

Wither the Water?

*Community organizing for justice
and resilience to the water-related
impacts of Climate Change*

2nd California Adaptation Forum

September 8, 2016, 10:15am - 11:30am

Pike 1-2 room, Renaissance Long Beach Hotel, Long Beach, CA

Panelists

Angela Mooney D'Arcy, Acjachemen Nation, Juaneño Band of Mission Indians, Sacred Places Institute for Indigenous Peoples (Orange County)

Terrie Green, Shore Up Marin (Marin)

Douglas Mundo, Shore Up Marin & Canal Welcome Center (Marin)

Tameeka Bennett, Youth United for Community Action (East Palo Alto)

Amanda FencI, University of California, Davis (Davis)

Moderator: Colin Bailey, The Environmental Justice Coalition for Water

re-sil-i-ence

rə'zilyəns/

noun

1. the ability of a substance or object to spring back into shape; elasticity.
2. the capacity to recover quickly from difficulties; toughness.

Climate resilience can be generally defined as the capacity for a [socio-ecological system](#) to:

(1) absorb stresses and maintain function in the face of external stresses imposed upon it by [climate change](#) and

(2) adapt, reorganize, and evolve into more desirable configurations that improve the [sustainability](#) of the system, leaving it better prepared for future climate change impacts.

A large electronic sign with orange LED lights displays the message "SERIOUS DROUGHT HELP SAVE WATER" in two lines. The sign is set against a background of a sunset over a mountain range. The sky is a mix of light blue and orange, and the mountains are silhouetted against the horizon. The sign itself is black with the text in bright orange LEDs. The background shows a clear sunset with some clouds and silhouettes of trees and mountains.

SERIOUS DROUGHT
HELP SAVE WATER

Source: <http://a.scpr.org/i/a83632e9fa8077436108bd930fe5dedf/78350-full.jpg>



Source: <http://waterwellservice.com/At%20a%20well%20trailer%20with%20pipe%20on.JPG>

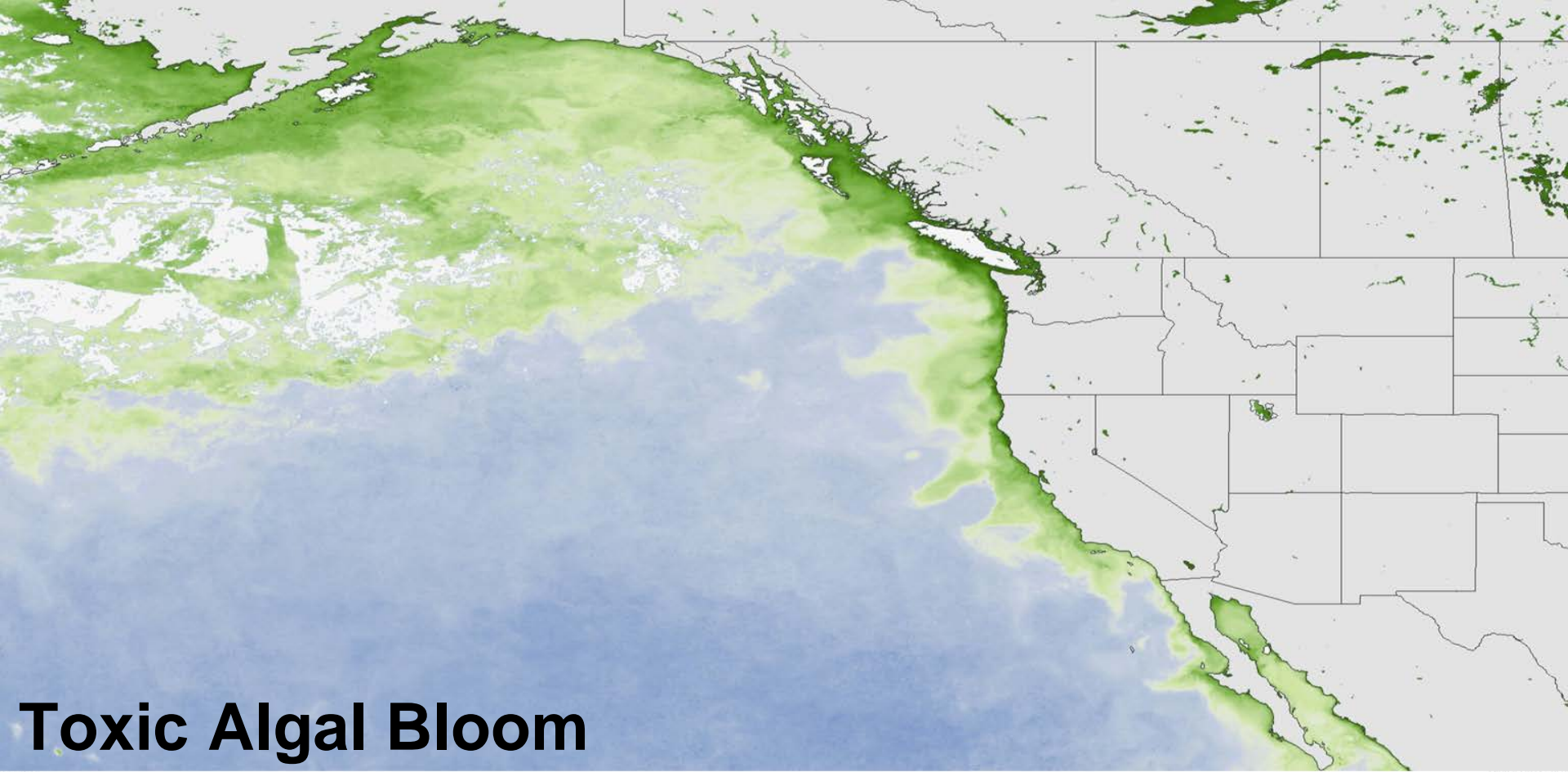




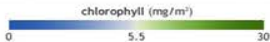
Source: <http://strangesounds.org/wp-content/uploads/2015/05/fracking-drinking-water-contamination.jpg>



Source: <http://earthfirstjournal.org/newswire/wp-content/uploads/sites/3/2014/12/o-FISH-FOLSOM-facebook.jpg>



