

Alabama State University

915 S. Jackson Street
Montgomery, AL 36104



Stormwater Management Program Annual Report

NPDES Permit ALR040065

April 1, 2023 – March 31, 2024

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1.0 Introduction

1.1 Alabama State University Phase II MS4 Program

Alabama State University (ASU) was issued its current NPDES Permit for discharges from regulated small municipal separate storm sewer systems, or MS4 Permit (No. ALR040065) by the Alabama Department of Environmental Management (ADEM) on September 16, 2021. The permit was made effective on October 1, 2021. ASU's MS4 program is managed by the Office of Facility Services.

1.2 Alabama State University MS4 Area

ASU covers approximately 200 acres as shown in **Appendix A**. The student population is approximately 4,413 students (3,934 full-time and 479 part-time). There are currently 97 buildings on campus ranging from academic buildings, dormitories, faculty buildings, sports complexes, cafeterias, and facility management buildings. There are approximately 786 full-time and 277 part-time ASU staff working on campus.

1.3 Watershed Information

The ASU campus receives approximately 53 inches of rainfall annually. Rainfall tends to be evenly distributed throughout the year with drier periods occurring during late summer and early fall. Stormwater runoff from ASU ultimately discharges into two primary receiving streams. The majority of the campus drains to the southwest towards the Genetta Ditch. Genetta Ditch flows to Catoma Creek which eventually drains into the Alabama River west of Montgomery. A small portion of the northeast side of campus flows to the northeast to an unnamed drainage ditch. This unnamed drainage ditch flows east and then north to where it eventually reaches Galbraith Mill Creek. Galbraith Mill Creek flows into the Alabama River North of Montgomery.

Catoma Creek is currently impaired for Organic Enrichment and Low Dissolved Oxygen. Impairment to Catoma Creek is derived exclusively from non-point source (NPS) and Municipal Separate Storm Sewer Systems (MS4) pollutant loadings, for which needed reductions are being sought under Total Maximum Daily Load (TMDL) implementation. ASU property makes up less than 0.07% of the total watershed of Catoma Creek.

As a requirement of the NPDES MS4 Permit, the University must demonstrate that its discharges do not cause or contribute to the impairment of an impaired water body. The University developed and implemented a sampling plan during the 2020-2021 reporting period to determine whether or not the discharge contributes to the impairment of Catoma Creek via the City of Montgomery's MS4. The sampling results indicated that ASU's discharges have minimal oxygen demand and nutrient loading and therefore are not contributing to the impairment of Catoma Creek.



1.4 Annual Report

Part VI of the NPDES MS4 permit requires ASU to submit an annual report to ADEM each year. The annual report's purpose is to summarize activities between March 31st of the reporting year and April 1st of the previous year. This report covers the period from April 1, 2023 to March 31, 2024 and includes the following required information:

- **2.0**, *A list of contacts and responsible parties*
- **3.0**, *An overall evaluation of ASU Stormwater Management Program*
- **4.0**, *A narrative report of the required minimum control measures*
- **5.0**, *A summary of future controls*
- **6.0**, *A notice of reliance on others*
- **7.0**, *Certification*

No monitoring was required during this reporting period; therefore, no monitoring or sampling results are provided in this annual report.

1.5 Availability of Report

This annual report has been provided to ADEM in electronic format via the Alabama Environmental Permitting and Compliance System (AEPACS). The report will be accessible for public review on or through the ASU web site in the future, along with the Stormwater Management Program Plan (SWMPP) and the NPDES permit. Printed copies of the report are available upon request.

2.0 Contacts / Responsible Parties

The personnel responsible for preparation of this report are:

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3.0 Overall Stormwater Management Program Evaluation

3.1 Major Accomplishments

The ASU stormwater management program, coordinated by the Office of Facility Services, has made progress this reporting cycle. The University continues its commitment to improvement in the area of stormwater management and water quality protection. A few specific notable endeavors are listed and described below. Additional details for these and other reporting period accomplishments are provided in applicable locations of the Narrative Report (Section 4.0) of this report.

- *Post-construction Inspection Form (February 2023) – Redeveloped a post-construction site inspection form.*
- *The Facility department installed “No-Litter” signs around campus.*
- *The Facility department began monthly MS4 topic discussions during safety meetings.*
- *Survey Awareness Surveys were created and polling began.*
- *Facility Inspection form was created and digitized.*
- *Monthly social media posts were implemented.*
- *Educational brochures were designed.*

3.2 Overall Program Strengths and Weaknesses

Even prior to the issuance of the NPDES Permit, campus activities had become reflective of an environmentally conscious mindset. Awareness of environmental responsibilities and expectations is increasing among ASU staff as the stormwater program leaders share information about the importance of operating in accordance with regulatory permitting. The University took several steps towards developing and enhancing the stormwater program over the last reporting cycle. Staff and student body leadership have stepped up to make progress towards setting University environmental and water quality stewardship standards for the University. The progress made is summarized in the following sections of this report.

Donald Dotson, ASU Vice President of Facilities Management & Operations, is currently responsible for coordinating the University’s stormwater program. Mr. Lehman Tucker assists Mr. Dotson with MS4 efforts. Both gentlemen continue to increase their knowledge of managing stormwater for water quality protection in an urban setting. Both participate in state and local water-related events. Mr. Dotson and Mr. Tucker are members of the Alabama Stormwater Association (ASA) and intend to participate in the organization’s local events.

Areas of potential improvement include increased intentional and coordinated education and



involvement of students, staff, and visitors; and staff training of the standard operating procedures (SOPs) related to pollution prevention and good housekeeping associated with campus facilities. These will continue to be areas of program focus and are described more fully in the sections below.

Areas of strength include ad-hoc student activities that are known and provide positive water quality protection, but are currently not well coordinated with the overall program. ASU is currently working towards evaluating the effectiveness of the program and helping to incorporate the ad-hoc activities with the University's MS4 program. Communication among the campus population in regard to the University's priorities related to environmental and water quality protection is the greatest area of improvement that occurred this reporting cycle and will continue to occur in future reporting periods. More information regarding these elements of the program are found in Sections 4.1 and 4.3 below.

3.3 Future Direction of the Program

ASU values the environment and continues taking steps towards ensuring that its facilities and surrounding environment are maintained for future generations. With the commitment and support of leadership, willingness of staff to learn and implement, and the energy of students and visitors, the future of the ASU stormwater program continues to be bright. Program leaders have recognized measures that can be implemented to continue developing and enhancing the stormwater program.

4.0 Narrative Report

Part III. A of ASU's NPDES permit requires the development, implementation, revision, and maintenance of a stormwater management program to reduce the discharge of pollutants into local waterways and streams. The SWMPP submitted to ADEM in March of 2022 established and described the five minimum control measures required by the permit. The SWMPP guides how minimum control measures are implemented. The five minimum control measures include: public education and public involvement; illicit discharge detection and elimination (IDDE); construction site stormwater runoff control; post construction stormwater management; and pollution prevention/good housekeeping for municipal operations.

A narrative report for the implementation of each control measure is found in the sections below.

4.1 Public Education

Noteworthy progress has been made at ASU in adopting a educational mindset that is not tolerant of litter around campus. This has been achieved partly by verbal communication, "No-litter" sign placements and digital media campaigns. The Vice President of Facilities and Operations, Donald Dotson, is the figurehead in this effort by confronting litter issues around campus and hosting monthly facility meetings focused on litter reduction. Further efforts to place brochures within the university's library and hand out brochures during events throughout the year are being made.

Progress made this reporting cycle includes:

- Developed educational brochures and handouts to increase public education (**Appendix B**).
- Developed and implemented stormwater awareness survey
 - (<https://forms.gle/3tgHBtpPe4dbyrLr9>)
- Monthly social media posts were implemented (Figure 1)

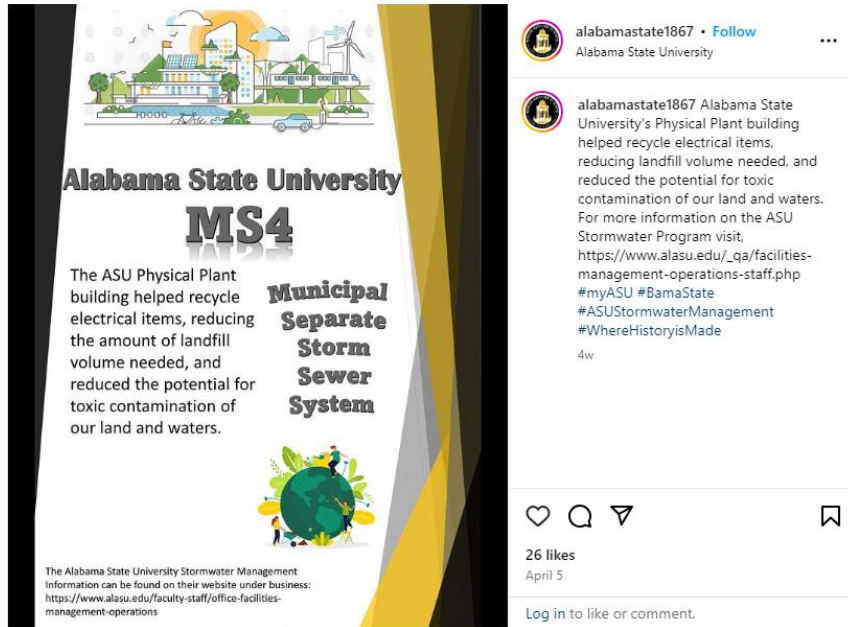


Figure 1. Social media posts for public education

- Signs were posted around tailgating areas during sporting events to direct people to waste receptacles and deter people from improperly disposing of waste (Figure 2).



Figure 2. Example of tailgating signs

- The Facilities Department installed “No-Litter” signs around campus (Figure 3).



Figure 3. Example of “No-Litter” signs

- The Facilities Department continued to maintain storm drain marking (Figure 4).



Figure 4. Example of ASU’s storm drain marking

4.2 Public Involvement

With all of the social involvement that characterizes a typical college campus, the opportunities to educate and engage the public on water quality issues are plentiful. ASU has previously taken steps to facilitate the participation of the students, staff, and campus visitors by organizing campus clean up days as well as providing various recycling activities. The University has taken steps to document efforts as well as promote new efforts of public involvement. Progress this period includes:

- The Office of Facilities Management and Operations provided University staff training by sending out a fact sheet describing what an MS4 program is and how staff can help support the University’s stormwater management program. The training fact sheet and sign-in sheets are provided in **Appendix C**. Several hundred faculty and staff indicated that they received the handout.

With ASU’s current commitment to continual improvement regarding stormwater management, there is tremendous potential and opportunity for the establishment of an effective MS4 program. ASU has



established goals for the upcoming reporting cycles. ASU is currently working on implementing social media engagement and stormwater awareness surveys to evaluate the effectiveness of their program.

4.3 Illicit Discharge Detection and Elimination

All runoff from the ASU campus is conveyed through the City of Montgomery's MS4 prior to discharge into receiving waters. In February of 2022, the University's outfall mapping was updated and 100% of outfalls were screened for potential illicit discharges. No potential illicit discharges were observed in any of the University's stormwater outfalls.

The Facilities and Operations Department staff are trained on identification, reporting, and corrective action of illicit discharges.

Currently, campus security and police receive most calls concerning local concerns or emergencies. Protocol has been established for transferring grounds and facilities-related calls to the Physical Plant facility. Existing processes and procedures will be leveraged to also communicate and report potential illicit discharges as the Physical Plant Operations Manual is updated. Communications plans will be included in illicit discharge awareness training and other educational efforts.

Trash pickup occurs every morning and during the football games to reduce illicit discharges and eliminate trash or debris from exiting the MS4 boundary. Additionally, a recycling program is being established to help further reduce debris from exiting the MS4 boundary.

4.4 Construction Site Stormwater Management

ASU has not reviewed any construction plans or had any new development or redevelopment projects on campus during the reporting period. Past qualifying project development has followed a predictable path for project design and management and is intended to remain largely unchanged in the future. An example of a previous construction stormwater inspection report is provided in **Appendix D**.

ASU development and redevelopment projects are typically designed by a team led by an architect. When regulatory thresholds are met, permit coverage is sought under the NPDES general permit for construction discharge (ALR100000). ASU is typically the permittee listed for permit coverage on the submitted Notice of Intent. The design and implementation of construction stormwater management practices are informed by and are in accordance with the following: The NPDES general permit; *The Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas*; Alabama Division of Construction Management's guidelines; and applicable elements of their MS4 permit.

The construction of development and redevelopment projects is typically managed by a program management firm. Project management typically includes construction stormwater management



practice inspection. When potential violations are discovered on a construction site, issues are addressed immediately between the program management staff and the contractor. Project work may be stopped until issues are properly addressed. Should instances of noncompliance take place, proper notification is provided to ADEM in accordance with the NPDES General Permit.

Some smaller projects are managed by the designing architecture firm or a member of their team. If these projects meet regulatory thresholds, they are also designed and managed in accordance with applicable permit coverage and Alabama Division of Construction Management's guidelines as described above.

The Alabama Department of Finance, Division of Construction Management (DCM) is responsible for construction plan reviews and inspections for all projects on ASU's campus. DCM's Plan Review Division enforces codes and regulations by reviewing proposed construction plans. DCM's Project Inspection Division ensures acceptable building practices and code compliance by inspecting projects under construction.

