

# LIFE AT THE FENCELINE

## Understanding Cumulative Health Hazards in Environmental Justice Communities

### THE PROBLEM

In Madera County and across the United States, industrial and commercial facilities that can cause catastrophic harm through explosions or toxic releases operate often without the knowledge of the residents, business owners, schools, and medical facilities nearby. Serious chemical releases at the approximately 12,500 high-risk facilities that are part of the US Environmental Protection Agency's "Risk Management Plan" (RMP) program because they use or store highly hazardous chemicals are frighteningly common. From 2004-2013 there were over 1,500 reported chemical releases or explosions at RMP facilities that caused over \$2 billion in property damage, evacuation or "shelter in place" of half a million people, 17,099 injuries, and 58 deaths (US EPA).

Many communities with concentrations of high-risk chemical facilities face multiple hazards, including potential chemical disasters, lack of access to healthy foods, daily exposure to toxic chemicals released into the air by industrial facilities, and even chemical exposures from everyday products in their homes. These health hazards are often amplified by other factors such as lack of access to health care; lack of quality public services and infrastructure; higher rates of diseases like diabetes and asthma; and stress from poverty, unemployment, and crime, among other factors.



Many parts of California, including Madera County, contain high-risk chemical facilities in agricultural areas.

Lideres Campesinas in California, and community organizations in eight other areas of the US, worked together through the Environmental Justice Health Alliance for Chemical Policy Reform (EJHA) to research who lives in the “fenceline” zones (within three miles) near high-risk RMP facilities, what hazards they face, and possible solutions. The research addressed several interconnected issues:

- Who lives in fenceline zones near high-risk chemical facilities included in the EPA’s RMP program?
- What cancer risks and potential for respiratory illness related to toxic air pollution exposure (from both RMP facilities and other sources) do the people living in these fenceline zones face?
- What is the demographic profile of people living in areas within the fenceline zones that have Low Incomes and Low Access to healthy foods (known as LILA areas), two key indicators of unequal risks and health impacts?
- Where are important institutions, such as schools, hospitals and nursing facilities, and dollar stores (which in many areas are the only source of household products and food, and can contribute chemical exposures from the products they sell, or could choose to support health by selling nontoxic products and healthy foods) located in fenceline zones?



Lideres Campesinas promotes the leadership of campesinas to serve as agents of political, social and economic change in the farmworker community.

## RESEARCH FINDINGS

Details on the study methodology are included in the full report *Life at the Fenceline: Understanding Cumulative Health Hazards in Environmental Justice Communities*, available at [www.ej4all.org/life-at-the-fenceline](http://www.ej4all.org/life-at-the-fenceline).

Overall findings for the nine communities studied are:

1. In most of the areas researched, large majorities of the population live in fenceline zones around highly hazardous facilities, and most schools and medical institutions are located in these zones, at much greater rates than nationally.
2. Fenceline zones around hazardous facilities are disproportionately Black, Latino, and impoverished, and face multiple health hazards and risks.

3. The most vulnerable neighborhoods—areas that are both low income and have low access to healthy foods—are even more heavily and disproportionately impacted.

Specific research findings for Madera County appear on page 4.

### Cancer and Respiratory Hazard Data

In our findings, cancer risk from toxic air pollution, and potential for respiratory illness from air pollution, are based on EPA’s National Air Toxics Assessment data, including the Respiratory Hazard Index (RHI). For a full explanation, see Appendix A (Methodology) of the full report.

