

LA County Climate Vulnerability Assessment (CVA)

Countywide Climate Vulnerability Findings Workshop
Thursday, July 1, 2021

Welcome - Logistics

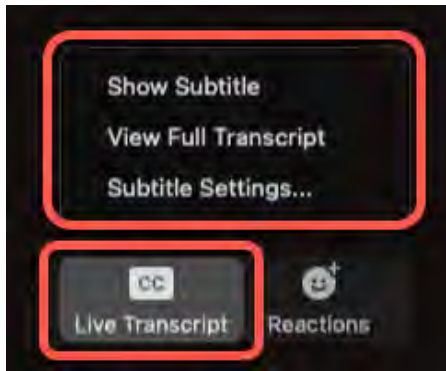
- Interpretación en español está disponible en el doble canal de Zoom



- Spanish interpretation is available on the dual Zoom channel

Welcome - Logistics

- Live transcript/subtitles are also available in English if you prefer to follow along through reading text



- Session is being recorded in English and Spanish for County's YouTube channel
 - Spanish subtitles will be generated via YouTube recording after workshop

Welcome - Logistics



- **Use of the chat box:**
 - Introduce and rename your Zoom title – name, pronouns, and organization
 - Submit questions throughout and organizers will respond at appropriate time

Welcome



- Land Acknowledgement
- Racial Equity Statement
- Recent Climate Events
- Remarks from Ricardo Lara, California Insurance Commissioner
- Acknowledgement of CVA partners and stakeholders

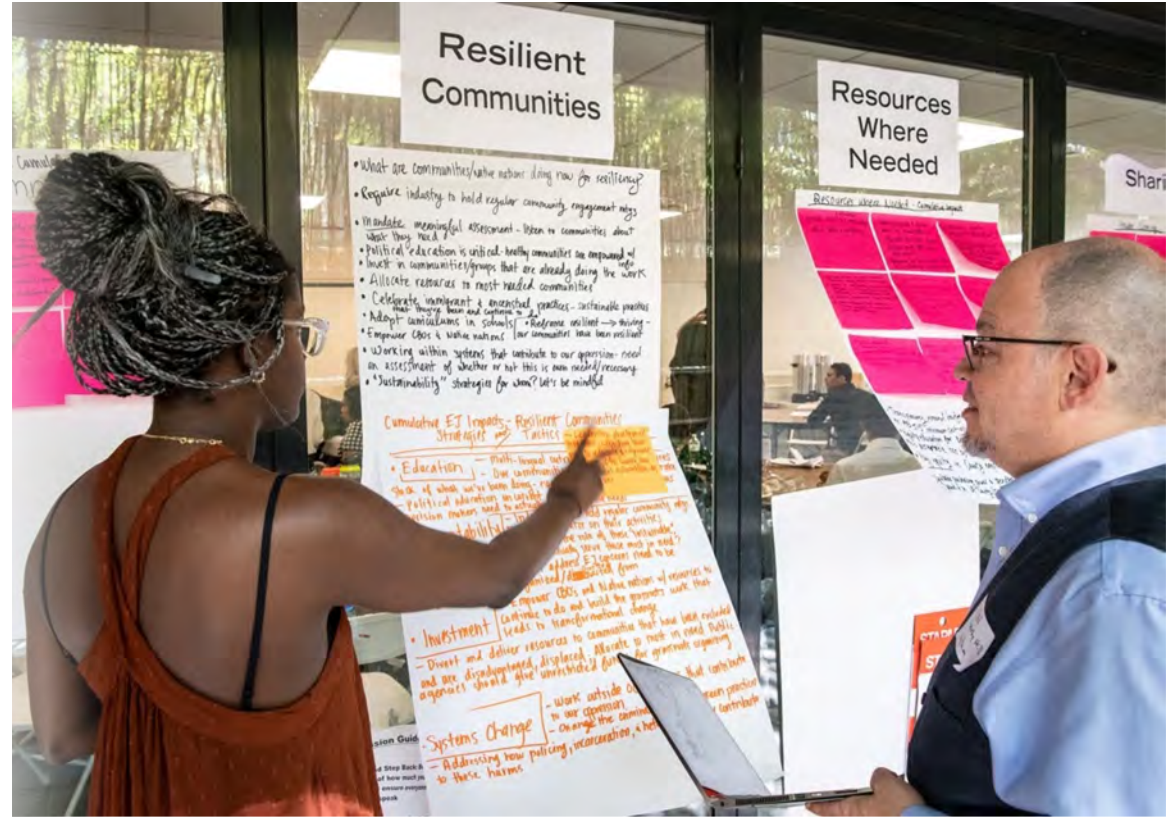
Welcome - Agenda



- I. Project Overview
- II. Mentimeter Introduction
- III. Key Findings from the Report
- IV. Question and Answer
- V. How You Can Use the CVA
- V. Closing Remarks

Project Overview

Purpose



Source: OurCounty Plan

What makes this CVA unique



Source: Streetsblog LA, Sahra Subramanian

Stakeholder engagement overview

Advisory
Committee
Meetings (4)



Public Workshops (2)
Cities Summit (1)



Listening Sessions
(6)



Key Informant
Interviews

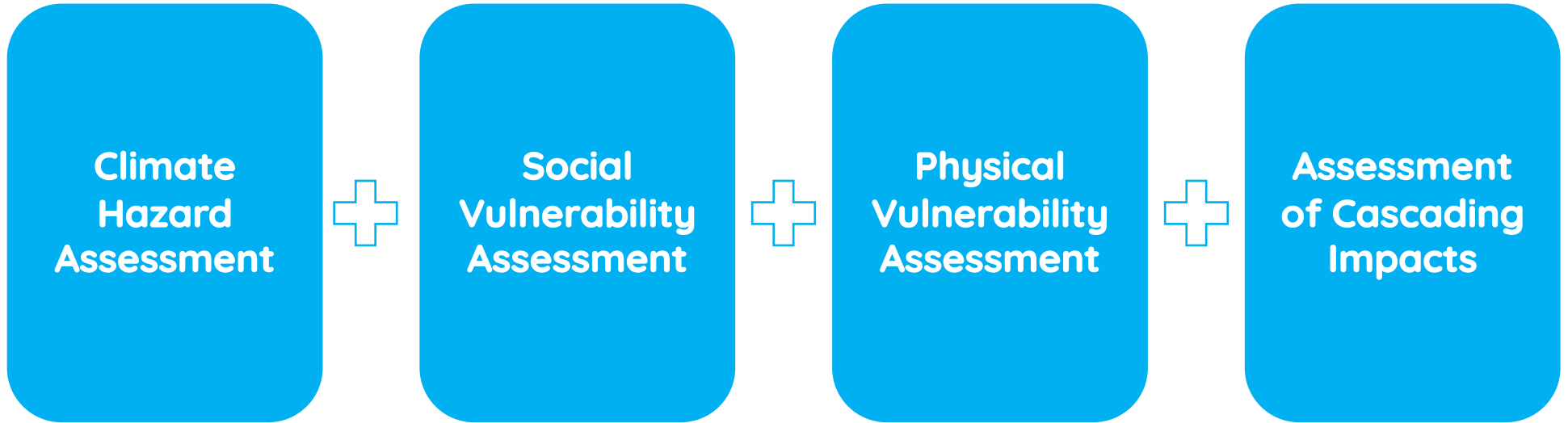


Webpage



Throughout our presentation today, we will highlight stories heard through our engagement process.

Components of the LA County CVA



What is Vulnerability?

Climate Vulnerability

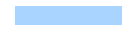
Exposure

The nature and degree to which a system or sub-population is exposed to significant climatic variations.



Sensitivity

The degree to which a system or sub-population is affected by climate-related stimuli.



Adaptive Capacity

The ability of a system or sub-population to adjust to climate change, to moderate potential damages, or to cope with the consequences.

Defining Social Vulnerability



Vulnerability is not an indicator of an individual’s weakness or incapacity to cope but rather an indicator of the factors, almost all of them outside of the individual’s control, that make people more at risk for negative impacts.

