



OCEAN VIEW GROWING GROUNDS

Urban Agriculture and Food Disparities: Eliminating Superfund toxicants at the food-water nexus in disadvantaged neighborhoods

Growing community through food



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THE PROBLEM: People living in disadvantaged neighborhoods with high levels of obesity, poverty, poor nutrition, health disparities, and exposures to environmental toxicants are subject to "cumulative impacts" that put them at greater risk for illness and cancer,



THE SOLUTION: (1) Promote knowledge and understanding of how cumulative risks (e.g., obesity, poor nutrition and exposure to toxicants) impact human, and (2) Intervene, using this knowledge, to engage residents in transforming their neighborhoods into healthy places.

Ocean View Growing Grounds (OVGG) Community Garden (20,000 sq. ft.)

4540 Ocean View Blvd.
Southeast San Diego, California

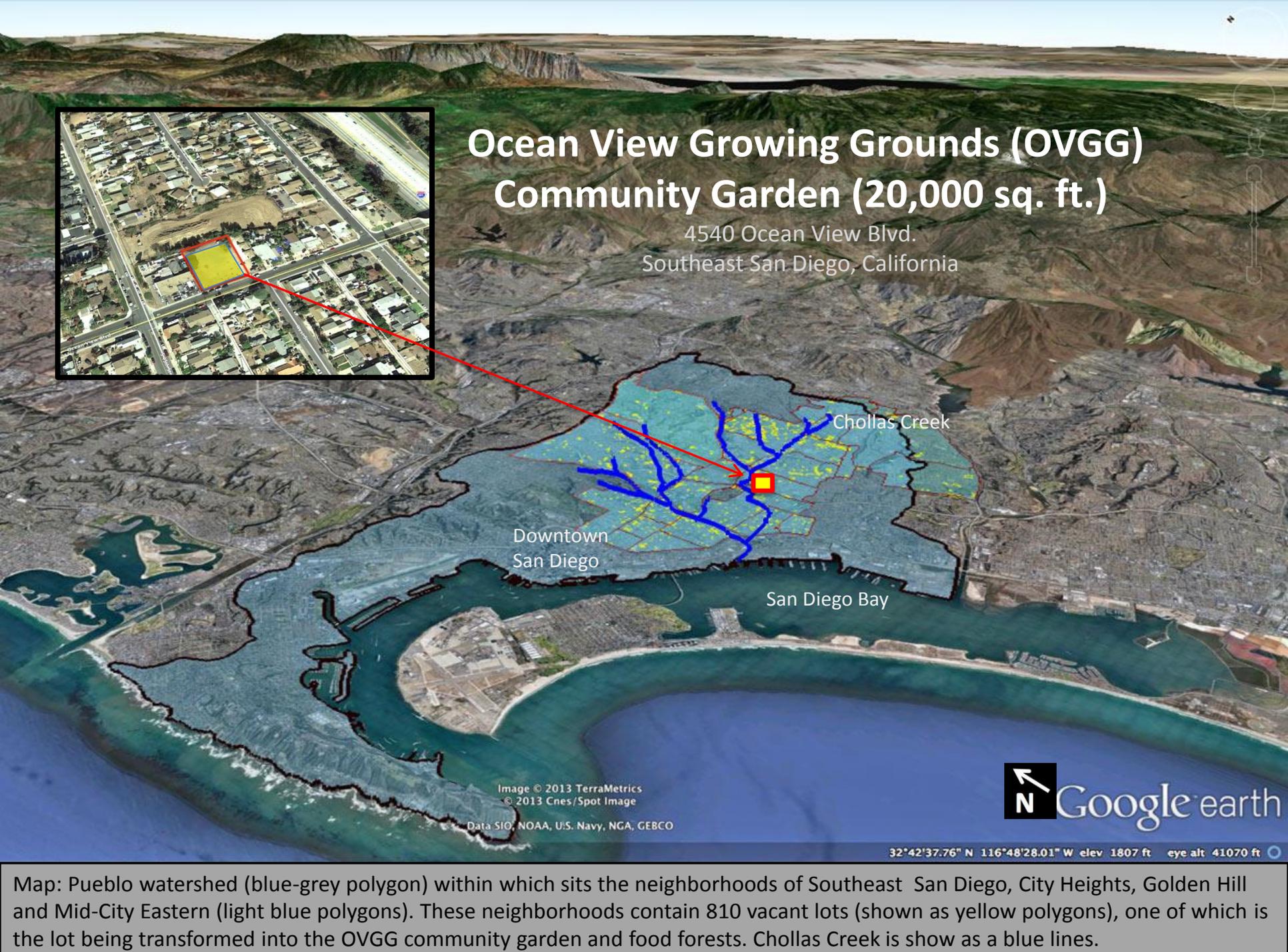


Image © 2013 TerraMetrics
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Data SIO, NOAA, U.S. Navy, NGA, GEBCO



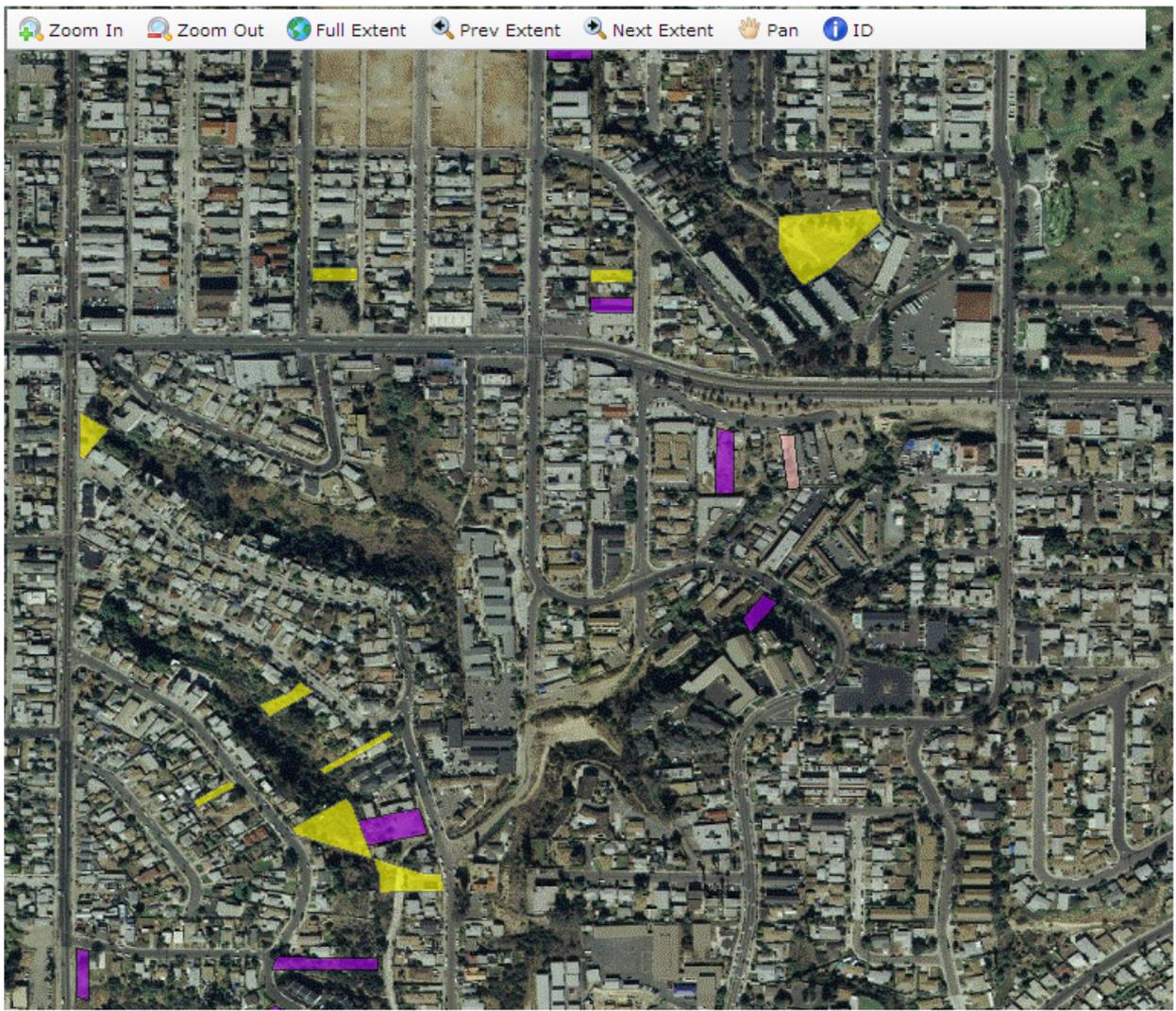
32°42'37.76" N 116°48'28.01" W elev 1807 ft eye alt 41070 ft

