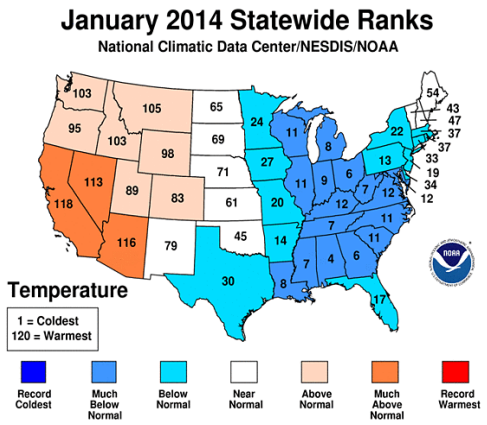
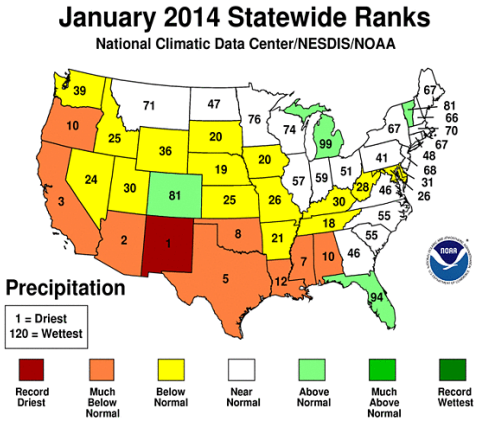
The Rain Events

February 2014
California Edition

If the Rain Comes Back…





It has been said in the past "*that was a long dry summer;*" well California is having a long dry winter that is until the end of January. Not only were the months of December and January the driest on record for the Golden State, but our State also experienced numerous records broken for most consecutive days without rain and daily average high temperatures[1]. After 50+ days of no rain, many facilities covered under the storm water Industrial General Permit (IGP) scrambled to collect their storm water samples during the rains at the end of January and earlier this month. Many facility operators scratched their heads wondering whether or not the storms, which began in the middle of the night or on weekends, were qualifying sampling events. If a facility is subject to the IGP, it is required to collect storm water samples, not just from whatever storm passes by, but from a qualifying storm event. Every time it rains, we at ***The Rain Events*** receive urgent emails and phone calls asking, "*Do I need to sample?*" In this edition of ***The Rain Events***, we will look at how the IGP defines a qualifying storm event; that is a storm which is eligible for sample collection. We will explore the reasoning as to why these rules exist. Also, we are going to take a look at some smart sampling strategies and tips.

[1] http://www.ncdc.noaa.gov/sotc/

Eligible Storm

"Qualifying storm" is a term commonly used both among storm water professionals and State regulators to describe a storm eligible under the current IGP for analytical sampling. The actual term "qualifying storm" is not found in the permit; however, it is understood that the term qualifying storm refers to a storm as outlined in §B.5.a-b of the IGP.

In order for a storm to be qualifying, it has to conform to the following criteria:

1. The storm must occur during the wet season as defined in §B.4.a which is from October 1st to May 30th.

   Reasoning: *This qualifying storm criterion was added because most industrial facilities in California do not have storms or significant storms during the dry season (June, July, and August) and early fall (September).*

2. The storm must be preceded by at least 3 days with no discharge (see §B.4.b, §B.5.b, & pg 26 footnote #2).

   Reasoning: *This qualifying storm criterion was added to test the impact of the facility's industrial activities on the storm water runoff by making sure that there has been at least three days of "build-up" of pollutants.*

3. A storm must produce enough precipitation to cause runoff/discharge (usually a minimum of 1/10th of an inch; however, every facility may vary as to how much rain is required to generate a discharge).

   Reasoning: *The General Permit is for discharges of storm water associated with industrial activities that discharge storm water directly to surface waters or indirectly through municipal separate storm sewers. If no water leaves your property, it is not a discharge.*

4. The storm must occur within the start of or during scheduled facility operating hours (see §B.5.b, and pg 25 & footnote #1).

   Reasoning: *This qualifying storm criterion was added to reflect water quality during hours of operation and to allow samples to be collected when personnel are at the facility. When drafting the current IGP, the State Water Resources Control Board wanted to make sure that facilities would not be obligated to collect samples when they are not staffed. For example, if a facility is closed overnight, on weekends and/or during holidays like Thanksgiving or Christmas; a facility will not need to incur the additional expense of having personnel or a contractor collect storm water samples during off hours.*

Smart Sampling Strategies

Some may think when using the term “strategies” that we are endorsing some way to fool or trick the system. That is not the case at all.

