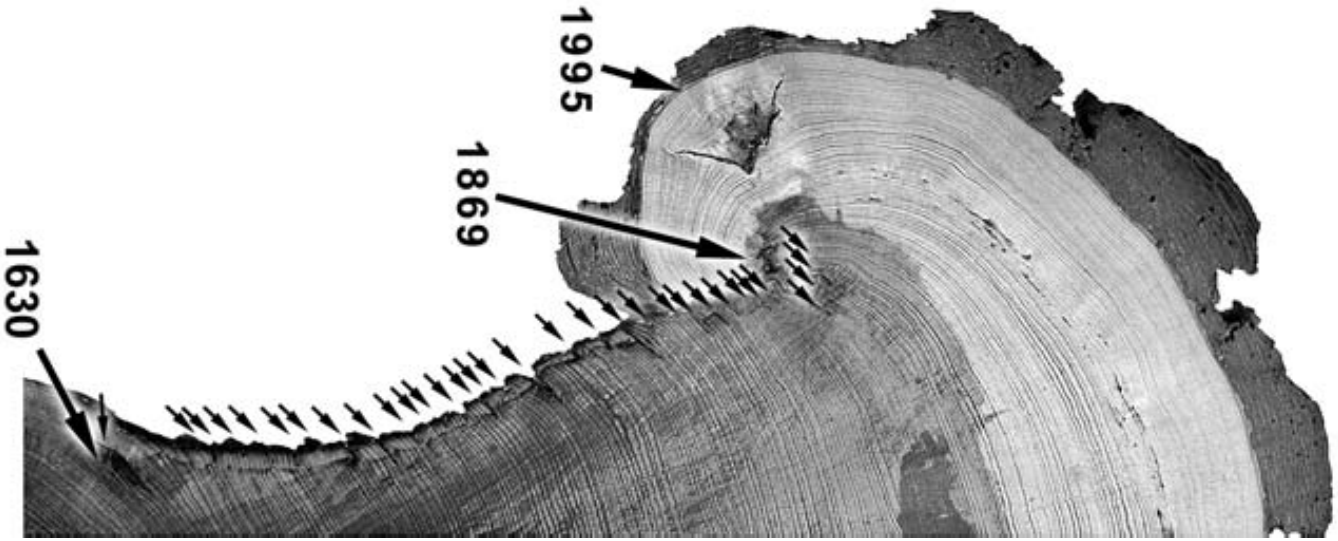
Governor's Drought Interagency Coordinating Group
2015 Wildfires and 2016 Outlook

Jeff Whitney, State Forester



2015 Fire Season

- 2015 Statewide area burned all jurisdictions : 158,493 Acres
- 2015 Statewide number of fires: 1,543 Fires
- 2014 Statewide area burned: 183,406 Acres
- 2014 Statewide number of Fires: 1,541 Fires
- 10 year average acres (2005-2014): 317,781 Acres
- 10 year average fires (2005-2014): 2,144 Fires

2015 Fire Season Large Fires
100+ Acres

From May 20, 2015, the Oak Tree Incident (2,023 acres burned) to September 29, 2015, the Potato Patch Incident (650 acres burned)

There were:

- 34 fires of more than 100 acres.
- 23 fires of greater than 1,000 acres.
- 2 fires of greater than 10,000 acres.

