The California Department of Water Resources' Real-Time Data and Forecasting Project: Linking Water Quality Monitoring, Modeling, and Communication

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Abstract

The California Department of Water Resources, together with the state water contractors have developed the Real Time Data and Forecasting (RTDF) program. The RTDF program consists of three interrelated efforts: Field monitoring, modeling and forecasting, and data dissemination. The goal of the project is to help municipal water supply providers with tools to "avoid unpleasant surprises" due to sudden changes in source water quality in the Sacramento-San Joaquin Delta and State Water Project. Field monitoring includes several permanent remote stations that measure organic carbon, anions, and other water quality parameters in real time to a central server. Modeling and forecasting is a collaboration between modeling groups within DWR that produce source volume, conductivity, and organic carbon source water contributions, as well as salinity (as electrical conductivity) forecasts. Data dissemination includes real-time data posted to the web, and a weekly emailed water quality newsletter discussing trends, causes, and forecasts. RTDF data and information are organized by watersheds and water quality constituents in a user-friendly format to meet the needs of a diverse audience of municipal water quality managers, scientists, and other interested parties. We will describe these elements, provide examples of how the data are used, and discuss plans for the future.

Keywords

Real-time water quality monitoring, modeling, information dissemination, innovative technology

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