



California Regional Water Quality Control Board

Los Angeles Region



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(50 Years Serving Coastal Los Angeles and Ventura Counties)

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October 29, 2004

Mr. Jeff Pratt, P.E., Director
Ventura County Watershed Protection District
800 South Victoria Avenue
Ventura, CA 93009-1600

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Claim No. 7002 2030 0002 1673 2223

REVIEW OF THE VENTURA COUNTYWIDE STORMWATER MONITORING PROGRAM 2003/ 04 MONITORING REPORT, JULY 2004.

Dear Mr. Pratt:

Thank you for the Ventura Countywide Storm Water Monitoring Program's 2003/04 Monitoring Report (Report), which we received on July 12, 2004. We have reviewed the Report and the following are our comments based on our review.

Monitoring

- The Report is to have represented the County's Storm Water Monitoring Program during the 2003/2004 water year. Data represented in the Report does not fully show storm water monitoring for the 2003/2004 water year. For mass emission stations, the NPDES Permit CAS004002 (Permit) states: "Up to six station events per year, including a minimum of 2 dry weather samples must be monitored." This is interpreted to mean that at least 6 samples are to be taken each water year (4 wet weather samples and 2 dry weather samples). Data from the county's mass emission stations shows 3 wet weather samples collected in 2004 (February 2nd, 18th and 25th). The wet season is from October 1st through April 15th as defined in the Permit. The required 2 dry weather sampling events are to be taken during the water year also, one prior to the onset of wet weather (2003) and once wet weather events have subsided (2004). The Report does not contain data for the required 6 events per year, and this is a violation of the County's Permit.

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Precipitation and Flow

- The 8 monitoring stations storm water sampling dates show that the 2003 first storms of the season were not sampled. In a storm event, the first flush of runoff typically contains relatively high concentrations of contaminants which may then fall and fluctuate at lower levels for the remainder of the storm event. As a result of this contaminant concentration pattern through an event, the highest levels of toxicity are expected to be associated with this first flush. The first .25 inches of rain from a storm event creates runoff in channels (See, *Los Angeles County 1994-2000 Integrated Receiving Water Impacts Report. Appendix D, Low Flow Study*). It has been shown those water quality constituents such as nitrate, total phosphorus, turbidity, TSS and hardness are higher in the smaller storms than larger storm events. Ventura County did not collect sampling data accurately representing storm water contaminants within its watersheds. The Permit does not contain "blackout dates".
- The first storms of the year generally produce the most toxic storm water, showing the need to sample these storms (See, *Los Angeles County 1994-2000 Integrated Receiving Water Impacts Report. Appendix C, Executive Summary of the Santa Monica Bay Receiving Waters Study by Southern California Coastal Waters Research Project. Excerpted from the Study of the Impact of Stormwater Discharge on the Beneficial Uses of Santa Monica Bay, July 8, 1999 (SCCWRP, 1999), Pg. 11.*

Toxicity Testing Issues:

- The presence of a particular contaminant should lead to the use of organisms with known sensitivity to that contaminant. For example, where ammonia is considered to be the causative agent of toxicity, fish should be used rather than invertebrates due to their greater sensitivity. In contrast, invertebrates would be more appropriate where pesticides are the suspected causative agent of toxicity. If the County of Ventura would like to perform a study to evaluate the selection of organisms to use when performing acute and chronic toxicity testing, then a plan will have to be submitted to the Regional Board prior to the onset of the study for evaluation. Alternatively, the County of Ventura may use the toxicity methods as explained in- Lau, S.-L., M.K. Stenstrom and S. Bay. 1994, *Assessment of storm drain sources of contaminants to Santa Monica Bay. Volume V, Toxicity of Dry Weather Urban Runoff*, prepared for Santa Monica Bay Restoration Project, Monterey Park, CA, Pg. 129, water flea (*Ceriodaphnia dubia*) reproduction and survival test (freshwater), and the purple sea urchin (*Strongylocentrotus purpuratus*) fertilization test (marine), shall continue to be used.

