New Mexico Climate Impacts

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Water and Natural Resources Committee
New Mexico Legislature
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Photo: B. Ekwurzel

Difference between 1986–2016 and 1901–1960 average temperature

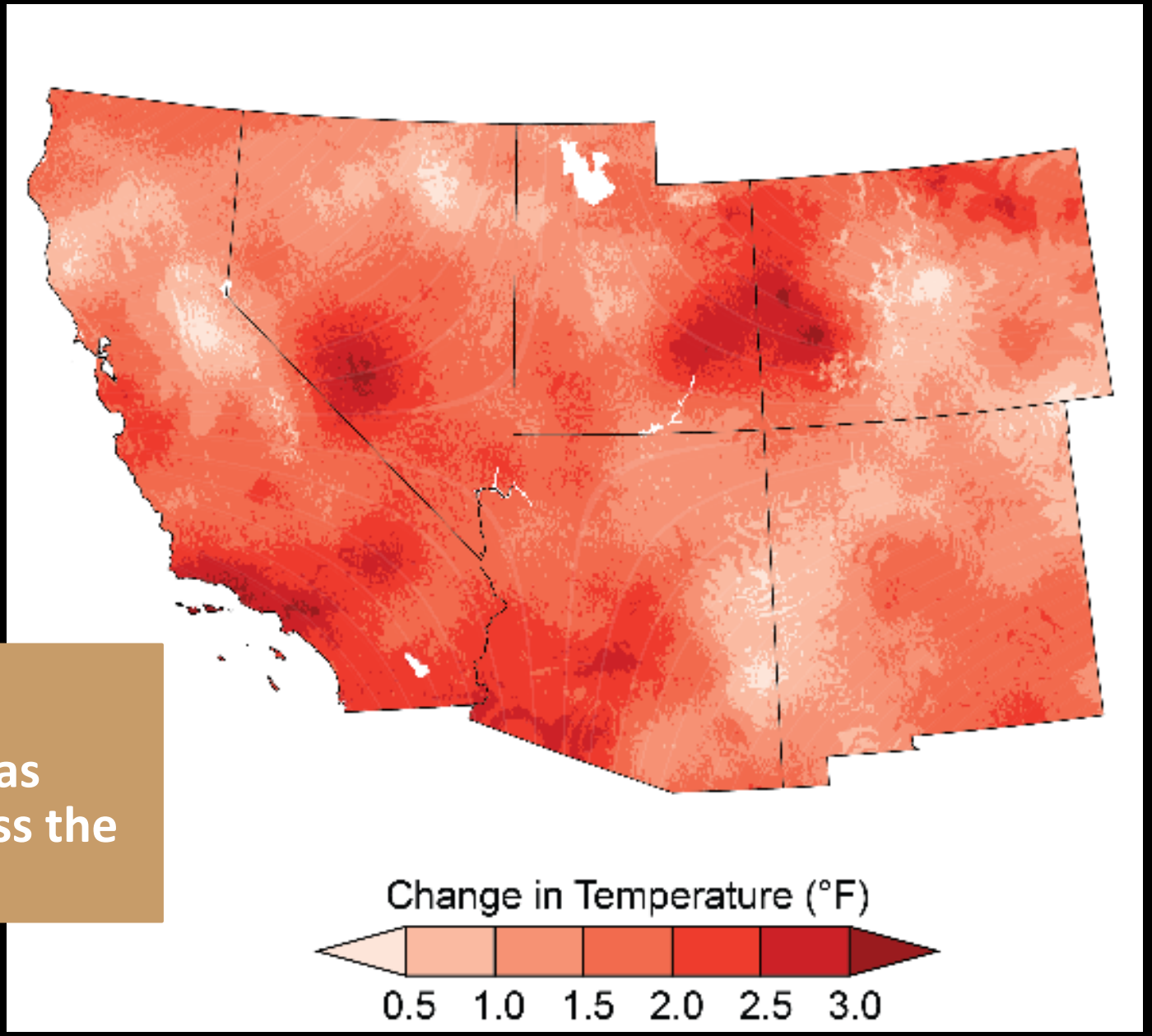

Fig. 25.1: Temperature Has Increased Across the Southwest

https://nca2018.globalchange.gov

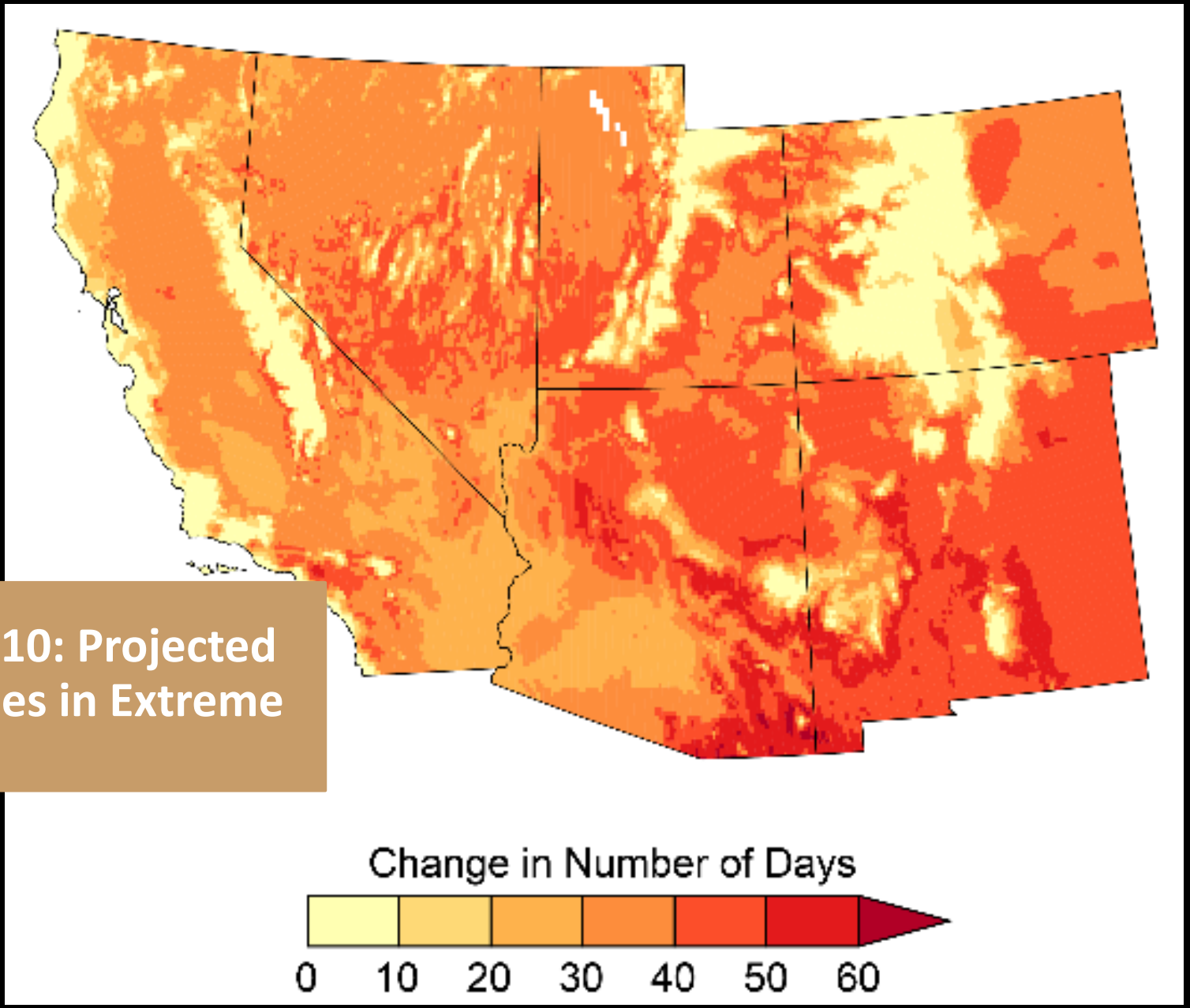

Fig. 25.10: Projected Increases in Extreme Heat

Days per year where the temperature exceeds 90°F by the period 2036–2065, compared to the period 1976–2005 under high emissions scenario RCP8.5

https://nca2018.globalchange.gov

TYPE IN YOUR LOCATION (CITY OR COUNTY)

Albuquerque, NM

CHOOSE HOW HOT

Above 90°

GO

WHERE WE ARE NOW	WHERE WE ARE CURRENTLY HEADED		WITH BOLD ACTION
Historically	**Midcentury**	**Late Century**	**Extreme Heat Limited to**
1971-2000 average	2036-2065 average	2070-2099 average	
17	68	105	60
DAYS PER YEAR	DAYS PER YEAR	DAYS PER YEAR	DAYS PER YEAR

Data are drawn from the July 2019 report, *Killer Heat in the United States: Climate Choices and the Future of Dangerously Hot Days*.

