AMIRI ENGINEERING CORP.
Geotechnical, Materials & Environmental Engineers

May 13, 2020

Ms. Marla Smith
Alabama Department of Environmental Management
Water Division
Storm Water Management Branch
P.O. Box 301463
Montgomery, AL 36130-1463

Subject: Annual Report-MS4 May 1, 2019-April 30, 2020
Municipal Separate Storm Sewer System (MS4) Phase II General Permit
NPDES Permit No. ALR040059
The University of Alabama in Huntsville
Madison County (89)

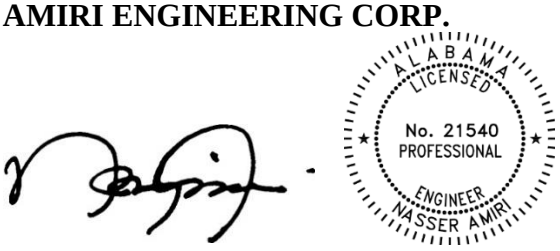
Dear Ms. Smith:

Amiri Engineering Corporation has prepared the following Annual Report for The University of Alabama in Huntsville for the Municipal Separate Storm Sewer System (MS4) Phase II General Permit, NPDES Permit No. ALR040059, in Madison County (89), for the period between May 1, 2019 and April 30, 2020.

If you have any questions regarding the information contained herein, or if you require any revisions/changes, please contact undersigned at your convenience.

Respectfully submitted,

AMIRI ENGINEERING CORP.



Nasser Amiri, P.E.
Sr. Geotechnical Engineer
AMIRI ENGINEERING CORP.

THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

Greg Smith, CFM, AAE
Assistant VP. of Facilities & Operations
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

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Introduction

This Annual Report, for Year 3 for "Measurable Goals to Meet MEP Requirements of MS4", was developed in accordance with the guidelines provided in Title 40 Code of Federal Regulations (CFR), Part 122.26(d) incorporated by reference in the Alabama Administrative Code 335-6 as administered by the Alabama Department of Environmental Management (ADEM) and NPDES ALR4040091 Phase II General Permit effective May 1, 2017.

The purpose of this Annual Report is to describe the compliance efforts reflected in the University of Alabama in Huntsville's Storm Water Management Program Plan (SWMPP). The Annual Report will identify the control measure specific efforts undertaken by University of Alabama in Huntsville from May 1, 2019 through April 30, 2020 to reduce discharge of pollutants from University of Alabama in Huntsville's campus to the Maximum Extent Practicable (MEP) to protect water quality and to satisfy the appropriate water quality requirements of the Clean Water Act (CWA).

This Annual Report is a result of a collaborative approach from individuals that represent both academic and operational areas of the campus. The multi-disciplinary effort continues to be strengthened by its diversity and includes the following individuals and their areas of responsibility or interest:

1. Mr. Greg Smith, UAH Facilities & Operations; Assoc. Vice President for Facilities & Operations
2. Mr. Christian Reed, AIA, UAH Facilities & Operations, Senior Campus Architect
3. Mr. Justin Thompson, UAH Facilities & Operations, Campus Architect II
4. Ms. Kristy Olive, UAH, Director of Office of Environmental and Safety
5. Mr. James A. (Tony) Davis, UAH Facilities & Operations, Director of Facilities Maintenance
6. Ms. Claire Jackson, UAH Director of Utilities and Sustainability
8. Mr. Kevin Bennett, UAH Office of Risk Management, Director of Risk Management
9. Mr. Tory Tollefson; UAH Director of Grounds and Landscaped Management
10. Mr. Scott Royce; Assistant Dean of Students
10. Mr. Nasser Amiri, PE; Amiri Engineering Corp; Environmental Consultant

MS4 Description

The University of Alabama in Huntsville (UAH) is a public Tier 1 national university located in Huntsville, Alabama. UAH offers nearly 90 degree programs of study at the undergraduate and graduate level, with colleges in Engineering; Education; Nursing; Science; Business Administration; Arts, Humanities, & Social Sciences; Graduate Studies; and Professional & Continuing Studies. UAH is a fast growing University with current year's record-setting enrollment of nearly 10,000. The current student population plus the faculty and staff does not trigger the Standard Urban Storm Water Mitigation Plan (SUSMP) requirements for new construction projects.

Actions taken during this reporting period are presented in this Annual Report and also in the MS4 document "Measurable Goals to Meet MEP Requirements" for Year 3 section.

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Control Measures

Storm water management controls or Best Management Practices (BMPs) is implemented to the MEP to minimize pollution in storm water discharges from University of Alabama in Huntsville's Campus. The Permit requires BMPs to be implemented to address five minimum control measures to be part of the SWMPP. As required by Part III.B of the Permit, the Annual Report will describe the University's efforts performed during this reporting period to implement the established BMPs (Public Education & Public Involvement on Storm Water Impacts, Illicit Discharge Detection & Elimination, Construction Site Storm Water Runoff Control, Post Construction Storm Water Management in New and Redevelopments and Pollution Prevention / Good Housekeeping for Municipal Operations) and will include:

1. The status of UAH's compliance with Permit conditions, an assessment of the appropriateness of the identified BMPs, and progress towards achieving the statutory goal for each of the minimum control measures.
3. Results of information collected and analyzed during this reporting period, including any monitoring data used to assess the success of the SWMPP at reducing discharge of pollutants to the MEP.
4. Update University of Alabama in Huntsville's SWMPP.
5. All monitoring results collected during the reporting period in accordance with Part V. of the Permit.

BMP: Public Education & Public Involvement on Storm Water Impacts

Storm water pollution prevention education leads to an informed and knowledgeable campus community that is more likely to support and comply with the BMP provisions. The targeted "Public" audiences of the University's SWMPP are University of Alabama in Huntsville faculty, staff, students and visitors, which populate the campus on any given day. Within these populations, only students in residence housing live on campus. All other students, employees and visitors reside in the surrounding communities.

Throughout this reporting period, University of Alabama in Huntsville initiated activities consistent with the SWMPP and continued the activities that begin prior year and built upon those. Some of those activities are as follow:

Marketing Campaign: The marketing campaign's purpose is to inform and educate the campus community about the importance of properly managing storm water on campus and avoiding storm water pollution. The campaign included Website announcements, Posters which were printed and distributed and Medallions informing the campus community that storm drains flow to the river were placed on drains around campus. On this year, Hannah Upton attended the Alabama Stormwater Association meetings. Also participated in campus storm water pollution prevention events.

The stormwater working group continued to convene in 2019 in May and June before switching to a proposed quarterly schedule. The latest meeting was in March 25, 2020, which, due to Campus shutdown due to Covid-19, was held via Zoom.

- Meetings are held during the course of the year between OEHS staff and Housing administration staff as part of the public education sessions to help get the word out on storm water pollution prevention.

- During the week of welcome of 2019-2020 school year, a stormwater contest was held by OEHS for the students. During that stormwater contest, six (6) areas were picked for cleaning and maintaining stormwater-runoff maintenance.

- During the Week of Welcome, Scavenger Hunt was also performed for the purpose of awareness of stormwater awareness. Photos and correspondence associated with this event are attached.

- During the week of welcome, Office of Environmental and Health Safety of UAH sponsored an event, and educational materials were distributed to students.

- Since January 5th, 2015 that UAH implemented a campus wide single-stream recycling program. The program covers majority of buildings on campus.

- During the events where students and staff were present, educational materials were distributed and/or placed on display. Photograph of one of such events, during the Week of Welcome of the students, which Storm Water Control Poster was in display, is presented here.
- Posted storm water pollution prevention information on OEHS website. Storm Water pollution prevention is presented on the website of OEHS.

Web Resources

Information related to water quality and storm water management continues to be provided from a wide variety of University of Alabama in Huntsville websites. The UAH Office of Environmental Health and Safety (OEHS) is the central web resource specific to the SWMPP and the requirements of the Phase II General Permit NPDES ALR4040091 through the webpage is presented at www.uah.edu/oehs/stormwater. The University of Alabama in Huntsville websites which provide information relating to storm water BMPs include:

- Office of Environmental Health and Safety https://www.uah.edu/oehs
- Dept. of Atmospheric Science: www.uah.edu/science/departments/atmospheric-science
- Earth System Science: www.nsstc.uah.edu/ess/ess_bs.html
- Civil and Environmental Engineering: //www.uah.edu/eng/departments/cee

- Office of Sustainability; www.uah.edu/sustainability
- Facilities and Operations: //www.uah.edu/facilities-and-operations

Measure Specific Evaluation

Throughout this reporting period, University of Alabama in Huntsville continued to foster an open and collaborative relationship with different groups on and off campus to improve and protect water resources to engage and to train a local network for the continued efforts by the Office of Sustainability. Through these continued efforts, our connectivity with the environment and the importance of storm water management is better understood.

BMP: Illicit Discharge Detection & Elimination

During this reporting period, University of Alabama in Huntsville continued to utilize the storm water infrastructure engineering assessment to prioritize areas on campus requiring further assessment and/or repair along with field observations by UAH Facilities Management, Mechanical Shops, Resources and Risk Management & Safety to investigate sources of potential illicit discharges. An updated map is attached to this report and identifies the storm water conveyance system maintained by the University.

Upon discovery, any potential illicit discharge is investigated further. In the Stormwater section of the Environmental Health & Safety page of the University's website, https://www.uah.edu/oehs/stormwater, individuals are asked to call UAH Emergency to report any illicit discharge. A variety of measures can be deployed to track the source of the illicit discharge and may involve multiple UAH groups as well as the City of Huntsville as necessary.

The proper management of waste and the prohibition of illicit discharges on campus continued to be promoted by University of Alabama in Huntsville through a variety of guidance documents, design standards, recycling guidelines and contractual specifications:

Measure Specific Evaluation

Throughout this reporting period, The University of Alabama in Huntsville was successful in meeting the objectives of the Illicit Discharge Detection Elimination (IDDE) measure as defined in the University's SWMPP. Advance/improvements to the program are dependent upon an informed public. Continued educational efforts promoted by numerous groups on campus are successful in increasing the campus community's awareness towards proper waste management procedures and services.

Measure specific activities planned for the next reporting period

University of Alabama in Huntsville will continue the Illicit Discharge Detection and Elimination (IDDE) measures as defined in the University's SWMPP. During the next reporting period, planned activities will include performing a campaign of IDDE to the UAH employees, students and visitors to increase community's level of awareness to pollution prevention.

BMP: Construction Site Storm Water Runoff Control

In accordance with Part III (B) (4) of NPDES Permit No ALR04040091, University of Alabama in Huntsville developed the Construction Site Storm Water Runoff Control Best Management Practice. University of Alabama in Huntsville's Facilities Management is responsible for all construction projects on campus and implementation of this measure.

During this Report period, UAH Construction Site consultant begin education training including site inspections, reporting discharges and evaluation of inspection results. This is provided to project supervisors and construction site operators.

During this reporting period, no new project was initiated that required storm water protection measures to be implemented and maintained. However, one (1) project, Morton Hall Addition, which required Stormwater runoff control and inspection was in progress. Responsibility of the contractors was as follows:

Contractor responsibilities include:

- Maintain Best Management Practices Plans.

Construction Site Inspection

Field inspections associated with Construction Storm Water Runoff protection on both projects have been conducted by a Professional (Registered) Engineer with Amiri Engineering Corporation. The inspections have included QCI/QCP inspections per ADEM Registration.

Construction Site Problem Reporting

There have been no public reports related to construction site problems. Some minor deficiencies which were noted were repaired during 48 hours of the inspection time or before next rain forecast date.

- UAH's Facilities and Operation is responsible for all construction projects on campus and implementation of this measure. Campus Architect's office and Amiri Engineering Corporation, a Consulting Environmental Engineering firm, reviewed Construction Storm Water Control Program on new constructions projects to verify that they meet UAH Construction storm water programs.
- Construction sanctions/penalties is included in construction contract language. All project documents for new construction and/or building additions/expansions included documents for the contractor to meet Construction Stormwater Run-off control and ADEM NPDES Permit requirements.
- Project managers were reminded prior to initiation of the construction, about UAH 's policies about Construction Storm Water Control. Since majority of UAH watershed enters the two (2) lakes in the southwestern portion of the campus, surface run-off from the construction sites typically enters the lake system, through surface runoff and storm

sewer lines, and sediment is generally deposited in the upper (northern) late before if exits over the weir of northern lake and enters the drainage structure and southern lake. Specific discussions are made to minimize any erosion and loss of fines into the lakes. Project Managers and contractors were reminded during the pre-construction meetings about implication of the erosion and sediment that leaves the jobsite and ends up in the lake system and/or the creeks that run through the campus.

