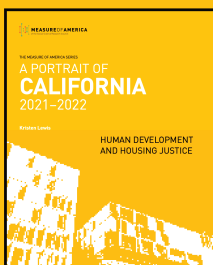
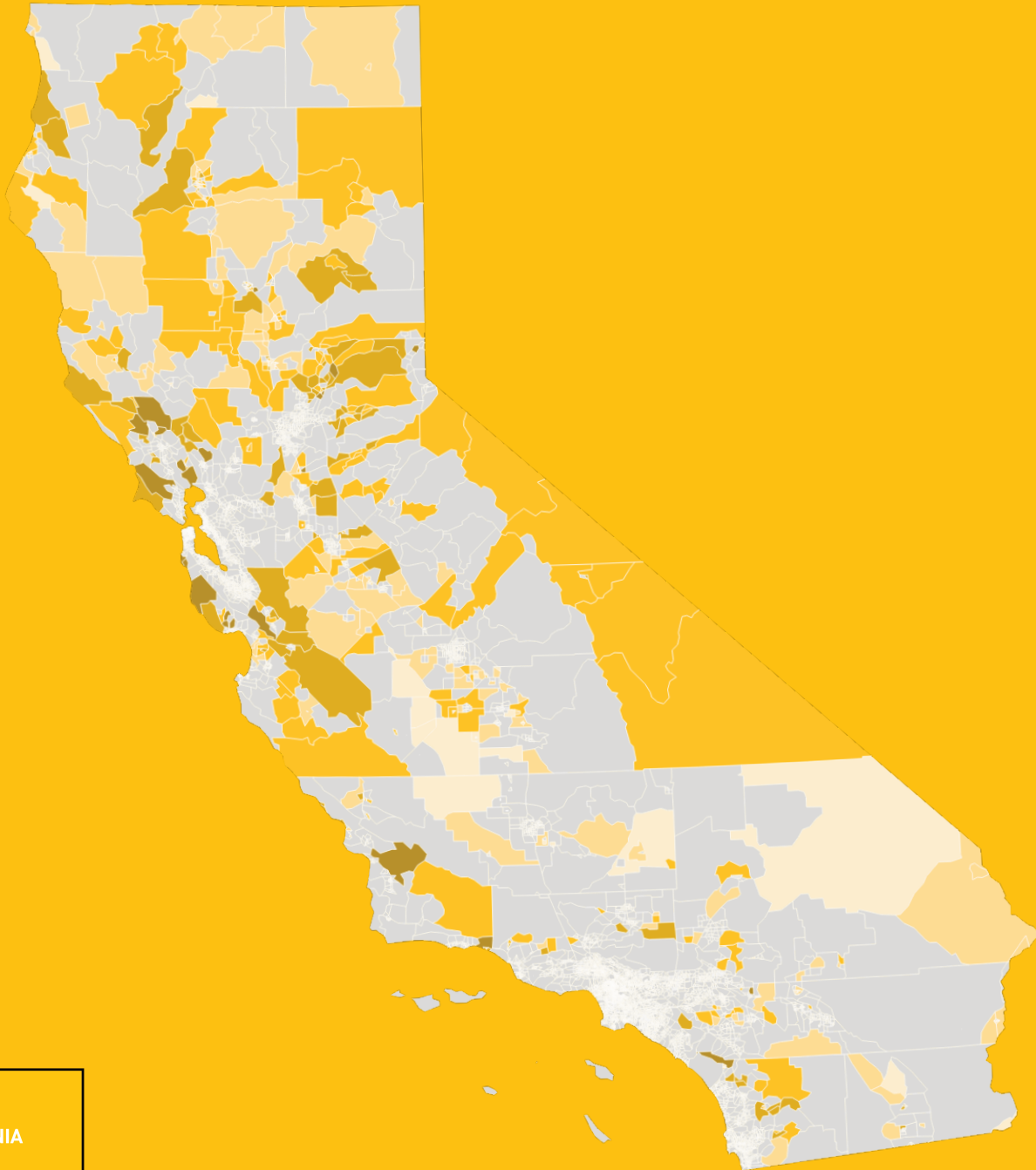


WELL-BEING IN RURAL CALIFORNIA 2023



REGIONAL REPORT SERIES

A PORTRAIT OF **CALIFORNIA 2021-2022**

Acknowledgements

The seeds for *Well-being in Rural California 2023* were sown almost three years ago with the launch of *A Portrait of California 2021–2022: Human Development and Housing Justice*, the third volume in Measure of America’s Portrait of California series. We are grateful to build on this work with stakeholders across the state who are committed to using data for change to improve well-being for all rural communities. We are deeply appreciative of **NeighborWorks America** support to make this endeavor possible.

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Thank you!
Kristen



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Spotlight on Rural California 2023

Residents of California’s rural communities enjoy unique advantages, such as easy access to the natural world, but they also face specific challenges shared with rural residents across the country. These challenges include comparatively poor access to high-speed broadband, few nearby educational institutions, difficulties accessing health care due to hospital closures and a shortage of health-care professionals, inadequate transportation systems, and limited economic opportunities.¹ With the vast majority of Californians living in urban and suburban communities, the concerns of the state’s rural residents are frequently drowned out by issues that matter most in areas with bigger populations, greater political power, and better access to resources of all sorts.

This report explores well-being and access to opportunity among rural Californians using the American Human Development Index (HDI), which measures how people are doing on three key dimensions of well-being—a long and healthy life, access to knowledge, and a decent standard of living. The report presents HDI scores for rural California as a whole, for the most populous demographic groups in rural California (women and men as well as residents who identify as Latino or white), and for rural places (census tracts and public use microdata areas, which are Census Bureau–defined areas with a population size of at least 100,000 people; we refer to these areas as neighborhood clusters). *Well-being in Rural California* is part of a series released in connection with *A Portrait of California 2021*; this series also includes reports on the Inland Empire, the San Joaquin Valley, and Mendocino, Del Norte, and Sonoma Counties.

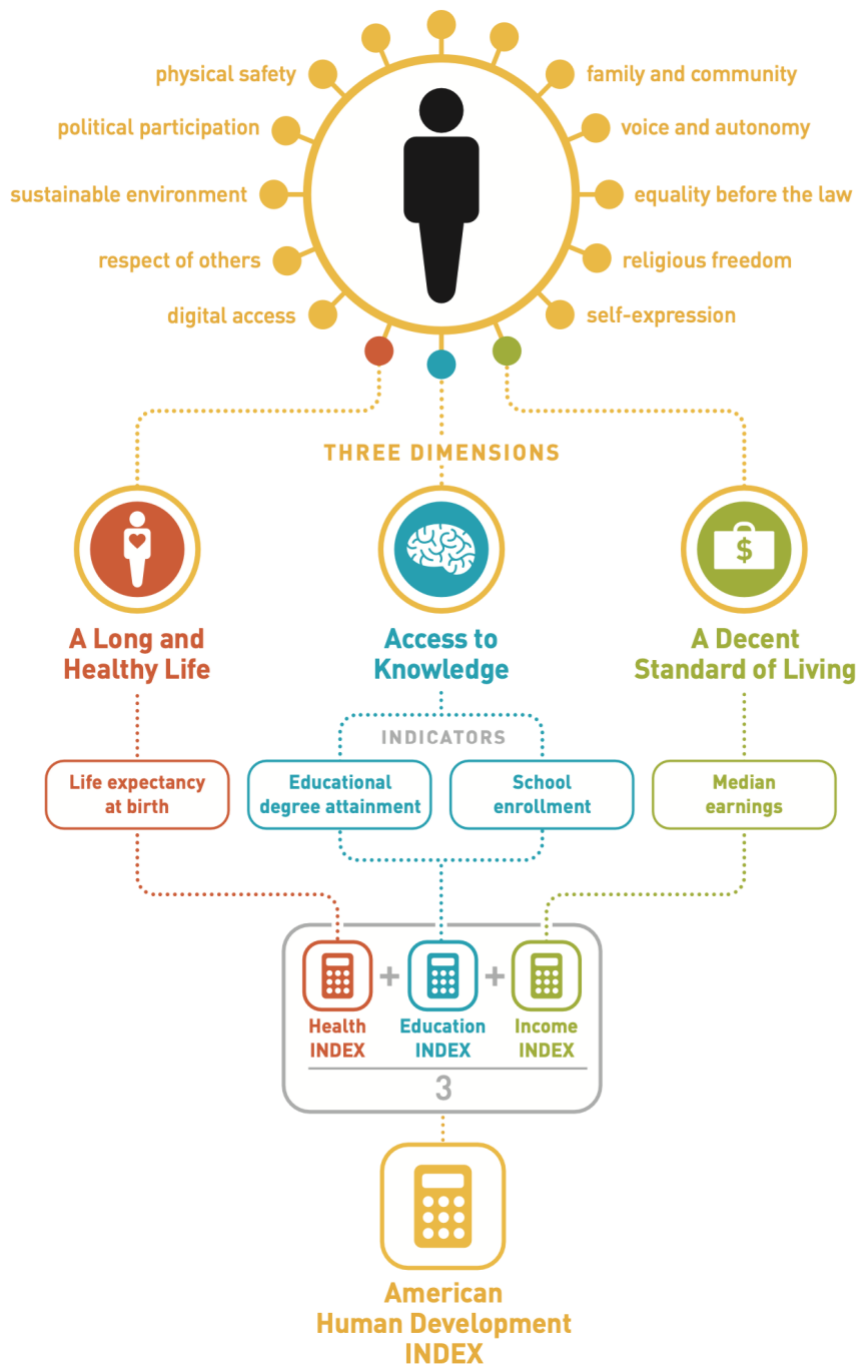
Definitions of “rural” vary widely—depending on the classification system used, between 836,200 and 4,375,200 Californians live in rural areas—and we considered several for this analysis. The US Census Bureau defines “rural” as any area that does not qualify as urban—that is, after identifying urban areas, rural areas are what is left; this definition was too broad for our purposes. The US Department of Agriculture classifies places according to its own Rural-Urban Commuting Area Codes, a measure of urbanization, population density, and daily commuting. This definition was too restrictive; very few California census tracts fell into this classification.² After consulting with the advisory group for this report, we chose to identify rural census tracts using the classification system developed by the California Tax Credit Allocation Committee, which has the most comprehensive methodology for defining the state’s rural areas and is tailored to California’s unique housing situation.³ It is also particularly relevant as tax credits are a major source of affordable housing. For our analysis of rural neighborhood clusters, we selected public use microdata areas with population densities below 1,100 people per square mile. This cut-off allowed us to include some areas that included a larger town but were still predominantly rural.

