STORMWATER SAFETY 2020 TRAINING

POLICIES, PROCEDURES AND IMPLEMENTATION OF BMPS REVIEW
ILLICIT DISCHARGE ELIMINATION SOP TRAINING

ENVIRONMENTAL HEALTH AND SAFETY

HOW CAN POLLUTION OCCUR?

- EROSION
  - SEDIMENT—SOIL PARTICLES DETACHED (DURING EROSION PROCESS)
  - ORGANIC MATTER
- GROUNDS/MAINTENANCE
  - GREEN WASTE
  - FUEL
  - OIL
  - PESTICIDES
  - HERBICIDES

UPDATES TO STORMWATER 2020

- RESULTS OF LAST ADEM ANNUAL AUDIT
- NEW SOP FOR ILLICIT DISCHARGE DETECTION AND ELIMINATION AND DRY WEATHER INSPECTION PROCEDURE

RESULTS OF ANNUAL ADEM AUDIT

- NO CITATIONS
- RECOMMENDATIONS FOR THE COMING YEAR
  - FORMALIZE SOP FOR ILLICIT DISCHARGE DETECTION AND ELIMINATION
  - DEVELOP QUANTITATIVE (NUMERICAL) MEASURES INSTEAD OF QUALITATIVE MEASURES
  - ENSURE ACTIVITIES THAT ARE DONE BY F&O GROUPS ARE DOCUMENTED – THROUGH WORK ORDER OR OTHER MEANS

NEW SOP IF IDDE AND DRY WEATHER INSPECTION

THE UNIVERSITY OF
ALABAMA IN HUNTSVILLE
Office of Environmental Health & Safety

PROCEDURE NAME:	**Illicit Discharge Detection and Elimination and Dry Weather Inspection Procedure**
REVISION:	Revision 1
LAST REVISION DATE:	8/31/20
CATEGORY:	Environmental
DESCRIPTION:	The goal of this control measure is to develop and implement a plan to identify and eliminate non-stormwater discharges to the storm drain system.
CREATED BY:	Kristy Olive
DATE CREATED:	10/1/20
REVISION FREQUENCY:	Annual

DRY WEATHER MONITORING

PROCEDURE DETAILS:	**Dry Weather Monitoring:** • Visual Dry weather monitoring of at least 50% of outfalls and storm drains will be conducted each year to insure that all outfalls are inspected every 2 years. • Two outfalls have been identified on campus. • If any priority areas are identified they will be screened at least once a year. • A grid system will be used at least quarterly to monitor the existing storm drains and outfalls for potential illicit discharges and the results of this monitoring will be reported to the Director of OEHS for corrective action or improvement. See Appendix A for Grid and Checklist.

DISCHARGE REPORTING

Discharge Reporting:

- If an illicit discharge is observed by a member of the UAH community, the discharge should be reported to the UAH OEHS at 256-824-2171 during normal operating hours and to UAH PD at 256-824-6911 after hours and on weekends. These numbers are found at www.UAH.edu/OEHS and www.UAH.edu/Stormwater.
- If the discharge is reported to UAH PD, they will contact the OEHS representative on-call and the UAH AVP of Facilities and Operations or his/her Manager on Duty will serve as a backup if no OEHS personnel are available.

- OEHS will work with F&O to trace the illicit discharge and develop a plan of corrective action using resources available including outside vendors if needed.
- If it is determined that a student, employee, or contractor is responsible for the source of the illicit discharge, the following steps will be implemented:
  - Report to Supervisor or Dean of Students and Retraining on Stormwater and illicit discharge
  - Initiate the disciplinary process for the category of individual as follows:
    - Staff will be subject to the Disciplinary Process for Violation of a UAH Policy as presented in the UAH Staff Handbook.
    - Faculty will be subject to the Disciplinary Process for Violation of a UAH Policy as presented in the UAH Faculty Handbook.
    - Students will be referred to the Dean of Students for the Student Disciplinary Process.
    - Contractors will be reported to the AVP of Facilities and Operations and Procurement for violating a UAH Policy.
- If a student, employee, or contractor is found to have deliberately and knowingly engaged in illicit discharge, a report will be made to UAH PD for possible criminal investigation.

