

California Building Resilience Against Climate Effects (CalBRACE): Request for Indicators Feedback from Stakeholders

The California Department of Public Health (CDPH) is starting to develop a list of climate change and vulnerability indicators for the California Building Resilience Against Climate Effects (CalBRACE) project. We would like your feedback on the preliminary list. CDPH will be inviting you to participate in a webinar in mid-December to obtain your feedback and have a discussion.

The indicators will be used in county summaries to describe future climate risks and their potential health impacts, and to construct detailed (census tract) maps of population vulnerabilities. This is part of planning tools that the CalBRACE project aims to develop with you – our partners in local public health departments and community-based organizations – to build internal capacity, participate in climate adaptation planning, and enhance resilience at the local and regional levels.

Indicator Feedback Requested

Based on a review of the scientific literature of climate change impacts and vulnerabilities, CDPH has drafted an initial list of indicators (See Table 1 and 2). Please consider the following questions as you review the list:

1. Does your department or your key stakeholders routinely use a different indicator for the climate risk or vulnerability we are trying to assess?
2. Do you have alternative suggestions for indicators described in the list? If so, what are they, what data do they use, and why do you think they would be better than the recommended indicator?
3. Are there key indicators that you think need to be added?
4. How have you used or how do you intend to use these indicators?
5. In addition to data files to produce color-shaded maps of census tracts (see attached), would you also like a map layer with locations of sensitive populations like skilled nursing facilities, prisons, and K-12 schools for your jurisdiction? Would you be willing to tell us where there are incorrect addresses or missing points of interest?

If you have any questions or would like additional information, please contact Jacqueline Chan at Jacqueline.chan@cdph.ca.gov or (510) 620-3619. If you are unable to attend the webinar, please submit feedback via email by December 18, 2014 to Jacqueline Chan.

Table 1. Draft List of Climate Change Exposure and Vulnerability Indicators Available at Census Tracts (N = 23), 2006-2010, CalBRACE Project

Climate Change Vulnerability Indicators	Data Source
Exposure and Environment Domain	
Heat (mean, min, max, extreme heat days, heat waves)	Cal-Adapt
Percent of population living in 100-year and 500-year flood plain	FEMA, SFI
Susceptibility to sea level rise (inundation)	Cal- Adapt
Annual number of unhealthy ozone days	CalEnviroScreen
Annual average PM2.5 concentration ($\mu\text{g}/\text{m}^3$)	CalEnviroScreen
Percent of population currently living in high risk fire zone	CAL FIRE FRAP
Risk of wildfire >200 hectares (projected risk)	Cal-Adapt
Population Sensitivities Domain	
Children aged < 5 years	ACS
Population aged ≥ 65 years	ACS
Educational attainment (percent of population aged ≥ 25 years with \geq high school degree)	ACS
Population living below federal poverty level	ACS
Race/ethnicity	ACS
Percent of households paying more than 30% (or 50%) of monthly household income towards housing costs	ACS
Jobs working outdoors	ACS
Car ownership	ACS
Linguistic isolation	ACS
Comorbidities (e.g. obesity, asthma, hypertension, diabetes)	CHIS*
Population living with a disability	ACS
Health care access	CHIS#
Adaptive Capacity Domain	
Air conditioning ownership	California Energy Commission (2009 Residential Appliance Saturation Survey)
Impervious surfaces	US EPA National Land Cover Data
Tree canopy	US EPA National Land Cover Data
Population residing within 0.5 miles of public transit stop with headway frequency < 15 min. during peak hours	Major MPO Regions (SCAG, SANDAG, MTC, SACOG)

