Wither the Water?
Community organizing for justice and resilience to the water-related impacts of Climate Change

2\textsuperscript{nd} 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 Fencl, University of California, Davis (Davis)

Moderator: Colin Bailey, The Environmental Justice Coalition for Water
re·sil·i·ence  
rəˈzil·əns/  
noun

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

Source: https://www.google.com/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=resilience
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.

Source: https://en.wikipedia.org/wiki/Climate_resilience
SERIOUS DROUGHT
HELP SAVE WATER
Toxic Algal Bloom

Source: http://static1.techinsider.io/image/55c4e9152ace711008be367-1920-1150/noaaview_chloro_july2015_lrg.jpg
CO2 Caused Climate Change

More Permafrost Melt

More Sunny & less Ice Days

More Photosynthesis

Increased H₂O Temperature

More Nutrients in H₂O

Sewer Run-off

CYANOBACTERIAL BLOOMS

Source: https://seagrant.uaf.edu/nosb/papers/2011/images/bullheads-fig1.gif
No Water Privatization
What to do?

RESILIENCE

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

#RebuildBETTER
Agua Limpia es un Derecho Humano!

Clean Water

Help Californians who Lack Safe Water

SUPPORT THE HUMAN RIGHT TO WATER

Source: EJCW (on file)
### Climate Resilience Model

**Resilience**
- Response capacity
- Adaptive capacity
- Reorganize

**Adaptation**
- Human
- Ecological
- Local to Global Scales

**Climate Change**
- Natural Disasters
- Impacts to ecosystem services

**Vulnerability**
- Economic
- Geographic
- Equity Issues

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

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
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 FencI
University of California, Davis
WHAT ARE RESEARCHERS/SIENTISTS 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

Source: https://www.newsdeeply.com/water/articles/2016/06/16/is-drought-causing-a-health-crisis-in-california
BUILD RESILIENCE AND ADAPT TO WHAT CHANGES?
RESEARCHERS IDENTIFY, QUANTIFY, MEASURE
PROJECTED CHANGES IN THE WATER CYCLE

Source: https://www3.epa.gov/climatechange/images/impacts-adaptation/WaterCycleChanges.jpg
BUILD RESILIENCE AND ADAPT TO WHAT CHANGES?
RESEARCHERS IDENTIFY, QUANTIFY, MEASURE WHO IS EXPOSED AND VULNERABLE TO CHANGES

http://stanford.maps.arcgis.com/apps/StorytellingTextLegend/index.html?appid=dafe2393fd2e4acc8b0a4e6e71d0b6d5
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 %s 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.

LINDSAY, CA

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

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

Mydrywatersupply.water.ca.gov
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.

A five-fold increase is expected for emergency funds for dry private wells over the next year.

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

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

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