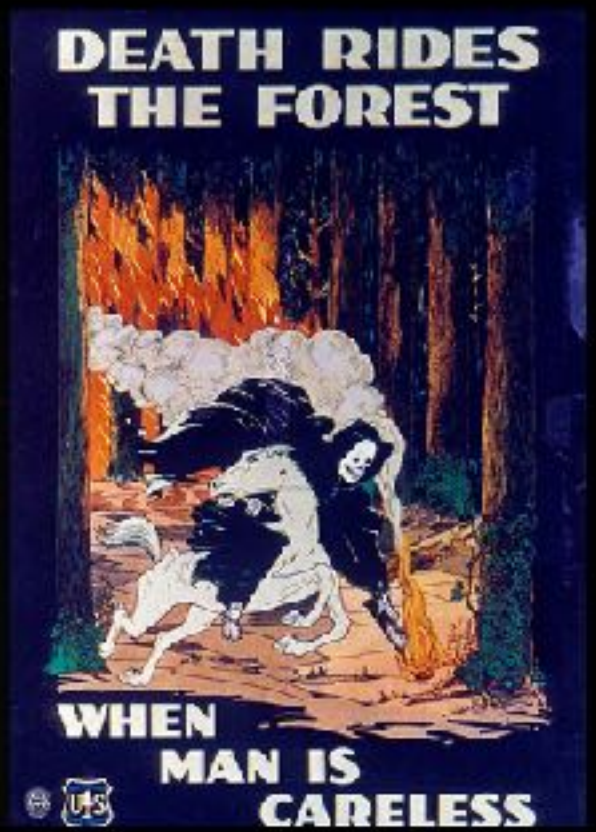
Limits of Firefighting

The Imperial Model: War Against Wildfire

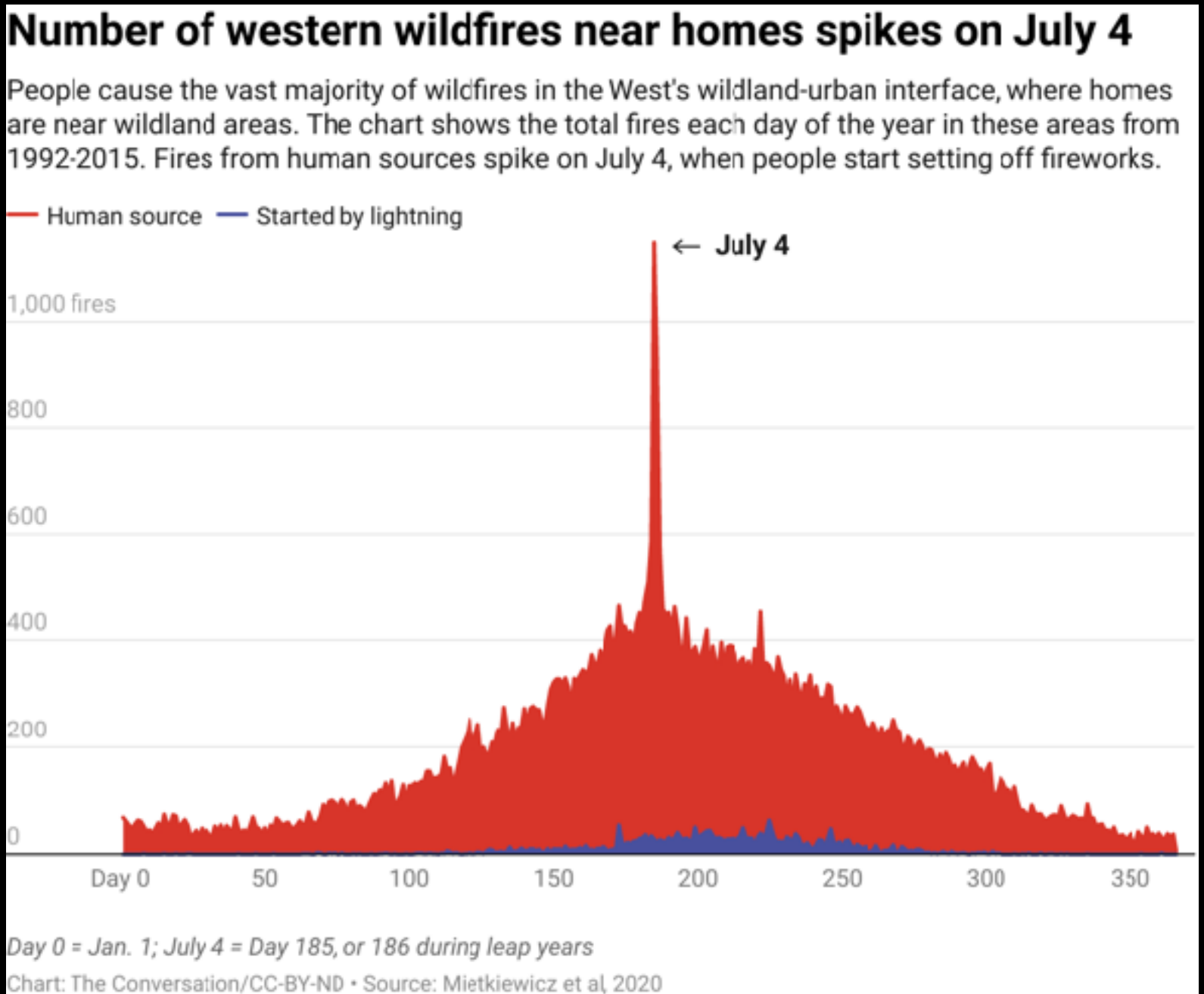
Battling Blazes

Fighting fire in an endless, escalating, War on Wildfire.

Fire crews as soldiers rather than stewards has consequences for society and nature.


DEATH RIDES
THE FOREST
WHEN
MAN IS
CARELESS

Predictable Ignitions, Unpredictable Locations



Reality

21st century climate is ending efficacy of
20th century firefighting strategies and tactics.

We are losing, and there is no “winning” when
you are forever battling against Mother Nature.

Paradox: firefighting is becoming:

- *more risky for* firefighters
- *more expensive for* taxpayers
- *more damaging* to ecosystems

….and *less effective*

Increased drought, high temps = weather-driven "**Megafires**"

Firefighters forced to back off, wait for weather to change

Firestorms since 2017: Santa Rosa, Malibu, Paradise in CA, Louisville & Superior in Boulder Colorado, Almeda & Talent-Phoenix & 8 Significant 2020 Labor Day Fires in Oregon, Malden, Washington, Dixie & Greenville, Bootleg Fire, Klamath, Lahaina in Maui, Oregon Road & Gray Fires - Spokane Area

