



Greenbuild

Life After Fire

A vision for ecological and human flourishing



Learning Objectives/Learning Level

1. Be able to articulate the impact building material choices have on public and ecological health both pre and post fire.
2. Be able to locate the tools needed to life cycle both the toxicity and impact of building materials.
3. Be able to appreciate the dynamic nature of defensible space and see its many other roles.
4. Be able to appreciate the public health benefits of planning resilient communities and creating spaces for healing after fires occur.

Learning Level: Basic

Life After Fire

A vision for ecological and human flourishing

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Course Description

Fires and modern fire suppression measures are destructive at the interface of the built environment, and the impact is devastating to human and ecological health. By applying a regenerative and public health approach to the design and planning of our gardens, homes, and communities, this session proposes new and old ways of building that enhance the health of people and reduces the short and long-term negative impacts of fire risk to people and their communities.







EXPOSOME



Regenerative Firescaping

Show up and Care



Regenerative Firescaping

Designing Fire Resistance is Easy

The practice of designing and building fire resilient properties is well known. Governing Californians have been doing it since the 1700s.

Sustaining that resistance has beguiled California.



Regenerative Firescaping

One Saturday a Month

Sustaining an ethic of resilience has eluded California.

In practical terms, fire protection asks for one Saturday a month. And on those Saturdays eaves are painted, air vents are checked and gutters are cleaned—plants are nourished, deadwood is removed and flash fuels are mowed. Tidiness is the goal.

But fear of fire only fills so many Saturdays.



Regenerative Firescaping

Fear Drives Land Management

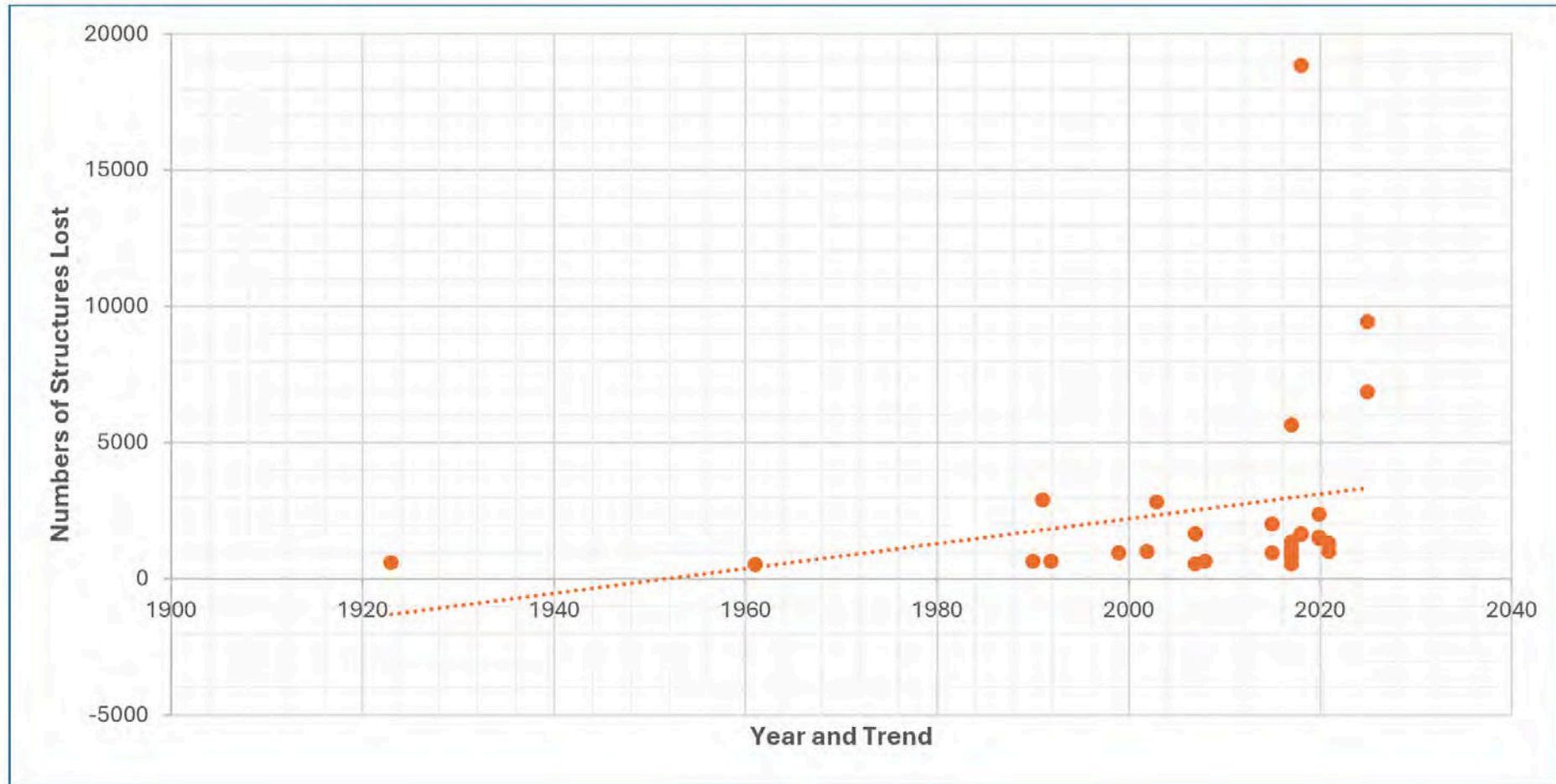
Landscaping for fire protection creates a relationship whose foundation is fear. “You will lose your house and everything if you do not”.

There are three problems with fear:

1. Being remiss about fire protection does not have everyday consequences. The impulse to act can/will fall prey to other everyday emergencies.
2. The relationship with land gets antagonistic. If everything out there poses a risk, then the land must be corrupt and commanded/controlled.
3. The relationship with land is a chore with few rewards.