## SOLUTIONS: What can be done to address these health and safety risks?

In order to protect communities, workers, businesses, and the environment, the EJHA and Lideres Campesinas recommend that local, state, and federal governments:

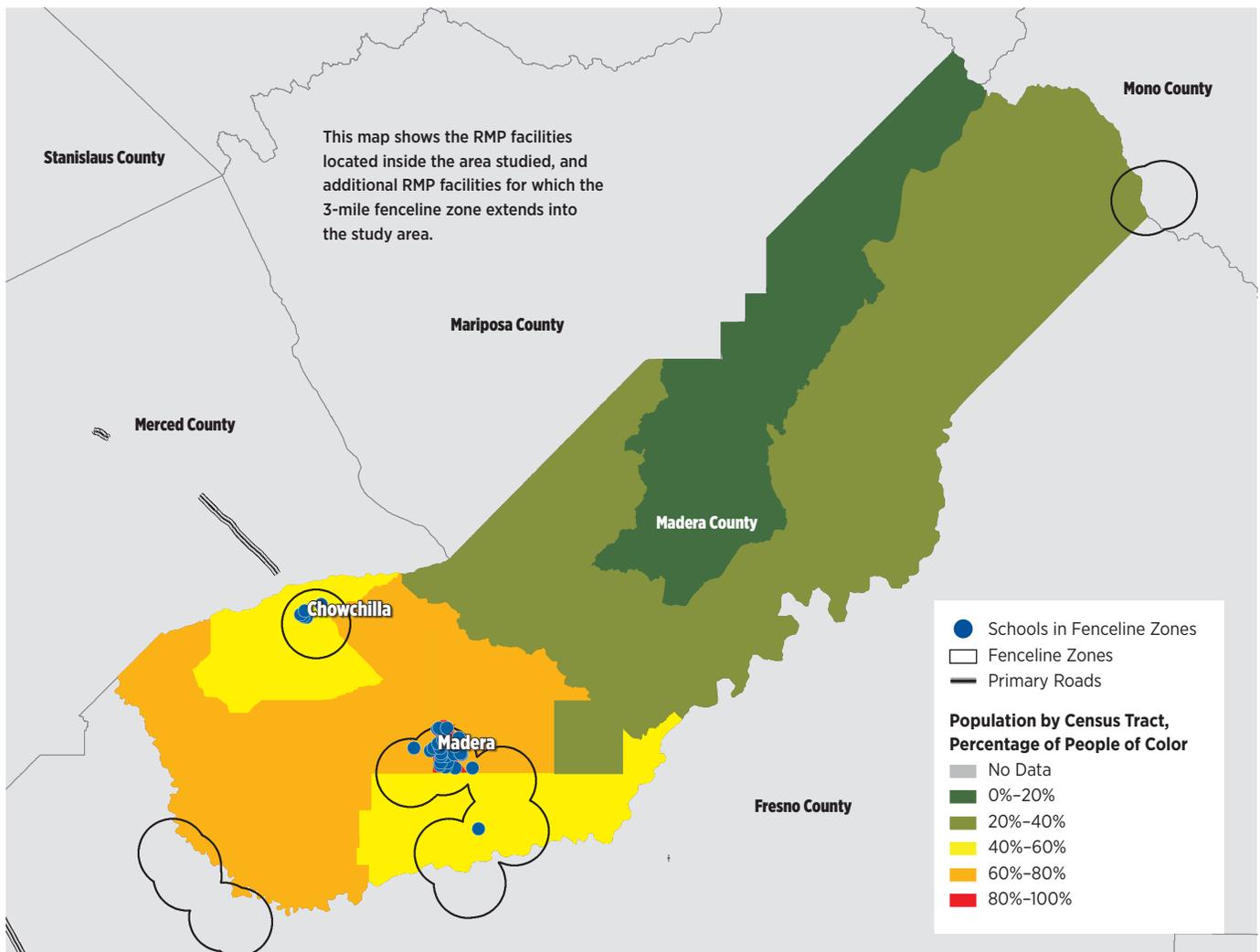
1. Require that facilities that use or store hazardous chemicals adopt safer chemicals and processes whenever possible;
2. Ensure that facilities share information on hazards and solutions, and emergency response plans, with fenceline communities and workers;
3. Require that polluting facilities continuously monitor, report, and reduce their fenceline-area emissions and health hazards;
4. Prevent the construction of new or expanded chemical facilities near homes and schools, and

the siting of new homes and schools near facilities that use or store hazardous chemicals;

5. Require publicly accessible, formal health-impact assessments and mitigation plans to gauge the cumulative impact of hazardous chemical exposures on fenceline communities;
6. Strengthen the enforcement of existing environmental and workplace health and safety regulations.

