



# LIVING SUSTAINABLY WITH **WILDFIRE:** SCIENCE FOR SOLUTIONS

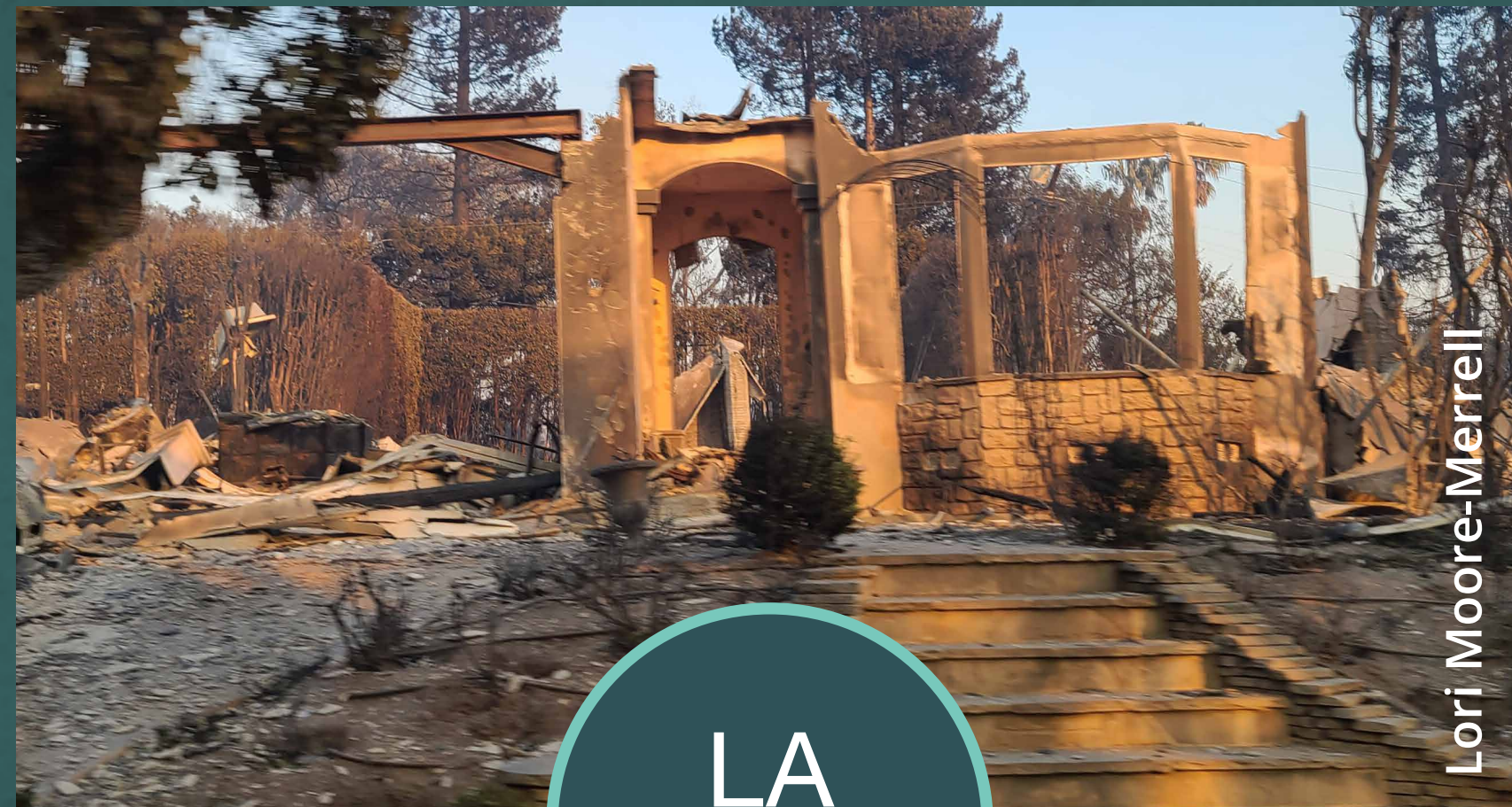
PANEL DISCUSSION

[westernfireforest.org](https://westernfireforest.org) | [caryinstitute.org](https://caryinstitute.org)

