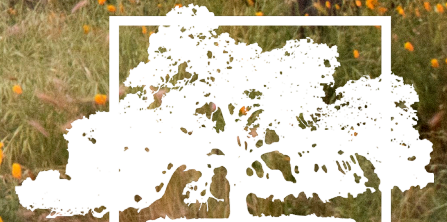


Nature and Forest Therapy for Long- Term Disaster Recovery

Blake Ellis, ASW
Chico State Ecotherapy
Program Manager



Chico State
BIG CHICO CREEK
ECOLOGICAL
RESERVE

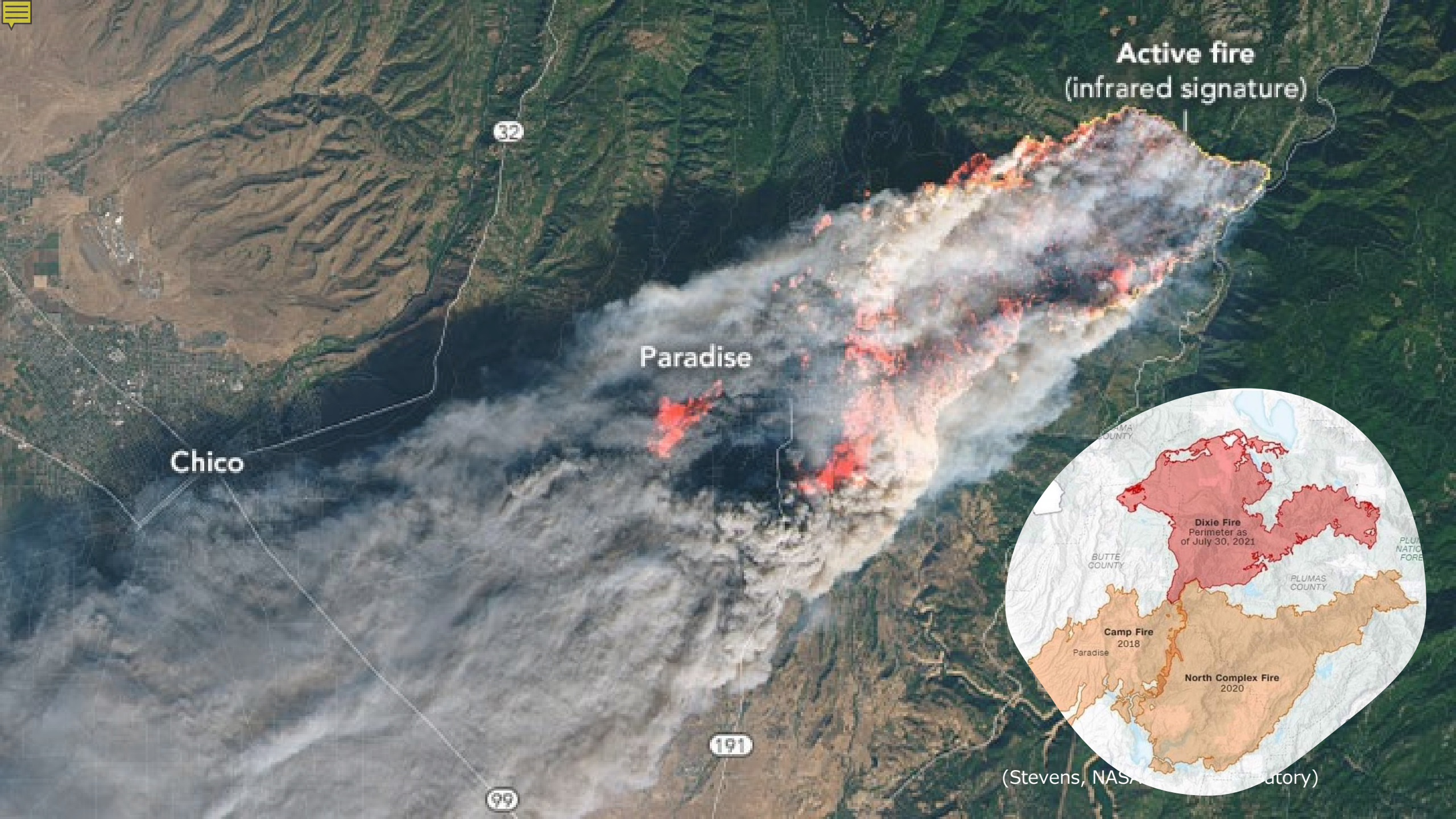


Introduction

Blake Ellis

- MSW, California State University, Chico