Photo: Rory Gauthier, NPS

Fig. 25.4: Climate Change Has Increased Wildfire

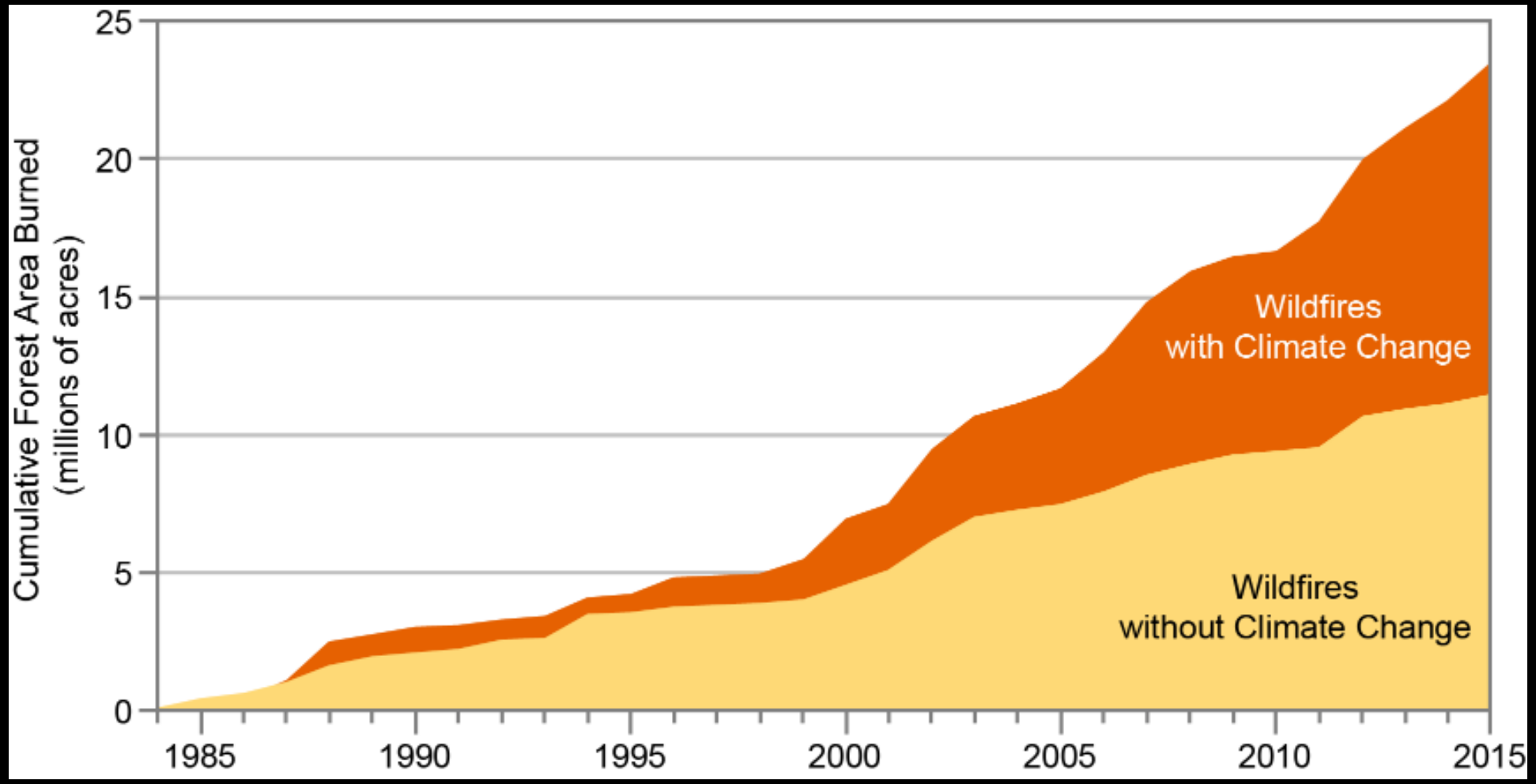

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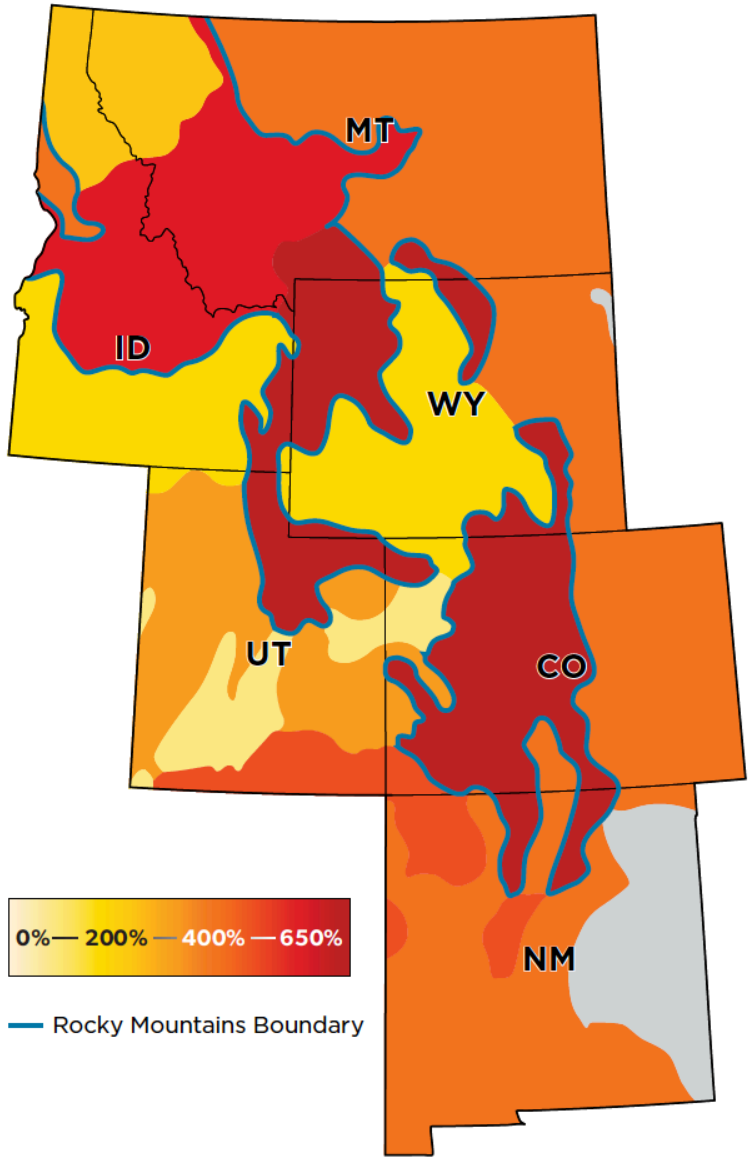
FIGURE 4. Projected Changes in Average Area Burned with a 1.8°F Rise in Average Temperature



Scientists project that a temperature increase of just 1.8°F will lead to marked increases in acreage burned by wildfires in the West. The figure shows the projected percentage increase in burned area, compared with the 1950–2003 average, for different ecological regions of the West, including the Rocky Mountains. (Grey indicates areas with insufficient data for making projections.)

SOURCES: ADAPTED FROM NRC 2011 AND LITTELL ET AL. 2009.

www.rockymountainclimate.org/reports_6.htm.

