Capitalizing Environmental Justice in the Sacramento Region:

Building a Strategic Framework for Regional Action

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CENTER FOR REGIONAL CHANGE

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About the UC Davis Center for Regional Change (CRC)
The CRC is a solutions-oriented research center dedicated to encouraging and informing healthy, sustainable and equitable regional development. We pursue this through engaged scholarship that is collaborative and multi-disciplinary. Our goal is to help solve pressing issues in California and beyond.

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TABLE OF CONTENTS

I. Introduction

This report provides an overview of key Environmental Justice (EJ) issues and initiatives in California's Capital Region. It aims to serve as a resource for leaders in community organizations, public agencies, elected office, business, philanthropy, and other sectors who are working for a more just, healthy, and equitable region. It was developed through a collaborative partnership between the UC Davis Center for Regional Change, the Coalition for Regional Equity, the Sacramento Housing Alliance, Ubuntu Green, and the Environmental Justice Coalition for Water.

The report analyzes the Capital, or Sacramento region. This region comprises the counties of Sacramento, Yolo, El Dorado, Placer, Sutter, and Yuba. Unlike many other regions of the state, such as the San Francisco Bay Area, Los Angeles, and the San Joaquin Valley, the EJ movement in the Capital Region is much less well-funded, with fewer organizations working on local and regional EJ issues. Work on these issues is often fragmented by issue and geographic area, highlighting the lack of a sustained regional EJ coalition such as those in many of California's other regions. This is partly attributable to the dominant focus on state policy by social justice advocates in the Capital Region. It also reflects the lack of a galvanizing regional EJ issue such as pesticides and hazardous waste facilities in the San Joaquin Valley, or clustered petro-chemical refineries in the Bay Area and Los Angeles. While the Capital Region is also beset by many significant EJ problems, these have not been as well-documented as they have been in other regions, depriving both EJ advocates and environmental regulatory agencies of a road map to guide their collective action.[1]

We feel that there is a strong need to tell the environmental justice story of California's Capital Region in an effective way. By shedding light on the causes, manifestations, and organizing challenges posed by EJ problems, and the opportunities for mobilizing regional action to confront these problems, we hope to inform and inspire EJ leaders as they work to form a cohesive movement in the Capital Region. We employ a regional analysis because this is critical to understanding the political, economic, social and environmental processes that cross local jurisdictional and issue boundaries, and that demand boundary-crossing solutions.

This report points to environmental issues that disproportionately affect low-income communities and communities of color, and which also may have profound implications for the entire region's well-being and sustainability. It does so by highlighting some of the most socially and environmentally vulnerable areas and populations within the Capital Region through the use of data and mapping tools, and presents some key opportunities for environmental justice action. The report also uses these maps to uncover EJ conditions in rural and suburban areas that are sometimes left out of EJ analyses and actions. It brings together the voices of many environmental advocates throughout the Capital Region who are tackling complex problems with perseverance and commitment. Several current EJ projects are offered as case studies, including initiatives to deal with groundwater threats, vacant lots, inequities in food systems, and hazardous and solid waste facilities. (Please refer to the Appendix, "List of Organizations That Promote Environmental Justice," for an overview of the diverse organizations in the region carrying out this work).

II. A Brief History of Regional Environmental Justice Partnerships

The fight for environmental justice in the United States has been shaped by the intertwined dynamics of race, class, place, and health. It represents an outgrowth of diverse social movements led by indigenous peoples, organized labor, anti-toxics campaigners, civil rights, and some traditional environmental advocates that have targeted structural injustices wherever people live, work, and play. In the 1980s, African-American and low-income communities overburdened by industrial plants and waste disposal facilities in the American Southeast as well as rural communities in California's San Joaquin Valley, were some of the first to come together to denounce these injustices, which became targets of a newly forming environmental justice movement.[2] Faced with evidence of environmental injustice and the political power of EJ movements, the federal and state governments developed a range of EJ policies. In 1994, President Clinton issued Executive Order 12898, which called for "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."[3]

Meanwhile, in California's Capital Region, starting in the 1980s, diverse actors began to address what they saw as the institutional and structural racism that shaped the area's social, political, economic, and ecological systems. Their initiatives ranged from advocating for basic infrastructures such as public transit in African-America neighborhoods, to providing support services for recent Asian immigrants, to protecting Latino farmworker communities from pesticides.

Residents and environmental justice activists celebrate their victory to prevent the storage of potentially hazardous natural gas under the Avondale/Glen Elder neighborhood. *Photo credit: Greenlining Institute*

One such group was the Coalition on Regional Equity (CORE). The group was founded in 2007, and brought together a coalition of social justice organizations, including the Sacramento Housing Alliance (SHA), Legal Services of Northern California, and the Environmental Council of Sacramento, with research support from the UC Davis Center for Regional Change.[4] The coalition included affordable housing advocates and developers, environmentalists, activists working on transportation, homelessness and poverty, as well as leaders from organized labor, faith communities, the civil rights movement, and public health groups. CORE's goal was to unify community and regional organizations and constituencies that had very different perspectives in order to advocate for more equitable community and regional land use patterns.

In 2010, CORE, SHA, and Ubuntu Green (UG) launched the Environmental Justice Initiative (EJI) to address health disparities in communities of color and low-income communities throughout the Sacramento region. In partnership with UG's Healthy Land Use Engagement Project, the EJI began a multi-year community engagement process focused on environmental health and justice issues, including access to healthy food, transportation, parks, and affordable housing. These activities led to the creation of the Brownfields and Vacant Spaces Campaign (BVSC). As one outgrowth of the BVSC, in 2014, UG formed the Sacramento Environmental Justice Working Group to serve as a collaborative forum for building a regional EJ movement (see Figure 1 for a statement of the Working Group's EJ vision).

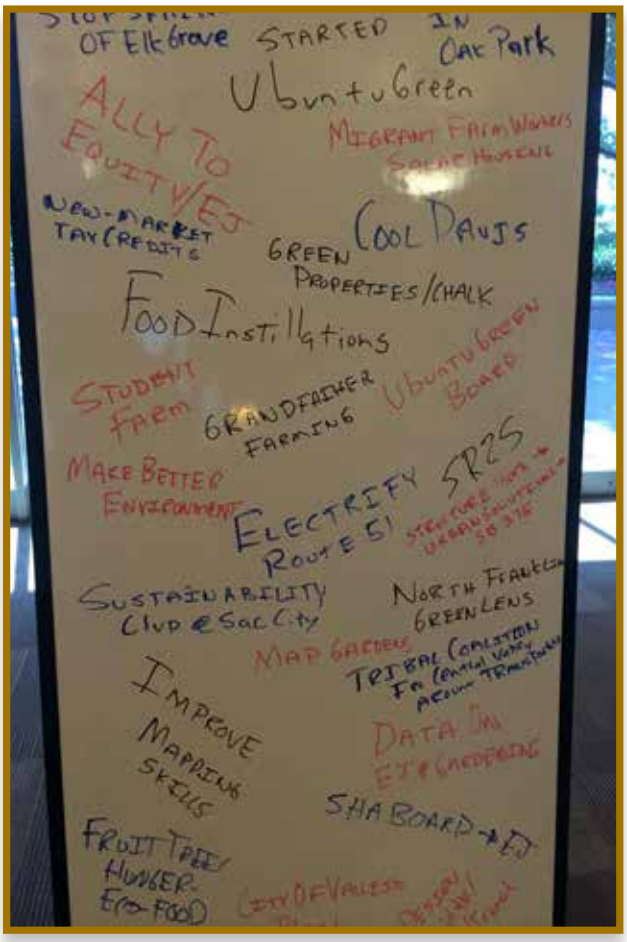
II. A Brief History of Regional Environmental Justice Partnerships

Figure 1. Sacramento Environmental Justice Working Group Common Vision

- Communities across the region are interconnected with the environment and live in, healthy, sustainable, safe and thriving neighborhoods.
- Environmental injustices in all communities are eliminated through collaborative partnerships.
- Private and government groups are accountable and work in partnership with communities and neighborhoods to minimize the negative impacts of their work and decision-making.
- Public processes create transformative partnerships with the most vulnerable communities to educate them on and create permanent solutions to environmental risk.
- All people are empowered to transform their communities and live humanely, respectfully and compassionately, regardless of race, ethnicity, income, gender, identity or language.

Participants in the Sacramento EJ Working Group discuss action strategies. *Photo credit: Ubuntu Green*

Charles Mason Jr. from Ubuntu Green speaks at an EJ rally at the state Capitol. Also pictured, from left, Amelia Medeiros (formerly of Ubuntu Green), UC Davis professor Jonathan London, State Senator Richard Pan, South Sacramento resident Pam Forster, and Emilio Balignit (formerly of Ubuntu Green). *Photo credit: Ubuntu Green*



Brainstorm of key EJ issues and actions contributed by participants at a Sacramento EJ Working Group meeting. *Photo credit: Ubuntu Green*

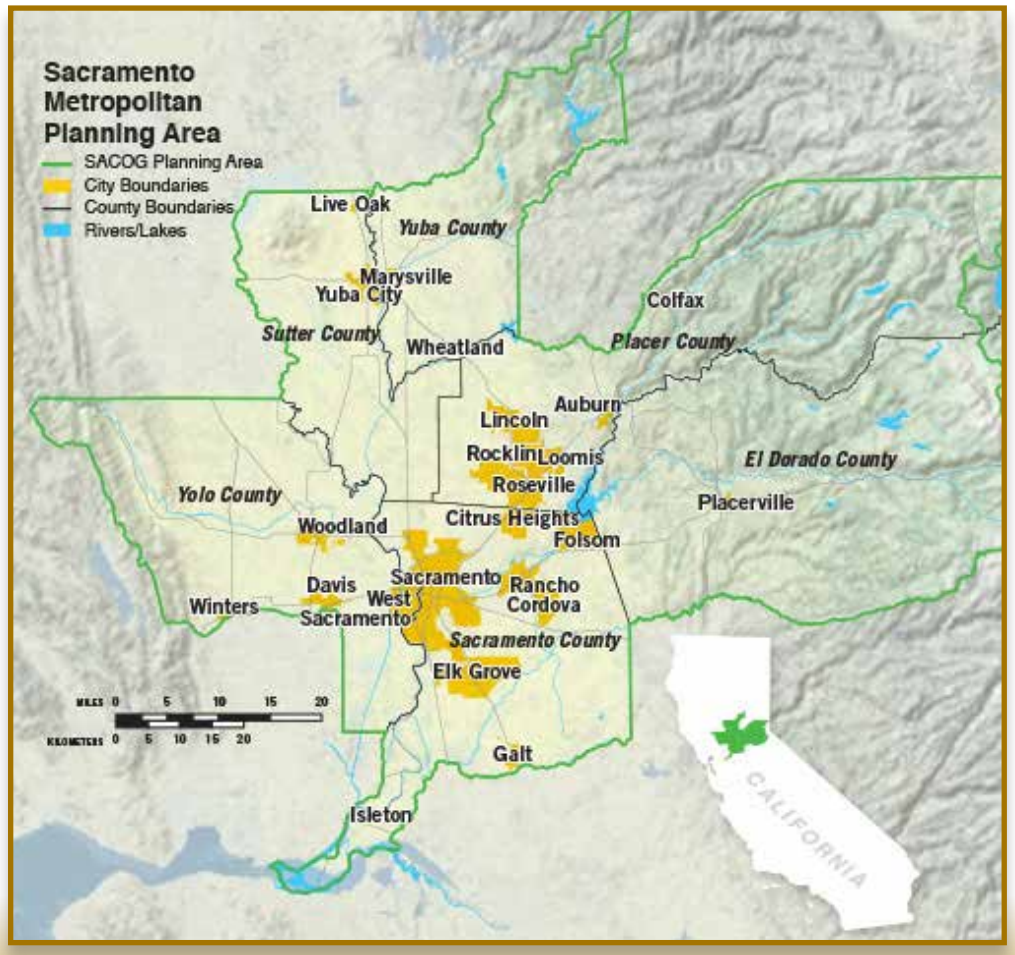
III. Defining the Capital Region

The six-county Capital Region stretches from the Sacramento/San Joaquin River Delta in the south, to the Coastal Range in the west, the Sierra Nevada in the east and the rural communities of Yuba and Sutter Counties in the north. It is an area that can boast of rich farmland, pristine mountain wilderness, and key watersheds that represent significant natural and economic assets for the state as a whole. It is the political center of the world's eighth largest economy, and home to approximately 2.3 million residents. Of these, just under half are non-Hispanic whites, one in five are Hispanics, one in ten are Asian, and over 7% are African-American.[5] At the heart of the region is the city of Sacramento, which in 2002 was declared by Time Magazine to be "America's most diverse city."[6] The city of Sacramento was 10th among American cities in number of refugees resettled between 1983 and 2004.[7]

Over a decade later, the city continues to be one of the most diverse and racially integrated in the country.[8] The Capital Region as a whole has significant cultural riches. For example, in addition to English and Spanish, students in Sacramento County schools speak more than 52 languages.[9] Cultural events, such as one of the largest Sikh festivals outside India (held in Yuba City), as well as Hmong, Mexican, Portuguese and Greek festivals, enliven the regional landscape.[10]

The demographic and geographic diversity both enriche and fragments the region. The region's six counties and 31 cities coordinate land use, transportation and housing planning through the Sacramento Area Council of Governments (SACOG). Yet implementation decisions are made at the local, not regional level. The interests of political leaders in urban Sacramento do not always align with those in suburban areas such as Elk Grove and Roseville, or rural areas in the Sierra foothills. This makes regional-scale planning challenging. In this fragmented political landscape, the interests of typically under-represented populations can fall through the cracks.

