

A People's **Blueprint** for California Water

Thirsty For Justice:

The Environmental
Justice Coalition for Water



California Aqueducts and Dams

— California Water Project Aqueduct
 — State Water Project Aqueduct
 — Other Aqueduct

- California Water Project Dam
- State Water Project Dam
- ① Shasta and Trinity Dams
- ② Tehema Colusa Canal
- ③ Hetch Hetchy Aqueduct
- ④ California Aqueduct
- ⑤ Owens Valley/LA Aqueduct
- ⑥ Colorado River Aqueduct
- ⑦ All-American Canal

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California Water



The Environmental Justice
Coalition for Water
June 2005

The Environmental Justice Coalition for Water

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Our Mission

The Environmental Justice Coalition for Water (EJCW), formed in 1999, is a network of more than sixty grassroots groups and intermediary organizations. Our mission is to advance a progressive, community-driven policy agenda that affirmatively addresses the water-related issues, problems, and visions of low-income communities and people of color in California. The EJCW works to educate and build leadership in order for our members to become effective water advocates locally, regionally, and statewide. We seek to support and promote greater advocacy for environmental justice issues in California water policy and to support community participation in water policy forums.

Our Objectives

- Expand public rights related to water and improve democratic participation in local and state-wide water policy and planning by facilitating broad grassroots participation by communities historically excluded, especially people of color and the poor.
- Assist community leaders in becoming stronger community water advocates.
- Facilitate collaboration among environmental justice, rural, ethnic, and farm worker communities, and between these communities and the environmental movement.
- Improve the accountability of state water planning, policy, and decision-making processes to the needs and issues of low-income communities and people of color.

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INTRODUCTION

Achieving environmental justice requires redressing and counteracting the environmental discrimination that people of color and low-income people experience in their daily lives.

ACCESS TO CLEAN, SAFE, AND AFFORDABLE water is a fundamental human right essential for a healthy population, environment, and economy. In spite of the fact that California has the sixth largest economy in the world, millions of Californians lack a safe supply of drinking water.¹ Millions more fish in polluted lakes and streams, swim at sewage-contaminated beaches, and live in the path of polluted floodwaters.

This report will describe how this fundamental lack of access to safe and affordable water for drinking, fishing, recreation, and other uses primarily affects people of color and low-income communities in California. This lack of access is a direct result of the history of the state's water development, which is characterized by the creation of policies and institutions specifically designed to benefit wealthy and powerful interests while preventing large segments of California's population from participating in decisions about water quality and supply. Low-income communities and communities of color bear the environmental and health burdens of these management decisions.

We establish such lack of access to water and exclusion from decision making as an *environmental injustice*, part of a much larger reality of *environmental discrimination* experienced by

people of color and low-income communities in California.

Environmental discrimination can be defined as corporate and governmental actions and decisions that result in the disproportionate exposure of people of color and low-income people to environmental dangers that threaten their physical, social, economic, or environmental health and well-being. Environmental discrimination occurs when corporate or government policies deny low-income communities and communities of color equitable access to the ecological, social, economic, or political resources necessary for their health and prosperity.²

The key part of this definition is that a government institution, corporation, or powerful individual undertakes the discriminatory action and that the action has *disproportionate impacts on people of color and/or low-income populations*. Government inaction and lack of enforcement of existing laws are also a form of environmental discrimination.

Achieving environmental justice requires redressing and counteracting the environmental discrimination that people of color and low-income people experience in their daily lives. The U.S. Environmental Protection Agency (EPA)

defines environmental justice as “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. Fair treatment means that *no group of people, including racial, ethnic, or socioeconomic groups* should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies (emphasis added).”³

The contemporary environmental justice movement arose as a grassroots response to environmental discrimination. Early struggles against industries ranging from incinerators to hazardous waste dumps to uranium mines grew out of community experiences of toxic exposure and environmental degradation and emphasized that low-income communities and communities of color throughout the U.S. pay a disproportionate social and environmental price for industrial development and urban and rural growth.

The environmental justice movement seeks to reverse the trend that locks ordinary citizens—especially low-income people, immigrants, and people of color—out of governmental decision-making processes about environmental and

environmental health issues. The environmental justice movement challenges government policy that, in the words of environmental justice scholar Robert D. Bullard:

has (1) institutionalized unequal enforcement; (2) traded human health for profit; (3) placed the burden of proof on the victims and not the polluting industry; (4) legitimized human exposure to harmful chemicals, pesticides, and hazardous substances; (5) promoted “risky” technologies such as incinerators; (6) exploited the vulnerability of economically and politically disenfranchised communities; (7) subsidized ecological destruction; (8) created an industry around risk assessment; (9) delayed cleanup actions; and (10) failed to develop pollution prevention as the overarching and dominant strategy.⁴

The Environmental Justice Coalition for Water (EJCW) grows out of and grounds itself in this movement.

Milestones in Environmental Justice Organizing and Policy Development

The environmental justice movement originated independently from traditional environmentalism. The leadership of the environmental

movement is mostly white and affluent. It has traditionally focused on preserving endangered species and pristine ecosystems, which are often far removed from urban and agricultural communities. In contrast, most early environmental justice advocates emerged from the civil rights and anti-toxics struggles of the 1960s and 1970s. They viewed combating environmental racism as part of broader movements for social and political equity and self-determination.⁵ The leadership of the environmental justice movement is largely by people of color who live in low-income communities. It is concerned with the health and social and economic well-being of these communities and their local environments.

Although it is difficult to pinpoint precisely when the environmental justice movement began, an event in Warren County, North Carolina triggered a nationwide rise in awareness of environmental discrimination. In 1982, hundreds of residents rose up in opposition to the siting of a polychlorinated biphenyl (PCB) landfill in their rural and mostly African-American county. More than five hundred protesters were arrested after they lay down in the road to block trucks transporting hazardous loads. As a result of these protests and pressure from the Congressional Black Caucus, the U.S. General Accounting Office in 1983 conducted a study



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of eight Southern states, which found that a disproportionate number of hazardous waste landfills were located in predominantly Black communities.⁶

The Commission for Racial Justice of the United Church of Christ first coined the term “environmental racism” in their 1987 report entitled *Toxic Wastes and Race in the United States*. The Commission found a correlation between a person’s race and their likelihood of living near a hazardous waste facility.⁷ This groundbreaking report prompted numerous other studies that supported the report’s conclusions. Evidence mounted quickly supporting the claim that people of color and low-income communities bear a disproportionate share of environmental dangers and thus are victims of environmental racism.

In 1991, environmental justice activists from around the U.S. converged on Washington, D.C. for the first People of Color Environmental Leadership Summit. They demanded the right to equal environmental protection under the law, which they described as “the right to

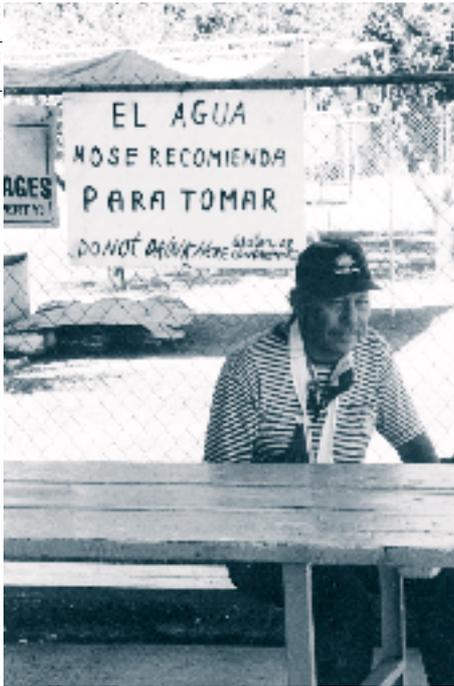
live, work, play, and pray in communities that are safe, healthy, and free of life-threatening conditions.”⁸ Crucial to the exercise of this right is “the right to participate as partners at every level of decision making including needs assessment, planning, implementation, enforcement, and evaluation.”⁹ (For the complete list of environmental justice principles, see Appendix A).

In 1994, President Clinton signed Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.” The order attempted to address environmental injustices embedded in existing federal laws and regulations by strengthening Title VI of the Civil Rights Act of 1964 and the National Environmental Policy Act; increasing the study of the disproportionate impacts and health effects of environmental hazards; and increasing grassroots participation in the study of these impacts.

Throughout the early 1990s, California’s grassroots environmental justice movement placed mounting pressure on the state’s legislators and government agencies to instate the

Executive Order. Community efforts resulted in legislation—passed between 1999 and 2001—that required the California Environmental Protection Agency (Cal/EPA) to take specific actions to implement environmental justice throughout its agencies. Since that time, grassroots activists have spent hundreds of hours participating in advisory committee meetings to craft agency policy and directives around the environmental problems they face. The tangible results have been mixed. Agencies such as Cal/EPA and the California Bay-Delta Authority (CALFED) have developed environmental justice language and programs on paper, but have largely failed to implement such public policy proclamations. Other agencies, such as the Department of Water Resources (DWR) and the Department of Health Services (DHS), have not begun any community-driven processes to incorporate environmental justice concerns.¹⁰

The environmental justice movement has worked to build a multi-racial, multi-lingual, cross-class movement.¹¹ Across the U.S., grassroots activists continue to mobilize in protest of landfills and incinerators, design commu-



Residents of many agricultural communities in California have fears about the safety of their drinking water.

nity-based air and water monitoring programs, organize to ensure community participation in urban redevelopment plans, among other victories. As the environmental justice movement has broadened its analysis of what constitutes environmental discrimination, groups have begun to draw connections between issues such as equal access to public transportation, immigrant rights, and climate change. Environmental justice advocates in the U.S. have joined their voices with communities and organizations across the globe fighting similar struggles. Women of color and youth have emerged as dynamic leaders.¹² As the movement as a whole has evolved a long-term vision for a mass environmental movement based on racial and social justice principles, it has reaffirmed its commitment to the many communities who continue to bear the burden of current environmental and social policies.¹³

An Environmental Justice Framework for Water

Environmental justice demands that community experiences of toxic contamination be addressed and that communities participate as equal partners in every level of decision-making. People of color and low-income communities in California continue to be denied these rights, and the

failure of government and private entities to protect water resources in vulnerable communities has exacerbated this injustice. Today, towns such as Raisin City and Alpaugh in California's Central Valley lack safe drinking water. Tribal members, Asian-Americans, Latinos, and African-Americans who fish in Clear Lake and the San Francisco and San Diego Bays, and family members who eat their catch are endangered by mercury and PCB contamination. In Northern California, indigenous peoples such as the Winnemem Wintu are fighting to prevent the flooding of their ancestral lands by dam expansion and the cultural annihilation carried out—but not completed—through genocidal U.S. government policies of the nineteenth and twentieth centuries.

This report is intended to provide people of color and low-income income communities with critical information regarding the water-related problems they face. By establishing a pattern of discrimination within water policy and management, we hope to help community members better understand how local environmental and health problems relate to statewide environmental injustices.

Throughout the report, case studies highlight the diverse ways in which communities of color

and low-income communities are impacted by water management and policy. While not exhaustive, these case studies exemplify some of the struggles, campaigns, and model projects communities are undertaking to address their local water issues. By presenting community voices in a context of current and historical injustices, we will help to develop a common language with which impacted communities can articulate their concerns, values, and visions for California water.

This report will help state, regional, and local policy-makers understand the severity of the injustices low-income communities and communities of color experience on a daily basis. It is our hope that this report will initiate a more thorough discussion between affected communities, public agencies, and key water management institutions of the importance of taking action to address chronic water problems and innovative ways to solve them.

The members of EJCW Steering Committee, who have extensive experience living and working in affected communities, identified this report's themes. Its content was further developed by community members and leaders, social and environmental activists, environmental and water professionals, elected officials, and

government agency representatives who attended several regional workshops co-convened by EJCW throughout the state between 1999 and 2004. This report does not claim to address all environmental justice issues related to water. In particular, we recognize that we have not adequately documented environmental injustices affecting Asian-American communities. There are other gaps as well, which we hope to address in the future.

The Organization of this Report

The report's first chapter analyzes the origins of environmental discrimination in California water policy. After an overview of how low income communities and communities of color have been historically left out of California water management, we analyze political, economic and social trends that produce the current exclusionary system and emerging policies and technologies that could further harm low-income communities and communities of color.

In the second chapter, we provide an overview of what we term "water governance": who controls water supply and quality and what agencies are responsible for ensuring that people have enough clean water. We explain the current system of water governance, examine

changing patterns in control over water, and provide examples of communities that face profound barriers to participating in water decisions. We conclude by discussing barriers within water regulatory entities that prevent community voices from entering into water decision-making.

In the third chapter, we provide a picture of water-related environmental injustices that low-income communities and communities of color face on a daily basis. These communities' lack of access to safe, affordable drinking water and healthy watersheds exemplifies the health burdens many communities bear as a result of California's water policies.

Our report concludes with policy recommendations for how to remedy some of the most pressing water concerns low-income communities and communities of color face, in order to guarantee the basic right to safe and affordable water.



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CHAPTER 1:

ORIGINS OF ENVIRONMENTAL DISCRIMINATION IN CALIFORNIA WATER POLICY

IN ORDER TO RECOGNIZE THE consistent pattern of environmental discrimination behind the water problems low-income and communities of color face, it is crucial to understand the historical development of California's water policy. Every aspect of the state's enormous water infrastructure—from how the water flows from river to faucet and irrigation ditch, to how agriculture, industry, and cities pollute waterways—is influenced by political structures that systematically exclude the diverse needs of California's low-income communities and communities of color. This chapter delves into the entrenched racism and monopolistic control over resources that permeate current California water management and keep water concentrated in the hands of an elite, white few.

Low-income communities and communities of color experience a chronic lack of access to water for drinking, subsistence, cultural, and recreational uses. This injustice stems not from a shortage of water, but from the politically motivated mismanagement of resources. If institutionalized racism and entrenched injustices are not acknowledged and addressed, emerging technological and management fixes such as desalination and water marketing will only increase the disproportionate economic, social, and health impacts the current water system places on people of color and low-income people.

1.1

HOW THE WATER MOVES AND HOW PEOPLE MOVE THE WATER

CALIFORNIA IS A WATER-RICH STATE. But it is also a state where nature's provision and people's demands are very much out of balance. The state's largest and most densely populated cities crowd the coast, sprawling back over hills and across valleys where neither aquifers nor local streams can support the number of people living there, in part because those who decided early in the state's history where to build cities and plow fields viewed nature's patterns as obstacles to be conquered through engineering.

Now most Californians turn on their faucets and expect clean drinking water to flow, hot and cold, from the tap. Few think of the water's journey as they fill glasses, wash dishes and brush their teeth. Many residents, especially in rural areas, get their water from private or community-run wells that pull water from underground pools that may lie just a few hundred feet below their homes. California's largest urban areas rely primarily on water from rivers that flow hundreds of miles away from the city's pipes and swimming pools. A resident of San Francisco, for example, drinks crystalline water that travels

a distance of over one hundred and fifty miles from the Hetch Hetchy Valley in Yosemite National Park, via pipes, aqueducts and a twenty-eight-mile tunnel through the Coast Range. In Los Angeles, residents wash vegetables and water lawns with snow that melts in the Sierra Nevada and travels the entire length of the San Joaquin Valley in the California Aqueduct, water piped through the Los Angeles Aqueduct across and down the state from the Owens Valley, and even water that fell as rain and snow over the Rocky Mountains that is funneled through the vast natural and concrete tributaries of the Colorado River.

The water cycle has been generous with California. Water moves from rain and snow to rivers and underground aquifers, transpires through plants and evaporates from ponds, lakes, and oceans before falling again. Every year nearly 200 million acre-feet of water fall from the sky over California.* Most of that water seeps into the soil, soaks into the roots of plants, or evaporates back into the atmosphere. On average more than 70 million acre-feet gather into streams and rivers, almost half of which empty into the Pacific Ocean along Northern California's coastline.¹

* An acre-foot of water is the amount necessary to fill an area of one acre to a depth of one foot, or 325,851 gallons. One acre-foot of water is roughly the amount needed yearly for domestic uses for one to two families or five to eight people.

The engineered movement of water from riverbed to reservoir follows a consistent course throughout the state, hauling water from the north to the south, and from the east to the west. California's vast water projects "harvest" about 42 million acre-feet of water each year, collecting it behind dams, shipping it down and across the state in aqueducts, pipes and canals, and pumping it from underground aquifers.² The largest water projects—the federal Central Valley Project and the California State Water Project—pull much of their water from the southern edge of the Sacramento-San Joaquin Rivers' confluence region.

Californians drinking tap water, boiling potatoes, and washing lettuce use a small fraction of the state's water supply. Throw in showers and dishwashers, laundry machines, toilets, and sprinklers, even combine households with small businesses like restaurants and coin-laundries, and still these municipal activities consume only about 15 percent of the state's harvested water.³ Manufacturing industries like computer chip companies in the Silicon Valley, which use water for cooling and cleaning equipment, use about 2 percent of the state's water. Where, then, does the majority of the harvested water go?

Nearly 80 percent is delivered to agricultural users for irrigation.⁴ Irrigators, whose operations range from a few acres of organic apricots to over 100,000 acres of industrial almonds and pistachios, buy vast amounts of imported river water—most of which is subsidized by taxpayers—from the state and the federal governments. While some irrigators harvest rainwater, divert local streams, and tap underground aquifers to water their crops, the bulk of the water flowing to California's farmlands originates from dams constructed specifically for water districts that

are managed by large-scale, industrial agriculturalists.

Left Out: Environmental Injustice in Water Development

It is hard to imagine that amidst such plenty, many California residents lack safe drinking water. At least 80,000 of California's 10.4 million households "may have a vulnerable source of water," according to the 1990 U.S. Census.⁵ A Department of Water Resources analysis of state



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health data revealed that about 250,000 Californians sometimes go without water due to insufficient supply. The study showed that over 4 million of the state's 35.5 million residents may be drinking unfiltered surface or well water that is contaminated with fecal matter or E. coli, and almost a million residents contend with sewage contamination of their water supply.⁶ Many of these Californians, the report acknowledges, "reside in rural, economically disadvantaged communities" and in metropolitan areas with overcrowded housing conditions.⁷

When this information is combined with California's demographic information, it becomes apparent that many of the Californians who do not have reliable access to safe, clean water are people of color. Indeed, people of color comprise the majority of Californians. The number of people of color in California is growing; by 2020, people of color will constitute two-thirds of the population.⁸ In addition, almost half of all Californians are considered "low income."⁹

Many of the rural, economically disadvantaged communities the Department of Water Resources report mentions are communities of color.¹⁰ In 2002, Tulare County was the top-producing agricultural county in both California and the U.S. with farm production valued at just

under \$3.5 billion.¹¹ With an average rainfall of about 10 inches a year, Tulare County depends on "imported" water supplies, mostly from the federal Central Valley Project. Rural communities in Tulare County do not have equal access to water, and have not flourished alongside industrial agriculture's irrigated fields.

In urban areas, California's industrial development has disproportionately burdened people of color.¹² Contaminant plumes and leaky underground storage tanks allow dangerous chemicals to seep into groundwater that supplies drinking water to communities of color located in these industrial districts. The old pipes in dilapidated housing found in many urban areas can leach lead into drinking water, and sewer systems left over from California's rapid urban expansion at the beginning of the twentieth century continue to dump untreated wastewater into water bodies along coastal urban communities. As a result, these communities face unequal access to water for a variety of uses, from recreation to subsistence fishing.

Immigration is changing the face of California and increasing the vulnerability of many low-income people and people of color to water-related problems. One quarter of California's population is foreign born. New Latino immi-

grants from El Salvador, Honduras, Guatemala and Nicaragua have joined the ranks of farm workers or settled in overcrowded urban housing.¹³ The number of Asian-Pacific Islanders has increased four-fold over the last two decades, as people from Laos, Vietnam, and Cambodia have immigrated to the state. In Oakland, 17 percent of people without plumbing are Asian-Pacific Islanders.¹⁴

Although California's diverse communities experience different water-related environmental injustices, all low-income communities and communities of color are linked by their experience of institutionalized racism and current and historical dominance of corporate interests in water policy. In order to understand the nature and extent of environmental racism in California water policy, it is important to first understand its history.

In California, water, the infrastructure necessary to move it, and the agencies and utilities assembled to govern it have mostly served to enrich privileged sectors of society while limiting the economic prosperity and political power of people of color and low-income communities.¹⁵ The current era of institutionalized racism began when white settlers stripped Native American and Mexican communities of



Shasta Dam, the keystone of the Central Valley Project, under construction in 1936. Water stored behind Northern California dams flows down to the delta of the Sacramento and San Joaquin rivers. There it is pumped into the Central Valley Project canals and then travels to the fields of the San Joaquin Valley and the cities of Southern California.

their land in order to establish logging, mining, transportation, and agricultural empires. The control of water development was necessary to further their economic gains, both by ensuring the growth of the industries they controlled, and by limiting access to those resources so as to guarantee a steady supply of low-wage labor.

It is difficult to trace the pervasive influence of landowners, bankers and speculative business people on the development of water policies and governing bodies because, as Gray Brechin, author of *Imperial San Francisco* wrote:

Power veils itself. From the mystery of what it does, what it owns, and, above all, who it is, it assumes added strength. [...] Because the machinations necessary to bring water to real estate are usually carried out in an intensely competitive arena, those who seek to unite them often operate under cover of vocal ideals of public service, making the task of those seeking to follow power exceedingly difficult.¹⁶

Many of the districts and agencies created to craft water policy were designed and continue to serve precisely this purpose: to mask the influence of private financial interests – such as large corporate farmers – in determining the

locations of the dams and canals and the destinations and uses of the state’s diverted public water resources. The powerful Kern County Water Agency, for example, was designed and created by the region’s largest landowners to access a county-wide tax base, or “zone of benefit” that subsidizes the landowners’ water payments to the California State Water Project.

The development of industrial agriculture played a particularly powerful role in creating and maintaining inequality in rural California, especially concerning access to water. In advocating for equal access to water, environmental justice claims do not seek to destroy or eradicate agriculture. Nor do such claims seek to paint industrial agriculture as a purely destructive force in California. No one can dispute the stunning power of the industry’s economy. Similarly, however, no one can dispute the devastating effect that the industry has had on the environment, in general, on the state’s water resources, and on the health of millions of people connected to the industry.

California’s economy towers over that of other states and would rank sixth in the world if compared with other countries.¹⁷ The state’s agricultural economy reached \$25.7 billion in direct sales in 2002.¹⁸ The Central Valley taken alone is

considered to be the most important agricultural region in the country. Of the seven counties that make up the San Joaquin Valley, three are top agricultural counties in both California and the U.S. – Fresno, Kern, and Tulare Counties.¹⁹ These same counties are among the poorest in California, and have large Latino populations. In Fresno, Kern, and Tulare counties, Latinos represent 44 percent, 38 percent, and 51 percent of the total population, respectively.²⁰ Industrial agriculture’s projected zones of benefit have always been, for many, zones of exclusion and hardship.²¹

1.2 CAUSES OF INEQUITABLE ACCESS TO WATER

THERE IS NO SINGLE CAUSE OF SOMETHING so complex as the evolution of greatly unequal access to water resources over a territory as large and geologically and culturally diverse as California. The causes identified here represent broad political and cultural trends that have shaped the development of inequality in access to water in California for the past several hundred years. Understanding these causes is essential to redress and counteract the environmental injustices now embedded in California's immense plumbing system and its water management policies.

Exclusionary Planning

California's vast and arcane web of water projects, agencies, policies and laws are all descendants of an old violation. When the Spanish conquered the "New World," they wrote the laws that were to govern native societies. These laws provided that water should be used for the common good; Spanish values dictated who constituted "common" and what was "good." Spanish allocation and management of water were incompatible with Native American practices of water use.²² Native American spiritual,

social and cultural values concerning water and the human use of water were given little attention in Spanish law. Indeed, under Spanish law, "the water system became a mighty vehicle and reason for mobilizing and controlling the labor of Native peoples."²³

The communal *acequia* irrigation system relied on cooperative labor and a proportional system of water distribution based on both a person's needs and the amount of water available. These systems survived under both Spanish and Mexican rule, and it wasn't until the U.S. invasion of California that they were truly dismantled.²⁴ The ceding of Spanish California to the United States in the Treaty of Guadalupe Hidalgo in 1848 and the discovery of gold by John Sutter just a week earlier ushered in a new era of institutionalized racism throughout California.

One of the most blatantly racist ideas that influenced Western development was "manifest destiny." Manifest destiny was the national mission supported by the U.S. government and its leaders giving American settlers the legal right and divine mandate to acquire and develop any lands in the territorial United States, including those recently "won" in the West. Native peoples and other non-whites were seen as a barrier to this mission.

The exclusion of indigenous peoples was fully and explicitly incorporated into federal water policies. Native American tribal life was devastated in California through the forced removal of entire villages and flooding of homelands that rendered tribes destitute. By 1870, an estimated 119,000 indigenous people in California had been killed due to massacres, disease and forced relocation.²⁵ In addition to these overt acts, land and water policies were written to invalidate the historic claims and treaty rights of native peoples. Miners and settlers ignored the property rights of Mexican ranchers, despite the promises made in the Treaty of Guadalupe Hidalgo to inviolably respect those rights. Ultimately, millions of acres of land were transferred to American settlers, thereby ending the Mexican rancho economy and culture in California.²⁶ As Tomas Almaguer states in his study of race and class divisions in California's early development, "ruthless subordination of [Mexican and Native American populations] was essential to the successful introduction of the new Anglo-American society in California. Its realization required the immediate dispossession of Mexicans and Indians from land needed for development."²⁷

The dominant logic of water law in California is, in theory, that of "reasonable and beneficial use." The California State Constitution and its Water Code define water as a public good



Farmland irrigated by a traditional *acequia*, New Mexico.

The Public Trust Doctrine

The public trust doctrine's roots lie in ancient Roman and English common law, which was adopted by American colonies as they became states. Originally intended to protect commerce and access to fisheries by holding tidelands and navigable waterways in trust for the people, recent court decisions have extended states' public trust responsibilities to include protecting environmental resources and traditional agriculture. As the following examples show, the public trust doctrine can be a powerful tool in the hands of low-income and communities of color and indigenous peoples in protecting water rights, access to public space, and fisheries.

An Early Public Interest Approach to Water

In 1985, a U.S. District Court in New Mexico ruled against the transfer of water from a communal *acequia* irrigation system to a ski area. The opinion acknowledged that this decision should involve more than just a buyer and seller of water.³² The ruling read in part:

“It is simply assumed by the Applicants that greater economic benefits are more desirable than the preservation of a cultural identity. Northern New Mexicans possess a fierce pride over their history, traditions and culture. This region of northern New Mexico and its living culture are recognized at the state and federal levels as possessing significant cultural value, not

measured in dollars and cents. The deep-felt and tradition-bound ties of northern New Mexico families to the land and water are central to maintenance of that culture.

I am persuaded that to transfer water rights, devoted for more than a century to agricultural purposes, in order to construct a playground for those who can pay is a poor trade indeed.”³³

Waiahole Ditch case expands public trust in Hawaii

For eighty years, sugar cane operations owned by such corporations as Campbell Estate, Dole Foods and Del Monte diverted water from streams on the windward side of Oahu via the Waiahole Ditch. The diversion deprived traditional taro farmers of irrigation water and harmed the ecology of Kane'ohe Bay's watershed, an important source of fish and natural resources for native Hawaiians. When the plantations shut down, a coalition of traditional farming and indigenous organizations petitioned the State Commission on Water Resources Management to restore water to the windward streams. When the Commission restored a fraction of the water but directed most to developments on the leeward side, the coalition took the

case to Hawaii's Supreme Court.³⁴ In two separate decisions, the court found that “the public trust doctrine applies to all water resources without exception or distinction,”³⁵ and ordered the Commission to return water to the windward streams.

The Hawaii case cited and expanded upon the California Supreme Court's 1983 decision to apply the public trust doctrine in order to restore Mono Lake. This case stopped the City of Los Angeles from diverting flows into the lake for municipal use, and affirmed the state's duty to use the public trust doctrine when reviewing current and past water allocations.³⁷

The Hawaii case has several implications for California public trust law. The right to fish in California is explicitly protected in the Declaration of Rights in Article 1, Section 25 of the state constitution. Fish have always been considered a public trust resource that must be preserved in condition fit for public trust uses by present and future generations. Under the broadest interpretation of the public trust requirement, the state would be required not only to warn of the dangers of eating contaminated fish, but would also be responsible for cleaning up pollution and providing reasonable access to healthy fisheries.

and hold the state responsible for managing it in the public interest.²⁸ These laws, combined with the tradition of protecting public access to navigation and fishing, form the basis of the public trust doctrine, which defines water as a common public resource, not private property. The state is thus charged with managing water to protect “reasonable and beneficial” uses and with ensuring that such uses do not violate the public trust as hoarding or speculative marketing would. However, embedded in the apparently benign logic of “reasonable and beneficial use” are two exclusionary principles: 1) water not *used* for agriculture or municipal purposes is water wasted and 2) the value of water usage is to be measured *economically*, not socially, culturally or environmentally.

The “use it or lose it” principle embedded in California water law requires water users to use their allotted water or risk losing the right to use it in the future. It fails to acknowledge many immigrant communities’ and Native peoples’ uses, which require the unhindered flows of rivers. Under this narrow definition of use, Native, ecosystem, and recreational uses of water are considered wasteful, and the environment is stripped of equal standing in policy debates about “reasonable and beneficial use.”²⁹

The systems of exclusion that have evolved in California water policy are complex. As with the Spanish missionaries’ use of water systems to control the labor of native peoples, the land barons behind industrial agriculture in California have harnessed state and federal water policy to control immigrant labor in rural communities for over 150 years.³⁰ With people of color explicitly excluded from all realms of early California politics, the state’s dominant white, landowning classes established frameworks for the political management of water that locked these communities out of both the debates and the benefits surrounding water resource development.³¹

Institutional Imperialism

The U.S. Bureau of Reclamation, which began as the federal Reclamation Service, took charge of creating and administering the nation’s largest irrigation projects after Theodore Roosevelt signed the 1902 Reclamation Act into law. The intent of the law was to create a vibrant rural agricultural heartland in the West. Frederick Haynes Newell, the first director of the Reclamation Service, said, “the object of reclamation law is primarily to put the public domain into the hands of small landowners.”³⁸ Not only did the law fail to meet this fundamental objective

but, as we will see below, it achieved the exact opposite of what it purportedly set out to do by carving up public land and handing it over to the state’s most powerful landowners. The Act marshaled in a new era of federally subsidized water infrastructure and agricultural-based subsidies to farmers regardless of the size of their acreage. Millions of dollars were allocated, first by the federal government to build dams and the federal Central Valley Project, then by the State of California to build the State Water Project.³⁹

Federal reclamation law also took over where the genocide of the nineteenth century left off, further driving Native Americans from their land and water.⁴⁰ The Reclamation Service—under the authority of an 1887 law that sought to break up reservations and convert the lands into private property—actually funded irrigation projects for white farmers using money from the sale of Native American land.⁴¹ Historian Donald Pisani writes that the “Reclamation Service had little real interest in the welfare of Native Americans, but it needed Indian land and money. The service had a clear objective: to provide as much land to white farmers as it could, using money from the sale of Indian land as well as from the reclamation fund.”



Karuk salmon fisherman at Ishi Pishi Falls on the Klamath River, 1800s.

Nutritional Justice on the Klamath River

For thousands of years, the Karuk Tribe of Northern California maintained the health of the Klamath Basin by controlled burning, careful harvesting of plant species, and regulation of salmon runs and harvest in the Klamath River. “Having evolved over an immense period of time, Karuk land management finds multiple expression: environmental knowledge, technical and ritual practices, underlying attitudes toward nature and a conception of the role of humans in the natural system” John Salter, Karuk Tribal Anthropologist, and Leaf Hillman, Director of Natural Resources for the Karuk tribe explain. “With us the relationship to the land is an inclusive way of life in which the spiritual link is constantly re-emerging.”⁴³

The Klamath River salmon runs are central to Karuk ceremonies and worldview. However, sustainable management of salmon runs that included the entire watershed does not fall within the California Water Code’s strict definition of “reasonable and beneficial use.” Indigenous groups such as

the Karuk suffered massacres, land theft, the loss of physical health and economic base, and cultural degradation during the colonization of California. “The Karuk tribe was one of the fifteen tribes that signed treaties that were never ratified by Congress,” Ron Reed, Cultural Biologist for the Karuk, explains. “[The federal government] took our 1.4 million acres, our hunting, and our water rights and we have been fighting every step of the way for what is rightfully ours. The Department of Natural Resources is failing miserably at managing our tribal resources that they are mandated by law to protect. We are still climbing out of this shattered existence that is with us today.”⁴⁴

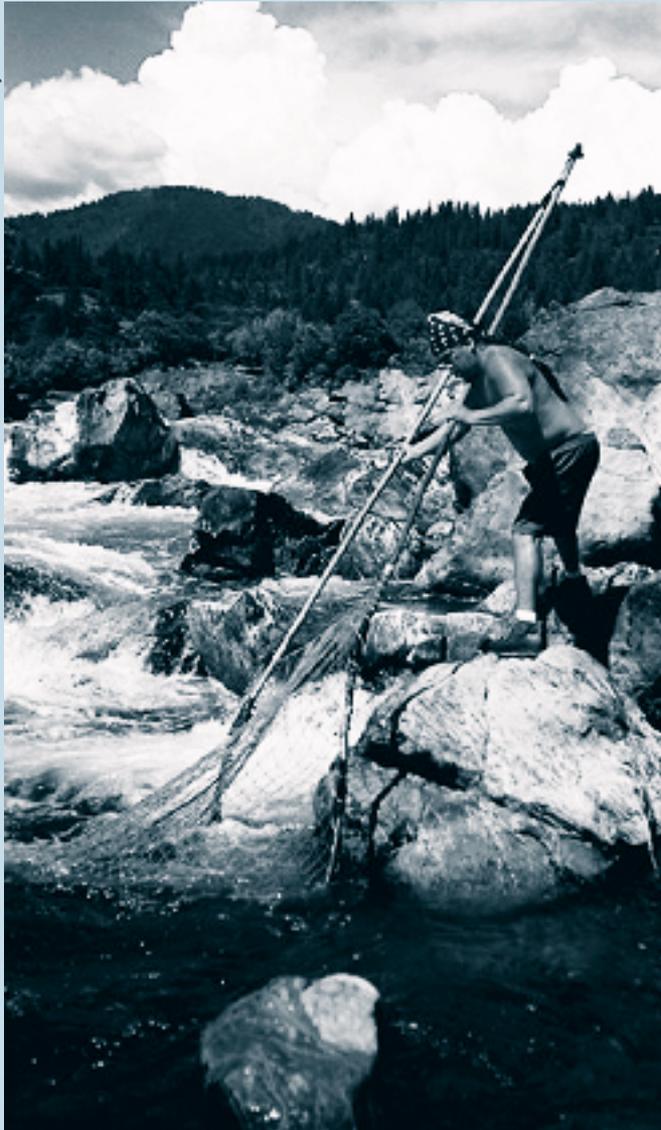
Hydroelectric dams operated by Pacificorp along the Klamath River pose one of the most immediate threats to the cultural practices and physical health of the Karuk people. The dams block salmon from 350 miles of spawning habitat. Water policy decisions that overlooked the inextricable tie between spiritual practices, tribal livelihoods, and ecosystem management caused the crash of the Karuk fishing economy and a rise in chronic poverty among the Klamath River tribes. The median income for Karuk families is just

\$13,000 per year.⁴⁵ The loss of fisheries replaced the traditional salmon and river-based diet of the Karuk with the high-starch, processed-food diet of poverty, which led to high rates of diabetes and heart disease. A recent study of nutrition among the Karuk found that “the devastation of the resource base, especially the fisheries, is also directly linked to the disproportionate unemployment and socioeconomic status of the Karuk people today.... The present decreasing access to traditional foods must therefore be understood in the broader context of cultural genocide.”⁴⁶

In 2004, Pacificorp submitted an application to the Federal Energy Regulatory Commission (FERC) to renew their dam operation licenses. For three years, the Hoopa, Yurok, Klamath and Karuk tribes, the Pacific Coast Federation of Fisherman’s Associations, and environmental groups such as Friends of the River met with Pacificorp to discuss the environmental, cultural, and fishery impacts of the dams. Pacificorp addressed none of these concerns in the license renewal application.

The Klamath River dams provide less than 2 percent of Pacificorp’s total

Courtesy: Ron Reed



Ron Reed, Cultural Biologist for the Karuk tribe, fishing for salmon at Ishi Pishi Falls, 2003.

operating power;⁴⁷ a study by the California Energy Commission found that already-operational power plants could easily replace any energy lost from decommissioning the Klamath River dams.⁴⁸ Their continued operation will cause cultural and physical destruction that water policy decision-makers are unwilling to factor into their cost-benefit analyses. Commenting on the relicensing process, Reed said, “You can sit there and say, Okay, that acre of land with potatoes or alfalfa is worth this amount of money. But we are talking about cultural resources here. How can I put money terms on these things? I threw my heart on the table for three years, saying these are the impacts of these dams on my people and it basically went unheard . . . They were working out of their boxes and didn’t realize the relationship of every aspect of [dam impacts] is related to our culture.”

After the negotiations with Pacificorp failed, the tribes and their allies began a campaign to “Bring the Klamath Salmon Home.” In 2004, tribal leaders traveled to Edinburgh, Scotland and presented their concerns at the annual stockholders meeting of Pacificorp’s parent company, the multinational

energy giant ScottishPower. As a result of the alliance’s organizing and media campaigns, Pacificorp has entered into a settlement renegotiation with indigenous, environmental and fishing groups. While Karuk tribal members face the possibility of another long, drawn-out, and ultimately futile process of negotiations, they continue to rely on government commodity foods and a single fishing spot to survive.

This is a human rights issue. We are talking about health and economic issues for the Karuk. Our people are not getting enough food. It’s not just about the use of a river, it’s about our human rights.

