

# CITY OF TUSCALOOSA PHASE II STORMWATER PROGRAM

PERMIT YEAR SIX ANNUAL REPORT MARCH 2008-MARCH 2009

# City of Tuscaloosa Office of the City Engineer

Walter P. Maddox, Mayor

Joseph A. Robinson, P.E. City Engineer

**Council Members** 

Bobby Howard - District 1 Harrison Taylor - District 2 Cynthia Almond - District 3 Lee Garrison - District 4 Kip Tyner - District 5 Bob Lundell - District 6 William Tinker - District 7

1000 28th Avenue, Tuscaloosa, Al. 35401 (205)349-0240 Fax (205)349-0341 E-mail cchristian@tuscaloosa.com

6/18/09

Alabama Department of Environmental Management Post Office Box 301463 Montgomery, AL 36130-1463 ATTN: Mrs. Vernetta Holdren

RE:

City of Tuscaloosa Phase II Stormwater Permit

**Annual Report** 

Dear Ms. Holdren:

Enclosed please find the Sixth Annual Report for the City of Tuscaloosa Stormwater Phase II NPDES Permit. We have extended our Public Education and Outreach efforts by conducting a comprehensive advertising campaign in the fall of 2008 at a cost of \$27,000. Furthermore, we engaged an outside consultant to conduct BMP seminars for both our employees and local builders and developers. The developers' seminar was especially well-received and included over 100 attendees. In addition to the existing Up-Flo Filter treating runoff from the Riverboat Landing parking lot and vicinity, two new filter units will be installed in the coming months to serve our new Amphitheatre and protect the Black Warrior River.

To avoid repetition of old material, I have only provided documentation in "Appendix F" that pertains to the efforts of the most recent permit year. Therefore, any documents referenced to be in the "Appendix" are contained in previous Appendices and are not duplicated in this volume. Feel free to contact me with any questions or if you should need additional information.

Chad P. Christian, P.E.

Storm Drainage Engineer

**BOB RILEY**GOVERNOR

Alabama Department of Environmental Management

JHN - 3 2009

HONORABLE WALTER MADDOX MAYOR CITY OF TUSCALOOSA P O BOX 2089 TUSCALOOSA AL 35403

RE: Warning Letter

City of Tuscaloosa's Municipal Separate Storm Sewer System

General NPDES Permit Number ALR040021

Tuscaloosa, AL

Tuscaloosa County (125)

Dear Mayor Maddox:

Pursuant to Ala. Code §22-22-9(e) (2006 Rplc. Vol.), City of Tuscaloosa, is hereby notified that the following permit deficiencies were noted during a review conducted by the Department.

Part V. C. 1. requires a Permittee to submit an annual report to the Department by March 10<sup>th</sup>
of each year of the current permit. The annual report has yet to be received by the
Department.

Upon receipt of this letter all necessary measures should immediately be implemented to the maximum extent practicable to prevent/minimize discharges and other pollutants in water used in the regulated activity/process or stormwater run-off from permitted areas.

The Department encourages you to voluntarily consider additional pollution prevention practices/alternatives to assist in complying with applicable regulatory requirements and possible reduction/elimination of pollutant discharges.

Should you have questions concerning this matter, please contact Vernetta Holdren at (334) 394-4365.

Sincerely,

Lee Warren, Chief General Permit/MS4 Section

he Varien

NPDES Enforcement Branch

Water Division

File: ENOV/16669

Pc: Chad Christian P.E., Storm Drainage Engineer, City of Tuscaloosa

Vernetta Holdren, ADEM, Enforcement Branch

# **Date Prepared: 6/19/2009**

For questions regarding this report contact: Chad Christian 1000 28th Avenue Tuscaloosa, AL 35401

	Stormwat	er Program Permit Information
1. Permitting Auth	ority: ADEM	
2. Permit Number: Unknown 3. Permit Type: General		
4. Permit Name: To	uscaloosa Small M	S4 Permit
5. Date Issue:	3/10/2003	6. Date Expire: 3/9/2008

	Gen	eral Informat	tion fo	r MS4 Operator		
1. Operator Name:	Walt Ma	addox				
2. Operator Title:	Mayor					
3. Represented Entity:	City of	City of Tuscaloosa				
4. Mailing Address:	1000 28	1000 28th Avenue				
5. Mail City, State, Zip:	Tuscaloosa, AL 35401					
6. Phone Number:						
7. E-Mail Address:						
8. Co-Permitting With:						
9. Population: 80,000	<u> </u>	Households:	0	Area (sq mi): 0		
10. Official Website:	¥2					

	General Information for Primary Contact Person
1. Name:	Chad Christian
2. Title:	Storm Drainage Engineer
3. Phone Number	(205) 349-0240
4. E-Mail Address:	

General Information for Secondary Contact Person		
1. Name:		
2. Title:		
3. Phone Number		
4. E-Mail Address:		

#### **Public Education and Outreach**

#### **Descriptive Text:**

To satisfy this minimum control measure, the operator of a regulated small MS4 needs to:

- 1. 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 local waterbodies and the steps that can be taken to reduce storm water pollution; and
- 2. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

An informed and knowledgeable community is crucial to the success of a storm water management program since it helps to ensure the following:

- 1. Greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important. Public support is particularly beneficial when operators of small MS4s attempt to institute new funding initiatives for the program or seek volunteers to help implement the program; and
- 2. Greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters.

# Number of BMPs associated with control measure:

#### **Important Dates:**

Earliest Start Date: 3/10/2003

End Date:

3/10/2007

#### Details of BMPs and Work Performed for Them

#### Advertise Stormwater Hotline

Responsible Party: Unknown, Unknown

Start Date: 3/10/2003 End Date: 3/10/2004

Permits Years during which activities are scheduled:

Year 1 X

Year 2

Year 3

Year 4

Year 5

Name of Separate Implementing Entity:

Unknown

**BMP** Description:

Advertise the Stormwater Hotline once established. This will promote citizen interest and participation in the stormwater management plan and establish a direct link from the community and stakeholders to the program.

Has Goal Been Accomplished: YES

#### Work Performed

Date: 3/11/2005 Responsible Party: Chad Christian, Storm Drainage Engineer

3rd Year Distribution of Phase II Brochure

Approximately 500 additional copies of existing Phase II brochure distributed during permit year 3 at various small public meetings and speaking engagements. Refer to Appendix B of Permit Year 2 Annual Report for sample copy.

Date: 3/11/2006

Responsible Party:

4th Year Advertisement of Hotline

Distributed Countywide brochure containing Stormwater Hotline information to 77,727 households. A copy of the brochure is included in Appendix D.

Date: 8/3/2007

Responsible Party: Chad Christian, Storm Drainage Engineer

5th Year Advertisement of Hotline

The Stormwater Hotline was advertised via the 2007 Stormwater Phase II Media Campaign. A copy of the Council Resoultion and Advertising Plan are included in the Appendix.

Date: 7/28/2008

Responsible Party: Chad Christian, Storm Drainage Engineer

6th Year Advertisement of Hotline

The Stormwater Hotline was advertised via the 2008 Stormwater Phase II Media Campaign. A copy of the Council Resoultion and Advertising Plan are included in the Appendix.

Date: 3/11/2004

Responsible Party: Chad Christian, Storm Drainage Engineer

Continued Distribution of Phase II Brochure

Approximately 1000 additional copies of existing Phase II brochure distributed during permit year 2 at various small public meetings and speaking engagements. Refer to Appendix B of Permit Year 2 Annual Report for sample copy.

Date: 7/2/2003

Responsible Party: Chad Christian, Unknown

Started Distribution of Phase II Brochure

Began distribution of Tuscaloosa stormwater brochure with contact information and telephone number. Approximately 1000 copies distributed to date at numerous small public meetings and speaking engagements as well as the major presentations listed.

#### Conduct Public Education

Responsible Party: Unknown, Unknown

Start Date: 3/10/2003

End Date: 3/10/2004

Permits Years during which activities are scheduled:

Year 1 X

Year 2 X

Year 3 X

Year 4 X

Year 5

Name of Separate Implementing Entity:

Unknown

BMP Description:

Speak at seminars and public meetings to raise awareness of the City's Phase II program and begin education of the public concerning BMP's. Distribute brochures and other educational materials.

Has Goal Been Accomplished: NO

#### Work Performed

Date: 3/9/2005

Responsible Party:

"Our Great Lake" Media Campaign Initiated

A multiyear media campaign has been funded during Permit Year Two to raise public awareness about watershed issues and to protect Lake Tuscaloosa, our local drinking water source. The campaign has entailed radio, newspaper, and billboard advertisement and watershed signs within the Lake Tuscaloosa Watershed. In addition, the website www.ourgreatlake.org was established. Refer to Appendix B for details of this campaign.

Date: 8/3/2007

Responsible Party: Chad Christian, Storm Drainage Engineer

2007 Stormwater Media Campaign

Public Education was achieved via the 2007 Stormwater Phase II Media Campaign. A copy of the Council Resoultion and Advertising Plan are included in the Appendix.

Date: 7/28/2008

Responsible Party: Chad Christian, Storm Drainage Engineer

2008 Stormwater Media Campaign

Public Education was achieved via the 2007 Stormwater Phase II Media Campaign. A copy of the Council Resoultion and Advertising Plan are included in the Appendix.

Date: 3/11/2005

Responsible Party: Chad Christian, Storm Drainage Engineer

Continue "Our Great Lake" Media Campaign

A multiyear media campaign was been funded during Permit Year Two to raise public awareness about watershed issues and to protect Lake Tuscaloosa, our local drinking water source. The campaign has entailed radio, newspaper, and billboard advertisement and watershed signs within the Lake Tuscaloosa Watershed. In addition, the website www.ourgreatlake.org was established. Refer to Appendix B of Permit Year Two Annual Report for details of this campaign. This campaign continued through Permit Year Three and is still active for upcoming Permit Year Four.

Date: 3/11/2005

Responsible Party: Chad Christian, Storm Drainage Engineer

Continue Stormwater Media Campaign

An \$18,000 "Stormwater Media Campaign" contract was authorized by the Tuscaloosa City Council on 9/23/04. This contract led to the creation and running of stormwater education print, radio, and television advertisement. This contract was completed in Permit Year 3. Please refer to Appendix B of the Permit Year Two Annual Report for examples and details of this campaign. Also please refer to Appendix C of this report for details of the ads run during Permit Year Three. A new larger campaign will be initiated in Permit Year Four to increase media exposure.

Date: 4/22/2008

Responsible Party: Chad Christian, Storm Drainage Engineer

**Erosion and Sediment Control Workshops** 

Michael Mullen was retained by the City of Tuscaloosa to develop training materials and conduct multiple training seminars for local citizens, developers, builders, City employees and interested citizens. A copy of the Council Resolution and Training Proposal is included in the Appendix.

