

Southwest Tribal Fire and Climate Resilience Virtual Workshop Series Winter 2023

Workshop Summary



Oak Creek Canyon, Coconino National Forest



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Introduction

As exemplified by recent fire events in New Mexico and Arizona, wildfires continue to expand in size and severity as the Southwest's climate grows warmer and drier. In response to changes in historic fire regimes, land managers and stewards are increasingly challenged to improve the resilience of wildlife, watersheds and water storage, cultural resources, communities and more. The exchange of professional and traditional knowledge along with creative solutions is necessary to improve and inform our collective approach to managing for landscape resiliency in this changing environment.

In spring 2023, [Intertribal Council of Arizona](#), [Southwest Fire Science Consortium](#), [Institute for Tribal Environmental Professionals](#), and [Forest Stewards Guild](#) co-convened a three-part virtual workshop series, with workshop design and facilitation support provided by [Southwest Decision Resources](#) and funding provided by [Bureau of Indian Affairs](#), and the tribal-led workshop guided by a [Planning Committee](#) representing tribal expertise and interests in AZ, NM and beyond. The workshop series focused on increasing tribal capacity around wildland fire and climate change impacts across the Southwest. Specifically designed to support Tribal and Pueblo natural resource and fire programs in New Mexico and Arizona in their work on- and off-reservation, participants included Indigenous and non-Indigenous interested parties whose work focuses on Tribal fire and climate resilience.

Workshop Overview and Planning

An Indigenous-led planning committee (See [Appendix 2](#)) was convened and met six times to plan workshop series. An iterative planning approach enabled each workshop to inform the focus of the next, thereby maximizing relevance to workshop participants.

Workshop Topics

- Workshop 1: [Indigenous Perspectives on Fire and Climate](#)
- Workshop 2: [Tribal Climate Resiliency Planning and Opportunities](#)
- Workshop 3: [Partnerships, Resources, and Moving Forward](#)

Workshop Format and Structure

- Format: Virtual (Zoom)
 - Three 2-hour workshops were held bi-weekly on Friday mornings in February and March (before of the onset of fire season)
- Structure of each workshop:
 1. Welcome by a Planning Committee member, which included relevant opening remarks and land acknowledgment
 2. Panel presentation and discussion
 3. Breakout sessions to facilitate in-depth conversation and peer sharing on key topics
 4. Zoom-based polls to measure the effectiveness of the format and topical relevance of the presentation and small group discussion. The Zoom chat feature was widely used to share resources and comments.

Workshop Participants

Over the course of the three workshops, 104 participants from tribal governments and organizations, federal and state agencies, universities, research, planning, and other organizations. Many participants had multiple affiliations. See [Appendix 2](#) for a full list of affiliations.

- 59 participants from 31 different tribal affiliations
- 30 participants affiliated with 7 state and federal agencies
- 1 participant affiliated with a county government
- 10 participants with 5 different university or other higher education affiliations
- 12 participants affiliated with 7 other non-governmental organizations and entities

Key Themes

Indigenous perspectives on fire

- Both fire and connections to the land know no boundaries
- Fire is the greatest gift given to native communities and now we treat it like a liability
- Fire is a natural part of the ecosystem and is a tool to restore healthy forests and watersheds, which can combat climate change
- Fire is a natural part of the ecosystem, and when not allowed to fill its role in the natural system, there are ecological and cultural consequences
- For many Tribes and Pueblos, fire is an integral part of cultural and spiritual practices; it is also part of the healing process
- Indigenous people hold the most knowledge of fire on their lands, and managing fire is an exercise of Tribal sovereignty

Cultural burning

- Monitoring impacts of cultural burning on culturally important species
- Need to bridge the gap between research and cultural burning
- Desire to increase capacity to develop and expand cultural burning programs on off-reservation ancestral homelands

Prescribed fire

- Prescribed fire is an essential tool to reduce the risk of catastrophic fire and maintain a healthy forest and grassland ecosystem

Fire and post-fire research and restoration

- Research and monitoring on and off Tribally-managed lands is key to understanding which land management practices are most successful post-fire
- Reseeding culturally important plants for food and medicinal use