—Ron Reed
*Cultural Biologist
for the Karuk Tribe*

Water Rights: Legalized Discrimination

The economic designs of California’s first white American settlers set the course for the state’s confused and contradictory system of water law.⁴⁹ Early miners set up a system of claiming rights to water by getting to it first and using it in mining operations. The doctrine of “prior appropriation,” or “first in time, first in right,” was white settlers’ law of the land. They did not believe that Native Americans held any rights to the water—though they were obviously there first—because they did not “use” the water in the way that whites did. The white American idea of use meant diverting water from its natural flow and applying it to the earth to extract wealth.⁵⁰

Non-white laborers were excluded from the economic benefits of the gold rush and from the emerging water rights system. Many African-Americans were brought by Southern slave owners as low-paid or slave mine laborers.⁵¹ Chinese and Mexican competition for gold sparked so much fear amongst whites that they passed the Foreign Miners Tax Law of 1850, which required that all “foreigners” working a claim pay a fee and obtain a permit.⁵²

Prior appropriation gave miners the right to divert a stream into sluices to use on distant mine sites. This enabled speculators to set up regional water monopolies. Prior appropriation, which was upheld by the California Supreme Court in 1855 and 1875, was a “legal subsidy” for such early corporations in that it entitled them to take public property for free.⁵³

Riparian law—a facet of British common law—was also brought to early California. Early riparian doctrine gave landowners along a stream or river full rights to use water for all domestic needs, but not to divert the stream for mining or irrigation.⁵⁴ Starting in 1865 the California Supreme Court began amending the riparian doctrine to include limited irrigation.⁵⁵

In 1886, the California Supreme Court was forced to prioritize between the two doctrines. In the case of two agricultural monopolies in the San Joaquin Valley, *Lux v. Haggin*, the court declared that riparian rights were to be maintained on all private lands *except* where a person or corporation claiming prior appropriation rights had begun to use the water *before* the riparian owner acquired their property.⁵⁶ For a more detailed description of water rights, please see Appendix B.



Courtesy: Karuk Tribe

We like to call it “legalized feudalism.” We have a saying up here in Butte County, it’s like the tail wagging the dog. Of the 200,000 people in the county, there are only few people in the water districts making all the decisions about our water.

—Lynn Barris

Butte County resident and almond grower, water policy analyst, Butte County Environmental Council

Both prior appropriation and riparian rights set the stage for the intense concentration of wealth. The doctrines tied water rights to land ownership with no meaningful protections against monopoly or abuse of the public resource. In the wake of the *Lux v. Haggin* case, the dueling land barons—partners Charles Lux and Henry Miller versus their archenemy James Haggin—cut a deal and exited the courtroom in full control of the Kern River, and between them nearly a million acres of land waiting for irrigation water.

In most cases, the water rights claims that were registered with the state were for far more water than was ever recorded as flowing in the state’s major rivers.⁵⁷ The State Water Resources Control Board has estimated that there are still about three times as many rights as there is actual water.⁵⁸ Adjudication, the legal process in which claims are measured against actual water in a stream system, has helped resolve a small number of California’s water rights conflicts, however, the laws of property and contract alone cannot solve this problem. Since California’s state’s laws allow the sale of rights to unused water, large water users often exaggerate claims of historical water use for their personal profit.

Profit Before People

From the earliest years of European settlement, the land-owning class in California has viewed land always as a means of creating wealth. Whether by carving the hills to mine for gold, or creating new cities along the coast and in the desert, or draining ancient lakes to grow cotton, or leading a river hundreds of miles from its course to grow oranges in the desert, using land and water to create wealth dominated the politics of early California.⁵⁹

In his 1947 study *As You Sow*, Walter Goldschmidt described how the shift to industrial agriculture changed farming from a livelihood to a means of achieving wealth. This shift reshaped rural communities, effectively urbanizing them by consolidating small farms into large landholdings; creating a demand for cheap labor; and subjecting agricultural land to speculative prices, which often bankrupted small family farmers.⁶⁰

Since Goldschmidt’s 1947 study much work has been done to test his ideas. In a 1988 Congressional Research Report, Dean MacCanell concludes that “there is evidence for substantial deterioration of human communities and living conditions associated with the new form of

agriculture [and] it is exactly those areas where farming is most modern, rational and economically profitable that the worst general social conditions are found.”⁶¹ Industrial agriculture also forces small farms that cannot compete in a global economy out of business; from 1982 to 1997, the number of small farms consistently decreased.⁶²

Farming of large land holdings and building the water infrastructure to sustain agricultural empires have relied on what Goldschmidt calls “cheap labor,” most often low-income, people of color. African-Americans worked mostly as unskilled day laborers in the urban areas that grew up around the agricultural empires.⁶³ The Chinese laborers who built much of California’s water infrastructure and “reclaimed” thousands of acres of Delta wetland for farmland were prohibited from owning land. Many became tenant farmers, growing vegetables to sell to urban centers and mining towns. The Chinese Exclusion Act, passed in 1882, outlawed Chinese immigration. The Alien Land Act of 1906 prohibited both Chinese and Japanese immigrants from owning land in California, though Japanese tenant farmers continued to play an important role in agriculture.⁶⁴

According to the Pacific Institute report *Our Water, Our Future*, many Mexicans:

were forced to live in labor camps near the fields where they worked, or were confined to the most marginal of communities. They were treated as peon workers and were principally employed at low wages in agriculture or other types of undesirable manual work.... The stream of immigrants from Mexico to do the back-breaking manual work required to harvest agricultural crops continues to this day.⁶⁵

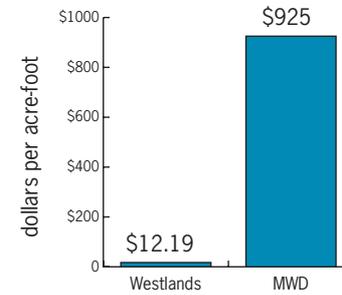
Undemocratic Political Institutions

In the early years of the twentieth century, industrial agriculture relied heavily upon technological advances in groundwater pumping. These advances allowed agribusiness to cultivate increasingly large acreages. Within a matter of decades, pumping had lowered underground water tables, causing the valley floor to drop as much as thirty feet.⁶⁶ The San Joaquin Valley's largest landowners then began clamoring for state and federal water projects to pipe in river water from Northern California to replace their depleted groundwater supplies. As they planned the state's massive waterworks, they were also designing a new political institution—the water district—to manage the system's water deliveries.⁶⁷

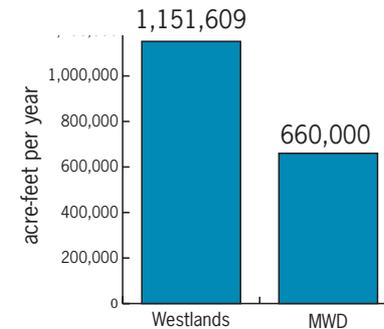
There are two distinct types of water management districts in California. One type—authorized by the Wright Act of 1887—has a more democratic structure and a board composed of elected members. These districts rely on local ground and surface water and serve smaller farms. The second type—authorized by the Water District Act of 1913—tends to be undemocratic as its board is composed of local or absentee landowning elites with voting power proportional to the dollar value of their property. “Property-weighted” voting excludes all non-landowning members of the district from decision-making. This second type of district has been the most prominent since the 1940s, largely due to the construction of the state and federal water projects. Merrill Goodall, a scholar of California water politics, told a 1991 Sacramento conference on water in California agriculture, “there is a simple, straightforward relationship between large corporate entities and the public agency [of the second type]. Concentrated land ownership is a primary source of political influence and there is a stable bias in the distribution of public benefits.”⁶⁸

Property-weighted voting in water districts evolved simultaneously with three trends in the San Joaquin Valley: (1) the increase in the concentration of land ownership; (2) the expansion of acreage under irrigation in the southern and

How much does Westlands Water District pay for water each year?



How much water does Westlands Water District use per year?



The Westlands Water District receives vast amounts of publicly-subsidized water at discounted prices, while over 18 million water users served by the Metropolitan Water District of Southern California, are paying over 75 times the price Westlands pays.

Sources: The Environmental Working Group, California Water Subsidies; and the Metropolitan Water District of Southern California.

western parts of the valley; and (3) the convergence of the largest public water projects and private water organizations in the state. These trends have blurred the distinction between public and private welfare. The result, according to Goodall, is that “both environmental degradation and social inequity have come to be described as ‘development.’”⁶⁹

One of the most extreme examples of undemocratic control within a landowner district is the Westlands Water District, which receives irrigation water from the federal Central Valley Project. In the late 1970s, the average farm size in Westlands was 2,200 acres, and the entire 600,000-acre district comprised only 216 farms.⁷⁰ In the 1980s, Dean MacCannell found some of the worst poverty conditions in California within the boundaries of the water district. He notes, “the Westlands is an area of small, poor towns surrounded by more than half a million acres of rich farmland held in 200 farming units owned by local farmers and by wealthy investors living in distant cities.”⁷¹

Monopolistic Influence of Public Water Projects

The undemocratic structure of water districts and the disproportionate political influence of landowners allowed them to twist and bend the

laws governing acreage limitations and allow this empire of disparity to bloom. In December 2004 the Environmental Working Group released a report showing that taxpayers spend about \$416 million a year subsidizing water deliveries to Central Valley Project agribusinesses and farms.⁷² The report showed that 67 percent of project water goes to the largest 10 percent of the agribusinesses. The Westlands Water District receives over 700,000 acre-feet of water each year, seven times more than any other contracting agency. Westlands paid \$13.4 million in 2002 for water that the Environmental Working Group estimates to be worth between \$80-110 million.

The State Water Project and the federal Central Valley Project sprang from, fit within, and contributed to a system of exclusion in rural California, where the lion’s share of the benefits of the state’s water resources and taxpayer funded public works flowed up hill to property owners. Once created, the projects increased and solidified the concentration of land and wealth among the white upper classes.

In February of 2005, the Bureau of Reclamation began signing new contracts with two hundred water districts and contractors who receive water from the Central Valley Project. These contracts lock California into delivering huge

Here in [Tulare County], you know that the big farmers, the big corporations, get the lion’s share. And the small farmers, particularly amongst the minority, the people, the main community, they get a little farm started, forget it.

—Graciela Martinez
Proyecto Campesino



Michael Bialecki

amounts of water to Central Valley growers for the next twenty-five to fifty years, increasing the likelihood that infrastructure projects such as the raising of Shasta Dam will be approved.⁷³ The proposed dam expansion will likely be pushed forward by the demands of districts that have been “promised” amounts of water that the state cannot deliver.⁷⁴ These projects have vast impacts for communities like the Winnemem Wintu, a Northern California tribe whose sacred sites would be flooded if the dam is raised. See Chapter 3 for a more detailed discussion of the Winnemem Wintu’s struggle.

The contracts do include a small rise in the price of project water, but they promise water that California cannot supply that irrigation districts do not really need. Agricultural acreage has dropped over the past forty years and many districts do not use their full annual allotments of water. By conserving a mere 5 percent of the water used on the alfalfa crop, growers could save five times the water that the Bureau’s most generous projections say would be stored by the expansion of the dam.⁷⁵ But profits, rather than efficient water use, are the main motivation for the dam expansion. According to the *Los Angeles Times*, the contract renewals “will virtually guarantee growers a dominant role in the state’s water markets,” as growers will be able

to sell extra water to urban areas and real estate developers.⁷⁶

As land uses in the Central Valley shift from agriculture to urban development, public funds are increasingly subsidizing luxury suburban development. Tejon Ranch, the largest property owner in the state, is turning its farmland into industrial parks and subdivisions through the development of a new city called Centennial. The ranch, which covers over 270,000 acres in southern Kern and northern Los Angeles counties, buys water from the State Water Project through the property-weighted Tejon-Castaic Water District. Dennis Mullins, Tejon’s general counsel, is the president of the water district’s board of directors and a member of the board of directors of the Kern Water Bank, the largest underground water storage facility in the U.S. The developers are so sure of their water supply for this new city that Mullins recently told the *Los Angeles Times*: “Even when the rest of the state is shut down and rationing, we’re still going to be in good shape.”⁷⁷ As residents of groundwater-dependent communities located only a few miles from the California Aqueduct go without safe water and drive up to fifty miles per week to purchase bottled water, Tejon Ranch plans to stick a spigot in the State Water Project and create their own private city.

Exclusionary Planning: Urban Land-Use Policies

Land-use decisions have a major influence on how our communities look today and why low-income communities and communities of color are so often located in environmentally degraded areas. Land-use planning describes the process by which local and county governments make decisions and establish policies about growth and service provision in a specific area. Land-use planning tools include the creation of county and city general plans and the crafting of local zoning laws that determine what types of land uses are allowed in a particular area.⁷⁸

Zoning decisions have long been used to concentrate undesired land uses, such as industrial or residential waste processing facilities, in low-income and communities of color.⁷⁹ Whites who did not want to live near noxious land uses, immigrants, people of color, or low-income people were able to influence zoning and industrial development to ensure that environmental degradation followed lines of segregation.⁸⁰ In San Francisco, one of the earliest applications of zoning was to isolate land uses such as shipbuilding facilities and tanneries on the east side of town, away from affluent, white neighborhoods.⁸¹ Simultaneously, San Francisco’s famous China-

town grew out of racist policies that prohibited Chinese immigrants from renting or owning housing or land anywhere else in the city.⁸²

Like agriculture, industrial growth often relied on the labor of people of color. As California rapidly urbanized from the turn of the century through World War II, immigrants and people of color came in search of work and to escape racism elsewhere in the U.S. Often the only jobs available to them were low-wage manufacturing and industrial work.⁸³ In Oakland, once known as the “Detroit of the West,” African-Americans who migrated from the South worked in shipyards and the Oakland Army Base during World War I and II.⁸⁴ Cheap, conveniently located housing was made available in cramped, segregated neighborhoods, creating a predominantly African-American neighborhood that still exists today.⁸⁵

White interests used land-use planning tools to prohibit people of color from moving into new areas. Racial covenants confined people of color to segregated neighborhoods. One notorious practice was the use of “redlining,” a form of property categorization based on race and income that banks used as legal justification for refusing home loans to people of color wanting to buy homes in white neighborhoods.⁸⁶ In

Los Angeles, housing titles that restricted sale or lease to persons other than whites confined African-Americans to the downtown Central Avenue district.⁸⁷

Zoning practices overlooked the impacts of development on local water sources. Sediment and pollutants produced toxic runoff that contaminated groundwater and flowed through the streets into nearby streams and bays.⁸⁸ One of the greatest oversights, and one with lasting impacts, was the practice of building in floodplains. San Francisco’s industrial district was

built in the floodplain marshes of Islais Creek and Yosemite Slough; Central Los Angeles is built in the floodplain of the L.A. River; and San Diego naval bases are built on paved-over wetlands. The flood-control function of floodplains and wetlands was never considered in zoning decisions, which created conditions that caused the flooding of the largely low-income, communities of color located in the flatlands. Industry was also virtually unregulated.⁸⁹ The lack of toxic waste disposal regulations and wastewater treatment plants created squalid housing and poor health conditions in these neighborhoods.



Zoning practices in many low-income communities lead to the contamination of streams, rivers, and groundwater.

Alisha Deen

Bayview Hunters Point is starting to be gentrified. The city is building houses, but people can't buy houses if they don't have jobs. The community doesn't get any money and then developers and the city say, 'well this is what is best for you,' but we say we know what is best for us. They have been destroying our community. They have been killing me with toxins, and then telling me I am not qualified to participate in any development in the area. That's gentrification.

—Olin Webb

Bayview Hunters Point Advocates and a life long resident of Bayview Hunters Point

Racist zoning practices kept people of color from moving out of polluted neighborhoods and participating in the next phase of U.S. metropolitan growth: urban sprawl.⁹⁰ Urban sprawl describes the expansion of spacious, single family housing developments on the outskirts of cities. The mass development of suburbs in the post-World War II era maintained and exacerbated segregation in U.S. cities. In *Crabgrass Frontier: the Suburbanization of the United States*, the definitive study of U.S. suburban development, Kenneth Jackson describes how the urbanization policies of local and national government “put its seal of approval on ethnic and racial discrimination and developed policies which had the result of the practical abandonment of large sections of older, industrial cities.”⁹¹

Public and private resources have flowed to new construction in the suburbs and white, mobile people have moved out of urban areas. The 1999 report *Building Upon Our Strengths: A Community Guide to Brownfields Redevelopment in the San Francisco Bay Area* examines the prevalence of former industrial sites in the Bay Area. The report notes that urban sprawl “essentially redirects public funding, public services, and new businesses out of the inner cities and older suburbs into newer suburbs. These new developments require new infrastructure investment for roads,

sewers and schools.”⁹² Suburban development requires large amounts of water. Separate houses with lawns use more water than the high-density housing characteristic of urban areas, requiring miles of water and sewer infrastructure and encouraging higher water consumption.⁹³

Many industries have followed lower labor costs and weaker government regulations to foreign countries. The manufacturing centers that provided stable jobs for many people of color severely declined throughout the 1960s and 1970s.⁹⁴ The combination of industrial relocation and “white flight” created an abandoned urban core that has lost major sources of revenue. Derelict buildings and contaminated lots—known as brownfields—are the toxic legacies of five decades of industrial production.⁹⁵ Communities lacking in political power have become concentrated in these landscapes filled with deserted factories, power plants, warehouses, railways and vacant lots.⁹⁶

Although environmental regulations are now in place, they are difficult to enforce because many abandoned sites have been toxic-ridden for many years. In Oakland, efforts to redevelop a former industrial site into a shoreline park in a community of color was delayed because the Port of Oakland failed to determine the extent

of contamination. The Port of Oakland then required a local non-profit organization to foot the bill for the environmental studies.¹⁰⁴ Brownfields also drive property values down, hampering revitalization in economically depressed areas. In the study *Brownfield Redevelopment: Case Studies*, the California Center for Land Recycling notes that “brownfields are disproportionately located in disinvested and underserved neighborhoods that have neither the financial resources to promote redevelopment, nor the expertise to work through a complex remediation and redevelopment process.”¹⁰⁵

Bay Area flatland communities such as West Oakland and San Francisco’s southern waterfront are home to high concentrations of people of color and high rates of poverty, and contain most of the area’s toxic sites.¹⁰⁶ Current zoning policy places new polluting sources in these so-called blighted neighborhoods, furthering cycles of neglect and discrimination.

Many low-income communities and communities of color now face a new threat. Gentrification describes a pattern of redevelopment in which affluent, usually white people move into neglected urban areas, thus pushing property values up and driving out long-term residents. Real estate developers cast urban areas as new

“hot spots” of culture, luring potential businesses and homeowners into the area.¹⁰⁷ In the process, many low-income people—often people of color—are subjected to increased policing, forced to leave their neighborhoods, or made homeless.¹⁰⁸

Low-income communities and communities of color are thus excluded from any redevelopment or revitalization that may occur in their neighborhoods.¹⁰⁹ When money flows into their areas, it rarely finances much-needed benefits for the local community, such as affordable housing. It often further excludes low-income, people of color from waterfront development and open space and pushes them into other environmentally degraded areas.

Control Over Water Equals Control Over Development

In California, water has been essential to urban growth. Water systems were developed in the 1800s by private companies, which built dams and pipelines to supply groundwater and river water to growing cities. In *Dam Nation* Cleo Woelfle-Erskine notes:

Early water barons usually owned land or development enterprises, and diverted

streams to dry areas, creating lush oases that lured new residents. Their waterworks turned what had been a free, common resource into a commodity—one that greatly increased the value of the lands they subdivided and sold. [. . .] Those too poor to tap into private waterworks drew water from public taps, bought it from peddlers at high per-gallon rates, or carried it from river and creeks that were polluted with human waste. Private water companies’ monopolistic practices often resulted in sporadic service and outbreaks of typhoid and cholera. Eventually, municipalities took over.¹¹⁰

In the early 1900s, California cities sought out distant water supplies in order to attract new industries and promote land speculation and development.¹¹¹ The quintessential example is Los Angeles. By piping water in from the Owens Valley hundreds of miles away, real estate speculators and city bureaucrats fueled a development boom that allowed them to cash in on land investments.¹¹² In San Francisco, the construction of the Hetch Hetchy Dam and aqueduct transferred crystal clear water from the Sierra Nevadas to San Francisco, allowing city politicians to attract developers and investors and thus extend the city’s influence.¹¹³

We are a very tiny city in the Southeast with lots of industry. But it's all an extractive nature. We have no health programs, no community programs. There are a lot of industrial sites. Bethlehem steel used to have eight hundred people all who lived in Maywood. You had a good middle class economy

—Maywood used to be the Beverly Hills of Southside Los Angeles. This used to be a good manufacturing town, with a lot of different good paying jobs. When you take away the good union paying jobs, basically you are left with a Wal-Mart economy.

—Felipe Aguirre
Comité Pro Uno

Industry Contaminates Groundwater in Southeast Los Angeles

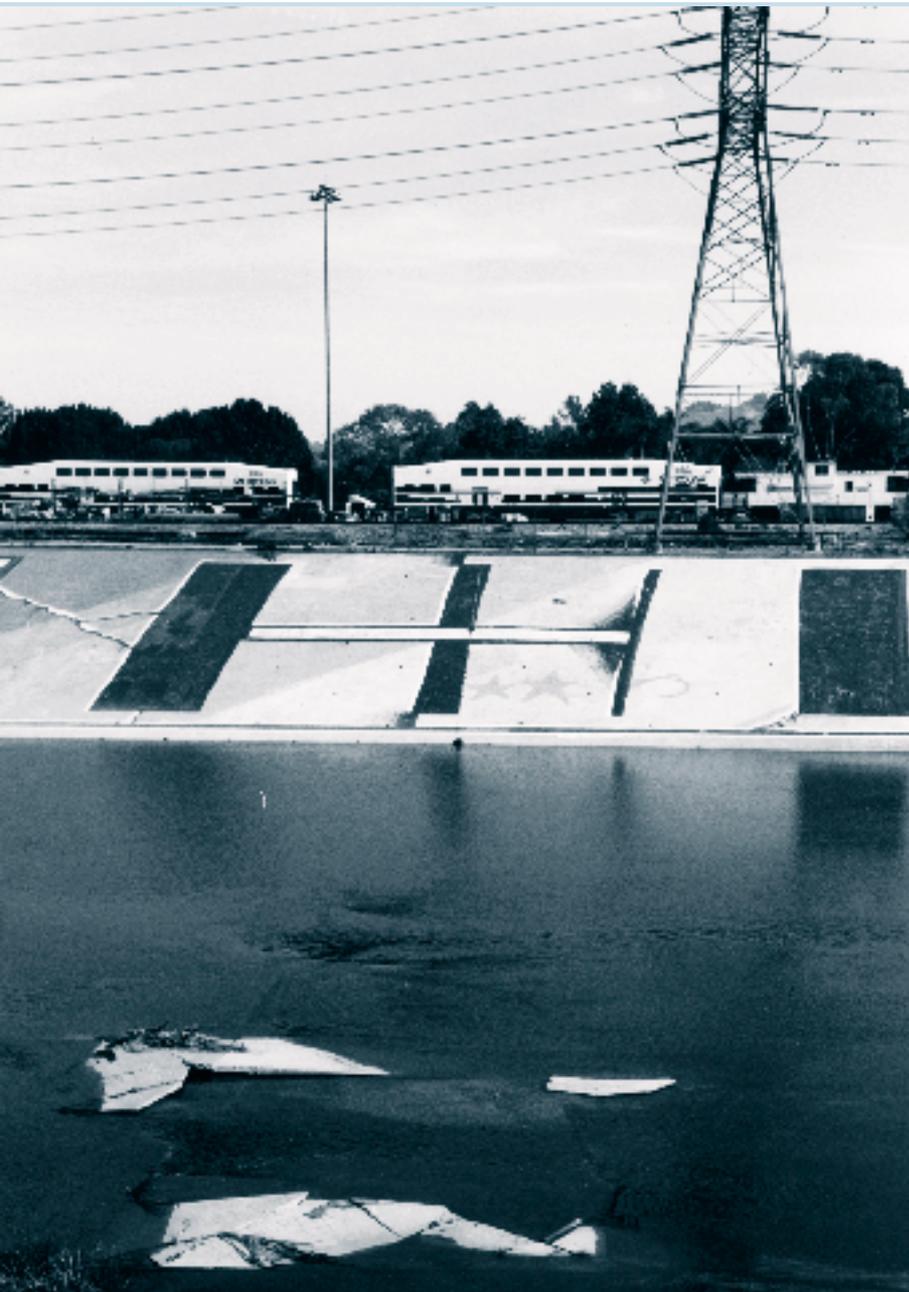
The community of Maywood, located in southeast Los Angeles, uses groundwater supplied by three small mutual water companies. Maywood is 96 percent Latino or Hispanic, with over 50 percent foreign born. Maywood resident's income is below the state average and unemployment rates are higher.⁹⁷ Maywood, only one square mile in size, is sandwiched between freeways, a rail yard, and industrial manufacturers. Comité Pro Uno, one of the few advocacy groups that organizes in the city, has identified a slew of toxic sites that can leach dangerous chemicals into local drinking water: a former paint plant; leaking underground fuel tanks; MTBE and benzene from oil additive companies; a Bethlehem steel plant; 6 major chromium plating operations; and lead from a glass bottle company.⁹⁸

One of the largest issues in Maywood has been the Pemaco Superfund site. Pemaco dumped degreasers, gasoline additives, and other industrial solvents containing volatile organic compounds

(VOCs), which spread in underground plumes and entered drinking water aquifers. A United States Geological Survey study found VOCs in two-thirds of groundwater samples in Los Angeles, and noted that VOC plumes can be seen as a “tracer” for patterns of urban industrial development.⁹⁹ In the South Coast area, VOCs from industrial sources have contaminated drinking water for more than a million people, causing four areas to be designated as Superfund sites.¹⁰⁰

Pemaco, a chemical blending plant active from the 1940s until 1991, produced chemicals for companies such as Lockheed Martin and Boeing, “chemicals for the war industry,” as Felipe Aguirre, a legal advocate with Comité Pro Uno, says.¹⁰¹ The site was listed as Superfund site after an assessment that “concluded the site posed a significant threat to human health, welfare and the environment. The shallow groundwater beneath the site was found to be contaminated.”¹⁰² The Public Health Assessment for the

Industrial facilities and railyards line the Los Angeles River and surround the city of Maywood.



Pemaco site noted, "...a common complaint among residents and teachers at the Heliotrope Elementary School was the tap water. When filling a glass from the tap, they report the water has a distinctly unpleasant odor and a slowly dissipating layer of bubbles. Many have complained to their water company."¹⁰³

Comité Pro Uno has been working to ensure residents have clean drinking water, but their efforts have been stymied by unresponsive water companies. Renters are not allowed to sit on the water company's board. According to Aguirre, the water board is dominated by business people who are not interested in protecting the rights or health of Maywood residents, many of whom are tenants. Renters cannot sit on the water board, so board decisions favor factory owners and landlords.

The Comité has held community events to educate local residents about water quality problems and is conducting independent tests for contaminants not identified in the water company's annual water quality reports. Aguirre believes that without community representation on the board of Maywood's mutual water companies, it will be difficult—if not impossible—to ensure

water supplies are protective of public health. Comité Pro Uno continues to advocate for the communities water needs, instead of industrial water needs, and community participation in local water decisions.

The problem is the lack of water. Water here in the Valley is like gold. It took me over a year and a half to be able to find an entitlement. This meant that I couldn't develop any housing, any new businesses, any new parks, and things of that nature that are needed in a community. I couldn't even serve the local communities because of the lack of the water.

—Victor Lopez
Mayor of Orange Cove

Suburban development in particular has flourished under the influence of water districts. In their study of Southern California's "hidden government" of water districts and agencies, Robert Gottlieb and Margaret Fitzsimmons note that:

Water development has been integral to the growth agenda. Water agencies, led by vigorous entrepreneurs who sought aggressively to capture and secure distant sources of supply so that their service areas could flourish and expand, became central to the political and institutional setting that promoted and sustained the urban, industrial, and agricultural expansion of the region.¹¹⁴

In the Central Valley, explosive suburban growth is causing a host of environmental problems while exacerbating social and economic inequalities. Resource-intensive, suburban-style development is expanding 55 percent faster in the Valley than elsewhere in the state, pricing out low-income people and covering some of the state's most fertile farmland with exclusive suburbs.¹¹⁵ Between 1994 and 1996, the Department of Conservation reported that nearly 18,000 acres of irrigated farmland was converted to urban use, a transformation that requires local

governments to construct more water, sewage, highway, and flood-control infrastructure.¹¹⁶ The 2005 Department of Water Resources report entitled *Flood Warnings: Responding to California's Flood Crisis* calls for sweeping new flood control systems necessary largely to protect new subdivisions in Central Valley floodplains.¹¹⁷

Despite these added costs and dangers, the powerful interests promoting suburban growth are unlikely to place voluntary restrictions on growth.¹¹⁸ Policy makers have only recently begun to address the historic exclusion of water-supply considerations from land-use planning processes.¹¹⁹ Senate Bill 221, passed in 2002, requires developers of subdivisions larger than five hundred units to prove that there is an adequate water supply to meet its needs.

Newhall Ranch, a planned 21,600-unit development along the Santa Clara River in semi-arid northern Los Angeles County, is one example of how current water policy fuels new development and the need for more water infrastructure. Castaic Lake Water Agency has acquired water from Kern County to maintain a supply for the development; environmental organizations have sued to block the deal.¹²⁰ John Gibler, a researcher with Public Citizen, has investigated how several corporations who control major

water agencies stand to make money on selling the rights to this water. His report *Water Heist* notes that, “with the houses built and the new dwellers moved in, the developers will push for new dams and more pumping of water from the north to save the stranded residents from drought.”¹²¹ The flow of water and money to these new developments directs resources away from urban areas and small, rural communities where many low-income people and people of color live.



Aerial view of a remnant farm surrounded by subdivisions, San Jose, 1996.

Robert Dawson

Definitions

Water transfers involve changes in the location or type of water use. In California, transfers usually do not involve water rights, only water. Transfers often occur between public or quasi-public agencies, and can take place as market-based transactions, which further the development of water markets, or as non-market reallocations, which may include the cutback of water deliveries against a water user's will. Non-market reallocations take place under government regulation through mechanisms such as the Endangered Species Act and the public trust doctrine, and will not be discussed here.

Water markets facilitate a water rights holder's ability to lease or sell water to users willing to pay for it. The term "water market" refers to the arena in which water sales take place. Water markets do not develop new sources of water; rather, they allow people and agencies to redistribute existing resources according to economic power and demand. As market-based transfers become more common, some believe that government regulators should oversee transfers to protect human and ecological communities from potential negative impacts such as groundwater depletion and the loss of agricultural jobs. Others favor minimal government regulation, which they say interferes with a water market's economic viability.

1.3 EMERGING ENVIRONMENTAL JUSTICE ISSUES IN CALIFORNIA WATER POLICY

Perspectives on Water Transfers

MARKET-BASED WATER TRANSFERS ARE A controversial and growing force in California water policy. Many proponents of water markets argue that market factors—rather than government bureaucracies—can regulate water use most effectively.¹²² They argue that creating a water market in which buyers and sellers can readily transfer water will increase conservation and efficient water distribution. Farmers would have incentives to conserve water because they could sell unused water on the market at a profit. Water districts, large municipal agencies, and many farmers favor water transfers because they stand to benefit economically from the transactions. In theory, the goal of market-based water transfers is to avoid the development of additional water infrastructure through a combination of increased efficiency and voluntary reallocation of water that is already stored and diverted.

Some environmental groups and environmental justice advocates favor water transfers and

some form of water markets. They argue that properly regulated market-based transfers can be a cost-effective way to meet growing urban demand. Many environmental groups, such as Environmental Defense in Los Angeles, think that government regulated, market-based water transfers provide an important means to acquire water for river or wetland restoration projects while avoiding the construction of new dams and aqueducts.¹²³ Voluntary transfers can also bring funds into agricultural communities to address a host of community needs.

Many environmental justice advocates, however, worry that these types of transfers could disguise a reshuffling of the state's public water between powerful corporations and landowners. As noted throughout this report, public and quasi-public agencies have cut out communities of color and low-income communities for decades precisely by creating policies and institutions that favor private and corporate interests. Public Citizen's report *Water Heist* highlights the ways in which private corporations that control water district boards of directors can influence water regulatory agencies in order to create and benefit from water markets. Environmental justice advocates fear that in an improperly or insufficiently regulated market, those who have already been left out would be further unable

to compete against those who have grown rich from decades of unjust water distribution in California.

The development of a California water market amenable to agribusiness and development corporations often requires expansion of infrastructure and at least partial privatization of a public resource. Advocates point to closed-door meetings between powerful landowners and state and federal water officials to re-configure the state's plumbing.¹²⁴ These proposals have included increasing exports from the Sacramento/San Joaquin Delta; raising Shasta Dam; integrating the state and federal water projects; building a peripheral canal around the Delta to transport more Northern California water south; and allowing for water sales between and within the public projects. All of these shifts lead toward the same goal: securing an ever-increasing imported water supply for the state's largest landowners.

Other environmental justice advocates argue that water sales are already occurring in many places, and that the best solution is to ensure government regulation. Their key requirement is the creation of public policies that ensure that potentially negative impacts are fully and fairly assessed, and then mitigated. In the jargon

of water bureaucracies, these impacts, ranging from the loss of jobs to the displacement of entire communities, are referred to as "externalities." An integral part of any mitigation within a transfer agreement is the commitment of resources and community-based programs for transitional assistance, re-training, education, apprenticeship, and job opportunities targeted to those most directly impacted. These policies would have to protect those who have long been underserved by traditional water development and management.

The Perspective from Imperial Valley

One example of a regulated market transaction is the water conservation and transfer program now taking shape within the Imperial Irrigation District (IID). The district uses more water—approximately 3.1 million acre-feet per year of California's 4.4 million acre-foot per year "entitlement" to Colorado River imports—than any other irrigation district in the U.S.¹²⁵ In 1998, IID negotiated a long-term agreement to conserve and transfer a portion of its entitlement to the San Diego County Water Authority (San Diego). In 2003, the IID-San Diego agreement was finalized as part of the complex multi-agency Quantification Settlement Agreement (QSA).¹²⁶ Under the final agreement, San

When agencies like the Imperial Irrigation District and the Metropolitan Water District move all this water between them, it affects the livelihoods of a whole lot of people who aren't involved in the negotiations. The real injustice is that these are the people who have been making all the farms survive and profit with their labor – farm workers, restaurants who supply food, packers, tractor drivers. The districts get to profit from all these people's hard work, and we are saying that they need to share some of that profit.

—Eric Reyes

Institute for Socio-Economic Justice and Progressive Community Development

Diego agreed to pay the district annually for increasing amounts of “conserved water,” which the irrigation district agreed to make available to the water authority. Initially, the water will be provided through voluntary land fallowing, and ultimately through agricultural conservation investments made on farms. This and other

Quantification Settlement Agreements are all integral parts of California’s efforts to reduce its dependency on Colorado River water.¹²⁷

In the midst of these deals between high-powered quasi-public agencies is an economically depressed community of farm workers, im-

migrants and indigenous groups. 23 percent of Imperial County residents live in poverty and the average per capita income is less than 60 percent of the California average. The population is 80 percent people of color and 72 percent Latino; more than three-quarters of the Imperial Valley’s farm labor workforce migrates daily or seasonally from Mexicali and other locations in Mexico. Most initial attention around the IID transaction focused on water loss to the Salton Sea, an important bird sanctuary. However, the transfer will also have huge effects on the many people whose livelihoods depend on the region’s agricultural economy.

As the IID-San Diego agreement was being finalized, farm workers and other community interests organized to request so-called mitigation funds to offset the impacts of transferring water out of agricultural production. They succeeded in securing a minimum commitment of \$20 million for job training, transitional assistance, and other types of community and local economic mitigation. The market-based transfer also includes the creation of a stakeholder advisory group called the Imperial Valley Socio-economic Improvement Committee, commonly referred to as the “Local Entity.” This group is responsible for monitoring how community impacts are calculated and developing the actual

Exclusionary Language

Like much bureaucratic language, words used in negotiating water transfers serve historically dominant interests while ignoring cultural values of traditionally excluded communities.

Externalities is a term used to describe the consequences of decisions or transactions that fall outside of the two groups negotiating a deal. This technical word hides the human and environmental consequences of any decision and makes it easy to keep those impacts out of the decision-making process. In

the case of market-based water transfers, the huge profits agricultural interests and districts stand to make in the face of drastic human and environmental impacts may be overlooked.

Cost-benefit analysis is the mechanism that agencies and districts use to quantify the impacts of a water sale or transfer. A cost-benefit analysis evaluates the relative costs and benefits of a proposed project. This requires placing dollar figures on all aspects of the sale or transfer, from the loss of revenue when an acre of agricultural land is taken out of production to intangible costs such as the loss of cultural

resources related to water. The many workers who provide the engine for California’s multi-million-dollar agricultural industry are reduced to “third parties,” effectively denying their crucial role in the local economy and their right to participate in water reallocation and land retirement decisions on equal footing with farmers and water agencies. Finally, some people question whether assigning a dollar amount for a person’s well-being or cultural values, as is done in cost-benefit analyses, can ever be an effective mechanism for addressing social inequality.

A Rural Northern California Perspective on Water Transfers

[Butte Environmental Council] has warned the public repeatedly about this being a hen house guarded by the vixen, but the brazen arrogance of the water sellers has never been more evident than from the following quote from the April 6, 1999 Butte County Water Commission meeting. The public voiced concern about the ability to mitigate losses to all the domestic well users if water levels dropped following sales, and Les Herringer, [Water Commission appointee] replied, “The intent of the ordinance is not to prevent impacts.”

—Butte Environmental Council¹³²

During the 1991-94 drought, large farmers in Northern California’s Butte County offered up their water to thirsty urban areas. In 1994 alone, rice farmers sold 115,000 acre-feet of water—for \$50 per acre-foot—to the State Drought Water Bank, which transferred it south. The California Department of Water Resources conducted neither public review nor outreach before the market-based transfer went into effect.¹³³

After selling their surface water, large rice farmers began pumping groundwater to irrigate their crops. The water level in local aquifers dropped, leading to a rapid drop in household well level near the water sale area.¹³⁴ During the summer of 1994, many well-dependent families experienced low water pressure and intermittent, unreliable water supply. Some drilled their wells deeper; in other cases, pumps were damaged by the sudden, unpredictable loss of water

A drop in well level causes heavy metals that sink to the bottom of a well to enter the drinking water supply. Families first learned about reduced groundwater supply when their wells went dry, so many people consumed contaminated water without their knowledge. The community of Durham, which depends on three municipal wells, had to close one of its wells and ration its remaining water due to contamination. Some small family farmers were unable to irrigate their crops.¹³⁵



Butte Environmental Council

Giant pumps dump water destined for Southern California into an irrigation canal in Butte County during the drought.

