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**STORM WATER  
MANAGEMENT PROGRAM  
ANNUAL REPORT**



**City of Auburn**

**PERMIT YEAR SIX**

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SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

**PERMIT NUMBER ALR040003**

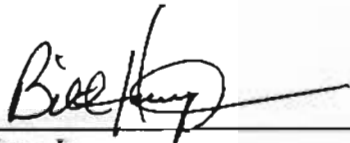
## CITY OF AUBURN

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEMS (NPDES)

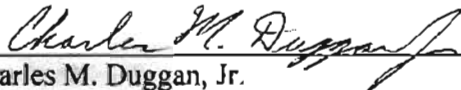
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MUNICIPAL STORM WATER PROGRAM ANNUAL REPORT

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 gathered and evaluated 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 submitted 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.



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2-22-2009

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Date

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# STORM WATER MANAGEMENT PROGRAM ANNUAL REPORT



**PERMIT YEAR SIX**  
March 2008 - March 2009

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## **I. INTRODUCTION**

In response to the National Pollutant Discharge Elimination System (NPDES) Phase II Storm Water Regulations, the City of Auburn applied for and received an NPDES permit for storm water discharges on May 14, 2003.

This report is being submitted to the Alabama Department of Environmental Management (ADEM) pursuant to Part V paragraph C of NPDES Permit ALR 040003 that expired in March 2008.

This annual report is the sixth report and covers the reporting period from March 2008 through March 2009. The program outlined in this report is patterned after the program submitted to and approved by ADEM in March 2003 in the City of Auburn's Alabama Notice of Intent (ALNOI) (Appendix A). The five year permit expired in March 2008. At ADEM's direction, the City will continue to operate under the original permit until the renewed Phase II NPDES permits are issued. The City reapplied for its NPDES permit in August 2007, with the renewed permit anticipated to be issued in 2009.

## **II. SITE DESCRIPTION**

The City of Auburn is located in East Central Alabama. A map of the City of Auburn is provided in Appendix B. The City limits encompass an area of approximately 52 square miles (33,549 acres) as of January 2009. This area calculation does not include Auburn University property or the City of Opelika. This acreage is slightly more than in 2007-2008 (approximately 32,300 acres). The population of Auburn is approximately 55,000. There are approximately 72 miles of creeks and streams flowing through Auburn. This is an increase from the 56 miles reported in the 2005-2006 report. This stream mileage was determined using the new FEMA Flood Map Modernization Project data. In the 2003-2004 reporting year the storm drainage system contained approximately 86 miles of storm pipe with 4,500 inlets and 3,000 storm water manholes/junction boxes. The storm water inventory for the 2008-2009 reporting year has not been updated, as the City is currently evaluating options for a system-wide comprehensive update of the City's storm water system. This update was originally scheduled to be completed in 2006 but, due to project difficulties, the City is

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*March 2008 – March 2009*

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## STORM WATER MANAGEMENT PROGRAM ANNUAL REPORT



City of Auburn

**PERMIT YEAR SIX**

March 2008 - March 2009

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reevaluating all options for the comprehensive update. The City approved sixteen (16) residential/commercial plats in 2008 as compared to forty (40) plats in 2007.

### **III. KNOWN OR SUSPECTED WATER QUALITY PROBLEMS**

The City of Auburn's storm sewer system discharges into streams located in four primary watersheds, including Moore's Mill Creek (Southeast), Saugahatchee Creek (North), Chewacla Creek (South) and Parkerson's Mill Creek (Southwest).

Moore's Mill Creek was placed on the draft 303(d) list in 1998 and was listed on the final 2002, 2004, 2006 and 2008 303(d) listing. Known water quality concerns within the jurisdictional area were identified as stream siltation resulting from sedimentation deriving from development.

The Saugahatchee Embayment where Saugahatchee Creek discharges into Yates Lake was placed on the State's final 303(d) list in 1996, 1998, 2000, 2002, 2004, 2006 and 2008. The Embayment was listed on the 303(d) list primarily for nutrient enrichment. It is also suspected that sedimentation should be a water quality concern near the embayment. ADEM and the USEPA issued the final Total Maximum Daily Load (TMDL) for nutrients and organic enrichment/dissolved oxygen for Pepperell Branch and the Saugahatchee Embayment in April 2008. It is anticipated that the City will be required to submit a storm water implementation plan to comply with the TMDL in 2009.

Parkerson's Mill Creek, from its source to Chewacla Creek, was placed on the final 2008 303(d) listing. Known water quality concerns within the jurisdictional area were identified as pathogens resulting from urban runoff and storm sewers.

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March 2008 - March 2009

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#### **IV. RESPONSIBLE PARTY**

The City of Auburn's storm water management program (SWMP) is composed of several programs operating under various departments within the City's organization. Components of the SWMP are as follows:

- Environmental Services Department – Operates recycling and composting program;
- Public Works Department – Performs maintenance of storm water infrastructure and assists with inspections of residential and commercial construction;
- Public Safety Department – Monitors residential and commercial construction;
- Water Resource Management Department – Monitors residential and commercial construction, manages water quality sampling program and manages public education and outreach program.

When the City of Auburn began its Phase II program, coordination and implementation of the individual SWMP was the responsibility of the Public Works Department. In October 2005, management of the storm water program was moved from the Public Works Department to the Water Resource Management Department, under a newly created Watershed Division. The intent of the move was to manage water supply operations, wastewater operations, and storm water operations from a watershed perspective for all components that impact water quality.

The person responsible for the coordination and implementation of the individual SWMP components is as follows:

Matt R. Dunn, P.E., Watershed Division Manager  
Water Resource Management Department  
City of Auburn  
1501 West Samford Avenue  
Auburn, AL 36832  
(334) 501-3060  
[mdunn@auburnalabama.org](mailto:mdunn@auburnalabama.org)



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## **V. STORM WATER MANAGEMENT PROGRAM COMPONENTS**

The Phase II storm water regulations require operators of small municipal separate storm sewer systems (MS4s) in urbanized areas to develop and implement storm water management programs employing best management practices (BMPs) to adequately address the six minimum control measures. The control measures include:

- Public Education and Outreach
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination
- Construction Site Storm Runoff Control
- Post-Construction Storm Water Management
- Pollution Prevention/Good Housekeeping for Municipal Operations

In March 2003, the City of Auburn submitted to ADEM a notice of intent (NOI) to implement a storm water management program under the Phase II storm water regulations. The goals of the individual components of the program and implementation dates were outlined in this document. At the end of permit year six, all program components outlined in the NOI have been implemented.

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## VI. PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS

### A. *Articles in the City News Letter "Open Line":*

*Open Line* is a monthly newsletter mailed to Auburn citizens through their utility bill. Articles and messages contained in the newsletter reach a large and diverse group of citizens. The goal for articles in the City newsletter was to produce two (2) articles per year. During the sixth permit year a total of eight (8) articles were published in which storm water issues were highlighted or affected:



- *Protecting Auburn's Water Quality: The City of Auburn's Illicit Discharge Ordinance – March 2008*
- *Auburn CityFest 2008 – April 2008*
- *GrOw GREEN – April 2008*
- *Going Green Saves Green – April 2008*
- *City to Host Earth Day for Auburn City Schools – April 2008*
- *Annual Water Quality Report Included in This Month's Water Bill – June 2008*
- *FEMA Floodplain Maps and Flood Insurance Study Update – August 2008*
- *Everyday Ways to Protect Our Watershed: Use Phosphorus Free Detergents – October 2008*

### B. *Brochure Publications:*

Pamphlets and brochures are an effective way to present and explain storm water issues. Unlike other communication vehicles, pamphlets and brochures can be distributed in many locations without requiring staffing and the location of distribution can specifically target the audience you are trying to reach. The goal for brochure publications was to produce two (2) brochures per year. During the sixth permit year, two (2) brochures were published with a total of seven (7) brochures distributed by the City. Brochures provided by the City over the past year include:

Brochures Published by Auburn, Lee County, Opelika and Auburn University (ALOA) Citizen Advisory Group:

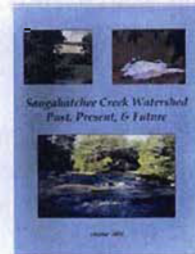
- Local Water Resources
- Our Local Watersheds



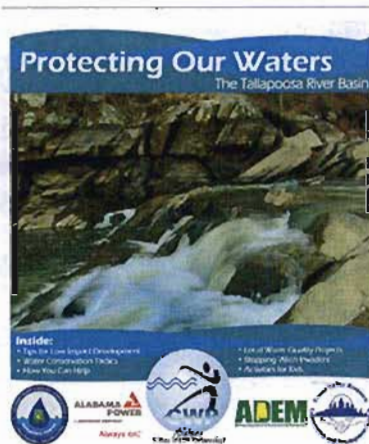
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Additional Brochures Distributed:

- Washing Car (ALCWP)
- Changing Oil (ALCWP)
- Pets (ALCWP)
- Fertilizing (ALCWP)
- Saugahatchee Creek Watershed: Past, Present and Future (SWaMP)



**C. Protecting Our Waters: The Tallapoosa River Basin:**



In November 2008, the Alabama Clean Water Partnership produced a newspaper insert titled *Protecting Our Waters: The Tallapoosa River Basin*. This insert was placed in major newspapers in circulation within the Tallapoosa Watershed. The City of Auburn contributed funding, articles and technical review for the publication. The 16-page insert contains articles on a variety of storm water topics within the Tallapoosa Watershed including facts on the Tallapoosa watershed and articles on storm water runoff, low impact development, water use in the basin, and on-the-ground projects within the watershed. The City obtained approximately 500 additional copies of the publication to distribute

to local leaders, City Council members and to make available in brochure stands at various city facilities.

**D. Website:**



Citizens often go to the City's website to obtain information on items of local interest. The web page is accessible 24 hours per day and can serve citizens that do not have the time or the ability to physically meet with staff during normal working hours.

The goal for the website was to develop a Phase II Storm Water section on the existing website in 2003 and post that web page in



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2004. This goal was met a year early when the Phase II Storm Water web page was posted in March 2003. City storm water policies, ordinances, design manuals and links to related sites (ADEM and EPA) have been posted and are available to the public.

The City's Storm Water website was moved from the Public Works Department home page to the Water Resource Management Department home page in 2005. The Storm Water website was updated in 2008 to include information on water quality sampling data, as well as additional links, resources, and new photographs.

For more information on the website please visit:

<http://www.auburnalabama.org/wrm/stormwater.asp>

***E. Video Presentations/Webcasts:***

Periodically, the City obtains relevant storm water information in video/internet format. The videos are presented to local interest groups and also made available for loan upon request. Videos are typically provided by ADEM, LEGACY, and other non-profit organizations. Webcasts based on storm water related topics are often hosted by the City. Video/internet media provided by the City over the past year include:

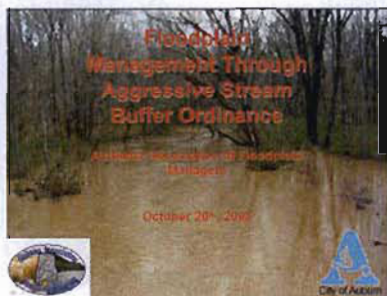
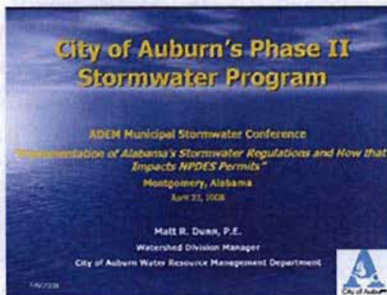
- *Wastewater Utilities Using Sustainable Watershed Approaches, United States Environmental Protection Agency, February 2008*

***F. Public Presentations:***

The City provides staff and/or resources to develop presentation materials for public meetings. Typically presentations are offered in PowerPoint format and the topics are chosen by the organization requesting the information.

Seven presentations were made during the sixth permit year. Presentations were given at various workshops and to various groups, including Alabama's Water Environment Association, Save Our Saugahatchee, the Lower Tallapoosa Clean Water Partnership, ADEM, and the Alabama Association of Floodplain Managers.

Presentations prepared and provided by City staff over the past year include:



- City of Auburn's Phase II Stormwater Program; ADEM Municipal Stormwater Conference, Montgomery, AL (April 2008)
- Post Construction Stormwater Management in Auburn, Alabama; Alabama's Water Environment Association, Orange Beach, AL (April 2008)
- Town Creek Park Stream Restoration Project: A Product of Teamwork; Save Our Saugahatchee, Auburn, AL (May 2008)
- City of Auburn Water Resource Management Department: An Overview; Save Our Saugahatchee/Friends of Chewacla, Auburn, AL (August 2008)
- Floodplain Management Through Aggressive Stream Buffer Ordinance; Alabama Association of Floodplain Managers, Auburn, AL (October 2008)
- A Low Impact Development Project in Auburn, AL; Tallapoosa Watershed Partnership Steering Committee, Alex City, AL (October 2008)
- Nonpoint Source Pollution Prevention and Reduction through Practical Stream Buffer Ordinance; ADEM Nonpoint Source Conference, Montgomery, AL (January 2009)

### G. Workshops Hosted:

In an effort to educate contractors, developers, engineers, and staff, the City initiated a series of workshops. The content of the workshops focused on local storm water issues of concern. Workshops hosted by the City over the past year include:

- **Erosion and Sediment Control Workshop (December 2008)** – The City of Auburn hosted its seventh annual Erosion and Sediment Control Workshop on December 11, 2008. The purpose of the Workshop is to educate and interact with local engineers, developers and contractors who are governed by the City's Erosion and Sediment Control Ordinance, the Alabama Department of Environmental Management (ADEM) storm water regulations, and the United States Army Corps of Engineers (COE) regulations. Representatives from the ADEM gave a presentation on the current



March 2008 – March 2009



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reorganization at ADEM and how that reorganization affects construction site permitting and enforcement. The Natural Resource Conservation Service gave a presentation on upcoming changes to the *Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas*, focusing primarily on upcoming changes to sediment basin design guidelines. Over 80 developers, contractors, and engineers attended the workshop.

