emergency response to any spill or release of a hazardous substance, as defined herein, which poses a significant present threat or potential hazard to human life, property or environment, shall be a charge against the person or entity whose conduct or conduct of its employees, agents or contractors, caused or permitted the incident resulting in the emergency response.

ARTICLE IV

Control of Runoff from construction Sites

Section 1. No person shall develop any land without having provided for appropriate storm water management measures that control or manage runoff, in compliance with this ordinance. Exceptions include the following:

Land disturbing activities on agricultural land for production of plants and animals useful to man, excluding the construction of an agricultural structure of one or more acres that require a building permit;

Land disturbing activities undertaken on forest land for the production and harvesting of timber and timber products;

Construction or improvement of single family residences or their accessory buildings which are separately built and not part of multiple construction of a subdivision development.

Section 2. (A) In developing plans for residential subdivisions, individual lots in a residential subdivision development shall not be considered to be separate land disturbing activities and shall not require development of a storm water management plan.

Instead the residential subdivision development, as a whole, shall be considered to be a single land disturbing activity. Hydrologic parameters that reflect the ultimate subdivision development shall be used in all engineering calculations.

If individual lots or sections in a residential subdivision are being developed by different property owners, all land disturbing activities related to the residential subdivision shall be covered by the approved

storm water management plan for the residential subdivision.

Individual lot owners or developers shall sign a certificate of compliance that all activities on the lot will be carried out in accordance with the approved plan.

Residential subdivisions which were approved prior to the effective date of these regulations are exempt from these requirements.

Development of new phases of existing subdivisions which were not previously approved shall comply with the provisions of these regulations.

(B) For land disturbing activities involving two acres or less for a residential development and all acreage for a commercial development which are not part of a larger common plan of development or sale, the person responsible for the land disturbing activity may be required by the Building Inspector to submit a simplified storm water management plan. This plan will require approval of the City Building Inspector but not professional certification. This plan will require, unless dictated differently by the City Building Inspector, the following:

- A narrative description of the storm water management facilities to be used;

- A general description of topographic and soil conditions of the development site;

- A general description of adjacent property and a description of existing structures, buildings, and other fixed improvements located on surrounding properties;

- A sketch plan to accompany the narrative which shall contain:

- A site location drawing of the proposed project, indicating the location of the proposed project in relation to roadways,

jurisdictional boundaries, streams and rivers;

-The boundary lines of the site on which the work is to be performed; and

-All areas within the site which will be included in the land disturbing activities shall be identified and the total disturbed area calculated.

-A topographic map of site;

-Anticipated starting and completion dates of the various stages of land disturbing activities and the expected date the final stabilization will be complete.

-The location of temporary and permanent vegetative and structural storm water management control measures.

-Storm water management plans shall contain certification by the persons responsible for the land disturbing activity that the land disturbing activity will be accomplished pursuant to the plan.

-Storm water management plans shall contain certification by the person responsible for the land disturbing activity that the City Building Inspector has the right to conduct on-site inspections. Land disturbing activities more than two acres shall meet the requirements of Section 3-6.

Section 3. A storm water management plan shall be submitted to the City Building Inspector for review and approval.

Should any plan involve any storm waster management facilities or land dedicated to public use, the same information shall also be submitted for review and approval to the department having jurisdiction over the land or other appropriate departments or agencies identified by the City Building Inspector for review and approval. This storm water

management plan shall serve as the basis for all subsequent construction. to public use, the same information shall also be submitted for review and approval to the department having jurisdiction over the land or other appropriate departments or agencies identified by the City Building Inspector for review and approval. This storm water management plan shall serve as the basis for all subsequent construction.

The City Building inspector shall review the plan within five working days from the receipt of the plan. Within ten working days from the receipt of the storm water management plan, the City Building Inspector shall issue a decision approving, rejecting or conditionally approving the plan with modification.

Storm water management plan requirements are found in Appendix A.

Section 4. A list of fees for plan review and other fees associated with this ordinance can be obtained from the City Building Inspector.

Section 5. Storm water management facilities may include both structural and nonstructural elements. Natural swales and other natural runoff conduits shall be retained where practicable.

Where additional storm water management facilities are required to satisfy the minimum control requirements, the following measures are examples of what may be used:

- Storm water detention structures (dry basins);
- Storm water retention structures (wet ponds);
- Facilities designed to encourage overland flow, slow velocities of flow, and flow through buffer zones; and
- Infiltration practices.