In response to public outcry, the state eventually created a committee of stakeholders—including community members—to examine the possible impacts of water transfers on small, rural areas such as Durham. The water districts refused to participate, until a “special-interest steering committee” was established.¹³⁶

The population of Butte County remains vulnerable to market-based water transfers. Since 1994, community activists have been meeting with Butte County officials to ensure that water sales include protections for environmental and community water uses. Local water districts continue to reject these efforts, and the County Board of Supervisors has failed to adopt any real protections.

mitigation plan. A representative of the United Farm Workers was appointed to the advisory group late in 2003, ensuring that farm workers have a voice and a vote in the Local Entity's deliberations.

Some environmental justice advocates see the Local Entity as one of the first opportunities to quantify the social impacts of market-based water transfers on a low-income community of color. Often called “third-party impacts,” effects on communities range from the loss of jobs to the loss of revenues for local governments. According to the Committee on Western Water Management, third parties are “those who stand to be affected by the transfer but are not represented in the negotiations and lack control over or input into the processes by which transfer proposals are evaluated and implemented.”¹²⁸ Impacts can also include less tangible losses from the loss of small businesses and economic vitality to the loss of cultural practices tied to an agricultural livelihood.

Martha Guzman, a Legislative Analyst with the California Rural Legal Assistance Foundation, sees the Local Entity process as an opportunity to provide meaningful economic benefits for farm workers and communities impacted by the deal. “Because water transfers and sales are

already taking place, there needs to be some mechanism to address the direct socio-economic impacts on communities,” she says. “If the costs of these losses can be properly calculated, and if appropriate mitigation programs can be developed to assist communities in adjusting, the Local Entity process might serve as a model for socioeconomic mitigation and improvement efforts as an integral part of other regulated water transfers in the future.”

Community Perspectives in the Westlands District: The Centrality of “Third Party” Impacts

This is going to affect...the entire community in the Fresno area, not just me, and all the other workers that are being impacted that work in the ranches nearby...[we're] having to move...having to relocate. If...there would have been discussions with the county, the government, and Westlands, maybe there wouldn't have been as many people being displaced.

—*Testimony of Jose Gonzalez, a farm worker displaced after 28 years of service to one company in the Westlands, at the Senate Committee on Housing and Community Development hearing on November 18, 2004, in Fresno, California.*



Courtesy CRLA

The Westlands Water District is made up of about one thousand square miles of land in Fresno and King counties in the western San Joaquin Valley. The district is governed by a board of directors elected solely by landowners, many of who do not reside there. In 2002, Westlands began a massive land retirement program involving approximately 100,000 acres.¹²⁹

Because much of the area's economy depends on active farming, land retirement will have significant impacts on local farm communities.¹³⁰ An estimated 750 farm workers have already been displaced from their jobs.¹³¹ Related industries will be directly impacted and the falling property values will further reduce funding for schools and local services. When these types of losses are termed "third party impacts," water districts such as Westlands are able to mask the profound social and economic losses that such drastic changes initiate.

Desalination: Looking for the Next Technological Fix

The prospect of having entire oceans on tap seems enchanting. In recent years, the process of desalination—taking salt from water—has attracted increasing attention from water agencies and the public. While there are no large-scale plants functioning in the U.S., thirty-one proposed California projects are currently being studied.¹³⁷ Desalination is still a technology in development. The largest projects in Tampa Bay and along the Colorado River have consistently run over budget and never reached full production.¹³⁸ Environmental and environmental justice organizations are concerned about the impacts of desalination, which range from increased

water rates, water pollution, and urban sprawl to the delayed decommissioning of polluting power plants, which are often located in low-income communities.

Desalination plants suck millions of gallons of ocean water through open intakes, killing 100 percent of aquatic organisms. The salt water is then forced through extremely thin membranes at high pressure. The salt is concentrated into brine, which is released back into the ocean or estuary. These processes are toxic to coastal waters and wreak havoc on their ecological balance, further depleting stocks of fish and shellfish that many low-income people rely on to supplement their food supply.¹³⁹

The desalination process requires enormous amounts of energy and additional infrastructure to pump ocean water into treatment plants. Since ocean water may contain toxins such as boron not commonly found in current drinking water sources, existing drinking water treatment plants may not purify desalinated water effectively. The costs associated with developing new treatment technologies, as well as high energy costs, make desalination very expensive.¹⁴⁰

Many proposed desalination plants would be "co-located" next to older power plants in order

to use the power plant's water intake facilities and cooling water. As a desalination plant justifies the continued use of large amounts of cooling water, it frees power plants from the obligation to develop cooling water recycling strategies.

The power plant provides cheap energy to the desalination facility; in fact, desalination requires so much energy that many old "peaker" plants that run only when demand is highest will need to run all night. This increase in demand will increase air pollution in surrounding low-income neighborhoods, most of which are home to people of color.¹⁴¹ Desalination will also thwart grassroots efforts to decommission dirty power plants. Residents of Huntington Beach have been struggling to shut down a nearby power plant for years; a proposed desalination plant would extend the facility's life.¹⁴²

With so many disadvantages, who is pushing desalination? Industries such as membrane-producers and electricity companies will make millions of dollars off the new plants. Private water companies and housing developers also stand to benefit from growth in coastal areas that currently lack access to additional sources of imported water.¹⁴³ Most proposed desalination plants would serve affluent communities



The Delta was once an expanse of swampy islands crossed by the two major rivers and countless muddy creeks. The Delta islands were “reclaimed” from the swamps when Chinese immigrant laborers used pumps to drain the land and built levees to hold back the water. Now, after decades of farming the islands, the ground has dropped up to thirty feet below sea level. The islands are protected from the salt waters of the San Francisco Bay by over 1,000 miles of aging levees. The Delta is the heart of California’s artificial water distribution system. If the levees collapsed and salt water rushed in, the state and federal water projects would be paralyzed.

in Marin County, the Monterey area, Cambria, southern Orange County and northern San Diego County. Many environmental justice advocates argue that this “new” water will be used to fuel unsustainable suburban development that prices out low-income communities and communities of color.

There are many cost-effective ways to ensure that all Californians receive safe, affordable drinking water. One solution is to address water management. As we show throughout this report, California’s water problems do not stem from a lack of water, but from its inequitable distribution. In addition, existing technologies

can increase California’s water supply at much lower costs to tax payers. The costs of desalination run at least four times the cost of conservation and twice that of water reuse. Water reuse options—treating brackish, or less salty, water and using treated wastewater to its maximum potential—are cost-effective and efficient.¹⁴⁴ Urban water conservation alone could account for over 30 percent of the state’s current urban water needs.¹⁴⁵

Urban water conservation programs increase supply without building new infrastructure. The most effective conservation programs have been delivered by community-based organizations that provide jobs and training within their own communities. Five such organizations affiliated with the Los Angeles Conservation Council have exchanged more than 1.3 million toilets for ultra-low flow models, employing hundreds of community members in the process.

In contrast, desalination plants along the California coastline would fuel exclusive coastal development and increase urban sprawl while setting a precedent for the privatization of the ocean itself. Neighboring low-income communities and communities of color would bear the brunt of the plants’ impacts while receiving none of their benefits.

CHAPTER CONCLUSION

California's water problems do not stem from too little water, but rather from greed, racism, and exclusion. People of color were systematically excluded from the development of water policy, which was based on a system of water rights that would benefit the white elites' economic uses of water resources and support their agricultural empires. The racism of early white settlers marginalized people of color, and both racism and exclusion became institutionalized in water policy. In urban areas, similar patterns of exclusion created areas of neglect and abandonment for low-income people and people of color while providing white, elite interests with opportunities for economic growth.

Corporate agribusiness and real-estate developers are becoming dangerously intertwined as farmlands are rapidly converted to unsustainable suburban tract homes, siphoning water and other resources away from urban areas and small, rural communities, often at taxpayer expense. They have no incentive to implement cost-effective, efficient solutions to water supply challenges. The "solutions" that come from water industry insiders actually perpetuate patterns of environmental discrimination; desalination is a clear example of such a solution that will pro-

vide expensive water for white suburbs, while inner-city and rural plumbing systems serving low-income communities and people of color continue to corrode. As the federal government commits California's water to fifty more years of cheap agricultural use, policy-makers and farmers refuse to engage in meaningful discussions around agricultural conservation.

The history of California's water development has set contemporary water management on a continued course of discrimination and exclusion. Environmental injustices in California water policy will continue until water is managed for the benefit of the public.

In Los Angeles, community based organizations recycle water-guzzling toilets and install water efficient toilets, creating local employment opportunities in the process.







CHAPTER 2:
ENVIRONMENTAL
GOVERNANCE

INJUSTICES IN WATER

CALIFORNIA'S RACIST AND EXCLUSIONARY water policy has resulted in a complicated, fragmented system of water control and regulation, or *water governance*. Water governance refers to the control over and regulation of water quality and supply. The agencies that are charged with guaranteeing clean, affordable water to all Californians have failed to ensure true public participation in decision-making and have not addressed community water needs.

This chapter untangles the complex web of public, quasi-public, and private organizations that play a role in the management and regulation of water resources. While some agencies have adopted token environmental justice policies, regulatory bodies have proven incapable of including low-income communities and communities of color in making deci-

sions about their water resources. By highlighting some of the most glaring examples of community exclusion from water governance and detailing the barriers to public participation, we aim to compel regulatory agencies to make real changes in their programs and policies that will ensure the full participation of all communities in the decisions that affect their water resources.

2.1 WHO CONTROLS CALIFORNIA'S WATER TODAY?

Water Districts As Hidden Governments

MOST CALIFORNIANS ARE NOT AWARE THAT there is a “hidden government” that controls their water.¹ It is estimated that more than 3,700 public and private agencies in California deal with some aspect of water supply, use, or treatment.² Many of these are “special districts” –technically separate, local governments that provide public services to particular areas.³

The different types of special districts range from rural mutual water companies that administer a single well to the Metropolitan Water District of Southern California, which is a consortium of 26 cities and water districts serving almost 18 million people.⁴ They include public utility districts, which provide services from drinking water to sewage systems, and special districts specifically created to supply irrigation water. There are twenty-three different types of districts, local agencies, and entities identified in the California Water Code that have some responsibility for the provision of safe, affordable water.⁵ For an overview of some of the different types of water districts, please see Appendix C.

Special districts have very broadly defined powers, including the authority to build projects such as dams and canals and to tax people and property owners within the district to pay for the projects. Autonomous boards of directors govern more than half of these districts.⁶

In 2000, the Little Hoover Commission released an in-depth study of special districts, which notes “policy-makers have expressed concern about the proliferation and fragmentation of local governments, including special districts. In their eyes, California’s 58 counties, 474 cities and more than 3,800 special districts are evidence of an uncoordinated, unwieldy and complex system of local government.”⁷ The lack of accountability, public oversight, and public participation within special districts creates a system of water governance that excludes most Californians.

Special districts are often invisible to the public and policy-makers, compromising oversight and reducing accountability.

Public Citizen’s report *WaterHeist* found that the Department of Water Resources transferred responsibility for one of California’s largest underground water storage facilities to the Kern County Water Agency, who transferred it to the Kern Water Bank Authority, a collection of

water districts controlled by real-estate developers and one corporation who are planning to use the water for suburban development.⁸ One small water district in Siskiyou County tried to sell half a billion gallons of spring water to the multinational corporation Nestle without conducting an Environmental Impact Review. The deal has been slowed by a group of citizens who sued the district.⁹

Elections in special districts have minimal public input and participation. Anecdotal evidence suggests that few people attend their local water service board meetings and have little understanding of how water districts function. The Little Hoover Commission’s analysis of special district elections in Sacramento County showed that 43 percent of water and irrigation district board members were appointed. Voter participation in open elections averaged only 11 percent.¹⁰

Districts have limited financial accountability. Water districts submit financial records only to the State Controller, which hampers public and government oversight. Special districts have lax accounting rules that allow inconsistent fee and capital reporting. As a result, water districts have reported billions dollars in cash reserves, unbeknownst to the public and many policy

makers. In 1999, the Metropolitan Water District of Southern California was found to have \$4 billion dollars in reserve. These funds are not factored into any public discussions of how to improve water service and infrastructure to customers, effectively “hiding” this money from public oversight.¹¹ The public pays for water service improvements through public bonds, while these districts often have huge sums of money they are unwilling to commit to public service provision.

Landowner Districts: Inherently Undemocratic Institutions

One type of special district exhibits particularly flagrant governance and accountability problems: the landowner district. In most landowner districts, votes are based on total acreage or assessed real estate. In irrigation districts, property owners are entitled to one vote per \$100 of assessed real estate value; and in water conservation districts, landowners receive one vote per acre.

Given the concentration of land in the hands of a wealthy few throughout the Central Valley and other agricultural regions of the state, many residents are completely excluded from participating in the governance of their water district.

Not everyone living within a district’s boundaries is a landowner, yet everyone is affected by the district’s actions. In some cases, communities subsidize these inequitable water governance structures. Irrigation districts may assess fees, parcel taxes, and collect payments from non-voting residents. Landowner districts do not prioritize building infrastructure for uses that do not provide a direct economic benefit to landowners. The federal Central Valley Project’s Friant Division provides surface water to over thirty-three water districts from Chowchilla to Arvin. However, only three of these districts actually provide potable water service to the communities within their borders. For example, many residents in Strathmore, a small, predominately Latino town in Tulare County, pay monthly fees to the landowner-based Lindsay-Strathmore Irrigation District. Instead of potable drinking water, these residents receive unfiltered canal water. The district claims it costs too much money to provide potable water to the community, even though drinking water is presumably what people are paying for.¹²

The only ones that can be on the board or serve in that capacity are the landowners. That’s one of the things that stops a lot of people from presenting themselves at these meetings. When somebody who is a water user in a community stands up to speak they are knocked down by being asked if they’re a landowner or not.

—Graciela Martinez
Proyecto Campesino

Deficient Water Governance in California Groundwater

In California, eight state agencies and over one thousand local and regional agencies play some role in monitoring and protecting groundwater quality. California still lacks a comprehensive groundwater management system despite, or perhaps due to, the many agencies involved in groundwater management.

According to the Water Education Foundation, “...attempts over the years to adopt statewide groundwater regulations have been vigorously opposed by overlying landowners, particularly agricultural interests and local water districts.”¹³ The *de facto* system for groundwater management is the monopoly of property rights; the right to build a well on a private property is rarely challenged, despite the fact that 43 percent of Californians rely on groundwater for drinking water. California is the largest user of groundwater in the nation, for both urban and agricultural uses.¹⁴

There are several environmental injustices resulting from a lack of groundwater management:

There is no public discussion of what constitutes “beneficial use.” Unregulated ground-

water pumping, often for agricultural purposes, has led to massive “overdraft” of groundwater supplies. Overdraft occurs when more water is pumped out of the ground than is replenished by rainfall or runoff. California’s annual groundwater overdraft is estimated at 1 and 2 million acre-feet. Overdraft results increased water pumping costs, land subsidence, decreased water quality, and environmental degradation, all of which interfere with other beneficial uses of water.¹⁵

Property owners may use and pollute groundwater at will. The majority of groundwater is used in agriculture, and agricultural runoff is a major source of groundwater pollution.¹⁶

Legal adjudication is long and difficult. The process that defines and quantifies the rights of all parties to a groundwater basin is often inaccessible to communities who are regularly underrepresented within the judicial system and face financial barriers to paying lawyers and court fees.¹⁷

Groundwater regulation is not mandatory. There is no way to ensure a county government will develop groundwater management plans, especially if local corporate or landowner interests oppose regulation.¹⁸

Water Privatization Threatens Basic Access to Water

In recent years, financially strapped municipal governments have turned to the private sector—invariably large multinational corporations—for the mammoth task of building and maintaining water and sewage treatment infrastructure. Armed with the dubious promise to bring water to the poor, and hefty loans from the World Bank and the International Monetary Fund, competing water giants have pursued aggressive campaigns of municipal water and wastewater system takeover that generally include promises to upgrade aging infrastructure, expand service networks and improve water quality.¹⁹ From the direct takeover of the management of a water system to the bottling of California spring water, multinational corporations are increasingly pushing into California’s waterscape.²⁰

“Privatization” refers to the transfer of all or parts of a public water system to private control. While state and local governments have historically failed to respond to the needs of California’s low-income communities and communities of color, international examples suggest that corporations will be more difficult to hold accountable.

Low-income communities and communities of color have several areas of concern specific to the impacts of privatization and corporate control of local water districts:

Increased water prices and changing rate structures. Private water companies are legally bound to generate profits for their shareholders. They thus have a mandate to charge higher rates and fees to their customers in order to ensure the desired profitability.

Irreversible loss of public capacity to provide water. When water systems are privatized, public agencies may be unable to buy back the system later, and may lose the skills and expertise needed to resume provision of water service if the private system fails or performs inadequately.²¹

Health impacts of discontinued service. Privatized water systems have a track record of discontinuing service to homes where people are unable to pay their water bills.²² The threat to public health from this practice is significant and has motivated the United Kingdom to make it illegal to disconnect residential water service.²³ There are no such protections in California.

Limited accountability for billing and record keeping. Private water companies are entitled to refuse government agencies access to the billing

information in their computer systems, which hampers agency oversight and monitoring of their financial practices.²⁴ As a result, customers find it difficult to dispute mistakes in their bills, including charges for services not provided.

Some of the poorest communities have already had their water supplies effectively privatized by being left out of the region's water development. These communities rely disproportionately on vended water and bottled water. Many families spend their only day off from work driving to fill up five-gallon water jugs at the nearest city supermarket. In this sense, much of California's water—supposedly a public trust—has been privatized twice.

Concerns about privatization have led to a number of efforts, both in the U.S. and internationally, to limit or outlaw corporate control of water systems and services. In 2003, the city of Atlanta, Georgia, cancelled a twenty year, \$21 million dollar per year operation and maintenance agreement with United Water, which is owned by the multinational corporation Suez, after multiple complaints about operations and management, maintenance, billing, and record-keeping. The city cited the company's failure to deliver on promised cost savings and to treat water and sewage adequately.²⁵



Tom Price

Stockton residents rally before City Hall to demand a city-wide referendum on privatization.

Environmental Justice Communities Fight Water Privatization

All of a sudden we got a bill for over \$100. Now our wages are pretty low. We earn \$280, or at most \$300 a week. If we have to pay a water bill of \$280, well that's a week during which we can't eat, we won't have money to buy food.

—**Rebecca Trujillo**

*community member in Chualar*²⁶



Communities rally to stop water privatization.

Tom Price

On December 16th, 2004, six residents of Chualar, California stood before the California Public Utilities Commission (CPUC) to tell commissioners that a private corporation's water rate increases left many residents owing hundreds of dollars in water bills.

Chualar, population 1440, is located amidst lettuce fields in Monterey County. The town's residents are almost entirely Latino and include many monolingual Spanish-speaking farm workers.²⁷ More than three-quarters of households qualify as low or very low-income.

When California American Water Company (Cal-Am), which is owned by the multinational RWE-Thames, bought the town's water system in 2001, monthly bills soared from a \$21 flat rate to anywhere between \$200 and \$430. Local school officials were faced with a \$2,753.13 monthly bill for providing water to three hundred students; previous bills averaged \$185.

Private utility providers such as Cal-Am, must prove to the CPUC that any rate increase or changes in water districting are in the public's best interest. Private utilities are also required to notify their customers of rate increases. Despite these presumed safeguards, the commission approved Cal-Am's rate structure in 2001.²⁸

Cal-Am did not notify residents of the rate changes, and bills were sent out only in English. Customers trying to complain about unexpectedly high rates were directed to English-speaking customer service representatives in Illinois. After community complaints and media attention, Cal-Am Vice President Steve Leonard acknowledged

"Cal-Am...erred by not advising the community new rates were on the way."²⁹

In Monterey and throughout California, Cal-Am has been engaged in a series of water system acquisitions, district mergers and rate increases that ratepayer advocates within the CPUC have found to be "patently unfair."³⁰ Cal-Am proposed a 34 percent rate increase for the Monterey Peninsula. The small town of Felton, in the Santa Cruz Mountains, has suffered such drastic price increases under Cal-Am that they are now involved in a lengthy legal process to buy back their water system. Residents in the City of Thousand Oaks mobilized city-wide opposition to a Cal-Am district merger that gave them less community control over their water system and received a rate reduction.³¹

Driven by this series of events, Chualar residents traveled over 150 miles to present community demands to the CPUC. Community members testified about having to choose between paying their

water bill and providing food for their children. They demanded a rollback of water rates, an independent audit of the town's water infrastructure, and bilingual customer service. Commissioners, appalled at Cal-Am's lack of oversight and the inappropriate rate structure imposed on Chualar, personally thanked community members for testifying.

As a result of community mobilization, Cal-Am reinstated the flat rate and agreed to develop a new rate structure with close supervision and involvement of both the CPUC and local community advocates.

However, the case of Chualar highlights the vulnerable situation that many communities find themselves in when a private company buys their water system. Corporations such as Cal-Am have even less public accountability than municipal utilities, especially when their customers belong to communities that have been traditionally left out of water policy decisions.

Kids who attend Chualar School play next to agricultural fields.



John Gihler

Water privatization affects communities worldwide

What we need in South Africa, indeed in the whole world, is people-driven government. Our comrades in the USA should campaign against the U.S. government putting pressure on poorer countries to abandon the interests of their own people [in order to] make the big corporations richer.

—**Trevor Nganwe**
co-founder of the
Anti-Privatization Forum

Privatization of water is an international environmental justice issue that has prompted grassroots campaigns demanding equal access to safe, affordable water. Anti-privatization efforts in the U.S. have built alliances with and learned from the strategies of international anti-privatization movements.

Bolivia

In 2000, a diverse coalition of residents responded to drastic rate increases as a result of multinational corporation Bechtel's takeover of the city-run water system. After a protracted general strike and popular uprising, the Bolivian government cancelled Bechtel's contract and amended Bolivian water law to treat water as a social good rather than a commodity.³² More recently, indigenous communities outside of La Paz have protested a contract with French water giant Suez Lyonnaise des Eaux, which left many residents in one of La Paz's poorest areas without access to water.³³ In January 2005, residents blockaded a major road in La Paz and succeeded in forcing Bolivia's president to cancel the contract with the company.³⁴

THE COCHABAMBA DECLARATION

Issued on December 8, 2000 in Cochabamba, Bolivia by residents fighting water privatization

Farmers, workers, indigenous people, students, professionals, environmentalists, educators, nongovernmental organizations, retired people, gather together today in solidarity to combine forces in the defense of the vital right to water.

Water is a fundamental human right and a public trust to be guarded by all levels of government, therefore, it should not be commodified, privatized or traded for commercial purposes. These rights must be enshrined at all levels of government. In particular, an international treaty must ensure these principles are noncontrovertable.

Water is best protected by local communities and citizens who must be respected as equal partners with governments in the protection and regulation of water. Peoples of the earth are the only vehicle to promote earth democracy and save water."

South Africa

In 1999, the South African government initiated a series of privatization projects in which water multinationals such as Suez teamed up with international agencies such as the World Bank to install pre-paid water meters in poor, segregated townships in several major cities. These meters charged residents up to 40 percent of their entire paycheck for water, and shut off service when people could not pay the exorbitant rates. Thousands of people had to drink from polluted rivers and lakes, and hundreds died in the resulting cholera outbreak.³⁵ The Anti-Privatization Forum, a grassroots group based in the townships, has helped reroute plumbing, destroyed pre-paid water meters, tampered with devices meant to reduce household water flows to a trickle, and demanded free water for all. As a result of the grassroots pressure, the African National Congress adopted a policy of providing free water, however, their plan is inadequate to meet the basic sanitation and drinking water needs of millions of South Africans.³⁶ The Anti-Privatization Forum continues to intensify its campaign to demand free water for all.

Small Communities Face Hidden Costs

Many communities have been completely excluded from California's state and federal water projects. In the San Joaquin Valley, particularly Kern and Tulare Counties, many rural, low-income communities are served by small mutual water companies: private non-profit water systems that are entirely investor owned and operated. In Tulare County alone, there are 363 small community water systems with less than 200 connections each.³⁸ Many serve unincorporated towns or mobile home parks, which grew up after farm workers were prohibited from living in larger towns. Laurel Firestone, attorney for the Center on Race, Poverty and the Environment located in Delano, California notes that "these towns have developed around labor camps where there wasn't any infrastructure...a lot of these farm areas were previously farm camps and laborers were not given running water." According to Firestone, the chronic lack of safe drinking water within small water systems has locked many communities into a cycle of environmental injustice.

"Low-income communities of color are very close to cities where people are getting services, but just because of a line that was drawn in the past they have to finance all of the public utili-

ties themselves," Firestone points out. "These are disadvantaged communities that have to pay for their basic utilities themselves without help from the surrounding communities that rely on their labor." While users in small systems are required to pay the full costs of water distribution and maintenance, according to the Rural Water Partnership Fund, "many small communities lack a fee structure that is adequate to generate the necessary operating revenues....The population is too small and average incomes are too low to provide sufficient revenue no matter what the fee structure."³⁹

Economies of scale makes water supply and treatment much more expensive for small mutual companies than for cities. Very small water systems require 8 to 10 times as much capital per gallon of water as systems that serve over 50,000 people.⁴⁰ A comprehensive water treatment system for a small town can require residents to pay three times as much as residents in larger areas.⁴¹ An Environmental Protection Agency survey found that 81 percent of small community water systems require infrastructure replacement.⁴² Dilapidated pipes and old wells require maintenance and additional treatment costs that cannot be borne by most communities.



Small, unincorporated communities cannot connect to larger water systems and are left without adequate water infrastructure.

Economies of scale is a term used to describe how the cost of developing or producing something can be distributed across a large number of people. For example, in an urban area, the high costs of water treatment can be dispersed among many users, but in a small, rural town, the same costs will be dispersed among a much smaller number of people, leading to higher costs for each individual.

The lack of adequate financing and support for small mutual water systems places a heavy burden on residents of towns like Tooleville, an unincorporated community of 250 people in Eastern Tulare County. Tooleville's small mutual water company operated two wells for thirty years. High levels of nitrates were recently found in the water. The water company lacks resources to upgrade its treatment facilities, so residents buy bottled water for cooking and drinking, which is an additional cost many residents can barely afford.⁴³

Small mutual water companies are often more difficult to hold accountable even than water districts. Small mutual water companies are regulated under the Corporations Code and are not subject to public utility regulation. Since there is no way to ensure that user complaints are taken into consideration, residents are often forced to turn to unresponsive government agencies for help. After repeated complaints of about one system operator's poor management and monitoring in the small Kern County town of Lake of the Woods, the Department of Health Services finally performed a sanitary inspection. They noted that "the Water Company's customers need to be able to register complaints directly with the Water Company,

and it is unacceptable for customers to continue to contact our office directly."⁴⁴

Lack of accountability is exacerbated by the lack of training and support for water operators and board members. Being a board member is a volunteer position, but a member is responsible for three jobs: operation of wells, operation of a small business, and complying with extensive state and federal reporting requirements. As Anne Pivvey, Fairway Tract Water Company board member said, "We're being required to fulfill the same water test requirements that [large] water companies are being required to fulfill, without the funds to even hire anyone... part-time to take care of this...so we have to remain volunteers and yet we're being buried in work. And we all have jobs, and families to care of, and many other responsibilities."⁴⁵

As drinking water regulations become more complex, more money, technical equipment, and knowledge are required to comply with new standards. A General Accounting Office national survey reported that, due to the growing number of federal regulations, it is "unrealistic to believe there will ever be sufficient resources to provide the amount of technical and financial assistance needed to bring these systems into compliance."⁴⁶ The result is that

very small systems have the highest number of drinking water standard violations and monitoring and reporting violations.⁴⁷ Many rural, primarily Latino communities in the Central Valley continue to use their own resources to meet their basic human need for clean, affordable drinking water.

Small Communities Face Funding Barriers

Small communities continue to be left out of funding opportunities that would enable them to address historic inequities in securing safe and affordable water. Larger communities and organizations with greater technical expertise, financial resources, staffing, and political clout receive the lion's share of state-level funding for water. Low-income, communities of color have been largely unable to obtain funds, due to the following barriers.⁴⁸

Information and understanding of state funding programs: In general, most small communities and community-based organizations lack accurate, timely, and accessible information about the state water funding. Information on state funding programs is often only publicized on an agency's website. Most application materials and information are only available in

English. It is often difficult for a water district's volunteer board to determine whether its district is eligible for funding.

Limited grant funding and financing options:

The demand for funding far exceeds the total amount of loan and grant monies available in the state and many deserving communities are not able to compete. Loans can impose high levels of debt on small water systems serving low-income households, which may require the board to increase water rates beyond customer's ability to pay. Successful applicants face a considerable time lag between applying for funding and actually receiving the money.

Complex application requirements: State and federal funding may require applicants to conduct urban water management plans, cost-benefit analyses, feasibility studies, engineering reports and studies, and extensive environmental review under the California Environmental Quality Act (CEQA) in order to satisfy existing state and federal laws. Most small communities and community-based organizations lack the up-front revenue, staff, and expertise to meet these requirements. Water systems are sometimes required to meet specified technical, managerial and financial standards to show they are qualified to receive funds. Some programs

require even economically disadvantaged communities to provide up to 25 percent matching funds for their projects.

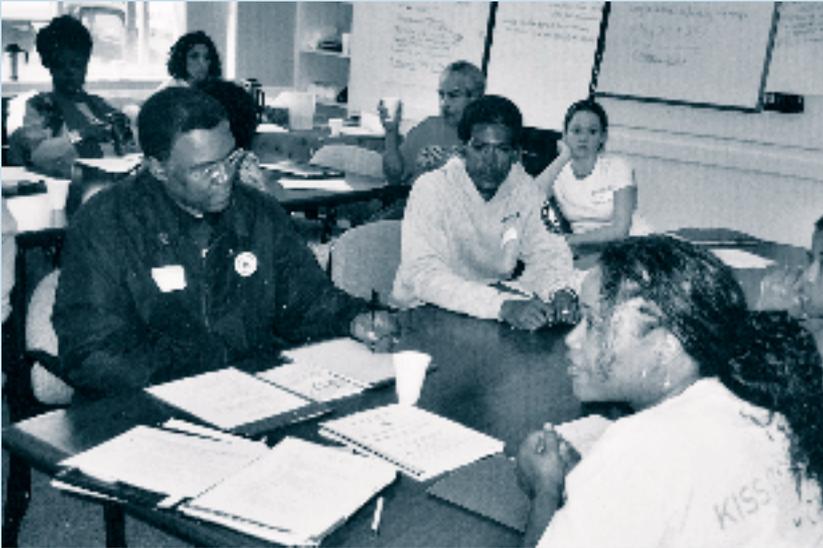
Many state funding programs require water systems to prove that the households they serve meet certain median household income or population size requirements. If there is a dispute between the applicant and the state agency about whether certain criteria are met, the applicant is often required to conduct household surveys to verify the information. Many small organizations do not have the resources and staffing to conduct these surveys. The federal government's process for financing water projects is much simpler. However, there is a negligible amount of federal money allocated to California for this purpose.

Staff capacity and technical expertise:

Most small communities and community-based advocacy organizations that serve low-income communities and people of color lack adequate technical expertise to complete a funding application and cannot afford to hire additional staff or consultants. Existing staff of small water systems generally lack the range and depth of technical expertise required to conduct the engineering, chemical, legal, economic, and environmental studies required for most applications.⁴⁹

If you're talking about assisting poorer communities—and a lot of farm worker communities are the poorest communities—you really need grant money to do any serious work with improving water systems or else good water and sewer service is going to end up costing the household a lot of money each month.

—David Wilkinson
Mercy Housing



Removing Barriers to Water Funds

In November 2002, California voters approved a ballot measure known as Proposition 50. This proposition authorized the state of California to use tax dollars to fund a \$3.44 billion dollar water bond to provide California with a safe, reliable supply of clean drinking water; create new water supplies to keep up with population growth; remove dangerous pollutants from drinking water; protect rivers, lakes, streams, coastal wetlands, beaches,

and bays, and protect water supply from “terrorist threats.”

After the bond’s passage the Environmental Justice Coalition for Water (Coalition) worked to force open a closed door in California water bond funding. Through a series of regional workshops with environmental, health, social justice, and community advocacy groups working on water issues we learned that although recent water bonds created large “competitive grants” for water projects, most funds did not reach the low-income, communities of color with the greatest

need for water projects. Large water management districts and well-established non-profit organizations with paid grant-writers and engineers repeatedly won the grants.

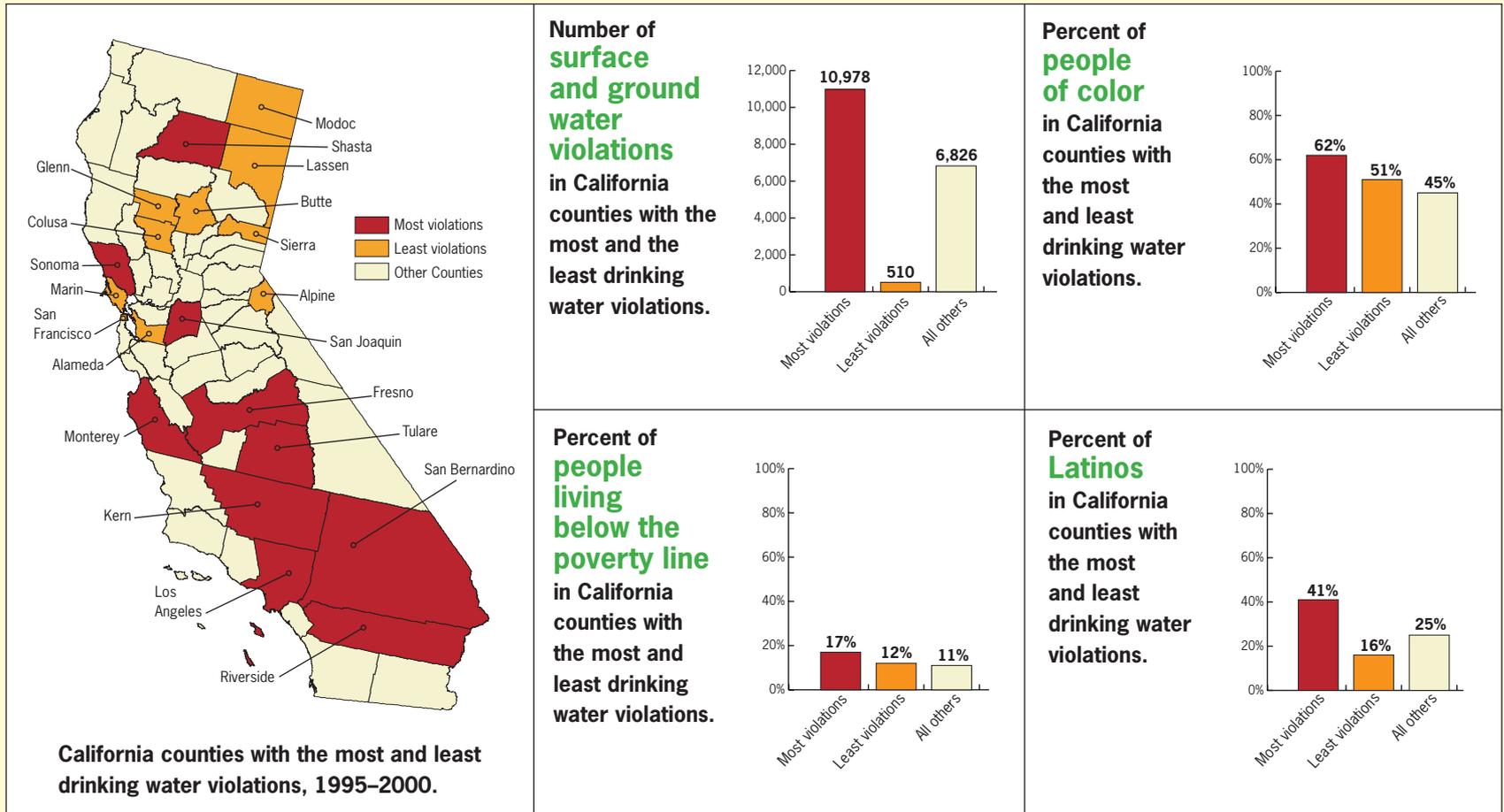
The Coalition helped translate the resulting community demands into specific policy recommendations and legislative language, and in 2003 worked with state legislators to incorporate the following environmental justice demands into the assembly bill (AB 1747) that allocated Proposition 50 funds:

- “Disadvantaged communities” are defined as communities whose annual median household income is less than 80 percent of the state-wide median.
- A “small community” is defined as having no more than 3,000 water users or 1,000 water service connections.
- Competitive grant criteria give preference to disadvantaged communities, with priority given to the most economically disadvantaged communities.
- Small community water systems and community-based organizations may be excused from matching funds requirements.

The Coalition continues to advise the agencies on how to address the needs of low-income communities in the grant guidelines for Prop 50 funding programs. Because of the Coalition’s legislative advocacy and persistent input into all available public forums, in the spring of 2004 the California Department of Health Services set aside a total of \$100 million of Prop 50 funding for drinking water quality projects specifically for “disadvantaged communities.”

Disparities in Access to Safe Drinking Water

Many low-income communities and communities of color lack access to safe drinking water. In California, counties with the highest rates of drinking water violations are also counties with high rates of poverty and people of color. These same counties are typically reliant on ground water sources.

