



**Where Do Things
Grow?**

**Gardening Through
Rupture in West
Oakland**

Infrastructure, Land Use, and Urban Agriculture in West Oakland

West Oakland has long been shaped by transportation systems, industrial growth, and patterns of migration. While community gardens, informal markets, and urban farms have provided access to fresh food and local resilience, larger forces—such as redlining, freeway construction, and industrial zoning—have continuously reshaped access to land. These changes fractured neighborhoods, displaced families, and left behind soil contamination and disinvestment.

This project traces the intersection of infrastructure and food systems across time. What once included backyards, orchards, and shared plots has become a patchwork of vacant lots, food deserts, and fenced-off parcels. Still, urban gardens remain. Beyond growing food, they hold space for cultural memory, ecological repair, and intergenerational knowledge.

Through mapping, historical research, and spatial observation, this work documents how West Oakland's land has been lost and reclaimed—highlighting the role of gardens not as romantic gestures, but as practical, grounded responses to structural neglect.

What do we inherit when our soil is paved over?

Forces of Change

Tracing the Shifts in West Oakland's Landscape

1852

West Oakland is established

1869

The Transcontinental Railroad is completed

1870s-1880

Agricultural trade expands through new rail systems

1890s

African American communities grow in West Oakland.

1910s-1930

The Great Migration brings thousands of African Americans to West Oakland

1920s-1930

The Great Migration reshapes the neighborhood

1940s

Wartime industry fuels economic growth

1957

The Cypress Freeway cuts through the community

1966

The Black Panther Party is born

1989

The Loma Prieta Earthquake brings down the freeway

1990-2020

Gentrification transforms the landscape





Urban Gardens as Formal and Informal Practice

Urban gardens in West Oakland operate on two planes—one visible to policy, the other rooted in lived experience. This project mapped how gardens exist both within and beyond zoning logic, often defying formal classifications to meet everyday needs. In a neighborhood fractured by industrial expansion and housing displacement, gardens reclaim backyards, sidewalks, and vacant lots as systems of care.

At one site, zoning technically permits small-scale gardening—yet what actually takes root reveals more. Residents share tools, raise goats, compost food scraps, and host cultural events. These are not just food-growing spaces but informal infrastructures built by and for the community. They form networks of survival where public systems fall short.

Does the city support its gardeners, or simply tolerate them?