2015 Fire Season Large Fires
Kearny River

Date of Origin: June 17, 2015

Cause: Under Investigation

Size: 1,428 Acres

Fuels Involved: River bottom, Salt cedar

2015 Fire Season Large Fires
Willow Fire

Date of Origin: August 8, 2015

Cause: Under Investigation

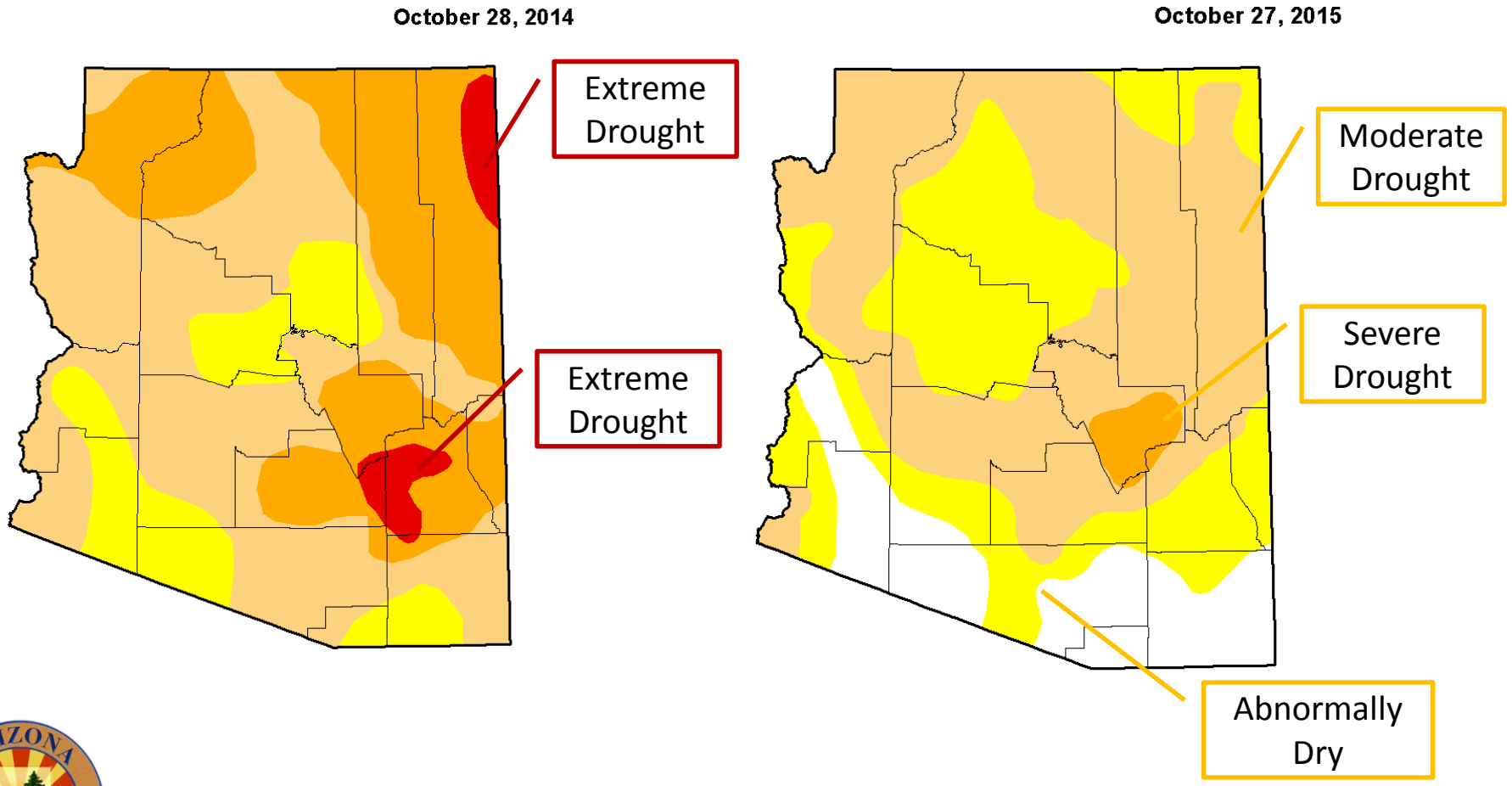
Size: 6,780 Acres

Fuels Involved: Salt cedar, mesquite, willow, brush, grass

Factors Affecting Fire Potential

- Drought
- Fine Fuel Condition
- Seasonal Temperature and Precipitation
- Spring and Early Summer Weather
- Monsoon

