

Heat Equity Policy: Inequities in Extreme Heat and Urban Heat Island Risks in Phoenix

Presentation to the Urban Heat Island/Trees and Shade Subcommittee
of the Environmental Quality and Sustainability Commission

City of Phoenix

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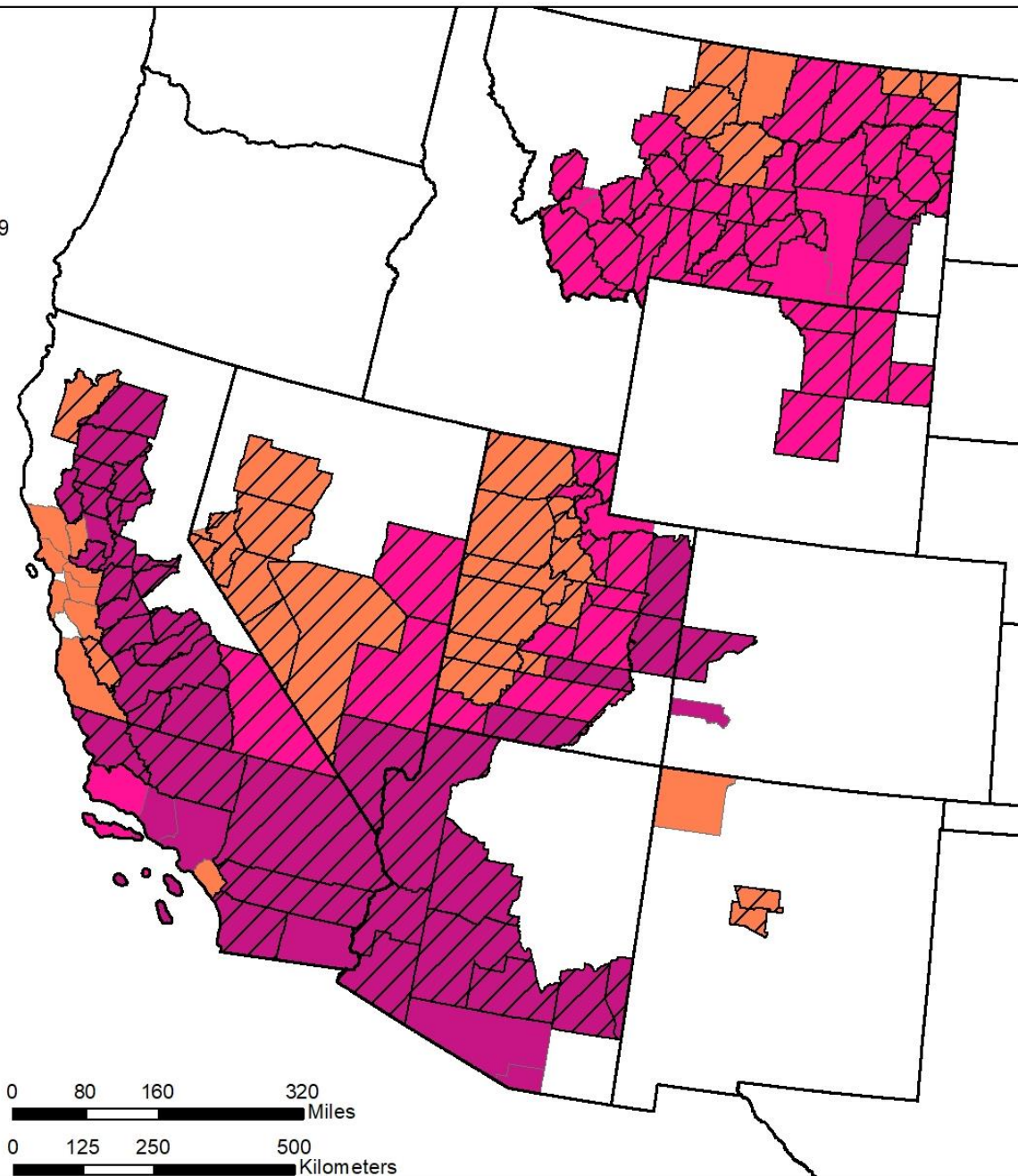
Finally, about half of the all-time high temperature records in the US occurred coincident with extreme drought. Dice are somewhat loaded, but still over a month from peak heat season

agupubs.onlinelibrary.wiley.com/doi/full/10.10...