Tribal capacity and workforce development

- Tribal fire programs have limited capacity to secure funding and resources which would allow them to build capacity in the future (e.g. training and burn plans)
- Need for technical training for Tribal staff on how to use big data and GIS.
- Due to limited capacity cannot write burn plans without BIA assistance

- Desire to build intertribal learning exchange and wildland fire response program

Burn qualifications and requirements

- NWCG fire requirements can impede Tribal use of fire due to a limited definition of intentional burning; their qualifications are extensive, time-intensive and inflexible
- Regulatory reform needed to better collaborate with agencies and acquire permits and approvals for burning

Collaboration and coordination

- Collaboration with federal and state agencies and other adjacent landowners is vital and can be challenging
- Tribal governments need clear definition of co-management and co-stewardship specific to climate change and fire
- Need for comprehensive cross-agency forest management

Perception of fire

- Non-tribal communities and land managers often view fire through a Western (fear-based fire suppression) lens and need to be educated on tribal views of fire in order to understand, support, and integrate tribal fire use into their policies and tolerances
- Shift narrative around fire to include cultural and ecological benefits

Climate impacts

- Tribal communities are both more susceptible and cannot leave their communities as a response to climate change - they are keepers of their lands
- The effects of climate change can be observed by paying attention to the land - in unusual precipitation patterns, changing vegetation, loss of culturally significant plants, permanent animal migration, and changing fire regimes
- Climate impacts and resilience knowledge is often oral and cultural and this often does not meet requirements from federal and NFO funding sources

Climate change adaptation planning

- Climate planning needs to include use of fire, both in tribal resiliency and outside agency plans
- Importance of including public health and the built environment in adaptation plans
- Integration of existing management plans (e.g, water, transportation) into climate adaptation plans
- Need a roadmap for how Tribal professionals and agencies can best apply general resources to specific local contexts
- Develop climate adaptation strategy database
- Adaptation plans and vulnerability assessments are scalable and build off of one another. Vulnerability assessments can be useful tools to justify funding for a full climate adaptation plan

Workshop Summaries

Workshop 1: Indigenous Perspectives on Fire and Climate (February 10, 2023)

Summary

This workshop was organized into two sessions, (1) a panel presentations, and (2) plenary and participant breakout discussions. Both sessions focused on sharing different Indigenous perspectives on Fire and Climate and centered on the questions below. Both panel and participant discussions informed the [Key Themes](#) in the section above.

1. Why is your Tribe/Pueblo in the Southwest wanting to restore fire?
2. What are you doing to restore fire? What would you like to be doing?
3. How does your Tribe/Pueblo feel about restoring fire beyond your designated tribal lands? How is this supported or not?
4. How is your Tribe/Pueblo concerned about and addressing climate impacts and adaptation, including changes in fire?

Indigenous Perspectives on Fire and Climate Panel

Panel [Recording](#) (Passcode: W\$2s^t*V)

- Moderator: *John Waconda*, Indigenous Partnerships, The Nature Conservancy New Mexico
- *Rene Romero*, Fuels Coordinator, Taos Pueblo
- *Alonzo Smith*, Fuels Crew Supervisor, Hualapai Tribe (Hopi)
- *Ryan Swazo-Hinds*, Environmental Biologist, Department of Environment and Natural Resources, Pueblo of Tesuque
- *Dee Randall*, Silviculturist, San Carlos Apache Tribe

Breakout Discussions

Following the panel discussion, breakout rooms of 7-10 meeting participants discussed questions posed to the panel using sticky notes on [Jamboard](#). Participants had the opportunity to review answers from the other groups. A high-level summary of participant input is provided in the table below.

