ALABAMA A&M UNIVERSITY

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
ALABAMA AGRICULTURAL AND MECHANICAL UNIVERSITY
NORMAL, MADISON COUNTY, ALABAMA

2023-2024 ANNUAL REPORT

NPDES PERMIT NO. ALR040061
GEO SOLUTIONS PROJECT NO.: 17-0350

PREPARED BY:
GEO SOLUTIONS, LLC

GEO-SOLUTIONS, L.L.C.
Geotechnical Engineering and Materials Testing Services
A UES Company

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1.0 INTRODUCTION

GEO Solutions has prepared the 2023-2024 Annual Report for Alabama Agricultural and Mechanical University's Municipal Separate Storm Sewer System (MS4) per the requirements of the Alabama Department of Environmental Management's (ADEM) National Pollutant Discharge Elimination System Permit (ALR040061). This report summarizes the programs accomplishments, events, monitoring and on-going storm water management.

1.1 Permit History

The United States Environmental Protection Agency (EPA) requires that all operators of small MS4s, as defined in 40 CFR Part 122.26(b)(16), maintain coverage for all storm water discharges. A Notice of Intent was submitted to ADEM in 2017 and MS4 Permit ALR040061 was issued on July 7, 2017. The permit was renewed effective October 1, 2021.

1.2 MS4 Area

Alabama Agricultural and Mechanical University is located in Normal, Alabama and is considered an entity within the City of Huntsville's city limits. The campus includes 2,300 acres with facilities for classrooms, student residences and athletic complexes. A map outlining the approximate boundary of the Alabama Agricultural and Mechanical University campus is included in Appendix A. There is one outfall located at 34°46'15.64"N, 86°34'56.72"W.

1.3 Hydrologic Units

The ultimate receiving water for Alabama Agricultural and Mechanical University MS4 is the Tennessee River (Region 06). The Subregion and Basin is Middle Tennessee Elk (06-03-00). The Subbasin is Wheeler Lake (06030002). The Watershed is Indian Creek (06030002-05) and the Subwatershed is Huntsville Spring Branch (060300020502). The onsite receiving water is Normal Branch which traverses the property from north to south.

1.4 Water Quality Concerns

The area that is covered under Alabama Agricultural and Mechanical University's MS4 Permit discharges at one single outfall, Normal Branch. Under Section 303(d) of the Clean Water Act, the State of Alabama is required to identify waterbodies that are not in compliance with the water quality standards for that particular use classification. Normal Branch does not discharge directly to an impaired waterbody. The stormwater layout for the MS4 permitted area can be found in Appendix B.

2.0 CONTACTS

The following personnel are directly responsible for the MS4 Program:

Mr. Brian Shipp
Director of Facilities and Administration
P.O. Box 1837
Normal, Alabama 35762
256-372-4276

Mr. Greg Bryant
Hazardous Environmental Manager
453 Buchanan Way NE
Normal, Alabama 35762
256-372-4090
Gregory.bryant@aamu.edu

Ms. Barbara R. Lehman, P.E.
Consultant
GEO Solutions, LLC
7201 Opportunity Boulevard
Huntsville, Alabama
256-837-6708
blehman@geo-solutions.net

3.0 EVALUATION OF STORM WATER MANAGEMENT PROGRAM

3.1 Major Accomplishments

Alabama Agricultural and Mechanical University was issued its first MS4 permit in July 2017 and is recognized as a small MS4 entity outside the City of Huntsville. The Department of Facilities and Administration was designated to oversee the storm water management program for the University.

Throughout this last year, the university has made an effort to create more green spaces within campus. By replacing vacant buildings with new green areas, the university is promoting the health of their campus.

Added Greenspace

Within the campus, several roads have been repaved to prevent more greenhouse gas emissions. Repaved roads are helpful for environmental purpose, by preventing dust from gathering and altering vegetation near old roadways. In addition to the road improvements, the drainage systems on campus have also been repaired. These improvements have created better water flow from the north to south side of the property. This is in an effort to prevent further soil erosion.

