ENVIRONMENTAL HEALTH IN THE EASTERN COACHELLA VALLEY

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In collaboration with

South Coast AQMD

DESERT HEALTHCARE DISTRICT & FOUNDATION

ALIANZA COACHELLA VALLEY

A report by

HARC
HEALTH ASSESSMENT AND RESEARCH FOR COMMUNITIES

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Executive Summary

Introduction

This report was funded by a grant from the United States Environmental Protection Agency (U.S. EPA), as part of a larger effort to educate underserved communities about how to monitor and interpret air quality data. The Desert Healthcare District and Foundation (DHCD), Alianza Coachella Valley (Alianza), and HARC (Health Assessment and Research for Communities) collaborated with the South Coast Air Quality Management District (South Coast AQMD) to convene an Air Quality Academy. The Air Quality Academy was an effort to educate residents from undeserved communities in the Eastern Coachella Valley about air pollution. Another component of this project was the writing of this report, which summarizes the environmental health challenges faced by the Eastern Coachella Valley.

The Coachella Valley is a desert basin with a population of approximately 450,000 people, situated in eastern Riverside County in Southern California. Although the valley is a single region geographically, socially it functions as two separate entities, divided between the wealthier, whiter, and more urban Western Coachella Valley and the more working-class, Latino, and rural Eastern Coachella Valley. In contrast to the hospitality and healthcare industries in the west, agriculture is the major industry in the east, which partly explains the valley's social and environmental disparities.

Methods

This report uses existing secondary data sources to compare the environmental and social conditions of the Eastern Coachella Valley with nearby geographies. The report pulls data from CalEnviroScreen 4.0, data from the Coachella Valley Community Health Survey conducted by HARC, and feedback from Air Quality Academy participants.

CalEnviroScreen

CalEnviroScreen 4.0 (CalEnviroScreen) is an online data dashboard provided by the California EPA's Office of Environmental Health Hazard Assessment.[1] This dashboard provides a map and other data indicators that represent environmental burden measures and social characteristics to rate the environmental and social vulnerability of each neighborhood (i.e., Census tract) in the state. These data measures are presented as percentiles. The CalEnviroScreen percentiles (ranging from 0 to 100) are relative measurements. The state average percentile is 50.0, with about half of all neighborhoods in the state falling on the "good" end (below 50.0) and half falling on the "poor" end (above 50.0). The percentiles can be summarized as follows:

- A *higher* percentile corresponds with less favorable environmental or social characteristics.

[11] For more information, please see https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40

- A *lower* percentile corresponds with more favorable environmental or social characteristics.

CalEnviroScreen presents three percentiles, described below:

- The pollution burden percentile derives from combining data on 21 indicators including, for example, ozone, PM 2.5, traffic, pesticide use, drinking water, and clean-up sites.
- The social characteristics percentile derives from combining data on five socioeconomic factors: education level, housing burden, linguistic isolation, poverty, and unemployment.
- The average percentile is calculated by combining the pollution burden percentile and social characteristic percentile, resulting in an overall percentile that accounts for both. This is referred to here as the "average CalEnviroScreen percentile."

Coachella Valley Community Health Survey

The report also uses data from HARC's 2022 Coachella Valley Community Health Survey. This survey is a population-based random sample survey, conducted via mailed paper surveys (in English and Spanish) to adult residents in the Coachella Valley. The results of the survey were weighted to the five-year (2016-2020) U.S. Census population estimates of the Coachella Valley, to ensure that the results are representative of the entire valley.

Qualitative Data

To include the opinions of residents in their own words, a discussion among Air Quality Academy participants was facilitated in Spanish during the first meeting of the Air Quality Academy on November 29, 2022. Air Quality Academy participants were all Eastern Coachella Valley residents. The discussion was led by HARC and Alianza staff. The discussion was audio recorded, and the recording was transcribed. The transcript was analyzed to identify common themes and representative quotations.

Results

CalEnviroScreen Data

This section presents the average CalEnviroScreen percentiles, the pollution burden percentiles, and population characteristics percentiles for the Eastern Coachella Valley, the Western Coachella Valley, the Coachella Valley as a whole, and Riverside County as a whole. Comparisons are also made with the average percentiles for the state. In addition, comparisons for all three percentiles are also provided for cities and unincorporated communities (Census-designated places) in the Coachella Valley.

Average CalEnviroScreen Percentiles

The Eastern Coachella Valley has an average CalEnviroScreen percentile of 61.5, placing it above (and thus worse than) the California average (50.0), and substantially above the Western

Coachella Valley average (27.6), Coachella Valley average (30.9), and Riverside County average (48.8).

Average Pollution Burden Percentiles

The Eastern Coachella Valley has an average pollution burden percentile of 39.0, placing it below (and thus better than) the California average (50.0), substantially above the Western Coachella Valley average (13.1) and Coachella Valley average (15.6), and slightly above the Riverside County average (37.8). The Eastern Coachella Valley's pollution burden is thus more favorable than the state average, slightly less favorable than the county average, and far less favorable than the averages for the Western Coachella Valey and Coachella Valley as a whole.

Average Population Characteristics Percentiles

The Eastern Coachella Valley has an average population characteristics percentile of 76.6, placing it substantially above (worse than) the California average (50.0), the Western Coachella Valley average (47.2), the Coachella Valley average (50.6), and the Riverside County average (57.5). The Eastern Coachella Valley's social characteristics are thus far less favorable than the other geographies.

Comparisons Among Coachella Valley Communities: Average CalEnviroScreen Percentiles

Eastern Coachella Valley communities such as Mecca and North Shore (81.9) are substantially higher (worse) in their average CalEnviroScreen percentile compared to other communities in the Coachella Valley. Although Western Coachella Valley communities tend to have low percentiles, Indio (52.4) is an exception, with the fourth highest percentile.

Comparisons Among Coachella Valley Communities: Pollution Burden Percentiles

The Eastern Coachella Valley communities of Mecca and North Shore (70.7), Coachella (51.1), Oasis (44.8), and Vista Santa Rosa and Thermal (44.5) have the highest (worst) pollution burden percentiles. The Western Coachella Valley community with the highest pollution burden percentile is Indio (29.4).

Comparisons Among Coachella Valley Communities: Population Characteristics Percentiles

The Eastern Coachella Valley communities of Coachella (86.3), Mecca and North Shore (81.0), and Oasis (75.2) have high (unfavorable) population characteristics percentiles. However, the community with the highest population characteristics percentile is the Western Coachella Valley community of Desert Hot Springs (87.0). In addition, the Western Coachella Valley communities of Indio (68.3) and Cathedral City (60.0) have relatively high percentiles. This indicates that regarding population characteristics, the division between the Western and Eastern Coachella Valley is less acute, as communities on both sides of the valley contend with the social challenges captured by this percentile (i.e., education level, housing burden, linguistic isolation, poverty, and unemployment).

Overall, the results from CalEnviroScreen suggest that the Eastern Coachella Valley has a pollution burden that is better than the state on average but is worse than Riverside County, the Coachella Valley as a whole, and the Western Coachella Valley. The results also suggest that the Eastern Coachella Valley has population characteristics that are far less favorable than the state on average, the county, the Coachella Valley as a whole, and the Western Coachella Valley. However, there remain communities in the Western Coachella Valley (especially Desert Hot Springs and Indio) that have comparable population characteristics as the Eastern Coachella Valley. Pollution burden is thus concentrated in the valley's east, but unfavorable population characteristics are less concentrated, found in communities on both sides of the valley.

HARC Environmental Perceptions Data

This data is drawn from HARC's Coachella Valley Community Health Survey, which is a representative population health survey of the region. The most recent survey (2022) included three questions about the environment: how residents perceive their neighborhood's air quality, how willing residents are to change their lifestyle for the environment, and how often outdoor activity is restricted because of air quality. These questions apply only to the adult population.

Entire Coachella Valley

Across the Coachella Valley as a whole, 21.5% of adults said that the air quality in their neighborhood was *fair* or *poor*. Further, only 8.6% of adults valley wide said they were *not so willing* or *not at all willing* to change their lifestyle for the environment. In addition, 47.4% of adults valley wide said that poor air quality hinders them from doing outdoor activities in their neighborhood.

Eastern Coachella Valley and Western Coachella Valley

Results for the three environmental questions were compared between the Western Coachella Valley and Eastern Coachella Valley. A total of 39.4% of adults in the Eastern Coachella Valley said that their air quality is *poor* or *fair*, in contrast to 18.9% of adults in the Western Coachella Valley.[2]

Further, 95.6% of adults in the Eastern Coachella Valley said that they were willing to change their lifestyle for the environment, in contrast to 90.7% of adults in the Western Coachella Valley.[3]

[2] This difference between the two regions is statistically significant.
[3] This difference between the two regions is statistically significant.

Finally, 64.0% of adults in the Eastern Coachella Valley said that poor air quality prevents them from doing outdoor activities, in contrast to 44.9% of adults in the Western Coachella Valley.[4]

These survey results show that there is a statistically significant disparity between the Eastern and Western Coachella Valley regarding opinions about air quality, willingness to change one's lifestyle for the environment, and whether poor air quality hinders outdoor activities.

Group Discussion Results

General Themes

This section summarizes the results of a group discussion facilitated by HARC and Alianza staff with Air Quality Academy participants. This discussion was meant to provide a snapshot of local perceptions of air quality in residents' own words.

Health Concerns

Participants spoke in detail about how health problems (such as asthma) are experienced by themselves, their families, or others. Participants also explained how such health problems had appeared after they moved to the area (and thus after they were exposed to local pollution).

The Salton Sea

Participants also discussed the environmental challenges presented by the Salton Sea. This included mentions of the Salton Sea's unpleasant odor (likely hydrogen sulfide gas), swarms of insects, and dust originating from the Salton Sea's dried lakebed. These challenges include not only nuisances, like odors and pests, but also health challenges, like asthma.

Agricultural Activity

The most commonly discussed theme was the impact of agricultural activity on air quality. Given that many (if not all) participants either work in or live near the fields, agriculture is a major issue of concern. Participants mentioned, for example, concerns with agricultural burns and agrochemicals such as fertilizers and pesticides.

Local Efforts to Improve Air Quality

Below are several organizations—public and nonprofit—that have programs aimed specifically at improving environmental health in the Eastern Coachella Valley.

[4] This difference between the two regions is statistically significant.

South Coast Air Quality Management District

The South Coast AQMD, in accordance with a state law known as Assembly Bill 617, has created a Community Emissions Reduction Plan (CERP) and Community Air Monitoring Plan for the Eastern Coachella Valley. The plan identifies a series of emission reduction targets and actions to be taken to reach those emission reduction goals.[5] One effort by South Coast AQMD has been partnering with Riverside County (the Office of Supervisor V. Manuel Perez) to allocate $4.57 million for paving dirt roads in the Eastern Coachella Valley.[6] South Coast AQMD has also begun to distribute a limited number of home air filters to Eastern Coachella Valley residents on a first-come, first-served basis, with about $1 million in state funding.[7] Distributing air filters is one area for possible program expansion, given the effectiveness of using air filters in the home and the potential of using air filters in workplaces or schools.[8] There is ample evidence showing that air filters are effective at reducing indoor air pollution, including one study of families in the Eastern Coachella Valley.