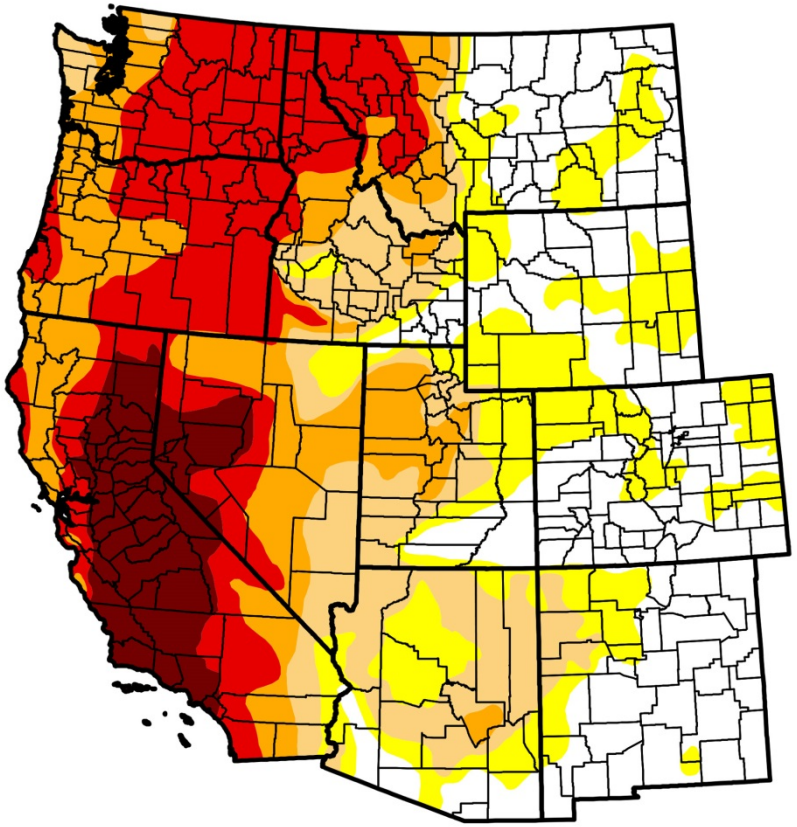
Drought


October 28, 2014
October 27, 2015
Extreme Drought
Extreme Drought
Moderate Drought
Severe Drought
Abnormally Dry

Drought

U.S. Drought Monitor

West



October 27, 2015

(Released Thursday, Oct. 29, 2015)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	26.79	73.21	55.42	41.21	26.23	7.62
Last Week *10/20/2015*	22.91	77.09	56.07	41.32	26.23	7.62
3 Months Ago *7/28/2015*	26.53	73.47	60.09	42.99	22.24	7.17
Start of Calendar Year *12/30/2014*	34.76	65.24	54.48	33.50	18.68	5.40
Start of Water Year *9/29/2015*	22.77	77.23	57.81	42.42	26.50	7.62
One Year Ago *10/28/2014*	34.52	65.48	55.05	34.64	19.08	8.90