Drainage Improvements

Alabama Agriculture and Mechanical University only utilizes Proterra electric buses to the campus for the students and neighboring community to utilize to commute around campus with a total of six electric buses. By utilizing the cleaner and more efficient buses, the University is making a positive impact on greenhouse gas emissions with the Bulldog Transit System. All storage tanks that were previous used for diesel fuel can be removed and have been swapped out for a new electric charging facility near campus.

3.2 Overall Program Strengths and Weaknesses

One of the University's strengths is the increase in available funding along with their collaborations with the City of Huntsville's Green Team and the Huntsville City Council.

The main weakness of the program continues to be staffing.

3.3 Future Direction of the Program

During the upcoming year, Alabama Agricultural and Mechanical University plans to implement the following:

- The drainage features that traverse the western campus to the main outfall still need some repair over the next year. As discussed, several improvements have occurred relative to the drainage on campus. There are plans to make further improvements in order to stabilize all banks and prevent further erosion.
- The campus has been moving towards removing all above-ground storage tanks since the successful switch to electric public transportation.
- The university is looking to improve waste management as well as increase green space.

- The university's student organizations will have student leaders involved with specific environmental matters to create a greater impact through student involvement and education.
- Utilizing the university's Environmental Department, Alabama A&M continues to have classes that involve student projects that work to promote and teach the importance of environmental topics.

4.0 MINIMUM STORMWATER CONTROL MEASURES

4.1 Public Education and Outreach

- Alabama Agricultural and Mechanical University's online publication, Bulldog Bottom Line, has been a major avenue for communication and education for both students and faculty at the university. This online media will continue to be used in the future for keeping campus clean.

- Training – The Facilities Department conducts a training course every five years for Spill Prevention Control and Countermeasures for the Maintenance Department virtually. This training includes Standard Operating Procedures in the Maintenance Shed as well as around campus. The trainees reviewed the types of spills, how to identify a spill, how to clean up spills and how to avoid them.

4.2 Public Involvement and Participation

- Signs and Posters – Alabama Agricultural and Mechanical University provides the signs, posters and their messages on the Bulldog Bottom Line. An example poster can be found in Appendix C.

- The University has an Environmental Department that includes faculty, as well as students, who are involved in activities on and off campus. The student body has teamed up with the City of Huntsville's Green Team to collect litter at District 1 Cleanup Day. Safety vests, gloves, grabbers and garbage bags were provided for students to properly collect litter in the surrounding neighborhoods.

- More than 500 freshmen were involved in "Serving the City as One" in several neighborhoods in North Huntsville. Students and community volunteers gathered at T.M. Elmore Gymnasium on the University's campus before loading buses to work in the areas of Edmonton Heights, South Plymouth Road, Merry Oaks Drive, Esther Avenue and The AAMU Farm in Hazel Green. The service included, but not limited to, clearing yards and making small home repairs. The event was in collaboration with Huntsville City Council Member Devyn Keith and Madison County Commissioner Violet Edwards.

- Through the Environmental Department at Alabama A&M, several class projects involving environmental topics and issues present on campus were presented at the Annual Stem Day. These class projects help educate both students, faculty, and the community about the importance of taking care of the environment around us.

- The Alabama Agricultural and Mechanical University's student body is participating in the statewide Adopt-a-Mile Program. The mile is along Chase Road which traverses on the southern perimeter of the University's campus. During their routine checks and maintenance, the students clean up trash and litter to aid in the ongoing beautification of the city.

