

# OFFICE OF THE CITY ENGINEER

## CITY OF TUSCALOOSA



**WALTER MADDOX**  
*Mayor*

**CITY ENGINEER**  
DAVID R. GRIFFIN, III, PE

**LAND SURVEYOR**  
JEFFREY N. THOMPSON, PLS

2201 UNIVERSITY BLVD (35401)  
POST OFFICE BOX 2089 (35403)  
PHONE NO. (205) 248-5380  
FAX NO. (205)248-5798

[www.tuscaloosa.com](http://www.tuscaloosa.com)

**WATER DISTRIBUTION ENGINEER**  
KIMBERLY A. MICHAEL, PE

**WASTEWATER ENGINEER**  
DANIEL H. PRICE, PE

**TRANSPORTATION ENGINEER**  
SELVIN B. GREENE, PE  
WENDY S. McBRIDE, PE

**STORM DRAINAGE ENGINEER**  
JOSHUA D. YATES, CFM

3/24/2015

Alabama Department of Environmental Management  
Attention: Ms. Marla Smith  
1400 Coliseum Blvd.  
Montgomery, AL 36130

RE: City of Tuscaloosa MS4 Phase II Stormwater Permit  
2014 – 2015 Annual Report

Dear Ms. Smith:

Enclosed please find the Twelfth Annual Report for the City of Tuscaloosa Stormwater Phase II NPDES Permit. As the new Storm Drainage Engineer, I look forward to continue working with you as we progress toward bettering the quality of stormwater in the City of Tuscaloosa.

Feel free to contact me with any questions or if you should need any additional information.

Sincerely,

Joshua D. Yates, CFM  
Storm Drainage Engineer

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### CITY COUNCIL

<i>District 1</i>	Harrison Taylor <i>President Pro-Tem</i> <i>District 2</i>	Cynthia Lee Almond <i>District 3</i>	Matthew Calderone <i>District 4</i>	Kip Tyner <i>District 5</i>	Eddie Pugh <i>District 6</i>	Sonya McKinstry <i>District 7</i>
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CITY OF TUSCALOOSA  
MS4  
PHASE II STORMWATER PROGRAM

**2014 – 2015 ANNUAL REPORT**

3/24/2015



OFFICE OF THE CITY ENGINEER

## **A. STORMWATER MANAGEMENT MISSION STATEMENT**

The City of Tuscaloosa will develop and implement an efficient and effective Stormwater Management Plan (SWMP) to reduce the discharge of pollutants from the City MS4 to the maximum extent practicable. Through existing and modified local ordinances and technical standards, the City will require and promote the use of Low Impact Development/Green Infrastructure techniques for both new development and redevelopment. This guiding philosophy will effectively reduce runoff quantity and improve water quality through both a net reduction of impervious area and enhanced infiltration of stormwater discharges.

The City will inform the Public concerning the impacts of stormwater pollution and educate the Public about individual actions that can reduce contaminated discharges. The City will provide opportunities for Public input and involvement.

The City will identify and eliminate illicit discharges through a comprehensive outfall mapping and wet and dry-weather inspection program.

The City will inspect construction sites both during and after construction and enforce existing and modified ordinances to reduce or eliminate erosion and associated pollutant discharges.

The City will develop Stormwater Pollution Prevention Plans for all Municipal Operations to reduce contaminated runoff from all public streets and facilities.

The City will continuously evaluate the SWMP and modify the plan as necessary to maximize pollutant reduction and eliminate ineffective measures.

The person responsible for the implementation of the overall SWMP is as follows:

Joshua D. Yates, CFM  
Storm Drainage Engineer  
P.O. Box 2089  
Tuscaloosa, AL 35403  
(205) 248-5387  
[jd Yates@tuscaloosa.com](mailto:jd Yates@tuscaloosa.com)

## **B. MINIMUM CONTROL MEASURES**

### **B.1 PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS**

The City of Tuscaloosa will engage in a continuous Stormwater Education Campaign to educate and include the public in stormwater management. We will use a combination of a website, brochures, seminars, newspaper ads, and radio and television spots to maximize our outreach efforts. We will also tailor aspects of the campaign to reach the following target audiences:

- General Public/Homeowners
  - May contribute to pollution through littering, pet waste disposal, poor vehicle washing and maintenance practices, and improper lawn fertilization.
- Local Businesses
  - May contribute to pollution through improper use and storage of chemicals and poor parking lot maintenance practices.
- Landscapers and Property Managers
  - May contribute to pollution through improper lawn fertilization and illegal dumping of grass clippings and woody debris.
- Engineers, Planners and Review Staff
  - May reduce pollution by ensuring development plans incorporate Low Impact Design techniques at the earliest possible stage and ensure adequate BMP Plans are in place for erosion and sedimentation control.
- Contractors
  - May contribute to pollution through poor construction techniques and inadequate maintenance of structural BMPs.

The Education Campaign is intended to address all pollutants of concern:

- Nutrients (Fertilizer Usage)
- Sediment (Construction Activity)
- Pathogens (Pet Waste Disposal)
- Hydrocarbons (Vehicle Maintenance and Parking Lot Runoff)
- Metals (Vehicle Maintenance)
- Debris (Grass Clipping/Limb Disposal and Littering)



**PUBLIC EDUCATION AND OUTREACH BMPs**

<b>BMP</b>	<b>DESCRIPTION</b>	<b>ANNUAL REPORT</b>	<b>NOTES</b>
STORMWATER PHASE II WEBSITE	WEBSITE FOR STORMWATER INFORMATION AND COMPLAINTS	<a href="http://www.ttownstormwater.com">www.ttownstormwater.com</a> WEBSITE REMAINS ACTIVE AND UPDATED	PROVIDE LINKS TO ANNUAL REPORTS AND SWMP  ALSO LID DATABASE!
STORMWATER EDUCATION BROCHURE	UPDATE, PRINT AND DISTRIBUTE STORMWATER EDUCATION BROCHURE	DISTRIBUTED 1,000 BROCHURES THROUGHOUT THE COMMUNITY  DESIGNED A NEW BROCHURE WITH THE COUNTY, NORTHPORT AND THE UNIVERSITY OF ALABAMA'S CONTACT INFO  SEE APPENDIX	USE FOR COMMUNITY MEETINGS, SEMINARS
STORMWATER SEMINARS	TARGETED EDUCATIONAL SEMINARS	WILL HOST CLEAR WATER ALABAMA IN SEPTEMBER, 2015, EXPECTING 120+ PEOPLE;  SPOKE TO UA CLASS IN MAY 2014  SPOKE AT AL WATER RESOURCES CONFERENCE IN PERDIDO BEACH SEPTEMBER 2014  SPOKE AT LID CONFERENCE IN NORTHPORT DECEMBER 2014  SPOKE AT AL CLEAN WATER PARTNERSHIP MEETING IN MONTGOMERY IN	PROVIDE TRAINING SEMINARS FOR DESIGNERS, INSPECTORS AND CONTRACTORS

		<p>FEBURARY 2015</p> <p>SPOKE IN MARCH, 2015 AT THE NOAA CENTER IN TUSCALOOSA</p> <p>SEE APPENDIX</p>	
<p>MANHOLE LABELING</p>	<p>LABELS MANHOLE TOPS ON INLETS THROUGHOUT THE CITY</p>	<p>“DRAINS TO WATERWAYS”</p> <p>“DUMP NO WASTE”</p> <p>REQUIRED FOR ALL STANDARD S-INLETS ON NEW PEJECTS BOTH CITY AND PRIVATE DEVELOPMENTS</p> <p>EXISTING</p>	<p>THESE PHRASES ARE ON ALL INLETS FOR NEW PROJECTS THROUGHOUT THE CITY</p>
<p>STORMWATER AD CAMPAIGN</p>	<p>RADIO, TV AND NEWSPAPER ADS</p>	<p>USED TOTALCOM AGAIN THIS PAST YEAR</p> <p>SEE APPENDIX</p>	<p>HIRE PR FIRM TO DESIGN AND IMPLEMENT ADS</p>
<p>WEBSITE SURVEY</p>	<p>SURVEY ON OUR PROGRAMS SUCCESS</p>	<p>SURVEY HAS BEEN ADDED TO THE WEBSITE</p> <p><a href="http://ttownstormwater.com">ttownstormwater.com</a></p>	<p>WILL REVIEW RESULTS OVER TIME TO GAUGE SUCCESS</p>
<p>DON'T CLOG WITH FOG</p>	<p>FOG (FATS, OILS AND GREASE)</p>	<p>INFORMS RESIDENTS ABOUT WAYS TO KEEP FOG OUT OF THE SANITARY SEWER SYSTEM TO PREVENT SS OVERFLOWS</p> <p>PUBLIC MEETING SET TO DISCUSS FORMAL ADOPTION</p> <p>SEE APPENDIX</p>	<p>HANDLED THROUGH OUR WATER AND SEWER DEPARTMENT</p>

STORMWATER LEAFLET	WATER BILL INSERT	SENT TO 45,000 CUSTOMERS IN AUGUST 2014  SEE APPENDIX	MASS MAILOUT TO TARGET GENERAL PUBLIC
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We plan to evaluate the success of the Public Education and Outreach program by conducting an annual website and telephone survey to track the level of public awareness of stormwater management as related to water quality improvement.

## **B.2 PUBLIC INVOLVEMENT AND PARTICIPATION**

The City of Tuscaloosa will engage and involve the general public in the implementation and refinement of the SWMP by soliciting feedback and providing opportunities for direct action. We will attempt to reach the following target audiences:

- General Public/Homeowners
  - May contribute input through the website or 311 system and may participate directly in lake clean-ups, volunteer monitoring and storm drain stenciling.
- Local Businesses
  - May participate by sponsoring lake or stream cleanups.
- Homeowner's Associations
  - May participate by adopting a local stream segment.
- Schools
  - May participate by adopting a stream segment or stenciling storm drains.
- Watershed Organizations
  - May participate through volunteer monitoring and illicit discharge reporting.



**PUBLIC INVOLVEMENT AND PARTICIPATION BMPs**

<b>BMP</b>	<b>DESCRIPTION</b>	<b>ANNUAL REPORT</b>	<b>NOTES</b>
STORMWATER PHASE II WEBSITE	SOLICIT PUBLIC INPUT ON SWMP, ALLOW EASY REPORTING OF DUMPING OR ILLICIT DISCHARGES	<a href="http://www.ttownstormwater.com">www.ttownstormwater.com</a>  WEBSITE REMAINS ACTIVE AND UPDATED	PROVIDE INFO FOR LAKE AND STREAM CLEANUPS, AND LOW IMPACT DEVELOPMENT SITES, ETC.
STORMWATER AD CAMPAIGN	RADIO, TV AND NEWSPAPER ADS	USED TOTALCOM AGAIN THIS PAST YEAR  SEE APPENDIX	HIRE PR FIRM TO DESIGN AND IMPLEMENT ADS
VOLUNTEER MONITORING	WORK WITH WATERSHED GROUPS TO PROVIDE MONITORING ASSISTANCE	CURRENTLY MEETING WITH THE BLACK WARRIOR CLEAN WATER PARTNERSHIP – NORTH RIVER PROJECT COMMITTEE (LOWER SUB-BASIN) MONTHLY. WE HAVE PURCHASED WATERWATCH KITS TO LEND OUT TO VOLUNTEERS  HAD A PARENT SUBMIT BLOGS ABOUT HER CHILDREN MONITORING THE STREAMS IN HER NEIGHBORHOOD  SEE APPENDIX	REQUIRE ALABAMA WATERWATCH CERTIFICATION WHICH THE STORM DRAINAGE ENGINEER AND SW INSPECTOR CURRENTLY HAVE
LAKE/STREAM CLEANUPS  WATERSHED FESTIVAL	ANNUAL LAKE TUSCALOOSA CLEANUP  HUNDREDS OF CHILDREN	PARTICIPATED IN APRIL 2014 AND WILL PARTICIPATE IN APRIL 2015  SEE APPENDIX	GAUGE PUBLIC INTEREST AND ADD STREAM CLEANUPS AS WARRANTED



HOUSEHOLD HAZARDOUS WASTE AMNESTY DAY	A SAFE AND ENVIRONMENTALLY ACCEPTABLE WAY TO DISPOSE OF WASTE	IT'S A WAY TO ACCEPT OIL AND ANTIFREEZE AND OTHER HAZARDOUS MATERIALS AND RECYCLE THEM PROPERLY  SEE APPENDIX	LOWERS THE AMOUNT OF CONTAMINANTS THAT ARE Poured OUT ONTO THE GROUND
CITY-WIDE RECYCLING PROGRAM	RECYCLES PAPER, PLASTICS, CARDBOARD, METALS, ETC.	HANDLED BY OUR ENVIRONMENTAL SERVICES DEPARTMENT  ONGOING, SEE APPENDIX	ALLEVIATES SENDING ALL MATERIALS TO A LANDFILL
ENVIRONMENTAL SERVICES AND TDOT LITTER PATROL	ES AND TDOT HAS A GROUP THAT PATROLS FOR LITTER AND COLLECTS GARBAGE/TRASH	HANDLED THROUGH THE ENVIRONMENTAL SERVICES DEPARTMENT AND TDOT TO PICK UP LITTER IN HIGH VOLUME LOCATIONS  EXISTING	ALSO GAINS VOLUNTEERS FOR COMMUNITY SERVICE CREDIT
TUSCALOOSA 311	EXISTING SYSTEM PROVIDING "ONE CALL" ACCESS TO CITY GOVERNMENT	EXISTING	HOTLINE FOR PROVIDING SWMP INPUT OR REPORTING ILLICIT DISCHARGES

The success of the Public Involvement and Participation program will be tracked through survey responses as well as a year-to-year comparison of participation levels in the lake/stream cleanup and drain stenciling programs.

### **B.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION**

The City of Tuscaloosa has implemented an illicit discharge detection and elimination (IDDE) program to identify and eliminate illicit discharges to the MS4. Moving forward, the City will strengthen and expand its IDDE program.

**IDDE PROGRAM BMPs**

<b>BMP</b>	<b>DESCRIPTION</b>	<b>ANNUAL REPORT</b>	<b>NOTES</b>
STORMWATER OUTFALL MAP	OUTFALLS HAVE BEEN PREVIOUSLY MAPPED. WE ARE RE-MAPPING WITH CITY FORCES (25%) INCLUDING PHOTOS & MORE INFO.	CONTINUOUS PROCESS  MAP IN APPENDIX	INTEGRATE GPS OUTFALL MAPPING AND INSPECTION WITH GIS DATABASE
STORMWATER PHASE II ORDINANCE	ORDINANCE FORBIDDING NON- STORMWATER DISCHARGES TO MS4	EXISTING	REVIEW ORDINANCE ANNUALLY
DRY WEATHER SCREENING PROGRAM	ESTABLISH GPS- BASED OUTFALL INSPECTION PROGRAM	CONTINUES IN CONJUNCTION WITH OUTFALL MAPPING  EXISTING	INTEGRATE INSPECTION DATA WITH GIS OUTFALL LAYER. SAMPLE AND TEST SUSPICIOUS DISCHARGES
LITTER AND NUISANCE ORDINANCE	ORDINANCE FORBIDDING LITTER ACCUMULATION ON LOTS WITHIN THE CITY	EXISTING	HANDLED THROUGH ENVIRONMENTAL SERVICES DEPARTMENT
BACKGROUND SAMPLING PROGRAM	SAMPLE AND TEST STREAM FLOWS WITHIN EACH WATERSHED TO DETECT POSSIBLE ILLICIT DISCHARGES	USED TO LABEL PRIORITY AREAS AND/OR AREAS OF CONCERN  COMPLETED IN 2013, SET PRIORITY AREAS IN 2014  EXISTING	HIRE OUTSIDE TESTING LAB TO PROFESSIONALLY SAMPLE AND TEST FOR POLLUTION

IDDE DETECTION STRATEGY	ADOPT PROCEDURES TO IDENTIFY POTENTIAL ILLICIT DISCHARGE SOURCES	EXISTING  STORM DRAINAGE ENGINEER AND STORMWATER INSPECTOR ARE WATERWATCH CERTIFIED, QCI CERTIFIED, AND OUR STORMWATER INSPECTOR IS A CERTIFIED STORMWATER INSPECTOR THROUGH THE EPA	WE REFERENCE <i>Illicit Discharge Detection and Elimination: A Guidance Manual (DR. PITT)</i>
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The overall success of the IDDE program will be indicated by a reduction in pollutant levels present in background samples.