The General Permit states in §B.7a:

> *“Facility operators shall visually observe and collect samples of storm water discharges from all drainage areas that represent the quality and quantity of the facility's storm water discharges from the storm event.”*

> *“If the facility's storm water discharges are commingled with run-on from surrounding areas, the facility operator should identify other visual observation and sample collection locations that have not been commingled by run-on and that represent the quality and quantity of the facility's storm water discharges from the storm event.”*

What we mean by smart sampling strategies is to make sure the collection of storm water samples is done in a manner that is representative of the “*quality and quantity*” of the storm water discharge. Implicit in the word strategy, is the idea of putting some thought into where and how the storm water samples are collected before a qualifying storm occurs. Not taking the time to think this through could cause problems with the analytical results, and possibly erroneous exceedances of benchmark levels. Oftentimes samples are collected at a non-representative location or via improper collection methods.

Strategy #1

Make sure that the sampling location is representative of the facility’s storm water discharge. Here are a couple of case studies:

The first facility was located in an area with poor storm water drainage. It was inevitable that during a significant storm event, storm water from off-site would run onto the property. Even though the facility was rarely used and the BMPs were proven effective at other similar facilities to keep storm water analytical results below the benchmark levels, this facility consistently had benchmark exceedances. It turns out that they were collecting storm water samples from an area by the front gate where the storm water comingled with the run-on. While samples collected up-gradient of the original spot would likely have shown much improvement in the sample results; ultimately, the facility opted to berm the whole facility and direct storm water to a permeable area where it was allowed to percolate and evaporate.

Another facility had a retention pond to which all of its storm water conveyances discharged. The facility personnel would collect storm water samples from the pond when it rained and submitted the results in their annual report. They sought out professional storm water advice when they received a letter from the Regional Water Quality Control Board outlining their benchmark exceedances. Upon reviewing their facility and the data, the storm water professional found that the facility’s pond never discharged storm water and that the samples

were not for actual discharges. A sample is not required unless there is a discharge from the facility to a receiving water or municipal storm drainage system. Since that time, the facility has added additional BMPs to mitigate storm water pollutants and improve the water quality of the pond, but has avoided discharges through the use of the storm water pond.

Tip#2

Don't muddy the waters! When collecting a sample, do not scrape, gouge, or agitate the storm water. This will artificially introduce solids to the sample.

For example, a facility operator, at a facility having a detention pond, collected a storm water sample by wading into the pond and stirring up sentiment with their feet, rather than collecting the storm water while standing at the edge of pond and grabbing a sample using an extension pole. This caused the total suspended solids (TSS) results to be elevated above the benchmark level of 100 mg/l. The facility typically had results well below the benchmark. Following the sample event, the facility obtained a swing sampler and collected a sample from the next qualifying discharge event. The sampling result showed that the TSS returned to the normal historic levels which were below the benchmark.

"To Do List" for February:

- Perform the 3rd Quarter Non-Storm Water Observation (Forms 2 & 3) by March 31 (we recommend waiting until the end of March).
- Get your second qualifying storm event sample if you have not yet done so. If you haven't gotten your first sample, you are way behind.
- Perform and document your monthly storm water inspections (Form 4).

We Have a January Contest Winner!

Joseph Garcia submitted the winning answer!

The question was…

What is the frequency of the storm water discharge observations required under the current IGP?

Answer: At least one storm event **monthly** during wet season (10/1-5/30)

Joseph wins $25 at Applebee's Great job!

February Storm Water Contest

Try it out! You can win!

By **March 7, 2013**, submit a response for the following question by email to steravskis@wgr-sw.com.

Question: Other than pH, total suspended solids, specific conductance, oil and grease, and total organic carbon; based on your SIC, where in the General Permit is there a list of pollutants that you will possibly need to test for?

Those submitting a correct answer will be placed in a drawing for a $25 Starbucks gift card.

Draft IGP News

The SWRCB has announced that the next and possibly last draft of the new IGP is due out during the week of February 17, 2014!

Please contact us if you have any questions …

Rain Events Newsletter Editor:

John Teravskis jteravskis@wgr-sw.com
(209) 334-5363 ext. 110

Technical Questions about Storm Water Compliance? Call …

Aaron Ortiz, aortiz@wgr-sw.com
Office (209) 334-5363 ext. 114 Cell (209) 810-5151
Steve Teravskis, steravskis@wgr-sw.com
Office (209) 334-5363 ext. 115 Cell (209) 642-5020
Chelsea Dreyer, cdreyer@wgr-sw.com
Office (562) 799-8510 ext. 205 Cell (310) 629-5259

Still need your crew trained to take storm water samples, measure pH in the field, and do monthly observations?

WGR will come to your facility and provide a two-hour training session for **$425**.

Appointments must be booked with aortiz@wgr-sw.com and facilities must be located within 30 miles of our Lodi or Los Alamitos offices. Discount pricing is also available for facilities farther than 30 miles, please contact Aaron Ortiz for more details. Offer does not apply to prepaid compliance programs.