Date: 10/10/2003

Responsible Party: Bennett Bearden, Unknown

Legal Aspects of Phase II Speech

Speech conducted and paper presented to ABICLE "What Every Real Estate Lawyer Needs to Know"

Conference covering all legal aspects of the EPA Phase II Program as it relates to affected municipalities. Date: 9/23/2004 Responsible Party: Chad Christian, Storm Drainage Engineer Media Campaign Initiated An \$18,000 "Stormwater Media Campaign" contract was authorized by the Tuscaloosa City Council on 9/23/04. This contract has led to the creation and running of stormwater education print, radio, and television advertisement. Please refer to Appendix B for examples and details of this campaign. Date: 8/27/2003 Responsible Party: Chad Christian, Unknown NEMO Presentation Gave NEMO Presentation to Alabama Genernal Contractors Seminar "Employee Training for Inspecting BMPs". Copy of meeting notice included in Appendix. Date: 6/22/2005 Responsible Party: Chad Christian, Storm Drainage Engineer Presentation at Weeks Bay Nonpoint Pollution Seminar A presentation detailing the City of Tuscaloosa's Stormwater Phase II compliance program was given to the 2005 Weeks Bay Nonpoint Source Pollution and Stormwater Workshop at Weeks Bay National Estaurine Reserve. A copy of the program agenda is included in Appendix C. Date: 5/10/2006 Responsible Party: Produce and Distribute Countywide Brochure A joint funding agreement was executed with Tuscaloosa County and the City of Northport to produce and distribute an educational brochure to every household within the County. A total of 77.727 brochures were mailed out in January and February 2007. A copy of the brochure is included in Appendix D. Date: 3/2/2004 Responsible Party: Joe Robinson, Unknown Speech to Local Realtor's Meeting Delivered talk to Tuscaloosa Realtor's group and distributed ordinance and brochures. Date: 6/25/2003 Responsible Party: Chad Christian, Unknown Tuscaloosa Phase II Presentation Delivered Model Community presentation on details of the City of Tuscaloosa Phase II Program. Copy of meeting notice included in Appendix. Date: 2/11/2004 Responsible Party: Chad Christian, Unknown WaterQuest Presentation Conducted presentation on the Tuscaloosa Phase II Program at WaterQuest Nonpoint Source Watershed Forum and distributed ordinance, brochures, legal paper, and outfall mapping requirements. Copy of meeting notice included in Appendix. Develop Educational Resources Responsible Party: Unknown, Unknown Start Date: 3/10/2003 End Date: 3/10/2004 Permits Years during which activities are scheduled: Year 1 X Year 2 Year 3 Year 4 Year 5 Name of Separate Implementing Entity:

Unknown

BMP Description:

Develop or collect existing brochures, fact sheets, print advertisements, radio and television media, and other educational materials to build a stormwater toolbox. Identify volunteer educators to be used for public education programs.

Has Goal Been Accomplished: YES

Date: 10/10/2003 Respon

Responsible Party: Bennett Bearden, Unknown

Created Educational Paper on Legal Aspects of Phase II

Paper written for educational effort covering the legal aspects of the Phase II program. Presented originally to real estate seminar and subsequently distibuted at WaterQuest 2004. Copy included in Appendix B of Permit Year Two Annual Report.

Date: 7/2/2003

Responsible Party: Chad Christian, Unknown

Created Tuscaloosa Phase II Brochure

Printed first run of City of Tuscaloosa Stormwater brochures. Brochure was created based on an EPA example brochure. Sample copy included in Appendix B of Permit Year Two Annual Report.

Date: 4/22/2008

Responsible Party: Chad Christian, Storm Drainage Engineer

**Erosion and Sediment Control Workshops** 

Michael Mullen was retained by the City of Tuscaloosa to develop training materials and conduct multiple training seminars for local citizens, developers, builders, City employees and interested citizens. A copy of the Council Resolution and Training Proposal is included in the Appendix.

Date

Responsible Party: Joe Robinson/Chad Christian, Unknown

Identified Volunteer Educators

Joe Robinson and Chad Christian trained as NEMO trainers.

Date:

Responsible Party: Chad Christian, Unknown

Started Stormwater Toolbox

Collected numerous fact sheets and materials for use in education programs. Access gained to Phase II print and television media through the ADEM Office of Education and Outreach.

#### **Expand Educational Resources**

Responsible Party: Unknown, Unknown

Start Date: 3/10/2005

End Date: 3/10/2006

Permits Years during which activities are scheduled:

Year 1

Year 2

Year 3 X

Year 4

Year 5

Name of Separate Implementing Entity:

Unknown

BMP Description:

Develop a school curricula to educate students about stormwater issues. Create an informational website describing the City of Tuscaloosa Stormwater Management Plan.

Has Goal Been Accomplished: YES

#### Work Performed

Date: 9/23/2004

Responsible Party: Chad Christian, Storm Drainage Engineer

Developed Additional Print, Radio and TV Ads and Logos

New logos and a series of new radio, print, and television ads were developed as part of a graphic design and media campaign contract with Southern Digital Design. Some ads were based on materials previously obtained from the ADEM OEO and some work was designed specifically for the City of Tuscaloosa. One major television ad was used with the permission of Salt Lake County, Utah, who originated the ad. Refer to Appendix B of Permit Year Two Annual Report for examples.

Date: 4/22/2008

Responsible Party: Chad Christian, Storm Drainage Engineer

Erosion and Sediment Control Workshops

Michael Mullen was retained by the City of Tuscaloosa to develop training materials and conduct multiple training seminars for local citizens, developers, builders, City employees and interested citizens. A copy of the Council Resolution and Training Proposal is included in the Appendix.

Date: 6/1/2004

Responsible Party: Chad Christian, Storm Drainage Engineer

Obtained Grade School Educational Materials

# Public Participation/Involvement

#### Descriptive Text:

To satisfy this minimum control measure, the operator of a regulated small MS4 must:

- 1. Comply with applicable State, Tribal, and local public notice requirements: and
- 2. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

EPA believes that the public can provide valuable input and assistance to a regulated small MS4's municipal storm water management program and, therefore, suggests that the public be given opportunities to play an active role in both the development and implementation of the program. An active and involved community is crucial to the success of a storm water management program because it allows for:

- 1. Broader public support since citizens who participate in the development and decision making process are partially responsible for the program and, therefore, may be less likely to raise legal challenges to the program and more likely to take an active role in its implementation;
- 2. Shorter implementation schedules due to fewer obstacles in the form of public and legal challenges and increased sources in the form of citizen volunteers;
- 3. A broader base of expertise and economic benefits since the community can be a valuable, and free, intellectual resource; and
- 4. A conduit to other programs as citizens involved in the storm water program development process provide important cross-connections and relationships with other community and government programs. This benefit is particularly valuable when trying to implement a storm water program on a watershed basis, as encouraged by EPA.

Number of BMPs associated with control measure:

#### Important Dates:

Earliest Start Date: 3/10/2003

End Date:

3/10/2008

#### Details of BMPs and Work Performed for Them Community Clean-Ups Responsible Party: Unknown, Unknown Start Date: 3/9/2007 End Date: 3/10/2008 Permits Years during which activities are scheduled: Year 1 Year 2 Year 3 Year 4 Year 5 X Name of Separate Implementing Entity: Unknown BMP Description: Plan and schedule community clean-ups for ordinary citizens to gain hands-on experience while cleaning stream segments of trash and debris. Coordinate through the Citizen Panel. Has Goal Been Accomplished: NO Work Performed Date: 6/5/2009 Responsible Party: 1st Annual Lake Tuscaloosa Clean Up The 1st Annual Lake Tuscaloosa Cleanup Day was held on June 6th, 2009. Over 12,000 pounds of debris was removed from the lake. A volunteer and debris removal summary sheet is included in the Appendix. Date: 3/11/2007 Responsible Party: Chad Christian, Storm Drainage Engineer Amend NOI to Move Goal to Permit Year Five We would like to move this Goal to Permit Year Five and coordinate Cleanups through TDOT rather than a Citizen Panel. Date: 3/10/2008 Responsible Party: Chad Christian, Storm Drainage Engineer Amend NOI to Move Goal to Permit Year Six We would like to move this Goal to Permit Year Six and coordinate Cleanups through the new Office of City Engineer rather than TDOT. Establish Citizen Volunteer Organization Responsible Party: Unknown, Unknown Start Date: 3/10/2003 End Date: 3/10/2004 Permits Years during which activities are scheduled: Year 1 Year 2 Year 3 X Year 4 Year 5 Name of Separate Implementing Entity: Unknown BMP Description: Create a citizen group to provide input from various viewpoints concerning storm water management policies and BMPs. Use the group to assist with water quality monitoring and location of outfalls, identifying illicit discharges, and stenciling storm drains. Has Goal Been Accomplished: NO Work Performed Date: 3/8/2005 Responsible Party: Chad Christian, Unknown Amend NOI to Move Goal to Permit Year Three We have not accomplished this task and wish to move this goal to Permit Year Three. Date: 3/11/2006 Responsible Party: Chad Christian, Storm Drainage Engineer

Amend NOI to Remove Goal

We have not gained traction with this effort and believe that focusing on broad advertisement of the Stormwater Hotline and expanding the Public Awareness Media Campaign will achieve acceptable Public Participation and Involvement.

#### Establish Citizen Watch Groups

Responsible Party: Unknown, Unknown

Start Date: 3/10/2006 End Date: 3/10/2007

Permits Years during which activities are scheduled:

Year 1

Year 2

Year 3

Year 4 X

Year 5

Name of Separate Implementing Entity:

Unknown

BMP Description:

Establish citizen watch groups and/or work with existing groups to monitor watersheds for potential and existing impacts to water quality.

Has Goal Been Accomplished: NO

#### ... Work Performed

Date: 3/9/2008

Responsible Party:

Amend NOI to Move Goal to Permit Year Six

We have established working relationships with active local watershed groups. We will form a broader citizen-based group as we continue our Outreach efforts.

#### **Finalize Citizen Panel Recommendations**

Responsible Party: Unknown, Unknown

Start Date: 3/10/2004

End Date: 3/10/2005

Permits Years during which activities are scheduled:

Year 1

Year 2

Year 3 X

Year 4

Year 5

Name of Separate Implementing Entity:

Unknown

**BMP** Description:

Compile the final recommendations of the Citizen Panel and publish the results. Make copies of the report freely available to the citizens.

Has Goal Been Accomplished: NO

#### Work Performed

Date: 3/8/2005

Responsible Party:

Amend NOI to Move Goal to Permit Year Three

We have not accomplished this task and wish to move this goal to Permit Year Three.

Date: 3/11/2006

Responsible Party: Chad Christian, Storm Drainage Engineer

Amend NOI to Remove Goal

We have not gained traction with this effort and believe that focusing on broad advertisement of the Stormwater Hotline and expanding the Public Awareness Media Campaign will achieve acceptable Public Participation and Involvement.

#### Public Awareness - Radio Media/Television

Responsible Party: Unknown, Unknown

Start Date: 3/10/2004

End Date: 3/10/2005

Permits Years during which activities are scheduled:

Year 1

Year 2 X

Year 3

Year 4

Year 5

Name of Separate Implementing Entity:

Unknown

**BMP** Description:

Radio and television spots promoting personal responsibility for compliance with the stormwater program and/or informing the public about the construction permit process.

Has Goal Been Accomplished: YES

#### Work Performed

Date: 8/3/2007 Responsible Party: Chad Christian, Storm Drainage Engineer

2007 Stormwater Media Campaign

Public Awareness was increased via the 2007 Stormwater Phase II Media Campaign. A copy of the Council Resoultion and Advertising Plan are included in the Appendix.

Date: 7/28/2008 Responsible Party: Chad Christian, Storm Drainage Engineer

2008 Stormwater Media Campaign

Public Awareness was increased via the 2008 Stormwater Phase II Media Campaign. A copy of the Council Resoultion and Advertising Plan are included in the Appendix.