National Weather Service alerts in counties (June 15, 2021)

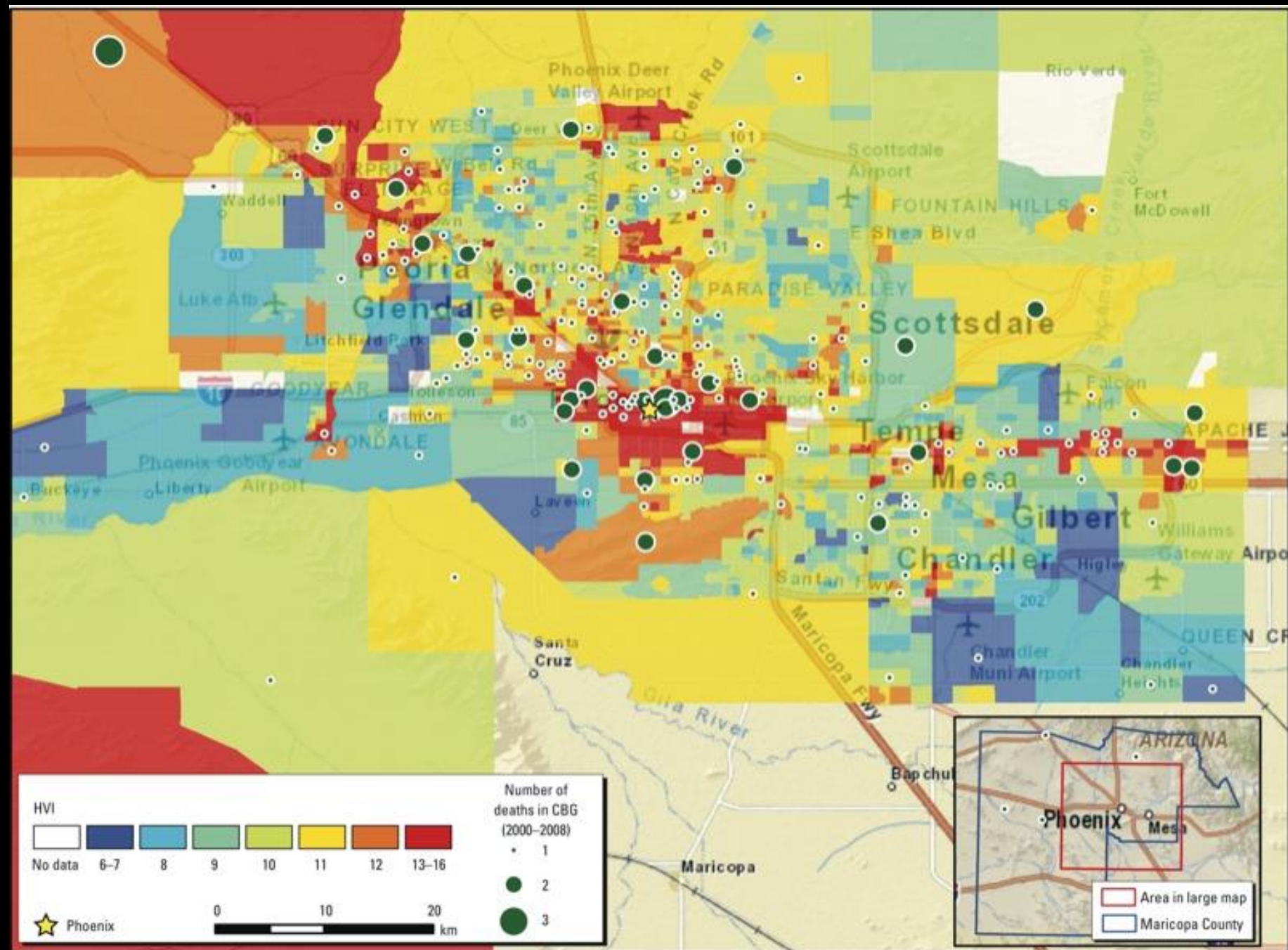
-  Excessive heat warning
-  Heat advisory
-  Fire weather
-  Percent fully vaccinated against COVID-19 under nat'l average (43.7%)