- ADEM NPDES Construction Storm water Inspection form was used during each site inspection associated with Construction Storm water runoff. This requires an inspection by a Qualified Credentialed Professional (QCP) after every ¾ inches of rain event in 24 hours period or at least one inspection per month, whichever is more. In addition, additional site inspections were made after 0.5 inches of rain in 24-hour period to meet the MS4 program.

BMP: Post Construction Site Runoff

This control measure incorporates BMP's that are designed to minimize water quality impact from developments once construction is complete. During the course of this reporting period,

During the course of the past year, Hannah Upton of UAH OEHS attended Post Construction Stormwater Management sponsored by Alabama Stormwater Association. Certificate of her attendance on this conference is attached.

Protection of Sensitive Waters

The 303(d) listing of impaired waters is routinely reviewed to ensure that local bodies of water which receive storm water runoff are not listed.

Local Interaction

During the course of this prior reporting period, Assistant Vice President of Facilities and Operations, Mr. Greg Smith, of UAH, met with Ms. Kathy Martin, Engineering Manager of City of Huntsville, to discuss improvement of Drainage Channels which enter UAH from the City of Huntsville. This interaction was a continuation of discussions between UAH and City of Huntsville staff that was initiated in 2018 and has continued since then.

UAH responsibilities included:

- Assign Project Manager for all sites.
- Review and approve Dig Permit requests.
- Contract with Engineer of Record to perform QCP inspections at least monthly, before forecasted rain events and within 48 hours of a Rain Wave flagged 0.5” or greater event.
- Notify contractors of all reported violations or BMP failures and inform them that corrections are to be made within 24 hours. If the contractor is non-responsive ADEM is to be notified.

BMP: POLLUTION PREVENTION / GOOD HOUSEKEEPING

Parking Lot, Parking Deck, Street Cleaning Program

UAH F&O Grounds Management Unit utilizes a street sweeper/vacuum truck contractor service 3-4 times per year to remove accumulated debris from parking lots, parking decks, streets, and sidewalks. Grounds Management inspect streets, street drains and curbs monthly and makes minor repairs as needed. Major pavement projects are managed via the UAH F&O Design, Planning and Construction Management Unit. During fall and winter months, Grounds staff remove leaves and other debris on a daily basis throughout the campus. Grounds and Custodial Services Units also use UAH owned and operated vacuum machines to remove debris before it enters the stormwater drain system. High wind and storm related trash, limbs and debris are also removed from the campus grounds and streets soon after each event.

During this reporting period, on April 12, 2020, a storm drain behind CCRH building at the Campus became clogged due to transport of leaves, etc. via stormwater runoff. This condition was repaired and area contributing to this drain line was inspected to verify that the condition does not reoccur, and no more debris can be transported on to the drain lines.

During this reporting period, Tory Tollefson of Facilities and Operations, began implementing shift equipment check of mobile equipment to check for oil leaks.

During this reporting period, coordination continued with the contractors to ensure that soft wash program for buildings on campus uses an environmentally friendly cleaning process and that the rinse water will not enter the storm drains.

Storm Water Conveyance System Cleaning Program

The University of Alabama in Huntsville Grounds Management inspects all storm water conveyance outfalls routinely throughout the year. This is done after each heavy rain or storm activity. If any large limbs, trees, or debris are blocking the area, the blockage is removed as quickly as possible. Lakeside maintenance to include invasive plant removal is also performed. To facilitate the inspection process, a Drainage Inventory Map, as shown on this page, was prepared during the past year. This map shows all Manhole locations and also street side drop inlets throughout the campus which allows water to enter into the Campus Drainage system.

During the beginning of this Reporting Period, such inspection was the responsibility of Paul Patterson, and later it became the responsibility of Tory Tollefson of Grounds and

Landscape Management. Tory Tollefson has formalized a process by creating work orders in the preventive maintenance system for clearing storm drains

Waste Management Reduction & Recycling

Daniel Boutwell, our Director of Custodial Services at UAH manages the Recycling Waste on the campus and works with faculty, staff, and students on a daily basis to provide easy and convenient recycling to the University.

The director of Custodial Services manages the campus building recycling program, game day recycling, office clean-outs, indoor/outdoor event trash and recycling bins, secure document shredding services. Electronics recycling is handled by the Central Receiving.

Waste reduction and recycling initiatives are also promoted through education and outreach on campus and in the surrounding community. The UAH maintained a contract with Waste Management (WM).

Spill Prevention Control & Countermeasure (SPCC) Program

University of Alabama in Huntsville maintains compliance efforts consistent with 40 CFR 112 and the University's SPCC Plan. The SPCC Plan addresses the University's program to manage oil and other petroleum products defined by 40 CFR 112.7(2) and 40 CFR 112.7(4). This includes the management of fuel oils, gasoline, lubricating oils, hydraulic and dielectric fluids as they are utilized and stored on University of Alabama in Huntsville's campus. The University inspects all applicable containers (fuel tanks, generators, elevators and drums) monthly and all transformers annually. These routine inspections evaluate the condition of the containers to ensure proper functionality and management to prevent releases to the environment.

During this reporting period, the following were performed to prevent Spill Prevention Control and Countermeasure Program:

- James (Tony) Davis and Quanteaus Jones of UAH Facilities Maintenance continued investigating to convert backup generators currently using diesel fuel from Underground Storage Tanks to Generators using natural gas to reduce the potential for diesel fuel leaks and spills. Presently the campus Architect has hired an environmental Engineer to create a scope of work to remove the tanks. Replacement of Generators has been postponed until tanks have been removed. This is scheduled for this summer (2020).

For the upcoming reporting period, training will continue for oil handling personnel employed by University of Alabama in Huntsville to further promote the objectives of the SPCC Plan, the regulatory responsibility associated with these regulated materials and to address in-house procedures necessary to respond to spills or releases from them.

Used Oil Recycling Program

During this reporting period, University of Alabama in Huntsville's Grounds Management (Garage Group) routi[illegible]10[illegible]ollected used oil, which was picked up by Holston environmental Services, Inc of Chattanooga, Tennessee for removal and recycling.

Measure Specific Evaluation

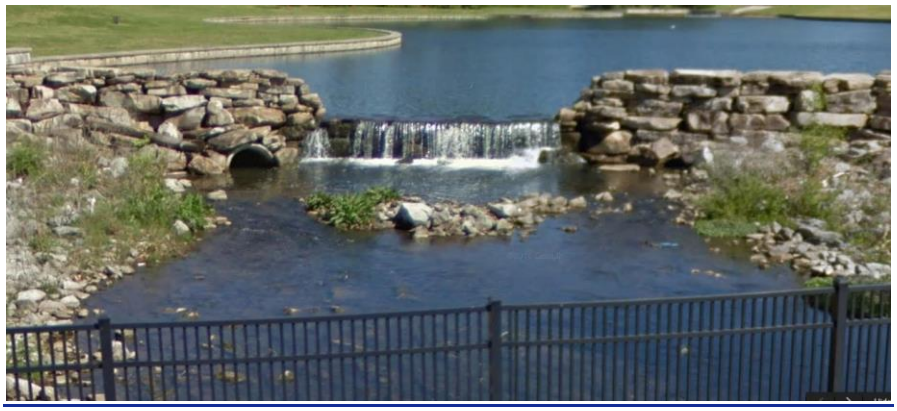
Throughout this reporting period, the on-going preventative measures taken by multiple groups on campus have removed items that could have been ultimately destined to our local landfill, groundwater and or surface waters. The University promotes waste minimization efforts to include regulated hazardous and non-hazardous wastes, e-waste and construction and demolition waste through reuse and recycling. Picture presented in this page is a sample of recycling efforts placed at UAH Website.

The University has developed sound practices to manage equipment and operations to minimize releases to the environment and provides training to University and contractual employees on these best management practices. Per the newly issued permit, UAH began efforts to inventory "municipal facilities".

Appendix A

Storm Water Management Program Plan (SWMPP)

NPDES Phase II Storm Water Management Plan (MS4)



PREPARED BY:

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1.0 INTRODUCTION

The Storm Water Management Program Plan (SWMPP) is required by Part II of the Alabama Department of Environmental Management (ADEM) National Pollutant Discharge Elimination System (NPDES) Individual Permit ALS000014 for discharges from The University of Alabama in Huntsville to Huntsville municipal separate storm sewer system (Madison MS4).

1.1 Regulatory Background

This Storm Water Management Plan (SWMP) is required under Federal Environmental Protection Agency Phase II storm water regulations, promulgated under the Clean Water Act. These regulations require The University of Alabama in Huntsville to apply for a National Pollution Discharge Elimination System (NPDES) permit and submit a SWMP.

Polluted storm water runoff is often transported to municipal separate storm sewer systems (MS4s) and ultimately discharged into local waterways (rivers, streams, lakes, and bays) without treatment. EPA's Storm Water Phase II Rule establishes an MS4 storm water management program that is intended to improve the nation's waterways by reducing the quantity of pollutants that storm water picks up and carries into storm sewer systems during storm events. Common pollutants include oil and grease from roadways and parking lots, pesticides from lawns, sediment from construction sites, and carelessly discarded trash, such as cigarette butts, paper wrappers and plastic bottles. These pollutants are deposited into nearby waterways, discouraging recreational use of the resource, and interfering with the habitat for fish, other aquatic organisms, and wildlife.

In 1990, EPA promulgated rules establishing Phase I of the NPDES storm water program. The Phase I program for MS4s requires operators of "medium" and "large" MS4s, that is, those that generally serve populations of 100,000 or greater, to implement a storm water management program as a means to control polluted discharges from these MS4s. The Storm Water Phase II Rule extends coverage of the NPDES storm water program to certain "small" MS4s but takes a slightly different and simplified approach to how the storm water management program is developed and implemented. NPDES Phase II regulations require operators of small MS4s to develop a program in order to:

- Reduce the discharge of pollutants to the "maximum extent practicable" (MEP);
- Protect water quality;
- Satisfy the appropriate water quality requirements of the Clean Water act and Regional Water Quality Control Board Basin Plan.

1.2 Purpose of the SWMP

This document has been developed to comply with Federal Environmental Protection Agency Phase II National Pollutant Discharge Elimination System requirements promulgated under the Clean Water Act. The purpose of the SWMP is: (1) to identify pollutant sources potentially affecting the quality and quantity of storm water discharges; (2) to provide Best Management Practices (BMPs) for municipal and small construction activities implemented by The University of Alabama in Huntsville staff and contractors and; (3) provide measurable goals for

the implementation of this SWMP to reduce the discharge of the identified pollutants into the storm drain system and associated waterways. This SWMP covers The University of Alabama in Huntsville campus.

1.3 SWMP Development Committee

The SWMP was developed with input from representatives from various campus departments with a potential to impact surface water quality. The campus committee members ranged from departmental directors to operations personnel as follows:

- Office of Environmental Health & Safety(OEHS)
- Facilities and Operations — Planning, Design, and Construction; Grounds; Facilities Maintenance; Sustainability
- Auxiliary Services/ Housing and Residence Life
- Environmental Consulting Firm (Amiri Engineering Corp.)

Public input is solicited in the development and implementation of the Stormwater Management Plan (SWMPP). The plan is reviewed at least annually by OEHS. Revisions will be made as necessary and will be submitted to ADEM for review.

1.4 The Storm Water Management Plan

The SWMP has been developed and designed to manage the discharge of pollutants from The University of Alabama in Huntsville small MS4 to the maximum extent practical. The purpose is to protect the water quality of the Unnamed Tributary to McDonald Creek and to satisfy requirements of the Clean Water Act. The University of Alabama in Huntsville SWMP includes various management practices, control techniques, engineering methods, and other provisions which will be described in detail in the body of this document.