During the previous reporting period, ASU developed a Stormwater Construction Site Inspection Form (**Appendix E**). Once ASU has construction on campus, an inventory of qualifying construction sites will be maintained. ASU's inspection and reporting procedures were re-evaluated over this reporting cycle to identify areas of improvement. It was concluded that no update is needed at this time. As the stormwater program develops, construction stormwater procedures will be revisited.

4.5 Post-Construction Stormwater Management

As stated above, ASU development and redevelopment projects are typically designed by a team led by an architect. The design of post-construction stormwater management practices is typically performed by civil engineers on the designing architect's team. Stormwater-related design is informed by the Alabama Division of Construction Management guidelines. Where development might drain to ALDOT property, ALDOT permitting requirements would also have to be met. The design generally requires that post-development hydrology (stormwater runoff) mimics predevelopment hydrology.

No recent construction activities have taken place on campus since the issuance of the MS4 permit. Therefore, no post-construction stormwater management practices are applicable to the MS4 permit.

The Alabama Division of Construction Management guidelines encourages incorporation of low impact development (LID) and/or green infrastructure (GI) practices into qualifying development and redevelopment projects. The latest version of the Alabama Low Impact Development Handbook is incorporated into this technical memorandum by reference, "*The Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas*".

Post-construction policies and procedures for new and redevelopment and maintenance of

stormwater controls were reviewed during this reporting cycle and were updated as necessary.

4.6 Pollution Prevention and Good Housekeeping

ASU facility services are based out of and are coordinated from ASU's Physical Plant building. These areas include: Transportation; Grounds; and Facilities (painting, electrical, HVAC, plumbing, and crafts). This allows for good housekeeping practices to be closely monitored as equipment maintenance, washing, fueling, equipment storage, chemical storage, etc. takes place. Of the 97 buildings on ASU's campus, only one building contains hazardous materials. A map of the campus is found in **Appendix A**.

Several activities of campus operations are being conducted in a manner that is protective of water quality. To minimize the likelihood of used oil being introduced to stormwater runoff, the University maintains motor oil and cooking oil disposal programs (**Appendix F**). All used motor oil is collected in designated barrels, which is then collected by Universal Environmental Services, LLC, an oil recycling company. Cooking oil is handled similarly. ASU kitchens have designated containers that store used cooking oil until the recycling company can pick up the oil and dispose of it properly (Figure 5).



Figure 5. Example of ASU's used cooking oil container.

To minimize the amount of litter entering storm drains, the University maintains trash receptacles across the campus grounds. These receptacles are emptied on a daily basis (at minimum) and hauled to the North Montgomery Sanitary Landfill. Vegetative debris that is collected from various landscaping operations is also taken to the landfill for disposal. Storm drain maintenance is also conducted by Facilities staff and includes weekly cleaning of drain grates for debris and litter.

Herbicide and pesticide application and maintenance are outsourced to a third-party vendor. This aids



in the reduction of hazardous materials held within the MS4 boundary and, therefore, reduces illicit discharges and maintains good housekeeping. Applications of herbicide and pesticide are applied periodically throughout the year. The facilities department is trained on SOPs for pesticide and herbicide application to identify any issues that may arise through the third-party vendor.

Pollution prevention and good housekeeping SOPs for campus facilities are provided in the SWMPP and include the following:

- Catch Basin/Inlet Cleaning and Maintenance
- General Housekeeping for Campus Facilities
- Painting
- Pesticides and Herbicides
- Vehicle and Equipment Fueling
- Vehicle and Equipment Maintenance
- Vehicle and Equipment Washing

The Office of Facility Services staff are trained on the SOP's during monthly safety meetings. SOP training material has been developed and is included in the SWMPP. During this reporting period, a facilities inspection form was created and digitized. The form has been added to the SWMPP.

5.0 Summary of Future Controls

The table provided in **Appendix G** summarizes the stormwater controls that are planned for future reporting cycles.

6.0 Notice of Reliance on Others

Primary enforcement of stormwater-related ordinances and policies is the responsibility of ASU. ASU, as well as its agents (architects, program managers, etc.), rely on ADEM as a backup for enforcement should compliance not be achieved in a timely manner. Richard Hulcher with the ADEM Field Operations Office will be the primary contact for the University. Mr. Hulcher's contact information: (334) 394-4309, rfh@adem.state.al.us.

The Montgomery Water Works and Sanitary Sewer Board operates and maintains the sanitary sewer system that serves the ASU campus. Montgomery Water Works' operation and maintenance of the sewer system is a component of ASU's Pollution Prevention and Good Housekeeping control measure. Montgomery Water Works' emergency response for sewer leaks is a component of ASU's Illicit Discharge Detection and Elimination Control Measure.



7.0 Certification

I certify under penalty of law that this document and all attachments 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 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.

Dr. Quinton T. Ross, Jr.

President, Alabama State University

5/13/24
Date

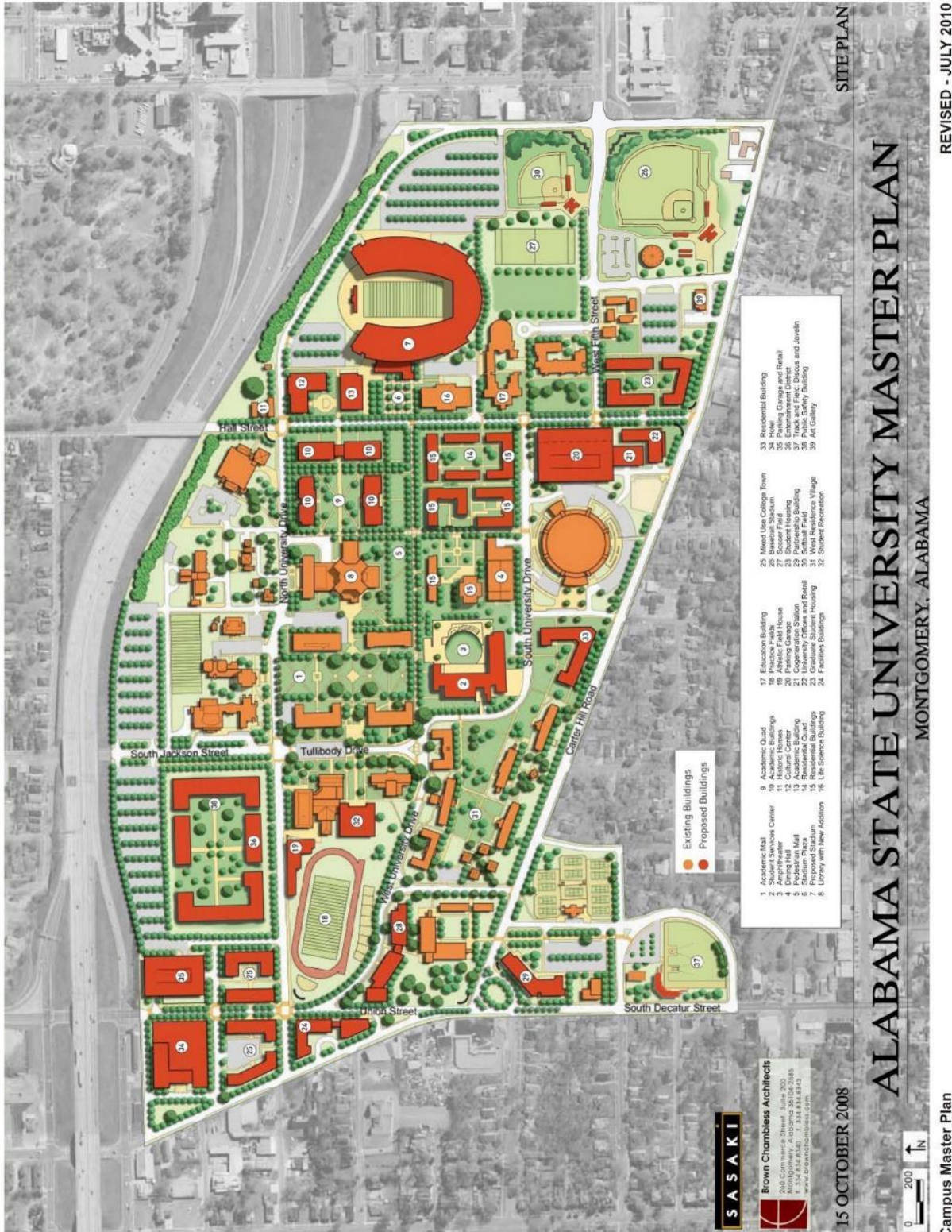
PO Box 271

Montgomery, AL 36101

(334) 229-4100



Appendix A – Campus Map





Appendix B – Public Education Brochures

Storm Drains vs. Sanitary Sewers

Storm drains are intended to collect and transport runoff from rainfall. Storm drain systems do not remove pollutants from water before discharging it into creeks, streams, or rivers. The storm drainage system includes all storm drains, streets, roadside gutter pans and ditches, drainage channels and swales, creeks and streams.

Sanitary Sewers collect wastewater from indoor plumbing such as toilets, sinks, mop sinks, and floor drains and take it to a sewage treatment facility. The treatment facility removes many harmful pollutants from wastewater before discharging it to the river.

REMEMBER, storm water is not treated and goes straight to water bodies — where we swim & fish!



Storm Water & Watersheds

When it rains, water hits the ground or a surface and infiltrates in to the ground or runs off the surface. In some cases, the water evaporates. Water that goes into the ground is typically known as ground water. Water that runs off the ground or a surface is known as storm water.

Storm water runoff occurs when rain hits an impervious surface (roof, driveway, paved road, parking lot, concrete pad, clay, etc...). Typically, storm water flows from a ridge line (highest point that separates two areas) to a collection point/area downstream. The area where rain falls and is collected is known as a watershed.

Located within the City of Alabaster's limits are four (4) major watersheds - Buck Creek, Peavine Creek, Spring Creek and Beaverdam Creek.



Composting and Mulching (Reducing Yard Debris)



Compost & Mulch

Benefits of Composting & Mulching

Compost Materials

Types of Mulch

Composting Tips

Storm Drains vs. Sanitary Sewers

Storm Water & Watersheds



Storm Water Management
Educational Series

Compost & Mulch

Compost is the material that results from the natural decomposition of organic matter. Compost can be mixed with garden soil before planting or used as a mulch.

Mulch is any material that is spread over soil to cover it. This material can be either organic or inorganic. Both materials can be purchased from retailers or easily prepared at home using everyday waste materials.

Benefits of Composting & Mulching

Composting:

- Improves the quality of soil.
- Improves the structure and texture of soil enabling it to better retain nutrients, moisture, and air, which plants need to grow.
- Reduces the need for water and fertilizers.
- Reduces the volume of waste material disposed of in our local landfill.

Mulching:

- Helps hold in moisture to keep plants from drying out.
- Inhibits the growth and germination of nutrient-stealing weeds.
- Keeps roots cool in the summer and protects them from freezing in the winter.

Compost Materials

The following materials can be used in the creation of a compost pile:

- Bread
- Coffee grounds and tea leaves
- Egg shells
- Fruits, vegetables and their peels
- Garden wastes
- Grass clippings
- Wood chips
- Leaves
- Shredded paper and newspaper
- Sawdust
- Sod

The following materials should never be used in the creation of a compost pile:

- Dog manure
- Cat manure or litter
- Cheese & other dairy products
- Chicken or fish
- Meat or bones
- Fat
- Noxious weeds
- Oils

Types of Mulch

The following are examples of organic mulches:

- Wood chips
- Grass clippings
- Leaves
- Pine needles and straw
- Hay

The following are examples of inorganic mulches:

- Stones
- Gravel
- Landscape fabric
- Plastic
- Newspaper

Composting Tips

Chop your materials into small pieces, which will break down faster. Always cover your layer of green material with a layer of brown material to cut down on flies and mask any odors. For fine compost, run over it with a mulching lawn mower. When composting whole plants remove seed heads and seed pods. Avoid adding roots of plants to your compost pile that could generate a whole new plant.

What are the different types of Best Management Practices?

- Erosion Control Practices
- Sediment Control Practices
- Chemical Control Measures

Erosion Control Practices

- **Weather Planning** - Check weather report and try to clear and grade at least a few days prior to predicted rain days.
- **Clear and Grade** - Clear and grade only areas being constructed, not the entire site.
- **Slope Protection** - Protect slopes from eroding into water bodies.
- **Natural Vegetation** - Protect natural vegetation with fencing, tree armoring, etc...

Sediment Control Practices

- **Filter Fabric/Class A Silt Fence** - filter fabric is used to hold the soil in place and prevent small soil particles, such as plant debris, from entering and clogging the drainage. Class A silt fence is a temporary barrier made of 5' minimum steel T posts, composed of a 39" wire support fence and an attached 48" synthetic woven filter fabric that is used to catch sediment-laden runoff from small areas of disturbed soil.
- **Wattle** - material installed across or at the toe of a slope and used to slow and/or control sheet flow and filter pollutants.
- **Inlet Protection** - prevent sediment from entering storm drainage systems.

