



NUTS
FOR
CLEAR WATER
ALABAMA
2024



AUBURN
STORMWATER

HOW DO WE EDUCATE THE INSTALLERS?

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SEPTEMBER 25TH, 2024 | DOTHAN, AL



erosion & resulting
sedimentation is one of
the nation's largest water
pollution problems



AUBURN
STORMWATER



Stormwater



2022 REPORT CARD FOR
ALABAMA'S
INFRASTRUCTURE

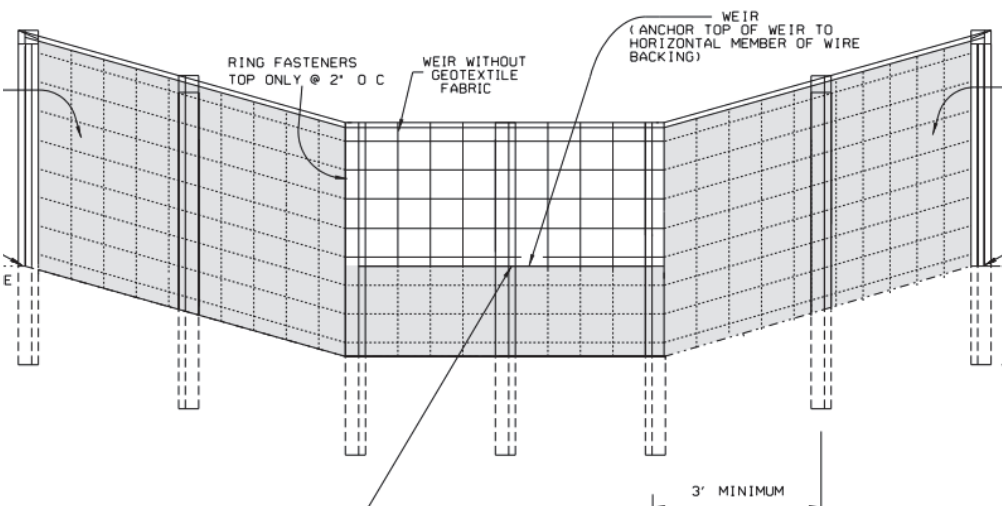
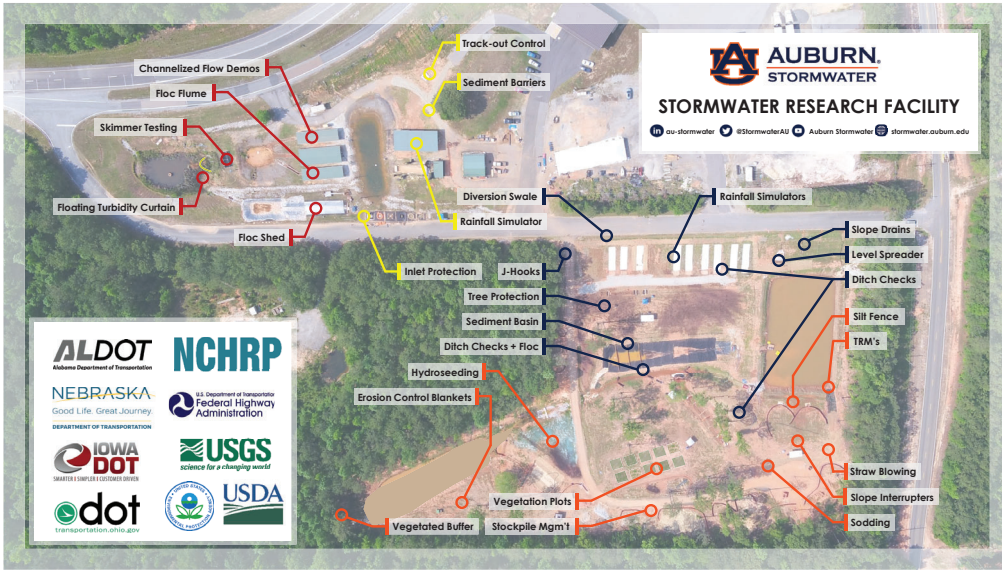
STORMWATER RESEARCH FACILITY