Where detention and retention structures are used, consolidation of these facilities into a limited number of large structures will be preferred over designs which utilize a large number of small structures. Storm water management plans can be rejected by the City Building Inspector if they incorporate structures and facilities that will demand considerable maintenance, will be difficult to maintain, or utilize numerous small structures if other alternatives are physically possible.

The drainage systems and all storm water management structures within the City will be designed in accordance with the technical criteria and standards established by the City Building Inspector.

Section 6. Storm water management plans shall be prepared, certified, and stamped/sealed by a qualified registered Professional Engineer, Land Surveyor or Landscape Architect, using acceptable engineering standards and practices.

ARTICLE V

Miscellaneous Provisions

Section 1. Variances. The City Building Inspector may grant a variance from the requirements of this ordinance if there are exceptional circumstances applicable to the site such that strict adherence to the site such that strict adherence to the provisions of the ordinance will result in unnecessary hardship and not fulfill the intent of the ordinance.

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

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

The City Building Inspection will conduct a review of the request for a variance within ten working days. Failure of the City Building Inspector to act by the end of the tenth working day will result in the automatic approval of the variance.

Section 2. Appeals. Any person aggrieved by a decision of the City Building Inspector (including any decision with reference to the granting or denial of a variance from the terms of this ordinance) may appeal by filing a written notice of appeal with the City Building Inspector within thirty calendar days of the issuance of the decision by the City Building Inspector. The City Building Inspector may reverse his/her decision or send this notice to the City Council. A notice of appeal shall state the specific reasons why the decision of the City Building Inspector is alleged to be in error and the City Building Inspector shall prepare and send to the City Council and the Appellant, within 15 days of the notice of appeal, a written response to said notice of appeal.

All such appeals shall be heard by the City Council at a regularly scheduled meeting, not to exceed thirty days after receipt of the notice of appeal or at such other time as may be mutually agreed upon in writing by the Appellant and the City Council. The City Council will then render a decision within fifteen days after the appeal has been heard.

Section 3. Penalties. Upon determination that a violation of this ordinance has occurred the City shall provide the violator

written notice of the violation and the time in which to correct the deficiencies.

Any person violating this ordinance or any part thereof shall be, upon conviction, fined not more than 500 hundred dollars or imprisoned not more than thirty days for each offense. Each separate interval of 24 hours, or every day, that such violations continue, are committed or exist, shall constitute a new and separate offense and shall be punished, as aforesaid, for each separate period of violation.

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

Section 4. Whenever the provision of this ordinance imposes more restrictive standards than are required in or under any other ordinance, the regulation herein contained shall prevail. Whenever the provisions of any other ordinance require more strict standards than are required herein, the requirement of such shall prevail.

Section 5. If any section, sentence, clause, or phrase of this ordinance is for any reason held to be invalid or unconstitutional by declaration of any court of competent jurisdiction, such declaration shall not affect the validity of remaining portions of this ordinance. The City Council hereby declares that it would have adopted this ordinance and each section, sentence, clause, or phrase thereof irrespective of the fact that one or more articles, sections, sentences, clauses, or phrases be declared invalid or unconstitutional.

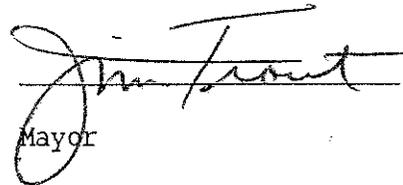
Section 6. This ordinance may be amended in the manner as prescribed by City procedure for ordinance amendment.

Section 7. Neither the approval of a plan under the provisions of this ordinance nor the compliance with the provisions of this ordinance shall relieve any person from the responsibility for damage to any person or property otherwise imposed by law nor shall it impose any liability upon the City for damage to any person or property.

Section 8. This ordinance shall take effect upon its due adoption and publication as required by law.