Climate hazards pose a risk to all County residents. However, various factors can make certain populations more susceptible than others. These factors include:

- **Inequities in infrastructure and access** to the benefits of education, economic opportunity, social capital, health protection services, and/or other services;
- **Institutionalized bias** or exclusion from political and decision-making power;
- Inequities in **environmental and living conditions** and health status
- Differences in individual health, age, and ability

**This framing is informed by the 2017 Advancing Climate Justice in California: Guiding Principles and Recommendations for Policy and Funding Decisions*

Scope of the CVA

Populations

Social climate vulnerability is assessed using a range of indicators across the following categories:



Age + Gender



Community + Language



Education



Health



Housing + Mobility



Income + Wealth



Occupation



Race / Ethnicity

Infrastructure

Physical climate vulnerability is assessed based on a range of infrastructure types across the following categories:



Communications



Community Facilities



Economic Centers



Energy



Housing



Medical + Emergency



Transportation



Waste



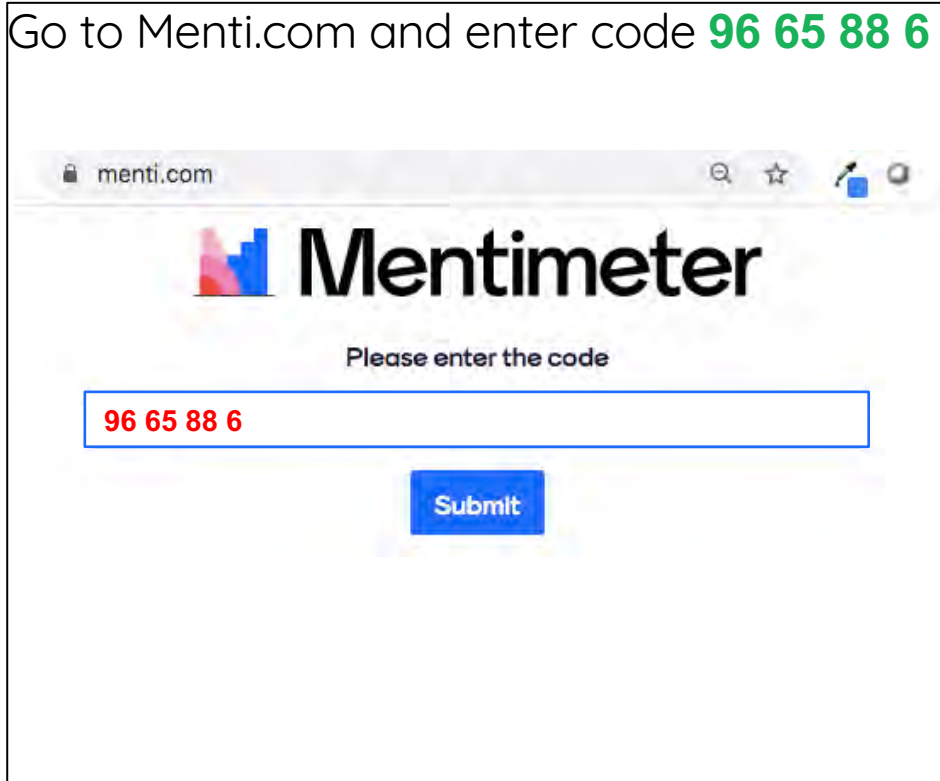
Water



Natural Systems

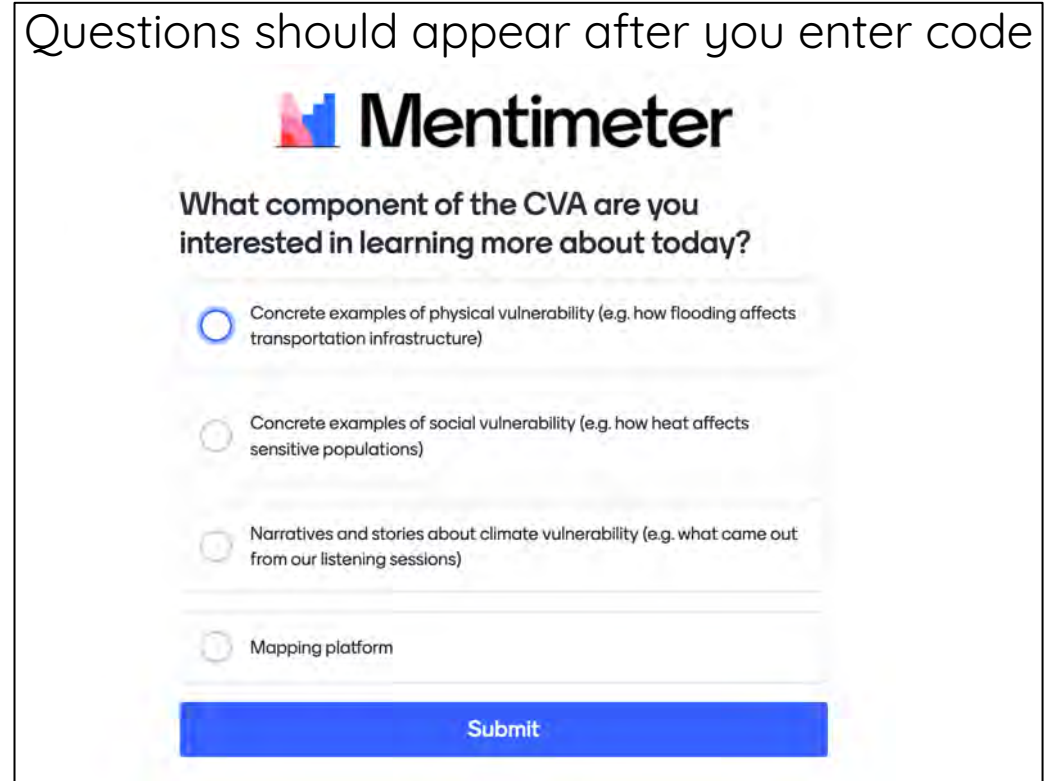
Mentimeter

Go to Menti.com and enter code **96 65 88 6**



The screenshot shows a web browser window with the URL 'menti.com'. The Menti logo is at the top, followed by the text 'Please enter the code'. A text input field contains the code '96 65 88 6' in red. Below the field is a blue 'Submit' button.

Questions should appear after you enter code



The screenshot shows the Menti poll interface. At the top is the Menti logo and the question: 'What component of the CVA are you interested in learning more about today?'. There are four radio button options:

- Concrete examples of physical vulnerability (e.g. how flooding affects transportation infrastructure)
- Concrete examples of social vulnerability (e.g. how heat affects sensitive populations)
- Narratives and stories about climate vulnerability (e.g. what came out from our listening sessions)
- Mapping platform

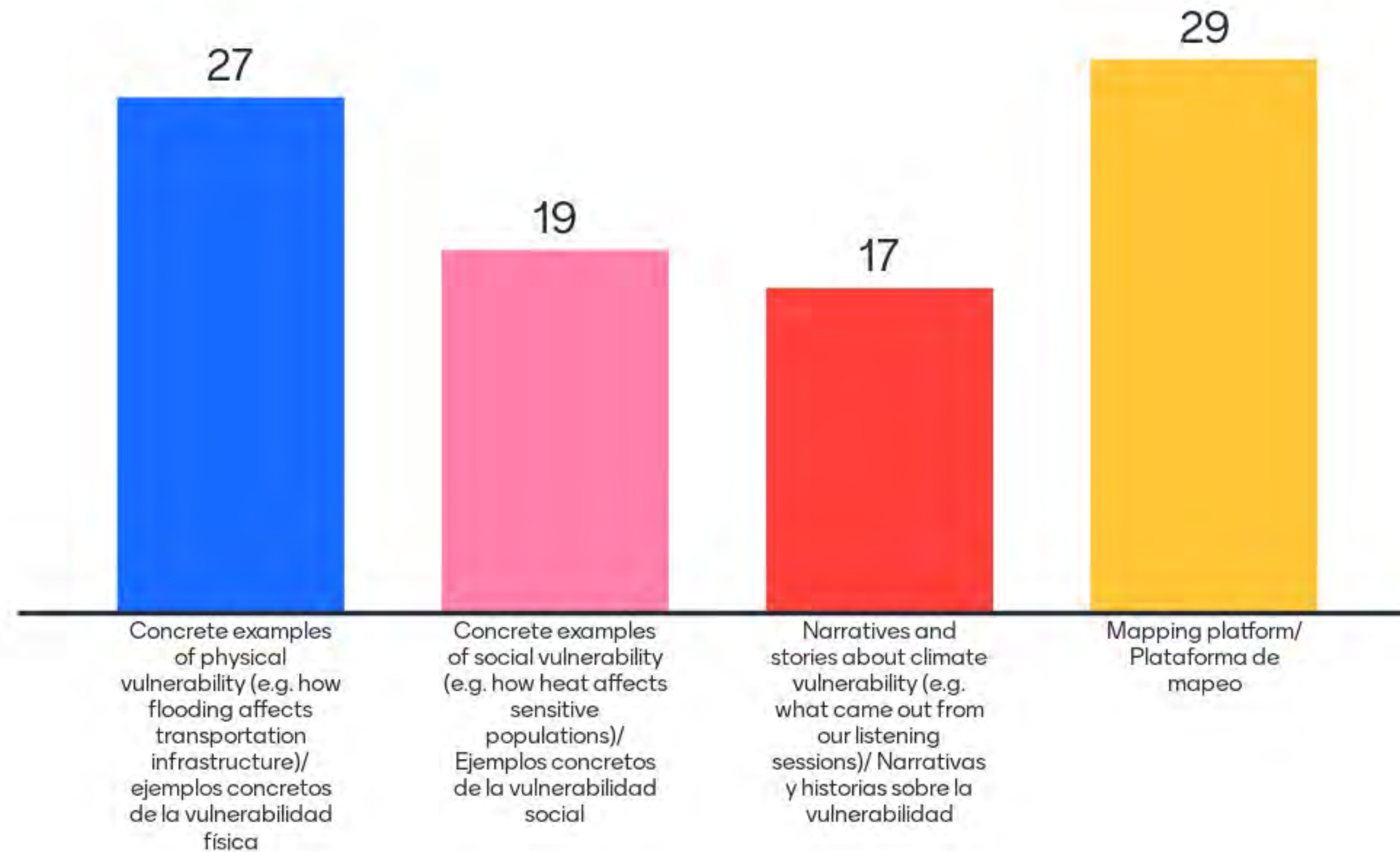
At the bottom is a blue 'Submit' button.

