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Integrative Assessment of Depressional Wetland Condition in California

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Abstract

Depressional wetlands (including seasonal and perennial marshes) are the most common wetland type in California. Despite their abundance they have seldom been included in statewide or regional ambient monitoring programs; consequently, little is known about their overall condition and how it varies relative to different stressors. To address this gap, we developed and implemented a depressional wetland ambient monitoring program comprised of condition indicators (macroinvertebrates, benthic diatoms, and the California Rapid Assessment Method) and stress indicators (water chemistry, sediment toxicity, chlorophyll and physical habitat). Our initial objective was to evaluate the performance of condition indicators which were adapted for use from other wetland types and their relative sensitivity to various stressors. Results indicate that all three condition indicators are valid for use in depressional wetlands, and they each is sensitive to different types of stressors. Together they provide the ability to understand depressional wetland condition and the factors that affect these wetlands.

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