- Certified Forest Therapy Guide with the Association of Nature and Forest Therapy (ANFT)
- Ecotherapy Program Manager: Big Chico Creek Ecological Reserve and Chico State Basic Needs
- Associate Clinical Social Worker (ASW)
- Type 2 Wildland Firefighter





Active fire
(infrared signature)

Paradise

Chico

32

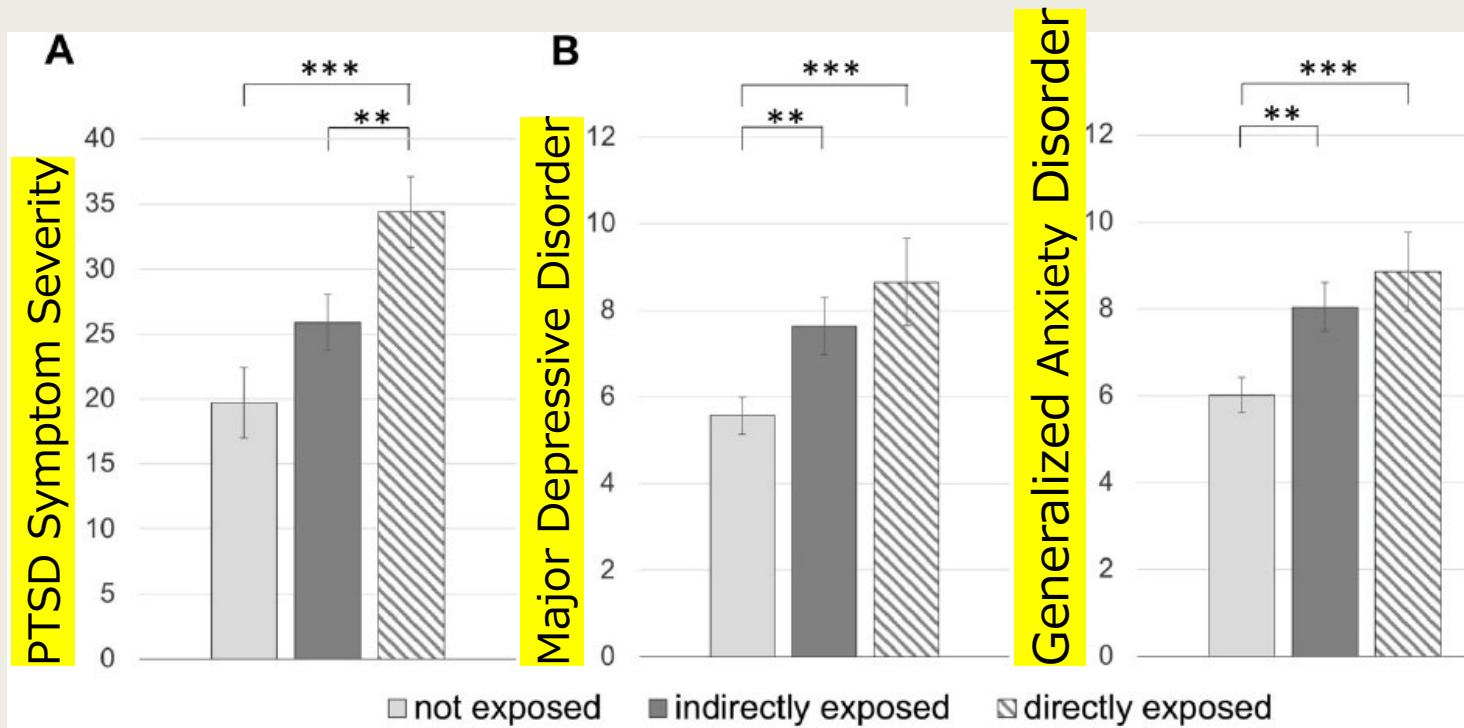
191

99



(Stevens, NASA Laboratory)

