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California Rapid Assessment Method for Wetlands and Riparian Areas (CRAM)

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INTRODUCTION

The California Rapid Assessment Method (CRAM) for wetlands and riparian areas is an integral part of the Wetland and Riparian Area Monitoring Plan (WRAMP) produced by the Wetland Monitoring Workgroup of the California Water Quality Monitoring Council. WRAMP has two main objectives: to enable local, state, and federal agencies in California to consistently assess (1) the distribution, abundance, diversity, and condition of wetlands in the watershed context, and (2) the performance of public policies, programs, and projects intended to restore and protect California wetlands (Fig. 4.3.3.1).

WRAMP is based on the three-level framework for wetland assessment embodied in the US Environmental Protection Agency's (USEPA) Core Elements of an Effective State and Tribal Wetlands Program (USEPA, 2008), where Level 1 consists of map-based inventories, Level 2 consists of field-based rapid assessments of wetland overall health, and Level 3 consists of intensive field-based measures of particular health aspects. CRAM is the state's primary Level 2 tool.

CRAM assumes that the condition of a wetland is a manifestation of many processes that together control the kinds and levels of wetland functions, such that the overall functional capacity of a wetland can be assessed based on its overall condition.

CRAM meets a broadly expressed need in California for a standard, scientifically sound, and affordable way to assess the overall condition or functional capacity of wetlands in a watershed context. The need is amplified by the watershed approach to compensatory mitigation required under the federal Clean Water Act (CWA, Section 404 (USACE, 2008), and the state's intent to take a complimentary watershed approach under CWA Section 401 (SWRCB, 2016). The state has also recognized that CRAM can help meet its reporting requirements under CWA Sections 303(d) and 305 (b) while also helping to evaluate the governor's Wetland Conservation Policy (CRA, 1993).

The state conducted a peer review of CRAM as part of its adoption process (SWRCB, 2011), and the USACE also conducted a review of CRAM relative to its use in mitigation planning and evaluation. A key finding of the state's review was that CRAM should be subject to ongoing revision to assure its continued efficacy. The Level 2 Committee of the Wetland Monitoring Workgroup serves this objective while also overseeing a statewide CRAM training program and online database. A key recommendation from the USACE was to quantify the relationship between the age and condition of wetland restoration projects based on CRAM that could be used to forecast future project conditions relative to ambient, reference, or target conditions.

Full Text:

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