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

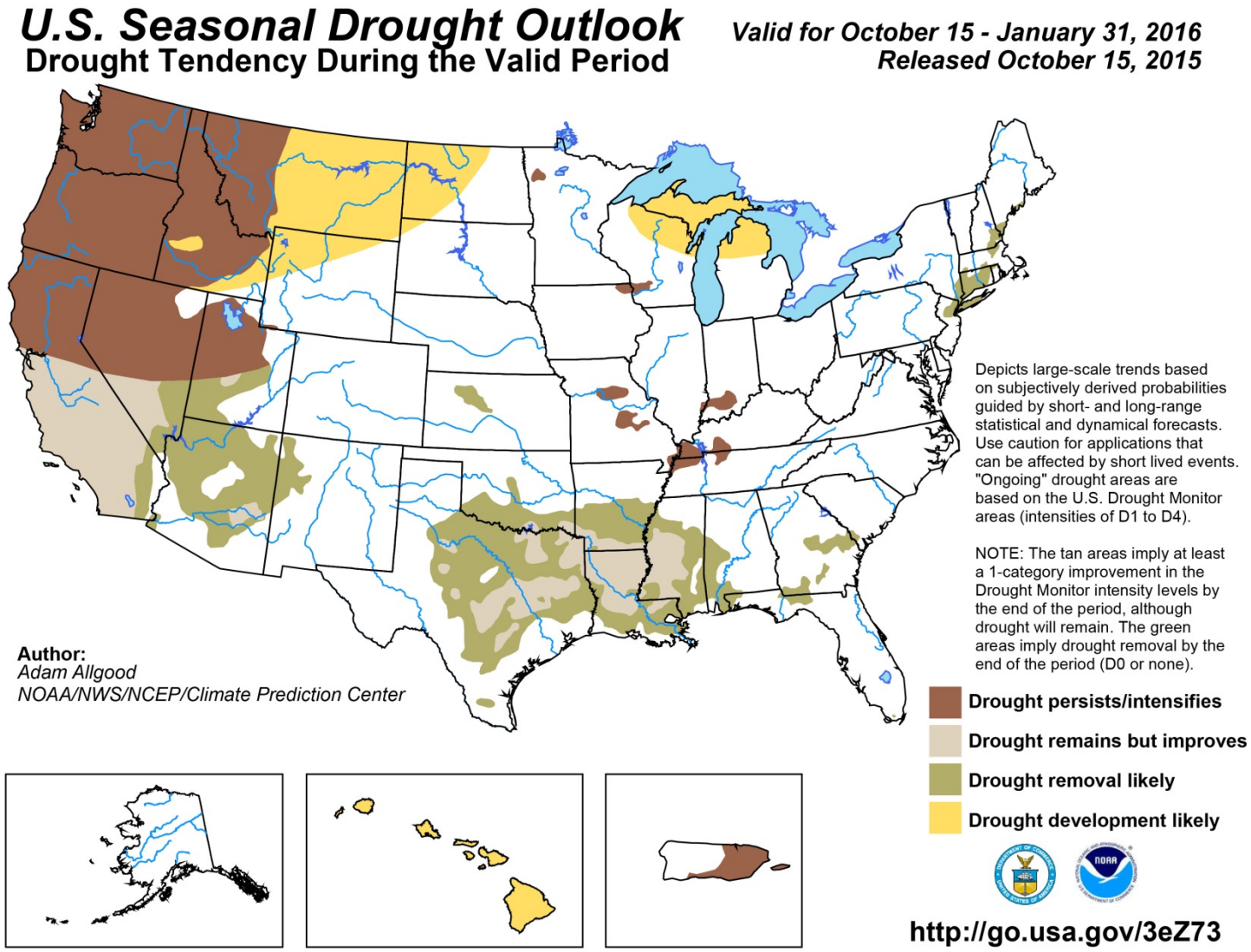
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Brad Rippey
U.S. Department of Agriculture

USDA National Drought Mitigation Center NOAA

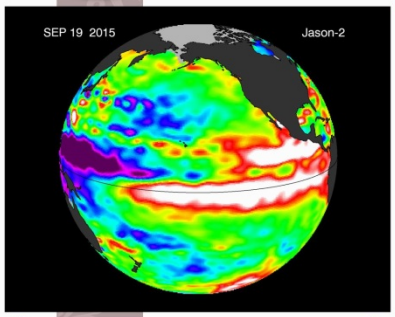
http://droughtmonitor.unl.edu/

Drought

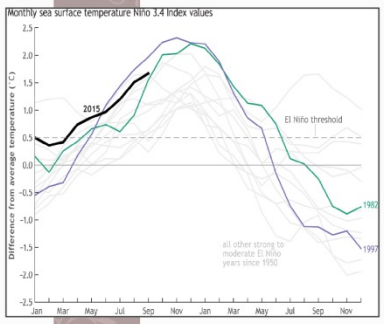

U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period
Valid for October 15 - January 31, 2016
Released October 15, 2015
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).
NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).
Author:
Adam Allgood
NOAA/NWS/NCEP/Climate Prediction Center
Drought persists/intensifies
Drought remains but improves
Drought removal likely
Drought development likely
http://go.usa.gov/3eZ73

