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

Secondary containment areas full of storm water? Now what?

When you think of storm water on a construction site, often the first thing that comes to mind is the runoff generated by storm water. However, during the rainy season, storm water not only runs off the project, but it also tends to collect in certain places – by design. A properly prepared and implemented SWPPP will call out activities and materials requiring containment throughout the project site. These areas of containment are to minimize the contamination of storm water with construction materials and waste. But the problem that many people overlook is that containment devices can fill up with precipitation and become a mini swimming pool of storm water and whatever contaminants are contained therein. Which in turn will become a maintenance item which will need adequate and immediate attention. In this edition of **The Monthly Dirt**, we will address what the Construction General Permit requires to be contained on a construction site and how the accumulated water should be managed.

First off, let's define some terms... According to the Construction General Permit, secondary containment is *"a device or control measure in addition to the primary containment that is used to stop a discharge of pollutants or hazardous material from leaving a specified area."* But what needs to be contained on a construction site, and what, specifically, needs secondary containment? Here's what the Permit lists as containment requirements. See how many apply to your site:

- Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed). Attachments D and E at Section II.A.1.c
- Provide containment (e.g., secondary containment) of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water. Attachments D and E in Section II.A.2.b
- Prevent discharges from waste disposal containers to the storm water drainage system or receiving water. Attachments D and E, Section II.A.2.f.
- Contain and securely protect stockpiled waste material from wind and precipitation unless actively being used. Attachments D & E, Section II.A.2.g.
- Secure and contain concrete washout areas and other washout areas that may contain additional pollutants to minimize discharge into the underlying soil and onto the surrounding areas. Washout areas also need to be covered prior to a precipitation event. Attachments D and E, Section II.A.2.h
- Contain fuel, grease, and oil to prevent them from leaking into ground, storm drains, or surface waters. Attachments D and E, Section II.A.3.a
- Place all equipment or vehicles which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs installed. Attachments D and E, Section II.A.3.b.
- Contain and protect stockpiled materials such as mulches and topsoil, or other erodible landscape materials, from wind and precipitation unless being actively used. Attachments D and E, Section II.A.4.a.
- Contain packaged landscape materials (e.g., fertilizers) when they are not being actively used. Attachments D and E,

Section II.A.4.b

- Store passive treatment products in leak-proof containers and place them in secondary containment under a storm-resistant shelter. Attachment G, Section A.5

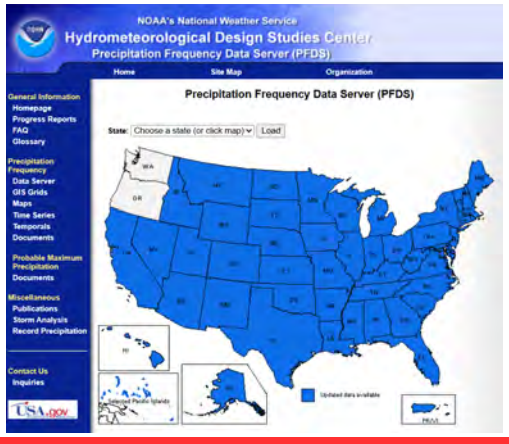
When it comes to providing containment, a compliant site will ensure that the following is performed:

Keep pollutant sources separated from storm water.

Even when containment is provided, storm water can come into contact with stored materials. Spills, leaks, or poor housekeeping of materials located within the containment can contaminate impounded storm water. This presents a problem in how to deal with the contaminated storm water. It cannot *(and should not)* be released from the containment structure to be discharged off site and will, therefore, need to be treated as wastewater. This scenario is not only expensive, but complicated. The best way to avoid this situation is to keep storm water separated from materials by either not letting storm water fall within the containment or by maintaining a clean environment within the containment. If possible, place a covering over the containment (even consisting of a secured tarp) to keep rain out of the contained area; or employee good housekeeping measures to clean up any spills or residues on the outside of containers placed within the containment structure.

Provide a closeable drainage mechanism.

The purpose of containment is to prevent liquids from being discharged until they can be properly inspected and managed. However, two common mistakes are made. The first is that containment valves or plugs are too often left open thus defeating the containment design. The second is that often no thought is given to accommodating the drainage of the structure; thereby, making it a maintenance headache which results in procrastination and, too often, an uncontrolled overfilling of the containment device. We commonly see this occur with containment trays of port-a-potties and with field-built concrete washout areas.



Think about it! ... when was the last time you saw anyone inspect or drain a port-a-potty containment tray?

Provide a sufficient amount of containment.

