

San Diego Stormwater Copermittees Dry Weather Monitoring Workgroup

February 16, 2005 Meeting Summary

1 Introductions

Attendees

Name	Organization
Aminpour, Khosro	City of Chula Vista
Dadkhah, Arsalan	D-Max Engineering
Filar, Cheryl	City of Escondido
Gobby, Kim	City of Coronado
Hartman, Paul	City of Encinitas
He, Li-Ming	County of San Diego, Watershed Protection Program
Helyer, Karen	Port of San Diego
Isakson, Linda	City of Oceanside
Padilla, Mayela	San Diego County Regional Airport Authority
McPherson, Sheri	County of San Diego, Watershed Protection Program
Smith, Kevin	City of Del Mar
Sonkson, Andre	City of San Diego
Vipatapat, Vasana	City of Escondido
Watts, Susie	MEC-Weston Solutions

2 Regional Datasharing Format

A regional datasharing protocol is needed for quick data exchange and regional assessment. The principle of developing a datasharing format is the simplicity, clarity, and completeness so that the format can be readily employed by individual Copermittees/agencies to meet their data storage and retrieving needs. This datasharing format presented to the Workgroup meeting was modified with inputs from the November meeting. Modifications included simplifying data entry fields, adding detection limits and units for field measurement results.

The workgroup recognized that it is challenging and takes some time initially to compile data in a way most feel comfortable with, but it will pay off in benefits after established. This format intended initially to be used for dry weather monitoring programs conducted and managed by Copermittees or their contractors, but can be applied to other monitoring programs for the San Diego region.

There were warm discussions at this meeting, with a focus on changes in and deletions of various fields. Karen Helyer (Port of San Diego) suggested that the method detection limit (MDL) be deleted from both field measurements and laboratory analytical results tables, whereas reporting limit (RL) be added in the field measurements table; some fields (e.g., LabSampleID, PrepDate, PrepMethodName, and AnalysisDate) in the Analytical Results table were suggested to be deleted, too. However, it was indicated at the meeting that MDL and RL should be provided in the table for the purpose of method comparison, data analysis and integrity.

The datasharing format will be finalized and ready to use for all Copermitees and other agencies prior to next Workgroup meeting on March 16, 2005. In order to accommodate Copermitees' needs as much as possible, the Workgroup will continue accepting comments on the current version of the datasharing format. However, all comments received after 5: 00 pm, March 11, Friday, 2005 will not be considered for inclusion in the datasharing format.

It was agreed at the meeting that each of the Copermitees and other agencies will submit dry weather monitoring data collected in 2004 to MEC-Weston Solutions by April 22, 2005 using the developed datasharing format.

3 Data Quality Issues

Data quality is defined by a series of statements that set standards the data must meet. These standards cover the way the sample is collected and analyzed. In general, certain performance criteria (data quality objectives) are established to ensure that the data are acceptable and usable. The data quality assurance and control (DQAC) process is a strategic planning approach based on scientific methods to prepare for data collection activities. It provides a systematic procedure for defining the criteria that a data collection design should satisfy, including when to collect samples, where to collect samples, the tolerable level of decision error for the study, and how many samples to collect, balancing risk and cost in an acceptable manner. Using the DQAC process will assure that the type, quantity, and quality of environmental data used in decision making will be appropriate for the intended application, resulting in environmental decisions that are technically and scientifically sound and legally defensible.

Li-Ming (Lee) He (County of San Diego) shared his experience with ammonia and nitrate measurements using field test kits. High levels of electrolytic conductivity (total dissolved solids) interfere with ammonia measurement by forming white precipitation. Adding extra amount of stabilizer solution to the sample with high conductivity eliminates the interference¹. As for nitrate, it was found that the laboratory method generated lower concentrations than the field method when the actual nitrate level was greater than 5 mg/L as N. A modified laboratory method provided nitrate data comparable to field test results².

Andre Sonkson (City of San Diego) mentioned that field measurement results for ammonia, nitrate, and orthophosphate using CHEMetrics test kits tended to be higher when the water had a high level of conductivity, for example, waters near San Diego Bay.

Also discussed at the meeting was the analysis of indicator bacteria. 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

¹ County of San Diego. 2004. Dry Weather Monitoring Sampling Manual.

² EnviroMatrix Analytical. 2003. Standard Operating Procedure: Nitrate Analysis. Revision 2.

method (MTF)³. 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 need more discussion and time for the process of approaching to these methods.

4 Dry Weather Monitoring Case Study Presentation

Paul Hartman gave a presentation to the Workgroup. The presentation described ICID case studies conducted by the City of Encinitas' Clean Water Program in 2004. They detected a high level of ammonia at a storm drain. While tracing upstream, high levels of indicator bacteria were also detected. They also used different tools such as closed circuit television truck and dye test to identify the source. The investigation found that the high ammonia and bacteria were from a restaurant with a sewer pipe connected to the storm drain conveyance. The presentation can be viewed at the website <http://www.projectcleanwater.org>.

5 Next Meeting

Next meeting will be held on March 16, Wednesday, 2005 from 10 am to noon, with location to be determined. An agenda will be sent out at least one week ahead of time or please check <http://www.projectcleanwater.org> for updated information.

³ Rachel T. Noble, Stephen B. Weisberg, et al., 2003. Comparison of beach bacterial water quality indicator measurement methods. Environmental Monitoring and Assessment 81: 301-312.