Map 1: Cities and Counties in the Sacramento Region



Map credit: Sacramento Area Council of Governments

Indeed, a number of challenges and inequities in the Capital Region impact certain communities and groups much more significantly than others. Not everyone experiences the benefits of the region's natural resources, economic prosperity, and political influence. As one example, the regional poverty rate varies widely by racial and ethnic group: (24.1% % for Hispanics 28.4% for African Americans, 18.2% for Asians, 22.1% for Native Americans, and only 10.6% for Non-Hispanic Whites). It also important to note the geographic disparities across the region. For example, in Yuba County, non-Hispanic Whites have a poverty rate of 19.3% compared to 7.4% in Placer and El Dorado Counties. As will be shown in the sections below, all too often, the dividing lines between those who do and those who don't benefit coincide with racial, ethnic, and socioeconomic boundaries.

IV. Historical Legacies

A. Race, Place, Discrimination and Displacement

Sacramento's Old West End, a vibrant neighborhood with diverse residents and family-run businesses, was demolished in the 1960s to make room for the Capitol Mall and the 1-5 freeway.
Photo credit: Sacramento Public Library

The Capital Region's social and environmental injustices are in part the legacies of racialized land use and housing policies that have long relegated communities of color to the regions' less desirable areas.[11] In 1886, for example, the Sacramento city trustees made it a misdemeanor for any Chinese person to reside in the city. Sacramento's Chinatown was burned down many times over the ensuing decades, often with the complicity of the Sacramento Fire Department. Japanese-American communities were similarly displaced and interned during World War II, and again through urban redevelopment programs in the 1950s and 1960s.[12] In the early 1900s, influential real estate associations and developers claimed that racial exclusion was key to building 'successful' communities and to maintaining high property values. Post-Depression New Deal programs from the Federal Housing Administration (FHA) imposed racial restrictions on federally-insured, low-interest loans. Spatial surveys conducted in the 1930's used racial categories to identify Sacramento's "West End" as the area most unsuitable for lending, effectively 'redlining' the neighborhood. In the 1950s and 1960s, the West End area was largely demolished by urban renewal, which displaced over 8,500 residents, including many people of color and immigrants who moved to neighborhoods that did not have racial covenants, such as Oak Park and Meadowview.[13]

Throughout the 1970s, the practice of mortgage redlining continued to exclude non-whites from the housing market. Racial categories were used for property valuation and credit approval, all of which further concentrated non-whites in less desirable neighborhoods.[14] Subprime lending practices targeted people of color, saddling them with high interest rates that resulted in a new round of dispossession and neighborhood instability, especially after the 2008 mortgage crisis and economic downturn.[15] This instability has made it difficult for low-income people and people of color to protect themselves from hazardous environmental conditions in their neighborhoods. It also created obstacles to attracting and maintaining positive land uses, such as parks, grocery stores, schools, and living-wage jobs.

These racialized land use and housing patterns have shaped the Capital Region's landscape of environmental injustice, in which low-income people and people of color have tended to be located in neighborhoods with close proximity to significant environmental hazards and a lack of environmental amenities.. In addition to urban Sacramento neighborhoods such as Oak Park, Meadow View, and Del Paso Heights, this pattern holds true in the agricultural and forest communities on the region's rural periphery and in its older suburban neighborhoods.

B. The Military Industrial Complex and Groundwater Contamination

One case that illustrates the far-reaching legacy of environmental injustice is the Aerojet facility (now Aerojet Rocketdyne Inc.). Located in a low-income suburban neighborhood, the facility manufactures rocket engines and propellant. This has endangered local drinking water supplies since at least 1953. The Aerojet Rocketdyne site is comprised of 5,900 acres in what is now the city of Rancho Cordova. It is located near the American River, close to dense residential areas, with some homes located within 500 feet of the site. Producing military and commercial grade rockets and fuel has brought obvious economic benefits. But these have come with high costs, among them, the discharge of the highly toxic industrial byproduct perchlorate into area groundwater. Even at low concentrations in drinking water, perchlorate has been linked to dire health effects such as thyroid cancer. For decades, thanks to mismanagement, perchlorate and other chemicals used in the manufacture of explosives have been leaking into the

American River and drinking wells of area homes. The extreme contamination of the soil and groundwater led the US Environmental Protection Agency (EPA) to designate the area as a Superfund site in 1983, thereby requiring remediation of the land by the responsible party. According to an engineer with the Central Valley Regional Water Quality Control Board,

"These people drank rocket fuel."[16]

Aerojet tests a MK-72 booster rocket used in the Navy's Aegis Ballistic Missile Defense system. *Photo Credit: Aerojet Rocketdyne.*

Disturbed by what they believed was decades of illegal chemical disposal methods by Aerojet and inadequate enforcement by public agencies, in the 1990's, a group of Rancho Cordova residents were able to convince a state laboratory to develop a new method of testing water for perchlorate. This new method revealed that perchlorate levels in the drinking water wells of Rancho Cordova reached 300 parts per billion (ppb) – a level 50 times higher than the public health screening level judged safe by the CalEPA's Office of Environmental Health Hazard Assessment. Based on these data, a number of lawsuits were filed between 1997-2002 against Aerojet for the negative health impacts and environmental damages caused by groundwater contamination. As part of the US EPA mandated cleanup of the Aerojet Superfund site, the company was required to construct a water treatment facility to contain water contamination, and to purify 25 million gallons of groundwater daily in order to prevent the contamination of additional drinking water supplies, as well as the nearby American River.[17] Despite these measures, the residents of Rancho Cordova and the many Capital Region residents living downstream continue to live under the risk of future drinking water contamination.

C. Vacant Lots and Empty Spaces in the Urban Core

Neighbors in Del Paso Heights conduct a walking audit of illegally dumped trash in their neighborhood. *Photo Credit: Tyrone Buckley*

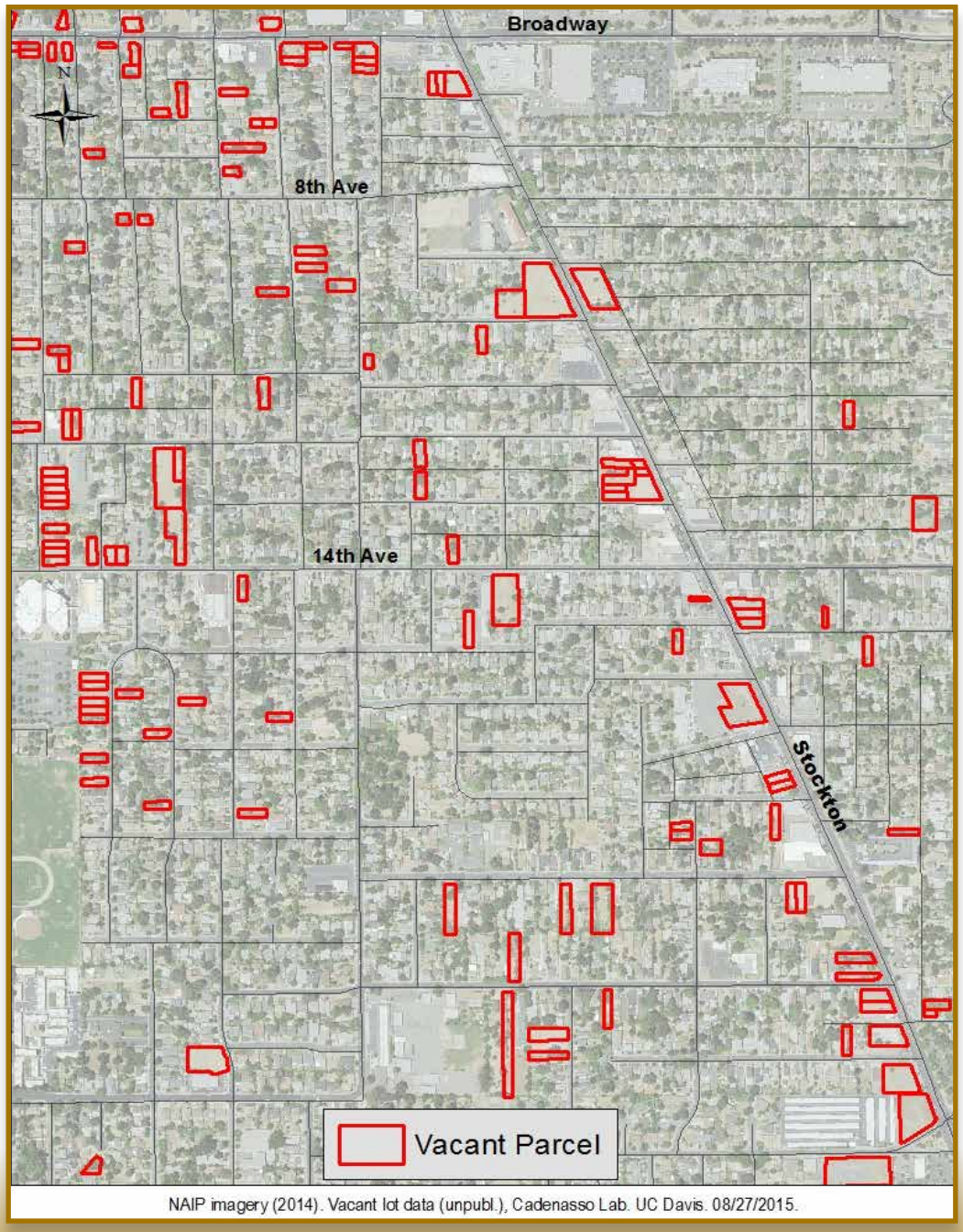
In low-income communities and communities of color in urban neighborhoods in Sacramento, as in many other cities, there are many parcels of land that were once occupied by residents or businesses that have relocated. Such businesses invariably take their jobs with them, at times leaving hazardous wastes behind. Some of these lots are owned by businesses, government agencies, or developers holding out for more favorable land prices. Others have been taken over by local and regional jurisdictions intent on remediating these hazardous conditions. Still others have no reliable ownership at all.

Land lots with documented toxic or hazardous wastes may or may not be included in official clean-up programs such as the US EPA's Superfund program. Others have lower levels of hazards that may reduce their viability for new development. In some cases, properties repossessed by banks have been left to decay and become nuisances. These areas are often called "brownfields" or simply "the fields," because many of them are vacant.

Often overgrown with weeds, the fields can be attractive places for children seeking adventure, but they can also expose residents of the neighborhood to significant dangers. They tend to be filled with furniture, junk appliances, construction debris, and other unsafe materials that are dumped there illegally. The fields are also often sites of violent crime and are often used for prostitution, drinking, and drug use. Many are littered with broken bottles and other discarded paraphernalia. Many poor communities are overwhelmed by these abandoned sites and buildings.

