

QUALIFYING STORM EVENTS

the **Rain**
events

Knowing when to collect a sample can prevent false NAL exceedances.

Your industrial facility just received 0.1 inches of rainfall. Do you need to collect a sample?

The rain season started with a bang this year—the October atmospheric river drenched most of our state in inches of water, breaking records, and refilling reservoirs. Scientists estimate over 7,600,000,000 gallons of water were dumped on California in just two days—the same amount of water discharged by the Amazon River in the same amount of time. At the time of this article, Northern California is going through another atmospheric river (albeit much smaller), and all this rain has us thinking about Qualifying Storm Events. In this month’s edition of The Rain Events, we’re giving a brief refresher of Qualifying Storm Events, when samples should be collected, how to prepare for rain, and some sampling tips and tricks.

► WHAT QUALIFIES AS A QUALIFYING STORM EVENT? Well first of all, a Qualifying Storm Event must be preceded by 48 hours of no discharge. This doesn’t necessarily mean 48 hours without rain—it could drizzle on and off for two days before enough rain falls to cause a discharge, which would trigger the start of the Qualifying Storm Event. Once discharge starts at your facility, the Permit allows a four hour

window for collecting samples. If the discharge started outside of business hours, the Permit allows facilities to collect a sample when business hours resume, provided your business hours resume less than 12 hours after the discharge begins.

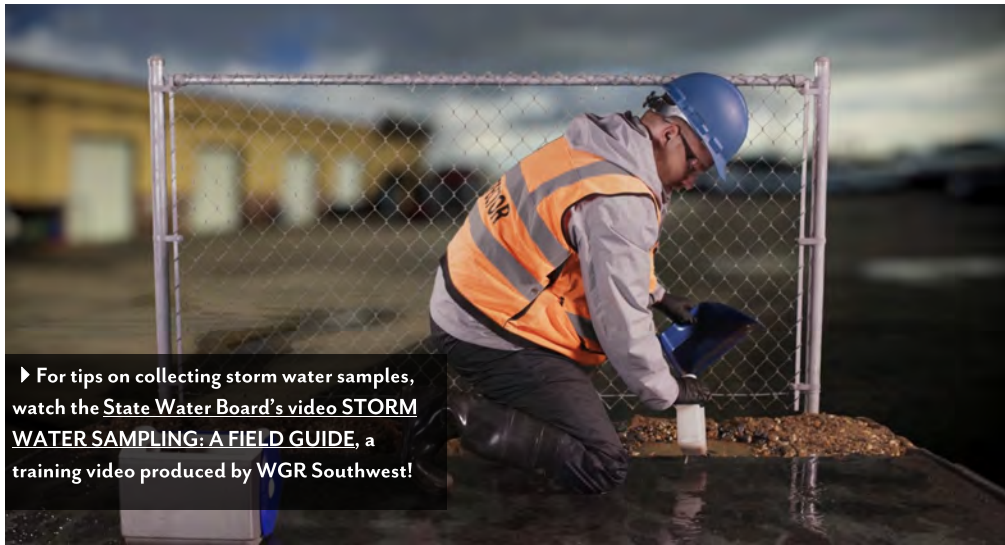
Qualifying events can happen during any time of year—thunderstorms in July could trigger a

QSE if storm water leaves your site. However, the Permit requires dischargers to only sample four QSEs per year: two during July-December, and two during January-June. If there aren’t two qualifying events in either of those six month periods, you only need to explain so on your Annual Report.

A Qualifying Storm Event is triggered by discharge from at least one outfall and drainage area at your facility. Remember, there isn’t a specific rainfall amount that triggers a qualifying event. Each industrial facility is different, and equal amounts of rainfall at two different sites won’t necessarily cause a discharge at both sites. In practice, we’ve found that a tenth of an inch will usually result in a discharge for facilities that are mostly impervious—but that’s not a hard and fast rule, and your facility may discharge sooner or much later.

WHEN SHOULD YOU COLLECT SAMPLES? The Permit requires dischargers to collect samples from Qualifying Storm Events, which are defined in Section XI.B of the IGP. Again, a QSE is a storm that produces a discharge from at least one drainage area, and is preceded by 48 hours of no discharge. However, there are a

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► For tips on collecting storm water samples, watch the [State Water Board's video STORM WATER SAMPLING: A FIELD GUIDE](#), a training video produced by WGR Southwest!

few exceptions—if hazardous conditions are present (flooding, electrical storms, hail, etc.), or if the storm happens outside of business hours, you are not required to collect storm water samples (see Section XI.C.6).

