

---

# Reaching the Mountaintop: Insurance Which Accounts For the Risk Reduction of Nature Based Solutions

---

Dave Jones  
Director, Climate Risk Initiative  
Insurance Commissioner, Emeritus

CUCEA/CUCRA, UC Riverside  
April 23, 2025

UC Berkeley Center for Law, Energy  
& the Environment

# ABOUT CLEE

---

**The Center for Law, Energy, & the Environment (CLEE)** believes solving our most pressing environmental challenges requires actionable research, training, and engagement to accelerate the implementation of solutions.

CLEE tackles climate change and other environmental challenges at the local to global scale through the development and implementation of equitable and effective legal and policy solutions. Our expert staff leverages the world's leading public research university to engage community leaders, government, business, and other stakeholders; to lead timely and practical research initiatives; and to train leaders to take action on our most pressing environmental problems.

UC Berkeley Center for Law, Energy  
& the Environment



# Insuring Nature vs Underwriting Accounting for Nature Based Solutions

---



UC Berkeley Center for Law, Energy  
& the Environment



# Forest Treatment: Healthier Forests

---



UC Berkeley Center for Law, Energy  
& the Environment



# Forest Treatment: Reduces Severe Wildfire Risk

---



UC Berkeley Center for Law, Energy  
& the Environment



- *Problem*

- Insurance underwriting models & rates don't account for the risk reduction benefits of forest treatment.





# WILDFIRE RESILIENCE INSURANCE:

Quantifying the Risk Reduction of  
Ecological Forestry with Insurance

The Nature  
Conservancy 

Willis Towers Watson 


## Underwriting Models Can Account For Forest Treatment Risk Reduction

2021 Paper

<https://www.nature.org/en-us/newsroom/ca-wildfire-resilience-insurance/>

UC Berkeley Center for Law, Energy  
& the Environment





# 20%-40%

AVERAGE ANNUAL LOSS  
REDUCTION

# \$21M

ANNUAL PREMIUM SAVINGS  
FOR 81,000 HOMES



## Goal: Structure & Place Insurance Underwritten Based on Forest Treatment

---

UC Berkeley  
Center for Law, Energy  
& the Environment

The Nature  
Conservancy



wtw

UC Berkeley Center for Law, Energy  
& the Environment



---

# Success!

- Insurance placed in forested area of Sierra Nevada, California
- Underwritten and priced based on forest treatment: Globe Underwriting
- Other insurers not accounting for forest treatment are not renewing/writing in same area
- Forest treatment enabled the insurance to be written



