

# What would a North American drought-fire nexus look like?

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**Timothy Brown**

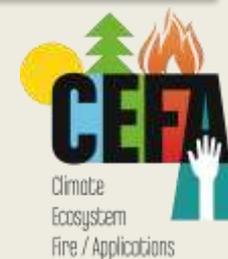
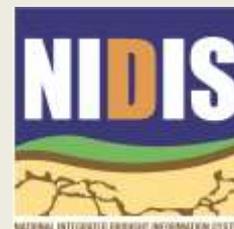
Desert Research Institute, Reno, Nevada

2018 North American Drought Monitor Forum

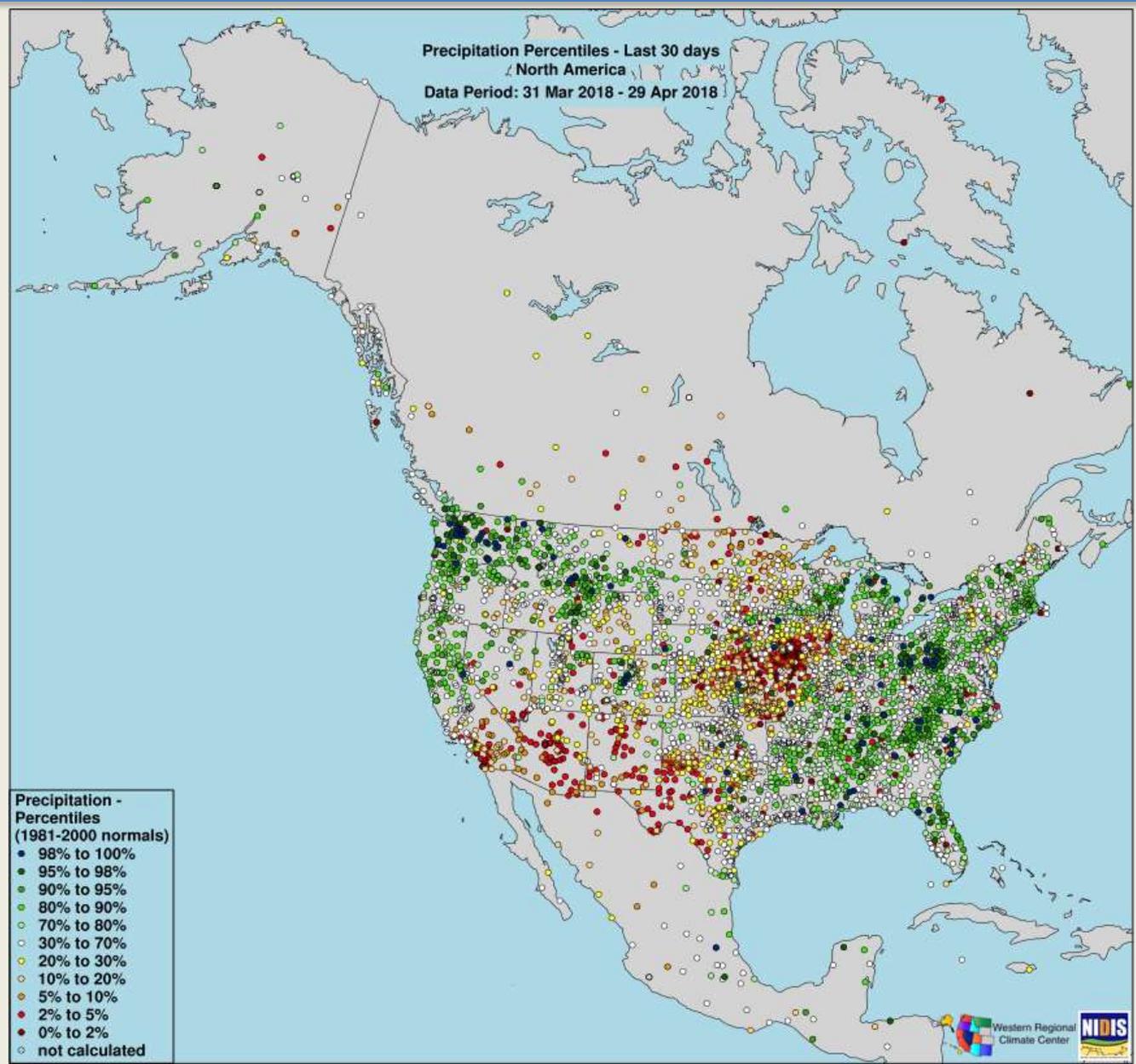
Calgary, Alberta

1 May 2018

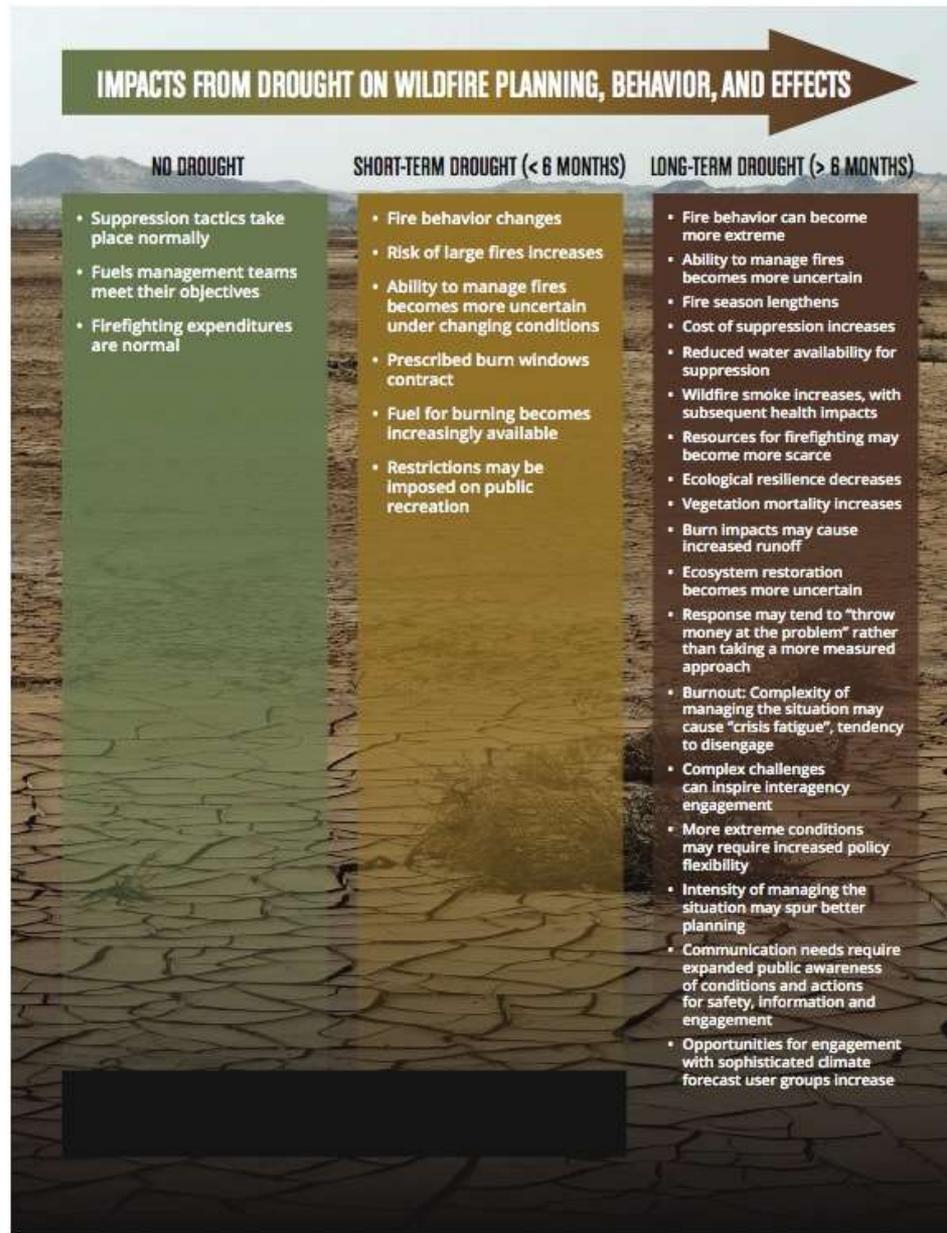
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# From the last meeting