Understanding Human Development

The American Human Development Index (HDI) is a composite measure of well-being and access to opportunity made up of health, education, and earnings indicators. The index is expressed on a scale of 0 to 10. Measure of America’s HDI calculations provide a snapshot of community well-being, reveal inequalities between groups, allow for tracking change over time, and provide a tool for holding elected officials accountable. Broken down by race and ethnicity, by gender, and by census tract, the index shows how communities across rural California are faring relative to one another and to the state and country as a whole.

The framework that guides this work is the **human development approach**. Human development is an expansive, hopeful concept that values people’s dignity and freedom to decide for themselves what to do, how to live, and who to be. Formally defined as the process of improving people’s well-being and expanding their opportunities to live freely chosen, flourishing lives, the human development approach puts people at the center of analysis. It is concerned with how political, social, environmental, and economic forces interact to shape the range of choices open to us.

The concept of human development is very broad; it includes all the factors that shape our lives, from religious and cultural values to family and community bonds to physical safety and equality before the law — and much more. Because measuring everything in a single index is not possible, however, the HDI includes just three dimensions of well-being: a long and healthy life, access to knowledge, and a decent standard of living. People around the world value these areas as core building blocks of a life of freedom and dignity. In addition, good proxy indicators that are collected and tracked in a consistent way across time and place are available for each. These indicators are not perfect, however. For example, one-third of the index is called “access to knowledge,” but the indicators used, school enrollment and degree attainment, measure only *access to formal education*, leaving out other valuable ways of knowing. A decent standard of living is measured using median personal earnings; this indicator tells us about the wages and salaries of typical residents but nothing about their assets and wealth, such as the value of their homes or investments, which are very important ingredients for well-being and security. It is important to keep in mind that the index is just the start of a conversation about well-being, access to opportunity, and inequality. Understanding the *why* behind the scores and crafting effective policies to address disparities requires additional quantitative data as well as qualitative data—interviews, narratives, life histories, and more.

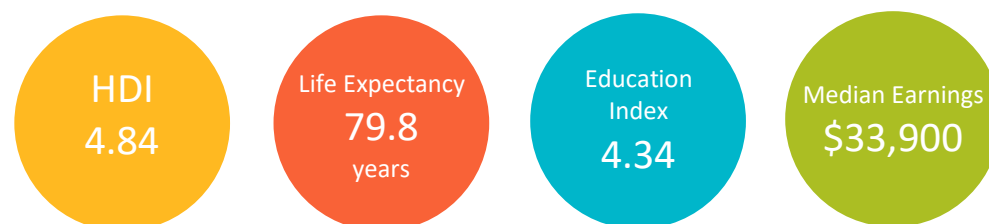


A Long and Healthy Life is measured using life expectancy at birth, which is calculated using data from the California Department of Public Health, population data from the US Census Bureau, and USALEEP data for census tract-level estimates.

Access to Knowledge is measured using data on school enrollment for children and young people ages 3 to 24 and educational degree attainment for adults 25 and older from the American Community Survey of the US Census Bureau.

A Decent Standard of Living is measured using median personal earnings of all full- and part-time workers ages 16 and older from the American Community Survey of the US Census Bureau.

Human Development in Rural California



The average HDI score for the areas that comprise rural California is 4.84 out of 10, compared to 5.85 for the state as a whole. While rural communities in the state and across the country face many shared obstacles to well-being, HDI scores within rural California vary significantly by demographic group and by place.

VARIATION BY GENDER AND BY RACE AND ETHNICITY IN RURAL CALIFORNIA

Women in rural California have an overall HDI score of 4.85, whereas men have a score of 4.79. This disparity is largely due to a 4.8-year difference in life expectancy as well as women's higher levels of degree attainment. Men in rural California, however, outearn women by a large margin; their median personal earnings are more than \$12,100 higher than women's.

TABLE 1 Human Development Index by Gender and by Race and Ethnicity in Rural California, 2021

RANK	HD Index	Life Expectancy at Birth (Years)	Less Than High School (%)	At Least High School Diploma (%)	At Least Bachelor's Degree (%)	Graduate or Professional Degree (%)	School Enrollment (%)	Median Earnings (2021 Dollars)	Health Index	Education Index	Income Index
California	5.81	81.1	15.8	84.2	35.2	13.3	78.5	41,900	6.27	5.28	5.88
All Rural	4.84	79.8	17.4	82.6	22.9	7.8	76.0	33,900	5.74	4.34	4.42
1 Rural Women	4.85	82.3	15.9	84.1	24.7	8.4	78.0	28,000	6.78	4.70	3.08
2 Rural Men	4.79	77.5	18.9	81.1	21.2	7.2	74.2	40,100	4.78	4.00	5.58
RACIAL AND ETHNIC GROUP											
1 Rural Whites	5.45	78.7	6.9	93.1	29.2	10.4	75.6	41,800	5.31	5.16	5.87
2 Rural Latinos	3.89	80.5	37.0	63.0	10.1	2.6	76.1	27,400	6.04	2.67	2.95
RACIAL AND ETHNIC GROUP BY GENDER											
1 Rural White Men	5.51	76.4	7.7	92.3	28.1	9.9	73.9	51,300	4.33	4.90	7.29
2 Rural White Women	5.36	81.2	6.1	93.9	30.3	10.8	77.4	33,300	6.35	5.43	4.30
3 Rural Latina Women	3.90	83.4	35.3	64.7	11.8	3.2	78.2	21,900	7.24	3.05	1.40
4 Rural Latino Men	3.77*	77.9	38.7	61.3	8.5*	2.1*	74.1	32,200	4.90	2.31*	4.05

DATA SOURCES:

Life Expectancy: Measure of America calculations using mortality data from the California Department of Public Health, 2015–2020, and population data from US Census Bureau ACS Public Use Microdata Sample, 2016–2020.

Education and earnings: Measure of America calculations using US Census Bureau ACS Public Use Microdata Sample, 2021

*Estimates with an asterisk have a higher degree of uncertainty.

Of the two racial and ethnic groups in rural California for whom it is possible to calculate HDI scores, white residents score 5.45 and Latino residents score 3.89. White women have a slightly lower HDI score than their male counterparts due to a large earnings gap—white men earn \$18,000 more than white women. Latina women score 3.90 on the 10-point scale; Latino men score 3.77, although this a less reliable estimate.

BOX 2 Why Don't All Groups and Places Have an HDI Score?

You will notice that on some maps, specific census tracts appear in gray, and that in some tables, values for certain groups or locales are missing or have an asterisk. Gray areas and missing and asterisked values indicate that the data for that place or demographic group are less statistically reliable than data for more populous areas or larger groups.

Ideally, we would be able to provide HDI scores not just for large demographic groups like Latino and white residents of rural California, but also for smaller ones, such as Asian, Black, and Native American residents, or even members of various Asian subgroups. The primary barrier to doing so is that the method we use to calculate life expectancy at birth requires a minimum number of deaths in each five-year age category. Because these populations are comparatively small, even combining several years of California Department of Public Health mortality data for rural California did not include deaths in a number of age ranges for these groups, making it impossible to accurately calculate life expectancy for them. Because we don't have life expectancies for groups other than Latino and white residents, we cannot calculate an HDI score for them.

