



Kansas LTAP Fact Sheet

A Service of The University of Kansas Transportation Center for Road & Bridge Agencies

Supervisory Level Focus on Road Construction BMPs

By Richard Basore

Editors note: We asked Richard Basore, Watershed Field Coordinator for the Kansas Department of Health and Environment (KDHE), to provide stormwater management tips for supervisors of crews on road work sites. He provided some great feedback, below. Be sure to read the sidebar below, too, about the requirement for a Stormwater Pollution Prevention Plan and tasks in the Plan that must be carried out at the job site.

It takes a “village”

Good BMP installation and maintenance is really dependent on everyone in the chain of command, from project managers to the individual work crew members at a project... not only the crews (or BMP contractors) that might have a BMP-connected responsibility, but everyone who has a role to play on the site. This includes subcontractors or utility companies installing in rights-of-way, and from the land-clearing and grading crews down to the last crews to leave the finished site.

Someone who may run over a sediment fence, or “temporarily” remove a ditch check (that doesn’t get reinstalled) may be an ancillary function contractor, such as fuel delivery, heavy equipment repair, pipeline, cable or electric pole relocation, etc.—not directly connected to the main project work.

So in short, it becomes the responsibility of everyone on the site,



A damaged BMP like this one—a sediment fence wash-under failure in a right-of-way ditch—should be reported to the job site supervisor, and quickly repaired.

but particularly for the main contractors’ work crews who are there every day, to be aware of the BMPs—why they are there, why they are important, and to report any activity-related damage.

Be on the lookout

People at the site also need to check for the need for maintenance following a weather event that may have damaged or compromised the ability of the BMP to function properly. An example is a sediment fence 1/3 to 1/2 full of dirt following a heavy rain. That is not a BMP failure, but actually evidence that the fence functioned as it was supposed to

do. The fence captured the sediment that might have otherwise left the site, so now it just needs to be cleaned out, have a stake or two added if needed, etc., to be ready to function again to trap sediment during the next rain event. Or maybe it is evidence that some additional measure needs to be taken to control runoff.

Common BMP problems in Kansas

The main issues we see at construction sites in Kansas are:

- Lack of maintenance for BMPs,
- Sediment fences down, or washed under, or with broken stakes,



As a job supervisor, you are likely responsible for the on-site tasks identified in the project's SWPPP. A SWPPP, or Stormwater Pollution Prevention Plan, is the plan submitted to KDHE by the project owner. KDHE bases its permit for land disturbance on the SWPPP, which includes:

- A site description identifying sources of pollution, including a site and BMP maps;
- A description of how you will prevent erosion, sediment, and other pollutants from contaminating stormwater (including fuel storage and solid wastes);
- A description of how you will control storm water flow from your site;
- Documentation supporting permit eligibility with regard to the Endangered Species Act; Possible Historic Sites, and the Kansas Surface Water Register;
- Documentation supporting permit eligibility with regard to local Total Maximum Daily Load (TMDL) requirements;
- Clearly outlined roles and responsibilities of different operators; and
- The protocol you will use to inspect your site.

Records must be maintained for the mandated 14-day self-inspections performed and the times and locations of major land disturbance and stabilization activities. Since you are required to inspect within 24 hours following 1/2 inch or more of rain, have a rain gauge on site—then you know. Make sure these records are legible. Be prepared to show the SWPPP and records to government inspectors who may visit your site. The SWPPP should be kept on site and revised if needed. For more detail on SWPPP contents, read the Construction General Permit packet referenced immediately below.

Source: Permit Packet. Kansas Department of Health and Environment. Kansas Water Pollution Control and National Pollutant Discharge Elimination System Stormwater Runoff from Construction Activities General Permit Packet. 2012. Accessed at <http://www.kansascountyhighway.org/DocumentCenter/View/130>.

- Ditch checks overwhelmed or washed around,
- Curb inlet controls out of place, and
- Track-out of dirt or mud from the site.