Regenerative Firescaping Fear Has Been Ineffective



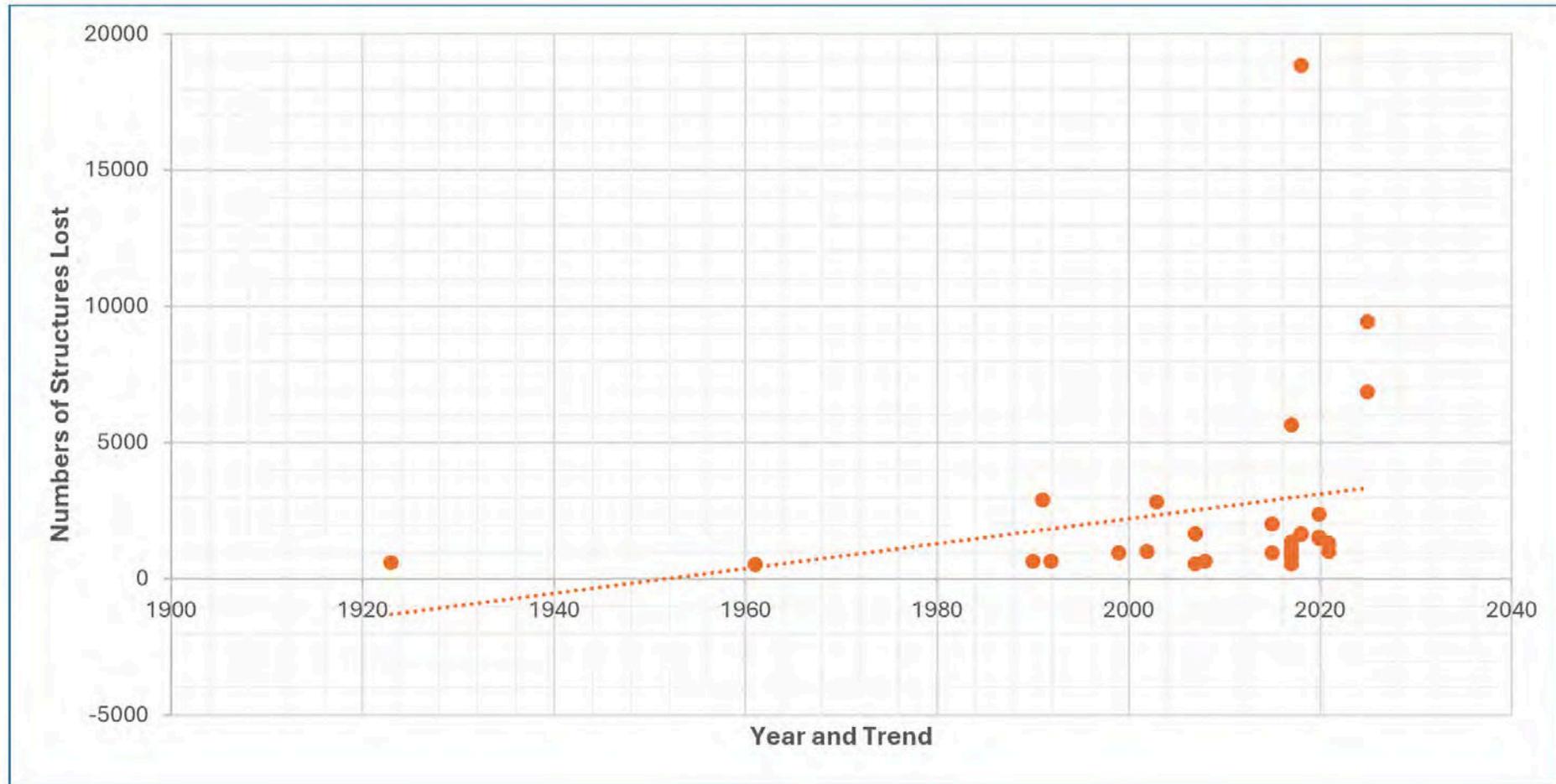
Regenerative Firescaping Mutual Care

What if we created connections that were physical and rewarding?

Give people the tools needed to create properties worth defending, maintaining and sustaining. Give people something to fight for – something to garden and care for.



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Regenerative Firescaping Mutual Care

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Regenerative Firescaping Relationships Matter

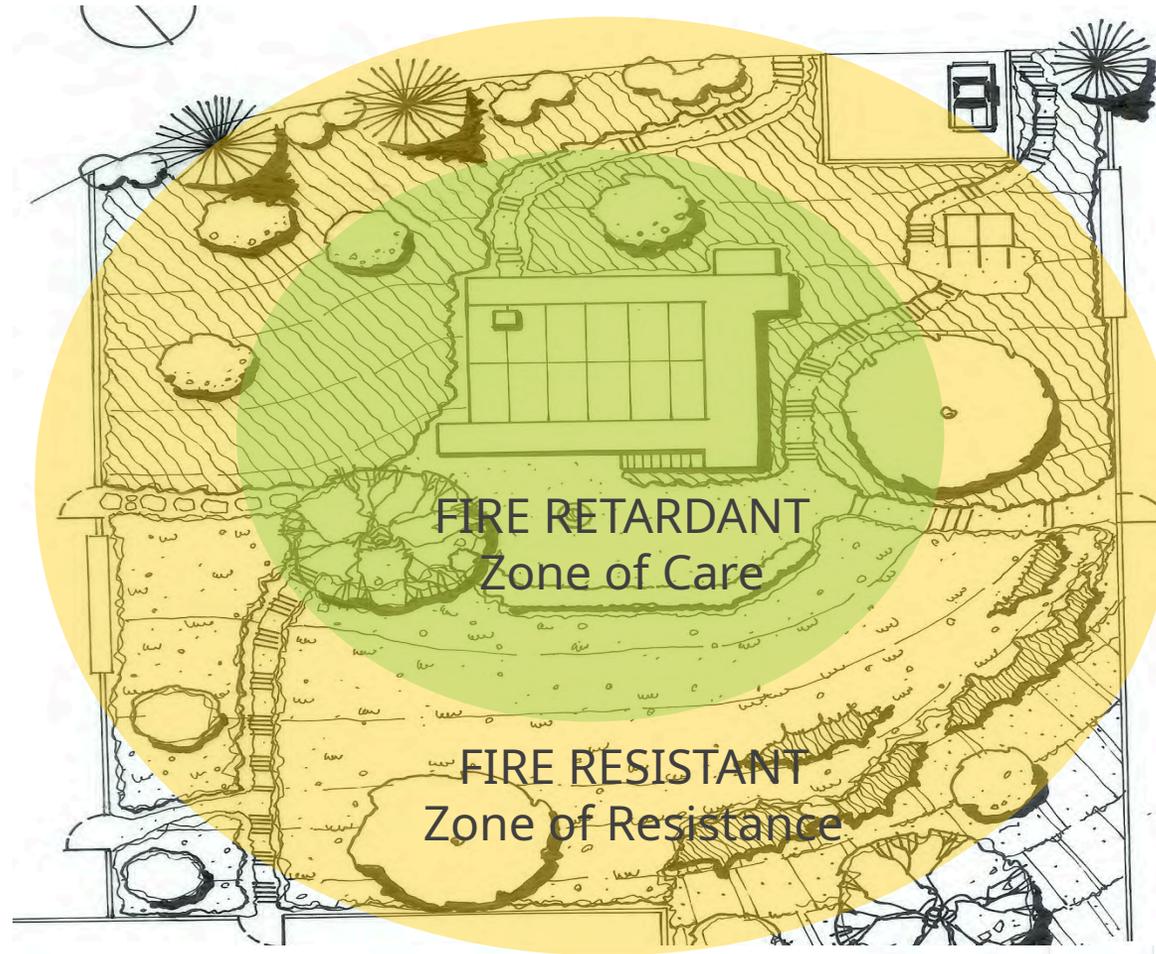
Create points of connection on a landscape, whether physical, emotional or financial. Give people a reason to get to interact with their environment.

- Ceremonial
- Economic
- Energy
- Public Health
- Nutrition
- Self-Care
- Thermal Comfort



Regenerative Firescaping

Zones of Mutual Care and Resistance



Regenerative Firescaping

One Saturday a Month

Fire protection asks for time and attention.

Pictured is Christmas Tree Lane in Altadena. Not one home or one of the 135 40-foot closely-planted deodar cedars were lost along these two blocks, despite destruction on all sides.

The towering trees cared for the community's ceremonies and shared identity, and the community cared for them.

Mutual appreciation provided a degree of protection.



Regenerative Firescaping

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Earvin "Magic" Johnson Park - MIG









Santa Monica City Hall East - MIG



Hemp + Lime

Examining the Feasibility of Building
with Hemp and Lime in USA

DESIGN AND DEMONSTRATION

Declare.