Chemical Control Measures

- Properly store, handle, apply, and dispose pesticides and petroleum products
- Store, cover, and isolate construction materials and chemicals, to prevent runoff.
- Provide disposal facilities for waste products and materials during construction.

What is the purpose of Construction

Best Management Practices?

- To minimize the amount of disturbed soil
- To prevent storm water from coming in contact with disturbed soil and chemicals
- To protect natural vegetation and other undisturbed areas
- To prevent dirt, chemicals and pollutants from entering inlets, ditches and other drainage systems
- To treat storm water (if polluted) and remove sediments before it leaves the site
- To prevent dirt, chemicals and pollutants from entering creeks, streams, and other water bodies

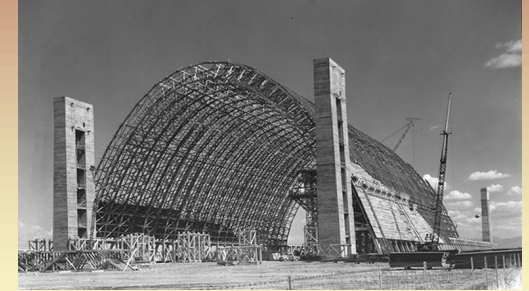
Impact on Storm water

Construction activities significantly impact storm water and human living conditions. Whenever natural ground is disturbed, loose material is exposed and it "runs off" if rainfall occurs when exposed. Some of the harmful impacts of construction are:

- Clogs storm drainage systems and causes flooding
- Harms or kills fish or other wildlife
- Destroys aquatic habitats
- Causes stream bank erosion
- Pollutes waters with chemical, sediment and debris



CONSTRUCTION ACTIVITIES



Erosion Control Practices
Sediment Control Practices
Chemical Control Measures



Storm Water Management
Educational Series

City of Alabaster Ordinance

The code of Ordinances, City of Alabaster, requires that an Erosion and Sediment Control Plan be submitted along with a Site Plan and Tree Survey prior to the issuance of any permit for land clearing, grading, excavation, filling, or any other activity which may result in soil erosion from water or wind or the movement of sediment from the disturbed property into streets, highways, or waters. The plan should be submitted to the Fire Marshal and reviewed by the City Engineer. The approval plan may be changed when the review reveals inadequacies in the plan. No land disturbing activities may be commenced prior to issuance of a permit.

1. Prior to issuance of the required Building Permit, the following shall be in place for the INITIAL SITE INSPECTION...

a. Gravel/crushed rock, similar material for a drive and parking area for motor vehicles, which enter the disturbed property. All such motor vehicles must remain on the prepared drive; complying with Alabaster Code of Ordinances, Sec. 101-1: Soil Erosion Prevention and Tree Preservation.

b. Silt screen, netting, hay bales, or similar structures or materials to control runoff; complying with the City of Alabaster Subdivision and Development Regulations, Section 5.7, including Appendix 1, Details EC-1 through EC-9, inclusive.

c. Toilet facilities for construction workers; complying with the IPC, Section 311

2. Soil Erosion Prevention and Tree Preservation. Alabaster Code of Ordinances, Sec. 101-1.

a. A scaled plan of the site with all deciduous trees of 15"DBH or greater located thereon.

b. No healthy deciduous tree with a caliper of fifteen (15) inches or greater, measured at diameter breast height (4.5 feet above ground level), shall be removed from the site unless such trees are replaced. Such trees shall be shown as an existing condition on a site plan required at the time of permit submittal. No replacement trees shall have a caliper of less than three (3) inches, measured six (6) inches from the ground, at the time of planting and the total caliper of replacement trees shall equal or exceed the total caliper of trees fifteen (15) inches or greater removed from the site. These replacement trees shall be in addition to any other landscaping requirements. However, such trees may be removed without replacement within the area of any road (minimal constriction limits), storm water management structure, utility easement on site, or of the footprint of the building, and within the twenty (20) feet of the foundation of the structure and within ten (10) feet of the perimeter of the driveways.

3. Alabama Department of Environmental Management (ADEM), Chapter 335-6-12 regarding Land Disturbance Activities, et al.

a. Waste disposal measures. ADEM 335-6-12-.21, Item 7 whereas...

i. Construction waste and sediment contaminated as a result of construction activities shall be removed and disposed of in accordance with applicable regulatory requirements in a timely manner.

b. NOTE—burning of waste or burying of waste in other than a landfill, which is permitted by the Alabama Department of Environmental Management, is prohibited.

Storm Drains vs. Sanitary Sewers

Storm drains are intended to collect and transport runoff from rainfall. Storm drain systems do not remove pollutants from water before discharging it into creeks, streams, or rivers. The storm drainage system includes all storm drains, roadside gutter pans and ditches, drainage channels and swales, creeks and streams.

Sanitary Sewers collect wastewater from indoor plumbing such as toilets, sinks, mop sinks, and floor drains and take it to a sewage treatment facility. The treatment facility removes many harmful pollutants from wastewater before discharging it to the river.

REMEMBER, storm water is not treated and goes straight to a body of water — where we swim & fish!

How can I help?

Do not allow pesticides, herbicides and fertilizers to drain onto parking lots, streets and gutters or into storm drain inlets and ditches use sparingly; away from the drains; not before expected rainfall; and prevent sprinkler water from causing their runoff into drains.

Do not blow grass clippings, leaves, weeds, etc. onto streets and gutters or into storm drain inlets and ditches bag them or compost away from drains.

Do not dispose leftover cleaners, solvents, or household hazardous wastes into storm drains. Use completely or take it to a collection center.

Do not allow power wash water, if used in conjunction with chemicals/soaps/solvents, to enter storm drains. Collect and discharge wash water or discharge to the sanitary sewer.

FOOD SERVICE ESTABLISHMENT



Potential Pollution

Inside Operations

Outside Operations

Cleaning Service Contractors

Training

Storm Drains vs. Sanitary Sewers

How can I help?



Storm Water Management
Educational Series

Potential Pollution

Food Service Establishments (FSEs) can potentially be a source of pollution to the storm drain system. Examples of potential pollution from FSEs are:

- Fats, Oils and Grease
- Spills & Leaks
- Wash Water
- Chemicals
- Trash and Debris

Inside Operations

- Wash water containing soap, bleach, and other chemicals must be discharged into mop sinks or floor drains, not into parking lots, ditches, or storm drains.
- Clean floor mats, filters, and garbage cans in a mop sink or over a floor drain.
- Recycle used cooking grease and oil. Don't pour it into trash cans, sinks, floor drains, onto a parking lot, or into ditches or storm drains.
- Store chemicals and cleaning fluids indoors to prevent spills.



Outside Operations

- Conduct all cleaning indoors whenever possible. Floor mats, filters, and garbage cans should not be cleaned outdoors unless all wash/rinse/waste water is contained and disposed of into the sanitary sewer.
- Use dry cleanup methods, such as cat litter or absorbent pads, for spills. Sweep up and properly discard all absorbent materials.
- Keep dumpster areas clean and keep lids and drain plugs closed. Do not fill dumpsters with liquid waste.
- Do not clean dumpsters onsite. When cleaning is needed, notify your waste hauler for cleaning or replacement.
- Use adequate containers with spouts when transferring oil and grease to recycling bins to minimize spills.
- Maintain grease traps to prevent overflows and have contents properly disposed of as needed.
- Clean parking lots regularly to remove food waste, cigarette butts, and other trash and debris from outside areas.
- If a chemical/soap/detergent is applied when pressure washing, ensure that the wastewater is contained and properly disposed into the sanitary sewer.

Cleaning Service Contractors

- Instruct any contractors you hire for cleaning hood vents, floor mats, etc... to collect all wash/waste water and dispose into the floor drain or mop sink. Ensure that they have a plan in place to clean up spills in order to prevent accidental discharge to the storm drain system.
- Instruct and prohibit contractors from pouring anything into parking lots, ditches, catch basins, inlets, or storm drains, including pressure washing waste water if a chemical/soap/detergent is used.

Training

- Educate employees about the harmful effects of allowing food waste and wastewater to enter the storm drain.
- Train all employees on proper disposal procedures for debris, toxic chemicals, solid waste and liquid waste.
- Train all employees on the proper use of spill cleanup materials.
- Retrain employees annually or as needed. Train new hires.

Compost Materials

The following materials **can** be used in the creation of a compost pile:

Bread
Coffee grounds
Egg shells
Fruit and fruit peels
Garden wastes
Grass clippings
Wood chips
Leaves
Shredded paper
Sawdust
Sod
Tea leaves
Vegetables

The following material should **never** be used in a compost pile:

Bones
Cat Manure
Cheese
Chicken
Dog Manure
Fat
Fish Scraps
Meat
Milk
Noxious weeds
Oils



Notes from EPA

Yard trimmings accounted for nearly half the municipal waste eliminated or diverted through source reduction programs in 2000 (USEPA, 2002). Source reduction has been a successful component of municipal waste management, and is a major reason why landfill capacity at a national level remains relatively constant. In fact, source reduction is estimated to have prevented a 25 percent increase in solid waste in 2000. As of 2000, 34 states had more than 10 years of landfill capacity remaining, 12 had five to 10 years, and 2 had less than five years of capacity remaining. (USEPA, 2002).

Yard clippings can be managed by reapplying them to lawns, or by composting at home or at community composting facilities. **Reapplying clippings to yards, reduces solid waste and can decrease the need for fertilizer and water by adding nutrients and limiting evaporation.**

Mowing the lawn without a collection bag helps grass to be reapplied without a lot of effort. Yard waste can also be composted and reapplied to improve water retention, add nutrients, reduce erosion and prevent storm water pollution.

GRASS CLIPPINGS AND LAWN WASTE



Proper Disposal Methods

How can I help?

Compost Materials



Storm Water Management
Educational Series

City of Alabaster Ordinance

Section 34-10 of the Alabaster Code of Ordinances states that the following activity is unlawful:

“Disposing of leaves, dirt or other landscape debris into the city MS4 (municipal separate storm sewer system) or causing leaves, dirt, or other debris to be deposited in or upon a street, alley, sidewalk, parkway, or other public right-of-way.”

Remember....

Storm drains, inlets, ditches, streets, and other parts of the storm drainage system **are not** part of the sanitary or sewer system. Sanitary sewer waters are treated, storm sewer waters are not. **They discharge directly to the creek, which leads to the river or the Gulf of Mexico where you and your children may swim.**

What is the problem?

Lawns typically edged around sidewalks, drive ways, roads, etc., can result in grass clippings being spread outside the lawn area. If these grass clippings are swept or blown onto the road, driveway or storm drain, they can cause storm water pollution and eventually pollute our drinking water sources or water bodies used for recreation.

To report a clogged ditch or drain or to report illegal dumping, go to:

[www.cityofalabaster.com/388/
Stormwater-Management](http://www.cityofalabaster.com/388/Stormwater-Management)

Why should grass clippings, yard wastes and other wastes not be discharged into storm drains?

It is **illegal** to dump, sweep, rake or blow grass clippings and yard waste into drains, ditches and streets.

When it rains, the waste is washed into the storm drainage system and gets **clogged**.

When storm drains, ditches and streets become clogged due to excessive sediment/debris build up, **flooding occurs**.

Expensive equipment and labor are required to find and remove clogs in drainage systems and ditches.

Yard and household wastes **suffocate plants** growing on the creek banks and in ditches.

Exposed dirt or barren ground next to storm inlets, drains, or ditches are potentially damaging during rainstorms as it **erodes** the dirt/soil, washing them into the storm drainage system.

Dirt can clog spawning areas for fish and cover the water channel floor resulting in fish food being covered and the fish **unable to sustain life**.

Also, if grass clippings reach creeks, streams, rivers and bays, they contribute to **sediment buildup**.

Sediment buildup in creeks and streams will cause **environmental pollution**.

How can I help?

If you see a clogged ditch or drain or **illegal dumping**, please report it.

Don't blow, sweep or dump grass clippings and yard waste into streets, ditches, drive ways, or storm drains. Blow or sweep **away** from roads, ditches, gutters, and areas of run off.

Bag grass clippings and leaves for landfill disposal or **use other proper disposal methods** like composting.

Use composted material to reduce the use and cost of fertilizers.

Don't overuse pesticides, herbicides, or fertilizers on your lawn. **Don't** apply these treatments if the forecast calls for rain.

Don't hose sand or soil into the gutter.

Avoid mulch cutting on steep slopes – this will cause run-off into storm drainage systems.

Seed and mulch exposed soil.

If you see your neighbor or someone in your neighborhood blowing grass clippings onto the street or storm drains, tell them it causes storm water pollution.

Ensure your lawn maintenance contractor operates in accordance with City Code.

Get involved! Share the information in this brochure with friends, family and neighbors.

Don't over water your lawn. Try to minimize run-off into the storm drain.

Pick up pet waste and dispose of it in a toilet or garbage bin.

How can I help prevent discharges into storm drains?

