STORMWATER UPDATE

Lessons Learned

Winter is rapidly falling behind us and the new construction season is getting underway. It’s not hard to see the difference our new approach to erosion control is already having on projects around the state. The emphasis on “stabilizing as you go” is clearly paying dividends in reducing the amount of erosion occurring on our newly constructed roadsides. As we continue to learn how to best incorporate these new strategies, it is important that we also continue to communicate and share our lessons learned. With that in mind, I’d like to share a few things I’ve learned from the successes and struggles of the last year.

1. **Playing catch-up is hard.** KDOT invested a significant effort in repair work on older projects with ongoing erosion issues. Repairing and stabilizing all of the eroded slopes and ditches required a tremendous effort on the part of our maintenance forces and also several emergency repair contracts. Much of this repair work could have been avoided with better construction practices and more timely maintenance.

2. **Identify your critical areas.** Our biggest problems occur where we have the most concentration of water. Repairing erosion around wingwalls, removing sediment from inside culverts and from riprap is difficult and costly. Erosion at these areas can very often lead to sediment discharge to water bodies or adjacent property. Investing the extra effort to stabilize the areas around our drainage structures pays off with reduced maintenance costs and increased peace of mind.

3. **Sometimes less is more.** It may seem like a good idea to use more ditch checks, more silt fence, more bio-logs etc., but in some cases these devices can cause more harm than good. These types of devices pond water and trap sediment. While this may be the desired effect for some applications, these devices can also inhibit vegetation establishment and can increase the concentration of flow which contributes to the formation of gullies. The most successful SWPPPs use these devices judiciously and remove them promptly as vegetation stabilizes the site.

4. **Once every 14 days is not enough.** Bi-weekly inspections are an important tool, but if you only think about erosion and sediment control every other week you are falling behind. Every operation on a construction project has a potential impact on the SWPPP. Failure to consider those impacts as work progresses will sooner or later result in permit violations, expensive repairs and costly penalties.

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WPCMs are required to have completed the EMT training within the 12 months prior to beginning work on a project.

INSPECTION REPORTING

Remember, all completed inspection reports must be submitted to the responsible Area Engineer and the contractor’s WPCM within 24 hours of each inspection. The reports should be signed within 3 calendar days by the responsible Area Engineer and submitted to stormwaterinspection@ksdot.org. Failure to complete inspection reports and submit them on time will result in penalties.
When to Stabilize?

The stabilization requirements in our current specifications come from the KDHE construction general permit. The following direction can be found in special provision 07-PS0360-R5, section 901.3a:

Immediately initiate temporary stabilization on areas that have been disturbed after construction activities have permanently ceased on that portion of the project site. Immediately initiate temporary stabilization measures on areas that have been disturbed after construction activities have temporarily ceased on that portion of the project site if construction activities will not resume for a period exceeding 14 calendar days.

Construction activities have permanently ceased once clearing, excavating, grading etc. is complete. Construction activities have temporarily ceased if clearing, excavating, grading etc. is incomplete, but the land will remain idle for a period of time. If the work is complete, or if the idle period is anticipated to be longer than 14 days then installation of stabilization such as mulch, erosion control blankets or geotextiles must begin immediately.

Inactive, disturbed areas should be documented on inspection reports if they have not been stabilized. Corrective action is required if the work is complete or if the idle period is expected to be longer than 14 days. Compliance with this specification and permit requirement requires thinking ahead and scheduling appropriately. This typically requires the WPCM to coordinate with various subcontractors and suppliers to make sure the appropriate personnel, equipment and materials are available on site as the grading work ceases.

ECO Database coming soon

A new way to report inspections and to track compliance issues is right around the corner. Felsburg Holt & Ullevig is putting the finishing touches on the software and testing is underway. Properly used, this package is expected to facilitate transmittal of completed inspection reports, track corrective actions, and provide electronic storage for nearly all SWPPP related documentation.
Spring is in the Air

As the spring growing season is right around the corner, this is an important time of the year to carefully review your projects and identify any areas where additional seeding may be required. No-till drills should be used when sowing permanent seed into areas where temporary or annual grasses have been established. If previously seeded areas have demonstrated minimal to no growth, it may be more effective to till the area according to standard specification 903 and seed the area conventionally. Contact Scott Shields in the Environmental Services Section if you have questions about seed types, seasonal limitations, or suspect poor soil quality.

Specifications and Standards

Beginning with the March letting, all projects will be using updated erosion control specifications. Special Provision 07-9002-R08 will be included in the contracts for Local Projects and also for KDOT projects disturbing less than one acre. This revision incorporates the new bid items and updates many of the practices which were implemented with 07-PS0360-R4.

The standard drawing LA 855 has been revised. This drawing shows details for installation of class I erosion control blankets and now includes details for placement around pipe and box culvert ends. This application is intended to better stabilize these critical areas around our drainage structures.