Themes from Workshop 1 - Jamboard Discussions			
Why is your Tribe or Pueblo wanting to restore fire? What is the value of fire to your Tribe/Pueblo?	What are you doing to restore fire? What would you like to be doing?	How does your Tribe or Pueblo feel about restoring fire beyond your designated tribal lands? How is this supported or not?	How is your Tribe or Pueblo concerned about and addressing climate impacts and adaptation, including changes in fire?
<ul style="list-style-type: none"> ● Tribal uses and perspectives on fire: fire is natural, traditional, and beneficial for native plants and habitats ● Culture, Knowledge, and Sustenance ● Natural Process: 	<ul style="list-style-type: none"> ● Knowledge Sharing and Collaboration ● Policy ● Monitoring ● Partnerships ● Changing public perception 	<ul style="list-style-type: none"> ● Mixed feelings: education and experience sharing is important ● “Fire knows no boundary”: strong feeling that cross-boundary work needs to happen ● It requires strong 	<ul style="list-style-type: none"> ● Water and watershed protection ● Reintroducing Fire ● Knowledge Transfer ● Funding ● Phenological changes ● Habitat restoration and preservation

Humans are not in control ● Restoration		partnerships and agreements with various organizations and agencies.	
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Workshop 2: Tribal Climate Resiliency Planning and Opportunities (February 24, 2023)

Summary

After opening remarks by Cynthia Naha, Workshop 2 focused on:

- Presentations on the Southwest Tribal Climate Adaptation Menu by Cynthia Naha and Tribal Climate Resilience Planning by Nikki Cooley, followed by in-depth Q&A and discussion opportunities in two breakout sessions.
- Short presentations on Federal Climate Adaptation and Resilience Programs - BIA Tribal Resilience Program by Shaina Tallas and the Southwest Climate Adaptation Science Center by Gregg Garfin.

The content of the workshop is summarized below. Themes from the breakout discussions are included in the [Key Themes](#) listed previously.

Panel

Panel [Recording](#)

a. SW Tribal Climate Adaptation Menu

Cynthia Naha, Chair, New Mexico Tribal Resilience Action Network (NM TRAN)

- SW Tribal Climate Adaptation Menu ([presentation](#) - need to get current version) is a planning tool that addresses the unique needs, values and cultures of Indigenous communities in the Southwest.
- Purpose of the Menu: to develop a catalog of tools and actions to build climate resilience in tribal communities across the southwest. Building tribal resilience from the inside out.

b. Tribal Climate Resilience Planning

Nikki Cooley, Director of the Institute for Tribal Environmental Professionals

- **Tribal Climate Resilience Planning** ([presentation](#))
 - Purpose of the Planning framework: address Indigenous culture and non-human relatives; the ITEP template provides a foundation to begin the climate adaptation planning process. Cooley's presentation includes case studies (Pueblo de San Ildefonso, Navajo Nation, and La Jolla Band of Luiseno Indians)
- **Why plan and prepare?** Land, water, air, plants, non-human relatives, language, prayers, songs, medicine, food, subsistence, culture, elders, and intergenerational teaching, passing these things on through the next seven generations: all connected to climate and western activities impacts.
- **What is being done?** Many adaptation and mitigation plans have been developed. ITEP and The University of Oregon also have databases of climate adaptation plans and related information.
- **Adaptation planning and frameworks.** There are existing frameworks that address native culture in climate response in ways that don't follow western views by siloing non-human relatives.
 - Funding is increasingly available: BIA climate resilience programs and current legislation making funding available for implementation of climate adaptation plans/frameworks.
 - The end goal is to use funding and frameworks to implement a management plan
- ITEP uses a S.A.D.I.E. Framework (see presentation link above) and their Tribal Climate Adaptation Plan template serves as a roadmap to begin the Climate Adaptation planning process - this includes a Toolkit or "checklist" for navigating the process and accessing resources.

Federal Climate Adaptation/Resilience Programs

Zoom [Recording](#) (both presentations)

BIA Climate Resilience Program from the [Branch of Tribal Resilience](#)

Shaina Tallas, BIA Regional Climate Resilience Coordinator

- 11 Tribes are currently being supported by new federal funding from the Biden/Harris Administration to do Climate Resilience Programs.
- 8 new Regional Climate Resilience Coordinator Positions (5 of 8 already filled)
 - These individuals (including Shaina) are main contacts for project-level support for BIA funding. They also provide technical support.
- [Native Youth Climate Adaptation Leadership Congress](#)
- [Annual Awards Program](#): Over \$100 million available this year (FY2023) to fund Tribes and Tribal organizations to plan and design different projects in climate adaptation planning and implementation goals:
 - Climate Adaptation Planning funds (\$250,000 max per award) for capacity building efforts. Includes set-asides for Tribes who haven't received support in the past
 - Climate Adaptation Implementation funds (\$4 million max per award). Includes set-asides for habitat restoration and adaptation (may be of specific relevance to fire actors)