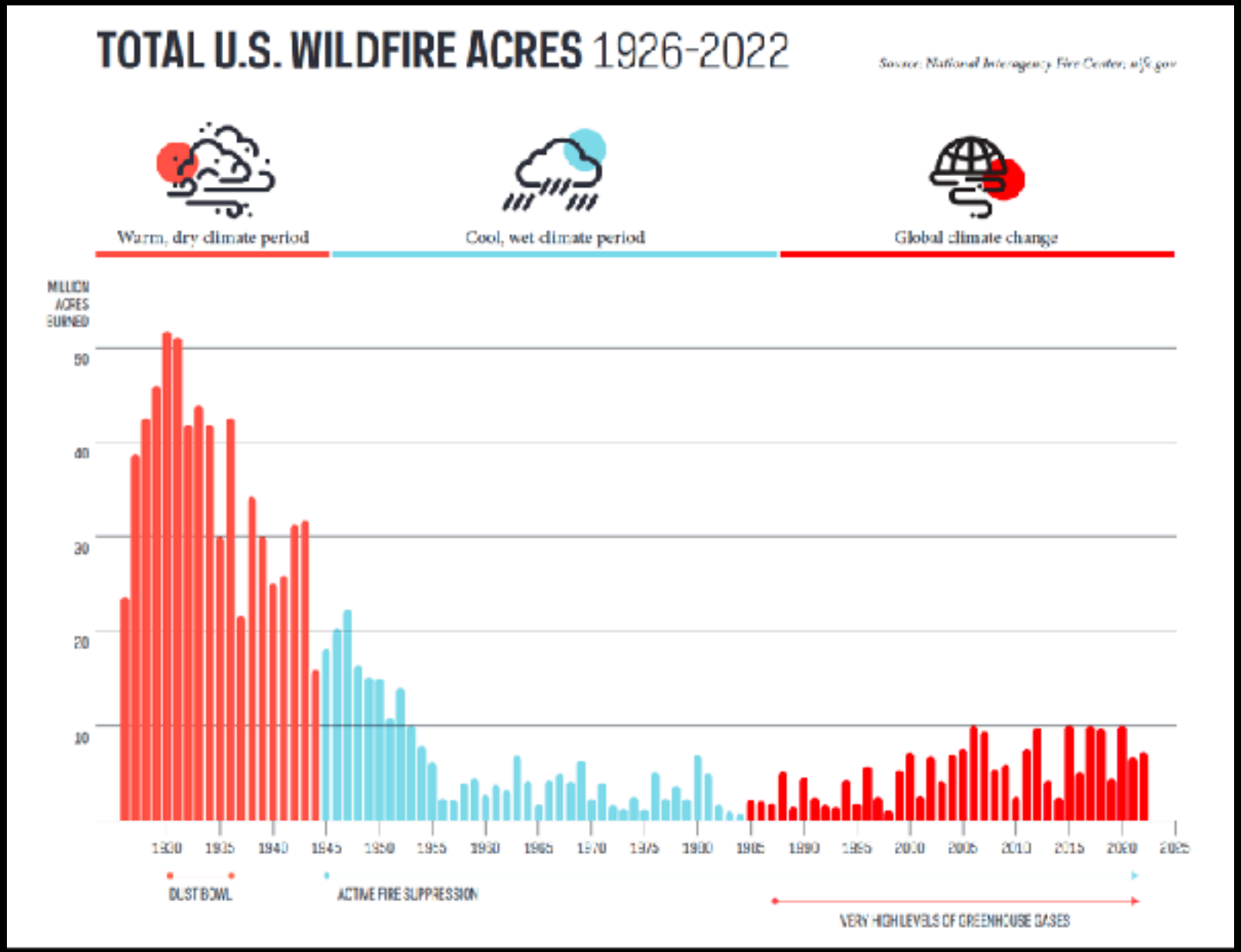
- Downslope w*ind events with fire caused by powerlines, people*
- *Drought, vapor pressure deficit, invasive grasses*
- Incinerated *homes* in *urban* and wildland interface areas
- Structure to structure ignition - homes become fuel

Increasing activity:

