

SECTION 14

DATA REPORTING PROTOCOLS

All data collected as part of a Caltrans Stormwater Monitoring project are entered into the Caltrans Statewide Stormwater Database. To facilitate data management, analysis, and the comparison of results from Caltrans Districts throughout the State, a uniform system for data reporting is required for all Caltrans monitoring projects. Every fall, and periodically each spring, Caltrans distributes a Data Reporting Protocols document that describes the manner in which data should be entered into the Database. The following key topics are covered in this section:

KEY TOPICS

- **General Instructions**
- **Organization of the Caltrans Statewide Stormwater Database**
- **List of Important Fields within the Database**
- **Certification Statement**

An overview of the most recent version (Caltrans, 1999c) of the Data Reporting Protocols (the Protocols) is provided in this section, and the entire document is included for reference in *Appendix H*. A new version is expected in July 2000; no major revisions are anticipated. However, new data fields may be added, subject to the approval of Caltrans.

Following is a brief description of the Protocols, the organization of the document and an outline of the major reporting fields in the Caltrans Statewide Stormwater Database.

➤ **GENERAL INSTRUCTIONS**

Every monitoring site is assigned an ID number by Caltrans. At the beginning of each monitoring season, data reporters must contact the Caltrans database manager to receive the Site ID for each site to be sampled. Data reporters provide the name of the site, Caltrans District and constituents to be monitored. The database manager then supplies the appropriate Site IDs, or assigns them, if previously unmonitored sites are added to a project.

Standardized entries are provided for almost every field. These entries must be used exactly as presented in the Protocols (including for example specifications for spacing, hyphenation or capitalization), and attention must be given to the units specified for each constituent. If the standardized list does not contain an appropriate descriptor, the data reporter should contact the database manager prior to submitting any non-standardized entries.

The database manager will provide every data reporter with a data-reporting worksheet (Excel file format) in which all data must be submitted. All data fields should be included, even when they are left blank. Time series data (for example flow, precipitation, etc.) should be presented in a separate Excel worksheet, one for each site. For detailed instructions on how to include time series data, see *Appendix H*.

For the reporting of dates and times, specific formats and references are dictated in the Protocols (*Appendix H*), as is a definition of a precipitation event. The purpose is to provide consistency in data reporting and calculation of summary statistics.

► ORGANIZATION OF THE CALTRANS STATEWIDE STORMWATER DATABASE

The database is separated into three parts: Sample Description, Sampling Event Description, and Site Descriptions. There are 29, 22 and 25 fields, respectively, in each of the sections. All three sections contain an Event ID and Monitoring Site ID field.

The Sample Description portion of the Database allows the data reporter to submit information that describes the sample itself: when and how it was collected, what it was analyzed for, the method and lab used to perform the analysis, and the result of the analysis. This section also allows the data reporter to characterize the sample source, as well as the portion of a rain event that is represented by the sample.

The second part of the Database contains data that describes the precipitation event itself. This includes when the rain started and stopped, rainfall intensity, when runoff started and ended, the total amount of rainfall prior to, and during, the event, and antecedent dry days.

In the third section of the Database, the data reporter enters records that describe the site at which the sample was obtained. The fields span a range of categories from geographic information and boundaries, such as coordinates, hydrologic sub-area, land use, and size of the watershed, to political data like county, Caltrans and RWQCB district.

► LIST OF IMPORTANT FIELDS WITHIN THE DATABASE

This section lists some of the fields in the Database. It is not meant to reproduce the Protocols, but simply to give the reader an idea of the type of information that is required from data reporters.

The Sample Description section includes such fields as Contract Number, Task Order Number, Constituent, Reported Value, Lab Name, Method Reference, Method Number, Method Detection Limit and Reported Detection Limit.

Also in this section is a heading for a Value Qualifier. This field qualifies reported values based on lab QA/QC (see *Section 13* and *Appendix H*).

In the Sampling Event description section, the data reporter must enter in such information as the Rain Start Time, Rain End Time, Rain Start Date, Rain End Date, Event Rain, Max Intensity, Total Flow Volume, Peak Flow and the Estimated % Capture, as well as who collected the sample.

The Site Description portion is comprised of fields such as the Caltrans District, County, RWQCB, Latitude, Longitude, Land Use, Catchment Area, Impervious Fraction, Post Mile, Receiving Water Type, Time Series, and Site Description.

► CERTIFICATION STATEMENT

Caltrans stormwater monitoring reports shall include the certification statement shown in Figure 14-1. The certification statement must be signed by the contractor's project manager and task order manager or duly authorized representative, to verify that all data collection and reporting were completed in accordance with this Guidance Manual and any applicable project-specific sampling and analysis plans.

I certify that this document and all attachments were prepared by qualified personnel under my direction or supervision in accordance with the most recent version of the *Guidance Manual: Stormwater Monitoring Protocols* (Caltrans) and the FILL IN (the project specific sampling and analysis plan).

Based on my inquiry of the person or persons directly responsible for gathering and reporting the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete

Consultant Project Manager

Date

Task Order Manager

Date

Figure 14-1. Certification Statement Required in All Caltrans Stormwater Monitoring Reports