Climate Adaptation Science Centers (CASCs)

Gregg Garfin, former consortium director of the Southwest CASC

- [CASCs](#) are a network of regional centers (supported by national coordination centers) that are partnerships between the USGS and consortia of research institutions (universities, NGOs, Tribes, etc.)
- The [Southwest CASC](#) is hosted by the University of Arizona in Tucson in partnership with the American Indian Higher Education Consortium
 - Mission: "to develop actionable science and implementable climate adaptation solutions in partnership with natural and cultural resource managers, policymakers, Native Nations, and researchers across the southwest." Partnerships are necessary for success.
 - *Anissa McKenna* - Tribal Climate Resilience Liason for the SW CASC - is tasked with connecting Tribal partners with desired resources.

Workshop 3: Partnerships, Resources, and Moving Forward (March 10, 2023)

Zoom [Recording](#)

Summary

After opening remarks from *Jason Nez* (Diné Fire Archaeologist/Resource Advisor), Workshop 3 focused on:

1. A panel on **Innovative Partnerships** featuring building and sustaining working partnerships between and among Tribes, federal agencies, and non-governmental organizations. This session is summarized below.
2. An interactive "**Moving Forward**" session that featured:

- a. Lightning presentations on upcoming events and opportunities (See [Appendix 4](#)) and
- b. Breakout discussions on moving beyond this workshop series (See [Next Steps and Moving Forward](#)).

Innovative Partnerships Panel

Tribe-to-tribe partnership and University MOU development

Melvin Hunter, Jr., Forest and Wildland Department Director, Hualapai Tribe

- Hunter is working with the local department of education and unified school district to create a seasonal, fire-centric curriculum
- This includes two initiatives to build a network and workforce of Tribal fire professionals:
 - MOU with NAU School of Forestry; future MOU with NM Highlands University
 - Exchange with other Tribal fire programs to build capacity and support learning with different fuel types. Examples include the Hoopa Tribe gaining experience in the Ponderosa ecosystem and exchanges with the San Carlos Apache and Florida Seminole Tribes.
- Partnership Funding: BIA PL 93-638 contract agreement that allows for quick access to funding for fire resources

TNC-Taos Pueblo Partnership (no power point)

John Wauconda, Pueblo of Isleta and Indigenous Partnerships Program Manager, The Nature Conservancy New Mexico

- Wauconda is focused on expanding Tribal programs on off-reservation ancestral lands, but emphasizes the need to build Tribal capacity to apply for grants and resources and then to build Tribal programs. Wauconda proposes that providing resources to increase Tribal workforces and administrative capacity could be a niche for private funders.
- Tribes and Pueblos should receive the same amount of financial support that the BIA does to run Tribal fire programs; Wauconda proposes that NGOs could possibly support capacity building to this end.
- Tribe-to-Tribe partnership building (e.g., build workforce capacity, post-fire recovery, riparian restoration) is key to resilience. Such partnerships require learning exchanges and would benefit from process development for inter-organizational network cooperation.

USFS-Jemez Pueblo Co-management ([presentation](#))

John Galvan, Pueblo of Jemez

- Galvan explained the **Jemez Fire and Humans in Resilient Ecosystems Project**, an interdisciplinary research project developed by the Pueblo of Jemez, the Santa Fe National Forest, and the National Science Foundation.
 - By looking at ancestral sites and the “ancient wildland-urban interface,” this project revealed a long history of the human relationship with fire. Additionally, it showed 27 different uses of fire and very active use of fire in ancestral sites.
- There are several tools available to promote off-reservation collaboration related to fire and climate resilience:
 - **BIA - 638 contracts** can be an avenue to obtain technical assistance for projects
 - **Reserved Treaty Right Program** allows Pueblo to work on adjacent off-reservation ancestral land
- Working on off-reservation ancestral lands requires strong partnerships and agreements. The Pueblo of Jemez has used several different mechanisms to this end:
 - Building relationships with Federal agencies