Mentimeter

What component of the CVA are you interested in learning more about today?

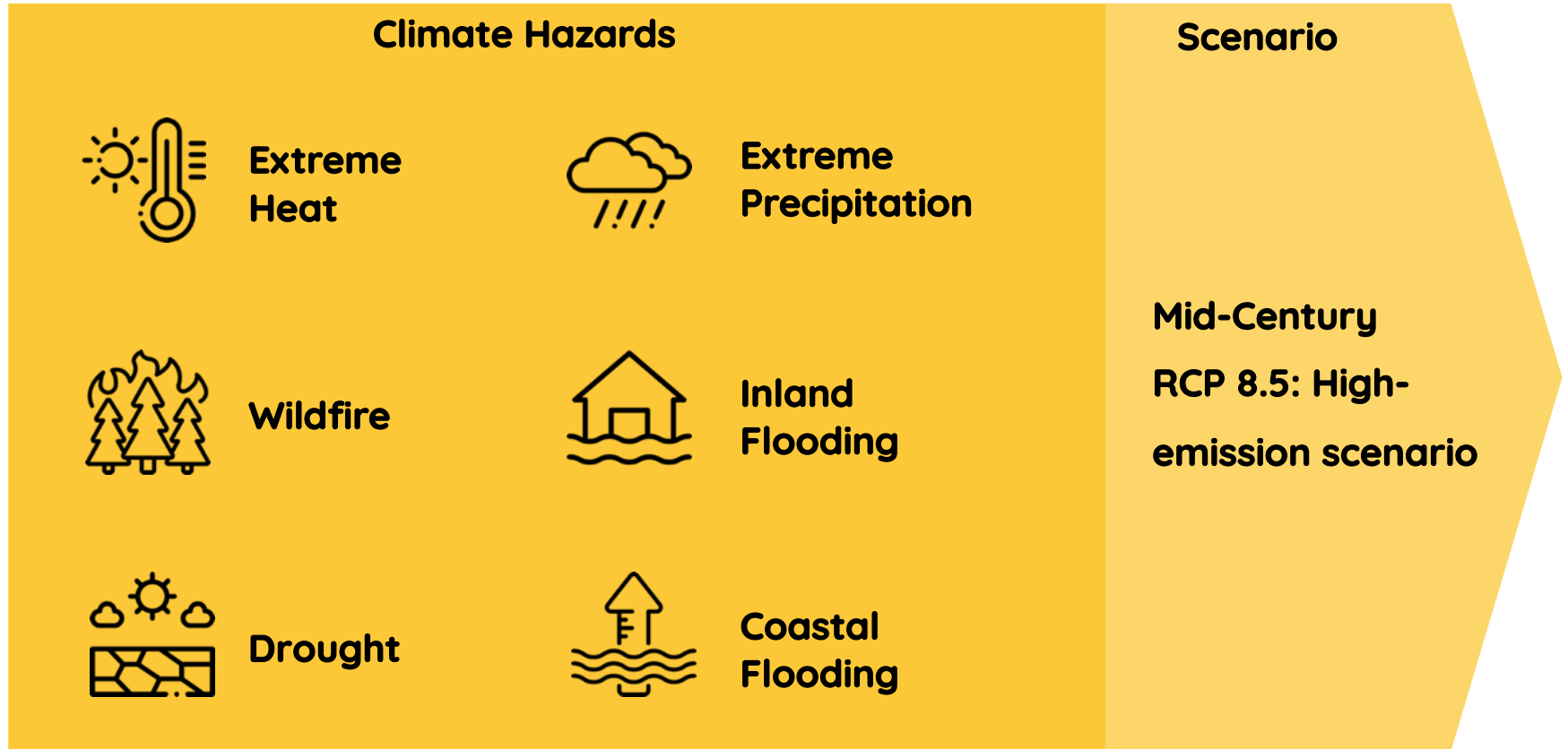
Go to [Menti.com](https://menti.com) and enter code **96 65 88 6**

What component of the CVA are you interested in learning more about today? / ¿Sobre que componente de la CVA te interesa aprender más hoy?













Key Findings from the Report

Climate hazards in LA County

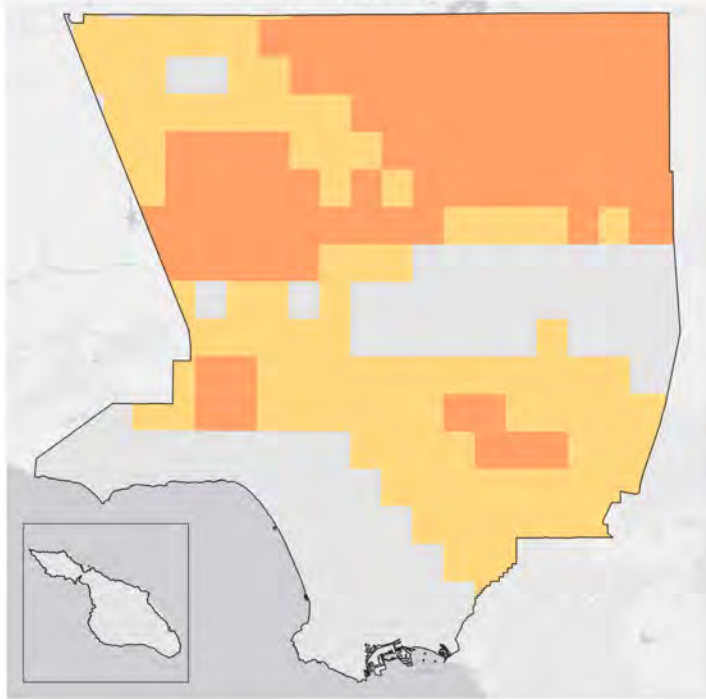


Climate hazards in LA County

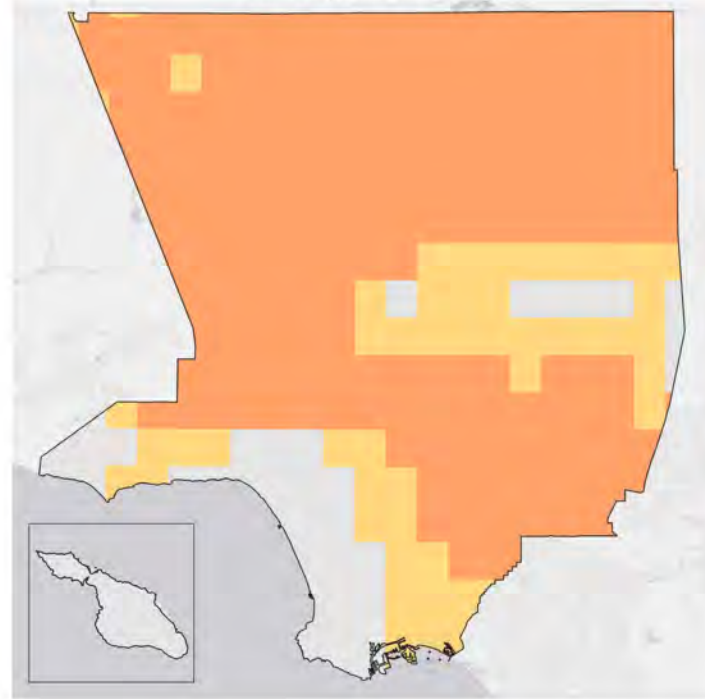
-   **Extreme heat** is projected to increase in frequency and severity, impacting much of the County
-   **Wildfire** events are projected to be considerably larger, more frequent, and more destructive by mid-century
-   **Droughts** are happening more often and are lasting longer
-   **Inland flooding** will likely increase in the future with drier springs and summers and wetter winters throughout the state
-   **Coastal flooding** events may become more frequent and severe, even with small increases in sea level rise

Extreme heat

Historical Baseline



RCP 8.5, Mid-Century




Relative Exposure Level
95th Percentile Daily Maximum Temperature

- Low, < 86.4 °F
- Medium, 86.4 °F - 94.2 °F
- High, > 94.2 °F

Sources: Cal-Adapt, UC Berkeley, Scripps Institution of Oceanography - UC San Diego, University of Colorado, Boulder.

