

Materials will be available at: www.eesi.org/061322climatechange Tweet about the briefing: #eesitalk @eesionline

CONGRESSIONAL BRIEFING Living with Climate Change: Wildfires **Policies to Anticipate Threats and Build Preparedness**

Monday, June 13, 2022

About EESI



Non-partisan Educational Resources for Policymakers

A bipartisan Congressional caucus founded EESI in 1984 to provide non-partisan information on environmental, energy, and climate policies

Direct Assistance for Equitable and Inclusive Financing Program

In addition to a full portfolio of federal policy work, EESI provides direct assistance to utilities to develop "on-bill financing" programs

Commitment to Diversity, Equity, Inclusion, and Justice

We recognize that systemic barriers impede fair environmental, energy, and climate policies and limit the full participation of Black, Indigenous, people of color, and legacy and frontline communities in decision-making

Sustainable Solutions

Our mission is to advance science-based solutions for climate change, energy, and environmental challenges in order to achieve our vision of a sustainable, resilient, and equitable world.

EESI Environmental and Energy Study Institute

Policymaker Education

Briefings and Webcasts

Live, in-person and online public briefings, archived webcasts, and written summaries

Climate Change Solutions

Bi-weekly newsletter with everything

policymakers and concerned citizens need to know, including a legislation and hearings tracker

Fact Sheets and Issue Briefs



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Timely, objective coverage of environmental, clean energy, and climate change topics

Social Media (@EESIOnline)

Active engagement on Twitter, Facebook, LinkedIn, and YouTube





Living with Climate Change

Polar Vortex – April 13

Sea Level Rise – May 18

Wildfires – June 13

Extreme Heat – June 24

Scaling Up Innovation to Drive Down Emissions

Green Hydrogen – April 27

Direct Air Capture – May 25

Electric Vehicle Charging – June 02

Offshore Wind Energy – June 29

Pathways to Regenerative Agriculture – June 16

Wildfires & Climate Change

Living with Climate Change: Wildfire EESI Briefing Carly A. Phillips Union of Concerned Scientists

Image credit: nps.gov

Science for a healthy planet and safer world.

Concerned Scientists

Our current wildfire situation



Data from *Monitoring Trends in Burn Severity* dataset

Image credit: ucsusa.org

A Drivers of current wildfire situation

- Loss of burning by Indigenous communities
- Widespread fire suppression
- Land management
- Human development
- Climate change



Image credit: ucsusa.org

Abatzaglou & Williams 2016, Impact of anthropogenic climate change on wildfire across western US Forests, PNAS

Wildfires & Climate Change

- Drought
- Higher temperatures
- Insect outbreaks
- Greater frequency of extreme fire weather
- Extension of wildfire season and shifts in seasonal dynamics





Carbon emissions from boreal wildfires

Fire History in Interior Alaska





Image credit: nasa.gov Phillips et al 2022 ucsusa.org

Future wildfires & climate change



Figure from Andregg et al 2022, Future climate risks from stress, insects and fire across US forests, Ecology Letters

Interconnected solutions

- Reduce our production of heat-trapping emissions
- Remove excess fuel from forests and restore historical fire regimes
 - Prescribed burns
 - Managed wildfire
 - Forest thinning
- Promote Indigenous fire stewardship
- Invest in resilient infrastructure
- Provide community level support
 - Address housing challenges
 - Home hardening
 - Air filtration
 - Water resources





Community Planning for Increasing Wildfire Risks

HEADWATERS ECONOMICS



Kimiko Barrett, Ph.D. Sr. Wildfire Research & Policy Analyst, Director, Community Planning Assistance for Wildfire June 13, 2022

https://headwaterseconomics.org

Community Planning for Increasing Wildfire



Community Adaptation







HEADWATERS ECONOMICS

Independent Nonpartisan Research



Roadmap



How does a home burn down?



What can a community do?



What needs to happen?

How does a home burn down?

How does a home burn down?

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Wildland-urban interface (WUI) fire

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https://headwaterseconomics.org

Embers (firebrands)





Reduce the flammability of the home





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Roadmap



How does a home burn down?



What can a community do?



What needs to happen?

Community Planning Tools



Building Codes



Wildfire resistant construction & vegetation management

Example: Austin, TX

Vegetation Management



Ordinances



Public-Private Partnerships



Roadmap



How does a home burn down?



What can a community do?



What needs to happen?







