



# NATIONAL WILDFIRE INSTITUTE

Supporting Healthy Forests That Resist Catastrophic Fire

**Introduction.** We at the National Wildfire Institute [NWI] would like to offer President-Elect Biden's USDA Transition Team and other key contacts selected items of national importance regarding the conservation of America's natural resources. The NWI believes we have a national crisis due to the lack of forest maintenance. This has resulted in large, intense wildfires that have become horrific in their destruction: lives lost, communities destroyed, landscape productivity ruined, and countless wildfire and domestic animals destroyed. Estimated losses range from \$70 to \$350 billion annually.

**The National Wildfire Institute.** The NWI is a non-profit organization dedicated to reducing the destruction of wildland fires through enhanced maintenance of our forests and wildland resources. The NWI includes professionals who have devoted their professional lives to the protection and wise use of our country's landscapes. The NWI is a respected source of peer-reviewed information about land stewardship and contemporary leadership for effective change.

**The 2020 Fire Season.** The 2020 fire season has been terribly destructive. Unfortunately, it was not much different than past years. As of November 28, 2020, almost 9 million acres of forest have burned, homes incinerated, and thousands of lives lost directly to burns and indirectly to smoke. Additionally, the impact to a changing climate from particulate matter in the atmosphere has been one of the worst on record. We urge the USDA Transition Team and others in leadership roles to address the following concerns:

- A. Lack of Forest Maintenance Resulting in Destructive Wildfires**
- B. Smoke is a Killer**
- C. Innovative Biomass Uses**
- D. The Concept of Managed Fires: Take it Off the Table**
- E. Fire Safe Communities**
- F. Expanded Use of More Agile Aircraft**
- G. A Call to Action**
- H. Proposed Legislation for Forest Maintenance and Wildland Fire Mitigation**
- I. The Forest Service Organizational Structure**

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**A. Lack of Forest Maintenance Resulting in Destructive Wildfires.** America has about 885 million acres of forestland [forests are more than just trees], including the 142 million acres of urban forests. The United States Forest Service has a stewardship role on about 80 percent of these lands and thus has a unique role and responsibility to help create healthy, sustainable forests that are more resilient to disturbances so the linkage between environmental health and community stability can be more fully realized. America looks to the Forest Service for leadership and help.

However, for the past 30 years, the maintenance of our forests and wildlands has all but stopped. For example, in 2001 there were 38 million acres of the National Forests designated as "high risk to fire." Today, that figure is 90 million acres. What a paradox this is. The very actions that help reduce large, destructive wildfires are halted so funds can be shifted to suppress fires. It has become a never-ending

cycle of unimaginable destruction. The 2020 fire season is still not over. When do we say, “Enough is enough” and begin to devote more of our time, energy and resources to *forest maintenance* as opposed to *fire suppression*?

Additional investments are key. In the mid-1990s, about 16 percent of the Forest Service budget went toward the fire effort. It is now about 60 percent. The need for additional resources to increase forest maintenance cannot be overstated. A funding gap has been created, and it’s never been closed. It’s a big number requiring an additional \$2.2 to \$3.5 billion annually for 5–7 years. However, as the impacts of forest and wildland maintenance materialize, less and less funding will be needed for fire suppression.

The increase may seem significant. But the amount is small when compared to what America’s taxpayers lose each year in wildfire-related damages to infrastructure, public health, and natural resources -- \$70 to \$350 billion.

Let’s be clear. Resources have been shifted away from forest maintenance for almost three decades. It’s now time to pay the piper, or as the *Enterprise-Record* [Chico, CA] recently put it, “We’ll [just] burn ... and all the firefighters in the world won’t be able to save us.”

- B. Smoke is a Killer.** Although it may not be as obvious as a raging inferno, smoke from wildfires is also a killer. People with asthma, heart or lung diseases, children, and older adults are the most likely to be affected. Frequent exposure to smoke for brief periods may also cause long-term health effects. Recent science-based information found that wildfire smoke affects children’s DNA and distorts proteins needed for the immune-system.

According to atmospheric researchers, “The scope of the problem is immense: Over the next three decades, more than 300 counties in the West will see more severe smoke waves from wildfires, sometimes lasting weeks longer than in years past.” The 2020 fire season dramatically illustrated this.

While America’s population is expected to decline between 2000 and 2100, the mortality attributable to wildfire smoke is expected to triple -- from as much as 25,000 to about 75,000 deaths per year, far more than previously considered.

Too many extraordinary firefighters and ordinary citizens have perished – directly and indirectly -- from wildfires and smoke. It did not have to happen. Lack of forest maintenance is the primary culprit. Now is the time to stand together and call for change.

- C. Innovative Biomass Uses.** Additional investments must include more innovative biomass uses. Biomass innovators have recently turned to solutions that offer opportunities for high-volume, high-value markets for lower-quality wood [i.e., hazardous fuels]. For example, wood-based nanotechnology offers a revolutionary opportunity to create new jobs and strengthen America’s forest-based economy. Applications include structural composite panels for construction, flexible electronic displays, and automotive parts.

It is estimated that these kinds of innovative uses of biomass could reduce future fire-suppression costs in the range of 12–15 percent [some say as high as 23 percent]. In terms of recent fire-suppression expenditures, this represents an annual savings exceeding \$1 billion! These are funds that could be redirected for forest maintenance, which would in turn, help reduce the size and intensity of unwanted fires. Simply put, it makes good economic sense to aggressively invest in innovative biomass uses.