Adopted this 1st day of December 1998

Approved:


Mayor

Attest:



City Clerk

APPENDIX A

PLAN REQUIREMENTS

Storm water management plans shall include as a minimum the following:

1. A vicinity map indicating a north arrow, scale, boundary lines of the site, and other information necessary to locate the development site.
2. The existing and proposed topography of the development site except for individual lot grading plans in single family subdivisions.
3. Physical improvements on the site, including present development and proposed development.
4. Location, dimensions, elevations, and characteristics of all storm water management facilities.
5. All areas within the site which will be included in the land disturbing activities shall be identified and the total disturbed area calculated.
6. The location of temporary and permanent vegetative and structural storm water management control measures.
7. An anticipated starting and completion date of the various stages of land disturbing activities and the expected date the final stabilization will be completed.
8. A determination that no occupied first floor elevation of any structure is below the 100-year plus one foot flood elevation.
9. At the discretion of the City Building Inspector, for all portions of the drainage system which are expected to carry between 50 and 150 cfs for the 100-year storm, the 100-year plus one foot flood elevation analysis shall be required. To require the 100-year plus one foot flood elevation analysis, the City Building Inspector should determine that one of the following conditions may exist:
 - a. The estimated runoff would create a hazard for adjacent property or residents.
 - b. The flood limits would be of such magnitude that adjacent residents should be informed of these limits.

10. For all portions of the drainage system which are expected to carry 150 cfs or more for the 100-year storm, the 100-year plus one foot flood elevation analysis shall be done and flood limits shall be shown on the storm water management plans.
11. Storm water management plans shall include designation of all easements needed for inspection and maintenance of the drainage system and storm water management facilities. As a minimum, easements shall have the following characteristics:
 - a. Provided adequate access to all portions of the drainage system and structures.
 - b. Provide sufficient land area for maintenance equipment and personnel to adequately and efficiently maintain the system with a minimum of ten (10) feet along both sides of all drainage ways, streams, channels, etc., and around the perimeter of all detention and retention facilities, or sufficient land area for equipment access for maintenance of all storm water management facilities. This distance shall be measured from the top of the bank or toe of the facility, whichever is applicable.
 - c. Restriction of easements shall include prohibiting all fences and structures which would interfere with access to the easement areas and/or the maintenance function of the drainage system.
12. To improve the aesthetic aspects of the drainage system, a landscape plan for all portions of the drainage system shall be part of the storm water management plan. This landscape plan shall address the following:
 - a. Tree saving and planting plan;
 - b. Types of vegetation that will be used for stream bank stabilization, erosion control, sediment control, aesthetics and water quality improvement;
 - c. Any special requirements related to the landscaping of the drainage system and efforts necessary to preserve the natural aspects of the drainage system.
13. To improve the water quality aspects of the drainage system, the storm water management plan shall include best management practices to control the water quality of the runoff during the land disturbing activities and during the life of the development.
14. The Storm water management plan shall include all engineering calculations needed to design the system and associated structures including pre- and post- development velocities, peak rates or discharge, and inflow and outflow hydrographs of storm water runoff at all existing and proposed points of discharge from the site.

15. Description of site conditions around points of all surface water discharge including vegetation and method of flow conveyance from the land disturbing activity.
16. Construction and design details from structural controls.
17. The expected timing of flood peaks through the downstream drainage system shall be assessed when planning the use of detention facilities.
18. In determining downstream effects from storm water management and the development, hydrologic-hydraulic engineering studies shall extend downstream to a point where the proposed represents less than ten (10) percent of the total watershed.
19. All storm water management facilities and all major portions of the conveyance system through the proposed development (i.e., channels, culverts) shall be analyzed, using the design and 100-year storms, for design conditions and operating conditions which can reasonably be expected during the life of the facility. The results of the analysis shall be included in the hydrologic-hydraulic study.
20. If the storm water management plan and/or design report indicates that there may be a drainage or flooding problem at the exit of the proposed development or at any location between the exit point and the 10 percent downstream point, the City Building Inspector may require:
 - a. Water surface profiles plotted for the conditions of pre- and post- development for the 10-year design storm;
 - b. Water surface profiles plotted for the conditions of pre- and post- development for the 100-year design storm;
 - c. Elevations of all structures potentially damaged by 10- and/or 100-year flows.
21. All storm water management plans submitted for approval shall contain certification by the person responsible for the land disturbing activity that the land disturbing activity will be accomplished pursuant to the approved plan and that responsible personnel will be assigned to the project.
22. All storm water management plans shall contain certification, by the person responsible for the land disturbing activity, of the right of the City Building Inspector to conduct on-site inspections.
23. The storm water management plan shall not be considered approved without the inclusion of a signature and date on the plans by the City Building Inspector. The signature on the plans is solely an acknowledgment of satisfactory compliance with the requirements of these regulations. The signature does not constitute a

representation or warranty to the applicant or any other person concerning the safety, appropriateness or effectiveness of any provision, or omission from the storm water management plan.