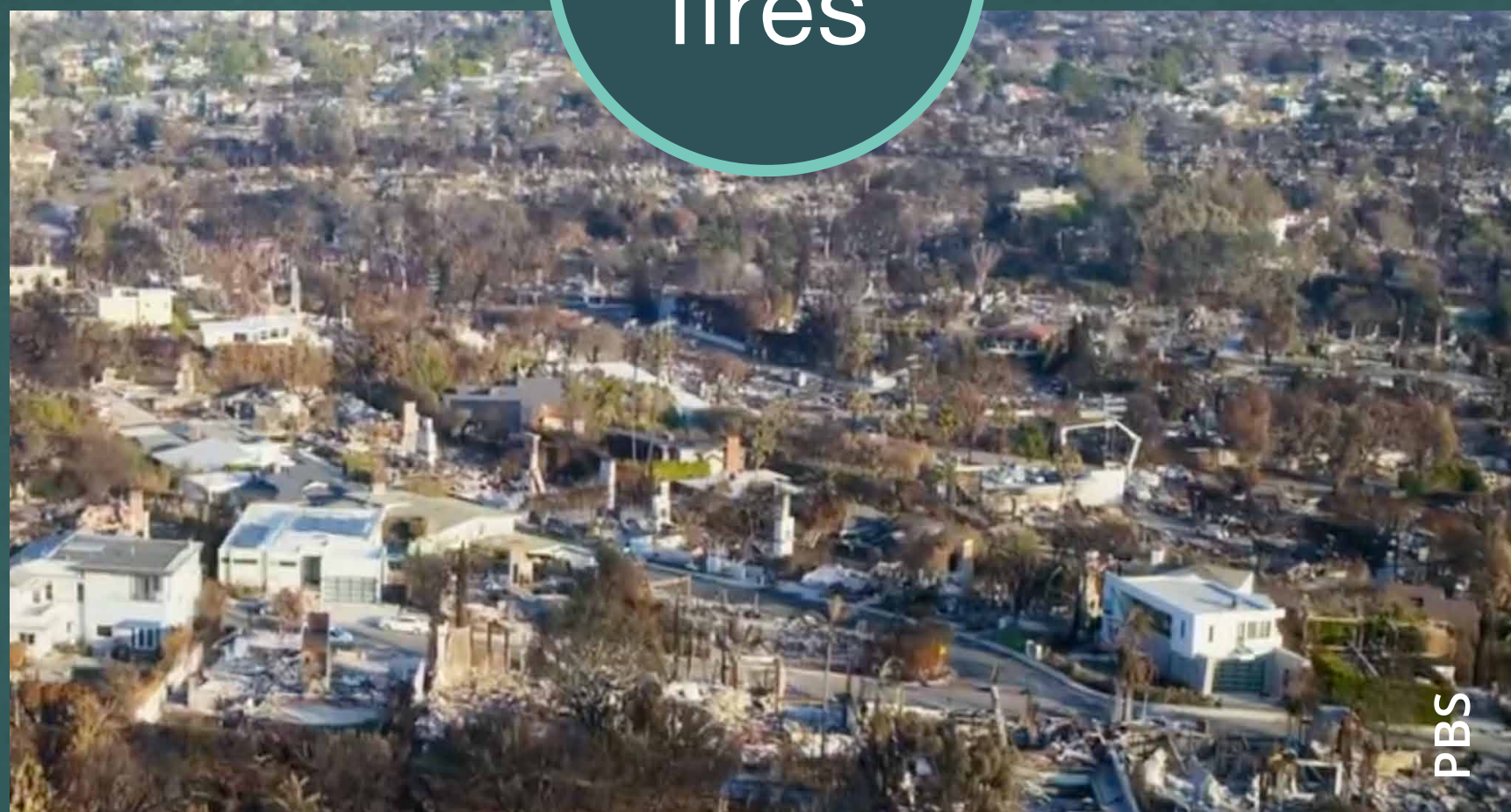


# LOS ANGELES FIRES: LESSONS LEARNED

## PREVENTING HOMES & COMMUNITIES FROM BURNING

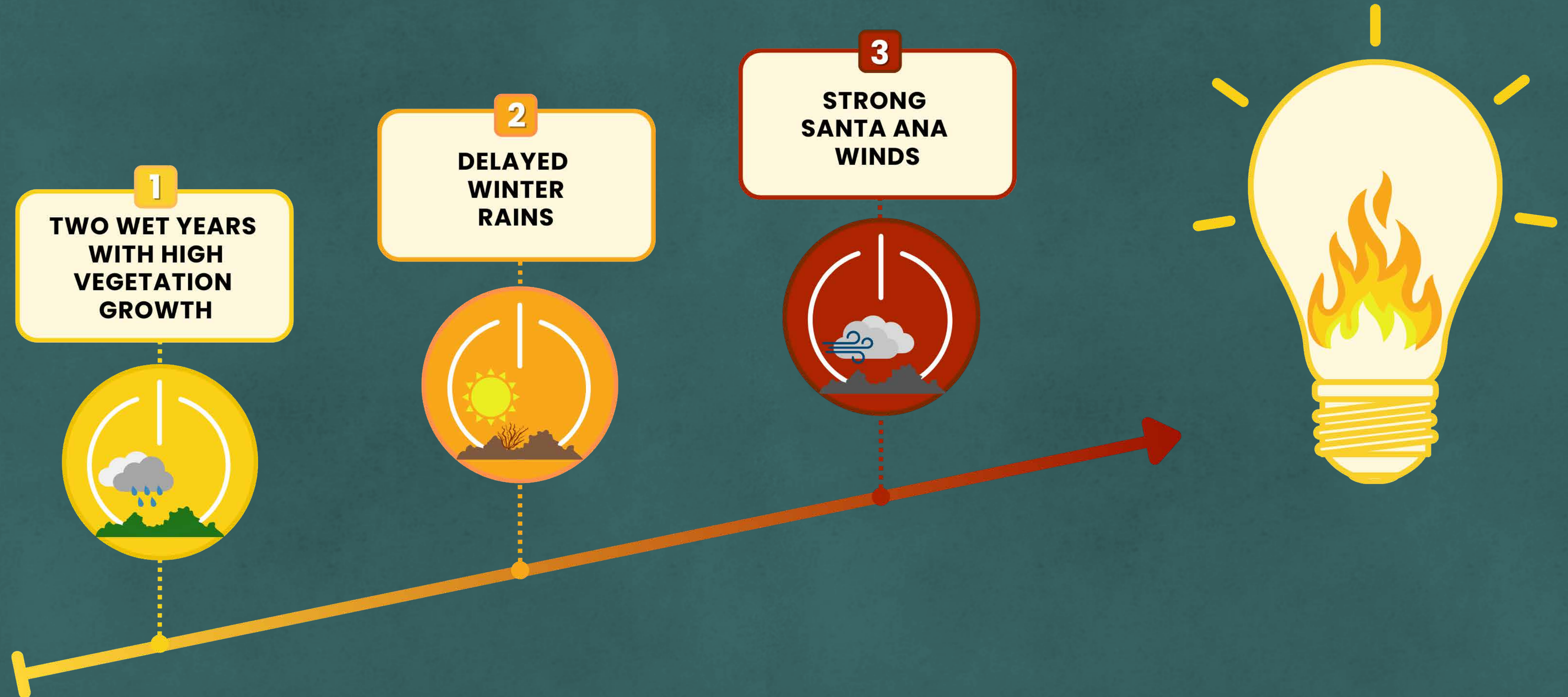


LA  
fires





# LOS ANGELES FIRES: 3 KEY CONDITIONS



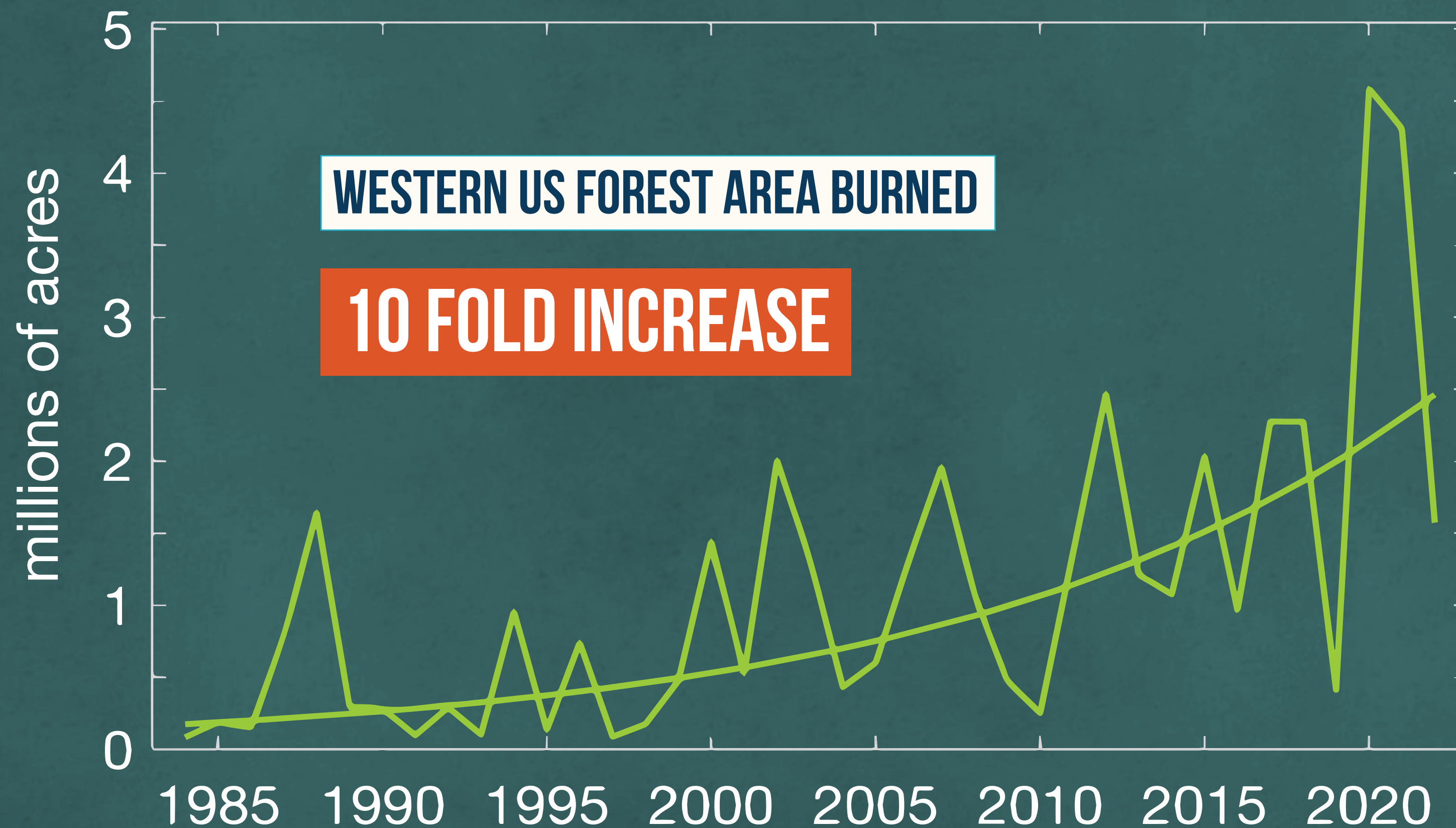
**EXTREME FIRE ACTIVITY REQUIRES THREE KEY 'SWITCHES' TO BE TURNED ON**





WESTERN US