All that the CGP requires concerning the volume of containment is that "appropriate secondary containment" be used to prevent spills. To determine what is "appropriate", we have to look to other regulations and industry standards. Generally, secondary containment must be able to contain the volume of the largest stored container plus have sufficient capacity for volume occupied by precipitation. USEPA guidelines for the development of a Spill Prevention, Control, and Countermeasures (SPCC) Plan call for the ability to contain storm water from a 25-year, 24-hour storm event. This is location dependent and can be looked up by clicking here. For example, in San Francisco, this volume would be 4.22 inches. Speaking of the SPCC Plan, it is also important to note that if a project has an aggregate storage of 1,320 gallons of oil (fuel, petroleum lubricants / oils, and/or plant derived oils) it will need to prepare and maintain the federally required spill plan. For more information about SPCC Plan requirements, go to the USEPA's website by clicking here .

Don't just assume contained water can be discharged to the ground.

After a precipitation event that captured storm water in your containment areas, you're going to need to inspect the water to determine how you will need to proceed. Look for sheens, discoloration, and obvious signs of contamination from the items being contained in that area. If there's no reason to believe the water is contaminated, you can discharge it to the ground *(as long as it stays on site and isn't discharge offsite – if if it will discharge off site, it could fall under the Attachment J requirements for dewatering, if the water is discharged by pumping or siphoning. Check out this past Monthly Dirt newsletter about dewatering under the 2022 CGP).* If water infiltrates into the soil and is not discharged off site, it will not need to be sampled. For clean water, an acceptable option is to bleed it out of the containment or apply it somewhere on site so that it infiltrates into the soil and does not discharge off site. Just be careful to closely monitor this process to assure that no leak or spill occurs while removing the water. Do not let containment structures drain while the site is unattended or when active material transfers are happening within the containment structure that might result in a spill. However, if you suspect the storm water is contaminated, you will have to test and profile the contained water to determine the pollutants. If it is contaminated by hazardous waste, you will need to handle this storm water as hazardous waste, and it will need to be disposed of in accordance with local, State, and Federal regulations. If it is determined that the contained liquid is not a hazardous waste, disposal options include pumping it to the sanitary sewer (after getting approval from the sanitation district), trucking it offsite to a municipal wastewater plant, combining it with another liquid waste (such as the concrete washout), or having a waste contractor haul it off as a non-hazardous waste. Before, removing any waste stream from the site, proper characterization, approval from the receiving party, and documentation will be necessary. Do not discharge this type of water/liquid to impervious surfaces or permeable soil. It can cause soil and groundwater contamination and be a violation of the CGP and other environmental regulations.

What to do with storm water that's been captured in containment areas is complex and each situation will need to be dealt with differently. It is best to consult with your environmental coordinator or consultant about options.

Please contact us if you have any questions ...

The Monthly Dirt

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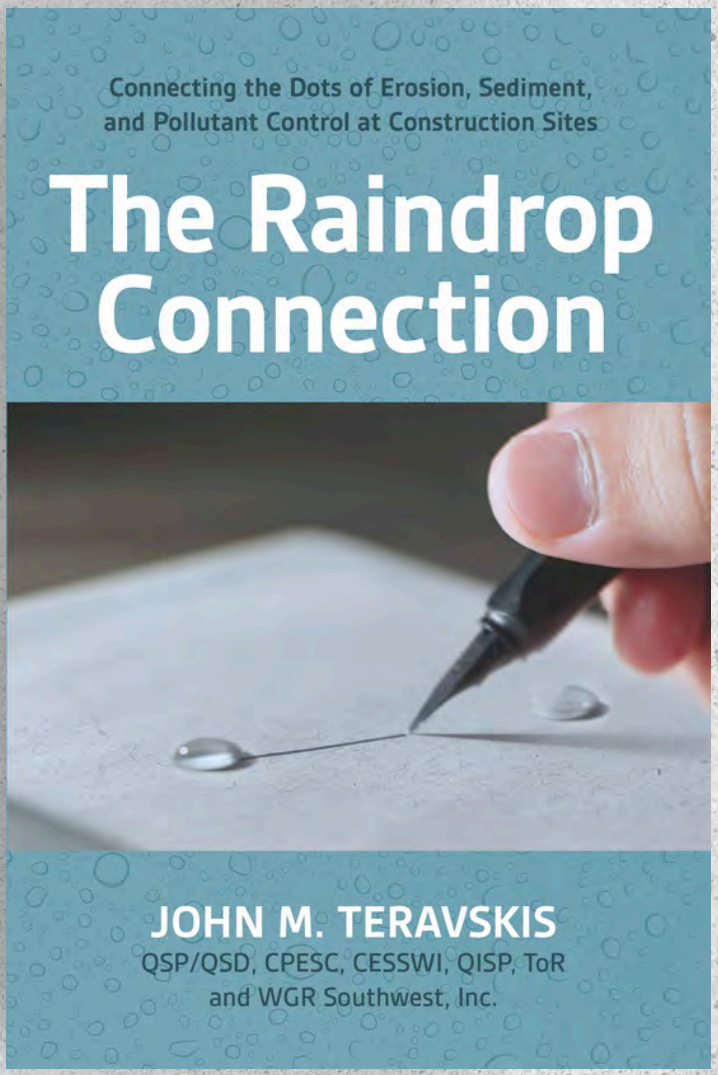