#### **B.4 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL**

The City of Tuscaloosa implemented a construction site stormwater runoff control program during the first permit cycle to manage construction site stormwater discharges. The City will continue to evaluate and enhance the construction site program during the current permit cycle.

#### **CONSTRUCTION SITE STORMWATER RUNOFF CONTROL BMPs**

BMP	DESCRIPTION	ANNUAL REPORT	NOTES
STORMWATER PHASE II ORDINANCE	ORDINANCE FORBIDDING NON-STORMWATER DISCHARGES TO MS4	EXISTING	REVIEW ORDINANCE ANNUALLY
LAND DEVELOPMENT ORDINANCE	ORDINANCE AND TECHNICAL SPECS FOR PERMITTING AND GOVERNING CONSTRUCTION	EXISTING	REVIEW ORDINANCE AND SPECS ANNUALLY

<p><b>STORMWATER SEMINARS</b></p>	<p><b>TARGETED EDUCATIONAL SEMINARS</b></p>	<p>WILL HOST CLEAR WATER ALABAMA IN SEPTEMBER, 2015, EXPECTING 120+ PEOPLE;</p> <p>SPOKE TO UA CLASS IN MAY 2014</p> <p>SPOKE AT AL WATER RESOURCES CONFERENCE IN PERDIDO BEACH SEPTEMBER 2014</p> <p>SPOKE AT LID CONFERENCE IN NORTHPORT DECEMBER 2014</p> <p>SPOKE AT AL CLEAN WATER PARTNERSHIP MEETING IN MONTGOMERY IN FEBURARY 2015</p> <p>SPOKE IN MARCH, 2015 AT THE NOAA CENTER IN TUSCALOOSA</p> <p>SEE APPENDIX</p>	<p>PROVIDE TRAINING SEMINARS FOR DESIGNERS, INSPECTORS AND CONTRACTORS</p>
<p><b>SITE INSPECTION PROCEDURE</b></p>	<p>ESTABLISH STANDARD PROCEDURE AND FORMS FOR CONSTRUCTION SITE INSPECTION AND PRIORITY AND SCHEDULING</p>	<p>EXISTING</p>	<p>MODIFY AND ADOPT EXISTING ADEM AND EPA PROCEDURES AND FORMS. REQUIRE MONTHLY INSPECTION OF PRIORITY SITES.</p>



DESIGN HANDBOOK	ADOPT STANDARD REQUIREMENTS FOR BMP DESIGN	ALL SUBMITTED COMMERCIAL DEVELOPMENTS ARE REQUIRED TO COMPLY WITH THIS MANUAL AND REFERENCE IT ON THE PLANS  EXISTING	<i>Alabama Handbook for Erosion Control...</i>
ENFORCEMENT STRATEGY AND TRACKING SYSTEM	ADOPT ENFORCEMENT STRATEGY WITH ESCALATING REMEDIES AND ESTABLISH RECORDKEEPING SYSTEM	INCLUDED IS A LIST OF VIOLATIONS AND CORRECTIVE ACTIONS TAKEN  SEE APPENDIX	FORMS AND PROCEDURES FOR SITE INSPECTIONS AND ENFORCEMENT. RECORDKEEPING SYSTEM TO DOCUMENT VIOLATIONS AND RESPONSE
RAINFALL DATA NETWORK	ESTABLISH NETWORK OF PERMANENT WEATHER STATIONS TO COLLECT AND DISSEMINATE RAINFALL DATA	EXISTING	SHARED RAINFALL DATA THROUGH WUNDERGROUND WEBSITE HELPS DETERMINE WHEN INSPECTIONS ARE REQUIRED

The success of our construction site stormwater runoff will be proven through a reduction in erosion control complaints and a lower need for enforcement action.

## **B.5 POST-CONSTRUCTION STORMWATER MANAGEMENT**

The City of Tuscaloosa has an established program to manage post-construction stormwater runoff from new development and redevelopment sites. The City will continue to evaluate and improve this program during the current permit cycle.

### **POST-CONSTRUCTION STORMWATER MANAGEMENT BMPs**

<b>BMP</b>	<b>DESCRIPTION</b>	<b>ANNUAL REPORT</b>	<b>NOTES</b>
LANDSCAPE ORDINANCE	REQUIRES LID AND PROMOTES INFILTRATION	EXISTING	REVIEW ANNUALLY
LAND DEVELOPMENT ORDINANCE	ESTABLISHED INSPECTION AND APPROVAL FRAMEWORK FOR POST-CONSTRUCTION BMPs	EXISTING	REVIEW ORDINANCE ANNUALLY
BUILDING CODE	ESTABLISHED REQUIREMENTS FOR WASTE CONTROL AT CONSTRUCTION SITES	EXISTING	ADOPTED THE 2006 INTERNATIONAL RESIDENTIAL CODE
LOW-IMPACT DEVELOPMENT DATABASE	CREATE AND MAINTAIN A DATABASE OF NEWLY DEVELOPED AND REDEVELOPED LOCAL SITES THAT INCORPORATE LID TECHNIQUES	EXISTING SEE WEBSITE <a href="http://ttownstormwater.com">ttownstormwater.com</a>	PROVIDE EXAMPLES OF WATER QUALITY IMPROVEMENTS ON A LOCAL LEVEL BY DOCUMENTING EXISTING LID SITES AND LINKING TO WEB PAGE

The success of our post-construction stormwater management program will be shown through a documented reduction in impervious cover and the continued promotion of stormwater capture, infiltration, and reuse.

**B.6 POLLUTION PREVENTION/GOOD HOUSEKEEPING**

The City of Tuscaloosa will build upon existing efforts to develop and implement a comprehensive program to reduce stormwater pollution from all municipal operations.

**POLLUTION PREVENTION/GOOD HOUSEKEEPING BMPs**

<b>BMP</b>	<b>DESCRIPTION</b>	<b>ANNUAL REPORT</b>	<b>NOTES</b>
INVENTORY OF MUNICIPAL OPERATIONS	IDENTIFY AND INVENTORY ALL MUNICIPAL OPERATIONS THAT DISCHARGE TO THE MS4	EXISTING  SEE APPENDIX	INCLUDES FUEL STORAGE TANKS, VEHICLE WASH RACKS, FLEET MAINTANANCE OPERATIONS, MATERIAL STOCKPILES, ETC.
POLLUTION PREVENTION PROGRAM	CREATE AND ADOPT STORMWATER POLLUTION PREVENTION PLANS (SWPPP) FOR MUNICIPAL OPERATIONS AS REQUIRED TO REDUCE POLLUTANT DISCHARGES	MET WITH DEPARTMENT HEADS  ALL ARE DIRECTED TO CONTACT OCE STORMWATER PERSONELL IN THE EVENT OF A SPILL  TDOT HAS BEEN SENT SPILL INFORMATION AND TOLD TO DISTRIBUTE TO NECESSARY EMPLOYEES AND CALL IF ADDITIONAL TRAINING IS NEEDED	IMPLEMENTED AND MONITORED BY ENVIRONMENTAL COMPLIANCE COORDINATOR

STREET SWEEPING PROGRAM	DOCUMENT THE OPERATION OF AND RESULTS FROM EXISTING STREET SWEEPING EFFORTS	8,000 TONS OF DEBRIS/SEDIMENT REMOVED FROM OUR STREETS ANNUALLY  EXISTING	PROTECTS OUR DRAINAGE SYSTEM AND REDUCES MAINTENANCE FORCES
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The success of our pollution prevention program will be shown through the documented quantity of pollutants removed and the implementation of SWPPPs for all municipal operations.



CITY OF TUSCALOOSA  
PHASE II STORMWATER PROGRAM

**APPENDIX**



**OFFICE OF THE CITY ENGINEER**



# COMMON STORMWATER POLLUTANTS

## POLLUTANT      IMPACT

<b>SEDIMENT</b> <i>Dirt and Sand</i>	Flooding due to blocked ditches and storm-drains
<b>DEBRIS</b> Grass Clippings, Cigarette Butts, Trash, Plastic	Choked streams that cannot support fish or animals
<b>HEAVY METALS</b> Lead, Mercury	Polluted lakes and rivers
<b>HOUSEHOLD WASTE</b> Antifreeze, Gas, Oil, Pesticides, Fertilizers, Paint	Fish that are unsafe to eat
	Increased water treatment costs
	Polluted groundwater
	Fish kills and polluted waterways

For More Information  
Or

To Report A Problem  
Visit Our Website At:

[www.townstormwater.com](http://www.townstormwater.com)

Or Call:

CITY of TUSCALOOSA

Josh Yates - 248-5380



TUSCALOOSA COUNTY

Bob Cunningham - 345-6600



CITY of NORTHPORT

John Powell Webb - 339-7000



UNIVERSITY of ALABAMA

Hal Barrett - 348-5905

Proud Partners of:



TUSCALOOSA AREA  
**STORMWATER**  
MANAGEMENT GUIDE

*Water Quality Equals  
Quality of Life*



# Always remember..... "ONLY RAIN DOWN THE DRAIN"

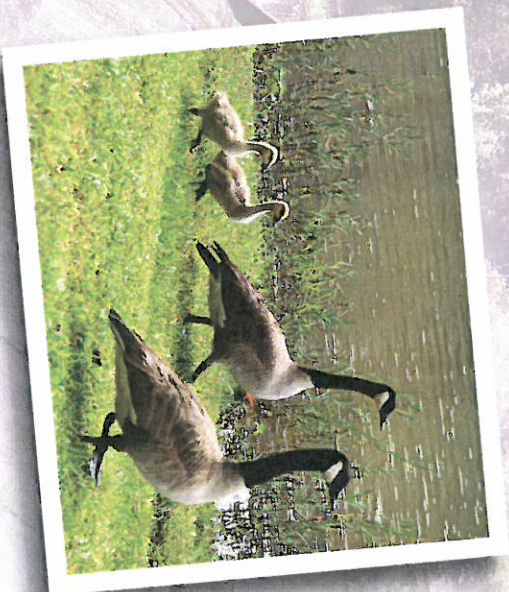
## WHAT IS STORMWATER POLLUTION?

Think of a single rain drop falling from the sky. It lands on your roof, flows down into the gutter, across your lawn and down your driveway. Along the way it picks up pesticides, fertilizer, oil and grease, pet waste, and many other chemicals and trash.

Next, it reaches the road where it can pick up sediment, cigarette butts, and more. Then, it flows into a drain, stream, river, or network of pipes that flow into your favorite fishing hole.

Now, imagine an entire storm, millions of raindrops, catching all these pollutants and flowing into our water bodies.

This is "Stormwater Pollution" and it occurs every time it rains!



## WHY IS STORMWATER POLLUTION A PROBLEM?

Stormwater pollution can result in dirty lakes and streams, fewer and less healthy fish and wildlife, limits on recreational use of Lake Tuscaloosa, and increased water and sewer treatment costs.

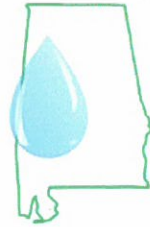
## HOW CAN I PREVENT STORMWATER POLLUTION?

- Report Spills or Erosion Problems Immediately
- Establish Grass on Bare Areas to Prevent Erosion
- Wash Your Car On The Lawn Instead Of The Driveway
- Dispose of Clippings, Leaves and Garbage Properly - Compost or Place Behind the Curb
- Recycle Used Oil and Antifreeze
- Sweep Your Driveway Instead of Pressure Washing
- Maintain Septic Tanks Properly
- Use Silt Fencing and Other Erosion Control Measures in Construction
- Don't Over Fertilize Your Lawn and Don't Apply Before Heavy Rainfall



**SAVE THE DATE!**

**Clear Water Alabama**



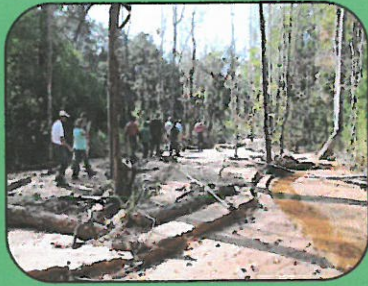
**2015 SEMINAR  
& FIELD DAY**

**September 2 & 3**

**Tuscaloosa, Alabama**

**Presented by the Alabama Erosion  
and Sediment Control Partnership**

Get details after June 1 at: [www.swcc.state.al.us](http://www.swcc.state.al.us)  
(Programs/Erosion and Sediment Control)



**SAVE THE DATE!**

**Clear Water Alabama**



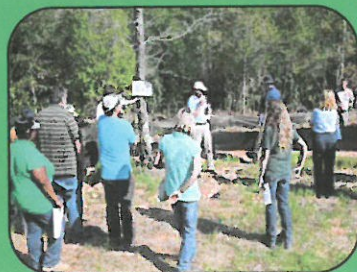
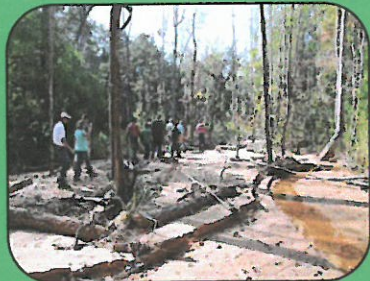
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(Programs/Erosion and Sediment Control)



## Josh D. Yates

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**From:** Josh D. Yates  
**Sent:** Friday, March 20, 2015 1:46 PM  
**To:** 'Philip Pitts'  
**Subject:** RE: Interim Watershed Class at UA

Yes, that would work for me.

Thanks,  
Josh Yates

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**From:** Philip Pitts [<mailto:northriverwatershed@Hotmail.com>]  
**Sent:** Friday, March 20, 2015 11:08 AM  
**To:** Josh D. Yates  
**Subject:** Re: Interim Watershed Class at UA

Josh,  
Could you do May 12 anytime in the am? Maybe 10:30?

Sent from my Fire

On March 16, 2015, at 9:26AM, Mary Wallace Pitts <[northriverwatershed@hotmail.com](mailto:northriverwatershed@hotmail.com)> wrote:

Thanks Josh, will let you know when I get some field dates confirmed.  
Appreciate your help, as always.  
Mary

Mary Wallace Pitts  
Sent from my iPad

On Mar 16, 2015, at 8:27 AM, "Josh D. Yates" <[jdyates@tuscaloosa.com](mailto:jdyates@tuscaloosa.com)> wrote:

Sure thing! Just let me know what time would work best for you, and I'll be there.

Thanks,  
Josh Yates

---

**From:** Mary Wallace Pitts [<mailto:northriverwatershed@hotmail.com>]  
**Sent:** Sunday, March 15, 2015 1:21 PM  
**To:** Josh D. Yates  
**Subject:** Interim Watershed Class at UA

Josh,  
Just wanted to check in with you about the Interim Term Watershed class. I was hoping you might find time to present an overview of the city's Stormwater Programs again. The students



really enjoyed hearing from you last year. I am hopeful that the class will fill as there has been considerable interest shown by students in advance. Of course I understand if your busy schedule doesn't allow. The class runs from May 4-May 20.