0 5 10 15 mi



Extreme heat

Highly vulnerable populations



People with pre-existing conditions



Children and older adults



Outdoor workers

Highly vulnerable infrastructure



Energy



Parks and open space



Transportation



Source: Flickr, Boyce Duprey

Wildfire



40% of the population says they avoided going outside due to smoke last year

Source: LA Barometer

Freeway embankment fire threatens Granada Hills Service Station - June 2021

Source: Flickr, Los Angeles Fire Department

Wildfire



Highly vulnerable populations



Older adults
living alone



People with
limited access to
transportation



People with
cardiovascular
disease

Highly vulnerable infrastructure



Communications



Water



Community
Facilities



Woolsey Fire - Nov 2018

Source: Flickr, CEO Countywide Communications

Extreme precipitation and inland flooding



Kagel Canyon Precipitation Preparedness and Mudslide Prevention - Jan 2018
Source: Flickr, CEO Countywide Communications

Extreme precipitation and inland flooding



Highly vulnerable populations



Mobile homes



Outdoor workers



Households without vehicle access

Highly vulnerable infrastructure



Transportation



Economic centers



Community centers



Source: Union Station Homeless Outreach Team

Coastal flooding




Marina del Rey area




Long Beach area



Coastal Flooding, 2.5 Foot Sea Level Rise

 Medium, 0 - 3.9 feet

 High, > 3.9 feet

Coastal flooding

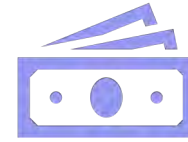


Photo Source: King Tides Photo Gallery

Highly vulnerable populations



Mobile homes



Low-income households



Educational attainment

Highly vulnerable infrastructure



Beaches and swimming areas



Transportation

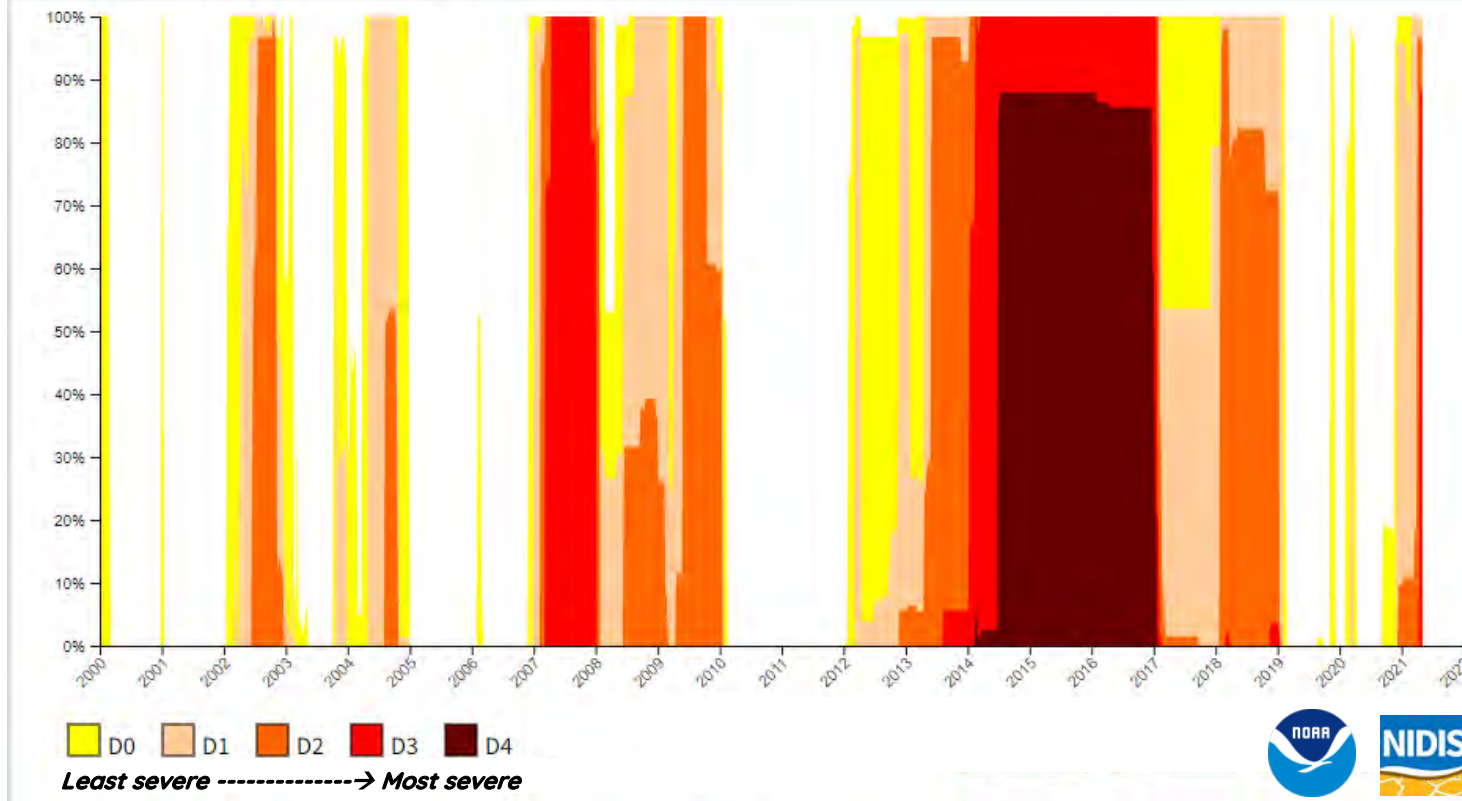


Water

Drought



Historical Conditions for Los Angeles County



Droughts are happening more often and lasting longer

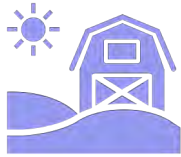
Drought



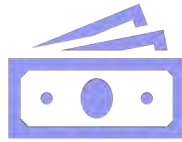
Highly vulnerable populations



Older adults



Rural communities



Low-income households

Highly vulnerable infrastructure



Water



Energy



Parks and open space



Photo Source: CLWA and SCVhistory.com

Mentimeter

What climate impacts on vulnerable populations are you most concerned about?

Go to [Menti.com](https://menti.com) and enter code **96 65 88 6**

What climate impacts on vulnerable populations are you most concerned about? / ¿Cuales impactos climáticos en comunidades vulnerables te preocupan más?

Heat

high heat health events

Heat

Heat

Wildfires

extreme heat

Health risks from increased heat

extreme heat for those who don't have air conditioning

I am most concerned about high heat exposure

What climate impacts on vulnerable populations are you most concerned about? / ¿Cuales impactos climáticos en comunidades vulnerables te preocupan más?

Heat

drought, wildfire, heat

Heat

Heat and access to water

Extreme Heat and Wildfires

Extreme heat

Power outage

population displacement

Extreme heat in urban areas.

What climate impacts on vulnerable populations are you most concerned about? / ¿Cuales impactos climáticos en comunidades vulnerables te preocupan más?

Extreme heat in South and SE LA

Heat attack

extreme heat, wildfires

Pregnant women and premature birth

Energy Access

water scarcity

heatwaves

heat

Heat

What climate impacts on vulnerable populations are you most concerned about? / ¿Cuales impactos climáticos en comunidades vulnerables te preocupan más?

Wildfire

Air quality impacts are a big concern.

wildfires

air quality

Health effects

Heat and wildfires

water quality from lower concentrations

Heat

All others all rely on quality mapping and spatial analysis

What climate impacts on vulnerable populations are you most concerned about? / ¿Cuales impactos climáticos en comunidades vulnerables te preocupan más?

Flash flood

heat

HeatAir quality / wildfiresWater shortages

extreme heat is #1

economic inequality exacerbated

Heat and extreme Flood

Drought and extreme heat

heat, air quality

Heat, lack of access to cooler parks, drought

What climate impacts on vulnerable populations are you most concerned about? / ¿Cuales impactos climáticos en comunidades vulnerables te preocupan más?

heat and wildfires-->

Elderly

Drought

Older adults living alone

wildfire

Heat and wildfires for workers

health risks from heat and smoke

Drought and dry vegetation.

Heat/air quality on indoor/outdoor workers

What climate impacts on vulnerable populations are you most concerned about? / ¿Cuales impactos climáticos en comunidades vulnerables te preocupan más?

heat and drought

Power outage

air quality issues during wildfire season where no air conditioning / air filtration systems

drought, wildfire

wildfire and heat

Heat exposure of homeless and outdoor workers.

They all tie together - namely I am concerned about continued lack of access to clean water, and concerned about wildfire's impact on water quality. Very concerned about lack of access to cooling for renters as well.

Extreme heat and energy

water scarcity

What climate impacts on vulnerable populations are you most concerned about? / ¿Cuales impactos climáticos en comunidades vulnerables te preocupan más?

Smoke/wildfire on domestic workers and day laborers

heat water scarcity

Urban flooding

heat

Heat, access to water, air quality, fires

Loss of trees as a result of drought and heat

access to clean water

contaminated fish/wildlife; higher concentrations of toxins in water

Heat impacts on BIPOC population

What climate impacts on vulnerable populations are you most concerned about? / ¿Cuales impactos climáticos en comunidades vulnerables te preocupan más?