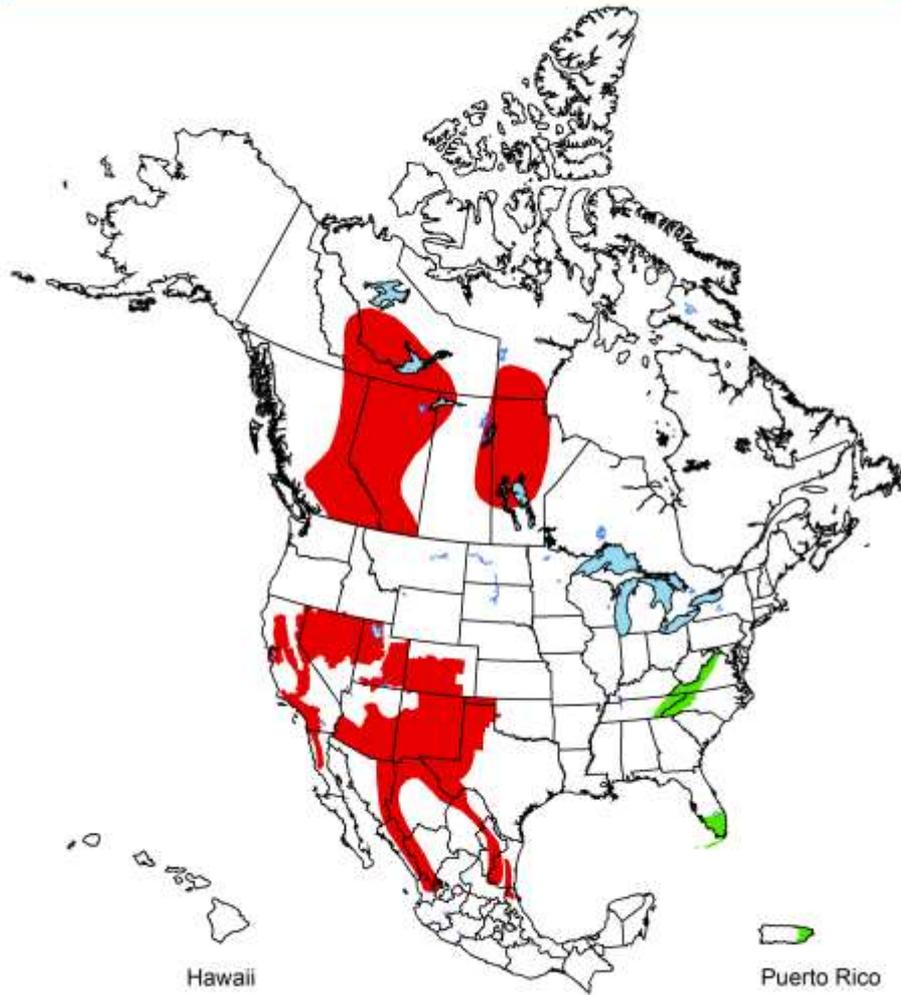
# Drought impacts on fire



# The North American Seasonal Fire Outlook

## North American Seasonal Fire Assessment

June 2018



Monthly fire outlook for North America. Red shading indicates areas where conditions would favor increased fire activity. Green shading indicates areas where conditions would favor decreased fire activity.

