



# STATUS OF TRIBES & CLIMATE CHANGE REPORT

VOLUME 2, 2025

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# Good Fire and Climate Change: The Return of Indigenous Fire Stewardship

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## KEY MESSAGES

Good Fire stewardship led by Indigenous Peoples has been practiced over millennia and is proven to be sustainable and healthy for landscapes. Cultural fire stewardship, often different from agency and prescribed fire approaches, is unique to each Tribe/ Indigenous group in terms of goals and technique. The acknowledgement of Traditional Good Fire implementation presents culturally grounded solutions to the escalating threats of wildfires, biodiversity loss, and climate change.

## CHAPTER RECOMMENDATIONS

Legal frameworks and policy must adapt to incorporate and prioritize Indigenous-led Good Fire practices. Acknowledging the legitimacy of these practices through supportive legislation will enhance ecosystem health and resilience in numerous locations across the United States. Policymakers should ensure that Indigenous voices are central in the dialogue, decision-making, and codification of these Indigenous-led, place-specific fire management processes.

## Chapter Author Positionality Statements

**Melinda M. Adams** belongs to the N'dee, San Carlos Apache Tribe and is an Assistant Professor in the Department of Geography and Atmospheric Science and Indigenous Studies at the University of Kansas (Kaw Nation of Kansas). A cultural fire practitioner and scholar, her research focuses on the revitalization of cultural fire with Tribes in California and more recently with Tribes in the Midwest (USA). Her work with Indigenous communities lives at the intersection of ecology/environmental science, environmental policy, and Indigenous research methodology.

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## Good Fire Terminology/Glossary

**Good Fire** The term Good Fire describes purposefully placed fire for the removal of dead and decaying vegetation; it can also be used to infer Indigenous use of intentional fire. It also has origins to Indigenous Peoples in Australia as traditional ecological and cultural Knowledge in “taking care of Country” (Steffensen, 2020) and bringing back traditional fire management (Eriksen & Hankins, 2014; Clark et al., 2022).

**Beneficial Fire** A term used to collectively refer to prescribed fire, cultural burning, and fire managed for resource benefit (California Wildfire & Forest Resilience Task Force, 2022).

**Cultural Fire** Indigenous-led burning that promotes intergenerational teachings and active responsibility to the land and enhances diversity and productivity of species, food, medicine, and ceremony (Long et al., 2020, 2021; Hoffman et al., 2022a); it actively involves communities and families to support overall community health (Hoffman et al., 2022b).

**Indigenous Fire Stewardship** Indigenous fire stewardship is the intergenerational teachings of fire-related Knowledge, beliefs, and practices among fire-dependent cultures regarding fire regimes, fire effects, and the role of cultural burning in fire-prone ecosystems and habitats (Lake & Christianson, 2019).

**Indigenous Cultural Burning Practices** These practices are distinguished from other fire management (e.g., local, state, and federal agencies) in terms of Indigenous goals, outcomes, and the right to burn (Clark et al., 2022).

**Prescribed Fire** Prescribed and controlled fire are planned burns conducted by trained fire practitioners to manage and restore lands and waters. Unlike wildfires, prescribed burns take place under specific weather conditions, often requiring significant environmental compliance review [i.e., the National Environmental Policy Act (NEPA)], burn and smoke management plan preparation, and explicit safety protocols for both the public and the fire practitioners (The Nature Conservancy, 2024).

## A Note on Capitalization, Possessive Words, and Word Choice

This highly collaborative report presents an opportunity to nuance the density and diversity of terminology and writing stylistics when referring to Native Tribes, Alaska Native Villages, and Native Hawai‘ians within the United States. The practice and protocol of this writing stylistic comes from Younging’s (2018) *Elements of Indigenous Style*, in which he offers culturally appropriate publishing principles to guide writing with and about Native American Peoples. The goal here is to present culture in a realistic and insightful manner, with the highest possible degree of verisimilitude (Younging, 2018). Our approach seeks to reject a colonial practice of presenting information about Indigenous Peoples, embracing instead a praxis of sharing Indigenous Peoples’ perspectives with, by, and for our Peoples (Younging, 2018) using appropriate capitalization, plurals, and word choice. The Good Fire chapter deploys:

**Capitalization:** We will capitalize terms that hold significant meaning to the co-authors. This capitalization signals proper noun practices within written documents and garners agency for Indigenous researchers, authors, and community members. It also asserts our relationality with people and more-than-human relatives (beings), which our communities hold in high regard (see Younging Principle 13).

**Possessive words:** We refer to Tribes, Alaska Native Villages, and Native Hawai‘ians, terms, and places in our/Tribes’ own languages as appropriate (see Younging Principle 15).

**Past tense:** The report encourages readers to develop the practice of refraining from using solely past tenses when referring to Native Peoples. Speaking of Native Peoples in the present tense asserts Native identity and existence and emphasizes Native Peoples in the now and always into the future (see Younging Principle 22).

## Fire: Indigenous Covenant to Protect the Land Narrative by Hillary Renick

**Hillary Renick**, JD, LLM, MS, Sherwood Valley Band of Pomo, Qualified Fire Archaeologist on the U.S. Department of Interior Burned Area Emergency Response, and President of the California Indian Land Institute

**Fire, powerful and often feared, has been a fundamental part of the life of healthy forests throughout history. Utilizing skills acquired by living in place for millennia and learning the rhythm of the seasons through observation, experimentation, and practice, Indigenous cultures use fire as a land management tool. By developing low-risk land management practices, Indigenous communities achieve the same effect as wildfire but minimize the length of ecosystem disruptions.**

Indigenous people understand how the health of their physical environment is directly connected to their well-being. The food chain is impacted by livable habitat. Economy and trade are dependent on available natural resources. Partaking in an intergenerational practice and tradition unites people, connects them to their Ancestors, and opens doors for generations to come. As documented in early newspapers and journals, Indigenous fire practices were well-known to the initial settler colonizers of the U.S. The Blackfoot Indians who practiced controlled burns, for example, were named as such by colonizers who observed their blackened moccasins from walking on recently burned terrain. While the benefit of their ecological stewardship was observed, many settlers promoted the false idea that Indigenous use of fire was a danger to society.

The 2024 wildfire season opened with extreme weather conditions and red flag warnings that many are now accustomed to. Seasonal wildland fire crews are now year-round, and land management agencies have moved from only fire suppression to restoring fire to the landscape through multiagency team approaches. As we face more frequent and extreme wildfires, learning from Indigenous communities about how to manage land and fire is vital. Reconnecting

Indigenous Knowledge to the land is occurring in fire management with Indigenous communities in the U.S., Canada, Finland, and Australia. Fire crews often employ fire archeologists to teach wildland firefighter teams about ancient fire burning techniques. Indigenous fire experts are joining these teams at an increasing rate and sometimes include an all-Indigenous team. Traditional Knowledge is combined with modern wildfire science that utilizes the latest technology, advanced predictive modeling, and satellite data to ensure wildland firefighter safety and success.

### Transmission of Knowledge

There is much to learn from taking the Knowledge of the past and the experience of the present and blending them for future generations. Indigenous Knowledge is key to sustainability in ecosystems, establishing balanced land stewardship, and understanding the symbiotic relationships that humans hold with our planet.