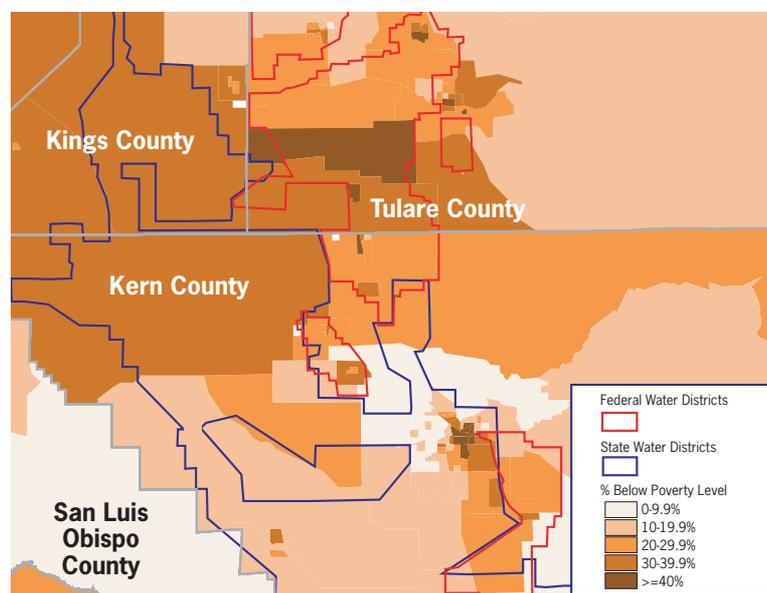


Low-Income, People of Color Shut-Out of Benefits from Water Projects

Many communities are excluded from the agricultural wealth produced in the Central Valley. The federal and state water districts in Kings, Tulare and Kern Counties all deliver large amounts of

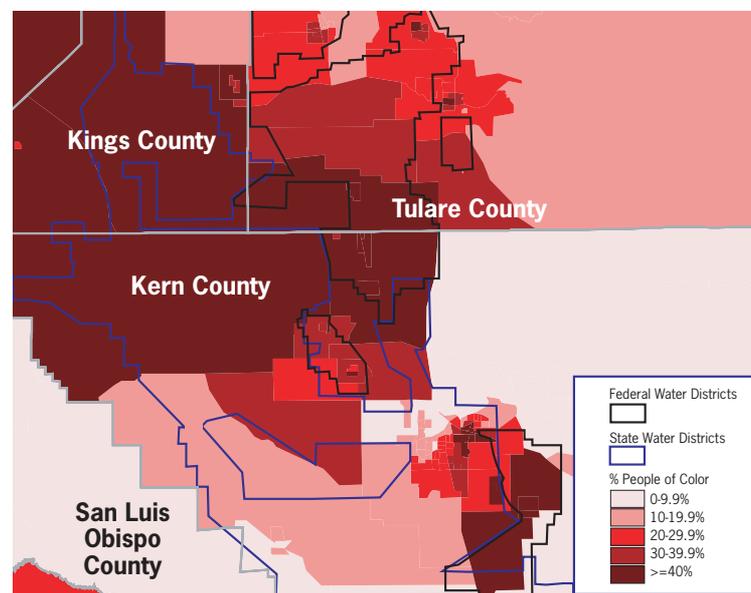
imported water to agribusinesses. Many low-income communities and communities of color do not benefit from these water deliveries or wealth.

Poverty rates in counties that receive large amounts of publicly-subsidized federal and state water



Source: 2000 Census of Population and Housing Summary File 3, Table P87 – Poverty Status in 1999 by Age.

Populations of **people of color** in counties that receive large amounts of publicly-subsidized federal and state water



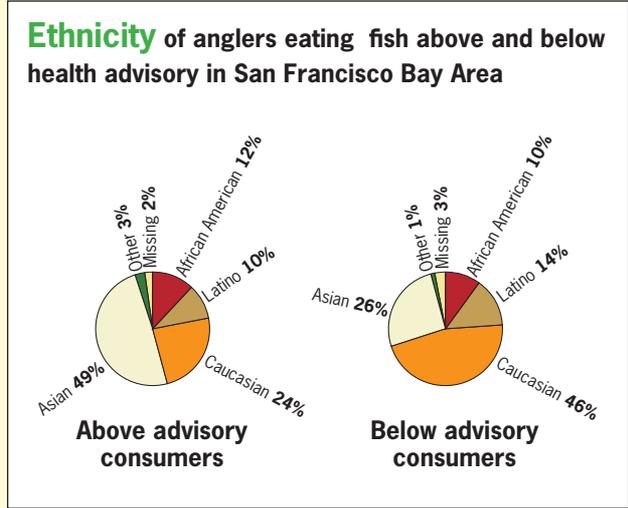
Source: 2000 Census of Population and Housing Summary File 3, Table P7 - Hispanic or Latino Population by Race.

Toxic Contamination and Popular Fishing Spots in San Francisco Bay

 Fishing Spot
 PCB or Mercury contaminated water bodies

Many low-income communities and communities of color lack access to clean fish that are an essential part of their daily diet. People of color regularly consume fish, both out of economic necessity and cultural traditions. Almost all of the common fishing spots

in the San Francisco Bay are contaminated with PCBs or mercury, leading to increased health risks for communities of color who depend on local sources of fish.



Sources: San Francisco Estuary Institute, San Francisco Bay Seafood Consumption Study (2001) and the Clean Water Act Section 303(d) list of impaired water bodies (2003).

Disparities in Access to Clean Water

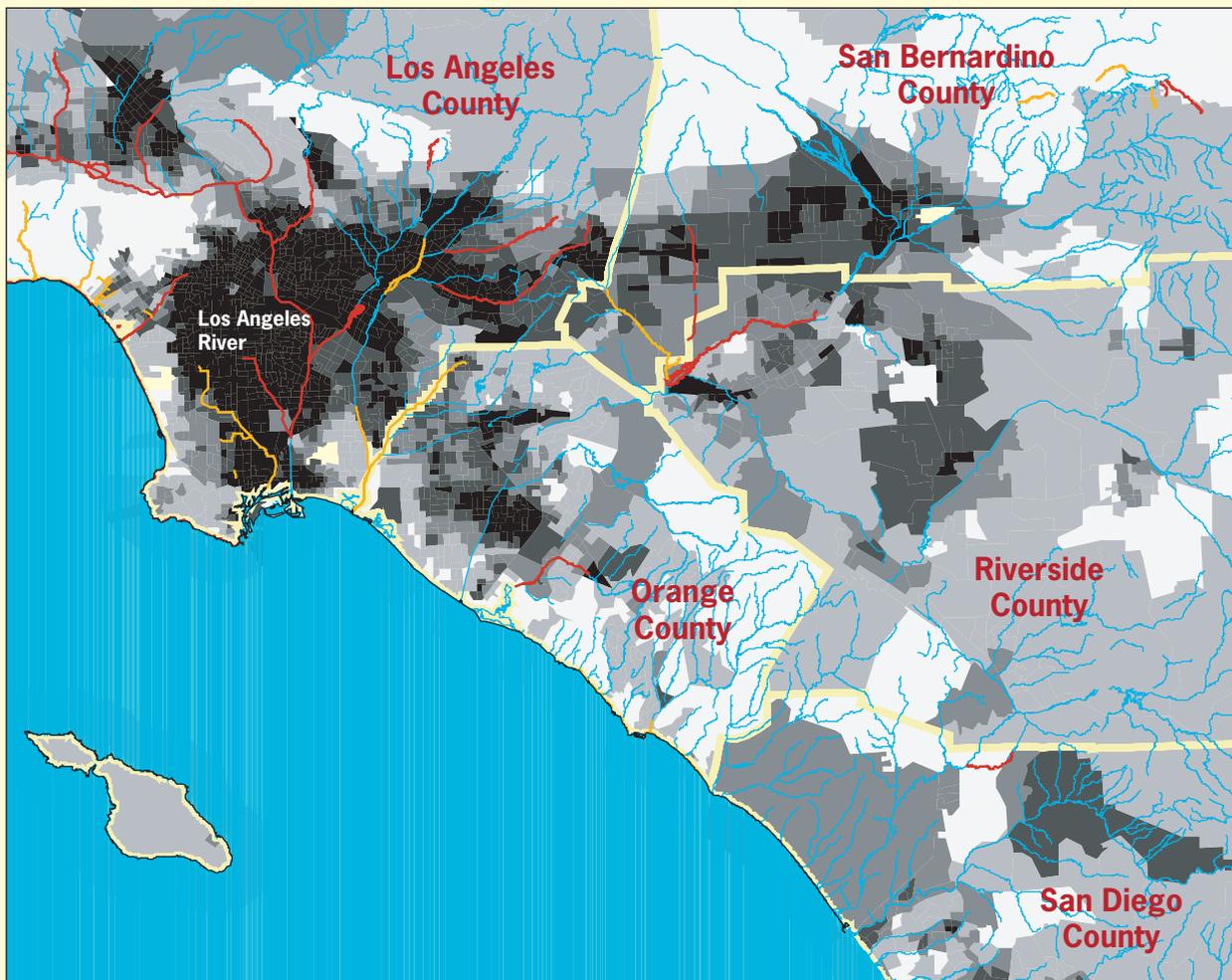
Many low-income communities and communities of color lack access to clean, safe water bodies. In the Los Angeles region, the most severely **contaminated water bodies** are located primarily in communities of color.

Waterways Listed as Impaired Under Total Maximum Daily Load Regulatory Process (TMDL):

- High
- Medium
- Low

% People of color

- 0-9.9%
- 10-19.9%
- 20-29.9%
- 30-39.9%
- >=40%



Sources: The Clean Water Act Section 303(d) list of impaired water bodies; U.S. Census 2000.

2.2 BARRIERS TO COMMUNITY PARTICIPATION IN WATER POLICY

THE AGENCIES RESPONSIBLE FOR ENSURING community participation in water policy exacerbate many of the problems of accountability and confusion that the water governance system perpetuates. Water agencies and institutions do not commit the resources, staffing and time to meaningfully engage community groups and bring affected constituencies into the decision-making process.

Community Voices Excluded

Local and state requirements for public hearings, comment periods, and public notice often fail to engage low-income, communities of color. Even when agencies try to follow minimum standards for public review and involvement assumptions about the capacity and resources of “the public” fail to account for the needs of low-income communities and communities of color in California. These patterns are perpetuated by a pervasive lack of representation of people of color within water agencies. For example, of the eighty-six members of the Regional Water Quality Control Boards, only three are people of color.⁵⁰

The current public involvement guidelines for state agencies assume all members of the public:

- Can speak, read and write English fluently;
- Can afford to miss a day of work to be present at meetings held during weekday hours;
- Can drive to meetings or pay to travel to meetings hundreds of miles from home;
- Can afford to pay for childcare and so do not need childcare services at meetings;
- Have access to a computer and the internet to receive public notices and announcements;
- Have the volunteer capacity and technical skill to review and comment on documents by deadlines;
- Have the volunteer capacity and technical skill to submit complex grant applications by deadlines.

Many Californians are prevented from participating in water management decisions affecting their communities because agencies work under these false assumptions. Without a place at the table, low-income communities and communities of color are denied access to important decision-making opportunities that affect their water supplies, the regulations that protect water quality and quantity, and sources of funding to improve local water infrastructure.

The people who are using the water don't control the water. We are paying all over the place but we have no say-so in how the water is kept clean. We are treated with total disdain. When you go to ask a question about your water, they are so disrespectful ... it's so undemocratic.

—Felipe Aguirre
Comite Pro Uno

Alpaugh Joint Powers Authority board member, Sandra Meraz, points out the old netting and rusted bolts covering the community's unsealed drinking water well.

Non-Profit Organizations Help Small Communities Access State Water Funds

Small water systems' most effective strategy for building long-term capacity and successfully applying for state funding has been to take advantage of the one-on-one technical assistance provided by organizations such as Self-Help Enterprises and Rural Community Assistance Corporation. These intermediaries provide a range of technical assistance to small water systems, including:

- identifying and securing consultants to provide the engineering, economic, and environmental studies required for system operation and funding applications;
- teaching management and administrative skills required to operate water systems;
- providing grant-writing and fundraising advice and support;
- assisting with organizational and board development; and
- being a trusted "go-between" in interactions with state regulatory and funding agencies.



John Gibler

Language, Technology, and Security

According to the 2000 U.S. Census, 39 percent of Californians do not speak English at home.⁵¹ California has 12.4 million non-English speakers; more than twice the number of any other state.⁵² However, most public meetings on water policy are advertised and conducted in English, with limited translation or interpretation. The technology exists to provide simultaneous translation to non-English speakers within large public meetings in an unobtrusive way through digital radio frequency technology. Fresno Metro Ministry, a community-based organization in the Central Valley, uses this translation service to allow Spanish-speakers from their New Leaders for Better Health program to participate in environmental health policy meetings. The Asian Pacific Environmental Network has also successfully used translation services to facilitate the participation of Laotian community leaders from Richmond in Cal/EPA environmental justice hearings. Despite the opportunity for greater public inclusion, few agencies are willing to commit funds towards translation equipment or services.

Though modern technology can serve as a tool to enhance public participation, it can also be a barrier to low-income communities and com-

munities of color. In order to cut costs, agencies have digitized documents for public review, meeting notices and agendas, and funding announcements. In 2004, the Department of Health Services solicited applications for their Proposition 50 Drinking Water grant program by distributing CD-ROM applications or asking applicants to download an electronic application from a website. Applicants from disadvantaged communities also had to use the U.S. Census website in a complex eight-step process to prove that they were in fact eligible.⁵³ Many applicants turned to non-profit rural assistance organizations like Self-Help Enterprises and Rural Community Assistance Corporation for help with these challenging, exclusionary grant applications.

California water policy is often discussed in overly technical and legal jargon—essentially a specialized language—that requires a background in science, engineering, or water law to interpret. Even many English speakers are unable to understand the basic context of water-related debates.

For example, the CALFED describes the process of guaranteeing “equivalent level of public health protection” for drinking water with a series of acronyms and technical terms that

When you have an overtaxed community, it is very difficult to go to all the meetings that they need to be heard and survive. It is so overwhelming to try to learn environmental law and why should we have to?

—Sharon Fuller
*Executive Director,
Ma’at Youth Academy*

make it extremely difficult for the lay person to participate in and inform these discussions.⁵⁴

Intimidating agency formalities and cultural insensitivity often discourage or prevent low-income people and people of color from participating in public meetings. Many public state level policy meetings and hearings are held in the State Capitol and other high-security buildings. Visitors must obtain a visitor pass, pass through a metal detector, and may be required to show a driver's license, which can exclude members of immigrant communities who cannot obtain California drivers' licenses. CALFED meetings are held in a high-security federal building shared by the Immigration and Naturalization Service. Security guards have repeatedly misdirected participants of color to the Immigration and Naturalization Service instead of CALFED Environmental Justice meetings.⁵⁵

Incorporating Meaningful Participation into Agency Processes

Following a legislative mandate, Cal/EPA created an Advisory Committee on Environmental Justice to help the agency develop “an agency-wide strategy for identifying and addressing gaps in existing programs, policies or activities that may impede the achievement

of environmental justices.”⁵⁶ When it was created in 2001, it contained only two seats for community members. After African-American community groups and Native American tribes complained about their lack of representation, four more seats were added to the committee, two of which were reserved for communities of color. After a two-year process, the committee produced recommendations detailing how to “...ensure meaningful public participation and promote community capacity building to allow communities to be effective participants in environmental decision-making processes.”⁵⁷ According to committee member and West County Toxics Coalition director Dr. Henry Clark, “it was a long, drawn-out process. Industry related interests tried to minimize community residents input and knowledge. It was only the consistent advocacy of community members and environmental justice advocates who came to testify and reiterate the whole process needs to start with the community people that made it a success.”⁵⁸

Examples of Recommendations of the Cal/EPA Advisory Committee on Environmental Justice to the Cal/EPA Interagency Working Group on Environmental Justice:⁵⁹

- Initiate outreach efforts as early as possible in the decision-making process, before significant resources have been invested in a particular outcome;
- When environmental decisions directly affect a local community, hold meetings and workshops at times and locations that are convenient for community members to attend;
- Provide adequate translation or interpretation services of documents and public meetings;
- Complete the “plain, straightforward language” description of how to navigate California’s complex regulatory process;
- Identify opportunities to provide grants and technical assistance to communities and elected officials to enhance their knowledge and understanding of environmental issues and governmental processes;
- Explore ways to assist stakeholders in reviewing technical documents related to environmental decisions affecting their communities, such as by providing access to technical experts through local colleges or universities.

At the federal level, the EPA and the National Environmental Justice Advisory Council published “The Model Plan for Public Participation” in 1996.⁶⁰ Similar to the Cal/EPA Environmental Justice Recommendations, this document trains agency staff on how to better reach out to environmental justice communities and suggests thirty-five ways to improve public involvement. Almost ten years later, California agencies like the State Water Resources Control Board and the Department of Water Resource claim they cannot commit the money necessary to implement these worthwhile environmental justice recommendations.⁶¹

While many of the Cal/EPA recommendations for meaningful public participation directly address the agency assumptions we identify, the document is virtually unknown outside the environmental justice movement. Many state and local elected officials as well as local water agencies have no mandate to improve existing public involvement. Even when guidelines are clearly written and training is provided, water agencies and institutions fail to commit the resources, staffing, or time to bring affected communities into the decision-making process.

Actions Speak Louder Than Words: Implementing Environmental Justice

The Environmental Justice Coalition for Water’s work within CALFED is an example of the continuing struggle to hold agencies accountable to environmental justice principles. The CALFED Record of Decision clearly states a commitment to Environmental Justice. However, the CALFED Environmental Justice Subcommittee, convened in February 2002, continues to receive significantly less funding than other subcommittees.⁶² As LaDonna Williams, a community member and director of People for Children’s Health and Environmental Justice testified at a CALFED finance hearing, “Directors have already made the decisions about where the big money gets spent in CALFED, and we are standing here holding out our hands hoping to get some crumbs. This is not a real commitment to environmental justice.” Though several environmental justice groups have received grants from CALFED, these victories are overshadowed by the agency’s continued reluctance to elevate environmental justice to equal footing with other program areas.

For example, the 2004 CALFED Annual Report states that one of its program accomplishments was conducting an “Extensive Environmental

Nobody is doing nothing for the people. People sit around making decisions for all the children and all the senior citizens that can’t walk, can’t get their water. We still don’t have pipelines, no well, no money, just nothing but tears and fears. Tears come from not being able to pay your water bill—they’re going to come turn it off. The fear comes from your children, ‘how are we going to survive?’

—Sandra Meraz
*Committee for
a Better Alpaugh*



Community members and activists protest agricultural waivers.

Justice Special Session” at the October 2004 CALFED Science Conference with guest speakers covering issues such as advocacy and science pertaining to mercury and fish consumption.⁶³ The panel fell short of community expectations. The one afternoon session regarding environmental justice was buried in five full weekdays of multiple panels on technical water issues. The conference, held in Sacramento, required a registration fee of \$165 dollars, though it did offer a “student rate.” When the Environmental Justice

Coalition for Water requested a fee waiver and transportation stipends for community members to attend, CALFED refused. The registration fee was waived only after community members adamantly advocated for community presence at the conference. Community members found the panel session to be a hostile environment and were criticized for questioning CALFED’s commitment to environmental justice.

Who Bears the Burden of Proof?

At the heart of environmental injustice is the absence of comprehensive data about the disproportionate exposure of low-income communities and communities of color to water contaminants and infrastructure problems. Many communities do not know that their water is unsafe for consumption or that their infrastructure is in need of repair until they experience severe problems. A Department of Water Resources report notes the difficulty of arriving at reliable estimates of how many Californians lack a safe water supply, in part because the Census Bureau dropped its “source of water” and “sewage disposal” questions from the 2000 census.⁶⁴ The overwhelmingly complex collection of federal, state, county, municipal, and regional agencies with some jurisdiction over water distribution and quality adds to the dif-

Agricultural Pollution Exemption Hearings Prevent Meaningful Public Participation

El Comité para el Bienestar de Earlimart got two van loads of people to go to Sacramento for these waiver hearings. The Comité is really good about providing stipends for people's time. I used to go for nothing. I used to dig up the change from my purse. But people need money to take time off from work to go these hearings.

Industry and lobbyists had their way with the water resources board. Agriculture and industry could dominate the meeting. My friend had stayed all day long she but still didn't get to give public comment. Comment was rescheduled to the next day and she couldn't wait that night – she was pretty disgusted. We sat on the ground. We had kids. None of those white men got up and gave us their seat.

—Teresa De Anda, Committee for the Well-Being of Earlimart

More than 635 miles of rivers and streams in the Central Valley are so polluted with agricultural runoff that they are unsafe for fishing, swimming, and drinking.⁷⁰ Farm runoff that reaches the Sacramento River, the San Joaquin River, and the Delta contaminates surface and drinking water supplies for millions of Californians in the Central Valley, the San Francisco Bay Area, and Southern California. In 2000, the Department of Pesticide Regulation detected pesticides in over 96 percent of the Central Valley water sources it tested. At over half of these locations, pesticide levels in the water exceeded safe levels for aquatic life and drinking water consumption.⁷¹

Despite this record, agricultural operators in California do not have to comply with water quality regulations. Since 1982, the State Water Resources Control Board has exempted agricultural entities from the reporting and permitting requirements of state clean water laws. What makes this policy so startling is that the board exempted agricultural dischargers even though state regulators and the

EPA recognized that agricultural runoff contributes to the pollution of every significant waterway in the Central Valley.⁷²

In July 2003, the Central Valley Regional Water Quality Control Board held public hearings about renewing the agricultural exemption, since the 1982 waiver had recently expired. The Clean Farms, Clean Water Coalition brought 150 community and public-interest representatives to the Sacramento hearing to advocate for stronger regulations of agricultural discharges. The board informed the public that it would set time limits on public comment to ensure that all perspectives would be heard.

On the day of the hearing, the Board failed to manage time limits for agricultural representatives, denying the public – whose testimony was the last item on the day's agenda – the opportunity to provide comment. Many community members, who represented communities directly impacted by agricultural runoff, had traveled from as far as Los Angeles, Delano, Fresno, and Bakersfield. The major-

ity lacked resources to remain in Sacramento overnight. In contrast, most agricultural representatives lived in or near Sacramento. The next day, against the advice of staff, scientific experts, and public interest lawyers, the board adopted a new exemption.

The issue of agricultural discharge waivers brings environmental injustice to the forefront. The new waiver allowed agricultural dischargers to continue to circumvent clean water laws. The hearing process denied community members meaningful and fair participation in a decision that affected their environmental health. The regional board is mandated to protect “the quality of the waters within the Central Valley Region for all beneficial uses.” Instead, the board chose to protect agriculture's financial interests at the expense of water quality, and continued to neglect the concerns of people in and outside of the Central Valley who face ongoing threats to health and safety from highly polluted water.

faculty of assembling and reviewing information about which communities lack safe, clean water.

In order for agencies to understand and address the water and related health and economic problems that environmental justice communities experience, they must have detailed data about race, income, and water quality. The EPA reports that for “diseases that are known to have environmental causes, data are not typically disaggregated by race and socioeconomic group” and that “environmental and health data are not routinely collected and analyzed by income and race. Nor are data routinely collected on health risks posed by multiple industrial facilities, cumulative and synergistic effects, or multiple and different pathways of exposure.”⁶⁵

As a result of these information gaps, agencies avoid their responsibility for addressing California’s unequal distribution of water and the adverse impacts of water contaminants. In February 2004, the CALFED Drinking Water Subcommittee refused to take action on any environmental justice programs until scientific studies—presumably funded by the community members and non-profit organizations present—documented how contaminated drinking water affects low-income, communities of color. The scientists and agency representatives pres-

ent refused to incorporate environmental justice studies or guidelines into the CALFED drinking water program without this proof.⁶⁶

Water Agencies Lack Public Accountability

The general public and community leaders are typically invited to the decision-making table to endorse decisions that have already been made, or after much of the planning, analysis, and discussions have taken place, or never at all. Many water-related decisions are still made behind closed doors. In 2004, a major agreement that allows increased water exports from the San Joaquin Delta was reached at a meeting between powerful water agencies and districts in Napa County. The Environmental Water Caucus, a coalition that monitors water policy in California, found that “the public was excluded from the recent ‘deal’ reached in Napa among major water-using interests. Consequently, key issues of public health, good government, finance, and environmental protection were not addressed.”⁶⁷

Because multiple agencies are responsible for water planning and management, agencies often evade responsibility for upholding water quality and public health standards. At biotechnology giant Astra Zeneca’s former chemical manufac-

turing plant in Richmond, oversight responsibility was shifted among four state and federal agencies while a private company cleaned up the site. Sherry Padgett, a resident who developed several forms of cancer as a result of the hazardous material left at the site, testified

The community has actively been trying to get the attention of the San Francisco Regional Water Quality Board since March 2004. We have asked hundreds of very appropriate questions, which have gone unanswered. We wrote three formal letters outlining our concerns. We met with representatives of the Water Board who were...ill equipped to deal with public inquiry. They are not structured to monitor a hazardous site as complex and lethal as the Zeneca site cleanup.⁶⁸

It was only after community members demanded a clear regulatory process that oversight for the clean up was handed over to the proper agency.⁶⁹

CHAPTER CONCLUSION

SINCE THE TIME OF COLONIZATION AND SETTLEMENT in California, low-income communities and communities of color have been prevented from controlling their water resources. The confusing web of water districts, agencies, and corporations that currently controls water exacerbate this historical injustice. The continued existence of landowner-based water districts and elections based on property ownership perpetuates exclusion and exploitation; landowner districts' powerful role in water policy is a stark reminder of the continuing power institutionalized discrimination.

Recent changes in water governance have failed to address the needs of some of California's most excluded communities. The failure of agencies to include all people in decision-making is a manifestation of continuing institutionalized racism. Even though California water agencies have adopted environmental justice proclamations on paper, discrimination and exclusion persist. The excuses that agencies lack the time, staff, and funding to incorporate meaningful community participation and outreach sound hollow as millions of dollars finance dam-expansion studies and water districts continue to operate with untold millions in reserve. Water justice requires a participatory system of water governance and new forms of management and regulation that are truly community-based.



Cleo WoeffleErskine

Bayview Hunters Point high school students restoring local wetlands at Heron's Head Park in San Francisco



CHAPTER 3: THE CONTINUING STRUGGLE FOR WATER JUSTICE

THE HISTORICAL INJUSTICES EMBEDDED in the development of California's water infrastructure combined with regulatory agencies' exclusionary policies have profound and widespread effects on communities of color and low-income communities.

The case studies presented throughout the report, while not a comprehensive survey, establish a pattern of water injustices. Millions of people—largely from low income communities and communities of color—rely on contaminated sources of drinking wa-

ter and experience a wide range of health problems as a result. California's low-income communities and communities of color experience watershed-level injustices ranging from the destruction of salmon runs to loss of access to ceremonial springs to mercury contamination of fish to overflows of raw sewage that pollute beaches and swimming places. This chapter highlights some current grassroots campaigns focused on improving local conditions and building a movement for water justice.

Farm workers have a long-term interest in securing clean and safe drinking water, both on the job and [for] their residences. Sustaining an adequate supply of clean drinking water in the communities where farm workers live and work is paramount to the health and safety of farm workers and their families. Decisions that impact workers are made by water boards, local and state, and the California Assembly, [and] numerous factors threaten the current water supply for agricultural and residential use, including: sea-water intrusion into the aquifers, caused primarily by agricultural pumping from the groundwater basin; nitrate pollution of groundwater basins, cause primarily by infiltration of high-nitrate fertilizers, and pesticide pollution of both surface and groundwater.

—**United Farm Workers Resolution # 16**
“Farm workers and water”⁷

3.1 CAUSES AND EFFECTS OF DRINKING WATER CONTAMINATION

THE LACK OF ACCESS TO QUALITY WATER resources and exclusion from water decision making has resulted in the disproportionate exposure of people of color and low-income communities to contaminated drinking water. A lack of strong drinking water regulations, poor of enforcement of what little regulation exists, and dilapidated infrastructure expose low-income communities of color to drinking water contaminants.

Weak Drinking Water Regulations and Lack of Enforcement

Existing drinking water standards are not always truly protective of the public’s health. The state Department of Health Services sets drinking water standards, known as Maximum Contaminant Levels, or MCLs, which describe the level of a given contaminant considered safe for human consumption. The process of establishing these standards is flawed, for two reasons. Since the Department of Health Services is under pressure to adopt MCLs that do not require water suppliers to make the expensive upgrades

necessary to remove harmful substances from public drinking water supplies, many MCLs allow contaminants to be present in water at levels that are above what science has determined to be safe.

In addition, the regulatory process does not take into account the full range of contaminants that communities of color and low-income communities are exposed to, nor the cumulative and overall health effects caused by exposure to multiple contaminants.¹ Nor does the process take into account the health effects that contaminants have on vulnerable populations, such as women and children. This may soon change, as legislation passed in 2004 will require that drinking water standards be established based on the health effects on children.²

Pesticides, for example, are virtually unregulated in drinking water. About one-third of the more than 600 pesticides used in California are known to be toxic to humans, causing a variety of diseases ranging from immediate vomiting and skin rashes to cancer and birth defects.³ Many pesticides are also known to contaminate rivers and groundwater. Yet only twenty-seven pesticides have an enforceable drinking water standard, or MCL, that requires large water suppliers to test and treat for the pesticide.

According to a 1999 report by the Californians for Pesticide Reform, the Department of Health Services exempts small water suppliers from testing requirements for specific pesticides if the supplier can establish that its water supply is not vulnerable to contamination by those pesticides. 96 percent of the water suppliers with no pesticide data are small rural water suppliers. The report contends that small suppliers “are at the highest risk of pesticide contamination, as they are generally close to areas of heavy pesticide application, draw their water from shallow aquifers, and are subject to less scrutiny than large water suppliers.”⁴

California’s inadequate pesticide regulations are poorly enforced. Pesticides have been detected in 1,877 water bodies, which provide drinking water to 16.5 million people.⁵ Though six hundred California water suppliers have found pesticides in their water, only forty possess the technology to test and treat pesticides. The pesticide DBCP (1,2-dibromo-3-chloropropane), a “recurring contaminant,” was banned in 1977. The cities of Fresno, Riverside and Bakersfield have all detected the toxin within the past ten years. In the 1980s, Fresno municipal wells were closed due to contamination; in Bakersfield, parents of children who

have developmental disorders as a result of pesticide exposure have sued manufacturers.⁶

Farm workers—predominantly low-income Latinos and immigrants—live in areas that are ground zero in terms of high pesticide use and drink water that is highly contaminated with pesticides. In Fresno and Tulare Counties, where large numbers of Latinos live, 69 percent of domestic wells are contaminated with pesticides.⁸

Communities like Alpaugh in Tulare County are dependent on trucked-in water donations. In Tooleville residents pour Clorox bleach directly into their well. Outside of Lindsay, residents have to sign affidavits declaring that they will use bottled water for drinking and cooking, because the water that flows through residential pipes is clouded with nitrates and pesticide runoff dumped into the groundwater by heavy industrial agriculture.

Other threats to water quality, such as large dairy operations, are also poorly regulated. The Central Valley Regional Water Quality Control Board, which is supposed to ensure that dairies’ wastewater discharge does not exceed legal limits, has only seven staff to regulate seventeen hundred animal facilities. The

In Lindsay, Tulare County, farm workers pick oranges, cherries and other fruits in the surrounding fields. In a good month they’ll each make about \$1000 dollars working from 6am to 3pm. In a bad month they’ll make around \$300.

None of them drink the tap water. When asked why not, they all spoke out, saying:

“It tastes bad. It comes out of the faucet grey. It has a certain odor. It comes out of the faucet foamy. It is thick, oily.” Instead, they buy about ten gallons of vended water a week.

Mauricio said that San Joaquin Valley farm workers always take a bottle or jug of water out to the fields with them.

“When I run out of the water I take with me I have to drink what’s around, from the tap,” he said. “One can’t take it otherwise, it’s so hot”



Residents fill up their jugs with drinking water at a donated water tank in the small town of Alpaugh, Tulare County.

Drinking Rocket Fuel and the Failure of Public Health Standards

Because perchlorate contamination is so widespread in my community, my children and grandchildren are at constant risk of exposure. Perchlorate has been found in our lettuce, milk, and recently in breast milk. Where can we turn for clean water and food?

—Jan Miguez

resident of San Bernardino and community organizer with Center for Community Action and Environmental Justice

On January 22, 2005, over one hundred people gathered at Fontana City Hall to express concern over the health impacts of perchlorate. This chemical has been found in local drinking water, milk, breast milk, and vegetables such as lettuce. The public gathering kicked off a campaign led by the Center for Community Action and Environmental Justice to ensure that California's recently proposed standards for the chemical are truly protective of the public's health.

Perchlorate—a salt used primarily in rocket fuel—inhibits the proper functioning of the thyroid gland, an epicenter for hormone production crucial to the body's growth, development, and metabolism. Perchlorate is especially harmful for infants and pregnant women, and has been linked to cancer.¹¹ The Air Force, NASA, and defense contractors such as Lockheed Martin and Aerojet use about 90 percent of the perchlorate manufactured each year. In 1999, both corporations were forced to undertake multi-million-dollar perchlorate clean-ups in San Bernardino and Sacramento Counties.¹²

The Center has been fighting perchlorate contamination in the predominant-

ly low-income communities of Fontana, Rialto, Glen Avon and Mira Loma, where some of the largest plumes in the nation were found. Twenty-two drinking water wells in the San Bernardino County area have been shut down or had their use restricted because of high perchlorate levels.¹³ Davin Diaz, Community Task Force Coordinator for the Center, sees a pattern of injustice in perchlorate contamination. "Where the perchlorate is...the majority of African American, Latino and poor whites live," he commented. "Rialto and Bloomington are low-income areas. Over half the population is Hispanic. I don't think there is a perchlorate plume in Beverly Hills."¹⁴

Perchlorate is a prime example of the Department of Defense's (DOD) virtually unregulated production and use of chemicals and hazardous materials. For more than fifty years, perchlorate seeped into the ground with no remediation or monitoring. The toxin has been found on at least thirty-four DOD facilities nationwide;¹⁵ in California, perchlorate contaminates 365 drinking water sources.¹⁶

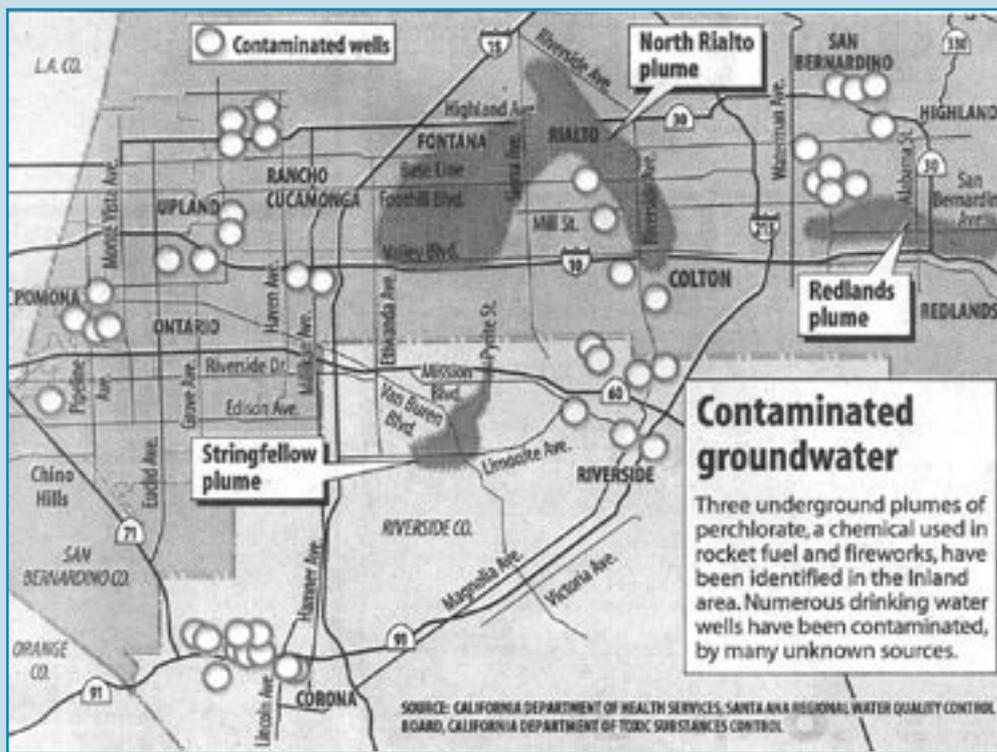
In 2002, the Environmental Protection Agency set a provisional perchlorate

standard of 1 part per billion (ppb). Studies financed by the Air Force and weapons manufacturers, however, recommend standards as high as 200 ppb.¹⁷ Under defense department pressure, the EPA reassessed perchlorate's public health risks, and announced a drinking water "safety standard" of 24.5 ppb.¹⁸ In 2004, the California Environmental Protection Agency (Cal/EPA) announced a public health goal—the level of contaminant concentration that poses no risk if consumed over a lifetime—for perchlorate in drinking water. Though groups like the Center for Community Action and Environmental Justice demanded the original EPA finding be used to establish a public health goal of 1 ppb, Cal/EPA set the goal of 6 ppb. The public health goal will be used to set the maximum contaminant level, the amount of perchlorate that is allowed in drinking water.

For the Center for Community Action and Environmental Justice, the perchlorate standard exemplifies problems with the entire drinking water regulatory system. The proposed public health goal fails to consider infant's increased susceptibility to drinking water contaminants, the cumulative impacts

of perchlorate exposure through water, food and breast milk, and the multiple ways people are exposed to the toxin. Setting public health goals and maximum contaminant levels can take several years to complete. Meanwhile, affected communities continue to be exposed to contaminated water.

The defense industry has lobbied aggressively to become exempt from a vast array of environmental regulations, including perchlorate enforcement, which the national Committee on Energy and Commerce says would result in “groundwater ‘sacrifice zones’ and higher ultimate cleanup costs for the DOD and taxpayers.”¹⁹ While the defense industry ammasses resources to block safe drinking water standards, low income, communities of color are left drinking the hazardous by-products of a flawed public health and drinking water regulatory system.



Perchlorate contamination is widespread in Riverside and San Bernardino Counties.