1.5 Minimum Control Measures

There are six minimum control measures outlined in the permit requirements. These are:

1. Public Education and Outreach.
2. Public Involvement and Participation.
3. Illicit Discharge Detection and Elimination (IDDE).
4. Construction Site Stormwater Runoff Control.
5. Post-Construction Stormwater Management in new Development and Redevelopment.
6. Pollution Prevention and Good Housekeeping.

Each minimum control measure will be addressed and detailed separately as part of the SWMP.

1.6 Contacts List

Part IV.3.a of the NPDES Permit requires that The University of Alabama in Huntsville provide a list of contacts and responsible parties involved in the preparation of the Annual Report. The following personnel are responsible for the preparation and review of this report:

Ms. Kristy Olive
Director of Office of Environmental Health and Safety
The University of Alabama in Huntsville
301 Sparkman Drive - PPB 114
Huntsville, AL 35899
256-824- 2171

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Responsibility for management of the Stormwater program lies with OEHS and Construction Administration. The individual responsible for facilitating operational aspects of the program is Kristy Olive at Office of Environmental Health and Safety.

2.0 SITE INFORMATION

2.1 Facility Description

The University of Alabama in Huntsville (UAH) is a public Tier 1 national university located in Huntsville, Alabama. UAH offers nearly 90 degree programs of study at the undergraduate and graduate level, with colleges in Engineering; Education; Nursing; Science; Business Administration; Arts, Humanities, & Social Sciences; Graduate Studies; and Professional & Continuing Studies. UAH is a fast growing University with current year's record-setting enrollment of nearly 10,000. The current student population plus the faculty and staff does not trigger the Standard Urban Storm Water Mitigation Plan (SUSMP) requirements for new construction projects.

The university's 432-acre campus, which includes 16 research centers and labs, serves the anchor tenant for the second-largest research park in the nation. It also maintains strong partnerships with federal agencies and commercial organizations that include the Hudson Alpha Institute for Biotechnology, NASA's Marshall Space Flight Center, the Missile Defense Agency, the DIA Missile and Space Intelligence Center, and the U.S. Army Materiel Command.

The University of Alabama in Huntsville campus is situated in Huntsville, Madison County. The facility is generally bounded by University Drive to the north, Interstate I-565 to the south, Sparkman Drive to the west and residential neighborhoods to the east. However, as shown on the attached Campus Plan, a few of UAH buildings are situated to the west of Sparkman Drive.

This SWMP covers facilities in urbanized areas operated by The University of Alabama in Huntsville.

2.2 Facility Operation

The University of Alabama in Huntsville employs maintenance, custodial, and grounds staff for day-to-day operations. This includes building maintenance (cleaning, painting, repairs), completion of department work requests, daily cleaning of common buildings, grounds maintenance, small construction jobs, and various repair and maintenance activities.

Campus Facilities Management staff and outside contractors do electrical, plumbing, roofing, asphalt, painting, sewer line cleaning, utility repairs, vehicle repairs, pool maintenance and janitorial duties.

3.0 DESCRIPTION OF POTENTIAL SOURCES OF POLLUTION

3.1 Potential Pollutant Activity or Sources List

In order to aid in identification of pollutant sources, historic spills as well as knowledge on the day to day operations to identify activities and sources of potential pollutants of concern were utilized to prepare this SWMP. Best Management Practices (BMP) to address the pollutant sources and activities described below will be developed as described in the Minimum Control Measures (Section 4.03).

Activity/Source	Pollutants of Concern
Building maintenance (washing, graffiti abatement)	Wash water, paint chips, cleaning products, dirt and sediment
Chemical Spills	Various- cleaning compounds, diesel, paint, hazardous materials, vehicle fluids
Construction activities	Concrete, drywall, paint, sediment
Erosion	Sediment, organic matter
Food service operations	Wash-water, food residue, oil and grease
Grounds maintenance	Green waste, fuel, oil, pesticides, herbicides, sediment
Impervious areas	Increased flows and pollutant loading
Litter and debris	Litter and debris
Loading/Unloading Areas	Petroleum products, fertilizers, pesticides, herbicides,
Outdoor Storage of Raw Materials	Sand, asphalt, soil, pesticides, herbicides, fertilizer, paint, solvents, fuel
Painting (indoor)	Paint or rinse water (oil and water based), paint thinner
Painting (outdoor)	Paint or rinse water (oil and water based), paint thinner
Parking lot runoff	Oil/grease, litter, heavy metals
Roof runoff	Particulate matter and associated pollutants
Sewer line blockages	Raw sewage
Sewer line seepage	Raw sewage
Trash storage areas	Organic materials, litter and debris
Vehicle and equipment washing	Cleaning products, oil/grease, vehicle fluids
Utility line maintenance and repairs (water/ irrigation/ sewer)	Chloramines, chlorine, sediment, adhesive cements, primers & fire protection system water
Animal feces	Coliform bacteria
Swimming Pool	Chlorinated water, pool chemicals
Fleet Maintenance & Repair	Oil, grease, antifreeze

4.0 MINIMUM CONTROL MEASURES

4.1 What are Minimum Control Measures

MEP, and BMPs "Minimum Control Measures" is the term used by the EPA for the six MS4 program elements aimed at achieving improved water quality through NPDES Phase II requirements listed below:

- Public Education and Outreach on Storm Water Impacts
- Public Involvement / Participation

- Illicit Discharge Detection and Elimination
- Pollution Prevention / Good Housekeeping
- Construction Site Storm Water Runoff Control
- Post-construction Storm Water Management in New Development and Redevelopment

The goal of the SWMP is to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP), as defined by the EPA, and to identify activities or structural improvements that help reduce the quantity and improve the quality of the storm water runoff. Best Management Practices (BMPs) have been developed for the SWMP to reduce the discharge of pollutants to the storm drain system to the MEP. BMPs include treatment controls, engineering controls, operating procedures, and practices to control site runoff, spills and leaks, sludge or waste disposal, or drainage from raw material storage. BMPs will be updated as appropriate to comply with any additions or changes to NPDES permit requirements.

4.2 How to use BMPs to Meet MEP Requirements

The BMPs described in this document in the measurable goals section are to be implemented by The University of Alabama in Huntsville staff and outside contractors. Whenever UAH staff or contractors perform work on the campus or associated areas, steps outlined in each relevant BMP, or other proven technique that reaches the same goal, must be used in order to ensure compliance with storm water discharge regulations. The University of Alabama in Huntsville has already initiated many of the BMPs listed in the Minimum Control Measures in this SWMP. In some cases the measure has not been formalized into a written plan or program. The SWMP will formalize and document these Minimum Control measures and associated BMPs. Full development and implementation of BMPs will be completed through the five-year implementation plan as presented in the measurable goals for each Minimum Control Measure in the following sections.

4.3 Minimum Control Measures

4.3.1 Public Education and Outreach on Storm Water Impacts

The goal of this minimum control measure is to develop and distribute educational materials and perform outreach to inform students, faculty, and staff about the impact of polluted storm water runoff discharges, and that their actions can make a positive impact on water quality.

Maximum Extent Practicable (MEP) Standards

- Implement a public education program to distribute educational materials to the community, or conduct equivalent outreach activities about the impacts of storm water discharges on local water bodies and the steps that can be taken to reduce storm water pollution.
- Determine the appropriate Best Management Practices (BMPs) and measurable goals for this minimum control measure.

Measurable Goals to Meet MEP Requirements

Year 1:

- Develop storm water pollution prevention educational materials. Developed by Taylor Myers in conjunction with Marketing Department. UAH's Sustainability Program hosted a water monitoring workshop by Alabama Water Watch on campus April 7, 2018. The UAH News published an article to raise awareness of the Stormwater Program after the event.
- Develop poster to educate students regarding storm water pollution prevention. Poster was developed by Taylor Myers in conjunction with Marketing Department.
- Stencil: "Flows to River" at accessible campus storm drains. A new medallion was designed by Marketing and was ordered for installation on unmarked storm drains. OEHS worked through student workers to develop a Stormwater Drain Map. 50% of the campus was mapped in 2018. Spread sheet of location of the storm drains and their geographic location and a spreadsheet of the status of drain markers is included in the map and associated spreadsheet.
- Developed storm water pollution prevention information for OEHS website. **T**he MS4 plan has been posted to the OEHS website and contact information for reporting stormwater pollution concerns has also been added to the OEHS website.

Year 2:

- Maintain campus storm drain stencils and replaced as needed. Student Workers, Jake Davenport and Darnisha Crane, on every Friday, when weather conditions are favorable (no precipitation or extreme temperature), perform Storm Sewer Medallion observation and update. They replace the damaged medallions and installed new medallions on new structures as needed.
- Distributed educational material to faculty and staff. Educational materials are placed on the University Website and also on OEHS site. During the events where students and staff are present, educational materials will be distributed and/or placed on display. Photograph of one of such events, during the Week of Welcome of the students, which Stormwater Control Placard was in display is present here.

- Posted storm water pollution prevention information on OEHS website. Storm Water pollution prevention is presented on the website of OEHS.
- Increased storm water pollution prevention outreach to surrounding community. UAH Campus is surrounded by City of Huntsville (larger MS4). As a part of community outreach program, Mr. Greg Smith, Assistant Vice President of Facilities and Operations, has initiated meetings and discussions about runoff which enters UAH Campus from adjacent community and discussed improvement of the Storm-Water drainage system that runs from the City of Huntsville into the drainage systems within UAH campus. Partnership between UAH and City of Huntsville to correct and improve erosion and maintain drainage infrastructures within UAH will continue. Copy of an email discussing this outreach is presented in Appendix B.

Year 3:

• Continue stenciling campus storm drains as needed.

- Distribute educational material to students. During the week of welcome of 2019-2020 school year, a stormwater contest was held by OEHS for the students. During that stormwater contest, six (6) areas were picked to concentrate on for cleaning and maintaining stormwater-runoff maintenance.

- During the Week of Welcome, Scavenger Hunt was also performed for the purpose of awareness of stormwater awareness. Photos and correspondence associated with this event are attached.

Year 4:

• Continue stenciling campus storm drains as needed.
• Continue sponsoring and/or participating in storm water pollution prevention events such as campus and levee clean-ups. • Outreach to faculty/academic programs for possible guest lecture opportunities.

Year 5:

• Continue stenciling campus storm drains as needed.
• Continue sponsoring and/or participating in storm water pollution prevention events such as campus and levee clean-ups.
• Write articles on storm water program for campus publications and newsletters.
• Include educational information in new student and new employee orientation packets.
• Give guest lectures on storm water runoff impacts/pollution prevention at community events.

OHES is the Department responsible for implementation of the above goals.

4.3.2 Public Involvement / Participation

The goal of this minimum control measure is to provide opportunities for students, faculty, and staff to participate in program development and implementation on a storm water management working-group.

MEP Standards

- Interact, comply and insure consistency with applicable State, and local public program requirements;
- Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Measurable Goals to Meet MEP Requirements

Year 1:

- Established on-going storm water working group for public comment. A stormwater working group began meeting on 1/10/18. Attendees from OEHS, Facilities and Operations and Housing were included. OEHS and Sustainability worked with Housing and Student Life to coordinate events to increase student involvement. Two events were planned:

- Residence Hall staff were trained on stormwater in April 2018 and a Stormwater Awareness Event was included in the "Big Event" planned by Student Life on April 14, 2018. An article was published in the UAH News to raise stormwater awareness.
- Established and maintained working relationship with the joint City/County Storm Water Program. On 3/31/17, Taylor Myers and Kristie Olive of UAH met with representatives of the City (Dustin Wilbourne and Bobby Simmons) to discuss a solution to stormwater coming onto the UAH property from the city from a ditch along John Wright Drive and another that feeds the two ponds on Sparkman Drive. An agreement was reached to reduce the spraying of herbicide in these areas to prevent erosion.
- Made copies of the SWMP available at OEHS office and website. This information was posted to the website as of 1/10/18.
- Placed e-mail link on OEHS website to report storm water pollution concerns. This information was posted to the website as of 2/9/18.