- Jemez has an MOU to work with the US Forest Service on a large-landscape with restoration project
- Jemez uses the Good Neighbor Authority (GNA) under the SW landscape project as the mechanism to work in the campground restoration (largely invasive species removal) around the Jemez River under the Southwest Landscape Project.
 - Galvan has discussed the Pueblo of Jemez’ partnerships with New Mexico State Forestry and the Casa Angelica Project
- It can be challenging to work with local agencies and staff, to keep up with funding changes, and to learn how each mechanism functions. Sharing knowledge and experiences can help.
 - Walatowa example: these partnership mechanisms can support local industry (in this case a small sawmill operation) with forestry and restoration work.

Next Steps and Moving Forward

Ideally, this conversation will not end here, but rather this Workshop Series will catalyze continued opportunities, connections, and collaboration to advance Tribal Resilience with regard to fire and climate adaptation. A central interest of the workshop series (especially Workshop 3) was to define better where this growing network can go next. This section details the outputs of this forward-looking discussion.

Resource Inventories

Information from the planning committee and workshop participants were used to generate the following inventories for Tribal Fire and Climate practitioners and researchers:

- Resource List (see [Appendix 3](#))
- List of upcoming events and opportunities (see [Appendix 4](#))

Participant Feedback and Suggestions

During Workshop 3, participants created a [Jamboard](#) during their small group discussion sessions. The discussion centered on the following questions. The responses to questions 1 and 3 are summarized in the table below. The responses to question 2 are included in the Resource List in Appendix 3 along with resources compiled from across the 3 workshops. .

1. *What are topics you would like to discuss in future conversations?*
2. *What resources do you know of? (again, responses are included in [Appendix 3](#))*
3. *What recommendations do you have to help make future convenings the most useful to you?*

Themes from Workshop 3 Jamboard Discussions	
Topics for Future Discussions	Recommendations for Future Convenings
<ul style="list-style-type: none"> - Focus both on Tribal lands and off-reservation resilience and adaptation activities - Partnerships & Agreements <ul style="list-style-type: none"> - Assistance with developing Tribal MOUs 	<ul style="list-style-type: none"> - Format: <ul style="list-style-type: none"> - Preference for in-person convenings - Engaging, hands-on activities - Add field time to be together on the land

<ul style="list-style-type: none"> - Ensuring Tribal self-determination in partnerships - Co-management and co-stewardship - Partnerships with Federal Agencies, NGOs, academic institutions, and between Tribes and Pueblos - How to move forward as a network (obtaining funding, developing a structure, establishing roles and responsibilities, coordinating work plans, etc.) - Discuss research opportunities and where there are gaps in the research related to Tribes' needs - Trainings <ul style="list-style-type: none"> - Internships on forestry and fire, manager/student joint trainings - Data sovereignty - Tribal-specific grant training - Working with Universities - Tribal Fire Training Academy - Burn planning/prescribed fire: sharing case-studies, trainings, and knowledge exchanges - Climate Planning: resources, process training, etc. - Capacity building <ul style="list-style-type: none"> - Tribal workforce development - Accessing funding opportunities - Information sharing - Others (e.g., biochar, beaver reintroduction, reforestation, TEK, culturally important plant preservation) 	<ul style="list-style-type: none"> - Frequency: meet at least once/year, but ideally more frequently - Timing: suggest convenings in winter (non-fire seasons) - Workshops on Tribal MOUs (including federal agency guests who can provide information on 5 year plans, etc.) - Coordinate work as a network (need a coordinating entity) - More regular communications between convenings (perhaps a newsletter or other briefing publication) - Different groups for different functions. Need for both an all-Tribal group and an interagency, cross-boundary group, for example. - Quarterly meetings between BIA and NGOs like The Nature Conservancy - Create a grant writing webinar for Tribal fire programs for participants to learn: <ul style="list-style-type: none"> - How to identify funding sources, - What makes a successful grant proposal - How to create grant proposal and implementation timelines - Best practices for using database to track funding sources and respective due dates - How to find and learn from Tribal programs that have successfully received funding
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Appendices