- **Materials Handling/Spill Prevention Workshop (March 2009)** – The Water Resource Management Department will sponsor its second annual Materials Handling and Spill Prevention workshop in March 2009. This workshop targets City employees who deal with fuels and chemicals on a daily basis and provides basic information on the proper management, handling and disposal of potentially hazardous chemicals. This workshop will be described in more detail later in the report.

#### ***H. Composting & Recycling Center/Compost Demonstration Site***

The City of Auburn has been operating a curbside recycling program since 1987. In addition to curbside recycling, the City maintains a drop-off center for recyclables. The *Recycle Auburn* drop-off center is located across from the Fleet Services Complex at 365-A North Donahue Drive. These operations allow citizens of Auburn to recycle their waste instead of disposing of it in the landfill. The Water Resource Management Department plans to initiate a Household Grease Recycling Program in 2009, with containers and bins located at the recycling center. This program will provide citizens with a mechanism to properly dispose of household grease and will be targeted at reducing potential sanitary sewer overflows.



In addition, the City maintains a Compost Demonstration Site that serves as an example of how homeowners can easily incorporate a home composting operation into a normal backyard setting. The site features six backyard compost units. The units range from a simple pile to a concrete bin.

The exhibits take the public through the process of how to compost and recycle materials for garden use and encourage these practices. For more information on recycling of waste, please visit: <http://www.auburnalabama.org/es/>

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### ***I. Streamside Class Room Initiative:***

In an effort to educate and raise awareness in our community about the need to protect local streams, the City of Auburn, *ALOA* (citizen storm water advisory committee), Save Our Saugahatchee (S.O.S.), and Auburn City Schools have joined together to provide streamside classroom activities.



Students from local middle schools combine classroom instruction with hands on field activities to conduct water chemistry and a biological assessment of a local stream. The program, geared to sixth graders, focuses on providing the students with a background in the type of habitat expected to sustain a healthy stream. The students conduct a chemical analysis of the stream and compare the results with that of a biological assessment of the same stream.

### ***J. Storm Drain Marking Project:***



In cooperation with the Auburn University Sustainability Initiative, the City of Auburn initiated a storm drain marking project in 2007. School children within the City of Auburn were asked to submit designs for the markers that were to be placed in the Saugahatchee Creek, Town Creek and Moores Mill Creek watersheds. A number of the students' designs were selected for use. To maximize the educational opportunity presented when asking students to design the markers, classroom activities were conducted by the Sustainability Initiative. The lessons taught focused on the importance of not dumping waste into storm drains and how materials dumped into storm drains eventually end up in our rivers and streams. The initial storm drain marking day resulted in nearly 200 markers and door hangers being installed in Auburn by approximately 30 volunteers. In 2008, the City hosted a storm drain marking day with approximately 20 local Boy Scouts and leaders participating in the event. Approximately 50 markers were installed during this event. In 2009, the City is planning to host additional marking events for the Junior Civitan Club, Auburn University SGA, and local Boy Scout/Girl Scout troops.



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***K. Lee County Business Partners for Clean Water:***

In conjunction with the Moore's Mill Creek Stream Restoration Project (ADEM funded 319 Project), \$14,000 is being used to create the Lee County Business Partners for Clean Water. The formation of this group will allow for area businesses to become educated in various ways in which they can enhance and improve the goods and/or services they provide while minimizing their potential impacts to local water bodies. Although all businesses are invited to participate, those involved in land development, agriculture, fertilizer, herbicide, and pesticide application, lawn maintenance, and golf course management will be highly encouraged to participate due to the obvious potential impacts from these types of services. The City of Auburn, as a stakeholder in this group, has pledged to be an active participating member of this group and to participate in its proceedings and facilitate its promotion wherever and whenever possible. The first workshop targeting lawn care professionals and landscape companies in the Lee County area was held February 10<sup>th</sup>, 2009.



***L. Rain Barrel Project:***

The City of Auburn, along with stakeholders from the Alabama Department of Environmental Management, Clean Water Partnership, Auburn University, Saugahatchee Watershed Management Plan (SWaMP), Save Our Saugahatchee, and the Alabama Cooperative Extension Service have come together to form a group known as the "Rain Catchers". This organization was formed with the intent of promoting the use of rain barrels and rain gardens to area citizens and to provide training on proper installation. To date, Rain Catchers have successfully organized a large stakeholder group and have been able to begin "train the trainer" sessions necessary to implement outreach initiatives to the general public. The "Rain Catchers" are placing a concentrated effort of promotion within the Saugahatchee Watershed in hopes of reducing non-point source pollution through rooftop disconnect. With a project goal of promoting the installation of 10,000+ rain barrels, the "Rain Catchers" are a wonderful example of how a grass roots effort can make a big difference.





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## VII. PUBLIC INVOLVEMENT/PARTICIPATION

### A. *Citizens Advisory Committee:*

Both the EPA and ADEM recommend that the public be included in developing, implementing, and reviewing storm water management programs through the establishment of a citizens' advisory committee. Communities that allow citizens representing diverse backgrounds and interests to participate in such a committee are far more likely to gain community support through implementation.



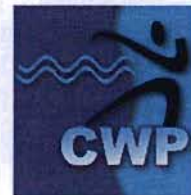
**ALOA CITIZENS STORM WATER ADVISORY COMMITTEE** (2001-present) - **ALOA** is a Citizens' Advisory Committee that serves Auburn, Lee County, Opelika, and Auburn University. It meets on a quarterly basis to review and provide public input on current policies, brochure content, educational material, and proposed ordinances.

In 2008, the ALOA citizens' advisory committee produced two brochures. The two brochures produced were titled *Local Water Resources* and *Our Local Watersheds*. These brochures are available to the citizens of Auburn and can be obtained at City Hall, the Bailey-Alexander Water and Sewer Complex or by contacting the Watershed Division of the Water Resource Management Department at (334) 501-3077.

### B. *Watershed Organizations:*

Regional watershed organizations bring together representatives from utilities, private industry, environmental awareness groups, farmers and branches of government to coordinate individual efforts, share information and plan for water resource and aquatic life protection. The regional approach allows participating entities to coordinate individual efforts in order to maximize limited resources.

**LOWER TALLAPOOSA RIVER BASIN/CLEAN WATER PARTNERSHIP** (2001-present) - The City of Auburn actively participates in the Lower Tallapoosa Clean Water Partnership and on technical sub-committees to assist and guide the development and implementation of a watershed management plan. The organization meets on a quarterly



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basis. In 2008, as a member of the Clean Water Partnership, the City of Auburn participated in the development of a Tallapoosa River Basin newspaper insert. These newspaper inserts were published in November 2008 and were placed in newspapers of major circulation within the watershed. The 16-page insert contains articles on a variety of storm water topics within the Tallapoosa Watershed including facts on the Tallapoosa watershed and articles on storm water runoff, low impact development, water use in the basin, and on-the-ground projects within the watershed.

**SAUGAHATCHEE WATERSHED MANAGEMENT PLAN GROUP (SWAMP)** - (February 2004 – present) Over the course of the past year, the City of Auburn has actively participated in the SWaMP group along with other stakeholders in the Saugahatchee Creek watershed to continue implementation of a watershed management plan for the watershed that encompasses parts of Lee, Macon and Tallapoosa Counties. The stakeholder group is made up of representatives from the Cities of Auburn and Opelika, WestPoint Stevens, Inc., MeadWestvaco, Inc., Save Our Saugahatchee (S.O.S.), the Natural Resources Conservation Service (NRCS), the Alabama



Cooperative Extension Service (ACES), the Lower Tallapoosa Clean Water Partnership (LTCWP) and Auburn University. The plan was finalized and submitted to the ADEM in March 2005. The SWaMP group received implementation funding from the ADEM in 2007. SWaMP has provided funding for several projects over the past year including: the Trinity School Rooftop Rainfall

Catchment project (Opelika), a storm water wetland retrofit in an existing subdivision (Camden Ridge) in Auburn, a stream restoration project in an existing subdivision in Auburn, and a community rain barrel project. Potential projects in the next year include a watershed signage project, several projects at local schools and activities in the rural areas of the watershed.

### ***C. City of Auburn Earth Week 2008:***

Earth Day is a week-long event in the City of Auburn. City departments have worked to create and implement a week of environmental activities and events aimed at educating citizens of all ages of the importance of protecting our environment. The City also hosted its 6<sup>th</sup> Annual Household Hazardous Waste Collection Day in 2008. This annual event is a favorite among Auburn residents. Each year, the City allows its customers to drop off hazardous household chemicals at a collection





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site, free of charge. The items are then disposed of in a safe manner, eliminating the possibility of these items being improperly dumped in local creeks and streams. Earth Week 2008 activities included:

- Educational Activities for 2<sup>nd</sup> Graders (NRCS – EnviroScape model, Auburn Water Board flocculation experiment, Recycling Demonstration, Auburn Tree Commission – Tree Demonstration)
- Children creation of an art project focusing on sustainability and environmentally-friendly, or green, concepts.
- Auburn Community Orchestra Earth Week Concert

**D. Website Hot Line:**

In an effort to provide the general public with an additional means of reporting potential erosion control violations, the City launched the “On-Line Hot Line” in March 2003. Citizens now have the ability to log on to the website 24 hours a day and provide information on suspected violations. The information is forwarded to the Water Resource Management Department and an investigation is initiated. The website hot line has proven to be a valuable tool over the course of the past six years by assisting City personnel in responding to citizens concerns. The Water Resource Management Department developed an online form for reporting potential illicit discharges in 2008.

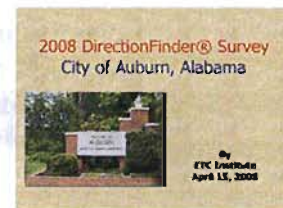


**E. Arbor Day Tree Give Away:**

The planting of trees improves water quality by reducing storm water runoff and erosion, while facilitating nutrient removal from the storm water runoff. In celebration of Alabama’s Arbor Day and to encourage the reforestation of the City’s urban landscape, the City’s Tree Commission sponsors a tree giveaway. The Commission gave away 750 Overcup Oaks and 1,250 Dogwoods at the annual Arbor Day Tree Giveaway. The City also gave away 500 Live Oaks and 500 Flatwood Plums at this past year’s Christmas parade.

**F. City of Auburn Citizen Survey:**

The citizen survey is an annual survey of a statistical cross section of randomly selected members of the community. The survey asks questions on issues of governmental performance and community priorities and is a means of



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March 2008 – March 2009

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encouraging citizens to participate in local government. In 2008, the survey contained several questions that directly impacted storm water quality issues. The questions covered issues such as storm drainage system efficiencies, storm water quality, trash collection, yard waste disposal, recycling, natural resource protection, green space initiatives and future growth planning. As it relates to storm water management, approximately 18% of those surveyed were very satisfied, and 44% were satisfied with the City's quality of performance in this area.

To view the Citizen survey, please visit: <http://www.auburnalabama.org/survey>.

#### **G. Newspaper Articles:**

Newspaper articles covering local storm water/environmental issues are a means for disseminating information to a large and diverse group of residents most directly impacted by these issues. Informative articles provide the reader with an independent point of view. The reader is not forced to rely on information generated by a single source (i.e. City through the newsletter *Open Line* or brochures).

The City of Auburn is fortunate to have a daily publication. The *Opelika-Auburn News* is a regional daily newspaper that covers local events and is widely read by residents of Lee County. A new weekly newspaper publication, the *Auburn Villager*, began circulation in 2007. Approximately twenty (20) articles and editorials were published in the last year that directly dealt with storm water/environmental issues. A listing of articles and publication dates is included in Appendix C of this report.

#### **H. Greenspace/Greenway Master Plan**

The Auburn Greenspace Advisory Board (GAB) was created by a City Council resolution in 2002. Its objective was to identify potential areas for future property acquisitions for parks, recreation facility projects, and greenways. Once identified, these properties could be purchased and/or protected from development.

In 2003, the GAB recommended a Greenspace/Greenway Master Plan for the City of Auburn. It was adopted in December 2003 by the City Council and has been utilized by the Planning Commission in connection with approval of projects. The GAB recently revised the initial Plan to include a vast expansion of the proposed greenspace/greenway areas. This first addition to the Greenspace/Greenway



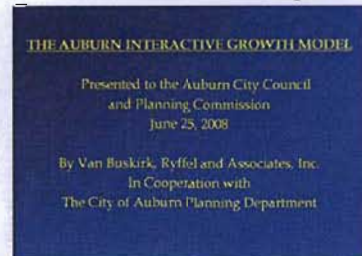
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Master Plan was adopted by the City Council in October 2004.