- Use pesticides, herbicides and fertilizers **sparingly** and away from storm drains and ditches.
- **Do not** pour household cleaners and paints on driveways or into storm drains.
- **Do not** blow leaves or dump lawn/yard trimmings into storm drains. Compost them away from storm drains or streams.
- **Pick up** litter. Adopt a storm drain, ditch, or section of road to keep clean.
- **Do not** store or expose materials to rain that could “wash-off” into storm drains or streets.
- **Check** if sewer laterals from rest rooms, kitchen and laundry room are connected to storm drains. If so, reconnect to sanitary sewer.
- **Check** to see if septic tank flow is entering storm drains. If so, correct the situation.
- **Never** pour oil or antifreeze down or near a storm drain, or onto the street. If you change your oil or antifreeze, put them in used containers, seal the containers, and take to the nearest collection site or center, such as the Metro Recycling Drop-off Center.



Within City limits, report any of the following:

- Witnessing someone drop litter
- Oil sheen in a body of water
- Leaves or grass clippings deposited in or near storm drains
- Sewage odor from a storm drain, inlet, or body of water
- Spills or dumping of oil, paint, household cleaners, antifreeze, pesticides, or fertilizers
- Discharge of chlorinated swimming pool water to a storm drain
- Sediment tracking from construction sites into streets
- Illegal dumping (at sites where regular garbage and trash is not picked up)
- Witnessing anything being disposed of into a storm drain

City of Alabaster
submit a report online

Reports can be made anonymously.

To report illegal dumping within City of Alabaster go to:

www.cityofalabaster.com/388/Stormwater-Management

Illicit Discharges



What is an Illicit Discharge?

Examples

Why should we care?

Exempted Non-Storm Water Discharges

Help Prevent Illicit Discharges

Reporting to 311



Storm Water Management
Educational Series

What is an Illicit Discharge?

An **Illicit Discharge** (Improper Disposal) is any kind of emission to a municipal separate storm sewer system (MS4) that is not entirely composed of storm water. The MS4 consists of storm drains, ditches, man-made channels, and municipal streets.

Eliminating illicit discharges into storm water can reduce pollution of our waterways.

What are some examples of Illicit Discharges?

- Litter
- Effluent from a failing septic system
- Sediment tracking from a construction site (into the street, storm drain, or body of water)
- Spilled chemicals (from improper oil disposal, roadway accidents, automobile maintenance, etc.) that find their way to a storm drain

Did you know?

- Storm drains collect rainwater from driveways, roads & yards and directly transport to streams. They **DO NOT** go to a treatment plant or get treated before discharge like sanitary sewer water.
- Anything you put in a storm drain ends up in a creek, river or body of water — where you swim and fish.
- One quart of oil can contaminate up to **2 million gallons** of drinking water.

Why should we care?

During and after rainstorms, pollutants on the surface are washed into our storm sewers. These storm sewers carry rainwater, along with pollutants, into streams and rivers. Such pollutants degrade our water quality and are harmful to the environment and to humans.

A 2012 estimate by the US Environmental Protection Agency showed that **35% of US waters are not even clean enough to support fishing or swimming** because of pollutants such as bacteria. In urban areas, untreated or partially treated sewage makes its way into rivers and streams through sewer overflows and leaks, dumping, illegal sewer connections and failing septic systems.

According to the Ocean Conservancy, **ocean trash ranks as one of the most serious pollution problems of our time.** Much more than an eyesore, trash in the water and on the shore affects the health of people, wildlife and economies. For example, trash in the water:

- injures swimmers and beachgoers;
- harms wildlife that eats it or get trapped in its mess;
- drives away tourists—and their wallets; and
- ensnares boat propellers, a costly navigation hazard.

Exempted Non-Storm Water Discharges

The City of Alabaster **does** allow the following discharges to flow into the MS4:

- Water Line Flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground water
- Uncontaminated ground water infiltration
- Uncontaminated pumped ground water
- Discharges from water sources
- Foundation and footing drains
- Air conditioning condensation
- Irrigation water
- Springs
- Water from crawl space pumps
- Lawn watering runoff
- Individual residential car washing and charitable car washes
- Flows from wetlands
- De-chlorinated swimming pool discharges
- Residual street wash water
- Discharges from firefighting activities
- Flows from riparian habitats and wetlands
- Non-storm water discharges which are in compliance with a separate NPDES permit

How can I help?

Do pick up after your pet. Scoop it up, bag it and dispose in your regular garbage or flush the waste down the toilet.

Do pick up litter from your property. Also, consider adopting a storm drain to keep clean or participating in a cleanup event.

Do not blow grass clippings, leaves, weeds, etc. onto streets and gutters or into storm drain inlets and ditches.

Do not change oil or fluids on a driveway or paved area sloping to the street or near a storm drain inlet or a ditch — take it to a service station or use drip pans and drop off at a recycle center or approved disposal handler.

Do not allow pesticides, herbicides and fertilizers to drain onto streets and gutters or into storm drain inlets and ditches — use sparingly; away from the drains; not before expected rainfall; and prevent sprinkler water from causing their runoff into drains.

How can I help?

Do not wash vehicles or equipment on a driveway sloping to the street or near a storm drain inlet or ditch — take it to a car wash or wash the vehicle on a vegetated area.

Do not dispose leftover paint, cleaners, solvents, or household hazardous wastes into storm drains — use completely or take it to a collection center.

Do not allow power wash water with chemicals/soaps/detergents to enter storm drains — collect and discharge to the sanitary sewer or over a vegetated area.

Do not dispose chlorinated or salt water from pools or spas into storm drains or ditches. Discharge to sanitary sewer.

REMEMBER, storm water is not treated—it goes straight to water bodies, which are where we swim & fish.

KNOW YOUR STORM WATER!



Storm Water and Watersheds

Storm Water Pollution

Storm Water Pollution Causes

How can I help?



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Storm Water and Watersheds

When it rains, water hits the ground or a surface and infiltrates into the ground or runs off the surface. In some cases, the water evaporates. Water that goes into the ground is typically known as groundwater. Water that runs off the ground or a surface is known as **storm water**.

Storm water runoff occurs when rain hits an impervious surface (roof, driveway, paved road, parking lot, concrete pad, clay, etc.). Typically, storm water flows from a ridge line (highest point that separates two areas) to a collection point/area downstream. The area where rain falls and is collected is known as a **watershed**.

Located within the City of Alabaster's limits are four (4) major watersheds - Buck Creek, Peavine Creek, Spring Creek and Beaverdam Creek.



SCAN ME

Storm Water Pollution

Stormwater runoff is the **#1 source of water pollution**.

Storm water runoff from impervious surfaces (roads, driveways, parking lots, roofs, etc.) is collected from streets and gutters into storm drain inlets, pipes and ditches. The collection of roads, curbs, gutters, inlets, pipes, ditches, channels, etc... is known as the Municipal Separate Storm Sewer System (MS4). In most cases, storm water collected by the MS4, flows **directly into our creeks, rivers, bays and oceans**.

Storm water collects, mixes and drains exposed material on the surface (litter, trash, dirt, metals, oil, pesticides, herbicides, fertilizers, paint, and other illicit discharges/improper disposals) and directly discharges to our creeks, rivers, and other water bodies.

Unlike sanitary sewer waste water (from sinks, showers, toilets, laundry, wash areas, etc...), **storm water is NOT treated** before entering our water bodies.

Storm water pollution could affect your watershed — **where you swim and fish**.

Storm Water Pollution Causes

Storm water pollution can be caused by several factors such as:

LITTER/TRASH

Cans, paper, plastic, cups, trash, cigarette butts, bottles, etc...

CHEMICALS

Pesticides, herbicides, fertilizers, oils, antifreeze, paint, etc...

MATERIAL

Leaves, grass clippings, sediment, pet waste, power wash, and vehicle wash effluent.

Storm water pollution is caused by simple day-to-day activities.

For example:

- Sweeping litter, leaves, trash, grass clippings, mulch, dirt, etc... onto streets or into storm drains
- Washing equipment, tools & vehicles on driveways, streets, or parking lots.
- Exposing stock-piles of waste, liquids, dirt, mulch, metals, and other runoff-type material to rain.
- Dumping paint, yard wastes, household chemicals, pet wastes, etc. into storm drains or ditches.

Gardening Gone Native

The weather in South Alabama is not meant for weak-hearted vegetation. Keep your gardens and lawns looking lustrous for longer by using the following plants, which are both low-maintenance and native to our hot, humid region.

Centipede Grass	Satsumas
Swamp Lilies	Okra
Smooth Azaleas	Peaches
Southern Magnolias	Blackberries
Honeysuckle	Tomatoes
American Holly	Pumpkins
Hardy Hibiscus	Sweet Potatoes
Crested Iris	Turnips
Helen's Flower	Onions
Pitcher Plants	Peas

For gardening calendars and planting guides, visit the Alabama Cooperative Extension System's website (www.aces.edu).



Alternatives to Pesticides

Many types of insects (such as lady beetles, lacewings, syrphid flies, parasitic mini-wasps, and spiders) are beneficial to your garden plants. These “good bugs” help decrease the need for insecticides, which could end up in waterways, by preying on insects that would cause harm to your garden. “Good bugs” can be attracted with plants from the aster, mint, mustard, and parsley plant families.

Additional information about pesticides, herbicides, and more can be found on the City of Alabaster's storm water website (www.cityofalabaster.com)

Rain Gardens

A rain garden acts as a filter, helping to remove pollutants from storm water and allowing it to seep into the groundwater table. These gardens detract from flooding and stream erosion, and they work best when positioned in a natural depression between a runoff source (like a downspout or a driveway) and where the runoff exits your yard.

Plants like dogwoods, wisteria, swamp sunflowers, and sword ferns are well suited to facilitate a rain garden.



LAWN MAINTENANCE AND GARDENING



Storm Water Management
Educational Series

Basic Maintenance Practices

The quality of your lawn can be significantly impacted by basic maintenance practices, like mowing and fertilizing.

Recommended Mowing Heights

Turfgrass	Mowing Height (in.)	Mowing Frequency (days)	Mower Type
Bahia	3 - 4	7 - 17	Rotary
Bermuda	1/2 - 1 1/2	3 - 5	Rotary or Reel*
Centipede	1 1/2 - 2	10 - 14	Rotary
St. Augustine	2 1/2 - 4	7 - 14	Rotary
Tall Fescue	2 - 3 1/2	7 - 14	Rotary
Zoysia	1 - 2	10 - 14	Rotary or Reel*

* Reel mowers provide a superior-quality cut.



Soil Testing

The key to successful fertilization is to have an annual plan. The basis of this plan should be the nutritional status of your soil, which can be determined by soil tests typically performed by your local plant nursery for approximately \$20 per sample. Samples should be collected from 2 - 3" down into the soil and can be easily stored and transported in a plastic gallon bag. Soil analyses test the pH of your soil, which is necessary to know when purchasing the correct type of fertilizer for your lawn. You should conduct a soil test every 2 - 3 years to ensure that proper nutrient levels are being maintained.

Fertilizing

Fertilizers contain large amounts of phosphorous and nitrogen, which can pollute storm water, groundwater, and runoff into lakes and streams if over applied.

Recommended Fertilization Schedule

Turfgrass	Desired Quality	Total Pounds of Nitrogen per 1,000 sq. ft. per year
Bahia	Low	2
	High	4
Common Bermuda	Low	2
	High	4
Hybrid Bermuda	Low	4
	High	6
Centipede	Low	1
	High	2
St. Augustine	Low	2
	High	4
Tall Fescue	Low	3
	High	5
Zoysia	Low	2
	High	4

When to Water

The most efficient way to water a lawn is to do so when signs of drought stress are apparent, and the best time to water is in the **morning** to avoid loss by evaporation.

The color of your lawn is a good indicator of drought stress. **If grass turns from green to bluish-grey or white in color, or if your steps leave lasting footprints,** apply about 1/2 to 1 inch of water. This will soak into the soil to a depth of 4 to 6 inches, depending on the type of soil.

Avoid watering to the point of runoff! If necessary, apply water in stages so that it will soak into the soil.

Thatch Control

Thatch is a layer of living and dead grass plant parts between the surface of the soil and the green vegetation of the turfgrass. Many problems can be caused for your lawn by excessive thatch (more than 1 inch).

Over fertilizing, overwatering, mowing too infrequently, or mowing too high can contribute to the accumulation of thatch.

If necessary, thatch can be removed with various kinds of mechanical equipment (like core aerifiers or vertical mowers) or by using a hand rake. The best time of year to dethatch a lawn is when the turfgrass is actively growing.



Mulch A Do about Nothing

Of the 243 million tons of municipal trash Americans generate in a year, only a third is recycled or composted.

You can have an impact on decreasing the volume of trash in our landfills and add a benefit to your yard at the same time.

- Turn leaves into mulch for your outdoor plants and shrubs.
- Use your leaves for composting.
- Remember, when disposing of yard waste, bag it or blow it away from the street. Don't put it down storm drains!

Additional information about fertilizers, lawn maintenance, composting, and more can be found on the City of Alabaster's storm water website (www.cityofalabaster.com).

Facts about pet waste!

Zoonotic Diseases are those passed from animal to human. Children and infants are the most vulnerable. Dog Feces are one of the most common carriers of Hookworms, Roundworms, Tapeworms, Whipworms, Parvo, and Salmonellosis.

It has been estimated that a single gram (the weight of a business card) of dog waste can contain 23 million fecal coliform bacteria, which are known to cause cramps, diarrhea, intestinal illness and serious kidney disorders in humans.