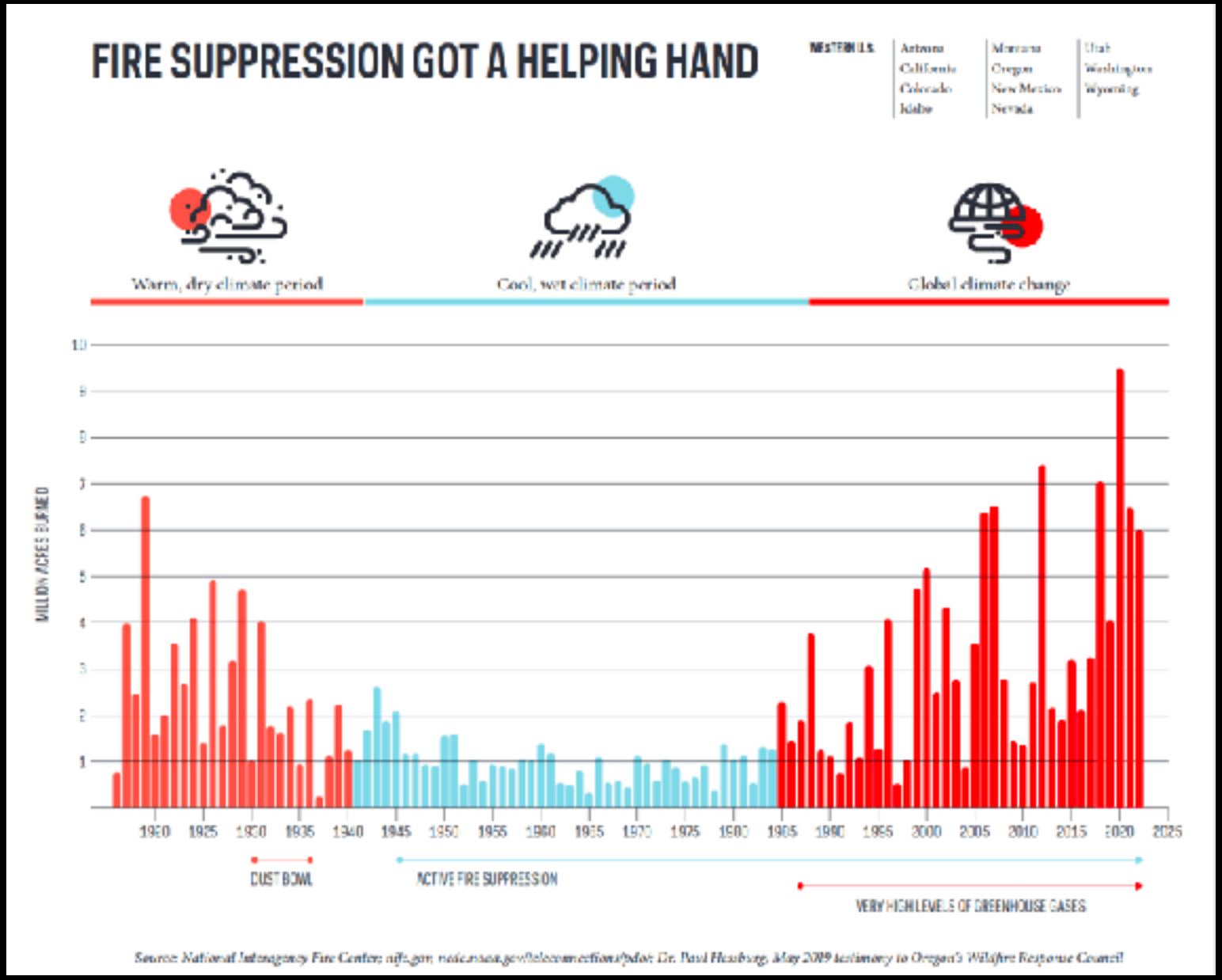
- More acres burned
- Very large wildfires
- Faster rates of spread
- Longer seasons
- More extreme

Increasing disasters:

- Human fatalities
- Homes destroyed
- Smoke impacts
- High suppression costs
- Economic losses
- Social disruption