# INCREASING BURN AREA & RISK



**Wildland-urban interface**

Areas where houses are near wildland vegetation

**HOUSING UNITS IN WUI OF WESTERN US**

**1990**  
**9.9 M**

**2020**  
**16.1 M**



# MANAGEMENT STRATEGIES

fuel  
reduction



US Forest Service

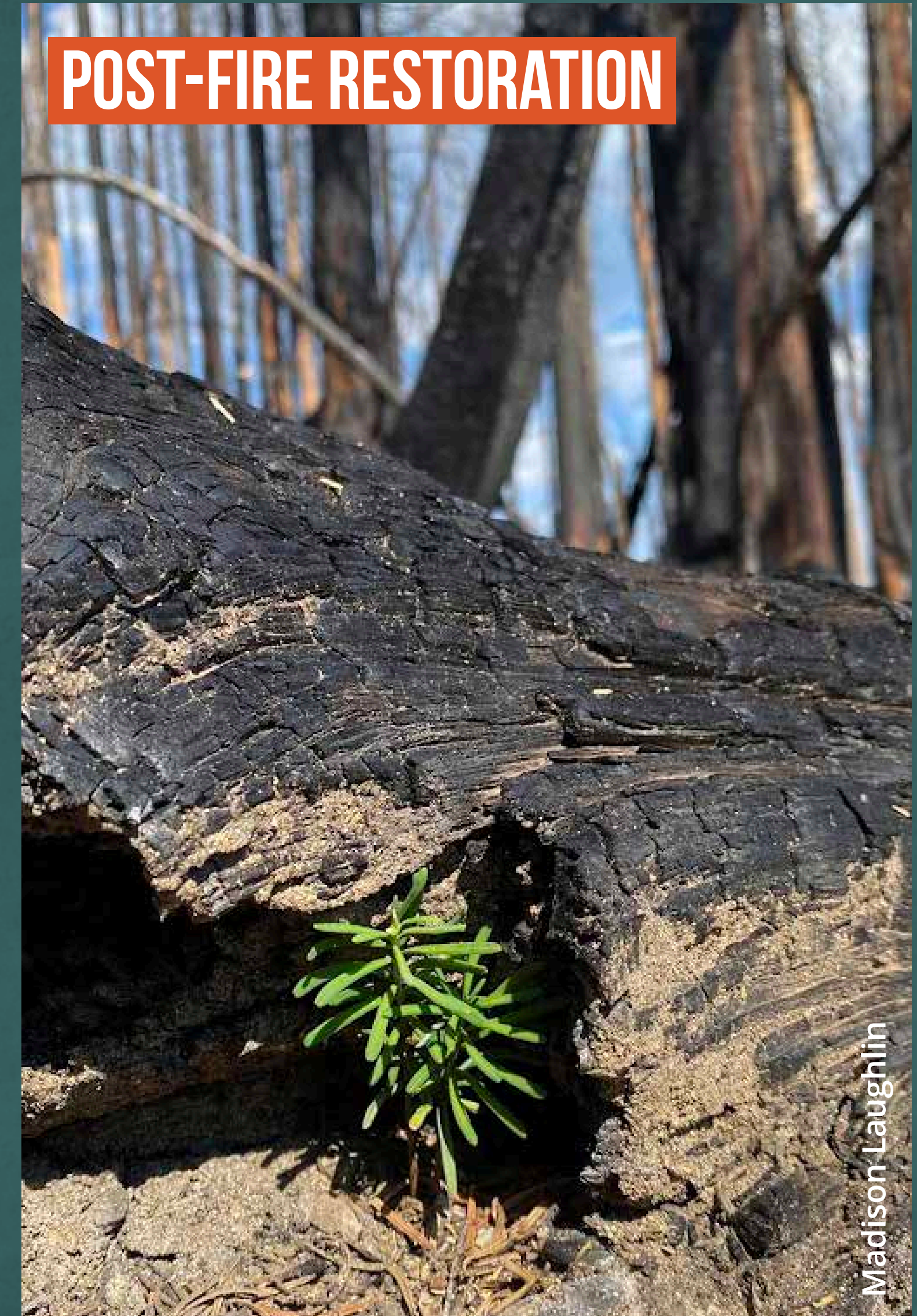
