Main Principles of E&SC

- Minimize the area disturbed by leaving existing vegetation that does not have to be removed.
- Minimize the time of exposure by shortening construction periods and staging a project when possible.
- Sequence installation in a manner that supports shortened construction periods and permits the use of temporary and permanent seeding when the practices can be most effective.

5 Pillars of Construction
Stormwater Management
(Barry Fagan)

In order of Importance
- Communication
- Work
- Water
- Erosion
- Sediment

“Green is Good and Sediment S___s!”

Changes to Handbook

- AASHTO M-288
- Erosion Control Blanket
- Check Dam
- Sediment Barrier
- Inlet Protection
- Sediment Basin
AASHTO M-288: Geotextile Specification for Highway Applications

- In the 2009 Handbook, geotextile specifications were defined using old NRCS tables.
- In the 2014 Handbook, every time a geotextile was mentioned, the handbook stated that geotextile must meet AASHTO M-288 (NRCS tables were deleted).
- Most designers did not have access to AASHTO standards.
- The 2018 Handbook will more clearly define the AASHTO M-288 requirements for a geotextile.

“Generally, the non-woven geotextile should meet the requirements found in AASHTO M288 for a Class 2 separation geotextile.”

Erosion Control Blanket

- ECTC changed from 14 to 18 Types (not Classes) of RECPs. There are 5 major Types.
  - Type 1: products have a 3-month functional longevity,
  - Type 2: a 12-month,
  - Type 3: a 24-month,
  - Type 4: a 36-month, and
  - Type 5: are Turf Reinforcement Mats for long-term erosion protection.

Erosion Control Blanket

- Subcategories of Types are defined by application and material composition.
- Changes made in HB to coincide with ECTC Types of RECPs and recommended installation procedures.

Check Dam - rock

- Old handbooks required rock check dams to have a keyway and geotextile between the rock and soil (separation only).
- AUESCTF found that a keyway is not necessary, but a geotextile underlayment should extend up and downstream to protect against undermining and downstream scour.
- AUESCTF also found that geotextile should be used on the upstream face of a rock check dam to increase ponding efficiency.

“OLD” Rock Check Dams

Rock Check Dam
The new handbook will contain information on:
- Wattle Check Dams
- Silt Fence Check Dams
- Sand Bag Check Dams
Sediment Barrier

- The old handbook had 3 types of silt fence: Type "A" fence was the same as the ALDOT wire backed silt fence.
- The 2018 handbook will only have 2 recommended types of silt fence (reinforced and non-reinforced).
- At locations where a silt fence ponds water, the posts should be 5 ft. spacing instead of 10 ft.
- AUESCTF found that a geotextile "off-set" installation performed better than the conventional installation.
Inlet Protection

- The 2018 handbook will have only one practice “Inlet Protection” that includes all types of stormwater inlet protection devices.
- All use a geotextile underlayment per AUESCTF recommendations.

Sediment Retention Barrier with Flocculant

Must have Sediment Control downstream.

- Silt Fence Inlet Protection
- Block and Gravel Inlet Protection
- Sand Bag Inlet Protection
- Wattle Inlet Protection

Silt Fence Inlet Protection

- Underlayment
- Bracing
- Pin down
- Dewatering

Block and Gravel Inlet Protection

- Underlayment
- Geotextile between blocks and gravel
- Cinder blocks
- Dewatering
What does the E&SC Program offer?

Clear Water Alabama Seminars and Field Days
Clear Water Alabama 2019
Seminar and Field Day
October 23-24, 2019
Prattville Doster Center

Wednesday – seminar for
construction site planners
design engineers
inspectors

Thursday – field day for everyone in E&SC
engineers
site contractors
homebuilders
public works staff
city council members
commissioners
SWCD supervisors

Any Burning Questions??