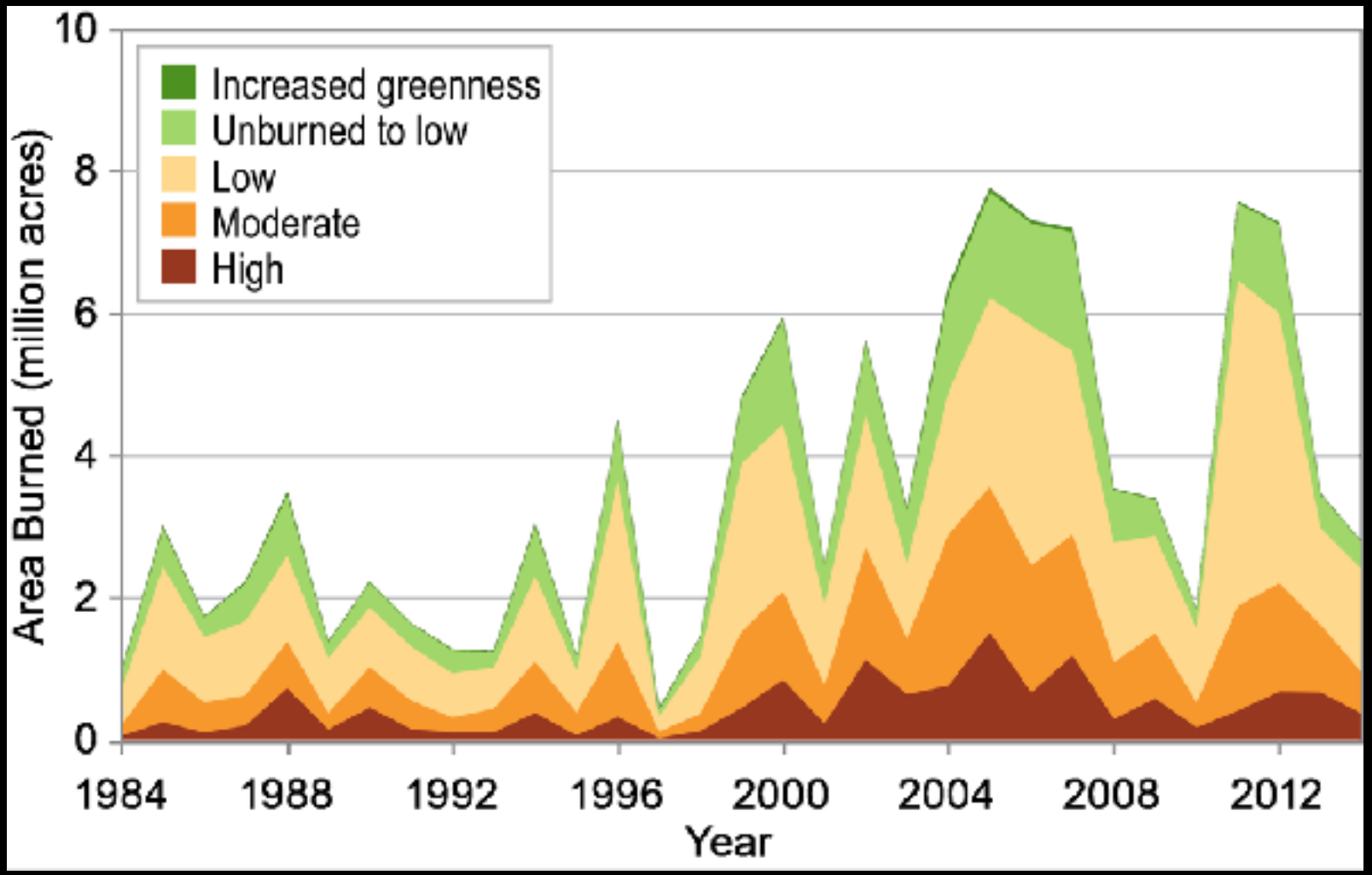


Sources: Listed on slide, plus others on file with author. Acreage tallies use different conventions, measuring devices, in other words data is not all derived using same methods



Note: Information in slides is from various sources, using different measurements available at time, historical data has been compared to other field indicators.

Wildfires are spreading faster, growing larger, and burning longer, but are not necessarily damaging or more intense



Source: U.S. Global Change Research Program. 2018. 4th National Climate Assessment, Vol. 2


ANOTHER 30 MILLION ACRES
WILL BURN THIS YEAR —
unless you are careful!
Remember - Only you can
PREVENT FOREST FIRES!