Map: Pueblo watershed (blue-grey polygon) within which sits the neighborhoods of Southeast San Diego, City Heights, Golden Hill and Mid-City Eastern (light blue polygons). These neighborhoods contain 810 vacant lots (shown as yellow polygons), one of which is the lot being transformed into the OVGG community garden and food forests. Chollas Creek is shown as blue lines.

San Diego Vacant Lot Survey

Info Charts Mapping

University Avenue and 50th Street		
Lot size	0.16 Acres	Poor
Owner	City	
Topography	Half of the lot is flat, but the other half is concaved down due to the sewage pipes.	Fair
Sunlight	Good sunlight can be achieved by trimming the trees in this area.	Good
Soil	Upon our observation, there are rocks everywhere on this lot, showing that the soil underneath is very rough. Also, part of this lot is paved.	Poor
Electricity	It is possible to tap into the power of nearby residential buildings.	Good
Visibility	undefined	Poor
Maintenance	There is a lot of garbage and there is graffiti on the sewage pipe concrete structure.	Poor
Fencing	There is no direct fence around the lot. However, the fences of the nearby buildings provide decent security.	Fair
Vehicle Access	The nearby street is wide enough for trucks to deliver necessary material for a garden.	Good
Parking	There is space for parking on the residential street; however, we have to take into account the parking spaces available for both residents and community members.	Fair
Overall Rating	Fair	



Ocean View Growing Grounds Neighborhood



- SB 535 “disadvantaged communities” : disproportionately affected by pollution
- 77% Hispanic community of approximately 60,000 people
- Median income of less than \$21,000.
- 38% live below the federal poverty level.
- 52% of the families with children under five live in poverty.
- 27%-34% of the children in the area are obese; Classified as a food desert;

National Brownfields/ Land Reuse Health Initiative

The Agency for Toxic Substances and Disease Registry (ATSDR) National Brownfields/Land Reuse Health Initiative is expanding. To further our program, we are collaborating with experts who help create healthy communities.

Who We Are

Our Brownfields and Reuse Opportunity Working Network (BROWN) is composed of experts from these agencies and fields:

- Agency for Toxic Substances and Disease Registry
- U.S. Environmental Protection Agency
- State Health Agencies
- Local Health Agencies
- Academia
- Agriculture/Urban Agriculture
- American Planning Association
- Brownfields Redevelopment
- Community Outreach and Education
- Economic Development
- Educational Film/Video
- Food Systems/Food Policy
- National Association of County and City Health Officials
- Smart Growth/Built Environment
- Technical Assistance to Brownfields
- Urban Planning

National Institute of Environmental Health Sciences Committee Members



Heather Henry,
Program Administrator, Health Sciences
Administrator, Morrisville, NC



Michelle Heacock,
Superfund Research Program, Morrisville, NC
heacockm@niehs.nih.gov

Heather studied plant-based environmental remediation (phytoremediation) and ecological restoration

The Brownfields & Reuse Opportunity Working Network (BROWN) is a coalition of stakeholders with a wide range of expertise in redevelopment. These ATSDR partners help our National Brownfields/Land Reuse Health Initiative reach out to more communities to integrate health in redevelopment.

