

Monitoring of Constituents of Emerging Concern (CECs) in California's Aquatic Ecosystems – Pilot Study Design and QA/QC Guidance

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INTRODUCTION

In October 2009, the State of California Water Resources Control Board (SWRCB) provided support for a scientific advisory panel to review existing scientific literature on constituents of emerging concern (CECs) in aquatic ecosystems; determine the state of the current scientific knowledge regarding the risks that CECs in freshwater and marine water pose to human health and aquatic ecosystems; and provide recommendations on improving the understanding of CECs for the protection of public health and the environment. Seven experts were vetted and convened as the CEC Ecosystems Panel (Panel) to provide information and recommendations on CECs in coastal and marine ecosystems, which was subsequently tasked to expand the scope to include freshwater ecosystems. The Panel collaborated with stakeholders, who provided their perspective of the water quality issues and additional information during the development of their recommendations. In their final report, *Monitoring Strategies for Chemicals of Emerging Concern (CECs) in California's Aquatic Ecosystems: Recommendations of a Science Advisory Panel*, SCCWRP Technical Report 692, Anderson et al. (2012) recommended a risk-based screening framework to identify CECs for monitoring, applied the framework using existing information to three representative receiving water scenarios to identify a list of appropriate CECs for initial monitoring, developed an adaptive phased monitoring approach and suggested development of bioanalytical screening and predictive modeling tools to improve assessment of the presence of CECs and their potential risk to the environment.

Early in the process, the Panel was instructed by SWRCB staff to focus on ambient surface waters that receive discharge from sources regulated under the National Pollutant Discharge Elimination System (NPDES). As a result, permitted discharges from municipal wastewater treatment plants (WWTPs) and municipal separate storm sewer systems (MS4) were considered as the primary sources of CECs to receiving waters. Waterbodies that receive agricultural runoff were not considered.

Full Text:

http://ftp.sccwrp.org/pub/download/DOCUMENTS/TechnicalReports/854_California_CEC_Pilot_Study_040315.pdf