Tillamook Burn: 200,000 acres in 24 hrs

Yacolt Complex: 30 miles in 36 hrs

1902 Yacolt Burn

Figure 11 Tillamook Fire, August 25, 1933 *Courtesy of National Archives*

1933 Tillamook Burn

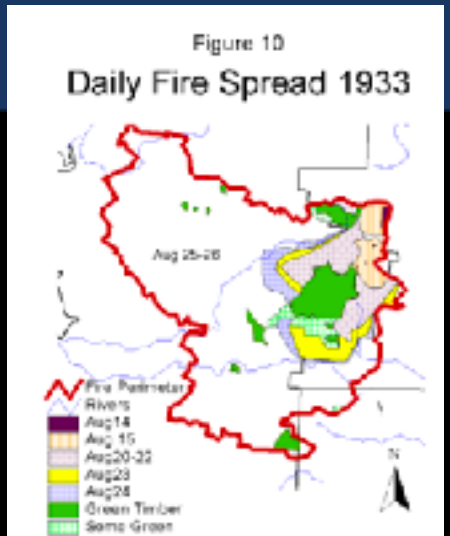
The M.O. of large westside fires

Three factors coincide:

1) Dry, late summer conditions

2) Ignition source

3) Synoptic east wind event



Oregon State University

Newsroom

FOR JOURNALISTS | FOR FACULTY AND STAFF | CONTACTS | NEWS ARCHIVE | 2022 TOP 10 STORIES

High wildfire severity risk seen in young plantation forests

April 27, 2018

CORVALLIS, Ore. – Wildfires show no respect for property lines, but a new analysis of the 2013 Douglas Complex fire in southwestern Oregon concludes that young plantation forests managed by industrial owners experienced higher severity fire than did nearby public forests.

Researchers in the College of Forestry at Oregon State University used satellite imagery and local data to analyze the factors driving differences of severity in the fire, which burned about 50,000 acres north of Grants Pass. Located in the

STORY BY:
Nick Houtman, 541-737-0783, nick.houtman@oregonstate.edu

SOURCE:
Harold Zald, 707-826-5434, hsz16@humboldt.edu; Christopher Dunn, 541-737-1194, chris.dunn@oregonstate.edu

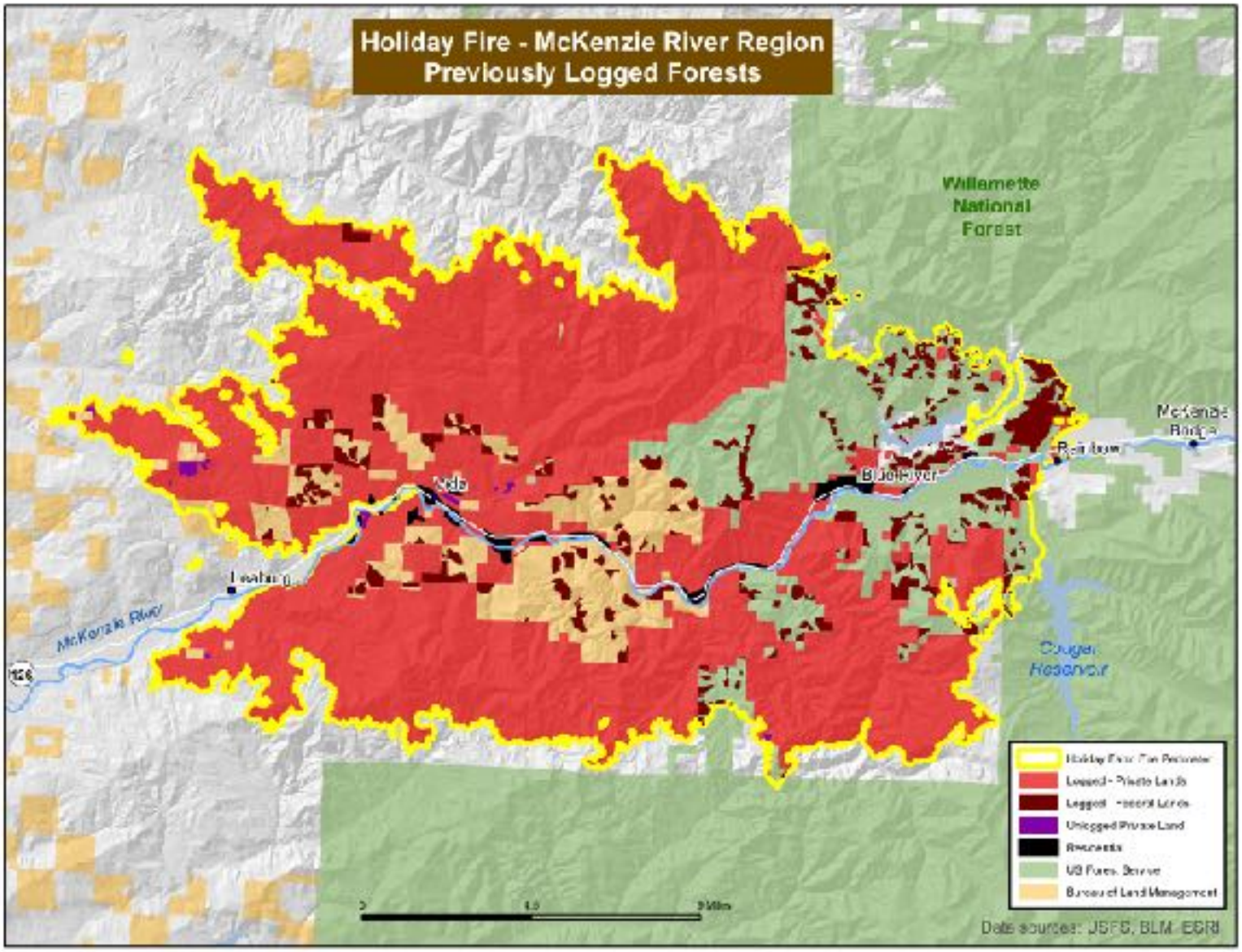
Higher incidence of high-severity fire in and near industrially managed forests