craft innovative & practical stormwater management solutions

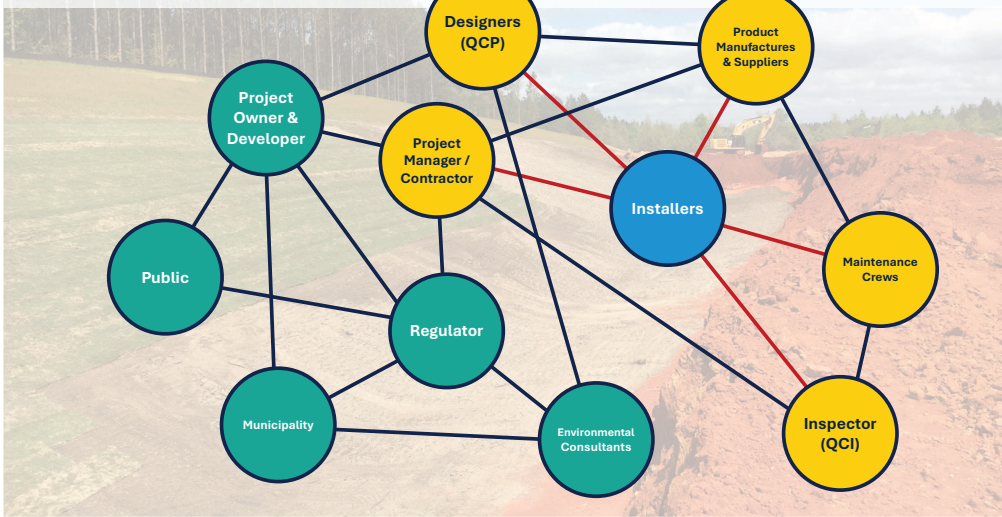
-  **Research**
-  **Testing**
-  **Training**



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STORMWATER



E&SC STAKEHOLDERS



DO E&SC INSTALLERS NEED TRAINING?



STORMWATER NEEDS SURVEY

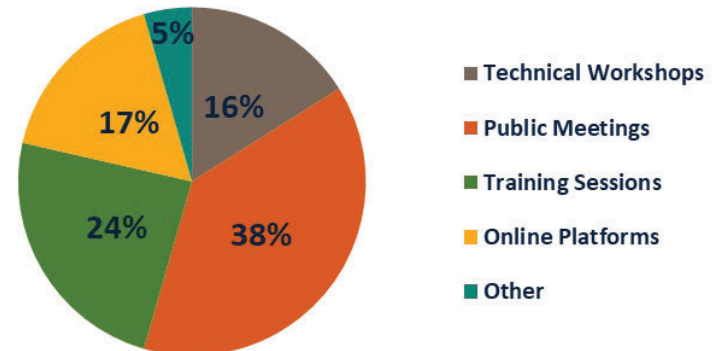
- Determine specific needs of stormwater professionals
- Completed by 95 stormwater professionals
- Insight on how to best implement stormwater training