UC Davis Professor Mary L. Cadenasso has produced a series of maps that combine satellite imagery with systematic ground-level observations. These maps identify vacant lots in South Sacramento and the Del Paso neighborhoods in north Sacramento (see Maps 2 and 3). As shown in red, many blocks in these neighborhoods have over five vacant lots each. These mar the

Map 2: Vacant Parcels in South Sacramento Neighborhoods

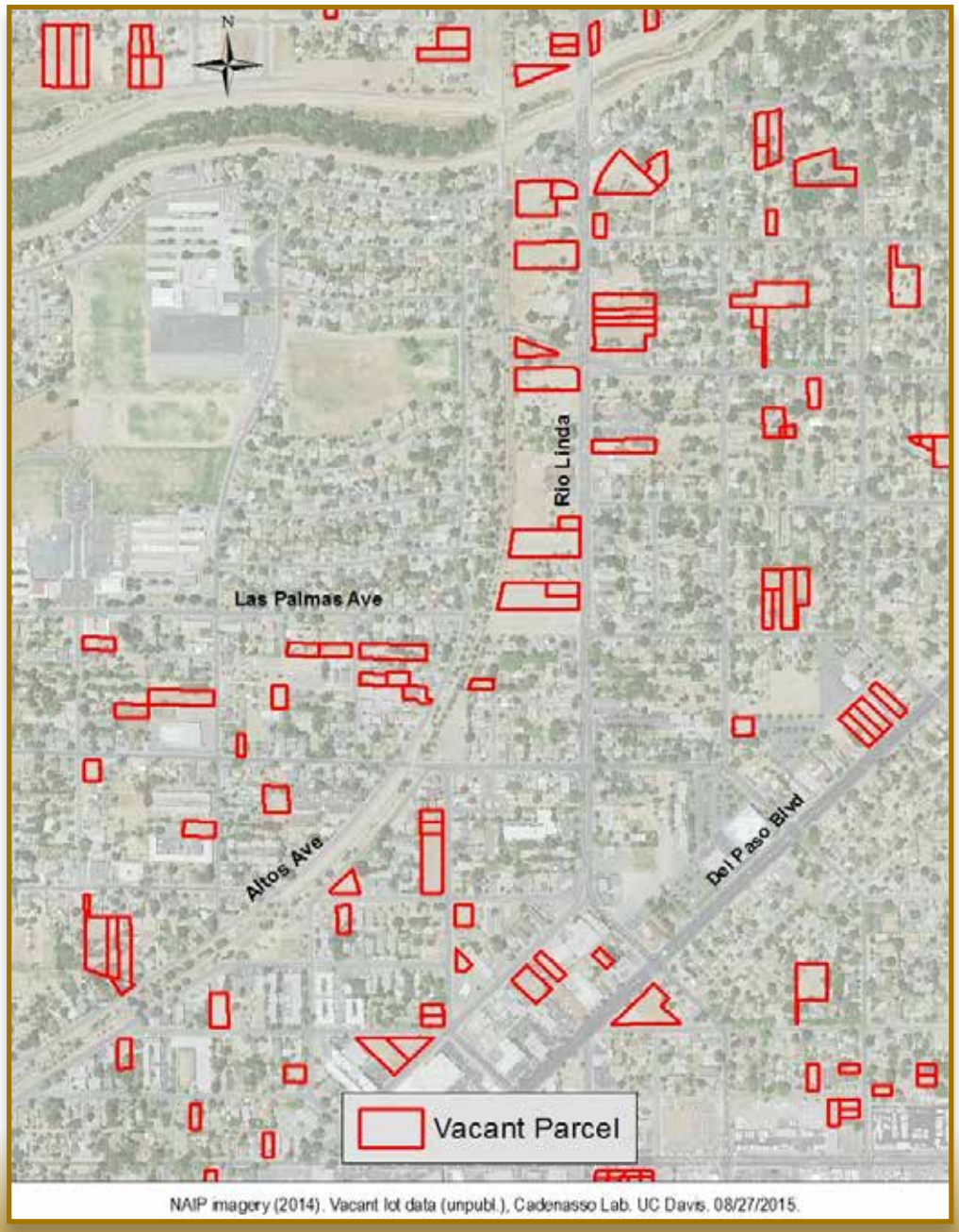


NAIP imagery (2014). Vacant lot data (unpubl.), Cadenasso Lab. UC Davis. 08/27/2015.

neighborhood landscape, are a source of neighborhood distress, and often lower property values. Conversely, though, these vacant lots also represent unique opportunities for promoting healthy land uses such as gardens, local employment centers, and affordable housing. In fact, so many of these lots have been developed as of late, that residents have become concerned about gentrification, pointing to the need to actively engage residents in shaping new visions of their area.

In 2011, the Coalition on Regional Equity, Sacramento Housing Alliance, and Ubuntu Green launched the Brownfields and Vacant Spaces (BVSC) Campaign to address the prevalence of unhealthy land use in communities of color and low-income communities, with a particular focus on Oak Park, South Sacramento, and Del Paso Heights. The Campaign developed an action plan to turn these problem sites into engines of neighborhood renewal, which is shown below (see Figure 2).[18] Describing the need for the BVSC, Tyrone Buckley, Board Member at the Sacramento Housing Alliance stated,

Map 3: Vacant Parcels in Del Paso Heights Neighborhoods



IV. Historical Legacies

"While Sacramento's diversity is a source of great pride, it should be a point of serious concern that our low-income communities and communities of color are suffering from illegal dumping, underinvestment, and crime. The BVSC report is a positive step to understanding the challenges these neighborhoods face. No part of Sacramento should be a dumping ground where families don't feel safe."

Due to the EJ movement's limited organizational capacities, only a few of these goals have been accomplished—most notably, the formation of the Sacramento Environmental Justice Working Group, and the garnering of support for the passage of the urban agriculture ordinance in the city of Sacramento. The remaining BVSC recommendations should therefore be taken to represent recommendations can be taken to represent an aspirational community vision that can be pursued in the next phases of building the region's EJ movement.

Figure 2: Brownfields and Vacant Spaces Campaign Recommendations

1. Strengthen Partnerships between Government, Nonprofits, and Residents
   - Establish a Sacramento Environmental Justice Working Group
   - Create and implement comprehensive community plans
2. Create Entities to Facilitate Brownfield Remediation and the Use of Vacant Spaces
   - Establish land banking authorities
   - Establish community development corporations
3. Strengthen Local Policies to Promote Healthy Solutions through the Built Environment
   - Identify funding for brownfields remediation
   - Develop a Brownfields and Vacant Spaces Campaign Resolution
   - Strengthen the Rental Housing Inspection Program
   - Prevent and clean-up illegal dumping on vacant lots

V. Mapping Environmental Justice in the Capital Region

The Capital Region exemplifies two distinct patterns in the location and distribution of environmental hazards. First, separate and unequal burdens of hazards exist in many neighborhoods inhabited by low-income people and people of color. Second, on some regional environmental issues such as air quality, residents across the region face a shared fate. The fact that the health and well-being of all residents in the Capital Region are affected by many of the same environmental hazards represents a powerful opportunity for diverse coalitions crossing racial, ethnic, class, and geographic boundaries.

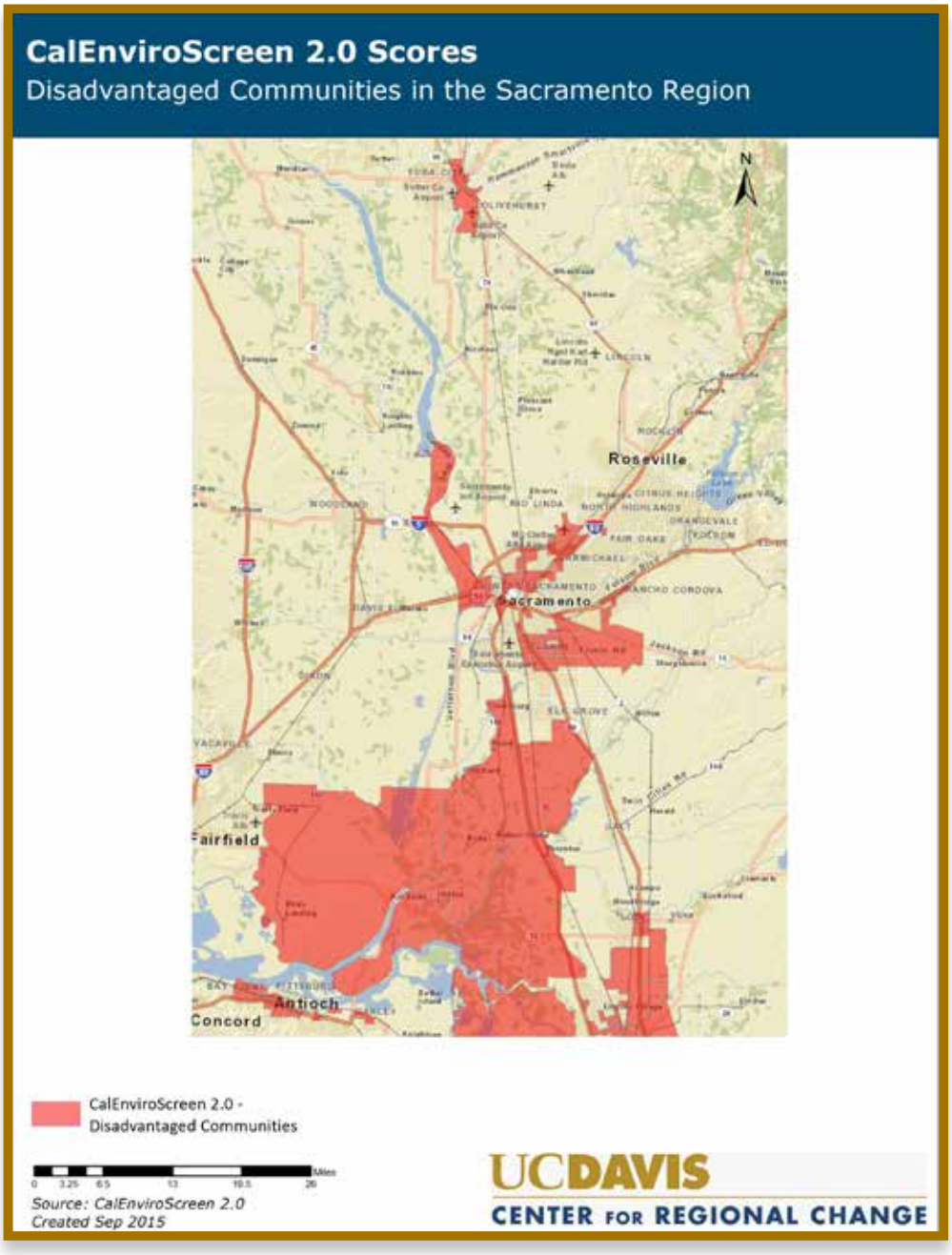
Both patterns are illustrated through maps adapted by the CRC from the CalEPA's CalEnviroScreen tool (CES 2.0).[19] CalEnviroScreen scores each census tract in the state by combining the scores for 19 individual indicators into a relative measure of cumulative impacts. These indicators integrate the "pollution burden" (which includes both exposure to pollutants and the environmental effect of exposures), and "population characteristics" (which includes the concentration of sensitive populations and other socio-economic factors). It is important to consider these factors together as opposed to only individually for three reasons. First, this combination of factors tell us how people actually experience their environment. Second, exposure to multiple pollutants

can have additive and synergistic effects. Third and finally, socio-economic factors such as poverty, limited formal education, and limited English-language fluency can make it more difficult for certain populations to mitigate, avoid, or adapt to pollution.[20]

The colors on the CES 2.0 maps 5-9 indicate the degree of these cumulative pollution burdens and population characteristics in each census tract. The bright red indicates tracts with the highest levels of cumulative impacts, and the dark green shows the tracts that have the lowest levels.