Data Sources: 1. Centers for Disease Control and Prevention. Fully Vaccinated Adults as of 6/15/2021. <https://data.cdc.gov/Vaccinations/Fully-Vaccinated-Adults/jm79-dz78>

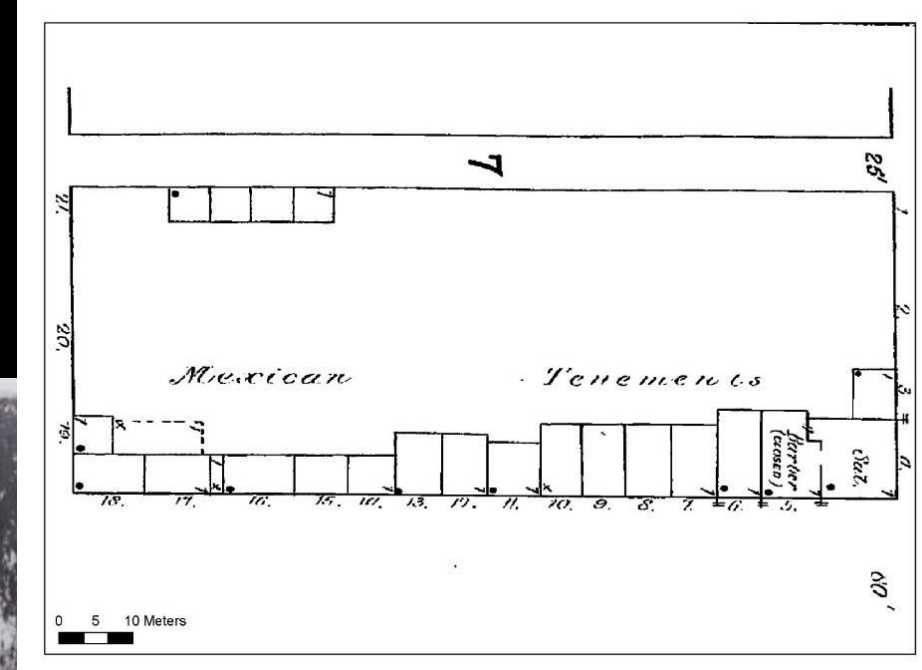
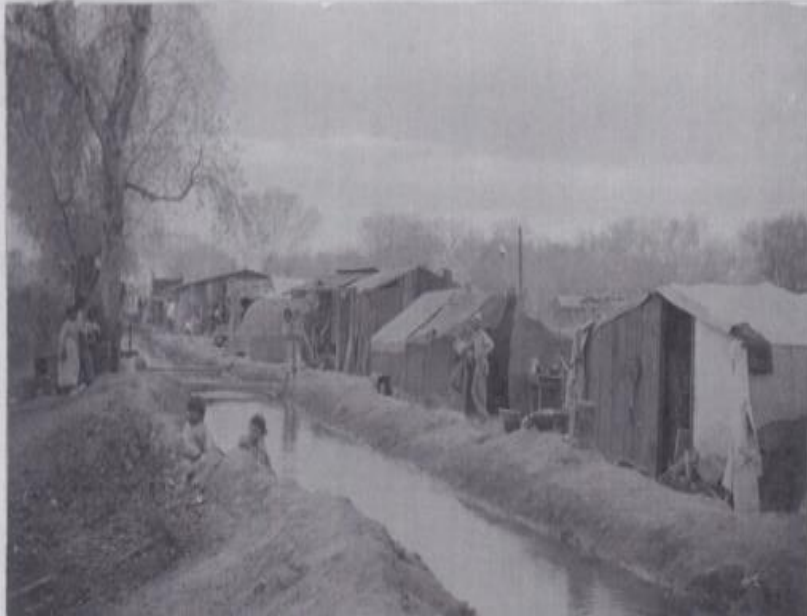
2. National Weather Service. Active Alerts as of 6/15/2021.