Urban and storm water pollution. The EPA and many state and local agencies of dog waste on waterways. The Environmental Protection Agency (EPA) estimates that two or three days worth of droppings from a population of about 100 dogs would contribute enough bacteria to temporarily close a bay, and all watershed areas within 20 miles of it, to swimming and shell fishing.

Pet waste does NOT make good fertilizer. It contains microorganisms from your pet's digestive system that can be passed along to plants. A person can become very ill by eating fruits or veggies "fertilized" with pet feces. Also, compost piles may not generate enough heat to kill diseases causing organisms.



Caution!

Around your home– If you leave pet waste to decay in your yard, be sure it does not become a problem. To prevent water pollution, clean up areas near wells, storm drains, ditches and waterways. Always remove waste from areas where children play. They are the most frequent victims of diseases from pet waste. Of course, the best protection for children and adults is washing hands with soap and water.

In your community– The City of Alabaster has an ordinance that governs pet waste cleanup. Section 10-38 of the municipal code requires that anyone who takes an animal off their property clean up any waste deposited from that animal immediately and to carry a bag, shovel or pooper scooper.

PET WASTE DISPOSAL



Adopting simple practices by cleaning up after pets can help reduce the impact of pet waste to our waterways.



Storm Water Management
Educational Series

What are the benefits of keeping parks and trails free of pet waste?

Picking up after your pets will benefit the waterways in several ways:

- Reduce the amount of bacteria found in local waterways.
- Keep parks and trails cleaner and healthier for residents.
- Keep shellfish beds and swimming beaches open
- Create a clean, sanitary play area for family activities.
- Ensure a healthier environment for us all
- Involve the community to reduce storm water pollution.

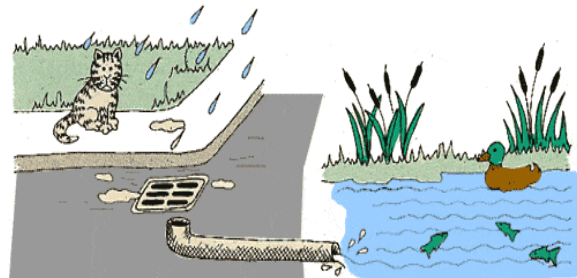
What is the relationship between storm drains and pet waste?

Pollutants from improperly disposed pet waste may be washed into the storm drain by rain or irrigation water. Unlike the sanitary sewer (from sinks and toilets), storm drains are a direct link to our creeks and rivers, carrying many pollutants– pet waste, pesticides and fertilizer, and oil– along with the untreated water.



Why is it important to dispose of pet waste properly?

- Pet waste left in parks is unsanitary and disagreeable for park users. It contains pathogenic bacteria and other parasites. When pet waste is washed into our creeks and rivers it decays in the water, depleting oxygen levels and releasing ammonia, which can be harmful to fish and other aquatic life.
- Pet waste contains nutrients that foster weed and algae growth.
- There is a significant problem with fecal bacteria contamination found in our waterways, and pet waste left on the ground is one of the leading sources of this pollutant.



Cat Litter

Cat litter dumped outside can also be washed into surrounding bodies of water increasing the bacteria in the waterway. Cat litter should also not be dumped into the sanitary sewer system. Scoop the litter into double lined bags, tie securely and dispose of in your garbage can.

Dog Parks

Several dog parks are located within the City of Alabaster. These parks are equipped with pet waste stations containing clean-up bags. When using the dog parks, or any City parks, please clean-up after your pet and dispose of the bags properly in the provided trash cans.

What should I do to help prevent pet waste into the storm water?

Follow these 3 simple steps to protect your health and prevent water pollution when out for a walk and at home:

- Pick it up
- Bag it
- Throw it in the trash

Pet waste that enters our storm drains ends up in our lakes, streams, rivers, and groundwater.

Tips for Bagging It

- Keep a supply of bags near your dog leash.
- Reuse old bags: plastic newspaper bags, grocery store bags, or bread bags.
- Purchase special bags where pet supplies are sold
- Tie bags on the leash if you don't have a pocket or pack.
- Double bag waste before throwing into your outside garbage can.

How should I store pesticides, herbicides and fertilizers?

- Keep all pesticides, herbicides and fertilizers in their original containers.
- Store all pesticides, herbicides and fertilizers in a dry, cool, well ventilated area out of the sun. Prevent exposure to children and animals.
- **DO NOT** allow the pesticides, herbicides or fertilizers to freeze or get too hot.
- Store pesticides and herbicides separately from fertilizers, seed, and food.
- Check storage facility and containers for any leaks or spills.
- Date the containers. Use the oldest ones first.



How should I dispose of the containers?

- Make sure that you have used all the contents of the container.
- The Alabama Department of Environmental Management recommends using a triple-rinse procedure: Fill the container 1/4 full with water or oil (whichever is the appropriate diluent). Swirl for 30 seconds and pour the rinse solution into a sprayer. Repeat two times. Spray the rinse water over a target plant or area.
- **DO NOT** spray rinse solution on driveways, roads, and other areas where it can enter storm drains.
- Wrap the container in newspaper.
- If this process is used properly, then it is safe to dispose the container in your regular garbage.
- If you prefer to recycle the container, contact the Alabama Department of Agriculture and Industries for Information on the Pesticide Container Recycling Program.
- For unwanted, unused pesticides, herbicides, or fertilizers, dispose at the City/County Household Hazardous Waste Day.

Resources: Alabama Cooperative System and Alabama Department of Environmental Management



Pesticides, Herbicides And Fertilizers

Usage, Storage, & Disposal



Storm Water Management
Educational Series

What are pesticides, herbicides, and fertilizers?

- A **pesticide** is a substance that kills bugs and animals.
- An **herbicide** is a substance that kills weeds and plants.
- A **fertilizer** is a substance that is used to enrich soils with nutrients.

How does home use contribute to the problem?

- Pesticides and fertilizers in residential areas have the highest loading factor.
- Approximately **10%** of fertilizers used in residential areas end up in storm water.
- Home use accounts for roughly **20%** of pesticides.
- Improper landscaping and maintenance can significantly contribute to non-point source pollution.
- In coastal areas, the high ground water table adds to the problem.
- **50-80%** of all households use some form of fertilizer for lawn and garden care.
- Homeowners unknowingly rinse containers on their driveways, streets, inlets, etc. allowing polluted water to runoff into storm drains.

Safer Alternatives for Bug & Weed Warfare

The Alabama Cooperative System encourages an integrated pest-management approach consisting of the following tactics:

- Remove infected plant debris to decrease overwintering and pest resurgence.
- Identify the pest before reacting.
- Plant pest-resistant or well-adapted plant varieties, such as native plants.
- Rely on and conserve “good bugs,” such as lady beetles, lacewings, syrphid flies, parasitic mini-wasps, and spiders. They help decrease the need for insecticides that could end up in waterways.
- Attract “good bugs” with plants from the aster, mint, mustard, and parsley plant families.
- Use compost or mulch for fertilizer instead of manufactured fertilizers. They allow grass to grow slower and tougher, requiring much less care.
- Recycle grass clippings. They save money, reduce waste and are equivalent to almost three applications of fertilizer a year, without unhealthy chemicals or their effects.



Using Pesticides, Herbicides, and Fertilizers More Safely

- If pesticides/herbicides are needed, use the least toxic products first. Read product labels carefully and follow instructions on proper use, storage, and disposal.
- When using pesticides/herbicides, avoid frequent use/over-application, spills, use when weather conditions favor rain, or use uphill from or adjacent to drains, ditches, inlets, storm drain system or bodies of water.
- If you choose to use a chemical fertilizer, try finding a slow-release one with low phosphorus content.
- Have your soil tested every 2-3 years to determine the right amount and type of fertilizer that you need. Test kits are available from the Alabama Cooperative Extension System (www.aces.edu).
- Instead of using one large application, use several small applications. This way, the plants get their nutrients, but excess fertilizer is not applied.
- Spot apply herbicides to weeds to prevent excess build up and runoff.
- If possible, use a licensed lawn care professional or get trained yourself.

Why should we care?

- Pesticides, herbicides and fertilizers contain materials that are toxic to people, plants and fish. When it rains, the materials can runoff into storm drains, ditches and waterways.
- Fertilizers contain large amounts of phosphorous and nitrogen, which are key nutrients for aquatic plants. They may come in contact with storm water and runoff into lakes and streams. If this occurs, aquatic plants will be saturated with nutrients causing them to overgrow and smother other aquatic life. Over application in coastal areas can contaminate storm water and ground water.

Paint and the Environment

The improper disposal of paints and their wastewater into a storm water drain or sewer can have serious and harmful effects on the environment.

Latex/Water-Based Paints

- May pollute natural waterways
- May decrease water clarity, which reduces photosynthesis in plants.
- May reduce oxygen levels in the water
- May threaten the survival of fish and other aquatic organisms

Oil/Solvent-Based Paints

- May deprive aquatic organisms of oxygen
- May cause tumors to form in animals such as fish
- May cause sediment contamination.
- May cause poisoning throughout the food chain which can eventually affect humans

Disposal Alternatives

- Consider giving the leftover paint to a friend, local church, housing rehabilitation organization or a housing program.
- Consider storing leftover paint for touchups. When properly stored, paint can last for years: cover the opening of the can with plastic wrap; make sure the lid fits securely so the paint doesn't leak; and store the paint can upside down. The paint creates a tight seal around the lid, keeping the paint fresh until it's needed again. To save space, you may transfer the paint to a smaller, plastic, airtight container. Label the container with the color and the room where the paint was used.
- Brighten up a piece of old furniture, a closet door, or even the garage.

Remember These 5 Simple Steps

1. Buy the correct amount of paint for the project.
2. Store paint to keep it fresh.
3. Use up leftover paint.
4. Reuse or recycle.
5. Dispose of paint properly.

Did you know?

Excess paint is one of the **most common** household hazardous wastes. Figuring out how much paint you will need before starting a job will save you time, money, and prevent unnecessary waste.

Wall Paint Estimator:

- Add together the length of each wall. Multiply the sum by the wall height.
- Subtract 20 for each door and 15 for each window.
- Divide total by 350 to find how many gallons to buy.

Ceiling Paint Estimator:

- Multiply the length of the ceiling by its width.
- Divide total by 350 to see how many gallons to buy.



PROPER PAINT DISPOSAL METHODS



Storm Water Management
Educational Series

Proper Disposal of Oil/Solvent-Based Paints & Stains

- Transfer as much paint as possible from the rollers back into the paint containers at the end of the day or job.
- Spin brushes and roller sleeves into a drum for solvent wastes after cleaning them in a minimum amount of solvent;
- Place all solvent into this drum and keep a lid tightly secured to stop harmful substances from evaporating.
- Oil-based paint or paint that has the word "alkyd", flammable, or combustible on the label should be used up until none is left. This can be done by painting old boards or newspapers in a well-ventilated place. Then the painted wood and newspapers can go into regular garbage along with the empty can.
- Take unwanted, used solvent and oil/solvent-based paints and stains to the City/County Household Hazardous Waste Collection Day event.



Proper Disposal of Latex/Water-Based Paints

- Place paint from the rollers, trays, and brushes back into containers at the end of the day or job.
- Transfer water used to clean one roller tray into the next tray to be cleaned, and so on.
- Spin brushes and roller sleeves into a waste paint drum before you wash them in a sink connected to sanitary sewer; Let the waste paint dry and dispose of it as solid waste.
- Collect and place all wastewater from equipment cleaning into larger drums and allow the solids to settle. For faster drying, add Redi-Mix Concrete or a package of Waste Paint Hardener. Dispose of solid waste by sealing it and placing it for disposal in a garbage bin.

Improper Disposal of Any Paint

- **Never** dispose of paint or brush/tool cleaning wastewater into a storm water drain, inlet, or drainage network.
- **Never** dispose of paint or brush/tool cleaning wastewater in any place from which the wastes may enter or pollute a natural water body (i.e. a creek, stream, ditch, channel, pond, lagoon, lake, river or ocean).

Proper Reuse and Disposal of Paint Thinners & Solvents

- Put used brush cleaners in closed container and allow paint particles to settle.
- Pour off clear liquid into clean, empty container for reuse. Store in a safe place.
- Add an absorbent material to the remaining residue (such as cat litter, shredded paper, or sawdust).
- Let residue dry completely before disposing of it in your regular garbage.

Recycling Paint and Aerosol Containers

Paint and aerosol containers can be recycled at a local scrap-metal center or the Metro Recycling Drop-off Center.

- Paint containers must be empty and dry in order to recycle. A thin layer of dried paint on the sides and bottom of the can is usually acceptable. Lids may be recycled, as well, but must be taken off the can.
- **Empty** aerosol cans may be recycled. Do not puncture, crush, or incinerate the can. You do not have to remove the nozzle of the spray cans, but do remove the aerosol caps, which are generally made of plastic.

Septic Tank Maintenance

Septic tanks hold water that carries harmful bacteria and microorganisms that can come into contact and pollute storm water, groundwater, creeks, rivers, lakes, and streams.

- Inspect/clean your septic tank regularly to avoid overflows.
- Do not park or drive vehicles on any part of your septic system.
- In order to avoid damage from roots, do not plant trees or shrubs over or near your septic system.
- Do not allow wastewater to flow into storm drains, ditches, streets, etc...
- Flush only human and animal waste, toilet paper and wastewater.
- Non-biodegradable items such as diapers, condoms, sanitary napkins, baby wipes, cigarette butts, or cat litter should not be flushed.