This plan has resulted in the acquisition of several hundred acres of property located in environmentally sensitive areas. The City is currently working on obtaining easements along Saugahatchee Creek for a proposed greenway project. The greenspace/greenway areas include proposed bikeways and trails along existing and new roads and along waterways in the City of Auburn's growth boundary. Areas along waterways may be improved with natural trails and will be preserved by the dedication of conservation easements in developments or the acquisition of property by the City of Auburn. The properties have been set aside for future uses by the City, as recommended by the GAB. A copy of the current Greenspace/Greenway Master Plan is included in Appendix D of this report.

### ***I. Future Land Use Plan***

Due to the pace of development and increase in population within the City of Auburn, City personnel and Auburn citizens have developed a Land Use Plan for future development and growth within the City. This Plan focuses on the concept that natural resource conservation is critical to our quality of life as a part of community planning and development. The plan emphasizes open greenspace that will be linked and tied in to the system of trails and greenspace areas created by the City's Greenspace/Greenway Master Plan.



The Plan places a strong emphasis on maintaining and enhancing natural resources within the City of Auburn such as streams, greenspaces, and parks. The Plan establishes the idea that development should be strategically placed away from our most critical resources. The City began developing new ordinances based on the Land Use Plan in 2005. In addition, the City, through its Planning Department, contracted with a firm to develop a Growth Model in 2007-2008 that the City will be able to utilize in making planning decisions within Auburn. This model was constructed so that it can be updated annually. Detailed inventories were conducted for current development such as housing unit by type, population by age groups, retail space by gross area, etc. A demographic forecasting model was developed as well as models for other uses that will provide guidance for future land use allocations. Finally, the Auburn Interactive Growth Model (AIGM) was developed that forecasts the spatial distribution of the population over time and the apportionment of land uses necessary to meet the needs of the population.

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### *J. Lee County Water Festival*

On May 15<sup>th</sup>-16<sup>th</sup>, 2008, the fifth annual Lee County Water Festival was held on the campus of Auburn University. Approximately 2,400 fourth graders from schools in the Lee County area attended the two-day event. The primary purpose of the event is to educate young people on the importance of our water resources and the role each of us plays in conserving our water. During the event, students learned about water filtration, aquifers, and the water cycle through hands-on activities such as building an edible aquifer, making a water cycle bracelet, and building a mini-filtration unit. Volunteers from the City of Auburn, the Auburn Water Works Board, the City of Opelika, and other local groups helped make last year's event a huge success. Planning is currently underway for the 2009 Water Festival, to be held at Auburn University on May 13 – 14, 2009.



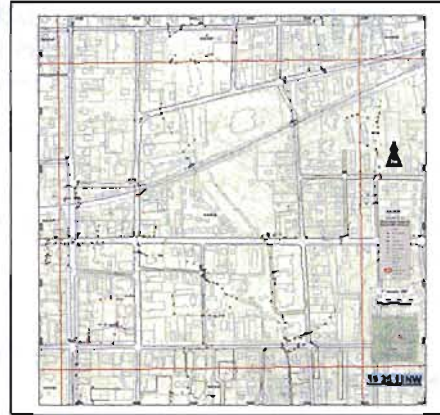


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## VIII. ILLICIT DISCHARGE DETECTION AND ELIMINATION

### A. *Storm Sewer Map:*

The City of Auburn completed the initial mapping of its storm sewer system in 2003. The mapping is maintained in a Geographical Information Systems Database (GIS). The drainage area was divided into quarter section maps with a scale of 1"=100'. Detailed information on pipe size, pipe material, direction of flow, inlets, manholes, bridges, box culverts, detention ponds, and headwalls are provided on the maps. The City is currently evaluating options for a system-wide comprehensive update of the storm water system asset data. This update was originally scheduled to be completed in 2006 but, due to project difficulties, the City is reevaluating all options to complete this effort.



*Note: GIS files are updated on a regular basis as new work is added or as old work is modified to current standards. The latest revisions to maps can be obtained through the Public Works Department located at 171 North Ross Street.*

### B. *Illicit Discharge Ordinance:*

The Environmental Protection Agency (EPA) recommends municipalities implement an ordinance that provides the means to identify and enforce correction of illicit discharges. In the City's NOI, submitted to ADEM in March 2003, the stated goal was to develop and implement an Illicit Discharge Ordinance by December 2005. This goal was met two years ahead of schedule.

A draft copy of the Illicit Discharge Ordinance was reviewed by the *ALOA* Citizens Advisory Committee in November of 2003. A revised draft was forwarded to the City Attorney and Municipal Judge for review in December 2003. The Auburn City Council adopted the Illicit Discharge Ordinance on January 20, 2004.

The City of Auburn has responded to several cases of illicit discharges over the past year. These cases involved illicit discharges of concrete washout water, sanitary sewer overflows, and grease/oil dumping from restaurants. In each





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instance, the illicit discharge was traced back to its source and the violator was given a warning and notified of the City's Illicit Discharge Ordinance. The proper regulatory agencies were notified of the issue and proper clean-up was conducted.

**C. Illicit Discharge Hotline & Reporting Form:**

In 2008, the Water Resource Management Department developed an illicit discharge reporting form that residents can download, complete and email back to the Department upon discovering a potential illicit discharge. This document was placed on a newly-created Illicit Discharge Website, giving residents instant and 24-hour access to the form. This form assists the Department in tracking and responding to illicit discharges.



**D. Public Education on Illicit Discharges & Improper Disposal:**

The Alabama Clean Water Partnership, in association with ADEM and other environmental groups, has produced a series of public service announcements featuring the "Nerdy Man". The City of Auburn has obtained materials for distribution from the Clean Water Partnership and provides them free to the public through its information centers located at City Hall, the Bailey-Alexander Water and Sewer Complex and the Development Services Building. These materials can also be obtained by contacting the City's Watershed Division at (334) 501-3074. The City also routinely places articles in the City newsletter, *Open Line*, to educate citizens on illicit discharges.

**E. Inspection of Drainage System:**

The Public Works Department conducts an annual inspection of its drainage system in order to maintain free flowing conditions. During this process, key stream sections, bridges, and culverts are inspected and routine maintenance is conducted. As areas are identified for maintenance, the work is listed on the maintenance schedule and a crew is assigned to perform the task.

**F. Hazardous Waste Emergency Response Team:**

The City of Auburn has entered into an agreement with the City of Opelika to share some of the cost of operating an emergency response vehicle equipped to handle hazardous waste spills. The agreement provides the City of Auburn with the ability

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to properly identify and address hazardous or potentially hazardous spills (see NOI submittal Appendix B).

**G. Water Sampling Program:**

In 2004, the City of Auburn began a water-sampling program in an effort to analyze the effectiveness of storm water BMPs on active construction sites within the City. This program has been expanded over the past 4 years to include more in-depth water quality monitoring.

The City conducts weekly, monthly, and quarterly sampling for a wide variety of parameters that includes turbidity, dissolved oxygen, temperature, specific conductivity, total dissolved solids, pH, fecal coliform and salinity. Routine physical, physiochemical and bacteriological monitoring is conducted to document critical water quality trends within our surrounding watersheds and also to locate potential sources of unauthorized pollution and contamination. Excessive pollutant loading can lead to loss of fish and wildlife habitat, loss of recreational use, human health hazards and higher water treatment costs. Both grab samples and real-time monitoring via two Hach Hydrolab multi-parameter probes have been incorporated into the sampling program. The City has developed a water quality website where residents and other interested parties can view reports of recent water quality data. The website address to view these reports is <http://www.auburnalabama.org/wrm/waterquality.asp>. In 2008, the City created a GIS database to track and trend all water quality data collected in-house and through outside sources. A screenshot of the GIS database can be seen above.



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## IX. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

### A. *Erosion and Sediment Control Ordinance*

The City of Auburn, in conjunction with the City of Opelika and Auburn University, adopted the Erosion and Sediment Control Policy recommended by the Citizens Advisory Committee (ALOA) in 2003. The policy provides for a regional set of rules that can be applied to contractors, developers and engineers in the area.

The Auburn City Council approved additions to the City's Erosion and Sediment Control Ordinance in 2005 to establish protocol for enforcement of the Ordinance and to enable City personnel to issue citations to developers/contractors in violation of the Ordinance. The enforcement mechanisms have proven to be a valuable tool in ensuring compliance with the Ordinance.

### B. *Erosion Control Checklist:*

The City of Auburn, in an effort to patrol the management of erosion and sediment control measures on active construction sites, initiated a construction site inspection program in 2003. The inspection program is designed to identify deficiencies in erosion control and initiate corrective action. Approximately 500 site inspections were performed from March 2008 through March 2009. The City of Auburn revised its Erosion Control Checklist form in December 2004. In 2005, the City's GIS Department, with input from the Watershed Division and Public Works Department, created a Construction Site database where information from each inspection is entered. The database is integrated with the City's GIS system. Information such as the location of construction sites, permit information and historical inspection data can be obtained from the database. The City's Water Resource Management Department maintains copies of the inspection reports.

Category	Inspected	Pass/Fail	Notes
<b>Erosion Control Measures</b>			
Stable Slopes	Inspected	Pass	
Clear Driveways	Inspected	Pass	
Stabilized Construction Areas	Inspected	Pass	
Clear Driveways	Inspected	Pass	
Stabilized Construction Areas	Inspected	Pass	
Other	Inspected	Pass	
<b>Sediment Control Measures</b>			
Stable Slopes	Inspected	Pass	
Clear Driveways	Inspected	Pass	
Stabilized Construction Areas	Inspected	Pass	
Clear Driveways	Inspected	Pass	
Stabilized Construction Areas	Inspected	Pass	
Other	Inspected	Pass	
<b>Storm Water Management</b>			
Stable Slopes	Inspected	Pass	
Clear Driveways	Inspected	Pass	
Stabilized Construction Areas	Inspected	Pass	
Clear Driveways	Inspected	Pass	
Stabilized Construction Areas	Inspected	Pass	
Other	Inspected	Pass	
<b>Site Stabilization</b>			
Stable Slopes	Inspected	Pass	
Clear Driveways	Inspected	Pass	
Stabilized Construction Areas	Inspected	Pass	
Clear Driveways	Inspected	Pass	
Stabilized Construction Areas	Inspected	Pass	
Other	Inspected	Pass	
<b>Erosion Prevention</b>			
Stable Slopes	Inspected	Pass	
Clear Driveways	Inspected	Pass	
Stabilized Construction Areas	Inspected	Pass	
Clear Driveways	Inspected	Pass	
Stabilized Construction Areas	Inspected	Pass	
Other	Inspected	Pass	



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**C. Erosion Control Residential:**

The City of Auburn Public Safety Department Codes Enforcement Division conducts an initial site inspection for all building construction in Auburn. Lots requesting the initial inspection must have a construction entrance and other necessary best management practices in place prior to authorizing foundation construction. Deficiencies noted during the initial inspection are relayed to the building permit applicant for correction.

The City of Auburn Public Safety Department Codes Enforcement Division maintains a database of complaints received in association with erosion resulting from residential construction. The complaints are routed to enforcement officers who investigate the complaint and pursue corrective actions with the responsible parties.

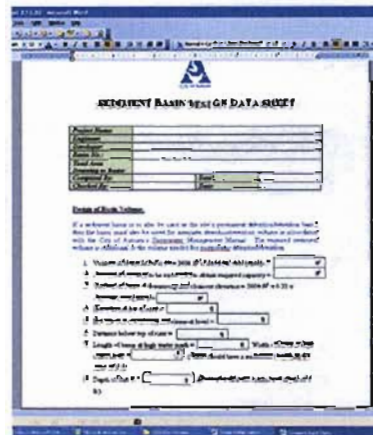
**D. Added Elements to Erosion and Sediment Control:**

In an effort to utilize the latest in erosion and sediment control technology, the City of Auburn has begun recommending that engineers consider the use of polyacrylamide (PAM) and other flocculants on certain developments within the City. PAM is essentially a soil stabilization BMP. Flocculants work to settle solids from turbid water and aid in stabilizing soils to support grass seed so that a suitable vegetative cover may be established. Flocculants can be applied through a hydraseeding application or in storm drains (i.e. floc blocks).

**E. Sediment Basin Design Worksheet & Standard Detail Changes:**

In an effort to create a uniform set of design criteria for sediment basins, the City of Auburn created a Sediment Basin Design Worksheet in 2007. This worksheet is based on requirements in the Alabama Handbook and can be utilized by engineers for the design of developments within the City of Auburn. Engineers must submit a copy of the completed worksheet to the City of Auburn for review during the plan submittal and review process.