Avoid and combat track-out

The #1 complaint from the public that we get is track-out of dirt, and particularly mud, onto the roads adjoining a construction site. Besides being a nuisance, tracked-out mud can be a traffic hazard, especially for bicyclists and pedestrians.

Track-out is usually addressed in two ways, hopefully in combination:

- 1) by creating controlled/limited access to a site and making all vehicles exit over a proper (rough) construction exit to knock off as much dirt and mud possible from transiting vehicles, and
- 2) The permit requires track-out clean-up at the end of each work day.

Create an erosion control culture at the job site

Again, everyone on the site is another pair of eyes that can make note of how things are working (or not).

Crew supervisors in particular should be aware of and understand the importance of BMPs and not only relay

that to their crews, but develop a culture whereby the crew members will readily report real or suspected issues to their supervisors.

One way to do that would be for the supervisors in their morning huddle to remind their crews if they are going to be working with or around BMPs that day and to be aware, to try not to damage the BMPs, and to report any BMP issues they might see, whether related to their own activities or not.

Learn from the private sector

Walmart has developed an effective stormwater controls program for their new store construction sites. They have a pre-construction meeting for all dirt-related contractors prior to work commencing. They all meet and have a presentation on general construction stormwater rules, regulations and reasons. They then discuss, with the aid of copies of the SWPPP, the entire plan for the site, location and function of BMPs and timeline for construction phases. Walmart makes the contractors and subcontractors not only aware of the BMP needs, but puts responsibility on them to respect the BMPs in place and to report any damage that they may cause. (\$\$\$\$s!)

As grading work is done, Walmart has a second meeting with all of the structure contractors and subcontractors, cement, frame, electrical, plumbing, paving, etc., etc., and they take them through the BMPs and SWPPP issues the same way.

When the original **Keystone Pipeline** came through here few years back, they held an all-day pre-construction meeting where all the work crew supervisors—from the multiple contractors and sub contractors to be involved in the project from start to finish—were all together in one room at the same time; close to 100 people. They discussed all aspects of the construction project, the layout of the route, special issues (wetlands, creeks or rivers, etc.), and how they would be approached. They discussed individual BMP types and purposes, and had a heavy emphasis on their rule that at the end of every work day, individual crews were responsible for making sure that all BMPs in their work area were left in fully functional and correct condition before they could leave.

Where to get more information

The KDHE website has links to information & guidance regarding all aspects of the permitting process for a



After it Rains, Don't Wait to Inspect. Get Out There!

By Richard Basore

Early last Spring I went by a KDOT project on US54 where they were doing a major road project. It was a divided highway section with a wide median for drainage purposes. It had rained heavily about dawn, and as I crested a hill I saw a well-done set of 10 or so stair-stepped sediment fences serving as ditch checks. They were impressively nice and wide and well-staged to handle the slope down to a creek at the bottom. Following the heavy rain most of the sed fences were full and bulging with water, some even spilling water over the top at the center (and that's OK). But what struck me was that two or three were holding no water because they had evidently washed out under the base of the netting.

Because of the continuing rain and the over-saturated conditions nobody was working at the site, so unless someone went to the site (and they may have... I just didn't see anyone), KDOT or the contractor may have missed an opportunity to view the site and to make note of the two or three failures needing maintenance/repair when the rain ended. By the time anyone showed up the next morning for the mandated 24 hour inspection following the rain, the full sediment fences may have drained out and to the untrained eye they might all look alike with the presumption that they had all worked, missing the problems.

So inspection during wet weather events to monitor BMP effectiveness, even if work is not being performed at the moment, can be valuable in monitoring BMP performance and possible maintenance needs.

You should check for a leaky roof when it rains; same for BMPs !!!

Construction Stormwater Notice of Intent (NOI) and the Stormwater Pollution Prevention Plan (SWPPP). Go to <http://www.kdheks.gov/stormwater/index.html#construct> ■

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