4.3 Illicit Discharge Detection and Elimination

- Aerators - There are two ponds on the Alabama Agricultural and Mechanical University Campus. Both ponds have aerators to increase the oxygen saturation.
- Hazardous Materials – Mr. Greg Bryant is the Hazardous Environmental Manger and conducts routine inspections looking for and documenting hazardous material on campus.
- SPCC – A Spill Prevention Control and Countermeasures Plan was developed for the Alabama Agricultural and Mechanical University Campus. There are two above-ground storage tanks located at the Maintenance Shed, as well as used oil containers. Several of the buildings on campus have back-up generators. The maintenance staff has received training on the Standard Operating Procedures when there is a spill.
- Standard Operating Procedures for the SPCC Program, Illicit Discharge, Construction and Post Construction were developed and a copy can be found in Appendix D.
- There are numerous buildings with potential for illicit discharges. A list of the buildings and the possible generators can be found in Appendix E.
- The university has removed diesel generators from the Council Training Center and the R.O.T.C center. The Event Center and the Welcome Center have had generators added over the past year.

4.4 Construction Site Storm Runoff Control

- Construction Storm Water Permits – There is no current Construction Stormwater Permits under the NPDES General Permit.
- When construction is present, monthly and rainfall driven inspections are conducted by Mr. Greg Bryant, Hazardous and Environmental Manager for Alabama Agricultural and Mechanical University as well as a third party, GEO Solutions, LLC. Records are kept in the Facilities Building on campus.

4.5 Post-Construction Storm Water Management in New Development and Redevelopment

- Landscape Management - Aramark Higher Education Services is subcontracted by Alabama Agricultural and Mechanical University to provide landscape services to the campus. They ensure that the drainage ways remain unblocked to prevent unnecessary ponding or backing up of storm water. Due to the highly erodible

soils located on the campus, Aramark is responsible for stabilizing the bare areas.

4.6 Post-Construction and Good Housekeeping

- Aramark collects and removes all the trash daily around campus. They also are responsible for major maintenance and managing the interior roadways. Approximately twenty-four bags of trash are collected daily around the campus.
- Regular inspections are performed across the campus to monitor trash pick-up and general maintenance.
- Use oil from maintenance vehicles and equipment is removed from the campus and disposed of by a third party.

