



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

Creek & Stream

Taking special care of aquatic species

Sometimes we need to take a step back and remind ourselves why we are getting caught up in silt fence, turbidity, and runoff. It's all in an effort to protect the species big and small who depend on our creeks and streams. The world would be a sad place if we no longer had salmon, steelhead, and all the other aquatic species we enjoy throughout the year. Without the wide variety of aquatic species, our creeks and streams would essentially be sterile. Protecting bodies of water can be achieved in a number of ways. During active construction, barriers or filters may be installed to prevent pollutants from entering the waterbody or prevent wildlife from entering the jobsite. Other times it might be beneficial to allow the passage of water and wildlife through a barrier such as an access road or bridge. In this month's edition of **The Monthly Dirt** we will be learning about protecting the health of our creeks and streams.

There are several environmental permits which outline how to protect the environment in and around our waterways. One of these is the Section 401 Water Quality Certification from the State Water Board. This permit emphasizes the need to protect the waters of the United States from discharges which may occur from a construction site. Or should the project require working where a waterway is flowing or once flowed, the Section 1600 Lake and Streambed Alteration Agreement from the State of California Department of Fish and Wildlife is the permit you'll need. This permit specifically applies to changes needed to be made to the bank, bed, channel, natural water flow of any river, stream or lake (including dry beds). Also covered under this permit is the depositing/disposing or use of material of any river, stream or lake. These rivers, streams and lakes are often environmentally sensitive areas and doing construction in them can negatively impact the plants, fish and wildlife living within them if not monitored and protected accordingly. For some projects, exclusion may be the necessary measure to prevent environmentally sensitive animals from entering the project site



or human activities from entering or damaging an area outside the project limits. Each project should be reviewed for permits or contract restrictions that specify where work may or may not take place. This is to ensure that the environmental damage which occurs due to normal construction activities can be mitigated and limited to the project boundaries. The idea is to leave the area as close to how it was before the project began. The exclusions that achieve

this are environmental sensitive area (ESA) fencing, wildlife exclusion fencing, the use of silt fence, and restrictions on project schedules and boundaries.

When in-water work needs to be conducted, there are special methods used to protect the water bodies and habitats. For some sites, water sampling is conducted every 4 hours during in-water work to ensure water turbidity and quality doesn't exceed background values. Too much sediment build up can choke out fish and prevent fish eggs from hatching. For other projects, a clear water diversion plan may be necessary. According to section NS-5 of the Caltrans Construction

GOOD HOUSEKEEPING & OTHER BMP MEASURES

- Keep work areas clean
- Add erosion control where needed for inactive areas or for rain
- Locate generators & other equipment out of the Creek area and on level ground
- Watch your Creek work windows, ex. June 15 to October 15 – get in as soon as you can so you

Watch this 2024 Storm Water Awareness Week workshop in which Robin Tully of Tully Consulting Group presented how to protect environmentally sensitive areas.

Site BMPs manual, “Clear water diversion consists of a system of structures and measures that intercept clear surface water runoff upstream of a project site, transport it around the work area, and discharge it downstream with minimal water quality degradation of either the project construction operations or the construction of the diversion.” This can be achieved through the use of berms, diversion ditches, slope drains, dikes, wood, gravel bags, sheet piles, cofferdams, pumps, aqua barriers, drainage and interceptor swales, filter fabric or turbidity curtains, pipes, or flumes.



Clear water diversion pumping operations

The diversion method enables contractors to be able to conduct all the work necessary for their project without having to spend extra time and resources preventing water pollution within the work area. According to CASQA’s BMP Handbook, the targeted pollutants this method addresses are sediment, nutrients (such as nitrogen), trash, metals, bacteria, oil and grease, and organics (like fuel). This method can sometimes also be used in an effort to avoid work delays due to fish spawning seasons and other seasonal delays. Sometimes we want to allow water and wildlife to flow through a barrier unimpeded. Often a culvert would be used to do this. The challenge with culverts is that they can be too rigid, shallow, and can allow water to pass

Is Clear Water Diversion subject to Attachment J of the 2022 CGP?

The Monthly Dirt recently posed this question to State Water Board staff.

