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SOCAN Testimony supporting SB83

Chair Golden and members of the Senate Committee on Natural Resources and Wildfire

As I have noted previously, Southern Oregon Climate Action Now is a grassroots climate organization of some 2,000 Southern Oregonians. We are concerned about the climate crisis and seek federal, state and local action to address it. We are rural and coastal Southern Oregonians who live on the frontlines of the warming, reducing snowpack, heatwaves, drought, rising sea level and the increasing wildfire risk that these trends conspire to impose on us. Because of our concern, we pay close attention to efforts nationally, statewide, and locally that impact our collective efforts to address the climate crisis through mitigation or adaptation. As our logo above indicates, the focus of SOCAN is to promote action through science.

As many, though not by any means all, Oregonians know, our state experiences an unusual Mediterranean Climate characterized by a winter wet – summer dry cycle. PRI (2021) pointed out that “the western states have an enormous variety of climatic areas [that] include hot, dry deserts in the Basin and Range, a Mediterranean climate (a climate with dry summers and relatively warm, wet winters).” In relation to fire consequences of the Mediterranean Type Climate (MTC) which occurs in the Mediterranean, Western North America, western South America, Cape Province of South Africa and Southwestern and Southern Australia, Keeley (2012) summarized: “A key feature of MTC regions is that precipitation exceeds potential evapotranspiration during the rainy season, resulting in plant growth sufficient to produce contiguous fuel loads that are highly flammable during the summer drought.” According to Bartolome (1989) the Mediterranean Type Climate in which Oregonians find themselves developed over the last 3 million years.

The first conclusion to draw is that our forests have long been prone to burn annually. Thus, our forests have evolved with this climate and have become fire adapted, with some species, e.g., lodgepole pine (NPS undated) and some ecosystems as a whole becoming fire dependent.

It is well documented that the area burned by fire is correlated with climatic conditions. This was demonstrated (Figure 1) by Marlon et al. (2012) reporting how area burned in western forests has correlated historically with climate trends, Figure 1, modified from Marlon et al

(2012) depicts the relationship for the last 1,400 years. This reveals the actual forest area burning records (gray), the rolling 100 year trend in these records (red) and what the modeled forest burning trend based on climate suggested (dotted black). There is an evident correlation between the climate based model expectations and the actual data suggesting a strong relationship. They also reported this relationship extending back. They also tracked area burned back for 3,000 years. Indeed, the revealed that currently, we are experiencing a fire deficit, meaning that climatic conditions indicate a larger area should be burning than is actually burning. The authors concluded that “temperature and drought predict changes in biomass burning up to the late 1800s...” After that, they suggest “human activities and the ecological effects of recent high fire activity caused a large, abrupt decline in burning similar to the LIA [Little Ice Age] fire decline.” They conclude in their Abstract by observing that “Large fires in the late 20th and 21st century fires have begun to address the fire deficit, but it is continuing to grow.” This implies assuredly that future fires are highly likely.