5.0 CERTIFICATION

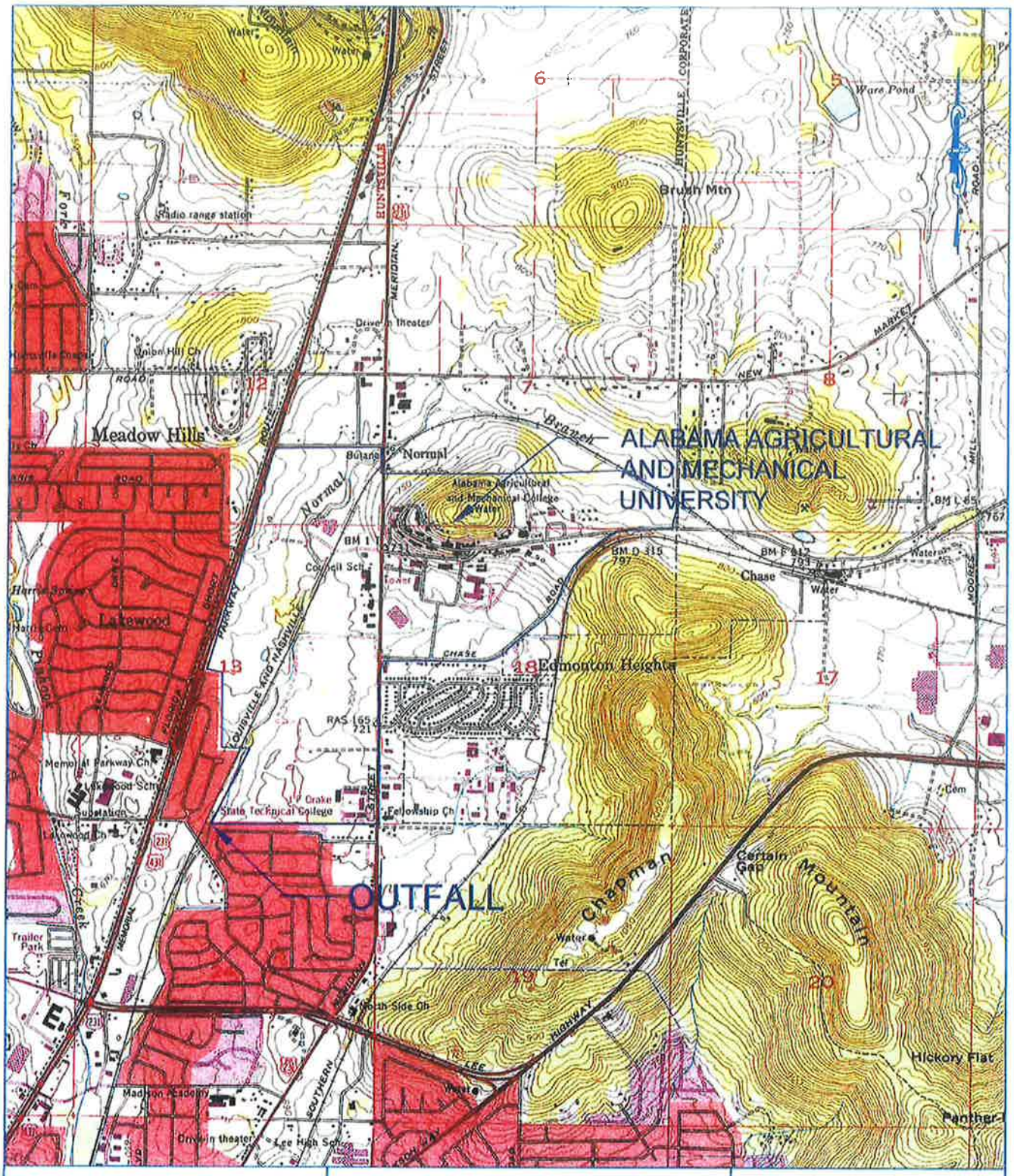
I certify under penalty of law that this Annual Report and all attachments pertaining to the Alabama Agricultural and Mechanical University's Municipal Separate Storm Sewer System were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment for knowing violations.

5-29-24

Mr. Brian Shipp, Director
Facilities and Administrative
Alabama Agricultural and Mechanical University

