



Wildfire Crisis Strategy Region 5 Roundtable Summary

Leadership Panel Session: April 16, 2022
USDA Forest Service Employees Roundtable: April 17, 2022
Partners Roundtable: April 18, 2022

INTRODUCTION

The 2020–2021 wildfire seasons highlighted an incredible litany of challenges associated with keeping communities safe and resilient to the impacts of climate change and extreme weather events. This growing wildfire crisis has created the need for a new land management strategy within the USDA Forest Service—one designed to support strategic management and restoration of millions of acres of land in high-risk areas to protect forest health, watershed function, and human infrastructure. The need for increased pace and scale of restoration requires approaching challenges holistically and in partnership with employees, multiple agencies, Tribal Nations, state and local governments, communities, industries, organizations, and private landowners.

In January 2022, the Forest Service released its [Confronting the Wildfire Crisis Strategy](#) and associated [Implementation Plan](#) (Plan). Under this Plan, the Forest Service will work with partners and interested publics to strategically focus fuels and forest health treatments at the scale of the problem, using the best available science as the guide.

The USDA Forest Service, with the support of the [National Forest Foundation](#), is hosting a series of [ten roundtable discussions](#) in the winter and spring of 2022 in support of the agency's effort to gain input on the Wildfire Crisis Implementation Plan. Planned roundtable conversations with employees and partners are the first of many coordinated engagement opportunities. A separate Tribal Roundtable was convened by the [Intertribal Timber Council](#).

This report is a summary of key themes from the roundtable sessions for Region 5, the Pacific Southwest Region of the USDA Forest Service.



The Region 5 roundtable, facilitated by the National Forest Foundation, focused specifically on California. Approximately 140 participants attended the roundtable kickoff and 118 attended the subsequent employee and partner sessions.

The Region held a separate meeting regarding Hawaii and the U.S. Affiliated Pacific Islands, where Forest Service programs assist state and private forest landowners. This report also includes key outcomes of that meeting.

ROUNDTABLE DESIGN AND PURPOSE

The goals of the roundtables are to

- Share information, goals, and timelines for the 10-Year Strategic Implementation Plan;
- Collect partner and employee input to inform the Plan;
- Provide an opportunity for dialogue among Forest Service leaders and partners to identify key needs and opportunities of the Plan; and
- Gauge ongoing levels of interest and determine ways to leverage that interest and energy.

Each roundtable includes three sessions: a two-hour Leadership Panel, during which a group of leaders frame the nature of the wildfire crisis, and two day-long sessions, one with Forest Service employees and one with partners, to offer feedback on the Wildfire Crisis Strategy and Implementation Plan. Please click to view the [agenda](#) and [presentation](#) shared at the National Roundtable.

In addition to the summary of themes provided in this report, the notes captured during roundtable discussions are being shared with (1) appropriate internal agency teams and workgroups and (2) regional Forest Service leadership. Following the conclusion of all roundtables, the National Forest Foundation will complete a synthesis report that highlights themes from all of the engagements and recommends process-oriented next steps.

SUMMARY OF LEADERSHIP PANEL

A video recording of the Leadership Panel session [is available here](#). The panel comprised the following individuals:

- **Jennifer Eberlien**, Regional Forester, Pacific Southwest Region
- **Richard Barhydt**, Station Director, Pacific Southwest Research Station
- **Joe Tyler**, Director, California Department of Forestry and Fire Protection
- **Patrick Wright**, Director, California Wildfire and Forest Resilience Task Force
- **Don Hankins**, Co-Leader, Inter-Tribal Indigenous Stewardship Project
- **Stacy Corless**, Supervisor, Mono County; Past President, Rural County Representatives of California
- **Russ Bacon**, Chief Executive of Intergovernmental Relations, USDA Forest Service
- **Rachel Neuenfeldt**, Collaboration Specialist, Wildfire Risk Reduction Infrastructure Team (WRRIT), USDA Forest Service



Wildfire Crisis Strategy and Implementation Plan

The Forest Service has developed a national strategy for confronting the wildfire crisis, protecting communities, and restoring forest resiliency. Fires do not respect boundaries; Tribal Nations, partners, states, and communities must work together to achieve the goals of this strategy.

In 10 years, the Forest Service hopes to have cleaner water, reduced impact from climate-driven drought, healthy landscapes and habitat, multiple options for recreation, and clearer air with less smoke from catastrophic fires. The agency also strives to have safe anchor points that firefighters can use to protect communities, infrastructure, and resources. All of these challenges are also opportunities for new jobs and new markets to support communities in our region. One of the goals of these roundtables is to ask how the agency can strengthen current partnerships and build new ones to achieve these goals.