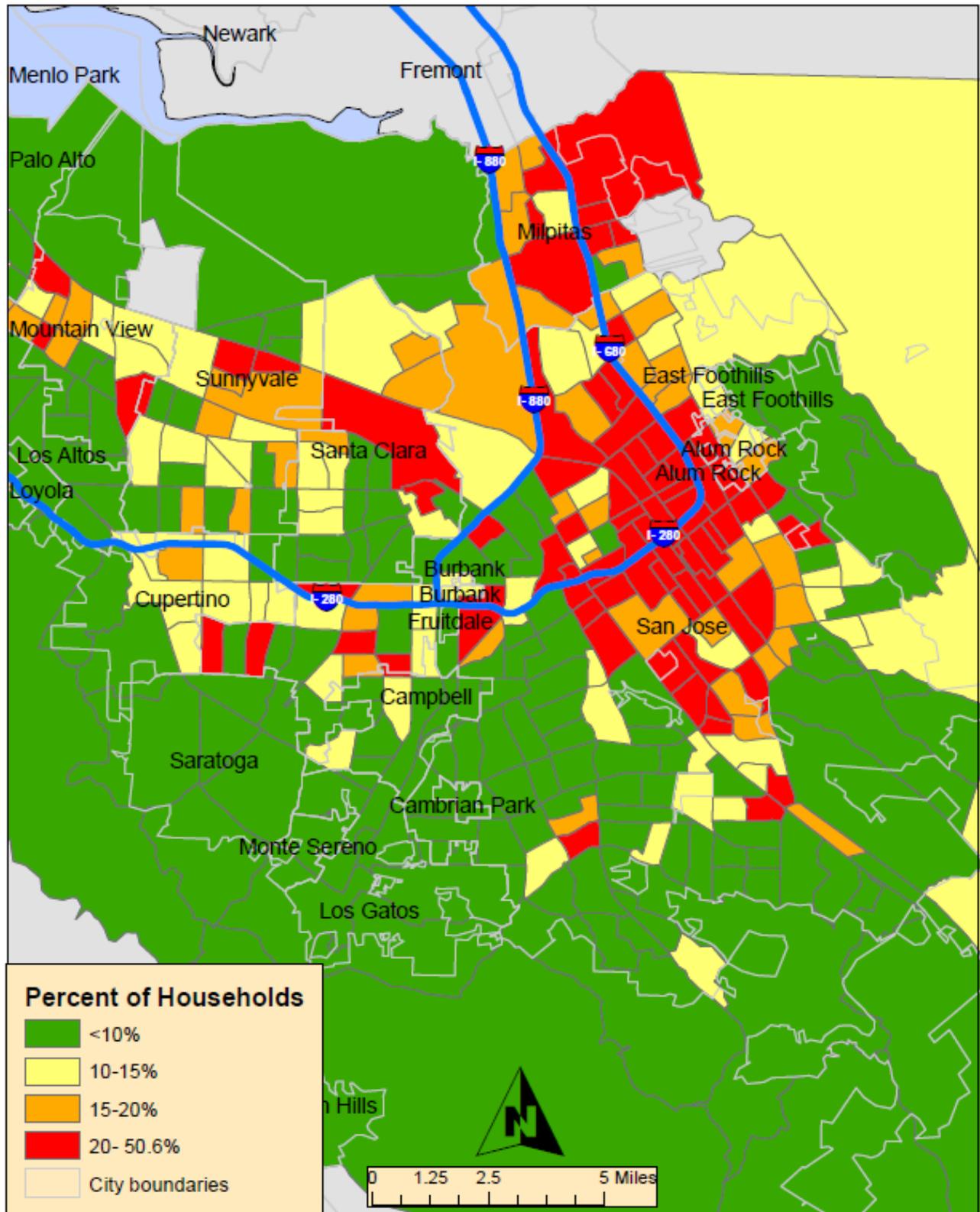
ACS = American Community Survey (U.S. Census); CHIS = Community Health Interview Survey; FEMA = Federal Emergency Management Agency; FRAP, Fire Risk Assessment Program; CalFIRE, California Department of Forestry and Fire Protection; * Available at county level; # Modeled data available at zip code level

Table 2. Draft List of Optional Vulnerability Indicators and Point Data, 2006-2010

Climate and Vulnerability Indicators	Data Source
Child care facilities	California Community Care Licensing Division, DSS
Percent of population in nursing facilities, prisons, military, college, other	Cal. Dept. of Finance
Skilled nursing facilities*	ACS (OSHPD)
Prisons*	Dept. of Corrections
University/college (enrollment)	ACS
K-12 schools [#]	Dept. of Education
County-specific age-adjusted death rates	SDMF (CDPH)
County-specific annual heat-related ER visits (per 100k) Annual average heat-related deaths, 2009-2011	CDPH Tracking Program
Percent of population residing near busy roadways	CalTrans
Elderly living alone (aged > 65 years)	ACS
Food insecurity (food affordability)	CHIS (HCI Project)

ACS = American Community Survey (U.S. Census); CHIS = Community Health Interview Survey; DSS, California Department of Social Services; OSHPD, Office of Statewide Health Planning and Development; SDMF, Statistical Death Master File, CDPH; HCI, Health Communities Data and Indicators Project, CDPH; *point data describing location of sensitive populations; [#]point data describing location of sensitive populations and population estimates

Percent of Linguistically Isolated Households by Census Tract, Santa Clara County, 2006-2010



Source: American Community Survey

BRACE Project, CDPH