Inequitable distribution of Urban Heat Island health risks



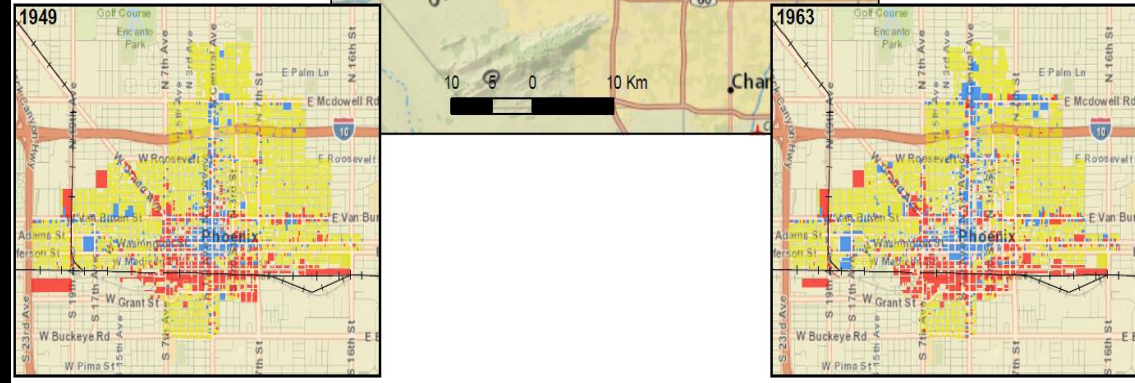
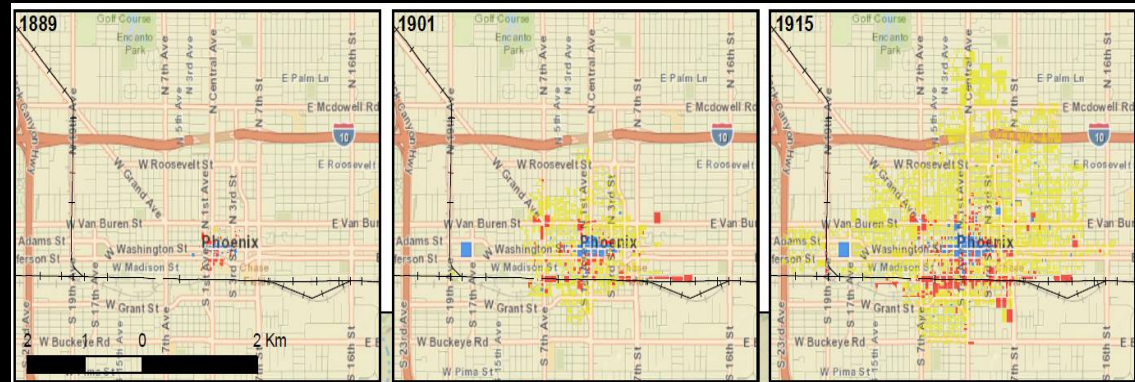
Environmental Injustices in Phoenix were created by urban development & racism

Barry M. Goldwater Historic Photograph Collection. Arizona Collection, Arizona State University Libraries.