Product Name Manufacturer

Final Assembly: First City, State, Country;
Second City, State, Country; Third City, State, Country
Life Expectancy: 50 Years
Embodied Carbon: # kg CO₂-eq =
Declared Unit: # m²
End of Life Options: Recyclable (95%), Landfill (5%),
Take Back Program (Program Name/Location)

Ingredients:

Your First Component: Sustainably Sourced Ingredient;
LBC Red List Ingredient¹; Your Second Component:
LBC Watch List Priority for Inclusion; Non-Toxic Ingredient;
Undisclosed (<0.1%)²

¹LBC Temp Exception RL-009 Formaldehyde
²LBC Temp Exception RL-004var.a Proprietary Ingredients

Living Building Challenge Criteria: Compliant

I-13 Red List:

- LBC Red List Free % Disclosed: 99.9% at 100ppm
 LBC Red List Approved **VOC Content:** # g/L
 Declared

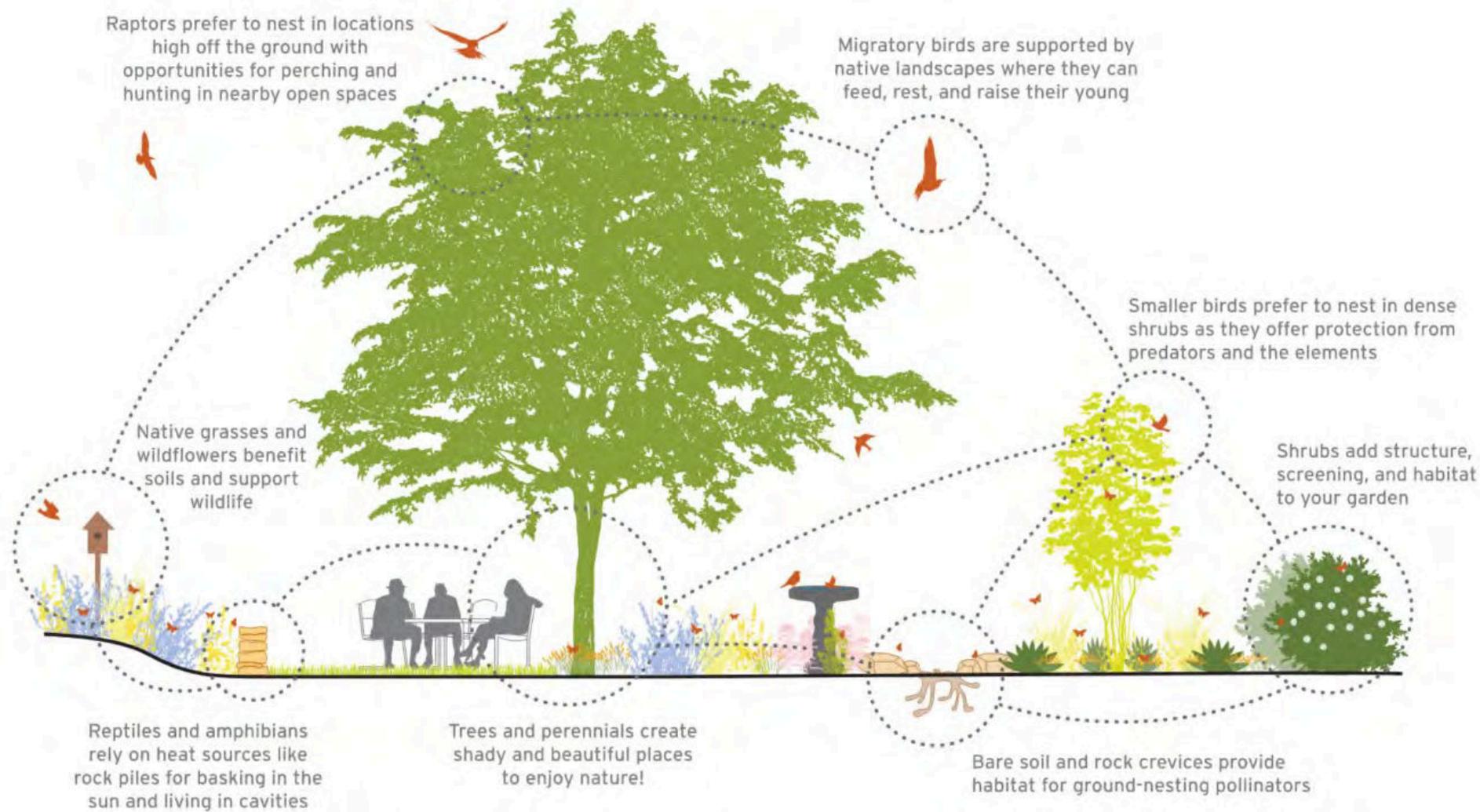
I-10 Interior Performance: CDPH Standard Method v1.2-2017
I-14 Responsible Sourcing: Product Available with FSC Chain of
Custody

XXX-XXXX
EXP. 01 OCT 2021
Original Issue Date: 20XX

Third
Party
Verified



HABITAT STRUCTURE



VEGETATION MANAGEMENT

Look for signs of nesting wildlife before starting work on trees or in habitat areas. Some signs of nesting wildlife include -

1. A bird singing
2. An active nest
3. A bird carrying nesting materials
4. A tree squirrel
5. A cavity that may contain a nest
6. A bird flying away
7. Whitewash excrement





Earvin "Magic" Johnson Park - MIG



Research Letter | Climate Change and Health

Excess Deaths Attributable to the Los Angeles Wildfires From January 5 to February 1, 2025

Eugenio Paglino, PhD^{1,2}; Rafeya V. Raquib, MS³; Andrew C. Stokes, PhD³

» [Author Affiliations](#) | [Article Information](#)

☰ RELATED ARTICLES

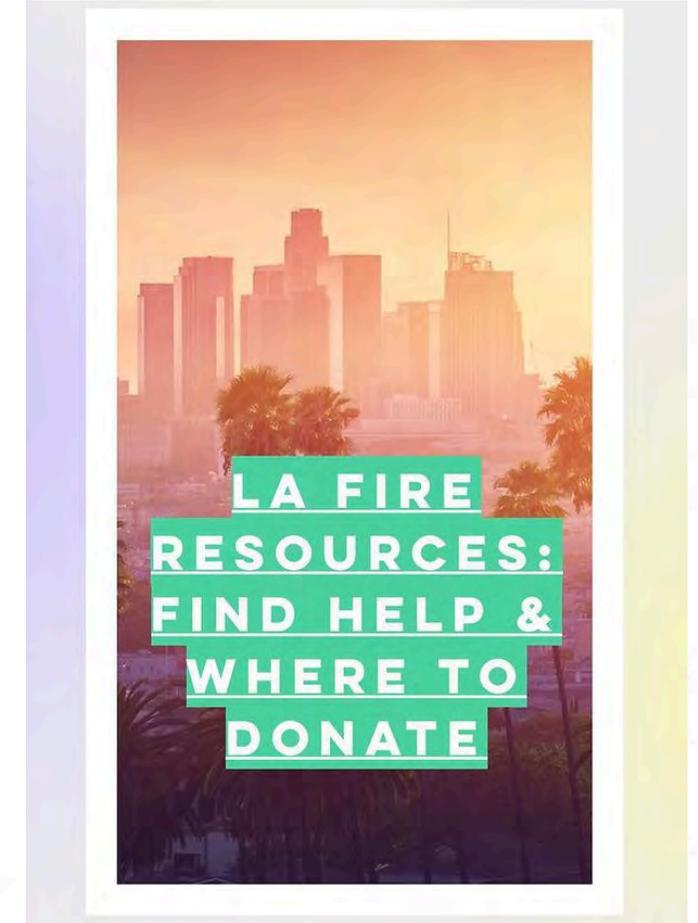
In January 2025, 2 major wildfires impacted Los Angeles County, California. Officials reported 30 direct fatalities,¹ but additional health impacts are likely.²

Excess mortality models have been applied to quantify the impacts of climate-related emergencies such as wildfires.³ Excess deaths from wildfires include deaths directly related to the wildfire, along with partially attributable deaths (eg, from lung or heart conditions exacerbated by smoke or stress) and indirect deaths (eg, disruptions to health systems, mental health impacts).^{4,5}