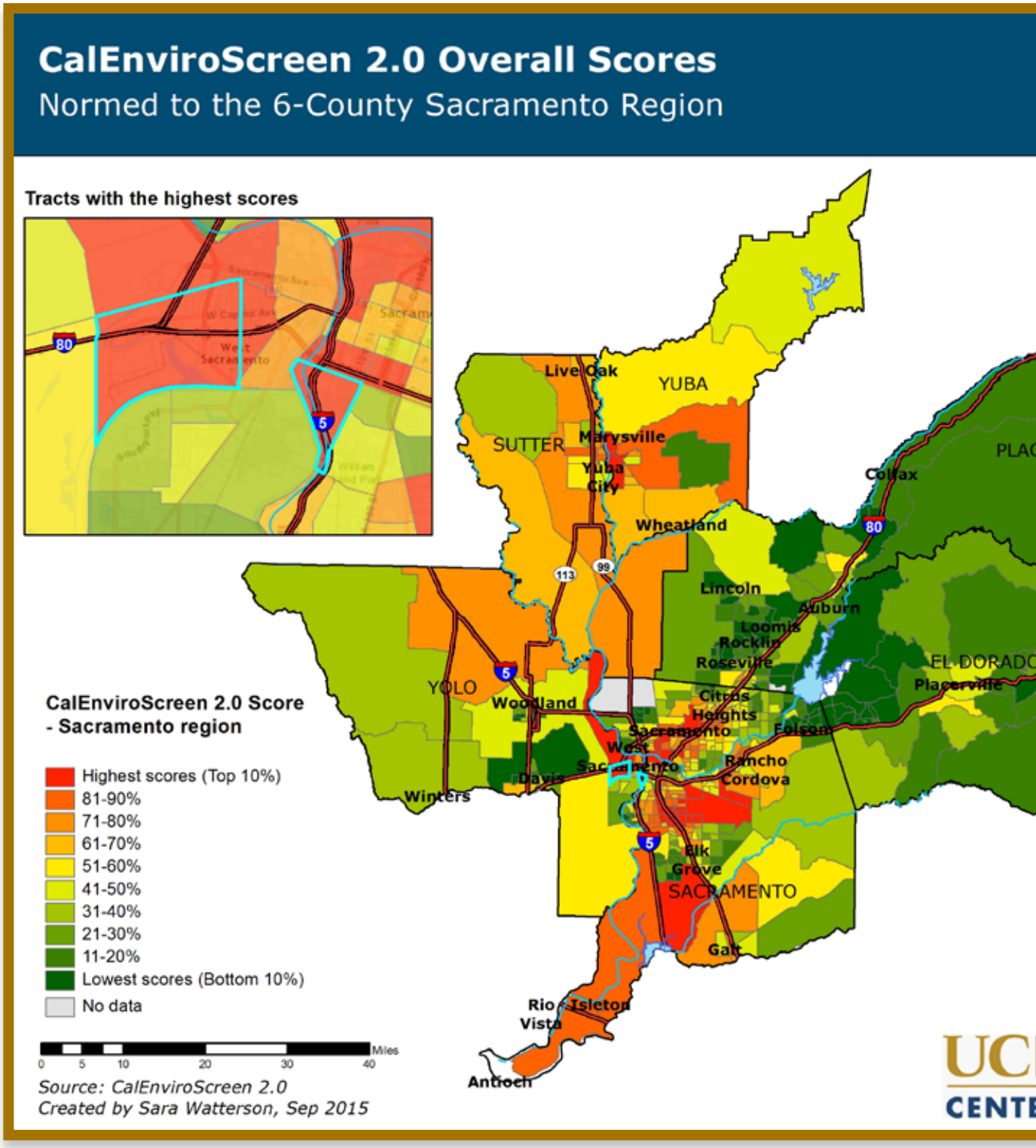
CES 2.0 reveals that the Capital Region includes many census tracts that fall within the top 25% of all tracts in the state in terms of the degree of social and environmental disadvantage they experience. In Sacramento County, this tier includes 41 tracts that are in the top 25% of tracts in the state. There are also three tracts in Yolo County (in and around the city of West Sacramento), three in Yuba County, and four in Sutter County (clustered in and around the Yuba City/ Marysville area) that fall into the top 25% category. These 51 disadvantaged census tracts are shown in Map 4. As mandated by Senate Bill 535, this status makes them eligible for funding through the state's Greenhouse Gas Reduction Fund (in which 25% of cap and trade revenues must be dedicated to the neighborhoods classified in the top 25% for combined environmental and social disadvantage), as well as for other state funding programs.[21]

Map 4: Disadvantaged Communities in the Sacramento Region



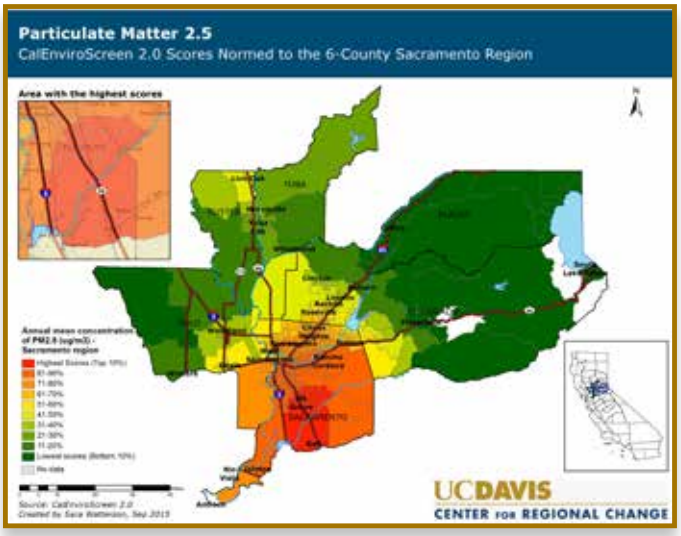
While this statewide analysis is important in determining eligibility for GGRF allocations, it is also useful for identifying patterns of inequity within the region. The CRC used the same data sources as the statewide CES 2.0, but compared each census tract to the regional mean. This prevents the Capital Region from competing with or being overshadowed by other regions of the state and provides regional leaders with the information needed to focus their attention and resources to the communities in greatest need within their jurisdictions and areas of action. This approach highlights many more areas than the ones shown in the CES 2.0 statewide map. These are areas that demand focused attention by public agencies, elected officials, foundations, and environmental justice advocates in the region.

Map 5: CES 2.0 Overall Scores for the Sacramento Region

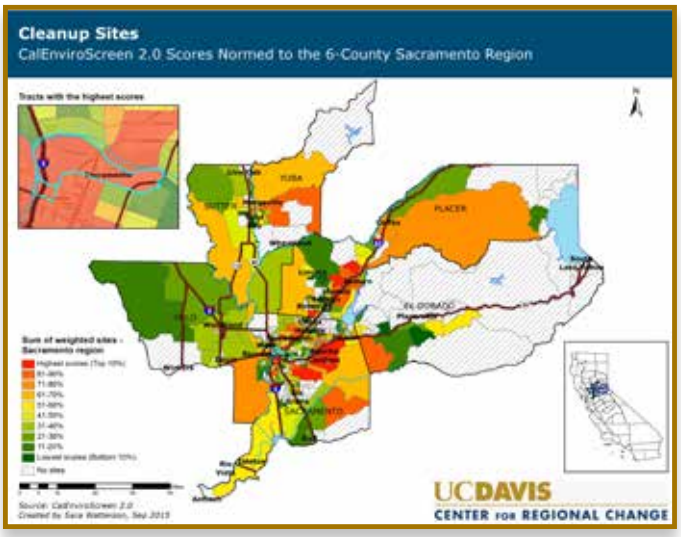


Map 5 shows the overall CES 2.0 scores of the Sacramento region. Maps 6, 7 and 8 show how specific environmental burdens are distributed across the Capital Region. Map 6 shows that particulate matter (PM) levels are highest in neighborhoods along the heavily trafficked Routes 99 and 5.[22] Map 7 shows that hazardous waste cleanup sites are distributed in a patchwork pattern across the region. Finally, Map 8 shows that drinking water appears to be more polluted in the western parts of the region.

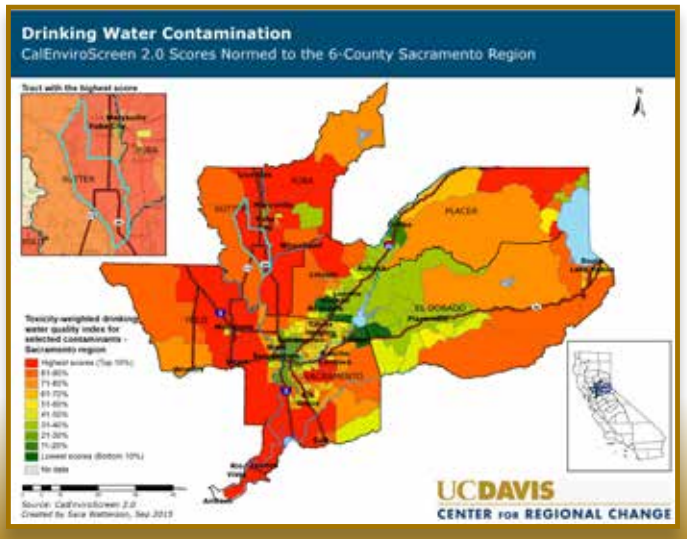
Map 6: Particulate Matter Scores for the Sacramento Region



Map 7: Cleanup Site Scores in the Sacramento Region

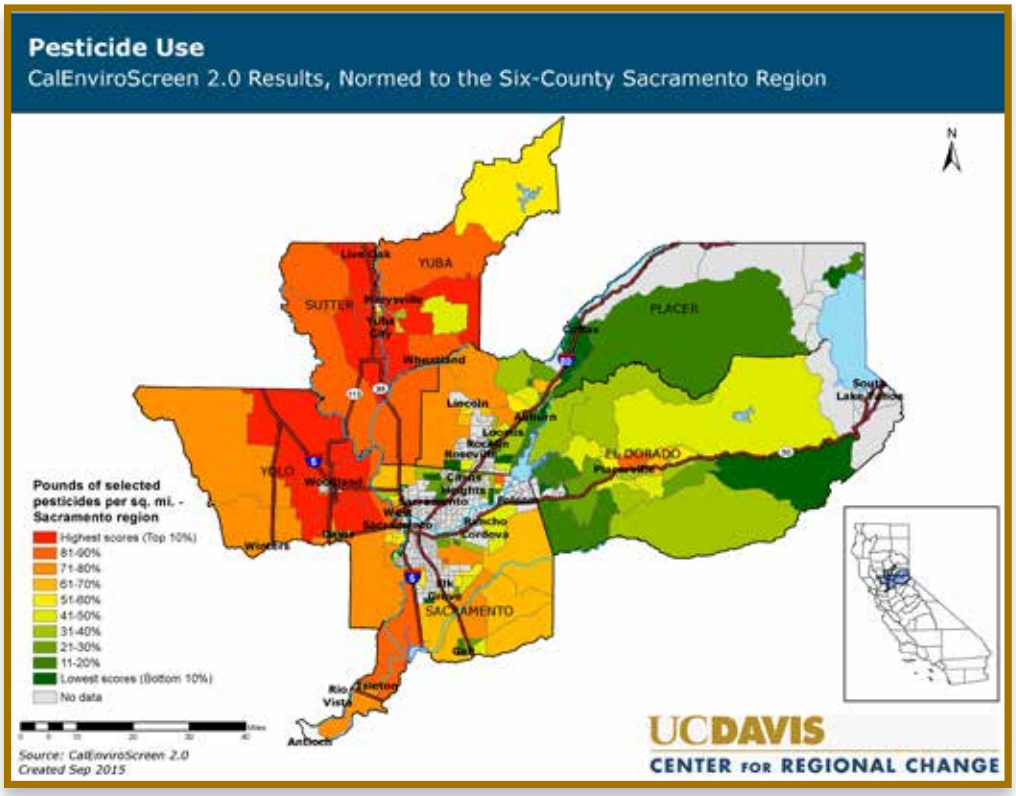


Map 8: Drinking Water Contamination Scores in the Sacramento Region



VI. Injustices on the Rural Periphery

Map 9:
Agricultural Pesticide Application Scores for the Sacramento Region



The rural areas of the Capital Region have a significantly lower population than the region's urban core. They can represent an idyllic and easy escape from the city for urban dwellers. Yet many of these areas face their own environmental justice issues. These include heavy agricultural pesticide use, contaminated drinking water, and the presence of hazardous and solid waste sites. Like the inhabitants of many urban environmental justice communities, rural inhabitants face high rates of asthma. At the same time, for a host of other reasons, they face low levels of formal education and high rates of unemployment, poverty, and linguistic isolation.

The following communities show up in the top 10% of census tracts using CES 2.0: Walnut Grove, Isleton, Rio Vista in Yolo and Sacramento Counties; Knights Landing in Yolo County; and Live Oak in Sutter County. Also included are wide swaths of the urban core of the city and county of Sacramento. Based on specific indicators such as drinking water (Map 8) and agricultural pesticide application (Map 9), other rural communities throughout the heavily agricultural western swath of the region, such as those in Yolo County's Capay Valley, are also sites of significant concern.