Desert Healthcare District and Foundation

DHCD has prioritized environmental impacts on health in their strategic plan, with a specific focus on air and water quality. Their efforts include addressing health issues related to the Salton Sea, illegal dump fires, and healthcare utilization stemming from air pollution. DHCD collaborates with community partners to build consensus and coordinate efforts across various organizations.

Alianza Coachella Valley

Alianza has a number of programs targeting environmental justice in the Eastern Coachella Valley. This includes a Salton Sea community science project, where community members (including youth) help to collect scientific data (e.g., regarding water quality) on the Salton Sea, data which is then posted online and available to the public. They aim to do this so the community is engaged in conversations with policymakers and decision makers about topics that affect their health with an aim to inform solutions to the challenges of the receding Salton Sea and improve health outcomes for residents.

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[5] http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/eastern-coachella-valley/final-cerp/final-cerp-july-2021.pdf?sfvrsn=9#page=103

[6] https://kesq.com/news/top-stories/2023/08/04/east-valley-roads-how-4-57m-in-pavement-funding-will-improve-air-quality/

[7] https://www.desertsun.com/story/news/environment/2024/05/10/free-air-filters-available-for-dust-plagued-east-coachella-valley-homes/73644536007/

[8] UC Irvine and CARB are conducting a study on the effectiveness of air filtration systems in elementary schools. The study investigates possible benefits directly associated with PM2.5 exposure reduction in 17 Los Angeles Unified School District elementary schools located in communities with a high air pollution burden. For more information, please see *https://ww2.arb.ca.gov/hifive-health-impacts-filtration-improvements-elementary-schools*

Salton Sea Management Program

The Salton Sea Management Program (SSMP) is the state-run effort to mitigate ecological and human health impacts as the Salton Sea shrinks. This includes a 10-year plan to build 30,000 acres of wetlands around the Salton Sea, to provide habitat and reduce dust emissions.

Leadership Counsel for Justice & Accountability

The Leadership Counsel for Justice & Accountability is a nonprofit organization that does work in Inland California, including the Coachella Valley. This includes a focus on environmental justice and advocacy for improved air quality.

Pueblo Unido Community Development Corporation

Publo Unido Community Development Corporation is a nonprofit organization focused on improving the lives of residents in the Eastern Coachella Valley. Their work includes rural development, community investment, and environmental justice advocacy.

Conclusion

Air quality is a major concern for the Eastern Coachella Valley. CalEnviroScreen data indicate that the Eastern Coachella Valley faces greater pollution burdens than the Western Coachella Valley, the Coachella Valley as a whole, and Riverside County. Further, population health data from HARC shows that Eastern Coachella Valley residents report that their air quality is *poor* or *fair* at twice the rate as do Western Coachella Valley residents.

Despite the social and environmental challenges faced by the Eastern Coachella Valley, efforts are ongoing to improve local air quality. These include the essential work of educating and organizing residents (such as through initiatives like the Air Quality Academy). Given the large-scale and costly efforts needed to reduce emissions (e.g., from dirt roads, agricultural fields, and the Salton Sea), the continued distribution of home air filters could be relatively cost-effective for mitigating air quality impacts, at least in the short term while long-term solutions are sought. For example, as part of the continuation of this project (the State Environmental Justice Cooperative Agreement and the Air Quality Academy), air filters will be provided to community members and training will be held to educate community members on how to use the filters and the benefits to indoor air quality. Among long-term solutions, one might include efforts to regulate emissions from the agriculture industry, such as pesticide (and other agrochemical) drift, agricultural burns, or fugitive dust from open fields.

Introduction

This report was funded by a grant from the United States Environmental Protection Agency (U.S. EPA), as part of a larger effort to educate underserved communities about how to monitor and interpret air quality data. The Desert Healthcare District and Foundation (DHCD), Alianza Coachella Valley (Alianza), and HARC (Health Assessment and Research for Communities) collaborated with the South Coast Air Quality Management District (South Coast AQMD) to convene an Air Quality Academy. The Air Quality Academy was an effort to educate residents from undeserved communities in the Eastern Coachella Valley about air pollution. Another component of this project was the writing of this report, which summarizes the environmental health challenges faced by the Eastern Coachella Valley.

The Air Quality Academy consisted of a series of workshops for a cohort of Spanish-speaking Eastern Coachella Valley residents. Each Air Quality Academy participant was provided with an air quality monitor,[9] which was installed at each participant's home and connected to the Internet. Participants were trained in how to interpret the air quality data, as well as other information about how to mitigate exposure to outdoor and indoor air pollution.

This report summarizes existing data sources (from CalEnviroScreen 4.0 and HARC's Coachella Valley Community Health Survey) on air quality and other environmental and social indicators, with a focus on disparities between the Eastern Coachella Valley and the Western Coachella Valley. The report also presents feedback from participants of the Air Quality Academy. This feedback was gathered at the first meeting of the Air Quality Academy during a discussion which allowed participants to share their experiences and opinions about environmental pollution. In addition, the report reflects on existing efforts to improve air quality and other environmental conditions in the Eastern Coachella Valley. An overview of the report's collaborating agencies, the Air Quality Academy, and the historical and environmental conditions of the Eastern Coachella Valley are provided below.

Collaborating Agencies

The South Coast AQMD is a regional government agency in charge of managing primarily stationary sources of air pollution (for example, gas stations or power plants.) Founded in 1976, South Coast AQMD has jurisdiction over Orange County and parts of Los Angeles County, San Bernardino County, and Riverside County, including the Coachella Valley.[10]

[9] Participants were provided with a PurpleAir monitor, which would upload air quality data to the PurpleAir network. For more information on the PurpleAir monitors and network, please see https://www.purpleair.com/

[10] For more information, please see http://www.aqmd.gov/aq-spec/aboutscaqmd

The DHCD, founded in 1948, is a government agency that owns Desert Regional Medical Center, a hospital located in Palm Springs. DHCD serves all residents within its district boundaries, which includes the entire Coachella Valley. DHCD funds numerous community health initiatives, including via grants to local organizations and two mobile health clinics, among other efforts.[11]

Alianza is a nonprofit organization that uplifts communities in the Eastern Coachella Valley by organizing residents and cultivating community leaders. Alianza has tackled numerous initiatives, including advocating for better water infrastructure, guiding grassroots decision-making regarding the Salton Sea, engaging youth in policymaking, and expanding healthcare access.[12]

HARC is a nonprofit organization that provides research and evaluation services. HARC focuses on the social determinants of health, the idea that conditions such as one's neighborhood, occupation, education, or racial identity affect one's physical and mental health. To collect community health data about the Coachella Valley, HARC began administering a triennial community health survey in 2006. HARC also conducts research and evaluation projects for a variety of local governments and nonprofit organizations.[13]

Air Quality Academy

With funding from the U.S. EPA, South Coast AQMD partnered with DHCD and Alianza to offer a series of workshops for a cohort of Spanish-speaking residents in the Eastern Coachella Valley to learn about air quality. This Air Quality Academy met in person over the course of about a year to hear presentations by South Coast AQMD and Alianza staff. Workshops included information on how to find and interpret local air quality data and how to mitigate exposure to air pollution. As explained earlier, all Air Quality Academy participants were also provided with an air monitor, and they received support to install the monitors at their homes. This effort allowed for more air quality data to be uploaded to an online air quality monitoring network (publicly available via www.PurpleAir.com), thus improving the capacity for others to monitor air quality in the Eastern Coachella Valley. In addition, the participants also shared their experiences and opinions in a discussion group, the results of which are provided in this report.

The Coachella Valley

The Coachella Valley is a desert basin with a population of approximately 450,000 people, situated in eastern Riverside County in Southern California. Although the valley is a single region geographically, socially it functions as two separate entities, divided between the wealthier,

[11] For more information, please see https://dhcd.org/About-Us
[12] For more information, please see https://www.alianzacv.org/about/#what-we-do
[13] For more information, please see https://harcdata.org/about-us/

whiter, and more urban Western Coachella Valley and the more working-class, Latino, and rural Eastern Coachella Valley. The Western Coachella Valley, as defined here, includes the cities of Cathedral City, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage as well as the unincorporated communities west and north of Indio (e.g., Desert Edge, Sky Valley, and Thousand Palms). The Eastern Coachella Valley, as defined here, includes the City of Coachella and the unincorporated communities east and south of the City of Coachella (e.g., Mecca, North Shore, Oasis, Thermal, and Vista Santa Rosa). In contrast to the hospitality and healthcare industries in the west, agriculture is the major industry in the east, which partly explains the valley's social and environmental disparities. To sketch these disparities, a brief description of the valley's geography, demographics, and economy is provided below.

Geography

The valley's geography, while defining the region's boundaries, also influences air quality. The valley is bound by the San Jacinto and Santa Rosa Mountains to the north and west and the San Gorgonio Mountain and Little San Bernardino Mountains to the north and east.[14] To the south, the valley is bordered by the Salton Sea, a terminal saline lake fed by the excess irrigation water flowing off nearby farm fields. Due to water policy decisions, the Salton Sea is shrinking, exposing toxic emissive sediments from the dried lakebed (known as playa), a source of local air pollution.[15] To the north, a narrow mountain pass (the San Gorgonio Pass) acts like a wind funnel, accelerating winds that blow into the valley from the Los Angeles Basin. These prevailing winds blow in smog from the Los Angeles metropolitan area. Strong winds also kick up dust and dirt from the valley floor, including toxic sediments from the drying Salton Sea.

Local sources of air pollution, in addition to the drying Salton Sea, include automobile traffic (the Interstate-10 freeway passes through the valley, a main artery of travel between Los Angeles and Pheonix, Arizona), fugitive road dust, pesticide drift, agricultural burns, illegal dumping, and desert sand and dust disturbed by wind events.[16] Air pollution is of special concern in the Eastern Coachella Valley, given that emissions sources are concentrated here.

[14] Britannica, T. Editors of Encyclopaedia (2024, May 28). Coachella Valley. Encyclopedia Britannica. https://www.britannica.com/place/Coachella-Valley

[15] UC Riverside Salton Sea Task Force. July 2021. Crisis at the Salton Sea: The Vital Role of Science. https://www.saltonseataskforce.ucr.edu/_files/ugd/0d73bf_f8133ee80a30473ca565ecab181e31a1.pdf

[16] South Coast AQMD. AB 617 – 2019-Designated Communities: Eastern Coachella Valley (ECV). http://www.aqmd.gov/nav/about/initiatives/environmental-justice/ab617-134/eastern-coachella-valley

Demographics

The racial composition of the Coachella Valley can be said to be dichotomous: about 54.0% of the population is Hispanic, and 37.4% is non-Hispanic White.[17] Like elsewhere in California, racial/ethnic identity correlates with socioeconomic status, with many Hispanic residents having lower incomes than non-Hispanic White residents. Further, Hispanic communities are concentrated in the poorer Eastern Coachella Valley. For example, the valley's wealthiest city, Indian Wells (in the Western Coachella Valley), has a Hispanic population of 6.5%, whereas the historically working-class City of Coachella (in the Eastern Coachella Valley) has a Hispanic population of 96.4%.[18] Further, much of the valley's population is found in the more urban Western Coachella Valley rather than the more rural Eastern Coachella Valley. About 14.3% of valley residents are in the Eastern Coachella Valley, and about 85.7% of valley residents are in the Western Coachella Valley.