### Web of Life

Lessons from the past will prepare us for the future as we work to reharmonize our relationship with nature. Working with university partners, Tribal Nations, and local Knowledge keepers is essential to being a good steward of the changing landscape. One way to promote sustainable land management is to support local Tribal Nations who actively manage lands with ancient fire practices. Contacting a Tribe’s historic preservation officer may provide valuable information on the topic. By learning to read the landscape and working with nature, it is possible to be part of the rhythm that has always sustained humanity. ◀◆

# 04

## Good Fire and Climate Change: The Return of Indigenous Fire Stewardship



Dr. Melinda Adams (N'dee San Carlos Apache) instructs cultural fire placement with UC Davis students, academics, and members of the local Native American community at the Tending and Gathering Garden in the Cache Creek Nature Preserve (Woodland, CA).  
*Photo Credit: Alysha Beck/UC Davis*

### Introduction

Since time immemorial, many Indigenous Peoples and Nations have been practicing cultural burning and related stewardship practices to tend and care for our lands. Many Indigenous

cultures are fire dependent, having adapted to climate and environments that rely on fire adapted species and living in fire prone ecosystems. Over time, the cultural systems modified fire regimes, diversifying the frequency, seasonality, and specificity of fire occurrence across the

landscape while also recognizing the spiritual and ecological significance of lightning's role in landscapes.

Indigenous fire placement has helped shape myriad ecosystems across the United States and beyond, replenishing nutrients, stimulating growth, and increasing biodiversity (Hankins, 2013; Lake et al., 2017; Lake 2021; Lake & Christianson, 2019; Long et al., 2020; Marks-Block, 2019; Adams, 2023a). Cultural burns are fires deeply rooted in Indigenous Knowledge Systems (Kimmerer & Lake, 2001) and are purposely placed for the rejuvenation of culturally significant resources (Goode et al., 2018, 2022; Marks-Block, 2019; Adams, 2023b). Many tactics have forcefully removed Indigenous fire stewardship from landscapes, contributing to present-day wildfire crises on top of depleting ecosystem function and diversity. Across the country, as a result of fire exclusion, forest management practices, increased fuel, and now climate influence conditions, destructive wildfires are posing ever-greater threats to human lives, livelihoods, and public safety. Further, the drivers of wildfire crises are numerous and complex and are influenced by multiple forces and factors at all scales (The Wildland Fire Mitigation and Management Commission, 2023).

Our chapter presents stewardship of cultural fire revitalization in five specific places within the United States: Northern California, Southern California, New York, and the Great Lakes Region of Minnesota and Michigan. Although this is not all-encompassing of the territories in which Indigenous Good Fire work is being done, the information here serves as an invitation for support of the return of cultural fire in all landscapes and all Indigenous lands.

This report reflects our collaborative narrative and is a current snapshot of the landscape of select fire activities occurring across what is currently known as the United States. Although the report limits our reach to the United States, as global relatives, we consciously make it a point to recognize the outstanding Good Fire work of Indigenous Peoples in Australia (Cavanaugh, 2020; Steffenson, 2020), Canada (Christianson, 2020, 2022), and Latin America (Welch & Coimbra Jr., 2021). Similar to other documents centering Indigenous fire stewardship and/or cultural fire, it is to be considered a living document; therefore, changes, updates, and modifications

will be necessary as we continue to experience climate change and the effects of wildfire and seek to center Indigenous Knowledge Systems as solutions to these micro- and macrocosmic issues.

### Cultural Fire: History, Creation Stories, and Cultural Understandings

Fire, as a more-than-human relative, holds significant regard in many Indigenous Peoples' stories of creation, cultural storytelling, and lessons in land stewardship. Ojibwe Peoples refer to fire as *ishkode* (ish-koh-deh); many Bodéwadmi refer to fire as *shkodé* (schkoh-deh) or *shkwedé* (scqui-deh) (Baird et al., 2023). The Oceti Sakowin Nations of the Lakota, Dakota, and Nakota are joined together as the Seven Council Fires. Karuk stories acknowledge fire as a Relative. The Three Fires Confederacy of the Great Lakes carries stories of the Seventh Fire Prophecy, where languages and land will return to us. In Kānaka Maoli (Hawai'i) culture, Pele is the goddess of fire, and the islands and all born from them are an extension of her and have a responsibility to understand the power of volcanic fire as creator of life. Indigenous author and scholar Robin Wall Kimmerer in *Braiding Sweetgrass* shares, "The land gives us so many gifts; fire is a way we can give back—our people were given the responsibility to use fire to make things beautiful and productive; it is our art and our science" (Kimmerer, 2015). Indeed, fire serves as a spiritual, social, cultural, and ecological connector to many of our Indigenous Nations and has the power to regenerate our identities and stewardship responsibilities through shared worldviews and stories, or our "original instructions" (Adams, 2023b).

In opening this chapter, it is important to acknowledge that for some Indigenous Peoples and Nations, fire is both a treaty right and a treaty resource. We also find it important to reemphasize the cultural significance of fire as a part of our kin networks and an ancestral responsibility. Although it is not the intent to storytell every Nation's relationship with fire, we use this space to instead amplify the communities we are in close relation/allyship with in the return of our right to steward and work with fire.

### The Yurok Tribe (Northwest California): Fire, Food, Ecosystem Stewardship

## *Yurok Reservation & Ancestral Territory*



**Figure 4.1.** 2024 Yurok Reservation and ancestral territory, Yurok Tribe (retrieved from <https://www.yurok-tribe.org/is-git>).

For thousands of years, the Yurok Tribe has resided on the northwestern coast of what is now known as California. Ancestral Yurok land begins deep in the Siskiyou Forest and follows the Klamath River until its mouth empties into the mighty Pacific Ocean. Ancestral Yurok land continues for miles north, east, and south of Klamath (see Fig. 4.1). The Yurok Tribe is a people known as “great fishermen, eelers, basket weavers, canoe makers, storytellers, singers, dancers, healers, and strong medicine people” (Yurok Tribe, n.d.).

Since time immemorial, fire has been central to the Yurok origin story, a central pillar of well-being of the Yurok people, and an essential role in the health of Yurok ecosystems. Good Fire was constantly tended in the landscape by stewards to promote the collective well-being of both human and more-than-human ecosystems (Marks-

Block, 2021; Clark et al., 2022). For instance, redwood trees, which the Yurok enter into relationships with to carve long canoes used for fishing and ceremony, often require frequent disturbances of fire in the landscape so they can healthily regenerate, sprout new seedlings, and germinate (Ramage et al., 2010). In the act of spreading Good Fire onto the landscape, the Yurok participate in the age-old act of reciprocity and stewardship, assisting the redwood with regeneration while clearing parts of the forest for food, game, and medicines. This, in turn, allows for the thriving of grasses used for weaving and bird habitat, oak trees for acorns and forage, and wide stretching savannah that elk and deer could enjoy as well. In addition to being a fundamental part of Yurok cosmology, fire has served an essential role in the holistic health of both human and more-than-human Yurok ecologies.

