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### **Comparison of sediment quality guideline performance for predicting sediment toxicity in southern California**

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#### **ABSTRACT**

Several types of sediment quality guidelines (SQGs) are used by multiple agencies in southern California to interpret sediment chemistry data, yet little information is available to identify the best approaches to use. The objective of this study was to evaluate the performance of five SQGs to predict sediment toxicity in southern California: the effects range-median (ERM), consensus, mean sediment quality guideline quotient (SQGQ1), apparent effects threshold (AET), and equilibrium partitioning (EqP) for organics. Large differences in performance among the SQGs were obtained when each approach was applied to the same southern California dataset. SQG approaches that performed well in identifying nontoxic samples were not necessarily the best predictors of toxicity. In general, the ERMq, SQGQ1, and consensus approaches had a better overall performance than the AET and EqP approaches. The results indicate the need to predetermine management objectives and evaluate SQG performance using regional data so that the most appropriate SQG can be identified for specific applications.

#### **Full Text**

[ftp://ftp.sccwrp.org/pub/download/DOCUMENTS/AnnualReports/2003\\_04AnnualReport/ar12-vidal\\_pg125-138.pdf](ftp://ftp.sccwrp.org/pub/download/DOCUMENTS/AnnualReports/2003_04AnnualReport/ar12-vidal_pg125-138.pdf)