Q: Is clean water diversion considered to be dewatering? We have a project for a Central Valley irrigation district where work will be done on a portion of the irrigation canal during a time of year when the irrigation district is not utilizing the canal. Although the canal will not be in use, there is always a certain amount of water within it that will need to be diverted. Upstream and downstream of the work an earthen coffer dam will be installed in the canal. A pump and 8-inch diameter temporary pipe will divert water from upstream of the project and discharge it back into the canal downstream of the last coffer dam. Nuisance water within the work zone between the two coffer dams will be pumped either into the 8-inch temporary diversion pipe or over the last coffer dam and back into the canal. Because pumps are being used, would this be considered dewatering and subject to Attachment J?

A: Interesting question! Based on my understanding of the dewatering requirements, and my best professional judgment, I would lean towards not considering the diversion of the upstream flow to downstream of the project area as dewatering since the water is not in contact the disturbed area. That said, I would still expect some BMPs to be in place to reduce velocity and prevent channel erosion as applicable. Any water pumped from the construction site (between the coffer dams) would still be considered dewatering [and subject to Attachment J.]

through at a velocity too high for small and sensitive organisms to survive in. These issues can lead to sediment build up and the prevention of aquatic species from traveling through which effectively cuts off habitat. To replicate the complexity of streams and creeks, culverts can be made with baffles so

as to recreate the same effect river stones and boulders cause on the water current. Shane Scott with SSA Environmental spoke about Retrofitting Culverts to Support Fish Passage at this year’s Storm Water Awareness Week. During his presentation he spoke about an adaptable and ecologically friendly product called flexible baffles. These baffles are made from a non-toxic rubber polymer which easily bends to allow sediment and fish to pass through. Retrofitting culverts with these baffles also allows for the water velocity to be engineered to match what would be found in the native stream/creek without drastically reducing the effectiveness of the culvert. Due to the nature of these flexible baffles, they allow culverts to be fully customizable for temporary or permanent use and for weak or strong swimming aquatic species. This is an affordable and effective way to meet the national goal of removing man-made barriers that are separating aquatic species from their natural habitats.

In an effort to protect sometimes complex waterbodies and habitats for plants, fish, and wildlife, a variety of methods are needed. Water diversion plans outline a way to divert water away/around the worksite so as not to interrupt work and to protect waterbodies that are a home to many sensitive species. All of these work in conjunction to prevent work delays and protect the surrounding environment from unnecessary interference. The invention and application of flexible baffles also allows culverts to be retrofitted to further expand the protection of our creeks and streams. Through the collaborative efforts of contractors, engineers, biologists, and water quality specialists the delicate balance of our ecosystem can be protected. This balance in our ecosystem is important for keeping fish species, such as salmon and steelhead, thriving which in turn protects our agricultural food systems.

Written by guest columnist, biologist and QSP Danielle Teravskis.

Please contact us if you have any questions ...
The Monthly Dirt

Newsletter Editor:

John Teravskis, QSP/QSD, CPESC, CESSWI, WPCM, ToR
jteravskis@wgr-sw.com (209) 334-5363 ext. 110
or (209) 649-0877

Technical Questions about Environmental Compliance? Contact...

Matt Lewis, QSP, CESSWI, WPCM
matt.lewis@wgr-sw.com,
Rebekah Burnett, acting editor
rburnett@wgr-sw.com

Retrofitting Culverts to Support Fish Passage

Shane Scott – Principal Biologist and Owner
SSA Environmental

Culverts and stormwater systems are significant impact to fish and other aquatic organisms and their habitats. This workshop will present options for retrofitting culverts to improve safe and effective passage for fish and other aquatic organisms. We will review a wide variety of projects in various locations throughout North America.

Watch this 2024 Storm Water Awareness Week workshop in which Shane Scott of SSA Environmental presented how to make culverts more friendly to aquatic organisms.

A Very

from our office

Merry Christmas

to yours

To You

Every valley
shall be raised
up, every
mountain and hill
made low; the
rough ground
shall become
level, the rugged
places a plain.
And the glory of
the Lord will be
revealed, and all
people will see
it together. For
the mouth of the
Lord has spoken.
Isaiah 40:4-5

HEADING HOME FOR THE HOLIDAYS?