Date: 3/11/2006 Responsible Party: Chad Christian, Storm Drainage Engineer

Continue Stormwater Media Campaign

An \$18,000 "Stormwater Media Campaign" contract was authorized by the Tuscaloosa City Council on 9/23/04. This contract led to the creation and running of stormwater education print, radio, and television advertisement. This contract was completed in Permit Year 3. Please refer to Appendix B of the Permit Year Two Annual Report for examples and details of this campaign. Also please refer to Appendix C of this report for details of the ads run during Permit Year Three. A new larger campaign will be initiated in Permit Year Four to increase media exposure.

Date: 9/23/2004 Responsible Party: Chad Christian, Storm Drainage Engineer

Media Campaign Initiated

An \$18,000 "Stormwater Media Campaign" contract was authorized by the Tuscaloosa City Council on 9/23/04. This contract has led to the creation and running of stormwater education print, radio, and television advertisement. Please refer to Appendix B for examples and details of this campaign.

#### **Public Meetings - Print Media**

Responsible Party: Unknown, Unknown

Start Date: 3/10/2003 End Date: 3/10/2004

Permits Years during which activities are scheduled:

Year 1 Year 2 Year 3 X Year 4 Year 5

Name of Separate Implementing Entity:

Unknown

BMP Description:

Notify citizens of public meetings in several different print media.

Has Goal Been Accomplished: NO

#### . Work Performed

Date: 3/8/2005 Responsible Party: Chad Christian, Unknown

Amend NOI to Move Goal to Permit Year Three

We have not accomplished this task and wish to move this goal to Permit Year Three.

Date: 3/11/2006 Responsible Party: Chad Christian, Storm Drainage Engineer

Amend NOI to Remove Goal

We have not gained traction with this effort and believe that focusing on broad advertisement of the Stormwater Hotline and expanding the Public Awareness Media Campaign will achieve acceptable

Public Participation and Involvement.

# Illicit Discharge Detection and Elimination

#### **Descriptive Text:**

Recognizing the adverse effects illicit discharges can have on receiving waters, the final rule requires an operator of a regulated small MS4 to develop, implement and enforce an illicit discharge detection and elimination program. This program must include the following:

- A storm sewer system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those outfalls;
- 2. Through an ordinance, or other regulatory mechanism, a prohibition (to the extent allowable under State, Tribal, or local law) on non-storm water discharges into the MS4, and appropriate enforcement procedures and actions;
- 3. A plan to detect and address non-storm water discharges, including illegal dumping, into the MS4;
- 4. The education of public employees, businesses, and the general public about the hazards associated with illegal discharges and improper disposal of waste; and
- 5. The determination of appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Discharges from MS4s often include wastes and wastewater from non-storm water sources. A study conducted in 1987 in Sacramento, California, found that almost one-half of the water discharged from a local MS4 was not directly attributable to precipitation runoff. A significant portion of these dry weather flows were from illicit and/or inappropriate discharges and connections to the MS4. Illicit discharges enter the system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, or paint or used oil dumped directly into a drain). The result is untreated discharges that contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria to receiving waterbodies. Pollutant levels from these illicit discharges have been shown in EPA studies to be high enough to significantly degrade receiving water quality and threaten aquatic, wildlife, and human health.

#### Number of BMPs associated with control measure:

#### Important Dates:

Earliest Start Date: 3/10/2003

End Date:

3/10/2008

# Details of BMPs and Work Performed for Them Illicit Discharge Detection and Elimination Responsible Party: Unknown, Unknown Start Date: 3/10/2004 End Date: 3/10/2007 Permits Years during which activities are scheduled: Year 1 Year 2 X Year 3 X Year 4 X Year 5 Name of Separate Implementing Entity: Unknown BMP Description:

Has Goal Been Accomplished: NO

					_		
<b>3</b> 1	57	-	-		97	200	7.7
		* 1724	Da	*** *	2		, A
	401		-		311	112	5.

Utilizing the System Map and Illicit Discharge Information Management System, begin systematic inspection of outfall lines to identify potential problems. After identifying actual illicit connections, take

Date: 3/10/2005 Responsible Party: Chad Christian, Storm Drainage Engineer

Continued Inspection and Enforcement
Inspection and Enforcement efforts were increased during Permit Year Three.

Date: 3/11/2006 Responsible Party:

Continued Inspection and Enforcement Increased

steps to eliminate them and report the action taken and results.

Inspection and enforcement efforts were ramped up again in Permit Year Four. At this point most builders and contractors are aware of BMP requirements and are actively complying.

Date: 3/11/2004 Responsible Party: Chad Christian, Storm Drainage Engineer

Inspection and Enforcement Activities Increased

A core group of TDOT employees were trained during Permit Year Two to increase our inspection and enforcement activities. Subdivision, homebuilding, and site development activities are monitored and the correction of BMP deficiencies is required as identified. Tips or complaints recieved through the stormwater hotline are acted on accordingly. We plan to train additional employees and continue to ramp up inspection and enforcement activity during Permit Year Three.

Date: 3/10/2007 Responsible Party:

Inspection and Enforcement Increased

Inspection and enforcement efforts were ramped up again in Permit Year Five. Unfortunately, we experienced numerous lapses in compliance by local developers and builders. We are currently revamping Education efforts for City staff and the private sector and are making changes to the City code to make enforcement easier, more punitive, and more rapid.

#### Illicit Discharge Employee Training

Responsible Party: Unknown, Unknown

Start Date: 3/10/2003 End Date: 3/10/2008

Permits Years during which activities are scheduled:

Year 1 X Year 2 X Year 3 X Year 4 X Year 5 X

Name of Separate Implementing Entity:

Unknown

BMP Description:

Design and administer a training program for employees to teach them to recognize and document potential illicit discharges.

Has Goal Been Accomplished: NO

#### Work Performed

Date: 1/3/2005 Responsible Party: Chad Christian, Storm Drainage Engineer

Initiated Employee Training

A core group of employees has been trained and consequently our inspection and enforcement activities have been ramped up during Permit Year Two. Additional employees were trained during Permit Year Three and Four to expand these efforts. We will continue this training throughout Permit Year Five and therefore need to amend our NOI to reflect this continued training activity. A need for more technical training as well as training of members of the private sector has become evident. To better achieve this goal we will hire an outside consultant. A copy of a the consultant's proposal is included in the Appendix.

#### Implement Illicit Discharge Tracking System

Responsible Party: Unknown, Unknown

Start Date: 3/10/2003 End Date: 3/10/2004

Permits Years during which activities are scheduled:

Year 1 X Year 2 Year 3 Year 4 Year 5

Name of Separate Implementing Entity:

Unknown

BMP Description:

Implement an information management system to gather and document all information concerning illicit discharge detention and elimination. Summarize results including outfalls screened, number of illicit discharges discovered through screening or complaints, and illicit discharges resolved.

Has Goal Been Accomplished: YES

#### Work Performed

Date: 1/1/2003 Responsible Party: Chad Christian, Unknown

ASIST Software Implemented

ASIST Software Suite purchased and implemented. Description of software capabilities included in Appendix of Year One Annual Report.

#### Ordinance/Regulatory Mechanism Evaluation

Responsible Party: Unknown, Unknown

Start Date: 3/10/2003 End Date: 3/10/2006

Permits Years during which activities are scheduled:

Year 1 X Year 2 X Year 3 X Year 4 Year 5

Name of Separate Implementing Entity:

Unknown

BMP Description:

March 2004

Evaluate existing ordinances/regulations

Prepare draft of revised ordinances/regulations

March 2005

Gather stakeholder comments and other input

March 2006

Revise and enact new ordinances and regulations

Has Goal Been Accomplished: YES

#### Work Performed

Date: 2/3/2004 Responsible Party: Tuscaloosa City Council, Unknown

#### Ordinance Adopted

A new ordinance was written with input from various stakeholder groups. It evolved over 9 drafts and assimilated concerns of the stakeholders. The final version of the Tuscaloosa Phase II ordinance was adopted by the City Council on February 3, 2004. A copy of the ordinance as adopted is included in the Appendix of Permit Year One Annual Report.

#### Recycling Program

Responsible Party: Unknown, Unknown

Start Date: 3/10/2003 End Date: 3/10/2005

Permits Years during which activities are scheduled:

Year 1 X Year 2 X Year 3 Year 4 Year 5

Name of Separate Implementing Entity:

Unknown

BMP Description:

Initiate or publicize an existing recycling program to collect commonly dumped wastes such as antifreeze, motor oil, paint, and pesticides.

Has Goal Been Accomplished: YES

#### Work Performed

Date: 3/11/2004 Responsible Party:

Continued Growth of Recycling Program

The Environmental Services Department of the City of Tuscaloosa has expanded the Recycling Program during Permit Year Two as follows:

The program currently serves 6000 residences and will add another 2000 in April 2005. To promote recycling, three different radio and television ads are run throughout the year and an educational brochure is distributed. Additional outreach is performed by speaking at public meetings and an educational program is presented to grades K-12 in the local schools. Please refer to Appendix B for additional details and sample educational materials.

Date: Responsible Party: Environmental Services, Unknown

Recycling Program Expanded

The City of Tuscaloosa Curbside Recycling Program has been expanded to now cover 20 neighborhoods and serve 2400 households. There are also 8 fixed drop-off sites and 1 major industry participating with on-site recycling collection. In the forthcoming permit year this program will be expanded to include 20+ additional neighborhoods and serve 2000+ additional households.

#### Sewer System Map

Responsible Party: Unknown, Unknown

Start Date: 3/10/2003 End Date: 12/9/2006

Permits Years during which activities are scheduled:

Year 1 X Year 2 X Year 3 X Year 4 X Year 5

Name of Separate Implementing Entity:

Unknown

BMP Description:

20% of system mapped March 2004

50% of system mapped March 2005

80% of system mapped March 2006

100% of system mapped November 2006

Has Goal Been Accomplished: NO

#### Work Performed

Date: 3/10/2007 Responsible Party: Chad Christian, Storm Drainage Engineer

Additional Mapping in Permit Year Five

Additional GPS outfall mapping was performed in Permit Year Five and is reflected in the Electronic Outfall Map reviewed during the Compliance Visit on 7/12/2007. The newly formed Office of City Engineer will complete our outfall mapping with the City surveying crew.

Date: 3/11/2006 Responsible Party:

Additional Mapping in Permit Year Four

Additional GPS outfall mapping was performed in Permit Year Four and is reflected in the System Map Submitted at the end of 2006. We will continue mapping in Permit Year Five to gather all Outfall data as required.

Date: 8/5/2003 Responsible Party: Chad Christian, Unknown

Began Outfall Mapping

Tuscaloosa City Council authorizes contract with local engineering firm to undertake GPS mapping of outfalls. Copy of Council action and description of data collected for each outfall is included in the Appendix. 275 outfalls have been surveyed to date; this represents approximately 20% of the total number of outfalls that will eventually be identified. The contract will be amended to continue in the 2004 permit year.

Date: 3/11/2004 Responsible Party: Chad Christian, Storm Drainage Engineer

Continued System Mapping

The existing Engineering Contract was extended to continue mapping efforts in Permit Year Two and beyond. During Permit Year Three we plan to generate the first map for showing outfall locations.

Date: 3/10/2005 Responsible Party: Chad Christian, Storm Drainage Engineer

Further System Mapping

During Permit Year Three mapping was continued. For Permit Year Four we plan to add GIS functionality for our outfall maps.

