



## **Restoration of the Eastern Forest Landscape with Fire: Wildfire Crisis Strategy Roundtable for the Northeast and Midwest Summary**

Leadership Panel Session: May 31, 2022  
USDA Forest Service Employees Roundtable: June 1, 2022  
Partners Roundtable: June 2, 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 necessitates 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](#), hosted 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. 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](#).



## ROUNDTABLE DESIGN AND PURPOSE

The goals of the roundtables were 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 included three sessions: a two-hour Leadership Panel, during which a group of leaders framed 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 Region 9 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 ten regional roundtables, the National Forest Foundation will complete a synthesis report that highlights themes from all of the roundtables 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:

- **Gina Owens**, Regional Forester, Eastern Region USDA Forest Service
- **Cynthia West, PhD**, Station Director, Northern Research Station and Forest Products Lab, USDA Forest Service
- **Jason Kuiken**, Wildfire Risk Reduction Infrastructure Team Deputy, USDA Forest Service
- **Patty Cormier**, State Forester and Director, Maine Forest Service
- **Mary Huffman, PhD**, Director, Indigenous Peoples Burning Network, The Nature Conservancy
- **Scott Crist**, Fire Management Officer, Shawnee National Forest, USDA Forest Service
- **Daniel C. Dey, PhD**, Project Leader and Research Forester, Northern Research Station, USDA Forest Service

### Wildfire in the Northeast and Midwest

There is a growing wildfire crisis affecting all regions and forests of the country. These roundtables were organized to gain input on the Wildfire Strategy and Implementation Plan and to hear all voices, because we must work together to succeed.

We will need every available tool for landscape management and to work across boundaries. Tools like Good Neighbor Authority, 638 Agreements under the Tribal Forest Protection Act, and Shared Stewardship offer frameworks for cross-boundary planning, funding, and governance,



particularly for prescribed fire. The Forest Service is striving to keep equity and inclusion at the forefront of all strategies and projects.

Currently, there is a 90-day pause on the use of prescribed fire throughout the National Forest System. While this will likely be relaxed, the windows for using prescribed burning are shrinking due to increased urban development and higher risk conditions. Many forests are suffering from the absence of fire as an ecosystem function.

National Forest System lands comprise a relatively small portion of the landscape in the Eastern Region, which consequently has the largest State and Private Forestry program. With 17 National Forests and one National Tallgrass Prairie across a 20-state region, most forests and grasslands in the region are on private, Tribal, state, or local government lands.

While in recent years this region has not experienced the “megafires” of the western United States, drought, warming temperatures, and changing soil conditions are increasing wildfire risk. For example, we are starting to see large fires in Minnesota and New Hampshire, places that have not faced significant wildfire risk in recent history. This all points to the need to treat the right places at the right times.

Fortunately, we have strong partnerships to build upon. In 2020, all State Forest Action Plans in the region were completed and include a prioritization of landscapes for treatment. Sixteen of these state plans call for increased use of prescribed burning, so we will need to work collaboratively to expand windows for burning.

Treating National Forest System lands alone will not lead to significant gains in fire-adapted forests and communities; this must be a collaborative, coordinated effort with all Tribal Nations, partners, and landowners. This will not happen overnight, and strong relationships are key.

### **Research and Development Supporting Wildfire Action**

The higher population densities in the Eastern Region mean that even relatively small-acreage wildfires can threaten several communities and critical infrastructure. Fire as an ecological process has been excluded from eastern forests. As a result, there is a trend of less biodiversity, particularly of native species and assemblages, and less resilience to fire events.

The increased use of prescribed fire will require continuing public and private landowner education and considerable coordination with Tribal, state, and local jurisdictions and agencies. It is important to monitor the effects of smoke, not only for public health but for safety, such as when smoke limits visibility on the highways and roadways within the region.

The Northern Research Station is researching how a changing climate affects soil structure and the potential for large releases of carbon into the atmosphere. A new tool, [“Hot, Dry, Windy,”](#) helps model where fire risk is increasing due to climate change and changing vegetation.



Reducing fuel loads will require mechanical thinning and stand management alongside increased use of fire as a management tool. Much of the biomass that needs to be removed has little or no value in terms of traditional forest product markets.

