The Rain Events

January 2011
California Edition

It's Raining, It's Pouring

December 2010 saw record rainfall throughout California, but especially in Southern California, where many spots recorded their wettest-ever December and the wettest month in more than a decade. Last month, Governor Arnold Schwarzenegger declared a state of emergency in six counties due to flooding. In the very north of the State, the Redding Municipal Airport recorded 39.66 inches from January 1 through December 31; which is 118 percent of the annual average and the most in one year since 1998. The 2010 rain broke a three-year drought which had lowered Lake Shasta to its third-lowest level on record. At the beginning of the year, Lake Shasta was almost 123 feet below the spillway rim. Rains from mid-January through the spring allowed dam operators to fill the lake for the first time since 2006. By the end of the year, dam operators were grappling with the opposite problem. They had too much water in the lake as a line of Pacific storms continued to hit California. By December, dam operators nearly tripled releases from the dam to make room for more water pouring in which also caused the Sacramento River to overflow into the Yolo bypass. Meterologists predict the wet pattern to continue into 2011, but long-range forecasts suggest drier weather later this winter through spring. While all this water means good things for our drought-wearied State, I think we would all agree this winter has certainly been a true test for industrial BMPs. How are your facility's BMPs holding up? Are the strategies contained in your industrial SWPPP working for you? Now is the time to take a look to see if the BMPs are controlling the pollutant sources and remaining effective. Try the following mid-storm season check-up:

Location	July 1, 2010 – Jan. 2, 2011	Normal
Sacramento	10.21"	6.20"
Stockton	8.45"	4.99"
San Francisco	9.70"	6.96"
Fresno	9.51"	3.49"
Los Angeles	11.82"	3.96"
Irvine	12.81"	3.96"
San Diego	8.11"	3.27"

- Inspect drain inlets to see if there is a build up a debris and sediment in them. Check to see if drain inlet bags or devices are plugged or need to be serviced.
- If you have a storm water retention pond, take a look to how full it is and note the quality of the water in it. If it is looking pretty full and you haven't had to discharge, you might even collect a sample to check the water quality to see if there are any potential problems.
- Make sure covers and tarps on oily parts, equipment, or stockpiled materials haven't blown off and are still secure.
- Check containment berms and drip pans, make sure they are not full and overflowing and that any oil sheens or other polllutants in them have been cleaned up.
- Look for areas of erosion and sediment track-out. Stabilize erodible areas with plastic sheeting or covering them with crushed rock.

Sources: www.redding.com/news and www.cnrfc.noaa.gov

"To Do List" for January:

- Monthly Storm Water Observations (Form 4)
- Storm Water Sampling (Most of you should have your 1st sample by now; go for your second one!)
- Quarterly Non-Storm Water Observations sometime between now and March 30 (Forms 2 & 3)
- Mid-season check-up. See story on page 1 of this newsletter.

A Souper Bowl for the Super Sampler

Back by popular demand is the *The Rain Events'* cooking edition. We know storm water samplers develop a powerful appetite while sloshing around in the cold and wet. Here is a recipe sure to make your sampling more bearable. You can try it out to warm up after the next sampling event or even make it for friends and family during the big game.

John's MEP[1] Chicken Tortilla Soup

Ingredients:
1 pound shredded, cooked chicken
1 (15 ounce) can whole peeled tomatoes, mashed
1 (10 ounce) can enchilada sauce
1 medium onion, chopped
1 (4 ounce) can chopped green chili peppers
2 cloves garlic, minced
2 cups water
1 (14.5 ounce) can chicken broth
1 teaspoon cumin
1 teaspoon cayenne chili powder
1 teaspoon salt
1/4 teaspoon black pepper
1 bay leaf
1 (10 ounce) package frozen corn
1 tablespoon chopped cilantro
8 corn tortillas
olive oil

Source: adapted from allrecipes.com

Directions (serves 8):

1. Place chicken, tomatoes, enchilada sauce, onion, green chilies, and garlic into a slow cooker. Pour in water and chicken broth, and season with cumin, chili powder, salt, pepper, and bay leaf. Stir in corn and cilantro. Cover, and cook on Low setting for 6 to 8 hours or on High setting for 3 to 4 hours.
2. Preheat oven to 400 degrees F (200 degrees C).
3. Lightly brush both sides of tortillas with olive oil. Cut tortillas into strips, then spread on a baking sheet.
4. Bake in preheated oven until crisp, about 10 to 15 minutes. To serve, sprinkle tortilla strips over soup.

[1] MEP – Maximum Extent Practicable

We Have a Winner !!!

George Alvarez submitted the winning answer!

Review your facility's SWPPP and name three things that must be addressed in the document.

George answered:

- Identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from our plant.
- Identify and implement site-specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges.
- Plan to be reviewed on an annual basis during the General Permit- required Annual Comprehensive Site Compliance Evaluation (ACSCE).

George will receive a $25 eGiftCard to amazon.com to buy a new crockpot for his MEP Chicken Tortilla Soup.

The Compliance Corner . . .

How Conductive is your Storm Water?

Of the four basic analytical tests that are required for storm water sampling, many times storm water compliance personnel get confused about EC (electrical conductivity). Part of the confusion comes from the various aliases for this test. It is also known as "specific conductance" or just plain "conductivity". But all of these terms relate to the same analytical measurement, which is how much electricity can be conducted through water. Pure de-ionized water has virtually no conductivity. That is because to have conductivity, water must have something in it to conduct electricity. Typically, the conductors in water are cations and anions from dissolved substances. These ions have electrical charges associated with them and act as a conductor of electricity; the more of them in the water, the more electricity can be conducted through it. If storm water runoff comes into contact with a salt or sugar, that substance is then dissolved and raises the conductivity of the water. Excessive dissolved solids in runoff can be detrimental to organisms in fresh receiving waters. Outside of a laboratory setting, there are always some dissolved solids in water. But what is the acceptable level of conductivity in storm water discharges? Well, that is where it gets somewhat controversial. Shortly after the Industrial General Permit was first issued in 1992, the State of California published in a newsletter a benchmark for conductivity of 200 umhos/cm. This benchmark is still referenced today by many Regional Boards throughout the State. Later, the State came out with a draft Industrial General Permit that listed a proposed benchmark for conductivity of 300 to 500 umhos/cm, which matched the benchmark in the old Federal Multi-Sector General Permit (which is the Federal equivalent of the California Industrial General Permit). However, the USEPA did not include any benchmarks or even testing requirements in the 2008 Multi-Sector General Permit. So, how do you know if your conductivity is a problem? If it is below 200 umhos/cm, it is safe to say you are good. But, if it is above 200, you still might be OK. What you should do is look at the background conductivity of the

receiving water for your facility's storm water discharges. The best place to research these values is in the Basin Plan established for each specific watershed by the local Regional Water Quality Control Board. If you are discharging to a salt-water or brackish water body, the background conductivity is significantly higher than any of the above referenced benchmarks, and the conductivity of your water is not causing a threat to receiving water quality. But beware! Conductivity is only one indicator of potential problems posed by the substances causing the elevated measurements. These same substances may also cause other problems and threats to the receiving water such as increased Biological Oxygen Demand (BOD), nitrates, or toxicity. Next month, we will continue our discussion by exploring how to identify and control sources of conductivity.

January STORM WATER CONTEST

Try it out! You can win!

By January 31st, submit a response for the following question by email to jteravskis@wgr-sw.com .

What is the name and website address for your local Regional Water Quality Control Board?

All persons submitting correct answers will be placed in a drawing. The winner will receive a $25 eGiftCard to .

Please contact us if you have any questions …

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