With thanks,

Mary

Mary Wallace Pitts

Coordinator

North River Watershed Management Plan

205-310-0831

[northriverwatershed.org](http://northriverwatershed.org)



**2014**

**Alabama Water Resources  
Conference & Symposium**

**September 3-5, 2014**

**Perdido Beach Resort  
Orange Beach, Alabama**

[aaes.auburn.edu/water/](http://aaes.auburn.edu/water/)

**Alabama Section of the American Water Resources Association  
Symposium Program**

**Wednesday, September 3, 2014**

***Theme: Water and Energy Relationships***

0:00 a.m.	<b>Registration</b>	<b>Registration Open – (Lobby)</b>
1:00 p.m. - 1:05 p.m.		<b>Introduction &amp; Welcome – (Salons E-H)</b> Todd Boatman, President, AWRA Alabama Section
1:10 p.m. - 1:15 p.m.		<b>Symposium Introduction – (Salons E-H)</b> Sam Fowler, President Elect, AWRA Alabama Section
1:40 p.m. - 1:45 p.m.		<b><i>Water Use for Energy in Alabama</i></b> , Tom Littlepage, ADECA Office of Water Resources
2:10 p.m. - 2:15 p.m.		<b><i>Alabama Power Reservoir Operations—Present and Future</i></b> , Herbie Johnson, Alabama Power Company
2:40 p.m. - 2:45 p.m.		<b><i>TVA's 2015 IRP: More Than A Least Cost Energy Plan</i></b> , Gary Brinkworth, P.E., Sr. Program Manager, 2015 IRP
3:00 p.m. - 3:05 p.m.		<b>Break (Ballroom Foyer)</b>
3:30 p.m. - 3:35 p.m.		<b><i>Modeling Power Plant Water Use in Alabama</i></b> , Tim Diehl, Hydrologist, USGS Mississippi-Tennessee Water Science Center
4:00 p.m. - 4:05 p.m.		<b><i>Water Use Related to Oil and Gas Production in Alabama</i></b> , Dennis Lathem, Executive Director Coalbed Methane Association of Alabama
4:30 p.m. - 4:35 p.m.		<b><i>Energy Management at Columbus Water Works</i></b> , John Peebles, Senior Vice President of Columbus Water Resource Operations
4:45 p.m. - 4:50 p.m.	<b>Q &amp; A Session for all Presenters</b>	
5:00 p.m. - Until	<b>Social and Dinner (Flora-Bama)</b> (Casual/Beach Attire)	

**2014 Sponsors**

Alabama Coal Association  
 Alabama Farmers Federation  
 Alabama Power Company  
 Alabama Pulp and Paper Council  
 AMEC Environment and Infrastructure  
 The Atlantic Group, LLC  
 Auburn University Center for Forest Sustainability  
 Balch & Bingham, LLP  
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 CH2M Hill  
 Drummond Company, Inc.  
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 Kleinschmidt – Energy & Water Resource Consultants  
 Layne  
 Normandeau Associates  
 PowerSouth Energy  
 Samford University Masters of Science in Environmental Management  
 University of Alabama, Discovering AL  
 Woolpert



**Alabama Water Resources Conference  
Program Overview**

**Thursday, September 4, 2014**

<b>7:30 a.m.</b>	<b>Registration Open (Lobby) and Continental Breakfast (Ballroom Foyer)</b>		
<b>8:00 a.m. - 8:40 a.m.</b>	<b>Welcome - Charles Stover, Chairman, Conference Organizing Committee (Salons E-H)</b> <b>Introduction of Keynote – Marlon Cook, GSA and Conference Planning Committee</b> <b>Keynote Address, The Water Energy Nexus; Mike Hightower, Water for Energy Project Lead for Sandia National Laboratories in Albuquerque, NM</b>		
<b>8:40 a.m. - 9:10 a.m.</b>	<b>The NOAA National Water Center in Tuscaloosa (Salons E-H)</b> Sam Contorno, Physical Scientist, NWS/National Water Center, Tuscaloosa, and Edward Clark, Hydrologist, NWS National Flash Flood Services Leader, Silver Spring, MD		
<b>9:10 a.m. - 9:20 a.m.</b>	<b>Break (Ballroom Foyer)</b>		
	<b>Salon E</b>	<b>Salons F-H</b>	<b>Sand Castle I</b>
	Concurrent Session One		
<b>9:20 a.m. - 10:30 a.m.</b>	<b>Water Quality I</b>	<b>Water Availability/Use</b>	<b>Water/Energy Issues</b>
	Concurrent Session Two		
<b>10:30 a.m. - 12:00 p.m.</b>	<b>North River Watershed Mgmt</b>	<b>Drought Assessment</b>	<b>Water Policy/Law</b>
<b>12:00 p.m. - 1:30 p.m.</b>	<b>Lunch (Grand Point)</b>		
	Concurrent Session Three		
<b>1:30 p.m. - 3:00 p.m.</b>	<b>Wetlands/Waters of the US</b>	<b>Groundwater Availability</b>	<b>Water Resource Education and Stewardship I</b>
<b>3:00 p.m. - 3:15 p.m.</b>	<b>Break (Ballroom Foyer)</b>		
	Concurrent Session Four		
<b>3:15 p.m. - 5:00 p.m.</b>	<b>Reservoir/Shoreline Management</b>	<b>Water Quality II</b>	<b>Aquatic Biology/Ecology</b>
<b>5:00 p.m. - 5:30 p.m.</b>	<b>AWRA State Section Business Meeting (Salons E-H)</b>		
<b>5:30 p.m. - 7:00 p.m.</b>	<b>Social Hour and Poster Presentations (Salons E-H)</b> Refreshments are courtesy of corporate sponsors.		

**Friday, September 5, 2014**

<b>7:30 a.m.</b>	<b>Continental Breakfast (Ballroom Foyer)</b>		
<b>8:00 a.m. - 8:50 a.m.</b>	<b>Welcome and Announcements – Charles Stover Chairman, Conference Organizing Committee (Salons E-H)</b> <b>Keynote Presentation</b> Introduction by Stan Cook, DCNR and Conference Planning Committee Member <b>Keynote Address: The Deepwater Horizon Oil Spill – An Update, N. Gunter Guy, Alabama DCNR Commissioner</b> <b>Student poster presentation competition awards – Amanda Fleming (Salons E-H)</b>		
	<b>Salon E</b>	<b>Salons F-H</b>	<b>Sand Castle I</b>
	Concurrent Session Five		
<b>9:00 a.m. - 10:30 a.m.</b>	<b>Water Management</b>	<b>Restoration/Remediation</b>	<b>Ecological Flows</b>
<b>10:30 a.m. - 10:45 a.m.</b>	<b>Break (Ballroom Foyer)</b>		
	Concurrent Session Six		
<b>10:45 a.m. - 12:00 p.m.</b>	<b>Floodplain Management</b>	<b>Water Resource Education and Stewardship II</b>	<b>Water Resource Management Tools and Techniques</b>
<b>12:00 p.m.</b>	<b>Conference Adjourns</b>		



**Alabama Water Resources Conference**  
**Session Topics and Presenters**

**Concurrent Session One**

Thursday, 9:20 a.m. – 10:30 a.m.

Salon E

**Session One (A): Water Quality I**

*Session Chair: Shannon Weaver, USDA, Natural Resources Conservation Service*

- The City of Auburn, Alabama's Outfall Reconnaissance Inventory Program - A Low Cost and Effective MS4 Best Management Practice (Program Update)**, Daniel Ballard, City of Auburn
- Stormwater Performance Monitoring of a Hydrodynamic Device and a Infiltrating Dry Pond at an Industrial Site**, Vijay Kumar Eppakayala, University of Alabama
- Status of recent US Geological Survey NAWQA Cycle 3 Activities in Alabama**, Amy Gill, U.S. Geological Survey, Alabama Water Science Center
- Comparison of two host-specific Bacteroidales assays for tracking cattle fecal contamination in water**, Jia Xue, Auburn University

Salons F-H

**Session One (B): Water Availability/Use**

*Session Chair: Athena Clark, U.S. Geological Survey, Alabama Water Science Center*

- Climate Variability Impacts on Surface and Ground Water Interactions in the Apalachicola-Chattahoochee-Flint River Basin**, Sarmistha Singh, Auburn University
- Use of statewide hydrologic models for assessment of water quantity in major river basins in Alabama**, Alexandria Hunt and Ana Maria Garcia, U.S. Geological Survey, North Carolina Water Science Center
- Water Use in Alabama - An Update**, Michael Harper, Alabama Office of Water Resources
- Surface-Water Availability - An Approach for a Statewide Assessment**, Brian Atkins, Alabama Office of Water Resources

Sand Castle I

**Session One (C): Water/Energy Issues**

*Session Chair: Marlon Cook, Geological Survey of Alabama*

- Energy Savings through Pipe Selection**, Maury D. Gaston, American Cast Iron Pipe and Carson Smith, Huntsville Utilities
- Energy Modeling of HVAC Heat Recovery System and Chilled Water Storage System for Energy and Water Conservation in Educational Buildings at the University of Alabama at Birmingham**, Zhuo Li, University of Alabama at Birmingham
- Water/Energy Panel Discussion**

**Alabama Water Resources Conference  
Session Topics and Presenters**

<b>Concurrent Session Two</b>	<b>Thursday, 10:30 a.m. – 12:00 p.m.</b>	<b>Salon E</b>	<b>Session Two (A): North River Watershed Management</b> <i>Session Chair: Mary Wallace Pitts</i>
			<p><b><i>From the Headwaters Down and Kindergarten Up – Every Partner in the Watershed Counts</i></b> - Mary Wallace Pitts</p> <p><b><i>An Evaluation of the North River SHU to Determine the Sedimentation Risk posed to Streams on Selected Unpaved and Paved Road Crossings</i></b> – Anne Wynn</p> <p><b><i>Sediment Pollution Control Provided by Best Management Practices Installation</i></b> - Abner Patton</p> <p><b><i>The Role Played by Local Government – A Case Study from the North River Watershed</i></b> - Scott Sanderford</p> <p><b><i>The City of Tuscaloosa Stormwater Management Program – A Partnering Case Study from the North River Watershed</i></b> - Josh Yates</p> <p><b><i>Evaluating Educational Effectiveness of North River Watershed Festivals 2012 to 2014</i></b> – Amanda Espy-Brown and Allie Sorlie</p> <p><b><i>Beyond Your Normal Comfort Zone - A Forester's Take on Partners in the North River Watershed</i></b> – Jim Jeter</p>
			<b>Session Two (B): Drought Assessment</b> <i>Session Chair: Charles Stover, Alabama Power Company</i>
		<b>Salons F-H</b>	<p><b><i>Using GIS to Assess Drought Conditions on Alabama's Public Water Systems</i></b>, Henry Moore, Alabama Office of Water Resources</p> <p><b><i>Evaluation Systems-Based Strategies for Drought Planning and Response</i></b>, Lian Zhu, University of Alabama</p> <p><b><i>Southeast US Drought: What needs to be done?</i></b>, Glenn Tootle, University of Alabama</p> <p><b><i>Drought Management in Alabama and the 2014 Drought Planning and Response Act</i></b>, Tom Littlepage, Alabama Office of Water Resources</p>
			<b>Session Two (C): Water Policy/Law</b> <i>Session Chair: Barbara Gibson, Choctawhatchee, Pea and Yellow Rivers Watershed Management Authority</i>
		<b>Sand Castle I</b>	<p><b><i>Water Policy and Law Update: An Overview of Interbasin Transfer Laws in Alabama and the Southeastern United States</i></b>, Bennett Bearden, University of Alabama</p> <p><b><i>Why Instream Flows Matter: Progress of Instream Flow Work in Alabama</i></b>, Patrick O'Neil, Geological Survey of Alabama and Stan Cook, Department of Conservation and Natural Resources</p> <p><b><i>Using the Best of the Best: Merging Ideals for a working Instream Flow Policy</i></b>, Mitch Reid, Alabama Rivers Alliance</p> <p><b><i>Alabama Groundwater Sustainability: A Strong Scientific Foundation for Water Resource Management and Policy to Secure Alabama's Water Future</i></b>, Marlon Cook, Geological Survey of Alabama</p>

**Concurrent Session Three**

Thursday, 1:30 p.m. - 3:00 p.m.

Salon E

**Session Three (A): Wetlands/Waters of the US**  
Session Chair: Sam Fowler, Auburn University Water Resources Center  
*Identification of Alabama's Geographically Isolated Wetlands*, Michael Barbour, Auburn University Natural Heritage Program  
*Image Analysis (GeOBIA)*, Tyler Jones, Auburn University  
*Clean Water Act Jurisdiction in a Ditched, Drained, Levee'd, Pasture on the Mississippi River Delta*, Jane Rowan, Normandeau Associates, Inc.  
*Development of risk-based nitrate TMDL for restored agricultural wetland near Chesapeake Bay: a case study*, Rasika Ramesh, Auburn University

Salons F-H

**Session Three (B): Groundwater Availability**  
Session Chair: Todd Boatman, U.S. Army Corps of Engineers, Mobile District  
*Alabama Aquifers: The GSA Groundwater Assessment Program Website and Hydrograph Decline Curve Analysis*, Amye Hinson, Geological Survey of Alabama  
*Effects of Pumpage for Irrigation on groundwater resources during Drought Events in the Lower Apalachicola-Chattahoochee-Flint River Basin*, Subhasis Mitra, Auburn University  
*Improved Estimates of the Population Using Private Drinking Water Wells: Alabama and Mississippi*, Phillip Grammer, University of Alabama  
*Proposed Waste Water Recharge/Reuse Plans for Blue Collar Country, Foley, Alabama*, Conrad Gazzier, CAG & Associates

Sand Castle I

**Session Three (C): Water Resource Education and Stewardship I**  
Session Chair: Allison Jenkins, Alabama Clean Water Partnership  
*Discovering Alabama-Alabama's Coastal Paradise: A Region Rich in Natural Diversity, History, and Educational and Recreational Resources*, Dr. Doug Phillips, Discovering Alabama  
*Gulf of Mexico Ecosystem Restoration: A Risk-Based Integrated Environmental, Economic, and Social Resource Management Decision*, Dr Michael Stovall, President, Ninth Generation Consulting  
*Alabama Low Impact Development Handbook*, Eve Brantley, AL Cooperative Extension System  
*Real-Time Flood Forecasting and Inundation Mapping for Nashville Tributaries*, Bradley Heilwagen, AMEC Environment & Infrastructure, Inc.

**Concurrent Session Four**

Thursday, 3:15 p.m. - 5:00 p.m.

Salon E

**Session Four (A): Reservoir/Shoreline Management**  
Session Chair: Brian Atkins, Alabama Office of Water Resources  
*Living Shorelines - A Guide for Alabama Property Owners*, Tom Herder, Mobile Bay NEP  
*Strengthening Coastal Resilience Through Natural and Engineered Infrastructure Enhancements: Howard Beach, New York City*, Paul Robinson, CH2M HILL  
*Developing an evaluative tool for prioritizing removal or repurposing of derelict vessels to improve watershed habitats*, Caitlin Wessel, University of South Alabama  
*Sources of Escherichia coli in Lake Martin, Alabama: The Potential Role of Geese*, Brian Burnes, University of West Alabama  
*Weiss Lake Environmental Concerns: The Weiss Lake R.V. Holding Tank Ordinance Regulatory Program*, Lem Burell, Alabama Department of Public Health

Salons F-H

**Session Four (B): Water Quality II**  
Session Chair: Roy McAuley, Alabama Pulp and Paper Council  
*Influence of geomorphologic spatial arrangement to in-stream nitrogen retention*, Laurence Lin, Jennifer W. Edmonds and Sagy Cohen, University of Alabama  
*Identifying Failing Septic Systems in the Eight Mile Creek Watershed*, Christian Miller, Auburn University Marine Research and Extension Center  
*Numerical simulation of flow dynamics and density current in a river-reservoir system under various upstream hydrologic conditions*, Gang Chen, Auburn University  
*Effectiveness of selected Erosion control covers with and without vegetation establishment on roadside slopes under simulated rainfall*, Ramandeep Sidhu, Auburn University  
*Impacts of dissolved organic nitrogen loading by submarine groundwater discharge in a coastal Alabama lagoon*, Jennifer Anders, University of Alabama and the Dauphin Island Sea Lab



**\*Thursday-Concurrent Session Four continued\***

**Session Four (C): Aquatic Biology/Ecology**

*Session Chair: Stan Cook, Alabama Department of Conservation and Natural Resources*

Sand Castle I

**State-of-the Science Review of Behavioral Guidance Technologies for Improving Fish Protection at Hydropower Dams and Power Plants in Alabama**, Christopher Gurshin, Normandeau Associates, Inc.  
**Traditional and new survey methods being implemented in the Bear Creek Watershed**, Jeff Powell, US Fish and Wildlife Service  
**Biological Sampling Tool Using Data retrieval, WRTDS, and Other R Packages**, Alexander Maestre, University of Alabama  
**Sample Size and Worth of Data in Hydraulic Habitat Modeling**, Thomas Payne, Normandeau Associates, Inc.  
**Smith Hydroelectric Plant Minimum Flow System: An Overview of the Installation and Operation**, Kenneth Odom, Alabama Power Company