Stronger Together: How Social Resources Influence Disaster Recovery Outcomes



Essential Resources for Socially Connected Communities

From Healthy Places by Design ---

Resource Guides

- [Utilizing Digital Spaces to Strengthen Social Connections](#)
- [Improving Community Safety through Social Connections](#)
- [Bridging and Belonging to Strengthen Social Connections](#)
- [Cultivating Community Hubs for Social Connection](#)
- [Transformative Narratives for Socially Connected Communities](#)
- [Nurturing Cogenerational Social Connections](#)
- [Measuring the Impact of Socially Connected Communities Efforts](#)
- [Building and Sustaining Resilient and Socially Connected Communities](#)
- [Exploring the Intersection of Civic, Social, and Community Health](#)
- [Why Economic Health Matters for Socially Connected Communities](#)



**Good Design is
Healthy Design**

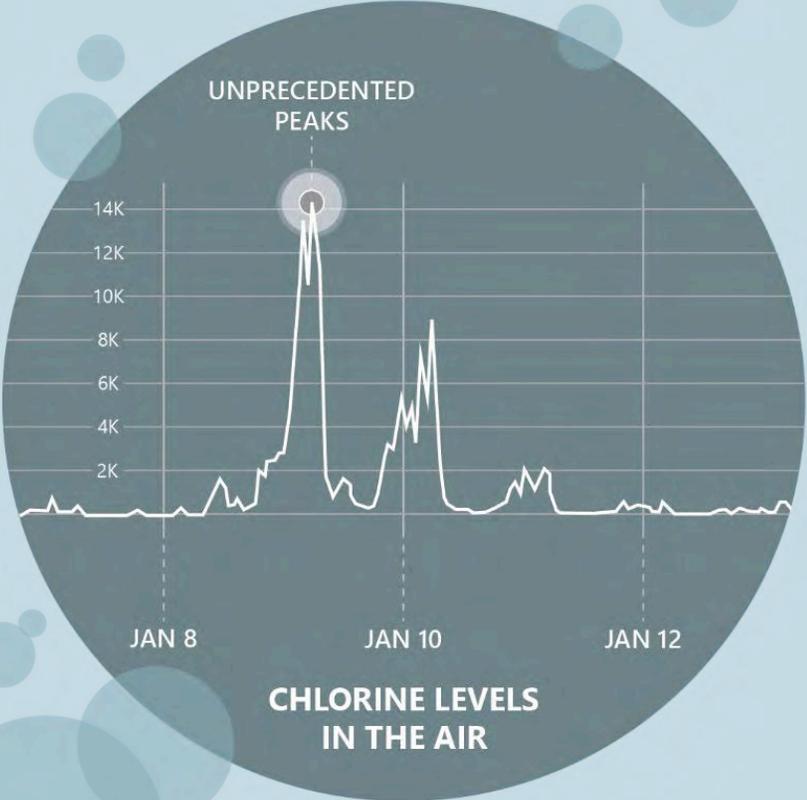
Designing for Social Connection = Resilience