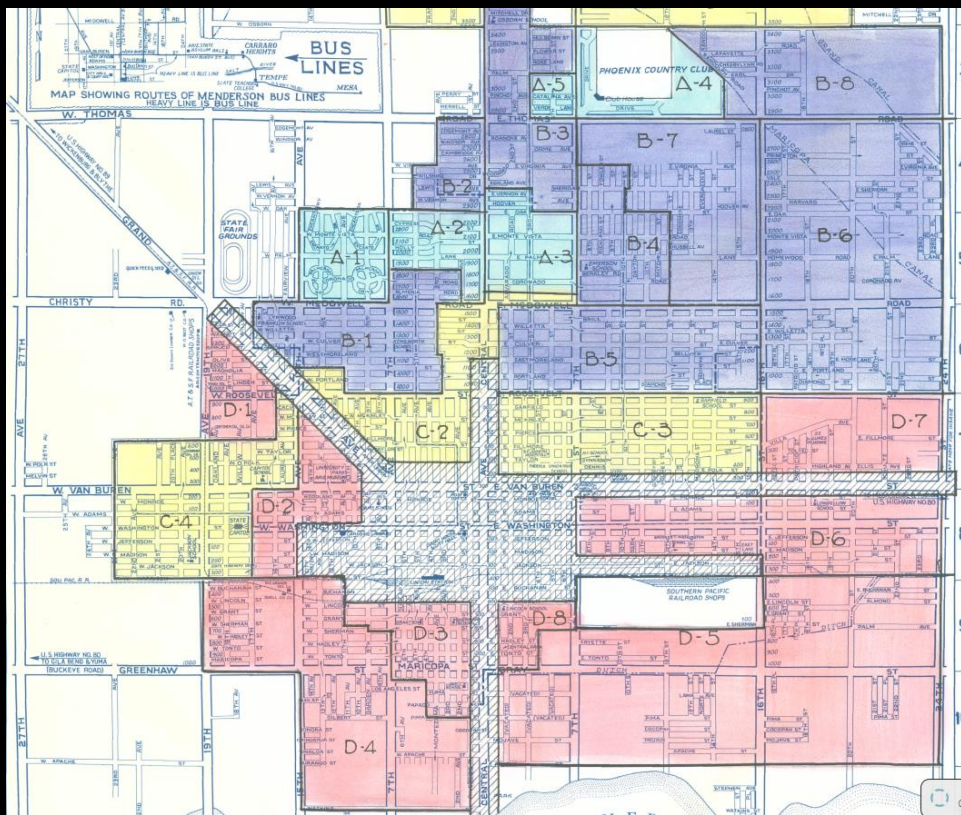


Oberle & Arreola (2008).

In the Negro section are some very good homes, considering their occupancy by colored people. Other houses in the area are cheap. There is within this area a mixed occupancy, including Mexicans, foreigners, etc.



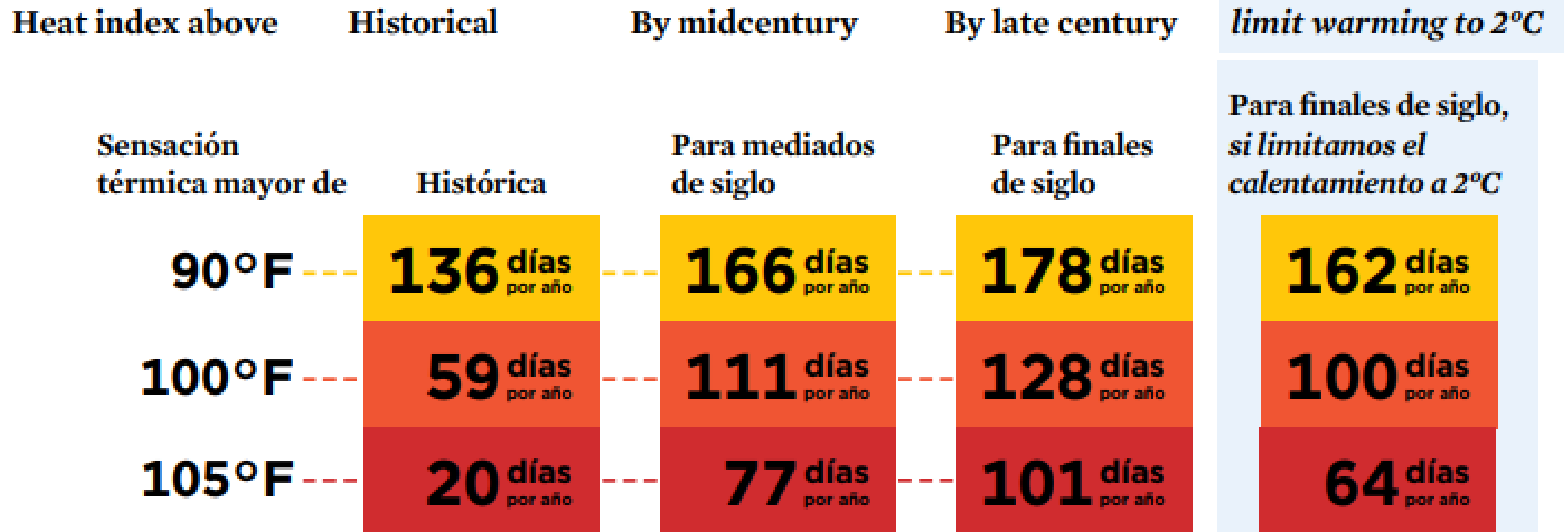
Declat-Barreto (2013).



