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Sacramento (CSUS)**

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Transportation (Caltrans)**

Characteristics of Stormwater Runoff from Caltrans Facilities

Presented at:

Transportation Research Board, 81st Annual Conference, Washington, D.C., Jan.13-17, 2002 (included in conference proceedings).

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Abstract: Stormwater runoff from 50 sites representing five different types of the California Department of Transportation (Caltrans) facilities (highways, maintenance stations, park and rides, rest areas, and acceleration/deceleration zones) were monitored by Caltrans during the 2000-01 monitoring season. This study was conducted by Caltrans to generate sufficient water quality data to satisfy permit requirements, research and development, load assessment and modeling, watershed planning, and statistical data quantification. Both flow-paced composite samples collected using automated samplers and single grab samples were collected and analyzed at the sites for a total of 323 station-storm events. Results obtained during the first year characterization study indicate that: (i) analytic data collected during the 2000-01 monitoring tended to have lower concentrations than data collected earlier; (ii) highway sites, in general, have above average concentrations of most constituents; (iii) acceleration/deceleration sites, in general, have above average concentrations of most conventional constituents; (iv) park and rides, rest areas, and maintenance stations, in general, have below average concentrations of most constituents; and (v) the data display a high degree of variability with sample standard deviation typically larger than sample mean.