



**AUBURN**

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**UNIVERSITY**

**STORM WATER MANAGEMENT PROGRAM PLAN**

Prepared by  
**AUBURN UNIVERSITY**

**STORM WATER MANAGEMENT COMMITTEE**

May 2019

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## **INTRODUCTION**

This Storm Water Management Program Plan (SWMPP) was developed in general accordance with the guidelines provided in Title 40 Code of Federal Regulations (CFR), Part 122.26(d) incorporated by reference in the Alabama Administrative Code 335-6 as administered by the Alabama Department of Environmental Management (ADEM) and NPDES ALR040030 Phase II General Permit effective October 1, 2016.

The purpose of this SWMPP is to describe Auburn University and its operation, and identify the Best Management Practices (BMPs) to be utilized to reduce the discharge of pollutants from Auburn University's main campus to the maximum extent practicable (MEP) to protect water quality and to satisfy the appropriate water quality requirements of the Clean Water Act (CWA).

The Storm Water Committee formed to develop this SWMPP is comprised of individuals from both academic and operational areas of campus. The collaborative effort was strengthened by its diversity and includes the following individuals and their areas of responsibility or interest:

Dr. Chris Anderson, Forestry & Wildlife Sciences

Mr. Daniel Ballard – City of Auburn Watershed Division

Mr. Nicholas Blair, Facilities Management – Design Services

Dr. David Blersch, Biosystems Engineering

Dr. Eve Brantley, AU CSES, ACES

Mr. Ben Burmester, Facilities Management – Office of University Architect

Ms. Mona Dominguez, Alabama Water Watch

Mr. Malcolm Dailey, Facilities Management – Utilities & Energy

Ms. Valerie Friedmann, Architecture Planning & Landscape Architecture

Ms. Joan Hicken, Facilities Management – Waste Reduction & Recycling

Dr. Thorsten Knappenberger, AU CSES

Mr. Mike Kensler, Office of Sustainability

Mr. Dan King, Facilities Management

Mr. Eric Klypas, Athletics Department – Field Management

Mr. Judd Langham, Facilities Management – Office of University Architect

Ms. Charlene LeBleu, Architecture Planning & Landscape Architecture

Mr. Glenn Loughridge, Campus Dining  
Mr. Tom McCauley, Risk Management & Safety  
Dr. Chandana Mitra, Department of Geosciences  
Ms. Wendy Peacock, Facilities Management – Construction Management  
Mr. Buster Reese, Facilities Management, Design Services  
Dr. Puneet Srivastava, Water Resource Center  
Ms. Amy Strickland, Office of Sustainability  
Mr. Justin Sutton, Facilities Management – Landscape Services  
Mr. William Walker, Campus Dining  
Dr. Amy Wright, Department of Horticulture

## **Objective**

The primary goal of the developed SWMPP is to improve the quality of surface waters at Auburn University by reducing the amount pollutants contained in storm water runoff to a maximum extent practicable (MEP). Auburn University will seek to reduce the pollutants from entering storm water runoff through the implementation of best management practices. The SWMPP will describe the minimum best management practices to be implemented by Auburn University and as required by ADEM General Permit ALR040030 (effective date October 1, 2016).

### **1.1 MS4 Description**

Auburn University is a large land grant educational institution located in Auburn, Lee County, Alabama comprised of approximately 1800 acres of contiguous property. Auburn University is one of the major liberal arts and science universities in the southeast. The area surrounding Auburn University consists of residential property to the east and southeast, agricultural property to the southwest and west and urban city property to the north and east.

### **1.2 Definitions**

**ADEM:** Alabama Department of Environmental Management responsible for enforcing environmental regulations in the State of Alabama.

**Best Management Practices (BMP):** may include schedule of activities, prohibition of practices, maintenance procedures or other management practices to prevent or reduce the pollution of Waters of the State. BMPs also include treatment requirements, operating procedures and practices both structural and non-structural designed to control runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage.

**Clean Water Act (CWA):** The Clean Water Act is an Act passed by U.S. Congress to control water pollution. It is formally referred to as the Federal Water Pollution Control Act of 1972 or Federal Water Pollution Control Act Amendments of 1972.

**Code of Federal Regulations (CFR):** A codification of the final rules published daily in the Federal Register. Title 40 of the CFR contains the environmental regulations.