Year 2:

- Contacted campus community environmental event organizers. Water Working Group participated in student activities, and attended environmental events within campus in several occasions. Posters for stormwater awareness were displayed in the events. Photo of one of the posters is presented in minimum Control Measures, above.
- Convened campus storm water working group. On every third Thursday of the Month at 3:00 PM, Stormwater Working Group, convenes. This event is publicized in the UAH Website and the entire UAH community is invited to attend. Typical attendances are OESH personnel, Architectural Staff that are involved with new and existing projects, maintenance and grounds control group. Samples of Sign-in sheets of the Water Working Group are presented in Appendix B.
- Used Media and publications to promote program and participation. Public involvement and participation is encouraged through the UAH Events Website and also in OESH website.

Year 3:

- Participate in campus storm water pollution prevention event(s): On this year, Hannah Upton attended the Alabama Stormwater Association meetings. Also participated in campus storm water pollution prevention events.

- The stormwater working group continued to convene in 2019 in May and June before switching to a proposed quarterly schedule. The latest meeting was in March 25, 2020, which, due to Campus shutdown due to Covid-19, was held via Zoom.

- Continue to convene campus storm water working group: Convened campus storm water working group. Stormwater Working Group convenes quarterly. Sample attendance sheet are attached. This event was publicized in the UAH Website and the entire UAH community was invited to attend. Typical attendances were OESH personnel, Architectural Staff that are involved with new and existing projects, maintenance and grounds control group. Samples of Sign-in sheets of the Water Working Group are presented in Appendix B.

Year 4:

- Organize and sponsor campus volunteer clean-up event.
- Continue to convene campus storm water working group.

Year 5:

- Organize and sponsor another campus volunteer clean-up event.
- Participate in campus storm water pollution prevention event(s).
- Continue to convene campus storm water working group.

OHES is the Department responsible for implementation of the above goals.

4.3.3 Illicit Discharge Detection and Elimination

The goal of this minimum control measure is to develop and implement a plan to detect and eliminate non-storm water discharges (illicit discharges) such as process water, wash water, chemical spills, and other non-rainwater discharges to the storm drain system (not applicable to exempt discharges).

MEP Standards

- Have a storm water map, showing outfall locations and the names and location of the waters of the United States that receive discharges from those outfalls;
- Through management, contracting, or other mechanism, prohibit (to the extent allowable under State, or local law) non-storm water discharges into the MS4, and establish appropriate enforcement procedures and actions;
- Have a plan to detect and address non-storm water discharges, including illegal dumping, into the MS4;
- Educate the campus community about the hazards associated with illegal discharges and improper disposal of waste;
- Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Measurable Goals to Meet MEP Requirements

Year 1:

- Reviewed and updated campus notification system for sewage spills and other non-storm water discharges. The Director of Risk Management was contacted to discuss notification. UAH website directs all concerns to OEHS. The OEHS has developed a list of people that should be notified in the event that a stormwater concern is reported through the 6911 number used for students to report environmental concerns.
- Developed a storm drain sump and outfall monitoring program to visually identify dry weather flows into the storm drain system. This is done as part of the stormwater mapping project. Approximately 50% of the campus was reviewed as of 3/14/18.

Year 2:

- Implemented updated campus notification system for sewage spills and other non-storm water discharges. Notification systems are set up on UAlert page of Website (https://www.uah.edu/ualert). The Notification system was updated in January 2019 meeting of the Water Working Group.
- Provided drain blockers and related training to campus police and parking staff. Training Sessions were organized for Drain Blockers. A copy of the latest Drain Blocker Training meeting sign-in sheet is attached in Appendix B.

- Implemented storm drain sump and outfall monitoring program. Paul Patterson, director of grounds management is responsible to perform observation of Storm Drains before and after major rain event.
- Develop educational materials. Educational Materials to prevent non Storm-Water discharges entering drain systems is posted in OEHS website. In the event that UAH determines that illicit discharges contribute to pollution of campus streams or other surface waters, responsible person or entity will be instructed to cease the discharge. When instructed to cease the discharge, the discharger of substances shall cease the discharge immediately and be given reasonable time to make corrections so that the discharge will not continue into the future. OEHS will also inform the discharger than such a clean-up does not relieve them of their responsibilities under federal or State law for any other actions required by federal or state agencies.

Year 3:

- Develop a campus policy that includes prohibiting non-storm water discharges or improper disposal of wastes to the storm drains: Stormwater Ms4 Plan Compliance Policy was prepared by The Office of Environmental Health and Safety (OEHS), and was submitted to the provost and subsequently forwarded to the Office of the president of the UAH for execution. That policy is under review. However, as of this date, it has not been signed by the president of the UAH.
- Continue to implement storm drain sump and outfall monitoring program: storm drain sump and outfall monitoring program continued during the past reporting period. The grounds department and OEHS student workers regularly check storm drains and reports any suspect illegal discharges to OEHS.
- The stormwater working group met and agreed that the first offense is to inform the supervisor if it is an employee, purchasing if it is a contractor, and the Dean of Students if it is a student. For non-affiliated personnel, the UAH PD will be informed. For a second offense, the party would be subject to disciplinary action according to the official UAH disciplinary system. A third offense would result in involving UAH Office of Counsel and the UAH PD.
- Develop an inspection and enforcement program for illegal discharges/improper disposal. The enforcement program will include a plan for escalation in penalties depending on the severity of the act and the number of offenses.
- Train employees of the hazards associated with illegal discharges/improper disposal: This was done during the working group meetings. Educational materials on the hazards of illegal storm water discharges was distributed during the welcome week and are also presented in the Website of the OEHS.
- Conduct a storm drain assessment to identify potential sources of non-storm water discharges: Storm drain assessment was conducted by Grounds Department during routine work and after storm events. OEHS is working to implement a formal quarterly check to provide checks and balances.

Year 4:

- Implement an inspection/enforcement program for illegal discharge/improper disposal.
- Evaluate the results of the storm drain assessment. Assign risk factors to the potential sources and develop a matrix by area on campus. Develop a prioritization scheme to identify those units that are exposed to the greatest risk.
- Develop a list of procedural and physical BMPs to be used as measures to control non-storm water discharges.
- Develop an action plan to re-route any illicit connections identified in the assessment. Determine any interim measures necessary to prevent illicit discharges from contaminating storm water.

Year 5:

- Continue to implement the inspection/enforcement program for illegal discharge/disposal.
- Implement procedural and physical BMPs to reduce risk of illegal discharges and improper disposal to storm drains.
- Implement any interim measures to reduce the risk of illicit discharges from cross connection until permanent re-routing takes place.
- Develop a long-term sanitary sewer maintenance/upgrade program.

OHES is the Department responsible for implementation of the above goals.

4.3.4 Pollution Prevention / Good Housekeeping for Facilities Operation and Maintenance

The goal of this minimum control measure is to develop and implement a program to prevent or reduce pollutant runoff from facilities operation and maintenance activities. The program must include training to relevant staff on pollution prevention measures and techniques (e.g., regular street sweeping, reduction in the use of pesticides, or frequent sump grate cleaning).

MEP standards

- Have a program with the ultimate goal of preventing or reducing pollutant runoff from facilities and maintenance operations into the storm sewer system.
- Include employee training on how to incorporate pollution prevention/good housekeeping techniques into facilities operation and maintenance such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. To minimize duplication of effort and conserve resources, the MS4 operator can use training materials that are available from EPA, their State, or relevant organizations.
- Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Measurable Goals to Meet MEP Requirements

Measurable Goals to Meet MEP Requirements

Year 1:

- Reviewed and evaluated Best Management Practices (BMPs) for major campus physical operations (grounds; facilities maintenance; physical plant/utilities; fleet services; custodial services; housing and dining services).
- A list of current BMP's in place at UAH has been developed. The Stormwater Working Group is in the process of converting these to a common format.
- Developed a multi-level training program for Facilities Management staff. The first level covered the basics on sources of storm water pollution. The second level would cover campus storm water policies/procedures and the implementation of the BMP's. Directors in the F&O Dept. were trained in level one.
- Created a maintenance schedule for periodic cleaning of storm water system sump grates. OEHS began mapping stormwater drains and determined a base level status for inspection. This process was about 50% completed by the end of year 1. Grounds Maintenance initiated to have a system in place to monitor storm drains after rain events and perform cleanouts as needed.

Year 2:

- Continue to develop the multi-level training program on the sources of storm water pollution and how to implement selected BMPs. Some of the sign-in samples for the training programs are presented in Appendix B.
- Implement the sump grate cleaning program. Director of Grounds Maintenance Group, Paul Patterson, is responsible for grate inspection before and after every major rain event. Grounds Maintenance is responsible for cleanouts as needed.

Year 3:

- Implement the multi-level storm water training program. Multilevel stormwater training of pollution control was conducted during the course of the year. This was done during the in-house training and meeting groups, and by sending key OEHS personnel to seminars. Copy of the seminar attendance
- Continue sump grate cleaning schedule by Tory Tollefson and Quanteaus Jones.

Year 4:

- Continue implementation of SWPPP with selected operational BMPs.
- Implement an inspection program for compliance with BMPs.
- Continue implementation of the multi-level storm water training program.
- Continue sump grate cleaning schedule.

Year 5:

- Continue implementation of SWPPP with selected operational BMPs.
- Continue implementation of the multi-level storm water training program.
- Continue implementation of an inspection program for compliance with BMPs.
- Continue sump grate cleaning schedule.

OHES is the Department responsible for implementation of the above goals.

4.3.5 Construction Site Storm water Runoff Control

The goal of this minimum control measure is to develop, implement, and enforce an erosion and sediment control program for construction activities.

MEP Standards

- Have a management, contracting, or other mechanism requiring the implementation of proper erosion and sediment controls, and controls for other wastes, on applicable construction sites.
- Have procedures for site plan review of construction plans that consider potential water quality impacts.
- Have procedures for site inspection and enforcement of control measures.
- Have sanctions to ensure compliance (established in management, contracting, or other mechanism);
- Establish procedures for the receipt and consideration of information submitted by the public;
- Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Measurable Goals to Meet MEP Requirements

Year 1:

- As a component of the University of Alabama in Huntsville Design and Construction Standards, the Post Construction Storm Water Manual provides the principles, guidelines and standards for storm water management design for new campus projects. By providing a set of comprehensive best management practices for storm water management, future campus construction projects will protect and improve water quality, provide campus flood protection, and reduce storm water flow rates to downstream waters. The Post Construction Storm Water Manual includes a storm water management review checklist to review compliance with the University's design standards. Multiple projects were completed, are in construction, or are currently being designed during this reporting period. Review of the BMPs has been conducted on every project by the design professionals as well as a Professional Engineer with Amiri Engineering Corporation, to verify all BMP meet the latest requirements.

- Review and evaluate construction contract sanctions/penalties for violations of storm water sediment and erosion runoff controls. Penalties/sanctions which have been in-place for the construction projects were generally such that the contractor had sufficient incentive to implement the BMPs.
- Review and evaluate construction site inspection procedures for BMPs. All Site Inspection procedure and forms were reviewed and no changes in the reports or procedures was warranted.
- Develop training for construction project managers/inspector. Training and one-onn-one discussions of the BMP requirements and procedures were conducted for every project by a Professional Engineer with Amiri Engineering Corporation.

Year 2:

- Campus policy statement regarding storm water runoff controls for minimizing sediment and erosion impacts from construction sites has been prepared and submitted to the president of UAH for approval.
- Formal review procedures and checklists to document site plan, including pollutant source assessment for pre-construction campus site plan and BMP review process is prepared. UAH's Facilities and Operation is responsible for all construction projects on campus and implementation of this measure. Campus Architect's office along with Amiri Engineering Corporation, a Consulting Environmental Engineering firm, reviews Construction Storm Water Control Program on new constructions projects to verify that they meet UAH Construction storm water programs.
- Incorporate construction sanctions/penalties where needed in construction contract language. Include revised storm water BMP specifications in large construction projects with the potential to impact water quality. All project documents for new construction and/or building additions/expansions include documents for the contractor to meet Construction Stormwater Run-off control and ADEM NPDES Permit requirements.
- Implication of violations and the importance of the enforcement of storm water specifications will be stressed. Project managers are reminded prior to initiation of the construction about UAH 's policies about Construction Stormwater Control. Since majority of UAH watershed enters the two (2) lakes in the southwestern portion of the campus, surface run-off from the construction sites typically enters the lake system, through surface runoff and storm sewer lines, and sediment is generally deposited in the upper (northern) late before if exits over the weir of northern lake and enters the drainage structure and southern lake. Specific discussions are make

to minimize any erosion and loss of fines into the lakes. Project Managers and contractors are reminded during the pre-construction meetings about implication of the any erosion and sediment that leaves the jobsite and ends up in the lake system and/or the creeks that run through the campus.