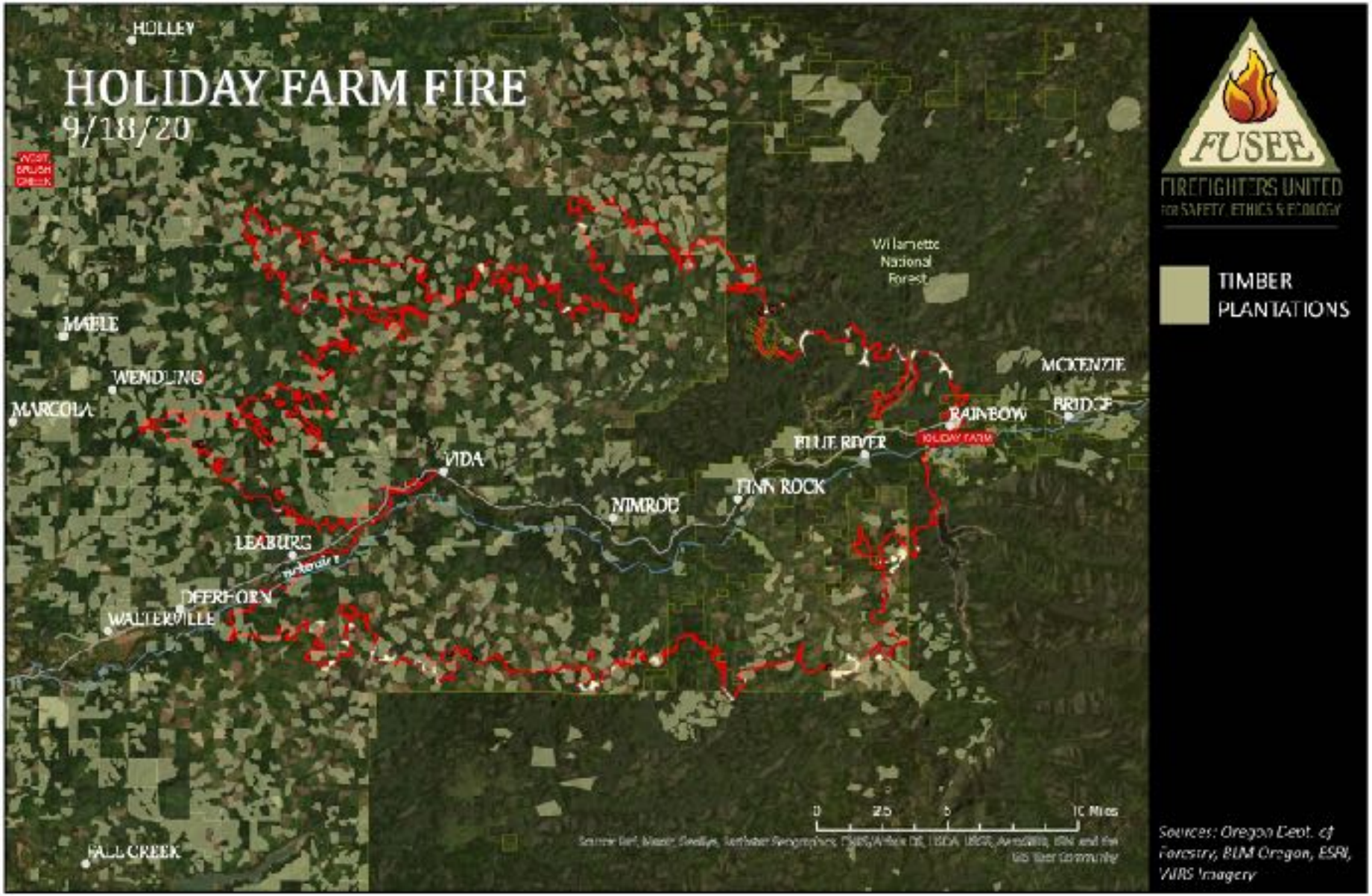
Jacob I Levine[1,2*], Brandon M Collins[2,3], Zachary L Steel[2], Perry de Valpine[2], and Scott L Stephens[2]

