

US EPA ARCHIVE DOCUMENT

## **Innovations in Environmental Justice Research for Action: the San Joaquin Valley Cumulative Health Impacts (SJV-CHIP)**

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**Background and Objectives:** Quantifying the spatial distribution of environmental hazards and communities' demographic characteristics can provide valuable knowledge for environmental justice (EJ) advocacy work, policy formation, and academic study. Cumulative impacts from multiple hazards and vectors and the spatial and temporal patterns of suffering they incur have just begun to be studied in public health and EJ literature. The San Joaquin Valley Cumulative Health Impacts (SJV-CHIP) project is a coalition of EJ and public health activists that seeks the adoption of a cumulative impacts policy by regional environmental regulators. SJV-CHIP activists have joined with researchers at the University of California at Davis and elsewhere to document cumulative health impacts in the San Joaquin Valley and to build capacity for community-based participatory action research.

**Methods:** In this poster, the spatial patterns of multiple environmental hazards and communities' demographic characteristics are quantified in the San Joaquin Valley of California using Geographic Information System (GIS) and spatial statistics. Indexes of environmental, social, and economic vulnerability are refined and applied on a census block group and regional scale.

**Results:** Health impacts from agricultural, industrial, development, and transportation sectors are shown to disproportionately affect the region's most vulnerable populations—the low-income, immigrant, and communities of color—while dynamics of environmental racism also restrict democratic participation in shaping policy decisions. TRI data are shown to be an incomplete proxy for environmental hazards and are complemented by exposure and health data.

**Conclusion:** Cumulative impacts—especially through a community-based participatory research approach—are shown to be a compelling way to analyze and frame EJ issues.