

The Monthly Dirt

Effective Soil Cover

A Grammar Lesson

Without the correct use of grammar and punctuation, communication would be confusing at best and, sometimes, downright bizarre. For example, there is a big difference between these two phrases:



“Let’s eat, Grandma.”

Punctuation can save lives!

“Let’s eat Grandma.”

It is amazing how one little comma can change the whole meaning. It’s also true in the Construction General Permit (CGP). There is a requirement in Attachments [C](#), [D](#), and [E](#), that often gets quoted with the wrong punctuation. You probably have heard the following: *“Dischargers shall provide effective soil cover for inactive areas.”* But, that is a misquote! The period was moved up in the sentence and, in the CGP, it actually appears after the following eleven words— *“and all finished slopes, open space, utility backfill, and completed lots.”* This makes a big difference in when effective soil cover is applied. In many cases, the CGP requires it to be in place, not in 14 days, but immediately. In this edition of **The Monthly Dirt**, we discuss what constitutes effective soil cover, what is acceptable temporary cover, and when should permanent cover be used.

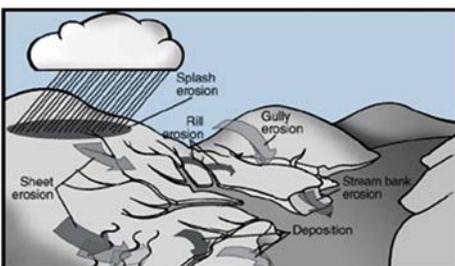
EFFECTIVE SOIL COVER: Let’s define this phrase starting with the last word — **cover**. Well, we know

what that means, it is to put something on top of something else, but, according to our definition, it also protects, shelters, guards, and even

cov-er *noun*
/ˈkʌvər/

1. Something that protects, shelters, or guards
2. Something that is placed over or about another thing
3. Something that conceals or obscures

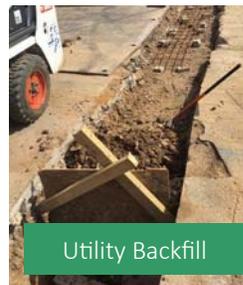
conceals **soil** from erosion. Soil, the next word, is the thing we are attempting to cover. It is where particles become detached from the existing soil structure and are liberated to be transported by wind, water, or mechanical means. This is what is called erosion. But



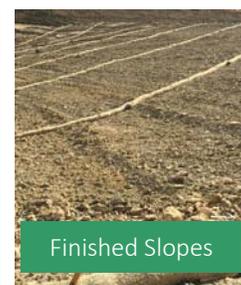
why is a cover necessary to prevent erosion? It is because the very first step of erosion involves something coming from above — **the raindrop**.

The CGP doesn’t only require that a barrier be placed between the rain drop and area of soil disturbance, but that this barrier (or cover) be **effective**. In other words, it has to work! It has to absorb the energy of the rain drop and keep it from colliding with soil particles and doing its damage on them.

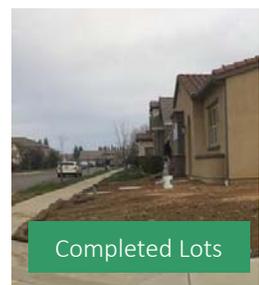
WHAT MUST BE COVERED: The CGP provides a list of areas on a construction site that must be covered. They include:



Utility Backfill



Finished Slopes



Completed Lots

These must be covered immediately, **there is no 14-day waiting period for them.**



Open Space

Areas of soil disturbance at the construction project that have become inactive, for whatever reason, and are not scheduled to be re-disturbed for at least 14 days must also have an effective soil cover.