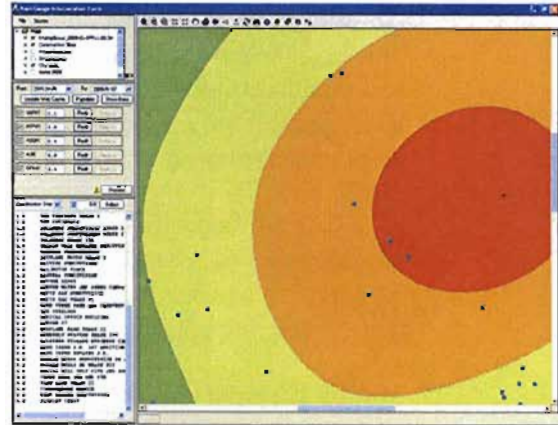
The City of Auburn revised its standard erosion and sediment control details in 2007 to include a more detailed sediment basin design, as well as additional details for erosion control blanket installations, wattle installation and alternative inlet protection measures. Erosion control blankets are required by the City of Auburn on any slope steeper than 3:1. Wattles are coir-filled socks utilized in check dam applications as an alternative to rip rap.



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***F. Rainfall Data Collection:***

In 2005, the City began maintaining historical rainfall data records. The data is obtained through a subscription to the Agricultural Weather Information System (AWIS) website. AWIS records daily weather data from the NOAA weather station at the Auburn-Opelika airport. The City collects the data on a routine basis and enters it into an Excel spreadsheet, enabling the City to analyze rainfall patterns and trends. The City has AWIS data dating back to 1976.



The City records daily rainfall data at its two water pollution control facilities. In addition, the Auburn Water Works Board also has rain gauges located at Lake Ogletree and the James Estes Water Treatment Plant that provide daily rainfall records. In 2008, the City contracted with a local consultant to provide real-time rainfall data utilizing Doppler radar imagery at five predetermined locations selected by the City. This data provides additional rainfall data and provides staff with the ability to analyze rainfall patterns across the City. In 2008, working in cooperation with the City's GIS department, staff created a GIS rainfall distribution analysis tool that allows staff to map rainfall patterns across the City. This, in turn, allows staff to perform erosion and sediment control inspections more efficiently.



## **X. POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT**

### ***A. Storm Water Management Manual:***



In April 2003, the City of Auburn published a Storm Water Design Manual that effectively addresses storm water runoff controls required for sites greater than one acre. The manual identifies project requirements and specifications for new infrastructure and also addresses the requirement for storm water system sizing and storm water runoff control/detention. During the first six years of implementation, the manual has proven to be a very successful tool for the City and developers. The Water

Resource Management Department contracted to develop an Engineering Design Manual in 2008 that will include engineering design criteria for sewer and water infrastructure, as well as storm water best management practices for water quality protection such as rain gardens and storm water wetlands. It is anticipated that this Design Manual will be completed in the 1<sup>st</sup> quarter of 2009.

### ***B. Stream Buffer Regulations:***

As part of the Erosion and Sediment Control Ordinance adopted by the City Council in July 2002, a minimum 25-foot non-disturbed vegetative buffer zone was required for new developments on “blue line” streams and creeks identified on USGS 7.5 minute topographic maps. In May 2006, the City Council adopted new Stream Buffer regulations. The new buffer regulations are based on a managed-use type buffer rather than a strict non-disturbed buffer approach. The new regulations implement a 3-zoned buffer (streamside zone, managed use zone and upland zone) with the width of the buffer being based on the drainage area of the stream. A



copy of the new regulations can be found under Article IV in the City’s Zoning Ordinance on the City’s website. Approximately 500 acres of riparian corridors have been set aside in the first two years following the adoption of the new regulations.

<b>Drainage Area (Watershed) Designation</b>	<b>Streamside Zone</b>	<b>Managed Use Zone</b>	<b>Upland Zone</b>	<b>Total Buffer Width on each side of Stream</b>
< 100 acres	25 feet	None	10 feet	35 feet
≥ 100 acres and ≤ 300 acres	25 feet	None	20 feet	45 feet

≥ 300 acres and ≤ 640 acres	25 feet	20 feet	10 feet	55 feet
≥ 640 acres	25 feet	50 feet	25 feet	100 feet

**C. Detention Pond Inspections:**

Existing detention ponds need periodic inspections to evaluate the maintenance and operation of these vital components of the City’s drainage system. Because vast quantities of storm water are collected and passed through these detention ponds every year, inspections of these facilities can identify potential problems and illicit discharges.



The Public Works Department and the Water Resource Management Department conduct annual inspections of all detention ponds (public and private) listed in the storm water inventory. Upon inspection, the owner of the pond is notified of any corrective action needed. Enforcement measures are taken if the owner does not address the items listed in the report. Approximately two hundred (200) detention ponds are currently being inspected

**D. Conservation Subdivision Regulations:**

In 2006, staff members from the Planning Department, Water Resource Management Department, Public Works Department and Parks and Recreation Department began developing conservation subdivision regulations to aid in the protection of local water resources. These regulations were approved by the Auburn City Council in 2007. The ordinance and subdivision regulations promote the use of low impact design concepts to protect natural resources in the Auburn area.

**E. Town Creek Park Stream Restoration Project:**

In November of 2006 the Water Resource Management Department and the Alabama Cooperative Extension Service (ACES) participated in a joint venture to develop the first “Priority 1” stream restoration project in Lee County. “Priority 1” stream restoration involves the abandonment of a degraded stream channel and the simultaneous construction of an entirely new stream channel to





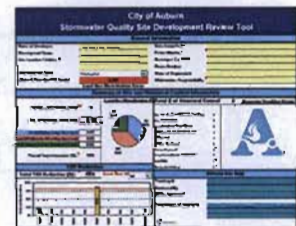
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restore basic morphological, biological and hydraulic functions. With funding provided through an ADEM 319 non-point source grant and additional partners such as the North Carolina State University Extension Service (NCSU), the Alabama Department of Environmental Management (ADEM), Stantec and a local landowner, it was also possible to conduct a series of four educational, hands-on workshops in which students from around the southeast were introduced to stream restoration assessment, natural channel design, stream construction and riparian vegetation. Collectively, this project serves to enhance a local valuable natural resource, provides for increased aesthetic value in Town Creek Park and provides for education on natural channel design alternatives.

***F. Site Development Review Tool:***

In 2006, the Water Resource Management Department contracted with CH2M Hill to develop a Site Development Review Tool (Tool) that could be utilized by local engineers when designing storm water best management practices (BMPs) on developments within the City of Auburn. This Tool was modeled on a similar tool created by CH2M Hill for Gwinnett County, Georgia.

The Tool was developed using a Microsoft Excel platform and can be used by engineers and developers to design and incorporate structural storm water BMPs for developments within Auburn's planning jurisdiction boundaries and to maximize the efficiency of runoff pollutant management following construction of developments. This Tool can also be used to meet the target pollutant removal efficiencies outlined in the City's Conservation Subdivision Regulations.



The Tool provides pollutant removal estimates for site specific conditions based on removal efficiencies for a variety of storm water BMPs including detention ponds, bioretention areas (i.e. rain gardens) and storm water wetlands. This Tool analyzes a variety of storm water pollutants including nutrients (phosphorus and nitrogen) and total suspended solids. City staff utilize the Tool during the plan review process to analyze development impacts on water quality within its water supply protection area (Lake Ogletree watershed), as well as in other watersheds within Auburn such as the Saugahatchee Creek Watershed.

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**G. MS4 Outfall Water Quality Monitoring:**

In 2007, the Water Resource Management Department initiated a program to evaluate and compare post-construction runoff water quality from various types of development. The types of development analyzed include low, medium and high density residential, commercial and industrial. Samples are collected each quarter during rainfall events and then delivered to a local lab to be analyzed for a variety of pollutants such as fecal coliform, suspended solids, nutrients and oils and grease. Staff attempt to collect “first flush” samples in an effort to obtain the most representative runoff samples. This data is used by Water Resource Management staff to develop trends, document illicit discharges and to make future decisions regarding post-construction storm water BMPs.



**I. Low Impact Development Project:**

Partnering with Auburn University and the Alabama Cooperative Extension Service, the City of Auburn is participating in the water quality monitoring of a planned Low Impact Development (LID) subdivision within the Saugahatchee Watershed and the City of Auburn planning jurisdiction. This project is partially funded by an ADEM 319 grant and is expected to be the first of its kind in Lee County and only the second in the State of Alabama. A primary project goal to implement at least six alternative, micro-scale (lot level), BMPs is written into the grant in an attempt to achieve high levels of post-construction nutrient and pollutant removal. A paired-watershed study has been chosen as the best approach to quantify the benefits of these alternative BMPs over those of a “traditional” subdivision. Any data obtained over the life of this project will significantly contribute to the ongoing efforts of the City to monitor and characterize phosphorus loading over various land cover types. Additionally, the LID BMPs installed onsite will serve as case study models not only for the City, but for other local developers and engineers.





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## **XI. POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS**

### ***A. Storm Water Management Training:***

The City of Auburn continues to develop a training program that provides the Water Resource Management Department and other City departments with information on the proper methods for implementing site control measures on all municipal projects. City personnel also attend a variety of storm water/water quality related workshops and seminars annually.

Training opportunities included:

- **Alabama's Water Environment Association Annual Conference (April 2008)** – This 4-day conference sponsored by the Alabama's Water Environment Association, state membership association of the Water Environment Federation, focused on storm water, water quality, and wastewater treatment issues. Four (4) City personnel attended the 2008 conference; attending technical sessions related to storm water and watershed management as well as vendor exhibits.
- **Annual State of Our Watershed Conference (April 2008)** – This 2-day workshop at Camp ASCCA focused on the current state of the Tallapoosa River Basin watershed, of which the City of Auburn is a stakeholder. Presentations were given on the current water quality status in the watershed as well as ongoing efforts to protect water quality in the watershed. One (1) City personnel attended the conference.
- **WEFTEC 2008 (October 2008)** – This 4-day conference, sponsored by the Water Environment Federation, is one of the premier water quality conferences in the world. This year's conference was held in Chicago, Illinois. City personnel attended technical sessions related to watershed protection, water quality, storm water BMPs and wastewater treatment. Three (3) City personnel attended this conference.
- **Erosion and Sediment Control Workshop (December 2008)** – The City of Auburn hosted a workshop for developers, contractors, and engineers to educate attendees on the City's Erosion and Sediment Control Program, as well as federal and state regulations. Over eighty (80) developers, contractors, engineers, and City personnel attended the workshop.

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***B. Spill Response and Prevention Training:***

As outlined in the NOI, the City of Auburn has developed an in-house spill response training program. The Water Resource Management Department will sponsor its second Materials Handling and Spill Prevention Workshop in March 2009. This workshop targets City employees who deal with fuels and chemicals on a daily basis and provides basic information on the proper management, handling and disposal of potentially hazardous chemicals. The Water Resource Management Department is planning to have this training on an annual basis. In addition, the ALOA group developed a brochure in 2007 focusing on materials handling and safety.

***C. Risk Management Manual:***

The City of Auburn Human Resources Department has developed a manual outlining specific requirements/policies for dealing with hazardous chemicals. Topic 12 (titled *Hazard Communication Program*) of the City's Risk Management Manual specifically requires City personnel to inventory, label and receive training on hazardous chemicals identified. Material Safety Data Sheets (MSDS) identifying personal protective equipment, permissible exposure limits (PEL) and Threshold Limit Values (TLV) are required for all hazardous chemicals identified during the inventory process. The Hazard Communication Program was adopted as part of the Risk Management Manual.

***D. Municipal Operations Recycling:***

It has been standard policy to encourage individual Departments to participate in the City's recycling program. Recyclable waste generated through City activities is collected and processed through the City's recycling center located on Donahue Drive.

***E. Street Sweeping:***

Regular street sweeping has been proven as an effective means to reduce overall pollutant loading from roads and storm sewer systems. The Environmental Services Department of the City of Auburn currently performs street sweeping measures on a monthly basis throughout numerous roadways within the City. One (1) mechanical and two (2) regenerative-air/vacuum sweepers are used to perform this service. Regular street sweeping measures such as these have been shown to reduce total phosphorus loading from roadways by 1.4-20% and total suspended solids by 4-45%, with variability seen in frequency of sweeping and machine type (Breault et. al., 2003).

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***F. Alabama Certified Pesticides Applicator:***

The City's Parks and Recreation Department maintains trained and certified personnel in the application of pesticides, including restricted-use pesticides. Although qualified to do so, the Parks and Recreation Department has **not** used any restricted-use pesticides in the previous decade. In order to maintain certification with the State of Alabama, the staff must document and complete 30 continuing education units (CEUs) over a three-year period. CEUs are earned at various conferences and workshops such as the Alabama Turfgrass Conference, Alabama Highway Department workshops, Sports Turf Short Course and the Alabama Urban Forestry Association's Annual Conference. The CEUs cover not only the application of pesticides, they also provide information on the proper use of fertilizers and other chemicals typically used to maintain athletic fields.

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## **XII. STORM WATER INFRASTRUCTURE IMPROVEMENTS**

In 2008, the Public Works Department continued to make considerable progress toward completing a priority listing of storm water improvement projects outlined in the City's Storm Water Master Plan.