Mapping Inequality: Redlining in New Deal America
<https://dsl.richmond.edu/panorama/redlining/#loc=5/39.1/-94.58>

With rapid & immediate action on climate we can limit the worst impacts for Phoenix

Annual Days of Extreme Heat Per Year in Arizona's 7th District



Heat Index
Above 90°F



Outdoor workers become more susceptible to heat-related illness.

Heat Index
Above 100°F



Children, elderly adults, pregnant women, and people with underlying conditions are at heightened risk of heat-related illness.

Heat Index
Above 105°F



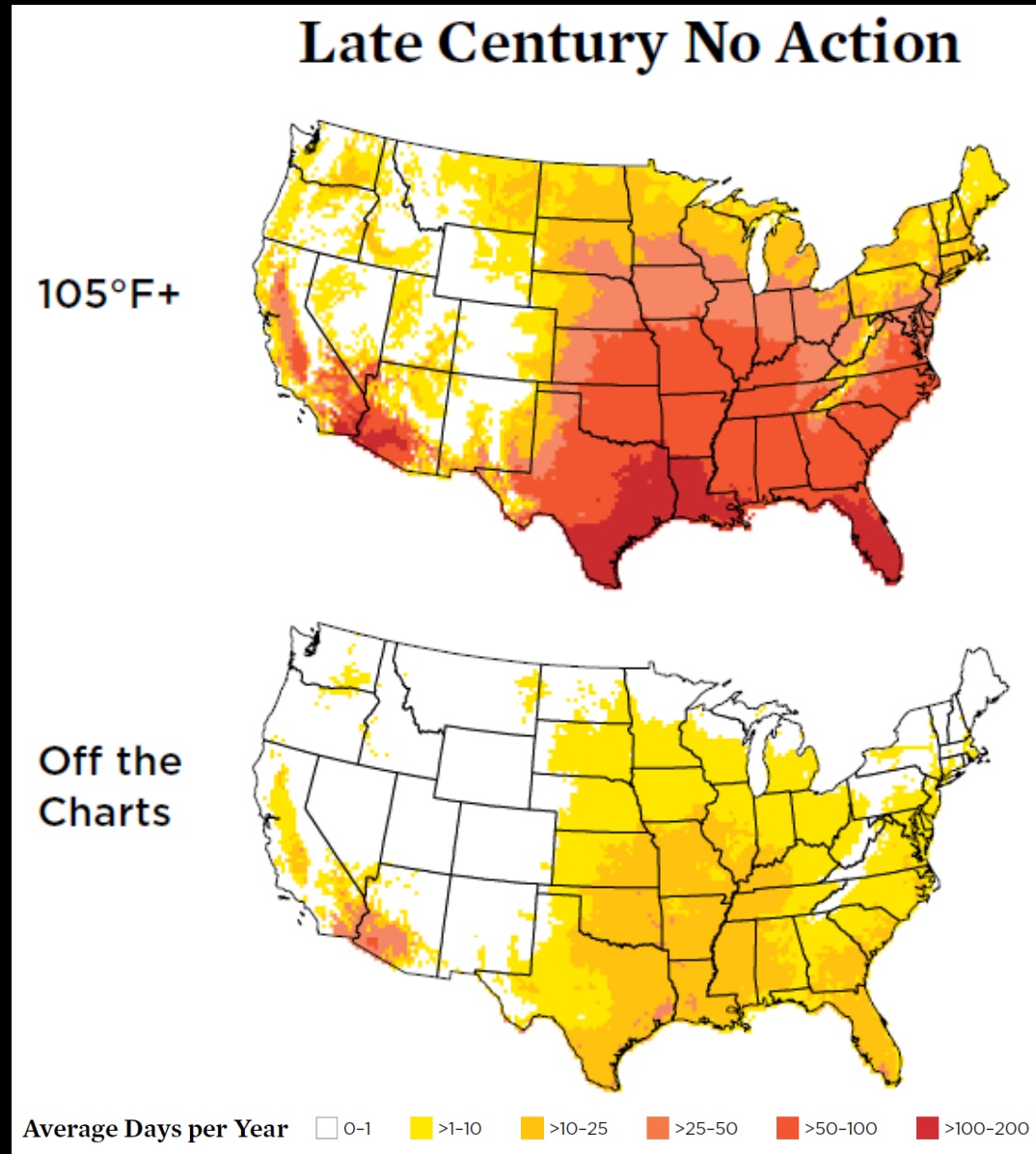
Anyone could be at risk of heat-related illness or even death as a result of prolonged exposure.