24. Approved storm water management plans remain valid for five (5) years from the date of an approval. Extensions or renewals of the plan approval will be granted by the City Building Inspector upon written request by the person responsible for the land disturbing activity.

PLAN HYDROLOGIC CRITERIA

The hydrologic criteria to be used for the storm water management plans shall be as follows:

1. 25-year design storm for all cross-drain culverts and drainage designs.
2. 10-year design storm for all interior culverts and drainage designs.
3. 2- and 10-year design storms for all detention and retention basins using procedures approved by City Building Inspector.
4. All drainage designs shall be checked using the 100-year storm for analysis of local flooding, and possible flood hazards to adjacent structures and/or property.
5. All hydrologic analysis will be based on land use conditions.
6. For the design of storage facilities, a secondary outlet device or emergency spillway shall be provided to discharge the excess runoff in such a way that no danger of loss of life or facility failure is created. The size of the outlet device or emergency spillway shall be designed to pass the 100-year storm as a minimum requirement.

PLAN WATER QUALITY CRITERIA

Following are the criteria related to using storm water management facilities for water quality purposes.

Ponds, Lakes and Reservoirs

1. When the land disturbing activity consists of the construction of a pond, lake or reservoir which is singly built and not part of a permitted land disturbing activity, the following procedures will apply:
 - a. A storm water management plan will not be required if the pond, lake or reservoir has received prior State approval. Best management practices should be used to minimize the impact of erosion and sediment.

- b. A storm water management plan will be required for the construction of all ponds, lakes or reservoirs not meeting the conditions in (a) above that otherwise meet the size requirements for storm water management plan approval.
2. When ponds are used for water quality protection, the ponds shall be designed as both quantity and quality control structures. Sediment storage volume shall be calculated considering the clean out and maintenance schedules specified by the designer during the land disturbing activity. Sediment storage volumes may be predicted by the Universal Soil Loss Equation or methods acceptable to the City Engineer.
3. Storm water runoff and drainage to a single outlet from land disturbing activities which disturb ten (10) acres or more shall be controlled during the land disturbing activity by the sediment basin where sufficient space and other factors allow these controls to be used until the final inspection. The sediment basin shall be designed and constructed to accommodate the anticipated sediment load from the land disturbing activity and meet a removal efficiency of 80 percent suspended solids or 0.5 ML/L peak settleable solids concentration, whichever is less. The outfall device or system design shall take into account the total drainage area flowing through the disturbed area draining to the basin.
4. Other practices may be acceptable to the City Building Inspector if they achieve an equivalent removal efficiency of 80 percent for suspended solids or 0.5 ML/L peak settleable solids concentration, whichever is less. The efficiency shall be calculated for disturbed conditions for the 10-year, 24-hour design storm event.
5. Permanent water quality ponds having a permanent pool shall be designed to store and release the first 1/2-inch of runoff from the site over a 24-hour period. The storage volume shall be designed to accommodate, at least, 1/2-inch of runoff from the entire site.
6. Permanent water quality ponds, not having a permanent pool, shall be designed to release the first inch of runoff from the site over a 24-hour period.
7. The use of measures other than ponds to achieve water quality improvement are recommended on sites containing less than ten (10) disturbed areas.

Infiltration Practice

1. Permanent infiltration practices, when used, shall be designed to accept, at a minimum, the first inch of runoff from all impervious areas.
2. Areas draining to infiltration practices must be established and vegetative filters established prior to runoff entering the

system. Infiltration practices shall not be used if a suspended solids filter system does not accompany the practice. If vegetation is the intended filter, there shall be at least a 20-foot width of vegetative filter prior to storm water runoff entering the infiltration practice.

