The Monthly Dirt
A monthly newsletter on the California Construction General Permit

Prize winning strategies for your site.

Summer is the time for county fairs with agriculture displays and homegrown produce and canned goods hung with blue ribbons. There's something so beautiful about preserves and jellies adorned with blue ribbons – not to mention something super delicious! But when it comes to blue ribbons, jellies and jams aren't the only preservations that can win first place. In this month's edition of **The Monthly Dirt**, we are going to discuss prize winning vegetation preservation techniques that will win your construction site the blue ribbon of BMPs for environmentally friendly practices.

Vegetation Preservation – More than *"oh that tree looks nice, let's save it!"*, vegetation preservation is a well thought out plan created by the project owner or developer. *"Planning should include consideration of how much disturbance is necessary. All projects should minimize disturbed areas. In some cases, there are areas in the work zone where work can progress with only vegetation removal. Mowing or string-trimming vegetation and leaving cuttings in place can protect soil and keep a native seedbank available to the project. Vegetation often returns with minimal extra effort. When trimming vegetation, it is important to remove trimmings from areas where they can easily wash into storm drains or receiving waters."*[1] Plus, under the 2022 Construction General Permit, vegetative buffers/preservation are required for near water work — *"dischargers shall provide and maintain natural buffers and/or equivalent erosion and sediment controls when a water of the U.S. is located within 50 feet of the site's earth disturbances, unless infeasible."* (Attachment D II.G)

According to industry BMP factsheets, vegetation preservation is a useful erosion control BMP which doesn't necessarily take a lot of effort. This BMP aims to minimize disturbance or injury to vegetation which is already on site. Existing trees, grasses, and plants protect soil from erosion, so preserving those natural BMPs will in turn reduce the amount of man-made stabilization your site needs. *"Construction staff can preserve natural or existing vegetation at any construction site where vegetation exists in the predevelopment condition. This practice can be particularly beneficial for floodplains, wetlands, perennial and intermittent streams, environmentally sensitive areas, steep slopes, and other areas where erosion controls would be difficult to establish, install or maintain (SPU, 2017)."*[2]

Vegetation Preservation Recipe For Success:

- Mark areas to be preserved with temporary fencing to prevent damage to vegetation or trees by heavy equipment, traffic, compaction, or trenching soil disturbance damage. The orange environmentally sensitive area fencing is a great choice since it's visible and cost effective.

- Minimize disturbance of protected areas. Grasslands, wetlands, and hillsides are delicate ecosystems in comparison to construction activities. Minimizing activities done in those areas will preserve their natural conditions.
- Keep construction activities away from tree drip lines. *"The dripline is the area directly located under the outer circumference of the tree branches. When the tree canopy gets wet, any excess is shed to the ground along this dripline, much like an umbrella. This is also known as a tree's Critical Root Zone (CRZ), sometimes also called the Root Protection Zone (RPZ). It is defined as a circle on the ground corresponding to the dripline of the tree. The most active water absorption area is at the dripline and beyond, not close to the center or trunk. This is where the tiny terminal feeder rootlets are located that take up water and nutrients from the soil for the tree."*[3]
- Be a good arborist. Trench as far away from tree trunks as possible. Cleanly cut through tree roots if necessary. Keep roots covered with soil. Aerate compacted soil or tamp loose soil in trenches so as not to allow excessive air space in the soil which can damage roots.
- Fertilize stressed or damaged trees in the fall or spring to help trees thrive.

While vegetation preservation is a great BMP, sometimes it's not feasible for a specific site. For instance, *"Several factors can limit the practicality of preserving natural or existing vegetation throughout the development process. First, the practice is only suitable for sites with ample existing stands of healthy vegetation. In many urban areas, existing vegetation may be patchy and unhealthy, providing little overall benefit to site hydrology or aesthetics. In these cases, new vegetation may provide greater benefit. During planning, design engineers should consider the footprint of proposed structures relative to the total footprint of the site; for high-density development or where land prices are high, preserving existing vegetation may not be cost-effective. During construction, staff may need to remove existing vegetation that would interfere with the maneuverability of construction equipment."*[4]

Soil Preservation – Proper preservation of soil during construction projects is equally important. In Issue # 3 of the CGP Review (the State Water Board's periodic newsletter prepared by the Construction General Permit Training Team), there is an article which provides information on "Stockpiling for Restoration". The main point of the article highlights how topsoil is supposed to be stored. Often the first thing to go into the stockpile (which ends up getting buried on the bottom) is the topsoil which is rich in organic material, native seed, and beneficial soil microorganisms. If this fertile soil is not placed in a segregated stockpile, it often becomes fill soil which is then covered by relatively infertile, non-organic containing soil. No wonder why hydroseeding and revegetation sometimes struggles to take root. For this reason, the State Water Board really encourages the practice of stockpiling of these fertile topsoils separately from the other soil and carefully managed so as to ensure an ideal climate for soil health (*"Rolled erosion control products (RECPs) or temporary vegetation cover is better than impervious covers because impervious covers can kill native seed stock that is already in the ground by increasing soil temperatures and can reduce soil quality by preventing exposure to rainfall which is necessary to maintain healthy soil biota. If an impervious cover is used, raise the cover off of the soil by a few inches to allow air exchange into the soil. This will prevent anaerobic organisms (pests) from dominating. Also, when the stockpile soil is returned to the site, add compost amendments that contains an abundance of beneficial soil biota to aid in revegetation efforts."*[5]). In fact, the 2022 CGP has a whole section which regulates the proper segregation and re-use of topsoil. It should be noted that, according to the third point of the CGP requirements, topsoils and mulches ought to be stockpiled differently. The American Association of State Highway and Transportation Officials (AASHTO) Center for Environmental Excellence website recommends the stockpiling and reuse of native soils where practical. So, what's the difference between a regular stockpile and a topsoil stockpile? Aren't they both stockpiles containing dirt? Think again! Because of the fertile condition of most topsoil, when creating a topsoil stockpile, the mound should be no higher than 4 feet high for less than 6 months and covered to prevent soil erosion and contamination by weeds. Stockpiling topsoil for more than six months can disrupt beneficial soil microorganisms especially in the top one-foot layer of the stockpile. Which is why, prior to use, the top one foot of stockpiled material should be mixed with the remainder of the stockpile to ensure that living organisms are evenly distributed throughout the material.