**Composite Sample:** A sample collected with consideration giving towards flow and time.

**Control Measure:** any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to Waters of the State.

**Discharge:** when used without a qualifier, refers to “discharge of pollutant” as defined as ADEM Admin Code 335-6-6-.02(m)

**EPA:** Environmental Protection Agency

**Grab Sample:** A sample that is taken on a one-time basis without consideration of the flow rate of the sampling media and without consideration of time.

**Green Infrastructure:** refers to systems and practices that use or mimic natural processes to infiltrate, evapotranspiration (the return of water to the atmosphere either through evaporation or by plants), or reuse storm water or runoff on the site where it is generated.

**Illicit Connection:** any man made conveyance connecting an illicit discharge directly to municipal separate storm sewer (MS4)

**Illicit Discharge:** defined at 40 CFR 122.26(b)(2) and refers to any discharge to a municipal separate storm sewer (MS4) that is not entirely composed of storm water, except those discharges authorized or excluded under an NPDES permit.

**Low Impact Development (LID):** an approach to land development (or redevelopment) that works with nature to manage storm water as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat storm water as a resource rather than a waste product.

**Maximum Extent Practicable (MEP):** the technology based discharge standard for municipal separate storm sewer systems to reduce pollutants in storm water discharges that was established by the Clean Water Act (CWA) Section 402(p). A discussion of MEP as it applies to small MS4s like Auburn University is found at 40 CFR 122.34

**Municipal Separate Storm Sewer System (MS4):** A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm ditches) owned or operated by a state, city, town or other public body having jurisdiction over the collection and conveyance of storm water which is not a combined sewer and which is not part of a publicly owned treatment works.

**Notice of Intent (NOI):** the mechanism used to “register” for coverage under a General Permit.

**National Pollutant Discharge Elimination System (NPDES):** The national program for issuing, modifying , revoking and reissuing, terminating, monitoring and enforcing permits and imposing and enforcing pretreatment requirements under Section 307, 318, 402 and 405 of the CWA.

**Permit:** NPDES ALR040030 issued to Auburn University & became effective October 1, 2016.

**Permittee:** Auburn University

**Priority Construction Site:** any qualifying construction site in an area where the MS4 discharges to a waterbody which is listed on the most recently approved 303d list of impaired waters for turbidity, siltation or sedimentation, any waterbody for which a TMDL has been finalized or approved by EPA for turbidity , siltation or sedimentation, any waterbody assigned the Outstanding Alabama Water use classification in accordance with ADEM Admin Code 335-6-10-.09 and any waterbody assigned a special designation in accordance with 335-6-10-.10

**Storm water:** defined at 40 CFR 122.26(b)(13) storm water runoff, surface runoff and drainage

**Storm Water Management Program Plan (SWMPP):** A plan developed for implementation of NPDES permit requirements.

**Waters of the State:** All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce. Waters of the State include but are not limited to all interstate waters and interstate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, play lakes or natural ponds.

### **REGULATORY MECHANISM**

Auburn University utilizes the Policy on Storm Water Management Compliance as the regulatory mechanism to prohibit activities on University Land that would be non-compliant with either the Permit or the SWMPP. Auburn University Facilities Management is the responsible for administering the Policy on behalf of the University.

[Policy on Storm Water Management Compliance](#)

### **CONTROL MEASURES**

Storm water management controls or BMPs will be implemented to prevent pollution in storm water discharges from Auburn University's main campus. The Permit requires

BMPs addressing five minimum control measures to be part of the SWMPP. These BMPs are described in the remaining subsections of this section with applicable measurable goals and scheduled implementation dates for each BMP.

The five control measures addressed by this SWMPP include:

- 2.1 Public Education and Public Involvement on Storm Water Impacts
- 2.2 Illicit Discharge Detection and Elimination
- 2.3 Construction Site Storm Water Runoff Control
- 2.4 Post Construction Storm Water Management in New and Redevelopment
- 2.5 Pollution Prevention / Good Housekeeping for Municipal Operations

### **2.1 Public Education and Public Involvement on Storm Water Impacts**

An informed and knowledgeable “community” at Auburn University will be an important factor in the success of this SWMPP to reach its goal of reducing the discharge of pollutants associated with storm water runoff. The effective implementation of this measure will help Auburn University to ensure:

- 1) Greater awareness to the University community of the importance of managing discharges to local receiving waters;
- 2) Greater support from the University community for the storm water management program; and
- 3) Greater compliance with the requirements of the General NPDES Permit.