*“Before humans lived here there were spirit beings that went into the sky and stole fire. They passed it from one animal to the next to bring it to humans to use. That is how we got fire. Some of those spirit beings stayed on Earth and took a physical form, we see them in the world around us—as trees, water, animals, rocks, and fire. These spirits had an agreement with the humans that we would take care of each other. Fire is one of the methods we use to take care of each other and the land.”*

— Margo Robbins, Yurok Tribe,  
Executive Director of Cultural Fire  
Management Council (McCann, 2020)

### *The Karuk Tribe (Northwest California): Fix the World People*

Located in the Klamath-Siskiyou Mountains in the mid-Klamath River region, the Karuk Tribe is one of the largest and most geographically dispersed Indigenous groups in California. Across remote terrain, lands located in northwest California have been traditionally managed by Karuk people for thousands of years. Self-described as “fix the world people,” Karuk Peoples continue ceremonies that restore balance and renew the world, including subsistence harvesting (Karuk Tribe Department of Natural Resources, 2019), prescribed burning (Karuk Tribe Department of Natural Resources, 2019), and watershed management (Reed & Diver, 2023). Tribal codes and

## Tribally Led Fire-Pest Research Narrative by Jolene Tamm

**Jolene Tamm**, Squaxin Island Tribal Member, Natural Resources Director, La Jolla Band of Luiseno Indians, master's student, University of California Riverside

Tribally led research on the goldspotted oak borer (GSOB) (*Agrilus auroguttatus*) is underway on the La Jolla Indian Reservation. For over 200 years, Indigenous Peoples were prohibited from burning in California. For the past 30 years, prescribed burns could not be conducted without copious amounts of paperwork (for permits and to fulfill environmental regulations), essentially prohibiting the use of prescribed fire for managing forest health. The absence of fire caused some oak woodlands to become overgrown, which increased the severity of wildfires. Lack of fire created an unbalanced ecosystem ready to be devastated by invasive insects, like the GSOB. The GSOB has killed almost 1,000 mature oak trees on the La Jolla Indian Reservation, and current research and modern knowledge do not give us the tools needed to slow or prevent ongoing tree mortality.

It is possible that fire will reduce GSOB survival, because Traditional Ecological Knowledge tells us that insect activity is reduced by burning. GSOB also undergoes metamorphosis just underneath the outer bark, primarily on the lower portions of the main tree trunk, which are areas that will be impacted by cultural and prescribed burns.

The GSOB research plan to assess fire for control of this pest was developed using local and Traditional Ecological Knowledge, incorporated with Western knowledge on the deleterious effects of heat and invasive species biology and management. In the process of preparing areas for burn experiments, we were able to see firsthand how smoke reduced insect activity near burn sites when we collected yucca a few days later. One of the yucca gatherers, Emily Burgueno, a Kumeyaay cultural burn practitioner, noted that usually the flowers are covered in insects. This was amazing to see and to then understand what the Elders were saying. At this moment I

understood that “knowing” and “Knowledge” were not the same.

To develop prescribed burning as a landscape-level management tool based on historical Indigenous land management practices, we have designed laboratory trials and field experiments to assess impacts of heat and fire on GSOB survivorship. For our field studies, we are monitoring GSOB-infested trees that have been treated with prescribed burns and monitoring the infestation rates in areas that have and have not had prescribed burns to determine how large an impact fire has on GSOB survival rates. The preliminary results on the field experiment indicated that pile burning infested oak rounds (or large woody debris) yielded a 98% reduction in beetle emergence from infested logs. Our preliminary laboratory trial data consisted of a series of heat treatment studies that indicate that heating the core temperature of infested oak firewood to 60° Celsius for 60 minutes is sufficient to kill GSOB larvae within infested firewood. The results from these studies will be analyzed to develop best management practices for firewood producers who handle GSOB-infested oak. The next challenge will be to write Western research papers using rigorously analyzed data that reflect TEK while interpreting the results we found within a scientific-method framework so that findings can be used in the larger scientific community.

We envision that these lab and field research studies will help to determine a baseline kill temperature that will help predictions of the impacts of fire on the GSOB and provide land managers with the best information that can be used to plan for cultural and prescribed burning, not only for management of insect pests but also, as Fire Chief Wesley Ruise Jr. says, “keeping the forests clean.”

While this research is challenging on many levels, it inspires me because it has increased the number of Tribal people who work in our precious native woodlands, and this is essential for truly knowing and protecting our forests. ◆◆

laws managing Karuk Traditional Knowledge Systems have been passed on for thousands of years; as Tribal people, Karuk understand the value of this knowledge, their reciprocal responsibilities, and obligation to preserve, perpetuate, and pass on this cultural heritage to succeeding generations (Karuk Tribe et al., 2017; Meyer 2022). Leaders within the return of Good Fire, Karuk Peoples are shifting fire management by partnering with public fire agencies as well as nongovernmental organizations.

#### **The Ojibwe Tribe (Great Lakes): Fire and Crow**

Since time immemorial, the Ojibwe people of the Great Lakes region have known of climate change and its many various aspects, including fire, particularly regarding how catastrophic it can be and how important it is to continue using it as a gift. Prophecies warning of climate change have been passed down through generations, and it is also the subject of many traditional Ojibwe stories. One story tells of a time when the Anishinaabeg People were suffering, cold, hungry, and without much light. A crow in a nearby tree observed this and felt bad for them, so he traveled up to the Creator's lodge in the sky to share his concerns. The creator provided

fire from his lodge to the crow and asked him to bring it down to the Anishinaabeg People with teachings and instructions on how to respect and use it. The Creator explained that it was a gift that would help them survive by keeping them warm and could be used as a tool to grow food. The Creator offered the reminder that if they do not use the fire, they will lose it, and it could turn on them. When the Anishinaabeg received the fire and began caring for it, their climate returned to one in which they could survive and thrive. Their respect, love, and appreciation for the gift of fire are still expressed today, especially with ceremonial fires when proper ceremonial protocol is followed. By returning to the use of fire as a traditional land management tool, they are also being proactive in addressing the many aspects of climate change currently and into the future.

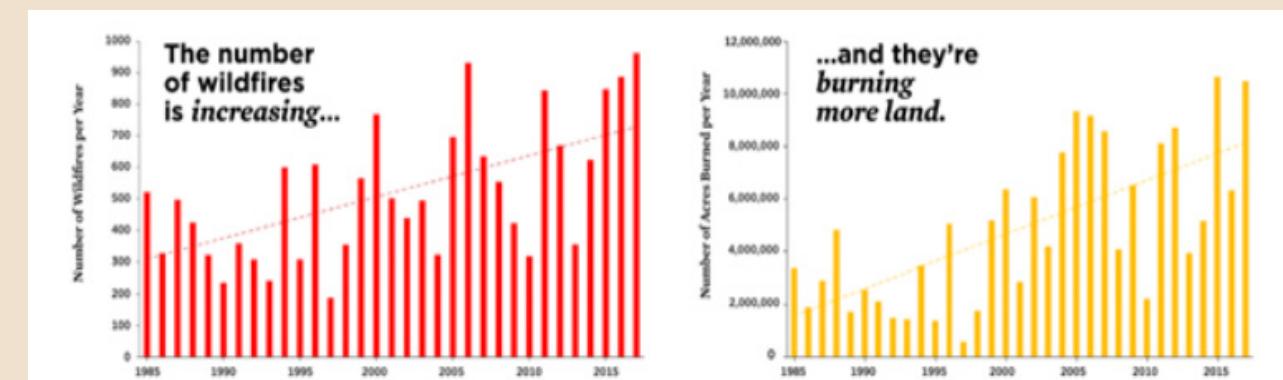
The use of Asemee (traditional, not commercial, tobacco) is key to the identity of the Anishinaabeg people. Without Asemee, Anishinaabeg would no longer be able to ask for help, gather medicines, harvest food, give thanks, and perform ceremonies. Asemee and the gifting of Asemee is central to their daily traditional-based lifestyles. It is also known that Asemee is made of different mixtures of plants that are all pre-

When reflecting about the importance of cultural fire to her people, Vikki Preston, Cultural Resources Technician for the Karuk Tribe Department of Natural Resources, emphasizes that her People come from a living culture and that fire is a significant part of their cultural identity. She also shares that to forward cultural, or Good Fire, more in her Peoples' territory, she envisions federal agencies adapting flexible policies that permit prescribed burning during wildfire season when weather and climactic conditions are conducive to low severity burns.