July 2015

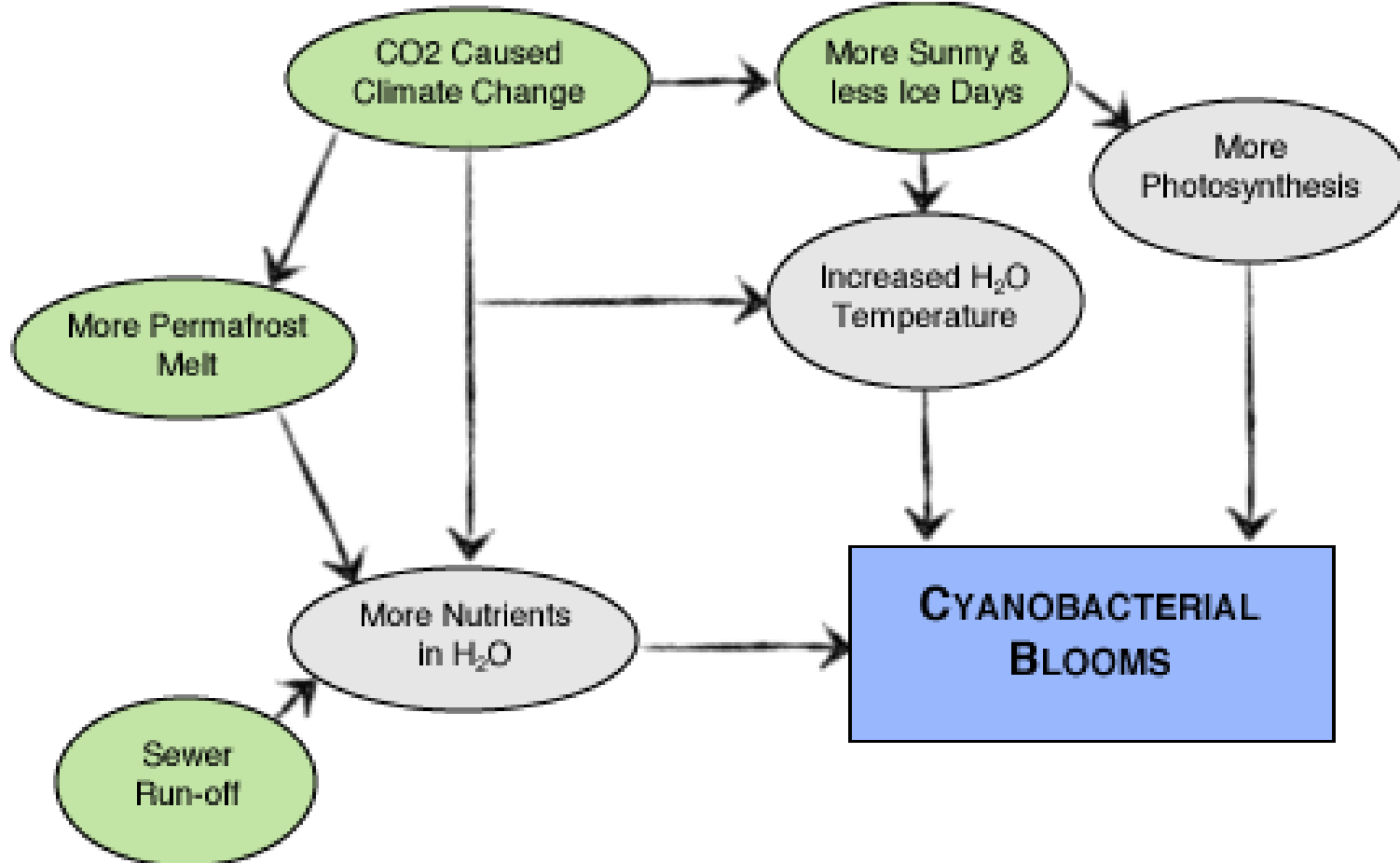


NOAA Climate.gov
Data: Suomi NPP
NOAA View

Source: http://static1.techinsider.io/image/55c4e9152acae711008be367-1920-1150/noaaview_chloro_july2015_lrg.jpg



Source: http://assets.inhabitat.com/wp-content/blogs.dir/1/files/2013/01/800px-Efflorescence_verte_5_Cyanobacteria.jpg



Source: <https://seagrant.uaf.edu/nosb/papers/2011/images/bullheads-fig1.gif>



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Source: http://www.fresnobee.com/news/local/3iey85/picture87331247/ALTERNATES/FREE_640/MTD%20JRW%20BEETLE





Source: https://theprairieecologist.files.wordpress.com/2013/10/eenpo130703_d006.jpg



WATER WARS

Source: <http://outlawjimmy.com/wp-content/uploads/2013/04/water-wars.jpg>

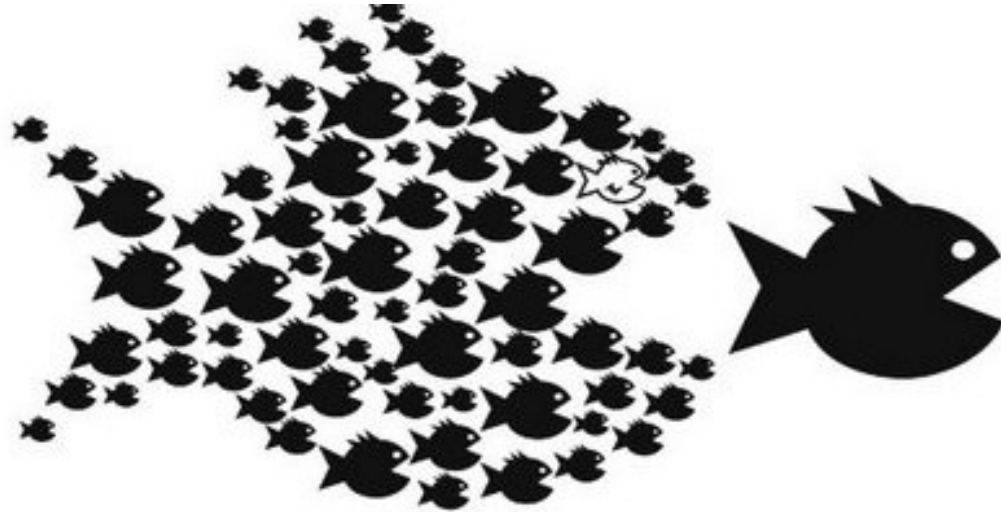


Source: <https://grid.files.wordpress.com/2011/02/no-water-privatization.jpg>



Source: <http://memolition.com/wp-content/uploads/2014/07/nestle-ceo-says-water-is-not-a-human-right-we-say-no-to-water-privatization->

What to do?