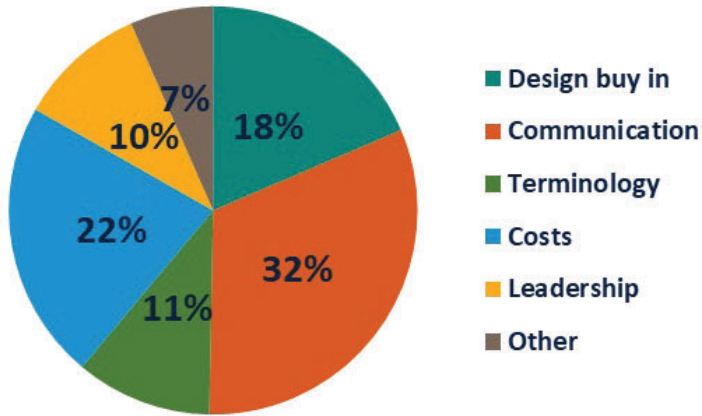
www.aub.ie/stormwatersurvey



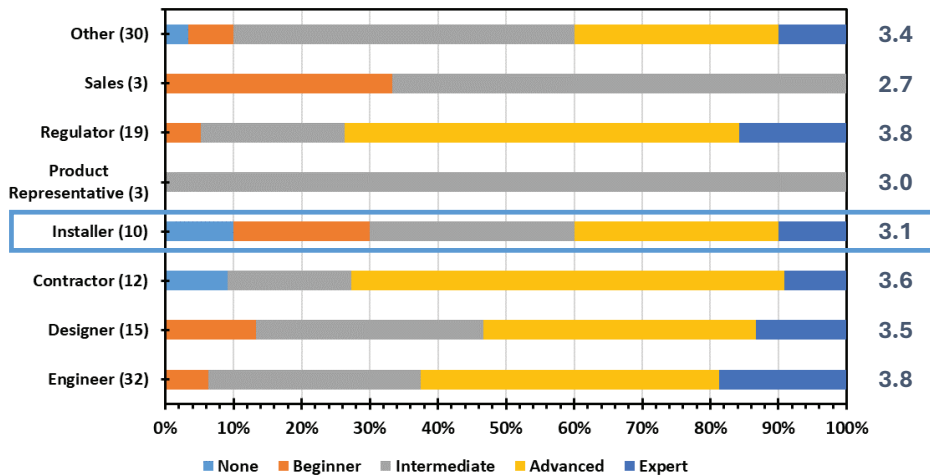
HOW DO YOU ENGAGE IN STORMWATER PROJECTS?



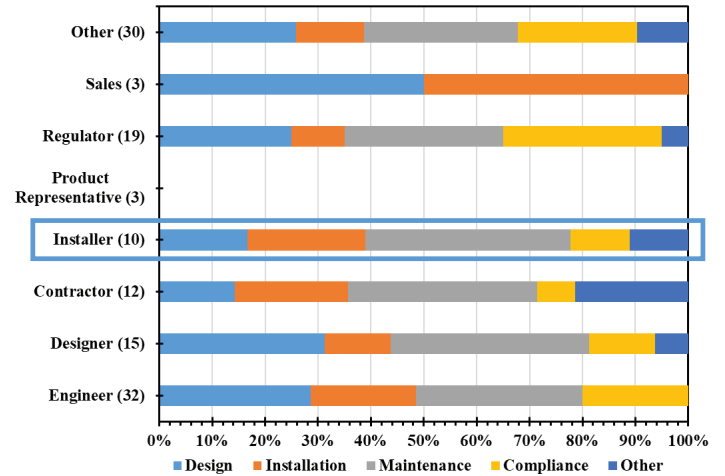
WHAT MULTI-DISCIPLINARY CHALLENGES DO YOU FACE?



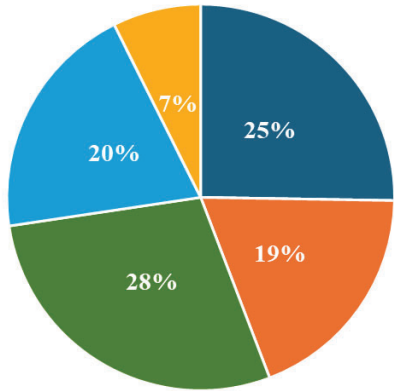
KNOWLEDGE OF STORMWATER REGULATIONS?



STORMWATER CHALLENGES FACED?

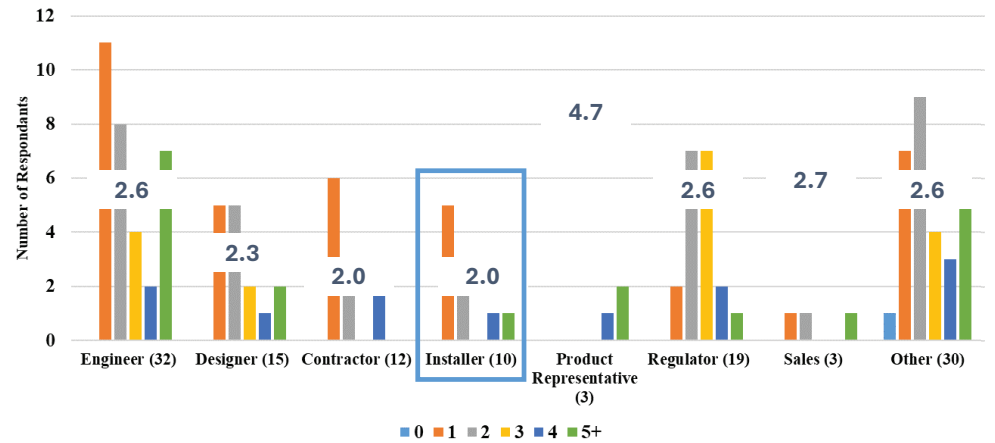


STORMWATER CHALLENGES FACED?