In addition, dollar store chains should implement broad policies to remove hazardous chemicals from the products they sell, stock fresh and healthy foods, and source safer products and foods locally and regionally.

### Hazardous Facility Fenceline Zones, Schools, and Race in Madera County



## RESULTS: MADERA COUNTY, CALIFORNIA

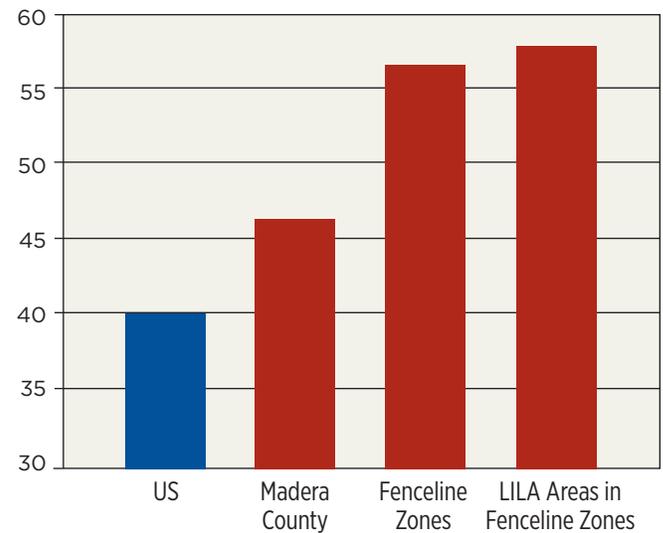
Madera County contains seven RMP facilities.

### KEY FINDINGS

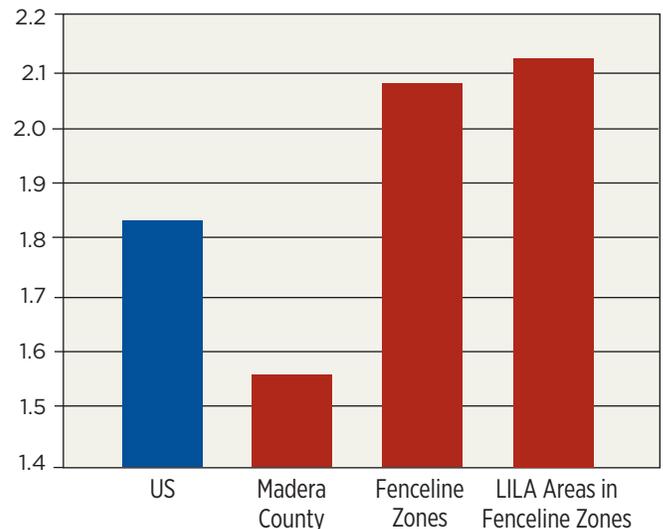
- More than 77,000 people, or 47% of Madera County residents, live within 3 miles of an RMP facility, a 21% increase over the national rate.
- Strikingly, almost 100% of those living in low-income/low food access areas in Madera County also live within 3 miles of an RMP facility, a rate that is more than twice the percent of county residents who live within fenceline zones (47%).
- The potential for suffering respiratory illness from toxic air pollution exposure is 33% higher for those living within 3 miles of an RMP facility compared to Madera County overall, and those living in low-income/low food access areas within these fenceline zones face a 35% higher risk.
- Cancer risk from exposure to toxic air pollution is 21% higher for those living within 3 miles of an RMP facility compared to Madera County overall. Those living in low-income/low food access areas within fenceline zones face a 24% higher cancer risk (about 57 cancers per million people), which is the highest risk of all 9 areas included in this report.
- While Latinos make up about 53% of the county's population, 70% of people living within 3 miles of an RMP facility are Latino, a 33% increase over their overall county representation. Latinos make up 76% of the population in low-income/low food access areas within these fenceline zones, a 44% increase over their overall county representation.
- The percentage of people living in poverty within 3 miles of an RMP facility is 28% greater than for Madera County overall. More strikingly, the poverty rate in low-income/low food access (LILA) areas within 3 miles of an RMP facility is 58% greater than for the country as a whole.
- Twenty-seven percent of Madera County residents are children, but 35% of the residents of low-income/low food access areas within fenceline zones are children, a 26% increase.
- The average household income for those living within 3 miles of an RMP facility is 17% lower than for Madera County overall. For those living in areas with low incomes and low access to healthy food, the drop in average household incomes doubles to 34%.