### ***A. Storm Water Infrastructure Projects Completed***

Projects completed in permit year six include:

- Technology Park West – The project consisted of the first phase of the Park's infrastructure. Project consisted of the installation of 1,240 linear feet (LF) of 15-inch reinforced concrete storm drain pipe (RCP), 2,120 LF of 18-inch RCP, 25 LF of 24-inch RCP and 110 LF of 42-inch RCP, along with 39 inlets, 7 sloped-paved headwalls, and 2 junction boxes. The project also included the installation of approximately 96 LF of 6 ft x 5 ft box culvert and 125 LF of 8 ft x 6 ft box culvert.
- Beehive Road Improvements at Technology Park West – The project consisted of the improvements of Beehive Road at the entrance of the Technology Park. The project included the installation of approximately 50 LF of 18-inch roadway pipe, 65 LF of 30-inch roadway pipe, 188 LF of 18-inch RCP storm drain pipe and 24 LF of 18-inch sidedrain pipe. The project also included the installation of 3 pipe end treatments, 2 inlets and 1 junction box.
- Slaughter Avenue Drainage Improvements Project – This was a Community Development Block Grant (CDBG) project to minimize local erosion. The project included piping a ditch with 115 LF of 24-inch RCP and the installation of 1 junction box and 1 sloped-paved headwall.
- Cured-In-Place Pipe (CIPP) Lining Project – This project included the CIPP lining of several deteriorated storm drain pipes in the City including 54 LF of 14-inch storm drain on Cary Drive, 250 LF of 15-inch storm drain and 62 LF of 24-inch storm drain on Brenda Avenue, 164 LF of 24-inch storm drain on Drew Lane, 62 LF of 24-inch storm drain on East Veterans Boulevard and 81 LF of 24-inch storm drain and 300 LF of 30-inch storm drain on Redwood Court.

### ***B. Storm Water Infrastructure Projects Under Construction:***

- Cox Road Improvement Project – This project consists of lowering Cox Road to improve site distance. As a part of the project, the following storm water



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infrastructure improvements are being made: installation of 430 LF of 15-inch RCP, 56 LF of 24-inch RCP, 2 winged headwalls, 3 sloped-paved headwalls and 5 inlets.

- Samford Avenue Extension Project – This project consists of extending Samford Avenue approximately 3,960 feet to Glenn Avenue. As a part of the project, the following storm water infrastructure is being constructed: installation of approximately 94 LF of 48-inch RCP, 624 LF of 30-inch RCP, 616 LF of 24-inch RCP, 374 LF of 18-inch RCP, and 1,540 LF of 15-inch RCP. The project also includes installation of 24 single wing inlets, 6 double wing inlets and 8 area inlets.
- Twin City Court Extension Project – This project consists of extending Twin City Court approximately 1,200 feet. As a part of the project, the following storm water infrastructure is being constructed: installation of 190 LF of 6 ft x 5 ft box culvert, 1,170 LF of 18-inch RCP and 97 LF of 24-inch RCP. The project also includes installation of 12 single wing inlets and 4 double wing inlets.

***C. Storm Water Infrastructure Projects Under Design and/or Consideration:***

- 2009 Cured-In-Place Pipe (CIPP) Lining Project – This project will involve CIPP lining of several deteriorated storm drain lines in the City.
- Albert-Judd Storm Drain Improvements – This project will involve the installation of 30 LF of 15-inch RCP, 55 LF of 24-inch RCP, 230 LF of 36-inch RCP, 2 single wing inlets, 1 area inlet and one headwall.
- Ross & Magnolia Intersection Improvements – This project will involve the installation of 10 LF of 18-inch RCP, 54 LF of 30-inch RCP, 1 single wing inlet, 1 double wing inlet and 1 junction box.
- Opelika Road at Guthries – This project will involve the installation of 170 LF of 30-inch RCP, 40 LF of 18-inch RCP, 15 LF of 24-inch RCP, 150 LF of 48-inch RCP, 7 single wing inlets and 1 headwall.

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### **XIII. PROGRAM EVALUATION**

Now in its sixth permit year, the City of Auburn's Storm Water Management Program continues to have a positive impact on storm water management in the City. The goals outlined in the City's Notice of Intent have been achieved at the end of this sixth permit year.

The City of Auburn has strengthened requirements of its construction storm water management program by empowering staff to issue citations and/or stop work orders in cases where Best Management Practices (BMPs) are not implemented or if BMPs are deemed deficient. The City has implemented a water sampling program so that the effectiveness of storm water BMPs on active construction sites may be analyzed. This program also allows staff to examine local streams from a water quality perspective. The City has purchased two Water Quality Probes that allow City staff to conduct more in-depth water quality analyses of local watersheds by monitoring certain water quality parameters. The City has implemented a Storm Water Outfall Monitoring program to evaluate trends of post-construction storm water runoff from various types of development. The City continues to strengthen its Illicit Discharge Detection and Elimination Program through the use of these water quality sampling programs. The City has implemented a Site Development Review Tool that assists engineers in designing post-construction storm water water quality best management practices for developments in certain watersheds within the City. The City continues to invest staff time and money into the continuing education, outreach and public involvement associated with the Storm Water Management Program through activities such as the storm drain marking program, the Lee County Water Festival, the Rain Barrel Project and Lee County Business Partners for Clean Water. The City has met or exceeded its goals for this year.

The overall evaluation of the sixth permit year has revealed several strengths and goals for the upcoming year.

#### ***A. Strengths***

Identified strengths of the program include the commitment and support of the Auburn City Council in protecting local natural resources as demonstrated in the formation of the Watershed Division to manage the storm water program, increased enforcement of erosion and sediment control requirements and increased efforts to evaluate water quality. The City of Auburn also actively engages local environmental groups, concerned citizens and the local development community to evaluate programs and develop new standards.

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Other strengths include:

- The Water Resource Management Department coordinates all of the water quality programs (water treatment and distribution, wastewater collection and treatment, and storm water management) for the City.
- The teamwork of the Water Resource Management Department Watershed Division, Public Works Department Inspection Division and Public Safety Department Codes Enforcement Division in the City's construction storm water management program.
- A well established and growing water quality sampling program to evaluate stream conditions, storm water outfalls and to detect and eliminate illicit discharges.
- The integration of water quality sampling data in to the GIS database allows staff to track and trend all water quality data and to make educated and technically sound decisions regarding any needed improvements.
- Community awareness and stakeholder involvement through activities and programs such as the storm drain marking program, the Lee County Business Partners for Clean Water, the Rain Barrel Project and the Lee County Water Festival.
- Proactive evaluation and rapid response to water quality-related issues.
- Increased public education and awareness through the creation of a water quality website where residents and other interested parties can view data reports associated with the water quality sampling program.
- Increased public education and awareness on illicit discharges through the creation of an online illicit discharge reporting form.

***B. Goals for the Upcoming Year***

The City of Auburn takes pride in its Storm Water Management Program and feels as though the efforts that have been made over the past six years have created a strong, viable and long-lasting program for the City that will have positive impacts on the City's natural resources. As the City strives to make its program even better, several program goals have been identified for the upcoming year by City personnel.

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These goals include:

- Increased public education and awareness through additional storm drain marking activities.
- Increased education of homebuilders on proper BMPs during construction.
- Initiate program to walk all creeks and begin identification of all storm water outfalls.
- Begin baseline catchment water quality monitoring associated with the Saugahatchee TMDL.



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**APPENDIX A**

**ALABAMA NOTICE OF INTENT (ALNOI)**

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City of Auburn

**Alabama Notice of Intent (ALNOI)**

General permit for Phase II Small Municipal Separate Storm Sewer Systems (MS4)

March 2008

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**Appendix J - City of Auburn Storm Water Management Manual**

**STATE OF ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

**ALABAMA NOTICE OF INTENT (ALNOI)**

General Permit for Phase II Small Municipal Separate Storm Sewer Systems (MS4)

**I. General Information:**

**A. Ownership Status (Please check one):**

- Small Municipal Separate Storm Sewer System
- Federal Facility
- State Facility

**B. Name of Small MS4: **The City of Auburn****

**C. Name of Responsible Official: **Bill Ham, Jr.****

Title: **Mayor**  
Mailing Address: **144 Tichenor Avenue**  
City: **Auburn** State: **AL** Zip Code: **36832**  
Telephone Number: **(334) 501 - 7260**

**D. Designated storm water management program contact:**

Name: **Matt Dunn**  
Title: **Watershed Division Manager**  
Mailing Address: **1501 West Samford Avenue**  
City: **Auburn** State: **AL** Zip Code: **36832**  
Telephone Number: **(334) 501 - 3060**  
Email Address: **mdunn@auburnalabama.org**

**E. Is this NOI for: (Please check one):**

Initial Issuance	_____
Reissuance	<input checked="" type="checkbox"/> _____
Modification	_____

**II. Location/Boundaries:**

**A. Location:**

1. Name of Urbanized Area or municipality where your MS4 is located:  
**Auburn, AL**

2. Name of your  
Organization: **The City of Auburn**

3. The latitude and longitude of the approximate center of your MS4:  
Latitude **764440.25** Longitude **766458.96**



**Note:** *Approximate center of MS4 is the intersection of Magnolia Avenue and College Street. Latitude and Longitude are in State Plane Coordinate System.*

4. All entities except counties must include a location map showing city, town, or district boundaries, and urbanized area (UA) boundaries, if part(s) of the MS4 is within a UA.

**See Appendix G**

5. Counties must include a map showing county boundaries, unincorporated area boundaries within the county, and urbanized (UA) boundaries.

**III. Known or Suspected Water Quality Problems:**

- A. The names(s) of the receiving water to which your MS4 discharges (attach a separate list if necessary):

**The City of Auburn discharges into Saugahatchee Creek (North), Moores Mill Creek (south East), Chewacla Creek (south) and Parkersons Mill Creek (South West).**

- B. Indicate any receiving water stream segments to which your MS4 discharges, which are included on the 303(d) list:

**Moores Mill Creek was initially placed on the draft 303(d) list in 1998 and was listed on the final 2002 and 2004 303 (d) list and the draft 2006 303(d) list. The Saugahatchee Creek Embayment where Saugahatchee Creek discharges into Yates Lake was placed on the State's 303(d) list in 1996, 1998, 2000, 2002, and 2004 and is currently on the draft 2006 list.**

- C. Describe any known or suspected water quality concerns within your jurisdictional area (e.g. stream siltation, 303(d) listed streams, habitat degradation, elevated levels of pollutants, etc.), including location (attach additional page(s) if necessary):

**Known water quality concerns within the jurisdictional area include stream siltation from sedimentation deriving from development (Moores Mill Creek and Saugahatchee Creek Embayment) and nutrient enrichment (Saugahatchee Creek Embayment).**

**IV. Sharing Responsibility**

- A. Has another entity agreed to implement a control measure on your behalf?

Yes  No (if no, Skip to Part III)

**Control Measure #1: Hazardous Waste Emergency Response Team**

1. Name of entity: **The City of Opelika**
2. Control measure or component of control measure to be implemented by entity on your behalf:

**The City of Auburn has entered into an agreement with the City of Opelika to share some of the cost of operating an emergency response vehicle equipped to handle hazardous waste spills. The agreement provides the City of Auburn with the ability to properly identify and address hazardous or potentially spills (see Appendix H).**

- B.** Attach an additional page if necessary to list additional shared responsibilities.

**It is mandatory that you submit a copy of a written agreement between your MS4 and the other entity demonstrating written acceptance of responsibility.**

**V. Minimum Control Measures:**

- A. Public Education and Outreach – (complete Appendix A)
- B. Public Involvement/Participation – (complete Appendix B)
- C. Illicit Discharge Detection and Elimination – (complete Appendix C)
- D. Construction Site Storm Water Runoff Control – (refer to Appendix D)
- E. Post-construction Storm Water Management in New Development and Redevelopment – (complete Appendix E)
- F. Pollution Prevention/Good Housekeeping – (complete Appendix F)

**VI. Certification Statement**

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 gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted 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.