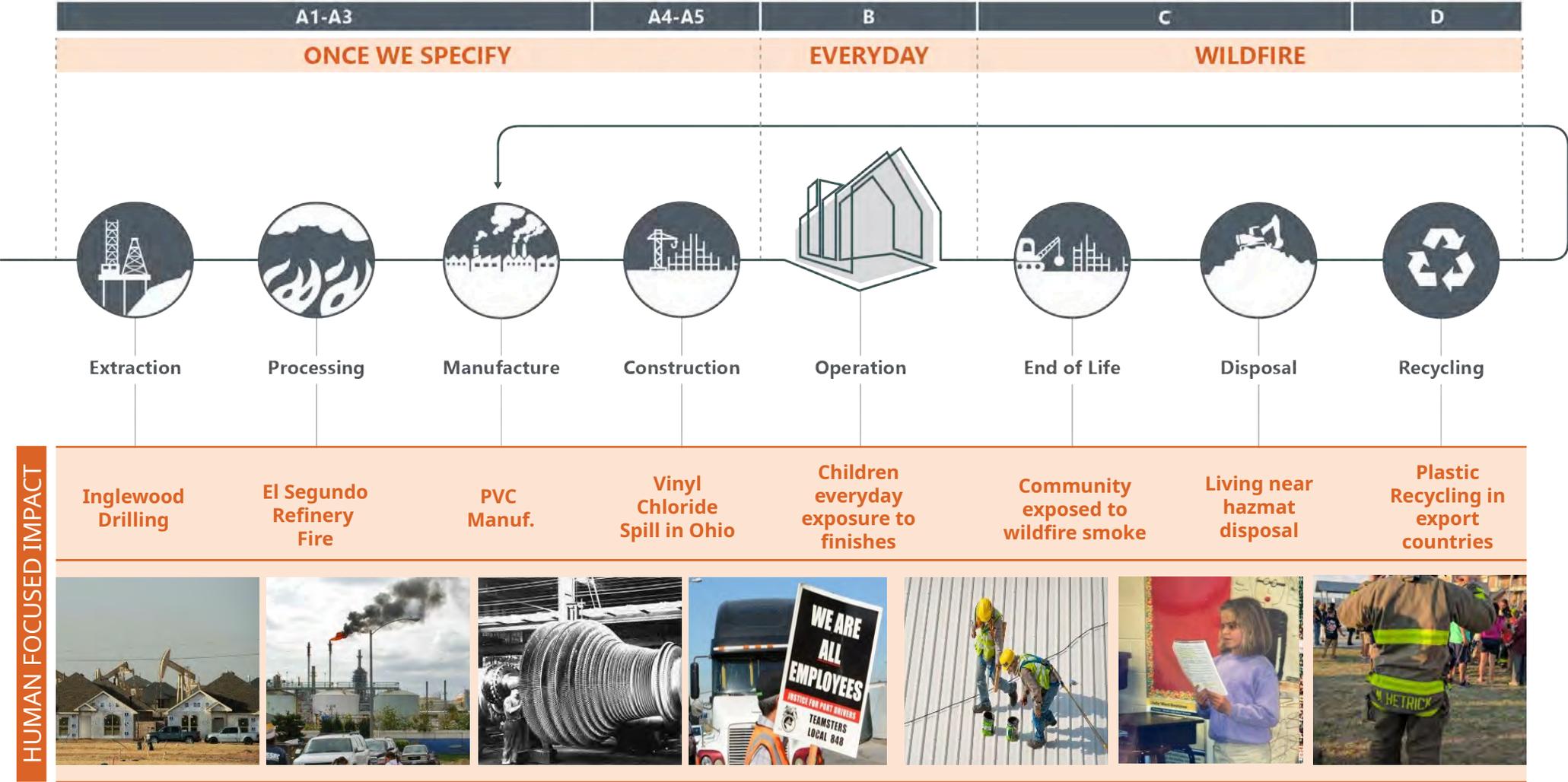
WEST LA FIRES | January 2025



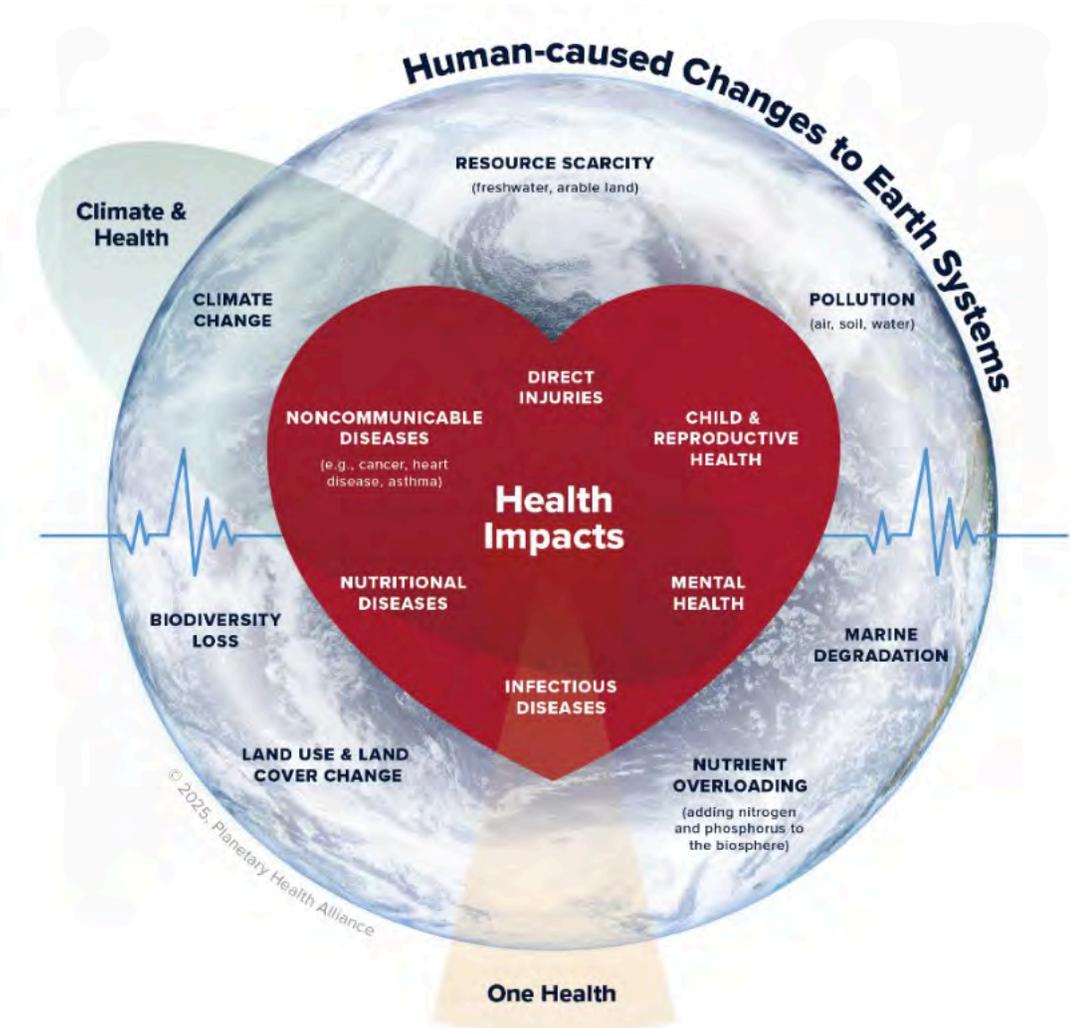
CHLORINE | in our Buildings and in our Air



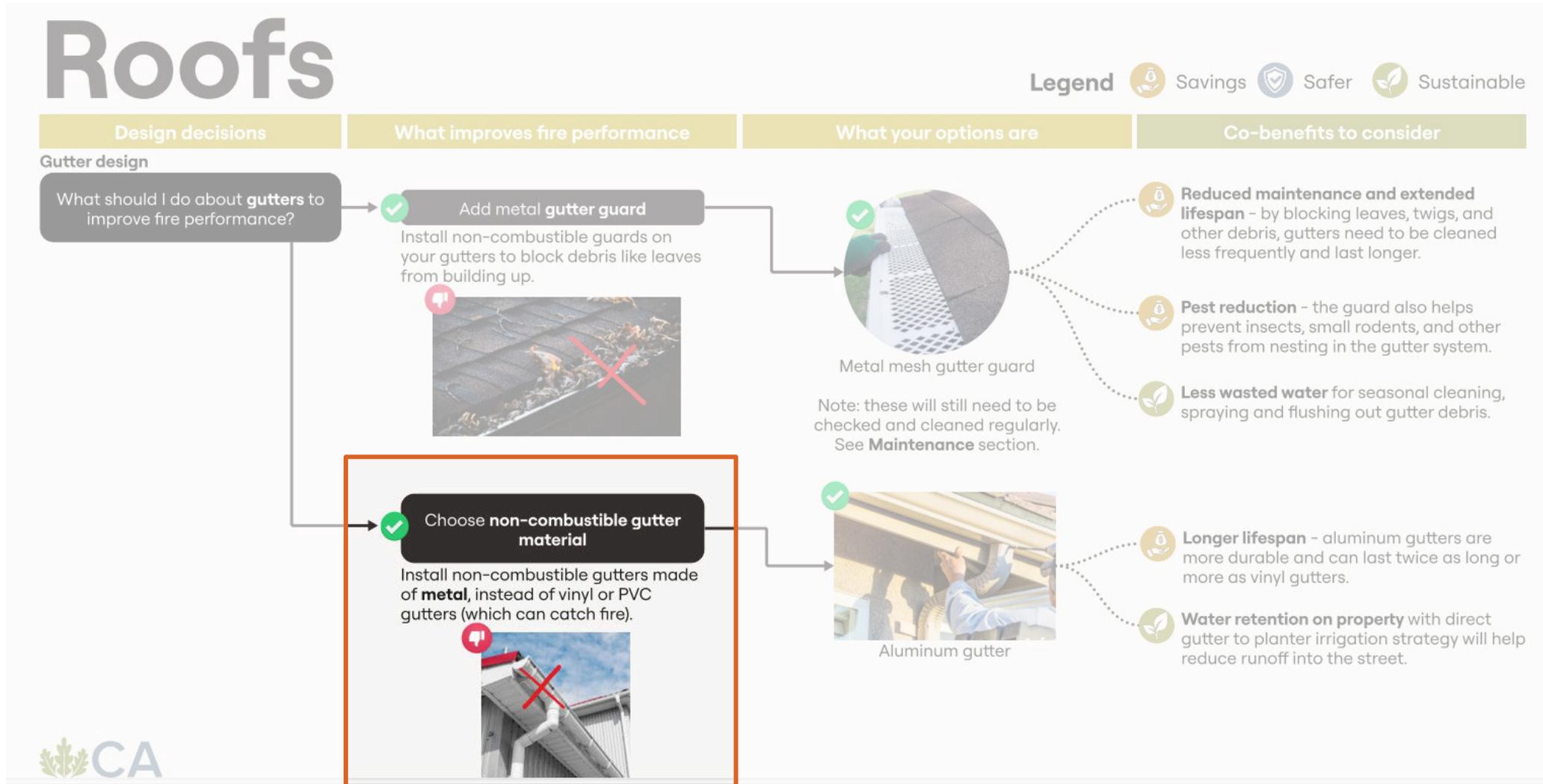
CHLORINATED MATERIAL LIFESPAN | Human-Focused Stories



EVERYTHING SUCKS | How can I have an Impact?