Wildfire

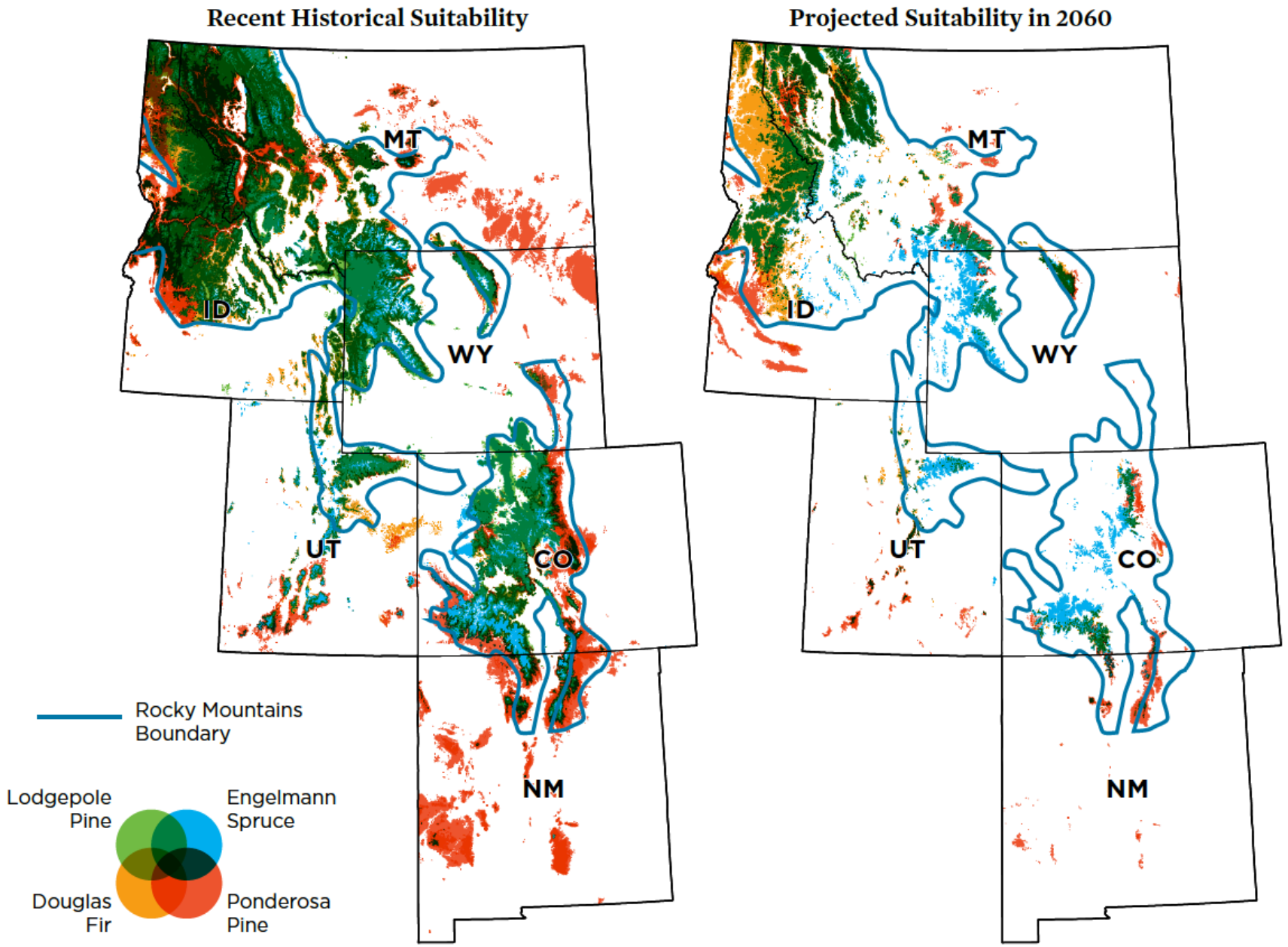
U.S. Air Force photo by Master Sgt. Jeremy Lock, 28 June 2012

Post Wildfire Flood

Santa Clara Pueblo is assessing the muddy mess left by overnight flooding.

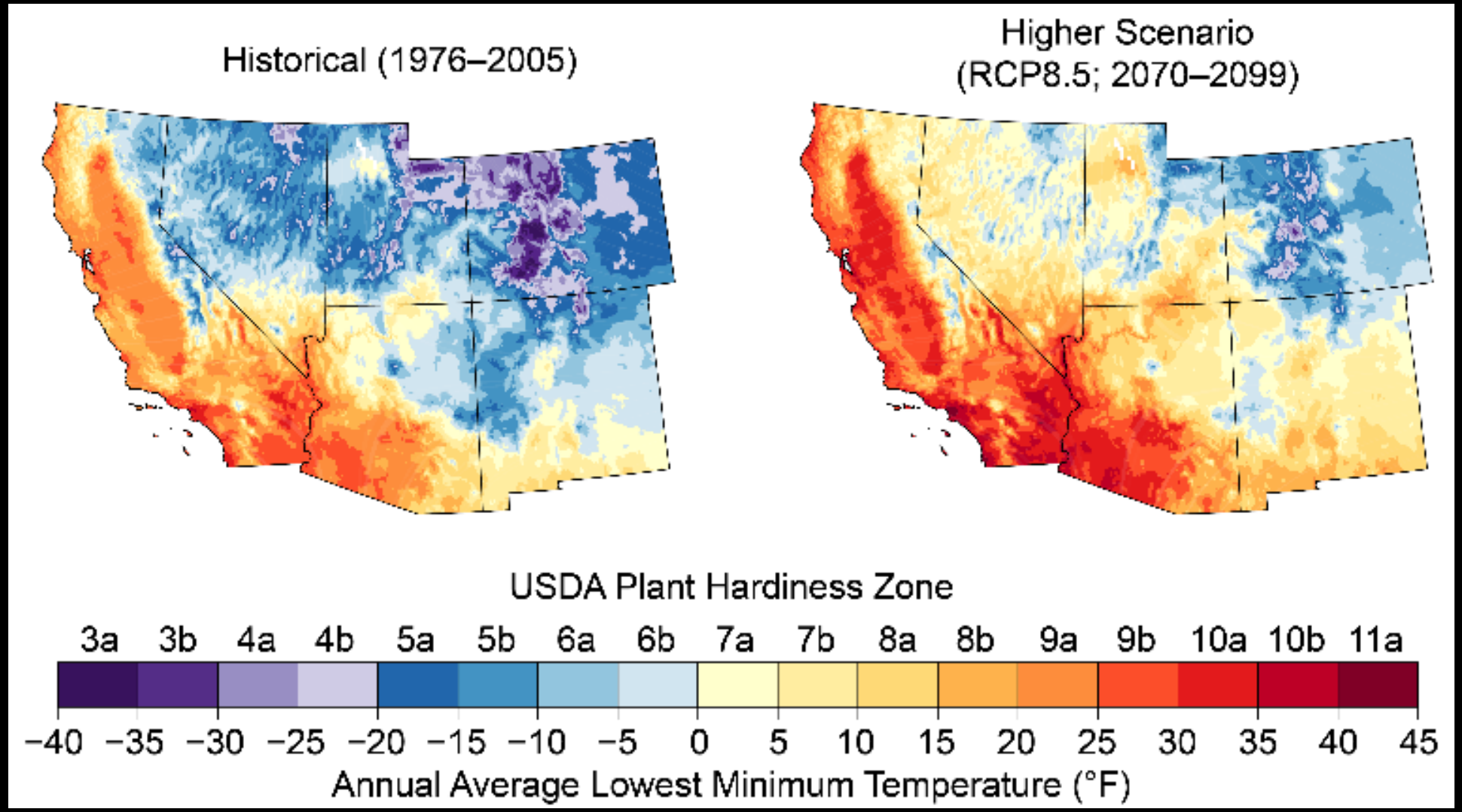
http://www.koat.com/article/pueblo-declares-state-of-emergency-following-flood/5041818