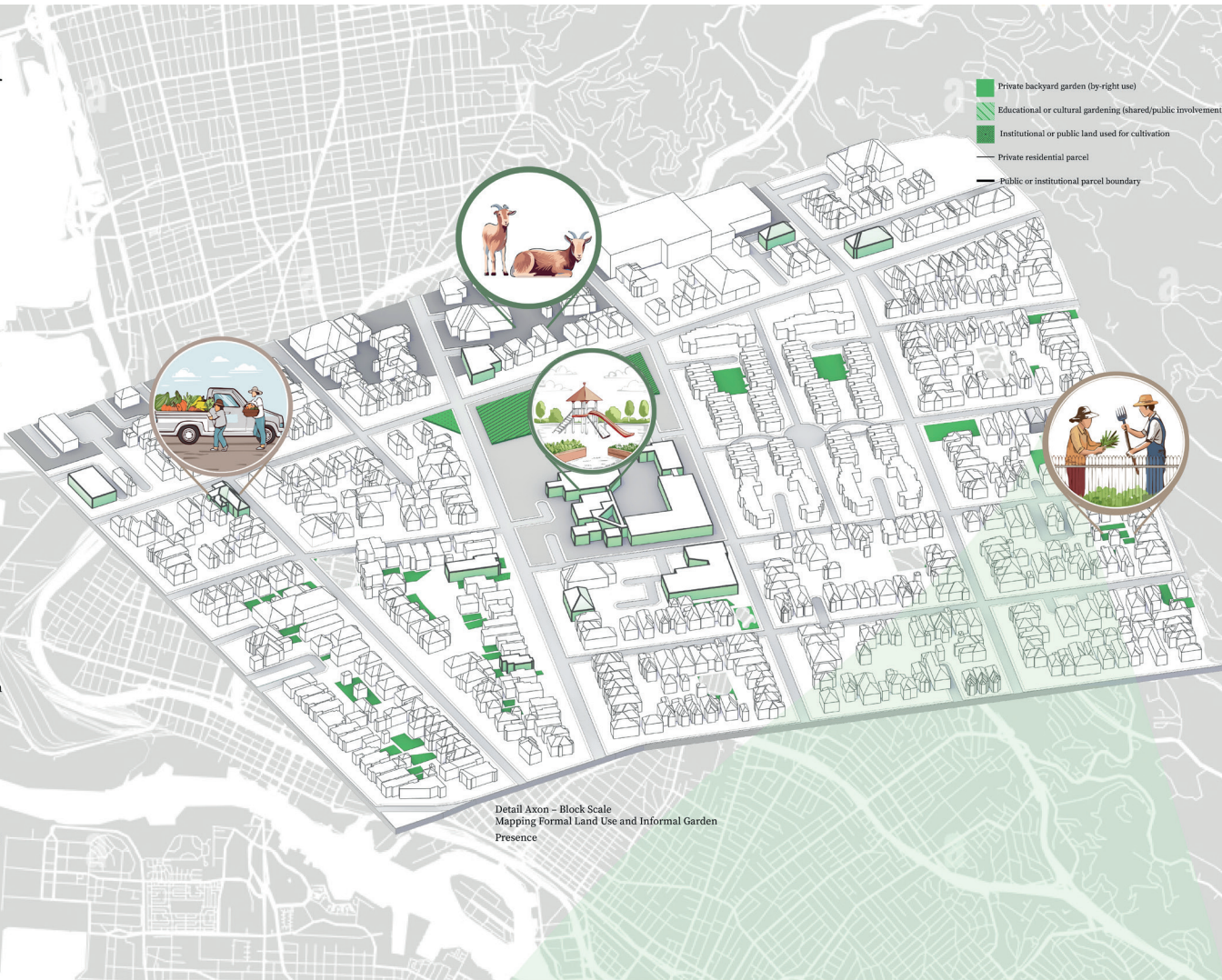
Where does formal zoning end and mutual aid begin?

Urban Gardens as Formal and Informal Protocols

The Spatial Life of Urban Gardens in West Oakland

This drawing maps the presence and function of urban gardens in West Oakland, revealing how they operate as both formal infrastructure and informal community lifelines. By documenting public and private growing spaces, this research highlights how urban gardening intersects with food access, land use, and collective care. These gardens represent more than green space—they are nodes of resilience that challenge displacement and provide space for cultural gathering, teaching, and mutual aid.

Formally, most of the observed gardens fall under Oakland's "limited agriculture" zoning classification, which permits residential-scale food growing by right in zones like RM (residential multi-family) and RD (residential duplex). Within the Prescott neighborhood, these zones dominate, allowing for vegetable beds, composting, and even small-scale animal keeping—such as chickens and goats—under specific setback and health requirements. However, while zoning technically allows for these practices, their actual emergence depends on factors like parcel ownership, community initiative, and historical land use patterns. The drawing highlights this tension by mapping the overlays of zoning envelopes, property lines, and access types, revealing where formal allowances support informal action—and where