TEMPORARY VS. PERMANENT: – Usually what comes to mind when considering erosion controls are temporary soil cover measures. These include hydraulic mulch (with or without hydroseed), rolled erosion control products (RECPs), or straw mulch (blown or hand-scattered). All of these products should certainly be used to cover exposed soil and prevent erosion during the construction project. However, we recommend that contractors and SWPPP developers consider utilizing permanent cover measures as soon as possible during the project. Traditionally, one of the last activities to occur on a project is paving ... this is because paving can be scuffed up and scoured during construction. But, more and more companies have been seeing the value of installing two lifts of pavement, with the first lift being installed early during the project. Last winter, our QSPs encountered several projects having to over excavate water-saturated muddy soils, just so they could work. They also were continuously needing to maintain their track out control devices and perform street sweeping. Most of these problems could have been avoided by installing a first lift of asphalt before the rains began.



Sure, a second lift costs money; but how much do you think those companies spent fighting the mud? Probably a lot more! But, it takes planning, foresight, and a willingness to not do it the way it has always been done.

Other permanent covers that can be applied early during the project include geotextiles and wood mulch in the areas to be landscaped and crushed rock in areas that will neither be paved nor landscaped.

NOW'S THE TIME TO ACT: – The issuance of this October Monthly Dirt edition means that the rains will soon start. Effective soil cover also implies a timely installation to provide the cover needed for the first raindrop / storm event. Not only is it a good idea to be proactive with the installation of erosion controls, but it is also economical. Many hydraulic mulch products require a curing time to be able to provide adequate cover and protection. Those who wait until the rains start and are compelled by Numeric Action Level exceedances or a State or municipal inspector, will most likely need to utilize a product that does not require the cure time and can be installed during wet weather. These products typically cost 2—3 times more. So, remember, this rain season ...

~~“Don't do something, Stupid.”~~

“Don't do something stupid.”

- MD

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Asphalt Basics*

What is the proper thickness of lift that should be used?

Minimum lift thickness should be at least 3 times the nominal max. aggregate size to ensure aggregate can align themselves during compaction to achieve required density and also to ensure mix is impermeable. The maximum lift thickness is dependent also upon the type of compaction equipment that is being used. When static steel-wheeled rollers are used, the maximum lift thickness that can be properly compacted is three (3) inches. When pneumatic or vibratory rollers are used, the maximum thickness of lift that can be compacted is almost unlimited. Generally, lift thicknesses are limited to 6 or 8 inches. Proper placement becomes a problem in lifts thicker than 8 inches. For open-graded mixes, compaction is not an issue since it is intended that these types of mixes remain very open. Therefore, the maximum size aggregate can be as much as 80 percent of the lift thickness.

Can paving be done in the rain?

This common question can mean different things to different people because of the wide range of precipitation encompassed by the word "rain." On one end, occasional light sprinkles should not be cause to shut down operations. However, a steady downpour, either light or heavy, should result in cessation of paving activities. To avoid waste, some states have verbiage in their specifications stating that trucks in route to the project when rain begins can be laid at the contractor's risk. Also keep in mind that the surface on which you are paving may influence your decision. Paving on a firm, stable, well-draining crushed aggregate base might be given more leeway than a thin asphalt overlay. Raining or not, new pavement must be placed on a firm, unyielding base. Critical ideas to keep in mind when dealing with rain:

- Rain will cool the asphalt mix and could make obtaining proper compaction more difficult;
 - The asphalt lifts must be able to properly bond together and moisture can be a hindrance to that bond; and
 - Puddles overlaid with hot asphalt turn to steam, which may cause stripping (separation of the asphalt binder from the aggregate) – never pave over puddles whether it is raining or not.
- If you temporarily suspend paving operations due to rain, don't forget to:
- Keep all trucks tarped;
 - Construct a vertical-faced construction joint;
 - Properly dispose of all material left in the hopper;
 - Be careful not to track mud on or off the project; and
 - Asphalt pavements are designed to last for many years, so don't let a sense of urgency to get the job done quickly allow you to make decisions which could strip years away from the pavement life.

*Referenced from: <http://www.asphaltinstitute.org/engineering/frequently-asked-questions-faqs/asphalt-pavement-construction/>

Please contact us if you have any questions ...

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