Mental Health Impacts of Catastrophic Wildfire on Communities



- Significantly higher rates of PTSD, anxiety, and depression
- Climate trauma affects cognitive & brain functions
- Substance abuse, insomnia
- Long-term
- Social vulnerability increases likelihood of mental health issues: ACEs, poverty, unstable housing, health issues,



The Camp Fire



A MAXAR COMPANY





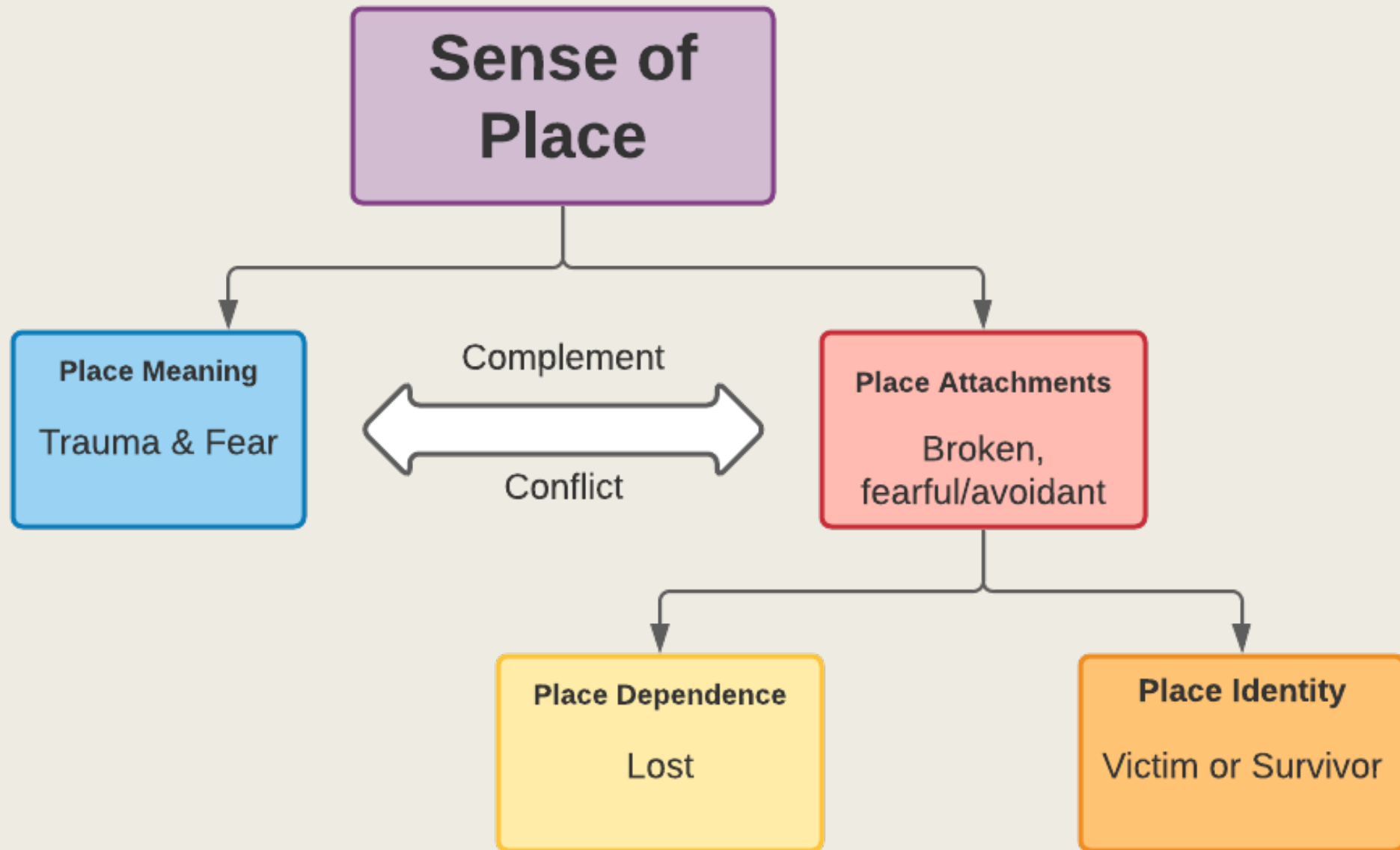
Solastalgia

The mental, emotional, and spiritual impacts of environmental degradation to one's home environment. The loss of solace and feelings of desolation when one's sense of place is under attack (Albrecht, 2019).