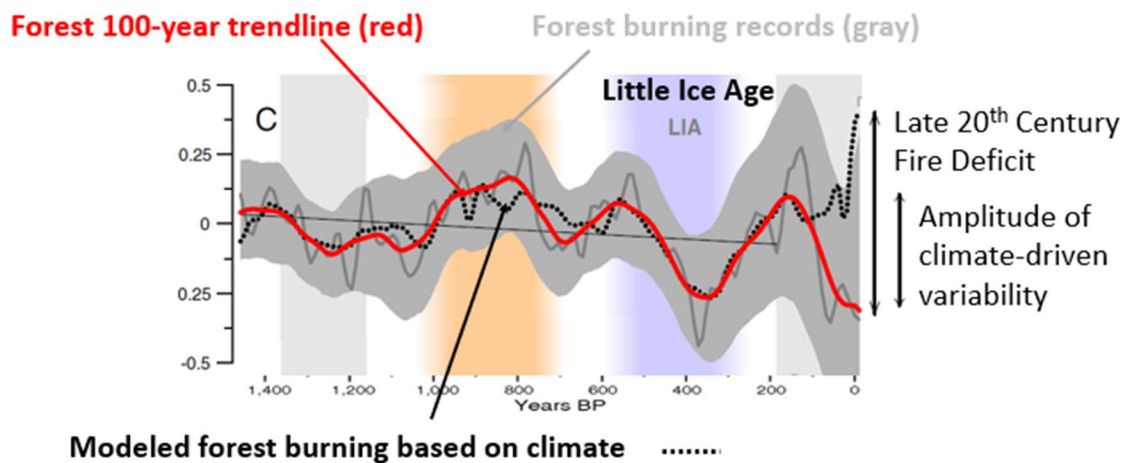
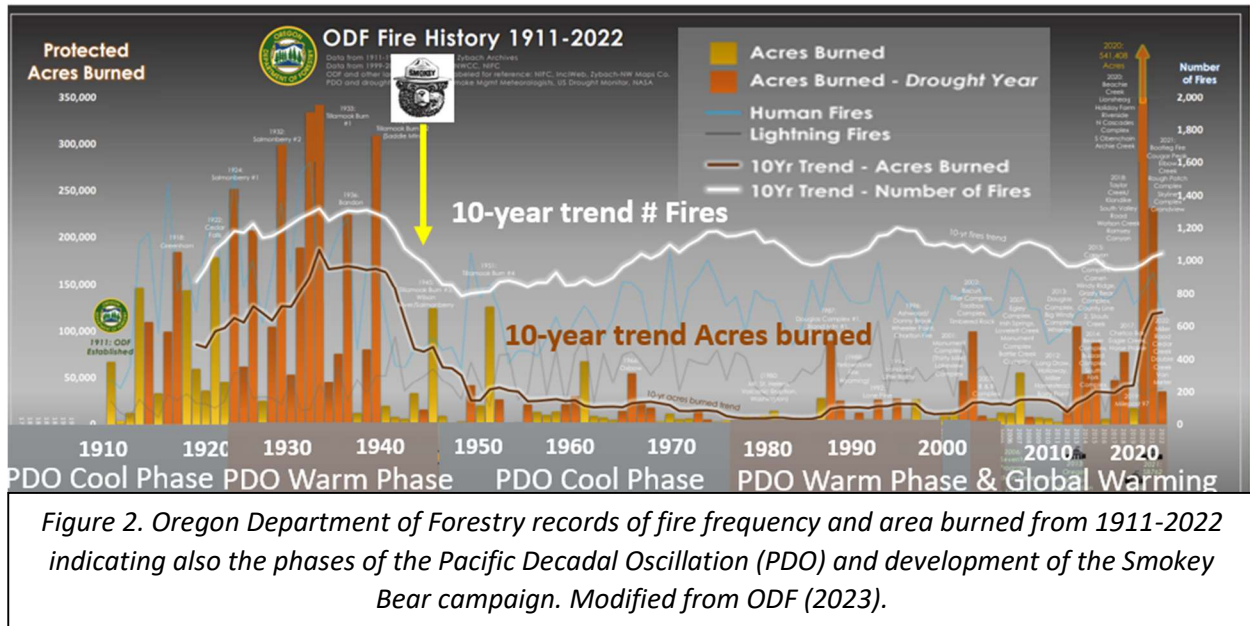


Figure 1. Area burned compared to modeled expectations of area burning based on climate records. Adapted by this author from Marlon et al. 2012)

Meanwhile the graphic presentation of fire number, area burned and climate from 1911-2022 (Figure) in the area managed by the Oregon Department of Forestry (ODF 2023) in relation to climate, suggests that fire number has been variable but exhibits no trend while area burned has correlated with climate, in particular, the Pacific Decadal Oscillation (PDO). Specifically, the warmer drier PDO phase seems to correlate with more extensive burning periods while the cooler, moister phase correlates with lower acreages burning. This pattern seems to continue until the last two decades of the last century and beyond when the implication is that global warming has superseded the PDO effect as area burned rose.

Interestingly, the ODF (2023) graph also suggests a potential correlation between area burned dropping during the mid-decades of the last century from the early century high and fire suppression, particularly the development of the infamous Smokey Bear campaign in the 1940s (Smokey 2021). Notably, and contrary to commonly held perspectives, the area burned in the ODF fire management area during the early years of the last century was generally greater than that experienced this century.



USDA (undated) argued that “Large and severe fires are associated with warm and dry conditions, which are likely to intensify with climate change.” The same source suggests that: “A 100 year-long, nationwide policy of fire suppression has also increased the likelihood of large and intense fires in the Northwest because of increased forest density and fuel levels. Additionally, according to NASA (2025) “Earth's warming climate is amplifying wildland fire activity, particularly in northern and temperate forests.”