Economy

The socio-economic contrast between the eastern and western sides of the valley is stark. The Western Coachella Valley is more populous, dominated by suburban development and an economic base that relies on the service sector (hospitality and healthcare). Country clubs, golf courses, and multimillion-dollar homes, confined often within gated communities, define the landscape as one of wealth and exclusion. Although working-class communities (primarily in Cathedral City and Desert Hot Springs) call the Western Coachella Valley home, the area benefits from the amenities (high-quality healthcare facilities, large parks and community centers, well-developed commercial districts, etc.) and infrastructure (e.g., roads and waterworks) that sustain the enclaves of upper-class and upper-middle-class residents.

The Eastern Coachella Valley, rather than depending on the economic base of tourism and healthcare services, relies largely on agriculture. Since the Coachella Valley was first colonized by White Americans over a century ago, irrigated agriculture has dominated the area's development, especially by large landowners. As throughout California, the agricultural industry rests upon a racialized labor force, comprised primarily of indigenous or other working-class immigrants from Mexico.[19] Many farmworkers and their families live in ad-hoc labor camps—mobile home parks (known as Polanco parks) that are often in disrepair or substandard conditions. While air quality is a major concern, other environmental concerns include unpaved roads, inadequate recreational and green space, a lack of sidewalks and streetlights, and

[17] 2020 U.S. Census. https://data.census.gov/
[18] 2020 U.S. Census. https://data.census.gov/
[19] Holmes, Seth. 2023. Fresh Fruit, Broken Bodies: Migrant Farmworkers in the United States. UC Press.

contaminated drinking water.[20] Although these communities provide the essential labor that sustains the Coachella Valley's economy, they often receive low wages and must contend with degraded living conditions.

The Eastern Coachella Valley, despite its long history of underdevelopment, racial discrimination, and economic exploitation, benefits from many successful efforts at community organizing and sustained interest by residents in improving their circumstances. As discussed further below, a number of initiatives are tackling the major environmental challenges faced by the area. Grassroots involvement by residents themselves, as illustrated by the Air Quality Academy, power these efforts forward.

[20] HARC. 2023. Special Report: Environmental Health in the Coachella Valley. https://harcdata.org/wp-content/uploads/2023/10/Environmental-Health-Special-Report-accessible.pdf

Methods

This report uses existing secondary data sources to compare the environmental and social conditions of the Eastern Coachella Valley with nearby geographies. The report pulls data from CalEnviroScreen 4.0, data from the Coachella Valley Community Health Survey conducted by HARC, and feedback from Air Quality Academy participants. These data sources are explained further below.

CalEnviroScreen

CalEnviroScreen 4.0 (CalEnviroScreen) is an online data dashboard provided by the California EPA's Office of Environmental Health Hazard Assessment.[21] This dashboard provides a map and other data indicators that represents environmental burden measures and social characteristics to rate the environmental and social vulnerability of each neighborhood (i.e., Census tract) in the state. These measures help compare a neighborhood's vulnerability with other neighborhoods and with the state average. These data measures are presented as percentiles. The CalEnviroScreen percentiles (ranging from 0.0 to 100.0) are relative measurements. The state average percentile is 50.0, with about half of all neighborhoods in the state falling on the "good" end (below 50.0) and half falling on the "poor" end (above 50.0). The percentiles can be summarized as follows:

- A *higher* percentile corresponds with less favorable environmental or social characteristics. For example, a neighborhood with a percentile of 80 has *high* environmental or social vulnerability.
- A *lower* percentile corresponds with more favorable environmental or social characteristics. For example, a neighborhood with a percentile of 10 has *low* environmental or social vulnerability.

CalEnviroScreen presents three percentiles: a percentile for pollution burden, a percentile for social characteristics, and an average percentile that combines both pollution burden and social characteristics. These three percentiles are described below:

- The pollution burden percentile derives from combining data on 21 indicators including, for example, ozone, PM 2.5, traffic, pesticide use, drinking water, and clean-up sites.
- The social characteristics percentile derives from combining data on five socioeconomic factors: education level, housing burden, linguistic isolation, poverty, and unemployment.
- The average percentile is calculated by combining the pollution burden percentile and social characteristic percentile, resulting in an overall percentile that accounts for both. This is referred to here as the "average CalEnviroScreen percentile."

[21] For more information, please see https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40

In addition to the three percentiles, CalEnviroScreen also calculates the *percentage* of racial/ethnic groups in a geography. Race/ethnicity is thus accounted for separately and is not factored into the population characteristics percentile. This is because race/ethnicity (unlike education level, housing burden, linguistic isolation, poverty, and unemployment) is not an unfavorable social characteristic. Rather, it simply correlates with unfavorable social circumstances, due to histories and current practices of racism. The race/ethnicity percentage can be used to see how racial/ethnic identity correlates with unfavorable environmental and social conditions.

For this report, pollution burden percentiles, population characteristic percentiles, and the average CalEnviroScreen percentiles are presented for the Eastern Coachella Valley, the Western Coachella Valley, the Coachella Valley as a whole, and Riverside County as a whole.

Coachella Valley Community Health Survey

The HARC data comes from HARC's 2022 Coachella Valley Community Health Survey. This survey is a population-based random sample survey, conducted via mailed paper surveys (in English and Spanish) to adult residents in the Coachella Valley. The survey includes data on a variety of topics, including environmental perceptions, health status, healthcare access, and demographics. The results of the survey were weighted to the five-year (2016-2020) U.S. Census population estimates of the Coachella Valley, to ensure that the results are representative of the entire valley.

Qualitative Data

To include the opinions of residents in their own words, a discussion among Air Quality Academy participants was facilitated in Spanish during the first meeting of the Air Quality Academy on November 29, 2022. Air Quality Academy participants were all Eastern Coachella Valley residents. The discussion was led by HARC and Alianza staff. A series of questions was used to guide the discussion, although participants were invited to share whatever they thought was relevant (for a copy of the discussion questions, see the Appendix). The discussion was audio recorded, and the recording was transcribed. The transcript was analyzed to identify common themes and representative quotations.

Results

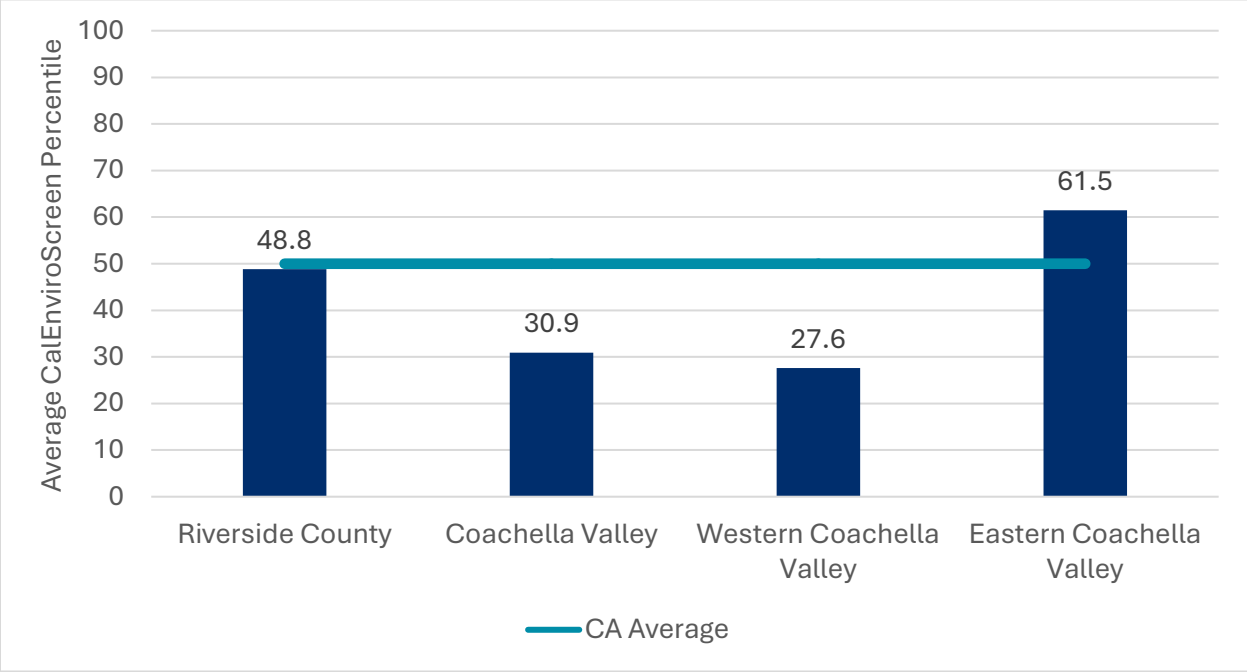
CalEnviroScreen Data

This section presents the average CalEnviroScreen percentiles as well as the pollution burden percentiles and population characteristics percentiles for several geographies. These geographies are the Eastern Coachella Valley, the Western Coachella Valley, the Coachella Valley as a whole, and Riverside County as a whole. Comparisons are also made with the average percentiles for the state. In addition, comparisons for all three percentiles are provided for cities and unincorporated communities (Census-designated places) in the Coachella Valley. The purpose of these percentiles is to compare the cumulative environmental and social vulnerability of the Eastern Coachella Valley with comparable geographies.

Average CalEnviroScreen Percentiles

For each section, note that the percentile for California is 50.0 and is presented for comparison purposes. As illustrated in the figure below, the Eastern Coachella Valley has an average CalEnviroScreen percentile of 61.5, placing it above (and thus worse than) the California average (50.0), and substantially above the Western Coachella Valley average (27.6), Coachella Valley average (30.9), and Riverside County average (48.8). This means that, comparatively, the Eastern Coachella Valley is living in less favorable environmental and social conditions.