TRACING ILLICIT DISCHARGE

racing Illicit Discharges:

- Selection of tracing techniques will depend on the type of illicit discharge detected, information collected during the initial discover period, observation, and the resources/technology available.
- Typical Tracing Techniques:
  - Visual Observation
  - Dye testing
  - Smoke testing

  - Sample Collection
  - Televising

TRANSITORY OR INTERMITTENT DISCHARGES

Transitory or intermittent discharges:

- When an illicit discharge is identified through inspection, complaint or notice to the UAH PD or OEHS, follow-up investigation may indicate that this is a transitory or intermittent discharge that is not always present. These discharges fall into two categories:
  - Potential source identified if the source was identified doing the first investigation, the site and nearby storm drain system should be visually inspected. If necessary, dye testing, smoke testing, or continuous monitoring should be implemented to identify whether the suspect site was the source of the illicit discharge.
  - If no source is suspected and only the general area of the illicit discharge is known, visual inspection will be used to attempt to find the source. If this catch basin, manhole inspection attempt is unsuccessful, interim steps will be taken to capture the water from the intermittent discharge if possible. This may include sand bagging, damming, or block testing the storm drain access point. These can help identify the source of the discharge. If not, it may have been a transitory or one time discharge and should be recorded in the annual report.

CONTINUOUS DISCHARGE

Continuous Discharge:

- The primary difference between tracing a continuous discharge and a transitory discharge is that sandbagging and weirs are not required for a continuous discharge. Visual inspection should identify the source of the flow. If visual inspection fails, televising, smoke testing or sample collection may be warranted.

PERMITTED DISCHARGE

Permitted Discharge:

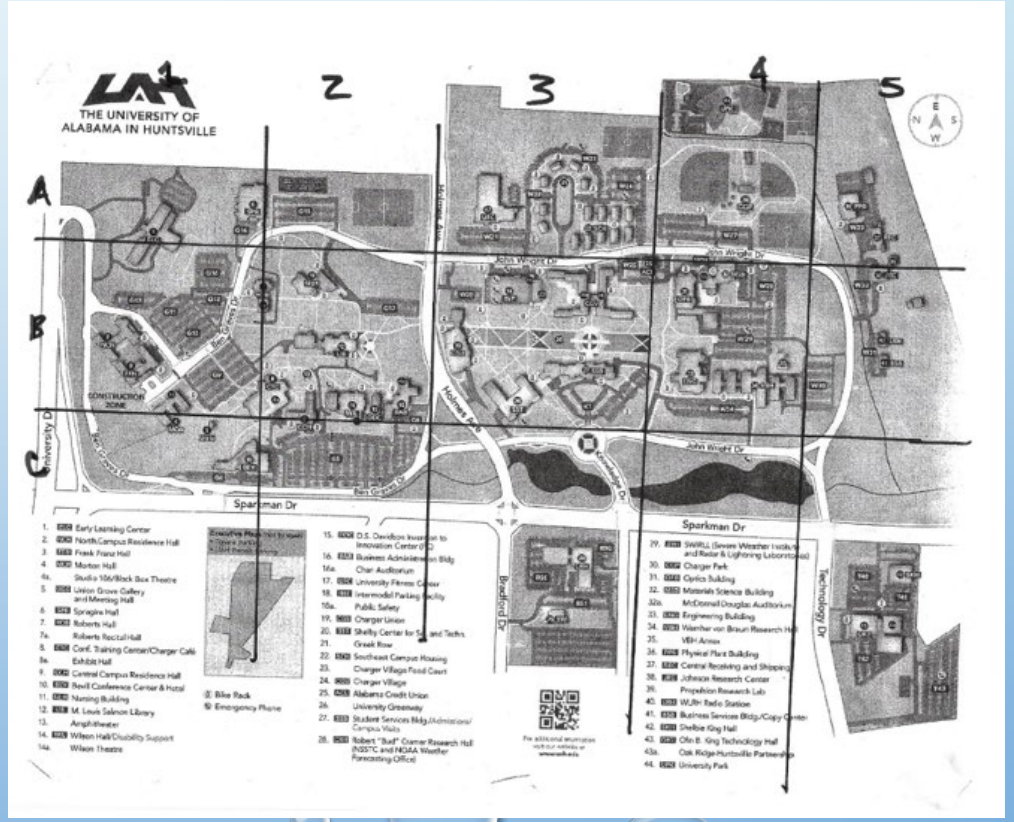
- Illicit discharge is identified as any illegal discharge to the storm drain/outfall system. The following fall under the permit and are not considered Illicit:
  - Water line flushing
  - Diverted stream flows
  - Uncontaminated pumped groundwater
  - Foundation drains
  - Irrigation water
  - Springs
  - Footing drains
  - Individual residential car washing to include charitable carwashes
  - Discharge or flows from firefighting activities
  - De-chlorinated swimming pool discharges
  - Landscape Irrigation
  - Uncontaminated ground water infiltration
  - Discharges from potable water sources
  - Air conditioning condensate
  - Rising ground water
  - Water from crawl space pumps
  - Lawn watering runoff
  - Residential street wash water
  - Flows from riparian habitats and wetlands
  - Discharges from authorized and in-compliance with a separate NPDES permit such as a construction project.