- Half of all medical facilities in Madera County are located within 3 miles of an RMP facility, as are 39% of schools.
- Seventy-five percent of all dollar stores in Madera County are located within 3 miles of an RMP facility, and 43% of RMP facilities have a dollar store within 3 miles.

### Cancer Risk from Air Pollution

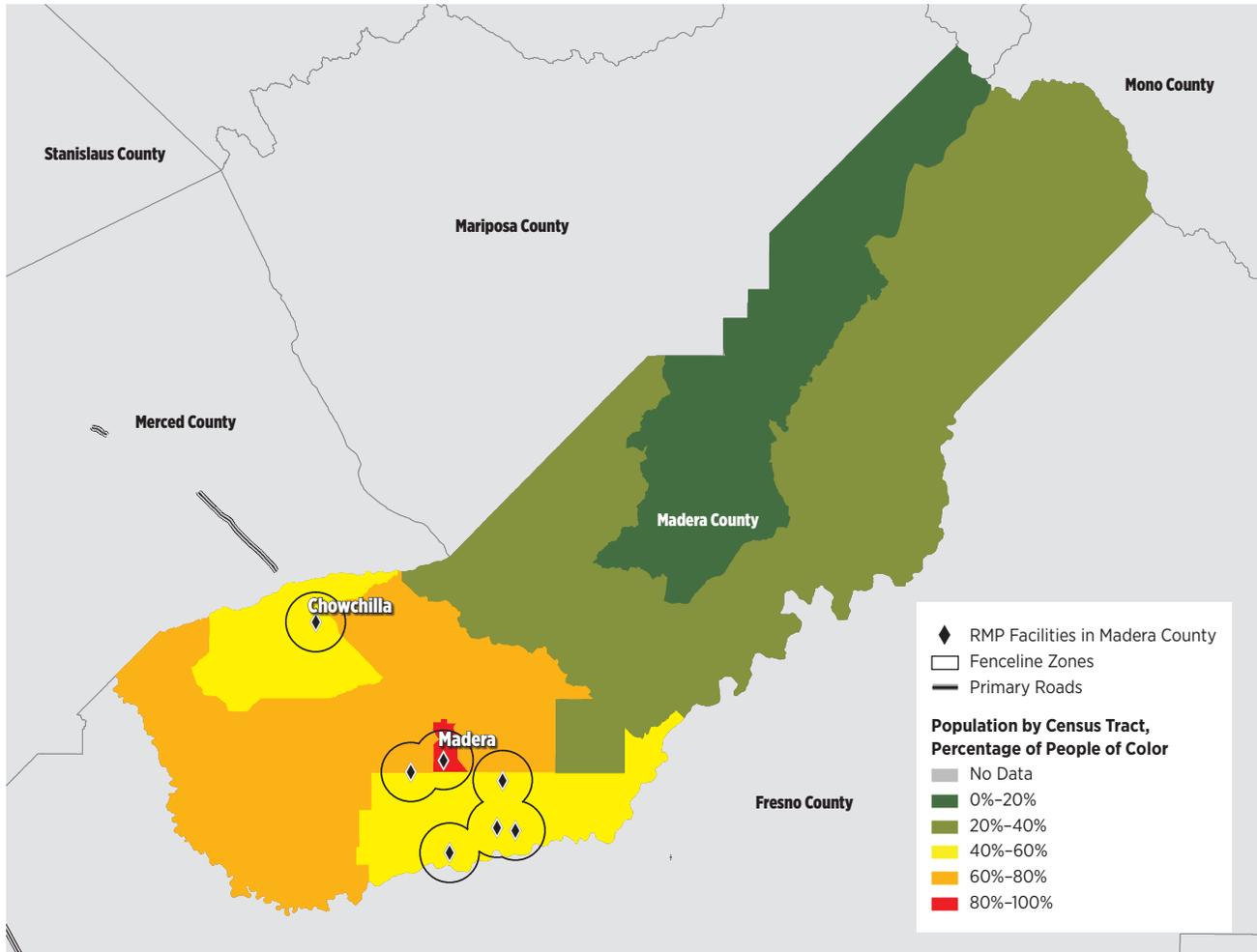


### Respiratory Hazard from Air Pollution



## Hazardous Facilities and Race in Madera County

For additional maps and other information about Madera County, visit <https://ej4all.org/life-at-the-fenceline>.



## Madera County Data Summary

	Madera Co. Totals	Madera Co. 3 Mile Totals	Madera County 3 Mile LILA* Totals
Weighted Cancer	46.37	56.32	57.27
Weighted RHI	1.56	2.07	2.11
Percent Black	3.3%	2.8%	2.5%
Percent Hispanic	52.8%	70.0%	75.8%
Percent White	38.3%	22.5%	17.0%
Percent Children	27.4%	32.1%	34.5%
Percent Poverty	22.3%	28.6%	35.2%
Average Household Income	\$63,832	\$52,779	\$42,043
Average Home Value	\$242,651	\$186,986	\$154,031
Percent HS Graduate or Less	51.7%	63.0%	71.2%
Percent College Degree or More	14.4%	9.3%	6.0%

\* LILA—Areas with Low-Income populations with Low Access to healthy foods.

Note: Highlighted numbers indicate a substantial difference from the full city or county, and the full 3-mile areas data.

## Critical Institutions and Students in Madera County Fenceline Zones

	Madera County Totals	Madera County Fenceline Zones
Dollar Stores	8	6 (75%)
Medical Facilities	10	5 (50%)
Schools	90	35 (39%)
Students	31,281	20,283 (65%)

## FIGHTING BACK

Community, worker, business, and health organizations in California and nationally are working to address these problems and implement safe, just, and sustainable solutions.