Another limitation in our ability to provide everyone an HDI score stems from how the data we use for the index are collected. We would like, for example, to calculate scores for LGBTQ residents, but are unable to do so because the American Community Survey does not provide a way for people to report information about their sexual and gender identities beyond marking the box for male or female. There is one bright spot: as of July 2021, the Census Bureau now includes questions on sexual orientation and gender identity on its Household Pulse Survey. Measure of America has asked the Census Bureau to extend these questions to the American Community Survey and its decennial census.

In short, we can only calculate scores for groups that are given the chance to self-identify on the American Community Survey and that are sufficiently large as to allow for reliable calculations. We understand the frustration and potential harms of not having reliable data on each and every demographic group in rural California; vibrant communities can be made invisible in cases like this.

Zeroing in on each of the three components of the HDI—health, education, and earnings—we also see noteworthy differences between rural California and the state as a whole and between different rural demographic groups.

Health

In the American Human Development Index, the proxy for a long and healthy life is life expectancy at birth, defined as the number of years that a baby born today can expect to live if current patterns of mortality continue throughout their lifetime. Although living a long life and living a healthy life are not synonymous, in general, those who manage to elude all causes of mortality until their eighties or nineties are healthier (as well as luckier) than the average person, and life expectancy is a widely used summary measure of population health.

Life expectancy at birth in rural California is 79.8 years, compared to 81.1 years in the state as a whole. Women in rural areas live longer than their male counterparts. A baby girl born today in rural California can expect to live 82.3 years, a baby boy, 77.5 years—a 4.8-year difference. Women tend to live longer than men in countries around the world, indicating some biological differences between the sexes that advantage women, particularly when it comes to the leading cause of death, heart disease.⁴ But the variation in the male-female life expectancy gaps in different countries, in different places in the United States, and among different racial and ethnic groups points to the existence of social, cultural, and economic contributors as well. Men are more likely to engage in risk-taking, violence, and health-care avoidance.⁵ They are thus more likely than women to die by homicide, by suicide, and as a result of unintentional injuries like car crashes; more likely to engage in risky substance use; and more likely to be exposed to health risks at work.⁶

Latinos in rural areas, like Latinos in the rest of California and in the United States overall, have a longer life expectancy than their white neighbors, 80.5 years compared to 78.7 years. Latina women can expect to live the longest, white men, the shortest. Around the world, populations with higher earnings and more education tend to live longer than those who earn less and complete fewer years of school. In the United States and California, however, this pattern does not hold; though Latinos have a lower Education Index score and lower earnings than whites, they have longer life expectancies. This phenomenon is known as the Latino health paradox. Research points to several potential factors behind this pattern. Latinos have lower smoking rates than non-Latino whites, which may help to explain the lower mortality rates of US Latinos for most cancers, heart disease, and respiratory disease.⁷ Research around positive birth outcomes among Latinos points to protective aspects of Latino cultures, such as strong social support and family cohesion, that help bolster better health outcomes, particularly for mothers and infants.⁸

Education

More than just allowing for the acquisition of skills and credentials, education builds confidence, confers status and dignity, and provides access to a wider range of possible futures. More education is associated not only with better jobs and bigger paychecks, but also better physical and mental health, a longer life, and greater marital stability, tolerance, and ability to adjust to change. In the American Human Development Index, access to knowledge is measured using data on school enrollment for children and young people ages 3 to 24 and educational degree attainment for adults 25 and older from the American Community Survey of the US Census Bureau.

The Education Index score for rural California is 4.34, compared to 5.28 for the state as a whole. A slightly higher share of rural adults ages 25 and older have not completed high school (17.4 percent) compared to state residents overall (15.8 percent). Similarly, two and a half percentage points separate rural California from the state in terms of school enrollment—76.0 percent versus 78.5 percent. The difference is much greater when it comes to postsecondary degree attainment: compared to state residents overall,

significantly smaller shares of rural Californians have bachelor’s degrees (22.9 percent versus 35.2 percent) or graduate degrees (7.8 percent versus 13.3 percent).

Only 63.0 percent of Latino adults in rural California hold at least a high school diploma, as compared to 93.1 percent of white adults. This disparity is largely due to the limited opportunities Latino immigrants had to complete their education in their home countries. Latino children and young adults, however, have enrollment rates on par with the state average; three in four rural Latino young people are enrolled in school.

Earnings

Money alone is a faulty gauge of well-being; that idea is central to the human development approach. A good life is built on much more than the size of one’s bank account: physical health, safety and security, love and friendship, freedom to practice one’s faith, equality before the law, being treated with dignity and respect, and having a say in the decisions that affect us, to name just a handful of ingredients for a freely chosen, flourishing life. But while money can’t buy happiness, it can certainly stave off many sources of unhappiness, like living in an overcrowded home, facing an excessively long commute, or being harassed by bill collectors. Without money, the range of the possible is vastly curtailed.

Many different measures can be used to gauge people’s material standard of living. The American Human Development Index uses median personal earnings—the wages and salaries of all full- and part-time workers ages 16 and older. This measure reflects the resources of the ordinary worker (thus the median, or midpoint, of earnings rather than mean, or average) and captures the command that both women and men have over economic resources (thus the focus on personal rather than household earnings).

Median personal earnings in rural California are \$33,900, compared to \$41,900 in the state as a whole. Men in rural areas earn 30 percent more than their female counterparts, \$40,100 compared to \$28,000. The typical rural white resident earns \$41,800, the typical Latino resident, \$27,400. In rural California as in the state as a whole, white men earn the most and Latina women the least, taking home \$51,300 and \$21,900, respectively—a difference of nearly \$30,000.

BOX 3 Farmworkers in Rural California

Rural California is home to an economically and politically powerful agriculture industry, producing the lion’s share of both traditional farming outputs—such as fruits, vegetables, eggs and dairy products, and meat—and crops for the newly legalized cannabis industry. The state received \$51.1 billion for its agricultural products in 2021.⁹ Traditional agriculture employs around 340,000 people in California, including those employed in full- and part-time capacities as well as contractors. Despite their central role in cultivating crops and livestock, Californian farmworkers experience substandard—sometimes unsafe and illegal—working and living conditions and face significant barriers to healthy and economically secure lives.

Reliable information on farmworkers in California is hard to come by. The recent Farmworker Health Study from the University of California, Merced, highlights many areas of pressing need: two-thirds of farmworkers have struggled to pay for food or bills since the pandemic; half have been without health insurance in the last year; one in four have at least one chronic health condition; one in five reported

wage theft by employers; and one in six said that wildfire smoke “often” or “very often” made it difficult to breathe.¹⁰

State-specific findings from the National Agricultural Workers Survey, most recently updated in 2019, add more context. California farmworkers reported an average hourly wage of \$12.13 and a median personal income of between \$20,000 and \$24,999. About seven in ten farmworkers are male. Ninety-six percent of California agriculture workers are Hispanic, and approximately eight in ten were born in Mexico. Thirty-five percent of farmworkers live in overcrowded housing. Roughly half of California farmworkers are authorized to work in the United States. Regardless of work authorization status, over 80 percent of workers are settled and have lived in America for at least ten years.¹¹

Notably, child labor regulations are significantly laxer in the agriculture sector than in virtually any other industry. In 2020, 38 percent of California farmworkers reported first working in agriculture at age 18 or younger.¹² In California, children can begin working on farms outside school hours at age 12 and may operate machinery and work in potentially hazardous conditions at age 16.¹³ Children die working in agriculture at far higher rates than those working in other industries and are likely injured or sickened at higher rates too.¹⁴

Environmental hazards directly impact farmworkers. The San Joaquin Valley, for instance, has some of the highest air pollution levels in the country. Particulate pollution in the Valley—stemming from automotive emissions, fuel combustion, wildfire smoke, windblown dust, and dust from farm operations and transport—results in elevated rates of asthma and similar respiratory illnesses.¹⁵ An additional hazard comes in the form of pesticide use: high levels of pesticide exposure have been found to increase adverse birth outcomes.¹⁶ One in three California farmworkers claimed respirators were not provided, but felt they were “always” needed when working in agriculture.¹⁷