**Session Five (A): Water Management**

*Session Chair: Tom Littlepage, Alabama Office of Water Resources*

Salon E

**The Choctawhatchee, Pea, and Yellow Rivers Watersheds: A Foundation for the Future Based on Sustainable Water Resources**, Barbara Gibson, Choctawhatchee, Pea and Yellow Rivers Watershed Management Authority  
**Apalachicola-Chattahoochee-Flint Stakeholders: Working Together to Share a Common Resource**, Brad Moore, Apalachicola-Chattahoochee-Flint Stakeholders  
**Evaluating the effects of land use change on headwater wetlands in Baldwin County, Alabama**, Christopher Anderson, Auburn University  
**A Hierarchical Modeling Approach to Simulating the Geomorphic Response of River Systems to Climate Change**, Sarah Praskievicz, University of Alabama

**Session Five (B): Restoration/Remediation**

*Session Chair: Sabra Sutton, CH2M HILL*

Salons F-H

**Successful Wetland and Forest Mitigation Design**, Amanda Fleming, Kleinschmidt  
**Stream Restoration Effectiveness in Baldwin County: Impacts and Remediation of the Perfect Storm**, Marlon Cook, Geological Survey of Alabama  
**Urban Waters Federal Partnership for Proctor Creek, Atlanta GA : An Opportunity for Simultaneous Watershed Improvements and Economic Revitalization**, Camilla Warren, US EPA Southeast Region  
**Paint Rock River Projects and Partnerships for water quality improvements and habitat restoration**, Paul Freeman, Nature Conservancy

**Session Five (C): Ecological Flows**

*Session Chair: Tom Payne*

Sand Castle I

**Ecological Flow Approaches in the Southeast – Four Case Studies**  
**AL:** Stan Cook, Chief of Fisheries, Alabama Department of Conservation and Natural Resources  
**FL:** Tom Bartol, Assistant Director, Division of Regulatory, Engineering and Environmental Services, St. Johns River Water Management District, Florida  
**MS:** Dennis Rieke (invited), Environmental Coordinator, Mississippi Dept. of Wildlife, Fisheries and Parks  
**GA:** Gail Cowie (invited), Assistant Chief, Environmental Protection Div., Georgia Dept. of Natural Resources  
**Moderated Discussion** of four panelists from different states using case studies to illustrate different technical approaches and complexities, and the utility of negotiation in problem resolutions regarding flows  
**Question and Answer Session**

**Concurrent Session Five**

Friday, 9:00 a.m. – 10:30 a.m.



# Alabama Water Resources Conference

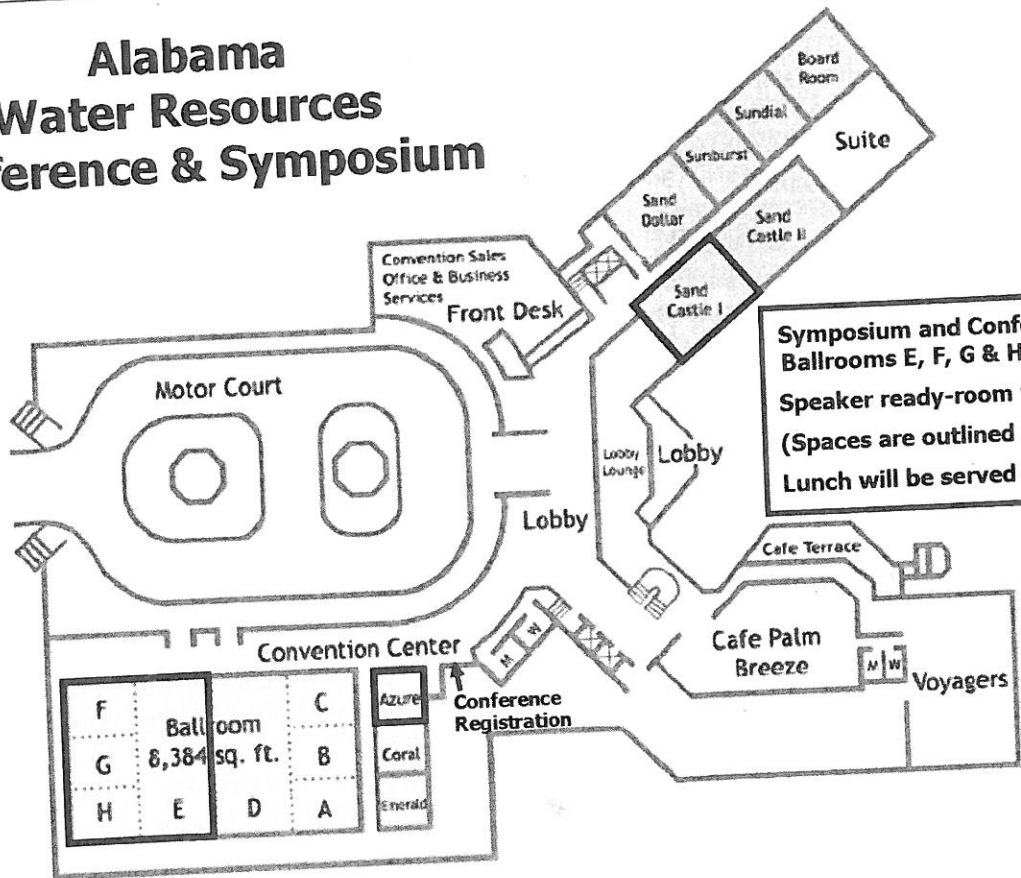
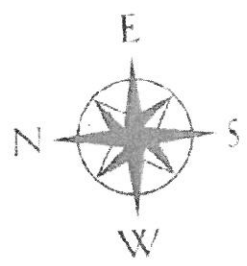
## Session Topics and Presenters

**Concurrent Session Six**

Friday, 10:45 a.m. – 12:00 p.m.

<b>Salon E</b>	<p style="text-align: center;"><b>Session Six (A): Floodplain Management</b>  <i>Session Chair: Bennett Bearden, Water Policy and Law Institute, University of Alabama</i></p> <p><b>Update on Alabama's Coastal Flood Mapping Project</b>, Jason Wilson, AMEC Environment &amp; Infrastructure, Inc.</p> <p><b>2-D Modeling for Approximate Complex Areas</b>, Monica Urisko, Atkins</p> <p><b>FEMA's New Flood Risk Products and Your Community: Practical Uses to Obtain Quantifiable Data and Shape Floodplain Management</b>, Jeff Zanotti, AMEC Environment &amp; Infrastructure, Inc.</p> <p><b>The Coosa River Flood Study</b>, Clay Campbell, AMEC Environment &amp; Infrastructure, Inc.</p>
<b>Salons F-H</b>	<p style="text-align: center;"><b>Session Six (B): Water Resource Education and Stewardship II</b>  <i>Session Chair: Eric Reutebuch, Auburn University Water Resources Center</i></p> <p><b>Meeting MS4 Permit Requirements through the ACWP</b>, Allison Jenkins, AL Clean Water Partnership</p> <p><b>Community-Based Response to Gulf of Mexico Water Quality Issues</b>, Miriam Guadalup Ramos Escobedo and Sergio Ruiz-Cordova, Global Water Watch</p> <p><b>The Center for Forest Sustainability works in Integrated Research and Education and Outreach</b>, Michelle Cole, Auburn University Center for Forest Sustainability</p> <p><b>An Outreach Program for Training of Proper Handling and Disposal of Pharmaceuticals</b>, Sue Duran, Auburn University College of Veterinary Medicine</p>
<b>Sand Castle I</b>	<p style="text-align: center;"><b>Session Six (C): Water Resource Management Tools and Techniques</b>  <i>Session Chair: Sam Fowler, Auburn University Water Resources Center</i></p> <p><b>Managing and Mitigating Energy Development and Risk in Mississippi</b>, Rachael Carter, MSU-Extension Service</p> <p><b>A Decision Support Tool for Water Distribution Network</b>, Xiaoyin Zhang, University of Alabama</p> <p><b>Better Water Assessment Tools &amp; Use in Optimizing Water Plants: Comparing Ryznar Stability Index and Langelier Saturation Index and Predicting Water Main Degradation</b>, Glenn Terrell, University of Alabama at Birmingham</p> <p><b>Econ Geo Wizard: A GIS Based Tool for Estimating Economic Consequences to Disruption in Water Service</b>, Joseph Gutenson, University of Alabama</p>

# Alabama Water Resources Conference & Symposium



Symposium and Conference Sessions will be held in Ballrooms E, F, G & H as well as Sand Castle I. Speaker ready-room will be in Azure. (Spaces are outlined in bold on the diagram.) Lunch will be served in Grand Point on Lower Level.

# LOW IMPACT DEVELOPMENT: THE NEXUS OF ON-THE-GROUND IMPLEMENTATION AND STORMWATER COMPLIANCE

DECEMBER 15, 2014 8:00am—4:30pm

NORTHPORT CIVIC CENTER 3500 McFarland Boulevard Northport, AL 35476

## Who should attend?

- ♦ Public works employees tasked with managing, enforcing or implementing NPDES Stormwater regulations.
- ♦ Design and engineer professionals, landscaping professionals and local, state, and federal government agency representatives.

## What will I learn?

- Why managing stormwater is important to economic development.
- Introduction to the recently published *Alabama's Low Impact Development Handbook*
- Current bioretention design, maintenance, and vegetation for successful implementation of low impact development stormwater control practices. Workshop will include design calculations.
- How other Alabama cities are complying with stormwater regulations.

## PROGRAM PARTNERS

- ✿ Black Warrior Clean Water Partnership
- ✿ Alabama Cooperative Extension System
- ✿ City of Northport Stormwater Management
- ✿ City of Tuscaloosa Stormwater Management
- ✿ Tuscaloosa County Stormwater Management
- ✿ City of Birmingham Stormwater Management
- ✿ Geological Survey of Alabama
- ✿ Zink Environmental PLLC
- ✿ Alabama Department of Environmental Management



08:00am	Registration	
08:30am	Welcome & Introductions	
	<b>Workshop Context</b>	
08:45am	Alabama's Natural Resources	Kellie Johnston
09:00am	Future of Water – Why It's Important	Dr. Pat O'Neil
09:15am	Alabama's Stormwater Regulations	ADEM
09:45am	Alabama's Low Impact Development Handbook	Dr. Eve Brantley
10:15am	B R E A K	
	<b>Workshop Content</b>	
10:30am	Mitigating the effects of Stormwater Using Low Impact Development	Dr. Jason Zink
12:00pm	L U N C H	
		Josh Yates, City of Tuscaloosa
12:45pm	What We are Doing Locally	Chad Scroggins, Shelby County
		Tom Miller, City of Birmingham
01:45pm	BMP Site Selection/Suitability; Intro to Group Activity	Dr. Jason Zink
02:15pm	Group Activity	All
03:00pm	Group Presentations and Discussion	All
03:30pm	Design Considerations for Stormwater Treatment Practices	Dr. Jason Zink
04:30pm	Resources, Future Trainings, Adjourn	

## REGISTRATION INFORMATION

\$25.00 Includes registration and lunch.

Register Online at <http://lowimpactdevelopment.eventbrite.com>

## INSTRUCTOR

As a professional engineer with 10+ years of experience, Jason Zink specializes in assessment, engineering design, and monitoring of ecological restoration projects, including stream restoration and innovative stormwater management. He has previously worked as an educator and researcher at North Carolina State University, and is now the Principal at Zink Environmental, PLLC. Jason has been the instructor for several Alabama workshops hosted by the [Alabama Cooperative Extension System](#).



*This project was funded or partially funded by the Alabama Department of Environmental Management through a Clean Water Act Section 319(h) nonpoint source grant provided by the U.S. Environmental Protection Agency – Region 4.*





Alabama Clean Water Partnership 10<sup>th</sup> Annual Watershed Conference  
Wednesday, February 18th, 2015 ~ 9:00 a.m. – 3:30 p.m.  
Renaissance Montgomery Hotel & Spa at the Convention Center  
201 Tallapoosa Street ~ Montgomery, Alabama 36104

## AGENDA

Registration/Networking/ABLE Exhibits		9:00
Welcome	Mike Godfrey, Board Chairman Jason Reid, Home Builders Assn. of AL	10:00
Planning for the ACWP's Future	Allison Jenkins, Executive Director	10:15
Unlocking the Geologic History of Alabama Rivers: Probing the Ancient Origins of the Aquatic Biodiversity	Dr. Jim Lacefield, Author Adjunct Professor, Biology/Earth Sciences, Retired University of North Alabama	10:30
Presentation of Limited Edition Print And Partner Recognition	Keith Smith, Artist Allison Jenkins	11:30
Lunch set-up/Networking/ABLE Exhibits Award Photos/Book Sales & Signing	All (Please exit room to allow for lunch set-up)	11:45
Lunch	All	12:15
Planning for Alabama's Natural Resources	Kellie Johnston, Black Warrior Facilitator	1:00
Panel: Meeting MS4 Stormwater Permit Requirements with ACWP assistance	Josh Yates, City of Tuscaloosa Chad Scroggins, Shelby County Kevin Ashley, City of Anniston	1:30
Economic Impacts of Riverfront Development (Including Chattahoochee Whitewater Express)	Scott Miller, Director Leisure Services City of Montgomery, Alabama  Richard Bishop, President/CEO, Uptown Columbus City of Columbus, Georgia	2:40
Conference Adjourns		3:30

Special Thanks to our Conference Sponsors:  
(Additional sponsors to be added)

*Alabama Department of Environmental Management*

*Alabama Forestry Association-Sustainable Forestry Initiative*

*Alabama Soil & Water Conservation Committee ~ Alabama Wildlife Federation*

*Georgia-Pacific (Brewton) ~ Home Builders Association of Alabama*

*Tri Rivers Waterway Development Association ~ Center for Water Resource Economics – Troy University*

Thanks to all of our partners for your support of The Alabama Clean Water Partnership.  
BECAUSE OF *YOUR* INVOLVEMENT WE *ARE* MAKING A DIFFERENCE!



**NORTH RIVER PROJECT COMMITTEE – LOWER SUB-BASIN  
AGENDA**  
March 16, 2015 1pm – 3pm  
NOAA National Water Center  
205 Hackberry Lane, Tuscaloosa, AL 35401

**WELCOME**

- Welcome and Introductions – Abner Patton, Black Warrior Lower Sub-basin Chair
- NOAA National Water Center

**PRESENTATIONS**

- *From the Headwaters Down and Kindergarten Up – Every Partner in the Watershed Counts*, Mary Wallace Pitts, Coordinator - North River Watershed
- *An Evaluation of the North River SHU to Determine the Sedimentation Risk posed to Streams on Selected Unpaved and Paved Road Crossings*, Anne Wynn, Geological Survey of Alabama
- *Sediment Pollution Control Provided by Best Management Practices Installation*, Abner Patton, Patton Geologics in Tuscaloosa, Al
- *The Role Played by Local Government – A Case Study from the North River Watershed*, Scott Sanderford, City of Tuscaloosa Lakes Division
- *The City of Tuscaloosa Stormwater Management Program – A Partnering Case Study from the North River Watershed*, Josh Yates, Office of the City Engineer, City of Tuscaloosa
- *Evaluating Educational Effectiveness of North River Watershed Festivals 2012 to 2014*, Amanda Espy-Brown and Allie Sorlie, University of Alabama
- *How the North River Project Complements the Development of Alabama's Water Policy*, Bennett Bearden, Water Policy and Law Institute-University of Alabama

**OPPORTUNITIES FOR FUTURE COLLABORATION**

*Discovering Alabama* feature of the North River Watershed – Dr. Doug Phillips

**TOUR OF NOAA NATIONAL WATER CENTER FACILITY (Optional)**

*The Black Warrior Clean Water Partnership is a part of the Alabama Clean Water Partnership. The Clean Water Partnership is a neutral forum to share information among stakeholders and has adopted a non-advocacy policy. This project was funded or partially funded by the Alabama Department of Environmental Management through a Clean Water Act Section 319(h) nonpoint source grant provided by the U.S. Environmental Protection Agency – Region 4.*



# TOTALCOM

Client: City of Tuscaloosa, Office of Engineering  
 Product: Stormwater Pollution 2014  
 Date: February 12, 2014

Revised: July 7, 2014

	June	July	Aug	Sept	Oct	Nov	Monthly Cost	TOTAL
<b>PRINT</b>								
Tuscaloosa News	2xs	1x					\$ 3,268/\$ 1,634	\$ 4,902
<b>RADIO</b>								
WJRD	20xs	20xs					\$ 400	\$ 800
WRTR	20xs	20xs					\$ 480	\$ 960
WTUG	15xs	15xs					\$ 675	\$ 1,350
<b>CHARTER CABLE</b>								
USA/TBS/ESPN				60xs	30xs		\$ 2,060/\$ 1,030	\$ 3,090
<b>WWUA</b>								
PM News/Tider Ins/Hey Coa/Wilcox				18xs	18xs		\$ 1,475	\$ 2,950
<b>ONLINE</b>								
TuscaloosaNews.com	40k imp	40k imp		40k imp	40k imp		\$ 760	\$ 3,040
<b>DIRECT MAIL</b>								
Utility Statement Stuffers		45k hh			45k hh			\$ 3,662
<b>SOCIAL MEDIA</b>								
Facebook Paid Ads	\$ 400	\$ 400	\$ 400					\$ 1,200
<b>AGENCY SERVICES</b>								\$ 2,500

**TOTAL**

**\$24,454**

# TOTALCOM

## **MEDIA DETAILS:**

- Tuscaloosa News – ¼ Page, Full Color, Sunday
- Radio - :30, M-Sat 6a-7p
- Cable - :30, M-Sun 6p-12m on TBS/USA/ESPN
- WVUA - :30, M-F News 5P/6P/10P; Hey Coach, Tider Insider, Tommy Wilcox
- TuscaloosaNews.com – Display ad on homepage with link, up to 40,000 impressions per month
- Utility Statement Stuffers – 4 x 9, 100# Gloss Text, Full Color One Side – includes printing and shipping
- Facebook Paid Ads – Will display only to Men 25 plus in Tuscaloosa City with lifestyle interests in hunting, fishing, outdoors, etc.