TRAINING

- Training
  - Each year OEHS will request from the Department Directors in Facilities and Operations and the Director of Residence Life a list of employees whose work is impacted by the Illicit Discharge Procedures.
  - OEHS will offer train the trainer sessions for the supervisors in these areas and will offer department training if staffing and resources are available.
  - OEHS will maintain record of the training and compare it to the list of employees provided by the directors. The percentage training completion will be included in the annual report. The goal is 100% of the designated employees.

DRY WEATHER MONITORING PROGRAM

Zone 1	ELC, SPR, NCH, FFH, MOR, UGG, BEV
1A	No non-storm water discharge. Parking lot is a potential source of non-storm water discharge
1B	No current non-storm water discharge. Possible discharge sources from construction zone.
1C	Potential discharge source from construction zone.
Zone 2	NUR, LIB, CTC, CCH, WIL, DDC, BAB
2A	Drains contain leaves, branches, and mud from previous storms in risk of littering from parking lot.
2B	Drains contain leaves, branches, and mud from previous storms. Water build up next to BAB that may cause flooding and carry non-storm water discharge to drainage
2C	Drains contain leaves, branches, and mud from previous storms. No current littering near drainage site but in risk near buildings.
Zone 3	UFC, SCH, ACU, CGV, IMF, SSB, CGU, SST, CRH, SWI
3A	Buildup of water in front of Southeast Housing. Small plastic pollution around drain behind Southeast that was possible carried by stormwater.
3B	Drains clear from non-water discharge other than leaves, branches, and mud.
3C	Possibly storm water blockage from leaves and branches from previous storms
Zone 4	UPK, CGP, MSB, OPB, ENG, VBH
4A	Possibly red clay contamination behind baseball field. Plants interfering with water flow behind baseball field.
4B	Storm drains clear of non-storm water discharge other than leaves and branches. In risk of littering flowing into drain near parking lots.
4C	Storm drains clear of non-storm water discharge other than leaves and branches. In risk of littering flowing into drain and lakes near parking lot.
Zone 5	PPB, REC, JRC, LRH, BSB, SKH, OKT
5A	No non-storm water discharge other than wood, leaves, and mud. Possible contamination from birds or waste dumping.
5B	No non-storm water discharge other than wood, leaves, and mud. Hill slope may carry discharge from dumpster waste
5C	No non-storm water discharge in front of SKH.



HOW CAN POLLUTION OCCUR?

- LITTER (A LARGE PORTION OF POLLUTION)
  - GARBAGE
  - CIGARETTES
  - BOTTLES
  - OTHER OBJECTS
- PAINTS
  - RUNOFF PAINT DRAINAGE
    - LATEX-BASED IS BETTER THAN OIL-BASED

HOW CAN POLLUTION OCCUR?

- PARKING LOT RUNOFF
  - OIL/GREASE
  - LITTER
  - HEAVY METALS
- SEWAGE RUNOFF
  - SEWAGE WASTE
  - DEBRIS

WHY DOES IT MATTER?