Date

APPENDIX A



ALABAMA AGRICULTURAL AND MECHANICAL UNIVERSITY
NORMAL, ALABAMA

FIGURE 1

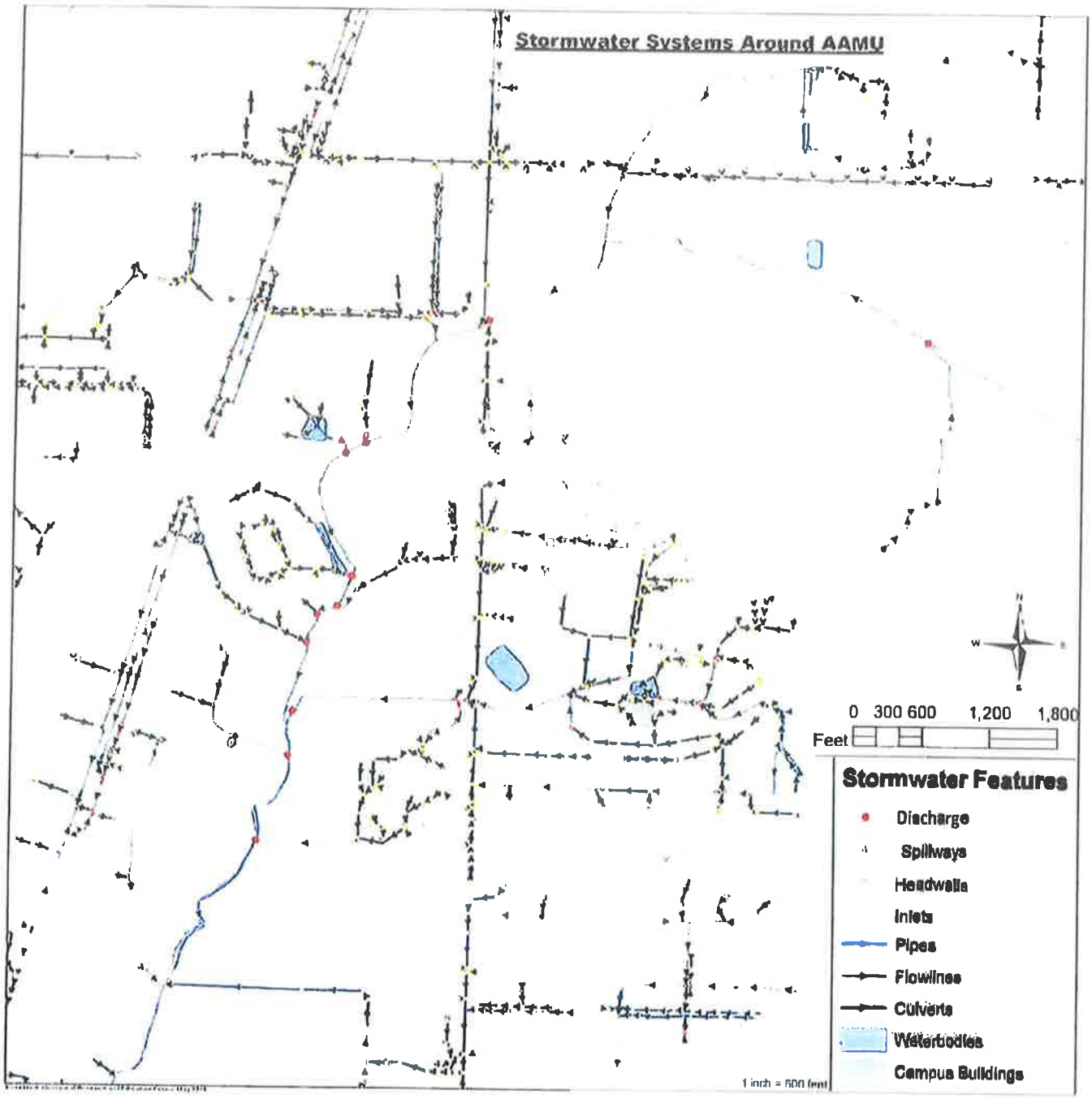
SITE LOCATION PLAN

GEO SOLUTIONS, L.L.C.
Geotechnical Engineering and Materials Testing Services

7201 Opportunity Boulevard
Huntsville, Alabama 35810
PH (256)837-6708 FX (256)837-6702

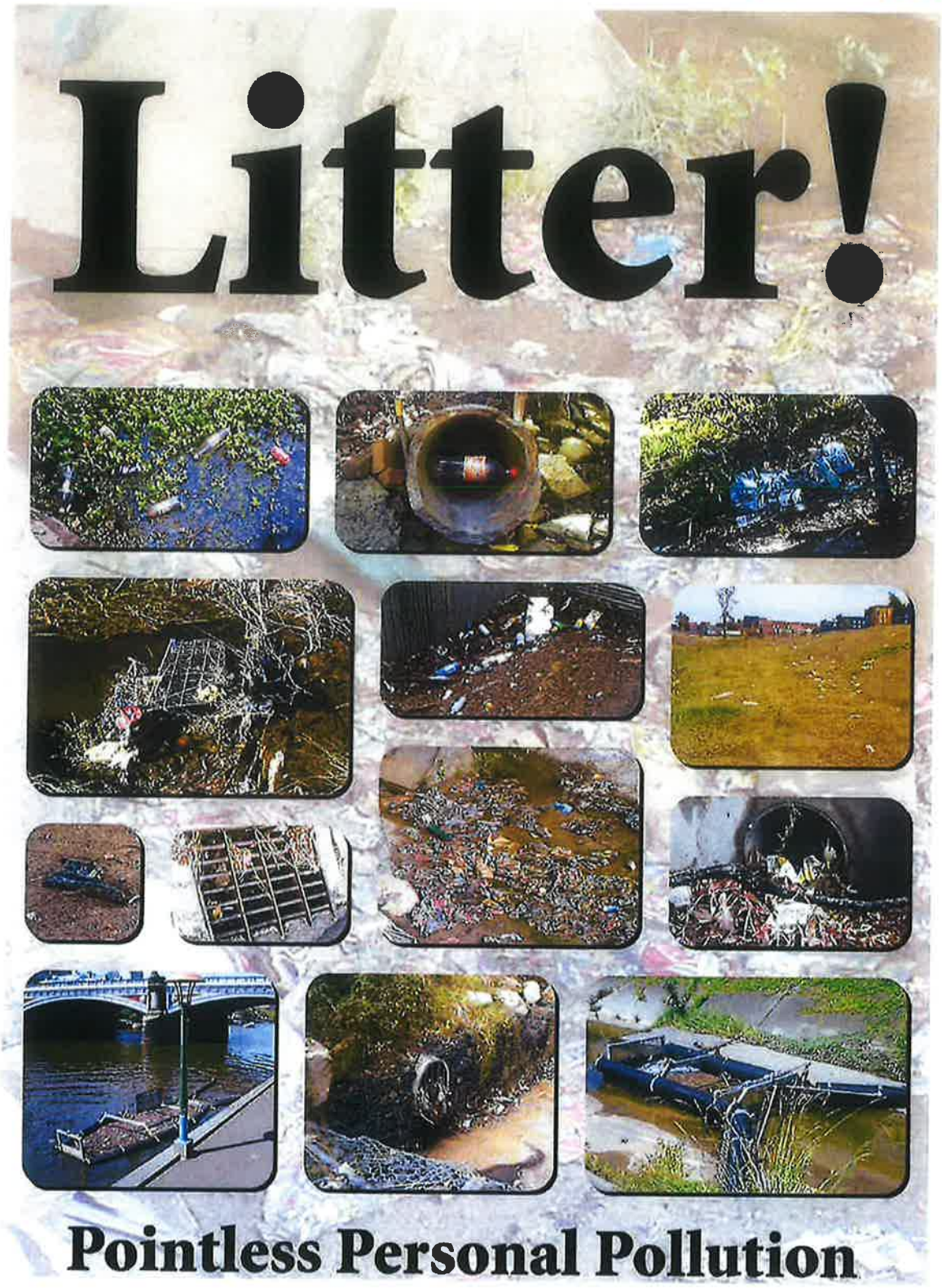
SCALE:	1" = 2500'
PROJ:	17-0350
DATE:	5/31/2023
# 1 OF 1	

APPENDIX B


Stormwater Systems Around AAMU
0 300 600 1,200 1,800
Feet
Stormwater Features
Discharge
Spillways
Headwalls
Inlets
Pipes
Flowlines
Culverts
Waterbodies
Campus Buildings
1 inch = 600 feet

APPENDIX C

KEEP OUR CAMPUS CLEAN!



IT KEEPS OUR WATER CLEAN

Storm Drains Are Not Trash Cans

Trash thrown in storm drains travels into our streams and disturbs aquatic life. Trash can also clog storm drains and cause flooding. Dispose of your trash properly, not in the storm drain.

Healthy Stream Habits!

APPENDIX D

Illicit Discharge Detection and Elimination (IDDE) SOP

Alabama A&M University goal is to develop a plan to identify and eliminate non-storm water discharges that are not acceptable according to the MS4 General Permit. The university has installed in the case of one being discovered as regulatory means to correct the actions.