Farm workers at Fully Belly Farm in the Capay Valley benefit from good wages and healthy working conditions. Unfortunately, this is not always the case elsewhere in the agricultural sector.
Photo Credit: Randy Pench rpench@sacbee.com

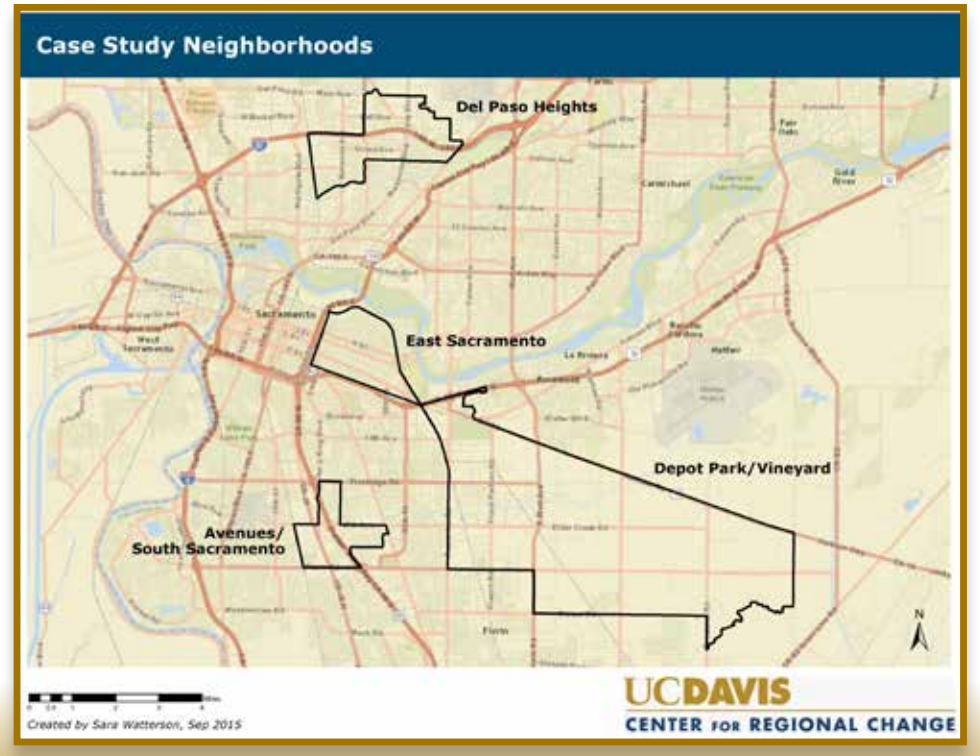
VI. Injustices on the Rural Periphery

Until very recently, urban-oriented regional planners have not addressed the place-specific concerns of rural residents, including accessible transportation, affordable housing, water infrastructure, and economic development. This is beginning to change with the Rural Urban Connection Strategy (RUCS) developed by SACOG. It is designed to provide data tools for rural community planning on land use, transportation, natural resource conservation, and economic development.[23] Advocacy organizations such as Legal Services of Northern California and California Rural Legal Assistance actively represent the interests of low-income people throughout the rural areas of the region. Additionally, Native American land stewardship by tribal governments such as the Yocha Dehe Wintun Nation in Yolo County's rural Capay Valley are developing renewable energy, sustainable agriculture, and natural resource conservation strategies aimed at recovering and strengthening traditional cultural lifeways and economic vitality.[24]

Yocha Dehe Wintun Nation Tribal Chairman Marshall McKay is leading efforts to revitalize the culture and economy of the tribe located in Yolo County's Capay Valley.
Photo Credit: Lisa Morehouse/KQED

VI. Diverse Communities, Diverse Inequities

Map 10: Case Study Neighborhoods



To highlight social and environmental issues at the neighborhood scale, as part of this study, we selected four comparison locations in Sacramento County: Depot Park/Vineyard, East Sacramento; Del Paso Heights; and The Avenues/South Sacramento. We measured social vulnerability using key demographic indicators: the percentage of people of color (a measure of racial and ethnic segregation); the degree of linguistic isolation; rates of poverty and unemployment; and the number of asthma hospitalizations. We also measured the pollution burden, using three key environmental indicators: the number of cleanup sites; the amount of PM2.5; and the quality of drinking water.

Figure 3: Population Characteristics Comparison

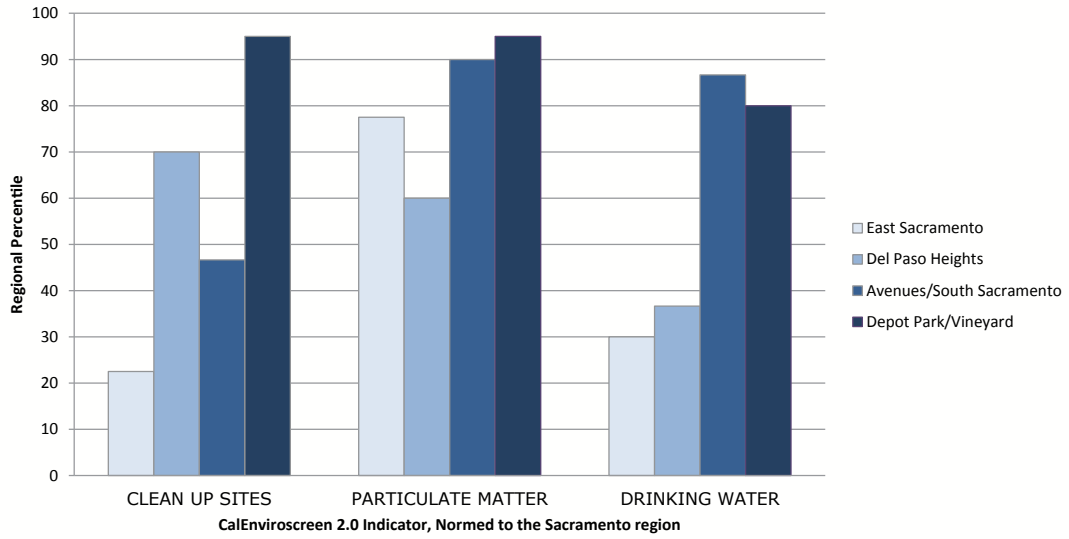
	East Sacramento	Del Paso Heights	Avenues/ South Sac	Depot Park/ Vineyard
Linguistic Isolation (percentile)	35	87	100	80
Poverty (percentile)	25	97	97	90
Unemployment (percentile)	18	87	97	85
Asthma (percentile)	50	100	100	70
People of Color (%)	21	75	82	51
Total Population (#)	16,350	19,544	14,807	4,402

People of color = 100-Non-Hispanic Whites. ACS 2009-2013

Other data derived from Calenviroscreen 2.0

Drawing on data from CES 2.0, Figure 3 shows that the two neighborhoods inhabited by the highest percentage of people of color (Del Paso Heights, with 75% and South Sacramento with 82%) also are ranked in the highest percentiles of linguistic isolation, poverty, unemployment, and asthma cases compared to the state as a whole. This table uses the actual percent of people of color because CES 2.0 does not include this indicator.[25]

Figure 4: Pollution Burden Comparison



These figures show that the complex pattern of environmental disparities across these neighborhoods. For example, while East Sacramento has both the lowest level of social vulnerability and the lowest levels of cleanup sites and drinking water contamination, it also exhibits a "shared fate" with Del Paso Heights and South Sacramento in levels of PM2.5. Depot Park/ Vineyard has a proportion of people of color comparable to the region as a whole (51%) but also has levels of environmental burdens that are as high or higher than the Avenues/ South Sacramento and Del Paso Heights where people of color are in the vast majority. These patterns of place-based disparities and shared fate demonstrate that the EJ movement must continue to fight for the health and well-being of disadvantaged communities while building alliances with residents in wealthier neighborhoods through issues of common interest.

VIII. Community Voices on Regional EJ Organizing

One of the principles of the Environmental Justice movement is to honor the voices and experiences of local community activists. These are considered fundamental in helping to define relevant issues and identify effective strategies to protect the health and well-being of disadvantaged communities. The following sections recount the perspectives of a number of such activists working on behalf of the selected Capital Region's disadvantaged places and people. The activists describe these communities' specific environmental and public health vulnerabilities, highlighting issues and current initiatives. (Note: these have been edited for clarity and length; they also include additions written by the authors of this report).

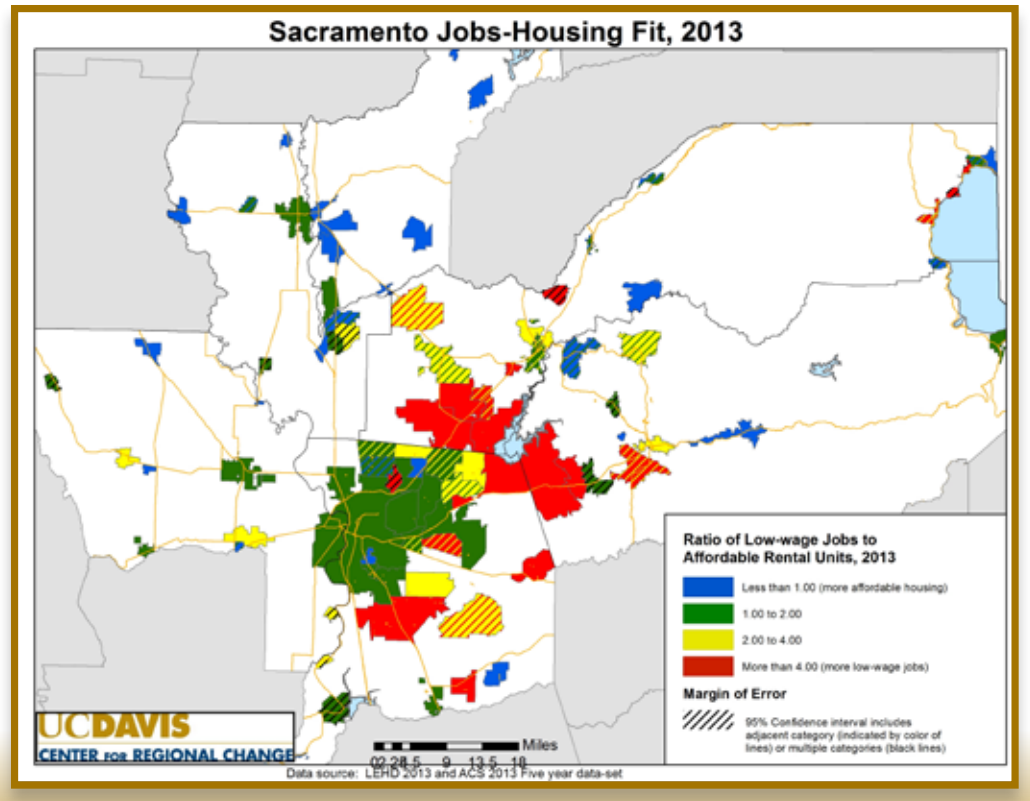
A. Struggle for Affordable Housing and Equitable Neighborhoods

By Darryl Rutherford, Executive Director, Sacramento Housing Alliance

Sacramento Housing Alliance (SHA) has engaged issues of environmental justice and the built environment, in recognition of the connection between affordable housing and community health. Our organization seeks to improve the lives of Sacramentans struggling to make ends meet. We work to strengthen affordable housing policies, but also understand that without a healthy environment, these policies cannot succeed. We work from the premise that affordable housing and Environmental Justice advocacy share the same goal: creating healthy communities rich with opportunities, that can serve as catalysts for residents' success. We feel that community activism is essential to resist and transform unhealthy land uses, and contributes to affordable rents and environmentally safe communities.

SHA has used research by Professors Chris Benner of UC Santa Cruz (formerly of UC Davis), Alex Karner of Georgia Technical University (formerly of UC Davis) and by Ph.D. candidate Bidita Tithi of UC Davis. Their measurement of Jobs/Housing Fit indicates the places in which there is a mismatch between affordable housing and low-wage jobs (that is, places where there are many affordable housing units but few low-wage jobs, as well as places with little affordable housing but many low-wage jobs).[26] In both cases a lack of "fit" imposes long commute times on low-income residents and increases the vehicle miles traveled (VMT) within the region. This, in turn, increases emissions of greenhouse gases and other air pollutants, affecting all residents in the region. One lesson that emerges from this is that it is crucial to develop strategies to locate affordable housing near job centers with employment opportunities for lower-income workers. Pursuing education and economic development strategies that support low-wage workers' transition into higher-paying jobs is also important.

Map 11: Jobs/Housing Fit in the Sacramento Region



SHA promotes housing development models that improve community safety and aesthetics. These models should also offer comprehensive social, health, and employment programing, such as day care, afterschool care, access to mental and physical health services, and employment training. Affordable housing is essential for creating the type of safe and stable environment that nurtures community connections and activism.[27]

To achieve these goals, SHA is involved in a range of strategies that link affordable housing with Environmental Justice. These include, for example, advocating for the preservation of Single Room Occupancy (SRO) buildings in downtown Sacramento. SROs are a lifeline for many low-income individuals.

Young residents play basketball at the Alder Grove affordable housing project in Sacramento, one of several neighborhoods in the region that will be razed and rebuilt. *Photo Credit: Andrew Seng aseng@sacbee.com*

In the coming years, it will become increasingly important to balance visions for revitalizing downtown Sacramento, with maintaining protections for low-income residents. Children and youth are sometimes left out of public discussions about affordable housing, yet these populations are often the most vulnerable when such housing is not available. Key strategies to promote well-being among these vulnerable populations include: reducing and preventing homelessness among children and families; developing safe and affordable routes to school; and funding recreation and community services for low-income children.

To ensure that housing is not only affordable, but also healthy, requires consideration of issues related to substandard living conditions. Proactive Rental Housing Inspection Programs are needed to monitor and enforce standards on housing quality that can negatively impact physiological health: (e.g., the presence of lead, radon, mold, and extreme temperatures); psychological health (e.g., noise, inadequate lighting), and safety. Comprehensive strategies for replacement of sub-standard public housing slated for the Marina Vista/ Alder Grove and Dos Rios complexes managed by the Sacramento Housing and Redevelopment Authority offer great promise for low-income families in the region.

