

#### Mapping ACS demographic data to assess extreme heat vulnerability in Santa Clara County

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2025 ACS DATA USERS CONFERENCE

### Background

#### •Background:

- In Santa Clara County, community demographics and health status factors play a role in determining vulnerability to climate impacts and extreme heat.
- Based on ESSENCE data from May 2024 to May 2025, areas around San Jose and Gilroy had the greatest number of heat-related illness and deaths.
- •Goal: Local data is needed to better understand the adaptive capacity of different populations. This project assessed county populations vulnerable to extreme heat.
- Funding: CDC Building Resilience Against Climate Effects (BRACE) grant



### Methods

 Indicator selection was based on literature reviews and the CDC/ATSDR Social Vulnerability Index to highlight populations at increased risk for adverse health outcomes and other impacts due to extreme heat events.

•Data sources:

- U.S. Census Bureau American Community Survey
- Department of Health Care Access and Information (HCAI)
- California Integrated Vital Records System
- County of Santa Clara Vector Control District
- American Housing Survey (AHS) metropolitan data
- Santa Clara County Assessor parcel data
- City of San Jose affordable housing data

•Data were aggregated by zip code and census tract for each indicator, mapped, and presented on a publicly available ArcGIS StoryMap.

## Indicators using ACS data

•Age - Population ages 65 years and older, population under 5 years of age

- •Race and ethnicity African American, Asian, Latino, White, and population of color (combining African American, American Indian/Alaska Native, Asian, Pacific Islander, Latino, and multi-race)
- •Population living below 200% of Federal Poverty Level
- •Population living alone (including ages 65 years and older)
- •Outdoor workers agriculture, forestry and fishing, hunting and mining, construction
- •Workers who drove alone to work
- •Housing units built before 1980
- •Disability ambulatory, cognitive

#### Storymap demo

https://arcg.is/0WCaOO0



### Conclusion

- •Identified zip codes and census tracts with larger proportions of high-risk county populations.
- •Visually emphasized patterns and risk disparities for climate vulnerability among county residents.
- •Shared with community partners working in response to extreme heat events to guide decision-making processes such as cooling center locations.
- •Guide policy and planning to ensure thoughtful consideration of varied risk levels, linguistic needs, cultural differences, existing disparities, and socioeconomic factors connected to climate impacts.



# Thank you!

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