Heat, Wildfire and Energy Vulnerability

Costs to decarbonize

Heat, disabled access to emergency services.

Hazards in climate disaster response

Drought, wildfire, heat, energy, drinking water

Fire, increased heat, drought

water availability

extreme heat on children

Possible extreme cold in the county's mountain areas;
Extreme heat in north county.

What climate impacts on vulnerable populations are you most concerned about? / ¿Cuales impactos climáticos en comunidades vulnerables te preocupan más?

extreme heat, power and communication outages, and impacts on health

Mental health

water quality

Wildfire, heat, loss of homes due to flooding.

air quality

heat, access to cooling centers which leads to transportation

Flooding, oils and harmful organics from wildfires

UHI, drought

health of outdoor workers/agriculture workers; people without access to air conditioning

What climate impacts on vulnerable populations are you most concerned about? / ¿Cuales impactos climáticos en comunidades vulnerables te preocupan más?

older adults

Urban heat island effect

the speed in which transitions are changing or not. Road infrastructure in the County is not moving fast enough for all of the vulnerabilitiy impacts.

Health related issues caused by communication infrastructures and policies

long term impacts on water supply for LA

access to food and clean water for homeless

air quality caused by fire and heat

Homeless population

Extreme heat water scarcity

What climate impacts on vulnerable populations are you most concerned about? / ¿Cuales impactos climáticos en comunidades vulnerables te preocupan más?

Lack of access to parks

Climate Gentrification, Climate Migration, Climate Regulations and More....

water fountains

Drought/water scarcity. Lack of tribal input. Control of water by gov. sources.

The County must prioritize multi-benefit solutions in all of their infrastructure projects. This is moving too slow. LAC is too big and cannot move fast enough if the lifelines do not work together.

groundwater/water

active transporation, neighborhood greenways, getting out of cars, invest locally, capture water locally at our homes. Rely on CBOs to do the work. The County must bring the community into the process to be the change.

Removal of countless mature trees to repair curbs and repaving streets the same old way, is a waste of time and budgets. A balanced approach is needed ASAP.

shade structures

What climate impacts on vulnerable populations are you most concerned about? / ¿Cuales impactos climáticos en comunidades vulnerables te preocupan más?