According to California’s Legislative Analyst’s Office, an astonishing one million Californians lack access to safe drinking water; these residents are disproportionately farmworkers and others living in rural areas, including Native peoples living on tribal lands, and those living in low-income, Latino communities.¹⁸ The Central Valley, in particular, is home to numerous disadvantaged unincorporated communities (DUCs) in rural areas outside city limits where residents cannot safely drink the water that pours from their taps.¹⁹ Access to sufficient quantities of safe, clean, and affordable water for drinking, cooking, personal hygiene, washing and cleaning, and other household uses is an internationally recognized human right²⁰ as well as a right codified in California law²¹—albeit one that too many low-income rural residents struggle to realize. Industrial byproducts from the agricultural, oil and gas, transportation, and manufacturing sectors; naturally occurring toxins like arsenic; and contaminants left behind in water thanks to substandard wastewater disposal and treatment systems threaten the safety of the water supply and the health of those who drink it. In addition, in many areas, the supply of water is dwindling as years of large-scale agricultural extraction of water leads more household wells to run dry. Like people living in informal settlements in the world’s poorest countries, low-income households in disadvantaged rural California communities not only lack reliable access to clean water, but also pay more than those with access to safe municipal water supplies—both for the dirty, unsafe water piped into their homes and for the expensive bottled water they have no choice but to purchase for drinking and cooking.²²

California farmers and farmworkers have been disproportionately affected by environmental changes over the last decade. According to a new study by University of California researchers, the effects of climate change on California agriculture will become more severe the coming decade.²³ These effects range from lower crop yields to warming temperatures, which will make parts of the state unsuitable for the crops grown there now. Climate change also results in more frequent and severe extreme

weather events, ranging from droughts and heat waves to heavy rains and flooding. The significant impacts of climate change on agriculture could severely harm the state's economy.

Cannabis is the most valuable agricultural product in California today, with estimated annual cash farm receipts of \$23.3 billion.²⁴ Beginning in January 2018, the state legalized both medical and recreational cannabis production, as long as growers completed a permitting process and qualified for a license. Nonetheless, the cannabis industry presents biological, chemical, and physical safety and health risks. Some risks are related to farming and processing, while others are associated with cannabis production due to the presence of the active ingredient of cannabis, tetrahydrocannabinol. Because information about work-related health and safety issues in this industry is lacking, there is an urgent need for research to identify the major hazards and protect workers from them.

The wages and working conditions of farmworkers have long been an area of concern in California. Though earnings and conditions have improved, most farmworkers—the people on whom a huge component of California's economy depends—still earn too little, work in unsafe conditions, and are missing the societal and regulatory support commensurate with their dignity as human beings, let alone the key role they play in supporting a major driver of the regional economy.

VARIATION BY PLACE IN RURAL CALIFORNIA

Well-being also varies dramatically by place across rural California. For this report, we calculated HDI scores by public use microdata area (PUMA) and by census tract. PUMAs, which we refer to as neighborhood clusters, are defined by the Census Bureau; they have populations of at least 100,000; and they are made by dividing populous counties into segments or by combining less-populous contiguous counties. Census tracts are likewise defined by the Census Bureau; they generally have a population size that falls between 1,200 and 8,000 people, with an optimal size of 4,000.

NEIGHBORHOOD CLUSTERS

TABLE 4 Human Development Index by Neighborhood Cluster in Rural California, 2020

NEIGHBORHOOD CLUSTER	HD Index	Life Expectancy at Birth (Years)	Less Than High School (%)	At Least High School Diploma (%)	At Least Bachelor's Degree (%)	Graduate or Professional Degree (%)	School Enrollment (%)	Median Earnings (2020 Dollars)	Health Index	Education Index	Income Index
1 Windsor, Healdsburg & Sonoma	6.79	83.2	7.0	93.0	44.8	19.2	78.1	45,400	7.18	6.48	6.70
2 Auburn & Colfax	6.66	81.6	6.8	93.2	40.3	14.1	77.0	51,000	6.51	5.95	7.51
3 El Dorado County	6.5	82.6	4.2	95.8	40.3	14.2	81.8	41,300	6.93	6.54	6.05
4 Nevada & Sierra Counties	6.1	81.8	4.9	95.1	40.3	14.9	76.2	39,300	6.59	6.00	5.70
5 Castaic	5.85	80.5	15.7	84.3	32.5	8.7	81.0	42,000	6.04	5.35	6.16
6 Galt, Isleton & Delta Region	5.72	80.9	13.5	86.5	28.2	7.1	79.0	40,700	6.21	5.00	5.95
7 Santa Paula, Fillmore & Ojai	5.45	81.3	18.8	81.2	25.7	9.6	82.5	34,900	6.37	5.10	4.88
8 Fallbrook, Alpine & Valley Center	5.37	81.8	15.6	84.4	25.6	9.8	75.1	35,400	6.58	4.54	4.98
9 Lompoc, Guadalupe, Solvang & Buellton	5.36	81.2	17.2	82.8	26.0	9.2	82.7	33,300	6.33	5.19	4.56
10 Inland Region	5.27	80.8	9.8	90.2	27.7	8.9	73.0	35,400	6.17	4.65	4.98

11 Alpine, Amador, Calaveras, Inyo, Mariposa, Mono & Tuolumne Counties	5.21	81.1	8.4	91.6	25.8	8.1	70.2	35,600	6.31	4.32	5.01
12 Southern Monterey County & San Benito County	5.12	83.0	25.4	74.6	19.4	4.8	71.6	35,700	7.06	3.27	5.03
13 Lodi, Ripon & Escalon	5.07	79.0	18.3	81.7	21.5	8.5	72.7	40,300	5.40	3.96	5.87
14 Humboldt County	5.06	78.6	7.8	92.2	36.5	14.3	79.5	30,500	5.26	6.00	3.94
15 Shasta County	5.02	76.9	8.8	91.2	24.5	8.7	80.7	36,700	4.54	5.28	5.23
16 Colusa, Glenn, Tehama & Trinity Counties	4.95	78.5	12.3	87.7	20.8	5.4	76.4	36,700	5.22	4.40	5.22
17 Phelan, Lake Arrowhead & Big Bear	4.89	79.3	9.5	90.5	25.6	11.0	69.2	34,500	5.56	4.30	4.80
18 Del Norte, Lassen, Modoc, Plumas & Siskiyou Counties	4.88	81.6	12.8	87.2	20.1	6.9	73.6	30,800	6.49	4.15	4.01
19 Madera County	4.86	80.2	27.6	72.4	21.9	7.2	75.4	35,100	5.92	3.75	4.92
20 Sanger, Reedley & Parlier	4.82	80.6	22.3	77.7	23.2	6.5	78.9	30,900	6.07	4.36	4.02
21 Sutter & Yuba Counties	4.77	77.7	15.4	84.6	21.3	7.1	77.1	35,500	4.89	4.43	5.00
22 Delano, Wasco & Shafter	4.12	79.6	32.4	67.6	15.1	6.5	73.1	29,500	5.65	2.99	3.72
23 Oroville & Paradise	4.11	76.3	12.5	87.5	18.0	3.4	76.0	30,300	4.29	4.15	3.89
24 Lake & Mendocino Counties	4.11	77.8	13.7	86.3	21.7	7.0	73.9	27,400	4.92	4.21	3.19
25 Imperial County	4.05	81.2	32.4	67.6	16.1	2.9	73.7	26,200	6.32	2.93	2.89
26 Outside Visalia, Tulare & Porterville	4.05	80.0	34.2	65.8	17.9	5.8	74.1	27,400	5.84	3.10	3.20
27 Los Banos & Livingston	3.95	79.1	35.2	64.8	14.5	3.7	78.4	27,200	5.47	3.22	3.16
28 Twentynine Palms & Barstow	3.77	75.6	9.1	90.9	22.1	5.5	62.5	30,900	4.00	3.28	4.04
29 Ridgecrest, Arvin, Tehachapi & California City	3.52	76.4	22.6	77.4	17.1	4.6	69.8	27,000	4.34	3.11	3.10
30 Selma, Kerman & Coalinga	3.41	79.9	35.4	64.6	10.7	3.3	66.5	24,900	5.79	1.89	2.55

DATA SOURCES:

Life Expectancy: Measure of America calculations using mortality data from the California Department of Public Health, 2015–2020, and population data from US Census Bureau ACS Public Use Microdata Sample, 2016–2020.

Education and earnings: Measure of America calculations using US Census Bureau ACS Public Use Microdata Sample, 2020.

Defining neighborhood clusters as rural based on population density allows us to include both rural communities that fall outside any metro area and those that lie within metro areas. For example, using a definition based on population density, the Riverside–San Bernardino–Ontario metro area (also referred to as the Inland Empire) contains multiple rural neighborhood clusters, including Twentynine Palms & Barstow and Phelan, Lake Arrowhead & Big Bear. This definition has some limitations, however; since the Census Bureau–defined boundaries of PUMAs generally require populations of at least 100,000 people, some smaller rural communities within predominantly urban PUMAs cannot be included here. Nonetheless, classifying neighborhood clusters by density highlights important differences between rural areas and the rest of the state.