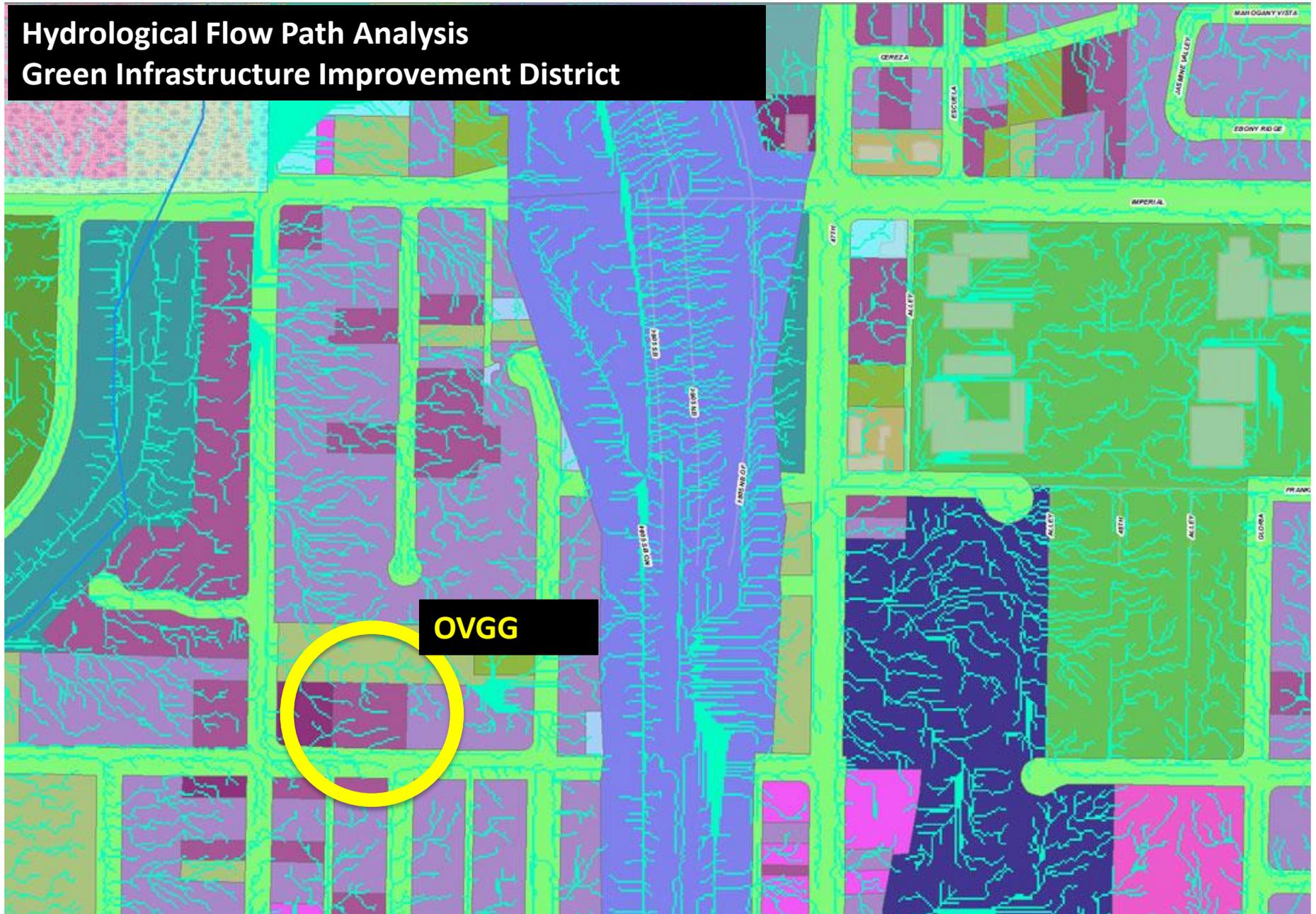
Table 1. Classification, List and Project use of Superfund toxicants to be used in studies by the UCSD SRP