Printed Name: \_\_\_\_\_ Date \_\_\_\_\_  
 Signature: \_\_\_\_\_ Title \_\_\_\_\_

## Appendix A

### Public Education and Outreach on Storm Water Impacts

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

#### **A. Best Management Practice (BMP) # 1: Messages/Articles in City News Letter "Open Line"**

1. Known or suspected problem/existing pollutant source to be addressed by BMP: **Storm Water Runoff; Illicit Discharges**
2. Target audience: **Citizens**
3. Description of BMP: **Messages/Articles in the City News Letter "Open Line"**
4. Measurable Goal(s): **Two Messages/Articles per year for duration of permit period**
5. Schedule:
  - a. Interim Milestone Dates (if applicable)
  - b. Implementation Date: **2008**
  - c. Frequency of actions: **Bi-annual**
  - d. Month/Year of each action (if applicable)
6. Person (position) responsible for overall management and implementation of the BMP: **Matt Dunn/Watershed Division Manager/Water Resource Management Department**
7. Rational for selecting this BMP:

**"Open Line" is the City's news letter that is sent out through the utility bill. No other publication is as widely read within the City Limits and an article or message in this document will reach the most diverse group of citizens.**

**B. Best Management Practice (BMP) # 2: Pamphlets/Brochures**

1. Known or suspected problem/existing pollutant source to be addressed by BMP: **Storm Water Runoff/Quality**
2. Target audience: **Citizens, Contractors, Developers, and Engineers**
3. Description of BMP: **Pamphlets and Brochures**
4. Measurable Goal(s): **Develop, Produce, and Distribute two Pamphlets/Brochures per year for duration of Permit Period**
5. Schedule:
  - a. Interim Milestone Dates (if applicable)
  - b. Implementation Date: **2003**
  - c. Frequency of actions: **Bi-annual**
  - d. Month/Year of each action (if applicable)
6. Person (position) responsible for overall management and implementation of the BMP: **Tim Logiotatos/Public Works Department**
7. Rational for selecting this BMP:

***Pamphlets and brochures are an effective way to present and explain a storm water message. Unlike other communication vehicles, pamphlets and brochures can be distributed in many places without requiring staffing and the location of distribution can specifically target the audience you are trying to reach (i.e. Development Services Building/Office of Codes and Enforcement).***



**C. Best Management Practice (BMP) # 3: Internet Web Page**

1. Known or suspected problem/existing pollutant source to be addressed by BMP: ***Storm Water Construction Runoff/Storm Water Quality***
2. Target audience: ***Community***
3. Description of BMP: ***Municipal Web Page***
4. Measurable Goal(s): ***Develop and post web page containing storm water information and links.***
5. Schedule:
  - a. Interim Milestone Dates: ***Develop Web Page 2003***
  - b. Implementation Date: ***Post Web Page 2004***
  - c. Frequency of actions: (if applicable)
  - d. Month/Year of each action (if applicable)
6. Person (position) responsible for overall management and implementation of the BMP: ***Tim Logiotatos/Public Works Department***
7. Rational for selecting this BMP:

***The City's web page is a place where citizens often go to obtain information on local events. A section of the web page can be modified to target various audiences (contractors, engineers, local interest groups, etc.). It also allows the City to link to existing web sites (i.e. ADEM and EPA) for the latest educational information provided by these agencies for our use.***

**Note: The MS4 is not limited to implementing only 2 BMPs for each minimum control measure. If additional BMPs are chosen, then you should attach additional sheets as needed.**

## Appendix B

### Public Involvement/Participation

40 CFR Part 122.34(b)(2) Requirement: You must, at a minimum, comply with State, Tribal, and local public notice requirements when implementing a public involvement/participation program.

**A. Best Management Practice (BMP) # 1: Formation of a Citizens Advisory Committee**

1. Known or suspected problem/existing pollutant source to be addressed by BMP: ***Storm Water Runoff/Quality***
2. Target audience: ***Community***
3. Description of BMP: ***Formation of a Citizens Advisory Committee***
4. Measurable Goal(s): ***Organize a regional Citizens Advisory Committee representing various segments of the community to offer recommendations to facilitate implementation of the Storm Water Management Program. Regional representatives include members City of Auburn, Lee County, City of Opelika, and Auburn University.***
5. Schedule:
  - a. Interim Milestone Dates (if applicable)
  - b. Implementation Date: ***The ALOA Citizens Advisory Committee was organized in 2001. It is comprised of various segments of the community including local environmental interest groups.***
  - c. Frequency of actions: ***The ALOA Citizens Advisory Committee meets on a quarterly basis.***
  - d. Month/Year of each action: ***The ALOA Citizens Advisory Committee is scheduled to meet on a quarterly basis for the duration of the permit period (5 years).***
6. Person (position) responsible for overall management and implementation of the BMP: ***All members of ALOA (City of Auburn, Lee County, City of Opelika, and Auburn University) are committed to fostering and maintaining the organization.***
7. Rational for selecting this BMP:  
***EPA and ADEM recommend that the public be included in developing, implementing, and reviewing storm water management***

**programs. This committee allows individuals to participate in the discussions regarding program implementation. The committee also has direct input into policy implementation for regional storm water issues.**

**B. Best Management Practice (BMP) # 2: Watershed Organization “Lower Tallapoosa River Basin/Clean Water Partnership”**

1. Known or suspected problem/existing pollutant source to be addressed by BMP: **Storm Water Runoff/ Quality**
2. Target audience: **Community**
3. Description of BMP: **The partnership is part of a state-wide river basin management initiative to link local basin management efforts in order to maximize resources, to develop comprehensive management plans, and to involve citizens in watershed protection.**
4. Measurable Goal(s): **Coordinate with the Clean Water Partnership to develop a watershed management plan. Work with the Clean Water Partnership's and ADEM's Education/Outreach initiative to improve awareness of water quality issues.**
5. Schedule:
  - a. Interim Milestone Dates (if applicable)
  - b. Implementation Date: **The City of Auburn is currently a participant on the Lower Tallapoosa Technical Committee.**
  - c. Frequency of actions: **Meetings are held on a quarterly basis.**
  - d. Month/Year of each action (if applicable)
6. Person (position) responsible for overall management and implementation of the BMP: **Tim Logiotatos/Public Works Department**
7. Rational for selecting this BMP:  
**The Partnership brings together representatives from utilities, private industries, environmental groups, farmers, and branches of government to coordinate their individual efforts, share information, and plan for water resource and aquatic life protection. This organization allows for the group to maximize resources available and to involve the public in protecting the environment.**

**Note: The MS4 is not limited to implementing only 2 BMPs for each minimum control measure. If additional BMPs are chosen, then you should attach additional sheets as needed.**

## Appendix C

### Illicit Discharge Detection and Elimination

40 CFR Part 122.34(b)(3) Requirement: You must develop, implement and enforce a program to detect and eliminate illicit discharges into you small MS4. You must:

- A). Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all waters of the state that receive discharges from those outfalls;
- B). Effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into your storm sewer system and implement appropriate enforcement procedures and actions;
- C). Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to your system; and
- D). Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

#### **A. Storm Sewer Map**

- 1. Does the MS4 have a completed storm sewer map showing the location of all outfalls and the names and locations of all waters of the State that receive discharges from those outfalls? Yes \_\_\_ No X
- 2. If yes submit storm sewer system map as an addendum to this form.
- 3. If the storm sewer system map must be developed, provide a schedule for completion (e.g. 30% of system to be mapped each year):

<u>Task</u>	<u>Interim Date</u>
<u>Draft Map Prepared</u>	<u>Dec 9 2002</u>
<u>QA/QC Map Information</u>	<u>Dec 9 2003</u>
<u>Finalize Map</u>	<u>Dec 9 2004</u>

Final completion date/ date for submittal to ADEM (No later than December 9, 2006): \_\_\_\_\_

#### **B. Ordinance/Regulatory Mechanism Evaluation:**

- 1. Does the MS4 have an ordinance or regulatory mechanism that effectively prohibits illicit discharges? Yes \_\_\_\_\_ No X



If yes, submit a copy as an addendum to this form.

2. If an evaluation of the ordinance/regulatory mechanism must be completed, or the MS4 is aware that the ordinance/regulatory mechanism will require revision, then a schedule for development of the document should be provided:

<u>Task</u>	<u>Interim Date</u>
<u><b>Review Ordinance Material</b></u>	<u><b>Dec 9 2003</b></u>
<u><b>Draft Ordinance</b></u>	<u><b>Dec 9 2004</b></u>
<u><b>Adopt Ordinance</b></u>	<u><b>Dec 9 2005</b></u>

Final completion date/ date for submittal to ADEM (No later than December 9, 2006): \_\_\_\_\_

**C. Best Management Practice (BMP) # 1: Public Education on Illicit Discharges & Improper Disposal**

1. Known or suspected problem/existing pollutant source to be addressed by BMP: **Storm Water Discharges**
2. Target audience: Citizens
3. Description of BMP: **The Clean Water Partnership in association with ADEM and other environmental groups have produced a series of public service announcements featuring the "Nerdy Man". These spots inform the public of the do's and don'ts of proper disposal.**
4. Measurable Goal(s): **Coordinate with Clean Water Partnership to obtain public service announcements and videos (e.g. "The Nerdy Man" videos) for public use locally.**
5. Schedule:
  - a. Interim Milestone Dates (if applicable)
  - b. Implementation Date: **Dec 9 2003**
  - c. Frequency of actions: **Provide public access to information and materials year round**
  - d. Month/Year of each action (if applicable)

6. Person (position) responsible for overall management and implementation of the BMP: **Tim Logiotatos/ Public Works Department**
7. Rational for selecting this BMP:

***The Clean Water Partnership provides the videos and training materials in an effort to educate the public. Use of the videos and other materials allows the city to provide education that could prevent an illicit discharge ( like proper disposal of oil). The materials have been produced through the assistance of various environmental agencies and are geared toward the general public.***

**D. Best Management Practice (BMP) # 2: Inspection of Drainage System**

1. Known or suspected problem/existing pollutant source to be addressed by BMP: **Storm Water Runoff/Quality**
2. Target audience: **Public Works**
3. Description of BMP: **Inspect drainage system and outfalls**
4. Measurable Goal(s): **Inspect drainage system and outfalls prior to start of rainy season. Document illicit discharges uncovered during inspections and schedule for remediation.**
5. Schedule:
  - a. Interim Milestone Dates (if applicable)
  - b. Implementation Date: **Dec 5 2001**
  - c. Frequency of actions: **Annually**
  - d. Month/Year of each action: **November - February**
6. Person (position) responsible for overall management and implementation of the BMP: **Robert Smith/Assistant Public Works Director**
7. Rational for selecting this BMP:

***Annual inspections of the City's drainage system are conducted in order to maintain free flowing conditions. During this process, key stream sections, bridges, and culverts are inspected and routine maintenance is conducted. Routine maintenance includes repair of the structure and/or removing litter and debris that has accumulated over the preceding year.***

***The removal and inspection of debris from these catch points can provide the City with valuable information locating, premeditating, and eliminating illicit discharges.***

**Note: The MS4 is not limited to implementing only 2 BMPs for each minimum control measure. If additional BMPs are chosen, then you should attach additional sheets as needed.**

## **Appendix D**

### **Construction Site Storm Water Runoff Control**

ADEM Admin. Code Ch. 335-6-12 implements a State-wide construction storm water regulatory program consistent with NPDES requirements for construction activities. As provided by 40 CFR Part 122.35(b), this NOI does not require an MS4 to implement a local construction storm water control program.

***The City of Auburn in conjunction with the City of Opelika and Auburn University has adopted the Erosion and Sediment Control recommended to it by the Citizens Advisory Committee (ALOA). The implementation of this regional Policy began in July 2002 (See Appendix I).***



## Appendix E

### Post-construction Storm Water Management in New Development and Redevelopment

40 CFR Part 122.34(b)(5) Requirement: You must develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into your small MS4. You must:

- A). Develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for you community.
- B). Use an ordinance or other regulatory mechanism to address post construction runoff from new development or redevelopment projects; and
- C). Ensure adequate long-term operation and maintenance of BMPs.

#### **A. Ordinance Evaluation**

1. Does the MS4 have an ordinance that effectively controls runoff from new development or redevelopment construction site?

Yes   X              No   

If yes, submit a copy as an addendum to this form.

***The City of Auburn has developed an Engineering Design Manual that effectively addresses storm water runoff controls required for sites greater than one acre. The manual specifically addresses the requirement for storm water system sizing and storm water runoff control/detention (see Attachment J).***

2. If an evaluation of the ordinance must be completed, or the MS4 is aware that the ordinance will require revision, then a schedule for development of the document should be provided:

<u>Task</u>	<u>Interim Date</u>
_____	_____
_____	_____
_____	_____

Final completion date/ date for submittal to ADEM (No later than December 9, 2006): \_\_\_\_\_

**B. Best Management Practice (BMP) #1: Buffer Zone**

1. Known or suspected problem/existing pollutant source to be addressed by BMP: ***Storm Water Runoff/Quality***
2. Target audience: ***Citizens***
3. Description of BMP: ***25 foot minimum vegetative buffer zones***
4. Measurable Goal(s): ***Require new developments to provide buffer zones to protect "blue line" streams and creeks identified on USGS 7.5 minute topographic maps.***
5. Schedule:
  - a. Interim Milestone Dates (if applicable)
  - b. Implementation Date: ***July 2002***
  - c. Frequency of actions (if applicable)
  - d. Month/Year of each action (if applicable)
6. Person (position) responsible for overall management and implementation of the BMP: ***City of Auburn Planning Commission***
7. Rational for selecting this BMP:

***Buffer zones provide for stream bank protection by restricting the type of land disturbance in and around streams. They also allow a location for stream bank vegetation to grow providing shade and habitat for aquatic life.***

**C. Best Management Practice (BMP) # 2: Detention Pond Inspection**

1. Known or suspected problem/existing pollutant source to be addressed by BMP: Storm Water Runoff/Quality
2. Target audience: Private and Public Detention Pond Owners
3. Description of BMP: Annual inspections of exiting detention ponds.
4. Measurable Goal(s): Inspect private and public storm water detention ponds (on record with Public Works) annually
5. Schedule:
  - a. Interim Milestone Dates (if applicable)
  - b. Implementation Date: **1997**
  - c. Frequency of actions: **Annually**
  - d. Month/Year of each action: (if applicable)
6. Person (position) responsible for overall management and implementation of the BMP: **Tim Logiotatos/Public Works**
7. Rational for selecting this BMP:

***Existing detention ponds need periodic inspections to maintain proper operation. Upon inspection, the owner of the pond is notified of corrective action needed. Because vast quantities of storm water are passed through these detention ponds every year, regular inspections identify potential problems before they create major environmental damage.***

## Appendix F

### Pollution Prevention/Good Housekeeping for Municipal Operations

40 CFR Part 122.34(b)(6) Requirement: You must develop and implement an operation and maintenance program that includes training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

#### A. Best Management Practice (BMP) # 1: Construction Site Management Training

1. Known or suspected problem/existing pollutant source to be addressed by BMP: **Storm Water Runoff/Quality**
2. Target audience: **Public Works Employees**
3. Description of BMP: **Construction Site Management Training**
4. Measurable Goal(s): **Develop and implement training that provides the Public Works department the guidance on how to implement site control measures on all municipal projects.**
5. Schedule:
  - a. Interim Milestone Dates (if applicable)
  - b. Implementation Date: **2003**
  - c. Frequency of actions: **Annual**
  - d. Month/Year of each action (if applicable)
6. Person (position) responsible for overall management and implementation of the BMP: **Tim Logiotatos/Public Works Department**
7. Rational for selecting this BMP:

**Providing training to employees will allow the City to better control runoff from municipal construction project sites. Training of construction design personnel will help to develop the skills necessary to choose and implement the most effective Best Management Practices (BMPs).**



**B. Best Management Practice (BMP) # 2: Spill Response and Prevention Training**

1. Known or suspected problem/existing pollutant source to be addressed by BMP: **Storm Water Runoff/Quality**
2. Target audience: **Public Works Employees**
3. Description of BMP: **Provide training to public works employees for spill response and prevention**
4. Measurable Goal(s): **Develop and implement training program targeted at spill response and prevention**
5. Schedule:
  - a. Interim Milestone Dates (if applicable)
  - b. Implementation Date: **Develop program 2003**
  - c. Frequency of actions: **Annual training starting in 2004**
  - d. Month/Year of each action: **January - March**
6. Person (position) responsible for overall management and implementation of the BMP: **Tim Logiotatos/Public Works**
7. Rational for selecting this BMP:

**Spill prevention training is targeted at public works employees. It will have the most impact when it comes to preventing and controlling spills of non-hazardous materials since the first responders to a spill are typically Public Works work crews. Hazardous materials will be addressed through our agreement with the Opelika Fire Department.**

Notes:

For the BMP used to describe the required training component of the O&M program, you should provide the name of the target audience(s). One targeted audience must be the MS4 employees.