■ Design ■ Installation ■ Maintenance ■ Compliance ■ Other

ANNUAL TRAINING ACTIVITIES?



CHALLENGE: WORKFORCE



CHALLENGE: LANGUAGE BARRIERS



31% of U.S. Construction Workforce is Hispanic

CHALLENGE: LACK OF SPECIALIZED KNOWLEDGE



CHALLENGE: TRADITIONAL METHODS



CHALLENGE: UNDERSTANDING IMPACTS



CHALLENGE: COMMUNICATION WITH STAKEHOLDERS



CHALLENGE: SITE-SPECIFIC COMPLEXITY



CHALLENGE: NO TRAINING REQUIREMENT



CHALLENGE: NO INCENTIVE



CHALLENGE: RESISTANCE TO CHANGE



INSTALLER TRAINING OPPORTUNITIES



Construction
Installer Online

NEBRASKA

Good Life. Great Journey.
DEPARTMENT OF TRANSPORTATION

Online E&SC Installer
Certification Course



VIRGINIA DEPARTMENT OF
ENVIRONMENTAL QUALITY

Responsible Land
Disturber



GEORGIA SOIL AND WATER CONSERVATION COMMISSION

Fundamentals
Level IA



Qualified SWPPP
Practitioner (QSP)



Stormwater Contractor &
Developer Training



Erosion & Sediment Control for
NCDOT Projects (Level I)