- Develop construction site inspection procedures. ADEM NPDES Construction Stormwater Inspection form is used during each site inspection associated with Construction Stormwater runoff. This requires an inspection by a Qualified Credentialed Professional (QCP) after every ¾ inches of rain event in 24 hours or at least one inspection per month, whichever is more. Results of the inspection will be provided to the contractors. However, as a part of the MS4 program, additional inspections are made after 0.5 inch rain event in 24 hours.

Year 3:

- Implement campus BMP enforcement procedures and responsibilities.
- Implement construction site inspection procedures.

Year 4:

- Include storm water specifications in smaller projects (less than $50,000) including Physical Plant, and other departments' minor construction activities.
- Continue implementation of construction site inspection procedures.
- Conduct pollutant source assessment during site plan and BMP review.

- Develop standard procedures to receive and respond to public and/or campus reporting/incidents regarding storm water runoff impacts from construction sites.

Year 5:

- Implement standard procedures to receive and respond to public and/or campus reporting/incidents regarding storm water runoff impacts from construction sites.
- Continue implementation of construction site inspection procedures.
- Continue to conduct pollutant source assessment during site plan and BMP review.

OHES is the Department responsible for implementation of the above goals.

4.3.5.1 Construction Projects Greater than One Acre

Construction projects that encompass an area greater than one acre (including Small Linear Underground/Overhead Projects) must develop a specific Storm Water Pollution Prevention Plan (SWPPP). The SWPPP shall conform to the Alabama Department of Environmental Management (ADEM) Template and shall include appropriate BMP's related to the specific project. At project completion, a Notice of Completion shall be submitted. All inspection and monitoring records will be retained for three years.

4.3.5.2 Construction Projects Less than One Acre

Construction projects that encompass an area less than one acre shall follow the guidelines for Construction Project Storm Water Pollution Prevention. All inspection and monitoring records obtained during the project timeframe will be retained for three years.

4.3.6 Post-construction Storm water Management in New Development and Redevelopment

The goal for this minimum control measure is to develop, implement, and enforce a program to address discharges of post-construction storm water runoff from new development and redevelopment areas.

Post-construction storm water management controls include permanent structural and non-structural best management practices (BMPs) (e.g. conservation of natural and permeable areas, permeable pavers, rooftop runoff infiltration galleries, and mechanical storm drain filters) that remain in place after the project is completed and prevent pollution from the new development in the long-run.

MEP standards

- Develop and implement strategies which include a combination of structural and/or nonstructural post-construction BMPs;
- Have a management, contracting, or other mechanism requiring the implementation of post construction runoff controls,
- Ensure adequate long-term operation and maintenance of controls;
- Determine the appropriate BMPs and measurable goals for this minimum control measure. Measurable Goals to Meet MEP Requirements

Year 1:

- Review and evaluate current procedures for developing structural and non-structural post construction BMPs for both new development and re-development projects. Throughout this reporting period, University of Alabama in Huntsville was successful in meeting the objectives of the Illicit Discharge Detection Elimination measure as defined in the University's SWMPP. Advance/improvements to the program are dependent upon an informed public. Continued educational efforts promoted by numerous groups on campus are successful in increasing the campus community's awareness towards proper waste management procedures and services. Routine screening (dry and wet) allowed for several incidences of illicit discharges to be identified. Projects were initiated during the reporting period to address the identified illicit discharges.

- Review current procedures for transitioning responsibility of BMPs from construction phase into long term maintenance. The Stormwater Working Group member from Maintenance will inform the group when projects are turned over to the University for maintenance. This will allow the Group to add these new areas to any plans and programs that are in place.

Year 2:

- Developed guidelines regarding post-construction storm water controls for new development and re-development project sites. After Construction projects are completed and they are turned over to the University, Post Construction Stormwater management will be turned over to UAH's Grounds Management. Director of Ground Management is responsible for performing Post Construction inspections and maintenance until ground cover and vegetation is well established, at which time, it is maintained the same as other sites within the University.
- Developed standard specifications for selected structural and non-structural post-construction BMPs. This is developed and is under Structural and non-structural BMPs listing of OSEH site.

Year 3:

- Provide training for construction staff on post-construction BMP site planning, design, implementation, and inspection/enforcement protocols: A copy of the attendance of OEHS personnel (Hannah Upton) attendance/certification in "Post-Construction Stormwater Management-Getting Started and Sustaining Success" sponsored by Alabama Stormwater Association is attached.
- Develop procedures for a post-construction audit of the effectiveness of structural and nonstructural BMP's: During the first year, after the completion of the construction, the environmental consultant makes site visits after every ¾ inches of rain event, or at least once a month inspection of the facility to inspect the condition of the BMPs to evaluate whether additional maintenance is require. If any deficiencies are noted, UAH Facilities and Operations, Grounds and Landscaped Maintenance Group will be notified to correct the conditions before the next forecasted rain event.
- Develop inspection program for long-term operation and maintenance of BMPs. This is prepared and is listed under Post Construction BMPs of OEHS page of UAH Website: Long Term inspections include yearly inspection by Amiri Engineering Corporation QCP personnel to inspect the campus to evaluate if any deficiencies are present, which ay require corrective actions. Again, if during this inspection, deficiencies are noted, they will be reported to Facilities and Operations, Grounds and Landscaped Maintenance Group, for corrective actions.

Year 4:

- Implement inspection and enforcement program for post-construction structural and nonstructural BMP's.
- Begin post-construction audits of BMP effectiveness and incorporate any findings into the BMP specifications.
- Provide training for operations and maintenance staff for long-term site BMPs

Year 5:

- Implement procedures for transitioning long-term site BMPs into campus storm water inspection program.
- Implement procedures for the long-term operation and maintenance of BMPs.

OHES is the Department responsible for implementation of the above goals.

5.0 RECORD KEEPING

5.1 SWMP Updating

The SWMP will be reviewed annually and The University of Alabama in Huntsville will update the SWMP whenever a change in activities or operations occur which may significantly affect the discharge of storm water pollutants.

5.2 SWMP Public Access

This SWMP is meant for use by The University of Alabama in Huntsville staff and is a public document. Any request for a copy of the SWMP by the governmental agency, or citizen is to be forwarded to The University of Alabama in Huntsville, Office of Environmental, Health & Safety (OEHS), 301 Sparkman Drive, Huntsville, AL 35899.

5.3 SWMP Annual Reports

OEHS will complete and submit annual reports regarding the implementation of the SWMP and measurable goals to the ADEM Water Division.

Appendix B

7.01 Appendix 1

Campus Facility Information

Location Description

The University of Alabama in Huntsville campus is situated in Huntsville, Madison County. The facility is generally bounded by University Drive to the north, Interstate I565 to the south, Sparkman Drive to the west and residential neighborhoods to the east. However, as shown on the attached Campus Plan, a few of UAH buildings are situated to the west of Sparkman Drive.

Facility Operations

The University of Alabama in Huntsville employs skilled trades, grounds, and custodial staff for day to day operations. Typical duties include building maintenance, plumbing and electrical repairs, clogged sewer line clean-outs, and grounds maintenance.

Climate and Rainfall

Meteorological conditions at The University of Alabama in Huntsville are as follows:

Climate	Jan	Feb	Mar	Apr	May	June	July	August	Sept	Oct.	Nov.	Dec.
Avg. High °F	51	56	65	74	81	88	91	91	85	75	64	53
Avg. Low °F	32	35	42	50	50	67	70	69	62	51	42	34
Avg. Precipitation	4.88	4.84	5.2	4.33	4.33	4.29	4.06	3.62	3.7	3.58	4.92	5.79

Source: US Climate Data

Facility Drainage

There are over 100 point sources that discharge into the storm drain system from the campus. These point sources drain areas such as streets, parking lots, loading docks, roofs, landscaped areas and any other surfaces that receive rainwater. All of the point sources drain into the existing lakes which are situated to the immediately to the east of Sparkman Drive (i.e., western end of the campus). Flow from these lakes then discharges into the Unnamed Tributary to the McDonald Creek which is situated in the southwestern end of the campus.

Local Geology

The University of Alabama in Huntsville is underlain by Tuscumbia Limestone, which is of the Mississippian age. Tuscumbia Limestone is composed of coarsely crystalline, fossiliferous

limestone with small amounts of chert. The formation weathers to a deep soil mixed with chert boulders, which may be 12 inches or more in dimension.

Since the Tuscumbia is primarily a carbonate rock, it is subject to solutioning along both joints and bedding planes. The solutioning process tends to initially form vertical slots in the limestone. In many instances, the overlying residual soil is eroded downward into these vertical slots, which subsequently become filled with soft, wet cohesive soils. As a result, the surface of the rock in many instances is characterized by relatively hard blocks (or boulders) and pinnacles separated by soil filled slots. The overlying residual clay is derived from the solution weathering of the limestone strata. The soil mantle has a varying thickness from a few to 50± feet because of the irregular configuration of the underlying limestone.

The groundwater is poorly defined and subject to seasonal changes. Flow is often very slow and nonuniform. In limestone, the Geologic structure is the major influence on the movement of groundwater. The permeability of rock is generally increased by faulting and fracturing, which results in severe rock weathering in these areas. In this formation, the groundwater flows along the bedding planes and joints, resulting in solutioning of the limestone bedrock. The solution activity along the joints often produces deep vertical slots.

APPENDIX

POST CONSTRUCTION BMPs

University of Alabama in Huntsville (UAH) operates under the requirements of the Alabama Department of Environmental Management (ADEM) National Pollutant Discharge Elimination System (NPDES) Permit; and this permit authorizes stormwater discharges from regulated small municipal separate storm sewer systems (MS4); and UAH shall be compliant with the ADEM NPDES Permit by developing, implementing, and enforcing a program to address post-construction stormwater management.

UAH Post-construction stormwater management is established to prevent or minimize water quality impacts. The purpose of post-construction stormwater management (PSCWM) is to provide measures that will take place after construction occurs on a Qualifying Site (any development that disturbs more than one acre of land in total). These measures include Best Management Practices (BMPs), both structural and nonstructural which may include low impact development (LID) and green infrastructure practices (GIP). These measures will provide and maintain permanent stormwater management to prevent or minimize water quality impacts for the life of the property's use to the maximum extent practical (MEP).

Structural BMPs include, but are not be limited to detention/ retention devices, check dams, drainage swales, lined ditches, infiltration basins, porous pavement, outlet protection, velocity dissipation devices, slope protection, constructed wetlands, rain gardens, catch basin inserts, vegetated filter strips, and rain barrels.

Non-structural BMPs. Non-structural BMPs include preservation of open spaces and vegetation, establishment of conservation easements, establishment of buffers along streams and other waters, maintenance of vegetation, BMP inspection and maintenance, planning for future development or redevelopment.

The latest version of the "Alabama Handbook for Erosion Control, Sedimentation Control and Stormwater Management on Construction Sites and Urban Areas", Volumes 1 and 2. and the latest version of the "Low Impact Development Handbook for the State of Alabama". and Post-Construction Stormwater Management {PCSWM) are used as standard guidelines for UAH projects.

The PCSWM includes design procedures and strategies that will address and identify the specific PCSWM measures, to the MEP, that will remain after construction is completed for the life of the property's use. After completion of the projects, UAH Ground Maintenance Group is responsible for Post Construction maintenance and Inspection. Until site is considered to be stabilized and Grounds Management Director is responsible for inspection of the site every 14 days, or prior to any forecasted rain event and after every rain event of 0.5 inches in 24 hours. If any conditions are noted which may appear to cause erosion, measures shall be taken to mitigate the conditions. In addition, an inspection by QCP after every rain event of 0.75 inch in 24 hour period, or one inspection per month, whichever is less shall be performed of Post Construction sites until that site is considered to be well stabilized.

If any Post Construction conditions are noted during the inspections which may requires more extensive efforts that ground Maintenance Group can address, UAH Campus Architect and Environmental Consultant will be consulted to address such conditions.