3. The bottom of the infiltration practice shall be at least 2.0 feet above the seasonal high water table, whether perched or regional, determined by direct piezometer by direct piezometer measurements which can be demonstrated by to representative of the maximum height of the water table on an annual basis during years of normal precipitation, or by the depth in the soil at which mottling first occurs.
4. The infiltration practice shall be designed to completely drain water within 72 hours.
5. Soils must have adequate permeability to allow water to infiltrate. Infiltration practices are limited to soils having an infiltration rate of at least 0.30 inches per hour. Initial consideration will be based on a review of the appropriate soil survey, and the survey may serve as a basis for rejection. On-site soil borings and textural classifications must be accomplished to verify the actual site and seasonal high water table conditions when infiltration is to be utilized.
6. Infiltration practices greater than three feet deep shall be located at least 10 feet from subsurface walls.
7. Infiltration practices designed to handle runoff from impervious parking areas shall be a minimum of 150 feet from any public or private water supply well.
8. The design of infiltration practice shall incorporate an overflow system with measures to provide a non-erosive velocity of flow along its length and at the outfall.
9. The slope of the bottom of the infiltration practice shall not exceed five percent. Also, the practice shall not be installed in fill materials, as piping along the fill/natural ground interface may cause slope failure.
10. An infiltration practice shall not be installed on or atop a slope whose natural angle of incline exceeds 20 percent.
11. Clean outs will be provided, at a minimum, every 100 feet along the infiltration practice to allow for access and maintenance.

Appendix B

SANITARY SEWER OVERFLOW EVENT REPORTING FORM

NOTE: This form is to be used to document written notification of a sanitary sewer overflow event or sewage release within five days of becoming aware of the event.

Permittee Name: CHICKASAW UTILITIES BOARD Permit Number: AL 0020885

Facility Name: CHICKASAW UTILITIES BOARD County: MOBILE

Date/Time SSO Began: 12/28/13 3:00 PM Date/Time SSO Stopped: 12/28/13 9:00 PM

Estimated Volume Discharged: 7,500 gallons (Mandatory)

Estimated Volume is: () <1,000gal (x) >1,000gal () >10,000gal () >100,000gal () >1,000,000gal

Was Department verbally notified within 24 hours? () Yes (x) No Date/Time of Notification: _____

Person that verbally notified Department: MICHAEL ENGLAND Phone Number: 251-331-9653

Did you contact the SSO hotline? (x) Yes () No

Indicate source of discharge event: (x) manhole () lift station () broken line
() cleanout () treatment plant () other (describe): _____

Location of discharge (street address, etc.): 4 RYAN STREET, 12 RYAN STREET

UP
Known or suspected cause of the discharge: PUMPS AT MAIN STOPPED WITH SEWER TRASH, SYSTEM OVERWHELMED BY HUGE RAIN EVENT - 4.75" IN 24 HOURS

Ultimate destination of discharge: () ground absorbed (x) creek or river (provide name): CHICKASABOGUE CREEK
() storm drain () drainage ditch () other (describe): _____

Monitoring of the receiving water is: (x) complete () ongoing

Describe corrective actions taken, plans to eliminate future discharges, and actions or plans to mitigate impacts to the environment and/or public health (attach additional sheets if necessary): RECOMMENDED RAISING MANHOLES, RECOMMENDED INSTALLING SCREEN OR GRINDER PUMP.

Indicate efforts to notify public (check all that apply):
() press release (x) other (describe): POSTED IN PUBLIC BUILDINGS
() placement of signs () notice not required, because: _____

Indicate other officials notified (check all that apply):
(x) county health department () other (describe): _____
() notice not required, because: _____

Were any public water supply intake locations effected? (x) No () Yes If yes, who was notified? _____

MICHAEL ENGLAND-LIFT STATION MECHANIC _____ 12/30/13
Name/Title of Facility Representative Signature of Responsible Official Date
(If > 10,000 gal)

I certify that I have personally examined and am familiar with the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information to be true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment.

ONE COPY OF A USGS QUAD SHEET OR OTHER GEOGRAPHICALLY REFERENCED MAP MUST BE ATTACHED SHOWING THE EXACT LOCATION OF ALL DISCHARGES GREATER THAN 10,000 GALLONS.

SANITARY SEWER OVERFLOW EVENT REPORTING FORM

NOTE: This form is to be used to document written notification of a sanitary sewer overflow event or sewage release within five days of becoming aware of the event.