INITIAL TRAINING PROGRAM: MAY 2014



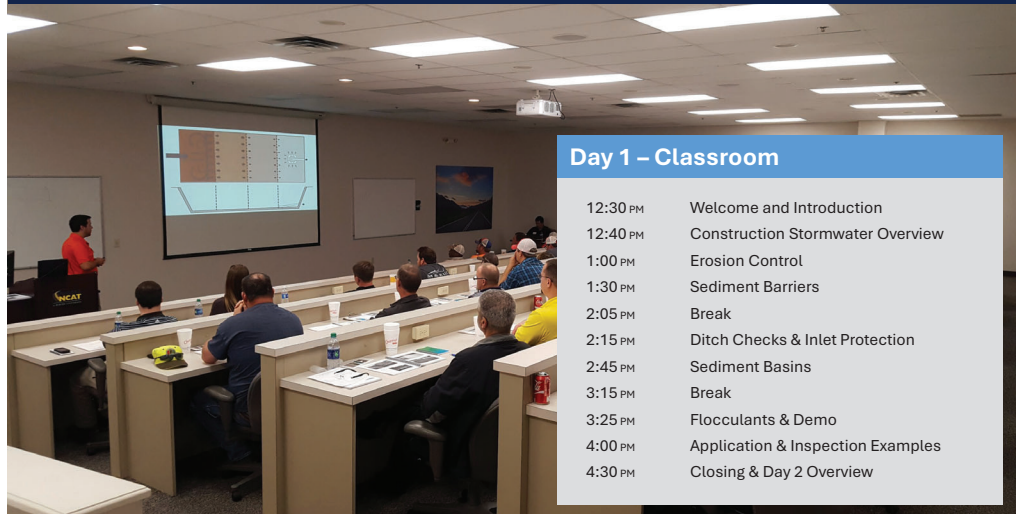
FIRST INSTALLER TRAINING: NOV 2015



HANDS-ON INSTALLER TRAINING



HANDS-ON INSTALLER TRAINING



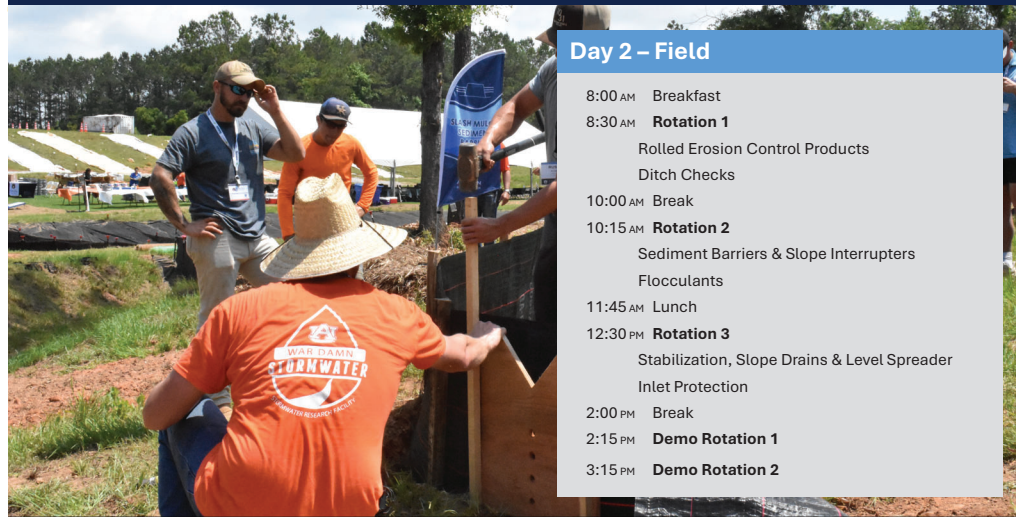
Day 1 - Classroom

- | | |
|----------|-----------------------------------|
| 12:30 PM | Welcome and Introduction |
| 12:40 PM | Construction Stormwater Overview |
| 1:00 PM | Erosion Control |
| 1:30 PM | Sediment Barriers |
| 2:05 PM | Break |
| 2:15 PM | Ditch Checks & Inlet Protection |
| 2:45 PM | Sediment Basins |
| 3:15 PM | Break |
| 3:25 PM | Flocculants & Demo |
| 4:00 PM | Application & Inspection Examples |
| 4:30 PM | Closing & Day 2 Overview |

HANDS-ON INSTALLER TRAINING



HANDS-ON INSTALLER TRAINING



Day 2 – Field	
8:00 AM	Breakfast
8:30 AM	Rotation 1
	Rolled Erosion Control Products
	Ditch Checks
10:00 AM	Break
10:15 AM	Rotation 2
	Sediment Barriers & Slope Interrupters
	Flocculants
11:45 AM	Lunch
12:30 PM	Rotation 3
	Stabilization, Slope Drains & Level Spreader
	Inlet Protection
2:00 PM	Break
2:15 PM	Demo Rotation 1
3:15 PM	Demo Rotation 2

INLET PROTECTION INSTALL



SLOPE INTERRUPTER INSTALL



DITCH CHECKS



SEDIMENT BASIN



SLOPE DRAIN INSTALL



DITCH CHECK INSTALL



INLET PROTECTION PRACTICES



HYDROSEEDING



AU-SRF TRAINING EFFORTS

-  **7 Installer Training Workshops**
379 Participants
-  **10 Field Days**
1,211 Participants
-  **33 Workshops**
-  **300+ Presentations**
-  **31 Graduate Students**
-  **292 Undergraduate Students**



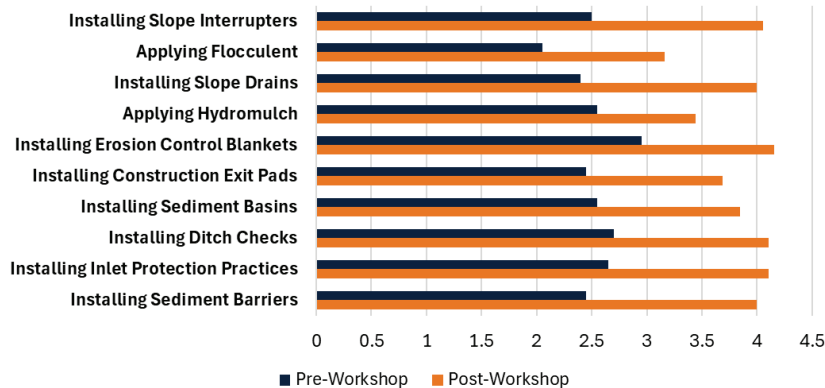
THE BENEFITS OF HANDS-ON TRAINING

- Learning by doing
- Increased retention
- Reinforcement by repetition
- Real world experience
- Troubleshooting & problem solving skills
- Better understanding of material
- Enhances communication
- On-the-spot coaching