The Public Education and Public Involvement on Storm Water Impacts control measure consists of BMPs that focus on the development of educational materials and efforts designed to inform the public about the impacts that storm water discharges have on local water bodies and to foster community partnerships that provide opportunities for stakeholders to learn more about storm water practices and policies, demonstration projects and assessments of local water quality.

Educational materials, activities and partnerships will be designed to engage the public to better understand the impacts of storm water pollution, local MS4 efforts as well as to highlight and support measures to reduce the introduction of pollutants in storm water.



The measure is expected to reach the constituents within the MS4s permitted boundary (Auburn University's main campus). An emphasis of these outreach efforts will be towards the removal of known pollutants from storm water to include floatables, pathogens and sediment.

A plan for effectively engaging in Public Education and Public Involvement on Storm Water Impacts is presented below as required by the Permit.

### **Target Audience**

Auburn University has a unique opportunity to reach several distinct target audiences throughout the year. These audiences include Auburn University faculty and staff, students, parents of students, visitors, contractors on campus, and surrounding community stakeholders.

### **Pollutants of Concern**

Primary storm water pollutants of concern for Auburn University include pathogens as listed on the 2010 303(d) list for Parkerson Mill Creek, floatables i.e. litter from improper trash disposal, and sediment from land disturbing activities and in-stream erosion processes.

### **Communication Mechanisms**

Communication of storm water pollution prevention principles will include the following mechanisms AU web sites, interactive campus storm water BMP tour, AU Daily electronic bulletin that reaches the entire student body and all Auburn University employees, representation at quarterly ALOAS meetings, inclusion of storm water and stream information on signage in strategic locations on campus, presentations to student and watershed organizations, continued participation in university-led activities such as Earth Day, Arboretum Game Day events, Adopt a Spot clean up events, student service events (i.e. Big Event, IMPACT) and various social medial platforms such as Facebook and Twitter.

### **Responsible Parties**

The Public Education and Outreach measure development and implementation will be overseen by a partnership between the University Water Resources Center, the Office of Sustainability and the Department of Risk Management and Safety (RMS).

### **Measurable Outcomes and Evaluation**

Effectiveness of the activities related to this measure will be measured through:

1. Number of presentations delivered – various AU programs will provide at a minimum of four presentations specific to storm water management annually.
2. RMS maintains the central electronic resource (webpage) to serve as primary reference site for the updated University SWMPP. [RMS-Stormwater](#)
3. Quantify the number of individuals reached through University led activities throughout each reporting cycle. Audience includes students, staff, employees and visitors to Auburn University and is targeted at 2500 individuals each reporting cycle.
4. Number of university led PMC cleanup efforts. AU aims to promote 3-4 cleanup events throughout each reporting cycle.
5. Documented attendance to quarterly ALOAS citizen advisory meetings.
6. Continued attendance, partnership, or participation in Alabama Water Watch monitoring workshops.
7. Continued installation of storm drain markers on all inlets located on campus.

## **2.2 Illicit Discharge Detection and Elimination**

Per the Permit, an Illicit discharge is defined at 40 CFR Part 122.26(b)(2) and refers to “any discharge to an MS4 (municipal separate storm sewer system) that is not composed entirely of storm water ...” Exceptions include NPDES permitted discharges and discharges resulting from fire-fighting activities. Some examples of illicit discharges include: sanitary wastewater, effluent from septic tanks, car wash wastewaters, improper oil disposal, and radiator flushing disposal, laundry wastewaters, and spills from roadway accidents, and swimming pool discharges (that have not been de-chlorinated). These illicit discharges can enter a storm drain system either through a direct connection (e.g., a pipe connected directly to the storm drain) or indirectly (e.g., spills, dumped chemicals, cracks in sanitary sewers). As a result, inadequately treated wastes containing high

levels of pollutants, such as heavy metals, oil and grease, toxics, viruses, and bacteria, are discharged to receiving waters. The next subsections describe Auburn University's current program to detect and eliminate both direct and indirect illicit discharges into the storm drain system and associated plans for the permit term.