The MS4 is not limited to implementing only 2 BMPs for each minimum control measure. If additional BMPs are chosen, then you should attach additional sheets as needed.

**Appendix G**

**City of Auburn Location Map**

**Appendix H**

**Lee County Emergency Operations Plan**  
**Emergency Support Function #10 Hazardous Materials**

**Appendix I**

**ALOA Erosion and Sediment Control Policy**



**Appendix J**

**City of Auburn Storm Water Management Manual**

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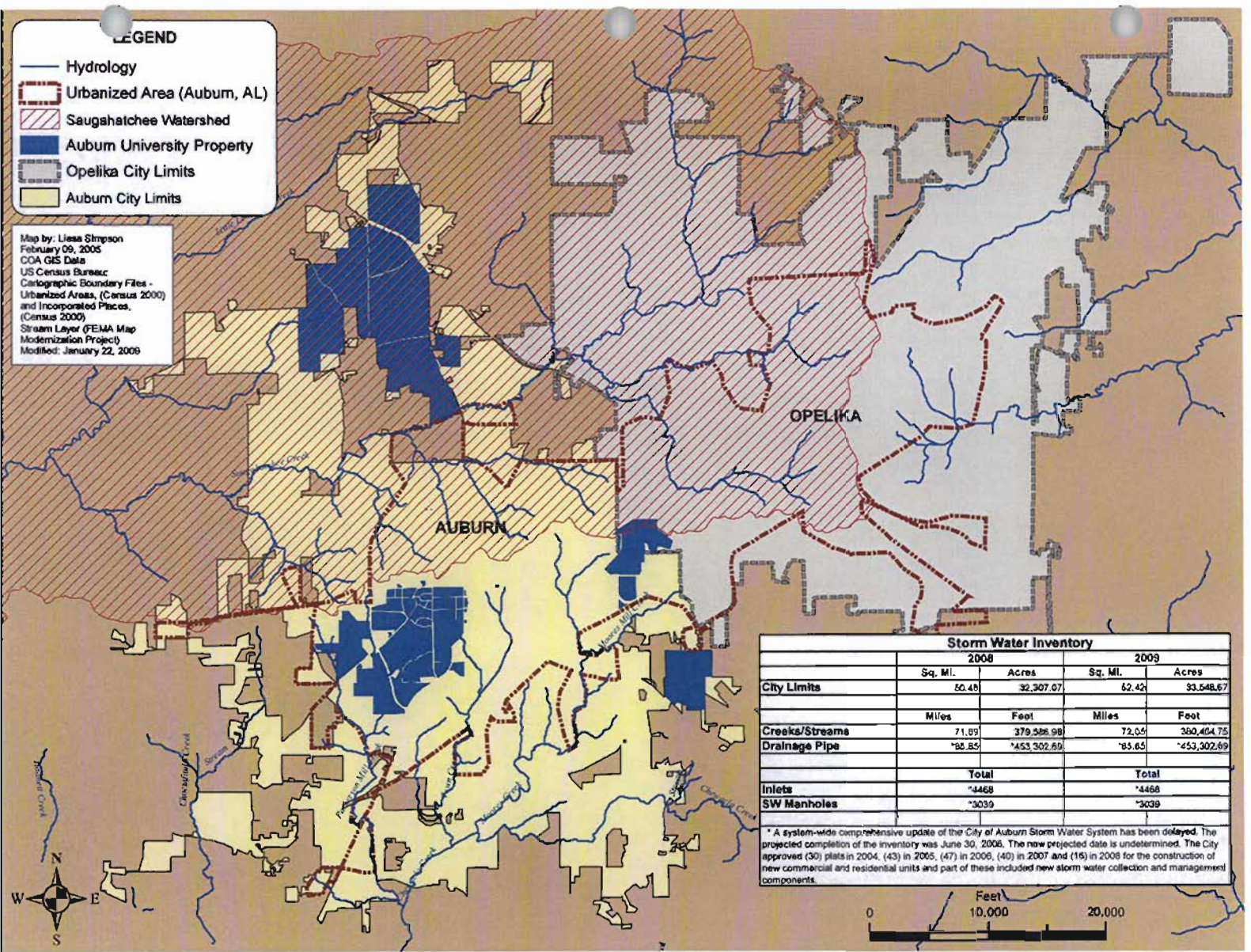
## **APPENDIX B**

### **URBANIZED AREA MAP**

**LEGEND**

- Hydrology
- Urbanized Area (Auburn, AL)
- Saugahatchee Watershed
- Auburn University Property
- Opelika City Limits
- Auburn City Limits

Map by: Liesa Simpson  
 February 09, 2005  
 COA GIS Data  
 US Census Bureau:  
 Cartographic Boundary Files -  
 Urbanized Areas, (Census 2000)  
 and Incorporated Places,  
 (Census 2000)  
 Stream Layer (FEMA Map  
 Modernization Project)  
 Modified: January 22, 2009



	2008		2009	
	Sq. Mi.	Acres	Sq. Mi.	Acres
<b>City Limits</b>	50.48	32,307.07	52.42	33,548.67
	Miles	Feet	Miles	Feet
<b>Creeks/Streams</b>	71.89	379,586.98	72.05	380,404.75
<b>Drainage Pipe</b>	*88.85	*453,302.89	*85.65	*453,302.89
	<b>Total</b>		<b>Total</b>	
<b>Inlets</b>	*4468		*4468	
<b>SW Manholes</b>	*3039		*3039	

\* A system-wide comprehensive update of the City of Auburn Storm Water System has been delayed. The projected completion of the inventory was June 30, 2006. The new projected date is undetermined. The City approved (30) plats in 2004, (43) in 2005, (47) in 2006, (40) in 2007 and (16) in 2008 for the construction of new commercial and residential units and part of these included new storm water collection and management components.



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## **APPENDIX C**

### **NEWSPAPER PUBLICATIONS LISTING**



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## *News Paper Publications*

<i>Publication Date by Month</i>	<i>Publication Date</i>	<i>Title</i>	<i>Editorial</i>	<i>Publication Source</i>
<i>February 2003</i>				
	2/5/2003	AUBURN PLANS HOUSEHOLD WASTE COLLECTION DAY	<input type="checkbox"/>	Opelika-Auburn News
	2/6/2003	EPA RECOGNIZES WORK OF AU-BASED ALABAMA WATER WATCH	<input type="checkbox"/>	Opelika-Auburn News
	2/6/2003	LET'S DUMP THOSE CHEMICALS	<input checked="" type="checkbox"/>	Opelika-Auburn News
	2/21/2003	OPELIKA TO HOLD ANNUAL ARBOR DAY CELEBRATIONS	<input type="checkbox"/>	Opelika-Auburn News
	2/21/2003	AUBURN TO HAND OUT TREES SATURDAY	<input type="checkbox"/>	Opelika-Auburn News
<i>March 2003</i>				
	3/5/2003	ADEM REFORMS IMPACT PRESENT AND FUTURE ENVIRONMENT	<input checked="" type="checkbox"/>	Opelika-Auburn News
	3/6/2003	S.O.S ENVIRONMENTAL GROUP AIMS TO CLEAN UP CREEK	<input type="checkbox"/>	Opelika-Auburn News
	3/6/2003	CONSERVATION EASEMENT A GOOD GROWTH ALTERNATIVE FOR AREA	<input checked="" type="checkbox"/>	Opelika-Auburn News
	3/9/2003	GARBAGE WAR ROLLING INTO HIGH GEAR IN COUNTY	<input type="checkbox"/>	Opelika-Auburn News
	3/9/2003	VOLUNTEER MOVEMENT CLEANS UP CREEKSIDE	<input type="checkbox"/>	Opelika-Auburn News
	3/13/2003	"OFFICIALS: LITTERING IS A PROBLEM"	<input type="checkbox"/>	Opelika-Auburn News
	3/13/2003	LEE COUNTY CONSIDERS CURBSIDE GARBAGE PICK UP	<input type="checkbox"/>	Opelika-Auburn News
	3/14/2003	CITY PLANNING MUST RISE ABOVE DOING FAVORS	<input checked="" type="checkbox"/>	Opelika-Auburn News
	3/15/2003	IT'S A DIRTY PROBLEM OFTEN IGNORED	<input checked="" type="checkbox"/>	Opelika-Auburn News
	3/15/2003	VALLEY OFFICIALS DISCUSS SEWAGE, DRAINAGE PROBLEMS	<input type="checkbox"/>	Opelika-Auburn News
	3/17/2003	THANKS TO OFFICIALS FOR PROVIDING HAZARDOUS WASTE COLLECTION DAY	<input checked="" type="checkbox"/>	Opelika-Auburn News
	3/17/2003	"LITTER REDNECKS" WERE PROBABLY NEVER BOY SCOUTS	<input checked="" type="checkbox"/>	Opelika-Auburn News
	3/17/2003	KEEP OPELIKA BEAUTIFUL HOST ANNUAL GREAT AMERICAN CLEAN UP	<input type="checkbox"/>	Opelika-Auburn News

<i>Publication Date by Month</i>	<i>Publication Date</i>	<i>Title</i>	<i>Editorial</i>	<i>Publication Source</i>
	5/2/2007	What You Can Do to Help Keep Auburn Beautiful	<input type="checkbox"/>	Open Line
	5/4/2007	ADEM Confirms Bacterial Presence in Creeks	<input type="checkbox"/>	Opelika-Auburn News
	5/23/2007	A Combined Effort	<input type="checkbox"/>	Opelika-Auburn News
	5/24/2007	AU Looks for Niche in Water Research	<input type="checkbox"/>	Opelika-Auburn News
	5/24/2007	AU to Hold Conference on Water Usage	<input type="checkbox"/>	Opelika-Auburn News
	5/31/2007	Dam Removed from Part of Moores Mill Creek	<input type="checkbox"/>	Opelika-Auburn News
<i>June 2007</i>				
	6/1/2007	Running Dry	<input type="checkbox"/>	Opelika-Auburn News
	6/6/2007	East Central Alabama Gets Rain	<input type="checkbox"/>	Opelika-Auburn News
<i>August 2007</i>				
	8/20/2007	DROUGHT CONDITIONS CONTINUE STATEWIDE	<input type="checkbox"/>	Opelika-Auburn News
	8/26/2007	DROUGHT	<input type="checkbox"/>	Opelika-Auburn News
	8/26/2007	WHAT ABOUT GEORGIA?	<input type="checkbox"/>	Opelika-Auburn News
	8/28/2007	ADEM RETURNS TO IDENTIFY E.COLI SOURCE IN LEE COUNTY WATERWAYS	<input type="checkbox"/>	Opelika-Auburn News
	8/31/2007	ADEM SUSPENDS WATER TESTING AFTER BEING INFORMED OF BROKEN SEWER LINE	<input type="checkbox"/>	Opelika-Auburn News
<i>September 2007</i>				
	9/19/2007	3 CREEKS LISTED AS IMPAIRED	<input type="checkbox"/>	Opelika-Auburn News
	9/27/2007	ADEM FINDS VIOLATIONS IN COUNTY FLYOVER	<input type="checkbox"/>	Opelika-Auburn News
<i>October 2007</i>				
	10/4/2007	ADEM FLYOVER SHOWS ONLY ONE AUBURN VIOLATION	<input type="checkbox"/>	Auburn Villager