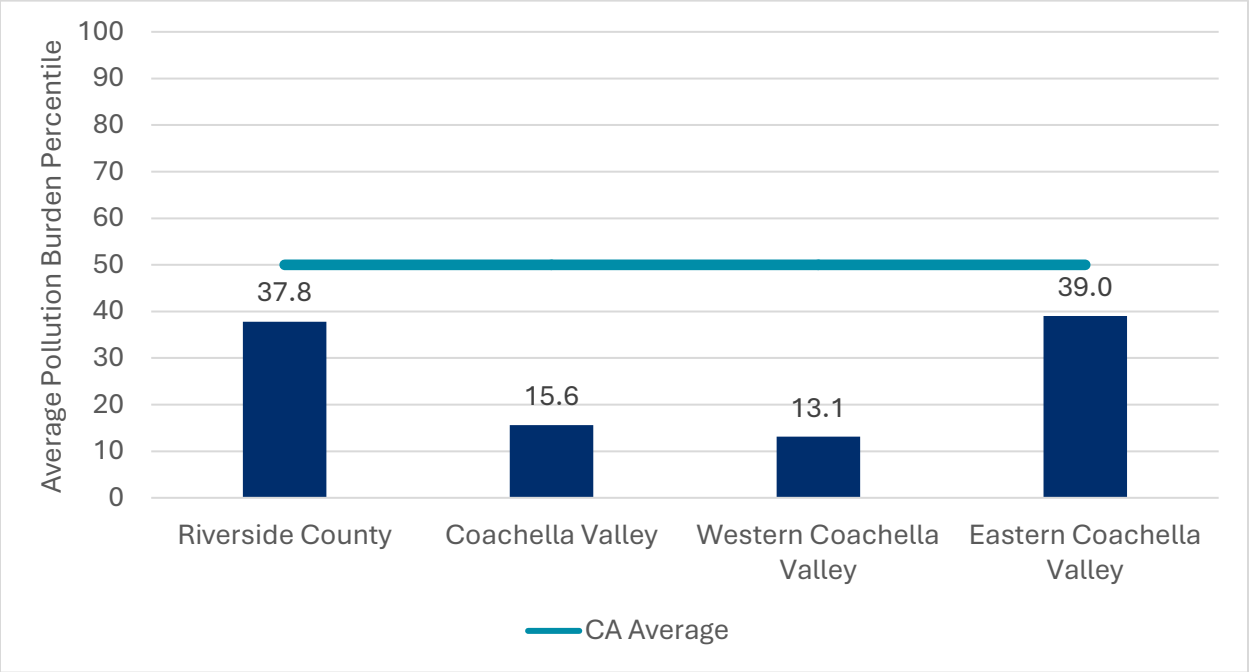
Figure 1. Average CalEnviroScreen Percentiles for All Geographies



Average Pollution Burden Percentiles

The figure below shows a comparison across geographies for pollution burden. A higher pollution burden percentile means that the area is more polluted. As illustrated in the figure below, the Eastern Coachella Valley has an average pollution burden percentile of 39.0, placing it below the California average (50.0), substantially above the Western Coachella Valley average (13.1) and Coachella Valley average (15.6), and slightly above the Riverside County average (37.8). This means that, comparatively, the Eastern Coachella Valley's pollution burden is more favorable than the state average, slightly less favorable than the county average, and far less favorable than the averages for the Western Coachella Valey and Coachella Valley as a whole.

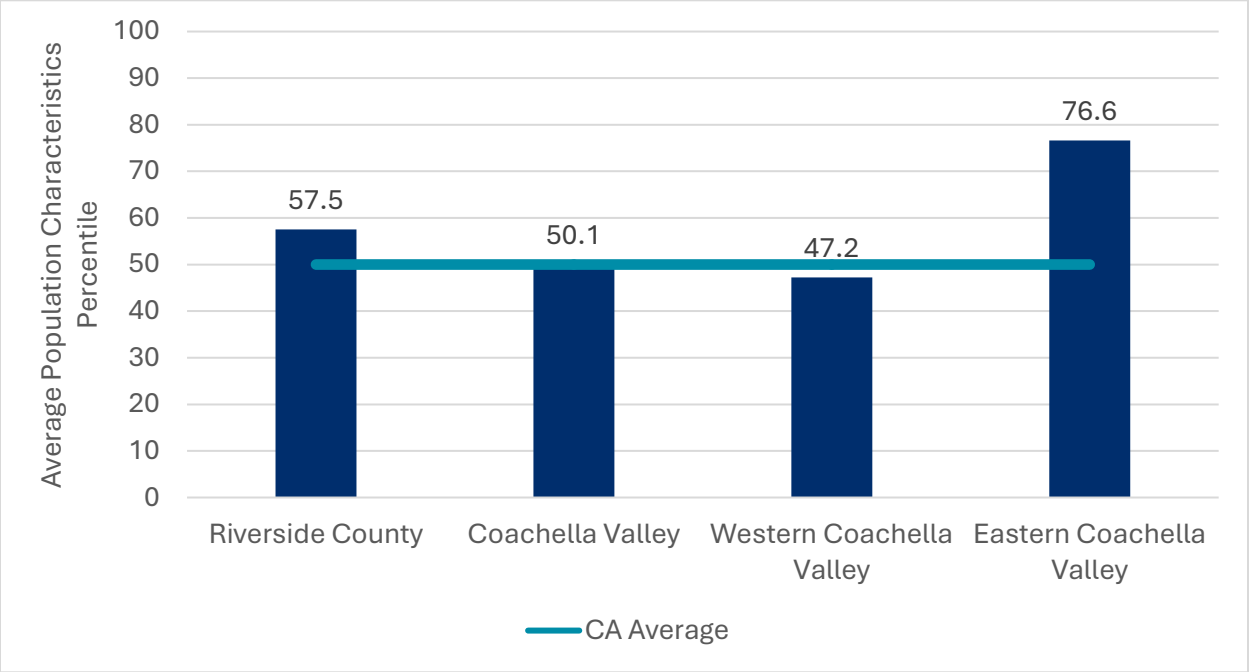
Figure 2. Average Pollution Burden Percentiles for All Geographies



Average Population Characteristics Percentiles

As illustrated in the figure below, the Eastern Coachella Valley has an average population characteristics percentile of 76.6, placing it substantially above (and thus worse than) the California average (50.0), the Western Coachella Valley average (47.2), the Coachella Valley average (50.1), and the Riverside County average (57.5). This means that, comparatively, the Eastern Coachella Valley's social characteristics are far less favorable than the other geographies.

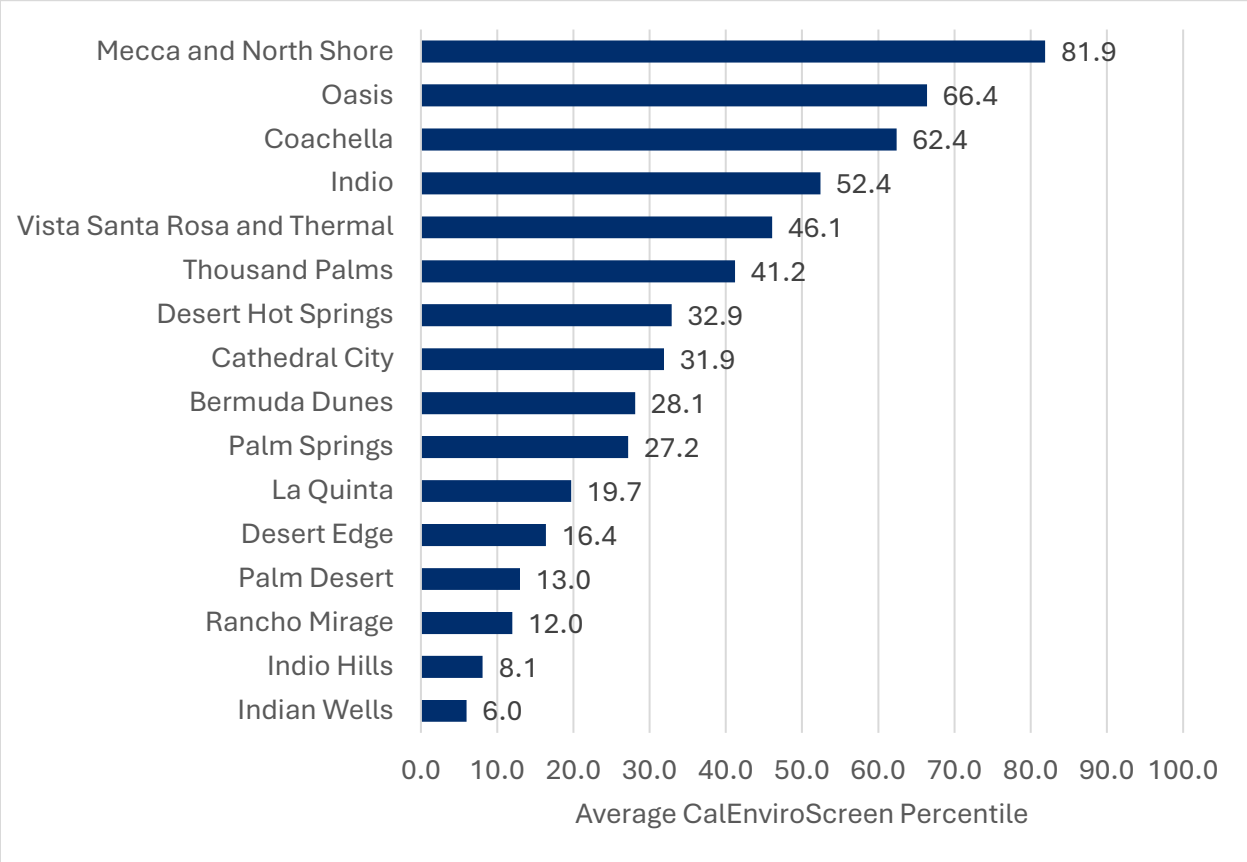
Figure 3. Average Population Characteristics Percentiles for All Geographies



Comparisons Among Coachella Valley Communities: Average CalEnviroScreen Percentiles

As illustrated in the figure below, Eastern Coachella Valley communities such as Mecca and North Shore (81.9) are substantially higher (and thus worse) in their average CalEnviroScreen percentile compared to other communities in the Coachella Valley. The Eastern Coachella Valley communities of Oasis (66.4), Coachella (62.4), and Vista Santa Rosa and Thermal (46.1) also have high percentiles. Altogether, communities in the Eastern Coachella Valley typically yield higher average CalEnviroScreen percentile scores, indicating less favorable social and environmental conditions.

