

California's Fourth Climate Change Assessment Supporting Research

Title: Adapting air quality management for a changing climate: Survey of local districts in California

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ABSTRACT

Air quality can be affected by weather and thus is sensitive to a changing climate. Wildfire (influenced by weather), consecutive high temperature summer days, and other extreme events are projected to become more severe and frequent with climate change. These may create challenging conditions for managing air quality despite policy targets to reduce precursor and pollutant emissions. Although extreme events are becoming more intense and interest in climate adaptation is increasing among public health practitioners, little attention in scholarly literature and policy covers climate adaptation for air quality governance. Understanding the management and managers' perspectives at the local level provides insight about the needs for climate adaptation, including their adaptation status, perspectives, responsibilities, and roles. This study explores local manager perspectives and experiences of managing air quality within a changing climate as one puzzle piece to understand the gap in climate adaptation within the air quality sector. A broader goal is to contribute to the discussion of developing a multi-jurisdictional vision for reducing the impacts of air quality in a changing climate. In 2016 local air quality district managers in California were invited to participate in an online survey of 39 questions focused on extreme event impacts on air quality. The questionnaire focused on present air quality threats and extreme event challenges, adaptation status and strategies, adaptive capacities, perceived barriers to adaptation, and jurisdictional responsibilities and roles. Over 85 percent of the 35 local air districts in California participated in the survey, which represents 80 percent of the state's population. High awareness and knowledge of climate change among local managers indicates they are ready to adopt and take action on policies that would support climate adaptation, but barriers reported suggests they may need policies and adequate funding to take action and make necessary changes.

Keywords: climate change, air quality districts, climate adaptation, air quality, governance

HIGHLIGHTS

- Despite climate change presenting increasing challenges to meet air quality standards, policy and action to mitigate these impacts have been surprisingly absent in California.
- We found that adaptation has not been incorporated into air quality management thus far, but local managers seem sufficiently knowledgeable and willing.

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