Alabama Stormwater Association

"Post-Construction Stormwater Management: Getting Started & Sustaining Success"

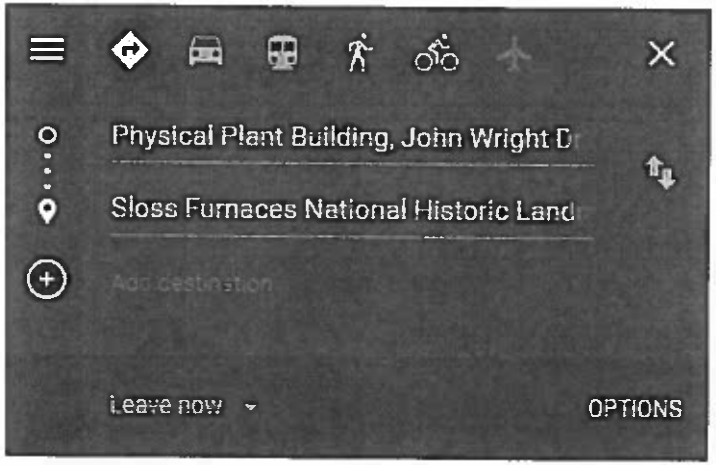
August 15, 2019
Sloss Furnaces National Historic Landmark
20 32nd Street North, Birmingham, AL 35222

10:00 a.m.	Registration & Seating
10:10 a.m.	**Welcoming** Speaker: Joshua Yates, CFM - City of Birmingham
10:20 a.m.	**Overview of Post-Construction Requirements in MS4 Permits** Speaker: Cammie Ashmore - ADEM
10:50 a.m.	**Alabama State Revolving Fund & Green Infrastructure Funding Opportunities** Speaker: Kris Berry, PE - ADEM
11:10 a.m.	**Hydrologic Impacts of Development in the Cahaba River Watershed** Speakers: Beth Stewart & Randy Haddock, PhD - Cahaba River Society
11:40 a.m.	Lunch *(provided)* / ASA Business Update / Announcements
12:30 p.m.	**Post-Construction Stormwater Management in the City of Tuscaloosa** Speaker: Case O'Dell, CPESC - City of Tuscaloosa
1:00 p.m.	**Developing & Implementing Municipal Post-Construction Ordinances** Speaker: Mary Halley, PE - Wood Discussion Moderator: Scott Hofer - Jefferson County Dept. of Health
2:00 p.m.	Adjournment
2:15 p.m.	*Tour of Railroad Park (tentative)*

Seminar Moderator: Scott Rogers, PhD, PE, CPMSM - ALDOT

Thanks to our lunch sponsors (listed alphabetically from left to right below) for their contributions!
City of Gadsden S&ME, Inc. Volkert, Inc. Wood

*Thanks to the **City of Birmingham** for providing our seminar facility!*



Send directions to your phone

via I-65 S — 1 h 38 min
Fastest route, the usual traffic — 100 miles
DETAILS

via US-231 S — 2 h 4 min
106 miles

via US-231 S and AL-79 S — 2 h 6 min
98.3 miles

Explore Sloss Furnaces National Historic Landmark

Restaurants Hotels Gas stations Parking Lots More

THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

STORMWATER MS4 PLAN COMPLIANCE

Number 07.07.25

Division Office of Environmental Health and Safety

Date 2020

Purpose To ensure UAH is in compliance with the NPDES Phase II MS4 Stormwater Management Plan submitted to and accepted by the Alabama Department of Environmental Management.

Policy It is the policy of UAH that the most recent revision of the UAH NPDES Phase II Storm Water Management Plan (MS4) must be followed by all members of the UAH community including staff, faculty, and students at all times.

Review The Office of Environmental Health and Safety (OEHS) is responsible for the review of this policy every five years (or whenever circumstances require).

Approval

_____

Vice President for Research and Economic Development

_____

Office of Counsel

_____

Campus Designee

_____

President

3/25/20 Storm water meeting

Attendees - Zoom Meeting, no sign in.

- Kristy Olive
- Q Jones
- Hannah Upton
- Tony Davis
- Tony Toleton?
- Daniel Bautell
- Christian Reed
- Scott Royce
- Justin Thompson logged in late

(Post construction Audit)

Nassar to develop checklist for BMPs - 4.3.6
- Christian said yes - as long as we can review

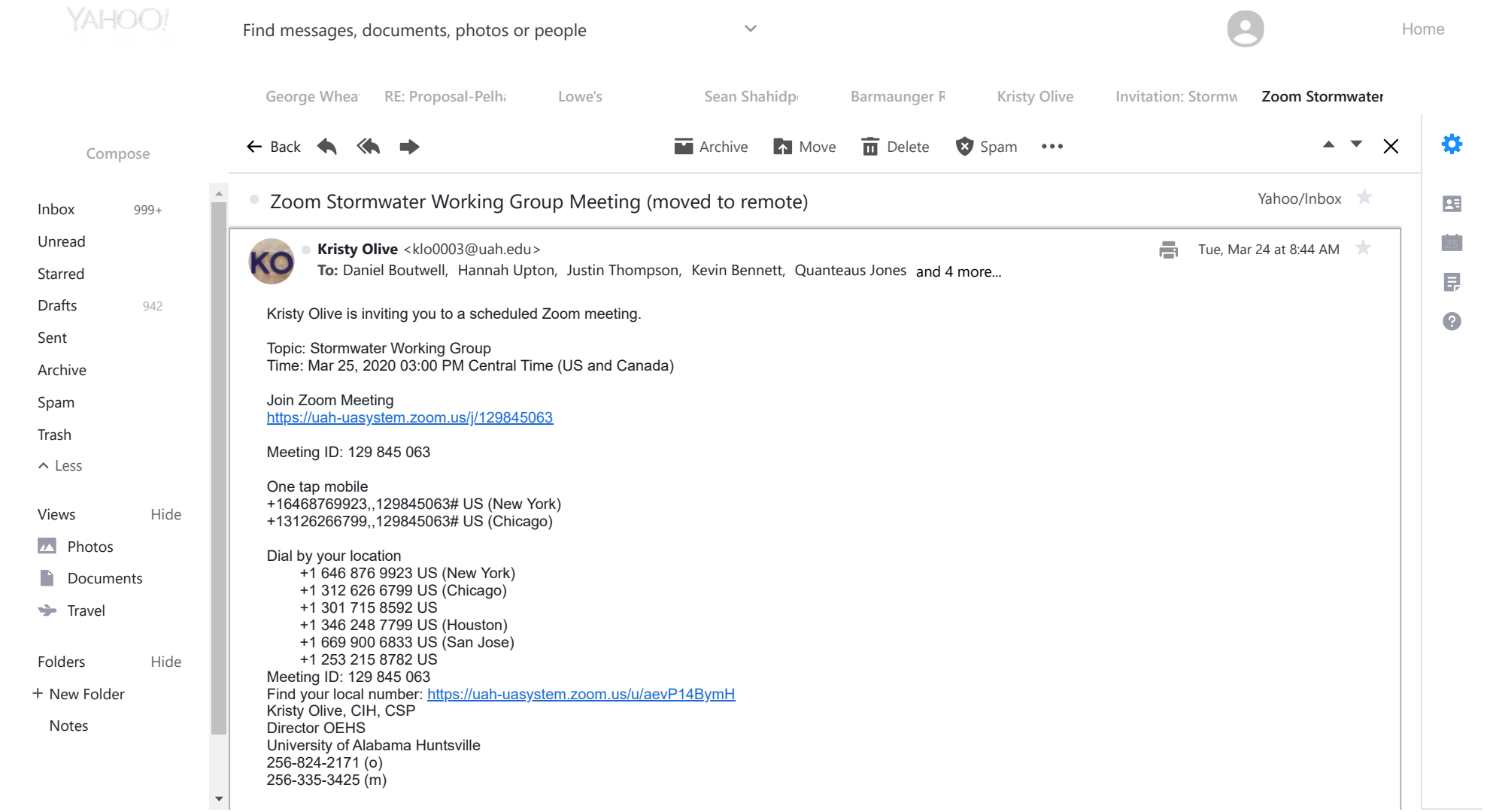
- need a time for when stormwater responsibilities are handed over to grounds / maintenance / facilities
  - Christian says 30 days

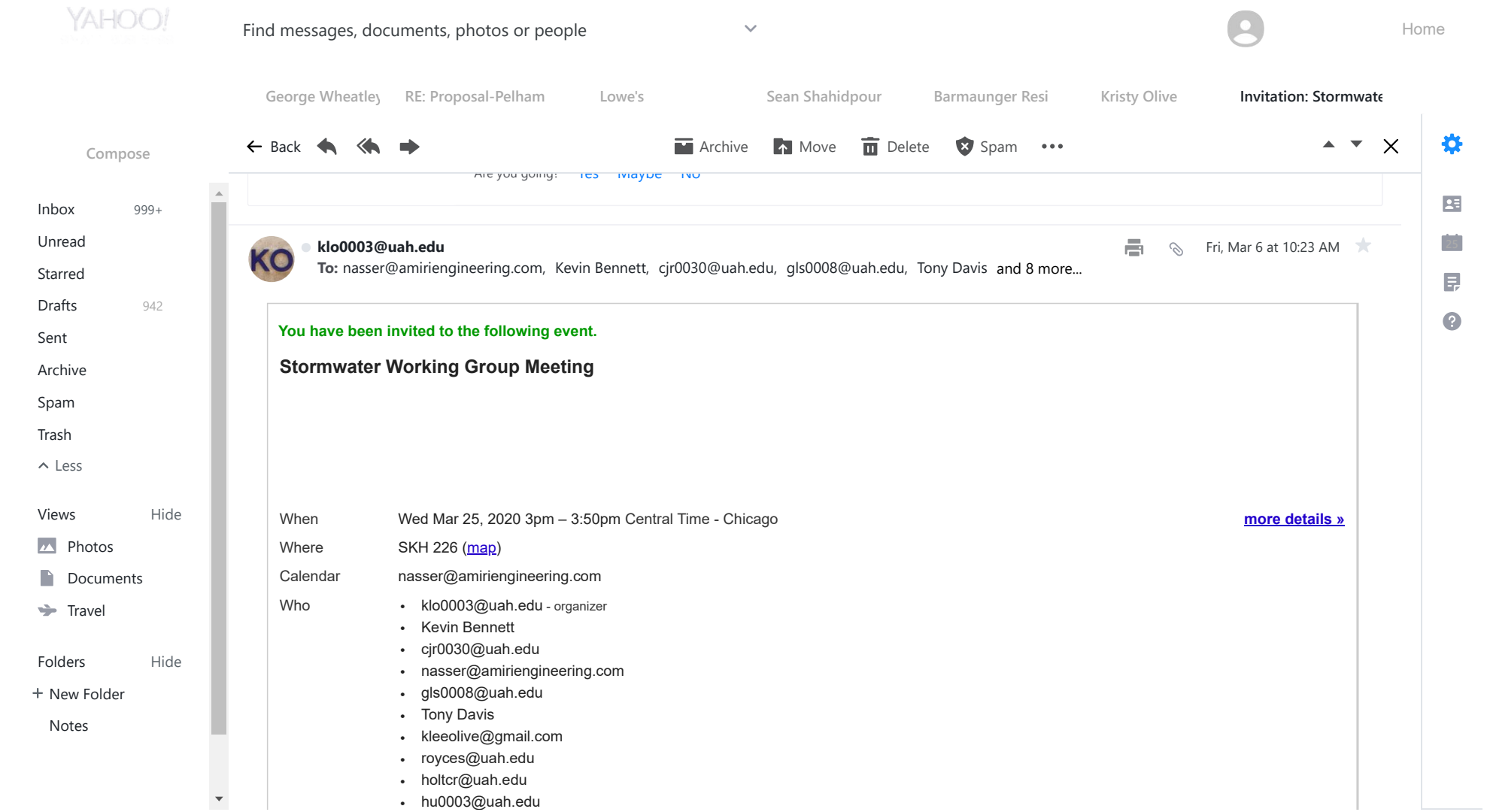
Justin & Tony to reword statement on when buildings are turned over to UAH from contractors
- due May 1st

- Group agreed to enforcement progression for employees
- for contractors - add in report them to ADEM
  Nassar will add to report