water and power

electrical infrastructure

Loss of work because of interrupted access to transit

Power and water

the flood control system

groundwater storage

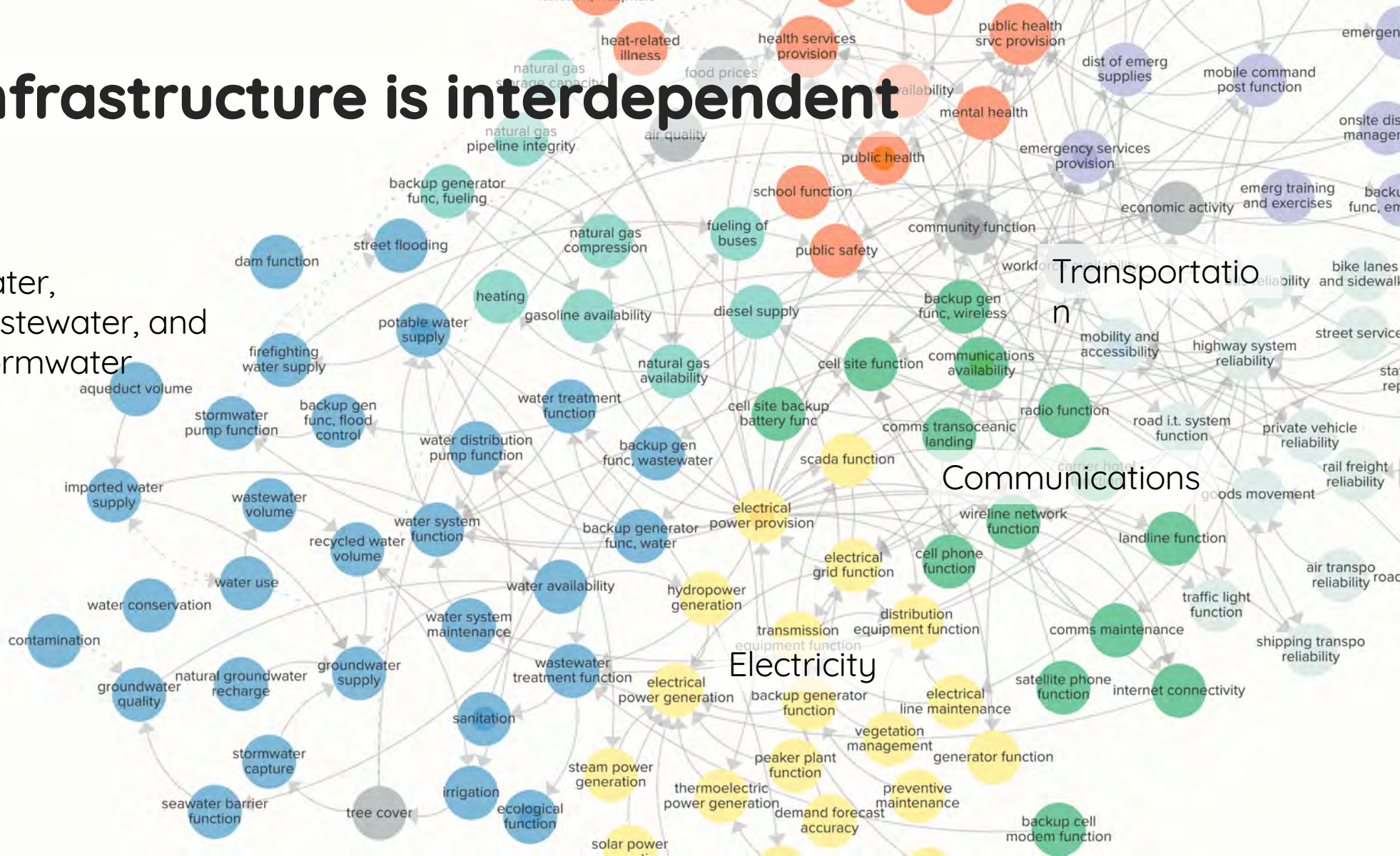
water supply

transportation

Even fewer trees due to drought

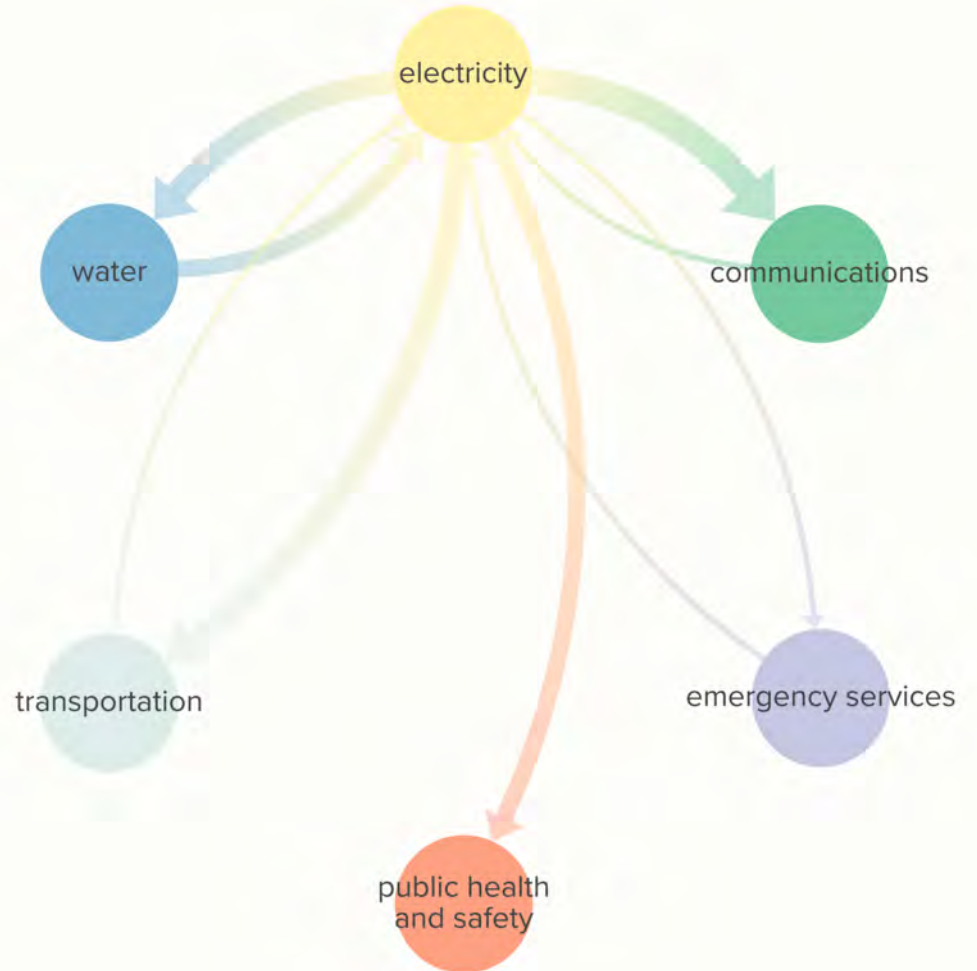
Infrastructure is interdependent

Water,
wastewater, and
stormwater



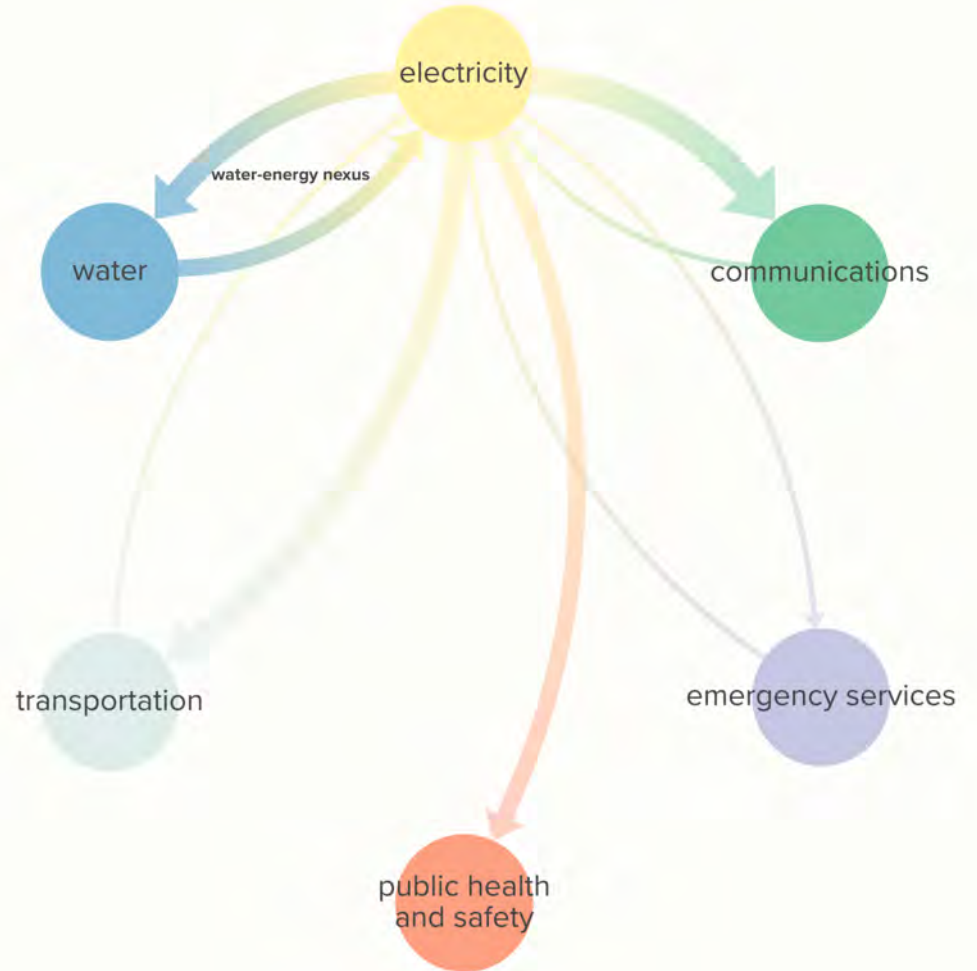
Electricity is critical

- Electricity strongly influences every other infrastructure sector, in many different ways
- Electrical power provision has the biggest direct impact on all other sectors

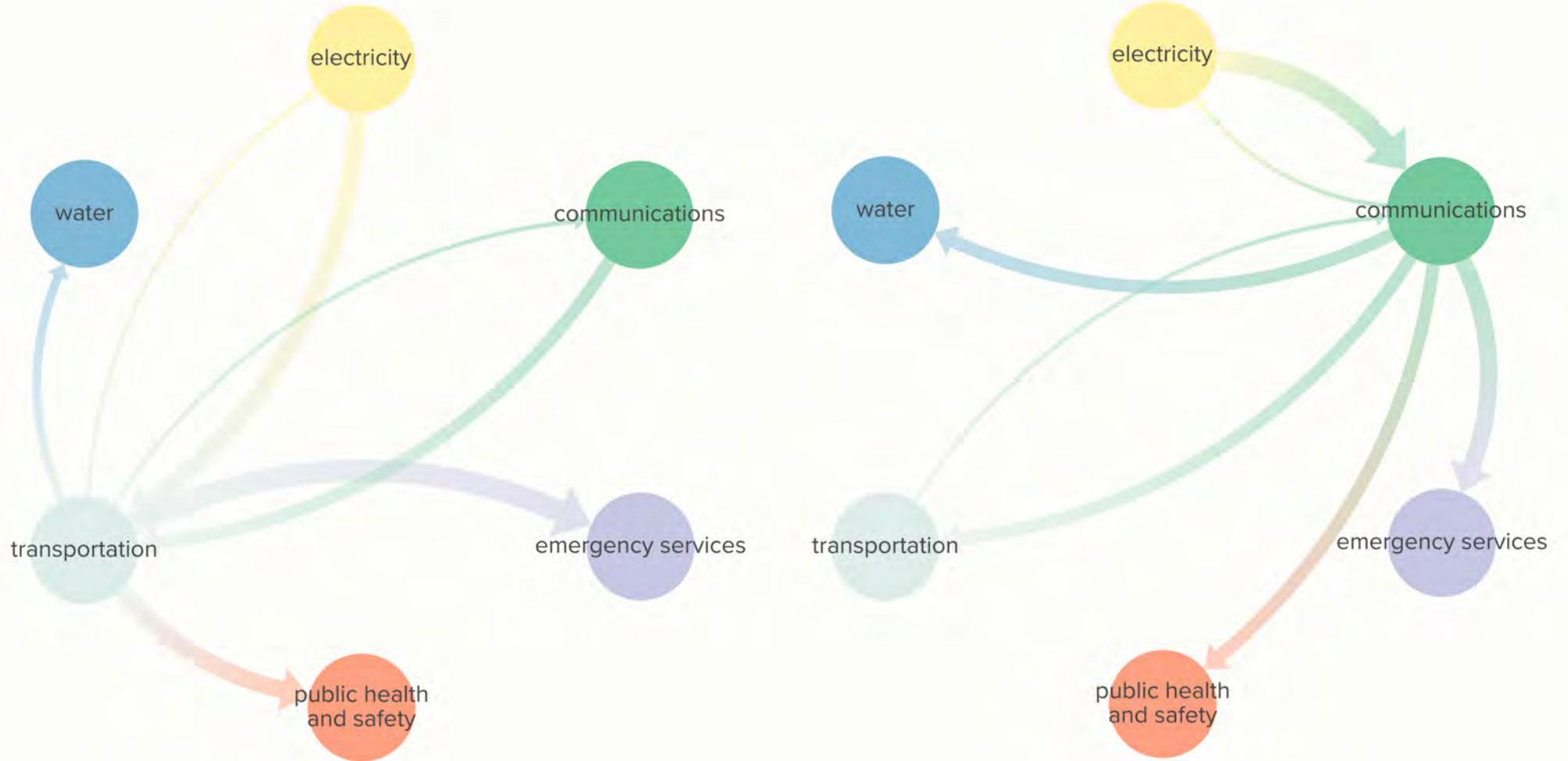


Electricity is critical

- Electricity strongly influences every other infrastructure sector, in many different ways
- Electrical power provision has the biggest direct impact on all other sectors
- Water is necessary to produce electricity