There is sufficient science to guide fuels treatment and restoration, but the crisis is accelerating. The last 20 years have demonstrated a clear trend of larger fires, more fires, and fire seasons turning into fire years. The seven largest fires in California's history have all come in the last 2 years. Two of these fires burned over a million acres, and two crested the Sierra Nevada for the first time: the Dixie and Caldor fires.

The reasons for this accelerating crisis are clear: increased fuel loads, climate change, and rapid development in the wildland urban interface (WUI). Bigger and more destructive fires are threatening homes, economies, and infrastructure. Ponderosa pine forests in this Region historically had densities of 20-60 trees per acre; many landscapes now have hundreds or even thousands of trees per acre.

To achieve the pace and scale of restoration necessary to address the wildfire crisis, we will need all the tools available to us, including mechanical thinning, biomass removal, and prescribed fire. We must work at the right scale and in the right places. The 2021 Caldor Fire and successful protection of communities in South Lake Tahoe demonstrate the benefits of strategic treatments.

One concept and tool to increase the pace and scale of restoration is the "fireshed" model of landscape analysis and restoration planning. The scale of a fireshed is approximately 250,000 acres, and the goal is to prioritize firesheds with the highest potential extent and severity of wildfire.

Fortunately, this Region has extensive experience collaborating with partners. The Forest Service plays an active role on the [California Wildfire and Forest Resilience Task Force](#). There are many examples of project implementation under the Tribal Forest Protection Act. The Forest Service seeks to build on these foundations and existing relationships.



In 2021, California invested \$1.5 billion in forest and fuels treatment and continues its commitment in 2022. [The Agreement for Shared Stewardship of California's Forests and Grasslands](#), signed in 2021, calls for a million acres a year treated to be treated annually in California by 2025.

The [Wildfire Resilience Action Plan](#) was launched in 2021 and includes an update to the Task Force to include more Tribal, state, and local representatives. The State of California is taking an approach of top-down coordination of strategies built from the ground up through local collaboratives.

The Task Force is currently working on the 99 actions in the Plan, has developed a roadmap to get to the target pace of one million acres treated per year, and is now working on an interagency tracking system for the first ever inventory of all completed fuels and restoration projects across all landownerships. The Task Force is also working to coordinate restoration resources like seed banks.

The Intertribal Indigenous Stewardship Network is organizing to expand the use of Indigenous Traditional Ecological Knowledge (ITEK) and advance stewardship projects led by Tribes. Much of the responsibility of achieving the goals of the Wildfire Strategy and Plan and of the 30x30 Initiative will be borne by Tribes; it is critical to collaborate closely with Tribes and to work in ways that do not create undue burden on Tribes. Land managers and partners should be mindful in their work of Tribal ancestral rights to these lands.

Two recently passed bills, [SB 332](#) and AB642, include language that promotes the use of traditional knowledge and transfers some authority to Indigenous practitioners for expanded use of prescribed fire. These are positive developments; regardless of recognition status, Tribal communities are tied to these landscapes and have thousands of years of history working with fire and forests. State and federal agencies should consider the opportunity to learn from Tribal people and develop flexibility with respect to knowledge, traditions, and practices that may not conform to state and federal mandates and regulations.

In addition to achieving fire and fuels management targets, it is critical to focus on quality work that serves all land management goals. Fire and fuels planning must be linked to protecting water quality and biodiversity goals. Wildfires provide opportunities for Tribes to re-steward and rebuild cultural knowledge systems in these landscapes.

These roundtables will inform further development of the Wildfire Crisis Strategy and Implementation Plan. The Infrastructure and Jobs Act passed in November of 2021 allocated \$3.3 billion for hazardous fuels reduction work. There is additional funding for reforestation, roads and trails management, and recreation infrastructure. The act also provides funds for state and private forestry in the form of wildfire defense grants and firefighter pay support.

More than 20 years of work have led to the Strategy and Plan. Some important milestones include the National Fire Plan (2000), the Healthy Forest Restoration Act (2003), the Collaborative Forest



Landscape Restoration Program (2010), Accelerated Restoration (2012), the National Cohesive Wildfire Strategy (2014), Fire Funding Fix (2018), and more.

Together we must increase the pace and scale of treatment severalfold to achieve the goal of treating 20 million acres on National Forest System lands and 30 million acres on Tribal, state, and private lands in 10 years and with a framework for ongoing maintenance.

Years 1-2 of the Plan will focus on priority firesheds that are ready for work and early implementation. The roundtables will inform years 3-10.