Remember, you are only required to sample four Qualifying Storm Events per year (two per six-month period), and if there's more than four QSEs in a year, you do not need to sample the extra events unless you are trying to lower your annual average numbers. The Permit requires you to upload all analytical results to SMARTS, including any samples you collected above and beyond the permit requirements—which could have unintended consequences if those extra samples cause a NAL exceedance.

When the first QSE comes along, don't miss the opportunity to collect your samples, but remember there is a four-hour window to do so. Resist the urge to collect samples as soon as the discharge begins, because the resulting sample will likely not be representative of your facility's overall discharge.

And don't allow any Qualifying Storm Events to pass by with the excuse of "I'm busy; I'll just sample the next storm." In our California climate, there's no guarantee we'll get another QSE before the end of the current six-month period. It's best to get your sampling out of the way, and then wait for the next six-month period to start (either January or July) before collecting your other two samples. Of course, this doesn't mean you should go out and collect samples in unsafe conditions. Use your best judgment to determine if the conditions are safe enough to sample, but don't stretch the rules just to save some money or because you don't want to go out in the rain. If you skipped a QSE and didn't meet your two-samples-per-six-months quota, you'll have to explain in your Annual Report why

you didn't collect a sample. If the Water Board doesn't buy your alibi, you could be in trouble.

HOW SHOULD YOU PREPARE FOR THE NEXT QUALIFYING STORM EVENT? A great place to start is by making sure the sample bottle kit you received from the laboratory is complete and ready to go. Check your sample kit against the Chain of Custody form to make sure everything is there (keep in mind some bottles can be used for more than one sample parameter). You'll need a bag of ice or two to keep your samples cold while transporting them to the lab.

Next, prepare your sampling equipment. Get your PPE together, including your high-visibility raincoat, rubber boots, sample collection tools (like drain hooks) and everything else you may need. Don't forget your field pH meter! Remember that you can only use pH test strips if your facility is at Baseline status for pH.

Once you get everything together, it's a good idea to store it all in a single location so you can grab it and collect a sample at a moment's notice. Finally, keep an eye on the weather forecast—know if there are any rainstorms coming, and be ready to collect your samples. Don't let a Qualifying Storm Event sneak up on you!

THE GOLDEN RULE OF REPRESENTATIVE SAMPLING: A "representative sample" is one that reflects the average quality of the storm water leaving your facility. The Golden Rule of Sampling is collecting a sample that is not cleaner than average, but not dirtier than average. Your goal is not to collect a sample where there is the most water, or where the water is the dirtiest, or where the water is the cleanest. When you collect a sample, you

should look at the water leaving your site, and fill up your bottles with storm water that is representative of the entirety of storm water leaving your site. Sometimes you don't have a choice as to where you collect your sample—maybe your sample point is a discharge point, or from the downstream sample port of a treatment system. But when you're collecting a sheetflow sample or sampling from a storm drain catch basin, pay attention to the Golden Rule of Representative Sampling.

SAMPLING TIPS:

OIL AND GREASE SAMPLING. The O&G sample bottle must be filled directly from the storm water runoff, with no intermediate containers or sampling devices like dustpans or pumps. Watch the [State Water Board's sampling video](#) for some helpful tips.

DON'T DISTURB THE BMPs. Sampling before your BMPs (compost sock, drain insert, etc.) isn't representative, and you're depriving your sample of all the benefits of your BMP in the first place! But moving your BMP to collect a sample is a terrible idea too, because disturbing your BMP will release pollutants directly into your sample bottle—also not representative. Try to setup your BMPs in such a way as to allow you to grab a sample without moving them.

TEST FOR pH IN FLOWING WATER. We've found that measuring pH in flowing water (instead of in a sample bottle) is the best way to get accurate and representative results.

DON'T MUDDY THE WATERS. When collecting a sample, never "scoop up" storm water or scrape the ground surface with your bottle. This stirs up all sorts of sediment and pollutants right into your sample container. ☔

**Need industrial storm water support?
Give us a call.**

The Rain Events

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DON'T FORGET

This Thanksgiving, take time to remember your blessings.
Happy Thanksgiving from The Rain Events staff.

Psalm 103:2



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Storm Water Contest...

Each month, we invite our readers to participate in a contest to test their knowledge of the Industrial General Permit and show their storm water compliance program. We enter all submittals to our monthly newsletter question into a drawing and one person is selected at random to receive a \$25 gift card.

Last month, due to some unforeseen circumstances, the monthly contest had to be postponed, but we're happy to announce that it is back for the November edition of The Rain Events!

...This Month's Contest

How many Qualifying Storm Events are you required to sample per year?

We need industrial storm water sleuths to help us with this month's question. Submit your answers by Friday, December 10th. Email your answer to jteravskis@wgr-sw.com. One winner will be selected by a random drawing to receive a \$25 gift card to *Amazon*.

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