

STORMWATER UPDATE

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CSW Training Upcoming Dates

KSU CIT Program

<http://citksu.com>

March 18-19, 2019

March 20-21, 2019

May 6-7, 2019

May 7-8, 2019

Kansas Contractors Association

<http://www.kansascontractors.org/>

No Classes Scheduled

**Construction Stormwater
 (CSW) Training has replaced
 the EIT/EMT courses.
 EIT/EMT Certifications
 remain valid for two years
 from date of certification.**

All completed inspection reports must be submitted to the responsible Area Engineer and the contractor's WPCM within 24 hours of each inspection. The Area Engineer must sign within 3 calendar days and submit to KDOT.stormwaterinspection@ks.gov. Failure to complete and submit inspection reports on time may result in disincentive assessment.

Soil Prep!

What is the most important aspect about establishing temporary and permanent vegetation on a construction project? Seed placement, correct fertilizer application, and proper mulch placement come to mind, but the one everyone forgets about is soil preparation.



Soil after compaction. Notice the irregular chunky surface

Specification 904.3b states, "Before seeding, use tillage equipment that penetrates 2 to 3 inches to prepare a firm, friable, and weed-free seedbed." What does that mean?

Most KDOT projects require a minimum soil compaction of 90% based on the soil proctor for the subgrade. This compaction creates a great base for a roadway but a terrible seed bed (unless you are growing weeds).

Tilling and plowing creates a uniform, loose and friable soil; allows easier root establishment for the new seed; and kills any existing weed vegetation. Friable soils allow seed drills to plant, cover and slightly compact the soil around the new seed.

However, soils can be too loose. Too loose soils can have up to 50% air voids in the seeding zone thus minimizing the amount of immediate seed/soil contact. Controlling seed depth can be difficult in too loose soils. Grass and wildflower seeds must be placed at maximum depths of 1/2" and 1/8", respectively, for proper germination.



Properly prepared soil bed

An easy field check is to walk in the freshly prepared area and look back at your footprints. If you sink deeper than the soles of your shoes the soil is probably too loose.

This next construction season keep an eye out for proper bed preparation. When the soil is prepped correctly the seed germinates better and the Notice of Termination (NOT) can be issued sooner.

Pollinators in Peril! Part 2

By Melissa Davidson, Roadside Vegetation Manager

To Mow, or Not To Mow

Routinely mowed areas range from 15 to 30 feet adjacent to pavement and are routinely maintained by mowing to provide for the safety of the motoring public. These areas are not generally considered to be suitable habitat for pollinators. Areas outside of routine mowing offer high potential habitat that extends from the routinely mowed area to the access control fence, including median areas and interchange infields. These areas are the highest value habitat areas within the highway transportation system when properly maintained.

Mowing is a critical component of maintaining right-of-way and ensuring the safety of the motoring public. Sight visibility, access to fixed assets and maintenance of drainage structures and features must be managed with mowing. Utilizing mowing strategies that improve or lengthen bloom time of nectaring plant species, control the spread of invasive species, and maintain the safety and integrity of the right-of-way should be considered when preparing a management strategy. Mowing strategies that have a positive impact include:

- Adjusting mowing standards by strategic or strip mowing, rotational section mowing or delayed roadside mowing, to avoid mowing during vulnerable times for pollinators.
- Adjusting mower deck heights to decrease the amount of chopping and mulching.
- When using mowing as a management tool, minimization and avoidance measures should be considered.
- Timing mowing in coordination with spot herbicide spraying.



Although mowing during the growing season can be harmful to pollinators, limited mowing can also be beneficial to pollinators by rejuvenating wildflower populations and keeping woody plants from invading. Without some management intervention, roadside vegetation may become degraded by the encroachment of woody plants or by the invasion of noxious weeds. Strategic reduced mowing and consideration of the timing of mowing can improve roadside habitat quality for pollinators. Beyond the value to pollinators, reducing mowing can provide DOTs with significant cost savings.

Mowing and Animal-Vehicle Collisions

Despite the economic and ecological benefits that reducing roadside mowing provides, it may not be adopted readily due to concerns that reduced mowing may increase dangerous animal-vehicle collisions. Common perceptions about reduced mowing include 1) that the unmown roadside vegetation will harbor more deer or other large herbivorous mammals that can be involved in vehicle crashes and 2) motorists will have greater difficulty viewing and avoiding animals entering the road.

In contrast to these perceptions, data indicates that reduced mowing of the entire roadside right-of-way may not influence deer-vehicle crash frequency. Researchers comparing deer vehicle crash frequency data before and after reduced mowing was implemented found no relationship between mowing regime and crashes. Researchers found that deer preferred the plots mowed four times a year over the plots mowed only once. Mowing can improve the palatability of some plants, thus increasing foraging by deer in roadsides.



Stormwater Update Online

This issue and all past issues of this quarterly bulletin are available online at KDOT's Stormwater website:
<http://www.ksdot.org/burconsmain/Connections/swppp.asp>

Contact Mervin Lare (mervin.lare@ks.gov) for questions, comments or suggestions for future content.