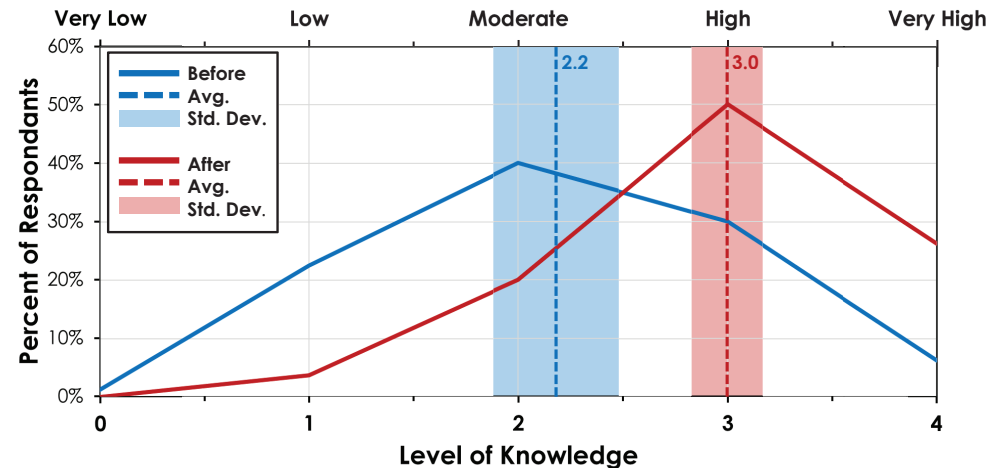
HOW DID KNOWLEDGE LEVELS CHANGE?

Change in Knowledge Pre- and Post-Workshop



(Note: 1 = Very Low; 2 = Low; 3 = Moderate; 4 = High; 5 = Very High)

CHANGE IN KNOWLEDGE – INSTALLER TRAINING



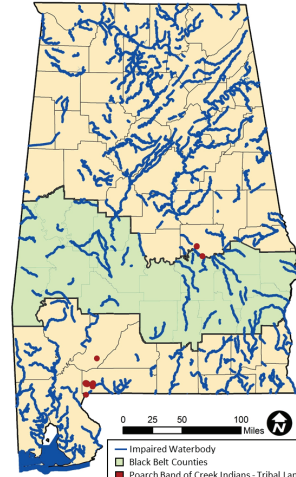
RECENT EFFORTS



RURAL ALABAMA INNOVATIVE
STORMWATER EDUCATION
PROGRAM



SERVICE AREA



- 47 individual U.S. Census Bureau Tracts
- 17 Counties:
 - Barbour
 - Bullock
 - Butler
 - Choctaw
 - Crenshaw
 - Dallas
 - Greene
 - Hale
 - Lowndes
 - Macon
 - Marengo
 - Montgomery
 - Perry
 - Pike
 - Russell
 - Sumter
 - Wilcox

52

ALABAMA IS HIGHLY VULNERABLE TO EROSION

- Southeastern U.S. is at a higher risk for construction stormwater pollution
 - Heavy rainfall
 - Erosive soils
- Alabama Black Belt had fertile soil that led to cotton production
 - Topsoil is now depleted
 - Compounds flooding effects



RURAL AL & BLACKBELT ARE DISADVANTAGED

- Population migration
- Poor health and low average income
- Less opportunities for training events
- AL Black Belt more vulnerable to environmental and stormwater related issues
 - Additional time, resources, and costs required



NEED TO TRANSFER PRACTICAL TOOLS TO INDUSTRY

- Inadequate technical resources for:
 - Professional design development
 - Training in the deployment, installation, inspection, & maintenance of ESC practices
- Gap between researchers and practitioners
 - Must assess on-site needs



WE WILL DEVELOP AND DELIVER RESOURCES



Project Objective: Develop and deliver training resources to equip stormwater professionals and citizens with resources to improve water quality from construction runoff sources in rural Alabama

EXPECTED PROJECT BENEFITS

Provide training resources & outreach to stormwater professionals & rural communities