Regulations require identification and elimination of all non-storm water discharges and appropriate responses to protect the campus community and the environment. The following discharges are not considered illicit and are not regulated under this minimum control measure:

- A. Water line flushing (including fire hydrant testing)
- B. Landscape irrigation
- C. Diverted stream flows
- D. Rising ground waters
- E. Uncontaminated ground water infiltration (infiltration is defined as water other than wastewater that enters a sewer system, including sewer service connection and foundation drains, from the ground through such means as defective pipes, sewer service connections or manholes.)
- F. Uncontaminated pumped ground water
- G. Discharges from potable water sources
- H. Foundation drains
- I. Air conditioning condensation
- J. Springs
- K. Water from crawl space pumps
- L. Footing drains
- M. Flows from riparian habitats and wetlands
- N. De-chlorinated swimming pool discharges
- O. Street wash water
- P. Discharges or flows from fire fighting

Auburn University relies upon multiple methods to identify illicit discharges as quickly as possible. All potential illicit discharges should be reported to Auburn University Risk Management and Safety upon discovery. Discovery and reporting methods include reports conveyed from the campus community to the University's Facilities Division by

dialing 844-HELP, by utilizing the electronic reporting feature known as “Ask Facilities” or by contacting RMS at 844-4870. Reports might originate from faculty, staff, students, or campus visitors. In particular, AU staff with specific training on illicit discharge identification will increase the probability of proper and timely reporting.

Investigation of illicit discharges will commence as soon as practicable but always within 5 working days of the initial discovery or report. Investigation and mitigation measures are implemented upon detection to identify possible source(s) of illicit discharges and to either prevent or reduce adverse impacts to storm water runoff and the environment. A written report will be prepared to document each illicit discharge investigation. Reports will include the nature of the discharge, possible sources, mitigation or cleanup measures implemented, any steps taken to prevent similar discharges in the future, and documentation of any ADEM reporting required.

### **Target Audience**

Auburn University has a unique opportunity to reach several distinct target audiences throughout the year. These audiences include Auburn University faculty and staff, students, parents of students, visitors, contractors on campus, and surrounding community stakeholders.

### **Responsible Parties**

The Illicit Discharge Detection & Elimination measure development and implementation will be overseen by a partnership between the Auburn University Facilities Management Facility Operations, RMS and the University Water Resource Center.

### **Measurable Outcomes and Evaluation**

1. Update map of all campus storm water outfalls. As required by Section III(b)(i) of the Permit, Auburn University will provide annual updates of the map to ADEM by May 31<sup>st</sup> each year.
2. Promote illicit discharge detection and elimination program in annual training efforts. A minimum of four presentations to include principles of the IDDE program will be provided to campus entities annually.

3. Continue bacteriological monitoring to identify possible sources of impairment.
4. Perform and document routine outfall field inspections. Evaluate all outfalls to PMC annually.
5. Continue to evaluate recently completed storm water system model and develop a prioritized schedule for repairs and maintenance.
6. Evaluate IDDE Standard Operating Procedure (SOP).

## **Auburn University**

### **Illicit Discharge Detection and Elimination**

#### **Standard Operating Procedure**

##### 1. Purpose of Standard Operating Procedure:

- A. To improve the quality of surface water and ground water within the watershed areas owned and maintained by Auburn University by preventing illicit discharges and illicit connections.
- B. To prevent the discharge of contaminated storm water runoff from Auburn University properties and operations into the storm drainage system and Parkerson Mill Creek.
- C. To comply with the requirements of Auburn University storm water permit.
- D. To comply with all United States Environmental Protection Agency and State laws applicable to storm water discharges.

##### 2. Definitions

An Illicit Discharge is the discharge of pollutants or non-storm water materials to the storm drainage system via overland flow or direct dumping of materials into a catch basin or inlet. Examples of illicit discharges include overland drainage from car washing or cleaning paint brushes in or around a catch basin.

An Illicit Connection is the discharge of pollutants or non-storm water materials into the storm drainage system via a pipe or other direct connection. Sources of illicit connections may include sanitary sewer taps, wash water from laundry facilities, wash water from sinks, or other similar sources.

##### 3. Illicit Discharges

No University employee, student, visitor, contractor, department, or unit shall cause or allow discharges into the Auburn University storm drainage system

which are not composed entirely of storm water, except for the allowed discharges listed in Section 5.

Prohibited discharges include but are not limited to: oil, anti-freeze, grease, chemicals, wash water, paint, animal waste, garbage, and litter.

#### 4. Illicit Connections

The following connections are prohibited, except as provided in Section 5 below:

Any drain or conveyance, whether on the surface or subsurface, which allows any non-storm water discharge, including but not limited to sewage, process water, waste water, or wash water, to enter the storm water drainage system, and any connections to the storm drain system from indoor drains or sinks.