The evidence suggests that fire is not only an inevitable presence in Oregon’s future but will also almost certainly increase as a problem so long as global warming continues and becomes more severe. If we don’t address the underlying causes of the climate trends, we will have to adapt to their consequences

That fire will pose an ongoing threat to Oregonians suggests that rather than pretending that we can suppress our way to a successful future, we need to learn to live with the fire that will come. The most effective route to achieving this is through construction or retrofitting that makes homes and buildings more resistant to the inevitable fire, a process termed ‘home-hardening.’ WFC (2024) among many other sources, offers a solid discussion of tips and best practices for home hardening. Undoubtedly, the most effective route for incorporating hardening into homes is to plan it during construction rather than undertake retrofitting.

SB83 represents an avenue for achieving hardened homes in areas prone to fire since Section 1 states: “the Department of Consumer and Business Services shall adopt wildfire hazard mitigation building code standards that apply to new dwellings and the accessory structures of dwellings, as described in section R327 of the 2021 Oregon Residential Specialty Code.” OLIS (2025).

It would be valuable to provide incentives to homeowners living in high fire risk areas to retrofit their homes with hardening features. Unfortunately, it seems that currently funds are only available for those who suffer damage or loss from fires. BCD (undated) for example, states: “The [Fire Hardening] grant program has also been expanded to include eligible structures damaged or lost in a wildfire since 2020.”

While we would like to see funds made available incentivizing home hardening, we acknowledge that the limited availability of state funds makes this problematic. However, a solid second-best step is to adopt codes that require that home hardening materials and techniques be incorporated into construction.

For the above reasons Southern Oregon Climate Action Now urges support for SB83.

Respectfully Submitted

A handwritten signature in black ink that reads "Alan Journet". The signature is written in a cursive, flowing style.

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Sources Cited

Bartolome J. 1989 Ecological History of the California Mediterranean-type Landscape. Landscape Ecology: Study of Mediterranean Grazed Ecosystems, Man and the Biosphere Symposium XVI

<https://my.ucanr.edu/repository/fileaccess.cfm?article=158001&p=KZNMV#:~:text=These%20processes%2C%20under%20the%20influence,rainfall%20climate%20present%20before%20the>

BCD undated Fire Hardening Grant Program. Oregon Building Codes Division.

<https://socan.eco/wp-admin/edit-comments.php?p=32012>

Keeley J. 2012 Fire in Mediterranean Climate Ecosystems—A Comparative Overview. ISRAEL JOURNAL OF ECOLOGY & EVOLUTION, Vol. 58, 2012, pp. 123-135.

https://www.researchgate.net/publication/261659995_Fire_in_Mediterranean_Climate_Ecosystems-A_Comparative_Overview –

NASA 2025 Wildfires and Climate Change National Aeronautics and Space Administration

<https://science.nasa.gov/wildfires-and-climate-change/#:~:text=Over%20the%20past%2020%20years,year%20has%20remained%20fairly%20constant.&text=This%20graph%20shows%20the%20number,year%20from%201983%20through%202023>. Institution

NPS undated Wildland Fire in Lodgepole Pine. National Park Service

<https://www.nps.gov/articles/wildland-fire-lodgepole-pine.htm>

ODF 2023 ODF Fire History 1911-2022. Oregon Department of Forestry

<https://www.oregon.gov/odf/fire/documents/odf-century-fire-history-chart.pdf>

OLIS 2025 2025 Regular Session SB83 Oregon Legislative Information System.

<https://olis.oregonlegislature.gov/liz/2025R1/Measures/Overview/SB83>

PRI 2021 Present climate of the western U.S. Paleontological Research Institution

<https://earthathome.org/hoe/w/climate/#:~:text=Much%20of%20Oregon%20has%20a,the%20mountains%20near%20the%20coast>.

Smokey 2021 Home – Story of Smokey: About the Campaign. The Ad Council

<https://smokeybear.com/en/smokeys-history/about-the-campaign>

WFCA 2024 Home Hardening Tips and Best Practices, Western Fire Chiefs Association.

<https://wfca.com/wildfire-articles/home-hardening/>