There are innovative technologies and expanding markets for new forest products that utilize small-diameter timber and other woody products. For example, there are emerging uses for biochar, fuel pellets, composite construction materials, food packaging, and concrete additives. These are great options to offset some costs, but the amount of biomass that needs to be removed from the landscape means there need to be solutions beyond those that are profitable or cost-recovering.

Therefore, fuels reduction can and should be framed as “wood waste removal,” which can open doors to new funding sources, practices, and models for cost containment. The Forest Service and partners should learn from and partner with waste removal agencies, experts, and industry.

### **Perspectives from States: Maine and Illinois**

Maine has a long history of cross-boundary work, with 17.7 million acres of forest. The state benefits from a robust timber industry and the capacity to harvest and process timber. Maine leads with collaborative planning, as the state fire plan requires that all communities develop their own wildfire protection plans. The state is investing in organizations and networks to coordinate across these community plans for the effective use of resources and holistic treatment of landscapes.

Much of the state’s success is due to concerted efforts to be in direct contact with landowners and other land managers like The Nature Conservancy. Though fairly new, the Maine Prescribed Fire Council is already an effective venue for coordinated planning and learning. Despite all this success, there are several factors constraining burn windows. Communities fear the escape of prescribed burns, and air quality and safety standards limit burning. Meanwhile, beetle kill and large storm events continue to add to fuel loads. The Forest Service and partners in Maine should continue to invest in a shared vision and common understanding of healthy forests and the role of fire in ecosystems.

Southern Illinois is a region with a great diversity of landscapes, ecosystems, and landownership patterns. Many of the forests in the state are suffering from the absence of fire as an ecosystem process.

Fortunately, Illinois has focused on coordinated cross-boundary work for over two decades, and the benefits are evident. Working with Tribes, state and private landowners, academia, and nonprofit organizations, Illinois has identified three common goals for landscape restoration and management: oak dominance and broad age-class distribution, increased biodiversity of native species, and connectivity and decreasing fragmentation.

Based on these goals, Illinois collectively identified “stewardship clusters” on a regional scale where different landscape goals will be prioritized. Not every patch of forest or grassland needs



to serve all goals for desired composition, diversity, and connectivity. Instead, partners can pursue more regional, holistic approaches.

Community wildfire protection programs have been instrumental platforms for education, learning, and coordination. New cooperative bodies are forming to help network and link communities and community wildfire protection plans (CWPPs).

The state is working with partners to complete larger scale environmental review in order to take a regional approach and to clear priority landscapes for treatment. Illinois is also investing in effective data sharing, with an online database that tracks treatment activities down to the parcel level. This helps sync activities and make the most of resources.

### **Working with Tribes and Indigenous Knowledge**

The Nature Conservancy is a convening partner of the Indigenous Peoples Burning Network. This program is built upon the understanding that Indigenous peoples are the bedrock of land stewardship and have a long history of working with fire, and that many of the land management challenges we face now are due to the interruption of these traditional methods and connections to landscapes.

To understand the value of stewardship based on traditional knowledge and a spiritual connection to the landscape, it is important to honestly examine Western and more recent definitions and approaches to landscape management and restoration. For example, a “classic” approach to forest and grassland management by Western agencies and organizations has been to restore to “pre-settlement” conditions. To do this, photo records from 1930s-1940s and historical accounts from settlers were used to define baseline conditions.

However, this is a skewed definition of “pre-settlement,” as these lands were occupied and managed by Indigenous peoples. As Western settlers arrived, they too used fire frequently as a management tool. Therefore, many assumptions should be adjusted, and lessons learned, by examining lands that have been in continuous management by Indigenous people. An example is Walpole Island in Lake St. Clair, cared for by the Ojibwe people. The biodiversity, water quality, habitat, and resilience found here are living examples of the desired conditions we seek.

To respect cultural knowledge, land managers must work early and consistently with Tribes through goal setting, planning, and implementation. To do this, it is valuable to acknowledge where there is anxiety or unease in letting go of Western ways of analysis, prioritization, and problem solving. Usually, this unease is related to fear of vulnerability or loss of control. However, shared responsibility and allowing Tribes and partners to lead will be critical for success. In this paradigm, federal land managers become followers, letting Indigenous people lead and helping remove barriers for them to use their traditional practices.