FIGURE 5 AND TABLE 1. Projected Changes in Suitable Ranges for Key Rocky Mountain Tree Species



www.rockymountainclimate.org/reports_6.htm.

Fig. 25.9: Projected Shift in Agricultural Zones



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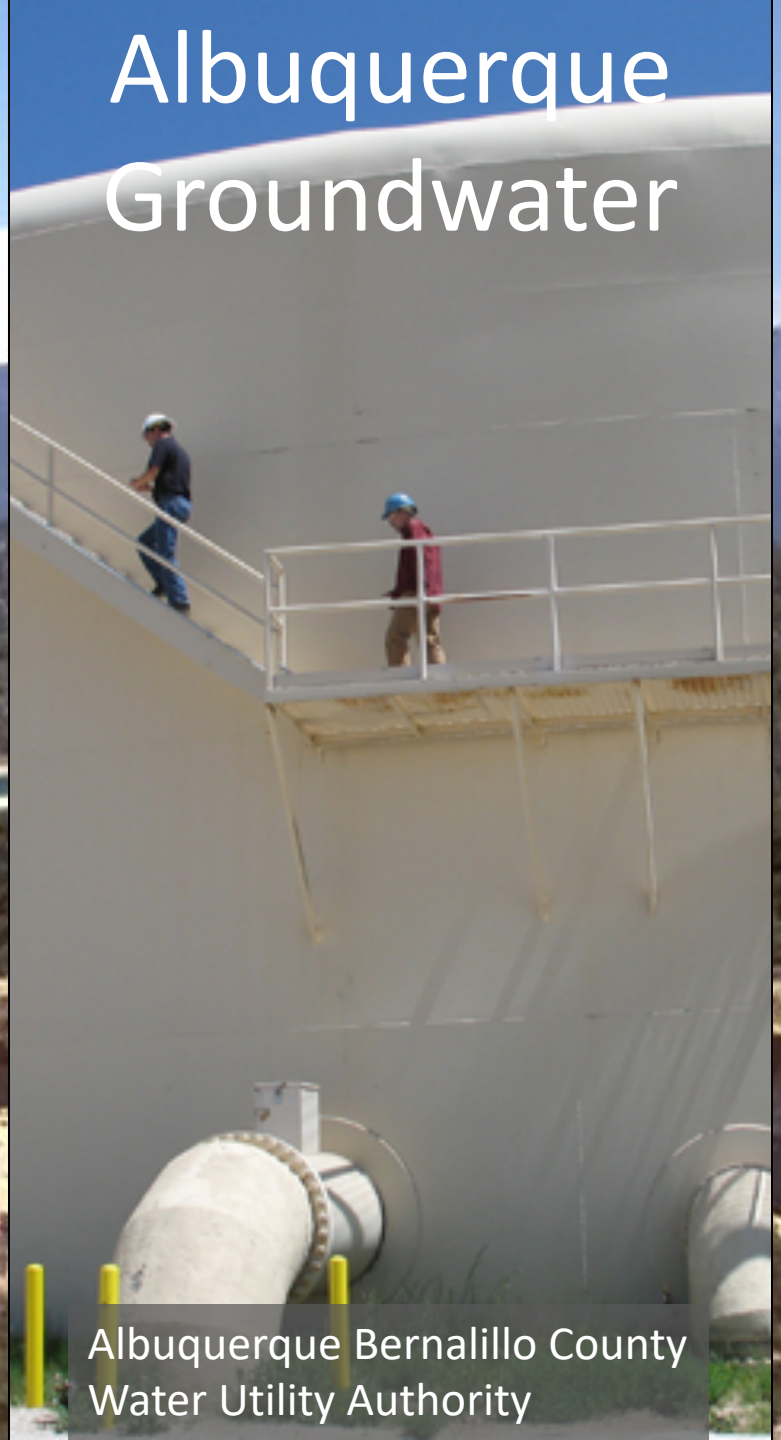
Colorado River Basin water