The HDI scores for the California’s thirty rural neighborhood clusters range from 3.41 in Selma, Kerman & Coalinga in the San Joaquin Valley’s Fresno County to 6.79 in Windsor, Healdsburg & Sonoma in Sonoma County. Twenty-five of the neighborhood clusters considered here score below the state average of 5.85.

The racial demographics of the state’s rural communities vary greatly; sixteen rural neighborhood clusters have majority-white populations and ten have majority-Latino populations. In the rest, no racial or ethnic group makes up a majority. Although most Native American Californians live in urban areas, rural neighborhood clusters are home to some of the largest shares of Native American residents. Humboldt County, for example, has the state’s highest percentage of Native American residents, 4.7 percent, and includes several federally recognized tribal lands, including the Bear River Band of the Rohnerville Rancheria, Big Lagoon Rancheria, Blue Lake Rancheria, Trinidad Rancheria, Hoopa Valley Tribe, Table Bluff Reservation of the Wiyot Tribe, and portions of the Karuk and Yurok reservations.

Life expectancy in rural neighborhood clusters ranges from 75.6 years in Twentynine Palms & Barstow in the Inland Empire to 83.2 years in Windsor, Healdsburg & Sonoma in Sonoma County, revealing major gaps in health equity across rural California. Nineteen of the rural neighborhood clusters have life expectancies below the state average of 81.1 years. Rural communities face distinct health challenges, including food insecurity, poor access to health care, and higher rates of certain health risks, like physical inactivity and substance misuse.²⁵ In addition, the pandemic has ravaged rural communities, which have faced some of the highest Covid-19 hospitalization rates in the state.²⁶

Of the three components of the HDI index, the greatest disparity among rural neighborhood clusters is in access to knowledge, with Education Index scores ranging from 1.89 in Selma, Kerman & Coalinga in Fresno County to 6.54 in El Dorado County. Only six of the thirty rural neighborhood clusters have Education Index scores higher than the state average (5.28). School enrollment is a significant issue for many rural communities, due in large part to chronic absenteeism, socioeconomic disadvantage, poor internet access, and barriers to higher education.²⁷ Closing the digital divide and improving educational outcomes in rural California will require investment in fiber broadband infrastructure and improved access.

Vast differences in median personal earnings also separate rural neighborhood clusters. In Selma, Kerman & Coalinga in Fresno County, median personal earnings are \$24,900, while in Auburn & Colfax in Placer County, they are \$51,000—more than double. Among rural neighborhood clusters, those with majority-Latino populations are more likely to have lower median earnings. For example, Imperial County (the area with the largest majority-Latino population) is among the lowest-earning rural areas (\$26,200). Thousands of agricultural workers reside in Imperial County, where they struggle with low wages, a lack of affordable housing, and poor access to health care.²⁸

CENSUS TRACTS

As described above, the census tracts included in this analysis are those that contain census blocks identified as rural according to the California Tax Credit Allocation Coalition definition. Included in this analysis are 550 tracts; a table that lists them all is available for download at <https://measureofamerica.org/california2021-22/rural-well-being/>. Their HDI scores range from a low of 1.79 to a high of 8.47.

Most higher-scoring rural tracts can be found in the mid-coast to the northern region of the state; they tend to be predominantly white and affluent. The ten census tracts with the very highest scores are found in the San Jose-San Francisco-Oakland combined statistical area and lie a maximum of two hours’ drive from at least one of the region’s major cities. They tend to be areas rich in natural beauty and recreational activities—beaches, hiking trails, camping sites, wineries, and more. These areas are disproportionately home to resorts and hotels, vacation houses, and, increasingly, primary residences of knowledge workers who mostly work remotely but may still need to commute the office occasionally. For example, Tracts 6136, 6138, and 6135.02 in San Mateo County (ranked first, eighth, and ninth, respectively) lie along the Pacific coast but are still reasonably close to downtown San Francisco or San Jose. Santa Cruz County has three

census tracts in the second, fourth, and sixth spots, Tracts 1207, 1208, and 1212, respectively. They directly neighbor one another and are a 20-minute drive outside of the Santa Cruz metro area. They are right next to UC Santa Cruz, and they also contain popular tourist attractions like hiking trails and the Henry Cowell Redwoods State Park. Census tract 5122 of Santa Clara County ranks third and is in close proximity to these tracts as well. Tracts 1539.03, 1503.03 and 2014.01 (ranked fifth, seventh, and tenth) are located just north of San Francisco in Sonoma and Napa counties and are home to wineries and luxury hotels. Those these areas are rural, their comparatively high HDI scores are rooted in the opportunities available in nearby urban centers.

The lower-scoring tracts are predominantly inland; seven of the ten lowest-scoring tracts lie in the Central Valley and three lie in California's far north. Among the indicators that stand out for low-scoring rural tracts are low access to broadband internet and high rates of adults with less than a high school education. In many of the struggling rural tracts, the majority of the population is Latino.

MAP 5 Human Development Index by Census Tract in Rural California

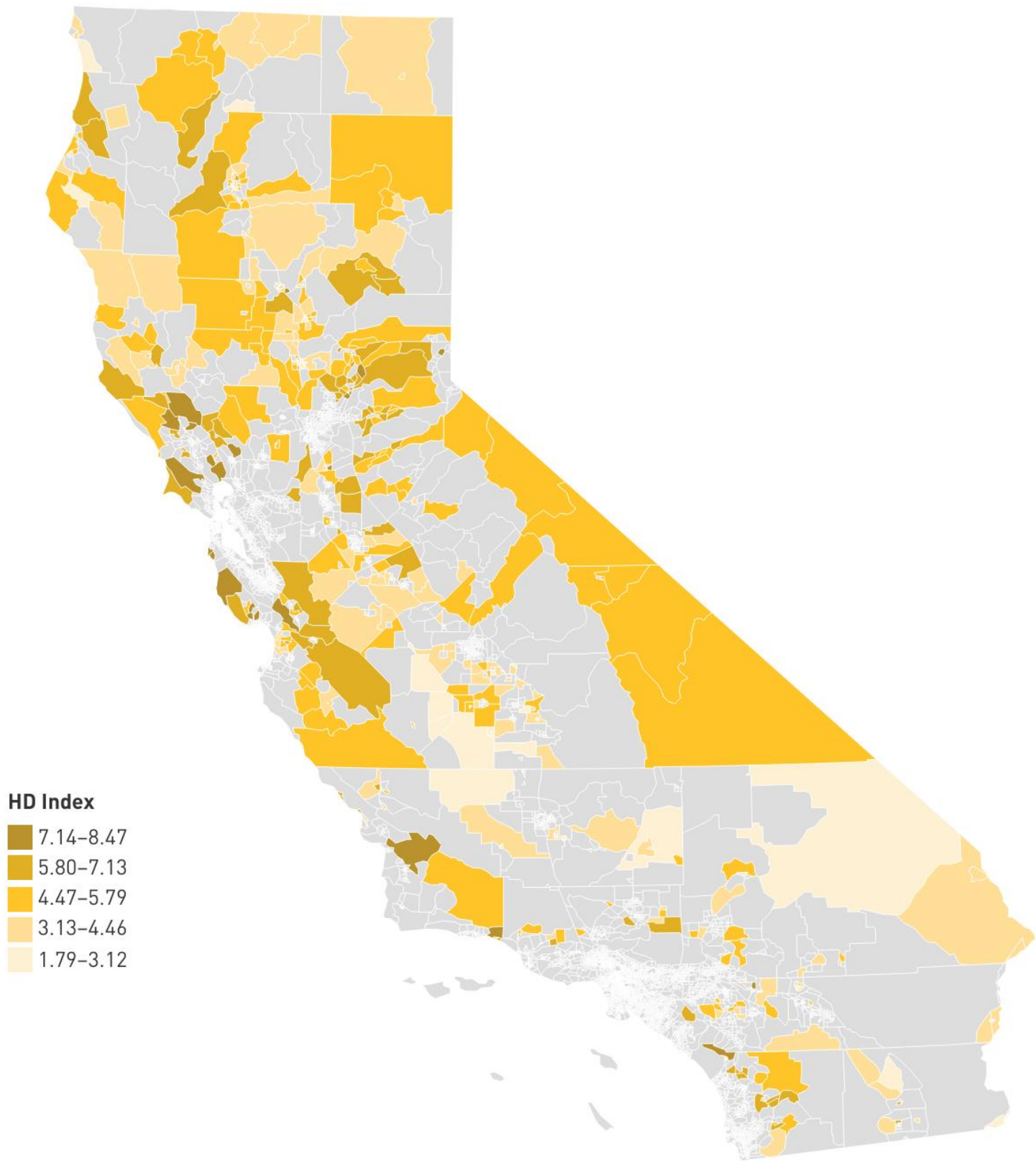


TABLE 6

Human Development Index by Census Tract in Rural California, 2021—Highest- and Lowest-Scoring Tracts