### **Wildfire Crisis Strategy and Implementation Plan**

Jason Kuiken, Wildfire Risk Reduction Infrastructure Team (WRRIT) Deputy, provided an overview of the WRRIT and its work. The WRRIT was established by the Forest Service in 2021 to develop



the agency's strategy to reduce wildfire risk and improve forest and community resilience. In January of 2022, the WRRIT published an updated [10-Year Strategy](#) and [Implementation Plan](#). Broadly, the goals for the Strategy and the Plan are to:

- Identify the right locations and tools for fuels and forest health treatments;
- Develop needed workforce capacity and invest in enabling conditions;
- Work with partners across jurisdictions to develop and implement projects that are landscape scale, outcome-driven, and community ready; and
- Support planning and investments in fire-adapted communities.

The 10-Year Strategy establishes a target of treating an additional 20 million acres of National Forest System lands for fuel reduction and resilience, with an additional 30 million acres treated on Tribal, state, and private lands over the next 10 years. The Strategy calls for development of an additional plan to address ongoing maintenance needs beyond the 10 years. The Forest Service cannot achieve management and treatment objectives alone.

Responding to the wildfire crisis is a priority effort of the USDA and the Forest Service. The roundtables seek to engage partners and employees to identify smart, strategic solutions and approaches. The Strategy and Plan build on [more than two decades of focused planning and partnership](#) around the mounting wildfire crisis and seek to harness the collective energy, ideas, and capacities of the agency's workforce and external partners.

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, participants were invited to participate in three rounds of small-group discussions around five topics. These breakout discussions were designed to collect input on the Strategy and Implementation Plans. In alignment with the key areas of work identified in the Strategy and Plan, breakout sessions were organized around the following discussion topics:

- Science supporting wildfire risk reduction
- Outcome-based prioritization and metrics of progress
- Cross-boundary partnerships
- Workforce capacity
- Markets and industry

Equity and inclusion questions were integrated into each topic. Major themes from each breakout session are summarized by topic below.



## Science Supporting Wildfire Risk Reduction

Roundtable participants discussed several questions about the availability and use of science to guide fuels treatment and forest restoration. Participants were encouraged to offer examples of the successful integration of Indigenous Traditional Ecological Knowledge (ITEK) into planning, decision-making, and projects. All participants were invited to describe the challenges and opportunities they continue to face in sharing science across scales and jurisdictional boundaries for strategic forest and fuels management.

### Managing fire and fuels in the Northeast and Midwest

- [LandFire](#) data is at a scale that in some cases may not pick up smaller fires, which for some efforts may limit its utility for the different and varied landscapes and forest types in the East and Midwest.
- Information gaps may include fire history and return intervals as well as land use and fire history on private lands in Eastern Region. This is very difficult to capture and maintain.
- One suggestion is to model resource allocations to different National Forest System regions over the next 5, 10, and 20 years to identify early the potential gaps and tradeoffs.
- While the pace and volume of treatment and prescribed burning is greater in the East and Midwest than in the West, these regions of the country also need increased resources to address fire risks. The climate is changing, and catastrophic fires are on the way if we do not stay ahead of the curve. Invest in success so that these regions are not also competing for resources to fight catastrophic fires.
- In the East and Midwest, major storm events impede fire and fuels management and restoration.
- There are different cultures, politics, and mindsets across the Forest Service regions. While lessons can be shared, it is difficult to, for example, transplant the willingness and understanding for prescribed burning from the East to the West.

### Challenges to holistic management

- Managing for resilience is the ultimate goal. Rather than just managing for fire and fuels, we should incorporate management for habitat, fighting invasive species, recovery from major disturbances, etc. These are complementary goals; how does managing for overall resilience fit with the Strategy and Implementation Plan?
- Conditions are changing on the ground quickly. Science and treatment methods have advanced, and some plans and projects are very out of date. For example, environmental review under the National Environmental Policy Act (NEPA) often relies on data and assumptions that are more than a decade old.
- Light detection and ranging (LiDAR) is a great tool for collecting data, but it needs to be translated for local application.
- The Forest Service and partners need to overcome culture and habit that drives them to use familiar local tools or models to guide decision-making and move toward more holistic and updated methods.
- There is significant locally held knowledge that could be captured in datasets and models.