ORGANIZE!

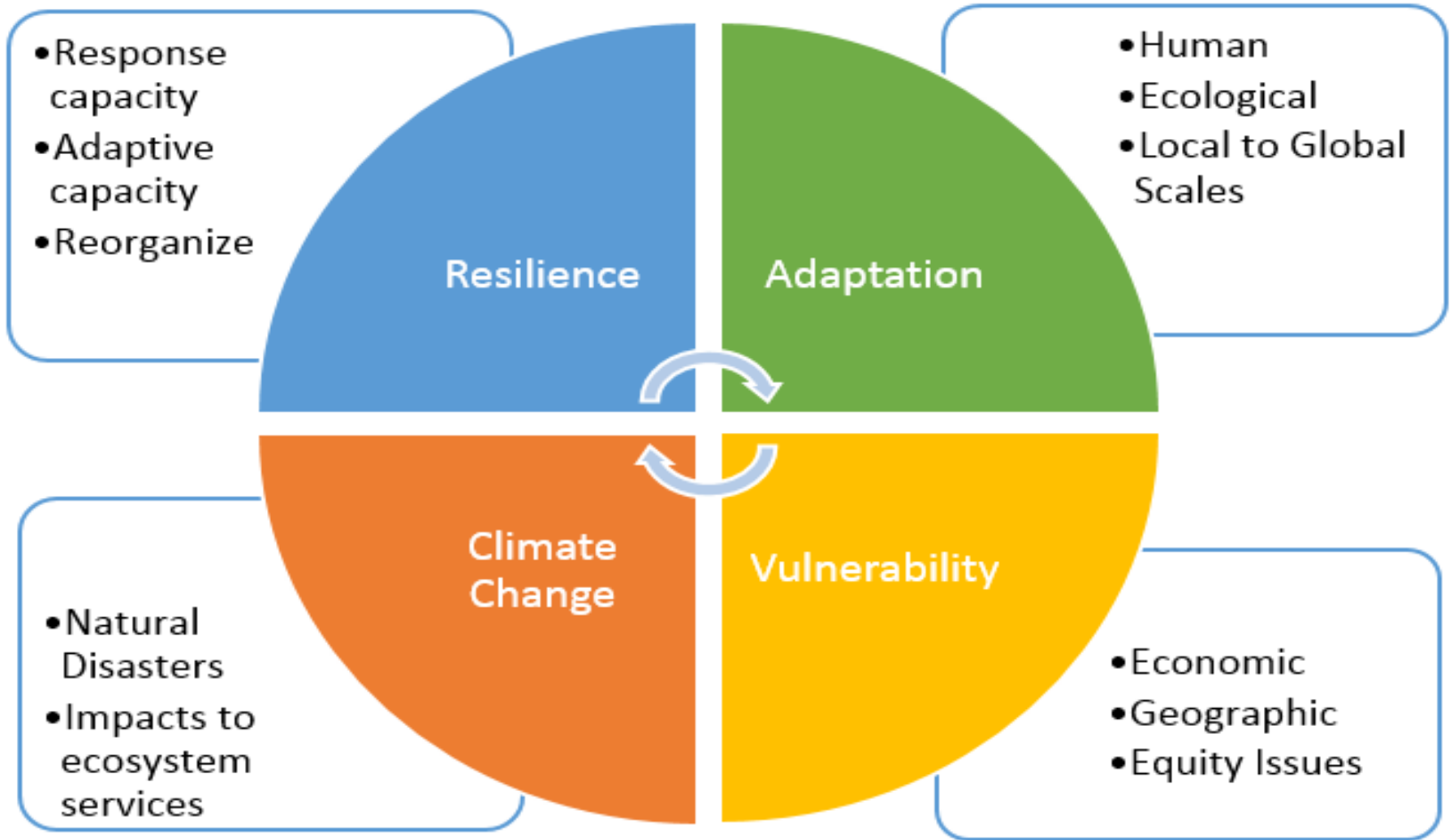
RESILIENCE

The capacity to **prepare** for disruptions, **recover** from shocks and stresses, and **adapt** and **grow** from a disruptive experience.

*#Rebuild***BETTER**



Source: EJCW (on file)



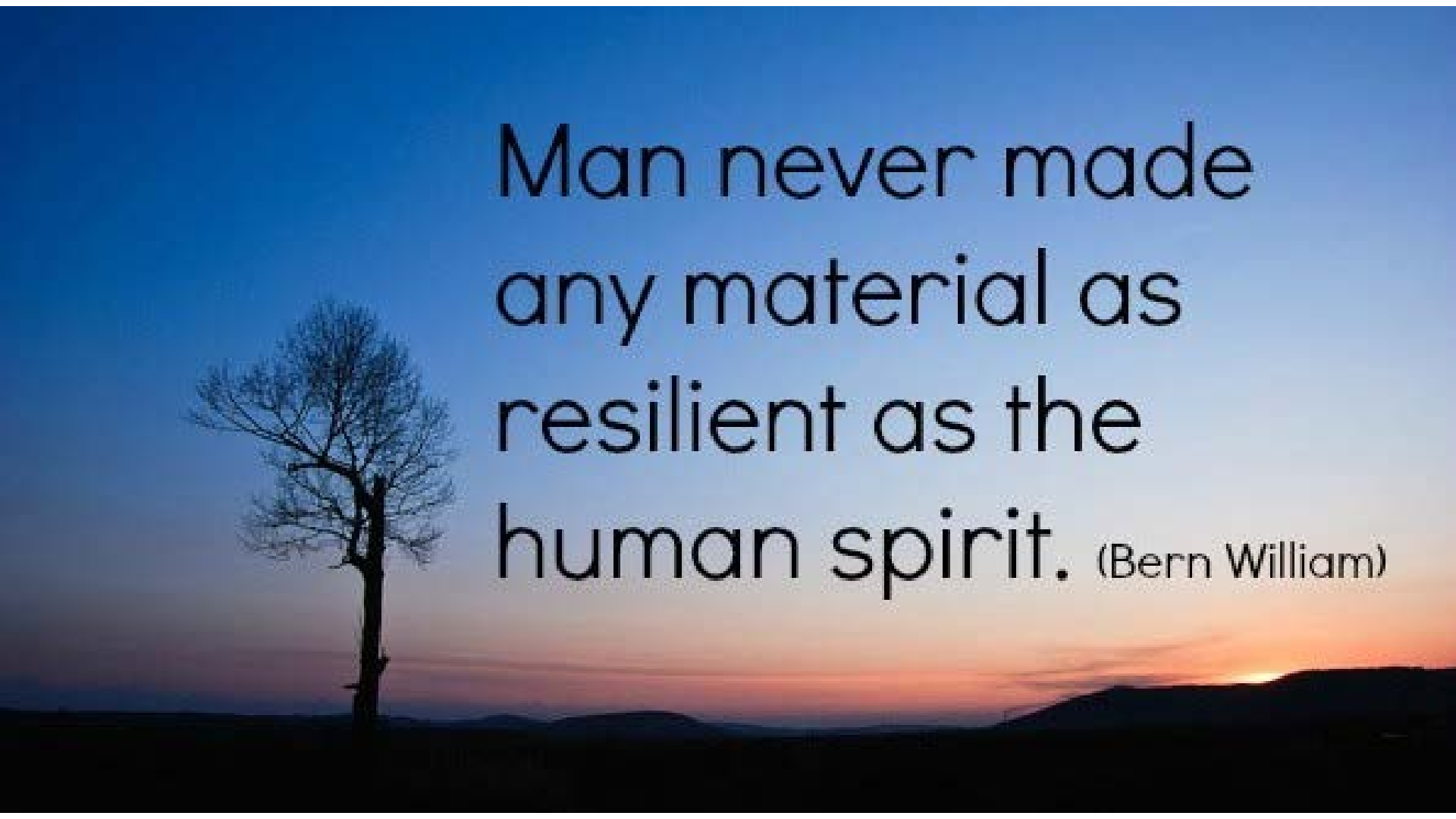
Source: https://upload.wikimedia.org/wikipedia/commons/a/ad/Climate_Resilience_Model.PNG