#### 5. Allowed Discharges

The following discharges to the storm drainage system are allowed:

A. Discharges that are specifically permitted under a State or federal storm water program.

B. Incidental non-storm water discharges which do not significantly contribute to the pollution of Auburn University surface waters and are limited to the following:

- water line flushing;
- reclaimed water line flushing;
- landscape irrigation, including but not limited to reclaimed water;
- diverted stream flows;
- rising groundwater;
- uncontaminated groundwater infiltration;
- uncontaminated pumped groundwater;
- discharges from potable water sources;
- foundation drains;
- air conditioning condensate (that does not contain biocide);
- springs;
- water from crawl space pumps;
- footing drains;
- flows from riparian buffers and wetlands;
- dechlorinated swimming pool discharges;
- flows from emergency firefighting; and
- building wash water without detergents, cleaners, or corrosive additives.

C. In the event that Auburn University determines that any of the above discharges contribute to pollution of campus streams or other surface waters or is notified by a State or federal government agency, such as the Alabama Department of Environmental Management, that the discharge must cease, Auburn University will instruct the responsible person to cease the discharge.

D. When instructed to cease the discharge, the discharger of substances newly classified as pollutants shall cease the discharge immediately and be given reasonable time to make corrections so that the discharge will not continue into the future.

E. Nothing in this SOP shall affect a discharger's responsibilities under federal or State law.

#### 6. Enforcement and Penalties

A. Whenever Auburn University finds that a violation of this SOP has occurred; Auburn University may order compliance by written notice to the responsible person. Such notice may require without limitation:

- i. The performance of monitoring, analyses, and reporting;
- ii. The elimination of prohibited discharges or connections;
- iii. Cessation of any violating discharges, practices, or operations;
- iv. The abatement or remediation of storm water pollution or contamination hazards and the restoration of any affected property;
- v. Payment of any fee, penalty, or fine assessed against Auburn University to cover remediation cost;
- vi. The implementation of new storm water management practices; and
- vii. Disciplinary action up to and including dismissal, where appropriate.

B. Such notification shall set forth the nature of the violation(s) and establish a time limit for correction of these violation(s). Said notice may further advise that, if applicable, should the violator fail to take the required action within the established deadline, then Auburn University Department of Risk Management & Safety will initiate work orders for the appropriate corrective actions and the individual or University department will be charged for the cost.

#### 7. Dry weather outfall inspection and monitoring

Auburn University shall, at a minimum, visually inspect PMC outfalls annually during dry weather conditions. Flows suspected of containing illicit discharges due to the presence of odors, colors or sheens shall be investigated.

Investigation may include water chemistry field testing and/or bacteriological sampling and will be dependent upon the characteristics of the observed discharge. Investigations will involve Facilities Management Utility & Energy resources to trace source of suspect illicit discharge. Upon source discovery, measures will be implemented to cease discharge immediately as possible. Should immediate cessation not be practicable, a schedule will be developed. Should the source of discharge be determined to originate off campus, the MS4 community having jurisdiction will be notified within 24 hours as well as the Department. The physical condition of the outfall shall also be noted during the inspections. Compromised outfall structures requiring maintenance will be documented with a work order to correct noted deficiency submitted within 24 hours of its discovery.

#### 8. Promote Illicit Discharge Detection & Elimination SOP

Promotion of this SOP shall be presented to Auburn University community via multiple methods to include but not limited to personnel training and web media.

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

In accordance with Part III (B) (4) of NPDES Permit No ALR040030, Auburn University developed the Construction Site Storm Water Runoff Control Best Management Practice.

#### **Target Audience**

The Construction Site Runoff Control Program was developed for the contractors performing construction activities on campus and to assist AU Facilities Management personnel responsible for managing development on campus. Auburn University has a unique opportunity to reach several distinct target audiences throughout the year. These audiences include Auburn University faculty and staff, students, parents of students, visitors, contractors on campus, and surrounding community stakeholders.



**Responsible Parties**

Auburn University's Facilities Management is responsible for all construction projects on campus and implementation of this measure.

Auburn University Design and Construction Standards serve as the University's regulatory mechanism for the Construction Storm Water Control Program and were recently revised to strengthen the storm water management efforts on all University construction sites including the following sections.