The increasing prevalence of high-severity wildfire in forests in the US state of California is connected to past forest management, but uncertainty remains regarding the differential effects of land ownership on these trends. To determine whether differing forest management regimes, inferred from land ownership, influence high-severity fire incidence, we assembled and analyzed a large dataset of 154 wildfires that burned a combined area of more than 971,000 ha in California. We found that where fires occurred, the odds of high-severity fire on "private industrial" lands were 1.8 times greater than on "public" lands and 1.9 times greater than on "other" lands (that is, remaining lands classified as neither private industrial nor public). Moreover, high-severity fire incidence was greater in areas adjacent to private industrial land, indicating this trend extends across ownership boundaries. Overall, these results indicate that prevailing forest management practices on private industrial timberland may increase high-severity fire occurrence, underscoring the need for cross-boundary cooperation to protect ecological and social systems.

Front Ecol Environ 2022; doi:10.1002/fee.2490

Holiday Farm Fire - 74% Private Land




HOLLEY
HOLIDAY FARM FIRE
9/18/20
Willamette National Forest
MABEL
WENDLING
MARCOLA
MCKENZIE BRIDGE
RAINBOW
BLUE RIVER
HOLIDAY FARM
VIDA
FINN ROCK
NIMROD
LEABURG
DEERHORN
WALTERVILLE
FALL CREEK
0 2.5 5 10 Miles
FUSEE
FIREFIGHTERS UNITED
FOR SAFETY, ETHICS & ECOLOGY
TIMBER PLANTATIONS
Sources: Oregon Dept. of Forestry, BLM Oregon, ESRI, VIIRS Imagery

Expanding Risk & Nationwide Smoke Events

Rapid rates of spread in a single day, massive sizes.
Firefighters unable to stop or contain, waiting on weather.
Thousands of homes burned, lives lost.
Smoke inundating communities across the West and nation.