The initial timeline for the Strategy and Plan is as follows:

- 2022–2023: Plan development and early engagement
- 2024–2026: Ramp-up of plan, projects, and programs
- 2027–2031 and beyond: Sustain implementation and establish new norms of practice

SUMMARY OF ROUNDTABLES

Themes from Breakout Sessions

In the employee and partner roundtable sessions, attendees participated in small-group discussions to collect input on the Strategy and Implementation Plans. Breakout session topics aligned with the key areas of work identified in the Strategy and Plan, as follows:

- Science supporting wildfire risk reduction
- Outcome-based prioritization and metrics of progress
- Cross-boundary partnerships
- Workforce capacity
- Markets and industry
- Watersheds and Headwaters Protection (partner session only)

Each topic integrated equity and inclusion questions. Each participant was invited to participate in three topics. Major themes from each breakout session are summarized by topic below.

Science Supporting Wildfire Risk Reduction

Participants were asked to discuss the availability and application of science to guide fuels treatment and fire restoration. In addition to specific knowledge gaps, participants identified challenges in sharing and coordinating information and models to support management efforts. Participants identified the Western Klamath Restoration Partnership as a successful example of working with a tribe to incorporate Indigenous Traditional Ecological Knowledge (ITEK) but highlighted that Forest Service in general lack these skills and experience.

Key themes from discussions:

- Science and information needs include:
 - Up-to-date research on fuel break strategies; existing research is from the 1970s.
 - Addressing inconsistencies, particularly with respect to large fires, between national and large-scale models and on-the-ground conditions.



- Development of culturally and ecologically important metrics, including to support integration of ITEK.
 - Science on how fuels projects benefit threatened and endangered species. Science on the California spotted owl has been helpful; research on other species is needed.
 - Getting real-time fire monitoring and modeling data to incident managers. The [Fire Behavior Assessment Team](#) is a successful example of two-way sharing between researchers and implementers.
 - Pre-season training and briefing with fire responders to inform them of the latest in fire science, incident management, and post-fire response.
 - A prediction model, checklist of thresholds and criteria, or other tool to help decision-makers decide whether to suppress a fire or allow it to burn. This tool should incorporate both fire science and local knowledge.
 - Better understanding of the human component of wildfire: how people and communities can live with increasing fire.
 - Integrating social science into research and land management to bridge the gap between forest restoration and community support.
 - Post-fire monitoring to demonstrate the need and value for treatments, including to decision-makers.
- Decision-making processes under the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) tend to underestimate the consequences of inaction on restoration and wildfire risk reduction work.
 - While some agency staff have experience working with Tribes and ITEK, most have little or none. Sharing success stories is important. For example:
 - Through the [Western Klamath Restoration Partnership Project](#), the Six Rivers National Forest has worked successfully with the Karuk Tribe on restoration approaches that integrate ITEK and cultural burning practices. This project integrated ITEK to justify the preferred alternative in a NEPA decision.
 - Tribes have practiced cultural burning for 10,000+ years; it is a natural process. Should it be treated like other management practices under NEPA, or could it be exempted?
 - As partners solicit ITEK and information from Tribes and Indigenous stewards, it is almost always in an extractive manner or as a way to “check the box.” Instead, the agency should invite Tribes early to co-plan, co-manage, and learn from each other.
 - Examples of successful coordination and information sharing in the Region include:
 - [Fire MOU Partnership \(CA\)](#) – This diverse group produced clear information and messages to air quality regulators about the needs and benefits of fuels treatment.
 - The [CalFire Science Consortium](#) mailing list for sharing fire science in the Region.
 - There is a lot of strong science but also challenges to sharing and using it.
 - Transparency with modeling data and assumptions can support more effective communication with decision-makers and build credibility for models and predictions.
 - There is desire for more connections and engagement between scientists and practitioners, but time, capacity, and institutional constraints limit this.
 - The current funding model for science incentivizes scientists to focus on producing publications, not engagement; how might this be shifted?



- Generally, communicating effectively about complex topics and uncertainty is challenging for federal and state agencies. Partners need to speak more effectively together about uncertainty, complexity, and science-based decision-making.