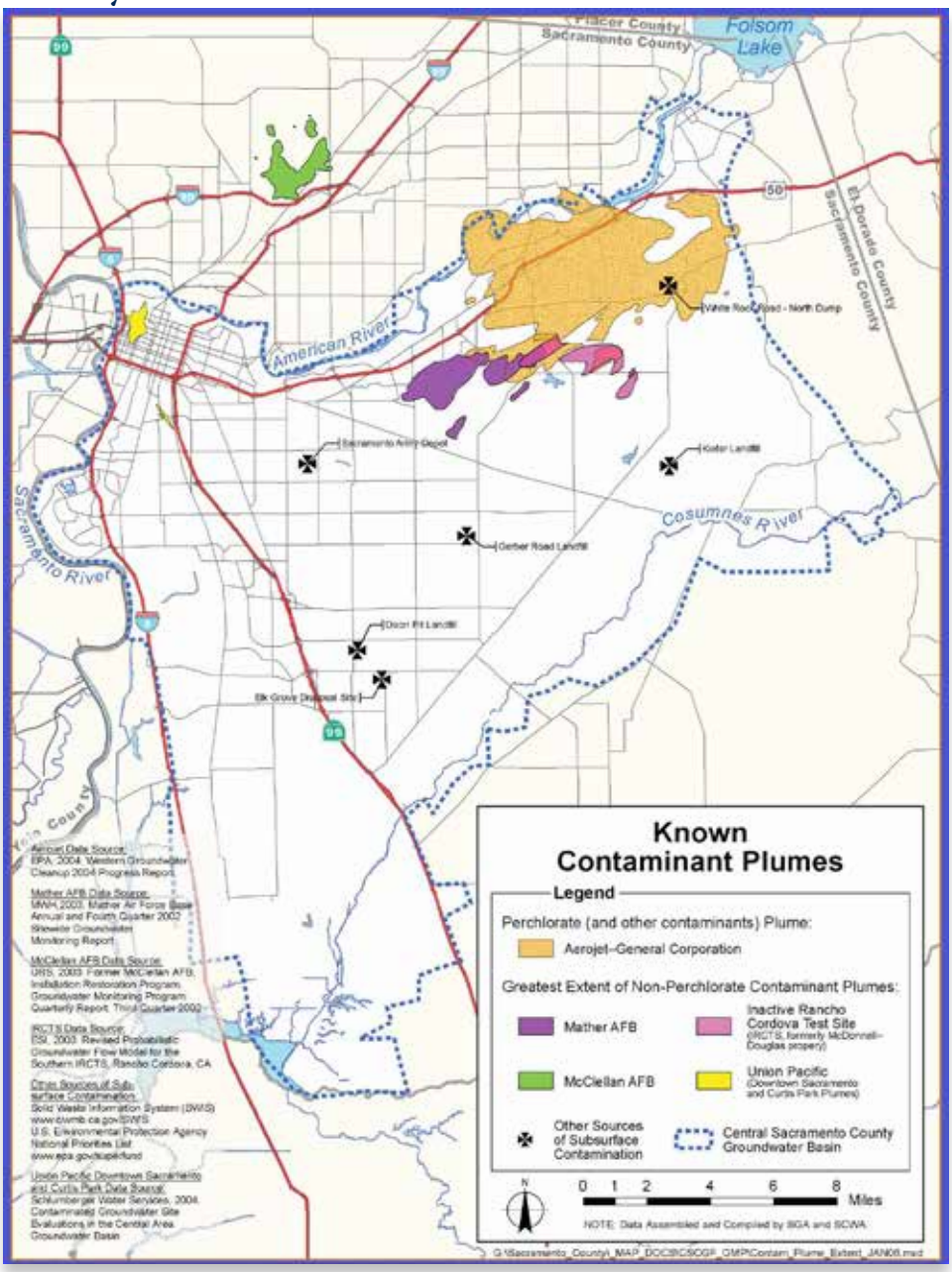
B. Clean, Affordable, and Accessible Water for Drinking Health: A Human Right

With contributions from Colin Bailey, Executive Director, Environmental Justice Coalition for Water

Access to clean, safe, and affordable water is a fundamental human right, and is essential for a healthy population, environment, and economy. Many communities, particularly low-income communities and communities of color, lack access to safe, affordable water for drinking, recreational, cultural, and/or subsistence fishing uses.

The Sacramento region overlaps with key watershed areas that are important to local communities, as well as the entire state. However, many of the region's water bodies are severely polluted. Surface water contamination includes urban and agricultural runoff with everything from sediments, oils and metals, pesticides, fertilizers, bacteria, and household trash. The American and Sacramento Rivers, as well as Putah Creek, are specifically known to contain mercury and other toxins, while the northern portion of the Delta waterways and the Sacramento Deep Ship Channel contain a range of toxic chemicals from agricultural pesticide applications such as chlorpyrifos, DDT, and diazinon, as well as mercury and polychlorinated biphenyls (PCBs). Some of these contaminants trace their origins to century-old mining practices, while others stem from recent and ongoing agricultural and industrial activities in both urban and rural areas. There is significant groundwater contamination from 3 EPA Superfund sites—Mather Field Air Force Base, Aerojet, and the Sacramento Army Depot—as well as from Kiefer Boulevard landfill and other landfills, a former PG&E site near Old Sacramento, and the Southern Pacific and Union Pacific rail yards (now being converted into Curtis Park Village). In addition to being contaminated with the above pollutants, the Sacramento groundwater basin is in significant overdraft, leading to dropping water levels that threaten the region's long-term sustainability. Water contamination in the Sacramento region is illustrated in Map 12.

Map 12: Groundwater Contamination in the Sacramento County Groundwater Basin



These environmental conditions represent a threat to vulnerable and affluent communities alike, although certain populations are at a greater risk than others. For example, subsistence fishers who catch fish for food rather than sport are much more likely to be ingesting accumulated toxic substances such as PCBs and mercury, than those who are able to afford access to healthy and contaminant-free seafood. Likewise, low-income families who depend on low cost or free recreational activities may depend on summertime cool-downs by the river more often than those who can afford pool memberships and fully functioning central cooling.

Headquartered in Sacramento, the statewide Environmental Justice Coalition for Water is leading a regional effort based in Sacramento to address these water injustices through community organizing and advocacy. Water justice will only be achieved when inclusive, community-based forms of water management are developed, and the disproportionate health and environmental burdens that low-income communities and communities of color bear are addressed.

VIII. Community Voices on Regional EJ Organizing

C. Hunger and Inequities in the "Farm to Fork" Capital

The rich farmland on the rural periphery of the Capital Region is responsible for putting the "farm" in the "Farm to Fork" identity that Sacramento proudly claims. The Sacramento region has provided fertile land and fresh water for human populations for thousands of years, and remains one of the most productive agricultural areas in the country. However, even as new restaurants featuring local and seasonal food are opening in the heart of the city, the majority of restaurant workers continue to earn poverty wages, and children from neighborhoods with limited grocery stores—such as the Avenues and Meadowview in South Sacramento—often go to bed hungry at night.

Injustices and disparities exist throughout the food chain and across the food system, including low wages and wage theft, racialized labor segmentation, on-the-job sexual harassment, lack of access to healthy food at home and in schools, and lifelong diet-related health complications. These challenges in our food system decrease life expectancy, negatively impact educational performance, limit economic opportunity, and put a myriad of additional stresses on disadvantaged populations.

With the rise of a food-focused regional identity and the growing investment in our regional food system, there has also been a parallel movement to recognize and address the basic issue that everyone has to eat—and to remind us that there is a shadow side to our success if there are people missing from the table.[28] Even before the City of Sacramento embraced the "Farm to Fork" slogan, many local organizations, churches, educators, and farmers were working to address hunger, food insecurity, health, and food access in holistic ways.

There are many examples of food justice work in our region. Alchemist Community Development Corporation provides CalFresh-EBT service at local farmers' markets, while Slow Food Sacramento hosts the "Farm-to-EVERY-Fork" annual benefit for organizations serving low-income and homeless communities. The Sacramento Food Bank & Family Services offers cooking classes featuring fresh produce from their demonstration garden, and Ebenezer Christian Center distributes food to families living in a food desert in South Sacramento. Ubuntu Green's Home Garden project installed planter box gardens for residents living in areas where access to fresh produce is limited. This function has now been taken on by Yisrael Family Urban Farm and Soil Born Farm's

Yisrael Family Farm is a visionary organization in the food justice movement, directed by Chanowk Yisrael (back to camera) with the mission of "transforming the hood for good." *Photo Credit: Yisrael Family Farm*

collaborative We Diggit program. Soil Born Farms' Harvest Sacramento Project also organizes teams to harvest local fruit trees and donate the proceeds to area food banks. The Yisrael Family Urban Farm teaches young people about permaculture, gardening, and healthy eating. It also uses its urban homestead in Oak Park neighborhood to demonstrate how growing and selling food and food-related products provides a path for economic autonomy, ecological stewardship, and community health.

In addition to these local-scale interventions, there are a range of regional-scale efforts underway to promote a more just food system in the region. For example, Valley Vision is building on several years of facilitating a Sacramento region food system collaborative to create a Regional Food Action Plan to "document, coordinate, align, and strengthen food system efforts across public and private sectors for optimum economic, community, and environmental benefits." In a major victory, Ubuntu Green, Soil Born Farms, Alchemist CDC, the Yisrael Family Urban Farm, the Alliance of Californians for Community Empowerment (ACCE) Pesticide Watch, and others partners came together to form the Sacramento Urban Agriculture Coalition (See Figure 5) to advocate successfully at the local and county level to advocate successfully at the local and county level for policy changes in support of a more just food system.

Figure 5: The Sacramento Urban Agriculture Coalition

By Matt Read, SUAC Member

The Sacramento Urban Agriculture Coalition (SUAC) has been fighting for policies that recognize and embrace the potential of urban agriculture to impact our region's food system since 2013. Through that work, we have developed relationships with local and state agencies that oversee the laws that most directly affect urban farming. We work by engaging urban farmers and helping connect them to the myriad nonprofit organizations and government agencies that provide resources for increasing food access in the Sacramento area. When we see a gap that could be addressed through advocacy, we work with local elected officials and bureaucrats to find solutions.

Most recently, our Coalition was successful in winning passage for one of the most progressive urban agriculture ordinances in the state. This involved developing proposed changes to the City of Sacramento's zoning that would balance the benefits of urban agriculture with neighbors' concerns regarding noise, traffic, odors, and other quality of life issues. While our city ordinance is now two months old, we are still working to pass parallel legislation in Sacramento County. Much of urban Sacramento is actually in unincorporated Sacramento County. As a result, County residents are subject to different and sometimes conflicting laws regarding their ability to practice urban agriculture.

The other role we continue to play is that of informing our residents and neighborhoods about what the rules are when it comes to growing food in the city. We are currently deploying a series of workshops titled "Law Bites: Practicing Urban Agriculture in Sacramento" and are working with organizations like Alchemist CDC and the Hmong Women's Heritage Association to make sure the work reaches the communities that need it most.

IX. Regional Successes

A. Avondale/Glen Elder Neighborhood Says No to Natural Gas Storage

Residents and legal aid attorneys celebrate their victory after the California Public Utilities Commission rejected the Sacramento Natural Gas Storage facility in the Avon Glen Elder neighborhood. *Photo Credit: Walking on Gas*

In 2007, Sacramento Natural Gas Storage (SNGS) put forward a proposal to pump and store eight billion cubic feet of natural gas beneath approximately 700 homes in South Sacramento, ostensibly to hedge against price fluctuations and due to concerns about the reliability of supply in natural gas markets. The Avondale/Glen Elder neighborhood that was targeted for the project is an ethnically and racially diverse predominantly low-income community located along the industrial borderline of south Sacramento. For SNGS, the neighborhood represented a valuable and convenient site, sitting atop a pre-existing natural gas reservoir which had been removed in the 1970's and 1980's. For many local residents however, the proposal was viewed as unsafe, hazardous, and yet another burden to bear amongst many others in their community. To win public support of the project, Sacramento Natural Gas Storage offered landowners a $500 signing bonus and $500 per year thereafter to homeowners who agreed to sign a contract to allow the gas storage beneath their homes. Despite the promise of financial compensation, many residents were concerned that this facility would put their property values, long-term health, and possibly even their lives in danger.