Chemical Classes	Superfund Chemicals	Project Use
Heavy Metal	As, Cd, Ni, Zn, Cr, Cu, Pb, Hg	1, 2, 3, 4, 5, 6, 7, 8
Nitrosamines	DEN	1, 4, 5
Organochlorides	CCl ₄ , CHCl ₃ , C ₂ HCl ₃ , C ₂ Cl ₄ , Chlordane	1, 3, 4, 5
Polycyclics	PAHs, PBDEs, PCBs	1, 3, 6, 8
Dioxins	TCDD and derivatives	8
Organophosphates	Dieldrin, chlorpyrifos and congeners	3, 6

Common sources of soil contaminants

Paint (before 1978):	<i>lead</i>
High traffic areas:	<i>lead, zinc, PAHs</i>
Treated lumber:	<i>arsenic, chromium, copper</i>
Burning wastes:	<i>PAHs, dioxins</i>
Manure:	<i>copper, zinc</i>
Coal ash:	<i>molybdenum, sulfur</i>
Sewage sludge:	<i>cadmium, copper, zinc, lead, PBTs</i>
Petroleum spills:	<i>PAHs, benzene, toluene, xylene</i>
Commercial / industrial site use:	<i>PAHs, petroleum products, solvents, lead, other heavy metals</i>
Pesticides:	<i>lead, arsenic, mercury (historical use), chlordane and other chlorinated pesticides</i>

Hydrological Flow Path Analysis Green Infrastructure Improvement District



ehp

ENVIRONMENTAL
HEALTH
PERSPECTIVES

November–December 2013 | VOLUME 121 | NUMBER 11–12

FOCUS

Urban Gardening

Managing the Risks of Contaminated Soil



FEBRUARY 2

SOIL MATTERS

CLIMATE CHANGE'S HOTTEST TOPIC

SOIL: ORGANISM HABITAT, ORGANIC WASTE RECYCLER,
WATER QUALITY REGULATOR & CLIMATE CHANGE MITIGATOR

WITH PANELISTS:

RYLAND ENGELHART CAFE GRATITUDE

CALLA ROSE OSTRANDER KISS THE GROUND

SCOTT MURRAY ORGANIC FARMER & RESOURCE CONSERVATIONIST

PABLO ROJAS RANCHER, EL MOGOR RANCH, VALLE DE GUADALUPE

DR. KEITH PEZZOLI DIR., URBAN STUDIES & PLANNING, UC SAN DIEGO

DAVID BRONNER C.E.O. DR. BRONNER'S

DR. JUSTINE OWEN SOIL SCIENTIST, UC BERKELEY

MICHELLE LERACH FOUNDER, BERRY GOOD FOOD FOUNDATION

FEBRUARY 2 | PRICE CENTER EAST, UC SAN DIEGO

5:30PM FOOD AND DRINKS IN FOYER | 6-8PM PANEL IN BALLROOM

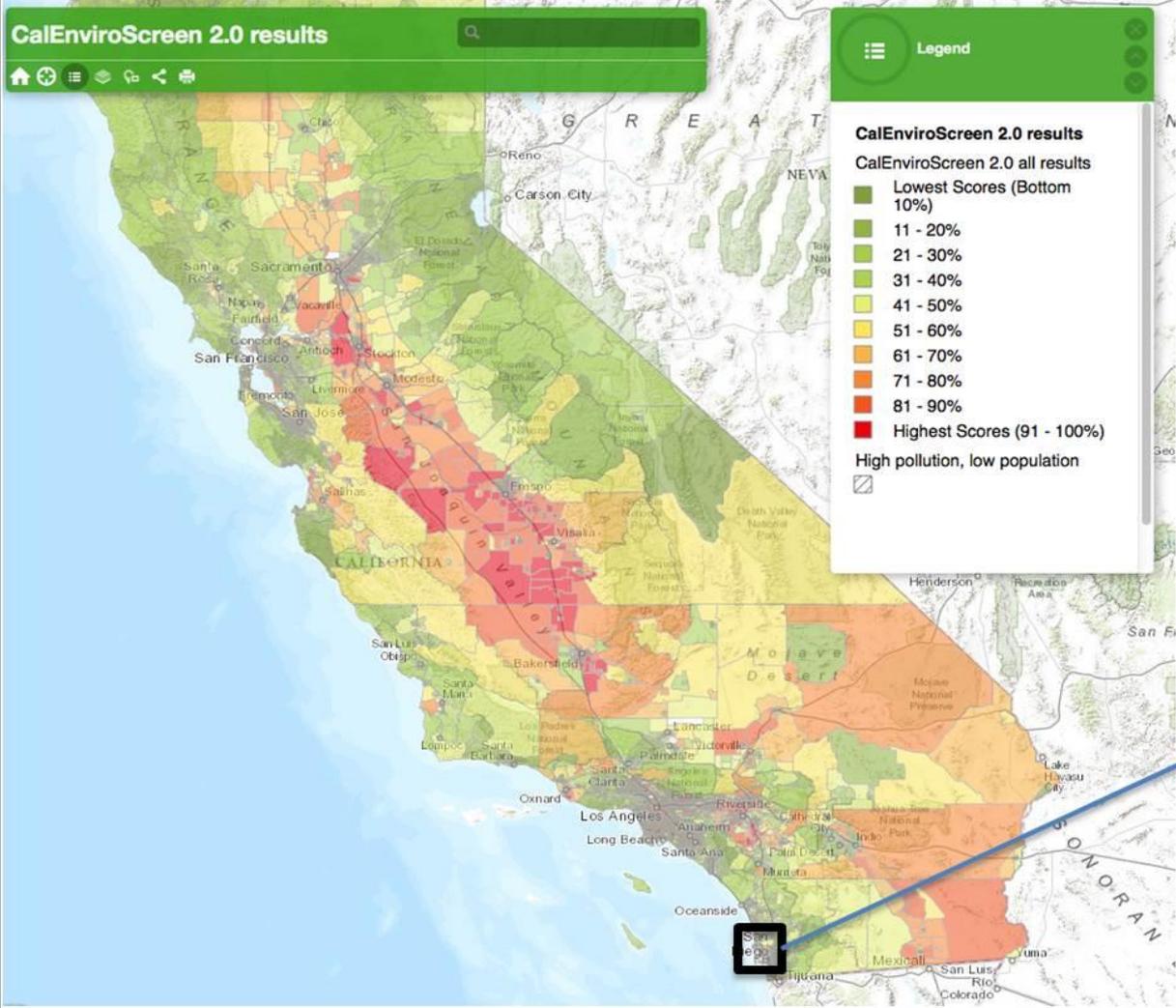


**BERRY
GOOD FOOD
FOUNDATION**

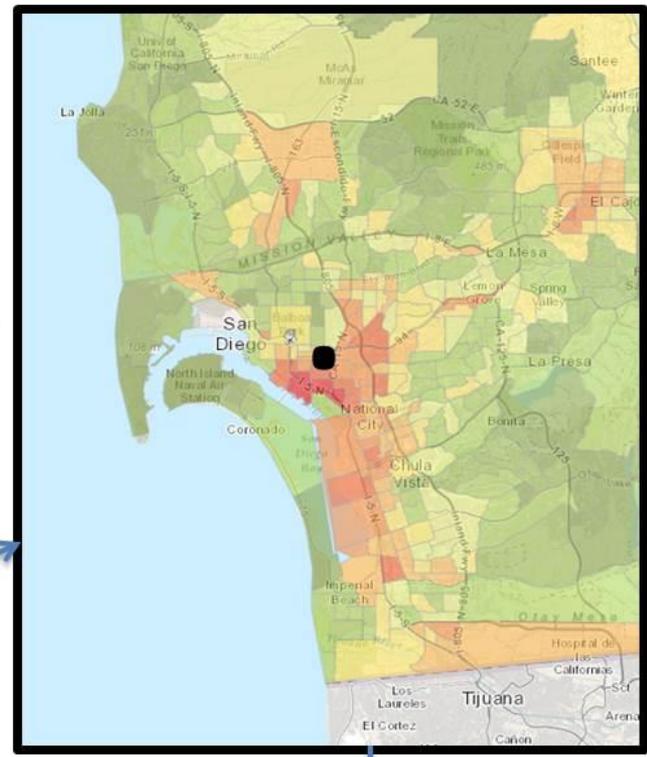
UC San Diego

Center for Sustainability Science,
Planning and Design (SSPAD)