Source: <https://www.nccs.gov.sg/nccs-2012/images/chapter-4/resilience-framework.jpg>



Source: <https://civicexplorer.wordpress.com/2010/04/01/social-ecological-urban-resilience/>

A silhouette of a tree stands on the left side of the image, set against a background of a sunset sky. The sky transitions from a deep blue at the top to a warm orange and red near the horizon, where the sun is partially visible. The foreground is dark, showing the silhouette of the ground and distant hills.

Man never made
any material as
resilient as the
human spirit. (Bern William)

Angela Mooney D'Arcy

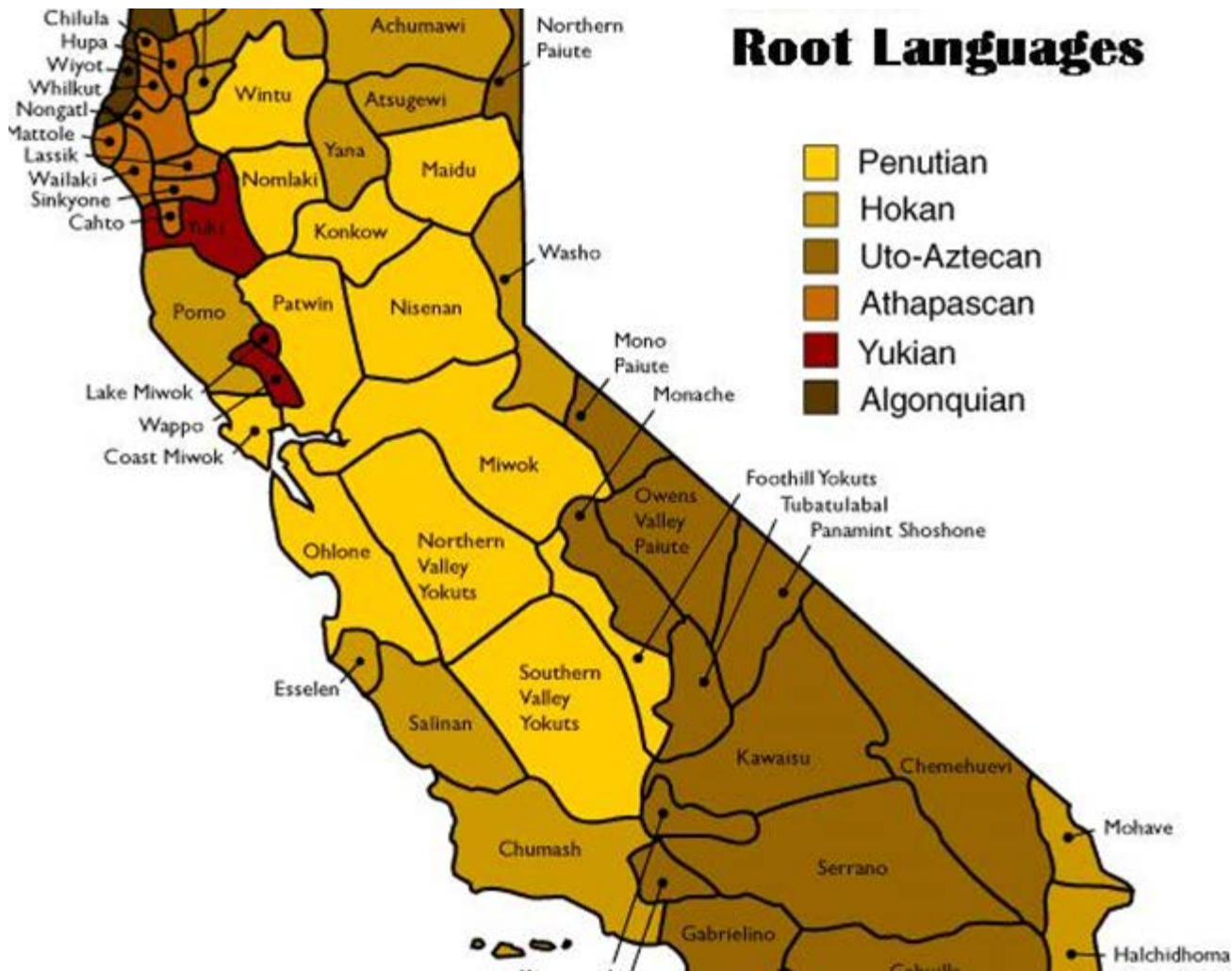
**Acjachemen Nation, Juaneño Band of
Mission Indians**

**Sacred Places Institute for Indigenous
Peoples**

Water Is Life

Indigenous Resilience, Traditional Knowledge, Climate Change, and
Meaningful Engagement with Native Nations

Map of California Native American Tribes



Indigenous Resilience

“According to HeavyRunner and Marshall (2003), every indigenous language has a word that means resilience.... Strong mind, strong will, and a strong and good heart – these are characteristics that resilient Native Americans possess in dealing with a lifetime of prolonged and near constant adversity.”