Outcome-Based Prioritization and Metrics of Progress

Participants stressed the need to engage communities and consider multiple objectives to identify priorities. They noted that prioritization may miss values such as sense of place, environmental justice, and ITEK. To effectively plan and prioritize actions across large landscapes, Forest Service managers need robust landscape-scale metrics, current data, ability to access large corporate data sets through cloud computing, and training and capacity to use landscape planning tools. The following key themes emerged from the discussion:

- Prioritization approaches should consider multiple objectives and engage communities:
 - Utilize roundtable discussions to identify high-value resources and map where treatments can be effective; for example, The Nature Conservancy’s map-based and facilitated process can identify alignment of community values and fire layers.
 - Look at local fire history and work with landowners in the WUI to identify landscape needs.
 - To reach underserved communities, the Forest Service should better define “underserved” and allow staff the extra time and resources this requires.
- The following elements are missing as prioritization values and approaches:
 - Sense of place; community connection to landscape and each other
 - Environmental justice lens; affluent communities usually get higher priority
 - Indigenous Traditional Ecological Knowledge (ITEK)
 - Capacity mapping to help understand where investments are needed to build human resources and capacity
- Participants suggested the need to prioritize:
 - Power, hydropower, and communication infrastructure
 - Critical areas for suppression, such as roads and ridgetops
 - Fuel treatment over fire recovery, since treatment will save on recovery
 - Needs of underserved communities
 - Iconic recreation destinations, which are both local economic drivers and places that connect people to forests, providing societal foundations for common goals and values
- Forest Service managers need better data, training, and tools to prioritize work across large landscapes. Specific needs include:
 - Managers need training and education on the many existing planning tools and data and how to use them most effectively to identify priorities and plan treatments.
 - Managers need expanded access to tools, including:
 - Light detection and ranging (LiDAR) data
 - Cloud computing to integrate and share large data sets across Forests and Research Stations
 - Drones
 - Managers need landscape-scale metrics to identify treatment priorities at scale:



- Managers need support to know what metrics to use and how to communicate metrics to the public.
- The ACCEL project, led by the Pacific Southwest Research Station, is working to identify landscape-scale metrics for multiple values based on the Tahoe Central Sierra Initiative's [Framework for Resilience](#).
 - Managers need more frequently updated data to reflect rapidly changing conditions on the ground; 5- to 10-year-old data and models are outdated.
- To reach and address the needs of underserved communities, participants encouraged the agency to:
 - Better define “underserved”; “climate vulnerable” or “wildfire vulnerable” may be more descriptive and useful terms.
 - Recognize that many vulnerable communities have the least resources to adapt/escape.
 - Underserved can also mean lack of access to resources and information, including language barriers. Providing information in their native languages is important.
 - Engage non-rural communities; forest restoration benefits everyone, including urban residents.
 - Consider incorporating data on food deserts, food scarcity, and burned or treated areas that may impact access to subsistence foods.

Cross-Boundary Partnerships

A key challenge to achieve the goals of the Wildfire Crisis Strategy and Implementation Plan is working across land ownership boundaries. Extreme wildfire events do not respect jurisdictional boundaries, so participants were invited to discuss how to strengthen and improve cross-boundary partnerships, including with underserved communities. Participants highlighted the need to invest in relationships and address policy and process barriers. Key themes included:

- Collaboration across boundaries is vital. Critical elements include:
 - Identifying common goals and values.
 - Sharing risk and responsibility equally.
 - Building landscape-scale projects from the ground-up: find leadership and staff within and beyond the Forest Service that create an environment of collaboration.
 - Building a table that seats everyone: be expansive and inclusive in your engagement.
 - Conducting more agency-agency coordination and agency-partner coordination. People tend to revert to silos; instead expand focus to see across projects, across boundaries.
 - Facilitation is helpful.
- To improve partnerships with underserved communities:
 - Find opportunities to go to those partners/communities; don't wait for them to come to you.
 - Find community leaders, liaisons, and events to seek entrance to communities.
 - Start by listening to what the community needs, and then thinking about how the Forest Service can help. Don't just talk about what you can offer or need.



- Don't disappear after projects. Maintain relationships and view them as long-term investments in that community.
- Change match requirements, which limit partners.
- Co-fund positions with partner groups to help them build capacity.
- Across agencies, coordinate approaches to working with underserved communities to minimize burden on those communities.
- Recognize that relationships take time! Instead of just output metrics, use input metrics that value relationships and investments in building relationships.
- Add more staff to work with underserved communities.
- Pay representatives of Tribes and underserved communities for their time.
- Policy and process changes that would support cross-boundary partnerships include:
 - Developing agency funding streams that allow for multi-year use to create predictability and stability and allow reasonable timelines.
 - Streamlining processes and providing training and education on agreement types and how they work for cross-boundary partnerships.
 - Internally, creating networks to share information about how Forests are working successfully with partners. Some Forests are skilled in partnering, but others are more reluctant to let partners lead, lacking experience and trust.
- Additional barriers include the following:
 - Air quality regulations sometimes clash with the need for fire and prescribed burning.
 - Different agencies require different credentials for prescribed burns, limiting the ease of burning across boundaries.