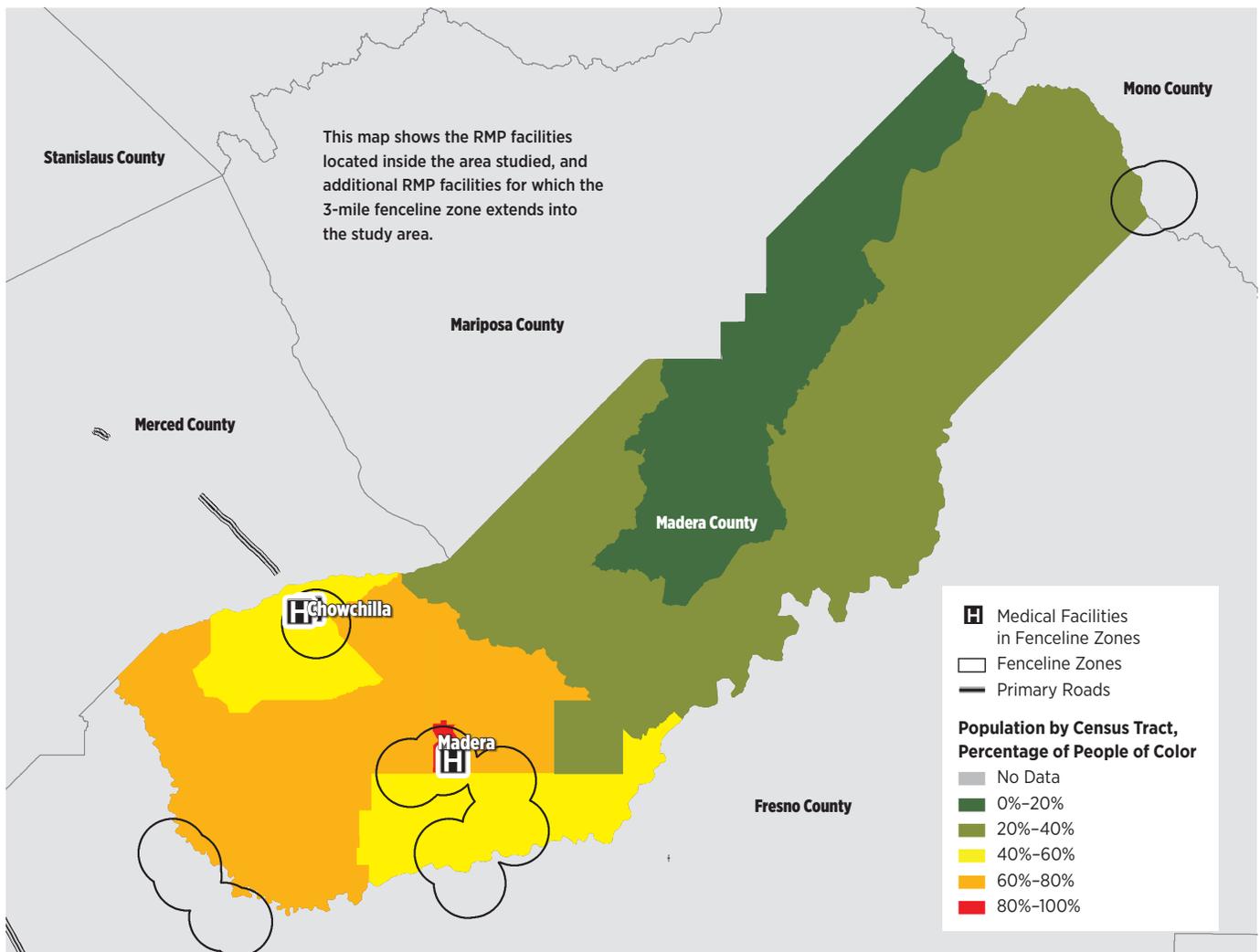
In Madera County, Lideres Campesinas works to develop leadership among campesinas so that they serve as agents

of political, social and economic change in the farmworker community.

Lideres Campesinas is part of the national Environmental Justice Health Alliance for Chemical Policy Reform (EJHA), a network of grassroots organizations in more than 13 states that advocates for just, sustainable solutions to the health and environmental hazards faced by communities disproportionately impacted by toxic chemicals.