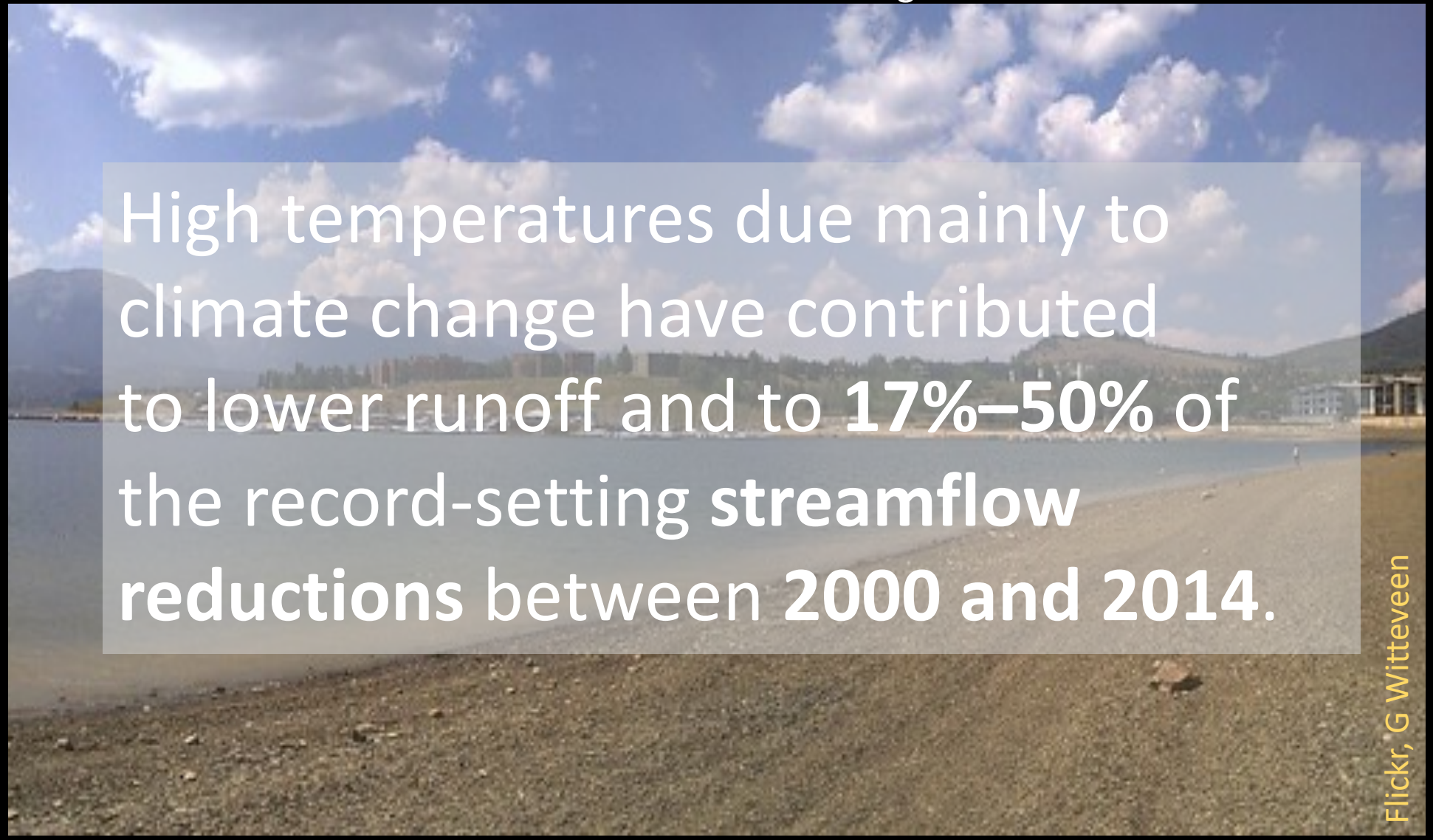
Heron Lake, NM

Albuquerque Groundwater



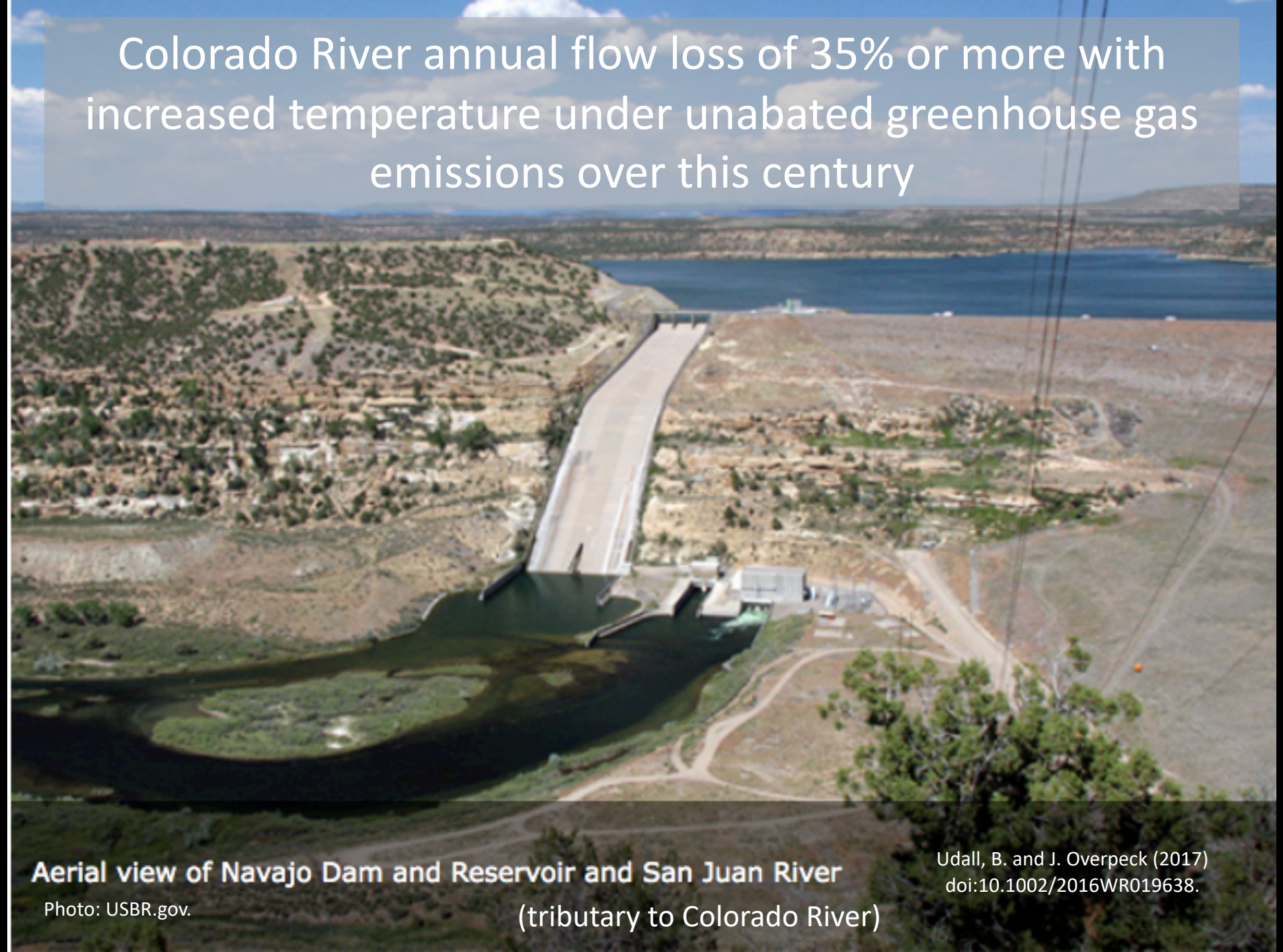
Albuquerque Bernalillo County Water Utility Authority

Colorado River Basin Drought



https://nca2018.globalchange.gov