## **PRODUCTION/AGENCY CHARGES:**

- Account Management
- Account Planning
- Procure Bonus Media
- Resize Artwork for Print, Internet, Statement Stuffers
- Deliver Orders and Production to Media
- Media Order Reconciliation
- Revise Contact Name on TV Commercials (4), Print Ads (3), Rack Cards

Presented By:

Lori Moore

TotalCom Marketing Communications  
205.345.7363

APPROVED AS TO FORM  
GDW  
Office of the City Attorney

Prepared By: TDB  
Requested: W&S/Admin Comm.  
Presentation on: 3/24/15  
Suspension of Rules: No

RESOLUTION

**RESOLUTION SETTING A DATE FOR A PUBLIC HEARING ON THE  
PROPOSED ORDINANCE TO ADOPT THE CITY'S FATS, OIL, AND  
GREASE (FOG) MANAGEMENT PROGRAM MANUAL**

(A15-0229)

WHEREAS, the Water & Sewer department desires to incorporate by reference the City's fats, oil, and grease (FOG) management program manual into the City Code; and,

WHEREAS, pursuant to Ala. Code 11-45-8 (c) (1975), Ordinances may adopt by reference thereto, without setting the same out at length in the ordinance, rules and regulations which have been printed as a code in book or pamphlet form, and,

WHEREAS, before adopting such code in book or pamphlet form, the governing body of the city or town shall by resolution hold a public hearing of which there shall be at least 15 days' notice of the time, place and purpose of such hearing by publication of the resolution once a week for two successive weeks

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF TUSCALOOSA as follows:

That a public hearing shall be held on Tuesday, April 7, 2015 at 6:00 p.m., in the Council Chamber of City Hall, to determine the assent of the City Council to adopt the following Ordinance amendment to allow the FOG manual by reference in the City Code as follows, to-wit:

**Sec. 16-61. Adoption of Fats, Oil, and Grease (FOG) Management Program Manual.**

(a) A leading cause of sewer blockages in the city's sanitary sewer system is caused by Fats, Oil, and Grease (FOG) build-up within the sanitary sewers. The blockages may cause or contribute to sanitary sewer overflows into local waterways and backups into homes and businesses and thus can cause significant damage to properties and be



a risk to public health and the environment. The city experiences a direct cost burden for responding to blockages, relieving the blockage, cleaning damage done, or paying regulatory fines and penalties for violating its National Pollutant Discharge Elimination System Permits because of FOG related problems. In addition, there are potentially adverse impacts from FOG on the performance of the city's wastewater treatment plant.

(b) The Water and Sewer Department has developed and maintains a uniform, Fats, Oil, and Grease (FOG) Program for the sanitary sewer system. In accordance with the provisions of Code of Ala. 1975, § 11-45-8(c), the city's Fats, Oil, and Grease (FOG) Management Program, 2014 Edition, (the manual) is hereby referred to and adopted by reference as fully as if set out at length herein, and from and after the effective date of this article shall govern as far as code or ordinance can, to all the subjects to which they relate within the corporate limits of the city and within its police jurisdiction. The regulation, disposal, and prohibition of introducing any fat, grease, oil or another viscous matter into the city's sanitary sewer system shall be in accordance with the provisions of said manual.

BE IT FURTHER RESOLVED pursuant to Ala Code §11-45-8 (c) (1975) that the City Clerk is hereby directed to publish this resolution in *The Tuscaloosa News*, a daily newspaper of general circulation once a week for two (2) consecutive weeks prior to said date of April 7, 2015

FUNDING REQUIRED:  Yes  No

**COUNCIL ACTION**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

By: \_\_\_\_\_  
 Finance Director



## The Drain Is Not A Dump Put FOG In The Trash

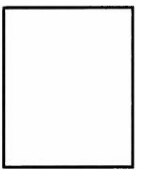
Fats, Oils and Grease (FOG), the residue left over from cooking meats, such as bacon that hardens after it cools, can cause problems when poured down the drain and clog pipes in your home. Did you know FOG can also clog the sewer pipes under the streets that take the wastewater from your house to the treatment plant? If that happens, the wastewater can back up and come to the surface and pollute the environment.



A sewer pipe clogged with FOG  
(Fats, Oils & Grease)

City of Tuscaloosa  
Water & Sewer Department  
4010 Kauloosa Avenue  
Tuscaloosa, AL 35401

# DON'T CLOG WITH FOG FATS OILS & GREASE





## Why should I help prevent FOG?

Collecting Fats, Oils & Grease in a container and throwing it away prevents health hazards and environmental damage. FOG can cause untreated sewage to run into our streets and storm drains. You can help prevent damage to the sewer system by taking a few simple steps.

### Taking Action will:

- ✓ Prevent grease buildups from blocking sewer lines.
- ✓ Stop sewer overflows into streets and storm drains.
- ✓ Reduce the number of times you have to clean your grease trap. *(food service establishments)*
- ✓ Save money spent on costly cleanups of sewage spills.
- ✓ Protect the quality of our water.

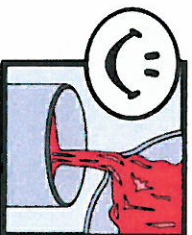
### More ways I can prevent FOG

Use environmentally safe cleaning products instead of harsh detergents or cleaners that can damage sewer lines.

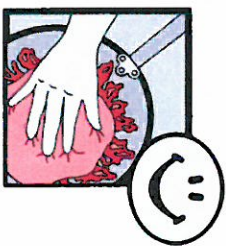
If you generate large amounts of used cooking oils, recycle it. To find a recycler, check the phone book under "recyclers" or "rendering companies."

If you generate small amounts of used cooking oils, pour it into a container that you can throw away into the trash.

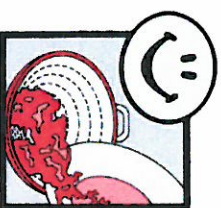
## 10 simple ways you can help the environment



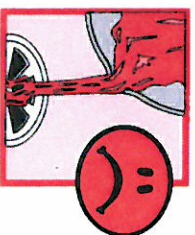
Put oil and grease into covered collection containers.



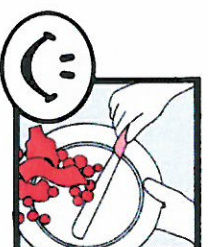
Remove oils and grease from dishes, pans, fryers, and griddles. Cool first before skimming, scraping or wiping grease.



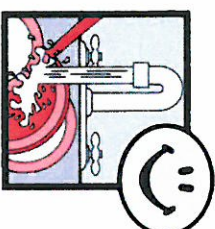
Cover the kitchen sink with a catch basket and empty into the garbage can as-needed.



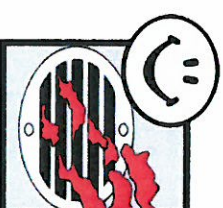
Don't pour oils and grease down the drain.



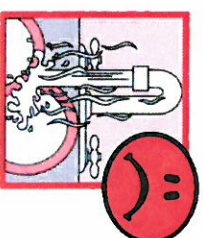
Scrape food scraps from dishes into trash cans and dispose of properly. Avoid your garbage disposal.



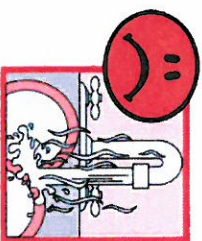
Prewash dishes and pans with cold water before putting them in the dishwasher.



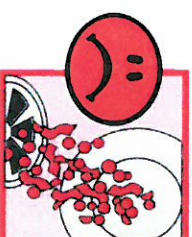
Cover floor drains with fine screen and empty into the garbage can as needed.



Don't rinse off oils and grease with hot water.



Don't run water over dishes, pans, fryers, and griddle to wash oils and grease down the drain.



Don't put food scraps down the drains.

**Always Remember: NEVER pour FOG down the drain!**



**ONLY RAIN DOWN THE DRAIN**  
Prevent Stormwater Pollution



## WHAT IS STORMWATER POLLUTION?

Rain can carry pesticides, fertilizer, oil, sediment, cigarette butts, chemicals and trash – and all flow into the drain and eventually end up in our streams, rivers, and lakes.

This stormwater pollution leads to fewer and less healthy fish and wildlife, limits on recreational use of lakes and rivers, and increased water and sewer treatment costs.

## WHAT CAN YOU DO?

- Wash your car on the lawn or at a professional car wash facility
- Dispose of clippings, leaves and garbage properly – compost or place behind the curb
- Recycle used oil and antifreeze
- Sweep your driveway instead of pressure washing
- Don't over fertilize your lawn and don't apply fertilizer before heavy rainfall

*For more information  
or to report a problem:*

*City of Tuscaloosa  
Josh Yates  
Dial 311  
[ttownstormwater.com](http://ttownstormwater.com)*

**Brought to  
you by:**



## Josh D. Yates

---

**From:** alina or patrick <rainscented@gmail.com>  
**Sent:** Friday, February 27, 2015 4:17 PM  
**To:** Anne Wynn; Josh D. Yates  
**Subject:** Re: Alabama Water Watch bacteria monitoring test kit

Thanks so much Josh. The kids will be thrilled given the extent to which they play in this creek.

And thanks to you Anne as well. As usual. For everything. :)

Best,  
Alina

On Fri, Feb 27, 2015 at 3:34 PM, Anne Wynn <[AWynn@gsa.state.al.us](mailto:AWynn@gsa.state.al.us)> wrote:

Thanks so much for following up on this Josh! It is a learning experience for us all. And Alina's blog is really cool. 😊

Have a great weekend!

---

**From:** Josh D. Yates [mailto:[jdyates@tuscaloosa.com](mailto:jdyates@tuscaloosa.com)]  
**Sent:** Friday, February 27, 2015 2:26 PM  
**To:** Friends of Hurricane Creek; Anne Wynn  
**Cc:** [alina.coryell@facebook.com](mailto:alina.coryell@facebook.com)  
**Subject:** RE: Alabama Water Watch bacteria monitoring test kit

Alina,

Thank you for the email! I love how the children are out exploring the watershed. I read your blogs and I went out personally to investigate and concur with Mr. Wathen that this is more than likely Iron that is seeping out of the ground. There is a lot of groundwater present in the hillside. When you conduct a test for pH in a watershed, you would want to get down into the creek to test the water (maybe you did, I assumed this was the pH from the little red pond). The little red pond is simply a hole in the ground that does not drain until it overflows allowing the solids and iron concentrate to collect. The storm drains themselves do not produce pollution, it's what might be put into that storm drain that could be a problem. The overall watershed has an average pH of 6.1 at a monitoring point downstream that we monitor and have continuously monitored in the past. You can tell the Prophet and the Gnome to rest easy knowing that the watershed is functioning properly. As they continue to explore, if they ever see any grey water, that is an indicator of sewage, not to say that it has to be grey to be sewage, but it is a good indicator. I encourage you to visit our website at [townstormwater.com](http://townstormwater.com) to see what we are doing locally, and it gives an opportunity to comment on our stormwater management plan and also report any concerns/problems. Thank you again for your email and if anything else arises feel free to contact me.



**Thanks,**

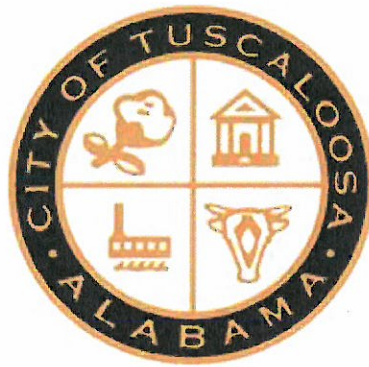
**Josh Yates, CFM**

**Storm Drainage Engineer**

**City of Tuscaloosa**

**Office of the City Engineer**

**(205)248-5387**



**"The opinions expressed here are my own and do not necessarily represent those of the City of Tuscaloosa."**

**This message may contain confidential and/or proprietary information and is intended for the person/entity to whom it was**

**originally addressed. Any use by others is strictly prohibited.**

**From:** Friends of Hurricane Creek [<mailto:lifeathurricanecreek@gmail.com>]

**Sent:** Wednesday, February 18, 2015 9:39 AM

**To:** Anne Wynn

**Cc:** Josh D. Yates; [alina.coryell@facebook.com](mailto:alina.coryell@facebook.com)

**Subject:** Re: Alabama Water Watch bacteria monitoring test kit

Josh,



Here are two links with images and a description of how we arrived at the location

<http://www.alinasadventuresinmaking.com/2015/02/exploring-the-nasty-red-pond-in-cribbs-mill-creek-watershed.html>

<http://www.alinasadventuresinmaking.com/2015/02/a-morning-in-the-life-of-junior-waterkeepers.html>

Estimated Latitude and Longitude: 33.183157, -87.494773

But it's best if you read the two posts because they include pretty specific site descriptions.

Thanks so much for your help.

Best,

Alina Stefanescu Coryell

On Mon, Feb 16, 2015 at 2:38 PM, Anne Wynn <[AWynn@gsa.state.al.us](mailto:AWynn@gsa.state.al.us)> wrote:

Alina,

If you send Josh the location, the City can come out and get a sample at the location you were referring to in the Cribbs Mill Creek watershed.

Thanks for your help, Josh.

-Anne

Sent from my Verizon Wireless 4G LTE Smartphone

----- Original message -----

From: "Josh D. Yates"

Date:02/13/2015 6:27 PM (GMT-06:00)

To: Anne Wynn

Subject: RE: Alabama Water Watch bacteria monitoring test kit

No, we do not because we didn't have an incubator, etc. If you believe there might be a sewage leak please send the location and we can take a sample and test it for ecoli at our sewage treatment facility.

Thanks,

Josh Yates

---

**From:** Anne Wynn [mailto:[AWynn@gsa.state.al.us](mailto:AWynn@gsa.state.al.us)]  
**Sent:** Wednesday, February 11, 2015 3:13 PM  
**To:** Josh D. Yates  
**Subject:** Alabama Water Watch bacteria monitoring test kit

Hi Josh,

Does the City have any of these kits to be loaned out? A woman in the Cherokee Hills subdivision (near the VA Center) reported some algae-like growth near a potentially leaky sewage pipe, and we wanted to test it.

Hope you are enjoying the nice weather!