EJHA works to prevent chemical disasters by uniting communities at the fenceline of hazardous chemical facilities with national allies and experts to prevent catastrophic chemical releases from the nation's high-risk chemical facilities through information disclosure, community and worker involvement, and transition to safer chemicals and technologies.

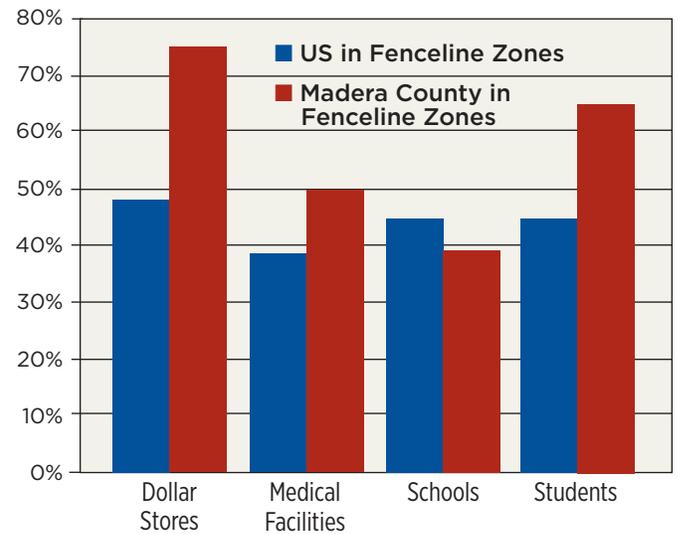
## Hazardous Facility Fenceline Zones, Medical Facilities, and Race in Madera County



