

San Diego Stormwater Copermittees Dry Weather Monitoring Workgroup

March 16, 2005 Meeting Summary

1 Introductions

Attendees

Name	Organization
Dadkhah, Arsalan	D-Max Engineering
Erickson, Jessica	City of San Diego
Hartman, Paul	City of Encinitas
He, Li-Ming	County of San Diego, Watershed Protection Program
Helyer, Karen	Port of San Diego
King, Danny	City of Solana Beach
Martin, Andrew	Weston Solutions
Matlaga, Julie	City of Oceanside
Morrison, Roger	City of Poway
Renfrew, David	EnviroMatrix Analytical
Smith, Kevin	City of Del Mar
Sonkson, Andre	City of San Diego

2 Regional Datasharing Format

The Workgroup finalized and adopted the Regional Datasharing Format, which was integrated with inputs from various Copermittees and interested parties. In particular, the Workgroup appreciated detailed comments provided by Karen Helyer of the Port of San Diego, which greatly improved this datasharing format. Most of the comments were accepted for integration into this datasharing format although warm discussions took place on these fields: Data for flow width, depth, and velocity, flow rate unit, method detection limit (MDL), and reporting limit (RL).

For the issue of MDL and RL, Li-Ming (Lee) He of the County of San Diego pointed out that both MDL and RL should be reported. Results lower than an MDL are reported as non-detects (< MDL), whereas results greater than an RL are reported as accurate data. For results between MDL and RL, the data are reported as estimates and flagged with "J". When analyzing data with non-detects, USEPA recommends using the MDL or half of the MDL to replace the non-detects.

David Renfrew of EnviroMatrix Analytical explained and clarified these two terms for the Workgroup. The method detection limit is the minimum concentration of a substance that can be measured with 99% confidence that the analyte concentration is greater than zero. A constituent is added to soil and water matrices to make a concentration near (within one to five times) the expected detection limit. Seven or more replicates of this sample are analyzed and the MDL is determined using the standard deviation of the replicates. (MDL = Standard Deviation x the Student T variate at 99% confidence). Reporting limits

take into account the sample size, matrix effects, blank levels, and any dilution factors. The Reporting Limit is always greater than or equal to the MDL. Reporting Limits are evaluated to verify that reporting limits are greater than or equal to the experimentally determined MDL and less than or equal to project-specific reporting limit requirements. Reporting limits may also be used for project specific criteria when the level of concern may be much higher than the calculated MDL. David indicated that MDL will vary from lab to lab within the same method, but RL will not.

It was agreed at the meeting that all Copermittees/agencies will submit dry weather monitoring data collected in 2004 to Weston Solutions by April 22, 2005 using the adopted datasharing format.

3 2005 Dry Weather Monitoring

The Workgroup reviewed the field datasheet, land use types, conveyance types, detection limits for laboratory analytes, and action levels for Permit-required analytes. There were no changes or modifications suggested for the field data sheet, land use type, and conveyance types. It was recognized at the meeting that the term of “detection limits” for laboratory analytes should be changed to “Reporting Limits” that reflects the reality of the values contained in the table. It was reminded that the Workgroup adopted at the October 2004 meeting 5.0 mg/L as the Reporting Limit for oil and grease. This RL will be used in 2005 dry weather monitoring. Lee mentioned to the Workgroup that EPA would withdraw the method 413.1 and replace that with the method 1664A for oil and grease analysis.

It was noticed that reporting limits for copper and lead are listed as ranges (from 5 to 10 µg/L), which may result in difficulties for regional datasharing and analysis. This issue will be discussed at the April meeting.

4 Dry Weather Monitoring Presentation

The presentation given by Lee of the County of San Diego summarized the results of dry weather monitoring conducted by the County’s Watershed Protection Program from 2002 to 2004. The results suggested that elevated fecal indicator bacteria and nitrate were the top constituents of concern. He demonstrated the application of statistical methods, multiple regression, and artificial neural network to water quality prediction and assessment. The presentation can be viewed at the website <http://www.projectcleanwater.org>.

5 Other Issues

The special issue raised at the meeting was the analysis of fecal indicator bacteria (FIB). Three methods (membrane filtration, multiple tube fermentation, and chromogenic substrate technology kits manufactured by IDEXX Laboratories, Inc.) are routinely used to measure indicator bacteria in waters. Studies indicated that results were generally comparable among methods, but variability was greatest for the multiple tube fermentation method (MTF). The MTF method takes 48-72 hours to get results, whereas IDEXX methods take 18-24 hours only. The Workgroup recognized the benefits of using IDEXX methods and would take the opportunity of using them. However, it needs to be clarified by San Diego Regional Water Quality Control Board. The Workgroup will prepare and submit an issue letter to SDRWQCB. Arsalan will draft this letter, which will then be circulated among Copermittees within the Workgroup.

6 Next Meeting

Next meeting will be held on April 13, Wednesday, 2005 from 10 am to noon at the Metro Biosolids Center. An agenda will be sent out at least one week ahead of time or please check <http://www.projectcleanwater.org> for updated information.