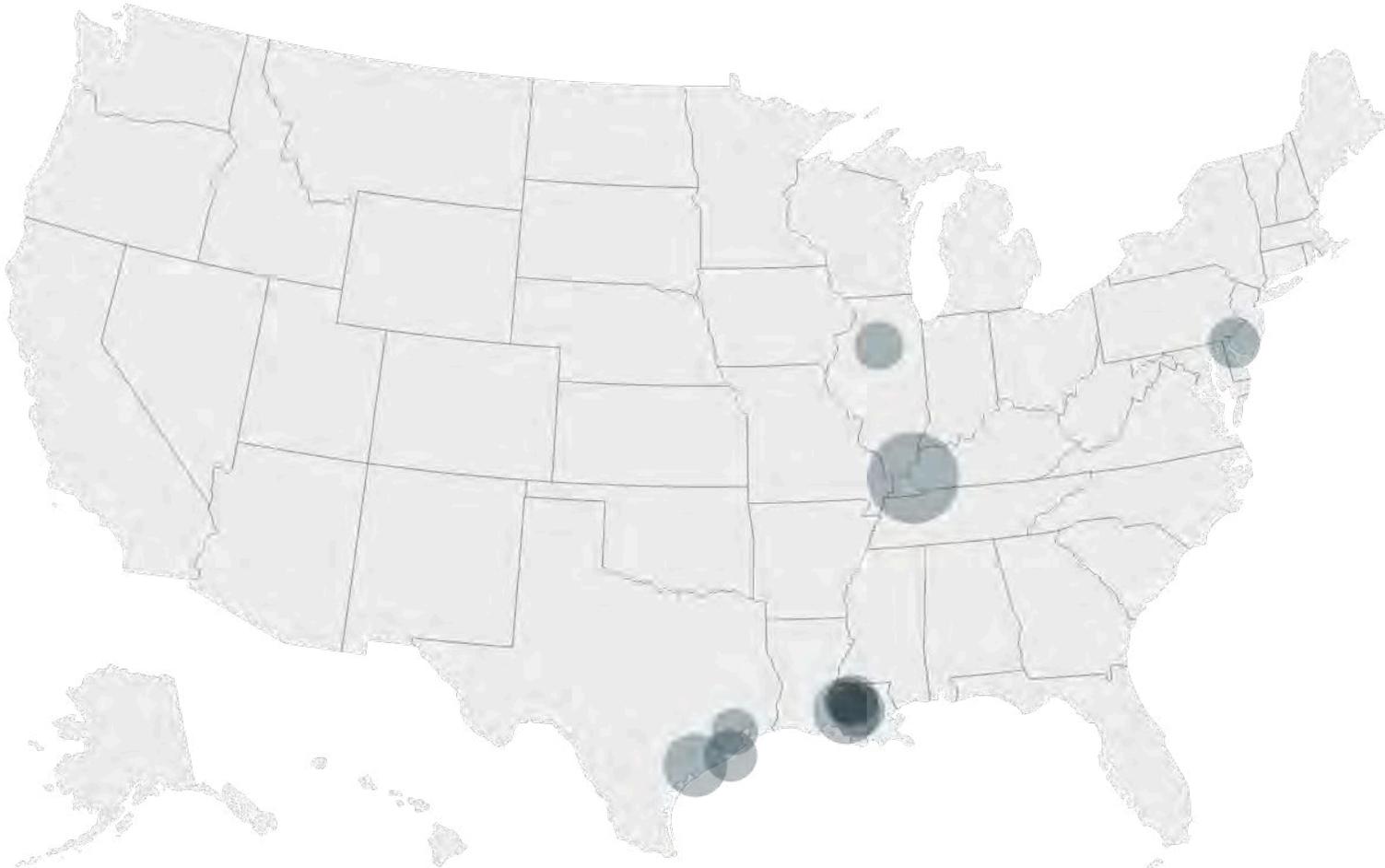


ACTION | Limiting Chlorinated Building Materials as we Rebuild



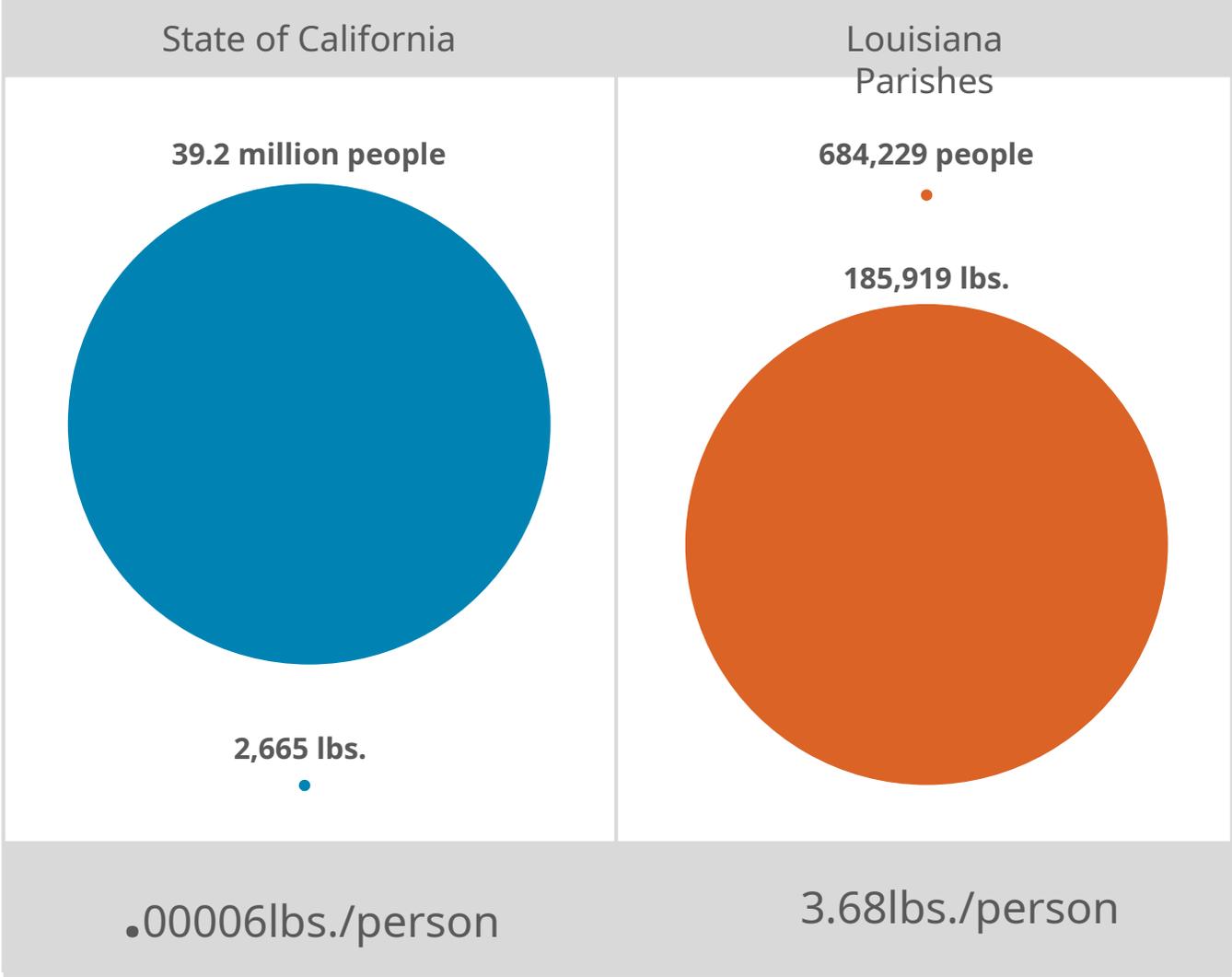
UNDERSTANDING THE IMPACT | Toxic Release Inventory

Manufacturer Location	Chlorine Emissions (lbs.)
Marshall County, KY	63,280
Calhoun County, TX	28,982
Ascension Parish, LA	19,978
Brazoria County, TX	19,268
Iberville Parish, LA	31,921
Salem County, NJ	18,424
East BR Parish, LA	18,362
Marshall County, IL	16,778
Harris County, TX	14,908
West BR Parish, LA	11,993



CONCENTRATED IMPACT

Louisiana Parishes release almost 40x the entire state of California and 61,000 times more per person.