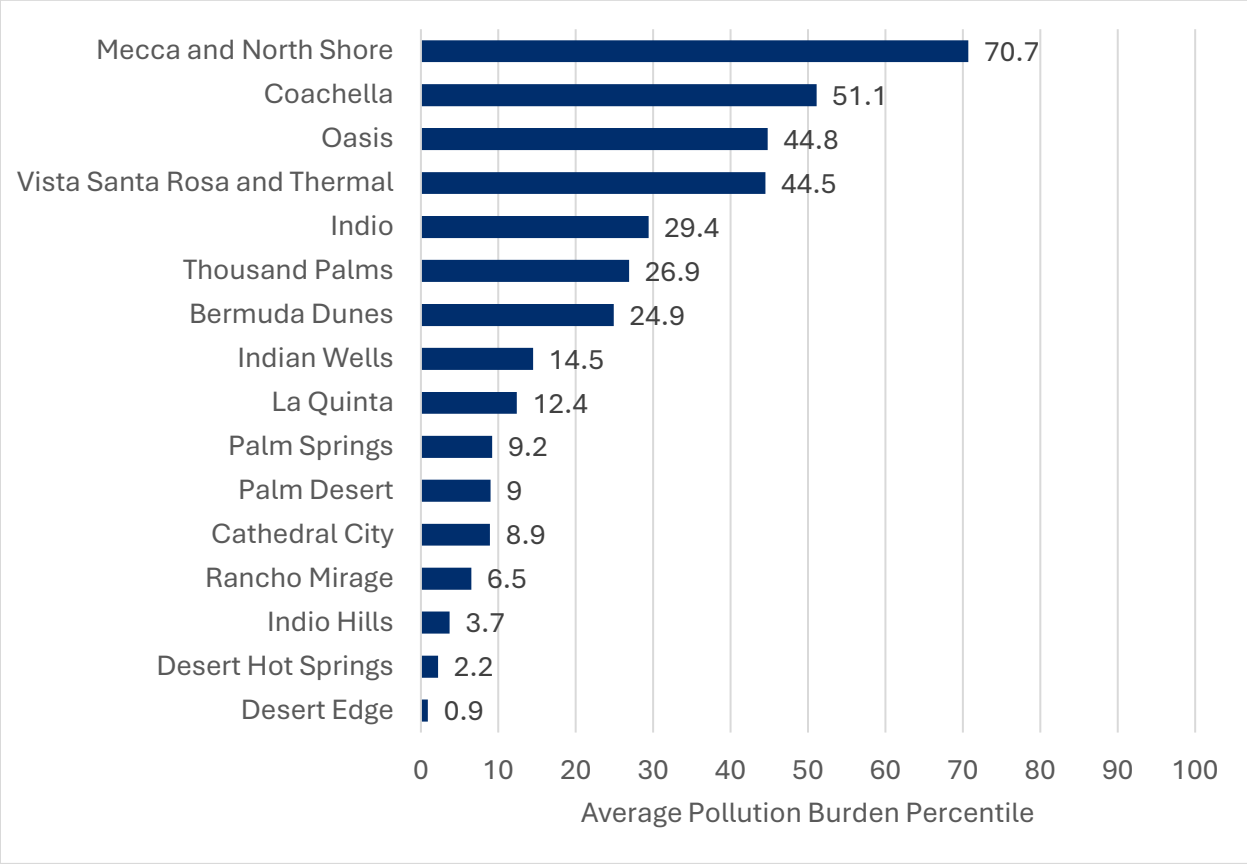
Figure 4. Average CalEnviroScreen Percentiles – Coachella Valley Cities/Unincorporated Communities



Comparisons Among Coachella Valley Communities: Pollution Burden Percentiles

As illustrated in the figure below, the Eastern Coachella Valley communities of Mecca and North Shore (70.7), Coachella (51.1), Oasis (44.8), and Vista Santa Rosa and Thermal (44.5) have the highest (worst) pollution burden percentiles. The Western Coachella Valley community with the highest pollution burden percentile is Indio (29.4), and the Western Coachella Valley community with the lowest pollution burden percentile is Desert Edge (0.9).

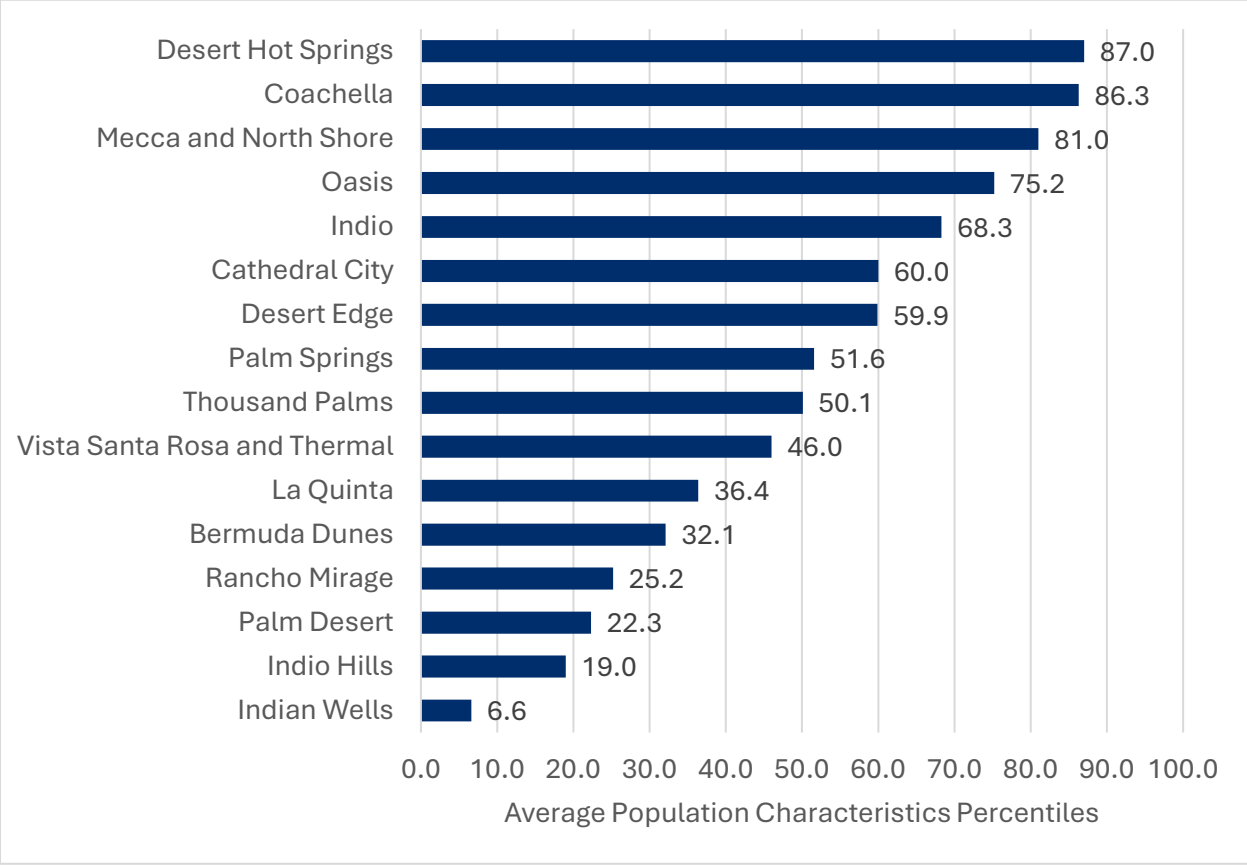
Figure 5. Average Pollution Burden Percentiles – Coachella Valley Cities/Unincorporated Communities



Comparisons Among Coachella Valley Communities: Population Characteristics Percentiles

As illustrated in the figure below, the Eastern Coachella Valley communities of Coachella (86.3), Mecca and North Shore (81.0), and Oasis (75.2) have among the highest (worst) population characteristics percentiles. However, the community with the highest population characteristics percentile is the Western Coachella Valley community of Desert Hot Springs (87.0). In addition, the Eastern Coachella Valley communities of Vista Santa Rosa and Thermal (46.0) have a population characteristics percentile that is lower than several Western Coachella Valley communities, such as Indio (68.3), Cathedral City (60.0), Palm Springs (51.6), and Thousand Palms (50.1). This indicates that in regard to population characteristics, the division between the Western and Eastern Coachella Valley is less acute, as communities on both sides of the valley contend with the social challenges captured by this percentile (i.e., education level, housing burden, linguistic isolation, poverty, and unemployment).

Figure 6. Average Population Characteristics Percentiles – Coachella Valley Cities/Unincorporated Communities



Overall, the results from CalEnviroScreen suggest that the Eastern Coachella Valley has a pollution burden that is lower than the state on average but is higher than Riverside County, the Coachella Valley as a whole, and the Western Coachella Valley. The results also suggest that the Eastern Coachella Valley has population characteristics that are far less favorable than the state on average, the county, the Coachella Valley as a whole, and the Western Coachella Valley. However, there remain communities in the Western Coachella Valley (especially Desert Hot Springs and Indio) that have unfavorable population characteristics but low pollution burdens. The picture painted by CalEnviroScreen data is thus nuanced. The Eastern Coachella Valley has a far higher pollution burden than neighboring geographies (but which is less than the state average) and far less favorable population characteristics than neighboring geographies (but which is comparable to at least two cities in the Western Coachella Valley). Pollution burden is thus concentrated in the valley's east, but unfavorable population characteristics are less concentrated, found in communities on both sides of the valley.

HARC Environmental Perceptions Data

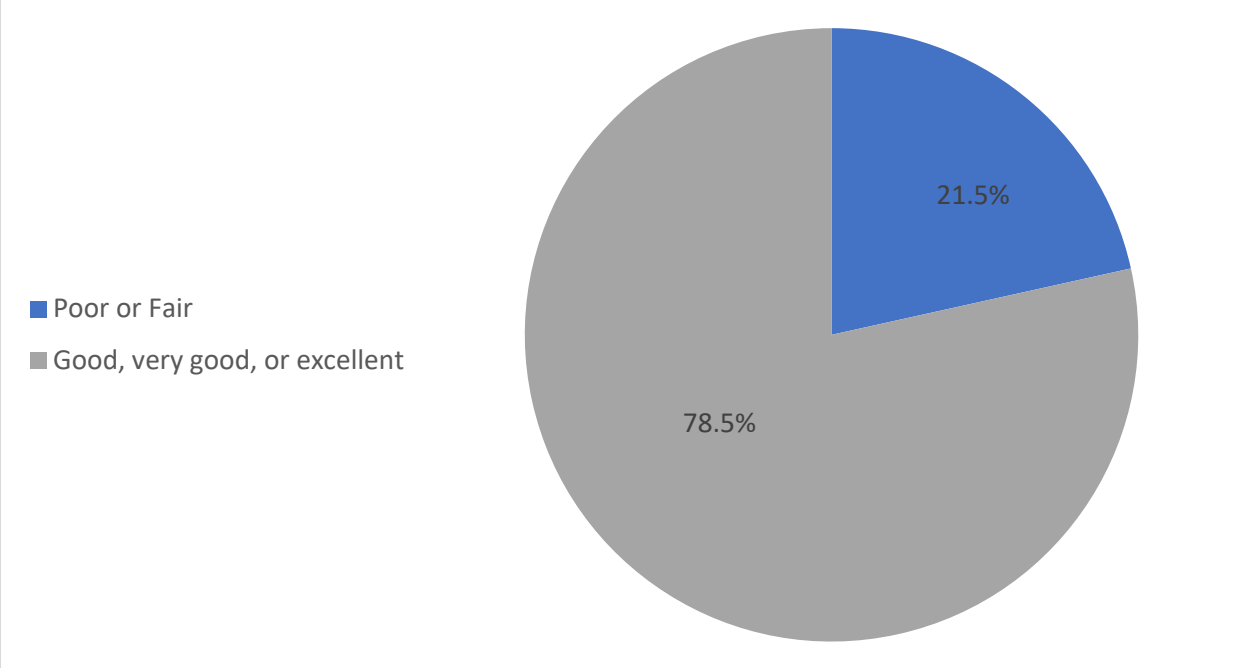
This section utilizes HARC's Coachella Valley Community Health Survey, which is a representative population health survey of the region. The most recent survey (2022) included three questions about the environment: how residents perceive their neighborhood's air quality, how willing residents are to change their lifestyle for the environment, and how often outdoor activity is restricted because of air quality. These questions apply only to the adult population. These three questions were analyzed by geography to see if there were differences between the opinions of residents in the Western Coachella Valley and Eastern Coachella Valley.