- POLLUTANTS DEPOSITED INTO THE WATERWAYS DISCOURAGE RECREATIONAL USE OF THE RESOURCE AND INTERFERES WITH
  - FISH
  - OTHER AQUATIC ORGANISMS
  - WILDLIFE

Water pollution. Retrieved on April 17, 2019 from http://www.onlinebiologynotes.com/wp-content/uploads/2018/07/water-pollution.jpg.

CAMPUS POLICIES AND PROCEDURES

- NEVER DUMP ANYTHING DIRECTLY INTO A STORM DRAIN.
- NEVER THROW ANYTHING DOWN A STORM DRAIN. DUMPING INTO STORM DRAINS IS NOT JUST WRONG. IT IS ILLEGAL.
- KEEP WORK AREAS CLEAN; SWEEP UP LITTER AND DEBRIS.
- KEEP OILS, SOLVENTS, CHEMICALS, PESTICIDES, FERTILIZERS AND OTHER HAZARDOUS FLUIDS UNDER COVER AND AWAY FROM THE STREET AND STORM DRAINS.

CAMPUS POLICIES AND PROCEDURES

- COVER STORAGE CONTAINERS AND DUMPSTERS; CLEAN THEM REGULARLY.
- NEVER DISCHARGE WASTEWATER TO THE GROUND OR STORM DRAINS.
- WASH VEHICLES OR EQUIPMENT ON THE LAWN OR IN WASH BAYS AND NEVER WASH OFF DETERGENTS, OILS AND GREASES INTO STREETS OR STORM DRAINS.
- SPILLS ARE REQUIRED BY LAW TO BE REPORTED, SO REPORT ANY CHEMICAL SPILL TO 6911.

BEST MANAGEMENT PRACTICES (BMPS)

- PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS
- PUBLIC INVOLVEMENT AND PARTICIPATION
- ILLICIT DISCHARGE DETENTION AND ELIMINATION
- POLLUTION PREVENTION AND GOOD HOUSEKEEPING
- CONSTRUCTION SITE STORM WATER RUNOFF CONTROL
- POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS

- GOAL: TO DEVELOP AND DISTRIBUTE EDUCATIONAL MATERIALS AND PERFORM OUTREACH ABOUT THE IMPACT OF POLLUTED STORM WATER RUNOFF DISCHARGES TO INFORM
  - STUDENTS
  - FACULTY
  - STAFF
    - THEIR ACTIONS CAN MAKE A POSITIVE IMPACT ON WATER QUALITY

BEST MANAGEMENT PRACTICES (BMPS)

- **PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS**
- PUBLIC INVOLVEMENT AND PARTICIPATION
- ILLICIT DISCHARGE DETENTION AND ELIMINATION
- POLLUTION PREVENTION AND GOOD HOUSEKEEPING
- CONSTRUCTION SITE STORM WATER RUNOFF CONTROL
- POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

PUBLIC INVOLVEMENT AND PARTICIPATION

- GOAL: TO PROVIDE OPPORTUNITIES FOR STUDENTS, FACULTY, AND STAFF TO PARTICIPATE IN PROGRAM DEVELOPMENT AND IMPLEMENTATION ON A STORM WATER MANAGEMENT WORKING-GROUP.

BEST MANAGEMENT PRACTICES (BMPS)

- **PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS**
- **PUBLIC INVOLVEMENT AND PARTICIPATION**
- ILLICIT DISCHARGE DETENTION AND ELIMINATION
- POLLUTION PREVENTION AND GOOD HOUSEKEEPING
- CONSTRUCTION SITE STORM WATER RUNOFF CONTROL
- POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

ILLICIT DISCHARGE DETECTION AND ELIMINATION

- GOAL: TO DEVELOP AND IMPLEMENT A PLACE TO DETECT AND ELIMINATE NON-STORM WATER DISCHARGES (ILLICIT DISCHARGES) SUCH AS
  - PROCESS WATER
  - WASH WATER
  - CHEMICAL SPILLS
  - OTHER NON-RAINWATER TO THE STORM DRAIN (NOT APPLICABLE TO EXEMPT DISCHARGES)
  - SOP PRESENTED EARLIER IN THIS TRAINING

BEST MANAGEMENT PRACTICES (BMPS)