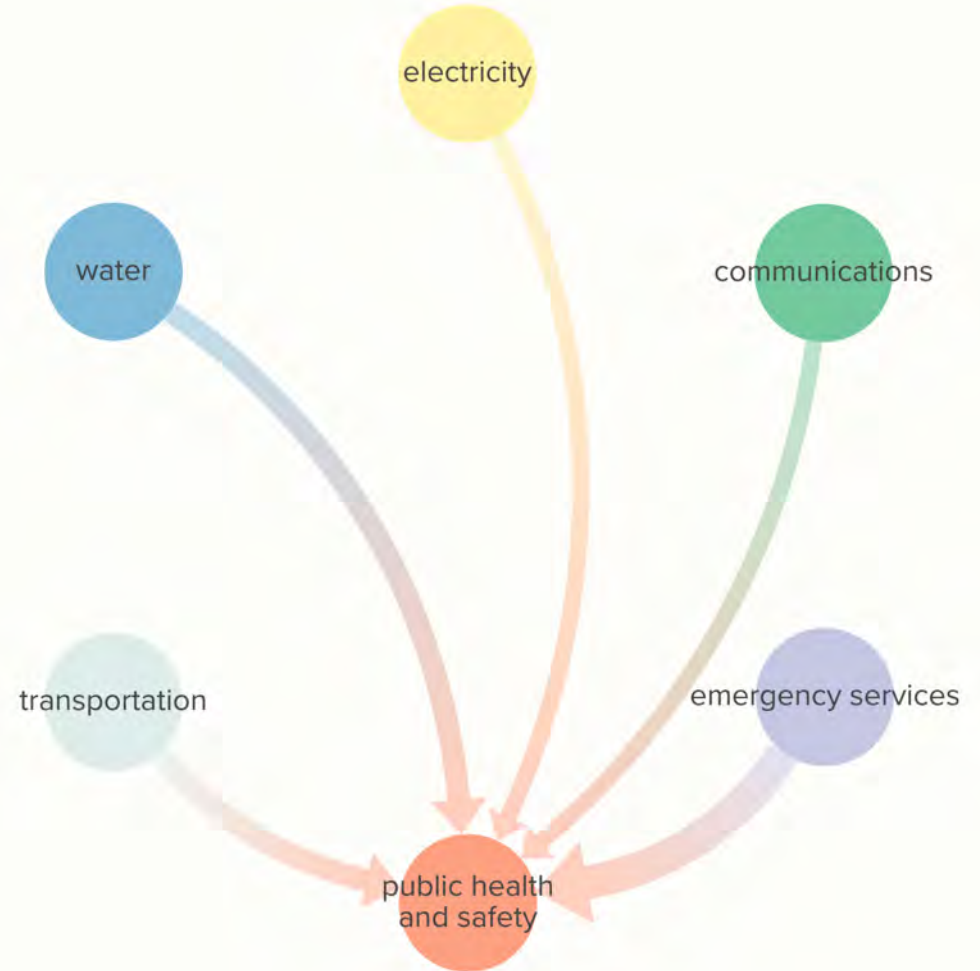


Transportation and communications are important too



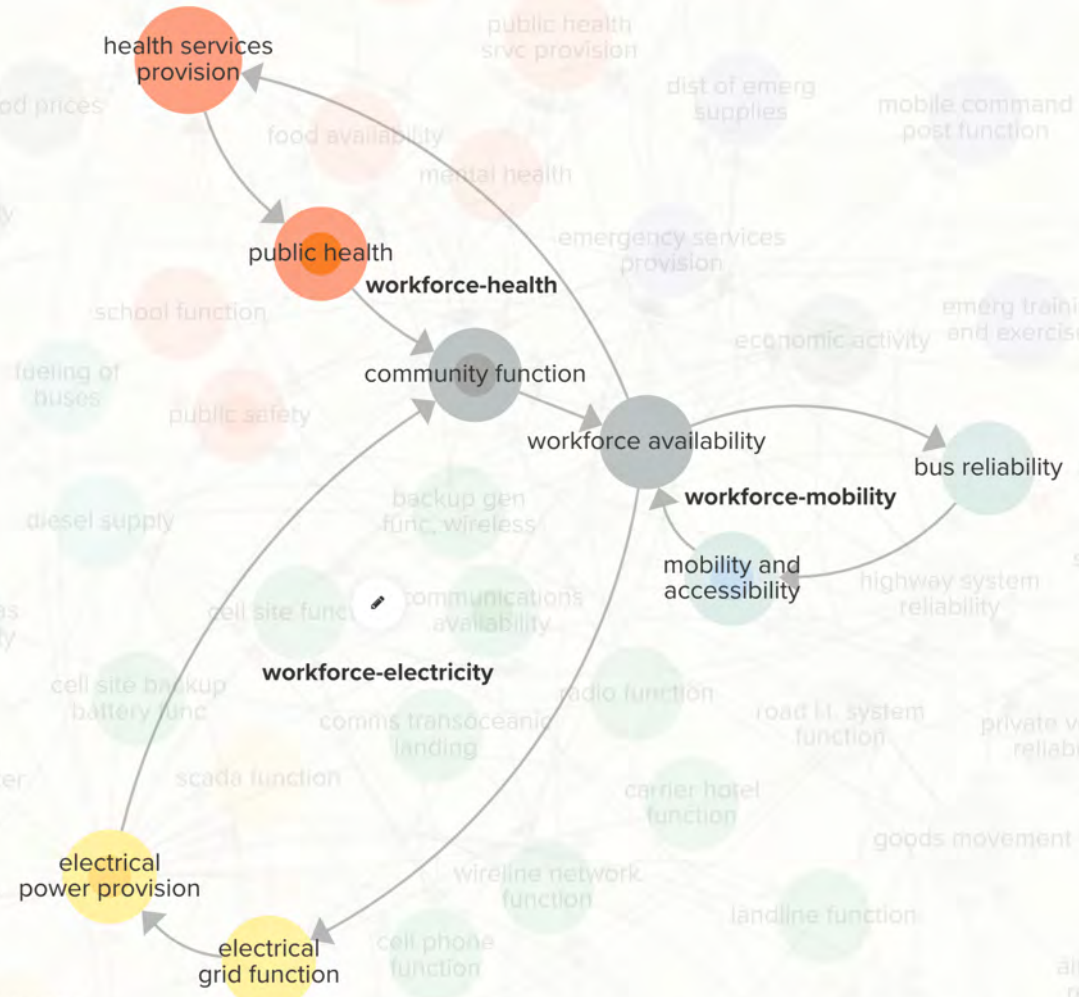
They all feed into our health and safety

- Public health and safety are the ultimate goals of critical infrastructure
- They feed back to reinforce other sectors: When the community is functioning well, essential workers can continue to ensure that it does.



Workforce availability is central

- Workforce availability mediates almost every interaction in the network
- Workers are essential not just to the services they help provide, but to the functioning of the whole community system



Human impacts of infrastructure disruption



- **Energy disruptions** can disproportionately impact socially vulnerable populations
- During climate disasters, vulnerable populations need more **accessible communication platforms** (text, WhatsApp, language media) as well as messaging through trusted networks (day laborer centers, CERT neighborhood leaders, town councils, and caregivers)
- **Evacuation** from wildfire zones can be more difficult for people with disabilities, people without access to reliable transportation, and rural communities
- **Parks and open space, trees, and access to cooling infrastructure** are critical and key to adaptive capacity while also vulnerable to heat, wildfire, and drought
- There is a reinforcing feedback loop between the impacts of climate-related infrastructure disruption on workers and the reliance on **workers** to **maintain** that **infrastructure**

Mentimeter

What infrastructure are you most concerned about in Los Angeles County when it comes to climate change?

Go to [Menti.com](https://menti.com) and enter code **96 65 88 6**

What infrastructure are you most concerned about in Los Angeles County when it comes to climate change?/ ¿Qué infraestructura te preocupa más con...

Electric grid.

Energy

Water

electricity grid

electrical

water supply

Gas pipeline ready for hydrogen

workers

Electricity now

What infrastructure are you most concerned about in Los Angeles County when it comes to climate change?/ ¿Qué infraestructura te preocupa más con...

Electrical grid

Grid Infrastructure

Water Infrastructure

communications

Energy

Roads, Bridges, Tunnels.

Solid waste and recycling

energy and water

Transportation

What infrastructure are you most concerned about in Los Angeles County when it comes to climate change? / ¿Qué infraestructura te preocupa más con...

Trees

water

communication in emergencies

Energy and Water

electricity grid

Water

energy & water

Above-ground power transmission lines, particularly in north LA county

Electricity

What infrastructure are you most concerned about in Los Angeles County when it comes to climate change?/ ¿Qué infraestructura te preocupa más con...

energy, especially central production & distribution

Reliable access to public transportation

Grid

Electricity and water

Caretakers. Eg child and eldercare low income workers

transportation

Water

cooling and workers

Energy, water supply

What infrastructure are you most concerned about in Los Angeles County when it comes to climate change?/ ¿Qué infraestructura te preocupa más con...

Electrical affecting water availability

Water and electricity

Water supply

Everything...

Water, electricity.

communication and workers

Electricity and communications

Communications infrastructure

Energy Resiliency

What infrastructure are you most concerned about in Los Angeles County when it comes to climate change?/ ¿Qué infraestructura te preocupa más con...

communication

electricity, water, people

Clean energy/ clean water

Energy, water, caregiver availability

Wastewater systems

trees

Energy

Water

Lack of power

What infrastructure are you most concerned about in Los Angeles County when it comes to climate change? / ¿Qué infraestructura te preocupa más con...

Green space

Workers involved in maintaining/repairing infrastructure

Transportation

clean energy/ clean water

Lack of green space

infrastructure that are already problematic before climate change

food

Transportation

watertreeselectricityworkforce

What infrastructure are you most concerned about in Los Angeles County when it comes to climate change?/ ¿Qué infraestructura te preocupa más con...

Grid overload

electricity and emergency services (fire, law enforcement)

loss of water electricity, ability to get food/gas,

Electricity, water, trees, roads, asphalt

Lack of access to parks as a place of respite and cooling

above ground electrical lines

agriculture

Water. Natural life (wild life). Heat.

medical facilities

What infrastructure are you most concerned about in Los Angeles County when it comes to climate change?/ ¿Qué infraestructura te preocupa más con...