- Native American Resilience, Tawna Skousen, PhD

Resilience of California Native Nations

“That a war of extermination will continue to be waged between the races, until the Indian race becomes extinct, must be expected. While we cannot anticipate this result but with painful regret, the inevitable destiny of the race is beyond the power or wisdom of man to avert. “

- Governor Peter H. Burnett, January 7, 1851, (as cited in Johnson-Dodds, Early California Laws and Policies Related to California Indians, 2002)

Resilience of California Native Nations: Executive Order B-10-11

WHEREAS California is home to many Native American Tribes with whom the State of California has an important relationship, as set forth and affirmed in state and federal law; and

WHEREAS the State of California recognizes and reaffirms the inherent right of these Tribes to exercise sovereign authority over their members and territory;

.....

IT IS FUTHER ORDERED that the Office of the Governor shall meet regularly with the elected officials of California Indian Tribes to discuss state policies that may affect tribal communities.

Resilience of California Native Nations: Executive Order B-10-11

IT IS FURTHER ORDERED that it is the policy of this Administration that every state agency and department subject to my executive control shall encourage communication and consultation with California Indian Tribes. Agencies and departments shall permit elected officials and other representatives of tribal governments to provide meaningful input into the development of legislation, regulations, rules, and policies on matters that may affect tribal communities.

For purposes of this Order, the terms “Tribe,” “California Indian Tribe”, and “tribal” include all Federally Recognized Tribes and other California Native Americans.

Terrie Green & Douglas Mundo
Shore Up Marin



**SHORE UP
MARIN**



Shore Up Marin

OUR VISION

An inclusive, equitable future where we have successfully adapted to climate change and sea level rise in Marin County, Bay Area, and beyond.

OUR MISSION

Shore Up Marin is a multi-racial environmental coalition advocating for equitable inclusion of low-income communities around planning and community preparedness.

FOCUS AREAS

Emergency Preparedness, Flooding and Hazard Mitigation, Sea Level Rise and Climate Adaptation, Water Quality and Social Equity.



WHO ARE WE?

Partnership of **Earth Day Marin, Canal Welcome Center, Marin City Martin Luther King Jr. Coalition, GreenUp Learning and Marin Asian Advocacy Project.**

The Coalition has identified key community concerns related to sea level rise, educated community members about resources and solutions, and fostered dialog, inclusion and understanding between diverse stakeholders.



Tameeka Bennett

Youth United for Community Action



YUCA

Youth United for Community Action

MISSION: Youth United for Community Action (YUCA), a grassroots community organization created, led, and run by young people of color, majority from low-income communities, provides a safe space for young people to empower ourselves and work on environmental and social justice issues to establish positive systemic change through grassroots community organizing.

Activities: Developing Leaders, Organizing Our Community, Taking Action

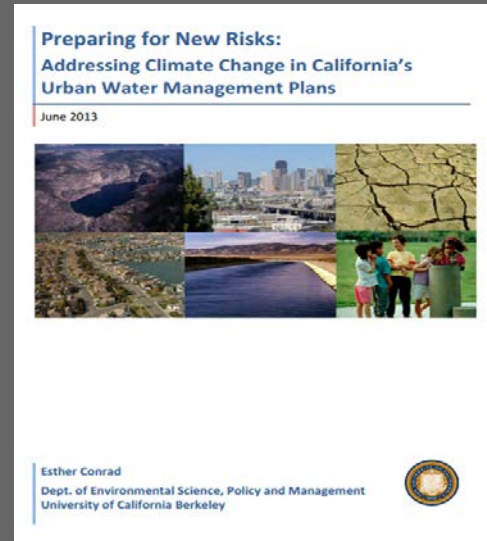
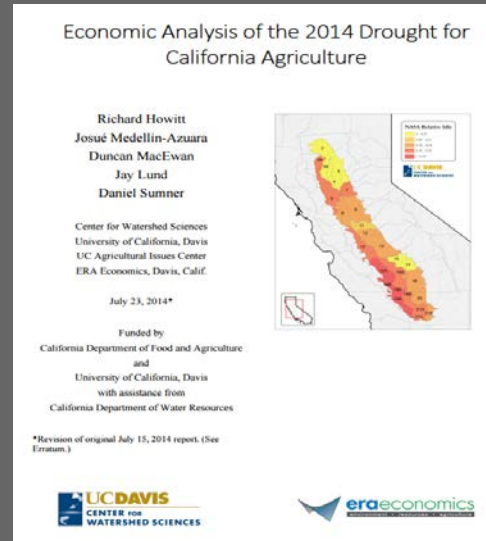
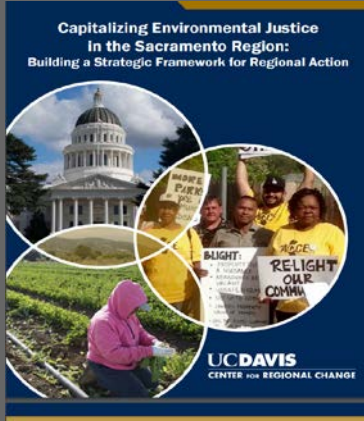
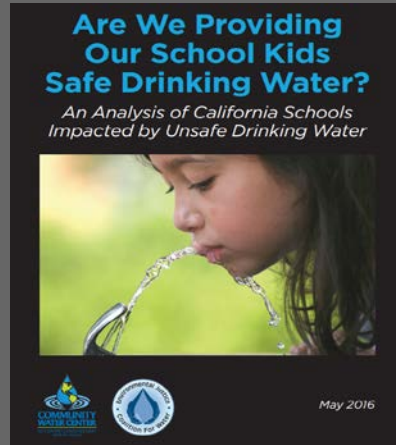
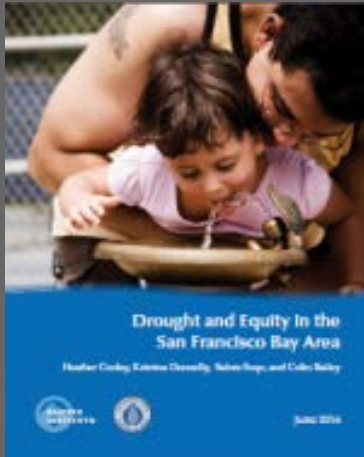
Water Challenges: Quality, Quantity/Supply, Flood Risk, Sea Level Rise, Affordability



Amanda Fencil

University of California, Davis

WHAT ARE RESEARCHERS/ SCIENTISTS DOING TO BUILD RESILIENCE AMONG CALIFORNIA'S WATER USERS?