*November 2007*

<i>Publication Date by Month</i>	<i>Publication Date</i>	<i>Title</i>	<i>Editorial</i>	<i>Publication Source</i>
	11/1/2007	AUBURN RECYCLES DAY: CELEBRATING 20 YEARS OF RECYCLING IN THE CITY OF AUBURN	<input type="checkbox"/>	Open Line
	11/20/2007	STATE CITES RETIREE FOR DIRT PIT	<input type="checkbox"/>	Opelika-Auburn News
<i>January 2008</i>				
	1/4/2008	Rain raises levels in some state lakes	<input type="checkbox"/>	Opelika-Auburn News
	1/4/2008	Christmas Rains Were Beautiful Stocking Stuffers	<input checked="" type="checkbox"/>	Opelika-Auburn News
	1/14/2008	Ex-Stream Makeover	<input type="checkbox"/>	Opelika-Auburn News
<i>March 2008</i>				
	3/14/2008	ADEM, Local Partners Help Revive Streams	<input type="checkbox"/>	Opelika-Auburn News
<i>April 2008</i>				
	4/1/2008	Auburn CityFest 2008	<input type="checkbox"/>	Open Lijne
	4/1/2008	6th Annual Household Hazardous Waste Collection Day - Saturday, April 19	<input type="checkbox"/>	Open Line
	4/1/2008	City to Host Earth Day for Auburn City Schools 2nd Graders	<input type="checkbox"/>	Open Line
	4/1/2008	GrOw Green	<input type="checkbox"/>	Open Line
	4/1/2008	Going Green Saves Green	<input type="checkbox"/>	Open Line
<i>May 2008</i>				
	5/9/2008	ADEM Gives Auburn an All Clear	<input type="checkbox"/>	Opelika-Auburn News
	5/23/2008	Opelika Middle School Students Plant for the Future	<input type="checkbox"/>	Opelika-Auburn News
<i>June 2008</i>				
	6/13/2008	Local Watershed SWaMPed With Success	<input checked="" type="checkbox"/>	Opelika-Auburn News
	6/23/2008	Investing in Waterways Good for Future	<input checked="" type="checkbox"/>	Opelika-Auburn News
<i>July 2008</i>				

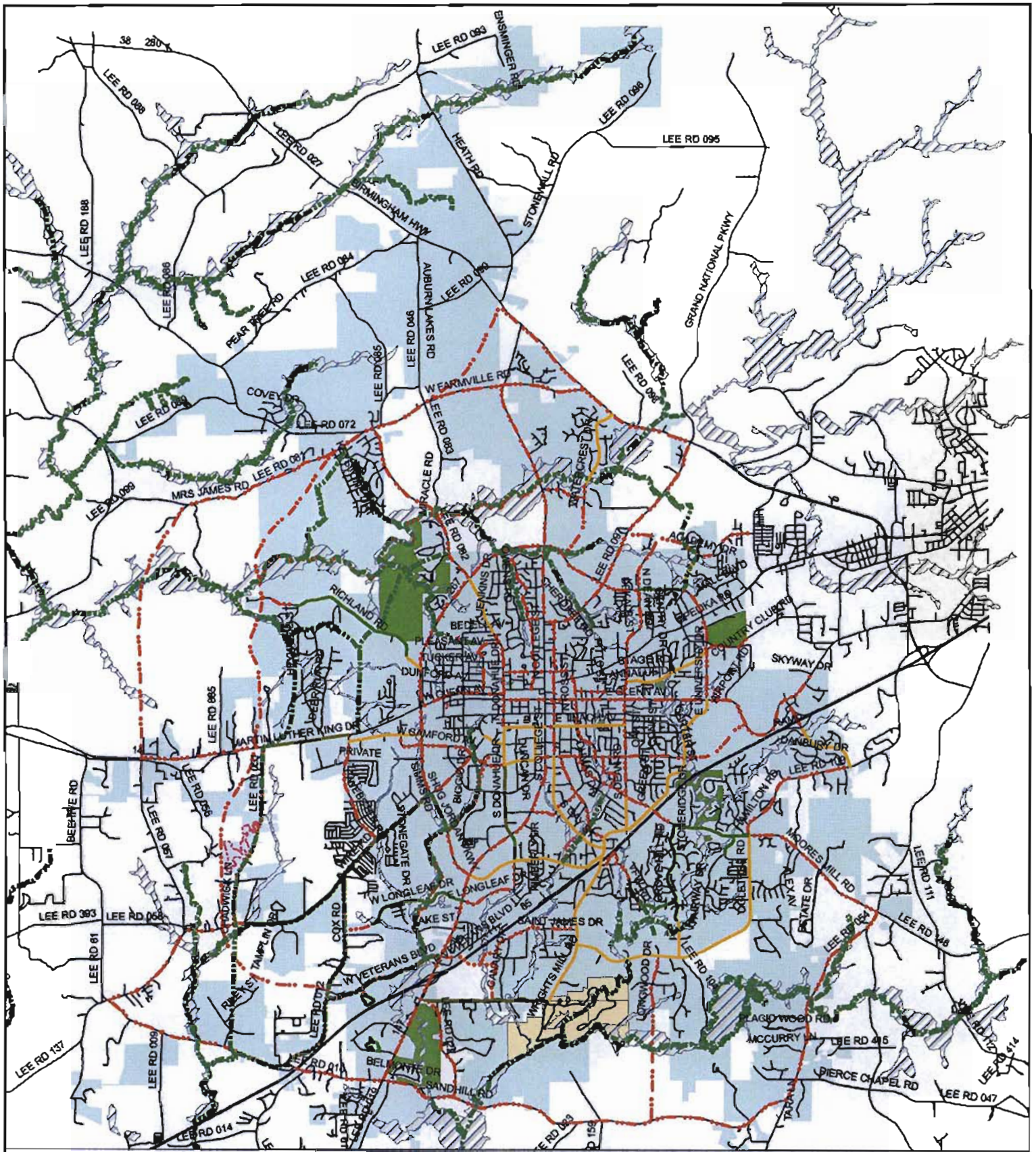
<i>Publication Date by Month</i>	<i>Publication Date</i>	<i>Title</i>	<i>Editorial</i>	<i>Publication Source</i>
	7/22/2008	East Alabama Still in Drought	<input type="checkbox"/>	Opelika-Auburn News
	7/23/2008	Hurricane Dolly Bears Down on Texas-Mexico Coas	<input type="checkbox"/>	Opelika-Auburn News
	7/25/2008	Drought Condition Worsens Across State	<input type="checkbox"/>	Opelika-Auburn News
<i>August 2008</i>				
	8/21/2008	Tropical Storm Faye Hits FL a 3rd Time	<input type="checkbox"/>	Opelika-Auburn News
	8/25/2008	Faye Still a Player in the Forecast	<input type="checkbox"/>	Opelika-Auburn News
	8/25/2008	Crews Work to Restore Power; Cleanup After Weekend Storms	<input type="checkbox"/>	Opelika-Auburn News
	8/26/2008	Residents Need to Be Ready for Storm Season	<input type="checkbox"/>	Opelika-Auburn News
	8/26/2008	Gustav Forms in the Caribbean	<input type="checkbox"/>	Opelika-Auburn News
	8/28/2008	Rains from Fay came as blessing to dry South	<input checked="" type="checkbox"/>	Opelika-Auburn News
<i>September 2008</i>				
	9/19/2008	Voice Your Concerns About Quarry	<input checked="" type="checkbox"/>	Opelika-Auburn News
<i>February 2009</i>				
	2/10/2009	New Flood Maps Could Mean New Insurance Costs for Some Residents	<input type="checkbox"/>	Opelika-Auburn News
	2/11/2009	Potential for Stormy Weather Today	<input type="checkbox"/>	Opelika-Auburn News



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**APPENDIX D**

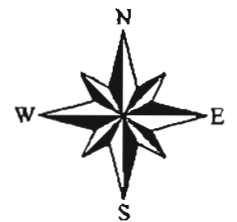
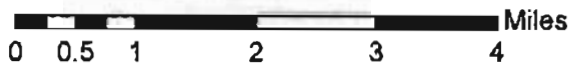
**GREEN SPACE AND GREEN WAY MASTER PLAN**



**Legend**

- |                           |                   |
|---------------------------|-------------------|
| Greenways                 | Street Names      |
| Bike Paths                | Walking Trails    |
| <b>TYPE</b>               | Floodplain        |
| Concrete Multi-Use Path   | Cheves State Park |
| Asphalt Off-road Bikepath | Golf Courses      |
| Bike Lane                 | Greenspace        |
| Proposed                  | City Limits       |

**City of Auburn  
Greenspace and Greenway  
Master Plan**

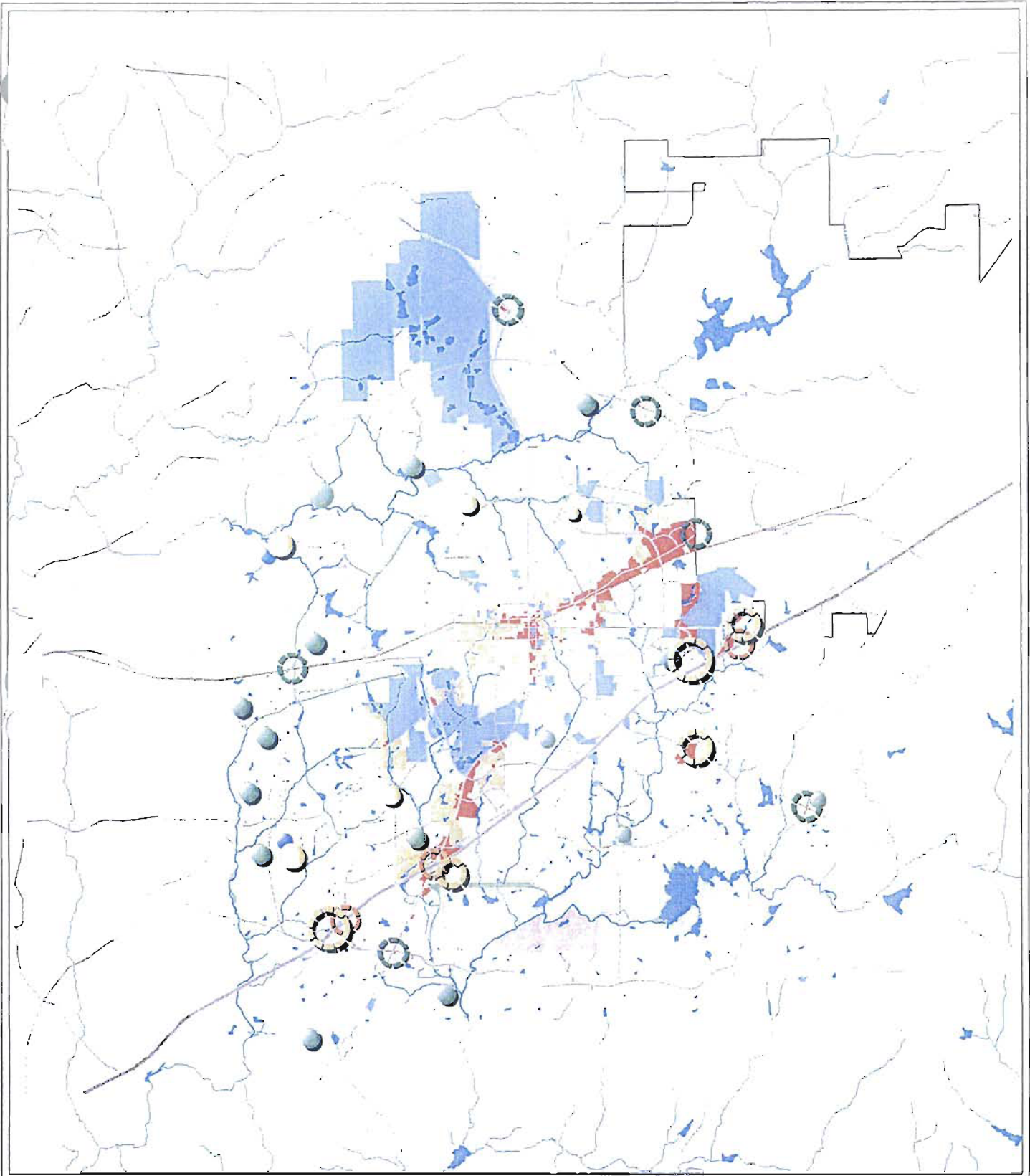


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**APPENDIX E**

**FUTURE LAND USE PLAN**























Future Land Use Plan  
AUBURN, ALABAMA



RIPS

LEGEND

- |  |   |  |
|--|---|--|
|  OFFICE                   |  INDUSTRIAL                    |  MINOR GATEWAY            |
|  COMMERCIAL MIXED USE     |  EXTRACTION                    |  MAJOR GATEWAY            |
|  LARGE LOT RESIDENTIAL    |  UTILITY                       |  PROPOSED ACTIVITY CENTER |
|  RESIDENTIAL              |  PARKS, RECREATION,            |  PROPOSED ACTIVITY CENTER |
|  HIGH DENSITY RESIDENTIAL |  GREENWAY                      |  PROPOSED SCHOOLS         |
|  INSTITUTIONAL/ CIVIC     |  PROPOSED ROADWAY IMPROVEMENTS |  PROPOSED PARKS           |