1.1 Reporting a IDDE

Illicit Discharge are reported by individuals on campus by calling EHS office number 256-372-4090. IDDE can be detected through inspections around campus

1.2 Tracing Illicit Discharges

Once an illicit discharge is detected or reported through an inspection. The next step is to locate the source. Selection of tracing techniques will depend on the type of illicit discharge detected, information collected during the initial discovery period, observation, and the resources/technology available. Tracing techniques include visual observation, dye testing, sample collection, and televising

Various techniques can be used in combination to identify the source of the illicit discharge.

- **Transitory or intermittent discharges**: These conditions may occur as a result of an inspection or a community complaint. While initial information may have been collected regarding the potential illicit discharge, a return trip may show that the discharge was either intermittent or transitory. The investigative techniques used will depend on whether or not a potential source location was identified during the initial observation:

- **Potential source identified** - If a potential source for the illicit discharge was initially identified, steps are taken to investigate the potential source site, such as inspecting the site and storm drain system in the vicinity of the site. If floor drains, sumps, or other suspect discharge locations are observed during this inspection, dye testing, smoke testing, or continuous flow monitoring may be used. These techniques should definitively show whether the suspect site was the source of the illicit discharge.

- **Potential source not identified** - If no source site is suspected, and only the general area of the illicit discharge is known, it may be possible to trace the evidence of the illicit discharge by visual inspection of the storm drain access points. If this catch basin/manhole inspection technique is unsuccessful, some interim steps may be taken to attempt to capture water from an intermittent discharge. For example, sand bagging, damming or block testing of selected storm drain access points, combined with installation can help reveal the source of the discharge. If these techniques have no positive result (no water pools behind the weir or sand bag), the discharge was likely transitory (one time only), and it may not be possible to determine its origin. and should be logged tracked for any future incidents.

- **Continuous discharges**: Tracing continuous discharges is typically easier than tracing transitory/intermittent discharges. The primary difference between tracing this type and tracing a continuous discharge is that sandbagging and weirs are not required for a continuous discharge. Visual observation of the system access points should reveal where the flow is coming from. If visual inspections fail in identification of the source and the original report was severe or gross pollution, then televising, smoke testing, or sample collection would be warranted

1.3 Regulatory Mechanism

If Alabama A&M University discovers the violation of the IDDE SOP. The individuals or companies may require verbal or written notice for non-compliance

- The performance of monitoring, analysis and reporting
- The termination of the prohibited discharge, practices, or operations
- The abatement or remediation of the storm water pollution, and the restoration of the affected property
- Payment of non-compliance fees or remediation expenses against Alabama A&M University
- Disciplinary action up to and including dismissal of personnel or contractors

Dry Weather Screening SOP

Alabama A&M University shall, at a minimum, visually inspect outfall 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 Contractor to trace source of suspect illicit discharge.
- Upon source discovery, measures will be implemented to cease discharge immediately as possible.
- Should immediate termination 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.

Construction Storm Water Runoff Control SOP

Alabama A&M University goal control construction storm water runoff by implementing plan site reviews, control mechanisms, an inspection.

- **Site Plan Review**

  Physical Facilities Department are responsible overseeing all construction projects conducted on campus. The department is responsible for assuring storm water runoff controls are implemented prior to construction. This can involve review of architecture's site plans and construction specifications

- **Sites Less than 1 Acre is Disturbed**

  Construction sites where less than one acre of ground is disturbed will be covered on AAMU MS4 General Permit and BMP's. The contractor will be responsible implementing control mechanisms, i.e. silt fences, inlet protection, street sweeping.

  Alabama A&M University will at a minimum perform an inspection of site every two months to ensure the BMP's and control mechanisms are being implemented.

  Any deficiencies noted during these inspections will be presented to the construction superintendent or project design engineer or architect.

