California Extreme Heat Symposium Synopsis

Extreme Heat in California

California's best climate science predicts that higher average temperatures and more frequent and severe heatwaves will impact every corner of the state in the years and decades to come. For some Californians, extreme heat is an immediate stressor, impacting public health and safety, economic prosperity, and communities and natural systems – with profoundly disproportionate consequences for the most vulnerable Californians. In September, California experienced the most severe heatwave ever recorded, foreshadowing what is to come across more parts of the state and with greater frequency.

California is meeting the urgency of this threat through coordinated policy action, legislation, and a record $865 million investment. In April 2022, the State released an updated Extreme Heat Action Plan, which outlines a strategic and comprehensive set of actions to adapt and strengthen resilience to extreme heat. During September's record heatwave, Flex Alerts successfully averted a loss of electrical grid reliability by encouraging Californians to contribute to demand reduction. Additionally, Governor Newsom signed several climate bills into law, including creating a first-in-the-nation extreme heat ranking and notification system and directing research into the effects of extreme heat on California's workers and economy.

2022 Extreme Heat Symposium

Building on this progress, in October, the California Natural Resources Agency (CNRA) and Governor's Office of Planning and Research (OPR) hosted the State's first Extreme Heat Symposium with the aim of informing heat adaptation decision-making and actions across sectors and regions, including the implementation of California's Extreme Heat Action Plan and OPR's recently-established Extreme Heat and Community Resilience Program. The event harnessed the collective power of community leaders, State policymakers, scientists, and members of the public, and set the stage for extreme heat action in California in the coming years. This Synopsis captures key highlights of the event.

Key Takeaways from the Symposium

Building a reliable and safe energy system for the future

- Supporting an energy system that is resilient to extreme heat requires early scenario planning and coordination to ensure our built environment can withstand heat events and is reliable and safe for all Californians.

- Historical energy data does not clearly predict future trends, necessitating research into demand and supply side scenarios to understand procurement required and changes to energy consumption.

- Accounting for the effects of compounding climate impacts on the grid, such as concurrent heatwaves and wildfires or heatwaves when water stores (and by extension, hydropower capacity) are low, poses additional challenges.

- Making our grid reliable with each unique event, season, and context will require balancing tradeoffs and utilizing data to meet these challenges.

Re-imagining communication to reach all

- Keeping communities safe during extreme heat events requires effective and targeted public notifications and awareness campaigns.

- Communication about extreme heat needs to encompass both discrete events and the impacts of sustained heat exposure because both ultimately impact public health and safety.

- To reach all populations across California, linguistically- or culturally-sensitive approaches that consider geography and leverage trusted messengers will provide targeted messaging to hard-to-reach audiences. Due to the differences in how people access and trust information sources, diversification of communications channels and technology platforms is key.

- Robust community engagement can inform strategies that respond to culturally and geographically diverse needs.

- Finally, a promising and important next step for California's extreme heat communications is the creation of the nation's first extreme heat ranking and warning system, as required by AB 2238 (L. Rivas, 2022).

Addressing historical and racial inequities to address extreme heat

- Extreme heat's impacts are not experienced equally across California; rural and disadvantaged communities and California Native American Tribes experience disproportionate impacts.

- In some cases, there is a direct overlay of communities subject to redlining and disinvestment and communities experiencing more extreme heat events. These communities often have less tree canopy, fewer cooling centers, less green space, higher urbanization and asphalt or pavement cover, and poorer housing conditions.

- The State's grant programs, hiring practices, and other policy levers can advance racial equity and dismantle historic inequities through continued investment, technical assistance, engagement, and outreach that centers vulnerable populations and provides them decision-making power and ownership.

- Solutions need to meet community needs and include public health interventions.

Scaling innovative solutions to yield real progress

- Reducing the severity of extreme heat events is possible through nature-based solutions. In addition to their cooling benefits, practices like greening schoolyards, regenerative agriculture, and urban forestry have numerous co-benefits that include improving air quality, quality of life, and access to the outdoors.

- In addition to natural infrastructure's direct and indirect climate benefits, innovative materials and technologies for our built environment, such as cool roofs and cool pavements, can cool communities and improve livability.

- Solutions to cooling communities can have more profound benefits if they center goals and outcomes around improving social infrastructure and community cohesion. Examples of such strategies include resilience hubs, re-imagined cooling centers, and youth training corps programs and workforce development opportunities, as well as attention to inclusive and equitable decision-making and power-sharing processes and procedures.

Conclusion

All Californians will be impacted in the years to come by higher average temperatures and more frequent and life-threatening heat waves, impacting public health and safety, economic prosperity, and communities and natural systems. In partnership with communities, advocates, and implementing partners, the State remains focused on the implementation of the Extreme Heat Action Plan and advancing an all-of-government and all-of-California response to extreme heat.

To learn more about what was discussed during the Symposium, you can access the full recording of the event, a list of tools, data, and reports shared during the event, and selected speakers' contact information below:

- Symposium Recording

- Reports, data, tools shared and referenced throughout the symposium:
  - UCLA Heat Maps website
  - Sonoma Water – Carbon Free Water
  - Sonoma Water – Climate Adaptation Plan
  - CDFA Office of Farm to Fork newsletter
  - CDFA Office of Farm to Fork survey
  - CAL FIRE Urban and Community Forestry Program website
  - Public Health Institute's State of Equity
  - Cool Roof Rating Council

- Contact information for speakers and other experts:
  - Dr. David Eisenman – deisenman@mednet.ucla.edu
  - Dale Roberts – dale.roberts@scwa.ca.gov
  - Sara Bernal – sara.bernal@cdfa.ca.gov
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- Kristen Torres Pawling – kpawling@cso.lacounty.gov
- Sarah Schneider – sarah@coolroofs.org
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