Regional Highway Stormwater Runoff Characteristics in California

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by

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ABSTRACT

The California Department of Transportation (Caltrans) is engaged in a multi-year program of monitoring storm water runoff from highways. As part of this ongoing program and permit requirements specified by the National Pollution Discharge Elimination System (NPDES) a total of ten representative highway sites were selected within five Caltrans Districts for comprehensive stormwater monitoring and characterization study. Parameters monitored include: (1) conventional pollutants, (2) metals and inorganics, (3) nutrients, (4) organics and pesticides, (5) selected microbes, and (6) toxicity. Results obtained during 1997-98 and 1998-99 NPDES monitoring seasons are discussed in this paper.

INTRODUCTION

With the passage of the Clean Water Act (CWA) in 1972, the federal government has placed a priority on protecting the quality of our nation's waters. The stated objective of the CWA is to restore and maintain the chemical, physical, biological integrity of the Nation's waters. The CWA prohibits point source discharge of pollutants into waters of the U.S. without a National Pollutant Discharge Elimination System Elimination (NPDES) permit. In the 1987 amendments to the CWA, Congress directed EPA to establish a permitting framework under the NPDES program to address storm water discharges associated with urban areas and certain industrial activities.

In California, administration of the federal NPDES program has been delegated by the EPA to the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCB). The SWRQCB uses statewide general NPDES permits for construction sites and industrial activities. The RWQCBs issue and enforce individual municipal permits and take the lead in enforcing the general permits within their respective regions.

Prior to 1999, each of the twelve Caltrans geographical Districts obtained individual, District-specific NPDES permits and developed individual stormwater quality management programs. As of May 1999, Caltrans has refined its statewide stormwater management goals and objectives and obtained a single NPDES stormwater permit. A comprehensive and consistent stormwater management plan (SWMP) was found to be the most effective approach to addressing its activities statewide.