Storm Drains vs. Sanitary Sewers

Storm drains are intended to collect and transport runoff from rainfall. Storm drain systems do not remove pollutants from water before discharging it into creeks, streams, or rivers. The storm drainage system includes all storm drains, roadside gutter pans and ditches, drainage channels and swales, creeks and streams.

Sanitary Sewers collect wastewater from indoor plumbing such as toilets, sinks, mop sinks, and floor drains and take it to a sewage treatment facility. The treatment facility removes many harmful pollutants from wastewater before discharging it to the river.

REMEMBER, storm water is not treated and goes straight to a body of water — where we swim & fish!



Storm Water Pollution Prevention



Lawn & Garden Maintenance

Proper Disposal of Litter

Chemicals & Hazardous Waste

Pet Waste

Vehicle Washing, Repair & Maintenance

Swimming Pool Care

Septic Tank Maintenance

Storm Drains vs. Sanitary Sewers



Storm Water Management
Educational Series

Lawn & Garden Maintenance

- Use fertilizers, herbicides and pesticides sparingly.
- Don't use fertilizers, herbicides or pesticides before a rainstorm.
- Compost or recycle yard waste, such as leaves and grass clippings.
- Cover piles of soil, sand and mulch to prevent them from washing into storm drains, streets, or driveways.
- Sweep up debris rather than hosing down outside areas.
- Keep trash and litter, oils, leaves, and pollutants off streets, driveways and storm drains.
- Plant grass or trees in areas where soil is exposed, or cover with erosion control netting to prevent erosion.

Proper Disposal of Litter

- Trash should be discarded in a water tight trash can or dumpster - do not stockpile any waste materials.
- Carry a bag in your car to collect trash.
- Separate recyclable materials such as metals, glass, plastics, newspapers and magazines, in a sealed bin or container until it is ready for pickup or disposal at an approved location.
- Cigarette butts are litter. Use an ashtray for cigarette butts and ashes, and properly dispose in trash can as needed - not on the street.
- Do not litter or throw trash on streets or into storm drains - you could be fined.

Chemicals & Hazardous Waste

- Use hazardous materials, such as paints, solvents, and cleaners in the smallest amounts possible.
- Properly store chemicals and hazardous wastes in their original containers.
- Dispose of chemicals and hazardous wastes, including batteries, paints and thinners and household cleaners according to the directions printed on the label.
- Do not pour into storm drains.
- Clean up spills immediately using paper towels or other dry absorbent materials.

Pet Waste

- Clean up pet waste when you are walking your pet. Pet waste should be flushed down a toilet or bagged and disposed of in regular garbage.
- Properly dispose of pet waste at parks-use litter bags and dispose in marked containers. Make sure the lid is closed to prevent rain water contact.
- Do not flush or bury cat litter. It should be double-bagged and disposed of in regular garbage.
- Do not dispose of pet waste onto streets, driveways, sidewalks, curbs or gutters.
- Do not dispose pet waste into inlets, catch basins, ditches, storm drains, channels or any body of water.

Vehicle Washing, Repair, & Maintenance

- It's best to wash your car at a commercial car wash. When washing at home, use as little detergent as possible and wash your car on grass, dirt, or gravel to prevent any wash water from flowing into the storm drain, inlet, ditch, street, etc...
- Always check cars, boats, motorcycles, and other machinery and equipment for leaks and spills.
- Clean up spills with absorbent materials such as cat litter or sand. Sweep up all material when liquid is absorbed.
- Place drip pans under vehicles to catch leaking fluids.
- Do not dump oil or other automotive fluids into inlets, ditches, catch basins, storm drains, channels, etc... etc. Recycle or properly dispose them.

Swimming Pool Care

- Drain your pool into the sanitary sewer and not into storm drains.
- Only drain your pool when the test kit does not detect chlorine. De-chlorinate naturally allowing the water to sit for 5-10 days without adding chlorine or use a chemical additive to de-chlorinate pool water.
- Store chemicals in a covered area to prevent spills - use dry clean up methods if there is a spill.
- The City of Alabaster prohibits the discharge of chlorinated or salt water from pools or spas to a storm drain, street, or ditch.

Water Quality Impacts

Storm water ponds and wetlands are designed and constructed to contain and/or filter pollutants that are flushed from our roads and landscapes. These pollutants can include sediment, metals, and nutrients. Without proper maintenance of storm water ponds, the polluted runoff can lead to degraded conditions such as low dissolved oxygen, algal blooms, unsightly conditions, and odors. Neglected storm water ponds may also degrade the downgradient creek or river to which it flows.

Health and Safety Issues

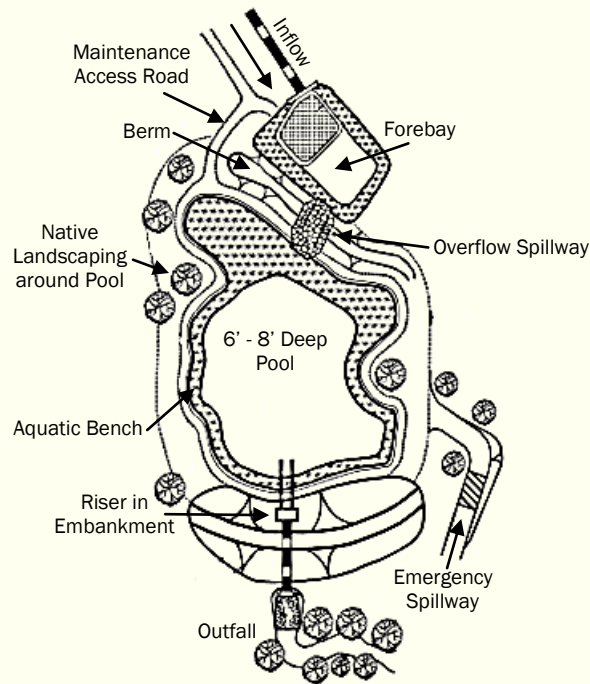
Waterfowl: Geese and mallards may become undesirable year-round residents of a pond if structural complexity is not included in the pond design. Water quality in permanent pools often becomes degraded due to increased fecal coliform counts and nutrients from goose and duck droppings.

Mosquitos: The proliferation of mosquitoes is usually an early indication that there is a maintenance problem. A few inches of standing water, such as that found in dry pond depressions, voids in riprap linings, or other inconspicuous places, can become mosquito-breeding areas.

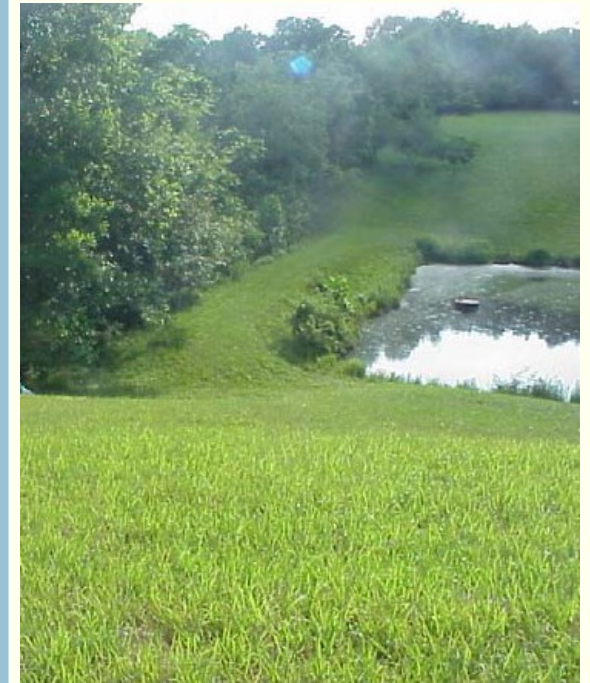


Design Objective and Significance to Water Quality

- Design staff should review preliminary designs with facility owner, City Engineering, and parties responsible for long-term operation and maintenance.
- Consider designing ponds with sediment forebays, pond drains, access for sediment removal, and a designated onsite disposal area.
- Properly designed storm water ponds protect our lakes & streams by holding runoff contaminants such as sediment and phosphorus.



STORM WATER POND MAINTENANCE



Storm Water Management
Educational Series

Common Maintenance Issues

- Sediment accumulates reducing the storage volume,
- Debris blocks the outlet structure,
- Pipes or the riser are damaged,
- Invasive plants take over and out-compete the planted vegetation,
- Slope stabilizing vegetation is lost, or
- The structural integrity of the embankment, weir, or riser is compromised.

Typical Maintenance Schedule

Maintenance Activity	Typical Frequency
Mowing - minimum Spring/Fall/Summer	Monthly or Quarterly
Cleaning/removing litter and debris after major storm event (> 2")	Annual or as needed
Harvesting of vegetation when excessive vegetation is present (10% reduction in the original open water surface area occurs)	
Repairing embankment & side slopes	
Repairing control structures	
Removing accumulated sediment from forebays or sediment storage areas when 10% of the original volume has been lost	Annually
Removing accumulated sediment if either 10% of the original volume has been lost or if sediment depth is 6" or greater.	Annually

Undesirable Plants

Examples of plants to control in your stormwater pond:



purple loosestrife & cattails



multiflora rose



porcelain berry



kudzu

If a non-native or invasive plant community has been established, conduct removal with care or during a dormant season to discourage seed distribution.

Inspections

Property owners should reach an agreement with the property management/landscaping contractor to conduct frequent inspection and maintenance items such as mowing, checking for clogs, and debris removal.

Inspection sheets should be created to record the conditions of all practices, particularly those that need frequent maintenance.

Skill Level	Description	
0	No special skills or prior experience required, but some basic training via manual, video, or other materials is necessary. Consider assigning an HOA member or property manager to perform these tasks.	
1	Inspector, maintenance crew member, or citizen with prior experience with ponds/wetlands.	
2	Qualified Credentialed Inspector or Qualified Credentialed Professional	
Inspection Activity	Inspection Skill Level	Frequency
Inspect low flow orifices and other pipe for clogging	0	Monthly - Quarterly; After Major Storms (>1")
Check the permanent pool or dry pond area for floating debris & undesirable vegetation	0	
Investigate embankment & side slopes for erosion	0	
Look for broken signs, locks, and other dangerous items	0	
Inspect area for possible mosquito production	1	Frequently in hot/warm season
Identify invasive plants	1	Semi-Annual - Annual
Ensure mechanical components are functional	1	
Inspect all pipes	2	Annual
Monitor sediment deposition in facility and forebay	2	
Inspect riser, barrel, and embankment for damage	2	

Shopping List

Common ingredients used for safer alternatives:

- Baking soda
- Biodegradable liquid soap
- Borax
- Salt
- White vinegar

Safe Alternatives to HHW

- **Air Fresheners**
Set vinegar or a cotton ball soaked in vanilla extract out in open dish.
Use an open box of baking soda in the refrigerator.
- **All-Purpose Cleaner**
1 quart warm water
1 tsp liquid soap
1 tsp borax
1/4 cup undiluted white vinegar
Mix ingredients and store in a spray bottle.
Use for cleaning countertops, floors, walls, carpets, and upholstery.
- **Ant Control**
Use cream of tartar.
- **Copper Cleaner**
Use vinegar with salt and rub.
- **Disinfectants**
Dilute bleach: 1/4 cup to 1-quart water.
- **Drain Openers**
Pour baking soda and vinegar down drain, followed by boiling water.
Use plunger or metal snake to discharge.
- **Fighting Silverfish**
Make traps with mixture of 1 part molasses to 2 parts vinegar.
Place near cracks/holes where pests live.
Repel silverfish by applying mixture of borax and sugar/honey to baseboards and cupboards.

- **Flea Repellant**
Use lavender oil, fennel, rosemary, red cedar shavings, sassafras, eucalyptus or pennyroyal leaves as flea repellent under and around the pet's bed or sleeping area.
- **Floor/Furniture Polish**
Use soap and water with a soft cloth.
Use hard wax melted into mineral oil.
- **Glass Cleaners**
Use 8 parts of water mixed with 1 part of vinegar.
- **Mothballs**
Place cedar chips around clothes.
- **Oven Cleaners**
Use baking soda to scrub.
Sprinkle salt when warm and scrub.
- **Paints**
Use latex or water-based paints that do not require thinners, if possible.
- **Rat Poison**
Use mechanical-snap or glue traps.
- **Roach Spray**
Use boric acid with sugar.
- **Rug & Upholstery Cleaners**
Use soap based non-aerosol rug shampoos.
Sprinkle cornstarch on rug.
- **Rubber Cement**
Use Elmer's-type white glue or yellow carpenter's glues for wood, china, paper, and other porous materials.
- **Snail/Slug Bait**
Pour beer in a shallow pan and place in infested area.
- **Toilet Bowl Cleaners**
Use baking soda, borax, or bleach.
Use a pumice stone for hard water spots.

The "Dos and Don'ts" of Household Hazardous Waste (HHW)



Storm Water Management
Educational Series

What is Household Hazardous Waste?

Hazardous materials and their waste are not only found in truck tanks, factories, and dumps—they can also often be found in the cabinet right under your kitchen sink.

