

Clean Water Compliance



Kathryn Gruver

Failed compliance may have negative effect on environment

Road construction with paving or grade changes requires permits and regulation compliance. SWS Associate Editor Bob Crossen spoke with Gresham, Smith and Partners Environmental Engineer Kathryn Gruver, P.E., CPESC, about compliance with storm water regulations during road construction.

Bob Crossen: What are some common Clean Water Act compliance challenges faced on transportation construction sites?

Kathryn Gruver: For the most part, transportation projects are large and they're linear, so they can cross multiple drainage divides. Instead of one or two outfalls, if you had a site development, you could have dozens and sometimes hundreds, depending on how big your site is or how long your project is. And to the nature of roadways, there can be a substantial topographic change between the roadway and what it's going to look like after the roadway is constructed.

Crossen: How can designers keep up with the changes in regulations?

Gruver: You need to go to conferences and work with other designers. Hopefully your [department of transportation] is keeping up with the changes so its manual is up-to-date. If you're a roadways designer and your state's manual is not up-to-date, it's going to be hard to know what to do.

Crossen: What are some best practices for maintaining compliance?

Gruver: Inspections and enforcement. Those go hand-in-hand. If the contractor doesn't know what they are doing wrong, they need to be told they're wrong. I'm not talking about fines and things like that. [Contractors] need to be inspected in the field to let [them] know when they're not

doing something right, so they don't keep doing it over and over again.

Crossen: Why is compliance with this act so important?

Gruver: With transportation, it's because it crosses so many drainage divides. It can have a huge impact on the hydrology and the hydraulics of the area. It's important because if a roadway isn't designed with storm water in mind, it can cause significant damage to the surrounding environment.

Crossen: What kind of damage would that be?

Gruver: You would reduce the time it takes for flows to get to streams. You interrupt stream flow. If you're on a farm field and the water was sheet flowing all the way across without any disruption, and now there's a roadway and the road has ditches on both sides, you turn sheet flow into concentrated flow. Proper design would transition that back to sheet flow.

Crossen: What types of concerns are commonly overlooked and how can they be overcome?

Gruver: The biggest problem I notice when driving around the state of Ohio is the schedule [on which] things are constructed, specifically when seeding is established. It's standard for the seed to be established as the last thing contractors do before they leave, [but] they should really put the seed down as soon as their embankment has reached final grade, which could be months before they've finished paving. If there's no seed, there's no grass growing. ... It would be nice if they seeded it before paving started. **SWS**

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