Community-Led Gardening Practices in West Oakland



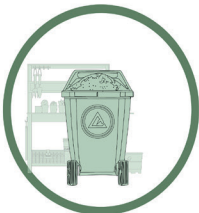
1. Harvesting



2. Mutual aid / tool sharing



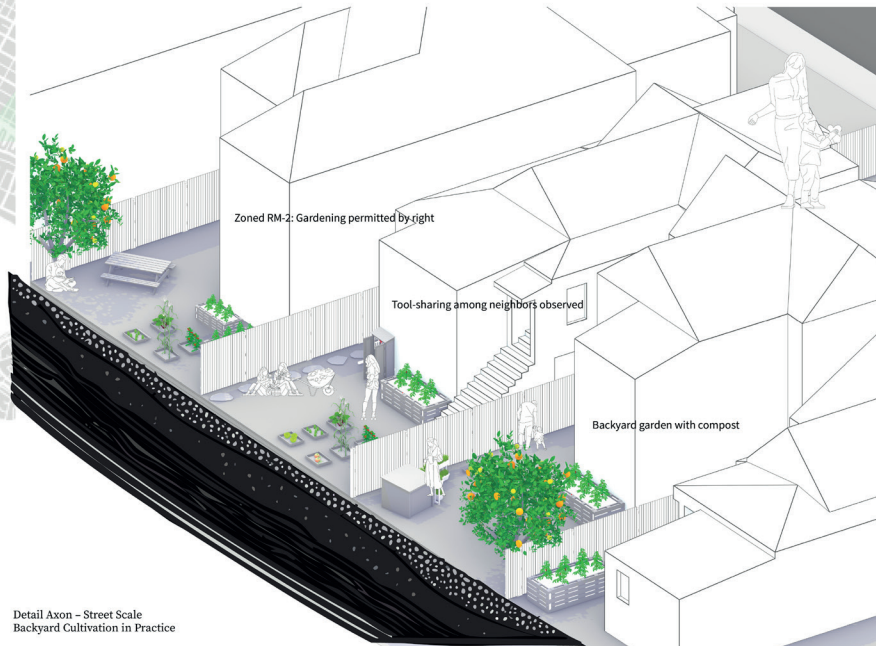
3. Cultural gathering



4. Composting



5. Informal teaching



Water Systems and the Informal Infrastructures of Survival

The water that reaches West Oakland originates over 90 miles away in the Sierra Nevada and is delivered via the Mokelumne Aqueduct, managed by EBMUD. Despite this regional network, water infrastructure within the neighborhood remains unreliable. Aging sewer systems, sealed creeks, and rising groundwater compromise water access and management at the local level. Project 3 maps this fragmented journey—tracing water from its source to its points of rupture and loss in West Oakland's residential fabric.

In response to these failures, residents implement informal and decentralized strategies. Rain barrels, drip irrigation, greywater reuse, and raised beds built above contaminated or flood-prone soil reflect a localized form of environmental adaptation. These methods are not merely provisional—they constitute a form of infrastructural agency, shaped by necessity and supported through shared knowledge.

How do communities reclaim land when the soil itself is unsafe?

What forms of stewardship emerge in spaces marked by toxicity?



Where Does the Water Go?

Tracing Oakland's water networks from mountain to garden.

The water that reaches West Oakland doesn't begin nearby. It travels nearly 100 miles from the Sierra Nevada, flows through the Mokelumne River, crosses the Delta, and is carried westward by a vast aqueduct system managed by EBMUD. But by the time it arrives, it's no longer a clean, direct journey — it's fragmented, leaking, rising from the ground, and often unreachable to those who need it most.

This project maps the journey of water across three interconnected scales: from the regional systems that bring water in, to the broken and buried networks that lose it along the way, to the neighborhood-level questions of how water is accessed, reused, or wasted.

In West Oakland, the problem isn't just scarcity — it's contamination, aging infrastructure, rising groundwater, and a long history of environmental neglect. What happens to the water that doesn't make it to the tap? How do residents irrigate their gardens, manage polluted soil, or access rain and greywater alternatives?

Scale 1 – Regional Watershed Flow

From the Mokelumne River to the East Bay

Water for West Oakland begins over 90 miles away in the Sierra Nevada foothills. It travels through the Mokelumne Aqueduct and across the Delta before entering the East Bay. The EBMUD system supplies this urban area, yet the journey of water doesn't end at the tap.

WEST OAKLAND HAS OVER 200 BROWNFIELD SITES AND IS PART OF THE EPA'S ENVIRONMENTAL JUSTICE SCREENING TOOL DUE TO HIGH CUMULATIVE EXPOSURE RISKS.

RESIDENTS FACE ELEVATED LEVELS OF DIESEL PARTICULATE MATTER—UP TO 90 TIMES HIGHER THAN STATE AVERAGES,

Container Gardens

Reuses buckets and barrels to grow food in non-arable land.



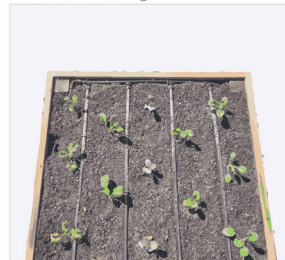
Rain Barrel System

Collects rooftop runoff for reuse in gardens.



Drip Irrigation

Reduces water use through efficient slow-release watering.



Raised Garden Beds

Prevents contact with contaminated soil by using clean fill.