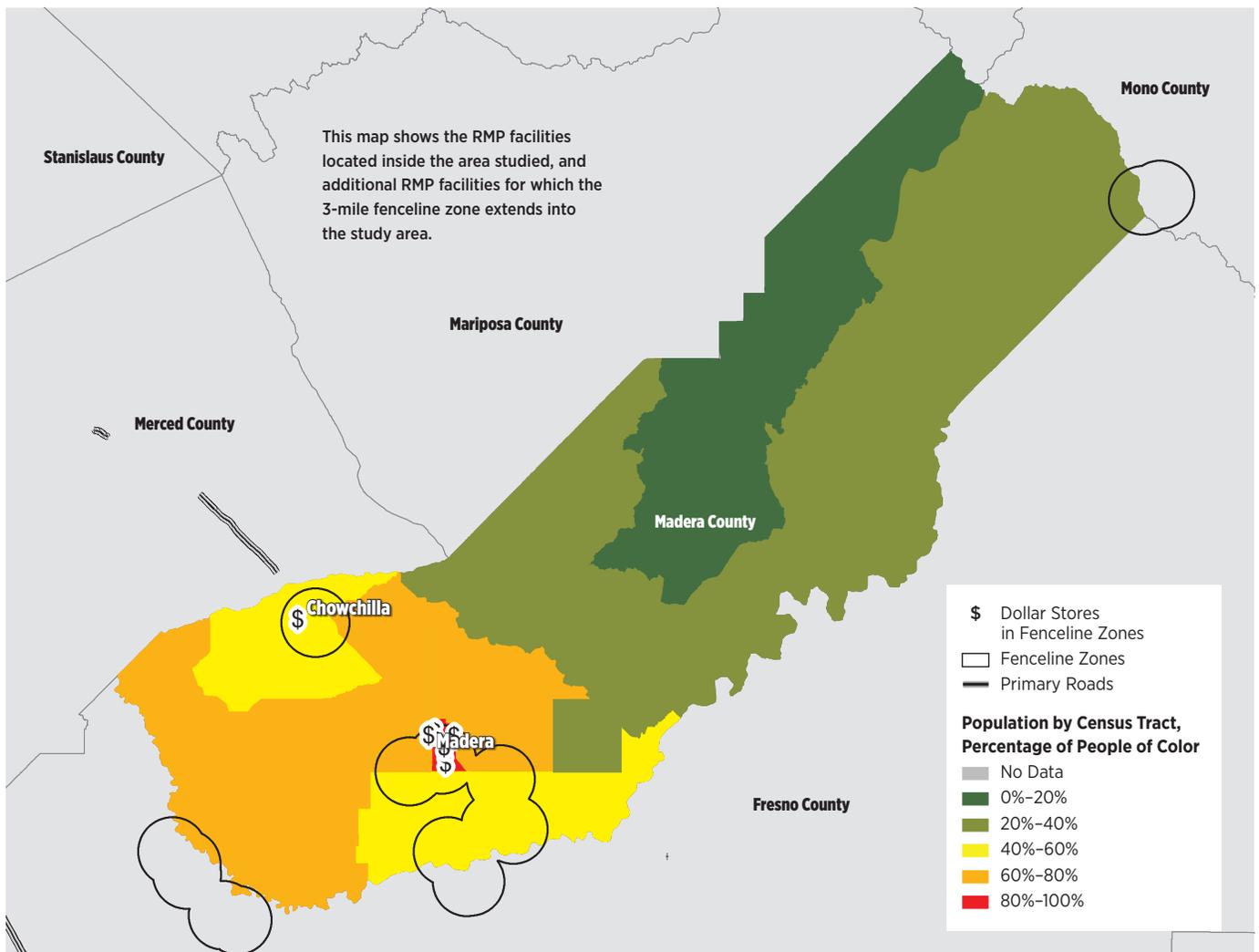
EJHA's Campaign for Healthier Solutions (CHS) works with discount retailers (dollar stores) to help them protect their customers and the communities in which they operate, and grow their businesses, by implementing corporate policies to phase out harmful chemicals in the products they sell, and by stocking safer products and healthier foods that support the communities in which their stores operate.