**"Fire is a huge part of our identity, and we are not allowed to do it how we want to do it or when we want to do it, and you're also often told you don't know how to do it."**

**Fire suppression tactics in places that are significant to Karuk People and an increase in wildfire is an increase in harm to cultural resources (creation of line, dozers, etc.). The suppression tactics mostly used in wildfire, and perpetuated in wildfire culture, are often harmful to places and cultural places; on the other side, you're not allowed to place beneficial fire to these places in the times conducive to low intensity fire."**

— Remarks from Vikki Preston (Karuk/Yurkuk/Paiute/Pit River), a key partner on the Intentional Fire podcast (Karuk Tribe/SWCASC, 2022), Karuk stories and perspectives related to cultural and prescribed burning and intentional fire practices (Murveit et al., 2023). The podcast served as a follow-up to the *Good Fire* report (Clark et al., 2021), which describes the barriers to intentional burning and identifies potential solutions.



**Figure 4.2.** Data from the Monitoring Trends in Burn Severity program (MTBS, 2022), which includes large fires in the United States (>500 acres for the eastern U.S., >1,000 acres for the West), with prescribed fires removed (Hatchett & Koshkin, 2023).

dominantly fire dependent to grow. Therefore, the absence of fire would result in the inability to perform many acts that are inherent rights of the Anishinaabeg.

#### **The Effects of Fire Suppression in the Face of Climate Change**

Before the presence of settler colonists on Turtle Island, Indigenous Peoples such as the Shawnee, the Karuk, and the Yurok maintained a strong presence of Good Fire on landscapes. Once European settlers set foot in the U.S., this changed greatly. In 1850, California passed the Act for the Government and Protection of Indians (Norgaard, 2019). This anti-Indigenous law solidified the settler conquest of European ecosystem dominance by forbidding the use of Good Fire in the newly formed state. Throughout the early 1900s, the U.S. Forest Service seized thousands of acres of Native land, like that of the Karuk, and imposed strict Eurocentric models of fire suppression, which often framed fire as a threat to economic development and the idea of a pristine or untouched wilderness in the eye of European settlers (Fisk et al., 2023; Vinyeta, 2022; Moura et al., 2019). According to Karuk descendant and research ecologist Dr. Frank Kanawha Lake, "Fire suppression legacies emerge in various forms of trauma in communities that are trying to revitalize their relationships with fire today." These legacies play themselves out on the landscape through continued no-burn policies (Norgaard, 2019).

As a continuance of these fire suppressive policies, wildfire in the West has now become seasonal, setting records in acres burned and rising

economic costs (Cart, 2022). The combination of drought, warmer summers, and high winds has led to a devastating pattern of catastrophic mega-fires. These trends are broadly consistent with those expected from anthropogenic climate change. Climate change itself is thoroughly tied to colonial practices, as anthropogenic activities have hinged on the dispossession of Indigenous land and resources (The Red Nation, 2021; IPCC, 2021). Concerns addressing health disparities linked to rising wildfires are necessary (STACC, 2021). As we begin to experience more intense and prolonged fire seasons, data shows that wildfire will be compounded by cascading climate impacts, including prolonged drought, quicker depletion of snowpack, hotter summers, higher winds, and generally more severe and unpredictable weather patterns (Fig. 4.2) (Hatchett & Koshkin, 2023).

A global awakening to the increasing frequency and far-reaching impact of wildfires occurred in June 2023 when New York City, and much of the eastern coast of the United States and Canada, was inundated by wildfire smoke from wildfires originating in northern Quebec and Ontario, Canada (Roush, 2023). Tribal Nations along the eastern coast, such as the Shinnecock Nation, issued state of emergency orders requiring all citizens to remain indoors due to debilitating air-quality conditions. The Shinnecock Territory, among other Indigenous territories along the coast, was covered in thick orange smoke that lasted for nearly a week (see image on opposite page).

On August 9, 2023, the onset of fierce winds and dry conditions led to devastating wildfires

that consumed Maui's Lahaina—one of the deadliest fires in the United States in more than a century (PBS News Hour, 2023). Statistically, the Indigenous population in Lahaina is 8.5%. According to Carmen Lindsey, chair of the board of trustees of the Office of Hawaiian Affairs, from a cultural perspective, "Lahaina holds some of the most historically significant cultural properties and highest ranking sacred remains of our Ancestors; the fires of today are in part due to the climate crisis, a history of colonialism in our islands, and the loss of our right to steward our 'aina and wai [land and water]" (Office of Hawaiian Affairs, 2023). Kānaka Maoli scholar Keolu Fox remarks the wildfires are "a sad, stark reminder of the environmental pressures on the Hawai'ian Islands caused by overdevelopment and industrial tourism" (Fox, 2023). This now fire-prone region was once a vast wetland (Adler, 2023) drained for tourism expansion and is now emblematic of climate coloniality (Sultana, 2022; Ka'anapu, 2023). Lahaina's wildfire has not only revealed the effects of climate change stemming from colonialism, but it has also called attention to issues such as emergency preparedness, electrical grid capacity, and water scarcity. Indeed, the Lahaina wildfire reminds us that in order to mitigate the wildfire crisis among Indigenous communities, Kānaka Maoli and Indigenous relatives must be able to exercise their sovereign rights to steward their homelands with Good Fire and other land-care practices that alleviate the impact felt by those

disenfranchised the most. Fox further remarks, "The knowledge of how to recover from disasters already lives in Hawai'i, but Indigenous community voices often get lost; Hawai'i can successfully recover if a new environmental governance emerges that intertwines sustainable ecosystem resilience with the profound cultural knowledge of its Indigenous communities" (Fox, 2023). Although the United States has a history of imposing fire-suppression policies, even through the onset of climate catastrophe, Indigenous Peoples have remained resilient in our use of Good Fire.

## "Fire suppression is cultural suppression."

—Althea Walker, Nez Perce/Hopi/Gila River, Co-Director & Community Resilience Lead of the Climate Science Alliance

At present, there are several examples of Tribes leading efforts, as more agencies and non-profit organizations turn to Indigenous Peoples to aid in solving the wildfire and climate crisis. Although we present a select vignette of case studies, we acknowledge the information pre-

Shinnecock Territory wildfire smoke conditions, June 2023.  
Photo Credit: Kelsey Leonard



sented is not all-encompassing of the Good Fire work being done by Tribes and Indigenous Peoples across the country and beyond.

## Kindles of Hope: Current Fire Stewardship Case Studies

### TERA: Strengthening Tribal Ecologies and Economies

An example of successful cultural fire return is that from the Tribal EcoRestoration Alliance (TERA), located in Lake County, California. TERA is a nonprofit, cross-cultural, multi-organizational collaborative that works to revitalize ecology, economy, and culture through Indigenous-led stewardship. With partners that include the California Department of Forestry and Fire Protection (CAL FIRE), the U.S. Forest Service, and the Watershed Research and Training Center, TERA's mission is to "cultivate land stewardship, livelihood, and leadership skills that weave collaborative relationships between Tribal members and the community at large for the benefit of all lands and beings" (TERA, n.d.). Goals include:

- Connect Tribal members with **meaningful livelihoods and culturally relevant work** in our ancestral territories
- **Build Tribal capacity** to engage in ecological restoration work that mitigates the impacts of climate change and reduces the risk of uncharacteristic wildfire
- **Support Native American voices** and worldview to play a central role in land stewardship
- **Regenerate the ecosystems** of the North Coast ranges

Partners include Robinson Rancheria Pomo Indians of California; Scotts Valley Band of Pomo Indians; and the United States Forest Service—Mendocino National Forest. Present-day sovereign Nations in Lake County include Big Valley Rancheria, Elem Indian Colony, Middletown Rancheria, Robinson Rancheria, Scotts Valley Band of Pomo Indians, Habematolel, and Koi Nation (TERA, n.d.). TERA has so far provided several opportunities for community members to obtain National Wildfire Cooperating Group (NWCG) federal fire certifications, including Basic 32 Firefighter Type 2, RT-130 Fireline Refresher, S-219 Firing Operations and Tactical Fire, and Fire Effects Monitoring. In addition to certifying Tribal and community members, TERA holds several cultural burn demonstrations, allowing space for cultural-led objectives and approaches to Good Fire return (for further

work on the integration of Traditional Ecological Knowledges into fuels treatment, see Wynecoop et al., 2019).