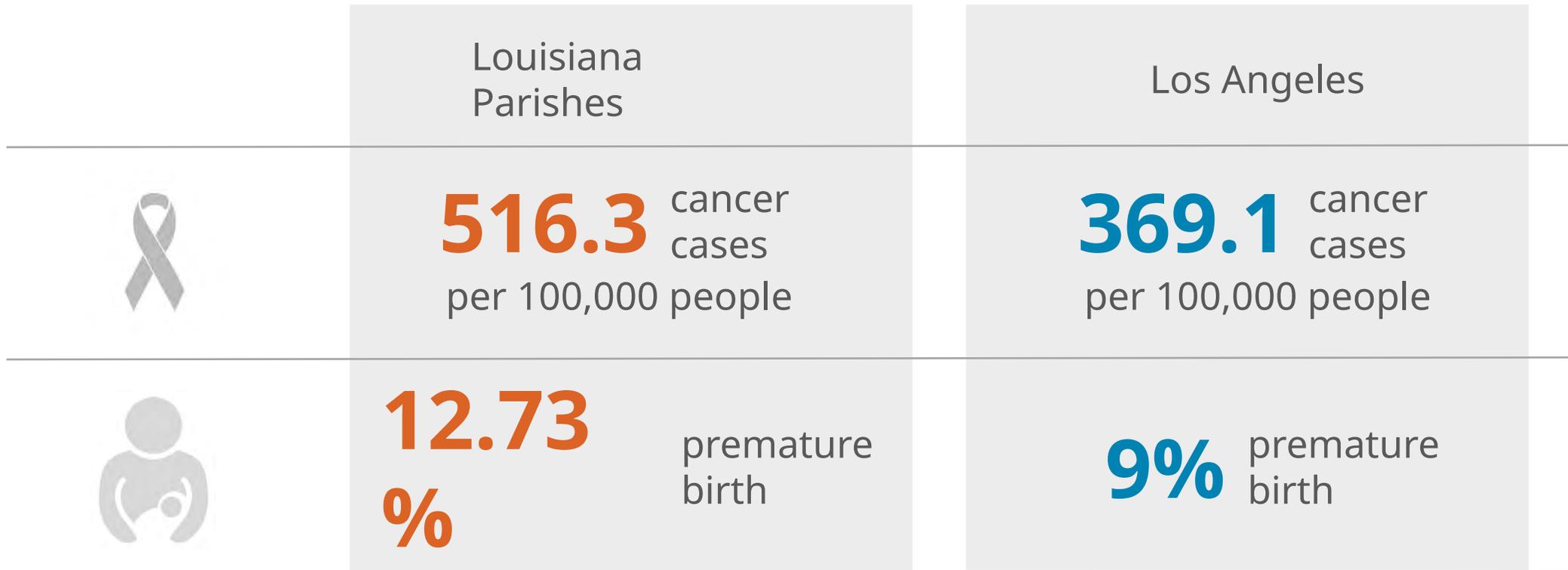
ST. JAMES PARISH | April 2025



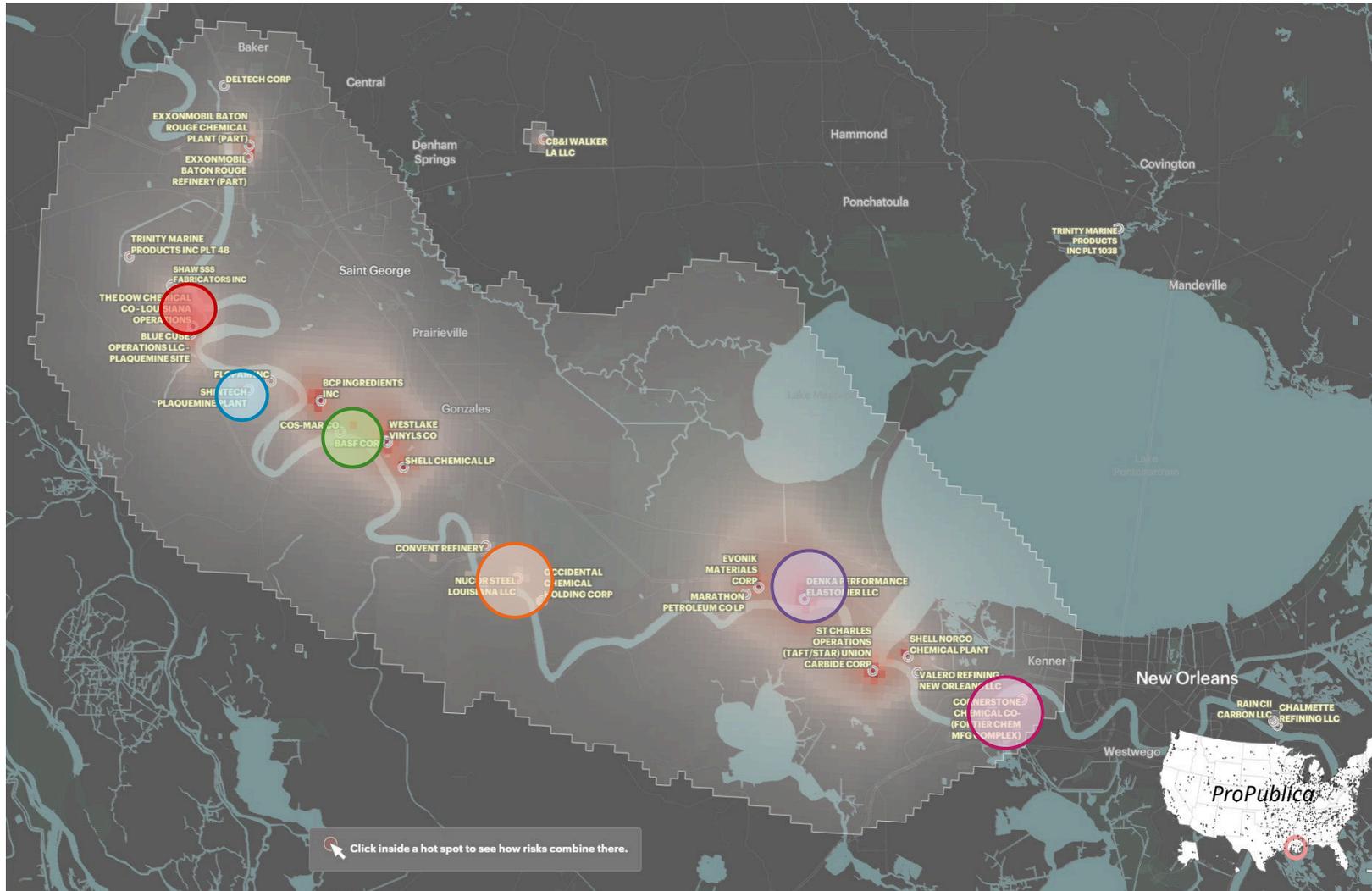
FIND YOUR REASON | Louisiana Catholic Health Conference



