Extreme Heat

SAMPLE SOLUTIONS

Progressive urban community that is highly diverse in terms of race and ethnicity, languages spoken, and socioeconomic status with a large houseless population

Community Resilience Center Shade heat

Urban **Forestry**

Urban Greening

A/c and in-home cooling

Cool Roofs

Green Roofs

Cool **Pavements**

Energy Efficiency & Building Retrofits

Transportation Electrification (UHI reduction strategy)

Awareness & Communications Campaign

Open/Green Space Preservation

accessibility of extreme heat mitigation measures: community

discount/incentive

with extreme heat. come drought and water scarcity... hydro stations, water splashpads, water for hygiene (showers) etc in addition to cooling centers (activities for kids)

Cooling Center

structures and covered walkways

supply side / grid resilience during high

consideration of mental health & depression when trapped in their home

> b/u battery power (either residential or at cooling centers) and charging stations

Strengthening of Community connectness. **Building networks** of support (to check on neighbors, etc)

> resilience center as combination of many of the solution components

access to potable water

accessibility to cooling centers

providing nighttime cooling as well that's the time that's more physiologically

taxing

covid precautions for cooling centers

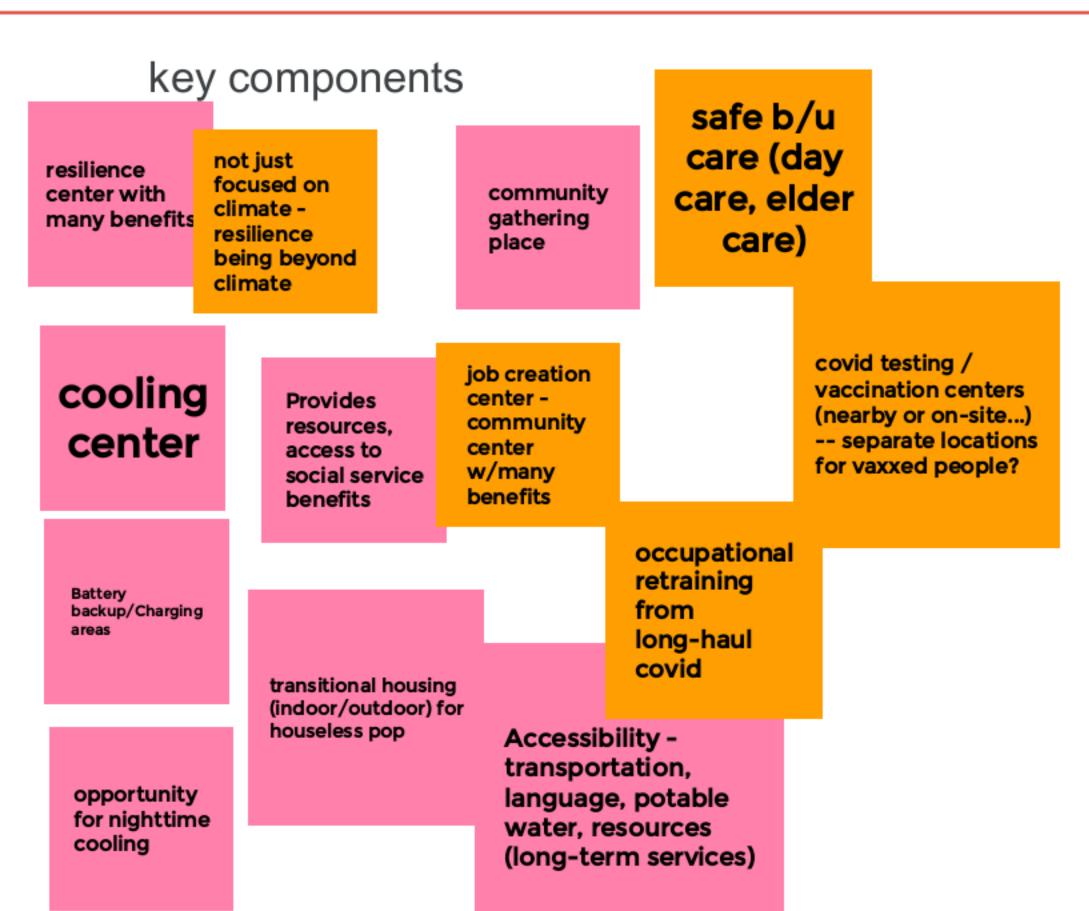
houseless population - how to get past hurdles of getting them into cooling centers (mental health)