In September 2023 TERA held several cultural burns, in partnership with CAL FIRE and the U.S. Forest Service, in Cobb County and Lake County to improve oak savannah health, help native plant species thrive, and enhance wildlife habitat. A high priority for the TERA crew is to restore a wetland reed species, tule (*Schoenoplectus acutus*), found along the edges of lakes. Tule is a natural water filter and a culturally significant material that Tribes in the Clear Lake Basin use for making mats and boats. Controlled fires for tule have long been used by the Tribes in the Lake County area to keep plants healthy, but these were banned when laws passed in the late 1800s and early 1900s made cultural burns illegal (Nguyen, 2023). Clear Lake, a culturally significant waterscape, has sustained Native Peoples for millennia. Through different iterations of industrialization, the lake has endured many environmental and cultural harms: runoff has leached into the water from an abandoned mercury mine, which is now a Superfund site, and runoff also comes from nearby gravel mines, cannabis farms, and vineyards, which has led to a flux of harmful algal blooms. TERA is working to apply fire to tule for rehabilitation efforts to improve water quality and repopulate fish populations.

"We're just trying to do our best to survive from what has happened to us historically — being relocated from our lands to where we are today, trying to eliminate us as people and our way of life. Just the act of bringing back fire really is historical, especially for Robinson and other Tribes here in Lake County, because that was taken away from us. And just to be able to do that means a lot. A lot of the hard work of our Elders in our communities or families before us, they've put in all the work and so I honor them for getting us here, and being strong for people to survive. And now I'm trying my best as a community member to stay strong for our next generation."

—TeMashio Anderson, TERA board chair and the former environmental director at Robinson Rancheria (Fishman, 2022)

TERA is also partnering on the North Shore Restoration project to restore and reforest acres of



burned area as a result of the 2018 Ranch Fire. Located in one of the largest wildland urban interfaces in the Mendocino National Forest, TERA will engage in prescribed and cultural burning, pile burning, hand thinning, and/or mechanical treatment over a 40,000-acre area and reforestation on 2,600 acres as wildfire mitigation (Fishman, 2022). Overall, the portfolio of trainings offered by TERA not only equips Tribal members to be wildfire-ready in defense of their homelands, the work also contributes to local economies by providing employment opportunities while stewarding fire for ecosystem improvement.

### Anishinaabe Cultures: Historical and Continued Fire Practices

A second case study of successful recognition of the importance of cultural fire is that from the Anishinaabeg Peoples in southern Michigan. In May 2023, the University of Michigan School for Environment and Sustainability released the "Prescribed Burn Program Best Practices for Southern Michigan: From Indigenous Partnerships to Communication and Burn Plans" (Baird et al., 2023). The report provides a deep understanding of fire history in southern Michigan, including the culture, rights, Knowledges, and histories of Anishinaabeg Peoples, in order to build respectful and informed fire reintroduction partnerships; guidance and recommendations to engage, communicate, and build trust with

a variety of stakeholders, partners, and rights holders; and recommendations to develop an effective and informed burn plan with the best available information and approaches to increase pyrodiversity (the spatial and temporal variability in fire effects across a landscape) (Fig. 4.3).

The report serves as a call to reclaim Tribal fire history, placing it in the context of environmental decision-making; identifies deployment of Tribal sovereignty in the just return of fire to landscapes; and offers best practices in building trust, consent, and accountability with stakeholders (research partners and collaborators) and rightsholders (a term invoked to Tribes that encompasses rights and responsibilities to steward lands and waters).

### Wiisaakodewan: Ojibwe Cultural Fire

Wiisaakodewan-minis (known as Stockton Island since the 1800s) is a 4,000-hectare, ecologically heterogeneous island located in western Lake Superior within the Apostle Islands National Lakeshore (APIS). It's also within the homeland of the Anishinaabeg (Ojibwe People). The islands are often referred to as the final stopping place of the Anishinaabeg, who arrived in the area after a long migration journey from the east. The meaning of the Ojibwe name for the island, Wiisaakodewan-minis, speaks to the influence of cultural fire. *Wiisaakodewan* refers to



Figure 4.3. Adapted from *Life from Ashes: Learning from Indigenous Fire Use to Heal Neglected Ecosystems* (Woodruff & Salgado, 2023).

“half-burned trees” (charred on one side), which occur after surface fires due to the influence of wind. *Minis* is simply the Ojibwe word for island. The cultural fires contributed to the globally rare barren community on the island, but later it experienced structural changes that occurred after the federal suppression of cultural burning (Booth et al., 2023).

Generations of cultural fire use by the Anishinaabe likely contributed to the increased ecological resistance and resilience of the pine forest and barren vegetation through past periods of climatic change. Therefore, maintaining the health of these ecosystems with the consistent use of fire is integral through future changes in climate. Due to the APIS’s commitment to management policies such as the Wilderness Act, burning may be prevented and therefore cause unintended harm to these fire-dependent ecosystems.

Due to the criminalization of cultural use of fire practices by the Anishinaabeg and overall fire suppression policies of the early 1900s, specifically direct wildfire suppression by the National Park Service since the 1970s, the tombolo on the south side of Wiisaakodewan-minis shows a significant increase in tree density of the pine woodland and barrens since the 1930s. The history of fire suppression is evident through a comparison of historical photographs of the 1930s to present-day aerial images. To help understand and assess the ideal stewardship goals for these forested communities, paleo-ecological records consisting of vegetation, fire, and hydrological change were developed, which showed that fire had been a major component of the ecological history on the island for at least 6,000 years, determined by a char analysis of macroscopic charcoal records.

In April 2016, these records aided APIS managers in making more Tribally inclusive management decisions for the island, specifically whether to return fire to the island. Before this period, management objectives focused more on recreation and biodiversity conservation but from a narrowed lens. The paleoecological records prompted the APIS managers to recognize and honor Indigenous Peoples’ treaty rights and cultural practices.

Indigenous oral histories regarding the use of fire were gathered from the local Tribal com-

munity (specifically the Red Cliff Band of Lake Superior Chippewa). During the sharing of these oral histories from multiple individuals, it was shared that before the criminalization of the use of fire, it was used every four to eight years on Wiisaakodewan-minis, primarily favoring blueberry (*Vaccinium spp.*) production and overall management of the ecosystems of which blueberry is a part. The combination of Knowledge from Indigenous Knowledge Holders, Western science, and historical records, and the willingness of the APIS to try different management approaches for the critically imperiled barrens, has successfully resulted in the return of fire to Wiisaakodewan-minis, beginning in 2017. Conversations, decisions, and similar efforts are continuing, which have already had numerous positive results (Booth et al., 2023).