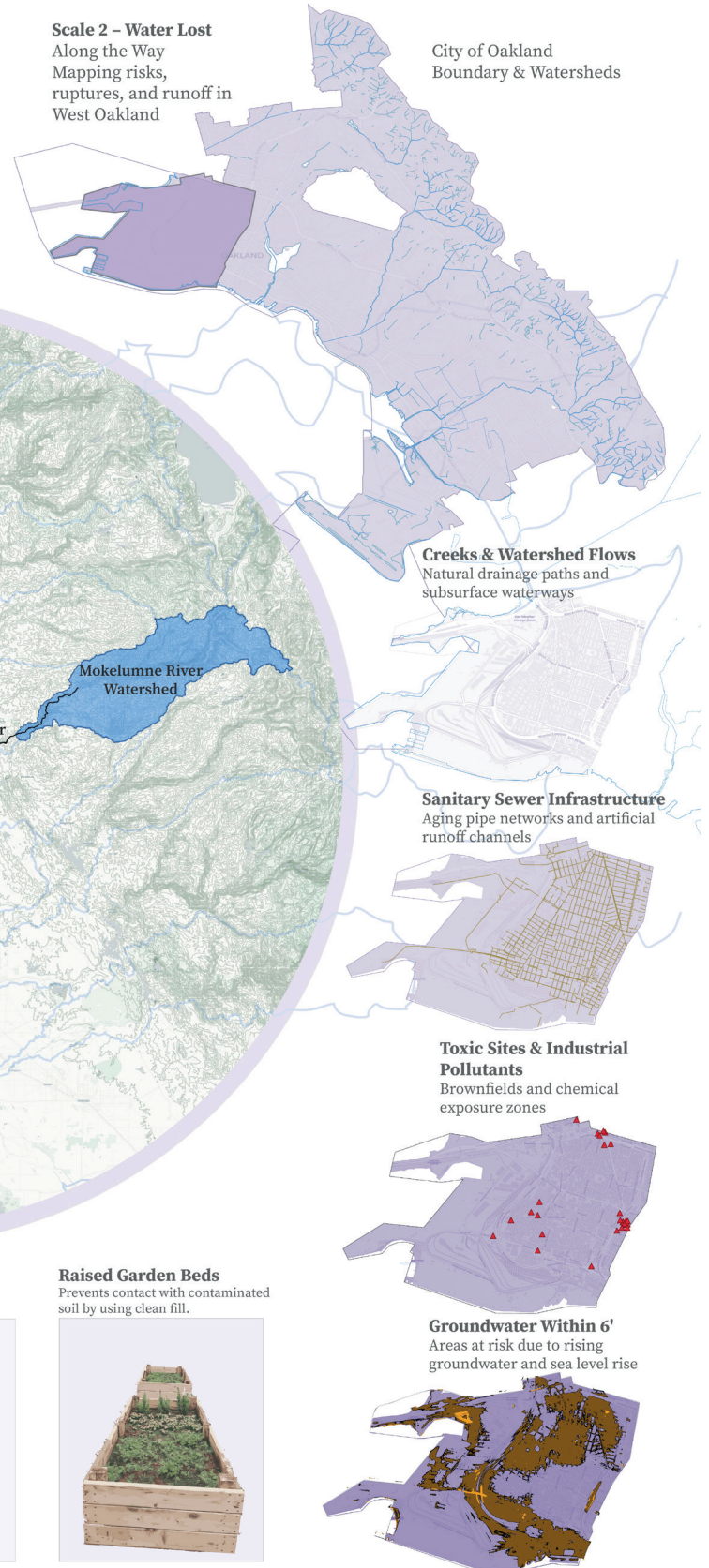
43% OF WEST OAKLAND RESIDENTS LIVE WITHIN 6' OF RISING GROUNDWATER

8 MILES OF CREEKS SEALED UNDER CONCRETE

90+ MILES OF WATER TRAVEL FROM SIERRA TO EAST BAY

Scale 2 – Water Lost Along the Way
Mapping risks, ruptures, and runoff in West Oakland

City of Oakland
Boundary & Watersheds





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I'm a B.Arch student at California College of the Arts who cares deeply about ecology, art, and how environmental systems shape daily life. My work explores how everyday practices, like gardening, can help people care for each other, resist environmental harm, and reconnect with land in meaningful ways.

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Urban Cultures
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