Permittee Name: CHICKASAW UTILITIES BOARD Permit Number: AL 0020885
Facility Name: CHICKASAW UTILITIES BOARD County: MOBILE
Date/Time SSO Began: 12/28/13 3:00 PM Date/Time SSO Stopped: 12/28/13 9:00 PM
Estimated Volume Discharged: 3,498 gallons (Mandatory)
Estimated Volume is: () <1,000gal () >1,000gal () >10,000gal () >100,000gal () >1,000,000gal

Was Department verbally notified within 24 hours? () Yes () No Date/Time of Notification: _____
Person that verbally notified Department: MICHAEL ENGLAND Phone Number: 251-331-9653
Did you contact the SSO hotline? () Yes () No

Indicate source of discharge event: () manhole () lift station () broken line
() cleanout () treatment plant () other (describe): _____

Location of discharge (street address, etc.): #4 LIFT STATION (PELHAM & VALLEY)

Known or suspected cause of the discharge: 4.75" OF RAIN IN 24 HOURS OVERWHELMED SYSTEM

Ultimate destination of discharge: () ground absorbed () creek or river (provide name): CHICKASABOGUE CREEK
() storm drain () drainage ditch () other (describe): _____

Monitoring of the receiving water is: () complete () ongoing

Describe corrective actions taken, plans to eliminate future discharges, and actions or plans to mitigate impacts to the environment and/or public health (attach additional sheets if necessary): IMPROVED PUMP EFFICIENCY, REPLACED DEFECTIVE SENSOR RELAY IN PANEL

Indicate efforts to notify public (check all that apply):
() press release () other (describe): POSTED IN PUBLIC BUILDINGS
() placement of signs () notice not required, because: _____

Indicate other officials notified (check all that apply):
() county health department () other (describe): _____
() notice not required, because: _____

Were any public water supply intake locations effected? () No () Yes If yes, who was notified? _____

MICHAEL ENGLAND-LIFT STATION MECHANIC _____ 12/30/13
Name/Title of Facility Representative Signature of Responsible Official Date
(If > 10,000 gal)

I certify that I have personally examined and am familiar with the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information to be true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment.

ONE COPY OF A USGS QUAD SHEET OR OTHER GEOGRAPHICALLY REFERENCED MAP MUST BE ATTACHED SHOWING THE EXACT LOCATION OF ALL DISCHARGES GREATER THAN 10,000 GALLONS.

SANITARY SEWER OVERFLOW EVENT REPORTING FORM

NOTE: This form is to be used to document written notification of a sanitary sewer overflow event or sewage release within five days of becoming aware of the event.

Permittee Name: CHICKASAW UTILITIES BOARD Permit Number: AL 0020885
Facility Name: CHICKASAW UTILITIES BOARD County: MOBILE
Date/Time SSO Began: 12/28/13 3:00 PM Date/Time SSO Stopped: 12/28/13 9:00 PM
Estimated Volume Discharged: 360 gallons (Mandatory)
Estimated Volume is: (X) <1,000gal () >1,000gal () >10,000gal () >100,000gal () >1,000,000gal

Was Department verbally notified within 24 hours? () Yes (X) No Date/Time of Notification: _____
Person that verbally notified Department: MIKE ENGLAND Phone Number: 251-331-9653
Did you contact the SSO hotline? (X) Yes () No

Indicate source of discharge event: (X) manhole () lift station () broken line
() cleanout () treatment plant () other (describe): _____

Location of discharge (street address, etc.): GRANT ST. & JOHNSTON ST.

Known or suspected cause of the discharge: 4.75" RAIN IN 24 HOURS OVERWHELMED SYSTEM

Ultimate destination of discharge: () ground absorbed (X) creek or river (provide name): CHICKASABOGUE CREEK
() storm drain () drainage ditch () other (describe): _____

Monitoring of the receiving water is: (X) complete () ongoing

Describe corrective actions taken, plans to eliminate future discharges, and actions or plans to mitigate impacts to the environment and/or public health (attach additional sheets if necessary): IMPROVED QUALITY OF GRAVITY FEED LINE TO MAIN

Indicate efforts to notify public (check all that apply):
() press release (X) other (describe): POSTED IN PUBLIC BUILDINGS
() placement of signs () notice not required, because: _____

Indicate other officials notified (check all that apply):
(X) county health department () other (describe): _____
() notice not required, because: _____

Were any public water supply intake locations effected? (X) No () Yes If yes, who was notified? _____

MICHAEL ENGLAND -LIFT STATION MECHANIC 12/30/13
Name/Title of Facility Representative Signature of Responsible Official Date
(If > 10,000 gal)

I certify that I have personally examined and am familiar with the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information to be true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment.