Date: 1/1/2008 Responsible Party:

New Surveying Equipment Purchased in Permit Year Six

Some additional GPS outfall mapping was performed in Permit Year Six and a new survey-quality GPS unit was purchased to enhance these efforts. The Office of the City Engineer will complete our outfall mapping with the City surveying crew.

## **Construction Site Runoff Control**

#### **Descriptive Text:**

The Phase II Final Rule requires an operator of a regulated small MS4 to develop, implement, and enforce a program to reduce pollutants in storm water runoff to their MS4 from construction activities that result in a land disturbance of greater than or equal to one acre.

The small MS4 operator is required to:

- 1. Have an ordinance or other regulatory mechanism requiring the implementation of proper erosion and sediment controls, and controls for other wastes, on applicable construction sites;
- 2. Have procedures for site plan review of construction plans that consider potential water quality impacts;
- 3. Have procedures for site inspection and enforcement of control measures;
- 4. Have sanctions to ensure compliance (established in the ordinance or other regulatory mechanism);
- 5. Establish procedures for the receipt and consideration of information submitted by the public; and
- 6. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Polluted storm water runoff from construction sites often flows to MS4s and ultimately is discharged into local rivers and streams. Of the pollutants listed in Table 1, sediment is usually the main pollutant of concern. Sediment runoff rates from construction sites are typically 10 to 20 times greater than those of agricultural lands, and 1,000 to 2,000 times greater than those of forest lands. During a short period of time, construction sites can contribute more sediment to streams than can be deposited naturally during several decades. The resulting siltation, and the contribution of other pollutants from construction sites, can cause physical, chemical, and biological harm to our nation's waters. For example, excess sediment can quickly fill rivers and lakes, requiring dredging and destroying aquatic habitats.

Table 1
Pollutants Commonly Discharged From Construction Sites

Sediment
Solid and sanitary wastes
Phosphorous (fertilizer)
Nitrogen (fertilizer)
Pesticides
Oil and grease
Concrete truck washout

#### Number of BMPs associated with control measure:

2

#### Important Dates:

Earliest Start Date: 7/29/2008

End Date:

12/31/2012

#### Details of BMPs and Work Performed for Them Land Development Permit Jurisdiction Enhanced Responsible Party: Start Date: 7/29/2008 End Date: 12/31/2012 Permits Years during which activities are scheduled: Year 1 Year 2 Year 3 Year 4 Year 5 Name of Separate Implementing Entity: Not Applicable BMP Description: All developments within not only the City Limits but the Police Jurisdiction are now required to obtain a land Development Permit from the Office of the City Engineer. This will enhance our ability to police violations and enforce compliance with stormwater requirements. Has Goal Been Accomplished: YES

Wolf-Parjorned

Statewide Prog	ram Estab	lished				
Responsible Par	rty: Unknow	vn, Unknown				
Start Date:	Start Date: End Date:					
Permits Years d	uring which	activities are sc	heduled:		<u> </u>	
•	Year 1	Year 2	Year 3	Year 4	Year 5	
Name of Separa Unknown	ite Impleme	enting Entity:	· · · · · · · · · · · · · · · · · · ·	,		
BMP Description ADEM Administroprogram consisted	rative Code				ion storm water regulate	ory
Has Goal Been	Accomplish	ed: YES				

Work Performed

## Post-Construction Runoff Control

#### **Descriptive Text:**

The Phase II Final Rule requires an operator of a regulated small MS4 to develop, implement, and enforce a program to reduce pollutants in post-construction runoff to their MS4 from new development and redevelopment projects that result in the land disturbance of greater than or equal to 1 acre. The small MS4 operator is required to:

- 1. Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs);
- 2. Have an ordinance or other regulatory mechanism requiring the implementation of post-construction runoff controls to the extent allowable under State, Tribal or local law,
- 3. Ensure adequate long-term operation and maintenance of controls;
- 4. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Post-construction storm water management in areas undergoing new development or redevelopment is necessary because runoff from these areas has been shown to significantly effect receiving waterbodies. Many studies indicate that prior planning and design for the minimization of pollutants in post-construction storm water discharges is the most cost-effective approach to storm water quality management.

There are generally two forms of substantial impacts of post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in storm water runoff. As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides. heavy metals, and nutrients (e.g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such as lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans. The second kind of post-construction runoff impact occurs by increasing the quantity of water delivered to the waterbody during storms. Increased impervious surfaces interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, water is collected from surfaces such as asphalt and concrete and routed to drainage systems where large volumes of runoff quickly flow to the nearest receiving water. The effects of this process include streambank scouring and downstream flooding, which often lead to a loss of aquatic life and damage to property.

#### Number of BMPs associated with control measure:

#### Important Dates:

Earliest Start Date: 3/10/2003

End Date:

12/30/2012

#### Details of BMPs and Work Performed for Them

#### Identification of BMP's

Responsible Party: Unknown, Unknown

Start Date: 3/10/2003 End Date: 3/10/2004

Permits Years during which activities are scheduled:

Year 1 X

Year 2

Year 3

Year 4

Year 5

Name of Separate Implementing Entity:

Unknown

BMP Description:

Identify and catalog a mix of effective BMPs tailored to the geography and rainfall patterns of Tuscaloosa. Utilize existing manuals or guidance available from regulatory bodies when possible.

Has Goal Been Accomplished: YES

#### Work Performed

Date: 2/3/2004 Responsible Party: Tuscaloosa City Council, Unknown

**BMP Manual Adopted** 

Tuscaloosa City Council adopted Alabama Handbook for Erosion Control, Sediment Control, and Storm Water Management on Construction Sites and Urban Areas.

#### Land Development Permit Jurisdiction Enhanced

Responsible Party:

Start Date: 7/29/2008

End Date: 12/30/2012

Permits Years during which activities are scheduled:

Year 1

Year 2

Year 3

Year 4

Year 5

Name of Separate Implementing Entity:

Not Applicable

BMP Description:

All developments within not only the City Limits but the Police Jurisdiction are now required to obtain a Land Development Permit from the Office of the City Engineer. This will enhance our ability to police violations and enforce compliance with stormwater requirements.

Has Goal Been Accomplished: YES

#### Work Performed

#### Ordinance Evaluation

Responsible Party: Unknown, Unknown

Start Date: 3/10/2004

End Date: 3/10/2006

Permits Years during which activities are scheduled:

Year 1 X

Year 2 X

Year 3 X

Year 4

Year 5

Name of Separate Implementing Entity:

Unknown

BMP Description:

March 2004

Evaluate existing ordinances/regulations

Prepare draft of revised ordinances/regulations

March 2005

Gather stakeholder comments and other input

March 2006

Revise and enact new ordinances and regulations

Has Goal Been Accomplished: YES

#### Work Performed :

Date: 2/3/2004

Responsible Party: Tuscaloosa City Council, Unknown

Ordinance Adopted

A new ordinance was written with input from various stakeholder groups. It evolved over 9 drafts and assimilated concerns of the stakeholders. The final version of the Tuscaloosa Phase II ordinance was adopted by the City Council on February 3, 2004. A copy of the ordinance as adopted is included in the Appendix.

#### Publication of BMP's

Responsible Party: Unknown, Unknown

Start Date: 3/10/2004

End Date: 3/10/2005

Permits Years during which activities are scheduled:

Year 1

Year 2 X

Year 3

Year 4

Year 5

Name of Separate Implementing Entity:

Unknown

**BMP** Description:

Distribute the previously developed BMP Manual to developers, municipal staff and interested citizens.

Has Goal Been Accomplished: YES

#### Work Performed

Date: 1/3/2005

Responsible Party: Chad Christian, Storm Drainage Engineer

Adopted BMP Manual Made Available

Two hard copies of the adopted BMP manual (Alabama Handbook) were made available for public inspection and use at the Tuscaloosa Department of Transportation office.

#### Statewide Program Established

Responsible Party: Unknown, Unknown

Start Date:

End Date:

Permits Years during which activities are scheduled:

Year 1

Year 2

Year 3

Year 4

Year 5

Name of Separate Implementing Entity:

Unknown

BMP Description:

ADEM Administrative Code Ch. 335-6-12 implements a State-wide construction storm water regulatory program consistent with NPDES requirements for post-construction activities.

Has Goal Been Accomplished: YES

Work Performed

## Pollution Prevention/Good Housekeeping

#### Descriptive Text:

Recognizing the benefits of pollution prevention practices, the rule requires an operator of a regulated small MS4 to:

- 1. Develop and implement an operation and maintenance program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations into the storm sewer system;
- 2. Include employee training on how to incorporate pollution prevention/good housekeeping techniques into municipal operations such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. To minimize duplication of effort and conserve resources, the MS4 operator can use training materials that are available from EPA, their State or Tribe, or relevant organizations;
- 3. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

The Pollution Prevention/Good Housekeeping for municipal operations minimum control measure is a key element of the small MS4 storm water management program. This measure requires the small MS4 operator to examine and subsequently alter their own actions to help ensure a reduction in the amount and type of pollution that: (1) collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways; and (2) results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems. While this measure is meant primarily to improve or protect receiving water quality by altering municipal or facility operations, it also can result in a cost savings for the small MS4 operator, since proper and timely maintenance of storm sewer systems can help avoid repair costs from damage caused by age and neglect.

## Number of BMPs associated with control measure:

#### Important Dates:

Earliest Start Date: 3/10/2003

End Date:

12/30/2012

#### Details of BMPs and Work Performed for Them

#### **Develop Pollution Prevention Plan**

Responsible Party: Unknown, Unknown

Start Date: 3/10/2003 End Date: 3/10/2008

Permits Years during which activities are scheduled:

Year 1 X Year 2 X

Year 3 X

Year 4 X

Year 5 X

Name of Separate Implementing Entity:

Unknown

BMP Description:

Develop a comprehensive Pollution Prevention Plan that identifies the following: BMP's, Management Practices and Maintenance Schedules, Recycling Efforts, Waste Disposal Guidelines, and Areas of Concern.

Has Goal Been Accomplished: NO

#### Work Performed

Date: 2/3/2004 Responsible Party: Chad Christian, Unknown

BMPs Identified

BMP menu identified with the adoption of the Alabama Handbook for Erosion Control, Sediment Control, and Storm Water Management on Construction Sites and Urban Areas.

Date: 1/13/2004 Responsible Party: Natural Resources Subcommittee, Unknown

City of Tuscaloosa Comprehensive Plan Input

The City of Tuscaloosa Comprehensive Plan is being updated currently. A Stormwater/Watershed Task Force was formed from members of the Comprehensive Plan Natural Resources Subcommittee to submit goals and guidelines for inclusion in the new Comprehensive Plan. A summary of the recommendations made is included in the Appendix.

Date: 3/11/2004 Responsible Party: Chad Christian, Storm Drainage Engineer

Continued Development of Plan

An additional street sweeping route has been started to focus on residential neighborhoods. We now have three street sweeping routes in regular implementation. No additional work was done on the plan in Year Six and therefore our NOI needs to be amended to reflect the completion of our Pollution Prevention Plan in Permit Year Seven.

Date: Responsible Party: TDOT/Environmental Services, Unknown

Rough Draft of Plan Initiated

A preliminary plan has been formulated including some of the necessary aspects. A regular schedule has been established for street sweeping activities and the recycling program is now serving 20 neighborhoods.