**MECHANICAL THINNING**



Bureau of Land Management

**PRESCRIBED BURNS**

**POST-FIRE RESTORATION**

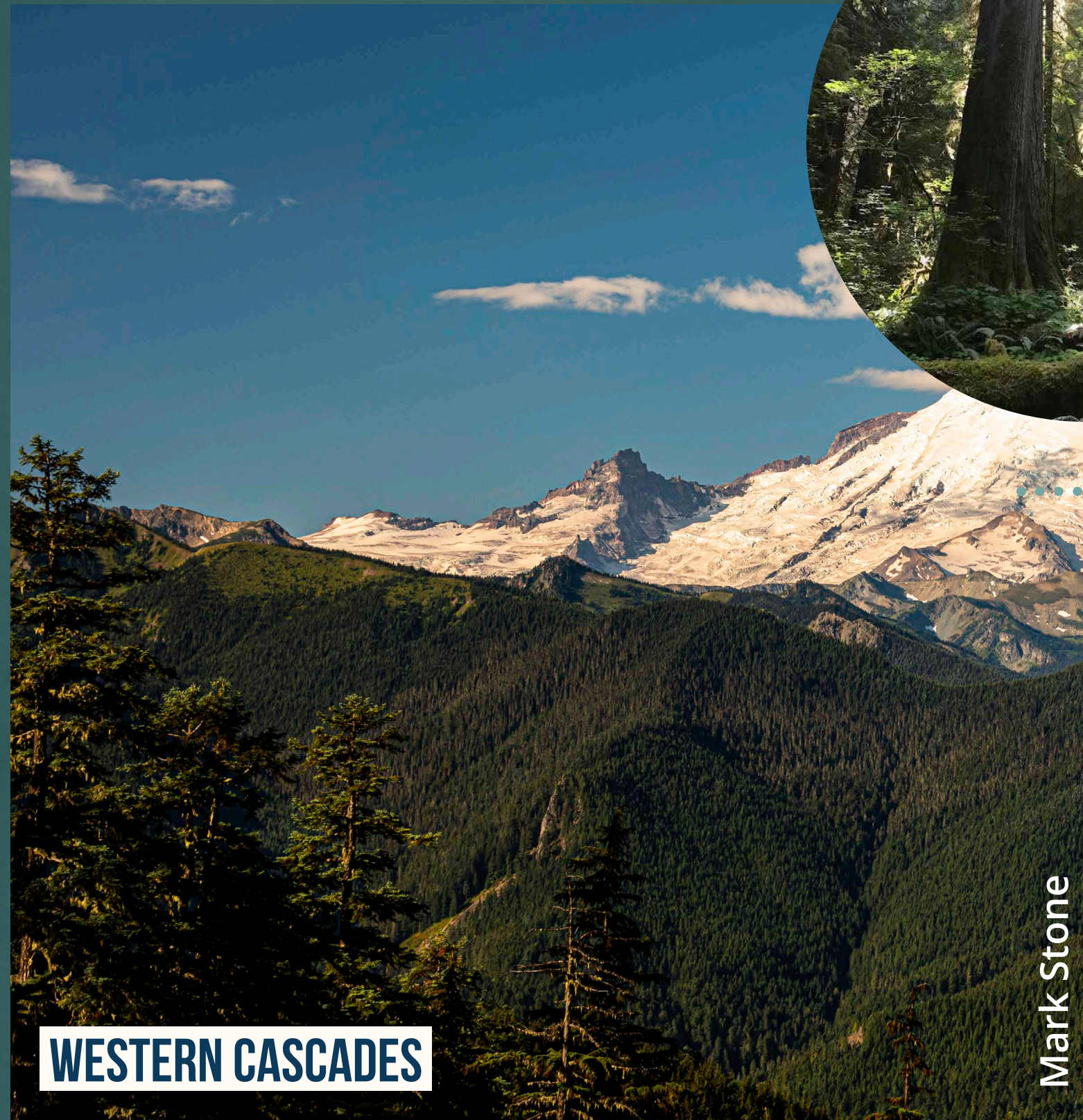


Madison Laughlin



# DIFFERENT ECOSYSTEMS = DIFFERENT STRATEGIES

## WET FOREST

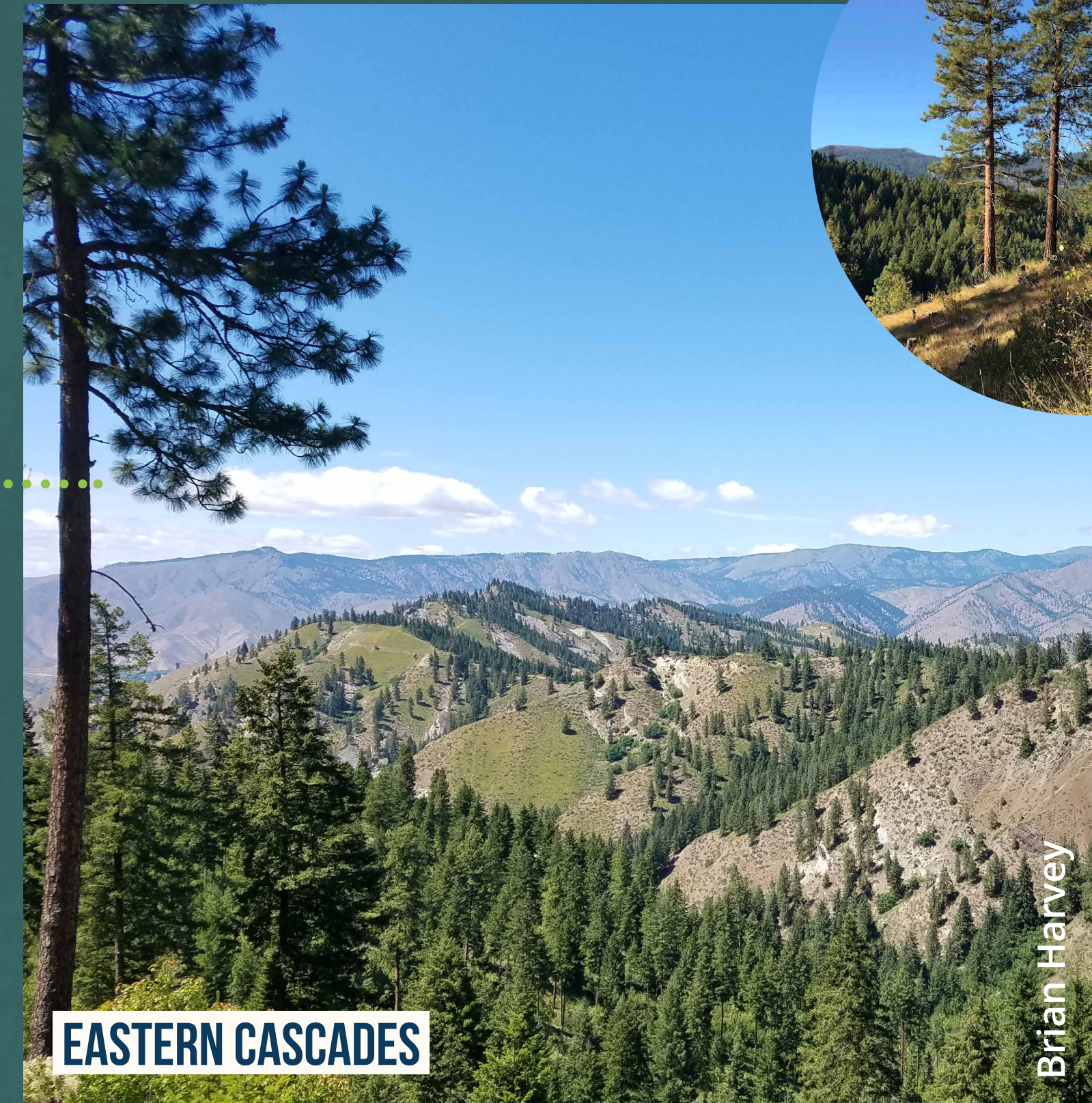


Mark Stone

WESTERN CASCADES



## DRY FOREST



Brian Harvey

