



CITY OF TUSCALOOSA  
PHASE II STORMWATER PROGRAM

STORMWATER MANAGEMENT  
PLAN

9/25/2014



*CITY OF TUSCALOOSA*

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:

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## **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>ADDITIONAL INFO</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 ACTIVE SINCE OCTOBER 2012	PROVIDE LINKS TO ANNUAL REPORTS AND SWMP  ALSO LID DATABASE!
STORMWATER EDUCATION BROCHURE	UPDATE, PRINT AND DISTRIBUTE STORMWATER EDUCATION BROCHURE	CONTAINS INFO ON STORMWATER POLLUTANTS AND CONTACT INFO FOR REPORTING TO THE COUNTY, CITY OF TUSCALOOSA, AND CITY OF NORTHPORT	USE FOR COMMUNITY MEETINGS, SEMINARS
STORMWATER SEMINARS	TARGETED EDUCATIONAL SEMINARS	WILL HOST AND ATTEND MANY SEMINARS TO GET THE WORD OUT ON OUR PROGRAM AND TO EDUCATE THE PUBLIC AND OUR ENGINEERS AND DEVELOPERS ON STORMWATER	PROVIDE TRAINING SEMINARS FOR DESIGNERS, INSPECTORS AND CONTRACTORS
MANHOLE LABELING	LABELS MANHOLE TOPS ON INLETS THROUGHOUT THE CITY	“DRAINS TO WATERWAYS”  “DUMP NO WASTE”	THESE PHRASES ARE ON ALL INLETS FOR NEW PROJECTS THROUGHOUT THE CITY
STORMWATER AD CAMPAIGN	RADIO, TV AND NEWSPAPER ADS	ALSO NOW USING SOCIAL MEDIA TO SPREAD THE WORD ON AND BRING AWARENESS TO STORMWATER ISSUES	HIRE PR FIRM TO DESIGN AND IMPLEMENT ADS

WEBSITE SURVEY	SURVEY ON OUR PROGRAMS SUCCESS	TO BE INCLUDED AS AN ONLINE SURVEY	WILL REVIEW RESULTS OVER TIME TO GAUGE SUCCESS
DON'T CLOG WITH FOG	FOG (FATS, OILS AND GREASE)	INFORMS RESIDENTS ABOUT WAYS TO KEEP FOG OUT OF THE SANITARY SEWER SYSTEM TO PREVENT SS OVERFLOWS	HANDLED THROUGH OUR WATER AND SEWER DEPARTMENT
STORMWATER LEAFLET	WATER BILL INSERT	45,700 CUSTOMERS EACH MAILOUT	MASS MAILOUT TO TARGET GENERAL PUBLIC

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>ADDITIONAL INFO</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 ACTIVE SINCE OCTOBER 2012	PROVIDE INFO FOR LAKE AND STREAM CLEANUPS, AND LOW IMPACT DEVELOPMENT SITES, ETC.
STORMWATER AD CAMPAIGN	RADIO, TV AND NEWSPAPER ADS	ALSO NOW USING SOCIAL MEDIA TO SPREAD THE WORD ON AND BRING	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	REQUIRE ALABAMA WATERWATCH CERTIFICATION WHICH THE SW INSPECTOR AND EICC CURRENTLY HAVE
LAKE/STREAM CLEANUPS	ANNUAL LAKE TUSCALOOSA CLEANUP	CLEANS THE LAKE OR STREAMS IN THE AREA WHERE NEEDED. LAKE IS AN ANNUAL OPERATION WHILE STREAMS ARE ON AN “AS NEEDED” BASIS	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	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	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	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>ADDITIONAL INFO</b>	<b>NOTES</b>
STORMWATER OUTFALL MAP	OUTFALLS HAVE BEEN PREVIOUSLY MAPPED. WE ARE RE-MAPPING WITH CITY FORCES (25%) INCLUDING PHOTOS	CONTINUOUS PROCESS MANY OUTFALLS ADDED DAILY AS WE WALK OUR STREAMS	INTEGRATE GPS OUTFALL MAPPING AND INSPECTION WITH GIS

	& MORE INFO.	MAP IN APPENDIX	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  HAVE HAD SEVERAL SUCCESS STORIES	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	HIRE OUTSIDE TESTING LAB TO PROFESSIONALLY SAMPLE AND TEST FOR POLLUTION
IDDE DETECTION STRATEGY	ADOPT PROCEDURES TO IDENTIFY POTENTIAL ILLICIT DISCHARGE SOURCES	EXISTING  EECC 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>

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**

<b>BMP</b>	<b>DESCRIPTION</b>	<b>ADDITIONAL INFO</b>	<b>NOTES</b>
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
STORMWATER SEMINARS	TARGETED EDUCATIONAL SEMINARS	WILL HOST AND ATTEND MANY SEMINARS TO GET THE WORD OUT ON OUR PROGRAM AND TO EDUCATE THE PUBLIC AND OUR ENGINEERS AND DEVELOPERS ON STORMWATER	PROVIDE TRAINING SEMINARS FOR DESIGNERS, INSPECTORS AND CONTRACTORS
SITE INSPECTION PROCEDURE	ESTABLISH STANDARD PROCEDURE AND FORMS FOR CONSTRUCTION SITE INSPECTION	THE ESCALATING ENFORCEMENT PROCEDURE IS FINALIZED AND INCLUDED IN APPENDIX	MODIFY AND ADOPT EXISTING ADEM AND EPA PROCEDURES AND FORMS. REQUIRE MONTHLY

	AND PRIORITY AND SCHEDULING		INSPECTION OF PRIORITY SITES.
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	<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  THE EECC AND STORMWATER INSPECTOR INSPECTS JOB SITES ON A DAILY BASIS AND WILL DOCUMENT ALL SITES ON A MONTHLY BASIS	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>ADDITIONAL INFO</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	CREATED AND THE WEBSITE WILL HAVE PICTURES OF THESE SITES ADDED TO THEM SOON	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>ADDITIONAL INFO</b>	<b>NOTES</b>
INVENTORY OF MUNICIPAL OPERATIONS	IDENTIFY AND INVENTORY ALL MUNICIPAL OPERATIONS THAT DISCHARGE TO THE MS4	ATTACHED	INCLUDES FUEL STORAGE TANKS, VEHICLE WASH RACKS, FLEET MAINTENANCE OPERATIONS, MATERIAL STOCKPILES, ETC.
POLLUTION PREVENTION PROGRAM	CREATE AND ADOPT STORMWATER POLLUTION PREVENTION PLANS (SWPPP) FOR MUNICIPAL OPERATIONS AS REQUIRED TO REDUCE POLLUTANT DISCHARGES	INCLUDE MEASURES TO REDUCE AND/OR ELIMINATE TO THE MAXIMUM EXTNET PRACTICABLE CONTAMINENTS THAT COULD LEAD TO A NEGATIVE EFFECT ON WATER QUALITY	IMPLEMENTED AND MONITORED BY ENVIRONMENTAL COMPLIANCE COORDINATOR

STREET SWEEPING PROGRAM	DOCUMENT THE OPERATION OF AND RESULTS FROM EXISTING STREET SWEEPING EFFORTS	REMOVES MASSIVE AMOUNTS OF SEDIMENT, LEAVES, TRASH, ETC. FROM CITY STREETS AND THE DRAINAGE SYSTEM	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



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