# First Placement of Insurance Accounting for Forest Treatment

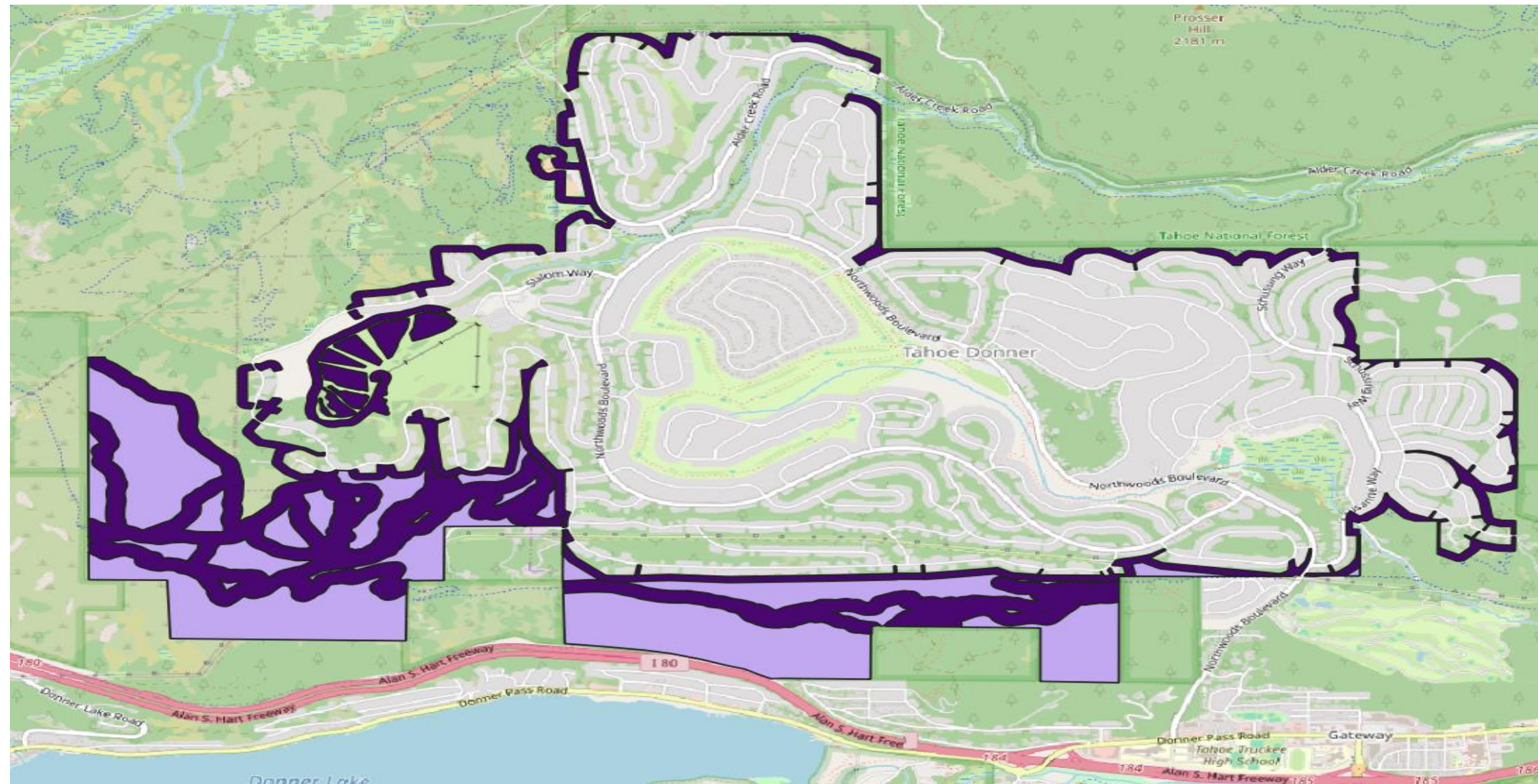
- \$2.5 Million in coverage
- Tahoe Donner Community (HOA)
  - 6500 homes
  - 7500 mostly forested acres
  - Forest Treatment
- 1345 forested acres insured
  - Low vs High value acreage
- Parametric Insurance
- Trigger: Acres Burned
- Low vs. High Severity Payout

Location	Area (acres)	Value (USD/acre)	Insured value (USD)
Low value	624.9	2500	1,562,250
High value	720.6	4500	3,242,700
Total	1,345.5	n/a	4,804,950



# Tahoe Donner Community: 1345 Acres Insured

---



Light purple=\$2500/acre Dark Purple =\$4500/acre



# Forest Treatment: Price 39% Lower & Deductible 84% Lower

---

Parameter	Not accounting for fuel reduction	Accounting for fuel reduction (Quote)
Deductible (each-and-every loss)	USD 62,464	USD 10,000 (-84%)
Limit	USD 2.5m	USD 2.5m
Gross premium (incl. brokerage)	USD 90,000	USD 55,000 (-39%)



# Technical Report on Analytics Used to Underwrite and Price Insurance

---



## Risk Reduction From Forest Management Accounted For in First-Of-Its-Kind Wildfire Resilience Insurance: A Technical Report on the Analytics Used to Price and Underwrite Insurance in California

- Risk Analytics Accounting for Forest Treatment
- <https://www.law.berkeley.edu/research/clee/research/climate/climate-risk-initiative/wildfire-resilience-insurance-policy/>

David Williams<sup>1</sup>, Dave Jones<sup>2</sup>, Kristen Wilson<sup>3</sup>, Jason Hadjuk<sup>4</sup>, Charlotte Stanley<sup>3</sup>, Claire Wilkinson<sup>1</sup>.

<sup>1</sup>WTW, <sup>2</sup>U.C. Berkeley Center for Law, Energy & the Environment, <sup>3</sup>The Nature Conservancy, <sup>4</sup>The Tahoe Donner Association.

UC Berkeley Center for Law, Energy  
& the Environment



---

# Thank you!

---

Dave Jones

DaveJones@Berkeley.edu

<https://www.law.berkeley.edu/research/clee/>

UC Berkeley Center for Law, Energy  
& the Environment