#### **Employee Training Materials**

Responsible Party: Unknown, Unknown

Start Date: 3/10/2003 End Date: 3/10/2004

Permits Years during which activities are scheduled:

Year 1 X Year 2 Year 3 Year 4 Year 5

Name of Separate Implementing Entity:

Unknown

BMP Description:

Develop and collect training materials to educate staff about pollution prevention and good housekeeping. Some items will need to be specifically tailored to Tuscaloosa while others are available

from EPA and other external sources. Has Goal Been Accomplished: YES

#### Work Performed

Date: 4/22/2008

Responsible Party: Chad Christian, Storm Drainage Engineer

**Erosion and Sediment Control Workshops** 

Michael Mullen was retained by the City of Tuscaloosa to develop training materials and conduct multiple training seminars for local citizens, developers, builders, City employees and interested citizens. A copy of the Council Resolution and Training Proposal is included in the Appendix.

Date:

Responsible Party: Chad Christian, Unknown

Training Materials Collected

Over the first permit year numerous educational materials have been collected from EPA, ADEM, and NEMO that will be utilized in the forthcoming employee training.

#### Implement Information Management System

Responsible Party: Unknown, Unknown

Start Date: 3/10/2003

End Date: 3/10/2004

Permits Years during which activities are scheduled:

Year 1 X

Year 2

Year 3

Year 4

Year 5

Name of Separate Implementing Entity:

Unknown

BMP Description:

Implement an information management system to track the inventory of stormwater facilities and outfalls. Use system to schedule and perform inspections and document and report any actions taken.

Has Goal Been Accomplished: YES

#### Work Performed

Date: 1/1/2003

Responsible Party: Chad Christian, Unknown

ASIST Software Implemented

ASIST Software Suite purchased and implemented. Description of software capabilities included in Appendix.

#### Landscaping Ordinance Enacted

Responsible Party:

Start Date: 3/25/2008

End Date: 12/30/2012

Permits Years during which activities are scheduled:

Year 1

Year 2

Year 3

Year 4

Year 5

Name of Separate Implementing Entity:

Not Applicable

BMP Description:

A comprehensive Landscaping Ordinance was enacted to address new development and redevelopment. The landscaped areas of any development are now required to be part of the storm drainage system and achieve water quality improvement. A copy of the Landscape Ordinance is included in the Appendix.

Has Goal Been Accomplished: YES

Work Performed

#### Pollution Prevention/Housekeeping Effectiveness

Responsible Party: Unknown, Unknown

Start Date: 3/10/2004

End Date: 3/10/2008

Permits Years during which activities are scheduled:

Year 1

Year 2 X

Year 3 X

Year 4 X

Year 5 X

Name of Separate Implementing Entity:

Unknown

BMP Description:

Generate reports that summarize the following: estimate of the quantity of floatables and other pollutants intercepted, list of facilities and stormwater system components maintained, report of overall compliance and explanation of discrepancies.

Has Goal Been Accomplished: NO

#### - Work Performed

#### Train Employees

Responsible Party: Unknown, Unknown

Start Date: 3/10/2004 End Date: 3/10/2008

Permits Years during which activities are scheduled:

Year 1

Year 2 X

Year 3 X

Year 4 X

Year 5 X

Name of Separate Implementing Entity:

Unknown

BMP Description:

Utilizing the Employee Training Toolbox previously created, train staff on pollution prevention and good housekeeping measures.

Has Goal Been Accomplished: NO

#### Work Performed

Date: 3/11/2004

Responsible Party: Chad Christian, Storm Drainage Engineer

Core Group of Employees Trained

A core group of employees has been trained and consequently our inspection and enforcement activities have been ramped up during Permit Year Two. Additional employees were trained during Permit Year Three and Four to expand these efforts. We will continue this training throughout Permit Year Five and therefore need to amend our NOI to reflect this continued training activity. A need for more technical training as well as training of members of the private sector has become evident. To better achieve this goal we will hire an outside consultant. A copy of a the consultant's proposal is included in the Appendix.

Date: 4/22/2008

Responsible Party: Chad Christian, Storm Drainage Engineer

**Erosion and Sediment Control Workshops** 

Michael Mullen was retained by the City of Tuscaloosa to develop training materials and conduct multiple training seminars for local citizens, developers, builders, City employees and interested citizens. A copy of the Council Resolution and Training Proposal is included in the Appendix.



# APPENDIX F

ADOPTED	
APPROVED  City Attorney	Prepared By: GHW  Requested: PROJECTS COMMITTEE  Presentation on: 7/8/> Suspension of Rules: NO
RESO	LUTION
FOR MEDIA CAMPA	MAYOR TO EXECUTE AGREEMENT AIGN, STORMWATER 3-0630)
That the Mayor be, and he is hereby, authorized the Council between the City of Turbesign for a media campaign for Stormw	COUNCIL OF TUSCALOOSA as follows: horized to execute that certain contract now scaloosa and Caldwell Mason Marketing and vater awareness in an amount not to exceed Cents (\$27,000.00), and the City Clerk is
FUNDING REQUIRED:	COUNCIL ACTION
10/07040_3100 10/07040_3100 Buglet = 65,000 AV = 50,000 By: Multiplet - Finance Director	Resolution Ordinance Introduced Passed 2nd Reading Unanimous Failed Tabled Amended Comments:

報

#### 2008 Stormwater Campaign **Broadcast/Print Media Placements**

Total Broadcast Budget:

\$27,000

Campaign Dates: August - November 2008

#### WTBC 1230 Package

\$1150 per month (Aug - Nov) for the following:

(16) Spots Per Week: rotating between 6am - 6pm, M-F

(21) Bonus Spots Per Week: 3 bonus spots rotating 6am - 10pm, Mon - Sun

148 Total Spots

\*Web Banner Ad on wtbc1230.com included in bonus

Total WTBC Package: \$4,600.00

#### WTXT 98.1 Package

\$1,000 per month (Aug - Oct) for the following:

-100 thirty second commercials total to air from 6am-7pm August-October on TXT

-High School Football Scoreboard Sponsorship

-Sponsorship mentions every Friday night from 8pm-12m during the scoreboard August-October

on TXT

Total WTXT Package: \$3,000.00

#### WWPG AM Package

\$1,150 per month (Aug - Nov)

(37) Spots per week, emphasis in Jim Lawson program, 30 minute segment in Jim Lawson Show Total WWPG Package: \$4,600.00

#### WTUG FM Package

\$800 per month (Aug - Nov)

A minimum of (63) commercials per month (6A – 6P) with drive time emphasis

Total of (240) commercials including bonus spots

Total WTUG Package: \$3,200.00

#### **WVUA TV Package**

\$1,150 per month (Sept - Nov) for the following:

(16) local news commercials per month, during 5pm, 6pm and 10pm newscasts.

(1) ROS commercial during prime each night for 2 months / 2 ROS commercials each day \*Additional bonus coverage during all local newscasts and throughout the programming day

Total WVUA Package: \$3,500.00

#### Comcast/Charter Cable Package

\$1,067 per month (Sept - Nov) for the following:

Rotator schedule between major cable networks including FOX News, ESPN2, HGTV, CNN for

\$1,067.00 per month (145 total spots in package, not including bonus coverage)

\*Additional bonus coverage during space available times throughout the cable lineup.

Total Comcast/Charter Package: \$3,200.00

#### Tuscaloosa News Print Advertising

\$1500 per month for 3 months

Total Tuscaloosa News Package: \$4,500.00

Graphic Design Services: \$400.00

CAMPAIGN TOTAL: \$27,000.00



Prepared By: <u>TDB</u>
Requested: <u>OCE/Projects</u>
Presentation on: <u>4/22/08</u>
Suspension of Rules: <u>No</u>

#### RESOLUTION

RESOLUTION AUTHORIZING THE MAYOR TO
EXECUTE AN AGREEMENT WITH MICHAEL WILLAIM MULLEN TO
CONDUCT EROISION AND SEDIMENT CONTROL WORKSHOPS AND
TRAINING
(A08-0312)

#### BE IT RESOLVED BY THE CITY COUNCIL OF TUSCALOOSA as follows:

That the Mayor be, and he is, hereby authorized to execute that certain consulting agreement between the City of Tuscaloosa and, Michael William Mullen to provide consulting and relating services to the City for erosion and sediment control training and in an amount up to and not to exceed \$7,000.00 and to be paid from the outside services budget of the Office of the City Engineer from the Stormwater Phase II budget; by, and as an act for, and on behalf of, the City of Tuscaloosa; and the City Clerk is authorized to attest the same.

FUNDING REQUIRED: Yes No	COUNCIL ACTION
OCE-Outside Services	Resolution Ordinance
Budgeted \$65,000	Introduced 4-22-08
	2 <sup>nd</sup> Reading
	Unanimous
	FailedTabled
By: Der Mike Wright	Amended
Finance Director	Comments:

# Proposal Erosion and Sediment Control Training for Tuscaloosa Area Developers, Contractors and Homebuilders

The purpose of the proposed effort is to provide information and understanding that will enable attendees to more effectively and efficiently control erosion and sediment transport thereby achieving better compliance with construction stormwater permits and improved protection of water quality and aquatic resources.

#### Anticipated Results:

- Workshop participants will leave with a clear understanding that erosion and sediment control involves a process and a system and is not just individual erosion and sediment control Best Management Practices (BMPs)
- Workshop participants have an increased understanding of the importance of organization, planning and management of erosion and sediment control as an integral component of the construction process.
- Workshop participants will learn when in the construction process that different measures must be in place for effective erosion and sediment control.
- Workshop participants will learn the difference between erosion and sediment control and that both erosion control and sediment control must be in place and maintained in order to assure compliance and protection of water quality and aquatic resources.
- Workshop participants will learn how basic BMPs function and thus the what, why and how of BMP selection.
- Workshop participants will learn how to properly locate, configure, install and maintain a variety of BMPs

#### Training Format:

The training will include both classroom and field instruction. The field instruction will reinforce the classroom instruction. The classroom training session will be a 3-hour session that covers:

- A process that should be followed for effective erosion and sediment control for new subdivisions and large construction projects including pre-clearing site evaluation, planning, off-site water management, runoff flow control and largescale sediment control
- Erosion and sediment control management procedures needed to assure quality erosion and sediment control
- The science of erosion and sediment control the technical background needed to understand the difference between erosion control and sediment control and to understand how different BMPs work and where and when they should be used
- Examination of a variety of erosion control BMPs with emphasis on appropriate application and common mistakes or misuse that results in failures

- Examination of a variety of sediment control BMPs with emphasis on appropriate application and common mistakes or misuse that results in failures
- A discussion of how planning, management, proper BMP selection and placement and BMP maintenance work together to create effective erosion and sediment control
- The consequences of failing to do effective erosion and sediment control

The field session will examine several sites in the Tuscaloosa area. The field session will:

- Point out appropriate and effective BMPs
- Point out inappropriate BMPs (selection, placement, construction, alignment) and failing BMPs and suggest alternatives or improvements
- Field questions from participants

In addition to the classroom and field training session, an option will be made available for additional training and advice in the form of "courtesy" inspections. These courtesy inspections would provide an opportunity for further training of city personnel who might attend the training as well as an incentive for those who attend.