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- The next Permit will re-evaluate the testing procedures for both acute and chronic toxicity testing. In the interim, it is recommend that Ventura County review the toxicity testing sections of the Storm Water Monitoring Program's Reports for both Los Angeles and Long Beach Counties. The County of Long Beach's Report, section 4.5.2.3- Sea Urchin Fertilization Test, should be reviewed for adjusting sample salinity. The County may also want to use the October 2002 EPA toxicity testing methods, EPA-821-R-02-012 for acute and EPA-821-R-02-013 for chronic.
- Chronic toxicity testing was not performed for water flea (*Ceriodaphnia dubia*) reproduction.
- Data sheets showing toxicity test results have to be included with the Report. Aquatic Bioassay & Consulting Laboratories, Inc.'s ToxCalc output for the 2003/2004 monitoring year is to be submitted to the Regional Board immediately.

Water Quality Objective Comparisons:

- The Water Quality Control Plan for Ocean Waters of California (Ocean Plan), which contains water quality objectives for the coastal waters of California, is to be used in comparing the County's monitoring data to water quality exceedances. Section C.1 of the *California Ocean Plan* states: "Nonpoint sources of waste discharges to the ocean are subject to Chapter I Beneficial Uses, Chapter II – WATER QUALITY OBJECTIVES (wherein compliance with water quality objectives shall, in all cases, be determined by direct measurements in the receiving waters) and Chapter III – PROGRAM OF IMPLEMENTATION Parts A.2, D, E, and H."
- During storm events, freshwater flows into the Ocean where a plume can persist for several days after a storm. Information on the properties of storm water plumes in terms of characterization and biological effects can be found in the report - *Los Angeles County 1994-2000 Integrated Receiving Water Impacts Report. Appendix C, Executive Summary of the Santa Monica Bay Receiving Waters Study by Southern California Coastal Waters Research Project.* . Excerpted from the *Study of the Impact of Stormwater Discharge on the Beneficial Uses of Santa Monica Bay, July 8, 1999 (SCCWRP, 1999).*
- Monitoring data are to be compared to both acute and chronic criteria in the California Toxics Rule. In toxicity testing, it is the sub-lethal effect of the exposure that is being tested rather than the duration of exposure. Sub-lethal effects include damage to reproductive rates, growth, etc. Acute testing is showing lethal effects- death.

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Potential Problematic Constituents


- Constituents exceeding water quality objectives are considered Pollutants of Concern (POC) and should be discussed within the Report. For these POCs, besides "continued monitoring" and "track[ing] for further analysis", they should be identified in the Ventura County Storm Water Management Plan (SMP) as requiring additional investigation. Based on the POC source identification, additional target businesses may be identified to be included in the industrial/commercial inspection program. And co-permittees shall report on the types and proposed actions to be taken in regard to the additional target businesses in annual reports.
- Also, in light of upcoming Total Maximum Daily Loads (TMDLs), the monitoring program should be geared towards selecting and prioritizing appropriate BMPs to target the identified POC.

Continued TSS Underreporting

- We continue to be concerned about the low results of TSS from your monitoring. These low results may be related to sampling large rainfall events and sampling methods. There are a multiple of sources of TSS from nearly all land uses. The significance of reducing TSS cannot be understated given the fact that a few other POC adsorb onto sediments.
- Therefore, as suggested in prior correspondence please review your testing methods, and we would like also to take split samples if given sufficient notification time.

If you have any questions concerning this matter, please call me at (213) 620-2237.

Sincerely,

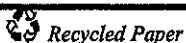


Ejigu Solomon
Ventura Storm Water Chief

cc: Mr. Lawrence Jackson, Division Manager, Ventura County Watershed Protection District
Ms. Darla Wise, Ventura County Watershed Protection District

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