Appendix 1: Workshop Materials

Workshop 1

Agenda: [Indigenous perspectives on fire and climate](#)

Jamboard: The [Workshop 1 Jamboard](#) was produced by participants during the meeting and covers the following questions:

1. Why is your Tribe or Pueblo in the Southwest wanting to restore fire?
2. What is the value of fire to your Tribe or Pueblo - why is it important?
3. What are you doing to restore fire? What would you like to be doing?
4. How does your Tribe or Pueblo feel about restoring fire beyond your designated tribal lands?
How is this supported or not?

Workshop 2

Agenda: [Tribal Climate Resiliency Planning and Opportunities](#)

Workshop 3

Agenda: [Partnerships, Resources, and Moving Forward](#)

Jamboard: [Workshop 3 Jamboard](#) was produced by participants during the meeting and covered the following questions:

1. What are topics you would like to discuss in future conversations?
2. What resources do you know of? (resources mentioned are compiled with others from across the workshops in [Appendix 3](#))
3. What recommendations do you have to help make future convenings the most useful to you?

Appendix 2: Planning Committee and Participant Affiliations

Workshop Series Planning Committee	
Bureau of Indian Affairs	Leon Ben and Shaina Tallas
Forest Stewards Guild	Rachel Bean
Havasupai Tribe	Melvin Hunter Jr.
Institute for Tribal Environmental Professionals - Tribal Climate Change Program	Nikki Cooley
Inter Tribal Council of Arizona	Kelly Jendrisak
Intertribal Timber Council	Jim Durglo
NAU Ecological Restoration Institute, Native American Forest and Rangeland Management	John Martin
NAU Southwest Fire Science Consortium	Andi Thode, Molly McCormick, Annie Mataj Elko
New Mexico State Forestry, Deputy State Forester and Tribal Liaison	Lindsay Quam
Pueblo of Tesuque	Ryan Swazo-Hinds
The Nature Conservancy New Mexico, Indigenous Partnerships Program	John Waconda
USFWS/University of Arizona Conservation and Adaptation Resources Toolbox	Ariel Leger
Fire Archaeologist, Diné	Jason Nez

Facilitation Team	
Tahnee Robertson	Southwest Decision Resources
Sophia Cinnamon	Southwest Decision Resources

Participant Affiliations

(*note that many participants listed multiple affiliations)

Tribe/Pueblo	Tribe/Pueblo	Local, State, Federal Government	University or Higher Education	Other NGOs and Entities
Choctaw Nation	Pueblo of Acoma	McKinley County Office of Emergency Management	American Indian Higher Education Consortium	Climate Science Alliance
Cochiti Pueblo	Pueblo of Isleta	New Mexico Energy Minerals and Natural Resources Department	Northern Arizona University	NM Forest and Watershed Restoration Institute
Eight Northern Indian Pueblos Council, Inc.	Pueblo of Jemez	New Mexico Forestry Division	University of New Mexico	Northwest New Mexico Council of Governments
Gila River Indian Community	Pueblo of Laguna	Bureau of Indian Affairs	University of Arizona	Shute, Mihaly, & Weinberg LLP
Hualapai Tribe	Pueblo of Sandia	US Geological Survey / SW and South Central Climate Adaptation Science Centers	University of California - Davis	Southwest Decision Resources
Inter Tribal Council of Arizona	Pueblo of Santa Ana	USDA Forest Service		The Nature Conservancy
Intertribal Timber Council	Pueblo of Tesuque	USDA Southwest Climate Hub		Transformation Network
Maori - Ngati Rangiwewehi, Ngati Whakaue (Aotearoa NZ) Scion Research NZ	Pueblo of Zia	National Park Service		Southwest Fire Science Consortium
Mescalero Apache Tribe	San Carlos Apache Tribe			Forest Stewards Guild
Nambe Pueblo	San Felipe Pueblo			
Native Development Associates, LLC.	Santo Domingo Pueblo			
Native Pathways	Santa Fe Indian School			
NAU - Institute for Tribal Environmental Professionals	Taos Pueblo			
Navajo Nation	The Chickasaw Nation			
New Mexico Tribal Resilience Action Network	Washoe Tribe			