The courtesy inspections would work as follows:

- City personnel (inspectors) would visit sites where courtesy inspections were requested and the trainer would do a mock inspection
- Site/project personnel would be present during the courtesy inspection of their site
- Recommendations would be made to the site personnel
- No enforcement action would be taken by the City based on problems discovered as a result of the courtesy inspection so long as work to correct problems commences within 72 hours

Resources Needed for the Proposed Training:

Resources required for the proposed training are detailed in the second page of this proposal. Some items are recommendations only and are separable. These are indicated in the attachment.

The resources/cost section is broken down into presenter expenses and local costs.



# City Of Tuscaloosa Water & Sewer Department Lake Division



3650 Lake Nicol Road Tuscaloosa Alabama 35403 Phone Number (205) 349-0279 Fax Number (205) 759-9880 Ensuring the Resources That Serve Us All

#### **Volunteer Totals**

City of Tuscaloosa Employee's - 2

Environmental Services – 5

Boy Scouts - 11

Bama Docks – 2

PARA - 5

Shelton Students - 3

Almon & Associates - 8

Patton Geologics – 2

Lakes Division - 8

Hearing Construction – 2

Hudson Poole – 2

TTL - 10

UA Students - 3

USGS - 2

Hansel King Docks – 5

Premier Service – 10

Individual Volunteers - 56

#### **TOTAL ALL VOLUNTEERS: 136**

#### **Clean-up Totals**

Debris hauled to landfill from Rock Quarry boat landing by Rumsey Environmental **4040 lbs** 

Debris hauled to landfill from Binion Creek boat landing by Rumsey Environmental 3860 lbs

Debris hauled to landfill from Hansel King barges on lake by Environmental Services

1020 lbs

Debris or material removed from lake that was reused or recycled (Including 200 lbs of separated plastic bottles and aluminum cans)

3320 lbs

Total Removed From Lake! 12,240 lbs!! (6.12 TONS)

Lake Tuscaloosa Cleanup Day

June 6, 2009

Diameter D.

PROTECT. Preserve. Play.

That's an average of 90lbs per person.

Way to make a difference!

Once again thanks to all our Sponsors, Supporters, Volunteers, and Participants! Without you all believing in this and showing up, this would still just be an idea and all this debris would still be in OUR Lake!

APPROVED	Prepared By: Eric Thompson/JPW III
City Attorney	Requested: Planning Commission Presentation on: 02/17/09
	Suspension of Rules: No

ORDINANCE NO.

#### AN ORDINANCE AMENDING THE ZONING ORDINANCE OF TUSCALOOSA AMENDMENT NO. 1182

Amendment to Text of the Zoning Ordinance Pertaining to Article XIX, Landscape and Buffer Requirements Sections 24-250 through 24-264 (A08-0418)

BE IT ORDAINED BY THE CITY COUNCIL OF TUSCALOOSA, that the text of the Zoning Ordinance of Tuscaloosa, adopted by Ordinance No. 1754 on October 3, 1972 be, and the same is hereby, amended as follows:

That Article XIX, Landscape and Buffer Requirements, Sections 24-250 through 24-263 of the Code of Tuscaloosa be amended to add article XIX as follows:

## "Article XIX: Landscape and Buffer Requirements

#### Sec. 24-250. Statement of Intent

This article recognizes the importance of trees and landscaping throughout the City and their relationship with the economic, ecological and cultural processes that give Tuscaloosa its tradition and identity. Through preservation, replacement, and maintenance of the urban forest, this article will provide a better quality of life for the citizens of Tuscaloosa while promoting the stability of residential neighborhoods making them more livable and desirable, and educating the public in the areas of preservation and conservation of the natural processes that exist within the City.

Urban landscaping aids in preventing soil erosion, siltation of streams and reservoirs and flood damage. Trees are valuable in providing shade and cooling effects, in preventing air and noise pollution, as well as preserving the character of the City.

## (b) The purpose of this article is:

- To promote the public health, safety and welfare by decreasing incompatibility between adjacent uses, by establishing a buffer between residential and business uses and by preserving property values;
- (2) To make Tuscaloosa, Alabama a more attractive and healthy environment in which to live, and better control noise, glare and heat;
- (3) To preserve, protect and maintain the health of existing vegetation, encourage the incorporation of plant materials, especially native plants, and ecosystems into landscape design where possible and discourage the proliferation of invasive species of plants:
- (4) To establish and maintain the maximum sustainable amount of tree cover on public and private lands in the City;
- (5) To promote the character of the City by encouraging aesthetically pleasing sustainable designs of commercial, industrial and residential areas while still allowing for innovative, diverse and cost-conscious approaches to the design, installation and maintenance of the landscape;
- (6) To promote the conservation of the local waterways and aquifers by encouraging the planting of local plant species or site specific species when possible, providing means for natural aquifer recharge; preventing excess runoff by containing the maximum amount of water on site possible and facilitating compliance with State and Federal legislation relative to water and air quality, including the Clean Air Act (42 U.S.C. §7401, et seq.) and the Clean Water Act (33 U.S.C. §1251, et seq.).

#### c) Scope

This article does not contain all the regulations and requirements for development activities, design and construction nor does approval of a landscape plan pursuant to the provisions herein serve as a substitute for obtaining and complying with all other applicable city ordinances, building and related codes, zoning restrictions, and other applicable regulations. Without limiting the generality of the foregoing development activities may also require building and related technical permits and inspections, compliance with zoning and subdivision ordinances and regulations. Municipal utilities

for water and sewer require compliance with separate ordinances and policies of the water and sewer department of the City.

# Sec. 24-251. Applicability

- (a) Property affected by this article:
  - (1) All property located within the Corporate Limits of the City of Tuscaloosa, Alabama.
    - a. The provisions of this ordinance shall apply to all new construction, development, redevelopment, or change of use for any multifamily residential, commercial, or industrial use and shall become applicable to any property for which a land development permit is required. The requirements shall remain applicable at all times once the property has become subject to these provisions.
- b) Landscape Plan required.

Prior to any development on any property in the City, the developer or person in charge or control thereof submit an application to the Landscape Administrator and obtain approval of a landscape plan authorizing development on the property in accordance with the provisions of this article. A landscape plan must be submitted and approved by the Landscape Administrator prior to the issuance of a Land Development Permit or Building Permit.

## Sec. 24-252. Definitions

**Application:** A form provided by and submitted to the Office of Planning and Economic Development by a developer desiring a landscape plan to engage in development as herein defined.

**Applicant:** A developer as herein defined, including applicant or developer's representative, who is applying for approval of a landscape plan.

Area: The provisions of this article shall have applicability to all site and land development projects and development activities within the corporate limits of the City and the City's police jurisdiction, including the development of subdivisions and planned unit developments (not individual lots within subdivisions).

**Bioswale:** Vegetated surfaces that are designed to treat sheet flow from adjacent surfaces. Bioswales function by slowing runoff velocities, filtering out sediment and other pollutants and by providing some infiltration into underlying soils.

**Buffer:** Property used to visibly separate one land use from another through screening and distance.

**Caliper:** The diameter or thickness of a nursery-grown tree trunk as measured at 6" above the top of the root mass.

**Canopy Trees:** Any of the trees listed as a canopy tree in Section 24-261, or other species approved by the landscape administrator.

**City:** The City of Tuscaloosa, Alabama, a Municipal Corporation, organized and operating pursuant to Ala. Code 11-44B-1 et seq. (1975), whose address is 2201 University Boulevard, Tuscaloosa, Alabama 35403.

Construction: Any improvement, replacement, alteration or renovation activity including that which erects a building or structure, including accessory use, and/or parking or landscape area or development as herein defined

Critical Root Zone: An area around a tree that is within the drip line of a tree.

DBH (diameter at breast height): The diameter of a tree 4½ feet above ground level.

**Developer**: Any person, firm, partnership, corporation or other legal entity engaged in or seeking to engage in development activity as herein defined including a developer that has been issued approval of a landscape plan pursuant to the provisions of this article.

**Development:** Any manmade or earth change to property within the City including, but not limited to, preparation of property for the construction of buildings or other structures, mining, dredging, filling, grading, regrading, paving, clearing, excavating, or drilling operations. This definition also includes changes or improvements to any property subject to these regulations such as curb and gutter, storm drainage structures, streets, drainage facilities, sidewalks, and related public or private roads and the installation of utilities.

**Director:** The Director of the Office of Planning and Economic Development or his designee.

**Drip line:** The perimeter of a tree's canopy.

**Grading:** Altering the shape of the ground surfaces to a predetermined condition; this includes stripping, cutting, filling, stockpiling and shaping or any combination thereof and shall include the property in its cut or filled condition.

**Green Space**: Any area retained as permanently vegetated property.

Land Development Permit (LDP): A written document prepared and executed by the City Engineer or his/her designee which authorizes development in accordance with the provisions in Article 12 Chapter 21 Section 21-212 of the City Code and subject to any additional or specific requirements that may be stated therein.

Land Development Plan: A properly documented written plan, prepared, signed and stamped by a registered professional engineer, licensed in the state, consisting of a completed application with supporting documents demonstrating that development as herein defined will occur upon an identified parcel of property within the area in compliance with the provisions of this article. The land development plan shall include drainage plans in compliance with city drainage standards, and compliance with technical specifications issued by the City Engineer. An engineering drawing showing all the important physical features both existing and proposed, of a given parcel of property and abutting the right-of-way shall also be submitted with the application and form part of the plan. The land development plan will adequately and sufficiently address in accordance with the provisions of this article traffic, parking, stormwater, sanitary sewer, erosion, use of Best Management Practices (BMPs), sanitary sewer and related components.

Landscape Administrator: The staff member designated by the Director of Planning and Economic Development to administer this article.

Landscape Plan: A plan showing all plant types to be used, all planting standards and specifications, location, scheduling, stormwater mitigation areas identified and showing detailed design specification for solid type, depth and construction of said mitigation area, and any other appropriate details considered important for the compliance with this article. Also, any alternative compliance methods should be identified.

Landscaping: The treatment of grade, groundcover, vegetation and ornamentation for a given area. Landscaping shall include plant materials such as trees, shrubs, groundcovers, perennials and annuals; and any other materials such as rocks, water, walls and fences; and any other feature affecting layout and use of the site.

Lot—Parcel—Plot—Property: A single undivided portion of property that is either legally recorded in the office of the Tuscaloosa County Probate Judge, or is being proposed in good faith by well-prepared plan drawings for the purpose of being legally recorded. It is the responsibility of the property owner (or his/her agent) to insure that the property is legally recorded with the office of the Tuscaloosa County Probate Judge.

Low Impact Development (LID): A set of approaches and practices intended to reduce runoff of water and pollutants from the site at which they are generated by means of infiltration, evapotranspiration, and reuse of runoff. LID techniques manage water and water pollutants at the source and thereby prevent or reduce the impact of development on rivers, streams, lakes, coastal waters, and ground water.

Park: Any public property set aside for open space and recreation purposes.

Parking Area: The paved area including parking spaces and abutting isle ways.

Parking Lot: A surface used for the parking, storage or display of motor vehicles, boats, recreational vehicles, etc.

Parking Space: A delineated area reserved for the parking of a single vehicle.

**Perimeter Planting Strip:** Property located within the boundary of a lot and required to be set aside and used for landscaping upon which only limited encroachments are authorized.

**Property Line:** The boundary between 2 or more lots.

Street Tree or Trees: Any existing tree or any tree to be planted on the street right-of-way.