Anne

--

Alina Stefanescu Coryell

--

Alina Stefanescu  
Tuscaloosa, Alabama  
[rainscented@gmail.com](mailto:rainscented@gmail.com)



## Alina's Adventures

### Exploring the nasty red pond in Cribbs Mill Creek watershed.



After the Eldest and E. sampled and tested the water at what they called "Red Pond", we entered the data online at the World Water Monitoring Challenge. The results weren't pretty-- the PH low as 1 and impossibly high turbidity.

Latitude and Longitude: 33.183157, -87.494773

The King wanted to see for himself so we set off to find Red Pond again, this time by foot. The Eldest debriefed him on the parameters- this is part of the Cribbs Mill Creek Watershed which has a watershed management plan and the problem area is right next to a massive storm drain in Lakewood Circle.





The Eldest took us through the woods between Cherokee Hills and Lakewood Circle. We entered just after Hardy's property and hiked our way through the underbrush.



Oh man.



Gnome kept getting snagged by thorns.

When we came out of the thick underbrush, we were behind the big kudzu patch in what looked like a fairway.





Granted, finding seven golf balls gave us the fairway impression. The girls "hunted eggs."



Poor Gnome was distraught at only finding one- "everyone else found balls but me."





There was something metallic, shiny like gasoline weeping from the creek beds further downstream. My pictures aren't very good but you can see it here- looks white because of the light.



A foot further, the banks have a reddish tint where the water empties into the creek.





And here it the gasoline-looking fluid is sitting in a marshy area. I wish I'd taken better photos...

Further downstream, where the boys like to build dams, the water is still ruddy and the smell is sewer or sulfur.



The view still further downstream, moving towards the lake in Cherokee Hills.

Hurricane Creekkeeper John Wathen said it looked like an iron seep but needs to put eyes on it. I am so grateful for everything I've learned about waterkeeping as a Board Member of Friends of Hurricane Creek, and the way this education has involved and included my family and children. The world is a better place to the extent that we invest in its care. And there is no investment without knowledge.

So the story continues...

February 8, 2015 | [Permalink](#)

## Comments

Comment below or sign in with [Typepad](#) [Facebook](#) [Twitter](#) [Google+](#) and [more...](#)

(You can use HTML tags like <b> <i> and <ul> to style your text. URLs automatically linked.)

Email address is not displayed with comment.





## Alina's Adventures

### A morning in the life of junior waterkeepers.

The Eldest and E. were dressed, fed, and out the backdoor by 8 a.m. this morning in pursuit of a noble cause. Last night, they regaled us with stories of a "disgusting, blood reddish pond" in the woods abutting Cherokee Hills and Woodland Hills. They were determined to investigate further this morning.



By the time I rolled out of bed and doused my face in coffee, the boys had returned- "You've got to see this!"- and convinced me to hop in the spaceship and drive over to Lakewood Circle to photograph the curious pond. I parked on the street and crossed my fingers that no one would report us.



We entered the woods just past a water drain.





"Watch where you step," warned the Eldest. The kudzu hibernates during the winter but everything we see (and every step we take) is a mass of kudzu come summertime. Not what you'd call firm ground.



The Prophet and Gnome walked down the slippery slope, eyes peeled for holes and loose soil. They wanted to throw sticks into the "bloody water."





The boys were right. It wasn't pretty. And it came straight from the stormwater drain.



You could see the high degree of sedimentation just beneath the orange skin.





After having followed the water upstream and downstream, the boys had their theories. E. mentioned a possible sewer line spilling into the woods. We concluded the storm drain near the street was the probably source point of pollution.



*Looking downstream from the pond.*





*The Eldest pontificates.*



"Shouldn't we map out the watershed so we can see where all this is going?", I asked. The photos of watershed landmarks come in handy when map time rolls around.





The boys wanted to follow the water back to Cherokee Hills so I hiked back to the spaceship (which hadn't been towed) and drove back to wait for the budding waterkeepers.



*"The water looks super yuck!"*

Back at the castle, a hapless queen scoured the web for answers. The coolest geologist in the world (cough, Anne Wynn) gave us a clue- the boys were exploring the Cribb Mill Creek Watershed. And what do you know? A google search gave me the [Cribbs Mill Creek Watershed Management Plan](#). The boys returned anxious to test the water and see the watershed plan. Cowabunga, let the good times roll.

We're off to test the water with our water testing kits. The mischief-maker in me says why not leave a geocache near the nasty pond to encourage others to bear witness but the fine, upstanding mom in me says what if some fool gets hurt. Who knows which side will win?

February 6, 2015 | [Permalink](#)



## Comments

Laurie said...

Love this! Well, the story, not the subject...

Reply February 8, 2015 at 10:04 AM

Alina said...

:) You would have loved the entire adventure, Laurie. And then I wouldn't have been the only one saying bad words.

Reply February 10, 2015 at 09:19 PM

Comment below or sign in with [Typepad](#) [Facebook](#) [Twitter](#) [Google+](#) and [more...](#)

(You can use HTML tags like `<b>` `<i>` and `<ul>` to style your text. URLs automatically linked.)

Email address is not displayed with comment.

POWERED BY  TypePad



# 3<sup>rd</sup> Annual WATERFEST

April 4<sup>th</sup> 10am-2pm, Phelps Activity Center

The WATERFEST Information Fair is a good place to learn about where your water comes from, how it is protected, and ways you can help preserve it for the future of the Tuscaloosa area.

# 6<sup>th</sup> Annual Clean Our Lake Day

April 5<sup>th</sup> 8am-1pm, Binion Creek (Hwy 43) Boat Landing

Annual Lake Cleanup day where volunteers clean the trash from bridge crossings, streams, rivers and lakes in the Tuscaloosa area to help protect one of our areas greatest natural resources.



For more details contact 205-349-0279  
or [www.northriverwatershed.org](http://www.northriverwatershed.org)

## Waterfest made possible by...

Alabama PALS ~ Almon Associates ~ Bama Docks ~ Black Warrior Riverkeeper  
Blue Herron Marina ~ Buffalo Rock ~ Campus Collections ~ Chris Watkins Construction  
CH2MHill ~ City of Northport ~ Hansel King ~ Harrison Construction ~ Hudson Poole  
McAbee Construction ~ Nick's Kids ~ Nucor ~ PARA ~ Patton Geologics  
Planet Weekly ~ Pottery Grill ~ Sentell Engineering ~ Smith's Marina  
Tuscaloosa Assoc. of Realtors ~ Thornton Welding ~ TTL ~ Tuscaloosa Scale Co.  
Varnon Engineering. ~ Walker Associates, Inc. ~ Ward Scott Architecture





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## Contact

### City Hall

2201 University Blvd  
P.O. Box 2089  
Tuscaloosa, AL 35401

### Telephone:

(205) 248-5311

### Fax:

(205) 349-0147

[Email Webmaster](#)

## City of Tuscaloosa Schedules Seventh Annual Waterfest for April 10 and 11

March 10, 2015

Tuscaloosa, Ala. – The seventh annual Lake Tuscaloosa-North River Waterfest and Lake Clean Up, a two-day educational and cleanup event, is scheduled for April 10 and 11 at Lake Tuscaloosa.

The fest will include an education expo on Friday, April 10 at the Phelps Activity Center for area fourth-grade students. The lake cleanup event is open to the public on Saturday, April 11 at the Highway 43 boat landing.

Residents of the City of Tuscaloosa and surrounding areas receive their drinking water from Lake Tuscaloosa, which is fed by the North River watershed. Waterfest provides an opportunity for local students and citizens to learn more about protecting and conserving the local water supply.

At last year's Clean Our Lake Day, 86 volunteers removed a total of 5,670 pounds of trash from the lake. Over the past six years, this brings the total to over 75,000 pounds of trash cleaned out by over 800 volunteers.

The Friday festival will start at 9:30 a.m. and end at 1:30 p.m. with booths providing education on North River and Tuscaloosa watershed. Local experts will present and demonstrate how and why Lake Tuscaloosa and North River watershed are important to the community.

On Saturday, the cleanup begins at 8 a.m. and lasts until 1 p.m. Participants will be able to register at the Highway 43 Binion Creek boat landing. At this location there will be raffle prizes, t-shirts, hotdogs and drinks available to registered participants.

Contact Dana Willingham at 205-349-0279 or [dwillingham@tuscaloosa.com](mailto:dwillingham@tuscaloosa.com) or Tuscaloosa 311 at 205-248-5311 with any questions.

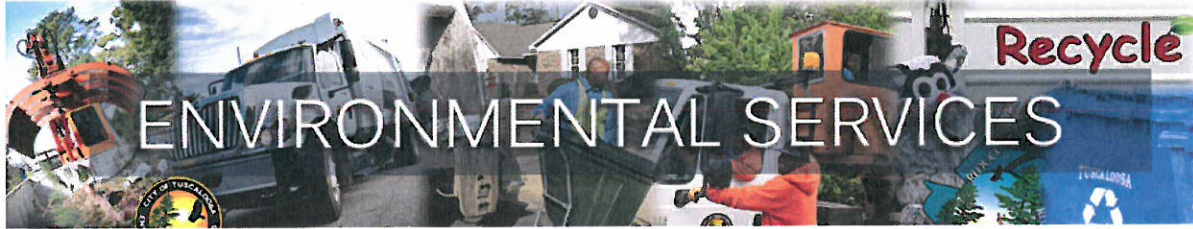
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- [Solid Waste Collection Services](#)
- [Code Enforcement & Litter Control](#)
- [Environmental Education](#)
- [Environmental Events](#)
- [Collection Schedule](#)

## Save the Date:

**Saturday, May 17th, 2014**

**(8am-Noon)**

Environmental Services Department  
3431 Kauloosa Avenue  
Tuscaloosa, AL 35401

[Household Hazardous Wastes Brochure](#)

**Toxic. Free. Home.**

**HOUSEHOLD HAZARDOUS WASTE DISPOSAL DAY**

**Saturday, May 17th, 2014 8:00AM - Noon**

Environmental Services Department (equipment lot)

3431 Kauloosa Avenue Tuscaloosa, AL 35401

205-248-4900



## Household Hazardous Wastes (HHW)

Household hazardous wastes are chemical products disposed by residential consumers. like you.

These wastes include cleaning solvents, paints, pesticides and thermostats. These items often contain substances that can catch fire, react with other chemicals, explode, or are corrosive or toxic.

Household hazardous wastes should not be thrown away in your garbage cart. ESD accepts a few of these items at our facility ([map here](#)) and there are a few Tuscaloosa businesses that also accept HHW.



### HHW is easy to find

HHW items should not be thrown away or poured down the drain.

Click the categories below to see which HHW items you may have in your home.

**General**

### Past HHW Events

HHW Disposal Day - May 11th, 2013

The city of Tuscaloosa's Environmental Services Department along with Nucor Steel Tuscaloosa, Inc. recently hosted a Hazardous Household Waste Disposal Day. This free drop-off event was open to



**Kitchen**  
**Garage**  
**Workshop**

all Tuscaloosa County household residents and provided the opportunity to safely recycle or dispose of items and chemicals found in most homes. Items collected at the event included: batteries, paint, paint thinner, light bulbs, used motor oils, gasoline, herbicides, pesticides and other common household hazardous wastes. Nearly 400 residents participated in the disposal day, eliminating over **55,000 lbs.** of hazardous chemicals from the waste stream and keeping them out of water ways and local landfills.

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## What is Household Hazardous Waste?

Leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients are considered to be "household hazardous waste" or HHW. Products that contain hazardous ingredients are safe to use when you follow the manufacturer's instructions, but require special care when you dispose of them. If disposed of improperly, these wastes can pollute the environment and pose a threat to human health.

### Have you ever...

**Poured used motor oil, gasoline or antifreeze on the ground?**

**Thrown away dead batteries in your garbage cart?**

**Emptied a partial can of paint thinner or cleaning product down the drain?**

Doing this once or twice may not seem like a big deal, but if everyone in Tuscaloosa County does this, these small amounts equal a BIG water quality problem! The average household contains between 3 to 10 gallons of hazardous wastes. If these wastes are not disposed of properly, they can contaminate our rivers and lakes.

## HHW DAY

The City of Tuscaloosa's Environmental Services Department is proud to offer the citizens of Tuscaloosa a safe and environmentally acceptable way of recycling and disposing their household hazardous waste. This is another great step towards Tuscaloosa becoming a Cool City. Practically every household has hazardous materials and events such as this will continue to show Tuscaloosa's dedication to improving our local environment and reducing the overall carbon footprint of the area.

## Who To Contact

### *City of Tuscaloosa*

Environmental Services Department

3441 Kauloosa Ave (temp address)

Tuscaloosa, AL 35401

**(205) 248-4900** (phone)

**(205) 349-0366** (fax)

[www.tuscaloosa.com/ESD](http://www.tuscaloosa.com/ESD)

[ESD@tuscaloosa.com](mailto:ESD@tuscaloosa.com)

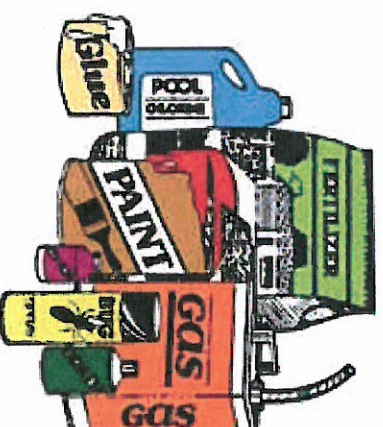
**311 - One Call to City Hall**

City of Tuscaloosa  
ENVIRONMENTAL  
SERVICES DEPARTMENT



## HOUSEHOLD HAZARDOUS WASTE

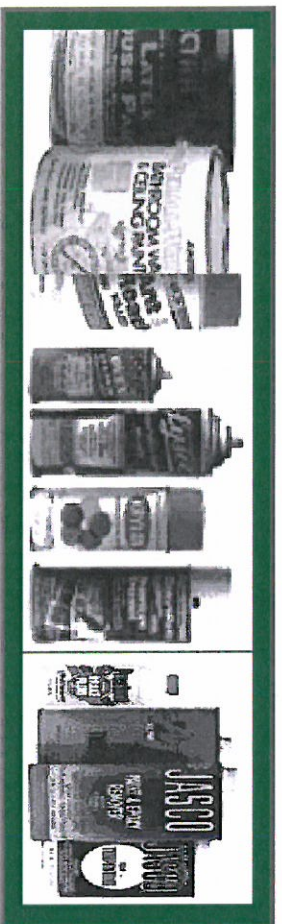
### *A Reference Guide for Homeowners*



Shane Daugherty, ESD Director

City of Tuscaloosa ♦ Alabama





## What's in Your Home?

**These are just some of the Household Hazardous Wastes found in most homes:**

- ✦ **Kitchen:** Aerosol cans, floor care products, furniture polish, metal polish, bleach
- ✦ **Bathroom:** Nail polish, nail polish remover, bathroom cleaners
- ✦ **Garage:** Antifreeze, used oils, automotive batteries, brake fluids, car wax with solvents, diesel fuel, gasoline, kerosene, transmission fluid, pesticides, lawn care chemicals
- ✦ **Workshop:** Paintbrush cleaner, glues, mineral spirits, paints (oil and latex), stains, paint thinner rust remover, turpentine, varnish
- ✦ **Here & There:** Household batteries, dry cleaning solvents, fiberglass epoxy, gun cleaning solvents, old chemistry sets, lighter fluid, moth balls, old propane tanks, unmixed photographic chemicals, septic tank degreasers, swimming pool chemicals, fluorescent light bulbs, mercury-containing light bulbs and thermostats.