Stormwater Plan & Illicit Discharge training was covered

Kristy Olive 3/25/20


YAHOO!
Find messages, documents, photos or people
Home
George Whea
RE: Proposal-Pelh
Lowe's
Sean Shahidp
Barmaunger R
Kristy Olive
Invitation: Stormw
Zoom Stormwater
Compose
Back
Archive
Move
Delete
Spam
Inbox 999+
Unread
Starred
Drafts 942
Sent
Archive
Spam
Trash
Less
Views Hide
Photos
Documents
Travel
Folders Hide
New Folder
Notes
Zoom Stormwater Working Group Meeting (moved to remote)
Yahoo/Inbox
KO
Kristy Olive <klo0003@uah.edu>
To: Daniel Boutwell, Hannah Upton, Justin Thompson, Kevin Bennett, Quanteaus Jones and 4 more...
Tue, Mar 24 at 8:44 AM
Kristy Olive is inviting you to a scheduled Zoom meeting.
Topic: Stormwater Working Group
Time: Mar 25, 2020 03:00 PM Central Time (US and Canada)
Join Zoom Meeting
https://uah-uasystem.zoom.us/j/129845063
Meeting ID: 129 845 063
One tap mobile
+16468769923,,129845063# US (New York)
+13126266799,,129845063# US (Chicago)
Dial by your location
+1 646 876 9923 US (New York)
+1 312 626 6799 US (Chicago)
+1 301 715 8592 US
+1 346 248 7799 US (Houston)
+1 669 900 6833 US (San Jose)
+1 253 215 8782 US
Meeting ID: 129 845 063
Find your local number: https://uah-uasystem.zoom.us/u/aevP14BymH
Kristy Olive, CIH, CSP
Director OEHS
University of Alabama Huntsville
256-824-2171 (o)
256-335-3425 (m)


YAHOO!
Find messages, documents, photos or people
Home
George Wheatley
RE: Proposal-Pelham
Lowe's
Sean Shahidpour
Barmaunger Resi
Kristy Olive
Invitation: Stormwate
Compose
Back
Archive
Move
Delete
Spam
Inbox 999+
Unread
Starred
Drafts 942
Sent
Archive
Spam
Trash
Less
Views Hide
Photos
Documents
Travel
Folders Hide
New Folder
Notes
klo0003@uah.edu
To: nasser@amiriengineering.com, Kevin Bennett, cjr0030@uah.edu, gls0008@uah.edu, Tony Davis and 8 more...
Fri, Mar 6 at 10:23 AM
You have been invited to the following event.
Stormwater Working Group Meeting
When Wed Mar 25, 2020 3pm – 3:50pm Central Time - Chicago
more details »
Where SKH 226 (map)
Calendar nasser@amiriengineering.com
Who
klo0003@uah.edu - organizer
Kevin Bennett
cjr0030@uah.edu
nasser@amiriengineering.com
gls0008@uah.edu
Tony Davis
kleeolive@gmail.com
royces@uah.edu
holtcr@uah.edu
hu0003@uah.edu

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Kristy Olive <klo0003@uah.edu>

2019 Fall Week of Welcome Event Confirmation: Stormwater Awareness

5 messages

Nikki Goode <nikki.goode@uah.edu> Thu, Aug 1, 2019 at 8:45 PM
To: Kristy Olive <klo0003@uah.edu>

Thank you for your 2019 Fall Week of Welcome event submission. This email serves as confirmation of Stormwater Awareness / Red Cross CPR Awareness taking place on Thursday, 8/22/2019. This event is scheduled to be hosted from 10:00 AM to 2:00 PM at the following location: CGU Breezeway.

Below is a copy of the event description submitted for the website and printed materials:

The stormwater awareness program at UAH has been a staff led process, but is switching gears and looking for student involvement. Everyone enjoys our Alabama waterways, rivers, and creeks, but protecting that stormwater takes everyone. Share your ideas to raise awareness throughout the UAH campus and Huntsville community. Snacks and door prizes will be provided. Students will also be able to learn how to sign up for a CPR/AED class provided through the OEHS department.

Please review the details and description of your event carefully and let us know if there are any changes you wish to make no later than Wednesday, August 7, 2019.

While your event location has been reserved, you must submit the following information for your event (if applicable) to Charger Events by Wednesday, August 7, 2019:

AV Request Form
Setup Request Form **CHARGER UNION & CTC EXHIBIT HALL EVENTS ONLY** *(please specify table and chair arrangements)*
Outdoor Event Form **ONLY NEEDED IF YOUR EVENT IS TAKING PLACE OUTDOORS IN LOCATION OTHER THAN CHARGER UNION**

You can find png files of the WOW logo here. So that all WOW events can be easily identified, please include the WOW logo on any marketing (print and social media) you do for this specific event.

The Student Life Office will be responsible for marketing your event in the following ways:

Student Events Calendar & WOW Website
WOW Events will be submitted to the events calendar and WOW website on your behalf. These will appear on Monday, August 12th. If you have a specific graphic you would like to have used, please email the graphic, sized to the proper dimensions (720 px x 405 px), by Wednesday, August 7th to nikki.goode@uah.edu.

Charger Student Newsletter
Friday, August 16th, an email will be sent at 12:30 p.m. that will list all WOW events. Beginning Saturday, August 17th - Saturday, August 24th, an email will be sent each morning at 8 a.m. with the daily events to all UAH student emails.

Toilet Paper
A listing of all WOW Events will be on the weekly TP found in most campus restrooms.

Social Media
Daily event reminders will post each morning at 8 a.m. to the Student Life Facebook, Instagram, and Twitter accounts (@uahstudentlife).

When making your own social media posts for your events, please make sure to tag UAH Student Life (@uahstudentlife) and also use the WOW hashtag (#UAHWOW19). If you are using Snapchat, there will also be a Snapchat WOW filter as well.

Again, thank you for taking the time to plan and host an event for the 2019 Fall Week of Welcome. We appreciate your dedication to this annual campus wide initiative and look forward to a successful event!

Nikki Goode
Director of Student Life
The University of Alabama in Huntsville
201 Charger Union
Huntsville, AL 35899
256-824-4739: Voice
256-824-4883: Fax
nikki.goode@uah.edu
http://www.uah.edu/campus-life/student-involvement

Kristy Olive <klo0003@uah.edu> Fri, Aug 2, 2019 at 8:00 AM
To: Justin M Thompson <jmt0022@uah.edu>, Hannah Upton <hu0003@uah.edu>, Paul Patterson <patterpl@uah.edu>

WOW event

Kristy Olive, CIH, CSP
Interim Director
UAH-Office of Environmental Health and Safety
256-824-2171
[Quoted text hidden]

Kristy Olive <klo0003@uah.edu> Mon, Aug 5, 2019 at 8:19 AM
To: Kristi Dendy <krd0015@uah.edu>, Hannah Upton <hu0003@uah.edu>

Kristi - This is for the Week of Welcome event. Can you take care of the set up forms attached to her email?

Hannah - Can you take care of the scavenger hunt set up?

I will follow up on trying to get that Staples contact. Melanie tried too and she was also unsuccessful.

Thanks,
Kristy

Thanks,
Kristy

Kristy Olive, CIH, CSP
Interim Director
UAH-Office of Environmental Health and Safety
256-824-2171

---------- Forwarded message ---------
From: **Nikki Goode** <nikki.goode@uah.edu>
Date: Thu, Aug 1, 2019 at 8:46 PM
Subject: 2019 Fall Week of Welcome Event Confirmation: Stormwater Awareness
To: Kristy Olive <klo0003@uah.edu>

[Quoted text hidden]

Kristy Olive <klo0003@uah.edu> Thu, Aug 22, 2019 at 7:37 AM
To: Hannah Upton <hu0003@uah.edu>, Kristi Dendy <krd0015@uah.edu>, Paul Patterson <patterpl@uah.edu>, Justin M Thompson <jmt0022@uah.edu>

Here are the details on the Week of Welcome event today.

Kristy Olive, CIH, CSP

Interim Director
UAH-Office of Environmental Health and Safety
256-824-2171

---------- Forwarded message ---------
From: **Nikki Goode** <nikki.goode@uah.edu>
Date: Thu, Aug 1, 2019 at 8:46 PM
Subject: 2019 Fall Week of Welcome Event Confirmation: Stormwater Awareness
To: Kristy Olive <klo0003@uah.edu>

[Quoted text hidden]

Kristy Olive <klo0003@uah.edu> Thu, Aug 22, 2019 at 7:42 AM
To: Kristi Dendy <krd0015@uah.edu>

Since we have the booth covered in shifts, you can just go over and set your stuff up and then you can come back at 1:45 to help take it all down. I don't think it's necessary to have 2 people at the booth since it's just informational for the most part.

Thanks,
Kristy
[Quoted text hidden]

TOPIC: Stormwater Level II for Facilities & SPCC Review		Training Date: 5/1/19
Location: PPB Training Room		Time: 9:15 am
Instructor: Hannah Upton		
Print Name	**Signature**	**Department**
Allen Butler		HVAC
Kirk Elliott		HVAC
Larry Satterfield		HVAC
Josh Sisco		HVAC
DAVID FULLER		HVAC
Jeremy Mitchell		HVAC
TD Bingham		Plumbing
Ricky Dempsey		Electrical
Keith West		Electrical
John Swearengan		Plumbing
Ricky Morring		Electrical
Tim Hughes		Electrical
Paul Brandon III		Electrical

Year 3 training referenced in 4.3.3 & 4.3.4

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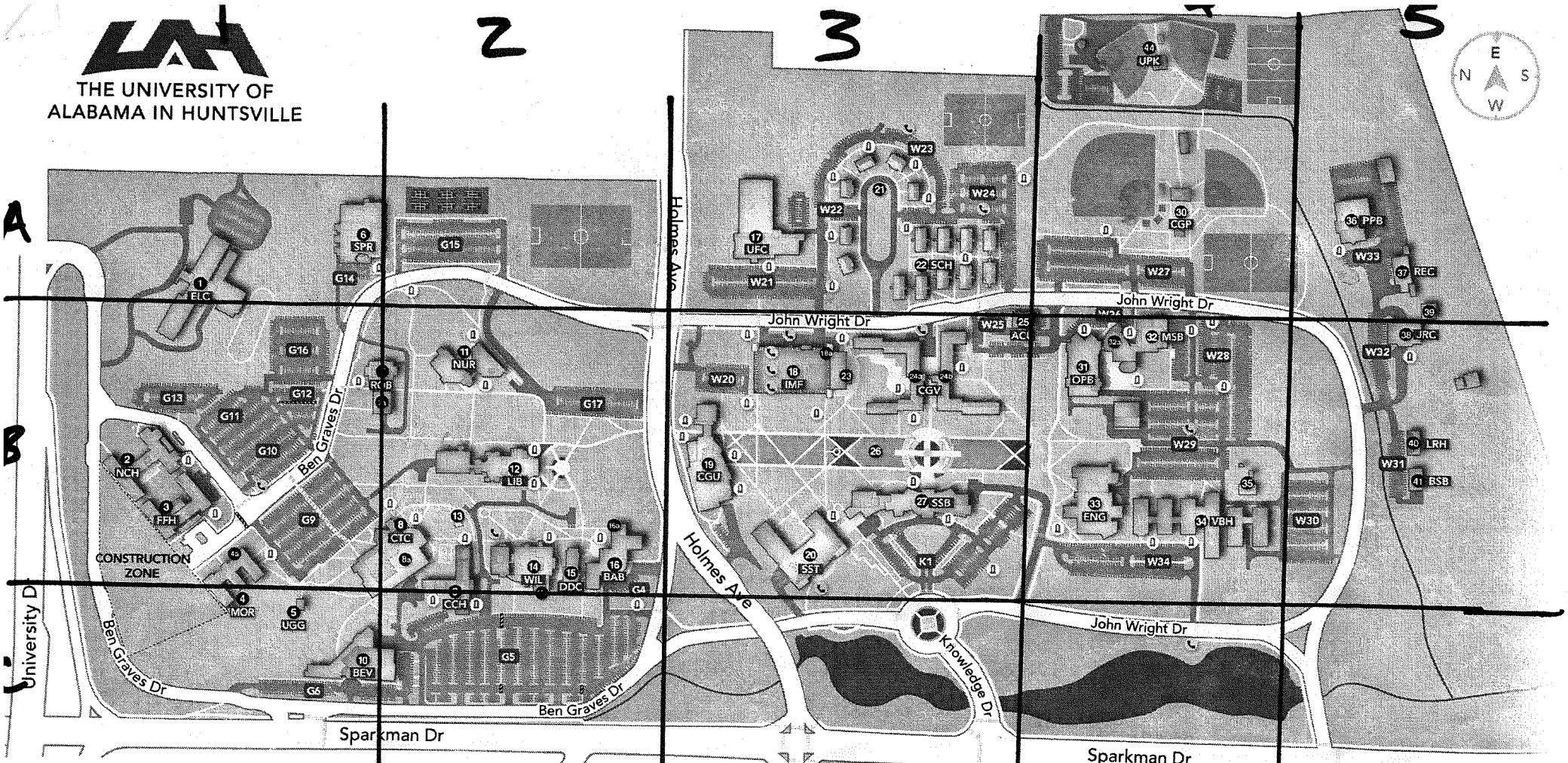