Heat Index
Off the Charts



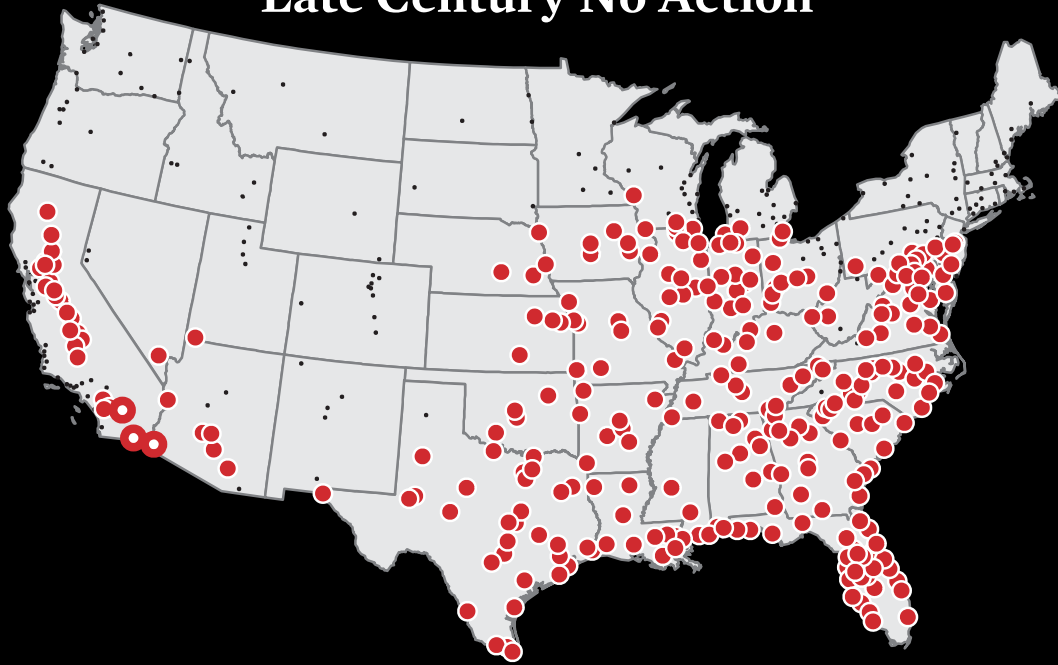
Undetermined: any level of exposure is presumed extremely dangerous for all people and likely to result in heat-related illness or even death.

Late century: Unprecedented heat



Taking action now would limit expansion of heat

Late Century No Action



Late Century Rapid Action



Cities Experiencing Heat Index >105°F

- More than 30 Days per Year
- More than 30 Days per Year, Historically
- Fewer than 30 Days per Year

Thank You!

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<https://blog.ucsusa.org/author/juan-declet-barreto/>

Resources

- Curated Phoenix timeline
<http://tommybleasdale.com/timeline/timeline.html>
- Oberle, A. P. and D. D. Arreola (2008). Resurgent Mexican Phoenix. *Geographical Review* 98(2),
- 171–196.