Solari + Desolare + Algia



“The homesickness one feels when one is still at home.”



How is Sense of Place or Solastalgia showing up in your life or current work?



What I discovered

- Survivors were experiencing solastalgia and it impacted their healing and recovery
- Solastalgia as disenfranchised grief
- Community encompasses the More-Than-Human World
- Regrowth was a symbol of hope
- Service is healing





Forest Therapy for Community Recovery Pilot Project

2019: Big Chico Creek Ecological Reserve (BCCER) receives funding from NVCF to certify 15 Nature and Forest Therapy Guides

2021: Forest Therapy for Community Recovery Pilot Project serves 378 individuals impacted by wildfire





Nature and Forest Therapy



History of “Shinrin-Yoku”

FOREST BATHING

- 1980’s cultural shift in Japan
- Rapid urbanization & technology economy: pollution, stress, digital addiction, demanding work culture
- What happens when humans spend time in forested environments?

PROVEN TO

- Activates parasympathetic nervous system
- Reduces cortisol and adrenaline levels
- Improves respiratory and cardiovascular function
- Regulates blood pressure
- Alleviates depression and anxiety
- Improves mood, focus, attention, academic performance, and creativity
- Boosts immune function
- Phytoncides > NK Cells



What is Forest Therapy?

Forest Therapy is a research-based practice that supports health & wellness through guided sensory immersions in nature aimed at cultivating healthy relationships with the self, each other, and the More-Than-Human World. The intention of the practice is to **slow down, relax, to awaken the senses, and engage with the natural world.**



Forest Therapy for Long-Term Recovery



Protective factors & predictors of well-being: emotional and social support, mindfulness, sleep, and sense of community (Kornbluh et al., 2022)