ADD **SWPPP RADIO** TO YOUR TRAVEL PLAYLIST



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season 2, episode 1



9:32

RADIO



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PAGE

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SCAN

100

101

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RPT

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RPT

MAY 15, 2025
Lodi, CA

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EXPERIENCE

BMP ROUNDUP





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JANUARY 28-30, 2025 | WGR-SW.COM/TRAINING



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Wildlife Exclusion Fence



E-Fence™

Excludes special-status small vertebrates from job sites
Configurations for each species

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Drop Guard™

Protects unpaved field drop inlets



GR8 Guard™

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Protects slot and trench drains

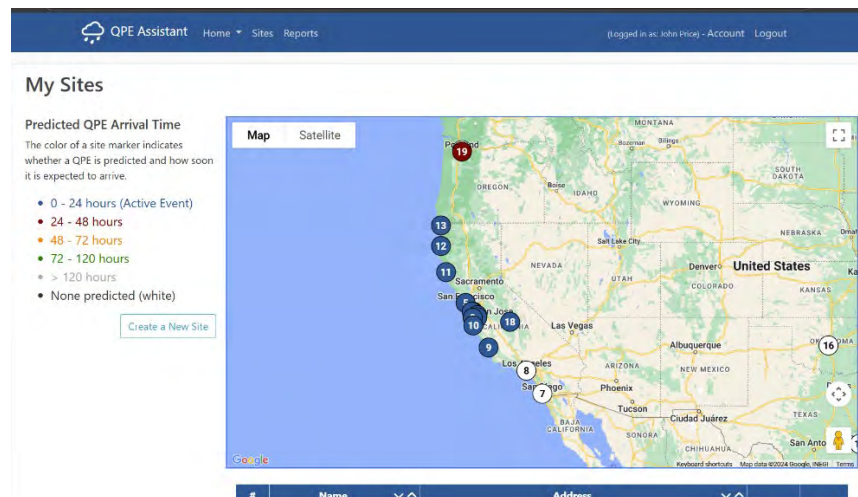




The rainy season has started in California! That's why we're excited to announce the release of **QPE Assistant**, a new app designed to take the guesswork out of predicting QPEs for compliance with the 2022 CGP. By automatically pulling real-time data from the National Weather Service (NWS), **QPE Assistant** predicts QPEs for your sites, so you no longer have to spend hours sifting through weather reports and manually crunching numbers.

Features:

- **Automated QPE Predictions** – Real-time predictions based on the latest NWS data, tailored for your construction sites.
- **Daily QPE Reports** – Automatically sends a daily summary of QPE forecasts directly to your email, keeping you informed without lifting a finger.
- **Save Time & Reduce Errors** – Eliminate manual calculations and the risk of human error.
- **Completely Free for One Site** – Manage a single site at no cost. If you have multiple sites, it's only \$1/month per additional site.



QPE Assistant Map View

Focus more on the work that matters and less on compliance headaches!

Questions? – We're happy to help! info@digamesystems.com

We hope you'll give it a try!

Best regards from the **QPE Assistant** Team!

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What are Your Plans for Storm Season 2024-2025?

We can keep your team working through the winter!

Active Treatment Systems, Inc. has been providing small to large scale stormwater solutions for 20 years. Get ahead of this year's coming stormwater; hire the best and gain peace of mind and winter productivity.

ATS has extensive experience in designing, building and operating temporary stormwater treatment systems for large and small acre projects needing to dewater stormwater from their job sites. Our services include permitting assistance for local sanitary sewer, ATS plan and/or passive treatment system plan, mobilization of treatment equipment, operations and monitoring stormwater dewatering.

ATS Rapid Response Benefits:

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BENEFITS TO YOU

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- You will have peace of mind knowing ATS will keep your site in compliance and without project delays through winter.
- ATS delivers value and reliable service to its customers.
- ATS guarantees a clean and dewatered job site; no violations!

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Active Treatment Systems, Inc. specializes in the management of stormwater, groundwater and industrial wastewater on construction, industrial, and environmental remediation projects. ATS also provides wastewater recycling, engineering design, system automation, laboratory services and treatment equipment rental. Our customers include some of the largest builders in the country as well as small, local construction firms. Our projects are on highways, bridges, tunnels, rapid transit, pipelines, mines, landfills, high-rise buildings, industrial, commercial and residential sites and anywhere there is a problem with water that needs to be removed from your projects.

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6301 Angelo Ct #9, Loomis, CA 95757 - Ph: (916) 652-9745
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