After five years of grassroots organizing and advocacy work from a community coalition represented by a team of legal aid and pro-bono attorneys, community organizers, and action researchers, the California Public Utilities Commission narrowly voted down the proposal (3-2) and the community secured an environmental justice win that garnered national attention. But as Constance Slider-Pierre, the president of the Avon/Glen Elder Neighborhood Association (AGENA) at the time emphasized in the wake of this victory,

"This is not just an issue about some people in Southeast Sacramento, this is about all of Sacramento, this is about all of California."[29]

At least four factors played into this successful "David and Goliath" type of win. First, an alliance between residents, lawyers, and action researchers, provided a potent combination of data, legal advocacy, and local knowledge. Second, homeowners were able to convince the PUC to undertake a full-scope Environmental Impact Report (EIR). This EIR ultimately showed that the facility could not mitigate the risk of an explosion, leakage, or water contamination due to the gas storage project. Third, at about the same time as the SNGS conflict took place, a natural gas pipeline owned by PG&E exploded, killing eight people and destroying homes in San Bruno, CA. Due to this incident, a law was passed requiring the commission to make the safety of the public its number one priority. Fourth, three commissioners who generally supported environmental justice values were appointed to the California Public Utilities Commission in 2011. Finally, just weeks before the commission's final vote, the Sacramento Bee newspaper released an in-depth feature that linked the racial history of the Avondale/Glen Elder neighborhood to the current prevalence of environmental hazards in the community.[30]

While the Avondale-Glen Elder neighborhood residents won the gas storage fight, they continue to struggle with environmental injustices within their community. Some of these ongoing issues include a lack of public transportation services (for which funding was cut in 2008), illegal dumping, abandoned homes, and inadequate access to healthy food. AGENA is still actively engaging community members to work together to ensure that the needs of the community are honored and met.

B. Mitigating the "Urban Heat Island" Effect by Growing the Urban Forest

The "urban heat island" effect refers to the phenomenon in which the land cover of buildings, roads, and limited green space results in the raising of ambient air and surface temperatures. Higher temperatures not only impact the comfort of urban dwellers, but also increase the risk of health problems and even the incidence of death in extreme heat events. Data from the EPA's Urban Heat Island Pilot Project—conducted from 1998-2002—indicate that from noon until 5:00 p.m., Sacramento's modeled heat island of ground level air temperatures was up to 1.8° F higher than if the area were vegetated.[31]

Like most EJ impacts, the urban heat island effect is unevenly manifested across geographic and social terrain. Recent national studies of land surface temperature indicate high variability, with extreme "hotspots" within already warm urban areas often found in neighborhoods with residents with low income and low levels of formal education. These areas tend to be home to large percentages of ethnic minorities and elderly people, who face high crime rates.[32] Even though Sacramento is known as the "City of Trees," not all neighborhoods have the same density of large shade trees. This is especially true for neighborhoods with numerous vacant lots.

Through mitigation strategies, such as increasing the urban tree canopy, "green" or "cool" roofs and permeable pavement, Sacramento has had some success in combating the urban heat island effect, even as average summer temperatures have been increasing. Additionally, successes in enhancing and expanding Sacramento's urban canopy have the potential to yield improvements in air and water quality, energy savings, increased wildlife habitat, and other psychological and community benefits.[33]

Students from Pacific Elementary School celebrate tree planting as part of the Sacramento Tree Foundation's initiative to plant 30,000 trees in one year throughout the Sacramento region.
Photo Credit: Sacramento City School District

The Sacramento Tree Foundation has launched a regional framework, the Greenprint, to plant and steward 5 million new trees. One million of these trees are targeted for under-resourced, low tree-canopy neighborhoods.[34] By focusing tree-planting efforts in the most disadvantaged communities in the region, this mitigation strategy can allocate resources to areas and populations who are most in need of the benefits of tree canopies, while improving the health, well-being, and equity of the region overall.

C. Investing in Climate Change Mitigation and Adaptation

By Evan Schmidt, Valley Vision

Climate change represents a significant threat to already disadvantaged communities, specifically in terms of increased exposure to extreme heat events, impact on access to drinking water, flooding, increased air pollution, and other environmental injustices.

California's Greenhouse Gas Reduction Fund (GGRF) allocated over $800 million in 2014-15 and will devote $2.2 billion in 2015-16 from cap and trade revenues for programs that reduce greenhouse gas (GGRF) emissions. GGRF funds are geared toward building sustainable communities and transportation systems, energy efficiency and renewable energy, and natural resources and waste diversion. Under Senate Bill 535, at least 25% of total GGRF must support climate mitigation and adaptation activities to benefit Disadvantaged Communities (DAC), as designated by CES2.0.

Because of this focus on Disadvantaged Communities, the process of applying for GGRF funding has the potential to catalyze other types of community projects and activism. Educating and unifying neighborhoods around GGR F projects can result in more engaged and active residents, while also bringing funding and infrastructure to underserved neighborhoods.

XV. Regional Successes

Over 300 people marched from the State Capitol down Capitol Mall to the Tower Bridge and back as part of the People's Climate March in Sacramento on Sept. 21, 2014. *Photo credit: Valentin Almanza*

Recognizing the value of capturing these competitive funds for DACs, the Sacramento Metropolitan Air Quality Management District and partner agencies began outreach in spring 2014 to communicate with community-based organizations to better understand community needs. The Air District contracted with Valley Vision to work with applicants and community-based organizations to build capacity, share resources, and facilitate collaboration across the region. Valley Vision is working with GGRF applicants, as well as neighborhood representatives, to facilitate strong, collaborative applications that reflect the true needs of the communities that these programs are intended to serve. Community Coalitions of EJ and health organizations such as Breathe California and a newly forming coalition called the Sacramento Action Project are holding forums in disadvantaged communities around Sacramento to inform residents about opportunities available through GGRF to collect information about neighborhood priorities and needs, and to find champions who would like to have a deeper engagement with GGRF applicants.

In 2015, the Sacramento region received over $ 21 million in GGRF investments. This represents 4.5% of the total statewide investment of over $465 million. 62% of SACOG regional GGRF are invested in DACs throughout the region and DACs represent 9% of the regional population. Regional projects focused in DACs include transportation investments, such as: the expansion of bus/light rail service; improved bus service frequency; free or reduced-fare transit passes/vouchers; and the implementation of a regional Smart Card transit fare system. Close to $3.5 million in Energy and Water Efficiency investments from Department of Water Resources to provide free water and energy efficient fixtures to residents in DACs. Improved systems to better detect leaks in the water system and control water loss within disadvantaged communities. Four regional nonprofits were awarded a combined $2.3 million dollars to plant more than 25,000 trees in south Sacramento's disadvantaged communities; utilize and repurpose fallen or cut trees for products and support tree-planting efforts in West Sacramento, Yuba City, and Marysville.

One housing and transportation investment project was funded $6.7 million by the Strategic Growth Council to develop an affordable housing complex within a half mile of a DAC with improved transit investments to improve high quality housing and transit connections for low income residents. The GGRF will increase in quantity over the next few years. While these awards catalyzed by SB 535 are crucial to achieving greenhouse gas reductions in the Sacramento region overall, and to providing benefits to disadvantaged communities in particular, there is still a need for ongoing and increased investment and community engagement to ensure that the Sacramento region has the needed funding to address climate injustice issues in our EJ communities.

While these awards catalyzed by SB 535 are crucial to achieving greenhouse gas reductions in the Sacramento region overall, and to providing benefits to disadvantaged communities in particular, there is still a need for ongoing and increased investment and community engagement to address climate injustice issues.

X. Conclusion

By documenting the cumulative environmental hazards and social vulnerabilities of low-income communities and communities of color in California's Capital Region, this report has revealed both the hardships and the emerging strengths of the region's diverse communities. The region does not face the worst-in-the-country challenges of air quality and pesticide applications seen in the San Joaquin Valley. Nor does it face the concentration of petro-chemical facilities that imperil the Los Angeles and Bay Areas. Still, the Capital Region has its share of EJ problems. This is evidenced by the fact that 10 of its census tracts rank in the top 10% of all tracts in the state, based on the measurements of environmental hazards and social vulnerability in CES 2.0.

These numbers however only tell part of the story. Several social and political characteristics also play an important role in shaping both environmental hazards and EJ activism in the region. These are characteristics that activists, foundations, and public agencies should seriously consider.

1. The region's core urban neighborhoods of West Sacramento, South Sacramento and Del Paso Heights as well as the Yuba/ Marysville area are designated as Disadvantaged Community (DAC's) by CES 2.0. These areas require urgent actions by public agencies, foundations, and advocates.

2. The region has many other communities that do not fall within the DAC definition but that are nonetheless beset with many, specific EJ problems and also should be prioritized for protection. This pattern can be seen most clearly by utilizing a regionally-normed version of CES 2.0. Doing so reveals a concentration of EJ issues in a larger number of neighborhoods in South Sacramento, as well as along the I-80 corridor, the north and eastern sections of Yolo County and Yuba County, and the Sacramento-San Joaquin Delta.

3. The EJ movement in the region is diverse. There are activists and leaders working on a host of issues, from water and air pollution, to pesticides, food, affordable housing, transportation and urban forestry issues. This diversity represents both a significant challenge and a tremendous opportunity for forming a powerful regional EJ coalition.

XI. Recommendations for Regional Action

The dire conditions of environmental injustice confronting low-income communities and communities of color in California's Capital Region may seem overwhelming. However, recently, local residents and regional leaders have begun to develop a cohesive framework for action to improve conditions in their communities, and to contribute to the region's burgeoning EJ movement. No one entity or sector can accomplish this change agenda alone. It will take the collaborative investment of public agencies, elected officials, foundations, businesses, advocates, and residents to commit to a future of health, prosperity, and sustainability for the Capital Region.

The following is an action framework that local and regional advocates and agencies could use to develop specific collaborative strategies to achieve environmental justice in California's Capital Region.

Supporting a Capital Region EJ movement as it seeks to implement the action framework below will promote a future in which the flag of health, prosperity, sustainability and equity will fly proudly over California's Capitol.

XI. Recommendations for Regional Action

A. Public Agency Actions

- Utilize regional land use, transportation, housing, as well as water and air pollution management planning processes to incorporate EJ principles and engage EJ organizations in meaningful ways.
- Use regional data mapping tools, including a regionally-specific adaptation of CES 2.0 such as the one developed by the CRC, or the California Air Resources Board's Environmental Justice Screening Method, to provide a better basis for targeting local and regional funding, improving upon what state-normed tools can typically achieve.[35]
- Enhance pro-active efforts to ensure that GGRF funds reach the most disadvantaged populations and places in the region.
- Ensure key areas of investment of GGRF funds focus on: improvements to public transit (access, quality of service, and cost); urban forest and open space enhancements; green jobs training; energy efficiency initiatives, including retrofits of heating and air systems in low-income housing; and the creation of community gardens, among others.
- Develop improved public outreach and engagement strategies to ensure that the most disadvantaged communities have the ability to inform agency decision-making. This includes addressing the lack of meaningful participation by disadvantaged communities at the level of board membership and in other areas of representational leadership.

B. Foundations and Other Funding Organizations

- Increase funding for the organizations and coalitions working on environmental justice in California's Capital Region.
- Consider developing a "Sacramento Region EJ Fund", bringing together resources from multiple funders (foundations, public agencies, businesses) to provide for a coordinated and sustainable funding strategy.[36]
- Use foundation networks to help Capital Region EJ advocates build effective relationships with national funders that can provide larger and longer-term grants.
- Provide capacity-building resources in addition to project-specific funding. This will allow area organizations to build more diverse and skilled staff, invest in infrastructure, link to larger networks, and develop longer-range strategies.
- Encourage the development of "green jobs with justice" sector providing living wage employment, environmental stewardship, and accountability to local residents.

C. Community/ Regional Organization Actions

- Build a cohesive regional coalition, or another collaborative structure, to leverage unique strengths, share resources, and develop larger-scale campaigns.
    - Draw on members from the former Coalition on Regional Equity, the Sacramento EJ working Group, and new partners working on issues such as labor, food justice, faith-based organizing, climate justice, and immigrant rights, among others.
    - Reach out to organizations outside the urban core to invite more rural partners to join a larger EJ coalition, including farmworker advocates, tribal communities, and Sierra Nevada foothill communities.
    - Develop a robust set of collaborative and leadership structures to provide effective decision-making, mechanisms for conflict resolution, and resource-sharing.
- Identify one or more initial campaign areas for collective work that have a defined set of targets, goals, and tactics. These could be specific to the Capital Region, or linked to a larger statewide coalition.
- Consider identifying new collaborative opportunities that can link and mobilize a broad coalition of EJ partners.
    - One promising possibility would be to engage in the development of a Sacramento version of the Identifying Violations Affecting Neighborhoods (IVAN), an effort that is currently led by the Environmental Justice Coalition for Water (EJCW). This crowd-sourcing system allows community members to report suspected environmental violations to a website. Reports are provided to a collaborative community-agency task force that develops priorities and facilitates timely responses to the reports. IVAN programs have been implemented in seven other California counties to date.[37] Sacramento IVAN partners would need to make crucial decisions about the geographic scope of their project (county-specific or regional).
- Use this report to develop a compelling narrative and framework to tell the story of environmental justice in the Capital Region, in a way that can attract new funding resources and mobilize new partners for effective, equitable, and sustained regional change.