**D. The Concept of Managed Fires: Take it Off the Table.** Managed fires are natural [unplanned] ignitions which under suitable weather and soil moisture conditions are let to burn in order to meet desired ecological objectives. This allows fire to play a natural role in restoring the ecosystems by recycling nutrients into the soil and clearing the forest floor of excessive debris. The challenge is to identify the right kind of fire at the right time at the right place. Relying on natural ignitions to instantly create an opportunity for a managed fire in a random location without adequate planning and pre-positioning for resources is like playing a game of Russian Roulette.

Unfortunately, with the clogged-up conditions of our forests and wildlands, hard to predict weather events, and the extremely high level of expertise required to perfectly “herd” a wildfire, a “managed fire” can quickly become an escaped fire. Attempts to direct a wildfire to help restore the forest can often result in grave consequences. Resource benefits are then *lost*, not gained. Firefighters can be needlessly placed in harm’s way. And, deaths due to smoke inhalation can result along with significantly increased fire suppression costs that continue to shift more funds away from badly needed traditional forest maintenance.

To be realistic, it will take decades of sustained forest maintenance before the *management* of unplanned ignitions for landscape-scale conservation can become a workable solution. Until then, the careful use of prescribed fire, not managed fire, needs to be the tool in a pragmatic forest maintenance regime. *Prescribed fire* is a great tool that needs much more funding.

**E. Fire Safe Communities.** In all probability, the 2021 fire season will be as or more destructive than 2020. It is imperative that added resources be made available at all government levels to ensure that communities and structures are “firesafe.” With the continued expansion of the “Wildland-Urban Interface”, whereby development and fire prone wildland vegetation come face to face, protecting lives and property from wildfires has become a very dangerous and expensive proposition. We know that “defensible space” (also known as the “home ignition zone”) around homes is critical for protection from wildfire, yet less than 2 percent of the 72,000 communities at risk throughout the country have been designated as Firewise Communities. At a minimum, an additional \$26 million annually needs to be provided for fire science and technology development [including defensible space protection in the Wildland Urban Interface]. Additional block grants must be provided to concerned communities to help homeowners “fire safe” their property.

**F. Expanded Use of More Agile Aircraft.** In the “Call to Action” [Item G, that follows], there is a list of “Top 10” actions that the NWI found essential for this fire season and the immediate future. Two of the actions are:

- Fully utilize smaller, more agile aircraft and helicopters. Less people are needed to effectively operate them, thereby reducing the COVID-19 risk profile.
- Use larger aircraft more in a support role; their response time is slower.

Expanded use of more agile aircraft is of fundamental importance *to reduce response time by 80 percent* – and thus keep wildfires small. This year, we found that using smaller aircraft for small fires was very effective and about 10 times cheaper than the cost of large aircraft. When fires become too large for the smaller aircraft, large air tankers have an important role. There needs to be a much more balanced approach in the use of aircraft in firefighting tactics. To date, smaller, more agile aircraft have not been fully utilized to their potential. This must change.

**G. A Call to Action.** Conservation leaders recognize that in order to “create healthy, sustainable forests that are more resilient to disturbances, a *Call to Action* is required. We need a well-coordinated

partnership that shares resources and avoids duplication. This will improve our forests and the economy and protect lives and property. The NWI has drafted a *Call to Action*: “A National Crisis: Lack of Forest Maintenance Resulting in Destructive Wildfires”. It includes five main sections:

- National commitment
- Statement of intent
- Vision
- Strategy
- 10-year plan of work

Over 4,000 individuals have signed a petition to advance the current *Call to Action*. Here’s the link to read the Call to Action: <https://www.evergreenmagazine.com/a-call-to-action-prevent-wildfire-destruction/>

**H. Proposed Legislation for Forest Maintenance and Wildland Fire Mitigation.** The NWI supports proposed legislation that could help address the wildfire dilemma. These include:

- Emergency Wildfire and Public Safety Act 2020 [H.R. 7978]: Panetta (D-CA-20). Co-sponsored by LaMalfa (R-CA-01).
- Emergency Wildfire and Public Safety Act 2020 [Companion Bill by Feinstein (D-CA) and Daines (R-MT)].
- Wildland Fire Mitigation and Management Commission Act 2020: Romney (R-UT).
- 21<sup>st</sup> Century Civilian Conservation Corps Act [H.R. 2358]: Kaptur (D-OH-9).
- 21<sup>st</sup> Century Conservation Corps for Our Health and Our Jobs Act: Wyden (D-OR).

Depending on the final outcome of these proposals, it will be critical to link them to the *Call to Action*.

**I. The Forest Service Organizational Structure.** The current organizational structure of the Forest Service is woefully outdated. A clinical, organizational study needs to be conducted to develop pragmatic adjustments. Over the years, the Ranger Districts and science projects have suffered from declining resources. Role clarification at each organizational level of the Forest Service must be defined, agreed to and followed. This will help eliminate conflicting direction found in today’s agency. We recommend this study consider a more corporate approach to mission attainment and a structure that enables more resources to be placed “on the ground.”

**Contacts:** The NWI stands ready to assist in any appropriate way. The following are key NWI contacts:

- **For the USDA Transition Team:** Michael T. Rains, [mtrains7@verizon.net](mailto:mtrains7@verizon.net), (610) 356-1360.
- **For All Other:** Bruce Courtright, [bcourtright@sisqtel.net](mailto:bcourtright@sisqtel.net), (530) 468-5188