The results of these three questions are presented here first for the Coachella Valley as a whole and then for each the Western and Eastern Coachella Valley.

Entire Coachella Valley

To assess residents' perceptions of their air quality, residents were asked the following: "How would you rate the air quality in your neighborhood?" Residents could then choose either *excellent*, *very good*, *good*, *fair*, or *poor*. As illustrated below, across the Coachella Valley as a whole, 21.5% of adults said that the air quality in their neighborhood was *fair* or *poor*.

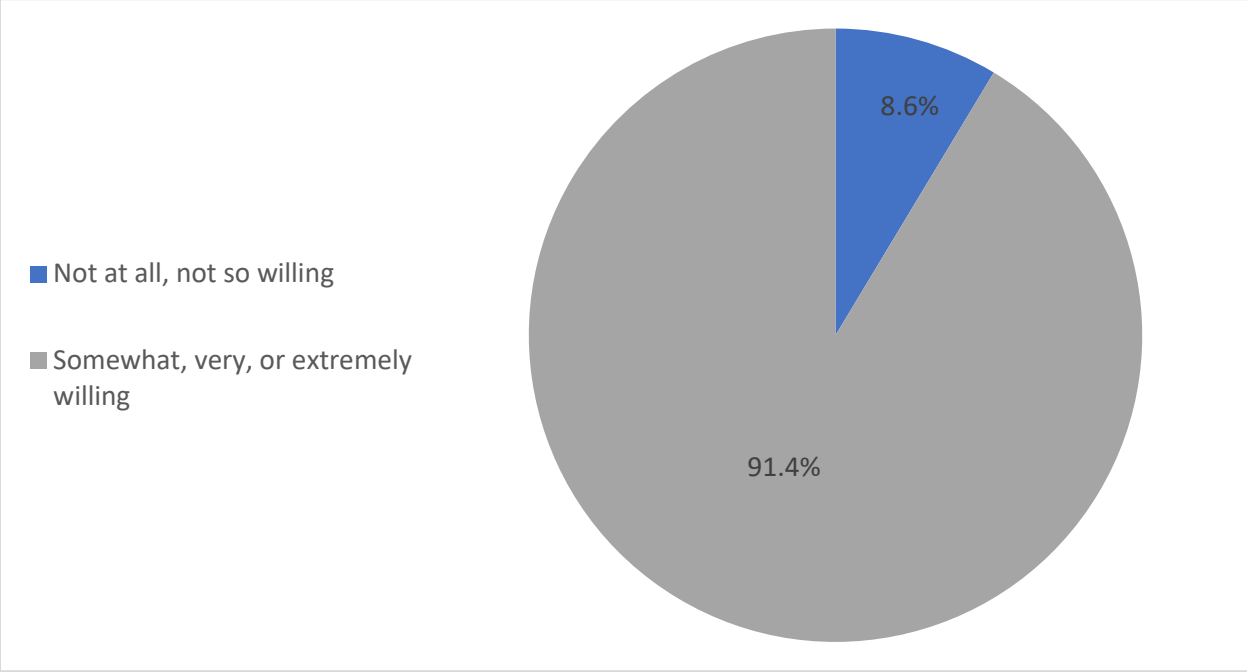
Figure 7. Air Quality Perceptions in the Coachella Valley as a Whole



Note: Estimated total population sample = 336,972

To assess residents' openness to make behavioral changes, residents were asked the following: "How willing are you to change your lifestyle to reduce the damage you cause to the environment?" Residents could then choose either *extremely willing*, *very willing*, *somewhat willing*, *not so willing*, or *not at all willing*. As illustrated below, across the Coachella Valley as a whole, only 8.6% of adults said they were *not so willing* or *not at all willing* to change their lifestyle for the environment.

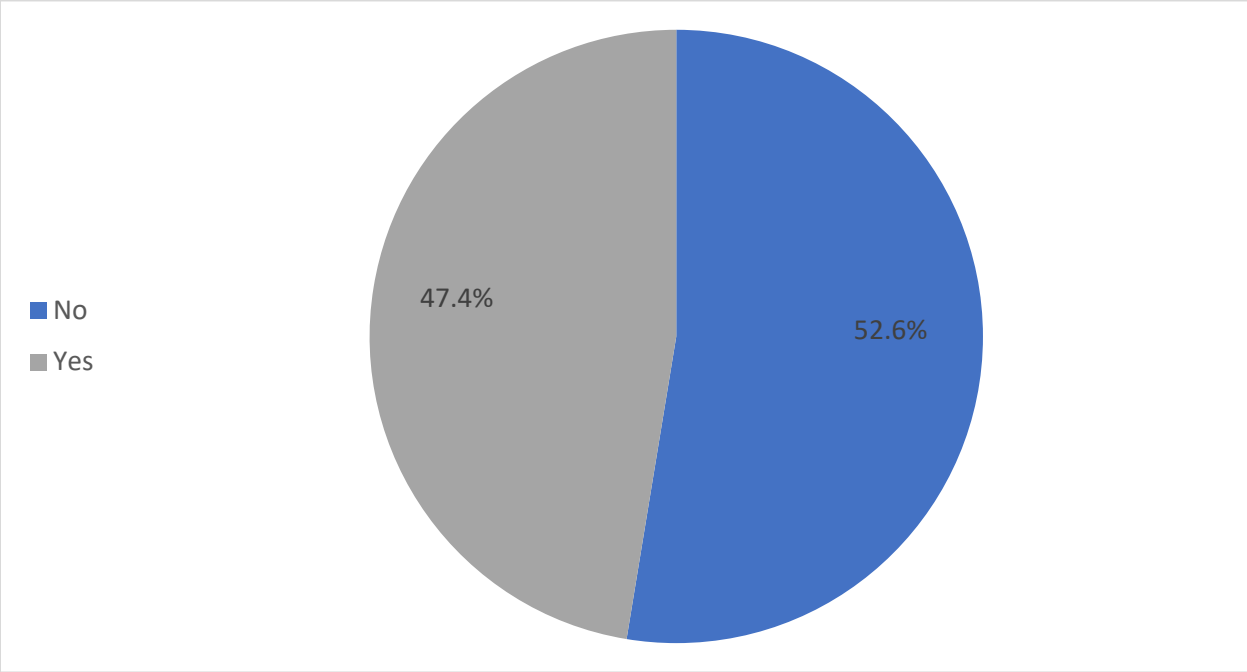
Figure 8. Willingness to Change Lifestyle for the Environment in the Coachella Valley as a Whole



Note: Estimated total population sample = 331,393

To assess the impact of poor air quality on residents' outdoor activities, residents were asked the following: "Does poor air quality ever stop you from doing outdoor activities in your neighborhood?" As illustrated below, across the Coachella Valley as a whole, 47.4% of adults said that poor air quality hinders them from doing outdoor activities in their neighborhood.

Figure 9. Whether Poor Air Quality Prevents Outdoor Activities in the Coachella Valley as a Whole

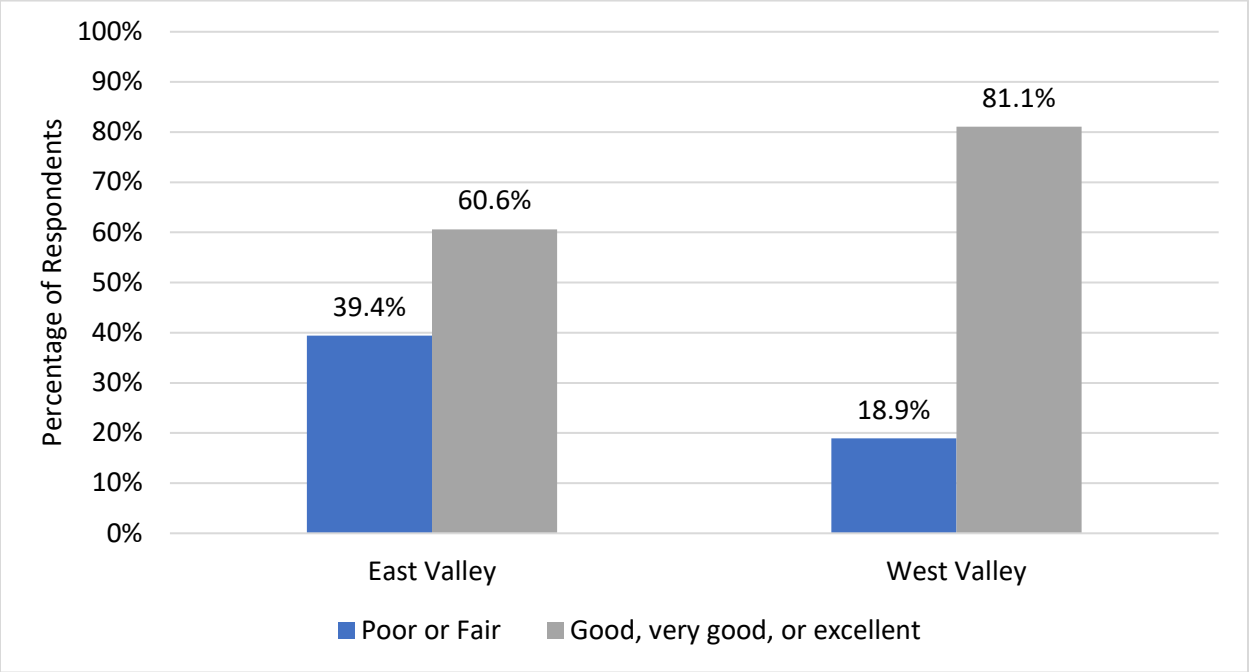


Note: Estimated total population sample = 297,214

Eastern Coachella Valley and Western Coachella Valley

Results for the three environmental questions were compared between the Western Coachella Valley and Eastern Coachella Valley. First, residents' opinions about their local air quality were examined. As illustrated below, 39.4% of adults in the Eastern Coachella Valley said that their air quality is *poor* or *fair*, in contrast to 18.9% of adults in the Western Coachella Valley. Thus, adults in the Eastern Coachella Valley are twice as likely to rate their local air quality as *poor* or *fair* compared to those in the Western Coachella Valley.[22]