The average home contains between three and ten gallons of materials that are classified as hazardous. Some examples of household hazardous waste (HHW) are listed below.

- Aerosol products
- Batteries
- Bug spray/insect killer
- Charcoal lighter fluid
- Degreasers
- Fertilizers
- Flea control products
- Fuels/gasoline
- Furniture stripper
- Glue with solvents
- Mothballs
- Nail polish/remover
- Oil/solvent-based paints/stains
- Oven cleaner
- Paint thinner
- Personal hygiene products
- Pool chemicals
- Roach/ant killer
- Rodent bait
- Rust/spot removers
- Thermometers (mercury)
- Wood preservatives

When disposing of HHW...

- **Don't** put them in your household garbage/trash. Doing so could:
 - Hurt the garbage hauler.
 - Damage the garbage/trash truck.
 - Seep into our groundwater or into the Bay from the landfill.
- **Don't** dump them down storm drains or into creeks.
 - Storm drains send water directly to our creeks, rivers, or Bay without treatment.
 - Toxics poison the fish and can end up in our drinking water supply.
- **Don't** pour them down your sink or toilet.
 - A chemical reaction could cause an explosion in the underground pipes.
 - Chemicals may pass through the treatment plant untreated and on into the Bay.
- **Don't** pour them on the ground.

Risks of HHW

Some products give off fumes that can leave you feeling dizzy or lightheaded. Some of these products are also **TOXIC, FLAMMABLE** or **CORROSIVE**. Always keep your HHW away from children and pets.



Cleaning products and other HHWs should never be mixed; mixing products could create a deadly chemical reaction.



HHW also poses a risk to our water supply. Pouring chemicals down the drain or toilet, onto the ground, or into storm drains and septic tanks creates a dangerous environmental problem.



DO:

- Use up all of the product.
- Give useable, leftover products to friends or neighbors, or donate to community groups.
- Take unwanted products and potentially dangerous waste to a HHW disposal program.

Recycling Your HHW

Many HHW products are reusable/recyclable.

- **Paint Cans**
Must be empty and may only contain a thin layer of paint on the sides and bottom
Accepted at Metro Recycling Drop-off Center
- **Batteries**
General purpose household batteries are accepted at several recycling facilities in Birmingham. Car batteries are accepted at most auto parts stores and maintenance centers. Many other kinds of batteries are accepted at Radio Shack, Best Buy, Lowes, Home Depot, Sears, Staples, Batteries Plus and Battery Source.

HHW Collection Day

The City of Alabaster conducts a Clean Sweep Event every year to gather HHW.





Appendix C – University Staff Training



Illicit Discharge Detection and Elimination (IDDE)

For our purposes, an illicit discharge is any runoff from the university that is not composed entirely of stormwater, unless authorized by regulation.

What to Look for:

- Draining water during dry periods. If it hasn't been raining then it shouldn't be draining.
- Runoff with unusual color (green, brown, orange, gray, yellow, red)
- Runoff with unusual odor (sewage, sour/rancid, sulfur, petroleum/fuel)
- Turbidity (cloudiness)
- Floatables (sewage/toilet paper, suds, oil sheen)

Illicit discharges may enter the storm sewer system through either direct connections such as wastewater piping, either mistakenly or deliberately connected to the storm drains. It may also enter through indirect connections, such as infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, or paint or used oil dumped directly into a drain.

The result is untreated discharges that contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria to receiving waterbodies. Pollutant levels from these illicit discharges have been shown in EPA studies to be high enough to significantly degrade receiving water quality and threaten aquatic life, wildlife, and human health.

Potential Sources:

- Sanitary wastewater
- Paint and chemical leaks
- Leaks, spills, improper disposal from campus activities
- Improper oil disposal
- Improper disposal of auto and household toxics
- Cafeteria related wastewaters
- Laundry wastewaters
- Car wash wastewaters

What to do:

1. Be on the lookout for suspicious water draining at inappropriate times and places.
 2. Pay particular attention around ditches, creeks, inlets, and pipe outlets.
 3. If you notice potential illicit discharges, tell your supervisor.
 4. Supervisors, notify Donald Dotson immediately for follow up investigation.
 5. Mr. Donald Dotson will need the location, description, and date/time of discovery.
-



Alabama State University is a campus that values our environment, including our local bodies of water. The University is going to continue to take steps towards ensuring that our facilities and surrounding environment are upheld for the future generations.

Mr. Donald Dotson
Vice President of Facilities and Operations
Alabama State University
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Montgomery, AL 36104
334-229-6965 office
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ddotson@alasu.edu



General Stormwater Awareness

In order to fully understand how to manage stormwater to the greatest extent, it is important to build a solid foundation for understanding how it functions in the environment. Starting at square one, stormwater originates from droplets of water that have condensed from water vapor. The droplets eventually condense to a certain size that become too heavy to stay suspended in the atmosphere. The gravitational force of the earth pulls the water droplets out of the sky, which we all commonly know as rain. As the rainwater lands on the surface of the earth it becomes surface water. As gravity continues to work, surface water finds its way downhill until it can either infiltrate into the ground or collect in larger bodies of water where it will eventually evaporate back into the atmosphere.

Due to the natural population growth occurring in the United States, the rapid conversion of land to urban settings has had a major impact on the state of stormwater in the U.S. With the increase of urban areas that are not able to drain stormwater as efficiently as natural land, the increase in stormwater flows puts a higher volume of water and more pollutants into our lakes, rivers, and estuaries. As runoff increases, so does the occurrence of erosion and sediment deposition in our waterways, the likelihood of creating pollutant and litter laden drainageways, as well as the risk of flooding in our communities. These changes have degraded water quality and habitat in almost every body of water in the U.S. Without proactive measures, the state of stormwater in the United States will only degrade further.

In 1948, the Federal Water Pollution Control Act was enacted and would end up being the basis for regulating discharges of pollutants in the waters of the United States. In 1972, the Clean Water Act reorganized and significantly expanded the original act to require permits for discharges as well as setting standards for water quality. Actions such as this as well as proactive thinking by all of us on staff here at Alabama State University will effectively help improve the overall quality of our watersheds.

Alabama State University is a campus that values our environment, including our local bodies of water. The University is going to continue to take steps towards ensuring that our facilities and surrounding environment are upheld for the future generations.

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Sign-in Sheets

Alabama State University

2024 Storm Water Management Awareness

Administrative Training

Department: Accounts Payable Date: 3/19/24

Print Name

Signature

Angelika White

Angelika White

JEFFERY DAVIS

[Signature]

[Blank lines for Print Name]

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Alabama State University

2024 Storm Water Management Awareness

Administrative Training

Department: Purchasing Date: 04/01/2024

Print Name

Stanishia Thomas

Ernany Johnson

Shungulla Moore

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Alabama State University

2024 Storm Water Management Awareness

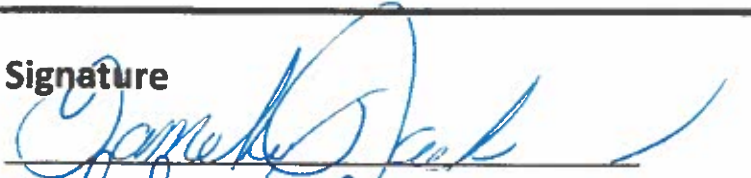


Administrative Training

Department: Vice President Business & Finance Date: _____

Print Name

Tomakee Jackson
MarShette R. Baldwin
Alondrea Pritchett

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Alabama State University

2024 Storm Water Management Awareness

Administrative Training

Department: Grants and Contracts Accounting Date: 3/26/2024

Print Name

Varee Pierce

Jasmine James

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Jasmine James

Annette Thomas

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Administrative Training

Department: Payroll

Date: 03/25/24

Print Name

Shira Russell

SHARON HOOD

Kimberly Black

Signature

Shira Russell

Sharon Hood

K Black

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Administrative Training

Department: **COHS-Occupational Therapy** Date: 3/26/24

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Leticia Oshorn
Allan DUNLAP
Shaughnessy Park
Lowet + Lowery
Kenya Crews

Leticia Oshorn
Allan Dunlap
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2024 Storm Water Management Awareness Administrative Training







Department: COHS-Physical Therapy

Date: 3/26/24

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Jared Rehm
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Sabrina Pennington
Sy Banks
Veronica Jackson

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2024 Storm Water Management Awareness Administrative Training

Department: **COHS-Rehab Studies** Date: 3/26/24

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Angie Hall
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Administrative Training

Department: **COHS-Orthotics and Prosthetics** Date: 3/26/24

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Scott Breck
Tyler Harrison

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Z. R. P.
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COHS/ Dean's Office

Alabama State University

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Department: Health, Physical Education and Recreation Date: 3/25/2024

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Doris Pogue

Samuel Roberson

Barbara Williams

Charlie Gibbons

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Administrative Training

Department: PSV-MPS

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Shauntae' R. Smith
Avionne Ruffin
Catrina Sword

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Shauntae' R. Smith
Avionne Ruffin
Catrina Sword

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Administrative Training

Department: CS TEM - Deans Date: 3/25/24

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Ashley Palomares
Amber Grace
Audrey N Matthews

Juanita Felder
Ashley Palomares
Amber Grace
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Department: Physical + Forensic Sciences Date: 3/25/24

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Sheree Finley

Robert L. Green

Whitney Coleman

Sapna Jain

Giana Biddle

Kristi Mitchell

ELIJAH NYMRO

Cleon Barnett

OSWALD TEKYI-MENSAH

James Patterson

Sheree Finley

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2024 Storm Water Management Awareness

Administrative Training

Department: Mathematics and Computer Science Date: 3-25-24

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<u>STEVE T. SHOALS</u>	<u>Steve T. Shoals</u>
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<u>Kennell Salery</u>	<u>Kennell Salery</u>
<u>Derek Simon</u>	<u>Derek Simon</u>
<u>Eze Nwaeze</u>	<u>Eze Nwaeze</u>
<u>Balaram Ghimire</u>	<u>Balaram Ghimire</u>
<u>Jing Zhou</u>	<u>Jing Zhou</u>
<u>Tim Wang</u>	<u>Tim Wang</u>
<u>CHUNHUA</u>	<u>Chun Feng</u>
<u>Raynetta Prevost-Williams</u>	<u>Raynetta Prevost-Williams</u>
<u>N. VANDER</u>	<u>N. Vander</u>
<u>Fidekemi Osage</u>	<u>Fidekemi Osage</u>
<u>Uma K. Kumar</u>	<u>Uma K. Kumar</u>
<u>Pranjana Sivaraman</u>	<u>Pranjana Sivaraman</u>
<u>Mark Uzochukwu</u>	<u>Mark Uzochukwu</u>

Alabama State University

2024 Storm Water Management Awareness

Administrative Training

Department: Institutional Effectiveness,
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Tanjula Petty

David Hammond

~~David Hammond~~

Patina Moss

Patina Moss

Juwana Henderson

Juwana Henderson

Veolanda Peoples

Veolanda Peoples

Shannon Burton

Shannon Burton

Bryn Bakovic

~~Bryn Bakovic~~

Journey Williams

Journey Williams

Lawrence Brown

~~Lawrence Brown~~

Brittany J. Collins

Brittany Collins

Latonya Kennedy

Latonya Kennedy

Geary Williams

Geary Williams

AMWARU A SIDDIQUI

Amwaru A Siddiqui

Raymond Green

Raymond Green

And Wheeler

And Wheeler

Alabama State University

2024 Storm Water Management Awareness

Administrative Training

Department: ASU GEAR UP Date: March 19, 2024

Print Name

Signature

Margaret Sanders

Margaret Sanders

Luther Crear

Luther Crear

Nakeyta Tucker

Nakeyta Tucker

Imma Sanders

Imma Sanders

Brittany Caloway

Brittany Caloway

Rachel Jones

Rachel Jones

Charday Gains

Charday Gains

Tyneka McCall

Tyneka McCall

Tamiya Reese

Tamiya Reese

Jia Ross

J. O. Ross

Alabama State University

2024 Storm Water Management Awareness

Administrative Training

Department: Operations & Event Management Date: March 18, 2024

Print Name

Signature

Crystal T. Moss

CMoss

Freddie Lawson

Freddie Lawson

Ashley Thompson

Ashley Thompson

Joy Banks-Talley

Joy Banks-Talley

George Harris

George Harris

Jeffrey Mitchell

Jeffrey Mitchell

Leonard Burke

Leonard Burke

Orion DeBore

Orion DeBore

Roderick Williams

Roderick Williams

Harold Samuel

Harold Samuel

Quawon Baldwin

Quawon Baldwin

Clarence Glass

Clarence Glass

Tony Leary

Tony Leary

Samantha Johnson

Samantha Johnson

Clinesha Wright

Clinesha Wright

Torie Floyd

Torie Floyd

Ashley Knight

Ashley Knight

BENNIE COOKS

BENNIE COOKS

Alabama State University

2024 Storm Water Management Awareness Administrative Training

Department: Office of Technology Services (OTS) Date: March 15, 2024

Print Name

Signature

Damian Clarke

Sonya Satterfield

Jacqueline DeLaine

Anthony Fleming

Quentin Ruffin

D'Andra Whiting

Carmen Ruise

Derrick Johnson

Ebenezer Aryitey

John Rooks

Kenneth Darrington

Lucus Banks

Rashad Moncrief

Tracy Williams

Jhaslyn Davis

Carol Cargle

~~Eyonne~~
Eyonne Jordan

Winston Thornton -FMLA

[Handwritten signatures in blue ink corresponding to the print names above]

Division of Facilities Management and Operations

Storm Water Management Division Meeting

Sign-In Sheet

March 25, 2024 8:30 a.m.