Colorado River annual flow loss of 35% or more with increased temperature under unabated greenhouse gas emissions over this century



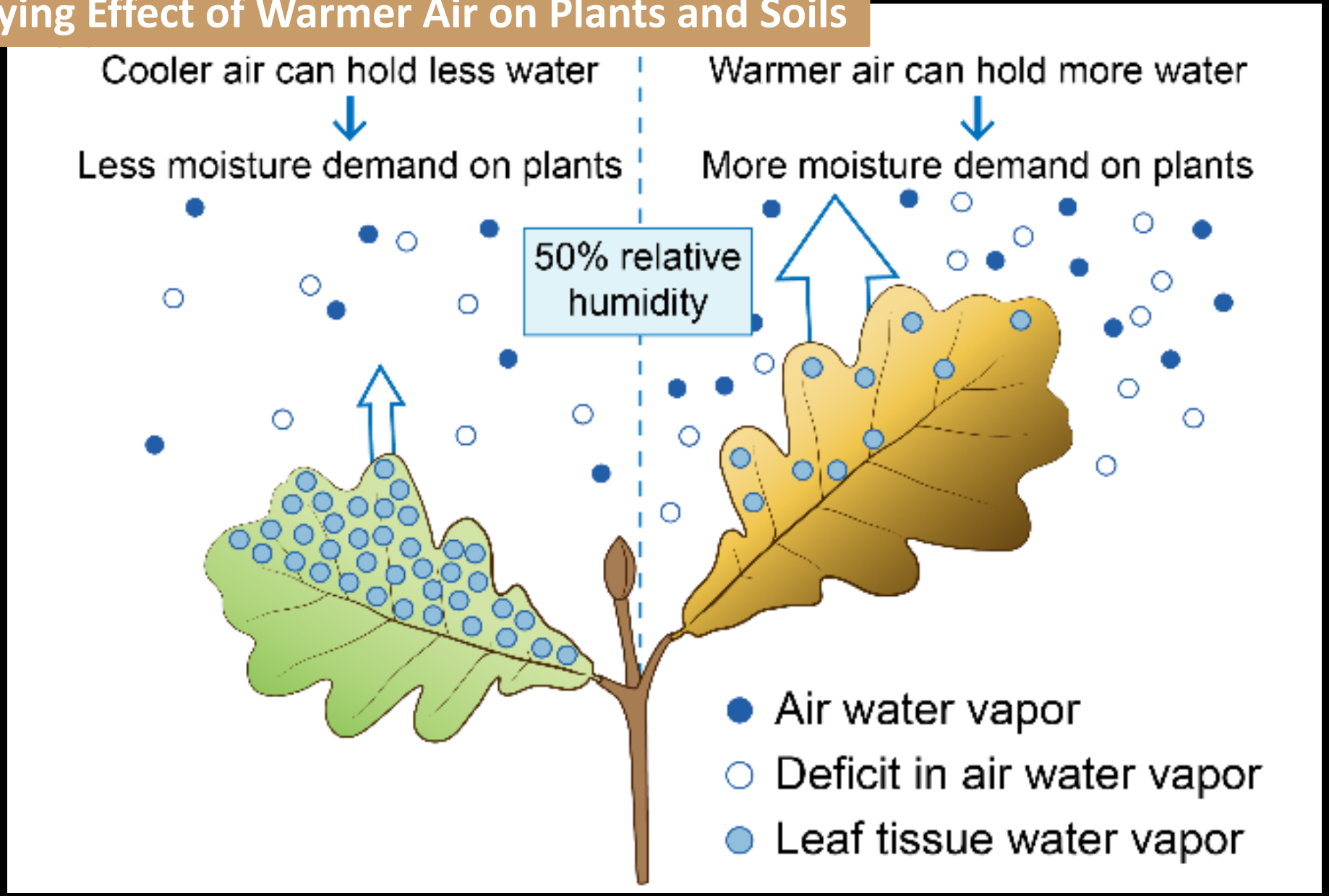
Aerial view of Navajo Dam and Reservoir and San Juan River