**Section G10 – Site Preparation**

<http://www.auburn.edu/administration/facilities/contractors/design-const-standards.html>

Section G10 of the Design and Construction Standards was modified to provide the Contractor a contractual responsibility to meet the objectives of the General NPDES Permit. This section requires that the Contractor:

- Meet the requirements outlined in the Alabama Handbook for Erosion and Sediment Control and Storm Water Management of Construction Sites and Urban Areas and the ALOA developed Erosion and Sediment Control Policy.
- Demonstrate compliance with the ADEM registration requirements prior to initiating any earthwork at the site.
- Require turbidity monitoring at specified construction sites to ensure that site runoff not result in an increase of 50 NTU turbidity standards.

Auburn University will conduct routine turbidity monitoring at specified sites to determine the effectiveness of the on-site controls design, installation and maintenance. Construction contracts administered by Facilities Management further identify the procedures that will be taken by the Auburn University should NPDES non-compliance be identified to include withholding payment and notification to ADEM.

### **Measurable Outcomes and Evaluation**

1. Continue turbidity monitoring program for new projects.
2. Perform annual training for contractors, designers and project managers to better understand the G10 requirements.

#### **2.5 Post Construction Runoff Control**

The post construction runoff control measure is designed to ensure that new construction designs do not result in increased storm water pollution.

Development can alter landscapes by increasing impervious areas (i.e. roofs, driveways, parking lots) and changing drainage patterns, thereby increasing the storm water rate, volume and velocity of runoff from a site. This can lead to degradation of receiving waters and increases in the occurrence of flooding. Storm water from developed impervious areas can also contain a variety of pollutants that are detrimental to water quality, such as sediment, nutrients, heavy metals, pathogenic bacteria, and petroleum hydrocarbons.

The goal of post-construction storm water management is “to reduce runoff volume and improve water quality by replicating the natural hydrology and water balance of the site, based on historical conditions and undeveloped ecosystems in the region.” LEED v4 Our intention is to develop storm water management designs in a manner best replicating natural site hydrology processes. New projects on campus shall address water quality and quantity impacts early in the design process to provide long-term water quality benefits. The implementation of Green infrastructure BMP designs that reduce impervious surfaces, provide water filtering services and encourage infiltration is preferred. New projects offer many opportunities to reduce storm water runoff from the site.

To meet the requirements of Part III B5 of the Permit, Auburn University developed a Campus Landscape Master Plan (CLMP) as part of the overall Comprehensive Campus Master Plan. The Master Plan is approved by the Board of Trustees and serves as the mechanism to ensure that the objectives of the CLMP are achieved. The CLMP embraces a sustainable environment, including an emphasis on Low Impact Development and Green Infrastructure approaches to storm water management that incorporate best management practices for maintenance and implementation schedules, as well as

campus watershed restoration opportunities.

The Design and Construction Standards performance requirements state a project is to not increase peak storm water flows for the 2, 5, 10, and 25 year storm events as well as provide water quality treatment for the first 1.2 inches of rainfall with an 80 percent Total Suspended Solids (TSS) reduction goal. Projects are also encouraged to reduce overall storm water runoff volume by reducing impervious cover campus wide and promotion of infiltration.

### **Responsible Parties**

Auburn University's Facilities Management is responsible for the implementation of the CLMP and implementation of this measure.

### **Measurable Outcomes and Evaluation**

1. Provide training to AU Design Leads, maintenance personnel, and others on AU storm water management preferences, updated Design Standards / Post Construction Storm Water Manual.
2. All new and redeveloped AU properties shall develop a storm water management plan to comply with the Design and Construction Standards. A report documenting the implementation or consideration of Low Impact Development and Green Infrastructure shall be reviewed per the Post Construction Storm water Manual by Facilities Management.

## **2.6 Pollution Prevention / Good Housekeeping for Municipal Operations**

Efforts to survey University activities and facilities will continue. These surveys focus on the storage of materials at the variety of areas managed by Facilities Management, Auxiliary Operations, various academic departments and AU Athletic Department.

Part III.B.5.a. of the Permit requires Auburn University to inventory "municipal facilities" including municipal facilities that have a potential to discharge pollutants via storm water

runoff, develop strategies to reduce litter, floatables and debris from entering the storm sewer system from these facilities, develop SOPs detailing good housekeeping practices to be employed at the appropriate municipal facilities, develop an inspection program to evaluate these operations and to develop a good housekeeping training program for municipal facility staff as outlined in the SOP.