1. ELC Early Learning Center
2. NCH North Campus Residence Hall
3. FFH Frank Franz Hall
4. MOR Morton Hall
4a. Studio 106/Black Box Theatre
5. UGG Union Grove Gallery and Meeting Hall
6. SPR Spragins Hall
7. ROB Roberts Hall
7a. Roberts Recital Hall
8. CTC Conf. Training Center/Charger Café
8a. Exhibit Hall
9. CCH Central Campus Residence Hall
10. BEV Bevill Conference Center & Hotel
11. NUR Nursing Building
12. LIB M. Louis Salmon Library
13. Amphitheater
14. WIL Wilson Hall/Disability Support
14a. Wilson Theatre

Executive Plaza *(not to scale)*
- Tenant Parking
- UAH Permit Parking

Bike Rack
Emergency Phone

15. DDC D.S. Davidson Invention to Innovation Center (I2C)
16. BAB Business Administration Bldg
16a. Chan Auditorium
17. UFC University Fitness Center
18. IMF Intermodal Parking Facility
18a. Public Safety
19. CGU Charger Union
20. SST Shelby Center for Sc. and Techn.
21. Greek Row
22. SCH Southeast Campus Housing
23. Charger Village Food Court
24. CGV Charger Village
25. ACU Alabama Credit Union
26. University Greenway
27. SSB Student Services Bldg./Admissions/ Campus Visits
28. CRH Robert "Bud" Cramer Research Hall (NSSTC and NOAA Weather Forecasting Office)

For additional information visit our website at www.uah.edu

29. SWI SWIRLL (Severe Weather Institute and Radar & Lightning Laboratories)
30. CGP Charger Park
31. OPB Optics Building
32. MSB Materials Science Building
32a. McDonnell Douglas Auditorium
33. ENG Engineering Building
34. VBH Wernher von Braun Research Hall
35. VBH Annex
36. PPB Physical Plant Building
37. REC Central Receiving and Shipping
38. JRC Johnson Research Center
39. Propulsion Research Lab
40. LRH WLRH Radio Station
41. BSB Business Services Bldg./Copy Center
42. SKH Shelbie King Hall
43. OKT Olin B. King Technology Hall
43a. Oak Ridge-Huntsville Partnership
44. UPK University Park

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UAH oehs <oehs@uah.edu>

Scavenger

UAH oehs <oehs@uah.edu> Thu, Aug 22, 2019 at 3:14 PM
To: Mason Shepherd <mks0024@uah.edu>
Cc: Hannah Upton <hu0003@uah.edu>, Paul Patterson <patterpl@uah.edu>, Justin Thompson <jmt0022@uah.edu>, Kevin Bennett <bennetkl@uah.edu>

Congratulations! You are the first finisher of the Stormwater Scavenger Hunt! I will contact you and any other winners tomorrow to let you know how to pick up your Dominoes Gift Card.

Thank you,
Kristy Olive
256-924-2171
[Quoted text hidden]
--
The Office of Environmental Health & Safety
301 Sparkman Drive
Huntsville, AL 35758
256 - 824-3537
http://www.uah.edu/oehs

UEHS
OFFICE OF ENVIRONMENTAL HEALTH AND SAFETY

THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

UAH oehs <oehs@uah.edu>

Scavenger

Mason Shepherd <mks0024@uah.edu> Thu, Aug 22, 2019 at 1:52 PM
To: "oehs@uah.edu" <oehs@uah.edu>

Sent from my Windows 10 device

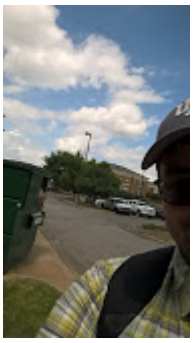
5 attachments

WP_20190822_13_30_37_Pro.jpg
1212K

WP_20190822_13_23_50_Pro.jpg
1085K

WP_20190822_13_20_29_Pro.jpg
1421K

WP_20190822_13_38_38_Pro.jpg
1165K



WP_20190822_13_50_20_Pro.jpg
919K

Stormwater Intern

1. Retype MS4 Plan
   - update Contacts
2. Make a list of Year 3 tasks in a spreadsheet
   - report on current status of all items
3. Attend SW Mtgs - if schedule allows
4. Put together schedule for implementing Year 3 tasks
5. Accomplish 1 task per week + request resources if needed.
6. **Get SW Annual Report Uploaded**

EXHIBIT NO. 8
PERSONNEL TRAINING LOG

Name	Response Training/Topics	Date and Number of Hours
Fabian LaPalme	Rain Events – No problems	10/7/19
Fabian LaPalme	Rain Event – No problems	10/16/19

Storm water Meeting 5/16/19

Scott Royce	royces@uah.edu	6235
Paul Patterson	paul.patterson@uah.edu	2547
JUSTIN THOMPSON	JUSTIN.THOMPSON@UAH.EDU	2410
Taylor Myers	taylor.myers@uah.edu	2545
Kevin Bennett	kevin.bennett@uah.edu	6875
Hannah Upton	HU0003@uah.edu	6053

* Charge union soapy water

Stormwater Working Group
June 20, 2019 3pm

Kristy Olive
Paul Patterson
Hannah Upton
Scott Royce

- Stormmapping project complete
  H. Upton & J Davenport finished it.
- Scott Royce - more ten year storms
- Drain issue reported @ ENG Loading Dock. → Drain is too small 10 x 10. → grounds tries to clear it before rain.
- Cramer Hall has same problem.
- Scott Royce suggested a different grate design. - Paul unreceived it. Dome shaped cover.
- Stormwater intern.
- 4 imprint → Disc golf discs for publicity event.
- long range - Paul Patterson - working w/ M°Annally on dredging of lake.
- Survey → lost 25% of carrying capacity of lake.

Quarterly Stormwater Working Group Meeting

August 1, 2019 3:00 pm

Print	Sign
Kristy Olive	Kristy Olive
Justin Thompson	
Paul Patterson	
Hannah Upton	Hannah Upton

1. Greg Smith Update on coordination with city.
2. John McCloud's suggestion on the Campus Rainworks Challenge.
3. Week of Welcome Table Sign up
4. List of outstanding items from Annual Report
5. Items for next year

Week of Welcome Table

10:00

11:00

12:00

1:00

2:00

Quarterly Stormwater Working Group Meeting

August 1, 2019 3:00 pm

Print	Sign

1. Greg Smith Update on coordination with city. – met w/ City rep & they trying to work up rock solution.
2. John McCloud's suggestion on the Campus Rainworks Challenge. → Civil – Alhamdan
3. Week of Welcome Table Sign up →
4. List of outstanding items from Annual Report
5. Items for next year → Ask Melanie (frisbees) Service order..

Week of Welcome Table

10:00 Kristy
11:00 Hannah
12:00 Paul
1:00 Justin
2:00

pizzas? (voucher) (food donated by Sodexo

→ Optics Parking lot drain in need man

→ drain @ CTC

→ drain around Charger Union

→ SSB greenway

Stormwater Annual Report Data - Part Deux - 4.3.4, 4.3.5, 4.3.6

Yahoo/Inbox

Kristy Olive <klo0003@uah.edu>
To: Nasser Amiri, Hannah Upton, Justin Thompson, Quanteaus Jones, Jalon Gary and 1 more...

Tue, Mar 24 at 11:49 AM

Nasser -

This is the second email containing the proposed OEHS Annual Reporting Data. If you see gaps, please let me know and we will do our best. The limiting factors right now are that our policies have to go through the official UAH review process and that we have very limited on-campus operations right now. If you need more backup, I'll see what I can do.

4.3.3 Begin implementation of Storm Water Pollution Prevention Plan for major Campus Operations.

Pollution Prevention BMP's from Year 2 have been continued. We had major turnover in the Facilties and Operations department with a new Director of Fleet, Grounds, Utilities and Energy Management, and a new Senior Architect. This year we focused on continuing what we had been doing the year before. OEHS plans to include formalizing the SWPP reporting in the March Stormwater working group meeting. The goal will be to get a quarterly report on SWPP from each of the major facilities departments. However since these directors hired in during January and February and then the Covid crisis hit in March, we have not advanced this process since last year - only maintained.

The Stormwater Intern has drafted an inspection program for compliance with BMP's as illustrated in 4.3.3. The same attachments apply. During the next MS4 year, we will work to tailor this inspection assessment tool to the Facilities departments affected to aid in reporting.

Continue Sump Grate Cleaning schedule - this has been continued in normal Grounds Dept. Operations. No changes were made this year.

4.3.5 - This one's yours, Nasser.

I propose that our enforcement for contractors be 1. Verbal Warning and email to Senior Architect and purchasing, 2. Report to Sr. Architect and purchasing for Warning Letter to contractor 3. Report to office of Counsel, purchasing, and senior architect and proceed to evict from job site.

4.3.6

Training on Post Construction BMP Site Planning, design, Implementation and inspection/enforcement protocols will be conducted by Zoom meeting in the month of April by Kristy Olive based on this plan to Justin Thompson, Christian Reed, Jeff Gibish and Tony Davis. Due to Covid Crisis, we will be flexible in scheduling catching as many as possible at a time.

Information for Stormwater Report - 4.3.1, 4.3.2, and 4.3.3

Yahoo/Inbox

Kristy Olive <klo0003@uah.edu>
To: Nasser Amiri
Cc: Justin Thompson, Hannah Upton, Scott Royce, Quanteaus Jones, Jalon Gary

Tue, Mar 24 at 11:28 AM

4.3.1 - Year 3 - Student Educational Materials Distribution -Document 1 -4

These documents and photos show a Week of Welcome Event sponsored by OEHS and the Stormwater Working Group. There was an exhibit as seen in the photo of the booth that showed Stormwater areas of concern and then a scavenger hunt was held to increase student engagement. The email where the winner sent in his scavenger hunt photos as well as the email where he was told he won are also attached. In addition, a stormwater intern was hired and one of his work products along with one of his task lists is attached for documentation.

This supports two bullets under 4.3.1 - Distribute educational materials to students and Sponsor an event. We sponsored this event in conjunction with the UAH Week of Welcome.

Hannah has already sent in the ARCGIS map that shows our most current status on the campus storm drains. Jake Davenport, Kristi Dendy, Hannah Upton, and Kristy Olive finished putting out storm drain markers last summer. In addition, we had a Stormwater Intern, Fabian LaPalme in the fall who continued monitoring the storm drain medallions and replacing if needed.

5 attachments.

4.3.2 Public Involvement/Participation - Year 3

Hannah Upton has attended the Alabama Stormwater Association meetings and brought back the information to us. This supports the first bullet - Participate in campus storm water pollution prevention events. Her expense report is attached to document attendance. If you need the agenda, let me know.

The stormwater working group continued to convene in 2019 in May and June before switching to a proposed quarterly schedule. The November meeting was cancelled because of low attendance and the February meeting did not meet due to OEHS moving offices and Facilities hiring new people for the majority of their Director positions. The next meeting is scheduled via Zoom on 3/25/20 due to the shutdown of campus due to Covid-19. The sign-in sheets for the May, June, and August meetings are attached. We have contacted the new Facilities Directors for new designees and should be staffed back up on the working committee.

2 attachments