## SAFER ALTERNATIVES!

Here are some of the safe alternative products that will get the jobs done well:

- Air Freshener:** An open box of baking soda absorbs refrigerator odors. For garbage carts, sprinkle boric acid in the cart.
- Antifreeze:** Look for the new, less toxic brands on the market.
- Drain Opener:** To prevent clogs, pour 1/4 cup baking soda followed by 1/2 cup vinegar. When it stops fizzing, flush with boiling water.
- Moth Repellent:** Cedar Chips in Cheese cloth
- Rust Remover:** Pour salt over rust, then squeeze lime over it. Leave for 2-3 hrs. Use rind to scrub off
- Window Cleaner:** Wipe clean with a mixture of 3 Tablespoons of vinegar in 7 quarts of water.
- Wood Furniture Polish:** Combine 1 part lemon juice with 2 parts olive oil

## Other Recyclables

- ✦ **Electronic Equipment** – Save your computers, cell phones, stereos, etc...for free recycling at the annual E-waste recycling day. Call ESD for details on event dates and details.
- ✦ **Rechargeable Batteries** - All RECHARGEABLE batteries such as cell phone, power tool, laptop and vehicle batteries may be dropped off at NO COST at the ESD during working hours. These are NOT accepted on curbside routes or in drop-off trailers
- ✦ **Inkjet Cartridges** - All inkjet cartridges may be dropped off for recycling at the ESD during working hours. These are NOT accepted on curbside routes or in drop-off trailers. Proceeds go to the Tuscaloosa Pre-K fund
- ✦ **White Goods** - Items like Refrigerators, stoves, and washing machines are recycled by the ESD. Tuscaloosa Residents may leave these items out on their trash day, separated from the rest of their debris.



# Environmental Events

## Environmental Presentations (Available Year Around)

Invite the City's Environmental Coordinator to your next neighborhood meeting, civic group presentation, school function, or community event. Contact [ESD@tuscaloosa.com](mailto:ESD@tuscaloosa.com) to book a free presentation today.

## Phone Book Recycling Contest

Bring old phone books to participating Tuscaloosa City & Tuscaloosa County schools for recycling. Schools who collect the most phone books per student enrolled will win prizes.

## Household Hazardous Waste

### Disposal Day

Do you have old paint, pesticide, used oil, and other chemicals in your garage or shed? Safely dispose of these hazardous household items at this annual event.

## Community E-Cycling Days

Don't throw away old, broken or unused electronics. E-cycle them safely at this annual event.

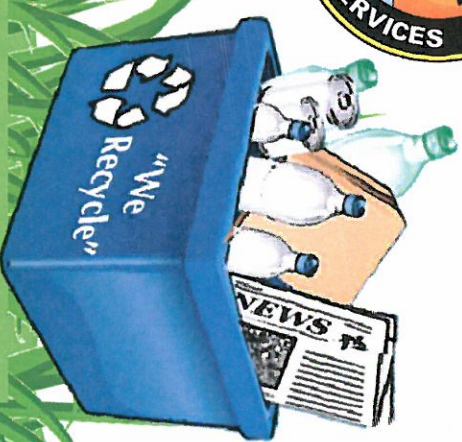
For more information about upcoming ESD events Tuscaloosa, Call 311 or visit [www.tuscaloosa.com/recycle](http://www.tuscaloosa.com/recycle)

# Things to Remember...

- Residential curbside recycling will be collected the same day as garbage & trash. To find your collection day and holiday schedule, visit [www.tuscaloosa.com/ESD](http://www.tuscaloosa.com/ESD)
- Recycling bins must be at the curb before 7:00AM to ensure collection (before 6:00AM between Memorial Day & Labor Day).
- Always place your recycling bin separate from the garbage cart & trash pile.
- If you have qualified for disabled garbage collection, you will automatically qualify for disabled recycling collection. Call ESD for details.
- Live in an apartment, own a business or live outside the City-limits? Drop off your recyclables at one of the drop-off recycling trailers located around town. For a list of locations, visit [www.tuscaloosa.com/recycle](http://www.tuscaloosa.com/recycle)
- To request a recycling bin, request an additional recycling bin, or if your recycling bin is broken, call **Tuscaloosa 311**. Please note that supplies are limited.

# Tuscaloosa Recycles

A Curbside Recycling Guide  
for City of Tuscaloosa  
Residential Garbage Customers



City of Tuscaloosa

Environmental Services Department

3431 Kauloosa Ave Tuscaloosa, AL 35401

205-248-4900 or Tuscaloosa 311

[ESD@tuscaloosa.com](mailto:ESD@tuscaloosa.com)

[www.tuscaloosa.com/recycle](http://www.tuscaloosa.com/recycle)





# City of Tuscaloosa Recycling Guide

Use this guide when recycling at home with the blue curbside recycling bin, or when visiting one of the numerous drop-off recycling trailers located around town. For more information, visit [www.tuscaloosa.com/recycle](http://www.tuscaloosa.com/recycle) or call Tuscaloosa 311.

## "What can I recycle in Tuscaloosa?"

### OFFICE PAPER

- White/color paper
- Lined paper
- Photo paper
- Junk mail (plastic windows & staples are acceptable)
- Paperback books & hardback books (must remove hard covers)
- Shredded paper

*Must be bundled or placed in plastic or paper bags*  
*Remove all personal information*

### PLASTICS

- **Plastics #1**
- Water bottles
- Soda bottles
- Plastic containers marked #1 PETE



### Plastic bottles #2

- **Bottles only**
- Milk jugs
- detergent bottles
- shampoo bottles
- Must be marked #2 HDPE



### Plastic film

- grocery bags
- Bundled together

### NEWSPAPERS & MAGAZINES

- All types & inserts
- Must be separated from office paper

### CARDBOARD

- Corrugated cardboard
- Cereal-type boxes
- Brown paper bags
- Boxes must be free of all packaging & flattened

### METALS

- Aluminum Cans (such as soda cans)
- Steel Cans (such as "tin" food cans)
- Must be clean



## The 3 R's

Recycling isn't the only step...

### REDUCE Waste

Avoid purchasing products designed to be used one time (non-rechargeable batteries, disposable cups, etc.)

### REUSE Items

Write on both sides of paper. Use plastic grocery bags again at home. They make great liners in small trash cans.

### RECYCLE Daily

Use this guide and recycle the right way in Tuscaloosa. Recycle MORE = Waste LESS

## Items NOT accepted in curbside recycling bin

### GLASS

- Wax-lined containers
- Styrofoam
- Household garbage

### Aluminum foil items

- Batteries
- Construction materials
- Electronics

### Metallic-lined bags

- Clothes hangers
- Diapers
- Hard plastics #3-#7

For more information, visit

[www.tuscaloosa.com/recycle](http://www.tuscaloosa.com/recycle)



## Construction Sites

<u>File</u>	<u>Date</u>	<u>Location</u>	<u>District</u>	<u>Description of Violation</u>	<u>Action Taken</u>
C-1		UA	4	Paint & floatables discharging into the river	Conducted meeting with UA & contractors to discuss BMP's on 7/24.
C-2	19-Jul-12	Tractor Supply Patriot Parkway	2	Mud/dirt in the street due to lack of exit pad	Talked with engineer and on site superintendent.
		The Province 1104 Hillard Dr.		Corrective action notice issued 7/26. Talked with engineer and on site superintendent.	
C-3	26-Jul-12	The Province 1104 Hillard Dr.	4	No storm drain inlet protection.	Contractor brought in for BMP training.
	30-Jul-12	The Province 1104 Hillard Dr.		Dirt on paved areas needed sweeping/cleaned. A lot of trash on site that can get into stormwater inlets.	Verbal warning. Engineer also e-mailed contractor
C-4	1-Aug-12	Bojangles/AutoZone 5 Points/Cottondale	5	Sediment being tracked onto Univ. Blvd. & Old Cottondale Rd.	Verbal warning to contractor and e-mail sent to engineer.
	10-Aug-12	Bojangles/AutoZone 5 Points/Cottondale		Sediment being tracked onto Univ. Blvd. & Old Cottondale Rd.	Corrective Action Notice issued to both sites. Notice lifted on 8/13 for both sites. BMP training 8/22.
	8-Aug-12			No erosion control devices present. Mud tracked out onto 6th Ave.	Talked with Graves Watkins (contractor) and gave verbal warning.
C-5	2-Oct-12		4	Mud/dirt being tracked onto the street due to lack of exit pad.	Corrective Action Notice issued 10/2. Notice lifted 10/3.
	16-Jul-13	Rock Point Estates 513 13th Street		Mud/dirt being tracked onto Hackberry.	Verbal warning to contractor (Graves Watkins)
C-6	13-Aug-12	Houndstooth Carwash McFarland	3	Exit pad was covered in mud which was tracking into the street.	Told on site superintendent to get pad cleaned or lay a new pad. New pad was laid.
C-7	14-Aug-12	18th Street sidewalk - Forest Lake	2	Mud/dirt in the curb/gutter from lack of BMP's on road.	Josh talked to BKI and issued a verbal warning.
C-8	14-Aug-12	Jamestown Villas 6th Street East	5	Not enough vegetation and turbid water leaving the site	Stop Work Order posted 5/17/12. Stop Work Order lifted 5/30/13.
C-9	16-Aug-12	Residences at City Lot - Univ. Blvd	1	No inlet protection and sediment leaving the site.	Corrective Action Notice issued 8/16. BMP training due to contractor leaving town.
	16-Aug-12			No inlet protection, silt fences failing and sediment leaving site.	No Stop Work Order issued 9/7. Stop Work Order/Corrective Action Notice lifted 9/10.
	28-Dec-12			Sediment leaving site due to failure to maintain BMP's.	Verbal warning to engineer (Al Cabaniss)





C-25	20-Dec-12	Cheddar's Café 900 Skyland Blvd. E	6	Sediment leaving site. Silt fences failing. 2" of mud has entered Chili's dumpster area.	Corrective Action Notice issued 12/20. Notice lifted 12/28.
C-26	7-Dec-12	Horton's Truck Serv. 5860 Old Mtgy. Hwy.	7	No LDP, filling in a floodway/flood hazard area.	Stop work order posted 12/7.
C-27	10-Dec-12	Fields Crossing	PJ	No BMP's in place. This has caused the sewer lift station to fill with sediment and mud.	Referred to Ronnie Pugh per Chad Christian. Verbal warning to contractor (Graves Watkins)
C-28	21-Dec-12	Parker Drug 501 15th Street E	2	Mud/dirt being tracked off site. No entrance/exit pad.	Corrective Action Notice issued 12/26. Notice lifted 12/28.
C-29	27-Dec-12	Hoo's BBQ 101 15th Street Central Church of Christ	2	Sediment entering storm drain. No entrance/exit pad. Silt fences failing.	Corrective Action Notice issued 12/27. Notice lifted 1/10.
C-30	27-Dec-12	304 Hargrove Road Alberta Baptist Church	2	Inlet protection missing/failing. Silt fences failing.	Corrective Action Notice issued 12/27. Notice lifted 12/31.
C-31	26-Dec-12	2210 University Blvd.	5	No inlet protection.	Corrective Action Notice issued 12/26. Notice lifted 12/27.
C-32	27-Dec-12	Gilda's 19 15th Street	2	Stockpile uncovered. No inlet protection.	Verbal warning to contractor. (Rushing Construction)
C-33	27-Dec-12	Masonic Temple 110 Hargrove Road	2	Sediment leaving site. Failure to maintain BMP's.	Verbal warning to contractor. (Harrison)
C-34	27-Dec-12	Cedar Crest Village 324 15th Street E	4	Sediment leaving site. Failure to maintain BMP's.	Verbal warning to on site superintendent.
	9-May-13			Sediment leaving site.	Verbal warning to owner and engineer. (Via e-mail)
	4-Jun-13			Silt fence down in multiple areas, sediment leaving site.	Verbal warning to on site superintendent. (J.J.)
	7-Jun-13			Silt fence down in multiple areas, sediment leaving site.	Verbal warning to owner and engineer. (Via e-mail)
C-34	27-Dec-12	Cedar Crest Village 324 15th Street E	4	Sediment leaving site. Failure to maintain BMP's.	Verbal warning to engineer. (Ron Henderson)
	5-Mar-13			Sediment leaving site.	Corrective Action Notice issued 3/5. Notice lifted 3/11.
	11-Jun-13			Sediment leaving site. Failure to maintain BMP's.	Corrective Action Notice issued 6/11.
	19-Jun-13			Sediment leaving site. Installed BMP's are not sufficient.	Corrective Action Notice continued. Notice lifted 6/24.



C-35	29-Dec-14	Crimson Village 1402 18th Ave. E Public Safety Building	5	Sediment leaving site.	Verbal warning to engineer. (Via e-mail.)
C-36	27-Dec-12	3440 Kauloosa Ave Career & Tech. High School	2	Failure to maintain BMP's. Improper inlet protection.	Verbal warning to engineer. (Doug Varmon)
C-37	3-Jan-13	2800 MLK Jr. Blvd Wood Square 1309 McFarland Blvd. E	1	Mud/sediment leaving site.	Verbal warning to engineer & contractor. (Mike Gardner & Harrison)
C-38	10-Jan-13		5	Mud/sediment leaving site.	Verbal warning to engineer & contractor. (Gonzalez-Strength & CEI)
	25-Jan-13			Mud/sediment leaving site.	Verbal warning on site superintendent. Corrective Action Notice issued 1/31. Notice lifted 2/5.
	19-Jun-13			Mud/sediment leaving site.	Verbal warning to contractor. (Brian Hurd)
C-39	20-Jun-13	1100 & 1104 13th Street	4	Lack of BMP's.	Corrective Action Notice issued 6/20. Notice lifted 6/21.
	25-Jan-13			Insufficient exit pad. Mud/sediment leaving site.	Verbal warning on site superintendent.
	1-Mar-13			No onsite inlet protection.	Verbal warning on site superintendent.
	15-Apr-13			Sediment leaving site.	Verbal warning via e-mail to owner, engineer & contractor.
	6-Jun-13			Sediment leaving site. Mud entering adjoining property owners' yards.	Corrective Action Notice issued 6/6.
	19-Jun-13			Sediment leaving site. Improperly installed BMP's.	Stop Work Order issued 6/19. Stop Work Order/CAN lifted 7/12.
C-40	18-Sep-13	Petro Gas Station 1902 Veterans Mem. Parkway	5	No inlet protection. No BMP's on uncovered soil.	Verbal warning via e-mail to owner, engineer & contractor.
	25-Jan-13			No exit pad. Mud/sediment leaving site.	Verbal warning on site superintendent. Corrective Action Notice issued 1/28. Notice lifted 1/28.
	27-Feb-13	Forest Lake Townhomes Forest Lake Dr & 16th Street E	2	Mud/sediment leaving site. Failure to maintain erosion control devices. Adjacent lay down yard needs BMP's installed.	Corrective Action Notice issued 2/27. Stop Work Order issued 3/5. Stop Work Order/CAN lifted 3/7.
C-41	31-Jan-13			No BMP's. Mud/sediment leaving site.	Corrective Action Notice issued 1/31. Notice lifted 2/5.

	19-Jun-13		Mud/sediment leaving site. No exit pad/lack of perimeter control on 13th Street	Corrective Action Notice issued 6/19.	
C-42	20-Jun-13	1005 13th Street	4	Mud/sediment leaving site. No exit pad/lack of perimeter control on 13th Street	Stop Work Order issued 6/20. Stop Work Order & CAN lifted 6/20.
C-43	31-Jan-13	1021 Convent Street	4	No exit pad. Mud/sediment leaving site.	Corrective Action Notice issued 1/31. Notice lifted 2/19.
C-44	1-Feb-13	Alabama One CU 70 Skyland Blvd.	7	Inlet protection needed.	Verbal warning to engineer. (Josh Rogers)
	1-Feb-13			No exit pad. Mud/sediment leaving site.	Corrective Action Notice issued 2/1. Notice lifted 2/6.
C-45	26-Apr-13	Cloverdale Lots 23, 25 & 27	4	Failure to maintain BMP's. Sediment leaving the site.	Verbal warning to on site superintendent. Also e-mail sent to owner and engineer.
C-46	5-Feb-13	908 13th Street	4	No BMP's. Mud/sediment leaving site.	Corrective Action Notice issued 2/5. Notice lifted 2/6.
	5-Feb-13			Sediment leaving site. Inlet protection needed. Broken storm drain pipe exposed.	Corrective Action Notice issued 2/5. Notice lifted 2/6.
	19-Feb-13			Sediment leaving site due to insufficient exit pads.	Corrective Action Notice issued 2/19. Notice lifted 2/21.
	26-Apr-13			Failure to maintain BMP's. Trash/debris in temporary storm drain.	Verbal warning issued via e-mail. (Owner, contractor, engineer.)
C-47	15-May-13	Old Row at Cloverdale	4	Sediment leaving site on both ends of the site at the exits.	Verbal warning issued via e-mail. (Owner, contractor, engineer.)
C-48	7-Feb-13	37 Cloverdale Road	4	Sediment leaving site due to insufficient exit pad.	Corrective Action Notice issued 2/7. Notice lifted 2/10.
	19-Feb-13			Sediment leaving site due to insufficient exit pad.	Corrective Action Notice issued 2/19. Notice lifted 2/21.
C-49	26-Apr-13	29 Meador Drive	4	Insufficient exit pad. Mud/sediment leaving site.	Verbal warning issued via e-mail. (Owner, contractor, engineer.)
C-50	26-Feb-13	705 13th Street	4	Sediment leaving site.	Corrective Action Notice issued 2/26. Notice lifted 3/1.
C-51	27-Feb-13	5900 McFarland Blvd. E	7	No LDP. No BMP's.	Stop Work Order issued 2/27. No plan received. Owner removed soil & hayed site. Will check back later for vegetation.
C-52	5-Mar-13	Thornton Welding Burchfield Drive	1	Sediment leaving site. (Also, concrete scrap pieces being placed into ditch beside property.)	Corrective Action Notice issued 3/5. Notice lifted 3/6.