### Lighting the Flame: Workforce and Pathway Opportunities

Current workforce development opportunities are important in returning Good Fire back to the land while establishing Tribal and Indigenous fire and fuels crews to provide a unique perspective and approach to wildland fire management. This includes not only understanding NWCG certification (federal fire certification) but also Tribal and Indigenous perspectives of being in relationship with fire and all that it provides for us.

In the industry of wildland fire management, it is important to have more presence of Tribal and Indigenous burn bosses (a qualified person with appropriate NWCG fire certifications), fire line resource advisors, fire effects monitors, equipment operators, incident leadership, and individuals who are red carded (NWCG fire certification) to reduce the barriers and challenges for cultural fire and cultural burners. This is also connected to the importance of co-stewardship and having Tribal and Indigenous Peoples in these roles to reduce the barriers to access and management of lands that they were previously denied access to after the establishment of certain jurisdictions (lands held in trust under the jurisdiction of the federal government as opposed to the Tribe, for example).

The Climate Science Alliance, a nonprofit organization sponsored by the California Wildlife Foundation and established in 2015, has been particularly attentive in meeting the fire capacity needs of several Tribes in Southern California.

“Fire is codified in the law of the land, and it has been so since time immemorial; it has always been here and always will be.

... To recognize that fire is the law of the land is to recognize that it is part of the laws of nature. ...

Indigenous fire knowledge encompasses a complex understanding of the environment and reading of a landscape’s needs and indicators for when, where, and what type of fire should be used to achieve desired outcomes for the land.”

—Don Hankins (Miwko?), Professor in Geography and Planning at California State University Chico, explains cultural burning (Clark et al., 2024)

With a mission to “lead activities and create partnerships which increase awareness of climate change impacts, promote solutions, and facilitate action” (Climate Science Alliance, n.d.-a), while nourishing relationships with Tribal partners, the Climate Science Alliance works to uplift Tribal and Indigenous communities’ ways of life and worldviews. Through successful collaboration, the Climate Science Alliance has developed the Stewardship Pathways program (Climate Science Alliance, n.d.a). The Stewardship Pathways program supports people from across the Southern California region who are interested in creating or expanding a career focused on

advancing Indigenous climate stewardship. With a foundation around the equal valuation of ways of knowing and an emphasis on the integration of climate science and cultural Knowledge, the Stewardship Pathways program’s intent is to build capacity, support economic and workforce development, and advance co-stewardship of ancestral lands through various training pathways.

Further workforce and pathway challenges to Tribes are presented in the workforce development section of the Indian Forest Management Assessment Team’s (IFMAT, 2023) report and the internship program offered at the center for Tribal Research and Education in Ecosystem Science (TREES, n.d.) at Salish Kootenai College.

### Indigenous Fire Stewardship Pathway

A specific pathway offered by the Climate Science Alliance through the Stewardship Pathways program is the Indigenous Fire Stewardship Pathway, where participants receive technical training combined with regional climate science and Traditional Ecological Knowledge. They learn valuable skills that can help build a career path around wildland fire management, Tribal fire stewardship, and fuels reduction. Most importantly, participants learn about Tribal fire stewardship and prescribed fire while receiving the certifications necessary to become a wildland firefighter and Tribal monitor working on the fire line. The program would not be possible without the Southern California Interagency Wildland Fire and Fuels Cadre (Climate Science Alliance, n.d.-b), a group of agency partners who contribute their time and expertise to plan and implement training opportunities. By investing in this capacity-building opportunity, we are:

- Working with partners to establish support systems for Indigenous crews to be trained in fire, forestry, and fuels management that will advance resilient and adaptive pathways for conserving the land in the face of climate change.
- Creating pathways toward equitable and sustained professional opportunities, all under the umbrella of climate-informed conservation, stewardship, and restoration.
- Building toward a network of year-round Indigenous-led forestry and fuels crews to work on the ground to reduce the potential for high severity wildfire by engaging in creating defen-



*Cultural Fire by David Streamer, taken on the homelands of the Los Coyotes Band of Cahuilla and Cupeño Indians.*

*Photo Credit: Condor Visual Media*



sible space and fuels abatement, restoration, and land stewardship—serving as a model for economic and workforce development.

For further materials on Southern California Tribal fire stewardship, see *Maathaaw, the Fire Within Us* (Pittman, n.d.), an Indigenous-led feature-length documentary from the Condor Visual Media team that documents the cultural, emotional, and scientific relationships of Southern California Tribes with the gift of fire.

### **Successful Partnerships and Autonomy**

#### **Great Lakes Fire Collaborative Focused Work and Partnership**

Despite extreme challenges, such as the Indian Removal Act of 1830, the Indian Appropriation Act of 1851, the General Allotment (Dawes) Act of 1887, the Indian Reorganization Act of 1934, and the BIA's Voluntary Relocation Program of the 1950s, fire remains integral to the culture and identity of the Ojibwe People today. In the early 2000s in Tribal communities located in the southwest region of Lake Superior, conversations began regarding the traumatic history of

fire criminalization and the need for returning to fire as a land management tool. It was acknowledged that although fire was still being used culturally and a component of most ceremonies, the use of it in land management practices predominantly ceased in the early 1900s. It was also recognized that many ecosystems were changing, especially in light of climate change, and the populations of more-than-human relatives were also being impacted by the long-term absence of fire on the ground.

This led to fire revitalization efforts in the region, resulting in an informal collective being formed consisting of Tribal Knowledge Holders, fire practitioners, fire researchers, and others. This collective has been successful in leading various Tribal, local, state, and federal fire research projects as well as prescribed burns involving, and at times led by, Tribal leaders. A few of the monumental burns that occurred involving Tribes occurred within treaty-ceeded territory and reservation boundaries, particularly at the University of Minnesota Cloquet Forestry Center, which lies within the Fond du Lac Band of Lake Superior Chippewa Reservation and on Stockton Island, Apostle Islands National Lakeshore,

which lies just outside of the Red Cliff Band of Lake Superior Chippewa Reservation and within the 1842-ceeded territory.

In addition, various Tribes, such as Red Cliff, have also taken the initiative to adopt Tribal codes and ordinances that address the need for ceremonial fires to continue even during times of state burn bans. Within this movement, Red Cliff has not only acknowledged that ceremonial fires, such as for funerals, still need to burn, but that fires are a treaty right and adopting culturally relevant legal codes is a form of asserting sovereignty and providing healing from trauma caused by the prior federal illegalization of fire (Booth et al., 2022).

### **Meeting the Fire Training and Capacity Needs of Southern California**

The Southern California Interagency Fire and Fuels Cadre (Cadre) (Climate Science Alliance, n.d.b) is composed of agency partners from Tribal fire departments, the Bureau of Indian Affairs, CAL FIRE, California State Parks, the U.S. Forest Service, and other entities that oversee fire management departments to establish support systems to meet the fire training and capacity needs of Southern California. Under the expert

guidance of the La Jolla Band of Luiseño Indians Tribal fire chief, Wesley Ruise, Jr., and in collaboration with the Climate Science Alliance and its Tribal Working Group (Climate Science Alliance, n.d.c), this interagency Cadre was convened in 2022 with the goal of advancing efforts to build economic and climate resilience in Tribal and non-Tribal communities across Southern California.

The Cadre meets virtually on a monthly basis to discuss training interests, needs, and opportunities to build the fire capacity across agencies and communities. Uniquely, the Cadre includes cultural practitioners and burners who provide the additional perspective of the importance of having Tribal and Indigenous leadership in wildland fire management. The leadership of cultural practitioners and burners in the Cadre has led to incorporating cultural burning perspectives in NWCG training opportunities as well as cultural burning events that build the understanding for non-Tribal partners. The Tribal and non-Tribal participation in the Cadre builds relationships across agencies and Tribal communities and, most importantly, collectively addresses the barriers and challenges of getting Good Fire on the land.