Board itself has said it needs between 40 and 100 staff to process permits and inspect facilities for compliance. This lack of oversight leads to increased water pollution. Heritage Dairy in Dixon spewed 1.3 million gallons of manure into tributaries of the Sacramento River in 2004 and again in 2005.⁹ In 2004, a Fish and Game Department Inspector found that dairies had dumped three to four feet of wastewater onto the Buttonwillow Ecological Preserve.¹⁰ Dairy waste contains high rates of salts and nutrients, which leach into groundwater and lead to a host of health problems. In areas where many low-income communities and communities of color rely on groundwater, this lax enforcement results in environmental injustice.

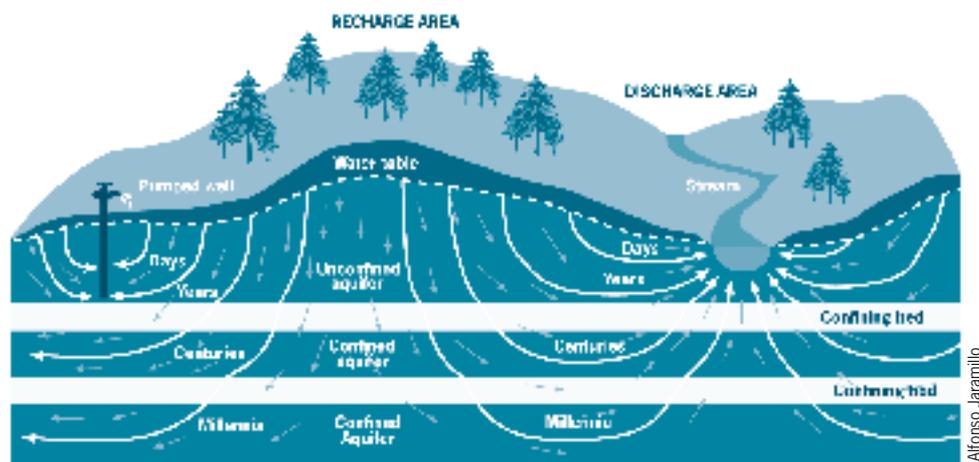
Unregulated Groundwater: Drinking Water for Many Californians

Half of all Californians depend on groundwater for their drinking water supplies. More than 16,000 public drinking water systems in California use wells to supply public water.²⁰ In rural areas, groundwater supplies 95 percent of drinking water.²¹ Because state and federal water quality laws do not regulate discharges into the groundwater, groundwater is threatened by many natural and man-made contaminants.

A 2001 report from the Natural Resources Defense Council highlights the problem of groundwater contamination from natural and

human-made contaminants, including MTBE, nitrates, and pesticides. Human-caused pollutants include agricultural runoff, septic systems, landfills, leaking underground storage tanks, and industrial waste. The water in many wells, many of which serve low-income rural communities, is so contaminated it is unsafe for consumption. Many communities are unaware of the extent of contamination because of poor monitoring, complicated bureaucracies, and the lack of regulations protecting groundwater quality.²² Throughout the San Joaquin Valley, nitrate from chemical fertilizers, factory farming, and septic systems pollutes drinking water wells. The United States Geological Survey found that nitrate contamination exceeded acceptable health levels in 30 to 40 percent of groundwater samples. Often this contamination occurs in conjunction with pesticide contamination, worsening health effects.²³

Urban residents, mainly in Southern California, receive some or all of their drinking water from groundwater that has been contaminated by years of industrial pollution.²⁴ Leaking underground storage tanks—markers of former industrial manufacturing sites—have contaminated almost 20,000 square miles of groundwater basins throughout the state. In 1998, the state found 3,000 sites contaminated with MTBE—a known



Groundwater aquifers are recharged in a process that can take thousands of years. Depletion, however, can happen in a few years.

carcinogen—at levels above acceptable health standards; 75 percent of these sites were located in Southern California.²⁵ The City of Santa Monica was forced to close municipal wells that were contaminated with MTBE, which had leaked from underground gasoline storage tanks.²⁶ Water agencies serving the San Gabriel Valley recently approved a \$320 million plan to try to clean up polluted groundwater.²⁷ Given the lock out of low-income, communities of color from water management decisions, many community water-quality concerns go unheard by agencies, resulting in increased health risks.

Only recently has legislation addressed the pervasive lack of groundwater monitoring. In 2001, Assembly Bill 599 passed, requiring that the State Water Resources Control Board establish a comprehensive groundwater management system and make its findings available to the public.²⁸ Other bills allow water agencies and districts to develop voluntary groundwater management plans.²⁹ Despite these moves to increase regulation of groundwater, the NRDC report concludes that although the existing data reveal a widespread problem, the unreliability and inadequacy of existing data about groundwater quality collected by public agencies is equally problematic. “One reason the existing regulations have not adequately protected

groundwater resources is that there are many holes in the regulatory system,” the report notes. “Many sources of contaminants and entire industries fall through the gaps in existing laws. Alternatively, laws may presumably address these sources, but there is little or no implementation and no enforcement when they are violated. Agricultural practices, for example, have traditionally received less regulation than any other major industry and source of contamination. In some cases this lack of implementation is due to under-funding; in other cases it is due to a lack of political will.”³⁰

Decaying Water Distribution Infrastructure

Most of California’s urban water distribution infrastructure was built between fifty and seventy-five years ago.³¹ In the next two decades, many towns and cities will have to replace this aging infrastructure.³² A nationwide Environmental Protection Agency survey found that distribution pipes, water treatment plants, and intake structures are in need of repairs and upgrades totaling more than \$90 billion in order to deliver water that meets public health goals.³³ The American Society of Civil Engineers estimates that California’s drinking water infrastructure

There is not adequate financial planning for infrastructure replacement. Pipes are old, they’re in the ground. I can think of one or two places that I would sooner bring my own water than run a gamble of drinking the water if I were visiting a friend.

—Nadine Felleto
Department of Health Services

Our tiny organization [Ma'at Youth Academy] is doing the job the regulatory agencies are supposed to be doing. There is a discussion going on at one level that doesn't move very quickly and there is the grassroots organizing that is working tirelessly to remove people from harm.

—Sharon Fuller
*Executive Director,
Ma'at Youth Academy*

will require \$17.5 billion in repairs over the next twenty years.³⁴

Sewage and other contaminants can pollute drinking water through cracks in pipes or storage facilities; aging pipes are often made of lead or asbestos, which can leach into the water. Poor water pressure caused by decaying water infrastructure can also be a serious safety issue. Adequate water pressure is necessary to fight fires; in several cases homes in low-income communities have burned down because local fire departments lacked adequate water pressure to put the fires out.³⁵

Low-income communities, whether urban or rural, generally lack the tax base and overall resources to construct, operate, and maintain water infrastructure. Inadequate and dilapidated infrastructure puts residents at greater risk of exposure to contaminants that threaten their health.³⁶ As the need for infrastructure replacement becomes more and more pressing, the costs will increasingly be borne by ratepayers. Low-income communities and small water systems will face greater burdens in terms of financing safe drinking water infrastructure.³⁷ As resources continue to be funneled away from rural communities, it is unclear whether these

areas will receive the funds needed to ensure the safety of their water distribution systems.

One of the most successful state funding programs designed to address infrastructure repair in low-income communities is the Department of Water Resources' Infrastructure Rehabilitation Program. Originally funded by Proposition 13 in 2000, the program funds the replacement of leaking and failing water system components in small and low-income communities. To date, this program has funded feasibility studies and construction projects in nineteen communities, an investment of over \$50 million that has vastly improved these water distribution systems.

The funds allocated to the Infrastructure Rehabilitation Program from Proposition 13 have been spent, and the program now lacks funding. Proposition 50, the most recent water bond approved by voters in 2002, did not contain specific language to fund this successful program. Environmental justice advocates are currently proposing that Proposition 50 funds be made available for the program, but face agency resistance.³⁸

Contaminated Drinking Water In Raisin City

There is a shortfall of available funds for small water systems. Communities who qualify for funds never receive money because it's just not there. Communities have been placed on the priority list for grants because of their water problems only to see the funding evaporate.

—Paul Boyer
Self-Help Enterprises

Raisin City, a community of 240 people in Fresno County, provides a clear example of the range of water quality problems that many small, rural, low-income communities of color face. According to the 2000 Census, people of color comprise about two-thirds of the community's population and the annual median household income—\$24,167 from census data and \$16,000 by community survey results—is one of the lowest in Fresno County.³⁹

Raisin City does not have its own water or sewage system and is too isolated to connect to a neighboring community's water system. Instead, each household has a private well and septic tank; residents worry that leaking septic tanks may be contaminating wells and causing gastrointestinal illnesses. Self-Help Enterprises, a nonprofit organization that assists San Joaquin Valley communities with sewer and water infrastructure development, procured funds in late 2000 to test about half of the wells in Raisin City for seven of the most likely water contaminants: the pesticides dibromo-chloropropane (DBCP) and ethylene dibromide (EDB), coliform and fecal coliform bacteria, nitrates, alpha radiation, and uranium.

Every one of the tested wells failed at least one of the State health standards for these contaminants, and most of the wells were contaminated by more than one substance. An adequate supply of safe water exists 400 to 600 feet below the ground, but none of the residents can afford to drill wells deeper than 250 feet.⁴⁰

In response to these findings, community members began to seek federal, state, and county assistance to develop a community water system, with at least one well deep enough to provide safe water for the entire community.

County and state funding has been dedicated to the project, which is now in the design phase. To date, no funding has been secured to extend water lines to households in the surrounding areas.

If Raisin City residents are not able to secure additional funding, each household will likely need to pay \$1000 to \$3000 to connect to the new proposed water lines and, where necessary, abandon old wells. Despite the availability of grant funding for the public portions of the project, residents will still pay an estimated monthly user rate of \$48 to operate

and maintain the system. This is roughly 3.5% of the average Raisin City family's income; well over the 1.5% affordability factor recommended by EPA.

Raisin City's experience mirrors that of many small, rural, low-income communities in California's Central Valley region. Without sufficient public funding to build community water systems, local residents must choose between two highly undesirable options: bottled water that is prohibitively expensive and affordable water that is severely contaminated.



Many wells in small communities like Raisin City need maintenance.

Health Impacts of Drinking Water Contaminants

People of color and low-income people tend to be disproportionately exposed to multiple types of contaminants. As a result, they experience the *cumulative impacts* of exposure to several pollutants simultaneously.

Consider the farm worker family that lives in or near farmlands, who face occupational hazards of exposure to pesticides in the workplace and routine pesticide spraying of fields near their home. This family is likely also drinking groundwater. The many chemicals used on fields often contaminate groundwater sources in agricultural areas.

The inner-city family that lives in the heart of an industrial zone in older, dilapidated housing may have corroded pipes that leach lead into the drinking water. Living next door to various types of polluting industries and surrounded by multiple freeways, this family would be exposed to a variety of airborne pollutants on a regular basis. Their drinking water source may be pristine surface water piped from hundred of miles away. However, even many large cities' water supplies are contaminated during transmission,

General Health Impacts of Common Water Contaminants in California⁴³

Water Contaminant	Health Impacts
Arsenic	Skin cancer; increased risk of bladder, kidney, liver, colon, and prostate cancer
Coliform bacteria	Abdominal cramps, diarrhea, fever, kidney failure, blindness, paralysis
Lead	Blood disorders, increased miscarriages, spontaneous abortion, reduced sperm count, premature birth, reduced birth rate, stroke, kidney disease, cancer
Mercury/methyl mercury	Damage to fetuses, including brain damage, mental retardation, blindness, nervous system damage, kidney damage, cancer
Nitrates	"Blue Baby Syndrome" a serious or fatal illness in infants, which is caused by consumption of water with high nitrate levels. ⁴⁴
Pesticides	Nausea, vomiting, diarrhea, neurological damage, reproductive effects (such as risk of miscarriage and birth defects), endocrine disruption, cancer
Polychlorinated biphenyls (PCBs)	Hearing and vision problems, liver problems, cancer
Trihalomethanes (THMs)	Bladder, colon, and rectal cancer. Increased risk of miscarriages and stillbirths in pregnant women. May also increase risk of birthdefects.
Volatile Organic Compounds (VOCs)	Cancer

storage, and delivery, or are a mix of contaminated groundwater and imported surface water.

Cumulative impacts are often most detrimental to “sensitive populations” such as children and people with compromised immune systems. A toxin’s effect on pregnant women and infants is rarely evaluated. Mercury, for example, impacts pregnant women more profoundly than any other populations, though the only attempt agencies make to mitigate this exposure is to issue fish consumption warnings for pregnant women. People whose immune systems are compromised, often as a result of living in toxic environments, are even more susceptible to the cumulative impacts of toxins.

Some of the most vulnerable communities are low-income women of color. Most risk assessments are based on a 150 pound male, and do not take into consideration different body size or fat content, different hormonal cycles, or pregnancy.⁴¹ Compared with higher-income women, low-income women are three times more likely to have compromised health, and women of color consistently report fair or poor health at much higher rates than white women. In addition, women of color are often uninsured or lack access to a consistent health care provider.⁴² These factors, combined with

the overwhelming evidence that low-income communities and communities of color face disproportionate environmental exposure, place women of color at a dangerous intersection of contaminants and health hazards.

Cumulative impacts

The summation of exposures of an organism to a chemical over a period of time. Adverse effects can result from individually minor but collectively significant actions taking place over a period of time.



Community members in Richmond learn how to navigate the complex world of California water.

Low-Income People of Color Paying Twice For Water



Buying vended water often causes financial burden on the people who can least afford it.

Many low-income communities choose vended water when searching for an alternative to tap water because it is cheaper than bottled water. The vended water industry aggressively markets to immigrant communities, taking advantage of the fears many immigrants hold regarding tap water – beliefs well justified in other countries where public water supplies may not be safe.⁴⁵ There are over 8,000 water vending machines in California.

However, consumers have no assurance that vended water is actually of higher quality than tap water. Tap water must meet relatively strict federal and state health standards and in most cases is subject to continuous testing and monitoring. Vended water, on the other hand, is virtually unregulated. The California Department of Health Services, the state agency responsible for licensing all water vending machines, does not conduct regular, on-going inspections of machines and retail water facilities. The agency has admitted that vended water regulation is not a priority for the agency, as they do not believe there is a public health risk,⁴⁶ and opposed efforts led by the Environmental Justice Coalition for

Water to require stricter regulation of vended water.⁴⁷

The California Department of Health Services argues that vended water is simply previously inspected tap water that passes through a vending machine's filtration system. The cause for concern, however, stems from the fact that without regular maintenance, vending machines can harbor bacteria and other harmful substances, and may actually contaminate the water they dispense. Vending machine operators are under no requirements to clean or maintain their machines, and since the Department of Health Services does not inspect the machines, vending machine operators have no incentive to ensure the quality of their product.

California state law requires vended water to meet all drinking water standards required of tap water.⁴⁸ Yet water vending machines do not filter all the contaminants that may be present in the tap water feeding the machines, including nitrates, pesticides, industrial chemicals, and even bacteria. In 1997 and 2000, Los Angeles County conducted random testing of the more than 2,000 vended water machines in the county. Over 32 percent of the

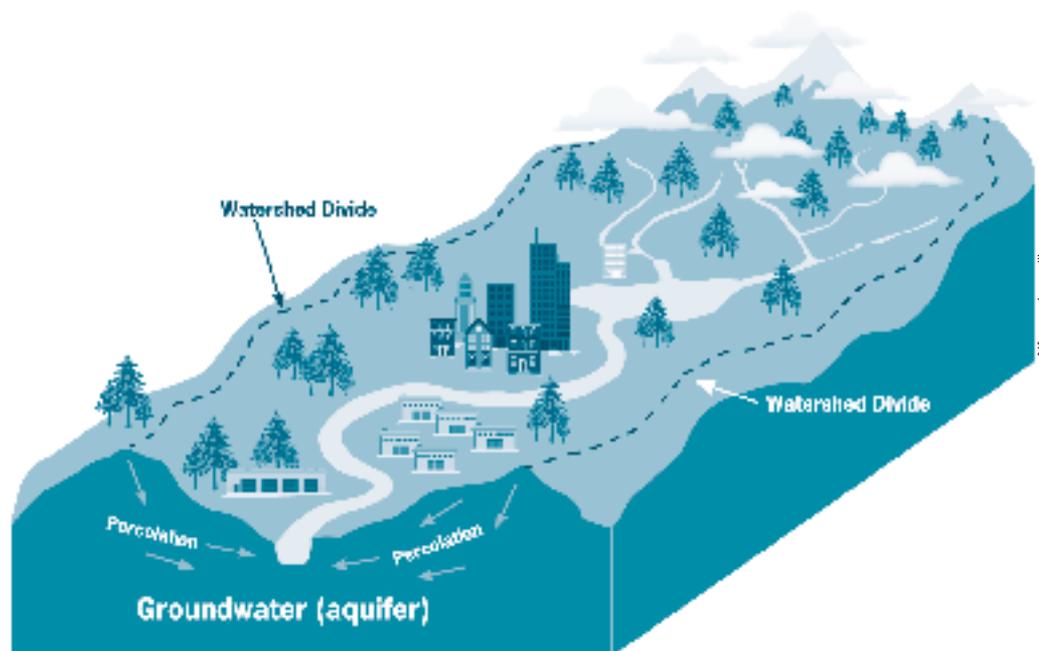
water vending machines tested were found in violation of the trihalomethanes standard and some machines were dispensing water with higher levels of bacteria than typically found in Los Angeles County's tap water.⁴⁹ Los Angeles County eventually sued Glacier Water Services, which operates nearly 90 percent of all the machines in California, for misleading consumers about the quality of their product.

Immigrant and low-income communities purchase vended water precisely to avoid contaminants that may be present in their tap water. The vended water industry has proven that it cannot be trusted to ensure the quality of the water it sells. Instead, vended water increases consumers' financial burden without necessarily protecting their health.

3.2 CAUSES AND EFFECTS OF UNEQUAL ACCESS TO HEALTHY WATERSHEDS

WATER SHAPES THE LAND, CARVING riverbeds, sheltering aquatic life, and feeding forests, grasslands and wetlands. In California, healthy watersheds provided the material resources for indigenous cultures, later immigrants' ranching, logging, and farming economies, and the development of cities and towns. The new economic activities, fueled by water development, stripped mountains of forest, washed entire mountainsides downstream, dammed rivers, drained the Central Valley's wetlands, converted salt marsh and floodplain to sprawling urban areas, and left a legacy of toxic contamination in the air, land, and water. Descendants of the largely Latino, Asian, and African-American labor force that worked the fields and built dams, aqueducts, levees, and cities bear the brunt of the watershed-level problems that accompanied the state's economic growth.

In urban areas, historic zoning practices systematically cut off communities of color from open space, particularly along the waterfront. Today, urban communities of color lack access



A watershed is the land area where rainwater collects and drains into a river, ocean, lake, or other body of water. It includes everything on the land, including vegetation, biological systems, and the human communities located within its boundaries. Healthy watersheds protect communities from flooding, recharge and filter ground water supplies, maintain year-round stream flow, and

reduce fire hazards. They also provide residents with access to open space and healthy plant and animal communities, important for aesthetic, educational, and subsistence reasons.

**We cannot survive
the flooding of our
people a second time.**

—Caleen Sisk-Franco
*spiritual leader of the
Winnemem Wintu*



Toby McLeod

to uncontaminated lands and waters for fishing, swimming, and other recreational activities. People of color, especially Native communities and others that depend upon local natural resources for food and livelihood, are heavily impacted by the loss and contamination of game, fish, shellfish, mushrooms, and edible and medicinal plants caused by poor watershed management practices.

Native Watershed Management Challenges Infrastructure Expansion

In California, Native American groups have suffered genocide and discrimination and have been especially harmed by the dams that impound the majority of the water delivered by federal and state water projects. Their exclusion from this development continues to affect Native American cultural, economic, and spiritual well-being. For many tribes, the wildlife that thrive off rivers, wetlands, lakes, and estuaries provide food and economic livelihoods. Healthy watersheds and wildlife populations are necessary to preserve spiritual and cultural practices. The poverty facing many tribes in California is a direct result of the institutional imperialism in water development highlighted throughout this report.⁵⁰

In Northern California, the Hoopa Valley and Yurok tribes are currently fighting the Bureau of Reclamation's renewal of water-delivery contracts with agricultural users such as Westlands Water District. The Bureau's water diversions have reduced the Trinity River to a trickle, devastating the salmon runs on which the Hoopa, Yurok, and Karuk depend on for food and economic livelihood. The water needed in the Trinity River to maintain the tribe's livelihood represents a mere 10 percent of the water going to Westlands Water District for its billion dollar cotton and garlic agribusinesses.⁵¹ In 2004, the Ninth District Court of Appeals ruled in favor of the Hoopa's challenge of the irrigation contract renewals, declaring that the Bureau must reinstate flow levels necessary to support fisheries.⁵²

The Winnemem Wintu tribe and their ancestral lands along the McCloud River near Mount Shasta are threatened by the Bureau of Reclamation's plans to raise the Shasta Dam, the largest dam in California and the keystone of the Central Valley Project. In 1851, the Winnemem Wintu signed a treaty with the U.S. government reserving a portion of their ancestral lands, but Congress never ratified the treaty. Tribal members eventually received allotments, but Winnemem lands, homes, sacred sites, and

burial grounds were flooded in 1945 behind Shasta Dam. The loss of their lands threatened Winnemem cultural practices, left many homeless, and resulted in further impoverishment of the tribe.⁵³

The Department of the Interior and the Bureau of Reclamation seek to create a more reliable supply of water for export by raising Shasta Dam between six and a half and two hundred feet. The dam expansion would cost taxpayers an estimated \$408 to \$483 million dollars in construction costs. Even a six-foot expansion would flood Winnemem burial grounds and sacred sites such as Puberty Rock, where young women have their coming of age ceremony.

In 2004 the Winnemem held Hu'p Chonas—a war dance—at Shasta Dam. The dance is a ceremonial way of declaring resistance and protest to a challenge. The event also drew public attention to the little-known dam project. Caleen Sisk-Franco, spiritual leader of the Winnemem, and Mark Franco, Tribal Chief and Headman explained the purpose of the war dance, saying “We are dancing now to show the McCloud River that we too are fighting to protect these waters from the increased destruction posed by the proposed raising of Shasta Dam.”⁵⁴

The Winnemem Wintu have assembled a diverse alliance of environmental groups, tribal rights advocates, and environmental justice organizations. Using an extensive media strategy, including film screenings and print coverage, members are working to stop the dam raise and ensure the tribe receives its proper federal recognition. Organizations are pushing state policy makers to recognize raising Shasta Dam is both a poor water management decision and a poor budget decision that will have severe consequences for the Winnemem. At the federal level, the tribe has been working with lawyers and agencies to hold the government accountable for the many promises it has broken to the Winnemem Wintu.

Urban Communities Cut Off from the Waterfront

Urban communities have long been excluded from the recreational development of water resources. Along the Los Angeles coastline, racially restrictive covenants prevented African-Americans from buying waterfront property. Blacks were segregated to a “black only” section of Santa Monica Beach known as the Inkwel. In Manhattan Beach, white opposition drove one of the few black beach resorts out of business by condemning the property.⁵⁵

Redevelopment and gentrification have exacerbated historical inequities. Redevelopment of abandoned industrial sites often excludes low-income, communities of color from access to waterfront land. Closed or soon-to-be-closed military bases ring the San Francisco Bay; as these sites are redeveloped, public access to the bay is often blocked by high-priced, exclusive housing developments. In San Francisco’s Bayview Hunters Point district, a predominately low-income, African-American community, attempts to clean up the severely-contaminated Hunters Point Naval Shipyard and restore a local slough have been stymied by lack of funding and government initiative, while redevelopment of a former military base in an affluent neighbor-



In Richmond, low-income communities and communities of color do not have access to the shoreline because of development.



East Bay Watershed Center

Threats to Waterfront Access in North Richmond

When I was young, Breuner Marsh was really accessible to kids in Parchester who wanted to fish. I remember trying to swim in the channels that come from the bay at high tide. But now, the Richmond shoreline is off limits

to the public. There are thousands of new homes that have evolved on old Chevron property and by the Richmond golf course. We want to keep a whole corridor of open space. It's very important for the whole area, but significantly for Parchester Village.

—Whitney Dotson
Parchester Village
Neighborhood Council

Residents of the North Richmond area, many of who do not own cars, have three times less access to open space than the average resident of Contra Costa County.⁵⁷ The marsh, which is the only local fishing and recreation site, is threatened by planned bay-front luxury housing and industrial development.⁵⁸

Breuner Marsh is one of the San Francisco Bay area's few remaining tidal wetlands, 95 percent of which have been lost to development. Wetlands provide vital ecological benefits: they cleanse pollutants from storm runoff, protect shorelines from erosion, absorb floodwaters, and provide wildlife habitat. Breuner Marsh is a component of a larger wildlife corridor. Its uplands protect the marsh area, feed the creek and groundwater, and contain a unique vernal pool ecosystem.

Few low-income communities and communities of color in California's large urban areas can access open spaces close to home. As undeveloped urban land, especially waterfront property, becomes increasingly valuable, low-income communities throughout California are threatened with the loss of local open space.

In 2003, a high-end developer agreed to purchase Breuner Marsh from the current owner for \$50 million and construct between 700 and 1,000 units of housing there. The high price prevented open space advocates from purchasing the property, but after the sale several community-based organizations formed the North Richmond Shoreline Open Space Alliance and demanded that government agencies actively involve them in planning and decision-making about the North Richmond Shoreline.

The North Richmond Shoreline Open Space Alliance continues to build grassroots support for the protection of Breuner Marsh. They have worked closely with the East Bay Regional Park District to acquire the Marsh and aggressively targeted local policy makers to support the preservation of open space. However, North Richmond residents working to protect this valued community resource and ecologically significant area realize that they face an uphill battle against developers seeking lucrative returns and municipalities hoping for increased property and sales tax returns to support their dwindling budgets.⁵⁹

hood has restored wetlands, created waterfront parks, and brought economic activity.

Surface Water Pollution: Point and Non-Point Sources

As of 2002, 685 water bodies in California were listed as “impaired waters” by the Environmental Protection Agency (EPA) because they exceeded pollutant limits or were degraded by structural barriers such as dams.⁶⁰ Many water bodies have moderate to severe water quality problems but are not listed by the EPA or the State of California.⁶¹ Surface water quality is damaged by two different categories of contaminants: point and non-point sources.

The federal Clean Water Act was passed in 1972 to clean up severely polluted rivers and requires permits for “point source” pollution—discharges from a single, identifiable source such as a factory or sewage treatment plant. Many early environmental and environmental justice campaigns focused on reduction of point-source pollution and significantly improved the water quality of many rivers, however these victories are threatened by recent Bush administration policies that allow more untreated waste water and pesticides to be dumped into local water bodies, defer enforcement of violations, ask

polluters to voluntarily reduce discharges, and create “pollution trading” loopholes that often concentrate polluting facilities near low-income communities of color.^{62, 63}

Intense urbanization and lack of effective watershed management decrease water quality. An investigation of the environmental justice issues related to transportation planning conducted by the California Department of Transportation highlights the fact that heavy materials from vehicle exhaust fumes, copper from brake pads, tire and asphalt wear deposits, drips of oil, grease and anti-freeze can seep into the shallow groundwater supplies of many low-income communities. The report concludes that “...water resource impacts may be more severe for low-income and minority residents than the population as a whole. Transportation facilities can affect water recreation resources by contributing to contamination and by creating physical obstructions that make water access difficult or unpleasant.”⁶⁴

According to the California Environmental Protection Agency, most pollution entering the state’s waterways is “nonpoint source.” Rain and melting snow that run off streets, drain off agricultural fields, and leach from abandoned mines and hazardous waste disposal sites carry

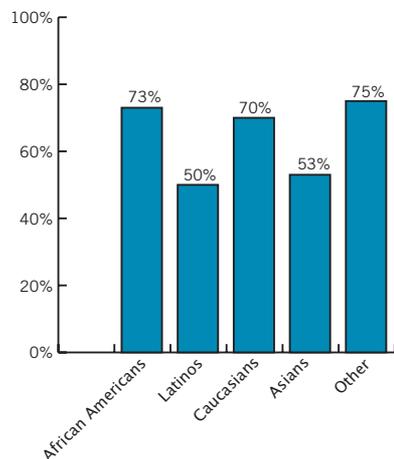
sediment, metals, pesticides, fertilizers, oil, pathogens, or trash. The Natural Resources Defense Council reports that “urban runoff... is one of the largest and fastest growing sources of water pollution in the United States [and] is the largest source of impairment in coastal waters and the second largest source of the bacterial contamination that closes thousands of beaches in the United States each year.”⁶⁵

Sewage overflows are another major form of water contamination resulting from poor watershed management. A recent Environmental Protection Agency report found that every year, 860 billion gallons of raw sewage and waste spill from storm-water runoff and sewage facilities.⁶⁶ Much of this polluted water is released into waterways adjacent to low-income communities and communities of color.

Subsistence Fishing Increases Toxic Exposure

California’s vast concrete water infrastructure has interfered with the ability of watersheds across the state to absorb and flush toxins. Legacy pollutants such as mercury and PCBs combine with urban runoff in lakes and bays. Pollutants remain at the bottom of rivers and estuaries; sediment taken up by invertebrates

Who is aware of fish consumption advisories?



Percentage of anglers claiming awareness of fish consumption health advisories.

Source: San Francisco Estuary Institute, 2001.

then accumulates through the food chain. A 2000 San Francisco Estuary Institute study found that fish in the San Francisco Bay “routinely exceeded health screening guidelines for PCBs, mercury, dioxin, dieldrin, and selenium.”⁸⁵ People who regularly eat fish from polluted waters are exposed to high levels of toxins.⁸⁶ Contaminants such as PCBs and mercury—common in fish in many California waters—increase the risk of cancer, birth defects, damage to the immune, nervous, and reproductive systems,⁸⁷ as well as learning and behavioral disabilities.⁸⁸

Many anglers of color consider fish consumption a healthy activity. Their subsistence practice arises from both cultural traditions and economic necessity. Multiple studies have demonstrated that fish consumption rates in California are highest among Asians, Blacks, Native Americans, and other minority groups.⁸⁹

Health risk assessments and related sediment clean-up plans have not addressed the human health risks contaminated fish pose to anglers of color and their families. The Environmental Health Coalition has found that most agency investigations of contamination in the San Diego Bay have “significant flaws and data gaps and have not specifically addressed the risks to subsistence-level fishers.”⁹⁰ The Office

of Environmental Health Hazard Assessment (OEHHA) issues fish advisory warnings about specific fish, but these are often inaccessible to low-income, immigrant communities because of language or technology barriers. A San Francisco Estuary Institute study found that Latinos and Asians in the San Francisco Bay Area were less likely to know about fish consumption advisories than other ethnic groups and that awareness of advisories decreased with income level.⁹¹ Richmond’s Ma’at Youth Academy visited six different government agencies before the OEHHA posted a sign warning Richmond Harbor fishers that this popular fishing spot is a Superfund site.⁹²

When a water body is polluted by multiple contaminants and fails water quality standards for recreation, fishing, or drinking, the federal Clean Water Act mandates a management plan based on the Total Maximum Daily Load (TMDL) of a given contaminant.⁹³ The mercury TMDL established by the San Francisco Regional Quality Control Board states that the San Francisco Bay will be contaminated by mercury for 120 more years. It does not outline strategies—except for not eating fish—to reduce mercury exposure. Instead of addressing better watershed management and pollutant control, agencies have targeted the subsistence and cultural activities of

Sewage Overflows and Toxic Water in Bayview Hunters Point

When I was a kid, Yosemite Slough seemed like a nice place to swim—but it was too filled with junk. Raw sewage used to flow into it, which still happens when the sewage plant overflows. You can't access open space here in Hunter's Point because some private person owns it or it's dump.

People need to open their ears to what environmental justice is saying. You have a clean pristine environment in your communities, we are saying we want clean environments in our communities. Here in Bayview, African-Americans are the main people who poisoned. We paid for this community with our lives, so for me it's a civil and human rights issue

—Olin Webb
*Bayview Hunters Point
Community Advocates*

The population of San Francisco's Bayview-Hunters Point neighborhood is comprised of over 80 percent people of color; 30 percent of the population has an annual income of less than \$10,000.⁶⁷ The district has borne the burden of the city's worst pollution problems – including soil and water contamination, two outdated power plants, two superfund sites, hundreds of toxic sites, and industrial facilities. The community has four times more toxins than any other San Francisco neighborhood and two outdated power plants.⁶⁸ Hospitalization rates for asthma, congestive heart failure, hypertension, diabetes, and emphysema in the Bayview are more than three times the state average.⁶⁹

In the center of this neighborhood lies Yosemite Slough, a large inlet of San Francisco Bay that is bordered on the north by the Hunters Point Naval Shipyard, an EPA-designated Superfund site. Yosemite Slough was once a free-flowing creek that supplied fresh water to the South Basin; today it serves as a conduit for annual combined sewage overflows (CSOs). 80 percent of San Francisco's sewage and rainwater runoff pass through a wastewater treatment plant in the Bay-

view. During periods of heavy rainfall, when demands on the system exceed its capacity, storm runoff mixes with sewage and is released directly into the San Francisco Bay. Ten CSO pipes are located in or adjacent to the community; three of these empty directly into the Slough. Although the Regional Water Quality Control Board permits only one sewage overflow into Yosemite Slough per season, recent years have seen seven per season.

According to a 2003 University of San Francisco (USF) study:

a ... concern and environmental hazard is the use of Yosemite Slough as an illegal dump site. The California Integrated Waste Management Board determined that...the slough contains several tons of household garbage, appliances, furniture, abandoned vehicles, concrete, asphalt, dirt, plastic, wood, and construction debris.... Issues have arisen concerning contamination and radiation from the on-site landfill."⁷¹

The study found that thirty-four out of thirty-nine water samples taken from the Slough contained polychlorinated

biphenyls (PCBs) at levels above the proposed "safe" level for fish consumption.⁷² This is a serious problem as many Bayview residents depend on their catch to feed their families.

The Yosemite Slough Watershed Restoration Project, funded by the CALFED Bay-Delta Program,⁷³ is a collaborative effort by community-based organizations, scientists, and regulatory agencies to address the impacts of toxic exposure, improve local and regional water quality, and reverse community member's historic exclusion from decision-making processes. The project has established a watershed council, employed youth to monitor water quality, and gathered scientific data about the Slough.



Bayview Hunters Point is home to numerous toxic sites.



Environmental Health Coalition

Bioaccumulation: An increase in the concentration of a substance in a living organism over time; occurs when an organism takes in contaminated air, water, or food containing substances that are very slowly metabolized or excreted, and can affect the health and functioning of the organism.

low-income communities of color. As a result, these communities have been forced to take outreach, community education and even data collection into their own hands.⁹⁴

The use of mercury to separate gold and other metals from ore began in California with the gold rush, but the legacy of environmental destruction and genocide continues to this day.⁹⁵ Clear Lake, the ancestral home of the Elem

Pomo Nation, has been declared a Superfund site due to contamination from an old sulfur mine. Fish advisories warn pregnant women not to consume any fish from the lake. After a \$10 million EPA clean up, the Elem have a fence and a warning sign. There has been no actual clean up of the site, which is part of the Elem community's dwindling land base.⁹⁶ The tribe, which used the area's plants and wildlife for food, medicine, and spiritual purposes, has lost an important cultural and economic center.

Most fish contaminants are produced by shipyards, military complexes, mines, and industrial facilities. For decades, the San Diego Naval Base released mercury, copper, PCBs, and polycyclic aromatic hydrocarbons into the San Diego Bay. A recent ecological assessment found that "contamination remains widespread in San Diego Bay sediments and affects the tissues of various species of fish that are subject to human consumption."⁹⁸ Sonia Rodriguez, Community Organizer with the San Diego-based Environmental Health Coalition, calls toxic sediment and the contaminated fish a key environmental justice issue in San Diego Bay. She notes that communities of color who depend on fish as a food source consume "...toxic fish in a manner that is consistent with cultural methods of preparations, i.e. consuming the entire fish, fish

Mega-Dairies and Environmental Justice Impacts

Wasco, just north of Bakersfield in Kern County, is one of the many towns in the Central Valley to witness the rise of “mega-dairies” – concentrated, highly mechanized and factory-like facilities typically housing anywhere between 800 and 14,000 cows. When residents heard news of impending dairy construction that would bring more than 100,000 cows to their area, 83 percent voted to request that any new dairies be sited outside a ten-mile buffer zone beyond the city limits.⁷⁴ The town of Wasco submitted the request to county supervisors, who proceeded with the approval process for the new dairies anyway.

For the past ten years, Chino Basin, east of Los Angeles, has been the center of the dairy industry.⁷⁵ Dairies’ practice of dumping large volumes of manure on nearby fields have severely degraded the Santa Ana River and groundwater basins, the drinking source for a large portion of Orange County.⁷⁶ Dairy-related water contamination presents serious human health



Tom Franz

risks, such as reproductive problems due to high nitrate levels.⁷⁷ The antibiotics and growth hormones used on cows can also migrate into drinking water and increase the risk of cancer.⁷⁸

Discouraged by increased regulation by the Santa Ana Regional Water Quality Control Board, dairies have moved into the Central Valley.⁷⁹ Dairies have been able to cash in on the Chino Basin’s environmentally unsustainable suburban expansion by selling their land to real estate developers at high speculative prices.⁸⁰ The patterns of poor watershed and land-use planning initiated in Chino Basin are being replicated in the Central Valley, particularly near low-income, communities of color.

The dairy industry regularly pollutes water sources. Companies like Hilmar Cheese in Merced County dumped huge amounts of wastewater on local fields for sixteen years until the *Sacramento Bee* revealed the extent of pollution and lack of enforcement. The absence of regulatory oversight at Hilmar was certainly encouraged by the fact that one of their founders and co-owners, Chuck Ahlem, was Governor Schwarzenegger’s undersecretary of agriculture.⁸¹ Also helping the dairy industry is their powerful lobbying force, the California Milk Advisory Board, one of the largest marketing boards in the U.S. With an advertising budget of \$37 million, they undertake aggressive marketing efforts such as

the “Happy Cow” campaign to promote corporate dairy interests.⁸²

Central Valley residents have seen property values drop and family farms move out as dairies move in. Tom Frantz, long-time Wasco resident and president of the Association of Irrigated Residents comments, “people have seen the effects of these dairies and they don’t want anything to do with that. Once the dairy is there, everyone knows you won’t get other development.”