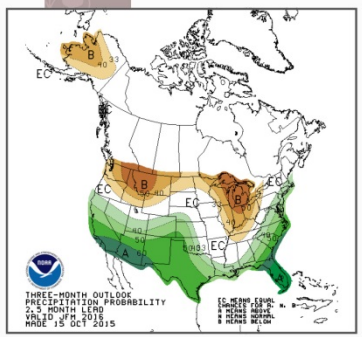
El Niño Fact Sheet

Weather.gov/Phoenix @NWSPhoenix



El Niño is a prolonged period of unusually warm Pacific waters that influence weather patterns





What we know:

- Strong El Niño conditions will exist through winter 2015-16
- This will be one of the strongest recorded El Niño episodes since 1950
- Strong El Niño's lead to the most predictable outcomes of increased rainfall in AZ and SoCal
- Odds clearly point towards a wetter than average winter - especially the latter part of the season

Uncertainties:

- Each El Niño is slightly different and there are other weather influences to consider
- There have only been 6 recorded strong El Niño events and only 3 as strong as this year since 1950
- The small sample size of comparative El Niño events limits more certainty in specific winter predictions

What we don't know:

- Even though odds strongly point towards a wet winter, we do not know whether it will be just above average or much above average
- Mountain snowfall may or may not be above average depending on snow levels during the winter

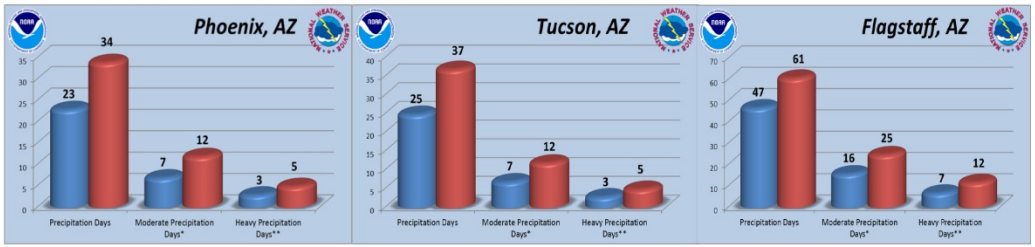
Arizona State Forestry

El Niño Fact Sheet

Weather.gov/Phoenix @NWSPhoenix

While strong El Niño's provide little predictive skill regarding temperatures, there is an excellent correlation to wetter than normal winters in Arizona and southern California—particularly later in the winter (Jan-Apr). The Climate Prediction Center forecasts better than a 60% chance of a wetter than normal Jan-Mar (leaving only a 5% chance of below normal).

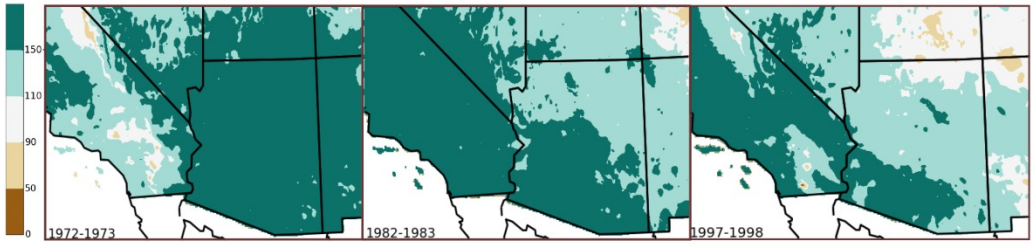
However, each El Niño has a somewhat different "flavor" and even among the strongest episodes, there are notable differences in precipitation amounts and placement . Fortunately, despite typical greater than average precipitation, past strong El Niño events have not produced significant flooding events in Arizona and Southeast California (not saying that it couldn't happen this year). Seasonal mountain snowfall also carries considerable uncertainty, though all the 3 strongest events led to above average snow in Arizona (not shown).