Invest in Communities



Investment Opportunities

- **Subsidies for homeowners**
- **Defensible space programs**
- **Outreach and education**
- **Community development plan updates**
- **Staff capacity**
- **Vulnerable populations**

Upfront investment saves long-term costs



Wildfire-Resistant Homes





We need to plan for inevitable wildfires.

Invest in people and communities.

We can't afford to wait.

Thank You!



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Subscribe!

CULTURAL FIRE MANAGEMENT COUNCIL

Bringing Fire Back to the Land



Managing the land for Living Culture And Wildfire Prevention

Food, Medicine, Basket Materials







Training Exchange (TREX)









Cooperative Burns







Demonstration Burns





Family Burns



Bootleg Wildfire Southern Oregon



Cultural Fire Management Council margo@culturalfire.org

Photo credit: Matt Mais



U.S. Wildfire Risk: Insurance Perspective

June 2022



State the Obvious: U.S. Insured Wildfire Losses are Increasing







U.S. Wildfire Risk is Growing





Western U.S. **Fire Season Months**

May to November

Climate Normal Comparison 1991-2020 vs 20th Century Avg

What do the results mean?

The combination of reduced precipitation during the standard "dry season" and hotter average temperatures is aiding in the intensification of drought events. This has also been a factor in U.S. West wildfire seasons now regularly being extended by several weeks.

> Data: NOAA (NCEI) Graphic: Aon (Catastrophe Insight)





Wildfire Risk as Part of the Climate Change Feedback Loop





Based on work from the United Nations (2022) https://wedocs.unep.org/bitstream/handle/20.500.11822/38372/wildfire_RRA.pdf



Larger Fires Correlate to Higher Losses

CONUS: Annual Wildfire Losses vs. Average Fire Size (1990-2021)



Fire Data: NIFC Loss Data & Graphic: Aon (Catastrophe Insight)



Federal Disaster Relief Funds & Wildfire Disaster Declarations



Today's Dollars





Wildfires

Insurance & the Wildfire Peril

Need to Properly Identify Risk

Strengthen the available computational tools, data, and utilize other analytics to find where the risk profile is evolving



Engage Public Sector Stakeholders

Find a balance to ensure coverage opportunities for low or high-risk properties & encourage needed forest management funding



Bring Down the **Protection Gap**

Portion of direct economic losses not covered by insurance can range from 20 to 50% per fire event



Clearly Communicate the Risk

The public and private sectors need to better communicate current and future risk to residents



Example: California Fire Risk





11M+

CA WUI Population

4.5M+

CA WUI Housing Units

Continued trend of residents moving into high risk Interface or Intermix WUI areas to seek cheaper costs of living.

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Communicate & Understand the Totality of Hazard Risk

Hazard Location

Where an event occurs ultimately will determine how much loss. The bigger the event affecting a larger population center will bring higher loss costs.

Hazard Behavior

The type of effects derived from an individual event or series of events. Climate influence is increasingly more pronounced with some perils.

Hazard Frequency

How often an event or a type of an event can be expected. This is an important metric but only a limited portion of how risk should be viewed.





Hazard Readiness

How well prepared a community is to withstand the intensity or frequency of various perils will determine how much damage occurs.

Totality of Hazard Risk

Event frequency matters. Event behavior matters even more. Event location and readiness matters most.

Prepare today to limit risk tomorrow.



How the Private Sector is Moving Forward: Academic Collaborations

Private Sector / Academic Outreach

The need for better collaboration between the private, public, and academic sectors has never been more important. Working together to find solutions.

Placement into Modeled Solutions

Scientifically sound solutions can be directly implemented into a catastrophe model. A preferred approach beyond basic frequency adjustments.





Direct Access to Emerging Research

Academic collaboration allows peer reviewed research or opportunities for new research ideas to be studied. Brings private sector perspective to untapped topics.

Higher Quality Results

Opportunity to better account and explain complex uncertainties with climate change solutions. Allows for more actionable quantitative and qualitative results.





Build Better. Build Smarter.





Source: https://revkin.bulletin.com/when-wildfire-comes-to-town-amid-the-marshall-fire-s-urban-ashes-hints-of-a-less-combustible-future



We cannot fully eliminate risk, but we can take meaningful steps to minimize it.





What did you think of the briefing?

Please take 2 minutes to let us know at: www.eesi.org/survey

Materials will be available at: www.eesi.org/061322climatechange

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