Wasco has unemployment rates hovering around 20 percent, with 24 percent of families below the federal poverty line and a population that is two-thirds Latino.⁸³ The new centers of dairy production—Tulare, Kern and King Counties—have similar high unemployment and poverty rates, and large communities of color.⁸⁴ To many residents, the lack of dairy regulation is the latest incident in a long history of the exclusion of community concerns from regulatory processes. “Poor communities never had that much voice in anything that they are building,” Frantz says. “Regular farmers and rural people didn’t want these factories. A town like Wasco has no say about what happens outside their city limits.”

As a child, one of my favorite activities was fishing on Clear Lake with my father. An expert fisherman, he has ‘fish patience’ and optimism and so he would wait a long time for the fish to nibble before moving the boat. I was in college before I bothered to look closely at the California Department of Fish and Game regulations in detail. And then I saw the section ‘Public Health Advisories on Fish Consumption.’⁹⁷

—Jacquelyn Ross
an Elem woman, remembers fishing on Clear Lake:

stews, and eating skin – all methods of eating that maximize exposure to toxics.”⁹⁹

An Environmental Health Coalition survey of local fishing spots found that 96 percent of the fishers were people of color, the majority of whom consume contaminated fish above the advisory level. Other studies of mercury levels in blood have found higher levels among Asians and Pacific Islanders and women who eat fish.¹⁰⁰ This raises concern about the exposure levels of the large percentage of Filipino families who regularly consume fish from the San Diego Bay. The report concludes by emphasizing the urgency of these environmental justice concerns:

Many of the fishers surveyed reside in Barrio Logan, Sherman Heights, Logan Heights, West Chula Vista and National City. These communities are the most heavily burdened with toxic exposure in San Diego County. Among the co-risk factors of these communities...are the highest lead contamination in housing stock, highest cancer, reproductive, respiratory risks from air contaminants, and high poverty rates. These co-exposure rates necessitate additional, more protective actions to respond to the high cumulative burdens of these community residents.¹⁰¹

The Impact of Floods

In a healthy watershed, forests trap and store rain water and melting snow. Riparian, or streamside, plants keep banks from eroding during floods. Wetlands soak up and slowly release floodwaters; plant roots and deep soils allow precipitation to sink into the ground, where it is filtered as it seeps slowly down to the aquifer; and beaver dams trap sediments. Indigenous management practices maintain the health of a watershed’s ecosystems. Watershed “management” in the U.S. era has devastated the natural function of California’s rivers. Massive flooding—a symptom of the instability of the engineered and degraded water system—began in the late nineteenth century as a result of mining and logging in the upper watersheds. Dams, levees, and other flood-control structures mask some of the impacts of the destruction of healthy watershed function, often by diverting floodwaters downstream.

Low-income communities and communities of color in rural areas are particularly vulnerable to flooding. Low-income communities of color located in the Central and Pájaro Valley floodplains lack adequate drainage, levee, and sewage infrastructure.¹⁰² In years of heavy rainfall, levees may be inadequate to hold back the excess

water. Nor are upland communities immune. In the Sierra Nevada the channelization of streams, the destruction of wetlands, clearcut logging practices, and road construction can cause significant flooding and mudslides during spring snowmelt and heavy rains.

Urbanization greatly increases the severity of floods. As concrete and buildings cover the land, more water runs off, laced with heavy metals, pesticides, motor oil, and sediment. Meandering streams become deep gullies and are usually put into concrete channels or buried completely in culverts. Increased runoff causes more intense flooding and decreases the amount of time water flows through riparian forests and wetlands. The destruction of these habitats reduces the ecosystem's ability to remove pollutants. Storm drains that are meant to pipe water away from upstream sites may simply relocate the flooding problems downstream to flatland communities with even less adequate flood-control infrastructure.

Because toxic waste sites and wastewater treatment plants are often located in the flatlands, adjacent to low-income communities and communities of color, flooding can lead to increased toxic exposure for residents. The economic impacts of flooding are also significant. Because flood insurance can cost several hundred dollars



Los Angeles Department of Public Works

Paved streets do not provide an adequate outlet for floodwaters.

such protections for their homes and belongings. When agencies attempt to quantify the impact of a flood, the overall economic impact in a low-income community is often valued lower due to lower property values. As a result, low-income communities are likely to be overlooked when resources to solve flooding problems are allocated based on calculated flood-damage costs.¹⁰³

Urbanization and Flooding in Los Angeles

The Los Angeles metropolitan area, one of the great emblems of urban sprawl, is built on a coastal floodplain. During the 1930s, rapid urban development caused drastic floods and

people. According to historian Mike Davis, as the city's population grew and industrial acreage expanded, the Army Corps of Engineers' solution was to:

deepen and 'armor' – that is, pave – a narrow width of the Los Angeles River's channel in order to flush storm runoff out of the city as efficiently as possible, and thus allow extensive industrial development within the floodplain. Beneficial to large landowners in the region, this strategy would force the natural river into a concrete straitjacket – destroying the riparian ecology and precluding the use of the riverway as a greenbelt."¹⁰⁴

John McPhee describes the resulting Los Angeles Flood Control system as “more than two thousand miles of underground conduits and concrete-lined open stream channels – a web of engineering that does not so much reinforce as replace the natural river systems.”¹⁰⁵ In the dry season, the flow is treated wastewater. Water runoff from new suburban developments has increased the flow of the Los Angeles River three fold, outpacing the construction of flood-control dams and concrete levees.¹⁰⁶ Industrial areas along the channelized river became the home of many of Los Angeles’ poor and working-class residents. Today, these areas are primarily communities of color.¹⁰⁷ Many of the former industrial sites are vacant; immigrant communities occupy tract housing built for former manufacturing workers.¹⁰⁸

Sun Valley, once a riverbed feeding the coastal floodplain and now a major concrete thoroughfare, is predominately Latino, largely industrial, and prone to flooding. The area was built without an underground storm sewer or curbside channels to catch rainwater and runoff. Residents recall annual floods that prevented children from going to school. They are frustrated with city officials who claim it costs too much money to make infrastructure improvements.¹⁰⁹ As one business owner says, “What makes you

mad is that they neglected this street. It’s not that we didn’t call and complain, it’s just that they didn’t care.”¹¹⁰ Non-profit organizations like TreePeople have initiated large-scale greening programs in Sun Valley, using catch basins and trees to prevent flooding. However, many communities in Los Angeles’ vast ‘flood control system’ still experience summertime releases of raw sewage and frequent floods.

Equitable Watershed Management is Essential to Achieving Environmental Justice

Watersheds provide important quality of life benefits and support the local and regional economy. They catch, store and transport our water supply, providing a “natural infrastructure” that supports household uses, industry, commerce, and agriculture. Sound watershed management is the foundation of community and economic development; restoration of rivers and waterfront lands has often been the catalyst for community revitalization.¹¹³ Effective watershed management and land conservation efforts increase property values and the local tax base.¹¹⁴ By using recycling wastewater and infiltrating stormwater throughout the watershed, cities improve water quality,¹¹⁵ increase green and public space in every urban neighbor-

hood, and provide all communities in California, regardless of race, income or ethnicity with safe, accessible parks and wild spaces.¹¹⁶

CHAPTER CONCLUSION

EQUITABLE WATERSHED MANAGEMENT IS A real solution to many community water issues. However, like conservation and water reuse, powerful forces in land-use planning favor urban sprawl, industry, and agribusiness interests. The result is a series of health and environmental concerns that overwhelmingly impact low-income communities and communities of color, which are simultaneously denied access to political processes to address these concerns. These communities continue to pay a heavy price, with their health and quality of life, for poor watershed planning decisions.

Every year state route 269 is closed down. From all the money that has been wasted cleaning up State Route 269, the state could have invested in a more sustainable solution. Up the creek there is a gravel company that conducts continuous excavations, which releases asbestos into the creek. With heavy rainfall the asbestos becomes concentrated and soils travel through the creek and the community of Huron. When the soil dries up and becomes dust, the asbestos and pesticide laden dust layer everything in town. A car can't stay clean for more than a few hours – so your car gets layered with not only pesticides but asbestos, and so do your lungs.”

—**Rey Leon,**
*Policy Analyst, Latino Issues Forum,
who grew up in Huron, California*

Flooding Devastates Central Valley Town

An annual event in Huron, a small, overwhelmingly Latino town of 6,300 west of Fresno, is the flooding of Highway 269. The highway is the main route to a major

north-south artery.¹¹¹ Every year Huron faces floods and mud slides from nearby Arroyo Pasajero Creek. When the California Aqueduct, the main canal for the Central Valley Project, was built just west of the farm working community, it diverted floodwaters away from their natural flow into Tulare Lake

and into the streets of Huron.¹¹² The aqueduct's path also blocks floodwaters from Lemoore Naval Air Station. Every year when the road is closed, the town loses business; residents are forced to take long detours, and deal with mud-covered roads and the associated health risks.



Suburban sprawl, a symptom of poor watershed management, negatively impacts local water bodies.

EJCW



POLICY RECOMMENDATIONS

Water Governance and Public Participation

The State Legislature Should Establish An Independent Commission To Analyze Social, Economic, And Environmental Inequities Inherent In The Current Water Rights Allocation System, Including The Definition And Legal Interpretation Of The “Reasonable And Beneficial Use” Doctrine.

The California State Constitution and the state Water Code define water as a public good and hold the state responsible for managing it in the public interest. The state is charged with protecting “reasonable and beneficial” uses. Unfortunately, the logic of “reasonable and beneficial use” is driven by two exclusionary principles: 1) water not used for agriculture or municipal purposes is water wasted and 2) the value of water usage is to be measured economically, not socially, culturally or ecologically. These two principles fail to protect Native American uses of water and ecosystem water needs.

CALFED Should Commission An Independent Community Review State And Federal Water Projects’ Social And Economic Impacts On Local Communities. CALFED Should Also Fund An Independent Review Of California Dams To Examine The Possibility Of Decommissioning Operations Through The Federal Energy Regulatory Commission Process Or Through Other Mechanisms.

Dams are destroying Native American cultures by flooding their ancestral homelands and burial sites, and by virtually exterminating salmon runs upon which many tribes depend on for food and livelihood. Several Northern California tribes are currently facing the threat of cultural extinction due to the proposed expansion of Shasta Dam and the continued operation of other dams. Studies of the economic impacts of removing dams have shown that dam removal can greatly improve rural economies by revitalizing fisheries and increasing tourism.

The State Of California Should Require All Water Users, Including Agricultural, Industrial, And Municipal Users, To Implement All Available Water Conservation, Reuse, Recycling, And Other Water-Use Efficiency Options Before Any Dams, Reservoirs, Ocean Water Desalination Plants, Or Other Types Of Water Development Infrastructure Are Approved For Construction.

Water conservation, reuse, and recycling programs have proven successful in increasing water supplies without building additional infrastructure. Many of these programs have also created jobs and economic opportunities in low-income communities. In contrast, dams, reservoirs, desalination plants, and other large water development projects have disproportionate negative impacts on low-income communities and communities of color, particularly tribal communities. They are also expensive, environmentally destructive, and fuel unsustainable coastal and suburban sprawl.

California Law Should Specifically Prohibit Water From Publicly Subsidized Projects From Being Sold Or Traded In Speculative Bulk Water Sales Or Trading Schemes.

California taxpayers pay hundreds of millions of dollars every year to build and maintain water infrastructure that provides water to farmers, municipalities, and others who are under legal obligations to use the water in specific ways. Such water is not private property but a public resource that legally belongs to all Californians. Therefore, anyone receiving publicly subsidized water must not be allowed to sell or trade water for a profit at taxpayers' expense. Instead, water no longer needed should be returned to the environment, or redistributed to communities who lack a safe, reliable drinking water supply.

The State Of California Must Require A Local Public Process For The Review And Approval Of Any Water Transfers And Land Fallowing Decisions. When Water Transfers And Land Fallowing Are Approved, California Must Require Transition Assistance For Communities And Individuals Impacted By Such Projects.

Water transfers and land fallowing impact farm workers, local residents, small businesses, and regional economies in addition to the parties directly involved in the agreement. The decisions to conduct these programs are often made by the boards of landowner-based water districts rather than the community as a whole. It is crucial to ensure meaningful public participation from the outset of any discussions about water transfers and land fallowing. In order to prevent severe disruption of local economies, water districts conducting the transfers must be required to include a transition assistance program for the impacted communities, especially for displaced workers who are left without employment and often, without homes.

California Law Must Require That The Governing Bodies Of All Water Districts Be Popularly Elected. Voting Should No Longer Be Limited To Those Who Own Land And Property.

Many water districts' governance structures are land based and property weighted. Water district board elections are inequitable because they favor wealthy landowners and their interests over those of other residents. Water districts must be responsive and representative of all the water needs in a community. Therefore, any district resident must be able to vote and run for a seat on a water district board.

Water Districts Must Define Their Service Area Broadly So As To Include All Members Of The Community And Their Respective Needs.

Water districts often narrowly define their service area and do not include all populations that are affected by board decisions. Many water districts assess taxes and fees on district residents to help subsidize water infrastructure projects that do not benefit non-landowners. A landowner-controlled irrigation district may focus on its mandate to provide adequate irrigation water and neglect the concerns of people also drink the irrigation water. It is critical that water districts gather accurate information about water problems in their communities, establish formalized processes to represent all users in the development of water policies, and ensure that such publicly made decisions are enforced.

All Water Districts Should Be Required To Develop And Implement Integrated Groundwater Management Plans That Include The Water Quality, Water Supply, And Drinking Water Quality Needs Of All Communities Within Their District Boundaries.

Groundwater is an important source of drinking water for millions of Californians. It is critical to ensure that aquifers are not further polluted or depleted. All water districts, including irrigation districts, must recognize that their practices may adversely impact groundwater sources upon which neighboring communities depend, and must create integrated groundwater management plans to ensure that their actions do not have negative impacts on groundwater supplies.

One Government Agency Should Have Ultimate Regulatory Oversight Over All Potable Water Suppliers To Ensure That All Consumers Have The Same Protections Under The Law Regardless Of Who Provides Their Water.

Different government agencies are responsible for regulatory oversight of public, quasi-public, and private water purveyors. Consumers receive vastly different levels of water quality, access to water, water rates, and customer service depending on who provides their water. Until one drinking water regulatory agency is established, all consumers must receive notification of which regulatory agency to contact when they have concerns about their water.

All Proposals To Privatize Public Water Utilities Must Include A Local Public Review Process That Also Allows All Local Water Consumers To Vote Or Otherwise Decide On Such Proposals Before Public Utilities Are Privatized.

The privatization of public water systems can lead to rate increases, service disconnection, and limited opportunities to hold a private company accountable, among other problems. Therefore, it is critical that all water consumers vote on any privatization proposals. Once a privatization contract is approved, local public agencies – such as city or county governments – should be responsible for monitoring and evaluating how effectively private water suppliers are able to deliver safe and affordable water to all community members. If a company fails to meet these requirements, the water system must be returned to public management. In communities that lack public capacity to manage the water system, the county government, local irrigation district, or other local public entity should assume responsibility for the water system.

The State Should Require That All Water And Land-Use Projects Be Planned, Implemented, And Managed With Participation From Impacted Community Members. Additionally, The State Should Require That Water Be Considered As An Essential Component In All Land-Use Decisions And Projects.

Land-use decisions and plans have a disproportionately negative effect on low-income, communities of color, including the permitting of multiple polluting facilities, such as heavy industries, landfills, power plants, and wastewater treatment plants in their neighborhoods. Land-use planning processes often fail to consider water resources, resulting surface and ground water pollution as well as flooding in low-income communities and communities of color. New water supply and quality, watershed restoration, and wastewater treatment projects, as well as efforts to renew water contracts, authorize or reauthorize dams, transfer water, retire agricultural land, restore rivers, or construct desalination plants can also negatively impact communities. All of these projects must also include a cost-benefit analysis that focuses on generating resources in communities left out of the benefits of California's existing water development.

All State Government Agencies Having Jurisdiction Over Any Aspect Of Water Management And Planning Must Adopt the Cal/EPA Advisory Committee On Environmental Justice Recommendations for Achieving Environmental Justice.

The recommendations revolve around the following four goals:

- Goal #1:** Ensure meaningful public participation and promote community capacity-building to allow communities to be effective participants in environmental decision-making processes.
- Goal #2:** Integrate environmental justice into the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.
- Goal #3:** Improve research and data collection to promote and address environmental injustice related to the health and environment of communities of color and low-income populations.
- Goal #4:** Ensure effective cross-media coordination and accountability in addressing environmental justice issues.

State agencies committed to achieving environmental justice within water policy must adopt these four goals as essential in addressing the water-related needs and concerns of low-income communities and communities of color. The recommendations outline many strategies public agencies can use to ensure meaning public participation in water-related policy and decision-making processes. The full text of the recommendations can be found at Cal/EPA and on EJCW's website, www.ejcw.org.

Access to Water Resources

All Potable Water Purveyors Should Be Required To Establish A “Lifeline” Rate For Low-Income Residential Water Users.

Residential water service, particularly in rural areas, can often place a major financial burden on low-income households. Electricity and telephone service utilities offer a “lifeline” rate to low-income consumers. It is vital that all water utilities to provide water at a discounted rate that low-income consumers can afford.

Adequate Funding Must Be Made Available To Build And Maintain Drinking Water and Wastewater Infrastructure For Tribal, Small, And Economically Disadvantaged Communities. State Funding Programs For These Projects Must Be Made Accessible To These Communities.

State agencies must be creative in finding funding for water-related projects in low-income communities and communities of color. One possibility is to use Proposition 50 funds for the Infrastructure Rehabilitation Program, which funds infrastructure projects in disadvantaged communities. The state agencies responsible for distributing the bulk of funds available for water projects—the Department of Health Services, the State Water Resources Control Board and the Department of Water Resources—manage funding programs that are often inaccessible to low-income communities and communities of color. Incorporation of the following principles into existing and future funding programs will ensure that communities are able to access resources necessary to develop and maintain safe, affordable drinking water systems:

- Translate all materials, including funding program guidelines, requests for proposals, instructions, and other documents into languages spoken by at least 10 percent of all Californians;

- Use U.S. mail, fax transmission, and other communication methods to disseminate information about funding programs;
- Contract with community-based organizations to disseminate information about funding programs, and to conduct prospective applicant workshops;
- Define “disadvantaged communities” as communities with an annual median household income less than 80 percent of the statewide annual median household income;
- Define “small community” as one with no more than 3,000 users or 1,000 connections;
- Give disadvantaged communities preference for state funding for safe drinking water and water quality projects;
- Set aside 25 percent of water funding for disadvantaged and small communities;
- Provide disadvantaged and small communities technical assistance in preparing of applications for water-related grants and loans in a manner that addresses community needs;
- If state agencies are unable to provide technical assistance directly to applicants, the state should contract with experienced community development organizations to provide such assistance;
- Disadvantaged and small community water systems, as well as community-based organizations should be exempted from matching funds requirements;
- Disadvantaged and small communities must receive assistance in meeting CEQA and TMF requirements;
- Native American communities should qualify as “disadvantaged communities.”

State Water Project And Central Valley Project Contractors Should Pay A User Fee, Proportional To Their Use Of Project Water, To Help Fund Water Infrastructure Projects For Tribal, Small And Otherwise Disadvantaged Communities Located Near The Projects.

The publicly funded State Water Project and Central Valley Project should provide benefits for the largest possible number of taxpayers. Currently, most tribal, small and economically disadvantaged communities located near the projects receive no direct benefits, including access to project water. Many of these communities lack access to safe and affordable drinking water, while high-quality surface water destined for irrigation flows all around them.

Public Health Goals (PHGs) And Maximum Contaminant Levels (MCLs) For Contaminants In Drinking Water Should Be Established Using Health Data Relevant To Women And Children. The Office of Environmental Health Hazard Assessment and the Department of Health Services Must Consider The Cumulative Impacts Of Exposure To Multiple Contaminants From Multiple Sources When Setting PHGs And MCLs.

The regulatory process that establishes drinking water standards is inherently flawed in several ways. First, standards are based on both public health and economic considerations, and therefore standards often allow a contaminant to be present in excess of what constitutes a health protective level. Second, the regulatory process does not take into account the wide range of contaminants that environmental justice communities are exposed to on a regular basis, nor the related cumulative health effects that such contaminants cause. Finally, drinking water standards are largely based on health studies performed on healthy white men, not women and children of color, or other vulnerable populations.

The State Of California Should Commission An Independent Study To Recommend Strategies For Phasing Out Pesticides And Other Chemicals That Are Known To Be Highly Toxic To Humans And That Pollute Water Supplies. In The Interim, The State Should Require Pesticide And Other Chemical Manufacturers To Pay Into A Special Fund That Would Be Used To Clean-Up Water Contamination.

Pesticides are a virtually unregulated but highly dangerous class of drinking water contaminants. About one-third of the more than 600 pesticides used in California are known to be toxic to humans and other living organisms; many pesticides have been found to contaminate groundwater. Pesticides have polluted more than 500 miles of the state's waterways, which as a result have been designated as unsafe for drinking, swimming, and fishing.

The California Department of Health Services (DHS) Must Ensure The Quality of Vended Water By Increasing Regulation of Water Vending Machines and Retail Water Facilities.

Harmful levels of bacteria and contaminants have been detected in vended water, yet DHS does not perform regular inspections of vended water machines and retail water facilities in order to guarantee the quality of water dispensed. Low-income and immigrant communities are especially reliant on vended water because they believe it is cleaner than tap water. Yet most consumers do not know that vended water is simply tap water that is run through a filtration process on site inside the machine. DHS currently collects over \$440,000 per year from vending machine licenses, yet this funding is not applied toward vending machine inspections

All Regional Water Quality Control Boards Must Stop Exempting Agricultural And Dairy Runoff From Meeting Federal And State Clean Water Laws.

As of 2002, 685 water bodies in California were listed as “impaired waters” by the Environmental Protection Agency because they exceeded pollutant limits. Many of these pollutants originate on farms and dairies and end up in streams, rivers, bays, and in groundwater supplies. Polluters should be required to clean up this pollution, and prevented from further polluting water resources. Regional Water Quality Control Boards must revoke any current exemptions, and must vigorously monitor and enforce compliance with the federal Clean Water Act, the state Porter-Cologne Act, and other water quality laws and regulations. Finally, the Regional Boards should provide incentives for farmers to adopt and use better management practices that prevent the contamination of groundwater and surface water.

The State Water Resources Control Board Must Take Immediate Action To Prevent The Continued Pollution Of And Clean Up Water Bodies Upon Which Low-Income, People Of Color Communities Rely On For Fish.

Low-income, people of color, more than affluent whites, rely on contaminated, locally caught fish to supplement their diets. While it is important to post signs that warn of the dangers of eating contaminated fish, the State Board must require industrial, agricultural, and municipal polluters to clean up existing pollution in water bodies. The State Board must also enforce federal and state laws designed to prevent further pollution. Finally, state and federal authorities must take immediate action to clean-up abandoned mercury mines and other legacy pollution sites that continue to contaminate California's waters.

The State Water Resources Control Board Must Require Local Governments To Adopt Wastewater And Stormwater Treatment Strategies That Put Them In Compliance With The Clean Water Act, In Order To Prevent Sewage Treatment And Combined Sewer Overflows In Environmental Justice Communities.

Stormwater runoff and combined sewer overflows pollute beaches and coastal waters throughout California but particularly affect urban low-income, communities of color. Municipalities must investigate and prioritize wastewater treatment strategies that provide tertiary treatment or higher; eliminate combined sewer overflows through watershed-scale stormwater infiltration; integrate water recycling; prioritize the use of constructed wetlands and other living systems that improve the ecological health of local watersheds; and enhance the communities in which wastewater treatment facilities are located.

Local And State Governments Must Require The Use Of Best Management Practices To Prevent Flooding In Environmental Justice Communities.

Examples of best management practices include banning new development in floodplains prone to catastrophic flooding, or in areas such as wetlands that store floodwaters and prevent flooding downstream. Local governments should use brownfield redevelopment processes to increase the hydrological integrity of urban watersheds by restoring riparian and waterfront land to greenways and natural retention basins. They should also train and employ residents of disadvantaged communities to implement flood control and habitat restoration projects.

California Law Must Require That All State Agencies Collect Public Health Data That Includes Race And Income Information. Additionally, The U.S. Census And The California Department Of Finance Should Collect Information On Residential Water Infrastructure In Census Questionnaires And Other Surveys Of The State's Residents.

Currently, agencies and the public do not have enough information available to adequately assess community water needs. In order to ensure the availability of data to characterize risk across populations, it is critical that public health data include race and income. Such data will enable agencies to determine which communities are most threatened by contaminated drinking water.

APPENDIX A: PRINCIPLES OF ENVIRONMENTAL JUSTICE

Adopted October 1991 at the First National People of Color Environmental Leadership Summit, Washington, D.C.

1. Environmental Justice affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction.
2. Environmental Justice demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias.
3. Environmental Justice mandates the right to ethical, balanced and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things.
4. Environmental Justice calls for universal protection from nuclear testing, extraction, production and disposal of toxic/hazardous wastes and poisons and nuclear testing that threaten the fundamental right to clean air, land, water and food.
5. Environmental Justice affirms the fundamental right to political, economic, cultural and environmental self-determination of all peoples.
6. Environmental Justice demands the cessation of production of all toxins, hazardous wastes, and radioactive materials, and that all past and current producers be held strictly accountable to the people for detoxification and the containment at the point of production.
7. Environmental Justice demands the right to participate as equal partners at every level of decision-making including needs assessment, planning, implementation, enforcement and evaluation.
8. Environmental Justice affirms the right of all workers to a safe and healthy work environment, without being forced to choose between an unsafe livelihood and unemployment. It also affirms the right of those who work at home to be free from environmental hazards.
9. Environmental Justice protects the right of victims of environmental injustice to receive full compensation and reparations for damages as well as quality health care.
10. Environmental Justice considers governmental acts of environmental injustice a violation of international law, the Universal Declaration on Human Rights, and the UN Convention on Genocide.
11. Environmental Justice must recognize a special legal and natural relationship of Native Peoples to the U.S. government through treaties, agreements, compacts, and covenants affirming sovereignty and self-determination.
12. Environmental Justice affirms the need for urban and rural ecological policies to clean up and rebuild our cities and rural areas in balance with nature, honoring the cultural integrity of all our communities, and providing fair access for all to the full range of resources.
13. Environmental Justice calls for the strict enforcement of principles of informed consent, and a halt to the testing of experimental reproductive and medical procedures and vaccinations on people of color.
14. Environmental Justice opposes the destructive operations of multinational corporations.
15. Environmental Justice opposes military occupation, repression and exploitation of lands, peoples and cultures, and other life forms.
16. Environmental Justice calls for the education of present and future generations that emphasizes social and environmental issues, based on our experience and an appreciation of our diverse cultural perspectives.
17. Environmental Justice requires that we, as individuals, make personal and consumer choices to consume as little of Mother Earth's resources and produce as little waste as possible; and make the conscious decision to challenge and reprioritize our lifestyles to insure the health of the natural world for present and future generations.

APPENDIX B: OVERVIEW OF WATER RIGHTS IN CALIFORNIA

The California Constitution states: “...water must be put to reasonable and beneficial use in the interest of the people and for the public welfare.” This public value is codified in the California Water Code, which states: “...all water within the State is the property of the people of the State.” By law, no individual, corporation, or other private entity can own water.

The State of California holds public water resources “in trust” for all Californians. The State government, through the courts, the Legislature, and the State Water Resources Control Board (SWRCB) ensures that water is used in a reasonable and beneficial manner. There is a clear distinction between the *right to use water* and the *actual ownership* of water, as only the people of California can own water.

Below is a summary of the major types of “water rights” governing water use in California:

Riparian Rights enable a user to divert water to land that borders a natural water body, such as a lake, river, or stream. Their exercise must not harm any other riparian user, and they are not lost by non-use. When water is scarce, all riparian rights holders divide the available

water equally. In theory, riparian rights take precedence over appropriative rights; however, presently unexercised riparian rights may get a lower priority than longer-established appropriative rights.

Appropriative Rights are based on actual use of water and are obtained through a permit from the SWRCB. They are assigned a “priority” based on the date the water use began or was first registered with the state. Appropriators are able to sell or transfer their water rights, and may lose title to their water rights through non-use.

Federal Reserved Rights are held by the U.S. government for national parks, forests, and Native American reservations. These rights are “senior” to all state water rights claims.

Contract Rights Water districts signed contracts with the Central Valley Project operated by the federal Bureau of Reclamation, and the State Water Project to deliver water to farmers, water companies, and municipalities. Central Valley Project irrigation contracts are currently being renegotiated.

Groundwater Rights are prescribed according to three legal categories of groundwater: 1) water that flows

underground beneath a stream; 2) underground streams that do not surface; and 3) rainwater that falls on the ground and settles downward (percolating waters). Surface water rights (described above) are applied to the first two categories of groundwater. The extraction of percolating waters is virtually unregulated: landowners have rights to use any groundwater beneath their land. The SWRCB does not require a permit to use groundwater, however some counties have adopted regional regulation practices.

APPENDIX C: OVERVIEW OF WATER DISTRICTS

There are over forty different statutes that people or agencies may use to form a water district. This leads to a large variety in structure and function. This table provides a description of some of the most common types of water districts. Note that since districts governed by elected boards only allow registered voters to vote in water board elections, non-citizens are excluded from water decision-making processes.

California Water Districts

Contra Costa Water District

Historical Origins: Created under the California Water District Act of 1913.

Current Function: To acquire, store and distribute water. Many have been formed to receive water from the Central Valley Project and the State Water Project.

Governance: Districts are formed by landowners and governed by boards of directors made up of landowners, who are elected via property-weighted voting.

Irrigation Districts

Palo Verde Irrigation District

Historical Origins: Created under the Wright Act of 1887, the first water district act in California.

Current Function: To provide water for agricultural use, but may also be responsible for providing potable water to residents within the district. They are found in agricultural areas.

Governance: Districts are formed by landowners within the proposed district and governed by an elected board of directors.

Community Services District

Shasta Community Service District

Historical Origins: Created under the Community Services District Law of 1951.

Current Function: Created to provide an array of municipal services, including water for all purposes. Often formed in isolated, unincorporated areas that have specific water needs that a countywide system cannot provide.

Governance: Districts are formed by a petition of voters and governed by either elected or county-appointed boards of directors.

County Water District

East Orange County Water District

Historical Origins: Created under the California County Water Act of 1913.

Current Function: To provide water to urban and suburban areas; the most common type of independent district.

Governance: Districts are formed by a petition of voters and governed by elected or appointed boards of directors.

Municipal Water Districts

Eastern Municipal Water District

Historical Origins: Created under the Municipal Water District Law of 1911.

Current Function: Manage large water basins and delivery systems. Many now sell water to other, smaller water districts and systems in Southern California.

Governance: Districts are formed by the voters in the area and are governed by either elected or appointed boards of directors.

Public Utility Districts

Bolinas Community Public Utility District

Historical Origins: Created under the California Public Utilities Act of 1912. Most were formed before the 1950's.

Current Function: Provide many public services, including water. They are formed in unincorporated areas.

Governance: Districts are formed by residents and are governed by a board of directors appointed by local officials.

Water Replenishment Districts

Southern California Water Replenishment District

Historical Origins: Created under the Water Replenishment District Act of 1955 to address extensive groundwater overdraft.

Current Function: Recharge groundwater basins that provide drinking water by obtaining supplemental water supplies. The Southern California Water Replenishment District is the only one that exists.

Governance: District was formed by registered voters in the area and is governed by an elected board of directors.

Water Agencies

Metropolitan Water District

Historical origins: Water agencies are created by specific legislative acts; for example, the Metropolitan Water District was formed by the Legislature of the State of California in 1927.

Current Function: Provide water management services throughout urban and rural areas and counties. Agencies often function as water wholesalers and purchase water from the Department of Water Resources or Bureau of Reclamation, or develop their own supply and sell the water to other, member water districts.

Governance: Districts are formed by a petition of a public agency, e.g., the City Council and are governed by an appointed board of directors; members of involved public agencies vote.

APPENDIX D: AGENCIES THAT REGULATE WATER QUALITY AND MANAGEMENT

There are the five major regulatory bodies responsible for ensuring water supplied to Californians follow federal and state guidelines. This reference tool highlights the stated goals and objectives of these agencies and provides general contact information.

The Department of Health Services (DHS), through the Drinking Water Program, is the state agency responsible for ensuring that Californians have safe drinking water. The agency oversees more than 7,500 public water systems in the state – ranging from private corporations, to mutual water companies, to public utilities. This means that DHS is responsible setting and enforcing drinking water regulations, known as Maximum Contaminant Levels (MCLs), issuing fines and taking other compliance measures against public water systems that are in violation of MCLs.
<http://www.dhs.ca.gov/ps/ddwem/technical/dwp/dwpindex.htm>
1616 Capitol Ave., 2nd Floor
Sacramento, CA 95814
(916) 449-5576

The State Water Resources Control Board (State Board) is charged with monitoring the quality of California's

water resources and ensuring proper distribution of these resources. The State Board works with nine Regional Water Quality Control Boards to develop and enforce water quality goals. Major responsibilities include developing Total Maximum Daily Loads (TMDLs) for various contaminants found in water bodies in their regions and issuing discharge permits for different types of water discharge.
<http://www.swrcb.ca.gov>
1001 I Street
P.O. Box 100
Sacramento, CA 95812
(916) 341-5615

Contact information for the California Regional Water Quality Control Boards:

<http://www.swrcb.ca.gov/regions.html>
North Coast Region 1: (707) 576-2220
San Francisco Bay Region 2: (510) 622-2300
Central Coast Region 3: (805) 549-3147
Los Angeles Region 4: (213) 576-6600
Central Valley Region 5: (916) 255-3000
Lahontan Region 6: (530) 542-5400
Colorado River Basin Region 7: (760) 346-7491
Santa Ana Region 8: (909) 782-4130
San Diego Region 9: (858) 467-2952

The Department of Water Resources (DWR) operates and maintains the State Water Project (SWP), which includes the California Aqueduct, which includes developing and managing large water delivery contracts. The State Water Project includes over 600 miles of canals and pipelines, 33 dams and reservoirs, and 5 hydroelectric power plants. Water districts use SWP water to supplement surface and groundwater resources, primarily for irrigation and drinking water in larger municipalities. DWR also works with local water districts on water management, flood control, and water use projects.
<http://www.dwr.water.ca.gov>

1416 9th Street,
Sacramento, CA 95814
Mailing Address:
P. O. Box 942836,
Sacramento, CA 94236
(916) 653-5791

The California Public Utilities Commission (CPUC) is a state agency that regulates investor-owned utilities including water, wastewater, telecommunications, and electric companies. The CPUC is responsible for ensuring that private utilities provide reliable service at reasonable rates. The CPUC regulates a total of 200 private

water utilities, which together serve approximately 20 percent of California's water users.
<http://www.cpuc.ca.gov/static/index.htm>
505 Van Ness Ave.
San Francisco, CA 94102
(415) 703-2782

The San Francisco Bay-Delta Authority (CALFED) is a collaborative effort between various state and federal agencies. It was formed to create a comprehensive plan for the Bay-Delta that balances environmental, agricultural, industrial and residential water uses. It has attempted to involve many stakeholders to address critical water management issues, such as the difference in actual water supplies and projected water uses in the Delta. While not a regulatory agency, it creates comprehensive management plans for many of the state's water resources.
<http://www.calwater.ca.gov/AboutCalfed/AboutCALFED.shtml>
650 Capitol Mall, 5th Floor
Sacramento, CA 95814
(916) 445-5511

RESOURCES

FOR ADVOCATES AND
COMMUNITY GROUPS

Technical assistance providers for local water concerns

California Rural Legal Assistance

Advocacy group with offices all over California that provides legal assistance and community education to rural farm working communities on environmental and social issues.

<http://www.crla.org>
Central San Francisco office:
631 Howard Street, Suite 300
San Francisco, California 94105
(415) 777-2752

California Rural Water Association

Provides technical assistance and training to rural water and wastewater systems.

<http://www.calruralwater.org/>
1112 I St, Suite 200
Sacramento, CA 95814
Toll free (800) 833-0322

Center for Race, Poverty and the Environment

Provides litigation and technical assistance to communities facing environmental health and justice issues.

San Francisco office:
450 Geary Street, Suite 500
San Francisco, CA 94102
(415) 346-4176

Delano office:
1224 Jefferson St, Suite 25
Delano, CA 93215
(661) 720-9140

Rural Community Assistance Corporation

Provides technical assistance, training and resources on a variety of issues rural communities may face.

<http://www.rcac.org/>
3120 Freeboard Drive, Suite 201
West Sacramento, CA 95691
(916) 447-9832

Self Help Enterprises

Provides technical assistance to small, rural communities in the San Joaquin Valley working to develop water delivery and sewage systems and housing resources.

<http://www.selfhelpenterprises.org/>
8445 W. Elowin Court
P.O. Box 6520
Visalia, CA 93290
(559) 651-1000

North Valley Office:
2413 W. Cleveland, Suite 101
Madera, CA 93637
(559) 675-1100

Advocacy and environmental justice organizations

Asian Pacific Environmental Network

Advocacy group in Oakland that builds networks of Asian-Pacific Islander community groups and works on direct organizing campaigns to promote environmental and social justice in API communities.