- More research is needed on the value of forest products from burned forests.

#### Working with Tribes and Indigenous Traditional Ecological Knowledge (ITEK)

- The Forest Service has a small number of examples working with the Sault Ste. Marie Tribe of Chippewa Indians that include early coordination with Tribes, resulting in co-learning and shared implementation.
- A Chippewa National Forest project is one of four 638 projects in the country at the moment. This is a small effort still early in its project life, but is nonetheless an example of using the [Self Determination Act](#) to advance shared stewardship and Tribal-led projects.
- It is difficult to incorporate archaeological and cultural heritage considerations into large-scale models because their scale is so local and site specific.
- Some traditional knowledge has been lost as oral histories and elders' knowledge fade. Work together with Tribes to rebuild knowledge and practices.
- The Red Lake Reservation in Minnesota actively burns as a stewardship tool to manage for foraging and other landscape goals. This example could provide lessons on how to learn from and engage Tribes.
- The forest products industry has worked with the Menominee Tribe to improve the health of white pine stands and add resilience and health to previously even-age stands.
- The Nature Conservancy has a Memorandum of Understanding with the Bureau of Indian Affairs (BIA) for the Midwest. While helpful in some ways, more prescribed burning could take place if Tribes were authorized and funded to manage burning rather than relying on BIA and others to meet National Wildfire Coordinating Group standards.

#### Communication around fire science, landscape health, and community safety

- The Forest Service should rely more on others and invest in networks for building effective communications.
- The Forest Service needs to improve its communication around science, uncertainty, and competing science.
- Focus on success stories! Currently, only the bad news gets attention.
- Local demonstration sites are a very effective approach for educating communities and publics.

#### Information sharing and joint learning

- Joint Fire Science Programs and Fire Exchanges are very effective. The [Lake States Fire Science Consortium](#) is one example.
- Fire Learning Networks and Fire Adapted Community Networks are also successful models.
- StoryMaps can be an effective tool for sharing information quickly. The [Eastern Area Short-Term Outlook](#) is one such example.



- Forest Service Research Station synthesis products make available emerging science in an accessible and user-friendly format.
- Suggestion: Convene more brownbag webinars to help deliver emerging science and trends.
- Field trips and interaction among “-ologists” are very valuable, though it is hard to find time and resources for field visits, especially if significant travel is involved.
- There is a desire for State and Private Forestry to expand their role as an information broker and coordinator.
- [Fueling Collaboration](#) is an example from the Northern Research Station of a shared learning portal.
- The new [Northeast-Midwest Wildfire Risk Assessment Portal](#) covers all forestlands in the Northeast and Midwest. The structure of this portal and models are good as long as the underlying datasets are updated regularly to match current conditions.
- Suggestion: Create an open data source like the [National Interagency Fire Center Open Data Site](#) to be an authoritative repository of practitioner experiences with prescribed fire and mechanical treatments.
- Overall, there is a need to improve our collective storytelling. Telling the story of the why fire is an important ecosystem process is critical.

### **Outcome-Based Prioritization and Metrics of Progress**

During the kickoff session, the Leadership Panel described an ongoing challenge: the lands with the greatest need are not treated for fuels reduction. Instead, lands that are accessible and available for treatment receive project investment. Participants were invited to discuss more effective and efficient ways to work across boundaries to prioritize and treat the areas that will result in the greatest reduction in risk of catastrophic wildfires. Participants were also encouraged to offer examples and models for monitoring both to identify lessons and to maintain treatment goals.