**KISS
-the-
GROUND**



Disadvantaged Neighborhoods: Food Forests and the Water-Climate-Infrastructure Nexus



Food Forest Installation, 2014, Southeast San Diego

CalEnviroScreen Score



Pollution Burden

Population Characteristics

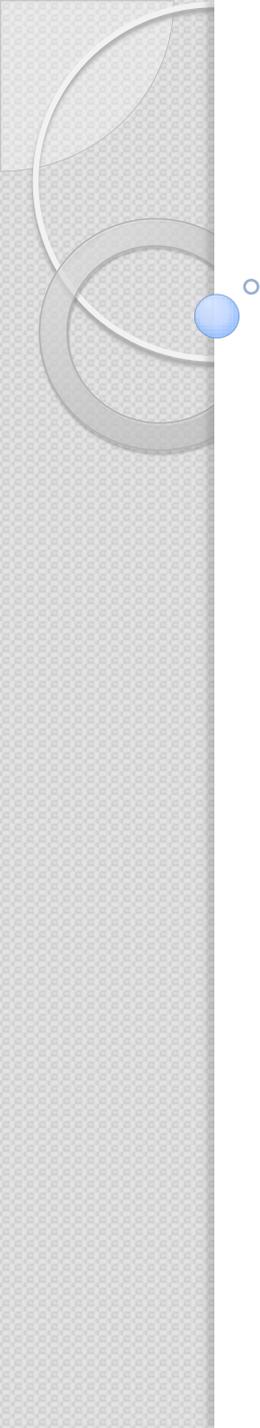


Ozone concentrations
PM2.5 concentrations
Diesel PM emissions
Pesticide use
Drinking water contaminants
Toxic releases from facilities
Traffic density
Cleanup sites
Groundwater threats
Hazardous waste
Impaired water bodies
Solid waste sites and facilities

Children and elderly
Low birth-weight births
Asthma emergency
department visits
Educational attainment
Linguistic isolation
Poverty
Unemployment



**SB 535 Disadvantaged
Communities in San Diego**



Healthy Places
Healthy People
Healthy Communities



The Global ARC
Global Action Research Center

Community Engagement

Our community engagement activities give residents a voice in decision making regarding their personal health, their family's health and the environmental public health of their community.



Global Action Research Center

Approach

The Global ARC approach to Community Engagement involves:

- Canvassing the neighborhood and identifying “Weavers”
- Listening to the resident’s issues and concerns
- Providing additional information/education on the issues that they are concerned about (e.g. Type of Toxicants in the soil)
- Providing leadership development training to the Weavers
- Support the creation of a governance structure necessary for sustaining the resident engagement (usually some sort of a neighborhood association)
- Facilitate a community planning process leading to the implementation of an intervention strategy.

Global Action Research Center Approach

This approach would also include:

- Ensuring that youth are included in the leadership development and community planning
- Ensuring that this group of neighborhood residents are networked with available resources outside of their neighborhood (university scientists, faculty and students; public officials; businesses; community-based organizations; similar efforts across the country; etc.)



Scientist collects samples for testing

Global Action Research Center Approach

This approach would also include:

- Ensuring that a bi-directional learning system has been established that makes sure that the science is communicated in a manner that the residents can understand and act upon it in a productive manner, and also captures the knowledge and innovation generated by the residents and that it is shared with the scientists and researchers



Community Engagement for Health

In order to effectively address the serious challenges we face to creating healthy places, people and communities – we must establish partnerships with engaged residents, young and old.