<http://www.apen4ej.org>
310 8th Street, Suite 309
Oakland, CA 94607
(510) 834-8920

California Communities Against Toxins

Statewide coalition that provides advocacy and technical assistance to communities working on environmental health and justice issues.

www.stoptoxics.org
P.O. Box 845
Rosamond, CA 93560
(661) 273-3098

California Environmental Rights Alliance

Advocacy organization in Los Angeles that works on environmental health and justice policy issues.

www.envirights.org
P.O. Box 116
El Segundo, CA 90245
(310) 536-8237

Californians for Pesticide Reform

Advocacy and research organization based in San Francisco that provides information on health affects of pesticide exposure and pesticide policy and practices.

www.pesticidereform.org
49 Powell St., Suite 530
San Francisco, CA 94102
(415) 981-3939 or
toll free (888) CPR-4880

Center for Community Action and Environmental Justice

Organizing and advocacy group based in Riverside that provides information and assistance to community groups working on environmental justice and public health issues.

www.ccae.org
P.O. Box 33124
Riverside, CA 92519
(951) 360-8451

Center for Environmental Health

Advocacy and research organization working on environmental and public health issues and ensuring corporate accountability of polluters.

www.cehca.org
528 61st Street, Suite A
Oakland, CA 94609
(510) 594-9864

Communities for a Better Environment

Advocacy, legal and research organization in Oakland and Los Angeles that promotes environmental health and justice in urban communities.

www.cbecal.org
Oakland office:
1611 Telegraph Avenue
Suite 450
Oakland, CA 94612
(510) 302-0430

Los Angeles office:
5610 Pacific Boulevard
Suite 203
Huntington Park, CA 90255
(323) 826-9771

Environmental Health Coalition

Organizing and advocacy group in San Diego that works on community environmental and social justice issues.

www.environmentalhealth.org
401 Mile of Cars Way Suite 310
National City, CA 91950
(619) 474-0220

Latino Issues Forum

Research and advocacy organization with offices in San Francisco, Fresno and Ontario that provides information and education on how public policy in California affects Latino communities.

www.lif.org
160 Pine Street, Suite 700
San Francisco, CA 94111
(415) 284-7220

Literacy for Environmental Justice

Education and organizing group in San Francisco which focuses on urban environmental education and youth empowerment.

www.lejyouth.org
6220 Third Street
San Francisco, CA 94124
(415) 508-0575

La Union del Pueblo Entero (LUPE)

A non-profit organization founded by Cesar E. Chavez, rooted in the belief that members of the low-income community have the responsibility and the obligation to organize themselves, and through their association, begin to advocate and articulate for the issues and factors that impact their lives.

www.lupenet.org
P.O. Box 62 - 29700 Woodford-Tehachapi
Road Old Highway 58
Keene, California 93531
Tel : (661) 823 6105

Physicians for Social Responsibility

Los Angeles Chapter

Research, policy and advocacy organization that works on environmental and public health issues.

www.psrta.org
617 South Olive Street, Suite 810
Los Angeles, CA 90014
(213) 689-9170

Public Citizen

Research and advocacy organization in Oakland that provides information on and fights corporate control of government and natural resources in California and internationally.

<http://www.citizen.org/california/>
1615 Broadway, Ninth Floor
Oakland, CA 94612
(510) 663-0888

Silicon Valley Toxics Coalition

Research, advocacy, and organizing organization in San Jose that addresses human health and environmental problems caused by the rapid growth of the high-tech industry
www.svtc.org
760 N. First Street
San Jose, CA 95112
(408) 287-6707

TreePeople

Education and urban reforestation organization in Los Angeles that provides watershed education programs, tree planting programs, and urban watershed management programs.
www.treepeople.org
12601 Mulholland Drive
Beverly Hills, CA 90210
(818) 753-4600

Urban Habitat

Research and advocacy organization based in Oakland that addresses issues of social and environmental justice from a regional perspective.
<http://www.urbanhabitat.org>
436 14th Street, Suite 1205
Oakland, CA 94612
(510) 839-9510

General information and resources on water quality, supply and use

American Water Works Association

Provides educational material on national water quality and utilities.
<http://www.awwa.org/>
6666 W. Quincy Ave
Denver, CO 80235
(303) 794-7711 or
toll free (800) 926-7337

California Urban Water Conservation Council

Council of water agencies, public interest groups and private entities working to integrate urban water conservation into California water policy.
<http://www.cuwcc.org>
455 Capitol Mall #703
Sacramento, CA 95814
(916) 552-5885

Campaign for Safe and Affordable Drinking Water

Alliance of environmental, consumer and public health groups that provide national information on drinking water contaminants, water infrastructure, and national water regulations.
<http://safe-drinking-water.org/>
4455 Connecticut Avenue NW,
Suite A-300
Washington DC 20008
(202) 895-0432 ext. 135

Clean Water Action

Research and advocacy group that works nationwide to develop, strengthen and defend water laws and protections.
www.cleanwateraction.org
San Francisco office:
111 New Montgomery St., Suite 600
San Francisco, CA 94105
(415) 369-9160

East Bay Watershed Center

Educational center based in Oakland working to promote local watershed stewardship and management by citizen groups, schools, planners, land owners, businesses, and elected officials.
<http://www.merritt.edu/~envst/watershed.html>
12500 Campus Drive
Oakland, CA 94619
(510) 434-3840

Pacific Institute

Provides research and policy analysis on issues relating to development, the environment, and security.
www.pacinst.org
654 13th St.
Oakland, CA 94612
(510) 251-2203

Public Trust Alliance

Research organization that uses the public trust doctrine to advocate for democratic management of natural resources that are legally held in trust by the state of California for public benefit.
www.publictrustalliance.org
Rm. 290, Bldg. D, Fort Mason Center
San Francisco, CA 94123
(510) 644-0752

Environmental Health Action

Safe Drinking Water

Education and action center sponsored by Physicians for Social Responsibility that provides national information on environmental health issues.
<http://www.envirohealthaction.org/water/>
1875 Connecticut Avenue, NW,
Suite 1012
Washington, DC 20009
(202) 667-4260

Groundwater Resources Association of California

Research organization that disseminates technical and educational material on groundwater issues for policy-makers and the public.
www.grac.org
915 L Street, Suite 1000
Sacramento, CA 95814
(916) 446-3626

Water Education Foundation

Research group that provides information on California water issues.
www.watereducation.org
717 K Street, Suite 317
Sacramento, CA 95814
(916) 444-6240

U.S. Geological Survey

Water Resources Division

Conducts national and statewide research and data collection on water supply, quality and use.
<http://ca.water.usgs.gov>
6000 J street Placer Hall Room 4000
Sacramento, CA 95819
(916) 278-300

Information on local natural resources and their contaminants

Environmental Protection Agency

Locate Your Watershed

Provides a watershed database with information local watershed locations, toxic releases and contact information for organizations and agencies working locally.
<http://cfpub.epa.gov/surf/locate/index.cfm>

Environmental Defense

Fund's Scorecard

Map Pollution in your Community

Database that provides searchable, location-specific reports and maps on land, water, and air contaminants and dischargers.
<http://scorecard.org>

Environmental Protection Agency

Envirofacts Warehouse for Water

Provides detailed information on companies discharging waste into waterways and reported violations.
http://oaspub.epa.gov/enviro/ef_home2.water

Government and water agencies

(see also Appendix D)

Association of California Water Agencies

Coalition of water agencies that provides statewide information on water supply, regulations, water quality and links to member agencies.
www.acwanet.com
910 K Street, Suite 100
Sacramento, CA 95814
(916) 441-4545

California Environmental Protection Agency Environmental Justice Program

Agency program developing environmental justice policies to implement throughout the California Environmental Protection Agency.
<http://www.calepa.ca.gov/EnvJustice/>
P.O. Box 2815
Sacramento, CA 95812
(916) 445-9480

California Office of Environmental Health Hazard Assessment

Assesses public health risks from air and water pollution, food and seafood contamination, and pesticides.
<http://www.oehha.ca.gov/water.html>
1515 Clay Street, Suite 1700
Oakland, CA 94612
(510) 622-3200

Mid-Pacific Region of the Bureau of Reclamation, U.S. Department of the Interior.

Federal agency that manages the Central Valley Project and provides news and information on water supply.
<http://www.usbr.gov/mp/index.html>
2800 Cottage Way
Sacramento, CA 95825
(916) 978-5000

United States Environmental Protection Agency, Region 9

Responsible for enforcing Enforces environmental and public health laws related to natural resources in the Southwest U.S., including California.
www.epa.gov/region09
75 Hawthorne Street
San Francisco, CA 94105
(866)-EPA-WEST or (415) 947-8000

Groups profiled in this report

Butte Environmental Council

Lynn Barris
www.becnet.org
116 W. Second Street, #3
Chico, CA 95928
(530) 891-6424

Comite Pro Uno

Felipe Aguirre, Legal Advocate
4020 E Flavson Ave
Maywood, CA 90270
(323) 560-8690

Karuk Tribe

Craig Tucker, Klamath Campaign Coordinator
(916) 207-8294
Ron Reed, Department of Natural Resources
(530) 627-3116

Bayview Hunters Point Advocates

Olin Webb
(415) 671-2863

North Richmond Shoreline Open Space Alliance

Whitney Dotson, Parchester Neighborhood Council
(510) 367-5379
Jonna Papaefthimiou, Sierra Club
(510) 848-0800

BayKeeper

www.baykeeper.org
Sejal Choksi
Baykeeper & SF Bay Chapter Director
Baykeeper
55 Hawthorne St. Suite 550
San Francisco, CA 94105
(415) 856-0444

GLOSSARY

agricultural discharge waivers:

Exemptions granted to farmers and agribusiness in 1982 by the Central Valley Regional Board that exempted agricultural dischargers from the reporting and permitting requirements of California's Clean Water Act. The waivers expired in 2003, but renewals—opposed by a coalition of over ninety groups—were granted for two more years. Agricultural drainage is the largest source of pollution for most of the Central Valley's waterways.

aquifer: An underground bed or layer of sand, gravel, or porous stone that stores water.

bioaccumulation: An increase in the concentration of a substance in a living organism over time; occurs when an organism takes in contaminated air, water, or food containing substances that are very slowly metabolized or excreted, and can affect the health and functioning of the organism.

brownfield: A vacant or underutilized site, or a portion thereof, that has actual or perceived contamination and an active potential for redevelopment or reuse.

CALFED Bay-Delta Program: A collaborative effort of over twenty state and federal agencies and stakeholders to develop a long-term plan to improve

water supplies in California and restore the ecosystem of the San Francisco Bay-Sacramento/San Joaquin River Delta watershed.

California Environmental Quality Act (CEQA): (see Public Resources Code section 2100 et.seq.) CEQA was passed into legislation in 1970. Among other things, it requires all local, regional, and state agencies to review environmental impacts of proposed public or private developments and to advise or require alternatives or mitigation for environmentally damaging projects. These findings for this review are stated either in an Environmental Impact Report (EIR) or a Negative Declaration.

carcinogen: Any substance that can cause or aggravate cancer.

Central Valley Project (CVP): A federal water storage and distribution project managed by the Bureau of Reclamation. The project's dams, reservoirs and aqueducts irrigate California's Central Valley and create water storage infrastructure, such as dams and reservoirs. The project stores and distributes about 20 percent of California's developed water.

chronic exposure: Long-term, low-level, continuous exposure to a toxic substance that usually occurs through a significant portion of a lifetime.

Clean Water Act: Enacted in 1972, it establishes the basic structure for regulating discharges of pollutants into water bodies in the United States. The Act gave the Environmental Protection Agency the authority to implement pollution control programs, such as setting wastewater standards for industry. The Clean Water Act is used to set water quality standards for all contaminants in surface waters. In California, industrial pretreatment programs are implemented under the Clean Water Act to control the discharge of toxic substances, and thereby protect sewer systems, treatment plants, sludge, and receiving waters from toxic contamination. Since 1987, the Clean Water Act has required each state to develop a non-point source program. The State Water Resources Control Board holds this responsibility in California.

cumulative effects: The summation of exposures of an organism to a chemical over a period of time. Adverse effects can result from individually minor but collectively significant actions taking place over a period of time.

discharge: Flow of surface water in a stream or canal or the outflow of ground water from a flowing artesian well, ditch, or spring; can also apply to discharge of liquid effluent from a facility or of chemical emissions into the air through designated venting mechanisms.

environmental justice: 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. Fair treatment means that no group of people, including racial, ethnic, or socio-economic groups should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local and tribal programs and policies.

—*Environmental Protection Agency*

environmental racism: Refers to any policy, practice, or directive that has the deliberate or unintended effect of differentially disadvantaging individuals, groups, or communities based on race or color. Environmental racism is often instituted by the government and reinforced by legal, economic, political, and military policies.

groundwater: The supply of fresh water found beneath the Earth's surface, usually in aquifers, which supply wells and springs. Because ground water is a major source of drinking water, there is growing concern over contamination from leaching agricultural or industrial pollutants or leaking underground storage tanks.

industrial agriculture: A large-scale, mechanized, corporate-run, export-oriented, monoculture agricultural system dominant in the U.S. and California; characterized by large acreage, soil erosion, use of synthetic pesticides and fertilizers, and a dependence on low-wage, immigrant labor.

maximum contaminant level (MCL): The maximum permissible level of a contaminant permitted by the federal and state Drinking Water Act regulations. MCLs are established by the state's Department of Health Services for individual contaminants.

non-point source (NPS): Diffuse pollution sources (i.e., without a single point of origin or not introduced into a receiving stream from a specific outlet). The pollutants are generally carried off the land by storm water. Common nonpoint sources are agriculture, forestry, urban, mining,

construction, dams, channels, land disposal, saltwater intrusion, and city streets.

pathogens: Microorganisms that can cause disease in other organisms or in humans, animals and plants (e.g., bacteria, viruses, or parasites) found in sewage, in runoff from farms or rural areas populated with domestic and wild animals, and in water used for swimming. Fish and shellfish contaminated by pathogens, or the contaminated water itself, can cause serious illness.

point source: A stationary location or fixed facility such as an industry or municipality that discharges pollutants into air or surface water through pipes, ditches, lagoons, wells, or stacks; a single identifiable source such as a ship or a mine.

Porter-Cologne Act of 1969: Designates the State Water Resources Control Board with the ultimate authority over state water rights and water quality policy. It also establishes nine Regional Water Quality Control Boards to oversee water quality on a day-to-day basis at the local/regional level.

privatization: The process of shifting the operation or ownership of a service and its infrastructure to the private sector.

property-weighted voting: A voting system in water districts whereby voting rights and power are based on how much and what types of property one owns.

Propositions 12 and 13 (2000),

Proposition 40 (2002): Public bonds passed to improve water quality in rivers, lakes, and streams; ensure clean drinking water; protect beaches and coastal areas threatened by pollution; improve air quality; preserve open space and farmland threatened by unplanned development; protect wildlife habitat; restore historical and cultural resources; and repair and improve the safety of state and neighborhood parks.

Proposition 50 (2002): A general obligation bond to fund a variety of water projects including: specified CALFED Bay-Delta Program projects including urban and agricultural water use efficiency projects; grants and loans to reduce Colorado River water use; purchasing, protecting and restoring coastal wetlands near urban areas; competitive grants for water management and water quality improvement projects; development of river parkways; improved security for state, local and regional water systems; and grants for desalination and drinking water disinfecting projects.

public trust doctrine: A legal principle that holds certain resources, such as water and wildlife, are the property of all residents and the state must hold such resources in trust for the benefit of the people. It was incorporated into the Californian constitution in 1928.

redlining: The figurative or literal process of drawing red lines on maps around areas to which lenders refuse to make loans, or make loans on less favorable terms. It allows lenders to refuse to serve particular geographical areas because of the race or income of the area's residents.

remediation: Cleanup or other methods used to remove or contain a toxic spill or hazardous materials from a Superfund site or other contaminated site.

runoff: Precipitation, snow melt, or irrigation water that runs off the land into streams or other surface water. It can carry pollutants from the air and land into the receiving waters.

Safe Drinking Water Act: Originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law requires many actions to protect drinking water and its sources. SDWA authorizes the United States Environmental Protection Agency to set national health-based

standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water.

State Water Project (SWP): A series of bond-funded California water delivery projects which transport water from Northern California to Southern California. The project was authorized in 1960 by the Burns-Porter Act, which established a bond to finance the construction of several major dams, reservoirs, aqueducts, and levee facilities in the Sacramento-San Joaquin Delta. Today, the State Water Project includes twenty-two dams and reservoirs.

Superfund program: The federal government's program to locate, investigate and clean up the worst uncontrolled and abandoned toxic waste sites nationwide. It is administered by the Environmental Protection Agency; activities include establishing the National Priorities List, investigating sites for inclusion on the list, determining their priority, and conducting and/or supervising the cleanup and other remedial actions.

urbanization: The increase in urban character or nature. It may refer to a geographical area combining urban and rural parts, or to the transformation of an individual locality from less to more

urban. In terms of a geographical place, urbanization often means increased density of settlement and/or business and other activities in the area over time. Urbanization has profound effects on a region's economy and ecology.

urban sprawl: The expansion of a metropolitan area, particularly its suburbs, over a large area. New development is often low-density with growth directed outwards from a metropolitan center.

Water District Act of 1913: Authorizes water districts governed through property weighted voting; created by landowners as a response to the Wright Act.

water marketing: The buying and selling of water; in California water marketing often involves the transfer of water from agricultural to urban users.

watershed: The area that drains to a common waterway, such as a stream, lake, estuary, or wetland. Also called a drainage basin.

wetlands: Those areas that are inundated or saturated by surface or ground water at a frequency sufficient to support vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

Wright Act of 1887: The state legislature's first comprehensive enabling act for water district organization. The act authorized the first water districts, which were to be public irrigation districts, and allowed voting based on voter registration.

zoning: The ability of local governments to specify the use of property. It is used to control and influence development. For example, some areas of a neighborhood may be designated only for residential use and others for commercial use.

REFERENCES

Introduction

¹ Monique Wilber, *Californians Without Safe Water* (Department of Water Resources Statewide Water Planning, 2003), 5.

² Torri Estrada, personal communication, 9 March 2005.

³ Federal Executive Order 12898 signed by President Clinton in 1994.

⁴ Robert D. Bullard, *People of Color Environmental Groups* (Atlanta: Environmental Justice Resource Center, 2000), 9.

⁵ Manuel Pastor, *Environmental Justice: The U.S. Experience*. Paper prepared for the International Conference on Natural Asset Building, Santa Cruz, California. December 2001, 3.

⁶ Manuel Pastor, *Environmental Justice: The U.S. Experience*. Paper prepared for the International Conference on Natural Asset Building, Santa Cruz, California. December 2001, 2.

⁷ Gregory King, "Addressing Environmental Justice in California" found in the Draft Recommendations of the Cal/EPA Advisory Committee on Environmental Justice to the Cal/EPA Interagency Working Group on

Environmental Justice. July 2003, Appendix A, 3.

⁸ "First People of Color Environmental Leadership Summit: Principles of Environmental Justice." See Appendix A.

⁹ *Ibid.*, Principle #7.

¹⁰ Gary Yamamoto, Department of Health Services, personal communication, 25 March 2005. Barbara Cross, Department of Water Resources, office communication, 25 March 2005.

¹¹ Aimee Suzara, "Reflections: A Filipina's Perspective," *Race, Poverty and the Environment*, X, no. 1, (2003): 18.

¹² Laura Pulido, "Development of the 'People of Color' Identity in the Environmental Justice Movement of the Southwestern United States," *Socialist Review* 96, no. 4, (1998): 172.

¹³ See: Juliet Ellis, Luke Cole and Ziba Kashef, "Where Do We Go From Here? A Look At the Long Road to Environmental Justice," *Race, Poverty and the Environment*, X, no. 1 (2003).

Chapter 1

¹ David Carle, *Introduction to Water in California* (Berkeley: University of California Press, 2004), 8, 10.

² Carle, 90.

³ See: Peter Gleick et al., *Waste Not, Want Not: The Potential for Urban Water Conservation in California* (Oakland: Pacific Institute, 2003), 2.

⁴ Norris Hundley, *The Great Thirst: Californians and Water, A History* (Berkeley: University of California Press, 2001), 9, 11, 568.

⁵ Monique Wilber, *Californians Without Safe Water* (Sacramento: Department of Water Resources Statewide Water Planning, 2003), 2.

⁶ *Ibid.*, 2

⁷ *Ibid.*, 2

⁸ Department of Finance, *Population Projections by Race/Ethnicity for California and Its Counties 2000–2050* (Sacramento: State of California, 2004).

⁹ The Henry J. Kaiser Family Foundation, “California: Demographics and the

Economy,” <http://www.statehealthfacts.org/cgi-bin/healthfacts.cgi?action=profile&area=California&category=Demographics+and+the+Economy> (25 April 2005).

¹⁰ Joel Diringer et al., *Health in the Heartland: The Crisis Continues* (Fresno: California State University, 2004), 14.

¹¹ California Farm Bureau, “Facts and Stats about California Agriculture,” 2002. www.cfbf.com (25 April 2005).

¹² Laura Pulido, “Rethinking Environmental Racism,” *Annals of the Association of American Geographers*, 90, no. 1 (2000), 22.

¹³ Kevin McCarthy and Georges Vernez, *Immigration in a Changing Economy: California’s Experience* (Rand: MR854, 1997), 1. <http://www.rand.org/publications/MR/MR854> (25 April 2005); Mike Davis, *Ecology of Fear* (New York: Vintage Books, 1998), 123.

¹⁴ “Environmental Justice and API issues,” Asian Pacific Environmental Network, http://www.apen4ej.org/issues_api.htm (11 April 2005).

¹⁵ Gray Brechin, *Imperial San Francisco: Urban Power, Earthly Ruin* (Berkeley: University of California Press, 1999), 71–71, 98–99; Robert Gottlieb and Margaret

Fitzsimmons, *Thirst for Growth: Water Agencies as Hidden Government in California* (Tucson: University of Arizona Press, 1991), 89–104; Merrill Goodall, “Water in California Agriculture,” (paper presented at the conference “Water in California Agriculture: Technology, Politics and People,” Sacramento, CA, 13 June 1991.) See the reviewer’s note available online at <<http://www.sarep.ucdavis.edu/NEWS-LTR/v5n1/sa-13.htm>>

¹⁶ Brechin, 71.

¹⁷ Public Policy Institute of California, “Just the Facts: California’s Economy,” October 2004, http://www.ppic.org/content/pubs/JTF_EconomyJTF.pdf (25 April 2005).

¹⁸ National Agricultural Statistics Service, “2002 Census of Agriculture – Volume 1 Geographic Area Series,” United States Department of Agriculture, 2002. <http://151.121.3.33:8080/Census/Pull_Data_Census> (25 April 2005).

¹⁹ *Ibid.*, “2002 US Census of Agriculture – County Information, California 241,” http://www.nass.usda.gov/census/census02/volume1/ca/st06_2_002_002.pdf (25 April 2005).

²⁰ Paola Ramos, *Promoting Quality, Equity, and Latino Leadership in California Water*

Policy (San Francisco: Latino Issues Forum, 2003), 15.

²¹ See Tomas Almaguer, *Racial Fault Lines: The Historical Origins of White Supremacy in California* (Berkeley: University of California Press, 1994); Carey McWilliams, *Factories in the Fields: The Story of Migratory Farm Labor in California, 1935* (Berkeley: University of California Press, 2000); Steven Street, *Beasts of the Fields: A Narrative History of California Farm workers, 1769–1913* (Stanford: Stanford University Press, 2004).

²² Kate A. Berry, “Race for Water? Native Americans, Eurocentrism, and Western Water Policy,” in *Environmental Injustices, Political Struggles: Race, Class and the Environment*, ed. David E. Camacho (Durham: Duke University Press, 1998), 104–108.

²³ Hundley, 61.

²⁴ Santos Gomez and Arlene Wong, *Our Water, Our Future: The Need for New Voices in California Water Policy* (Oakland: Pacific Institute for Studies in Development, Environment and Security and EDGE: the Alliance of Ethnic and Environmental Organizations, 1997), 10.

²⁵ Pratap Chatterjee, *Mercury Contamination and Community Health in Northern*

California (San Francisco: International Indian Treaty Council, n.d.), 8.

²⁶ National Park Service, “A History of Mexican Americans in California: Post-Conquest California,” http://www.cr.nps.gov/history/online_books/5views/5views5b.htm (25 April 2005); See also Leonard Pitt, *The Decline of the Californios: A Social History of the Spanish-Speaking Californians, 1846-1890* (Los Angeles: University of California Press, 1966).

²⁷ Almaguer, *Racial Fault Lines*, 41.

²⁸ California State Constitution, Article 10, Section 2, http://www.leginfo.ca.gov/.const/.article_10 (25 April 2005).

²⁹ One famous statement to this effect is Josef Stalin’s 1929 comment that “Water which is allowed to enter the sea is wasted,” quoted in *Corporate Watch*, “Engineering the Ebb and Flow” (Oxford (UK): Issue 12, Summer 2000).

³⁰ Street, 2004 and McWilliams, 1935.

³¹ Tomas Almaguer, 73.

³² Michael Warburton, “Hawaii Case Study,” office communication, 16 February 2005.

³³ Rio Arriba County Case No. RA 84-53 (C), N.M. 1st Judicial District, 16 April 1985.

³⁴ “Waiahole Tunnel: A Drain On Windward Resources,” *Environment Hawaii*, October 1994; Ann Bottocelli, “Windward streams to get a boost” *Honolulu Advertiser*, 17 December 1994.

³⁵ In re Water Permit Applications Waiahole Ditch Combined Contested Cases, 9 P 3d 409 (Hawaii, 2000).

³⁶ Ibid.

³⁷ Ibid. Cited in *The Public Trust Doctrine: Hawaii’s Precious Water* (Honolulu: Hawaii’s Thousand Friends, 2004)

³⁸ Donald J. Pisani, *Water and American Government: The Reclamation Bureau, National Water Policy, and the West, 1902-1935* (Berkeley: University of California Press, 2002), 2.

³⁹ Marc Reisner, *Cadillac Desert: The American West and Its Disappearing Water* (New York: Penguin Books, 1993), 152, 334-352.

⁴⁰ For an analysis of the concept of genocide and its history in nineteenth-century United States, see Frank Chalk and Kurt

Jonassohn, *Genocide: Analyses and Case Studies* (New Haven: Yale University Press, 1990), 3-39, 195-203.

⁴¹ Donald J. Pisani, *Water, Land, and Law in the West: The Limits of Public Policy, 1850-1920* (Lawrence: University of Kansas Press, 1996), 157, 174-179.

⁴² Pisani, *Water and American Government*, 154-155.

⁴³ Leaf Hillman and John Salter, “Environmental Management: American Indian Knowledge and the Problem of Sustainability,” *Forest, Tree and People Newsletter # 34* (1997). www.xlibris.de/magickriver/karuk.htm (18 February 2005).

⁴⁴ Ron Reed, interview conducted by Amy Vanderwarker, 17 February 2005.

⁴⁵ Ibid.

⁴⁶ Kari Norgaard, *The effects of an altered diet on the health of the Karuk people: preliminary report* (University of California, 2004), 52. http://www.friendsoftheriver.org/PressRoom/2005-01-31_KarukTribe.html (10 April 2005).

⁴⁷ Gerard Seenan, “U.S. tribes dance to shame ScottishPower,” *The Guardian*, 24 July 2004.

⁴⁸ Kevin Kennedy and Jim Woodward, *Preliminary Assessment of Energy Issues Associated with the Klamath Hydroelectric Project* (Sacramento: California Energy Commission, 700-03-007, 2003), 1. http://www.energy.ca.gov/reports/2003-07-15_700-03-007.PDF (18 February 2005).

⁴⁹ Pisani, *Water, Land and Law*, 7-8.

⁵⁰ Ibid., 11, 170.

⁵¹ Rudolph Lapp, *Afro-Americans in California* (San Francisco: Boyd & Fraser, 1979).

⁵² Almaguer, 70.

⁵³ Ibid., 11, 36.

⁵⁴ Hundley, 85-87.

⁵⁵ Ibid., 87.

⁵⁶ Ibid., 97.

⁵⁷ *Final Report of the Governor’s Commission to Review California Water Rights Law* (State Water Resources Control Board,

Dec. 22, 1978), 18. <http://www.swrcb.ca.gov/general/publications/docs/1584a.pdf> and <http://www.swrcb.ca.gov/general/publications/docs/1584b.pdf>

⁵⁸ Ellen Hanak, *Who Should be Allowed to Sell Water in California? Third Party Issues and the Water Market* (San Francisco: Public Policy Institute of California, 2003), 9.

⁵⁹ See: Gray Brechin, *Imperial San Francisco*; Gray Brechin and Robert Dawson, *Farewell, Promised Land: Waking from the California Dream* (Berkeley: University of California Press, 1999) and Stephanie Pincetl, *Transforming California: A Political History of Land Use and Development* (Baltimore: Johns Hopkins University Press, 1999).

⁶⁰ Walter Goldschmidt, *As You Sow* (Illinois: The Free Press, 1947), 8.

⁶¹ Dean MacCannell, "Industrial Agriculture and Rural Community Degredation [sic]" in *Agriculture and Community Change in the U.S.*, Louis E. Swanson, ed. (Boulder: Westview Press, 1988), 15, 17.

⁶² Kary Mamen et al., *Ripe for Change: Rethinking California's Food Economy* (Berkeley: International Society for Ecology and Culture, 2004), 12.

⁶³ Lapp, *Afro-Americans in California*.

⁶⁴ Gomez and Wong, 12.

⁶⁵ *Ibid.*, 11.

⁶⁶ Hundley, 239 and *Final Programmatic EIR/EIS* (Sacramento: CALFED Bay Delta Program, July 2000), 5.4-12

⁶⁷ Goodall, 1991.

⁶⁸ *Ibid.*

⁶⁹ *Ibid.*

⁷⁰ Dean MacCannell and Jerry White, "The Social Costs of Large-Scale Agriculture: The Prospects of Land Reform in California," in Charles C. Geisler and Frank J. Popper, eds., *Land Reform, American Style* (Totowa, New Jersey: Rowman & Allanhead, 1984), 39.

⁷¹ *Ibid.*

⁷² Renee Sharp, *California Water Subsidies* (Oakland: Environmental Working Group, 2004), 1. <http://www.ewg.org/reports/watersubsidies/execsumm.php> (25 April 2005).

⁷³ Dale Kasler, "Water worries never run dry," *Sacramento Bee*, 14 March 2005.

⁷⁴ John Driscoll, "Trinity advocates watch Central Valley contracts," *Eureka Times Standard*, 16 February 2005.

⁷⁵ Steve Evans, "Shasta Dam Raise and Reservoir Enlargement Factsheet," (Sacramento: Friends of the River, 2005).

⁷⁶ Bettina Boxall, "Water Pact Give State's Growers New Profit Stream," *Los Angeles Times*, 16 February 2005.

⁷⁷ Daryl Kelley, "Tejon Ranch Contends it has Enough Water," *Los Angeles Times*, 12 December 2004.

⁷⁸ Paul F. Minner and Antero A. Rivas-plata, *A Guide to Planning in California* (Sacramento: Governor's Office of Planning and Research, 1991), 2.

⁷⁹ A landmark study, "Urban Neighborhood Demographics Associated with Environmentally Suspect, Tax-Delinquent Properties: Equity and Redevelopment Implications" by Nancey Leigh and Robert Gradeck, *The Review of Black Political Economy*, 25, no. 1, (1996) 61-83, examines the demographics of neighborhoods in Milwaukee, Wisconsin, with "environmentally suspect, tax-delinquent (ESTD)" properties (i.e., brownfields). It reveals that African Americans are disproportionately concentrated in areas with ESTDs; that as the number

of ESTDs increased in a neighborhood, the overall health of the neighborhood declined (e.g., median household incomes and the quality of education decreased, while unemployment rates and poverty increased); and that, on average, there are twice as many ESTDs in federally-designated empowerment zones than there are outside their zones' boundaries.

⁸⁰ Pulido, "Rethinking Environmental Racism," 16, 26.

⁸¹ Lizette Hernandez, Torri Estrada and Catalina Garzon, *Building Upon Our Strengths: A Community Guide to Brownfields Redevelopment in the San Francisco Bay Area* (Oakland: Urban Habitat Program, 1999), 2.

⁸² Miriam Walden, *How did we get here? A regional history of the Bay Area* (Oakland: Urban Habitat Program, 2004), 8.

⁸³ Ruth Wilson Gilmore, "You Have Dislodged A Boulder: Mothers and Prisoners in the Post Keynesian California," *Transforming Anthropology*, 8 (1999), 13.

⁸⁴ Beth Bagwell, *Oakland: Story of a City* (Novato: Presidio Press, 1982), 196.

⁸⁵ Lawrence P. Crouchett, Lonnie Bunch III, and Martha Kendall Winnacker,

Visions Towards Tomorrow: The History of the East Bay Afro-American Community 1877-1977 (Oakland: Northern California Center for Afro-American History and Life, 1989), 10.

⁸⁶ Kenneth Jackson, *Crabgrass Frontier: the Suburbanization of the United States* (New York: Oxford University Press, 1985), 197.

⁸⁷ David M. Grant, Melvon L. Oliver, and Angela D. James, "African-Americans: Social and Economic Bifurcation," in *Ethnic Los Angeles*, Robert Waldinger, ed. (New York: Russell Sage Foundation Publications, 1997), 380.

⁸⁸ Joel Russell, "Overlay Zoning to Protect Surface Waters," *Planning Commissioners Journal*, 54 (2004). <http://www.plannin-reports.com/wfiles/w192.html> (5 April 2005).

⁸⁹ Pulido, "Rethinking Environmental Racism," 30.

⁹⁰ Jackson, 203 – 207.

⁹¹ *Ibid.*, 217.

⁹² Hernandez, Estrada, and Garzon, 6.

⁹³ Jackson, 190.

⁹⁴ Gilmore, 13.

⁹⁵ Pulido, "Rethinking Environmental Racism," 30.

⁹⁶ Michael Greenberg and Dona Schneider, "Violence in American Cities: Young Black Males is the answer, but what was the question?" *Social Science Medicine* 39, no 2 (1994), 180.

⁹⁷ "Maywood, California," City-Data. <http://www.city-data.com/city/Maywood-California.html> (20 March 2005).

⁹⁸ Felipe Aguirre, interview by Amy Vanderwarker, 18 March 2005.

⁹⁹ Jennifer Shelton et al., *Low-Level Organic Compounds in Active Public Wells as Ground-Water Tracers in the Los Angeles Physiographic Basin, California, 2000* (U.S. Geological Survey, Water Resources Investigations Report 01-4188, 2001), 26.

¹⁰⁰ Alex Helperin, David Beckman, and Dvora Inwood, *California's Contaminated Groundwater: Is the State Minding the Store?* (San Francisco: Natural Resources Defense Council, 2001), 35.

¹⁰¹ *Ibid.*, 35.

¹⁰² "Public Health Assessment: Pemaco Maywood, Maywood, Los Angeles County, California" (California Department of Health Services and Agency for Toxic Substances and Disease Registry, 19 February 2003), 3. <http://www.atsdr.cdc.gov/hac/pha/pemaco/pem_toc.html> (20 March 2005).

¹⁰³ *Ibid.*, 6.

¹⁰⁴ *Brownfield Redevelopment: Case Studies* (San Francisco: California Center for Land Recycling, 2000), 10.

¹⁰⁵ *Ibid.*, 14.

¹⁰⁶ Martha Matsuoka, *Reintegrating the Flatlands: A Regional Framework for Military Base Conversion in the San Francisco Bay Area* (Oakland: Urban Habitat Program, 1995).

¹⁰⁷ Neil Smith, "New City, New Frontier: The Lower East Side as Wild, Wild West," in *Variations on a Theme Park: the New American City and the Fall of Public Space*, Michael Sorkin, ed. (New York: Noonday, 1992), 84.

¹⁰⁸ Janet Abu-Lughod, "The Battle for Tompkins Square Park," *From Urban Village to East Village: the Battle for New*

York's Lower East Side (New York: Blackwell Publishers, 1994), 249.

¹⁰⁹ Olin Webb, interview by Amy Vanderwarker, 1 April 2005.

¹¹⁰ *Ibid.*

¹¹¹ Elisa Barbour, *Metropolitan Growth Planning in California, 1900 – 2000* (San Francisco: Public Policy Institute of California, 2002), 12. ppic.org/content/pubs/R_1202EBR.pdf (25 March 2005).

¹¹² For a detailed history of how water was necessary to the growth of Californian cities, see Marc Reisner, *Cadillac Desert*.

¹¹³ Barbour, 10.

¹¹⁴ Gottlieb and Fitzsimmons, 211.

¹¹⁵ Tapan Munroe and William Jackman, *The State of the Great Central Valley: Assessing the Region via Indicators* (Modesto: Great Valley Center, 1999), 9, 37.

¹¹⁶ Glen Totten, "California Issues: A Briefing on California Water Issues," (Water Education Foundation, March 2004), 9. <http://water-ed.org/cabriefing.asp> (4 March 2002).

¹¹⁷ Resources Agency, *Flood Warnings: Responding to California's Flood Crisis* (Sacramento: Department of Water Resource, 2005), 1.

¹¹⁸ Guy McCarthy, "Officials Deny Flood Blame, fingers point in wake of death of woman, fetus," *San Bernardino Sun*, 15 March 2005.

¹¹⁹ Ellen Hanak and Antonina Simeti, *Water Supply and Growth in California: a Survey of City and County Land-Use Planners* (San Francisco: Public Policy Institute, 2004), 5.

¹²⁰ Vic Pollard, "Groups Sue to Block Water Transfer," *Bakersfield Californian*, 13 March 2005.

¹²¹ John Gibler, *Water Heist: How Corporations Are Cashing In On California's Water* (Oakland: Public Citizen, 2003), 13.

¹²² See for example: Terry Anderson, "What Shortage? Water Markets Increase Water Supply," *EcoWorld: Nature and Technology in Harmony*, 25 October 2002. <http://www.ecoworld.org/Home/Articles2.cfm?TID=327>

¹²³ "In the Imperial Valley, working to make water transfer fair to all," Environmental Defense, 16 January 2004.

<http://www.environmentaldefense.org/article.cfm?contentid=3494> (9 April 2005).

¹²⁴ Gibler, 15.

¹²⁵ "How It Works," (Imperial Irrigation District, 1998). www.iid.com/aboutiid/iidbackground.html (20 March 2005).

¹²⁶ *Quantification Settlement Agreement* (Sacramento: Imperial Valley Irrigation District, the Coachella Valley Irrigation District, the San Diego County Water District, the Metropolitan Water District of Southern California, the San Luis Rey Settlement Parties, the State of California, and the United States Department of the Interior, October 2003), 10. <http://www.salttonsea.water.ca.gov/crqs/index.cfm> (25 April 2005).