Workforce Capacity

Fire and fuels treatments need to take place in the context of shrinking federal workforce in public land agencies and a tight labor market. Restoration work often competes with fire suppression and other industries for qualified workers. Participants of the roundtable were invited to discuss how best to ramp up workforces quickly and strategically, and in ways that serve communities in the region. The following are key themes from the discussions:

- Participants stressed the need for a lockstep plan to scale up workforce capacity alongside ambitious Forest Service targets under the 10-Year Strategy.
- Constraints on workforce capacity include:
 - Seasonal positions lack stability and adequate pay.
 - Hiring practices and lack of outreach limit the hiring of local residents.
 - USAJobs is inconsistent, hard to navigate, and screens out qualified applicants.
 - Batch hiring events and limited hiring windows undermine access to qualified candidates.
 - Low pay, especially for fuels work, is not competitive with state and private positions.
 - Positions are located in rural and isolated areas.
 - Housing is limited and prohibitively expensive; lack of agency support for employee housing.



- The above challenges are exacerbated in underserved communities.
- Human Resources within the Forest Service lacks capacity; therefore, managers and supervisors must spend more time on human resources and administration and less time on training and mentoring crews. This also affects retention.
- Changes that would support workforce capacity include:
 - Increasing wages, specifically for fire fighters.
 - Reconsidering required qualifications that screen out many potential hires; investing in on-the-job training instead.
 - Allowing open and continuous recruitment for seasonal and temporary employees.
 - Always hiring at highest grade possible.
 - Expanding potential duty stations to hire people at higher rates.
 - Developing and hiring for “ladder” positions with career advancement opportunities.
 - Creating more training and pathways internally, particularly in fuels management.
 - Building ecosystems of education; working with community colleges to build education and training for local workforces.
 - Demystifying the hiring process through outreach to colleges and universities, youth and conservation corps, and local communities.
- Additional actions that would support underserved communities include:
 - Hiring many more Tribal liaisons and partnership coordinators at Forest and District levels; these positions are critical to engaging underserved communities.
 - Diversifying the workforce to reflect California’s diversity.
 - Learning from and building on existing collaborations with Tribes that incorporate cultural burning and Indigenous stewardship into landscape management.
 - Reaching underserved communities through more and better public outreach on Forest Service mission and work opportunities.
- Regarding fuels reduction work:
 - While some participants suggested combining fuels management and suppression work within the same crew, others stressed that these should be separate: wildfire incidents would pull crews away from fuels management, and suppression crews need rest and should not be expected to perform fuels work.
 - Instead, need to hire dedicated fuels crews (which means doubling the workforce). Need to re-create the suppression workforce infrastructure but for fuels.
 - Mobilize fuels work as incidents to allow access to overtime and hazard pay; this would address a current barrier to recruitment.
 - Find ways to bring communities into fuels work to increase capacity, trust, and empowerment.

Markets and Industry

Industry is a critical partner in forest restoration, yet California has faced ongoing declines in mills and industry capacity for decades. Participants stressed that industry needs predictable supplies and support for innovation, including subsidies to scale up emerging markets and address barriers like high transportation costs. Communities need strategic investment in critical needs like rural housing to support local workforces. California offers many promising

examples, programs, and partnerships to build on. The Forest Service should also invest in new NEPA models to improve efficiency over large landscapes and should revisit the model that requires forest treatments to pay for themselves.

- Participants identified key challenges, including:
 - Lack of markets for surplus low-grade timber generated by fires and disease.
 - Lack of mills and processing capacity.
 - Lack of competition for projects, including timber sales.
 - Lack of predictable supplies of materials, which hinders market expansion and innovation.
 - While niche markets for biochar, bioenergy, and other products are growing, they remain too small-scale to address the need.
 - High transportation cost for biomass material, especially with high fuel prices.
 - Forest Service and often county roads are not designed for biomass transport and other heavy trucks and equipment.
 - Long history of industry decline in California and barriers to building new processing facilities. Barriers include market uncertainty, air and siting regulations, cost of investment, and permitting time.
 - Long timelines for environmental review and permitting: the science and landscape conditions in studies are obsolete by the time permitting is completed.
 - In chaparral landscapes, conflicts over whether to leave or remove manzanita.
- Participants stressed that equity must be a more central focus to reach vulnerable communities and make headway in issues of inequity. Suggestions include:
 - Train staff on working with Tribal communities, and recruit more tribal liaisons.
 - Avoid making assumptions about Tribal needs and priorities. Ask and listen instead.
 - Listen to the needs and concerns of urban areas around smoke and fire. Doing so may help build new allies and sources of funding.
- Ideas to support market expansion include:
 - Providing subsidies for transportation and alternative forest product markets and infrastructure, recognizing that subsidies are a traditional and critical tool for innovation and expansion.
 - Focusing on “campus” approach to mills for multiple forest products.
 - Developing power purchase options for facilities using biomass for energy production.
 - Committing to place and communities; building on local entrepreneurial spirit.
 - Investing strategically in rural housing and other long-term needs.
 - Conducting a literature review of past economic studies to identify previously prohibitive or impractical ideas that may now be economically feasible.
 - Identifying information gaps that may be impeding development of new markets.
 - Providing stewardship agreements to NGOs who partner with industry to build mills based on long-term, predictable supplies.
- The Forest Service should consider shifts in environmental analysis approaches:
 - Develop programmatic and large landscape approaches and NEPA documents with longer timeframes.