> transitional housing, including outdoor living component

Extreme Heat

Progressive urban community that is highly diverse in terms of race and ethnicity, languages spoken, and socioeconomic status with a large houseless population

PROJECT CONCEPT: GOALS & BENEFITS



outcomes/benefits

reduce negative health impacts from extreme heat

Education on heat impacts, solutions, resources

Community connectedness

Stronger sense of community

(re b/u battery) utility reliability

Proactive strategies
will be more cost
effective = lower
taxes and lower
government
spending!

having HVAC also serve as a clean air solution during fires

Extreme Heat

Progressive urban community that is highly diverse in terms of race and ethnicity, languages spoken, and socioeconomic status with a large houseless population

NGAGEMENT & PARTNERSHIP STRATEG Partner with vulnerable Hospital populations add state **Associations** outreach agencies and local govs e.g. older adult outreach add potential funders to engagement **Partner** with key Outreach in partnership w/health trusted providers/community **CBOs** Outreach through heat is alread a problem resident not a future

FUNDING & FINANCING

reevaluate budget priorities to align w/community health needs

find political champion w/will to progress initiatives

PROJECT CONCEPT: KEY STRATEGIES

State agency: how many cities/how many counties - how do you prioritize, since there's only so much money - how do you choose the CBO: consult a couple of different tools (CES); id case studies

cost effectiveness of extreme heat mitigations (also good for non-climate folks)

Survey users on use of the resilience center benefits/knowledge gained, how connected they feel to their community

still need for tool that allows for appropriate identification of impacted communities - combo of climate impacts & "social" vulnerability (EPA UHI tool, Alameda)

> engage research early to figure out the right questions to ask; but be sure to make sure this doesn't turn people away.

reduced hospitalizations /

death

engaging

hazard

MONITORING & EVALUATION STRATEGY

epidemiology research community (looking at increased stroke, heart attack... find measure to track these to heat wave) look at 2006 heat wave study and NAS study on natural

> use community centers to do some of the community building identifying older adults, people w/out AC - community climate action

squad

make the case that this saves money too - (reduce health costs, insurance costs etc)

manage different climate impacts - no maladaptive; land use

consideration; balancing community demands; fresno is successful with infill (beautification to the community) while successfully navigating reduction

concerned about location/NIMBY; other community member would want to know how quick to build it to meet need of current problem; how to be notified of services

Community member:

Funder: be convinced that it would actually work; that it will provide value to the community; how quickly see returns on investment

leaders climate

condition

Drought

Politically diverse county with a mix of urban, suburban, and rural communities, a highly active and engaged CBO network, the largest agriculture sector in the state.

SAMPLE SOLUTIONS

Green Infrastructure Residential Water Use Restrictions Commercial Water Use Restrictions Retrofits for Water Efficiency

Grey Water Systems

Water recycling (more treatment than greywater reuse) Agricultural Water Efficiency Revolving Loan Fund (or community grant/loan program)

Drought-Resistant Landscaping and crops

Drought-Tolerant Crops

Livestock / Herd Management

Rainwater Harvesting Preservation of Groundwater Recharge Zones

crop value

no fracking

no desalination



hydroponics / greenhouses energy intensive water savings?

Individual solutions don't work - rational integration - link with a transition plan Water Efficient
Irrigation Upgrades
for Agriculture cooperative system /
farm bureau - e.g.
drip systems
outreach

Smart Water Meters

Agri-voltaics - solar cells or wind on Agri land to permit different age uses and generate power - multiple co-benefits Agriculture Water
Market Solution groundwater
management area voluntary monitoring
-market based system
- water pricing and
markets - economic
strain on small
agriculture

Social aspect workforce
education crop
transition just transition

business and capital assistance research - trial and error

Drought

Politically diverse county with a mix of urban, suburban, and rural communities, a highly active and engaged CBO network, the largest agriculture sector in the state.