### **Karuk Indigenous Women+ Training Exchange**

*asiktávaansas kun-áhishti  
"women to light the fire"*

**October 8th-14th, 2023 | Karuk Ancestral Territory**

**Figure 4.4** Published call for the 2023 Karuk Indigenous Women + Training Exchange. It is worth noting Karuk leaders made the decision to cancel the fall WTREX 2023 due to wildfire impacts in their Homelands.



**Figure 4.5.** Artwork for the 2022 Karuk Indigenous Women's Training Exchange. Held in Karuk Territory, it was the first Indigenous women's TREX, a gathering of Indigenous fire practitioners from around the world. This artwork by Vikki Preston depicts Karuk women burning beargrass together, an important cultural basket-weaving material.

### The Western Klamath Restoration Alliance

The Western Klamath Restoration Alliance (WKRP, n.d.) began in 2007 with a mission to build trust and a shared vision for restoring fire resilience at the landscape scale. WKRP is a collaborative land and fire management effort between Tribal, federal, and nongovernmental stakeholders in the Western Klamath Mountains of Northern California (Marks-Block et al., 2019). This partnership is based on 20 years of collaborative work between diverse partners, ultimately forming the WKRP in 2013 (Vinyeta et al., 2015). A hallmark of the partnership is the Karuk Tribe's Knowledge of fire; through intergenerational TEK, the Karuk show that traditional human and fire relationships of the past can guide strategies for the future. Representatives from the Karuk Tribe, Mid Klamath Watershed Council, Salmon River Restoration Council, and the U.S. Forest Service are co-leads of the collaborative group, but many other stakeholders, communities, and organizations are involved (WKRP, n.d.). Central to WKRP is the Klamath Prescribed Fire Training Exchange (KTREX), which commenced in 2014. KTREX is among the largest national TREX events hosted by The Nature Conservan-

cy's Fire Learning Network Program and co-led by local partners, including the Karuk Tribe, the Mid Klamath Watershed Council, and the Salmon River Restoration Council. Here, international participants gather to "learn and burn together" on the Klamath landscape to learn fire as a tool (WKRP, n.d.).

Wildland fire management agencies are predominantly White and around 90% male (Oaster, 2022). In an effort to counterbalance the hyper-masculine firefighting culture, the Karuk Tribe led the first-of-its-kind women's TREX event (Karuk Tribe, 2022) on the Klamath and Salmon Rivers in September 2022. Focused on Indigenous leadership and prescribed burning for cultural objectives, this event brought together Indigenous women, femmes, and nonbinary Peoples representing 43 distinct groups from across the world. The goals were to promote intergenerational learning and burning, learn about and support basket weavers within communities, center Indigenous women and families in burning practices, and create a safe space for Indigenous women in fire. Among community members and within the fire world, Karuk Women's TREX was considered overwhelmingly successful and showcased the positive benefits of returning fire stewardship, management, and decision-making back to Indigenous Peoples (Figs. 4.4 and 4.5).

The successful partnerships and autonomy elevated in the previous section serve as potential frameworks for other Indigenous Nations to follow in the reclamation of our stewardship responsibilities. It is the authors' intent to emphasize that the examples listed represent place-specific dynamics, protocol, and relationships and that goals, objectives, and capacities often differ across Tribal communities. Additionally, nation-state law and policy often present obstacles that slow or prohibit a Tribe's ability to exercise sovereignty in land management. To streamline jurisdictional barriers, the next section provides newly generated frameworks of fire policy recommendations.

### Law and Legality: A Synthesis of U.S. Fire Policy Recommendations

STACC Vol. 2 presents an opportunity to iterate the important fire stewardship work Indigenous Peoples are leading across the United States and beyond. Although this chapter concentrates

on certain regions of the U.S., we emphasize that there is a growing number of communities advocating for and implementing the return of fire to our Lands and cultures. To support communities in the successful reclamation of fire practices, we have consolidated 10 policy recommendations taken from published works at the Tribal, federal, and state level for implementation into climate strategies (see Adams, 2024). Through the hard work and advocacy of on-the-ground Indigenous cultural fire practitioners and scholars, these policy recommendations are now contemplated at the federal level.

Policy recommendations come from (1) The Report of the Wildland Fire Mitigation and Management Commission (2023), which was conceived after Congress took action to establish the Wildland Fire Mitigation and Management Commission through the 2021 Infrastructure Investment and Jobs Act (Pub. L. No. 117-58; § 40803, 135 Stat. 1097, 2021) and approached the 50-member commission to produce a set of policy priorities; (2) the *Good Fire II* report (Clark et al., 2024), a key document that identifies impediments to implementing both cultural and prescribed burns in California; and (3) the *IPCC Climate Change 2022* report (IPCC, 2022).

A synthesis of these documents specifically identifies the following key and actionable next steps toward the return of cultural fire in myriad regions across the U.S.:

- Indigenous Peoples should be hired to assist cultural fire practitioners within each agency [Natural Resources Agency, state fire agencies, state parks, U.S. Forest Service, National Parks Service, Natural Resource Conservation Service, U.S. Fish and Wildlife Service (USFWS), etc.].
- A cultural fire practitioner training and certification program should be developed specifically for our communities but also as tasks toward federal/state fire certifications. Recognize cross-deputization by Tribal Nations of Indigenous fire practitioners.
- Modifications to NEPA regulations should be implemented (higher level plans to focus on emissions from cultural and prescribed fire rather than forest management strategies or wildfire).
- Federal agencies should be encouraged to work with Tribes, Alaska Native Villages, Native Hawaiians, states, and local partners to develop strategic plans for the implementation of prescribed fire with cultural objectives at a larger scale.
- National and international Indigenous-led training centers should be created with leadership from Tribes, Alaska Native Villages, Native Hawaiians, and other indigenous fire-based organizations.
- Congress should require the Bureau of Indian Affairs to acknowledge that federally recognized Tribes, Alaska Native Villages, and Native Hawaiians may develop fire programs on Tribal trust lands under approved Tribal laws, regulations, ordinances, policy, or other Tribal decision-making processes.
- Congress should codify Tribal cultural burning in federal law and ensure it is not confused with prescribed fire. Agencies should be granted authority to coordinate with Tribes, Alaska Native Villages, and Native Hawaiians on the conduct of Tribal cultural burning on federally administered lands. Cultural fire should also be acknowledged under NWCG. Congress should ensure that federal agencies have the capacity and authority to enter into equitable co-stewardship and co-management agreements for multi-jurisdictional lands and support Tribal self-governance in order to address wildfire risk reduction, management, and recovery and to enable beneficial fire practices.
- There should be recognition of "tiered stewardship," in that while returning fire may initially begin with "co-stewardship" and "co-management" with agencies, the eventual goal is full fire stewardship, autonomy, governance, and sole management by Tribes, Alaska Native Villages, and Native Hawaiians.
- To ensure Tribes, Alaska Native Villages, and Native Hawaiians have adequate funding and staffing to accomplish management goals on Tribal lands, Congress should consider the results of the Indian Forest Management Assessment (BIA, n.d.) and National Congress of American Indians resolutions (NCAI, n.d.) when creating new laws, regulations, or other authorities.
- Government agencies working with Tribes should take on the responsibility of funding Tribal forestry and fire programs to fulfill trust obligations to Tribes and Indigenous Peoples.