Photo: USBR.gov.

(tributary to Colorado River)

Udall, B. and J. Overpeck (2017) doi:10.1002/2016WR019638.

Fig. 21.3: Drying Effect of Warmer Air on Plants and Soils



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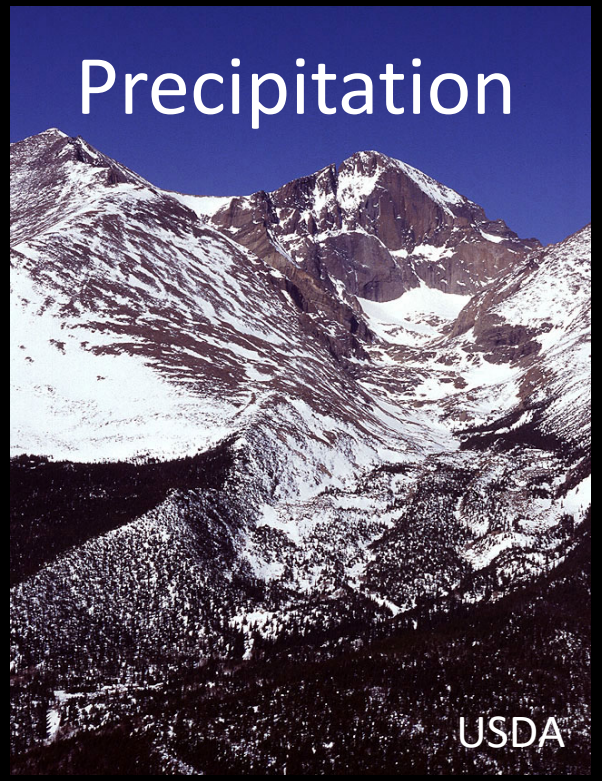

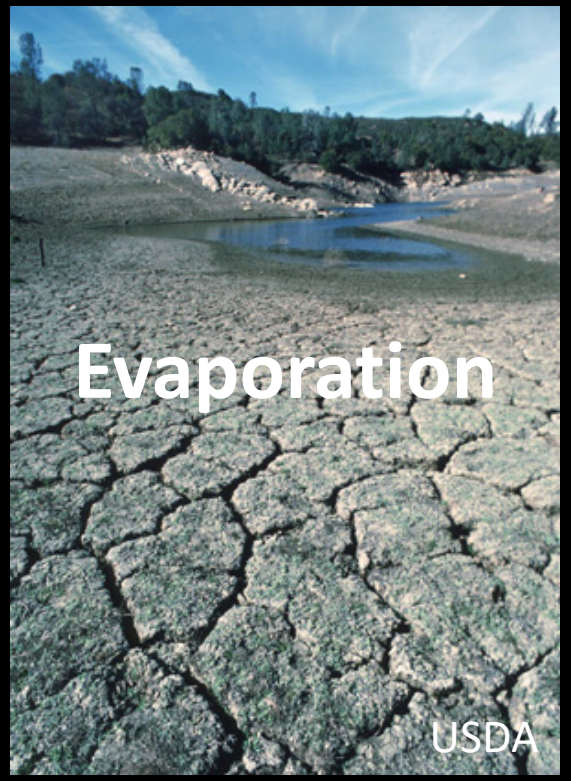

Historical drought

Hot drought

Risks of inaction

Under scenarios with high emissions and limited or no adaptation, annual losses in some sectors are estimated to grow to hundreds of billions of dollars by the end of the century.

Source: adapted from EPA 2017

(in 2015 dollars)

https://nca2018.globalchange.gov

Annual Economic Damages in 2090		
Sector	**Annual damages under RCP8.5**	**Damages avoided under RCP4.5**
Labor	$155B	48%
Extreme Temperature Mortality◊	$141B	58%
Coastal Property◊	$118B	22%
Air Quality	$26B	31%
Roads◊	$20B	59%
Electricity Supply and Demand	$9B	63%
Inland Flooding	$8B	47%
Urban Drainage	$6B	26%
Rail◊	$6B	36%
Water Quality	$5B	35%
Coral Reefs	$4B	12%
West Nile Virus	$3B	47%
Freshwater Fish	$3B	44%
Winter Recreation	$2B	107%
Bridges	$1B	48%
Munic. and Industrial Water Supply	$316M	33%
Harmful Algal Blooms	$199M	45%
Alaska Infrastructure◊	$174M	53%
Shellfish*	$23M	57%
Agriculture*	$12M	11%
Aeroallergens*	$1M	57%
Wildfire	–$106M	–134%