Rain Garden: Vegetated surfaces that are designed to treat sheet flow from adjacent surfaces. Filter strips function by slowing runoff velocities, filtering out sediment and other pollutants, and by providing some infiltration into underlying soils.

**Redevelopment:** The demolition and/or rebuilding or expansion of a site's physical development in association with the following guidelines:

- 1) If the original building size is less than 2,000 square feet, then a 25 percent or greater expansion of the building will require compliance with this article;
- 2) If the building size is between 2,001 square feet and 5,000 square feet, then a 20 percent or greater expansion of the building will require compliance with this article;
- 3) If the building size is between 5,001 square feet and 10,000 square feet, then a 15 percent or greater expansion of the building will require compliance with this article:
- 4) If the building size is over 10,000 square feet, then a 10 percent or greater expansion of the building will require compliance with this article.

**Right-of-way:** A general term denoting public ownership or interest in property, usually in a strip which has been acquired for or devoted to the use of a street or alley.

Runoff: The water from precipitation that flows over the ground.

Shrub: A low growing usually multi-stemmed, woody plant.

Stormwater: As defined in Section 21-151 of the City Code of Tuscaloosa.

Street Trees: Any existing tree or any tree to be planted on the street right-of-way.

**Tree:** A usually tall, woody plant, distinguished from a shrub by having comparatively greater height and, characteristically, defined as:

Canopy (Large Maturing) — Single trunk whose height is greater than 35 feet at maturity, or

Understory (Small Maturing) — Single trunk or multi-stem whose height is less than 35 feet at maturity.

**Tree**, **Blighted**: Any tree that does not exhibit healthy characteristics and is determined to be hazardous as determined by the Director.

Tree, Dead: A tree that does not contain any live tissue, i.e., green leaves or live limbs.

Tree, Deciduous: Any tree which naturally loses its leaves in the Fall.

Tree, Mature: Any tree which has attained the capability of flowering and reproducing.

Tree, Private: Any tree located on private property.

Tree, Public: Any tree located on City property or State, County or City right-of-way.

Tree, Replacement: A new tree planted on a site to meet minimum site density factor requirements (regardless of whether trees existed prior to any development).

Tree, Understory: Understory tree species used shall have an average mature crown spread of at least 15 feet when grown in Tuscaloosa, Alabama. Understory tree species shall be a minimum of 5 feet in height and have a caliper of at least 1½ inches immediately after planting.

Tree Planting Standards and Specifications: The design standards and specifications adopted for the planting or maintenance of trees.

Tree Protection and/or Planting Plan (TP/PP): A plan that identifies Tree Protection Areas where existing trees are to be protected and preserved, and replacement trees planted on a property to meet minimum requirements, as well as methods of tree protection to be undertaken on the site and other pertinent information.

**Tree Protection Area (TPA):** Any portion of a site wherein are located existing trees which are proposed to be preserved in order to comply with the requirements of this article. The TPA shall include no less than the total area beneath the tree canopy as defined by the drip line of the tree or group of trees collectively.

**Tree Save Area:** All areas designated for the purpose of meeting tree density requirements and/or preserving natural buffers.

**Utility Easement:** The right-of-way acquired by a utility or governmental agency or private agency to locate utilities, including all types of pipelines, television cable, telephone and electric cables. Also includes corridors on Public rights-of-way occupied by overhead utility lines.

Vegetated: Any ground surface covered with plant life.

# Sec. 24-253. Landscape plan submittal requirements

(a) Approval. A landscape plan must be submitted and approved by the Landscape Administrator prior to the issuance of a Land Development Permit or Building Permit.

#### (b) Format and materials

The landscaping plan and details shall be drawn to the same standard scale as the development plan or a scale which shows all landscaping accurately. Landscape plans shall be included in the Land Development Plan submitted to the City Engineer as part of an application for a Land Development Permit and the Building Official as part of an application for a building permit as applicable. All landscape plans must be reviewed and approved by the Landscape Administrator.

### (c) General information:

Complete landscape plans submitted for review and approval shall include the following:

(1) Title block, showing the title of the development, the name and address of the owner/developer, the name and address of the person or firm preparing the plan, the date of preparation, the scale, the north point, and the date of all revisions.

- (2) A location map, showing the relative location of the site to the nearest existing public street intersection.
- (3) The boundaries of the subject property including the location and description of all adjoining property, the location and names of all adjoining streets and easements.
- (4) The required number of parking spaces and the proposed number of parking spaces of subject property/development.
- (5) Location and dimensions of all entrances and exits of the parking lot and the manner in which vehicles will be parked, and the location and names of all utility lines, easements or rights-of-ways on, or adjacent to, the site.
- (6) All details needed to communicate appearance, and methods of construction and/or installation.
- (7) A planting schedule, keyed to the plant materials shown on the landscape plan, listing all proposed plant materials by botanical name, common name, cultivar or variety if any, quantity of materials, size of materials at planting, plant spacing, and existing trees approved for use.
- (8) Location of all existing and proposed buildings, accessory structures and paved areas.

# 24-254. General Requirements

- (a) Site protection and general planting requirements
  - (1) Topsoil. To the extent needed and practical, topsoil moved during the course of construction shall be preserved and stockpiled for reuse on the site.
  - (2) Existing trees. Preservation of each existing healthy tree of an approved species (see attached table), within required landscape areas, shall count toward fulfillment of the requirements of this section.
    - a. The existing tree to be preserved must be approved by the Landscape Administrator to receive credit toward meeting the requirements of this section.

- b. Existing trees that are credited towards meeting the requirements of this section shall be subject to the same maintenance and replacement requirements as newly planted trees.
- (3) Each existing tree that is credited towards meeting the requirements of this section may reduce the number of required parking spaces as specified in Section 24-256 of this article.
- (4) Slope plantings. Landscaping of all cuts and fills and/or terraces shall be matted or protected until plant cover is adequate to control erosion.
- (5) Plantings within Utility Company Easements must comply with the following:
  - a. Minimum distances measured horizontally from trees to overhead utility lines shall be:
    - (i) Canopy Trees: 30 feet
    - (ii) Understory Trees 15 feet
  - b. The location and species of trees proposed for location in utility easements shall be approved before installation.
  - c. Any part of a tree growing within 15 feet of an overhead utility line will require maintenance by a certified line trimmer approved by any affected utility companies.
  - d. This Article shall not be construed to impair the following: (1) the right of eminent domain granted by State laws to utilities, whether public or private, or (2) a utilities right to design, locate, erect, construct, re-construct, alter, protect or maintain utility poles, drainage ditches, structures, towers, lines, conduits, pipes or mains reasonably required in the public service or (3) a utilities right to exercise authority conferred by statute, franchise, certificate of convenience and necessity, license or easement. Maintenance, repair, and extension of any public and private utility lines or related infrastructure are expressly allowed. The preceding will apply to work done by the utility's employees, agents and contractors doing work for the utility.

(6) All plantings shall maintain a 3 foot clearance around all fire suppression equipment as well as a clear, accessible path, visible from the main approach.

### (b) Garbage and/or Trash Receptacles

- (1) All commercial garbage and/or trash receptacles shall be placed on a pad approved by the City Engineer that allows for pick-up and maintenance as needed.
- (2) All commercial garbage and/or trash receptacles shall be screened by a hedge and/or structure which is impermeable to sight from the main right-of-way. If hedges are to be used, the hedge must be 4 feet tall when planted and capable of reaching a height of 6 feet within 2 years. Any screening structure shall be a minimum of 6 feet tall when installed.
- (3) Garbage and/or trash receptacles which are located behind buildings shall be screened from sight from public rights-of-way.
- (4) Garbage and/or trash receptacle sites shall not be located within landscaped areas that are required by this article.

# Sec. 24-255. Landscaping Requirements.

In addition to the provisions in section 24-254, the following requirements shall apply to all parking lots and required buffers:

### (a) Perimeter planting requirements for parking areas

- (1) A continuous perimeter planting strip, exclusive of access driveways and other approved penetrations, with a minimum width of 10 feet measured from the edge of the parking area, is required. Existing street trees may be applied towards perimeter planting requirements along public rights-of-way.
- (2) Canopy trees are required, and trees of a minimum 2 inches in caliper and 12 feet high shall be planted at a maximum of 50 foot on center. Minimum lateral separation from overhead utilities shall be 30 feet for canopy trees. Shrubbery with a minimum 18-inch height at installation capable of forming a minimum 3 foot high evergreen hedge shall be provided in the landscape areas adjacent to public rights-of-way. In the event that pre-existing overhead

- utility lines prevent the use of canopy trees, understory trees shall be planted on 30 to 40 feet centers.
- (3) Planting strips are to be sodded, seeded, mulched or planted with shrubs or ground cover so as to leave no bare ground after landscape materials have been installed and permitted to grow for 2 years.
- (4) Existing trees which meet, in whole or in part, the perimeter and internal planting requirements, may be applied toward the landscape requirements.
- (5) No required landscaping shall be installed in proximity to the intersection of two rights-of-way that will result in an obstruction of vision as determined by the traffic engineer.
- (6) Stormwater inlets shall be located within a perimeter planting strip and incorporate bioswales, rain gardens or other staff approved stormwater mitigation techniques to promote infiltration and reduce stormwater runoff and non-point source pollution. Alternative designs that accomplish the intent of this ordinance may be permitted under Section 24-258.

## (b) Internal planting requirements

- (1) Based on parking area size and layout, trees shall be planted within landscape islands within the paved parking area so that every parking space is within 60 feet of the trunk of a tree. Perimeter trees and street trees as outlined above may be used to satisfy this requirement.
- (2) There shall be no more than 12 contiguous (linear) parking spaces without a landscape island. Trees are required in the landscape island. A landscape island used to satisfy this requirement shall contain a minimum of 250 square feet of area per tree with a minimum width of 8 feet. Tree size and spacing are the same as for the perimeter planting requirements. Shrubbery shall be provided in the island.
- (3) Landscape islands, based on the above requirements, shall be sodded, seeded mulched or planted with shrubs and/or groundcover.

- (4) The integration of Low Impact Development techniques as part of the landscape plan shall be required and may be used to meet these requirements.
- (5) All stormwater inlets shall be located within a landscape island and incorporate rain gardens, bioswales or other staff approved stormwater mitigation techniques to promote infiltration and reduce stormwater runoff and non-point source pollution.

### (c) Buffer Planting Requirements

#### (1) Standards.

- a. In order to decrease incompatibility between adjacent uses, an appropriate landscaped buffer shall be required. Planted buffers shall provide a visually impervious barrier, be uniformly dense at all heights from the ground, and be a minimum of 4 feet above grade throughout the entire length and width of the planting. The buffer shall be planted with at least one (1) tree that qualifies as a canopy tree, for each 30 linear feet of buffer. Within one (1) year after installation, that portion of the buffer planted as prescribed above shall be at least 6 feet above grade throughout the entire length of the planting.
- b. Walls and fences may be permitted within the required buffer, however, no such wall or fence may be used to reduce or exempt the property from compliance with the buffer planting requirements. The location of the fence or wall within the buffer shall be approved by the Landscape Administrator.
- c. All walls and fences located within buffer areas shall be finished on both sides with the same type of finish.