C-53	23-Apr-13	Soma Church 212 44th Court NE	5	Sediment leaving site at playground area.	Verbal warning to pastor. (Shaun Faulkner)
C-54	26-Apr-13	518 Wesley Place	4	Paint left the site and was on the curb. No perimeter control.	Verbal warning to engineer and property owner. (Via e-mail)
C-55	7-May-13	496 Wesley Place	4	Silt fence down and insufficient exit pad.	Corrective Action Notice issued 5/7. Notice lifted 5/9.
C-56	9-May-13	28 Cloverdale	4	Sediment leaving site due to insufficient exit pad.	Verbal warning to owner and engineer. (Via e-mail)
C-57	10-Jun-13	Rock Point Units 1214 Bryant Drive	4	Insufficient exit pad. Mud/sediment leaving site.	Verbal warning to owner and engineer. (Via e-mail)
	11-Jun-13			Insufficient exit pad. Mud/sediment leaving site.	Corrective Action Notice issued 6/11. Notice lifted 6/12.
C-58	11-Jun-13	Hurricane Creek Trace 6th Street East	5	No exit pad. Mud/sediment leaving site.	Verbal warning to owner, engineer & contractor. (Via e-mail)
C-59	9-Jul-13	Environmental Services Building 35th Str/Kauloosa	2	Insufficient exit pad. Mud/sediment leaving site. Silt fence failing.	Verbal warning to owner and engineer. (Via e-mail)
C-60	10-Jul-13	318 Wesley Place	4	Insufficient exit pad. Mud/sediment leaving site. Silt fence failing.	Corrective Action Notice issued 7/10. Notice lifted 7/12.
C-61	12-Jul-13	ZF Industries Commerce Drive	1	Failing silt fence. Sediment leaving site.	Verbal warning to owner and engineer. (Via e-mail)
C-62	29-Jul-13	Green Bear Development Bryant Dr./	4	Mud/sediment leaving site due to insufficient exit pad.	Verbal warning to owner and engineer. (Via e-mail)
C-63	29-Jul-13	Townes of North River Phase VII	3	Mud/sediment leaving site.	Verbal warning to owner and engineer. (Via e-mail)
C-64	14-Aug-13	Townes of North River	3	Various BMP and erosion control issues on multiple residential lots.	Corrective Action Notice issued 8/13. Stop Work Order issued 8/15. Lots released individually. Last one released on 8/20.
	22-Feb-14			Various BMP & erosion control issues in undeveloped areas of the property.	Verbal warning to contractor. (Via e-mail & phone conversation)
C-65	17-Jul-13	Shadesbrook subdivision	7	Fill dirt being brought in with no BMP's or LDP in place. Mud/sediment leaving site due to insufficient exit pad. Lack of proper perimeter control.	Stop Work Order issued 7/17. Stop Work Order lifted 7/23. Verbal warning to owner and engineer. (Via e-mail)
	1-Oct-13				

	18-Mar-14			Mud entering 13th Street due to a disturbed hillside.	Verbal warning to on-site superintendent. Verbal warning also sent to owner and engineer. (Via e-mail)
2-66	28-Mar-14	1400 13th Street	4	Mud/sediment leaving the site due to holes in silt fence and disturbed hillside.	Corrective Action Notice Issued 3/28. Notice lifted 4/7.
2-67	21-Oct-13	2204 Greensboro Ave	2	No BMP's on site.	Verbal warning to engineer. (Via e-mail.)
2-68	18-Nov-13	Panda Express 636 15th Str. E	4	Mud/sediment leaving site due to insufficient exit pad. Inlet protection missing.	Verbal warning to on-site superintendent.
2-69	9-Dec-13	Tusc. Credit Union 2925 Skyland Blvd E	7	Failing silt fence. Sediment leaving site.	Verbal warning to engineer. (Via e-mail.)
	26-Dec-13	Acadian Place Phase III	3	Sediment leaving site. Multiple BMP failures.	Corrective Action Notice Issued 12/26. Notice lifted 12/31.
2-70	22-Feb-14		3	Sediment leaving site. Multiple BMP failures.	Corrective Action Notice Issued 2/22. Notice lifted 2/25.
2-71	2-Jan-14	303 15th Street E Transamerican Equipment	2	Mud/sediment leaving site.	Verbal warning to engineer. (Via e-mail.)
2-72	5-Mar-14	2500 Greensboro Av	2	Bare soil for longer than 14 days.	Verbal warning to owner/engineer. (Via e-mail)
2-73	20-Mar-14	4605 Hargrove Rd E Old Row at Cloverdale II	PJ	Failed inlet protection, no exit pad.	Corrective Action Notice issued 3/20. Notice lifted 4/7.
2-74	24-Mar-14	Gramercy Park 519 11th Street	4	Insufficient exit pad. Sediment leaving site.	Verbal warning to owner, engineer & contractor. (Via e-mail)
2-75	28-Mar-14	Central Park 510 12th Street	4	Failing silt fence. Sediment leaving site.	Verbal warning to owner/engineer. (Via e-mail)
2-76	28-Mar-14	502 Wesley Place	4	Sediment leaving site due to hole in silt fence. Sediment leaving site; need perimeter control next to neighboring driveway.	Verbal warning to owner/engineer. (Via e-mail)
2-77	28-Mar-14		4	Failing silt fence. Sediment leaving site.	Verbal warning to engineer. (Via phone call.)
2-78	16-May-14	800 21st Avenue Somerville Apts. 5701 McFarland Blvd E	4	Failing silt fence. Sediment leaving site.	Corrective Action Notice issued 5/16. Notice lifted 5/19.
2-79	15-May-14		7	No exit pad. Silt fences cut.	Verbal warning to engineer. (Via phone call.)



C-80	28-May-14	2225 7th Street	4	Earth work being performed without LDP.	Stop Work Order posted 5/29.
C-81	12-Jun-14	2700 Capitol Park	1	Sediment leaving site onto 3rd Street.	Verbal warning to owner and engineer. (Via e-mail)
		2700 Univ Blvd			
C-82	12-Jun-14	Renasant Bank	1	Sediment leaving site onto 3rd Street. Unprotected inlet.	Verbal warning to owner, engineer & contractor. (Via e-mail)
		2518 Univ Blvd			
C-83	10-Jun-14	Riverfront Village	1	Failing silt fence. Sediment leaving site. Turbid water leaving site.	Verbal warning to engineer. (Via e-mail.)
		Corner of Greensboro & JWP			
C-84	13-Jun-14	1007 13th Street	4	Sediment leaving site.	Verbal warning to owner and engineer. (Via e-mail)
	22-Jul-14				
	17-Nov-14				
C-85	11-Mar-15	The Collegiate	5	Failing inlet protection. Sediment leaving site. Exit pads not maintained.	Corrective Action Notice issued 1/13/15. (Via e-mail)
	13-Jan-15				
		13th Street East			
C-86	9-Sep-14	Spring Hill Suites	2	No exit pad. Sediment leaving site.	Verbal warning to owner and engineer. (Via e-mail)
	14-Oct-14	4000 Greensboro Av			
C-87	8-Dec-14	The Balcony	4	Sediment leaving site.	Verbal warning to owner and engineer. (Via e-mail)
		1009 23rd Avenue			
C-88	8-Dec-14	1431 20th Ave E	5	Failing silt fence. Sediment leaving site. No exit pad.	Verbal warning to engineer. (Via e-mail)
C-89	29-Dec-14	Salvation Army	2	Turbid water leaving the site.	Verbal warning to engineer. (Via e-mail.)
		2902 Greensboro Av			
C-90	13-Mar-15	Church of the	3	Sediment leaving site due to exit pad not being maintained.	Verbal warning to owner, engineer & contractor. (Via e-mail)
		Highlands Rice Mine Rd NE			
C-91	18-Mar-15	Shoppes at Legacy	4	Sediment leaving site. Also noted sinkhole forming on Hilliard Dr. from street cut.	Verbal warning to contractor.
		Park 1320 McFarland Blvd E			
C-92	19-Mar-15	South 10	4	Sediment leaving site.	Verbal warning to owner and engineer. (Via e-mail)

C-93	20-Mar-15	Little Caesars-DD 528 15th St E	4	Sediment leaving site.	Verbal warning to engineer. (Via e-mail.)
C-94	20-Mar-15	520 Meador Drive	4	Sediment in roadway.	Verbal warning to owner and engineer. (Via e-mail)
C-95	20-Mar-15	521 Meador Drive	4	Sediment in roadway.	Verbal warning to owner and engineer. (Via e-mail)



## Municipal Sites

<u>File No.</u>	<u>Date</u>	<u>Location</u>	<u>Description of Violation</u>	<u>Action Taken</u>
M-1	19-May-12	Ed Love Water Plant	4,000 gallon sodium hypochlorite tank spilled causing unknown amount of NaOCl to enter storm drain	None. Was not notified. Talked with David Hartin so we will be notified on future spills.
M-2				
M-3				
M-4				
M-5				
M-6				
M-7				
M-8				
M-9				
M-10				
M-11				

## Reported Spills

<u>File</u>	<u>Date</u>	<u>Location</u>	<u>District</u>	<u>Description of Spill</u>	<u>Action Taken</u>
R-1	25-Jul-12	RaceTrac 940 15th Street E	5	Fire dept. reported petroleum spill in parking lot.	Fire dept. said they contained & cleaned spill. No sign of spill once Kevin got to the site.
R-2	14-Aug-12	2109 Forest Lake Dr.	2	Paint washed into stormdrain inlet and was discharging into Cribbs Mill Creek tributary No. 1.  Hose broke on truck hauling dumpster which spilled hydraulic fluid into the street. Estimated 3-4 gallons entered stormdrain	Talked to resident and informed him that dumping any materials into stormdrain is illegal.
R-3	17-Aug-12	Residences @ City Lot 2128 Univ. Blvd.	1	Paint spill on road. No responsible party identified.  Minimal amount reached storm drain.	Contractor stopped flow of fluid with sand. EMA was notified.
R-4	24-Aug-12	Veterans Mem. Pkwy at 13th Ave. E	5	Dried paint on gutter leading to storm drain.	Investigated & documented.
R-5	21-Aug-12	Acadian Place	3	Tanker truck overturned spilling 3000 gallons of biodegradable cleaning solvent DDE-4.	Investigated & documented.
R-6	9-Oct-12	Buttermilk Road & I Peco 59/20	6	Sewage backup.	Investigated & documented.
R-7	26-Feb-13	3701 Kauloosa Ave 10th Ave & Meadowlawn	2	Wreck involving front end of semi. Estimated 5 gallons entered storm drain.	Investigated & documented.
R-8	4-Apr-13	Hunt Oil	1	Oily wastewater was spilled into Black Warrior River.	Received report from EMA & Hunt Oil.
R-9	17-Jun-13	10th Ave & 359 ramp	2	18 wheeler saddlebag fuel tanks ruptured spilling approximately 150 gallons of diesel fuel onto roadway and potentially into storm drain.	Investigated & documented.
R-10	30-Sep-13	MLK Blvd.	PJ	Asphalt truck overturned spilling hot mix & diesel fuel.	Investigated & documented.
R-11	18-Dec-13	15th Street @ 359 off ramp	2	18 wheeler overturned at intersection and 2-3 gallons of diesel fuel entered storm drain, but not pipe.	Investigated & documented.
R-12	6-Nov-13	Wood Village Mobile Home Park	PJ	Intentionally discharging raw sewage from damaged lift station into storm drain.	Investigated & filed charges against responsible person.
R-13	6-Feb-14	Coral Industries 3010 Rice Mine Rd	PJ	Discharging raw sewage into tributary that leads to Black Warrior River.	Investigated & spoke with Coral officials.
R-14	28-Feb-14	Margaret Drive behind Campus Dr Parking Deck	4	UA bus fuel tank ruptured. Minimal diesel fuel entered storm drain.	Investigated & documented.



R-16	7-Apr-14	Kangaroo 6718 Hwy 69S	2	Fuel truck hose malfunction caused spill of fuel onto ground and into storm drainage system.	Investigated & documented.
R-17	24-Jun-14	University Blvd E (Alberta)	5	White substance appeared on roadway after rain where new asphalt had been poured.	Investigated & documented.

<u>Permit #</u>	<u>Responsible Person</u>	<u>Division</u>	<u>Location</u>	<u>Details</u>	<u>Status</u>
GW 08-11-01	Scott Sanderford	Lakes	Police Boat Landing on Lake	Monitoring as a result of a leaking tank that contaminated the groundwater next to the Lake	Active
AL0022713	Andrew Burroughs	Waste Water	WWTP	Waste Water Treatment Plant Permit	Active
ALG670195	Jimmy Junkin	Water Treatment	Jerry Plott WTP	Start-Up water	Terminated
ALG640061	Stephen Daly	Water Treatment	Ed Love WTP	NPDES Permit	Active
AL0001313	PWSID# CITYWIDE	Water Treatment	WTP	Citywide Public Water System Identification #	Active

Fuel Tanks (Above Ground)

<u>ADEM.I.D.</u>	<u>Size</u>	<u>Location</u>	<u>Lift Station #</u>
11085-125-017644	138	Crown Pointe	8
11085-125-017645	468	Industrial Park	22
11085-125-017646	530	Woodland Forest #2	27
11085-125-017647	181	Greystone	37
11085-125-017648	700	Mercedes #1	39
11085-125-017649	695	Cedar Cove Technical Park	40
11085-125-017650	765	Cottondale Industrial Park	41
11085-125-017651	655	Hargrove Road East	42
11085-125-017652	8,000	WWTP	WWTP
Not Registered	4,000	West End	3
Not Registered	500	Keene Mill Rd.	10
Not Registered	500	Cottondale	11
Not Registered	500	Woodland Forest #1	15
Not Registered	250	Oliver Lock & Dam	16
Not Registered	381	Creekwood	46
Not Registered	200	Black Warrior	55
Not Registered	500	Heatherwood	59
Not Registered	200	Lauderhill	64
Not Registered	200	Fields Crossing	65



<u>Permit #</u>	<u>Responsible Person</u>	<u>Division</u>	<u>Location</u>	<u>Details</u>	<u>Status</u>
ALG140463	Wayne Cameron	Airport	Airport	Runoff from Industrial Airport	???
???	Matt Odom	Road Maintenance	Citywide	Insecticide Permit	???

Fuel Tanks (Underground)

<u>ADEM I.D.</u>	<u>Number</u>	<u>Location</u>
11085-125-017472	2	TDOT
11085-125-017473	3	Police Station

<u>Permit #</u>	<u>Responsible Person</u>	<u>Division</u>	<u>Location</u>	<u>Details</u>	<u>Status</u>
ALR10A652	David Griffin	Traffic	Loop Road Phase 3	Land Disturbance	Active
ALR10AB15	David Griffin	Traffic	25th Avenue East	Land Disturbance	Active
ALR040021	Chad Christian	Stormwater	MS4	Phase 2 Permit	Active



Permit #  
ALR109930

Responsible Person  
Cliff Penick

Division  
Facilities Maintenance

Location  
Public Safety and Logistics

Details  
Construction NPDES

Status  
Active