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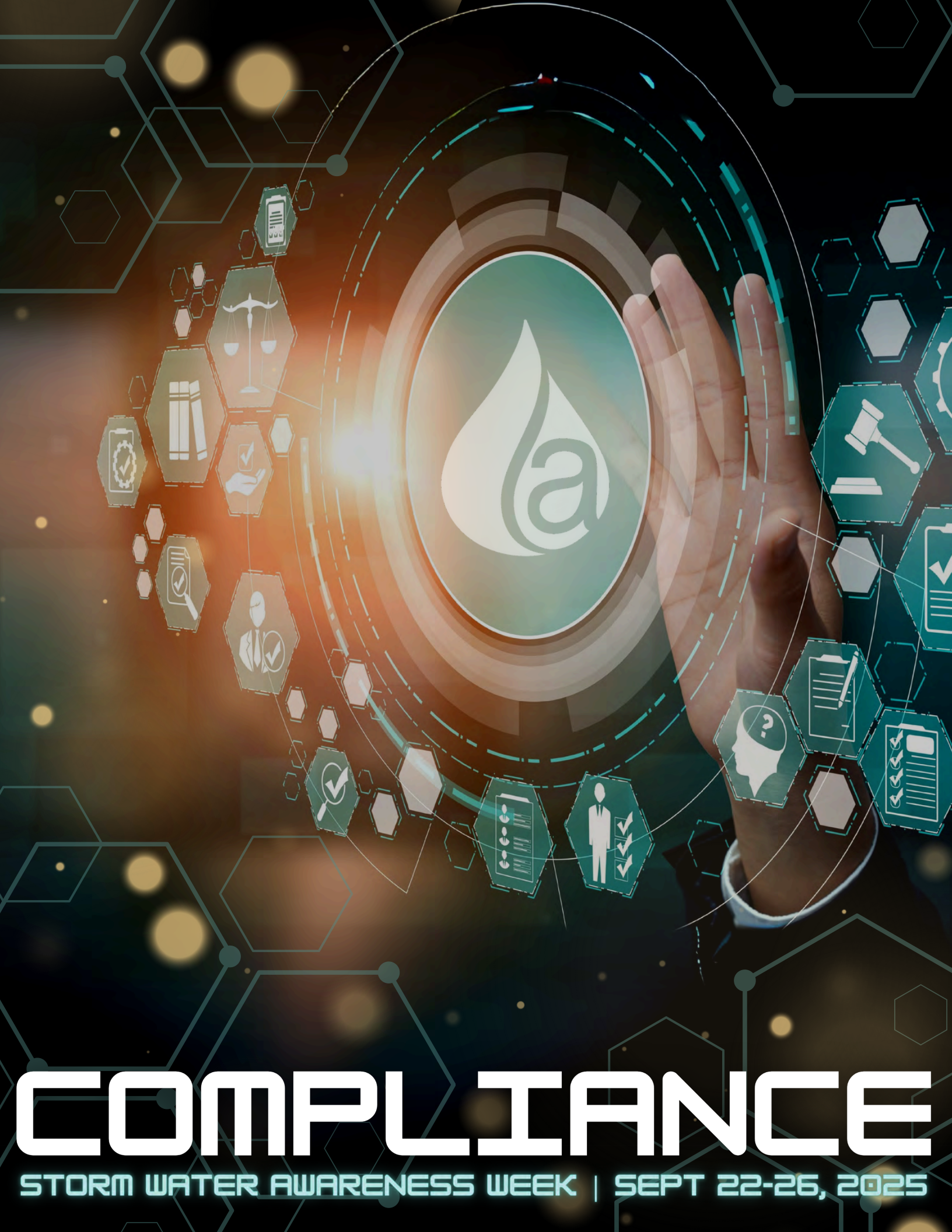

COMPLIANCE

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HOST A WORKSHOP

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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*