Money Preservation – This BMP selection is actually quite cost effective. Other than the cost of the ESA fencing, the cost of preserving vegetation is minimal and offset by the natural beauty which enhances property values. According to the CASQA BMP factsheet EC-2, *"During construction, the cost of preserving existing vegetation will likely be less than the cost of applying erosion and sediment controls to the disturbed area. Replacing vegetation inadvertently destroyed during construction can be extremely expensive, sometimes in excess of $10,000 per tree."* (CASQA EC-2)[6] In other words, it's cheaper to leave as much natural vegetation alone than to disturb all of the site and have to stabilize it. Preserving vegetation, topsoil, and your bank account by utilizing this BMP is a great recipe for winning a blue ribbon for your construction project!

[1]https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/training/cgp_review_issue3.pdf
[2]https://www.epa.gov/system/files/documents/2021-11/bmp-preserving-natural-or-existing-vegetation.pdf
[3]https://www.thespruce.com/dripline-3269491#:~:text=The%20dripline%20is%20the%20area,Root%20Protection%20Zone%20(RPZ)
[4]https://www.epa.gov/system/files/documents/2021-11/bmp-preserving-natural-or-existing-vegetation.pdf
[5]https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/training/cgp_review_issue3.pdf
[6]https://www.casqa.org/resources/bmp-handbooks

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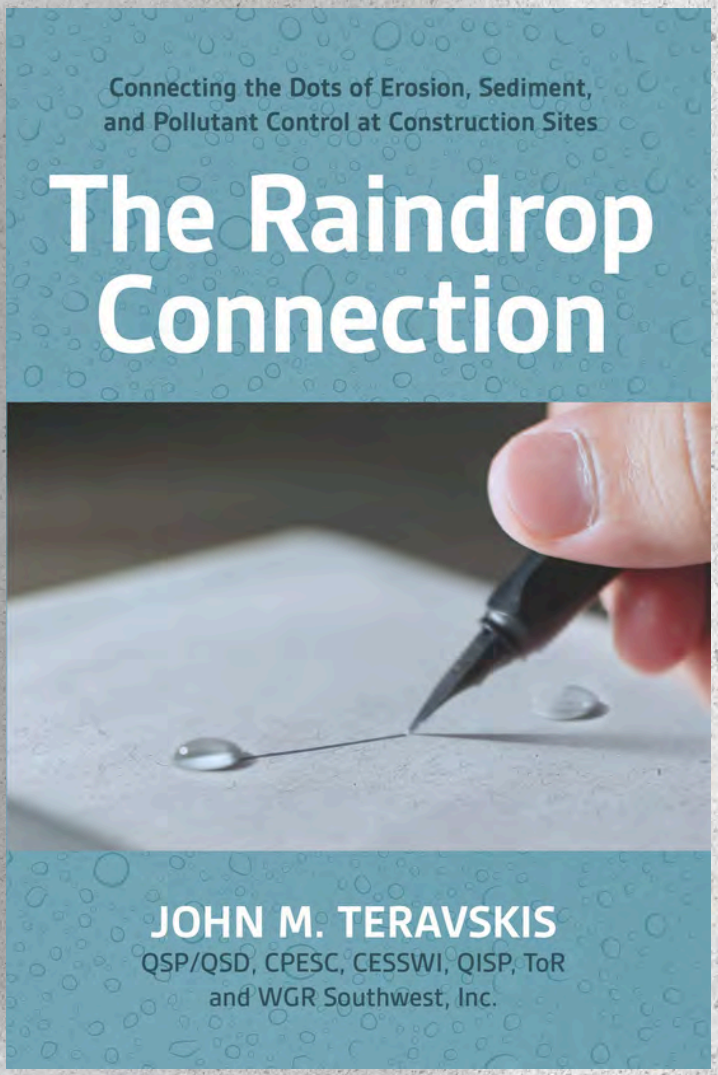

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2009 CGP

NOTICE OF TERMINATION

On September 1st of this year, the 2009 CGP will be terminated and all projects will need coverage under the 2022 CGP. 2009 SWPPPs will need to be converted to meet the 2022 Permit requirements and 2009 projects will need to be completed or apply for 2022 CGP Permit coverage by August 31st.

Need help converting your 2009 CGP sites to 2022 CGP sites? Need a revamped SWPPP? Contact us! *jteravskis@wgr-sw.com*