EASTERN CASCADES



40 MILES



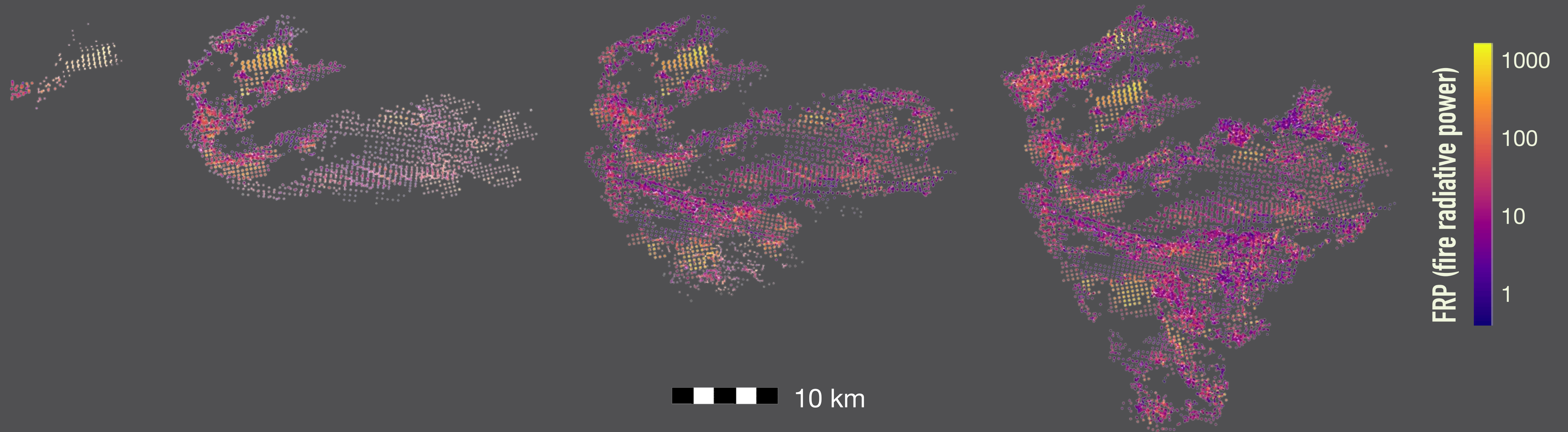
“Science is the foundation and bedrock for Washington Department of Natural Resources’ work on forest treatments and forest health.”



# USING SCIENCE TO DETECT FIRES & THEIR SPREAD

## TRACKING FIRE WITH THERMAL SATELLITE IMAGE DATA

### 2020 MULLEN FIRE, WYOMING



“We need science to advise us on the **movement**, **scope**, and **scale** of fire in the built environment.”



# FIRE AFFECTS WATER QUANTITY & QUALITY

## WATER QUANTITY



## WATER QUALITY



## MUDSLIDES/DEBRIS FLOW



If you care about **water**, you need to care about **fire**.



# PROTECTING WATER RESOURCES

## LAKE BERRYESSA



## MEDICAL LAKE



## PACIFIC OCEAN







# LIVING SUSTAINABLY WITH **WILDFIRE:** SCIENCE FOR SOLUTIONS

QUESTIONS FOR THE PANEL



# WHAT ACTIONS CAN WE TAKE?

## Individuals & Communities



- Consider wildfire risk when designing buildings and communities.

## Government



- Invest in fire response, land management, and community resilience.

## Universities & Research



- Conduct science. Build pathways from science to decision makers.

## Philanthropy & Private Sector



- Invest in science, technology, and solutions.



# THANK YOU FOR COMING

---



**Western Fire &  
Forest Resilience**  
C o l l a b o r a t i v e

**CARYINSTITUTE.ORG/DONATE-WFFRC**