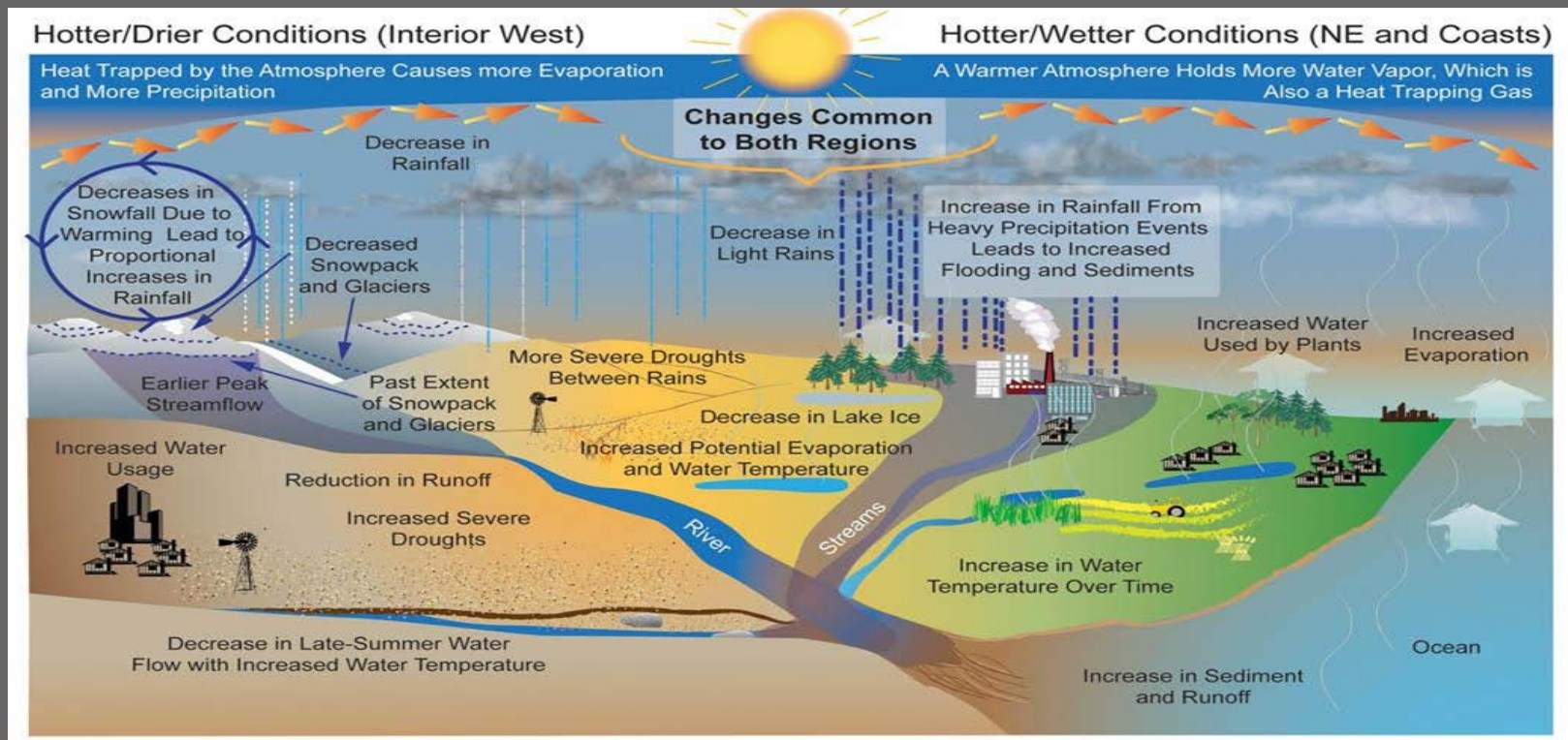
MOVING FROM ANECDOTAL TO SCIENTIFIC EVIDENCE

“We had a lot of anecdotal information, and we really just didn’t have anything that said, in a statistically valid way, that this drought was having an effect on people’s physical health, on their mental health. For me, I think **validating those concerns was a very important outcome.**” - David Rozell,

Tulare County’s public health emergency preparedness manager

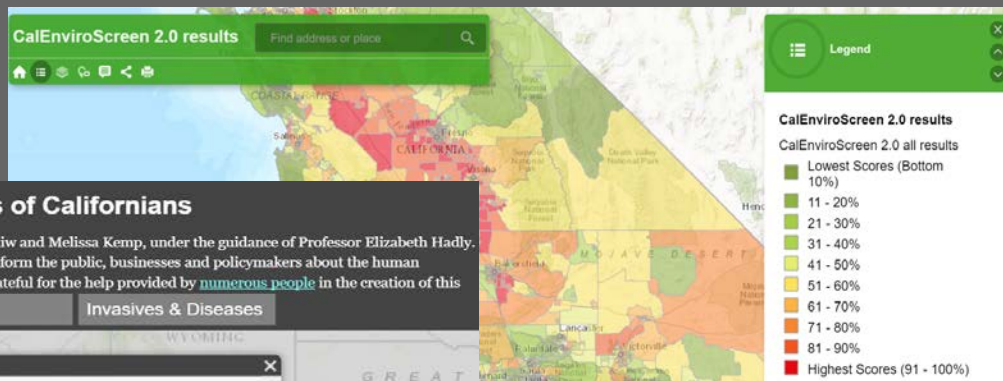
BUILD RESILIENCE AND ADAPT TO WHAT CHANGES?

RESEARCHERS IDENTIFY, QUANTIFY, MEASURE PROJECTED CHANGES IN THE WATER CYCLE



BUILD RESILIENCE AND ADAPT TO WHAT CHANGES?