Figure 10. Air Quality Perceptions by Region

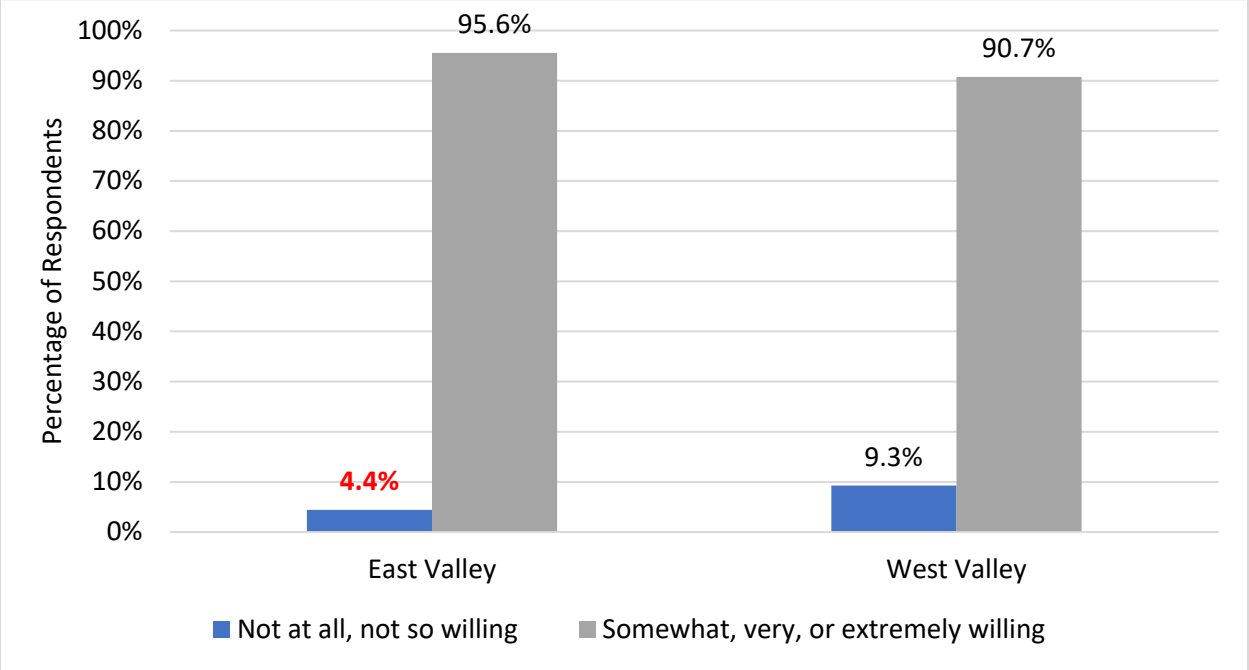


Note: East Valley, estimated total population sample = 43,325. West Valley, estimated total population sample = 293,647.

[22] This difference between the two regions is statistically significant.

Next, residents' opinions about their willingness to change their lifestyle for the environment were compared between the Western Coachella Valley and Eastern Coachella Valley. As illustrated below, 95.6% of adults in the Eastern Coachella Valley said that they were willing to change their lifestyle for the environment, in contrast to 90.7% of adults in the Western Coachella Valley. Thus, while both percentages are high, residents of the Eastern Coachella Valley are more likely to be willing to change their lifestyle for the environment than are those in the Western Coachella Valley.[23]

Figure 11. Willingness to Change Lifestyle for the Environment by Region

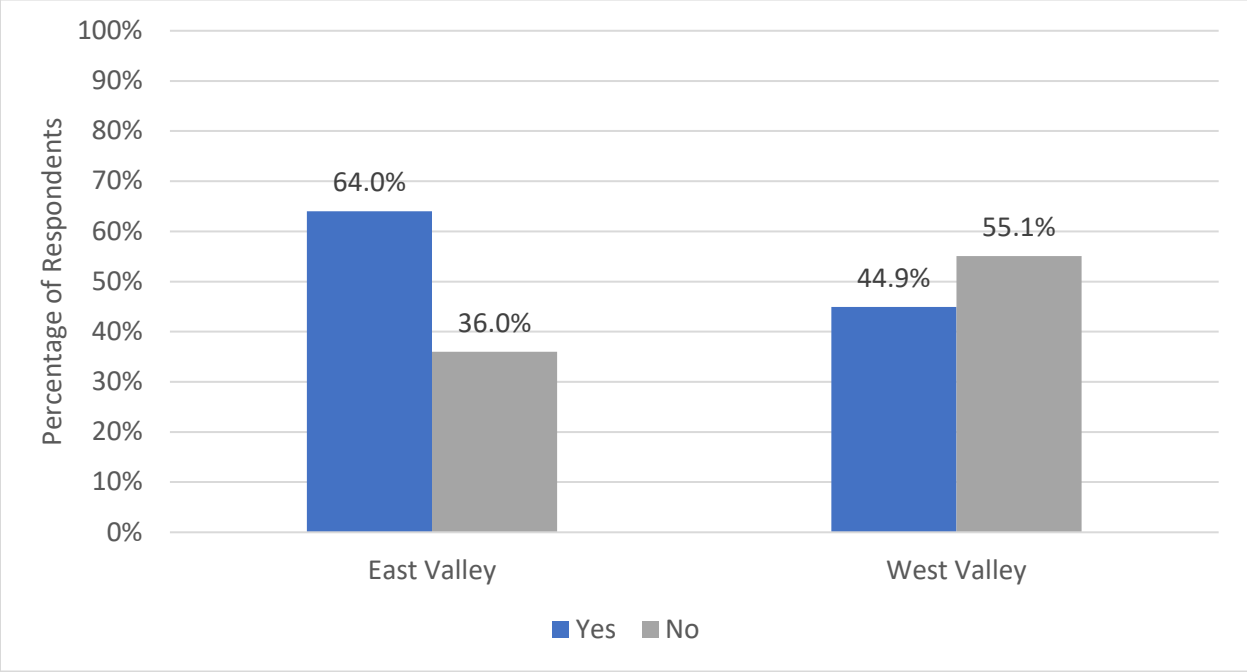


Note: East Valley, estimated total population sample = 42,960. West Valley, estimated total population sample = 288,433. The figure noted in red (4.4%) is unreliable (a statistically unstable estimate) and thus should be interpreted with caution.

[23] This difference between the two regions is statistically significant.

Finally, residents' opinions about whether poor air quality hinders outdoor activities were compared between the Western Coachella Valley and Eastern Coachella Valley. As illustrated below, 64.0% of adults in the Eastern Coachella Valley said that poor air quality prevents them from doing outdoor activities, in contrast to 44.9% of adults in the Western Coachella Valley.[24]

Figure 12. Whether Poor Air Quality Prevents Outdoor Activities by Region



Note: East Valley, estimated total population sample = 38,413. West Valley, estimated total population sample = 258,801.

These survey results show that there is a statistically significant disparity between the Eastern and Western Coachella Valley regarding opinions about air quality, willingness to change one's lifestyle for the environment, and whether poor air quality hinders outdoor activities. These results indicated that adults in the Eastern Coachella Valley are twice as likely to rate their neighborhood's air quality as *poor* or *fair* as those in the Western Coachella Valley. Further, nearly two-thirds of Eastern Coachella Valley adults have their outdoor activity hindered by poor air quality, compared with less than half of those in the Western Coachella Valley. These results suggest that air quality is both a higher concern and a greater burden on residents in the Eastern Coachella Valley compared to those in the Western Coachella Valley and compared to the Coachella Valley as a whole.

[24] This difference between the two regions is statistically significant.

Group Discussion Results

General Themes

This section summarizes the results of a group discussion facilitated by HARC and Alianza staff with Air Quality Academy participants. The Air Quality Academy included Spanish-speaking residents of the Eastern Coachella Valley. The Air Quality Academy participants took several in-person workshops to learn about indoor and outdoor air quality, how to gather (with a home air quality monitor) and interpret air quality data, and how to mitigate exposure to air pollution.

During the first meeting of the Air Quality Academy, a series of questions was asked of the participants to facilitate an open discussion. (For a copy of the questions, see the Appendix.) The Air Quality Academy participants were asked to reflect on their general understanding of air pollution and its local impacts. This discussion was meant to provide a snapshot of local perceptions of air quality in residents' own words.

During the discussion, participants emphasized environmental health concerns, such as air quality and allergies and asthma. In addition, participants mentioned other concerns, such as illegal dumping and a lack of trees in their neighborhoods. Participants also expressed concern about the drying Salton Sea. The most frequently discussed concern was agricultural activity, which causes air pollution from agricultural burns, fugitive dust, and agrochemicals. Above all, residents emphasized how they and their communities suffer from bad air quality. The word cloud below illustrates these themes.

Figure 13. Word Cloud Featuring Common Themes from the Air Quality Academy Discussion

Health Concerns

These general themes listed above were discussed often in how they affect the daily lives of residents. For example, participants spoke in detail about health problems experienced by themselves, their families, or others. Conditions such as asthma and allergies were mentioned as common occurrences that affect the whole community:

"Nowadays there is a lot of asthma, many problems with [constricted airways]. Many people suffer."
-Eastern Coachella Valley resident

Participants also explained how such health problems had appeared after they moved to the area (and thus after they were exposed to local environmental pollution). For example, one participant explained the following:

"Since we arrived here [in the Eastern Coachella Valley], my husband, my mother-in-law, my children, in fact also me, we have suffered more constantly from allergies or respiratory problems. It was something that before… [we] had not suffered."
-Eastern Coachella Valley resident

The Salton Sea

Participants also discussed the environmental challenges presented by the Salton Sea. This included mentions of the Salton Sea's unpleasant odor (likely hydrogen sulfide gas), swarms of insects, and dust originating from the Salton Sea's dried lakebed. For example, one participant explained the following:

"Sometimes, [for] someone who lives near the [Salton Sea], the odor is too much. Another thing [is] swarms [of insects]…. There are times when there are so many [insects] and there are a lot of mosquitos…. There are many factors that are affecting those who live near the [Salton Sea]."
-Eastern Coachella Valley resident

Some participants emphasized that these problems are greater for those who live closer to the Salton Sea. These problems include not only nuisances (such as odors and pests) but also health challenges. For example, one participant said the following:

"We who live on this side, right next to the [Salton Sea], we have more problems, and so do our children…. My son also has asthma, he has allergies, [because] we're a little closer to the [Salton Sea]…. They [who live farther from the Salton Sea] don't have as much impact and have not felt the impact as directly as we have."

-Eastern Coachella Valley resident

Agricultural Activity

The most commonly discussed theme was the impact of agricultural activity on air quality. Given that many (if not all) participants either work in or live near the fields, agriculture is a major issue of concern. Participants mentioned, for example, concerns with agricultural burns and agrochemicals such as fertilizers and pesticides. One participant explained how she used to face the occupational hazard of being sprayed while working in the fields:

"Prior… there were fertilizers [sprayed on the fields] at all hours. Sometimes they would [apply them] at night, sometimes during the day also, but sometimes they wouldn't tell us that we should leave and stay inside, but regardless they [would apply them.]… More than anything it's concerning—the fertilizers they put on the fields."