- Devote more staff capacity to completing NEPA documents. Consider NEPA strike teams. Recognize that public engagement under NEPA requires staff capacity.
- Identify conditions under which Forests should consider third-party approaches to completing NEPA documents.
- Consider dedicating teams to large landscapes needing environmental compliance capacity to build a pipeline of projects.
- Institutional, policy, and programmatic recommendations include:
 - Working with air quality districts to resolve regulatory roadblocks to prescribed fire
 - Reframing the discussion around hazardous fuels and waste removal. Many treatments will not generate enough revenue to pay for themselves in the long run.
 - Providing a clear focus and priorities to support partners and provide predictability, while recognizing we are working in a dynamic context.
 - Revisiting export restrictions, which limit ability to reach markets beyond California and the United States.
 - Building on current assets: Wood Innovations Working Group, Wood Innovations Grant Program, Calaveras Healthy Impact Product Solutions (CHIPS), partnership between UC Berkeley and State & Private Forestry, SERAL Project integrating social and ecological objectives, and others.
- Continuing to engage in the Governor’s Wildfire and Forest Resilience Task Force to share information and elevate issues to decision makers.

Watershed and Headwaters Protection

Much of California’s water supply originates on National Forest System lands. The Region 5 Partner Roundtable featured a special session in which participants provided thoughts on how to improve the resilience of the water supply to wildfire. Key recommendations included building relationships, making connections to related efforts, working at watershed and local scales, harnessing the power of storytelling, and pursuing institutional resources to support this work.

Participants encouraged the Forest Service, the state of California, and partners to:

- Build relationships, expand partnerships, and align forest restoration work with ongoing state efforts in water supply management and other areas:
 - The wildfire crisis is an opportunity to bring new partners to the table, including water users and agencies, and to build support for forest restoration.
 - It is also an opportunity to elevate Indigenous voices and practices.
 - Building these new relationships, a critical foundation for this work, will require going to them, investing the time, and building trust.
 - The Forest Service and California should connect the 10-Year Strategy not only to the Governor’s Task Force but also to other relevant efforts, including the [California Water Plan](#) and its climate change adaptation and natural infrastructure elements.
 - There is also a need to align and integrate crisis response with forest restoration: fire, flood, sediment, and infrastructure are all related and should be working together.
- Facilitate work at watershed and local scales:
 - Convene forums to support people in building relationships at watershed scales.

- Fund and empower local and regional forest collaboratives to manage forests in ways that support water supply, fire risk reduction, and local social and economic needs. Build on existing models of success.
 - Build capacity for collaboration in areas that are currently capacity limited.
- Harness the power of storytelling to build support for restoration and fire resilience work:
 - Use data-driven storytelling to reach more constituencies and build support. The [Chesapeake Bay Program](#) is an example of great storytelling.
 - Define water security into the equation of fire resilience. Protecting water supplies and reducing wildfire risk are part of the same equation.
 - Use the pillars of resilience from the [Tahoe Central Sierra Initiative](#) to build a common language and framework for what we want to achieve with this work.
- Pursue institutional resources to support watershed and headwaters protection:
 - Partners should advocate for the Forest Service to have the necessary funding and resources. The agency is currently 40% understaffed across the board, limiting capacity for environmental review. Staff also need access to LiDAR and other tools.
 - Use and/or adjust NEPA to allow work to be done on larger scales, recognizing that NEPA is poorly adapted to the scale and timing of large-scale fires and firesheds.
 - Seek programmatic and larger scale NEPA approaches. An example is the Sierra National Forest forest-wide prescribed burning NEPA analysis and program.
- Consider the opportunity to use prescribed fire in headwaters areas where mechanical treatment is not possible. Using fire in wilderness, roadless areas, and other high-elevation areas is an opportunity to learn to use fire on larger scales.

Hawaii and Western Pacific Island Forests

In addition to the roundtable focused on California, the Pacific Southwest Region and Western Forestry Leadership Coalition (WFLC) held a separate dialogue on April 7, 2022, regarding needs in Hawaii and the U.S. Affiliated Pacific Islands. Forest Service programs assist state and private forest landowners in this geographic area. This section summarizes outcomes and actions identified during the dialogue.