Print Name

Signature

Jesse Martin Jr



Curtis Bradberry



JaTawn Knight



William S. Taylor



LaShanda Oliver



Aundra Reynolds



ERROL HOSEA



Joe N. Taylor



JOHN P. DANIELS



Alexander



Vernachelle Brown



Joshua White



EUGENE HARRIS



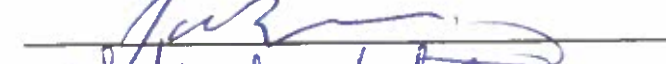
Gerrard WATTS



Joe Zeigler



Lakendra Mitchell



Division of Facilities Management and Operations

Storm Water Management Division Meeting

Sign-In Sheet

March 25, 2024 8:30 a.m.

Print Name
Sandra McCray
Kenneth Keith
Chris Bibb
Johnny Watkins
Lehman Tucker
Willie Feare
Orlando Martin
Richard E. Melan
Cruz Robinson
KEISE Jones
Trenton Jamison
Tobias Dunn
TROY NETTLE

Signature
Sandra McCray
Kenneth Keith
Chris Bibb
Johnny Watkins
Lehman Tucker
Willie Feare
Orlando Martin
Richard E. Melan
Cruz Robinson
KEISE Jones
Trenton Jamison
Tobias Dunn
TROY NETTLE

Division of Facilities Management and Operations

Storm Water Management Division Meeting

Sign-In Sheet

March 25, 2024 8:30 a.m.

Print Name

Signature

Chester Seaborn
Freddie Humphrey
Davian Martin
Demek Scott
Michael Bradford
Kellie Dill
Alfreda Abernathy
Willie J. Casby
Bnaira Williams

Chastin Jr
Freddie Humphrey
D. Martin
Demek Scott
Michael Bradford
Alfreda Abernathy
Willie J. Casby
Bnaira Williams

Division of Facilities Management and Operations
Storm Water Management Division Meeting
Sign-In Sheet

March 25, 2024 8:30 a.m.

Print Name

Signature

Derrick Smith

Dave Smith

Dave Lewis

Dave Lewis

Troy Melton

Troy Melton

Division of Facilities Management and Operations
Storm Water Management Division Meeting
Sign-In Sheet

March 25, 2024 8:30 a.m.

Print Name

Signature

Jessica Mills

Paula Humphrey

Paula Humphrey

Division of Facilities Management and Operations
Storm Water Management Division Meeting
Sign-In Sheet

March 25, 2024 8:30 a.m.

Print Name

CAROLYN HARRIS
YVETTE WASHINGTON

Signature

Carolyn Harris
Yvette Washington



Appendix D – Previous Construction Site Inspection

ADEM FIELD OPERATIONS DIVISION – NPDES CONSTRUCTION, AND NONCOAL MINING LESS THAN 5 ACRES STORMWATER INSPECTION REPORT AND BMP CERTIFICATION

RESPOND WITH "N/A" AS APPROPRIATE. FORMS WITH INCOMPLETE OR INCORRECT ANSWERS, OR MISSING SIGNATURES WILL BE RETURNED AND MAY RESULT IN APPROPRIATE COMPLIANCE ACTION BY THE DEPARTMENT. IF SPACE IS INSUFFICIENT, CONTINUE ON AN ATTACHED SHEET(S) AS NECESSARY. PLEASE TYPE OR PRINT IN INK.

Complete this form, attach additional information as necessary, and send report to the nearest ADEM office. Item I.

Registrant Name ALABAMA STATE UNIVERSITY		Facility/Site Name ASU EXPANSION	
NPDES ALR16EEUR	County MONTGOMERY	Facility Contact and Title KIPPY TATE, VICE PRESIDENT, BUILDING AND GROUNDS	
Facility Latitude & Longitude (decimal or deg,min,sec) N 32 21 41, W 86 18 41		Facility Street Address or Location Description 915 SOUTH JACKSON ST	
Township(s), Range(s), Section(s) T 16 N R 18 E SEC 18		City MONTGOMERY	State AL
Phone Number 334 229 4100	Fax Number 334 420 1500244 1512	E-Mail Address N/A	

Item II.

List name of current ultimate receiving water(s) (indicate if through MS4) and the number of disturbed acres which drain through each treatment system or BMP:

Receiving Water	Disturbed Acres	Receiving Water	Disturbed Acres
_ GENETTA DITCH	15		

Item III.

Any Discharge Sampling Data Attached. Any Instream Sampling Data Attached. Any Photographs attached.

X Based on this site evaluation which a QCI, QCP, or a qualified person under the direct supervision of a QCP conducted, discharge and/or instream sampling is not necessary to properly evaluate the effectiveness of BMP implementation to ensure compliance with this registration. I understand that it is the responsibility of the registrant to know and effectively evaluate the quality of the stormwater being discharged. Lack of knowledge regarding the requirements of ADEM Administrative Code Chapter 335-6-12, stormwater discharge or instream water quality, shall not constitute a valid defense with regard to deficiencies in BMP implementation and maintenance, or negative impacts to water quality.

Item IV.

INSPECTION RESULTS: (Describe current activities, deficiencies, proposed corrective action(s) and compliance schedule, etc.)

See Attached Report

“Based upon the inspection of (date & time) 1-24-11 2.00 PM by the QCP, QCI, or a qualified person (list: P E PILGREEN) under the direct supervision of the QCP identified below conducted, the QCI or QCP identified below certifies that effective structural and non-structural BMPs have been fully implemented and regularly maintained to the maximum extent practicable for the prevention and minimization of all sources of pollution in stormwater and authorized related process wastewater runoff, **except for those deficiencies noted above**, in accordance with the facility’s CBMPP, good sediment, erosion, and other pollution control practices, and the requirements of ADEM Administrative Code Chapter 335-6-12. I certify that discharges have been tested or evaluated for the presence of non-stormwater and non-authorized process wastewaters. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate 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 fines and imprisonment for knowing violations.”

Name & Designation of QCI or QCP P E PILGREEN, PE	Signature 	Date 1-25-11
Name & Title of Registrant Responsible Official	Signature	Date

**ALABAMA STATE UNIVERSITY
ADEM INSPECTION REPORT
1-24-11**

SITE 1 – SOFTBALL FIELD

No Work

SITE 2 – LIBRARY

CLEAN STREET

MAINTAIN SILT FENCE ON WEST END

SITE 3 – RESIDENTIAL DORMS

CLEAN STREETS

MAINTAIN INLET PROTECTION

SITE 4 – CARTER HILL RD

NO BMP'S INSTALLED

OTHER



DORM - CLEAN DEBRIS



DORMS - CLEAN STREET



DORMS - CLEAN STREET ↗





DORMS - MAINTAIN STRUCTURAL BMP'S ↗





LIBRARY - CLEAN SILT FENCE



CARTER HILL RD - INSTALL BMP'S



LIBRARY - CLEAN STREET



RESIDENTIAL - CLEAN STREET



Appendix E – Construction Site Inspection Form



MS4 CONSTRUCTION STORMWATER INSPECTION FORM

SECTION I. FACILITY INFORMATION

Facility Name:
Facility Type:
Facility Address:
Permittee Name:
Permit Number:
Owner/ Operator contact Information (name, address, phone, email):

SECTION II. INSPECTION SUMMARY

Inspection Date:	
Inspector Name and Title:	
Inspector Signature:	
Type of inspection (circle one): Monthly, Rainfall (depth - ____”), Complaint (details provided with comments)	
Operator onsite and aware of inspection results (Y/N, remarks):	
Facility ID Posted (Y/N)	Rain Gauge Onsite (Y/N)

Observations:

Provide a description of the stormwater BMP condition that may include, but not limited to, the quality of vegetation and soils, inlet and outlet channels and structures, embankments, slopes and safety benches, spillways, weirs, and other control structures; and sediment and debris accumulation in storage and forebay areas as well as in and around inlet and outlet structures.

Receiving Water	Discharge Point	BMP Condition (satisfactory, unsatisfactory, noncompliant)	Remarks



General Comments:
Items for Follow-up:

SECTION III. REPORT NOTES

Alabama State University (ASU) requires that all qualifying construction activity operators obtain appropriate NPDES permit coverage from ADEM. The University also requires operators to perform all required regulatory inspections. This report should not be confused with inspection documentation required by the Construction General Permit. This form serves as documentation of the University's enforcement of its expectations regarding construction stormwater management on campus property as a part of its MS4 obligations.

Attach photographic documentation of any issues and/or concerns.



Appendix F – Recycled Cooking Oil Collection Receipt



Universal Environmental Serv

Tel: 770-486-8916 Toll Free: 800

Alabama State University Montg

Customer Code: ALA136

Location Code: 1301

1301 West 5th Street

Montgomery AL 36104 (334)229-1614

Transaction ID: TX-2135-040124-0002

Date: 2024-04-01 07:29

UES - Montgomery, AL

EPA: ALR000032144

Transporter EPA ID: #GAR000020131

Service performed: Used oil

Component: Used Oil

Amount: 64.000 Gallon

Driver

Darnell Prince

Customer

Andrew Reynolds

Driver: Darnell Prince

PO Number: N/A

Halogen Checklist Used oil :

Halogen screen:

Pass

Chlor-D-Tect:

N/A

Notes:

N/A

Used oil quality?:

High (Re-refinable)



Appendix G – Stormwater Control Table

SWMPP MEASURES AND GOALS SUMMARY TABLE

✓	Minimum Control Measure	Practice/Goal Description	Actions	Goal Date/Frequency	Responsible
	1. Public Education and Public Involvement on Stormwater Impacts	1.1 Stormwater Management Program Plan (SWMPP)	review annually, update if necessary	5/31 Annually	Facilities and Operations Department
		1.2 SWMP Annual Report	create and submit to ADEM annually	5/31 Annually	Facilities and Operations Department
		1.3 ASU Stormwater Webpage	Review annually, update if necessary	3/31 Annually	Technology Services
		1.4 University Staff Training	Train staff annually	3/31 Annually	Facilities and Operations Department
		1.5 Storm Drain Marking	Maintain storm drain markings as needed	Ongoing	Facilities and Operations Department
		1.6 Social Media Postings	develop consistent message during the 2022/2023 academic year, implement during the 2023/2024 academic year	March 31, 2024	Technology Services
		1.7 Stormwater Awareness Surveys	Implement during the 2022/2023 academic year	March 31, 2024	Technology Services
	2. Illicit Discharge Detection and Elimination (IDDE) Program	2.1 Outfall Inventory and Mapping	update 100% of outfall mapping once per permit term	Complete	Facilities and Operations Department
		2.2 Outfall Screening	screen 100% of all outfalls once per permit term	Complete	Facilities and Operations Department
		2.3 IDDE Awareness Training	Provide IDDE training to facility staff once per permit term	Complete	Facilities and Operations Department
	3. Construction Site Stormwater Runoff Control	3.1 Construction Site Plan Review for New and Redevelopment	review plans as submitted	Ongoing	Program Management team under Facilities and Operations Department
		3.2 Construction Site Inspection and Reporting	review procedures annually, update if necessary; inspect construction activities per required frequencies	Ongoing	Facilities and Operations Department
		3.3 Construction Site Inventory	maintain an inventory of construction sites	Ongoing	Facilities and Operations Department
	4. Post-Construction Stormwater Management in New Development and Redevelopment	4.1 Post-Construction Procedures for New and Redevelopment	review once per permit term, update if necessary	March 31, 2024	Facilities and Operations Department
		4.2 Policy/Procedures for Maintenance of Stormwater Controls	review once per permit term, update if necessary	March 31, 2024	Facilities and Operations Department
		4.3 Plan Review for New and Redevelopment	review plans as submitted	Ongoing	Facilities and Operations Department
		4.4 Promote Low Impact Development (LID)/Green Infrastructure	encourage LID/green infrastructure	Ongoing	Facilities and Operations Department
	5. Pollution Prevention/Good Housekeeping for Municipal Operations	5.1 Facilities Visual Audit	Complete facilities inspection including checklists and procedures for correcting noted deficiencies	March 31, 2025	Facilities and Operations Department
		5.2 Standard Operating Procedures	maintain and update SOP's as needed	Ongoing	Facilities and Operations Department
		5.3 Staff Training of Standard Operating Procedures	Incorporate SOP staff training into monthly safety meetings	March 31, 2024	Facilities and Operations Department
		5.4 Motor Oil Disposal	recycle as needed	Continual	Facilities and Operations Department
		5.5 Cooking Oil Disposal	recycle as needed	Continual	Concessionaire Under Facilities and
		5.6 Campus Trash Pick-up	trash receptacles emptied on a weekly basis	Continual	Facilities and Operations Department
		5.7 Vegetated Debris Collection	vegetation debris disposal after all landscape maintenance	Continual	Facilities and Operations Department