PROJECT CONCEPT: GOALS & BENEFITS

COALITION FOR SILO-BUSTING AGRICULTURE

Development project:
- tests technologies,
social impact,
market-based
approach corrected
for
social/impact/equity long term project,
with immediate
technical assistance

Project objective is a transition plan with near term and long term goals time less

Smart Water Meters Social aspect workforce education crop transition just transition time more

Water Efficient
Irrigation Upgrades
for Agriculture cooperative system /
farm bureau - e.g.
drip systems
outreach

Individual solutions don't work - rational integration - link with a transition plan

Agri-voltaics - solar cells or wind on Agri land to permit different age uses and generate power - multiple co-benefits Agriculture Water
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business and capital assistance research - trial and error

impact less

impact more

Drought

Politically diverse county with a mix of urban, suburban, and rural communities, a highly active and engaged CBO network, the largest agriculture sector in the ALITION FOR SILO-BUSTING AGRICULTURE

ENGAG

Silo busting -Development project:
- tests technologies,
social impact,
market-based
approach corrected
for
social/impact/equity long term project,
with immediate
technical assistance

Project objective is a transition plan with near term and long term goals Social aspect workforce
education crop
transition just transition

water rights

n Upgrades
culture cooperative system /
farm bureau - e.g.
drip systems
outreach

Individual solutions don't work - rational integration - link with a transition plan FUNDING & FINANCING STRATEGY

Agriculture Water
Market Solution groundwater
management area participant water
monitoring -market
based system - water
pricing and markets economic strain on
small agriculture

EGY

business and capital assistance research - trial and error

Federal programs and funding efficiency and quality programs emergency; long
term - project
development Budget roles, timing,
organizational programs to
implement and test,
phasing; immediate
needs. Emergency
finding of resources executive order.

MONITORING & EVALUATION STRATEGY

Silo busting -Coalition of partners including agency (local, state, fed), research, growers and CBO's

Smart Water Meters- users and groundwater metering

Delivery of water?

Wildfire Stress on SOLUTIONS Rural community with many Tribes and Native communities, a tourism-based economy, limiting and an older, lower-income population with limited access to data and service. development due to focus on economy Less focus on Rx burns on federal Find way to **Funding** science and forest land could be make \$ from Master Plan for deprioritized due to could dry research residential/built env **Zoning &** changed veg mgmt WUI - designate buffer state/federal up materials zone, use as tourist Vegetation Building Development relationship attraction Managemen Restrictions Codes رىدىration Prescribed **Fuel Load** Forest Fire / Management / **Thinning** Controlled Treatment Biomass uses -Burns / Water wood cultural products/energy storage systems burning Evacuation for fire programming, **Evacuation** roads, vehicles: fighting Fire-resistant prioritizing Defensible Routes disabled/vulnerable Space Building Paratransit/m populations s for elderly Retrofits COVID **Prioritize** street features to accommodate impacts home Microgrid/nanogrid multiple modes (generators) for hardening for on homebound with single-direction/quick people power-dependent evac. Example: a two Evacuation business challenged to "evacuation hubs" **Tourism** health-assistance way cycle path that is alternatives to i.e. green belts or also wide enough to evacuate depending on accommodate EMS education open fields for short vehicles (bikes. vehicles, passenger distance walking trails, etc.) Co-benefit vehicles, etc. Tourist attraction to evacuation/fire campaign Protecting resilient-air teach visitors how breaks residents in spaces i.e. like to manage fire risk (long term solution), homes cooling incorporate tribal centers but for knowledge Ignition wildfire awareness smoke Addressing flooding **Smoke** ssing and magnifies Outreach/education mudslides/water people with Communication for Wildfire prevention health risks to home owners re: quality evacuation disabilities Smoke resources and (campfire & from COVID programs (hearing, Mitigation bbg smarts) mobility, etc.) Response

Wildfire

Rural community with many Tribes and Native communities, a tourism-based economy, ROJECT CONCEPT: GOALS & BENEFITS and an older, lower-income population with limited access to data and service.

Prescribed Fires/Veg Management

Tourism awareness

Built environment/WUI/ buffer zone

Evacuation - evaluation - evalu

Protect those who can't evacuate Preservation of life and health, and property as much as possible

economic support for tribal labor and cultural practices infill

Education beyond community by demonstrating safety Create healthy ecosystem that can survive future fires and address climate change

Fire wise planning/sustainabilit y for development

preserve recreation opportunities, jobs and spaces

sustainable, affordable mobility options

Wildfire

Rural community with many Tribes and Native communities, a tourism-based economy, PROJECT CONCEPT: KEY STRATEGIES and an older, lower-income population with limited access to data and service.



Sea Level Rise

SAMPLE SOLUTIONS

Highly developed coastal community with beaches providing recreational value and a service-driven economy supported by a large undocumented population.