Partnerships and Communications

- Short term actions:
 - US Forest Service (USFS), WFLC, Island Forestry/Fire staffs: Build upon existing wildfire partners (Pacific Fire Exchange and Hawaii Wildfire Management Organization) to further develop communication products that share key common messages between local forestry and fire organizations.
 - Fire and Aviation Management (FAM), Island Forestry: Coordinate acquisition of equipment that strengthens field response/communications (e.g., radios for multiagency connection).
- Long term:
 - USFS, WFLC, Island Forestry/Fire staffs: Apply appropriate strategic, branded messaging created for different audiences (e.g., mainland and Island elected

officials, communities) to reinforce fire preparedness and prevention throughout the network.

- USFS, WFLC, Island Forestry/Fire staffs: Host training opportunities in social media and messaging technology to help local organizations meet strategic communication objectives.

Education/Training

- Short term:
 - Region 5 Education and Outreach/State and Private Forestry (SPF): Scholarships: Suggest further discussions with Micronesian Conservation Trust, University of Hawaii, and University of Guam to select short-term options, structure annual commitment, and consider additional grant opportunities to secure resources.
 - FAM/SPF: Training: Hold follow-up conversation with Hawaii and Guam about training needs and hold places open on mainland or host specific training (SFA funds can be dedicated to this purpose).
- Long term:
 - USFS FAM, Grants and Agreements, Department of Forestry and Wildlife, and Department of Interior: Provide fire training, sharing resources in progress; aim to complete within next year.
 - USFS, universities/colleges: Scholarships based on opportunities for competitive funds and long-term commitments. The Institute of Pacific Islands Forestry (IPIF) is working with University of Hawaii at Hilo to establish an internship program.
 - USFS with Island Forestry/Fire staffs: Engage local governments/partners (e.g., Kupu) to create pathways for trained individuals to have job opportunities upon graduation/program completion.

Funding

- Short term:
 - SPF: Host follow-up discussions with Islands about current fire, invasive species, watershed restoration funding (federal and local); identify opportunities/needs for additional resources and capture best practices that could be replicated; consider options to use infrastructure funds to support priority work.
 - USFS/Island Program Mangers: Work across Islands and individually to prioritize funding needs for the next couple of years at current levels and create a pipeline of discrete opportunities should additional funds become available.
- Long term:
 - USFS, WFLC, Island Forestry/Fire staffs: Advance options for expanding funding resources through existing and new programs in USFS/Infrastructure Bill, earmarks, etc.
 - All: Invest in new collaborations with other government and NGOs as needed to leverage funding and human resources that can help fill needs.

Science

- Short term:
 - Pacific Southwest Research Station (PSW): Converse with partners to identify ongoing research that could be enhanced and prioritize additional research needs and tools strategically for building over time, specifically for Pacific Fire Exchange (PFX), climate change, decision support tools, and invasive species.
 - USFS, universities, Island Forestry/Fire staffs: Discuss options to leverage/share information from ongoing exchange forums, such as PFX, Palau National Wildfire Network, Hawaii Conservation Conference, and Micronesia-based events.
- Long term:
 - USFS with partners via Shared Stewardship: Develop a 10-year Hawaii/Pacific Islands research investment strategy with Islands and partners to help prioritize available resources and target additional resources.
 - All: Secure additional resources and partnerships to address new questions or start new research.

Workforce Capacity

- Short term:
 - PSW, Region 5: Converse with partners about what peer learning exists and how to expand and share knowledge with mainland, including better emphasizing use and co-production of Indigenous knowledge in wildfire strategies.
 - USFS, WFLC, Island Forestry/Fire staffs: Explore options to use Infrastructure Bill funds for hiring or contracting needed skill sets in FY22/23 (grants, program/project management, scientists, interns).
- Long term:
 - SPF: Follow up with Leslie Weldon and Hawaii/Pacific Island universities about request at department level for American Recovery Act funding; need National Institute of Food and Agriculture (NIFA) in this discussion.
 - USFS, Universities, Island Forestry/Fire staffs, partners: Apply technology to capture cost efficiencies and assist in our work performance.

APPENDIX A
Wildfire Crisis Strategy Region 5 Roundtable
Participating Employee Units and Staff Areas

The Region invited 74 employee representatives to participate in this roundtable. Approximately 58 employees attended this virtual event, held over Zoom. The participants represented a broad range of Forest Service units and programs/staff areas from across the region.