EJHA is part of the Coming Clean collaborative, which works to reform the toxic chemical and fossil fuel industries so they are no longer a source of harm, and to secure the systemic changes necessary for clean production, safe renewable energy, and a sustainable economy to flourish.

**Critical Institutions and Students in Madera County Fenceline Zones Compared to National Rate**



**Hazardous Facility Fenceline Zones, Dollar Stores, and Race in Madera County**



## LEARN MORE & GET INVOLVED

Visit [www.ej4all.org/life-at-the-fenceline](http://www.ej4all.org/life-at-the-fenceline) to:

- Read the full *Life at the Fenceline* report
- Check the interactive map to find out if where you, your family, and friends live, work, or go to school is near a dangerous chemical facility

Read EJHA reports on chemical facility risks and dollar store products:

- Who's In Danger: Race, Poverty, and Chemical Disasters  
<https://ej4all.org/assets/media/documents/ej4all-Who'sInDangerReport.pdf>
- A Day Late and a Dollar Short: Discount Retailers are Falling Behind on Safer Chemicals  
[https://ej4all.org/assets/media/documents/Report\\_ADayLateAndADollarShort.pdf](https://ej4all.org/assets/media/documents/Report_ADayLateAndADollarShort.pdf)

Contact Lideres Campesinas at [www.liderescampesinas.org](http://www.liderescampesinas.org) or (808) 486-7776 ext. 1005.

## Environmental Justice Health Alliance for Chemical Policy Reform

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### THIS REPORT WAS PRODUCED BY:

**Coming Clean** is a national environmental health and justice collaborative of 200 organizations working to reform the chemical and fossil fuels industries so they are no longer a source of harm, and to secure systemic changes that allow a safe chemical and clean energy economy to flourish. Learn more at [www.comingcleaninc.org](http://www.comingcleaninc.org).

**The Environmental Justice Health Alliance for Chemical Policy Reform** supports diverse movement towards safe chemicals and clean energy that leaves no community or worker behind. EJHA is a network of grassroots environmental justice organizations in communities that are disproportionately impacted by toxic chemicals, from old contaminated sites, ongoing exposure to polluting facilities, and toxic chemicals in household products and foods. Learn more at [www.ej4all.org](http://www.ej4all.org).

**The Campaign for Healthier Solutions**, hosted by Coming Clean and EJHA, is made up of interested organizations, dollar store customers, and investors who seek to work with discount retailers to help them protect their customers and the communities in which they operate, and also grow their business, by implementing corporate policies to identify and phase out harmful chemicals in the products they sell. Learn more at [www.nontoxicdollarstores.org](http://www.nontoxicdollarstores.org).

### THE SPONSORING ORGANIZATIONS WOULD LIKE TO THANK THESE FUNDERS FOR THEIR GENEROUS SUPPORT OF WORK RELATED TO THIS REPORT:

Cedar Tree Foundation	Lucy R. Waletzky, MD
Cornell Douglas Foundation	The New York Community Trust
Fine Fund	The Overbrook Foundation
Groundswell Fund, Catalyst Fund	Park Foundation
The Irving Harris Foundation	Seventh Generation Foundation
John Merck Fund	Sills Family Foundation