### Cultural Fire Sovereignty

Beyond policy recommendations, Indigenous fire practitioners and culture bearers are re-

claiming fire through story sharing and place-based Knowledge, exercising a time-honored practice of sovereignty. This understanding of sovereignty, rather than held through a government or colonized lens, is evoked through the agreements, stewardships, and covenants Indigenous Peoples hold and continue to hold with fire as a stewardship tool and as our relative. Cultural fire sovereignty, therefore, is rooted in ground truthing with cultural fire practitioners, ceremonial leaders, community members, basket weavers, and language carriers, each with a desire to practice Good Fire through good relationships, responsibilities, and a deep respect for individual and collective self-determination (Adams, 2023b). Cultural fire sovereignty calls on proposed frameworks by Indigenous scholars, including Leanne Simpson, Mississauga Nishnaabeg: "...when Indigenous Peoples use the English word sovereignty in relation to our own political traditions, we use it to mean authentic power coming from a generated consensus and a respect for dissent rather than sovereignty coming from authoritarian power or power over style of governance. Our ways of thinking come from the land, our intellectual sovereignty is rooted in place" (Simpson, 2007).

Robert Warrior, Osage, draws on Vine Deloria Jr.'s understanding of sovereignty as an open-ended process that involves critical and kinetic contemplations of what sovereignty means at different historical and paradigmatic junctures and that intellectual sovereignty can signify political movement for land and self-determination (Warrior, 1992). Warrior's vision informs fire land-care practices as a political act of reclaiming lessons passed intergenerationally, inter-Tribally, and for the betterment of our Indigenous futures. By deploying cultural fire, we make conscious decisions to honor reciprocity and responsibilities we hold with more-than-human relatives while governing ourselves through land keeping. This work on the land rebuilds spiritual and cultural connection to fire as our Relative while centering our intergenerational connections to our Peoples and as practice in collective decision-making. Here, we uphold our conceptualization of "Cultural Fire Sovereignty."

The current state of wildfire and climate crisis necessitates the inclusion of Indigenous voices, perspectives, and lived experiences toward mitigation implementation. We keep these policy recommendations in mind while also recognizing the federal government has a trust

responsibility to Tribes and Alaska Native Villages, reaffirmed in 2014 by 333-5: Federal Trust Responsibility to Federally Recognized Indian Tribes and Individual Indian Beneficiaries (Sec. Order 3335-Jewell 2014). More broadly, under international law and the *United Nations Declaration on the Rights of Indigenous Peoples*, the United States has a responsibility to ensure all Indigenous Peoples' rights to Good Fire are protected in perpetuity (UN General Assembly, 2007). Indigenous Peoples have always understood fire as not only a stewardship tool but kin that helps shape the land, create new life, and keep our cultures intact. As actionable steps, we encourage rightsholders and stakeholders at the local, state, federal, and Tribal levels to fold recommendations into current and future wildfire and climate mitigation plans toward a more just and Indigenized climate future.

**By deploying cultural fire, we make conscious decisions to honor reciprocity and responsibilities we hold with more-than-human relatives while governing ourselves through land keeping. This work on the land rebuilds spiritual and cultural connection to fire as our Relative while centering our intergenerational connections to our Peoples and as practice in collective decision-making.**

#### Conclusion: The Future of Fire

Fire will always be a part of our futures, and with the growing concerns of wildfire stemming from the effects of climate change, fire stewardship must be culturally centered and next-generation focused. As Indigenous Peoples, we have al-

ways understood the importance of our Youth. A clear example of fire forward is the FireGeneration Collaborative (FireGen, n.d.). FireGen is a diverse group of emerging leaders in the wildland fire space, supported by people with expertise in fire management, policy, and environmental justice. The work of this Youth team has so far included policy recommendations to the U.S. federal commission, including supporting Indigenous rights to revitalize cultural management practices in and beyond workforce frameworks; creating a high-performing fire workforce that is inclusive of women and underrepresented communities; and investing in intergenerational decision-making as a strategic asset for sustainable and collaborative results. This team strives to provide wildfire and climate solutions that are culturally grounded, forward-thinking, and beneficial for Tribal communities.

At the 2023 10th International Fire Ecology and Management Congress (Association for Fire Ecology, 2023) held in Monterey, California, and hosted by the Esselen Tribe of Monterey County, not only was space created for Indigenous Peoples and their deep connection to fire, but their voices were elevated and celebrated. In a particular session, carried out mainly by Indigenous Youth from the Great Lakes region, the information sharing served as an example of how fire can heal our Peoples and our Lands. The session, ironically entitled "Fire Ecology in the Forgotten Landscapes of the Upper Great Lakes," was especially empowering during several presentations on Indigenous fire efforts. Here, a powerful all-female Youth team representing the Fond du Lac Band of Lake Superior Chippewa and LGBTQ community stood in front of the room to share their story on how researching and reconnecting with historical fire use in the Great Lakes region is leading to a return of land management with fire. In the packed room of both Native and allied scholars, the group relayed that reconnection to fire for the next generation is not just about research, education, and land management, but about cultural resurgence, deep healing of both people and place, and a pathway to healing from historical trauma (Tom et al., 2023). Through the many tears shed in the room while the next generation stood and shared their shaking hearts, it was known that the importance of fire ecology around the world has not been forgotten, especially by Indigenous Peoples.

For Vikki Preston, an Indigenous fire practitioner

and leading voice in the return of Indigenous woman-led fire return in California, the future of fire is a part of the larger conversation among Indigenous communities around landback, that is, the return of Indigenous homelands to Indigenous Peoples, the original stewards of these lands (NDN Collective, 2021). She calls on the state to leverage more authority to Tribal Nations in exercising their autonomy over protecting their homelands from catastrophic wildfire, ecological collapse, and impending effects of climate disaster.

"My positionality comes from being raised in and living in Karuk territory; gaining more of a land base back and having more authority to exercise our sovereignty is what the future looks like. Karuk people are a part of the unratified treaties Tribes, we don't have a reservation, we are a landless Tribe that have slowly purchased back, 98% of our aboriginal territory is still on Forest Service and public lands; a lot of that is a reason why we can't do as much beneficial burning which also speaks to lack of access to lands and lack of autonomy. Moving forward, with regard to regulations around Tribally led fire, I'd like to see cultural burning processes more clear cut, more understood, so that Tribes can do it more regularly. I'd like for it to be less confusing so that fire practice is more readily available (same for fishing, hunting, and gathering with regard to climate change); all of that is a part of the future I hope for."

—**Vikki Preston, Karuk/Yurok/Paiute/Pit River, Cultural Resources Technician for Karuk Tribe Department of Natural Resources**

The time for fire return is now. While this report encapsulates a snapshot of individual communities and agencies that have initiated the undoing of decades of fire exclusion and centuries of colonial suppression, the rise in wildfire and climate catastrophe has signaled the necessity of Indigenous fire Knowledges and practices. A recall of our Ancestral Knowledge presents not only opportunity, but responsibility to protect and restore landscapes while invoking our inherent right to sovereignty. As we continue to demonstrate Cultural Fire Sovereignty, we lead with the decision-making protocols held by our Ancestors and do so with the inclusion of our Indigenous Women, Youth, Elders, and more-than-human Relatives for the return of Good Fire. ◀◀

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**Figure 4.6. Cultural Fire Sovereignty**, 2024. Beadwork created by Celina Hall (Ho Chunk and Narragansett) reflecting her experience during cultural burn demonstrations. Celina is an Environmental Studies & Indigenous Studies undergraduate student at the University of Kansas, KU Spencer Museum research fellow, and lab assistant in Dr. Melinda Adams' "Pyrogeography: fire, plants, and soils" lab group.