Electricity and water emergency aid

Green open spaces

water/groundwater

Getting a good mix of utility-scale AND distributed energy infrastructure.

vegetation

The power grid. Nature Based - loss of biodiversity. Urban Wildlife Interface. Transportation movement to local communities, water capture, street greening. Neighborhood greenways are a win win. Taking back street space for greening, for mobility

LA County's large infrastructure is disconnected. It is critical connecting with communities to empower them to be the change is key for sustainability.

Lack of wildlife corridors as creatures will need to migrate in order to adapt

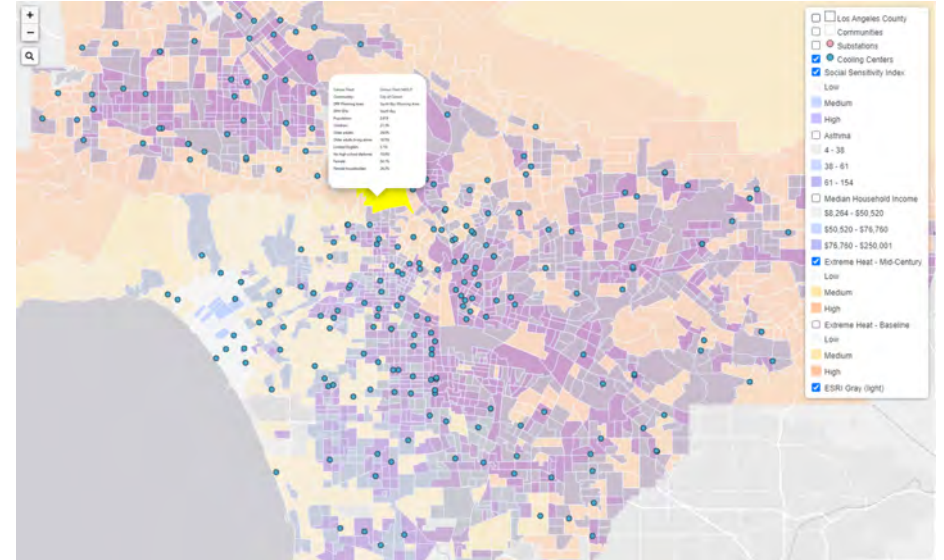
Connecting communities across the County is key. More community groups at the table improves communication. We are so large yet disconnected which makes it difficult to be sustainable and reaching these critical actions and goals.

Final Deliverables

LA County
Climate
Vulnerability
Assessment



Online
Mapping and
Data Tool



Q&A

How You Can Use the CVA



Nurit Katz

Chief Sustainability Officer



Photo Source: UCLA Sustainability



Sona Mohnot
Associate Director, Climate Equity



Photo Source: Greenlining Institute

Other Example Uses

- Inform a grant and apply for funding
- Help prioritize hazard mitigation efforts, public health policies and programs, emergency preparedness, land use planning, and infrastructure investment
- Help in creating a city adaptation plan/program
- Support municipalities with vulnerability assessments for SB 379

Mentimeter

What should the County do with the
CVA report and tool?

Go to [Menti.com](https://menti.com) and enter code **96 65 88 6**

What should the County do with the CVA report and tool?/ ¿Qué debería hacer el Condado con el informe y la herramienta de la CVA?

Have each department evaluate it against their own work plans

Lobby at the State level to make a case for projects that address sustainability on a regional scale.

Reallocate resources

Share reports and support grants and projects that help mitigate vulnerabilities

Use it to guide future research questions/RFPs

Share with local jurisdictions staff

Stop development in high risk areas

provide funding for projects

resource implementation of climate solutions

What should the County do with the CVA report and tool?/ ¿Qué debería hacer el Condado con el informe y la herramienta de la CVA?

Require all department administrators become familiar with the tool.

prioritize strategies on most vulnerable infrastructure and populations

Create a climate adaptation plan, as a 1st step in building implementation projects.

Share it with county leaders and create a county leader meeting to develop new policies for LA

implement mitigation measures and funding plan

Plan and implement the plan to make people less vulnerable

Stop Sprawl Development , direct funds to Infill Development

budget priorities

inform policymakers about the need for important investments

What should the County do with the CVA report and tool?/ ¿Qué debería hacer el Condado con el informe y la herramienta de la CVA?

Share with member cities, use to make unincorporated areas climate resilience

Use it to make changes to the general plan and for environmental reviews.

Enact public policies that address the issues

Listen, Act and Execute

Use it to help craft a plan to help marginalized people's evacuation plans.

Advocate for stronger infrastructure investments -- and policies to protect vulnerable communities

Share info with LA cities so they can prepare a plan; Share with public sector worker groups so they can prepare a plan;Lobby at state level

Develop adaptation measures and prioritize adaptation in most vulnerable communities first

Widely distribute the link to the report

What should the County do with the CVA report and tool?/ ¿Qué debería hacer el Condado con el informe y la herramienta de la CVA?

Gamify the reporting/engagement ask of the public

Use it as a measurement when approving development
environmental/CEQA docs

Create a grant assistance opportunity for local jurisdictions
to create their own specific muni-level CVA

facilitate pathways for funding

Build more housing in milder climates

Prioritize Infrastructure Needs

Share with local communities

Apply for federal grants

identify community projects to start sooner rather than later

What should the County do with the CVA report and tool?/ ¿Qué debería hacer el Condado con el informe y la herramienta de la CVA?

Meet with other County department representatives, city department representatives, and private entities to discuss possible workplans.

policy changes

Use the tool to plan mitigations like planning desalination plants.

policy reform

share with the other County departments

Share with all powers that be and utilize it to plan for climate solutions.

Use it to guide funding

Send it out to other agencies so they can use it as a reference tool.

use it as a living document- continue to edit with community response

What should the County do with the CVA report and tool?/ ¿Qué debería hacer el Condado con el informe y la herramienta de la CVA?

PSA's, continue working with allies.

Share with other universities to add to curriculums

Develop an Equitable Climate Adaptation & Resiliency Plan

Move to find ways to respond/address concerns found in the report.

Guide high-density housing development in areas well-suited by public transportation

To implement programs and projects directly

Lobby for grant program funding, and offering grant opportunities to member cities and NGOs, etc.

Force NIMBY cities on mild westside to build more housing ASAP

It is important that the county refer to the plan as they vote, fund (budget) and support and implement projects.

What should the County do with the CVA report and tool?/ ¿Qué debería hacer el Condado con el informe y la herramienta de la CVA?

Plant native plants in cities

Hold more workshops to educate people about it.

Browbeat local elected leaders to take concrete actions to build housing for essential workers of all incomes

Prioritize equity in climate adaptation and resilience plans

This CVA must help prioritize in the unincorporated areas to establish customized community plans, prioritizing community visioning for a sustainable resilient future community to maximize multi-benefit sustainable projects and solutions.

Mentimeter

How will you use the CVA report and tool?

Go to [Menti.com](https://menti.com) and enter code **96 65 88 6**

How will you use the CVA report and tool? / ¿Cómo usarás el informe y la herramienta de la CVA?

Inform company strategy

I will share with my community.

To create dialogue/solutions.

Not certain but will include on next meeting agenda

To advocate for necessary changes.

Use in education efforts and climate planning with cities

Align with other adaptation projects occurring in the region

to inform project developments at the community level

Sharing it with local jurisdictions

How will you use the CVA report and tool? / ¿Cómo usarás el informe y la herramienta de la CVA?

Share with my City to help them update our general plan

compare against own organizational CVA for gaps/synergies

Use it as Resource and Interact with all involve

reviewing against our CVA

use info to prioritize projects for safe clean water program

Share it with internal team

Sharing with my community

As a review tool to help select future projects.

Informing philanthropic investment.

How will you use the CVA report and tool? / ¿Cómo usarás el informe y la herramienta de la CVA?

To evaluate park and urban greening projects, and supporting case for funding of projects in areas of high vulnerability

Embed CVA outcomes into agency plans.

Explain it to my community!!

Follow its implementation

advocate for infrastructure funding

To inform people in my organization so we can more effectively advocate to help the disabled people we serve

Ask more questions, form strategies.

As a resource for what changes need to be made.

coordinating partnerships with relevant agencies that reflect CVA findings.

How will you use the CVA report and tool? / ¿Cómo usarás el informe y la herramienta de la CVA?

Personal knowledge/growth

Deepening analysis for sub-region

use data to support equity

Share internally for agency climate adaptation planning in various functions

advocating for funding.

To spread awareness among communities who are unaware of risks

To evaluate impacts to rural communities, use for emergency planning, allocate resources needed to support already independent rural communities

Inform emergency preparedness plans.

Advocate for a sustainable community plan forward!

THANK YOU!

For more questions, contact LA County Chief Sustainability Office:

sustainability@lacounty.gov

Recording and Sign-up for Updates

ceo.lacounty.gov/ourcounty-cso-actions/