XII. Appendix: Partial List of Organizations That Promote Environmental Justice in the Capital Region

Community Engagement and Organizing

Sacramento ACT (http:// www.sacact.org)
Capitol Area Organizing Project (https://www.facebook.com/CapitalRegionOP)
ACCE Sacramento (http:// www.calorganize.org/sacramento)
Ubuntu Green (http://www.ubuntugreen.org)
Legal Services of Northern California (http:// www.lsnc.net)[38]

Cultural Organizations

Asian Resources, Inc. (http:// www.asianresources.org)
Hmong Innovating Politics (http:// www.hipsacramento.org)
Sacramento Chinese Community Service Center (http:// www.sccsc.org)
Sol Collective (http:// www.solcollective.org)

Environmental/ Natural Resources

Environmental Council of Sacramento (ECOS) (http:// www.ecosacramento.net)
Environmental Justice Coalition for Water (http://www.ejcw.org)
GRID Alternatives (http://www.gridalternatives.org/)
Sacramento Air Quality Management District (http://www.airquality.org/)
Sacramento Tree Foundation (http:// www.sactree.com)

Food & Agriculture

Alchemist CDC (http:// www.alchemistcdc.org)
Center for Land-Based Learning (http://landbasedlearning.org/)
Harvest Sacramento (http:// www.soilborn.org)
Loaves & Fishes (http:// www.sacloaves.org)
Oak Park Sol Community Gardens (http:// www.oakparksol.org)
Pesticide Watch (http:// www.pesticidewatch.org)
Sacramento Food Bank and Family Services (http:// www.sacramentofoodbank.org)
Sacramento Food Policy Council (https://www.facebook.com/SacFoodPolicy)
Soil Born Farms (http:// www.soilborn.org)
The California Food Literacy Center (http:// www.foodliteracycenter.org)
Valley Vision (http:// www.valleyvision.org)
Yisrael Family Urban Farm (http:// www.yisraelfamilyfarm.net)

Housing

Housing California (http:// www.housingca.org)
Mutual Housing California (http:// www.mutualhousing.com)
Sacramento Housing Alliance (http:// www.sachousingalliance.org))
Sacramento Region NeighborWorks (http:// www.nwsac.org)
Sacramento Steps Forward (http://sacramentostepsforward.org/

Public Health

Breathe California of Sacramento-Emigrant Trails (http:// www.sacbreathe.org)
Health Education Council (http:// www.healthedcouncil.org)
Sacramento Building Healthy Communities (http:// www.sacbhc.org)

Transportation Organizations

Sacramento Area Bicycle Advocates (http:// www.sacbike.org)
Sacramento Area Council of Governments (http://www.sacog.org/)
Sacramento Regional Transit (http://www.sacrt.com/)
Walk Sacramento (http:// www.walksacramento.org)

XIII. Endnotes

[1] For research on EJ issues in other regions of the state see: Jonathan K. London, Ganlin Huang, and Tara Zagofsky. 2011. "Land of Risk/Land of Opportunity: Cumulative Environmental Vulnerability in California's San Joaquin Valley." Davis, CA: UC Davis Center for Regional Change, available at http://bit.ly/1Flh4IE; Jonathan K. London, Teri Greenfield, and Tara Zagofsky. 2013. "Revealing the Invisible Coachella Valley: Putting Cumulative Environmental Vulnerabilities on the Map." Davis, CA: UC Davis Center for Regional Change. http://bit.ly/1NImAIe, and Manuel Pastor, James Sadd, and Rachel Morello-Frosch. 2007. Still Toxic after All These Years: Air Quality and Environmental Justice in the San Francisco Bay Area. Center for Justice, Tolerance, & Community, University of California, Santa Cruz. http://bit.ly/1ODKKTm

[2] For research on the origins and evolution of the EJ movement see: Angela Anguelovski. 2013. "New Directions in Urban Environmental Justice: Rebuilding Community, Addressing Trauma, and Remaking Place." Journal of Planning Education and Research 33 (2): 160–75; Luke W. Cole, and Sheila R. Foster. 2001. From the Ground up: Environmental Racism and the Rise of the Environmental Justice Movement. New York, NY: NYU Press; and Julie Sze, and Jonathan K. London. 2008. "Environmental Justice at the Crossroads." Sociology Compass 2 (4): 1331–54.

[3] For a comprehensive history of environmental justice policy, see Alice Kaswan. 2012. "Environmental Justice and Environmental Law." Fordham Environmental Law Review. 24: 149.

[4] For information about CORE, see: Manuel Pastor and Chris Benner. 2011. "Planning for Equity, Fighting for Justice: Planners, Organizers and the Struggle for Metropolitan Inclusion." in E. Seltzer & A. Carbonell (eds.), Regional Planning in America: Practice and Prospect, 83–115. Cambridge, MA: Lincoln Institute for Land Policy; and Chris Benner et al. 2010. Sacramento SCORECARD: The Sacramento Coalition on Regional Equity Collaborative Assessment of Regional Development. Joint Project of CORE (Coalition on Regional Equity) and the Center for Regional Change. Available at http://bit.ly/1FE8Vd0

[5] American Community Survey 2009-2013.

[6] Ron Stodghill and Amanda Bower. "Welcome to America's Most Diverse City." Time Magazine, August 25, 2002. See http://ti.me/1iHHg64

[7] Robin Datel and Dennis Dingemans. 2008. "Immigrant Space and Place in Suburban Sacramento" in A. Singer, S. W. Hardwick and C. B. Brettell (eds.), Twenty-First Century Gateways: Immigrant Incorporation in Suburban America. Washington, D.C.: Brookings Institution Press.

[8] Rosie Cima. "The Least Segregated Cities in America." Priceonomics. Last consulted on the Web Jan 21, 2015 at http://bit.ly/1Lbeiqk.

[9] Op. Cit., 7.

[10] Isao Fujimoto and Gerardo Sandoval. (2006). "Tapping into California's Central Valley's Hidden Wealth: Its Rich Cultural Capital." Berkeley La Raza Law Journal, 17 (Fall), 245-264.

[11] This section draws on the excellent work of Jesus Hernandez in his articles "Race, Market Constraints, and the Housing Crisis: A Problem of Embeddedness." Kalfou 1.2 (2015) and Hernandez. 2009. "Redlining Revisited: Mortgage Lending Patterns in Sacramento 1930-2004," International Journal of Urban and Regional Research, Wiley Blackwell, 33(2),291-313.

[12] Ibid., Hernandez 2009.

[13] For a short documentary about the controversial demolition of Sacramento's diverse West End, see: "Urban Sacramento 1959: West End," Written by Chris Lango and published online on April 24, 2013. The original footage can be found at the Center for Sacramento History, at http://bit.ly/1OoGgQu. See also: Chrisanne Beckner. 2007. "Sacramento's Chinatown: Can the rail yards find room for a museum that commemorates the Chinese workers who lived and died there?" Sacramento News and Review, June 28, 2007. http://bit.ly/1L05mFM

[14] Op. cit., Hernandez, 2009.

[15] Ibid., Hernandez 2009

[16] Celia Lamb, "Aerojet, others try to halt toxic water flows." Sacramento Business Journal. June 18, 2006. http://bit.ly/1jlIjsk.

[17] For information about drinking water impacts from Aerojet, see Celia Lamb. 2004. "Aerojet Dispute Sheds Plaintiffs." Sacramento Business Journal, August 22, 2004; Kevin Mayer and Carmen Santiago-Ocasio. "Aerojet General Corp." 3 Superfund Site Overview, Pacific Southwest, US Environmental Protection Agency (EPA); US EPA Region 9 at http://1.usa.gov/1Mllx0p; US EPA. 2011. "Interim Record of Decision for Groundwater and Final Record of Decision for Soil for the Perimeter Groundwater Operable Unit OU-5." February 15, 2011; EDAW and Francine Dunn. "Water Supply Evaluation for the City of Rancho Cordova General Plan. City of Rancho Cordova." March 8, 2006; and Peter Waldman. "Perchlorate Runoff Flows to Water Supply of Millions." The Wall Street Journal, December 16, 2002.

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[19] For information about the Environmental Health Screening Tool (CalEnviroScreen 2.0), of the Cal EPA Office of Environmental Health Hazard Assessment's California Communities, see http://oehha.ca.gov/ej/ces2.html

[20] For more information about cumulative impacts and environmental justice see: George V. Alexeeff et al. "A screening method for assessing cumulative impacts." International Journal of Environmental Research and Public Health 9.2 (2012): 648-659; Ganlin Huang and Jonathan K. London. "Cumulative environmental vulnerability and environmental justice in California's San Joaquin Valley." International Journal of Environmental Research and Public Health 9.5 (2012): 1593-1608; and Rachel Morello-Frosch et al. "Understanding the cumulative impacts

of inequalities in environmental health: implications for policy." Health Affairs 30.5 (2011): 879-887.

[21] In 2012, the Legislature passed Senate Bill 535 directing that, in addition to reducing greenhouse gas emissions, a quarter of the proceeds from the Greenhouse Gas Reduction Fund must also go to projects that provide a benefit to disadvantaged communities (DACs). DACs are defined as communities that scored at or above the 75th percentile or above using the methodology in CalEnviroScreen 2.0 for ranking communities burdened by environmental and socioeconomic issues. A minimum of 25% of the funds must be spent to improve conditions in these communities and 10 percent of the funds must be for projects located within those communities. To learn more, got to: http://www.calepa.ca.gov/EnvJustice/GHGInvest/

[22] It should be noted that the highest levels of annual PM in the region are still below the California's PM standard of 12 microliters/ m3. For information on the US EPA's National Ambient Air Quality Standards (NAAQS), consult http://www.epa.gov/ttn/naaqs/criteria.html

[23] For information about SACOG's Rural-Urban Connections Strategy, see: http://www.sacog.org/rucs/

[24] Lisa Morehouse. "California Foodways: Native American Tribe Bets on Olive Oil." The California Report, 7 December 2014. Available at http://bit.ly/1Bup5Yb

[25] In a controversial decision, the California EPA removed the indicator measuring the concentration of people of color from CES 2.0. While the agency demonstrated that this change did not significantly affect the ultimate ranking of most census tracts, many EJ advocates believe that removing race from the tool detracts from its usefulness in highlighting the racial dimension of EJ issues. For CalEPA's analysis see http://bit.ly/1MkfR3Z.

[26] Chris Benner and Alex Karner. "Jobs-Housing Fit and Commute Performance" at http://bit.ly/1Nl0tG3; and Chris Benner and Bidita Tithi. Jobs-Housing Fit in the Sacramento Region. Center for Regional Change, UC Davis, 2011; and Michael Rawson and Mona Tawatao. "Growing Smaller and Cooler without Exclusion or Displacement." Duke Forum for Law and Social Change 4 (2012): 65.

[27] TransForm, and California Housing Partnership Corporation. Why Creating and Preserving Affordable Homes Near Transit Is a Highly Effective Climate Protection Strategy. 2014. Available at http://bit.ly/1Qbt1Rz

[28] For radio documentary resources on hunger in the Sacramento region, see "The View from Here: Hidden Hunger." Capital Public Radio, December 4, 2015 at http://www.capradio.org/hiddenhunger.

[29] For more information about the Sacramento Natural Gas Storage (SNGS) struggle, see http://walkingongas.com

[30] For links to media articles about the SNGS controversy, see http://bit.ly/1VWsOWg

[31] "EPA Urban Heat Island Pilot Project City Profile: Sacramento." Urban Heat Island Pilot Project (UHIPP) Archive, U.S. EPA. 1998-2002. Available at http://1.usa.gov/1VWsTsO.

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[33] For information on the benefits of urban forests in Sacramento, see: James R. Simpson. "Urban forest impacts on regional cooling and heating energy use: Sacramento County case study." Journal of Arboriculture 24 (1998): 201-214; and Gregory McPherson, E. Gregory, Klaus I. Scott, and James R. Simpson. "Estimating cost effectiveness of residential yard trees for improving air quality in Sacramento, California, using existing models." Atmospheric Environment 32.1 (1998): 75-84.

[34] For information about the Sacramento Tree Foundation's Greenprint Initiative, see http://www.sactree.com/pages/30

[35] For information about the Environmental Justice Screening Method developed by Jim Sadd, Rachel Morello Frosch and Manuel Pastor for the California Air Resources Board, see https://dornsife.usc.edu/pere/playingitsafe/.

[36] For one example of a multi-foundation fund, see the San Joaquin Valley Health Fund created by Sierra Health Foundation at http://www.shfcenter.org/sjvhealthfund.

[37] Shrayas Jatkar and Jonathan K. London, 2015. From Testimony to Transformation: The Identifying Violations Affecting Communities Program in California. UC Davis Center for Regional Change. Available at http://explore.regionalchange.ucdavis.edu/ourwork/projects/ivan For more information about IVAN, see http://ivanonline.org/

[38] Legal Services of Northern California does not engage in community organizing. It helps "to empower the poor to identify and defeat the causes and effects of poverty within their community."

PHOTO CREDITS

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