ECOLOGICAL DETERMINANTS OF HEALTH



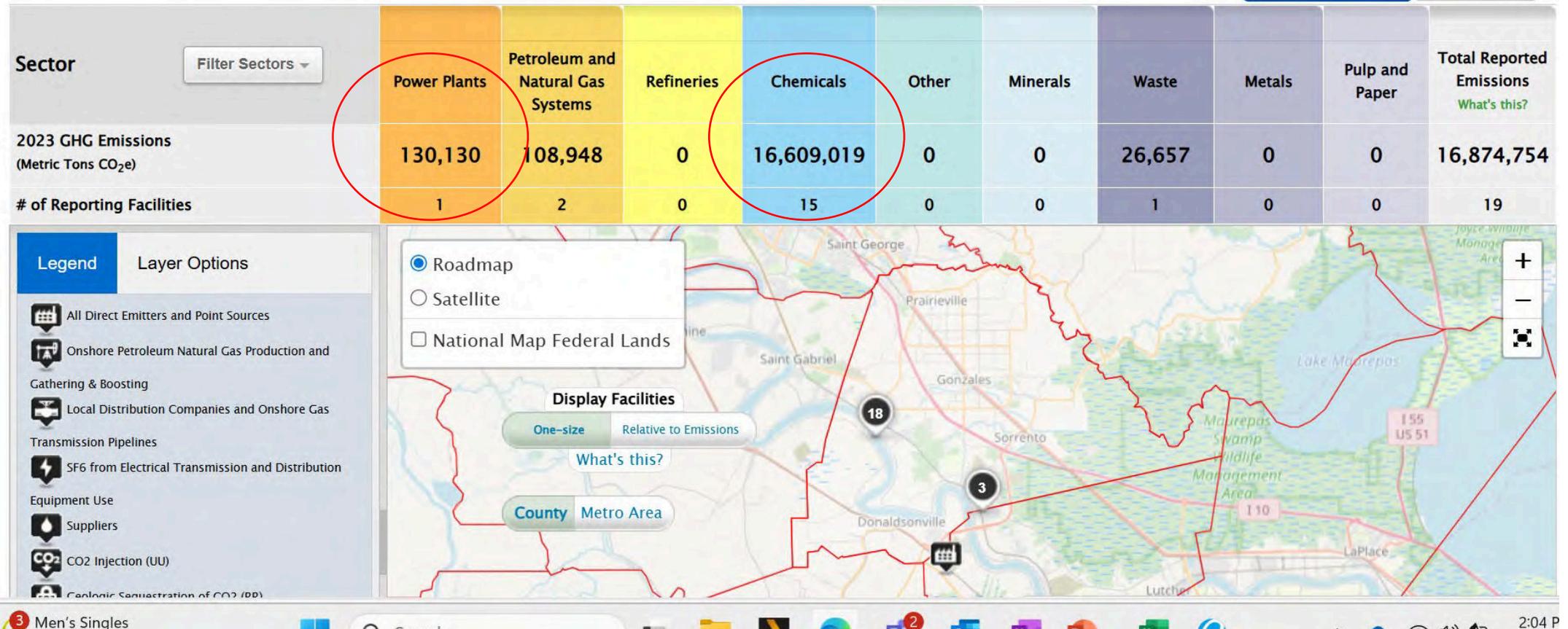
WHERE THERE'S SMOKE, THERE'S FIRE



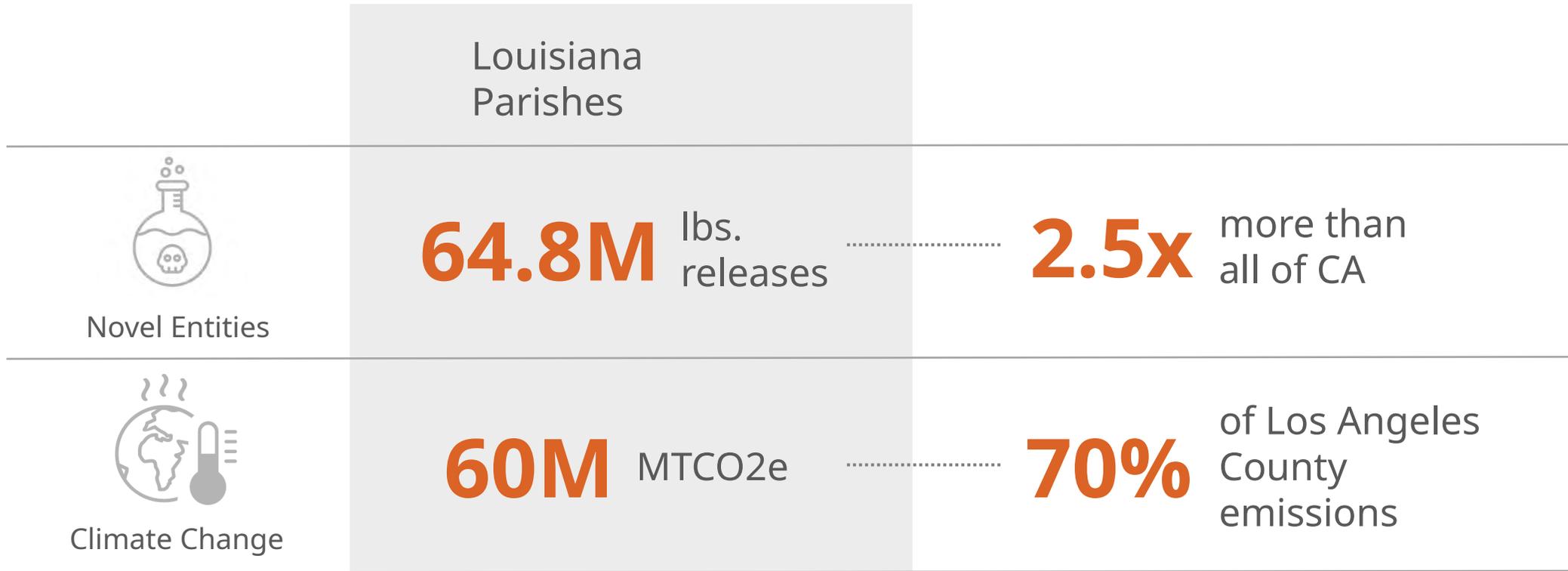
Global Novel Chemicals Impact

11	WESTLAKE VINYL CO.36045 HWY 30, GEISMAR LOUISIANA 70734 (ASCENSION PARISH)	123,103	1,346	124,449
	1,1,2,2-Tetrachloroethane (325 - Chemicals)	454	0	454
	1,1,2-Trichloroethane (325 - Chemicals)	1,592	0	1,592
	1,2-Dichloroethane (325 - Chemicals)	37,101	460	37,561
	1,2-Dichloroethylene (325 - Chemicals)	64	0	64
	Acetophenone (325 - Chemicals)	0	.	0
	Ammonia (325 - Chemicals)	10,464	0	10,464
	Benzene (325 - Chemicals)	415	0	415
	Bis(2-chloroethyl) ether (325 - Chemicals)	0	0	0
	Carbon tetrachloride (325 - Chemicals)	663	9	672
	Chlorine (325 - Chemicals)	1,760	.	1,760
	Chlorobenzene (325 - Chemicals)	48	26	74
	Chloroethane (325 - Chemicals)	1,301	.	1,301
	Chloroform (325 - Chemicals)	24,001	12	24,013
	Chloroprene (325 - Chemicals)	10	0	10
	Dioxin and dioxin-like compounds (325 - Chemicals)	**	**	**
	Ethylene (325 - Chemicals)	2,700	.	2,700
	Ethylidene dichloride (325 - Chemicals)	155	0	155
	Formaldehyde (325 - Chemicals)	815	0	815
	Hydrochloric acid (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size) (325 - Chemicals)	4,645	.	4,645
	Methanol (325 - Chemicals)	14,000	.	14,000
	Polycyclic aromatic compounds (325 - Chemicals)	0	0	0
	Propylene (325 - Chemicals)	983	.	983
	Sodium nitrite (325 - Chemicals)	0	0	0
	Tetrachloroethylene (325 - Chemicals)	355	9	364

EPA FLIGHT Tool & Scope 3 = 4.5 Coal Plants



SUPPLY CHAIN TRANSFORMATION = PLANETARY BOUNDARIES



Recommendations

Personal

- Spend one Saturday a month on fire protection
- Create connections that are rewarding

Ecological

- Remove one toxic material, like PVC pipe, on each project
- Learn the life cycles of wildlife in your area and adjust maintenance to support

Community

- Understand you are in the business of community health

Planetary

- Remove chlorinated materials from projects in fire zones
- Get involved in local environmental justice movements - listen! Act!

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