RESEARCHERS IDENTIFY, QUANTIFY, MEASURE WHO IS EXPOSED AND VULNERABLE TO CHANGES



Geographic Impacts of Global Change: Mapping the Stories of Californians

This Story Map was created by a group of Stanford students led by graduate student instructors Alexis Mychajliw and Melissa Kemp, under the guidance of Professor Elizabeth Hadly. Here we present how forces of global change are manifested locally throughout California, with the intent to inform the public, businesses and policymakers about the human dimensions of environmental change. By clicking a point on the map, a narrative is revealed. We are deeply grateful for the help provided by [numerous people](#) in the creation of this

- Climate Disruption
- Population Change
- Biodiversity Loss
- Pollutants
- Invasives & Diseases

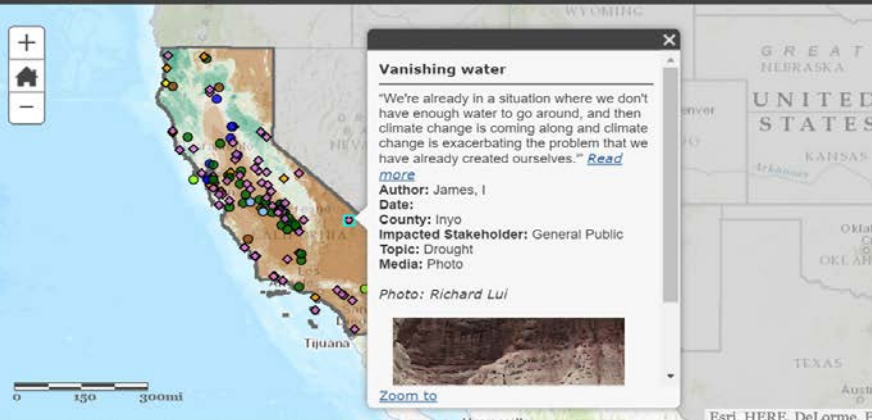
Climate Disruption

Ongoing climate disruptions mainly result from greenhouse gas (GHG) emissions from human activities such as the burning of coal, natural gas, oil, and their byproducts. Increased GHG emissions have raised average global temperatures that are triggering varied weather.

LEGEND

Impacted Stakeholders

- Business Owners
- City/ Agency Management
- Commercial Fishermen
- Conservationists
- Farmers



RESEARCH QUESTIONS

How has the drought impacted water quality? How will climate change exacerbate water quality threats?

To what degree are utilities prepared for the drought's impacts on water quality and supply?

To what extent are California's existing drinking water disparities exacerbated by the drought?

CERTAIN SYSTEMS AND COMMUNITIES IN THE STATE FACE SEVERE DRINKING WATER ACCESS AND QUALITY INJUSTICES.



Smaller CWS serving larger % of Latinos and renters face higher nitrate levels (Balazs et al.2011)

↓ GW levels aggravate contamination

(Criss and Davisson 2004).

Droughts contribute to

↓ GW levels.

CWS Nitrate Levels 2006-2010

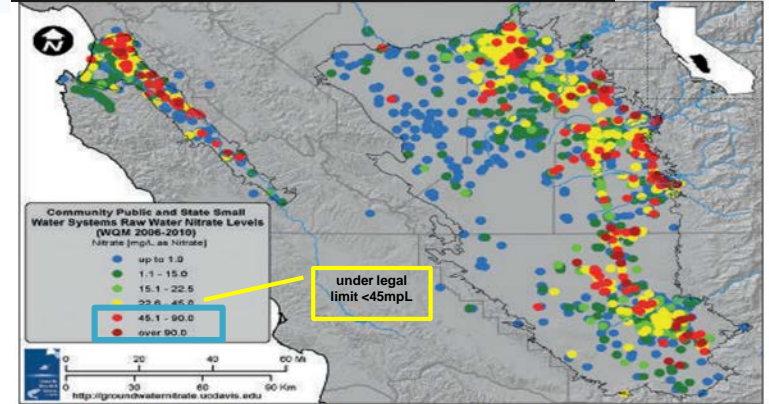
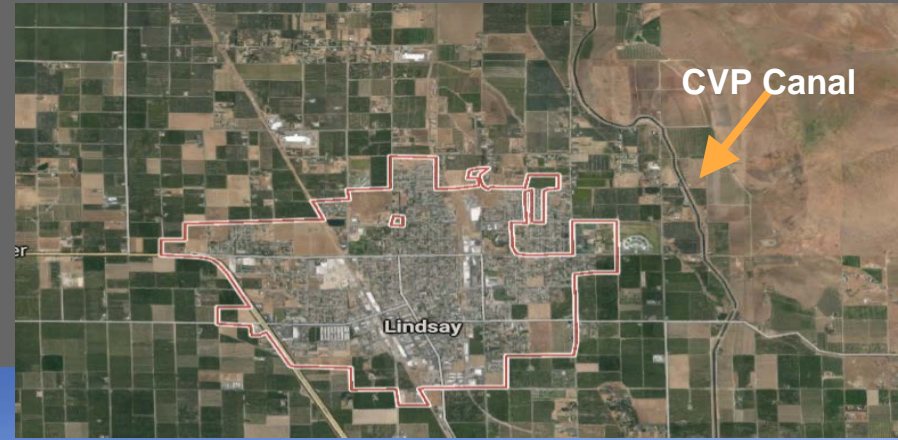


Figure 1. Maximum reported raw-level nitrate concentration in community public water systems and state-documented state small water systems, 2006-2010. Source: CDPH PICME WQM Database (see Honeycutt et al. 2011).

LINDSAY, CA

THE CENTRAL VALLEY PROJECT SUPPLIES
RAW WATER TO SEVERAL COMMUNITIES
IN C. VALLEY VIA FRIANT-KERN CANAL





Drought dries rural wells, residents carry water in buckets

The California Towns Without Safe Drinking Water

Bitter disputes in the municipal politics of California's drought-ridden San Joaquin Valley have kept the poorest areas from consolidating water systems.



Severe water shortages

State health officials on Tuesday identified 17 small community water districts in 10 counties that are at risk of running out of water in 60-120 days due to the drought.