ONE COPY OF A USGS QUAD SHEET OR OTHER GEOGRAPHICALLY REFERENCED MAP MUST BE ATTACHED SHOWING THE EXACT LOCATION OF ALL DISCHARGES GREATER THAN 10,000 GALLONS.

Appendix C

Make your home

The SOLUTION TO STORMWATER POLLUTION!

A homeowner's guide to healthy habits for clean water

As stormwater flows over driveways, lawns, and sidewalks, it picks up debris, chemicals, dirt, and other pollutants. Stormwater can flow into a storm sewer system or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm sewer system is discharged untreated into the waterbodies we use for swimming, fishing, and providing drinking water. Polluted runoff is the nation's greatest threat to clean water. By practicing healthy household habits, homeowners can keep common pollutants like pesticides, pet waste, grass clippings, and automotive fluids off the ground and out of stormwater. Adopt these healthy household habits and help protect lakes, streams, rivers, wetlands, and coastal waters. Remember to share the habits with your neighbors!

Healthy Household Habits for Clean Water

Vehicle and Garage

- Use a commercial car wash or wash your car on a lawn or other unpaved surface to **minimize** the amount of dirty, soapy water flowing into the storm drain and eventually into your local waterbody.
- Check your car, boat, motorcycle, and other machinery and equipment for leaks and spills. Make repairs as soon as possible. Clean up **spilled fluids** with an absorbent material like kitty litter or sand, and don't rinse the spills into a nearby storm drain. Remember to properly dispose of the absorbent material.
- **Recycle** used oil and other automotive fluids at participating service stations. Don't dump these chemicals down the storm drain or dispose of them in your trash.

Lawn and Garden

- Use pesticides and fertilizers **sparingly**. When use is necessary, use these chemicals in the recommended amounts. Avoid application if the forecast calls for rain; otherwise, chemicals will be washed into your local stream.
- Select **native** plants and grasses that are drought- and pest resistant. Native plants require less water, fertilizer, and pesticides.
- **Sweep up** yard debris, rather than hosing down areas. Compost or recycle yard waste when possible.
- Don't over water your lawn. Water during the **cool** times of the day, and don't let water run off into the storm drain.
- Cover piles of dirt and mulch being used in landscaping projects to prevent these pollutants from blowing or washing off your yard and into local waterbodies. **Vegetate** bare spots in your yard to prevent soil erosion.

Home Repair and Improvement

- Before beginning an outdoor project, locate the nearest storm drains and **protect** them from debris and other materials.
- **Sweep up** and properly dispose of construction debris such as concrete and mortar.
- Use hazardous substances like paints, solvents, and cleaners in the **smallest amounts possible**, and follow the directions on the label. Clean up spills **immediately**, and dispose of the waste safely. Store substances properly to avoid leaks and spills.
- Purchase and use **nontoxic, biodegradable, recycled, and recyclable** products whenever possible.

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- **Clean** paint brushes in a sink, not outdoors. Filter and reuse paint thinner when using oil-based paints. Properly dispose of excess paints through a household hazardous waste collection program, or donate unused paint to local organizations.
- **Reduce** the amount of paved area and increase the amount of vegetated area in your yard. Use native plants in your landscaping to reduce the need for watering during dry periods. Consider directing downspouts away from paved surfaces onto lawns and other measures to increase infiltration and reduce polluted runoff.

Pet Care

- When walking your pet, remember to **pick up** the waste and dispose of it properly. Flushing pet waste is the best disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local waterbodies.

Swimming Pool and Spa

- **Drain** your swimming pool only when a test kit does not detect chlorine levels.
- Whenever possible, drain your pool or spa into the **sanitary** sewer system.
- Properly store pool and spa chemicals to **prevent** leaks and spills, preferably in a covered area to avoid exposure to stormwater.

Septic System Use and Maintenance

- Have your septic system **inspected** by a professional at least every 3 years, and have the septic tank **pumped** as necessary (usually every 3 to 5 years).
- Care for the septic system drainfield by **not** driving or parking vehicles on it. Plant only grass over and near the drainfield to avoid damage from roots.
- Flush responsibly. Flushing household chemicals like paint, pesticides, oil, and antifreeze can **destroy** the biological treatment taking place in the system. Other items, such as diapers, paper towels, and cat litter, can **clog** the septic system and potentially damage components.

Storm drains connect to waterbodies!

For more information, visit
www.epa.gov/npdes/stormwater
or
www.epa.gov/nps

Appendix D