-Eastern Coachella Valley resident

Participants also expressed concern that agrochemicals harm the air quality (and thus the health) of not only farmworkers but also all residents who live near the fields. For example, one participant expressed the following:

"What happens is that there in the neighborhood when it's windy, they plant all types of chile, all of that. When it's windy and they prepare the soil, that soil [is kicked up into the air] and … it affects the children nearby [breathing in] the fertilizers that they apply on the soil. That affects nothing but the children, also adults, because of all the wind."
-Eastern Coachella Valley resident

As these challenges are faced by community members who have relatively few resources and are Spanish-speaking or immigrant, participants acknowledged the unfairness or injustice of their community's pollution burden. For example, one participant explained the following:

"What's funny or sad is how you're marked by the poverty level [regarding exposure to pollution]. That is what is actually concerning, because I don't know if even the environment itself is classist, [is] racist."
-Eastern Coachella Valley resident

Local Efforts to Improve Air Quality

There are several organizations tackling efforts to improve the air quality in the Coachella Valley, especially in the Eastern Coachella Valley. Below are several organizations—public and nonprofit—that have programs aimed specifically at improving environmental health in the Eastern Coachella Valley.

In addition to the targeted initiatives listed below, there are ongoing efforts by government agencies (as part of their overall mandates to reduce air pollution) that impact the Eastern Coachella Valley. These ongoing efforts include air quality regulations set by South Coast AQMD, the California Air Resources Board, the U.S. EPA, and tribal EPAs (such as agencies from the Cabazon Band of Cahuilla Indians, the Twenty-Nine Palms Band of Mission Indians, and the Torres Martinez Desert Cahuilla Indians).[25] The initiatives listed below are in addition to other general efforts to establish, revise, and enforce air quality regulations.

South Coast Air Quality Management District

The South Coast AQMD, in accordance with a state law known as Assembly Bill 617, created a Community Emissions Reduction Plan (CERP) and Community Air Monitoring Plan for the Eastern Coachella Valley. This includes the involvement of a Community Steering Committee and the identification of air pollution sources to prioritize mitigation, including the Salton Sea, pesticides, illegal dumping, open burns, dust from roads, diesel trucks, and the Desert View Power Plant.[26] The CERP identifies a series of emission reduction targets and objectives to be taken to reach those emission reduction goals.[27] One effort by South Coast AQMD has been partnering with Riverside County (the Office of Supervisor V. Manuel Perez) to allocate $4.57 million for paving dirt roads in the Eastern Coachella Valley.[28] South Coast AQMD has also begun to distribute a limited number of home air filters to Eastern Coachella Valley residents on a first-come, first-served basis, with about $1 million in state funding.[29] Evidence shows that air filters

[25] http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/eastern-coachella-valley/final-cerp/final-cerp-july-2021.pdf?sfvrsn=9#page=103

[26] As of this writing, the Desert View Power Plant has closed. See Wilson, J. and Coulter, T. 2 May 2024. Controversial Desert View Power Plan in east valley shuts down for now. The Desert Sun. https://www.desertsun.com/story/news/environment/2024/05/01/controversial-coachella-valley-power-plant-shut-down-for-now/73529047007/

[27] http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/eastern-coachella-valley/final-cerp/final-cerp-july-2021.pdf?sfvrsn=9#page=103

[28] https://kesq.com/news/top-stories/2023/08/04/east-valley-roads-how-4-57m-in-pavement-funding-will-improve-air-quality/

[29] https://www.desertsun.com/story/news/environment/2024/05/10/free-air-filters-available-for-dust-plagued-east-coachella-valley-homes/73644536007/

are effective at improving indoor air quality, including the reduction of particulate matter.[30] There is also evidence that air filters contribute to a reduction in asthma symptoms.[31] One study of families in the Eastern Coachella Valley, for example, showed that air filters produced on average a 20% reduction in indoor particulate matter.[32] Distributing air filters is one area for possible program expansion, given the effectiveness of using air filters in the home and the potential of using air filters in workplaces or schools.[33]

Desert Healthcare District and Foundation

DHCD has prioritized environmental impacts on health in their strategic plan, with a specific focus on air and water quality. Their efforts include addressing health issues related to the Salton Sea, illegal dump fires, and healthcare utilization stemming from air pollution. DHCD collaborates with community partners to build consensus and coordinate efforts across various organizations. One of their key activities is an environmental health "data walk," designed to inform the development of a request for proposals (RFP) aimed at preventing, diagnosing, and managing air-related health conditions. Additionally, DHCD is planning an environmental health summit to further coordinate efforts across organizations in the valley.

Alianza Coachella Valley

Alianza has a number of programs targeting environmental justice in the Eastern Coachella Valley. This includes a Salton Sea community science project, where community members (including youth) help to collect scientific data (e.g., regarding water quality) on the Salton Sea, data which is then posted online and available to the public. They aim to do this so the community is engaged in conversations with policymakers and decision makers about topics that affect their health with an aim to inform solutions to the challenges of the receding Salton Sea and improve health outcomes for residents. Alianza has conducted other efforts to collect data and engage residents about air quality and other environmental concerns.

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[30] Vijayan V. K, Paramesh, H., Salvi, S. S., and Dalal, A. A. K. Sept-Oct 2015. Enhancing indoor air quality – The air filter advantage. Lung India. 32(5). https://journals.lww.com/lungindia/fulltext/2015/32050/Enhancing_indoor_air_quality__The_air_filter.9.aspx
Fermo, P. et al. 2021. Improving indoor air quality through an air purifier able to reduce aerosol particulate matter (PM) and volatile organic compounds (VOCs): Experimental results. Environmental Research 197(2021) https://www.sciencedirect.com/science/article/abs/pii/S0013935121004254

[31] Xu, T. et al. 2009. Effectiveness of heating, ventilation and air conditioning system with HEPA filter unit on indoor air quality and asthmatic children's health. Building the Environment 45 (2010):330-337. https://openurl.ebsco.com/EPDB%3Agcd%3A15%3A8240975/detailv2?sid=ebsco%3Aplink%3Ascholar&id=ebsco%3Agcd%3A14236240&crl=c

[32] Trinidad, A., Porter, W., and Cheney, A. Measuring and Mitigating Indoor Air Quality Threats Around the Salton Sea. UC Riverside. Poster presentation.

[33] UC Irvine and CARB are conducting a study on the effectiveness of air filtration systems in elementary schools. The study investigates possible benefits directly associated with PM2.5 exposure reduction in 17 Los Angeles Unified School District elementary schools located in communities with a high air pollution burden. For more information, please see *https://ww2.arb.ca.gov/hifive-health-impacts-filtration-improvements-elementary-schools*

Salton Sea Management Program

The Salton Sea Management Program (SSMP) is the state-run effort to mitigate ecological and human health impacts as the Salton Sea shrinks. This includes a 10-year plan to build 30,000 acres of wetlands around the Salton Sea, to provide habitat and reduce dust emissions.[34]

Leadership Counsel for Justice & Accountability

The Leadership Counsel for Justice & Accountability is a nonprofit organization that does work in inland California, including the Coachella Valley. This includes a focus on environmental justice and advocacy for improved air quality.

Pueblo Unido Community Development Corporation

Pueblo Unido Community Development Corporation is a nonprofit organization focused on improving the lives of residents in the Eastern Coachella Valley. Their work includes rural development, community investment, and environmental justice advocacy.[35]

[34] https://saltonsea.ca.gov
[35] https://pucdc.org/

Conclusion

As this report has shown, air quality is a major concern for the Eastern Coachella Valley. CalEnviroScreen data indicate that the Eastern Coachella Valley faces greater pollution burdens than the Western Coachella Valley, the Coachella Valley as a whole, and Riverside County. Further, population health data from HARC show that Eastern Coachella Valley residents report that their air quality is *poor* or *fair* at twice the rate as do Western Coachella Valley residents.

An explanation for the high pollution burden is that agriculture is a dominant economic activity in the Eastern Coachella Valley, resulting in emissions from open fields, agricultural burns, and pesticides and other agrochemicals. The dominance of agriculture also helps explain the Eastern Coachella Valley's unfavorable social conditions (e.g., high poverty rates and low educational attainment), as rural communities here and elsewhere in California have less access to resources, given the history of racial marginalization and exploitation of farm labor.

Despite the social and environmental challenges faced by the Eastern Coachella Valley, efforts are ongoing to improve local air quality. These include the implementation of South Coast AQMD's AB 617 Eastern Coachella Valley CERP and the essential work of educating and organizing residents (such as through initiatives like the Air Quality Academy) so that residents themselves can advocate for and drive local change. This change includes efforts to stop or reduce emissions, such as the initiatives to pave roads or reduce dust emissions at the shrinking Salton Sea. Efforts also include mitigating the impact of emissions, such as with the distribution of home air filters to improve indoor air quality. Given the large-scale and costly efforts needed to reduce emissions (e.g., from dirt roads, agricultural fields, and the Salton Sea), the continued distribution of air filters could be relatively cost-effective for mitigating air quality impacts, at least in the short term while long-term solutions are sought. For example, as part of the continuation of this project (the State Environmental Justice Cooperative Agreement and the Air Quality Academy), air filters will be provided to community members and training will be held to educate community members on how to use the filters and the benefits to indoor air quality.

Air pollution does not affect all populations equally, but rather mostly harms the health and well-being of non-White and low-income communities, as evident among the immigrant, Hispanic, and working-class communities of the Eastern Coachella Valley. Improving air quality is thus a matter of justice, necessary to build a society that is more fair and democratic. Further, air pollution, although influenced by naturally occurring factors (like wind patterns and naturally occurring dust), is primarily a result of technologies and infrastructure. As the Eastern Coachella Valley demonstrates, air pollution results from what modes of transportation are encouraged or allowed, whether roads are paved, how much water is allocated to habitats (like

the Salton Sea), and how much industries are permitted to pollute (as with agriculture). Air pollution is thus a result of human actions and political decisions. New actions and new decisions can (and must) be made to radically change the region's circumstances.

Appendix

Air Quality Academy Discussion Questions (English Version)

- What do you note in the neighborhoods where you live in regard to air quality?
- Do you know how to access information on the Internet that can inform you about the air quality in your area?
- Where do you think pollution comes from or what causes pollution?
- How do you feel about the air quality where you live?

Preguntas de la discusión de la Academia de Calidad de Aire (versión en español)

- ¿Qué notan en los vecindarios donde viven en lo que respecta a la calidad del aire?
- ¿Sabe cómo acceder a información de internet que podría informarle sobre la calidad del aire en su área?
- ¿De dónde cree que viene la polución o que cause la polución?
- ¿Cómo se siente de la calidad del aire en donde vive?