#### Examples of effective cross-boundary work

- State Forest Action Plans and State Wildlife Action Plans are a place where collaborative and cross-boundary planning and implementation are occurring.
- Cooperative Burn Associations can help reach private industry and landowners.
- LiDAR and other remote sensing tools can provide good cross-boundary data and information; however, common infrastructure and standards must be developed and maintained.
- The Superior National Forest has successfully been sharing geospatial data with partners and may offer some models for shared learning.
- The [Minnesota Forest Resources Council](#) has coordinated forest planning and management for over 25 years.
- State and Private Forestry plays a critical role in cross-boundary work in this region, given diverse and varied land ownership.

#### Suggestions for new data, systems, and focus



- Land managers need monitoring of current conditions and post-treatment changes to guide adaptive management and projects and to “tell the story” of the need for active land management.
- The Eastern Region contains a diverse range of forests, partners, communities, and Tribes. Prioritization should be local, context-based, and built on communication.
- The fireshed and potential operational delineations (PODs) models are not well suited for use in eastern and midwestern forests.
- Cross-boundary success will be served by landscape-scale approaches that integrate multiple management goals. Shared values around water, recreation, wildlife habitat, and community safety can be the foundation of coordinated cross-boundary work.
- One effective metric for success can be the status of breeding birds and fire-dependent species.
- There is a gap in tracking the effectiveness and efficiency of grants, agreements, and shared stewardship.
- It would be very useful to know how many acres have been treated with prescribed burning and which have experienced wildfire. [The Illinois Prescribed Fires Accomplished](#) tool can be a model for use nationwide.

#### Working with underserved communities

- There is a need to identify, raise awareness, and develop connections with “underserved communities.” Land managers need clearer strategies and resources for customized outreach and coordination.
- Working with partners and Tribes requires trust, local knowledge, and longstanding relationships. The Forest Service structure and culture needs to evolve to really support strong and enduring relationships.
- The Forest Service should seek to hire more effectively from underserved communities.

#### **Cross-Boundary Partnerships**

With a rich history of collaborative stewardship, roundtable participants in the Eastern Region offered valuable insights on the efficacy of different approaches for working across Tribal, National Forest System, and state and private lands.

#### Need better tools for cross-boundary funding and governance

- Improved mechanisms for cross-boundary funding and governance should be among the top priorities for fulfilling the Wildfire Crisis Strategy and Plan.
- To support local, grassroots, and small-scale projects, Forest Service line staff must be empowered to make decisions on funding, grants, agreements, and commitments.
- Matching funds requirements are particularly burdensome and often keep smaller and local partners from entering into agreements with the Forest Service.
- Authorities and mechanisms for cross-boundary governance need refinement and standardization. It is hard to get funds on the ground across multiple partners despite a strong desire to coordinate.



- The Forest Service should invest in information-sharing infrastructure and maintenance. Factors including firewalls and poor documentation of assumptions currently limit data sharing; in turn, lack of data sharing limits trust and shared responsibility.
- Local jurisdictions and the private sector need consistent funding without burdensome requirements to take the lead on projects and increase treatment pace and scale.
- It is currently difficult for National Forests to support planning and treatment on lands that are not immediately adjacent. This does not serve regional planning and the most effective use of resources. New funding mechanisms and requirements are needed.

#### Examples of effective cross-boundary approaches

- The Wyden Agreement offers a great platform and mechanisms for working with private landowners and water and soil conservation districts.
- The [LANDIS-II](#) forest landscape model is a good tool but is research-intensive and needs to be integrated into decision making and communication around cross boundary work.
- Work in the Shawnee National Forest is a good example of developing grassroots initiatives that bring in multiple partners and change perspectives on prescribed burning.
- Firewise planning with local homeowner associations, fire departments, and local government can be very effective for cross-boundary planning, and more importantly, relationship building.
- Trust is a major barrier to effective work with underserved and hard-to-reach communities.

#### A change in culture will support cross boundary work

- The Forest Service would offer better leadership by shifting its approach from telling communities, “Here is what you need to do” to asking communities, “What do you need and how can we help?” This is especially true for Tribal and underserved communities and requires a shift in agency mindset and culture.
- Tribes and Tribal department staff are greatly overstretched and must coordinate with countless agencies. Therefore, it is important that the Forest Service go to Tribes for coordination on their terms.
- The Forest Service need not, and should not, seek to lead all projects. Instead, the Forest Service should support partners who lead.
- It would be helpful to have metrics that track the number, frequency, success, and lessons learned from collaboratives and multi-partner efforts.