Develop Professional Resources

Training Opportunities

Educational Outreach

Technology Transfer

Increase Public Awareness

Improve water quality in rural Alabama

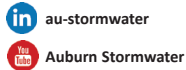
RAISE SPONSORED EVENTS

- **2024 Events**
 - Hands-on Erosion & Sediment Control Installer Workshop
 - Municipal Wet Weather Stormwater Conference
 - Innovative Erosion & Sediment Control Field Day
 - Clear Water Alabama
- 41 participants through RAISE

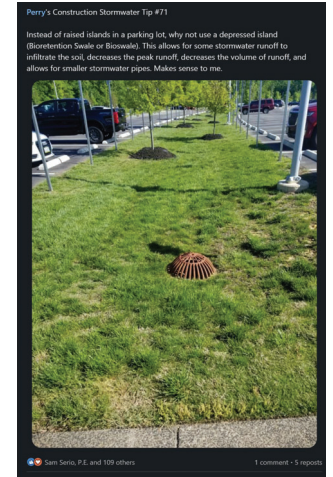
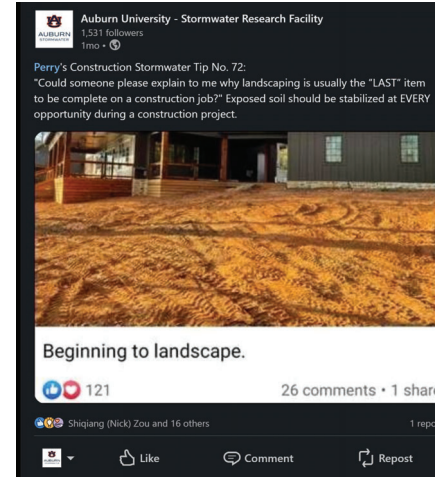


OUTREACH MATERIALS

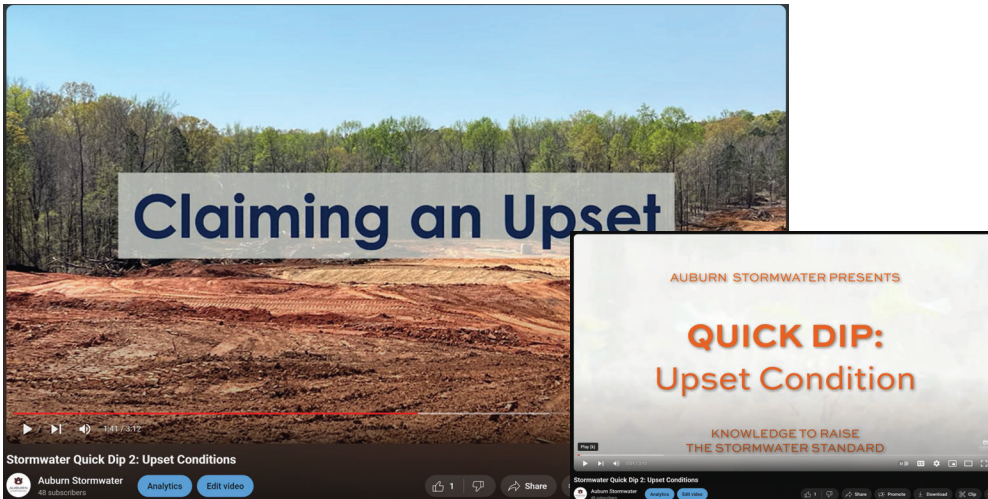
- Brochures & posters
 - Littering
- K-12 Outreach
- Technical & general videos
- BMPs
 - Installation & maintenance
 - Inspection
- CGP Quick Dip Video Series
 - Upset
 - TMDL
 - TMDL in CGP



CONSTRUCTION STORMWATER TIP SERIES



QUICK DIP VIDEO SERIES



QCP TRAINING PROGRAM FOR ALABAMA



ALDOT



STORMWATER RESEARCH FACILITY BUILDING



AUBURN UNIVERSITY - STORMWATER RESEARCH FACILITY

Tue-Wed, May 20-21
Hands-on E&SC Installer
Workshop



May 20-22, 2025
Join us for a week's worth of exciting stormwater events!
STORMWATER WEEK
May 20-22, 2025

Thu, May 22
E&SC Field Day



Save the Dates!



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QUESTIONS



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