# NIDIS drought and wildfire nexus

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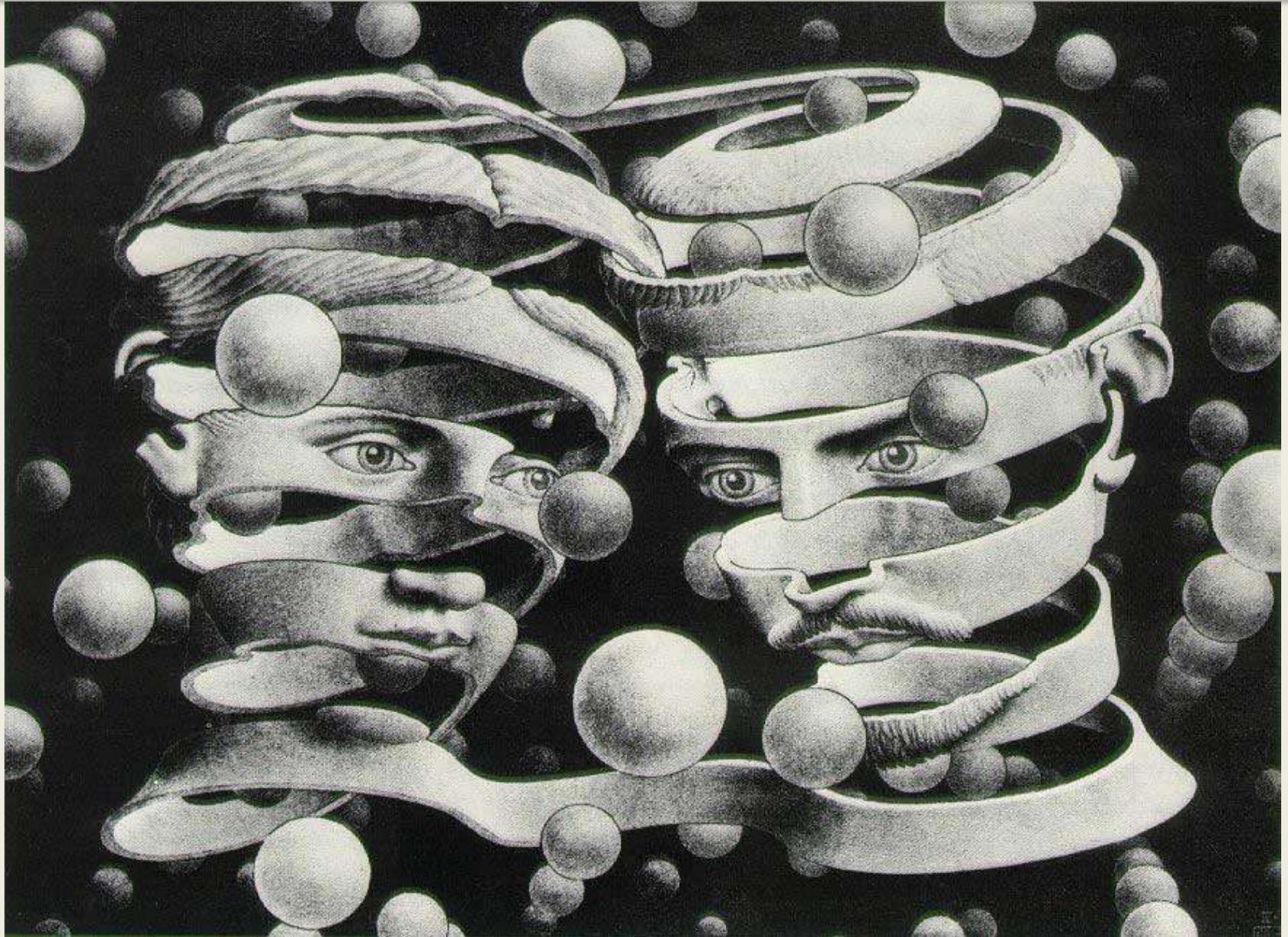
- 1) To involve the fire community in the Drought Early Warning Systems (DEWS) and drought information networks supported by NIDIS to successfully utilize drought information in fire management programs
- 2) To provide a baseline of how drought information is currently used in the wildfire community and primary sources
- 3) Identify gaps and needs related to drought information in the wildfire community
- 4) Initiate the development of a network that successfully disseminates and utilizes drought information in fire management planning, behavior, and effects decision contexts at state and regional levels

# Primary elements

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- ❑ Knowledge transfer
- ❑ Tool development
- ❑ Science research
- ❑ Communication
- ❑ Evaluation and metrics

# What would a NA drought-fire nexus look like?



# Sub-regional themes

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- Need to improve communication between field staff and fire weather forecasters regarding field conditions and how rapidly they are changing
  - Particularly in short-duration droughts or “flash droughts.”
- Drought could act as a catalyst to update fire policy and land management
- Drought tools specifically tied to fire relevance would help inform management decisions
- Research needs to better understand the quantitative impacts of drought on fire
- Desires to establish new or improve existing communication pathways for drought information

# Challenges

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- Extended and/or high frequency drought events increase management uncertainty
  - Both primary and secondary impacts of drought on fire behavior and effects are often unknown
  - This makes long-term planning difficult
- When resources are allocated from other programs to support fire suppression, fuel management programs may be reduced, creating a chain of impacts that feeds back to affect wildfire behavior, intensity, and frequency
- The issues of wildfire and drought, similar to other climate impact related issues, can seem overwhelming to managers
- The ways in which drought impacts wildfire, at varying timescales, locally and regionally, are highly complex and require coordinated adaptive management actions by multiple agencies

# Opportunities

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- More engagement across agencies and with the public through need and interest
- Potential to use drought indices as an early warning fire behavior indicator
  - Useful for improving planning and resource allocation
- Increased engagement potential with sophisticated forecast user groups to improve forecast accuracy, utilization, and confidence

# Greetings From Reno!

*Fire near Tim's house*