	HD Index	Life Expectancy at Birth (Years)	Less Than High School (%)	At Least High School Diploma (%)	At Least Bachelor's Degree (%)	Graduate or Professional Degree (%)	School Enrollment (%)	Median Earnings (2021 Dollars)	Health Index	Education Index	Income Index
TOP 10											
1 Census Tract 6136, San Mateo County	8.47	86.2	9.2	90.8	55.0	24.1	80.2	70,000	8.42	7.26	9.74
2 Census Tract 1207, Santa Cruz County	8.47	88.1	2.6	97.4	57.0	19.6	83.1	58,400	9.21	7.71	8.49
3 Census Tract 5122, Santa Clara County	8.28	83.0	3.0	97.0	56.2	16.0	85.7	82,300	7.08	7.74	10.00
4 Census Tract 1208, Santa Cruz County	8.24	83.7	2.1	97.9	53.5	24.2	84.5	66,800	7.38	7.91	9.42
5 Census Tract 1539.03, Sonoma County	8.18	86.8	3.4	96.6	51.5	20.3	92.3	50,800	8.67	8.34	7.53
6 Census Tract 1212, Santa Cruz County	8.16	82.3	2.6	97.4	59.6	21.8	87.9	65,800	6.79	8.38	9.31
7 Census Tract 1503.03, Sonoma County	8.15	82.3	1.6	98.4	55.1	21.2	92.4	63,000	6.79	8.63	9.02
8 Census Tract 6138, San Mateo County	8.09	82.4	11.6	88.4	56.6	33.2	87.8	63,700	6.83	8.35	9.09
9 Census Tract 6135.02, San Mateo County	7.94	82.2	5.3	94.7	53.5	21.0	78.6	82,800	6.75	7.07	10.00
10 Census Tract 2014.01, Napa County	7.92	83.3	6.6	93.4	56.7	23.2	85.2	60,100	7.21	7.88	8.69
BOTTOM 10											
1 Census Tract 83.01, Fresno County	1.79	77.2	59.4	40.6	3.3	0.4	67.3	15,000	4.67	0.69	0.00
2 Census Tract 8.02, Lake County	1.84	67.3	20.4	79.6	7.3	1.0	71.0	23,700	0.54	2.73	2.23
3 Census Tract 28, Butte County	1.90	70.3	13.8	86.2	10.6	1.9	61.3	21,700	1.79	2.28	1.64
4 Census Tract 11, Siskiyou County	2.08	71.0	9.7	90.3	18.9	5.1	41.8	20,700	2.08	2.86	1.30
5 Census Tract 47.02, Kern County	2.09	78.8	53.3	46.7	0.8	0.2	62.6	19,000	5.33	0.24	0.69
6 Census Tract 34, Kern County	2.09	74.3	38.1	61.9	5.3	2.6	65.5	21,000	3.46	1.40	1.41
7 Census Tract 1, Humboldt County	2.12	70.8	13.2	86.8	21.7	6.3	60.8	21,000	2.00	2.95	1.41
8 Census Tract 101, Shasta County	2.29	74.2	16.7	83.3	11.8	3.0	58.7	20,800	3.42	2.14	1.32
9 Census Tract 28, Tulare County	2.30	74.0	39.1	60.9	6.5	1.0	66.8	23,200	3.33	1.47	2.10
10 Census Tract 78.02, Fresno County	2.33	77.8	70.7	29.3	2.7	0.3	75.8	18,700	4.92	1.50	0.58

DATA SOURCES:

Life Expectancy: National Association for Public Health Statistics and Information Systems (NAPHSIS), 2010-2015.

Education and earnings: Measure of America calculations using US Census Bureau American Community Survey, 2017-2021.

The five lowest-scoring tracts in rural California include the following.

- Tract 83.01 in Fresno County's City of Mendota has the lowest overall HDI score, 1.79. The tract is located in the northwest corner of Fresno County and has one of the highest shares of adults age 25 and older who did not complete high school, over 40 percent. Over half the population was born outside the United States, and 94 percent of residents are Latino. This tract has poor access to broadband internet, with close to one in three households lacking access.
- Tract 8.02 in is Lake County's City of Clear Lake, located in the southern part of the county. It has the second-lowest overall HDI, 1.84, and one of the lowest life expectancies, 67.3 years. The area has a high rate of people living with a disability, 22.8 percent. The population is 66 percent white.
- Located in the southern region of Butte County is Tract 28 in Oroville. It has the third-lowest HDI, 1.9. Nearly one in seven households receive public assistance and close to half live below the poverty line. About half of all households are non-family households.
- Siskiyou County Tract 11, near the city of Dunsuir and located in the southern region of the county, scores 2.08 on the HDI. The population under the age of five is 13.7 percent coupled with high unemployment at 12.7 percent; this may indicate a need for better childcare resources to ease the unemployment rate. Over one-third of the housing units in this region are vacant.
- In Kern County tract 47.02, near McFarland City and located in the northwest region of the county, more than half of all adults age 25 and older did not complete high school and fewer than 1 percent hold either bachelor's or graduate degrees. Most residents are Latino, 96 percent. In addition, over 40 percent of households lack broadband services.

The five highest-scoring tracts include the following.

- Tract 6136 is in the northwest coastal corner of San Mateo County; it includes Moss Beach and the Fitzgerald Marine Reserve. The HDI score is 8.47, residents in this tract have a long life expectancy of 86.2 years, vacant housing is low at 10.8 percent, and only 7.9 percent of households lack broadband access. Median earnings are close to \$70,000, well above the state average.
- Census Tract 1207 is in the center of Santa Cruz County near Bear Mountain and also scores an 8.47 on the HDI. In this tract there is similarly high access to broadband, with 96 percent of households reporting access, and only 6 percent of housing units in this tract are vacant. The life expectancy estimate of 88.1 years is exceedingly high as is the percentage of residents who hold at least a high school diploma, 97.4 percent.
- Census Tract 5122, located in the southwest corner of Santa Clara County, contains Twin Peaks and the Uvas Reservoir. This tract scores the third-highest on the HDI, 8.28. This tract has few vacant housing units (4.3 percent) and the highest median personal earnings among the top-ranking tracts, \$82,300.
- Census Tract 1208 is located in the center of Santa Cruz County, contains the Pasatiempo Golf Course, and has an HDI score of 8.24. Three in ten residents report living in non-family households. The education attainment in this tract is high; 24.2 percent of residents hold a graduate degree. The majority of residents, 79 percent, is white.
- In the northeast corner of Sonoma County is Census Tract 1539.03, which scores 8.18 on the HDI. In this tract, over 97.9 percent of residents have access to broadband internet. Life expectancy at birth is 86.8 years. The Latino population stands at 21.5 percent, and 32.4 percent of residents are renters.

Recommendations

This report was developed by Measure of America in collaboration with an engaged group of stakeholders, who are listed in the acknowledgments. The recommendations below drew upon their guidance, the work of numerous organizations, and the recommendations found in *A Portrait of California 2021–2022*.

The stark well-being differences by race and ethnicity, by gender, and by place across rural California are rooted in interlinked social and economic inequities that together limit the life chances of some while easing the paths of others. Addressing thorny structural issues like gender inequality, racism, and residential segregation is a complex challenge but one that is required to make the California dream a reality for all who call California home. Expanding well-being requires short-term action focused on continued Covid-19 recovery, medium-term action aimed at building human security, and a long-term commitment to addressing structural inequalities.

MITIGATE THE HEALTH, EDUCATIONAL, AND ECONOMIC IMPACTS OF COVID-19 BY FOCUSING ON THE MOST VULNERABLE COMMUNITIES.

Addressing Covid-19's harmful health, educational, and economic impacts is a top short-term priority. Black, Latino, and Native American people and low-income communities were hardest hit by the pandemic; they were more likely to work in frontline jobs where they could be exposed to Covid-19, more likely to live in intergenerational or overcrowded homes, and more likely to have underlying health conditions that make the coronavirus more dangerous. Farmworkers and their families were particularly hard hit.

The HDI scores by census tract and demographic group presented in this report create a map of vulnerability; low scores flag areas and groups that were already grappling with threats to their health, access to education, and economic security pre-Covid-19, that were most affected by the pandemic, and which face the steepest climb to recovery. **Targeting recovery efforts and dollars toward the census tracts with HDI scores below 3.0 will prioritize those who struggled the most before the pandemic and who need the most assistance in rebuilding their lives now.** These priority communities will benefit the most from philanthropic and government investment.

BUILD HUMAN SECURITY THROUGH INVESTMENTS IN HEALTH, EDUCATION, AND INCOME.

The pandemic made clear that our thin, frayed safety net is inadequate to guard against chronic threats like unemployment and health problems as well as sudden disasters like disease outbreaks and wildfires. Investing in systems and services that allow people to care for themselves and their families during both normal and challenging times is critical to well-being.