¹²⁷ "Imperial Irrigation District Water Conservation and Transfer Project, California," *Federal Register Environmental Documents* (Washington, D.C.: U.S. Environmental Protection Agency, 67, no 217, 8 November 2002). <http://www.epa.gov/fedrgstr/EPA-IMPACT/2002/November/Day-08/i28507.htm> (25 April 2005).

¹²⁸ Committee on Western Water Management, National Research Council, *Water Transfers in the West: Efficiency,*

Equity, and the Environment (Washington: National Academy Press, 1992), 38.

¹²⁹ See "Analysis of Economic Impacts of Proposed Land Retirement in Westlands Water District: Final Report" and "Addendum: Responses to Comments," (United Farm Workers AFL-CIO; May 2003).

¹³⁰ Bill McEwan, "No Place to Call Home on the West Side," *Fresno Bee*, 26 October 2004.

¹³¹ Juliana Barbassa, "Though land is Poisoned, California water districts lock in supplies," *North County Times*, 15 March 2005.

¹³² "Local Water Demons," *Butte Environmental Council*, Spring 1999. <http://www.becnet.org/News/WaterDemons.html> (25 March 2005).

¹³³ Gregory Thomas, *Designing Successful Groundwater Banking Programs in the Central Valley: Lessons from Experience* (Berkeley: Natural Heritage Institute, 2001), 31.

¹³⁴ *Ibid.*, 32.

¹³⁵ Lynn Barris, office communication, 28 February 2005.

¹³⁶ *Ibid.*

¹³⁷ Juliette Beck, office communication, 22 March 2005.

¹³⁸ Conner Everts, personal communication, 1 April 2005.

¹³⁹ For more information about desalination see: California Coastal Commission, *Seawater Desalination and the California Coastal Act* (Sacramento: California Coastal Commission, March, 2004) <http://www.coastal.ca.gov/web/energy/14a-3-2004-desalination.pdf> (25 April 2005) and the Surfrider Foundation's website: <http://www.surfrider.org/a-z/desal.asp>.

¹⁴⁰ "Tapping the World's Largest Reservoir: Desalination" *Water Education Foundation*, Jan/Feb 2003, 8.

¹⁴¹ For more on this issue, see Latino Issues Forum, *Power Against the People? Moving Beyond Crisis Planning in California Energy* (San Francisco: Latino Issues Forum, 2001). http://www.lif.org/publications/power_rpt.pdf (25 April 2005).

¹⁴² Sam Miller, "Water Project up for Planning Commission vote," *Orange County Register*, 17 April 2003.

¹⁴³ *Seawater Desalination and the California Coastal Act*, 52.

¹⁴⁴ Water Reuse Foundation, *Project Profile, Water Reuse Economic Workshop Report* (National Water Research Institute Stratus Consulting Inc. Project No. WRF-03-006, Product No. 03-006-01), 2.

http://www.watereuse.org/pdf/profile_03006.pdf (1 May 2005).

¹⁴⁵ Peter Gleick, et al. *Waste Not, Want Not*, 1.

Chapter 2

¹ This term was coined from Robert Gottlieb and Margaret Fitzsimmons, *Thirst for Growth: Water Agencies as Hidden Government in California* (Tucson: University of Arizona Press, 1991).

² Betty Brickson, J.K. Hartshorn, and Elizabeth McCarthy, *A Layperson's Guide to California Water* (Sacramento: Water Education Foundation, 2000), 13.

³ Kimia Mizany and April Manatt, *What's So Special About Special Districts? A Citizen's Guide to Special Districts in California, Third Edition* (Sacramento: Senate Local Government Committee, 2002), 3.

⁴ Metropolitan Water District of Southern California, "About MWD," available online at: www.mwdh2o.com/mwdh20/pages/about/about01.html (18 March 2005).

⁵ *Groundwater Management in California: A report to the legislature pursuant to Senate Bill 1245* (1997) (Sacramento: Department of Water Resources, 1999), 3.

⁶ Mizany and Manatt, *A Citizen's Guide*, 3.

⁷ *Special Districts: Relics of the Past or Resources for the Future?* (Sacramento: Little Hoover Commission, 2000), 11.

⁸ John Gibler, *Water Heist: How corporations are cashing in on California's water* (Oakland: Public Citizen, 2003), 2.

⁹ "California Judge Scraps Nestle Water Deal," *San Francisco Chronicle*, 24 March 2005.

¹⁰ Little Hoover Commission, *Special Districts*, 21-22.

¹¹ Ibid., 56-57. In 2000, the Government Accounting Standards Board implemented new reporting requirements for special districts. This may increase accountability of water districts, but that has yet to be seen.² Paola Ramos, *Promoting Quality,*

Equity, and Latino Leadership in California Water Policy (San Francisco: Latino Issues Forum, 2003), 43.

¹³ *California Ground Water Conditions, Ground Water Report to Congress* (Washington, DC: Ground Water Protection Council, 1999), 15.

¹⁴ *Bulletin 118 California Groundwater Update 2003*. (Sacramento: Department of Water Resources, 2003) www.groundwater.water.ca.gov/bulletin118/update2003/index.cfm. pg 20 (March 15, 2005).

¹⁵ Ibid., 2, 96.

¹⁶ Ibid., 113.

¹⁷ *Groundwater Management*, 15.

¹⁸ Ibid., 15.

¹⁹ Cleo Woelfle-Erskine and Laura Allen, *Dam Nation: Dispatches from the Water Underground* (New York: Soft Skull, 2005).

²⁰ See the following online sources for more information on water privatization: Public Citizen's Water for All Campaign, <http://www.wateractivist.org>, International Forum on Globalization <http://www.ifg.org/analysis/reports/bg-summary.htm> and The Pacific Institutes'

report on water privatization: http://www.pacinst.org/reports/new_economy_of_water/ as well as Maude Barlow and Tony Clarke, *Blue Gold: The Fight to Stop the Corporate Theft of the World's Water* (New York: New Press, 2002).

²¹ Peter H. Gleick et al. *The New Economy of Water: The Risks and Benefits of Globalization and Privatization of Fresh Water* (Oakland: Pacific Institute, February 2002), 39.

²² Maude Barlow, *Blue Gold: The Global Water Crisis and the Commodification of the World's Water Supply* (San Francisco, International Forum on Globalization, 1999), 15.

²³ Health effects of service disconnections in the UK are documented in *House of Commons 8 May 1996: Column 151 Water Meters*. <http://www.parliament.the-stationery-office.co.uk/pa/cm199596/cmhansrd/vo960508/debtext/60508-01.htm> (28 February 2005). Also in Emanuele Lobina and David Hall, *UK Water Privatization: A Briefing* (London: PSIRU, February 2001), 16-18. Water shut-offs were made illegal in the UK by Water Industry Bill (Bill 1) 1998/1999, <http://www.parliament.uk/commons/lib/research/rp98/rp98-117.pdf> (28 February 2005).

- ²⁴ Sarah Rubenstein, "City Blasts United Water," *Atlanta Business Chronicle*, 9 August 2002, <http://atlanta.bizjournals.com/atlanta/stories/2002/08/12/story1.html> (28 February 2005).
- ²⁵ Geoffrey F. Segal, "Many Questions Remain for Atlanta after United Water," Reason Foundation, www.gppf.org/pubs/commentaries/2003/united_water.htm, (28 February 2005).
- ²⁶ Rebecca Trujillo, interview by John Gibler, 27 March 2005.
- ²⁷ "Chualar CDP, Monterey County," Central Coast Joint Data Committee. http://www.centralcoastdata.org/public_html/census/ambag/cdps/Monterey/Chualar/2000poprace (15 April 2005).
- ²⁸ Draft Chualar Existing Conditions Report, (n.p., n.d.), 3.
- ²⁹ Larry Parsons, "Higher Water Bills Spur Conservation Efforts," *Monterey County Herald*, 23 November 2004.
- ³⁰ Virginia Hennessey, "Group Fights Cal-Am Merger," *Monterey County Herald*, 14 December 2004.
- ³¹ Ibid.
- ³² Manuel de la Fuente, "Presentation on the struggle in Cochabamba," presented at the World Social Forum, Porto Alegre, January 2003. http://www.citizen.org/cmep/Water/cmep_Water/reports/bolivia/articles.cfm?ID=10608 (26 March 2005).
- ³³ Frank Chavez, "Bolivian water rates hard to swallow," *Tierramerica*, 2005. <<http://www.tierramerica.net/2005/0312/iarticulo.shtml>> (26 March 2005).
- ³⁴ Jim Shultz, "The Politics of Water in Bolivia," *The Nation*, 28 January 2005. <http://www.thenation.com/doc.mhtml?i=20050214&s=shultz> (26 March 2005).
- ³⁵ Jacques Paw, "Metered to death: how a water experiment caused riots and a cholera epidemic," *The Center for Public Integrity*, 5 February 2003. <http://www.icij.org/water/report.aspx?sID=ch&rID=49&aID=49> (26 March 2005).
- ³⁶ Dale T McKinley, "Running Dry: South Africa's water policy results in cutoffs, evictions and disease," *Race, Poverty and the Environment*, XI, no.1, 2004.
- ³⁷ Quoted from Walter Turner, "Soweto Resists ANC Privatization Moves," *Africa Today*, 18 August 2004, <http://www.corpwatch.org/article.php?id=11501>, (26 March 2005).
- ³⁸ Ramos, 43.
- ³⁹ Committee on Small Water Supply Systems, National Research Council, *Safe Water From Every Tap: Improving Water Service To Small Communities*. (Washington: National Academy Press, 1997), 7.
- ⁴⁰ John Cromwell and Robert Raucher, *Comparative Advantages of Alternative Forms of Public Ownership for Community Water Supply Systems* (Boulder: Rural Water Partnership Fund, 2004), 12.
- ⁴¹ National Research Council, *Safe Water from Every Tap*, 26.
- ⁴² *National Characteristics of Drinking Water Systems Serving Populations Under 10,000* (Washington, D.C., EPA, 1999), 5-2.
- ⁴³ Laura Florez, "Where's the Water: Tooleville residents have struggles with water problems for years," *Visalia Times Delta*, 3 August 2004.
- ⁴⁴ *Sanitary Inspection of Lake of the Woods Mutual Water Company* (Bakersfield: Department of Health Services, 2004), 4.
- ⁴⁵ Anne Pivey, Fairway Tract Water Company, interview by Amadis Sotelo and Torri Estrada, Latino Issues Forum, July 2003.
- ⁴⁶ *Drinking Water: Stronger Efforts Essential for Small Communities to Comply With Standards* (General Accounting Office, RCED-94-40, 1994), 27.
- ⁴⁷ Environmental Protection Agency, *National Characteristics*, 6-1.
- ⁴⁸ Torri Estrada, Paola Ramos, and Amadis Sotelo, *Where Does the Buck Stop? An Equity Analysis of State Funding Programs and Their Effectiveness in Addressing Water Issues in Low-Income Communities of Color in the Central Valley* (Latino Issues Forum, unpublished manuscript), 2.
- ⁴⁹ Florez, "Where's the Water?"
- ⁵⁰ Internet research and telephone interviews with Regional Board staffers conducted 25 March 2005.
- ⁵¹ Hyon B. Shin and Rosalind Bruno, "Nearly 1-in-5 Speak a Foreign Language at Home; Most Also Speak English 'Very Well,'" Census Bureau Reports, "Census 2000 Briefs," 6 October 2003. <http://www.census.gov/prod/2003pubs/c2kbr-29.pdf> (5 May 2005).

⁵² Ibid.

⁵³ To find a median household income, there are eight different windows a user must navigate through. See www.census.gov (15 April 2005).

⁵⁴ “Equivalent Level of Public Health Protection Draft Decision Tree, CALFED Drinking Water Subcommittee,” August 8, 2002, www.calwater.ca.gov/BDPAC/Subcommittees/DrinkingWater/ELPH_Decision_Tree_8_28_02.pdf (9 April 2005).

⁵⁵ Alisha Deen, personal communication, 28 April 2005.

⁵⁶ California Senate Bill 89 (Escutia, 2000), http://info.sen.ca.gov/cgi-bin/postquery?bill_number=sb_89&sess=9900&house=B&site=sen, (19 April 2005).

⁵⁷ *Final Report - Recommendations of the Cal/EPA Advisory Committee on Environmental Justice to the Cal/EPA Interagency Working Group on Environmental Justice* (Sacramento: Cal/EPA, 2003), 17-19. <http://www.calepa.ca.gov/EnvJustice/Documents/2003/FinalReport.pdf> (19 April 2005).

⁵⁸ Dr. Henry Clark, interview by Amy Vanderwarker, 23 March 2005.

⁵⁹ *Recommendations of the Cal/EPA Advisory Committee*, 17-19.

⁶⁰ *The Model Plan for Public Participation* (Washington, D.C., EPA, 1996, EPA-300-K-96-003).

⁶¹ Alisha Deen, personal communication, 28 April 2005.

⁶² The Environmental Justice Subcommittee operates entirely under the salary of its one staff member, while other CALFED programs have budgeted programs to push the subcommittee activities forward. Ken McGee, office communication, 12 April 2005. See also CALFED Bay-Delta Program, *2004 Annual Report* (Sacramento: CALFED Bay-Delta Program, 2005), 57.

⁶³ *2004 Annual Report* (Sacramento: CALFED Bay Delta Program, 2004), 52. http://calwater.ca.gov/AboutCalfed/AnnualReport2004/04AR_pdf_OandC.pdf

⁶⁴ Monique Wilber, *Californians Without Safe Water* (Department of Water Resources Statewide Water Planning, 2003) 9, 30.

⁶⁵ *Environmental Equity: Reducing Risk for All Communities* (Environmental Protec-

tion Agency, Washington, D.C., EPA230-R-92-008, 1992), 3.

⁶⁶ Alisha Deen, personal communication, 8 April 2005.

⁶⁷ “The Napa Agreement: Paper Dams for Paper Water,” Environmental Water Caucus fact sheet, 2004. On file at Public Citizen.

⁶⁸ Sherry Padgett, testimony given to the California Assembly Committee on Environmental Safety and Toxic Materials and the California Assembly Select Committee on Environmental Justice Legislative Hearing, Richmond, CA, 6 November 2004.

⁶⁹ Tom Frantz, Sharon Fuller, LaDonna Williams, personal communication, 25 April 2005.

⁷⁰ *2002 Clean Water Act Section 303(d) List of Water Quality Limited Segments* (Sacramento: State Water Resource Control Board, 2003).

⁷¹ Terri Olle et al., *Water Woes: An Analysis of Pesticide Concentrations in California Surface Water* (San Francisco: California Public Interest Research Group and Pesticide Action Network Report, 2000).

⁷² “Clean Water, Clean Farms Campaign fact sheet,” Clean Water, Clean Farms Coalition. <http://www.cleanfarmscleanwater.org/agfacts.htm> (25 April 2005).

Chapter 3

¹ Paola Ramos, *Promoting Quality, Equity, and Latino Leadership in California Water Policy* (San Francisco: Latino Issues Forum, 2003), 31-32.

² California Assembly Bill 2342, (Jackson, 2004). http://info.sen.ca.gov/pub/03-04/bill/asm/ab_2301-2350/ab_2342_bill_20040923_status.html (13 May 2005).

³ Margaret Reeves et al. *Fields of Poison: California Pesticides and Children* (San Francisco: Californians for Pesticide Reform, 1999), 4.

⁴ Brad Heavner, *Toxics on Tap: Pesticides in California Drinking Water Sources*. (San Francisco: California Public Interest Research Group Charitable Trust and Californians for Pesticide Reform, 1999), 38.

⁵ Ibid., 12.

⁶ Ibid., 18.

⁷ United Farm Workers, Resolution #16, presented by the National Executive Board of the United Farm Workers of America, AFL-CIO, Fourteenth Constitutional Convention of the United Farm Workers of America, 5 September 1998.

⁸ Neil Dubrovsky et al., *Water quality in the San Joaquin-Tulare Basins, California 1992-95* (Washington, D.C.: U.S. Geological Survey Circular 1159, April 1998). <http://water.usgs.gov/pubs/circ/circ1159> (9 April 2005).

⁹ Brian Medley, "Dairy wary activists make Sacramento Valley next battleground," Associated Press, 9 August 2004.

¹⁰ Gretchen Wenner, "Dairy may face fines in dumping," *Bakersfield Californian*, 21 September 2004.

¹¹ "Ground Water & Drinking Water: Perchlorate," Environmental Protection Agency. www.epa.gov/cgi-bin/epaprint-only.cgi, (9 February 2005).

¹² "Rocket Fuel Waste Contaminates Water Supplies For Thousands in Sacramento County," Environmental Working Group California Policy Memo, 5 June 2001.

¹³ Marla Cone and Lisa Getter, "Study Disagrees with EPA on Perchlorate: Scientists report says it poses a health risk but not at doses as low as the agency had calculated," *Los Angeles Times*, 11 January 2005. www.latimes.com/news/local/la-me-perchlorate11jan11,1,624804.story?coll=la-headlines-california, (3 March 2005).

¹⁴ Davin Diaz, interview by Amy Vanderwarker, 16 February 2005.

¹⁵ "Bush Administration Again Seeks Exemptions for Cleanup of Toxic Rocket Fuel," Environmental Working Group Press Release, 20 April 2004. <http://www.ewg.org/issues/perchlorate/20040420/index.php> (5 May 2005).

¹⁶ "Perchlorate in California Drinking Water: Monitoring Update," Department of Health Services. www.dhs.ca.gov/ps/ddwem/chemicals/perchl/monitoringupdate.htm (21 February 2005).

¹⁷ Cone and Getter, "Study Disagrees with EPA on Perchlorate."

¹⁸ "White House and Pentagon Bias National Academy Perchlorate Report," Natural Resource Defense Council Press Release, 10 January 2005, www.nrdc.org/medis/pressrelease/050110.asp (5 May 2005). John Heilprin, "EPA sets exposure

limit for rocket fuel pollutant," *Associated Press*, 18 February 2005.

¹⁹ "Fact Sheet on DOD Exemptions from RCRA and CERCLA," Committee on Energy and Commerce Democratic Staff, April 1, 2004. http://www.house.gov/commerce_democrats/DODexemptions/fact_sheet.1.htm. (2 April 2005).

²⁰ Ground Water Protection Council, *California Ground Water Conditions, Ground Water Report to Congress*, (Washington, DC: October 1999).

²¹ Lisa C. Klinosky, *Layperson's Guide to Drinking Water*. (Sacramento: Water Education Foundation Sacramento, 1997), 13.

²² For an in-depth discussion of this topic, see Helperin et al., *California's Contaminated Groundwater: Is the State Minding the Store?* (San Francisco: Natural Resources Defense Council, 2001).

²³ Karen Burow, Jennifer Shelton, and Neil Dubrovsky, *Occurrence of Nitrate and Pesticides in Ground Water Beneath Three Agricultural Land-Use Settings in the Eastern San Joaquin Valley, California, 1993-1995*. (Denver: U.S. Geological Survey, Water Resources Investigations Report 97-4284, 1998), 44.

²⁴ Richard E. Howitt and Charles V. Moore, "Water Management," in John Kirlin and Jeffrey Chapman, *California's Policy Choices, Volume 9* (Los Angeles: University of Southern California, School of Public Administration, 1993), 139.

²⁵ Helperin, 39.

²⁶ "Santa Monica Water Supply Threatened by MTBE," *U.S. Water News Online* July 1996, www.uswaternews.com/archives/arcquality/6smonica.html (6 April 2005).

²⁷ "Water Agencies Create Plan to fund \$320-million groundwater cleanup," *U.S. Water News Online* April 1999, www.uswaternews.com/archives/arcpolicy/9watage4.html, (9 April 2005).

²⁸ California Assembly Bill 599 (Liu, 2001). <http://www.waterboards.ca.gov/gama/ab599.html> (24 March 2005).

²⁹ Jim Mayer, *Layperson's Guide to Groundwater* (Sacramento: Water Education Fund, 1998), 10 -11.

³⁰ Helperin, 75.

³¹ *The Clean Water and Drinking Water Infrastructure Gap Analysis* (Washington,

D.C.: Environmental Protection Agency, EPA-816-R-02-020, 2002), 8.

³² *Dawn of the Replacement Era: Reinvesting in Drinking Water Infrastructure* (Denver: American Water Works Association, 2001), 11.

³³ *Drinking Water Infrastructure Needs Survey, Second Report to Congress* (Environmental Protection Agency, EPA 816-R-01-004, 2001), 33-34, 37.

³⁴ American Society of Civil Engineers, "Infrastructure Report Card 2005: California," www.asce.org/reportcard/2005/, (6 April 2005).

³⁵ Caroline Farrell, office communication, Center for Race, Poverty and the Environment, 18 February 2005.

³⁶ Ramos, 23.

³⁷ See American Water Works Association, *Dawn of the Replacement Era*, 21; Office of Water, *Drinking Water Infrastructure Needs Survey*, 17.

³⁸ "Proposal to allocate Proposition 50 funds to continue the Infrastructure Rehabilitation Program administered by the Department of Water Resources" (Oakland: Environmental Justice Coal-

ition for Water, 2005). www.ejcw.org. (5 May 2005).

³⁹ "Income and Poverty Level in 1999 for Places in Alameda to Fresno Counties - 2000 Census." State of California, Employment Development Department, Labor Market Information Division, <http://www.calmis.cahwnet.gov/file/demoinc/inc2000place1.htm>, (4 May 2005).

⁴⁰ Paul Boyer, office communication, 25 January 2005.

⁴¹ Tina Eshaghpour, *Confronting Toxic Contamination in our Communities: Women's Health and California's Future* (San Francisco: Women's Foundation of California, 2003), 4.

⁴² Roberta Wyn and Victoria Ojeda, *Women's Health Issues in California: Findings from the 2001 California Health Interview Survey* (Los Angeles: University of California Los Angeles Center for Health Policy Research, 2003), 6.

⁴³ John Balbus and Martha Embrey, *Drinking Water and Disease: What Health Care Providers Should Know*, (Washington: Physicians for Social Responsibility, 2000); United States Environmental Protection Agency, "What are the Health Impacts of Contaminants in Drinking

Water?" www.epa.gov/safewater/dwh/health.html, (4 May 2005).

⁴⁴ "Nitrates in Drinking Water," U.S. Department of Health fact sheet, 331-214, 2004. <http://www.doh.wa.gov/ehp/dw/Programs/nitrate.htm>, (4 May 2005).

⁴⁵ Renee Sharp and Bill Walker, *Is Water From Vending Machines Really "Chemical-Free"?* (Oakland: Environmental Law Foundation and Environmental Working Group, 2002), 12.

⁴⁶ Fran Burton, Deputy Director, Department of Health Services. Letter to Senator Richard Alarcon, July 26, 2004. Letter of opposition to Senate Bill SB 1302 (as amended May 24, 2004), on file at Senator Alarcon's office.

⁴⁷ Ibid.

⁴⁸ Ramos, 27-28.

⁴⁹ *1997-98 Water Vending Machine Pilot Study, Executive Summary* (Los Angeles: Agricultural Commissioner/Weights and Measures Department, 1998), 1; *2000 Water Vending Machine Pilot Study, Executive Summary* (Los Angeles: Agricultural Commissioner/Weights and Measures Department, 2000), 1.

⁵⁰ Carole Goldberg and Duane Champagne, *A Second Century of Dishonor: Federal Inequities and California Tribes* (Los Angeles: University of California Los Angeles, American Indian Studies Center, 1996), 58. See also: Kaiser Commission on Medicaid and the Uninsured, "Health Insurance Coverage and Access to Care Among American Indians and Alaska Natives" from E. R. Brown et al., *Racial and Ethnic Disparities in Access to Health Insurance and Health Care* (UCLA Center for Health Policy Research and The Henry J. Kaiser Family Foundation, 2000).

⁵¹ Tim Holt, "Crops Or Salmon: What Will It Be?" *Sacramento Bee*, 30 June 2004; Julie Johnson, "California Tribes Push For Higher Profile In Water Wars, Salmon Debate," *Pacific News Service*, 2 June 2004.

⁵² *Westlands Water Dist. v. Hoopa Valley Tribe, U.S. Ninth Circuit Court of Appeals*, 13 July 2004, CV-00-07124-OWW.

⁵³ News Release, "McCloud River Indians Hold War Dance at Shasta Dam - Long Form." http://winnememwintu.us/news_release_gary.html, (4 May 2005).

⁵⁴ "Winnemem Wintu H'up Chonas - War Dance Frequently Asked Questions," http://winnememwintu.us/Hup_Chonas_FAQ.html, (4 May 2005).

⁵⁵ Cecilia Rasmussen, "L.A. Then And Now; Resort Was an Oasis for Blacks Until Racism Drove Them Out," *Los Angeles Times*, 21 July 2002.

⁵⁶ Allen Edson, "Why can't communities get a Piece of The Pie," *Race, Poverty, and the Environment*, XIII, no. 1 (2001), 18.

⁵⁷ Based on calculations by Pacific Institute, www.pacinst.org/topics/community_strategies/richmond (25 April 2005).

⁵⁸ Tomio Geron, "Richmond Activists Fight for Wetlands, Open Space," *North Gate News Online*, 28 October 2004.

⁵⁹ Background information was provided by Community Health Initiative of North Richmond, the Pacific Institute, and the Neighborhood House of North Richmond.

⁶⁰ See State Water Resources Control Board, "303(d) Summary tables, 2002," http://www.swrcb.ca.gov/tmdl/303d_sumtables.html (4 May 2005).

⁶¹ State Water Resources Control Board, "Monitoring List, 2002," http://www.swrcb.ca.gov/tmdl/docs/2002_mon_list_020403.pdf (4 May 2005).

⁶² Robert Perks, *Rewriting the Rules, 3rd Edition: The Bush Administration's Assault on the Environment* (Washington D.C.: Natural Resources Defense Council, 2004), 38-43.

⁶³ Similar to air pollution trading schemes, water pollution trading systems can potentially impact low-income communities and people of color by creating toxic "hot spots." See Richard T. Drury, Michael E. Belliveau, J. Scott Kuhn, & Shipra Bansal, *Pollution Trading and Environmental Injustice: Los Angeles' Failed Experiment in Air Quality Policy*, 9 Duke Environment and Policy Form. 231 (1999); and, "EPA's Water Quality Trading Plan Wins Support," *Environmental News Service*, 13 January 2003. <http://64.233.179.104/search?q=cache:s4lsvTVt5bgJ:www.ens-newswire.com/ens/jan2003/2003-01-13-10.asp+Water+Pollution+Trading+Plan+Wins+Support&hl=en> (25 February 2005).

⁶⁴ *Desk Guide: Environmental Justice in Transportation Planning and Investments* (San Francisco: California Department of Transportation, 2003), 18.

⁶⁵ Nancy Stoner, *Clean Water at Risk: A 30th Anniversary Assessment of the Bush Administration's Rollback of Clean Water Protections*, (Washington, D.C.: Natural

Resources Defense Council and the Clean Water Network, 2002), 16.

⁶⁶ Marla Cone, "Despite Clean Water Act upgrades, thousands are sickened each year as waste from failing systems seeps into waterways, report finds," *Los Angeles Times*, 27 August 2004.

⁶⁷ SF Prospector, "Bayview District and Hunters Point Demographic Information," <http://www.sfgov.org/sfprospector> (25 February 2005), cited in Eliot S. Metzger, Sonya M. Havens, Vivian W. Chang, Kathryn M. Clifton, Wade R. Peerman and John M. Lendvay, "Community Based Water Quality Sampling at Bayview-Hunters Point, San Francisco, CA," paper presented at the National Association of Environmental Professionals, 28th Annual Conference "No Borders: One Globe, One Environment," San Antonio, Texas, 2003.

⁶⁸ E. Glaser, M.M. Davis and T. Aragon, *Cancer Incidence among Residents of the Bayview-Hunters Point Neighborhood, San Francisco California*. (San Francisco: Department of Public Health, 1998).

⁶⁹ Ibid.

⁷⁰ *Attracting Sustainable Redevelopment and Green Industries to Bayview/Hunters Point*. (San Francisco: Environmental Protec-

tion Agency Sustainable Urban Environments Initiative, 2000), 3. http://www.greenstart.org/efc9/publications/pdf/bayviewHunters/SFBHPP_FR.pdf (5 March 2005),

⁷¹ Metzger, "Community Based Water Quality Sampling at Bayview-Hunters Point, San Francisco, CA."

⁷² PCBs can accumulate in the fat of fish, wildlife, and human beings. For this reason, people should avoid eating fish from PCB contaminated waters. In addition, they should not consume the fatty parts of fish, such as the skin, head, or internal organs, and should cook it in such a way to allow fat to run off. For more information, go to <http://www.oehha.org/fish.html> and follow the various information links.

⁷³ The mission of the CALFED Bay-Delta Program is to develop and implement a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta System.

⁷⁴ "Wasco Backs Dairy Buffer," *The Bakersfield Californian*, 3 November 2004.

⁷⁵ California Regional Water Quality Control Board, Santa Ana Region, "Fact Sheet: General Waste Discharge

Requirements for Concentrated Animal Feeding Operations (Dairies and Related Facilities) Within the Santa Ana Region,” Order No. 99-11, NPDES No. CAG018001,” 1999.

⁷⁶ Sarah Ruby, “Will dairy influx foul Kern’s Water? Some fear explosion of cows, use of manure on crops may threaten water quality,” *The Bakersfield Californian*, 26 February 2005.

⁷⁷ Robin Marks, *Cesspools of Shame: How Factory Farm Lagoons and Sprayfields Threaten Environmental and Public Health* (Washington: Natural Resource Defense Council and the Clean Water Network, 2001), 23.

⁷⁸ Physicians for Social Responsibility, Oregon Chapter, “rBGH-free Oregon Campaign Fact Sheet.” http://www.oregonpsr.org/csf/rbgh_fact_sheet.doc. (28 April 2005).

⁷⁹ “California Animal Waste Management,” United States Environmental Protection Agency Region 6: Animal Waste Management, http://www.epa.gov/Region9/cross_pr/animalwaste/california.html (6 March 2005).

⁸⁰ Gretchen Wenner, “Manure, dairy issues raise legislator’s hackles in Wasco,” *Bakersfield Californian*, 2 November 2004.

⁸¹ Chris Bowman, “Hilmar plant fined over waste: Cal-EPA board levies a \$4 million penalty on the cheese manufacturer,” *Sacramento Bee*, 29 January 2005.

⁸² “Behind The Seal,” www.realcaliforniachese.com/behindTheSeal/default.cfm?sub=behindTheSeal&page=6&start=1, (18 February 2005).

⁸³ U.S. Census Bureau, 2000 Census, www.census.gov, (4 May 2005).

⁸⁴ Rey Leon, Raquel Donoso, and Miguel Rodriguez, *New voices for change: Environmental health issues in Latino communities of the San Joaquin Valley* (Fresno: Latino Issues Forum, 2004), 7, 10, 21.

⁸⁵ “San Francisco Estuary Institute, EPA Release Report on Contamination of San Francisco Bay Fish,” EPA Press release, 24 July 2003. http://www.sfei.org/inthenews/Fishcontam2000_press.pdf (2 May 2005). See also Ben K.Greenfield et al., *Contaminant Concentrations in Fish from San Francisco Bay, 2000* (Oakland: San Francisco Estuary Institute, 2000), http://www.sfei.org/rmp/reports/fish_contamination/2000/FishStudy_finalv3.pdf, (2 May 2005).

⁸⁶ See Commission for Racial Justice, United Church of Christ, *Toxic Wastes and Race in the United State: A National Report*

on the Racial and Socioeconomic Characteristics of Communities with Hazardous Waste Sites (New York, Public Data Access, Inc., 1987); Paul Mohai and Bunyan Bryant (eds.) *Proceedings of the Michigan Conference on Race and the Incidence of Environmental Hazards* (Ann Arbor: University of Michigan School of Natural Resources, 1990); *Environmental Equity: Reducing Risk for All Communities* (Washington, D.C.: Environmental Protection Agency, EPA230-R-92-008, 1992).

⁸⁷ Natural Resources Defense Council, “Contamination of Fish from San Francisco Bay: Findings at a Glance,” <http://www.nrdc.org/greengate/health/fishf.asp> (4 May 2005).

⁸⁸ Ted Schettler, Jill Stein, Fay Reich, and Maria Valenti, *In Harm’s Way: Toxic Threats to Child Development* (Cambridge: Greater Boston Physicians for Social Responsibility and Clean Water Fund, 2001), 11.

⁸⁹ Margy Gassel, *Chemicals in Fish Report No. 1: Consumption of Fish and Shellfish in California and the United States, Final Draft Report* (Berkeley: Office of Environmental Health Hazard Assessment, 1997), 10. <http://www.oehha.ca.gov/fish/pdf/fish-rpt.pdf> (4 May 2005).

⁹⁰ *Survey of Fishers on Piers in San Diego Bay, Results and Conclusions*. (San Diego: Environmental Health Coalition, 2005), 1. <http://www.environmentalhealth.org/CBCPierFishersSurveyReport.htm> (6 March 2005).

⁹¹ *Public Summary of the San Francisco Bay Seafood Consumption Study* (Richmond: California Department of Health Services and San Francisco Estuary Institute, 2001), 11.

⁹² Sharon Fuller, interview by Amy Vanderwarker, 16 February 2005.

⁹³ Section 303(d) of the Clean Water Act requires states to establish Total Maximum Daily Loads of pollutants for waters that are impaired even after application of pollution controls. For more information see National Council for Science and the Environment, www.ncseonline.org/NLE/CRSreports/water/h2o-24cfm?&CFID=249871&CFTOKEN=68806862 (3 March 2005).

⁹⁴ Examples of community data surveys include: Audrey Chiang, *A Seafood Consumption Survey of the Laotian Community of West Contra Costa County, California* (Oakland: Asian Pacific Environmental Network, 1998.); Sharon Fuller, *Ma’at Youth Academy: Fish Consumption Study for Women and Children* (Richmond: Ma’at

Youth Academy, 2005); *Survey of Fishers on Piers in San Diego Bay, Results and Conclusions* (San Diego: Environmental Health Coalition, 2005). <http://www.environmentalhealth.org/CBCPierFishersSurveyReport.htm> (4 May 2005).

⁹⁵ Pratap Chatterjee, *Mercury Contamination and Community Health in Northern California* (San Francisco: International Indian Treaty Council, n.d.), 8.

⁹⁶ Jim Brown III, Tribal Elder, interview by Amy Vanderwarker, 23 April 2005.

⁹⁷ Jacquelyn Ross, "Changing Waters," *News from Native California*. v 15, n 1, Fall 2001. www.heydaybooks.com/news/issues/articles/15/1/Waters.html (3 March 2005).

⁹⁸ *An Ecological Assessment of San Diego Bay: A Component of the Bight '98 Regional Survey*. (San Diego: City of San Diego Ocean Monitoring Program, 2003), 4. www.waterboards.ca.gov/sandiego/programs/baycleanup/executivepercent20summary.pdf (10 March 2005).

⁹⁹ Personal communication, Albert Huang and Sonia Rodriguez, 2 February 2005.

¹⁰⁰ Center for Diseases Control and Prevention, "National Health and Nutrition

Examination Survey, 1999-2000," <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5343a5.htm> (3 March 2005).

¹⁰¹ Environmental Health Coalition, Survey of Fishers on Piers, 6.

¹⁰² Monterey County Office of Housing and Redevelopment, "Pajaro Draft Community Plan: Principal Findings." (2002), 9-10. <http://www.co.monterey.ca.us/housing/pdf/PAJAROCOMMUNITYPLANPrincipalFindings.pdf> (3 March 2005).

¹⁰³ See Anu Mittal and Jeffrey Malcom, *Alaska Native Villages: Most Are Affected by Erosion, but Few Qualify for Federal Assistance* (Washington: General Accounting Office, GAO-04-042, 2003) for discussions of economic, technical, and other barriers faced by communities of color to federal flood and erosion control funding and programs.

¹⁰⁴ Mike Davis, *Ecology of Fear: Los Angeles and the Imagination of Disaster* (New York: Vintage Books, 1998), 69.

¹⁰⁵ John McPhee, from *The Control of Nature* in David L. Ulin ed., *Writing Los Angeles: A Literary Anthology* (New York: The Library of America, 2002), 757.

¹⁰⁶ Alan Loomis, "The Los Angeles River: Past, Present, and Possibilities," www.deliriousla.net/lariver/index.htm, (20 March 2005).

¹⁰⁷ *Sprawl Hits the Wall: Confronting the Realities of Metropolitan Los Angeles* (Los Angeles: University of Southern California, 2001), 9.

¹⁰⁸ Jennifer Price, "The South: From Downtown to Long Beach Harbor," *L.A. Weekly*, 10 -16 August 2001.

¹⁰⁹ Miguel Bustillo, "Sun Valley sets out to Harness Rainfall," *Los Angeles Times*, 6 June 2003. www.treepeople.org/vfp.dll?OakTree~getPage~&PNPK=119#Sunpercent20Valley (7 March 2005).

¹¹⁰ Quoted in Natasha Lee, "The 200-foot-long Sun Valley sinkhole has been stabilized for now, but city engineers say it will be fall before Tujunga Avenue re-opens," *Los Angeles Times*, 9 March 2005. www.latimes.com/news/losangeles/sinkhole9mar09,0,3504510.story?coll=la-home-local, (5 April 2005).

¹¹¹ Mark Grossi, "Creek Could be Bringing Huron More Than Flooded Road Mud From Annual Flows Laced With Asbestos," *The Fresno Bee*, 25 May 1998.

¹¹² Charles McCarthy, "Floods Drive Huron City Leaders to Consider Suit," *The Fresno Bee*, 7 May 1998

¹¹³ See Toronto's waterfront revitalization program at <http://www.city.toronto.on.ca/waterfront/index.htm>, (4 May 2005).

¹¹⁴ Tom Schueler, "The Economics of Watershed Protection," *Watershed Protection Techniques 2 vol. 4*, 469-481.

¹¹⁵ Pincetl et al., *Toward a Sustainable Los Angeles* (Los Angeles: University of Southern California, 2003), 43.

¹¹⁶ Robert Garcia, Erica Flores, Sophie Mei-Ling, "Healthy Children, Healthy Communities: Schools, Parks, Recreation, and Sustainable Regional Planning," *Fordham Urban Law Journal* 101 (2004), 119.