#### (2) Buffer Widths

- (a) The following widths and wall standards shall apply to all buffers required by this chapter. Where there is a conflict between perimeter planting requirements and buffer planting requirements, the more stringent provision shall apply.
  - Industrial zones and/or uses adjacent to residential uses/zones:
     50 foot

- 2. Commercial zones and/or uses adjacent to residential uses/zones. The property owner shall choose one of the following options:
  - a. 35 feet
  - b. 15 feet with an opaque wall constructed along the property line
  - c. 10 feet with an opaque wall constructed along the property line and parking lot constructed between the buildings and the buffer.
- 3. Multi-family residential zones and/or uses adjacent to residential zones/uses: 20 feet
- (b) Where an opaque wall is required by Section 24-255(c)(2)(a), such wall shall be at least 6 feet in height and constructed of masonry materials including, but not limited to, Architectural CMU, brick, stone, stucco, or comparable masonry products. Cementitious siding materials, cast stone, and other commercially available synthetic or simulated masonry products may be used alternately or in combination with any of the materials listed above.
- (c) Where walls are required in accordance with this section, the prescribed trees shall be spaced no further than 30 feet apart.
- (d) No wall shall be constructed of wood, PVC or vinyl.

# Sec. 24-256. Tree Preservation and Off-Street Parking Credits

The following section provides incentives for the reduction of impermeable surface through the addition of landscaping.

The following section only applies to commercial parking lots and in no case shall the combined reduction in parking exceed the following criteria: 10% for parking lots containing 1-74 spaces; 15% for parking lots containing 75-125 spaces and 25% for parking lots containing 126 or more spaces.

- (a) Trees which meet the perimeter planting requirements, whether existing or new, may be counted as 1 parking space per tree and be used to fulfill the total parking requirement of the development not exceeding the following percentages:
  - (1) Minimum parking requirements of 1 74 spaces: 10%
  - (2) Minimum parking requirements of 75 125 spaces: 15 %
  - (3) Minimum parking requirements of 126 or more: 25 %

- (b) Interior landscape islands may be counted as 2 parking spaces per island and may be used to fulfill a portion of the total parking requirement of the development not exceeding the following percentages:
  - (1) Minimum parking requirements of 1 74 spaces: 10%
  - (2) Minimum parking requirements of 75 125 spaces: 15 %
  - (3) Minimum parking requirements of 126 or more: 25 %
- (c) Tree Preservation and Credit: Existing healthy trees may be included in the minimum planting requirements and credited toward trees required by this article in a landscape plan as per the following schedule:

DBH of preserved tree(s)	Number of trees credited
9-19 inches	2
20-25 inches	3
26-29 inches	4
30-35 inches	5
36 inches or greater	6

- (1) A tree proposed for use as a credit to satisfy minimum planting requirements must be approved as part of the site plan review process.
- (2) The landscape area surrounding a preserved tree shall be located so that the trunk of the tree is as close to the center of the landscape area as practical, and specific preservation practices shall be followed to insure exchange of water and oxygen to the root zone.
- (d) Protection of Preserved Trees during Construction

Existing tree(s) shall only be credited where the following management standards are met:

- (1) During construction, the critical root zone of the tree(s) to be preserved shall be fenced and protected from compaction, trenching, harmful grade changes and/or other injury and be shown on an approved landscape plan.
- (2) Pavement, building foundations or other impervious surfaces shall not encroach into the critical root zone, unless specific preservation practices are followed to insure exchange of oxygen, water and nutrients to the root system.

(3) Sidewalks or other forms of hard surfaces that do not require soil compaction and are not intended for vehicular use may be located within the critical root zone only if specific preservation practices are followed to insure exchange of oxygen, water and nutrients to the root system.

## Sec. 24-257. Compliance

The architect, landscape architect, engineer, surveyor of record, horticulture professional, or landscape contractor for any criteria for which this article applies must certify to the Landscape Administrator that the landscaping has been installed to meet the minimum requirements of this article. The site will be inspected by the Landscape Administrator before a final certificate of occupancy will be issued.

In the event that inclement weather delays the installation of landscape materials, the developer may make a written request to the Landscape Administrator for an extension to the time of completion for the planting schedule in the approved landscape plan. The request must specifically state the reason for the delay as well as an estimated date for completion. Failure to complete the installation within 15 days of specified date will constitute non-compliance.

## Sec. 24-258. Alternative Compliance

### (a) Intent

The Landscape Requirements are intended to encourage development practices which are conscious of the character of the City and its ecological processes. Conditions associated with individual sites may under certain circumstances warrant approval of alternative methods of compliance. Conditions may arise where normal compliance is impractical or impossible, or where maximum achievement of the Purpose and Intent of this article can only be obtained through alternative compliance. It is not the intent of this section to allow alternative compliance on the basis of economic hardship. In the event that such conditions are present, the Landscape Administrator shall have authority to adjust the requirements of this chapter as provided in subsection (b).

# (b) Request for Alternative Compliance Review

Requests for alternative compliance must be made in writing at the time of submittal of the landscape plan for approval by the landscape administrator, when one or more of the following conditions are met:

(1) Improved environmental quality would result from alternative compliance.

- (2) Topography, soil, vegetation, drainage or other site conditions are such that full compliance is impractical.
- (3) Spatial Limitations, unusual shaped pieces of property, or prevailing practices in the surrounding neighborhood may justify alternative compliance.
- (4) Public safety considerations make alternative compliance appropriate.
- (5) Public Improvement projects make alternative compliance appropriate.
- (6) The site is part of a development for which a master plan has been submitted which makes adequate provision for landscaping.

## Sec. 24-259. Landscaping Requirements for Urban Areas

Within the area platted and known as the Original City Survey and within the area described in Section 24-220a(2), otherwise known as the University Area Neighborhood, landscaping shall be provided on the public right-of-way adjacent to any development as applicable in Section 24-221, in accordance with Exhibit "A", Typical Street Cross Section, and Exhibit "B", Typical Street Cross Section with Overhead Utilities and meeting the approval of the director of TDOT. Both Exhibits "A" and "B" are adopted herein by reference and shall remain on file in the Office of Planning and Economic Development.

#### Sec. 24-260. Maintenance

The owner of property developed in accordance with an approved landscape plan shall be responsible for maintaining all landscaping in good condition. The maintenance required under this section shall include the prompt replacement of all dead or damaged landscaping materials, whether from natural or unnatural causes, so as to insure continued compliance with the requirements of this ordinance.

# Sec. 24-261. Approved Tree List

Trees contained in the following list are preapproved for use and meet the requirements of this article. Any tree which is not on this list may be submitted for approval to the landscape administrator prior to the approval of a Land Development Permit. Trees which exhibit poor health characteristics, are not native to the climate range in Tuscaloosa or are considered invasive will not be approved for installation.

28 Ste

## **Scientific Name**

## **Canopy Trees**

Acer spp. Betula nigra

Carpinus caroliniana

Carya ssp.

Cedrus deodora

Celtus Iaevigata
Cornus x 'Rutican'

Cryptomeria japonica

Fagus grandifolia

Fraxinus americana

Fraxinus pennsylvanica

Ginkgo biloba

Juniperus virginiana

Liquidambar styraciflua 'Rotundaloba'

Liriodendron tulipifera Magnolia grandiflora Magnolia virginiana

Metasequoia glyptostryboides

Nyssa sylvatica Ostrya virginiana

Oxydendrum arboreum

Pistacia chinense

Platanus occidentalis

Quercus spp. Salix alba

Salix babylonica

Sequoia sempervirens Taxodium distichum

Taxodium ascendens

Tsuga candensis

Ulmus alata

Ulmus parvifolia

Zelkova serrata

### **Understory Trees**

Acer palmatum

Amalanchier x 'Autumn Brilliance'

Cercis canadensis

Cornus florida

Cornus kousa

Crataegus phaenopyrum

## **Common Name**

Maple Tree

River Birch

American Hornbeam

Hickory

Deodor Cedar

Sugar Hackberry

Constellation Dogwood Japanese Cryptomeria

American Beech

White Ash

Green Ash

Ginkgo

Eastern Red Cedar

Fruitless Sweetgum

**Tulip Tree** 

Southern Magnolia

Sweet Bay Magnolia

Dawn Redwood

Black Gum

Hophornbeam

Sourwood

Chinese Pistache

Sycamore

Oak Tree

White Willow

Weeping Willow

Redwood

**Bald Cypress** 

Pond Bald Cypress

Hemlock

Winged Elm

Lacebark Elm

Lacobark Enri

Japanese Zelkova

Japanese Maple

Autumn Brilliance Serviceberry

Eastern Redbud

Flowering Dogwood

Kousa Dogwood

Washington Hawthorn

llex latifolia llex x attenuate llex x 'Emily Bruner' llex x 'Nellie R. Stevens' llex verticillata Juniperus virginiana 'Idylwild' Lagerstroemia indica Magnolia stellata Magnolia x soulangiana Malus spp. Myrica cerifera Osmanthus fortunei Osmanthus fragrans Prunus serrulata Prunus subhirtella Prunus x yedoensis Thuja occidentalis Vitex agnus-castus

Lusterleaf Holly Foster Holly **Emily Bruner Holly** Nellie R. Stevens Holly Winterberry IdvIwild Juniper Crapemyrtle Star Magnolia Saucer Magnolia Crabapple Southern Wax Myrtle Fortune's Osmanthus Tea Olive Japanese Flowering Cherry Higan Cherry Yoshino Cherry Arborvitae Lilac Chaste Tree

## Sec. 24-262. Legal Aspects, Other Regulations.

All local, state and federal laws and regulations shall be considered when interpreting provisions of this article or technical specifications promulgated pursuant to this article. In each instance, the more restrictive requirement shall govern unless sound engineering judgment can determine and prove that the more restrictive requirement would be otherwise unnecessary. In most instances, laws and regulations that are phrased more explicitly shall apply over those items that are not phrased as precisely.

Nothing herein contained shall authorize a person to engage in development or earth changes within the area defined herein in a manner inconsistent with current zoning or subdivision regulations or other applicable codes or ordinances. All development or earth changing activity within the area defined herein shall be in conformity with current zoning or subdivision regulations and all other applicable codes or ordinances.

A landscape plan does not authorize any person or developer to engage in any activity that would violate any other applicable code, ordinance, regulation or state or federal laws nor substitute for obtaining any licenses or permits otherwise required.

# Sec. 24-263. Penalty for violation.

Any person, firm, corporation, or agent, who shall violate a provision of the code herein adopted or fails to comply therewith or with any of the provisions thereof, shall be

30-68

guilty of a misdemeanor and, on conviction, be punished as provided for in section 1-8 of the Code of the City of Tuscaloosa. The violation of or the noncompliance with each individual requirement, rule or regulation, of such code, and each day's continuation thereof, shall constitute a separate and distinct offense.

#### Sec. 24-264. Effective Date.

This ordinance is effective immediately upon passage and publication. The provisions contained herein shall not apply to the completion of a development that on or before the effective date has a current land development permit or current building permit, or to the completion of a planned unit development or riverfront development with final approval, but shall apply to redevelopment, change of use or expansion of such a development pursuant to Section 24-251. However, if the land development permit or building permit or approved planned unit development or riverfront development lapses or expires, all provisions contained herein shall apply.

APPROVED:

OFFICE OF PLANNING AND ECONOMIC DEVELOPMENT

#### **COUNCIL ACTION**

Resolution	
Ordinance	
Introduced	
Passed	
2 <sup>nd</sup> Reading	
Unanimous	·
Failed	
Tabled	
Amended	
Comments:	

(H/Ty-Y; L-Absent) Introduced 2/17/09 31 Saay Dhoom . Lot City Clerk