- **Sites More than 1 Acre is Disturbed**

  Construction site where more than 1 acre is disturbed or part of a large development Alabama A&M University requires the contractor to obtain ADEM Construction Storm Water Permit and follow all applicable requirements of the permit.

  Copies of the permit and inspections will be sent to the EHS department as part of compliance with requirements of the inspection.

  Alabama A&M University will perform at a minimum perform monthly inspections to ensure control mechanisms and monitoring issues are in place.

  Any deficiencies noted during these inspections will be presented to the construction superintendent or project design engineer or architect.

  Re-inspections could be required to these issues have been corrected.

Post Construction Storm Water Management SOP

The goal of the university's post construction runoff control measure is designed to ensure that new construction designs do not result in increased storm water pollution.

- As part of the site plan review, Alabama A&M University reviews site plans, specifications, design plans on post construction designs.
- The general contractor for all projects are required to implement post construction design for any undisturbed acre. This applies to projects less than and greater than once acre in design.
- Post construction control mechanisms are grass seed and straw, sod, and landscaping (i.e. shrubs, trees, mulching). These are some of the steps to be implemented to slow down and improve runoff water quality.
- Construction control mechanisms will stay in place until, the post construction designs are fully in place.
- This includes significant grass coverage 85% percent at a minimum. Sod has begun to root and grow. Control mechanisms will only be removed if the university feels that exposed ground surfaces have been adequately stabilized.
- Once the project is turned over to the university, Physical Facilities ground's and maintenance contractor is responsible for maintaining the post construction controls.
- The university will ensure the post construction implementations are maintained and point out any deficiencies to the contractor.

Housekeeping SOP

The goal of the university is to practice good housekeeping skills to help keep the drainage areas free from debris and trash.

- Facilities contractor, Aramark pick up trash every morning M-F primarily while school is in session. Aramark spends approximately 2-3 hours pick up trash and disposing it properly.
- Aramark also works on keep landscaping areas covered to prevent storm water runoff and wash out areas.
- Trash containers area keep free trash to prevent trash from getting in drainage culverts and outfall
- Drainage culverts are cleaned out by outside contractors when they present issue with improper drainage.
- **Regulatory Mechanism**

  Records will be kept for any clean out or repairs done storm drain culverts.

  Trash pick-up and landscaping are part of the operating procedures and contract requirement of the Facilities vendor, Aramark.

  Any deficiencies noticed will be pointed out by the contractor and follow up for other work will done if needed.

APPENDIX E

Buildings With Potential for Illicit Discharge

	Boilers	Diesel Generators	Water Cooling Towers	Labs	Other*
Ag. Mechanics Crump Building	X				
Agribition Center	X				
Agriculture Research ARC	X			X	
Auther J Bonds School of Engineering	X	X	X	X	
Carter	X	X		X	
Carver	X			X	
Chambers	X	X			
Crump maintenance building	X				
Dawson	X				
Eugene Kendrick Buildings					X
Event Center		X			
Foster Irradiation Center	X				
Gas pump above ground tanks					X
GreenHouse		X			X
Hopkins Hall	X		X		
J.F. Drake Library	X				
Louis Crews Stadium		X			
Mamie Foster Living/Learning	X	X	X		
McCalep Voc Building	X	X			
Morris Hall	X				
Morrison Fine Art	X		X	X	
New Residents Hall	X	X			
Palmer Hall	X				
Patton Hall	X				
Poultry Science	X			X	
Ralph Lee	X				
School of Business	X		X		
Stephens Hall	X				
Student Health & Wellness Center	X		X		
T.M. Elmore Gym	X				
T.R Parker	X				
T.R. Parker Annex	X				
Terry Hall	X				
Thigpen Hall	X				
Thomas Hall	X				
University Service Building					X
Wellness Center		X			
West Campus/ Knight Center	X	X	X		
William Councill	X				
Wilson	X				

* Activities (Garage, Maintenance, Chemical Storage, Fuel Storage)