- 1 AMADOR COUNTY**
 - Jackson Valley Irrigation District
- 2 FRESNO COUNTY**
 - Shaver Lake Heights Mutual Water Co.
 - Sierra Cedars Community Services District
- 3 KERN COUNTY**
 - Boulder Canyon Water Association
 - Camp Condor
 - Cypress Canyon Water System
 - Lake of the Woods Mutual Water Co.
- 4 MADERA COUNTY**
 - Bass Lake Water Co.
- 5 MARIPOSA COUNTY**
 - Whispering Pines Apartments
- 6 MENDOCINO COUNTY**
 - Brooktrails Township Community Services District
 - Redwood Valley Community Water District
 - Willits
- 7 NEVADA COUNTY**
 - Washington Ridge Conservation Camp
- 8 PLACER COUNTY**
 - Ophir Gardens
- 9 SANTA CRUZ COUNTY**
 - Lompico County Water District
- 10 SONOMA COUNTY**
 - Cloverdale
 - Healdsburg



CURRENT DROUGHT

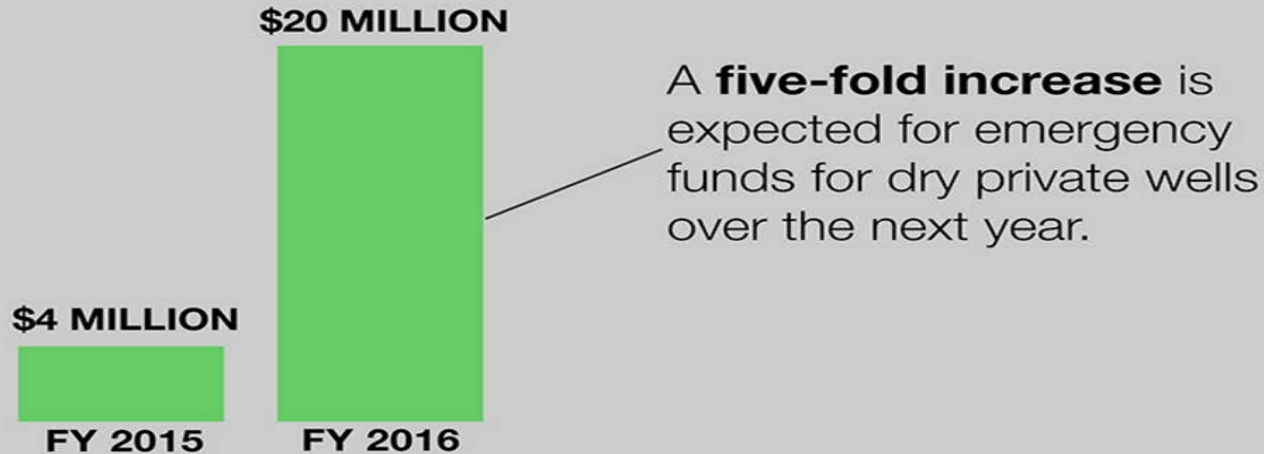
“California is no stranger to disaster, and that won't change over the next 25 years. In fact, things may get worse. [...] As traditional water supplies become less reliable, the state's collective thirst will continue to grow” (Totten 2015).



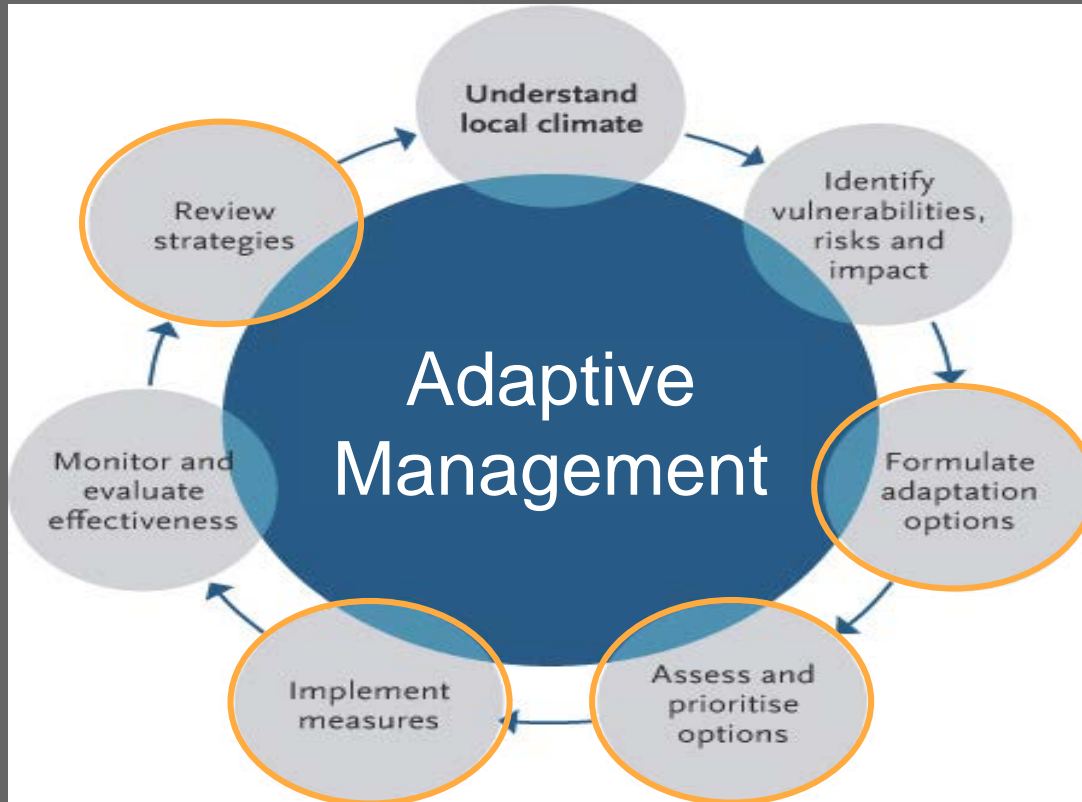
DATA COLLECTION + RESEARCHERS TO DETERMINE SEVERITY OF PROBLEM| ARGUE FOR ADDITIONAL RESOURCES

Funding for Dry Private Wells

The California Office of Emergency Services estimates that it will have spent an additional \$4 million on residents with dry private wells during the same time period. The funds are used to buy bottled water or to install 1,500-gallon tanks that can then be filled by water-truck delivery. By law, the state cannot pay for a new private well.



WHERE ARE COMMUNITY MEMBERS BUILDING RESILIENCE ALONGSIDE RESEARCHERS?



“I think these studies and surveys are great to the extent they can help get information out to people. My question would be, **how are we going to use it to help people?**” - Susana De Anda, CWC

*PARTICIPATORY
RESEARCH AND
ADAPTIVE MANAGEMENT*

Source: <https://www.nccs.gov.sg/nccs-2012/images/chapter-4/resilience-framework.jpg>

Audience participation

Question & Answer

Prompt: What organizing strategies are you seeing your community to build resilience to the water-related impacts of climate change?

Conclusion



Thank you!

Angela Mooney D'Arcy, <http://www.sacredplacesinstitute.org/>

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