Adding funding to strengthen social supports and infrastructure is one part of the solution but ensuring that these resources reach those most in need doesn't stop there. Vulnerable populations can struggle to locate, access, and coordinate physical, mental, and behavioral health services, income supports, workforce training, housing assistance, and more. Expanding navigation and coordination services can help people identify and access sources of assistance in ways that are more efficient, effective, and people-centered than a siloed approach. A one-stop-shop for wraparound services and support—requiring substantial coordination behind the scenes—would do a lot to help the populations that social services are meant to benefit. Universal basic income and similar proposals show promise for providing flexible, sustainable, and useful government support; research and evidence on these programs (including one in Stockton) are detailed on **pages 160–161** of *Portrait of California 2021–2022*.

ADDRESS HEALTH DISPARITIES MAGNIFIED BY THE COVID-19 PANDEMIC.

Underlying health conditions like heart disease, hypertension, and diabetes increase the risk of complications and death from Covid-19. Attentiveness to Covid-19's outsized impact on Black, Native American, and Latino residents, on people living in poverty, and on older Californians will offer critical lessons as the state recovers. A serious challenge is the relative scarcity of health-care providers of all sorts in much of rural California. Expanding and retaining the health professions workforce in rural areas is a critical priority.

INVEST IN THE CARE AND EDUCATION OF THE YOUNGEST RURAL RESIDENTS.

High-quality, affordable early-care and education programs are essential for rural residents. Without reliable childcare, parents cannot support their families and businesses struggle to find workers. In addition, high-quality early care and education can support the healthy development of the region's smallest residents. High-quality care enhances the social, emotional, and cognitive development of young children—particularly children living in poverty; key to quality is the educational background of care providers. Quality care can alleviate parents' stress by bringing them into contact with people, services, and organizations who can support them. Today, there are far too few affordable, high-quality care spots to meet this need; in fact, childcare is the largest household expense in all but five California counties (all in the Bay Area), outstripping housing and other expenses.²⁹ This crucial window in child development and future educational and economic opportunity needs more state and local resources than it has received to date.

SUPPORT DIVERSE PATHWAYS TO FLOURISHING ADULTHOODS.

Young people in low-income rural areas tend to face disproportionate challenges in the transition to adulthood. Measures like apprenticeship and mentoring programs can help young people successfully navigate the school-to-work transition by providing support, relevant instruction, and a clear end goal. Countries like Germany, the Netherlands, and the Nordics create youth-friendly economies with multiple well-structured pathways leading from school to career. Workforce development systems in these countries rely on apprenticeship programs (often funded at least in part by industry), worker training programs, and specialized high schools to help people develop the skills they need for long-term, sustainable careers—not just in manufacturing and skilled trades but also in sectors like tourism and renewable energy, including solar energy. There is also a need to improve college access and completion among rural young people. The higher education system was built around the needs of recent high school graduates who were largely white and middle-class, attending school full time, living on campus, financially dependent on their parents, and lacking significant caregiving responsibilities. Nationwide, fewer than one in five college students today meet this description.³⁰ Today's college students are more likely than in the past to be people of color, attending college part time while working full or part time, and parenting or otherwise caring for others. Colleges and universities that serve rural young people must continue to adapt their model to provide accommodations like flexible schedules, childcare, easy parking, and advising informed by the realities of students' lives.

IMPROVE WAGES AND CLOSE GENDER AND RACIAL WAGE GAPS.

California has led the nation in increasing the minimum wage, and doing so was crucial for improving the standard of living of the lowest-paid Californians. But more is needed. This higher minimum still does not cover the cost of living in many rural areas, and many workers are exempt from minimum-wage requirements. In addition, wage gaps by race and ethnicity and by gender imperil the well-being of families across rural California. Increasing economic security for low-income workers by raising wages, strengthening equal-pay protections, and protecting the right to unionize are important priorities. Universal basic income pilots, mentioned earlier, have shown promise.

TREAT HIGH-SPEED BROADBAND AS A PUBLIC UTILITY AKIN TO ELECTRICITY.

In the age of coronavirus, high-speed broadband can no longer be treated as an optional luxury. Gaps in internet access have created an opportunity chasm between the broadband haves and have-nots. Remote

learning, working from home, and seeing a doctor virtually—the new—are only possible with fast, reliable internet. Not all “broadband” is created equal; stakeholders in this space should coordinate around a minimum speed threshold of 100 Mbps, laid out in a summer 2020 executive order by Governor Gavin Newsom. This speed, which is recommended for digital learning, far exceeds the Federal Communications Commission’s broadband definition.³¹ Even as the threat of Covid-19 ebbs, broadband will remain critical for job searches, school projects, accessing government benefits, and myriad other important tasks. Closing the digital divide with infrastructure, affordable services, and skill-building will promote equity and inclusion for everyone. The California 2021 Broadband for All bill, which authorized the investment of \$6 billion in universal statewide broadband access, was a welcome step. Government officials from rural areas and longtime broadband advocates still have an important role to play in ensuring expansion with equity—making sure that everyone in the county benefits from this statewide investment. Access gaps will not magically close once the infrastructure is in place, though that’s a critical first step; low-income families may need assistance paying for services and devices as well as training and support.

DRAMATICALLY INCREASE THE QUALITY AND SUPPLY OF HOUSING AND END HOMELESSNESS.

Affordable housing is increasingly out of reach for low-income rural residents, especially in higher-income areas where job opportunities are more plentiful, and the rate of housing construction is far from sufficient to mitigate rising prices or meet demand. In the popular imagination, the California housing crisis is centered in cities, where limited land, sky-high costs, NIMBY-ism, and restrictive regulations conspire to make building affordable housing near impossible. Yet rural areas in the state also face a housing shortage. State funding formulas prioritize urban areas, private developers aren’t able to realize economies of scale because rural populations are small and often spread out, existing infrastructure is often inadequate, and rural residents disproportionately live in poverty, making even “affordable” housing unaffordable to many. Public funding is necessary to expand access to affordable housing given the obstacles to private development and the higher-than-average poverty rates across rural California. Keeping people in their homes by providing rental subsidies and services as well as support for home maintenance for homeowners, supporting human-centered, trauma-informed street engagement rather than criminalization, and pursuing a “housing first” strategy are all key to addressing homelessness. Comprehensively addressing the root causes of housing unaffordability and insecurity is necessary as well. Rural residents are more likely than urban residents to own their homes, and many low-income older residents in particular struggle to keep their homes in good repair; ensuring that homes remain safe and comfortable for their low-income owners is a particularly important priority in rural California as is increasing opportunities for home ownership.

The poor housing conditions of Native American communities demand special attention. A [report](#) by the California Coalition for Rural Housing and the Rural Community Assistance Council makes several specific recommendations with a view to ensuring that tribes “get their fair share of state resources that will enable them to increase the supply of decent and affordable homes on tribal land, address chronic substandard housing and water-sewer infrastructure, and improve the quality of life of their members.” They recommend that: California tribes be made eligible for state affordable housing and community development programs (today they generally are not); regulations be adapted to allow for the unique nature of tribal housing programs and projects, such as the rights tribes have to self-determination as sovereign bodies; state housing programs carve out tribal set-asides, apportionments, or goals for each of their programs as tribes often cannot compete with nonprofit developers or local governments; tribes and the state work together to develop real estate documents that meet the needs of both the tribe and the lender or grantee; and the state reconstitute the California Indian Assistance Program.

IMPROVE THE WELL-BEING OF FARMWORKERS.

Rural California contains some of the most agriculturally productive areas on Earth, many of which are also among the poorest places in California. This obvious inequity calls out for redress—the industry is built on

scarce and dwindling resources and the precarity of its labor force. These essential workers require the same protections that most other workers in America already have—fair pay, fair working conditions, an end to child-labor exploitation, employer-provided health care, protection from occupational hazards, freedom from fear of deportation and family separation, and gainful employment opportunities during off-peak seasons. Natural bounty can be a positive force for development, but fair wages and conditions are needed to unlock its full human development potential for working communities. Those who form the backbone of the agricultural labor force deserve the opportunity to lead healthy lives, have a decent standard of living, and build a better future for themselves and their families.

Notes

¹ National Conference of State Legislatures, “Challenges Facing Rural Communities,” January 21, 2020, <https://www.ncsl.org/agriculture-and-rural-development/challenges-facing-rural-communities#rural>.

² U.S. Department of Agriculture, “USDA ERS - Data for Rural Analysis,” Data for Rural Analysis, April 5, 2021, <https://www.ers.usda.gov/topics/rural-economy-population/rural-classifications/data-for-rural-analysis/>.