Forest Service Unit	Program or Staff Area
Angeles National Forest	Fuels
Angeles National Forest	Resources
Cleveland National Forest	Assistant District Fire Management Officer
Cleveland National Forest	District Ranger
Eldorado National Forest	District Ranger
Eldorado National Forest	Timber Management
Eldorado National Forest	Engineering
Inyo National Forest	District Ranger
Inyo National Forest	Vegetation Management
Klamath National Forest	Fuels Officer
Klamath National Forest	District Ranger
Lake Tahoe Basin	Heritage
Lake Tahoe Basin	Botany
Lassen National Forest	Silviculture
Los Padres National Forest	Engineering
Los Padres National Forest	Fire
Mendocino National Forest	Fire and Aviation Management
Mendocino National Forest	Vegetation Management
Mendocino National Forest	Line Officer
Mendocino National Forest	Recreation
Modoc National Forest	Fire and Fuels Management
Modoc National Forest	Watershed Program Manager
Pacific Southwest Regional Office	Regional Forester's Staff
Pacific Southwest Regional Office	State and Private Forestry
Pacific Southwest Regional Office	State and Private Forestry, Shared Stewardship

Pacific Southwest Regional Office	Public and Legislative Affairs
Pacific Southwest Regional Office	Regional Forester's Representative
Pacific Southwest Regional Office	Pacific Islands
Pacific Southwest Regional Office	Ecosystem Management
Pacific Southwest Regional Office	Ecosystem Planning
Pacific Southwest Research Station	Station Director
Pacific Southwest Research Station	Fire and Fuels Program/PSW Tribal Liaison
Pacific Southwest Research Station	Conservation of Biodiversity
Pacific Southwest Research Station	Research
Pacific Southwest Research Station	Ecosystem Function and Health
Pacific Southwest Research Station	Fire and Fuels
Pacific Southwest Research Station	Fire and Fuels
Pacific Southwest Research Station	Urban Ecosystems and Social Dynamics
Pacific Southwest Research Station	Fire and Fuels/Urban Ecosystems and Social Dynamics
Pacific Southwest Research Station	Research and Development
Pacific Southwest Research Station	Urban Ecosystems and Social Dynamics
Plumas National Forest	Recreation, Engineering, Lands and Minerals
Plumas National Forest	Supervisor's Office
Plumas National Forest	Fire, Fuels and Aviation Management
San Bernardino National Forest	Wildlife
San Bernardino National Forest	Supervisor's Office
San Bernardino National Forest	Recreation
Sequoia National Forest	District Wildlife Biologist
Sequoia National Forest	Public Affairs
Shasta Trinity National Forest	Ecosystems/Vegetation
Shasta-Trinity National Forest	Fire and Aviation Management
Sierra National Forest	Natural Resources
Six Rivers National Forest	Fire and Aviation Management
Stanislaus National Forest	Administrator
Stanislaus National Forest	Ranger
Stanislaus National Forest	Engineering
Tahoe National Forest	Public Services

APPENDIX B
Wildfire Crisis Strategy Region 5 Roundtable
Participating Partner Organizations

Region 5 invited 124 partner representatives to participate in this Roundtable. Approximately 60 partners attended this virtual event. The participants represented a broad range of stakeholders and sectors in this region.

American Forest Foundation	Associated California Loggers
Blue Forest Conservation	California Department of Water Resources
CAL FIRE	Calforests
California Air Pollution Control Officers Association	California Air Resources Board
California Association of Resource Conservation Districts	California Farm Bureau
California Natural Resources Agency	Caltrans
CalWild	Central Sierra Environmental Resource Center
Confluence West	Community Services & Employment Training, Inc.
CT Bioenergy Consulting	East Bay Municipal Utility District
Fire Restoration Group	Inland Empire Community Foundation
Inland Empire Resource Conservation District	Karuk Tribe Department of Natural Resources
Maidu Summit Consortium	Mono County/Rural County Representatives of California
National Fish and Wildlife Foundation	National Wild Turkey Federation
Natural Resource Conservation Service CA	Nevada County Office of Emergency Services
North Coast Resource Partnership	Placer County Air Pollution Control District
Placer County Water Agency	Rural County Representatives of California
Retired Forest Service	Rivers and Mountains Conservancy
San Bernardino Valley Municipal Water District	San Diego River Conservancy
San Manuel Band of Mission Indians	Save the Redwoods League
Sierra Business Council	Sierra Institute for Community and Environment
Sierra Nevada Conservancy	The Nature Conservancy
Timber Products Company	US Environmental Protection Agency
University of California, Berkeley	University of San Francisco
Water Solutions Network	Watershed Research & Training Center
Wildfire and Forest Resilience Task Force	