Average Winter Strong El Nino Winters

Number of rainfall days during an average winter (Oct-Apr) versus the average during 6 strong El Niños

(* Moderate = 0.25 inches ** Heavy = 0.50 inches)



October-April Percent Normal Precipitation from last 3 Strongest El Niño Episodes (1972-73, 1982-83, and 1997-98)

Arizona State Forestry

Fine Fuels: Potential for Fires in 2016

- Above average rainfall means an abundance of continuous fine fuels in general within Arizona.
- Forests, woodlands, and deserts likely to exhibit increased fuel loads in 2016.

Arizona's Forests and Forests Throughout the West: Extreme Fire Danger Persists

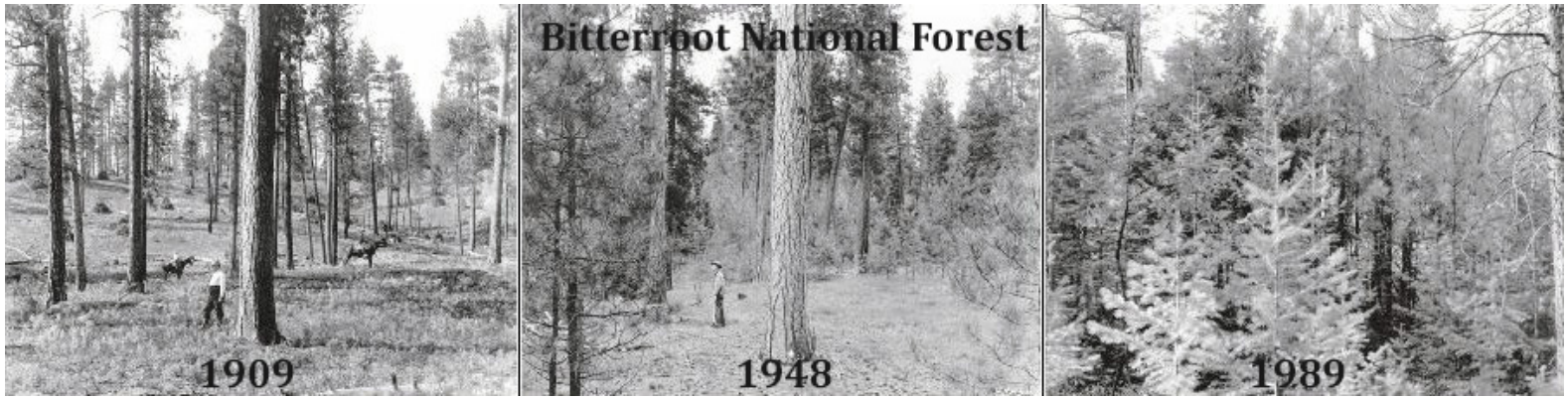
1901 Near Kendrick Mountain Shows Historical Spacing of Trees

"We came to a glorious forest of lofty pines, through which we have traveled ten miles. The country was beautifully undulating…every foot being covered with the finest grass, and beautiful broad grassy vales extending in every direction. The forest was perfectly open and unencumbered with brush wood, so that the traveling was excellent."

E.F. Beale expedition, 1858

Arizona's Forests and Forests Throughout the West: Extreme Fire Danger Persists

- Under pre-settlement conditions, healthy Arizona forests consisted of about 50 trees per acre.
- Today, that same acre supports up to 1,000 trees.
- Much of that growth is small diameter trees which, due to competition for nutrients and water, are much less healthy, highly susceptible to insect infestation and disease, and have become a substantial fuel load for wildfires.



Arizona State Forestry Division

Thank You

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www.azsf.gov