Pascua Yaqui Tribe				
Pueblo de San Idefonso				

Appendix 3: Resource List

<p style="text-align: center;">Resource List *generated throughout the Workshop Series</p>		
Category	Existing Resources and Examples	Additional resources needed
Partnership Development	<ul style="list-style-type: none"> • USDA Good Neighbor Agreement • Tribe-to-tribe partnership development (Melvin Hunter, Jr., Hualapai Tribe) • The Nature Conservancy-Taos Pueblo Partnership (John Waconda, TNC NM) • USFS - Jemez co-management (John Galvan, Pueblo of Jemez) 	<ul style="list-style-type: none"> • Support finding the right partners for specific types of work.
Co-stewardship and Cross-boundary agreements	<ul style="list-style-type: none"> • ERI - how to use TFPA/638 • Tribal Forest Protection Act - working with USFS (Dee Randall - San Carlos Apache) • Forest Management Plan with BIA and MOU with USFS (Ryan Swazo-Hinds - Tesuque Pueblo) 	
Plan Writing	<ul style="list-style-type: none"> • NM Forest Health Initiative cost share program (supports writing a stewardship/management plan) • ITEP Climate Adaptation Plans and Framework • BIA Annual Awards Program - Branch of Tribal Climate Resilience Indian Affairs (bia.gov) • Adaptation workbook planning and practices workshops and trainings (Southwest Climate Hub) - Lauren Kramer (lauren.kramer@usda.gov) • Nikki Cooley (Tribal Climate Planning) • Gregg Garfin (gmgarfin@arizona.edu)- “I’m always happy to discuss and consult with you on the use of western science climate data in adaptation planning” 	
Adaptation Plan Implementation	<ul style="list-style-type: none"> • BIA Annual Awards Program has specific implementation funding - Branch of Tribal Climate Resilience Indian Affairs (bia.gov) • Washoe Tribe: seeding culturally important native species in burn areas post-fire 	
Education, Training, and Certifications	<ul style="list-style-type: none"> • NAU School of Forestry - online Fire and Forest Management Certificate (past 401 certificate), proposed Applied Fire Science B.S. online degree in collaboration with community colleges, proposed online Natural Resources M.S. degree • Geographical Area Coordination Center or Region (BIA regions vs. USDA region etc.) • 401 Series • Training: Prescribed fire training exchanges (TRES), AZ Wildland Fire Academy, Sierra Blanca Fire Academy, Resource Advisor Training (N9042) etc., • P.L. 93 - 638 Training Indian Self-Determination and Education Act of 1975 (stand alone training) 	