INCREASES

- Mindfulness
- Nature connection
- Sense of place
- Mood states
- Sleep

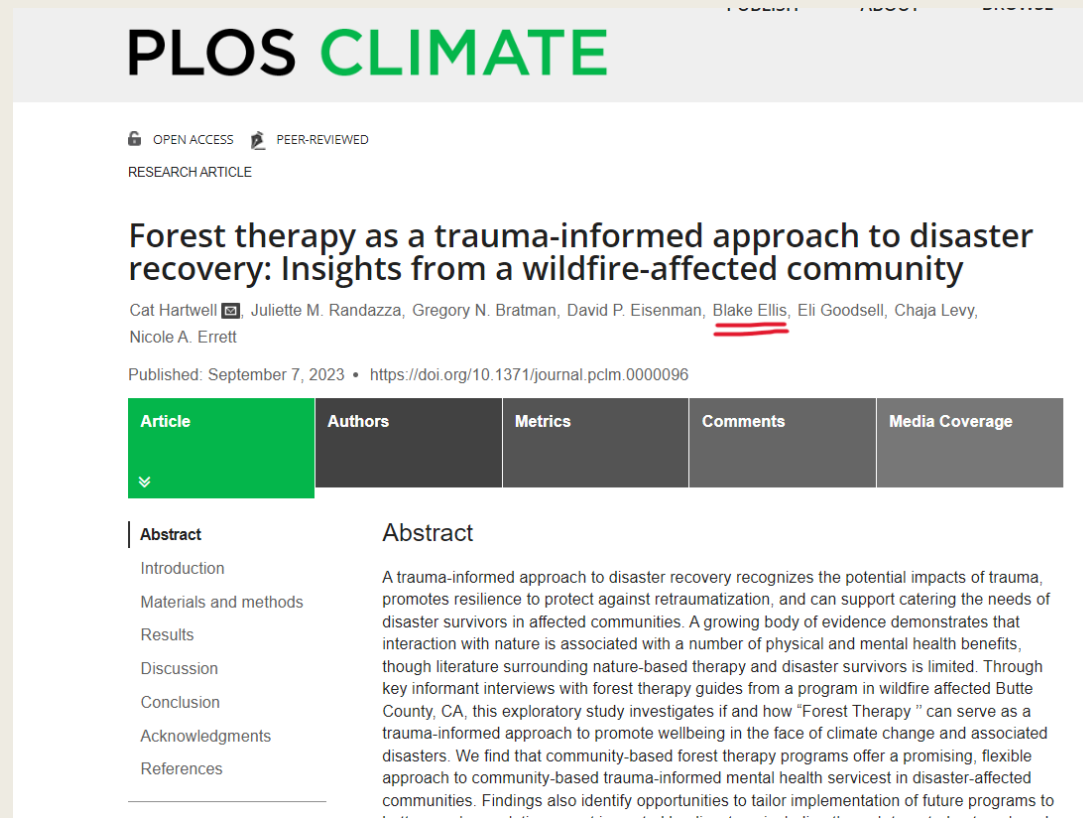
DECREASES

- PTSD
- Depression
- Stress & Anxiety

Disaster recovery and trauma-informed care

Trauma-informed Principles:

- Safety
- Trustworthiness & Transparency
- Peer Support
- Collaboration & Mutuality
- Empowerment, Voice, & Choice
- Cultural, Historical, & Gender Issues



PLOS CLIMATE

OPEN ACCESS PEER-REVIEWED
RESEARCH ARTICLE

Forest therapy as a trauma-informed approach to disaster recovery: Insights from a wildfire-affected community


Cat Hartwell, Juliette M. Randazza, Gregory N. Bratman, David P. Eisenman, Blake Ellis, Eli Goodsell, Chaja Levy, Nicole A. Errett

Published: September 7, 2023 • <https://doi.org/10.1371/journal.pclm.0000096>

Article	Authors	Metrics	Comments	Media Coverage
Abstract				
Introduction				
Materials and methods				
Results				
Discussion				
Conclusion				
Acknowledgments				
References				

Abstract

A trauma-informed approach to disaster recovery recognizes the potential impacts of trauma, promotes resilience to protect against retraumatization, and can support catering the needs of disaster survivors in affected communities. A growing body of evidence demonstrates that interaction with nature is associated with a number of physical and mental health benefits, though literature surrounding nature-based therapy and disaster survivors is limited. Through key informant interviews with forest therapy guides from a program in wildfire affected Butte County, CA, this exploratory study investigates if and how "Forest Therapy" can serve as a trauma-informed approach to promote wellbeing in the face of climate change and associated disasters. We find that community-based forest therapy programs offer a promising, flexible approach to community-based trauma-informed mental health services in disaster-affected communities. Findings also identify opportunities to tailor implementation of future programs to better reach populations most impacted by disasters, including through targeted outreach and



“Today is the first time since the [Camp] fire that I have been able to feel the wind on my face and have it be pleasant and pleasurable, instead of triggering. I can’t tell you how amazing that feels.”



Participant Quotes

"I've been in therapy for a while, and today's [Forest] therapy session was the best one I've had in years."

"I'm calm and more connected. I feel happier, relaxed, and refueled. I'm in a better place."

"This was a really healing experience that would be beneficial for folks of all ages. You're likely to learn, heal, and grow."

"I feel lighter and more resilient. Ready for more! I feel so much more centered and at ease."

"Surprisingly life-changing! I can't explain the feeling other than that"

"This experience feels like taking a deep, whole breath for 2 hours. I feel awake, childlike, and refreshed - What a beautiful thing!"



Our Future

- Ecotherapy Cohorts
- Volunteer stewardship and restoration
- Cultural training and place-based education
- Build relationships with Indigenous TEK practitioners
- Wildland Firefighters & Prescribed Fire Practitioners
- NFF grant partner with the USFS serving wildfire-impacted communities on public lands
- Healing Trees Maui – for Maui fire survivors



Call to Action

Reimagine how we think about mental health

- Community mental health for collective healing
- Nature connection and sense of place
- Heal in a parallel relationship with the land
- Our public lands are spaces for healing
- De-silo our systems of care: mental health at all levels of disaster recovery, planning, and mitigation

We need creative leadership, funders, and policymakers to value nature-led, community-driven responses that embed mental health as a pillar of disaster recovery, not an afterthought.



Thank you

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