- **PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS**
- **PUBLIC INVOLVEMENT AND PARTICIPATION**
- **ILLICIT DISCHARGE DETENTION AND ELIMINATION**
- POLLUTION PREVENTION AND GOOD HOUSEKEEPING
- CONSTRUCTION SITE STORM WATER RUNOFF CONTROL
- POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR FACILITIES OPERATION AND MAINTENANCE

- GOAL: TO DEVELOP AND IMPLEMENT A PROGRAM TO PREVENT OR REDUCE POLLUTANT RUNOFF FROM FACILITIES OPERATION AND MAINTENANCE ACTIVITIES.
- PROGRAM MUST INCLUDE TRAINING TO RELEVANT STAFF ON POLLUTION PREVENTION MEASURES AND TECHNIQUES
  - REGULAR STREET SWEEPING
  - REDUCTION IN THE USE OF PESTICIDES
  - FREQUENT SUMP GRATE CLEANING

BEST MANAGEMENT PRACTICES (BMPS)

- **PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS**
- **PUBLIC INVOLVEMENT AND PARTICIPATION**
- **ILLICIT DISCHARGE DETENTION AND ELIMINATION**
- **POLLUTION PREVENTION AND GOOD HOUSEKEEPING**
- CONSTRUCTION SITE STORM WATER RUNOFF CONTROL
- POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

- GOAL: TO DEVELOP, IMPLEMENT, AND ENFORCE AN EROSION AND SEDIMENT CONTROL PROGRAM FOR CONSTRUCTION ACTIVITIES.

BEST MANAGEMENT PRACTICES (BMPS)

- **PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS**
- **PUBLIC INVOLVEMENT AND PARTICIPATION**
- **ILLICIT DISCHARGE DETENTION AND ELIMINATION**
- **POLLUTION PREVENTION AND GOOD HOUSEKEEPING**
- **CONSTRUCTION SITE STORM WATER RUNOFF CONTROL**
- POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

- GOAL: 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 BMPS
  - CONSERVATION OF NATURAL AND PERMEABLE AREAS
  - PERMEABLE PAVERS
  - ROOFTOP RUNOFF INFILTRATION GALLERIES
  - MECHANICAL STORM DRAIN FILTERS

THAT REMAIN IN PLACE AFTER THE PROJECT IS COMPLETED AND PREVENT POLLUTION FROM THE NEW DEVELOPMENT IN THE LONG-RUN.

BEST MANAGEMENT PRACTICES (BMPS)

- GROUNDS
  - STREET SWEEPING
  - KEEPING DRAINS CLEAR
  - REGULAR LITTER COLLECTION
- MAINTENANCE
  - VEHICLE MAINTENANCE CONDUCTED OVER DRAIN PIT BY GARAGE
  - OIL AND OIL FILTERS ARE RECYCLED BY GARAGE
  - GARBAGE TRUCK INSPECTED AND PERMITTED ANNUALLY TO PREVENT TRASH AND LIQUIDS FROM LEAKING

BEST MANAGEMENT PRACTICES (BMPS)

- RECYCLING PROGRAM IMPLEMENTED CAMPUS WIDE TO DECREASE LITTER
- CAMPUS ARCHITECT CONTRACTS WITH THIRD PARTY TO ENSURE CONSTRUCTION PROJECTS ARE CONDUCTED IN COMPLIANCE WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES).
- CLEAN LOADING DOCKS (REMOVING PALLETS AND CARDBOARD) TO MAKE SURE IT DOESN'T BLOCK STORM DRAINS. PERFORMED REGULARLY.

BEST MANAGEMENT PRACTICES (BMPS)

- TOBACCO-FREE CAMPUS HAS PREVENTED CIGARETTE BUTTS AND TOBACCO PACKAGING FROM WASHING INTO STORM DRAINS.
- CHECKING STORM DRAINS AROUND THE PROPERTY TO ENSURE STORM DRAINS AREN'T BLOCKED.

WATER 101

- HELP KEEP OUR PONDS, CREEKS AND RIVERS CLEAN! STORM DRAIN WATER GOES DIRECTLY INTO THEM.
- STORM DRAINS ARE FOR STORM WATER **ONLY**!

Click here to acknowledge receipt of training & take the quiz