**Inventory of Municipal Operations**

Facilities Management HQ	Chilled Water Plant 1	Chilled Water Plant 2	District Energy Plant
Chilled Water Plant 3	Hot Water Plant 1	Hot Water Plant 2	Satellite Steam Plant
Coliseum Steam Plant	44kV Substation	115 kV Substation	Plainsman Park
Equestrian Center	Jordan Hare Stadium	Soccer Complex	Jane B. Moore Field
Hutsell-Rosen Track	Student Ctr. Dining	Auburn Arena	Intramural Rec Fields
Terrell Dining	Foy Union Dining	Village Dining	Environmental Health & Safety Facility
Housing & Residence Life HQ	Campus Parking Lots / Decks	Campus Roads	Co-fired Combustor

**Measureable Outcomes & Evaluation:**

1. Quantify the amount of floatable materials collected as a result of the successful implementation of the BMPs at these municipal facilities.
2. Quantify the number of “municipal facility” inspections performed.
3. Provide pollution prevention annual training to municipal facility personnel.
4. Revise and update “municipal facility” inventory annually.

**BMP Development & Implementation Schedule:**

1. Development of SOP for municipal facilities by March 31, 2020. SOP will include inspection frequencies and documentation mechanism.

**Responsible Department:**

Auburn University RMS & Facilities Management

**Spill Prevention Control and Countermeasure (SPCC) Program**

AU RMS has developed and maintains the campus SPCC Plan. The Plan calls for the proper storage and management of oil containing equipment. The SPCC Plan identifies the procedures to be followed to regularly (monthly) inspect applicable containers and instructs “oil handling personnel” on the appropriate measures to take in the event of a spill.

**Measurable Outcomes and Evaluation:**

1. Document the number of inspections performed on regulated storage units on an annual basis (SPCC).
2. Document the number of preventive maintenance procedures performed on tanks, valves, pumps, pipes, and other equipment.
3. Document the number of training presentations performed and the number of employees trained annually.
4. Document the annual volume of used oil managed by AU.

**Responsible Department:**

AU RMS & Facilities Management

**Monitoring Plan for Pathogen Impairment**

In accordance with Part V of the Permit, AU will continue to evaluate Parkerson Mill Creek (PMC) Watershed for its pathogen impairment. PMC is located in Lee County; the watershed is part of the Chewacla Watershed, in the lower Tallapoosa River Basin. The 9.3 square mile (5,981 acres) watershed contains 21,000 meters (68,500 ft.) of main stem perennial stream and approximately 86,000 meters (282,152 ft.) of tributary stream length. The stream network empties into Chewacla Creek, just south of the H.C. Morgan Water Pollution Control Facility

The watershed includes the City of Auburn, Auburn University and the surrounding areas. The headwaters of PMC are approximately 3,000 meters (9,845.5 ft.) in length and are located on the campus of Auburn University. In 2007, ADEM listed PMC as impaired on Alabama’s 303(d) List of Impaired Waters for pathogens from point source and non-point sources, primarily urban runoff and storm sewer connections. As such, AU monitors PMC

by performing bacteriological analysis through the AU Water Resource Center's Alabama Water Watch (AWW) program. The results of the monitoring effort will be reported with the submission of the annual report. Collaboration with the City of Auburn will continue as both entities contain and have influence to this watershed.

### **REVIEW AND UPDATING SWMPP**

AU will review the SWMPP annually in conjunction with the preparation of the annual report required under Part IV, Section B of the General Permit.

The annual report will be submitted to the ADEM for each year of the permit term. Reports are due to ADEM by May 31st of each year and will cover activities for the previous reporting period (April 1- March 31).

The reports consist of:

- Compliance status including:
  - Assessment of the appropriateness of the BMPs
  - Progress towards achieving statutory goals of reducing the discharge of pollutants and protecting water quality
  - Measurable goals for each of the minimum control measures
- Results of information collected and analyzed, if any, during the reporting period.
- Any changes made to the SWMPP since the last annual report and a summary of the storm water activities AU plans to initiate during the next reporting cycle.
- Proposed changes to the SWMPP
- Description and schedule for implementation of additional BMPs that may be necessary based on monitoring results.
- Monitoring data

Annual reports are signed by Mr. Tom McCauley, Environmental Programs Manager Department of Risk Management and Safety and the Storm Water Executive Committee.