³ The following text is paraphrased and quoted from the California Fair Housing Task Force: Methodology for the 2021 TCAC/HCD Opportunity Map. <https://www.treasurer.ca.gov/ctcac/opportunity/2021-hcd-methodology.pdf> The classification is as follows: All tracts in the following non-metropolitan counties: Alpine, Amador, Calaveras, Colusa, Del Norte, Glenn, Humboldt, Inyo, Lake, Lassen, Mariposa, Mendocino, Modoc, Mono, Nevada, Plumas, Sierra, Siskiyou, Tehama, Trinity, and Tuolumne; all tracts in Butte, Shasta, Sutter, and Yuba Counties; and any other non-urbanized block group with at least half its population in an area deemed as rural on the U.S. Department of Agriculture’s online multifamily mapping application. Any tract that falls within the 25 counties listed above is designated as a “rural area.” Beyond those counties, the Task Force identified areas in the state that correspond with rural areas on the US Department of Agriculture’s online multifamily maps. These areas were then overlaid with census tract boundaries to identify what share of the population within a tract falls within the rural area. If at least 50 percent of a tract’s population is located within census blocks which have their population-weighted centroid within the rural area, that census tract was allocated to the “rural areas” designation. For block groups that fall within the rural designation, the maps take a slightly different approach to allocating resource categories.

⁴ Bertrand Desjardins, “Why Is Life Expectancy Longer for Women than It Is for Men?,” *Scientific American*, December 2004, <https://www.scientificamerican.com/article/why-is-life-expectancy-lo/>.

⁵ James R. Mahalik, Shaun M. Burns, and Matthew Syzdek, “Masculinity and Perceived Normative Health Behaviors as Predictors of Men’s Health Behaviors,” *Social Science & Medicine* (1982) 64, no. 11 (June 2007): 2201–9, <https://doi.org/10.1016/j.socscimed.2007.02.035>.

⁶ Centers for Disease Control and Prevention, CDC WONDER, 2019; Shelly F. Greenfield et al., “Substance Abuse in Women,” *The Psychiatric Clinics of North America* 33, no. 2 (June 2010): 339–55, <https://doi.org/10.1016/j.psc.2010.01.004>; Julia A. Rivera Drew and Carrie Henning-Smith, “Within-Occupation and Industry Sex, Race, and Educational Differences in Exposures to Workplace Hazards,” PDF, Minnesota Population Center Working Paper Series, 2014, 20143, <https://doi.org/10.18128/MPC2014-3>.

⁷ Centers for Disease Control and Prevention, “Burden of Tobacco Use in the U.S.,” Centers for Disease Control and Prevention, April 7, 2021, <https://www.cdc.gov/tobacco/campaign/tips/resources/data/cigarette-smoking-in-united-states.html>; Jill Anne McDonald and Leonard Joseph Paulozzi, “Parsing the Paradox: Hispanic Mortality in the US by Detailed Cause of Death,” *Journal of Immigrant and Minority Health* 21, no. 2 (April 1, 2019): 237–45, <https://doi.org/10.1007/s10903-018-0737-2>.

⁸ A F Abraído-Lanza et al., “The Latino Mortality Paradox: A Test of the ‘Salmon Bias’ and Healthy Migrant Hypotheses,” *American Journal of Public Health* 89, no. 10 (October 1999): 1543–48.

⁹ “California Agricultural Production Statistics,” California Department of Food and Agriculture, September 1, 2022, <https://www.cdffa.ca.gov/Statistics/>.

¹⁰ Paul Brown, Edward Flores, and Ana Padilla, *Farmworker Health in California: Health in a Time of Contagion, Drought, and Climate Change* (UC Merced Community and Labor Center, 2022), https://clc.ucmerced.edu/sites/clc.ucmerced.edu/files/page/documents/fwhs_report_2.2.2383.pdf.

¹¹ “California Findings from the National Agricultural Workers Survey (NAWS) 2015–2019.” This survey includes migrant and seasonal workers, as well as documented and undocumented workers.

¹² U.S. Department of Labor, “Unweighted Number of NAWS Respondents in California Demographics, 1989–2020: Table 13,” August 12, 2021, https://www.dol.gov/sites/dolgov/files/ETA/naws/pdfs/Table13_CaliforniaDemographics_2021.08.12.xlsx.

¹³ U.S. Department of Labor, “State Child Labor Laws Applicable to Agricultural Employment,” DOL, January 1, 2023,

<http://www.dol.gov/agencies/whd/state/child-labor/agriculture>.

¹⁴ Working Children: Federal Injury Data and Compliance Strategies Could Be Strengthened, GAO-19-26 (Washington, D.C.: Government Accountability Office, 2018), <https://www.gao.gov/assets/700/695209.pdf>.

¹⁵ Andrew Ayres et al., Land Transitions and Dust in the San Joaquin Valley (Public Policy Institute of California, 2022), <https://www.ppic.org/?show-pdf=true&docraptor=true&url=https%3A%2F%2Fwww.ppic.org%2Fpublication%2Fland-transitions-and-dust-in-the-san-joaquin-valley%2F>.

¹⁶ Ashley E. Larsen, Steven D. Gaines, and Olivier Deschênes, “Agricultural Pesticide Use and Adverse Birth Outcomes in the San Joaquin Valley of California,” *Nature Communications* 8, no. 1 (August 29, 2017): 302, <https://doi.org/10.1038/s41467-017-00349-2>.

¹⁷ Brown, Flores, and Padilla, Farmworker Health in California: Health in a Time of Contagion, Drought, and Climate Change.

¹⁸ Legislative Analyst’s Office, “Expanding Access to Safe and Affordable Drinking Water in California—A Status Update,” November 10, 2020.

¹⁹ Jonathan London et al., *The Struggle for Water Justice in California’s San Joaquin Valley: A Focus on Disadvantaged Unincorporated Communities*, 2018, <https://regionalchange.ucdavis.edu/sites/g/files/dgvnksk986/files/inline-files/The%20Struggle%20for%20Water%20Justice%20FULL%20REPORT.pdf>.

²⁰ UN. General Assembly (64th sess. : 2009-2010), “The Human Right to Water and Sanitation : Resolution / Adopted by the General Assembly” (UN, August 3, 2010), <https://digitalibrary.un.org/record/687002>.

²¹ Office of Environmental Health Hazard Assessment, “The Human Right to Water in California,” Text, OEHA, November 30, 2018, <https://oehha.ca.gov/water/report/human-right-water-california>.

²² Jonathan London et al., *The Struggle for Water Justice in California’s San Joaquin Valley*.

²³ Tapan B. Pathak et al, “Climate Change Trends and Impacts on California Agriculture: A Detailed Review,”

Agronomy (February 26, 2018), <https://s3.documentcloud.org/documents/4405251/Agronomy-08-00025.pdf>.

²⁴ Farzaneh Khorsandi, “Cannabis Farmworkers’ Safety and Health,” *Western Center for Agricultural Health and Safety*, February 20, 2018, <https://aghealth.ucdavis.edu/news/cannabis-farmworkers-safety-and-health>.

²⁵ Eva Durazo et al., “The Health Status and Unique Health Challenges of Rural Older Adults in California,” June 14, 2011, <https://escholarship.org/uc/item/Ods8j0w9>; Jenine K. Harris et al., “The Double Disparity Facing Rural Local Health Departments,” *Annual Review of Public Health* 37, no. 1 (March 18, 2016): 167–84, <https://doi.org/10.1146/annurev-publhealth-031914-122755>.

²⁶ Michael McGough, “COVID Cases Hit All-Time Highs in Rural California Hospitals as Delta Variant Rages,” *The Sacramento Bee*, August 17, 2021, <https://www.sacbee.com/news/coronavirus/article253481404.html>.

²⁷ David Washburn, “Lost Days: Poverty, Isolation Drive Students Away from School in California’s Rural Districts,” *EdSource*, May 30, 2019, <https://edsources.org/2019/lost-days-poverty-isolation-drive-students-away-from-school-in-californias-rural-districts/613048>.

²⁸ Jennifer Bowman, “Feeding the Nation, Fighting for Housing: Imperial County Farmworkers’ Issues Persist Amid Pandemic,” *Times of San Diego*, March 9, 2021, <https://timesofsandiego.com/politics/2021/03/08/feeding-the-nation-fighting-for-housing-imperial-county-farmworkers-issues-persist-amid-pandemic/>.

²⁹ Anne Price and Aisa Villarosa, *The Cost of Being Californian* (Insight Center, 2021), <https://insightcced.org/cost-of-being-californian/>.

³⁰ Stephen G. Pelletier, “Success for Adult Students,” *Public Purpose* 12 (2010): 2–6.

³¹ Joseph Hayes and Niu Gao, “Achieving Digital Equity for California’s Students” (Public Policy Institute of California, October 2021), <https://www.ppic.org/publication/achieving-digital-equity-for-californias-students/>.