Living Shorelines

Wetland Conservation/ Restoration

Physical Barriers

Coastal Armoring (levees, sea walls, etc.) Elevate Structures

Floating Development

Floodable Development

Managed Retreat

Harden Critical Infrastructure Relocate Critical Infrastructure



Capacity building/ beaches important/managed retreat/relocate/living shorelines

Sea Level Rise

Highly developed coastal community with beaches providing recreational value and a service-driven economy supported by a large undocumented population.

PROJECT CONCEPT: GOALS & BENEFITS

Capacity building/ beaches important/managed retreat/relocate/living shorelines

natural solutions vs. hard solutions because the beach is important to the community. Preserve and enhance ecological and recreational resources.

reduce impacts of flooding on adjacent residential area

Emphasis on hazard reduction

Build community capacity and create a community-driven process to define adaptation strategies.

Identify vulnerable communities that may need to be relocated and potential options (i.e. receiving communities, buyout options)

Develop a buyout program now that happens over time

Ensure continued public access to coastal areas (in this case the beach) Preserve and enhance mobility in the community. - could tie into workers who don't live in the area (van pools, transportation methods)

protect economic benefits of tourist economy Implement a project that can be scaled up or tied into regional strategy

Develop adaptive pathways that continue to be implemented as sea level rises passive dune restoration, dune building, hybrid living shoreline, living terraces/sea walls, retreat, depending on vulnerability and over time

Provide economic benefits to community, small businesses, and workers.

Develop job strategies the plans/actions in project mentioned in state or local plans. Do they have technical capacity to implement project? Permits feasible. Is approval likely from a state policy aspect. Regulatory agency standpoint.

revenue
opportunities, would
this increase revenue?
protecting beaches. /
coastal
attractions/businesse
s hiring outside
community workers.
(messaging that SLR
is happening with or
without funding)

Sea Level Rise

PROJECT CONCEPT: KEY STRATEGIES

Highly developed coastal community with beaches providing recreational value and a service-driven economy supported by a large undocumented population.

ENGAGEMENT & PARTNERSHIP STRATEGY

Build community capacity and create a community-driven process to define adaptation strategies. Design project to incorporate community values while balancing multiple-benefits.

Preserve through curveball and be consistent with messaging

City would be the lead

NGOs - on the ground community orgs

Community-based, Faith-based orgs, local agencies, tribes

member - people may be concerned about property values!

Community member /funder-don't fall into trap of implementing short term solutions that don't make a lot of sense. Consider environmental justice and long-term solutions.

Large effort to noid workshops and other engagement strategies. Multiple opportunities to review the project before it is implemented, Also, include how to incorporate community into

project and long-term.

Consider legislative outreach strategy

environment

Communicate as economic development project that considers SLR, hazard reduction

Community 1 member - Education and outreach beyond community

Build community capacity and create a community-driven process to define adaptation strategies.

Build project in

prioritize with

sources to

projects

reps in community

working groups so

the challenges at a

local level and be

and understand

Regional

with state

at meetings

regulation at local

they can understand

involved in the project

level. State as partner

not layer of project.

Increase capacity of

framework/regional

principles worked on

representations and

local jurisdictions. If

principles - maybe

consistent with those

don't need state reps

or build upon

adaptation stages,

community, allows

to identify funding

implement in stages

Community member - how to compensate, people have jobs and need childcare, being respectful of their time and make it easier to participate

Build community capacity and create a community-driven process to define adaptation strategies.

Identify the organizations and people who are trusted by the undocumented community. Include them and provide resources to ensure they can participate

> SLR vulnerability study is completed, translate results to community to identify adaptation strategies

FUNDING & FINANCING STRATEGY

Coastal Conservancy, FEMA, NOAA, **CALtrans**

> Analysis of potential funding strategies for buyout if/when retreat/relocation is needed. Current efforts revolving city funds.

Communicate as economic development project that considers SLR. hazard reduction

Develop job strategies

Emphasis on hazard reduction

Local

push for

city

support

More state

sources

and fed bills to

create funding

MONITORING & EVALUATION STRATEGY



Develop comprehensive monitoring plan to measure whether project meets goals.

Develop methods and metrics to evaluate goals with the community. Would help hold the city and who is implementing accountable.

Monitoring and identification of trigger points to implement adaptation pathways

Funders - does project have multiple benefits

Funders - is project feasible and will it be effective. Transferability (not one offs, wants to see it replicated), community engagement and commitment (match, engagement plan), is a plan in place to implement