	<ul style="list-style-type: none"> ● Fire Ecology Learning Lab - Curriculum for youth. https://www.swfireconsortium.org/education-materials/ ● NPS READ (Resource Advisor) Training ● Adaptation workbook planning and practices workshops and trainings (Southwest Climate Hub) ● Intentional Fire podcast ● Fire Futures with Indigenous Researchers podcast features the Emerging Indigenous Leaders who focus on cultural fire ● Hualapai tribe MOU with NAU School of Forestry (students being close to home creates a strong support system) ● Webinar on Native American Fire Management at an Ancient Wildland-Urban Interface recording from March 4, 2021 	
Funding and Grant Writing Support	<ul style="list-style-type: none"> ● EPA nonpoint-source grants ● BIA Annual Awards Program - Branch of Tribal Climate Resilience Indian Affairs (bia.gov) ● Native Americans in Philanthropy (https://atbc.nativephilanthropy.org/) ● National Fish and Wildlife Foundation (example: Santa Clara Pueblo) ● New Farm Bill ● USDA Good Neighbor Agreement ● Hualapai PL 93-638 contract example with BIA ● Jemez Pueblo example of using Good Neighbor Authority ● Hualapai professional contract example for partnering with other tribes - BIA Western Regional Office, partnering with San Carlos, Hoopa, Florida Seminole ● FACNM microgrants (starter funds) available for grant writing assistance 	<ul style="list-style-type: none"> ● Share the "funding success stories" between federal agencies and tribes, including the names of the contracting attorneys who have helped tribes cement these mechanisms. ● Support finding the right funding for specific types of work. ● Better visibility of funding opportunities ● Funding transfer between Tribes and the Federal government has been an ongoing issue. BIA and Tribes know what needs to be done and its likely time for contract/agreement updates
Networks, Collaboratives, Peer-to-peer groups, and Resource hubs	<ul style="list-style-type: none"> ● New Mexico Tribal Resilience Action Network - to join email Cynthia Naha (cynthianaha505@gmail.com) or Atherton Phleger (aphleger@law.unm.edu). ● Institute for Tribal Environmental Professionals ● SWFireCAP - Cultural Burning Roundtable (contact Sarah LeRoy (sary21@arizona.edu) for more information or to join) ● SW Fire Science Consortium ● The Klamath Network - 2022 NPS gathering; list of wildland-related presentations ● SW Climate Adaptation Science Center <ul style="list-style-type: none"> ○ Anissa McKenna - Tribal Climate Resilience Liason for the SW CASC 	
Case Studies and Information Gathering	<ul style="list-style-type: none"> ● Ariel Léger (arielleger@arizona.edu) - "have capacity to write & mentor students, seeking case studies about on-the-ground adaptation and Cultural Burning with SWFireCAP and CART/CCAST." 	<ul style="list-style-type: none"> ● Contribute to an ongoing cultural burning survey (from Nina Fontana)

Appendix 4: Upcoming Events and Opportunities

This is a growing collection - please use the comment function to add additional opportunities.

2023		
Date	Location	Event/Opportunity
March 22-23, 2023	Pueblo of Tesuque	NM Tribal Fire Working Group
May 2023	Fort Collins, CO	Southwest Ecological Restoration Institutes: Cross-Boundary Landscape Restoration Workshop: Adapting to a Climate-altered West
April-June 2023	Online	2023 Wildland Fire Resource Advisor Training (N-9042) <ul style="list-style-type: none"> ● When: April 10- June 16, 2023 (30 hours of online self-study) and May 17, 18 or 23 (attend one 8-hour webinar session) ● Who: Resource managers, fire managers, and anyone interested in serving as a Resource Advisor. All individuals interested in understanding how Resource Advising can protect sensitive resources. ● Why: With wildland fires increasing in scope and impact, preparation and response are critical to avoiding, minimizing, and mitigating impacts. Use your professional skills to make a difference! ● How: Enroll through the Wildland Learning Portal
Summer 2023		ITCA: BIA Tribal Climate Resilience Workshops on (1) Soil Health and (2) Water Availability/Drought <ul style="list-style-type: none"> ● For information on either workshop contact kelly.jendrisak@itcaonline.com
September 2023	Central Coast - California	Fire and Climate Change: Adaptation Planning for Tribes (contact: nikki.cooley@nau.edu)
November 6-10, 2023	Santa Fe, NM	National Cohesive Wildland Fire Management Strategy Workshop

2024		
Date	Location	Event/Opportunity
February 2024	Tucson, AZ	Southwest Adaptation Forum
November 2024	Santa Fe (likely)	Southwest Fire Science Consortium : Southwest Fire Regional Fire Conference
2024 (TBD)	Arizona (TBD)	Potential workshop to discuss how Tribal interests are being incorporated into large, cross-boundary landscape restoration, including priority landscapes like San Carlos Apache. (Shared by Jonathan Long - USDA Forest Service Pacific Southwest Research Station)

Miscellaneous Timing (Ongoing and TBD)		
Date	Location	Event/Opportunity
Ongoing	Online	SW Fire Climate Adaptation Partnership (SWFireCAP) <ul style="list-style-type: none"> • Cultural Burning Roundtable
TBD	Arizona	Southwest Tribal Fire and Climate Resilience Workshop