### **Workforce Capacity**

The Leadership Panel identified a critical set of challenges regarding adequate resources to collect and process fire fuels and forest products. Participants were invited to identify key workforce skills needed to accelerate treatment and different models for meeting workforce needs within the Forest Service and beyond, with expanded capacity among partners.

#### Skills and experience needed for the Strategy and Implementation Plan



- Communication and collaboration are essential skills that help incorporate a range of values and community contexts.
- Finance, administration, contracts, hiring, and personnel management are needed throughout the Eastern Region and the Forest Service in general.
- This work requires investment in cultural competency, language skills, and experience working with Tribal Nations and communities. Not all of these skillsets need to be held within the Forest Service; instead, the Forest Service should rely more on partners.
- Technical skills specific to National Wildfire Coordinating Group qualifications are needed, particularly around practical equipment usage and the selection of appropriate treatment programs and options.

#### Challenges to maintaining an effective workforce

- The current workforce is aging out, causing huge losses in institutional knowledge and relationships.
- Major constraints to building and maintaining a workforce include:
  - The cost and availability of housing
  - Persistently vacant positions
  - Burnout and work overload
  - Competition for workers in a tight labor market
  - Substandard pay and benefits
  - Hiring and recruiting systems within the Forest Service that are cumbersome, confusing, and outdated

#### Strategies for a strengthened workforce

- It is important to invest in the mental health of current Forest Service employees. The mentality of “doing more with less” is taking a toll on workers.
- Forest Service positions need to offer competitive benefits and options for career tracks. The private and public sector compete for the same labor pool.
- Job Corps programs can be built and expanded to help build workforce pipelines.
- Colleges, community colleges, and vocational training institutions can be key partners for identifying and training new land managers. The University of Wisconsin–Stevens Point has a forestry program worth examining as a model, despite high costs of tuition.
- The Forest Service can partner with the Department of Defense to reach veterans as a potential pool of candidates.
- Start early. Elementary and middle school is not too early to begin outreach about public lands, land management, and career options.
- Synchronize qualifications and standards for prescribed fire across Forest Service regions, states, and agencies.

### **Markets and Industry**

Lack of markets and infrastructure to treat small-diameter wood and other by-products of restoration pose critical challenges to addressing the wildfire crisis. Participants were invited to



describe the state of the forest products markets and infrastructure across the region and identify strategies to increase the processing of fuels removed from forested lands.

- There is great variation in the health of markets throughout the Northeast and Midwest. West Virginia and Virginia have very strong and enduring markets. Meanwhile, mills are closing in Michigan, Minnesota, and Wisconsin.
- There are some healthy and robust traditional forest product markets despite some decline in infrastructure to process products from large-diameter timber.
- There are few and weak markets for small-diameter timber. Previous federal incentives for the utilization of small wood and brush for fuel have expired.
- New markets continue to develop at small and local scales in terms of biochar, cogeneration, and alternative forest products.
- Biochar markets are growing but are still at a small scale. Seek additional partnership with the Natural Resource Conservation Service to expand these markets.
- Firewood, pellets, and mobile mills to process small-diameter trees offer some process for expanding local markets, particularly for Tribes and underserved communities.
- It will likely require substantial and enduring subsidies to increase the removal of biomass and the innovation of new products and markets.
- Expanding and strengthening markets is a challenge that goes beyond Forest Service scope and abilities. Therefore, growing markets requires an investment in partnerships with colleges and universities, the private sector, policymakers and legislators, and nongovernmental organizations.
- Look to new funding streams focused on climate change, carbon, and water quality and supply. For example, protecting water quality and supply can be a reframing of fire and fuels management.
- The Menominee Tribal Enterprises' [Forest Keeper](#) program is a great example of Tribes leading the way in managing for multiple uses while expanding markets for traditional and nontraditional forest products.
- The Forest Service could partner to develop frameworks to quantify benefits of fire and fuels treatments to state, private, and Tribal landowners.



**APPENDIX A**  
**Wildfire Crisis Strategy Region 9 Roundtable**  
**Participating Employee Units and Staff Areas**

The Eastern Region invited 97 employee representatives to participate in this roundtable. Approximately 47 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.

<b>Forest Service Unit (RO, Station, Forest)</b>	<b>Staff Area or Program</b>
Chippewa National Forest	Forest Leadership
Chippewa National Forest, MN Interagency Fire Center	Fire Management
Eastern Region S&PF	Forest Stewardship Program
Eastern Region S&PF	Forest Health and Forest Markets
Eastern Region S&PF	Landowner Assistance Program Coordinator
Eastern Region S&PF	Forest Health Protection
Eastern Region S&PF	State and Private Forestry
Eastern Regional Office	Fire and Aviation Management
Eastern Regional Office	Safety
Eastern Regional Office	Silviculture
Eastern Regional Office	Renewable Resources
Eastern Regional Office	Forest Health and Forest Markets
Eastern Regional Office	Public and Government Relations
Eastern Regional Office	Fire and Aviation Management/S&P
Eastern Regional Office	Fire and Aviation Management
Eastern Regional Office	Forest Markets
Eastern Regional Office	Tribal Relations
Eastern Regional Office	Fire and Aviation Management
Eastern Regional Office	Renewable Resources
Eastern Regional Office	Cooperative Fire Programs
Eastern Regional Office	Fire and Aviation Management
Forest Products Laboratory	Wood Products Research Unit
Green Mountain & Finger Lakes National Forests	Ecosystem Services
Hiawatha National Forest	Fire Staff Officer / Unit FMO
Hiawatha National Forest	Line Officer
Hoosier National Forest	Fire Management
Huron-Manistee National Forest	Silviculture
Huron-Manistee National Forest	Fire

Huron-Manistee National Forest	Acting Forest Supervisor
Mark Twain National Forest	Fire and Aviation Management
Mark Twain National Forest	Forest Supervisor
Monongahela National Forest	Fire
Monongahela National Forest	Silviculture
Monongahela National Forest	Ecosystems Staff - Forest Biologist
Northern Research Station	Landscape Ecology and Sustainability
Northern Research Station	Fire Sciences
Northern Research Station	Forest Inventory & Analysis
Northern Research Station	Communities and Landscapes of the Northeast
Northern Research Station	Ecology and Management of Invasive Species and Forest Ecosystems
Eastern Regional Office	Public and Government Relations
Shawnee & Hoosier National Forests	Forest Supervisor
Shawnee National Forest	Natural Resources and Planning
Shawnee National Forest	Fire Management
St. Paul Field Office	State and Private Forestry
Superior National Forest	District Ranger
Superior National Forest	Renewable Resources
Superior National Forest	Forest Supervisor
Wayne National Forest	Fire Management

**APPENDIX B**  
**Wildfire Crisis Strategy Region 9 Roundtable**  
**Participating Partner Organizations**

Region 9 invited more than 200 partner representatives to participate in this roundtable. Approximately 48 partners attended this virtual event. The participants represented a broad range of stakeholders and sectors in this region.

American Bird Conservancy
Consortium of Appalachian Fire Managers & Scientists
Forest Resources Association
Forest Stewards Guild
Illinois Department of Natural Resources
Maryland Department of Natural Resources Forest Service
Massachusetts Bureau of Fire and Forestry
Michigan Department of Natural Resources
Mille Lacs Band of Ojibwe
Minnesota Department of Natural Resources, Forestry
Minnesota Forest Industries
National Wild Turkey Federation
Natural Resources Conservation Service
North Carolina State University
Northeast Midwest State Foresters Alliance
Northeast Regional Cohesive Strategy
Northeast-Midwest State Foresters Alliance
Ohio Division of Forestry
Osage Nation Historic Preservation Office
Ponca Tribe of Nebraska
Rhode Island Department of Environmental Management, Division of Forest Environment
Ruffed Grouse Society & American Woodcock Society
The Nature Conservancy
The Nature Conservancy - Indigenous Peoples Burning Network
University of Wisconsin-Stevens Point
West Virginia Division of Forestry
Wisconsin Department of Natural Resources