



# NATIONAL WILDFIRE INSTITUTE

Supporting Healthy Forests That Resist Catastrophic Fire

July 23, 2021

Mr. Randy Moore  
Chief Designee  
U.S.D.A. Forest Service  
1400 Independence Ave., SW  
Washington, D.C. 20250-0003

Dear Chief Designee Moore:

Congratulations on your appointment. We wish you success as you begin your assignment as America's Chief Forester. You will be dealing with the most significant issue affecting our National Forests and Grasslands—wildfire impacts and the “use of wildfire where allowable” across America's landscapes.

We are excited that you will have an opportunity to lead us in the coming years and we are very aware of the challenges you face. A group of us have been considering these things and we have some ideas that may help. We also want to let you know what's on our minds.

We have viewed events in wildfire policy and practice with growing alarm since the aggressive use of “wildfire where allowable” or “managed fire” began in earnest in 2009. “Using unplanned fire in the right place at the right time” to “restore fire to fire-depleted ecosystems” has become a devastating practice across principally Western landscapes. The cumulative effects of “managed fire” have never been fully disclosed and the outcome for forest users and private property owners are often devastating.

Further, funds appropriated by Congress for fire suppression are increasingly being used to loose-herd or “monitor” fires, often for weeks or months at a time, and often resulting in hundreds of millions of dollars in damages and expenditures on public and private lands. Fire teams, firefighters, and equipment of all kinds are committed to what amounts to massive, prescribed burns using aggressive backfiring and “big boxing” on fires from Washington to Arizona. We believe the Forest Service is using appropriated dollars for purposes other than those prescribed by law.

We also believe these uses of wildfire to manage natural resources and profoundly change ecosystems are not wise, especially during this time of severely clogged forests (forests are more than just trees); the expanding Wildland-Urban Interface; and the impacts of severe drought. We are concerned that the practice of “managed fire” has never been subjected to NEPA, NFMA, or to the plain requirements of the substantive Acts such as Clean Air, Clean Water, the Endangered Species Act, ARPA, and others. The truth is that our wildfire use has dramatically changed land and resource management plans and there seems to be no accounting for the cumulative effects and outcomes.

The taxpaying public and those most interested in and affected by the concept of “managed fire” and “using wildfire where allowable” have not been invited to comment on our purposes and practices. Accordingly, there has been no opportunity to provide input, to object, or to alter the course of these unilateral actions in any way.

Additionally, in the past few years as Forest Service fire policy attracts increasing scrutiny Agency line officers have changed the label from “managed fire” to “wildfire use” to “defensive fire” (on the 2021 Rafael Fire where IC Bales took the opportunity to prescribe burn thousands of extra acres). It all amounts to “using wildfire where allowable,” per Chief Christiansen.

We appeal to you to change these deficiencies while you still have control over events. Anger directed at Forest officers over aggressive backfiring and burning is at an all-time high (resulting in a rancher fatality in Arizona last year). The great goodwill we enjoyed for over 100 years is quickly eroding from a wide range of Forest users. Our white hat opportunity to maintain public and cooperators support for the maintenance of the National Forests and Grasslands is in peril.

We think that now is the time to engage the public and the agency to disclose the cumulative effects of our wildfire use programs, gain public understanding and acceptance, align our actions with our appropriations, and carry on together in a unified way with our partners and our people.

We are attaching a document [Appendix A.1, page 5] for your consideration, [A National Crisis: Lack of Forest Maintenance Resulting in Destructive Wildfires: A Call to Action](#). This document is an urgent plea to you to bring back some balance in managing the National Forests and Grasslands for watersheds, wildlife habitat, timber, forage, and the many things our public lands provide and are meant to provide. Wildfire use is obliterating these things without regard to sustainable uses. We believe our current fire policies and practices are exacerbating the situation exponentially. Additional documents to support our concerns are also included and listed on page 4.

It is unfortunate that the example of the Tamarack Fire should explode in the news as an exclamation point to our alarm. Forest Service people allowed this fire to burn for days, claiming it was unsafe for firefighters to fight, only to have it blow up and overrun communities in two states. This decision bears many hallmarks of criminal negligence. Separately, we intend to ask for a formal investigation of the Tamarack Fire by agents not supervised by the Forest Service.

Chief, it's time to declare that all fires will be promptly and aggressively extinguished, period. This would be direction until such time as the Agency would engage the public in a robust and comprehensive planning process to subject fire policy to widespread public involvement and public understanding. Anything less would simply serve to increase already fevered resistance to Forest Service fire policies.

We reaffirm our strong support for Prescribed Fire and strong compliance with the law through approved burn plans.

We provide our comments and thoughts as a group whose combined fire experience, time as line officers, experience in staff, policy, and other key areas of Forest Service life, may help you understand our concerns.

We are ready and willing to help and would be happy to discuss these issues with you or your staff. We appreciate you and your solid experience as an agency administrator and your many years dealing with the complexities of wildfire across our country. In our view, if anyone can right this ship and correct our course it will be you.

Very Truly Yours,

Lyle Laverty  
Assistant Secretary of Interior (RET)  
Fish Wildlife and Parks  
Total years in service: 45

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District Ranger (RET)  
USFS  
Total years in service: 33

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Associate Chief (RET)  
USFS  
Total Years of Service: 32

William A. Derr  
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USFS, Pacific SW Region  
Total years in service: 38

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Jim Petersen  
Founder & President  
Evergreen Foundation  
Author of "First Put out the Fire"

Chuck Sheley  
Editor  
Smokejumper Magazine  
Total years in Service (USFS/BLM): 34:

Ted Stubblefield  
Forest Supervisor, Gifford Pinchot NF (RET)  
Type I Incident Commander  
Total years in service: 38

Del Pengilly  
District Ranger (RET)  
Sequoia National Forest and Monument  
Total years in service: 40

Murry A. Taylor  
Smokejumper  
USFS/BLM  
Total years in service: 34

Frank Carroll  
Managing Partner  
PFMc Wildfire Pros  
Total years in service: 31 USFS 15 Private

Ronald Stewart, Ph.D.  
Deputy Chief, Programs and Legislation (RET)  
USFS  
Total Years of Service: 30

Bruce Van Zee  
Forest Supervisor (RET)  
Chugach NF  
Total Years of Service: 32

Steve Fitch  
Forest Supervisor (RET)  
Shasta-Trinity NF  
Total Years of Service: 41

Sid Nobles  
Director North Zone Ops (RET)  
USFS  
Total Years of Service: 35

Dave Hammond  
 Deputy Forest Supervisor (RET)  
 Class II Fire Boss, Class I Plans Chief  
 Total Years of Service: 38

Blaine Cornell  
 Forest Supervisor (RET)  
 Stanislaus NF  
 Total Years of Service: 33

Dave Kohut  
 Fire Management Office (RET)  
 Sierra NF, Type 1 Incident Commander  
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**CC:**

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**Supporting Documents Included**

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## Appendix A.1.

## A National Crisis: Lack of Forest Maintenance Resulting in Destructive Wildfires<sup>1</sup>

### [A Call to Action](#)

**REV. 8.4**



**GLANCE AT  
THE *LOGIC*  
SEQUENCE SHOWN  
ON PAGE 8.**



**UPDATED**

**For  
COVID-19**

**SEE ADDITIONAL  
FOCUS ON  
“MANAGED FIRE”,  
PAGE 10**

**INCLUDES A  
SECTION  
ENTITLED, “BE  
FIRE WISE AND  
SAFE”, PAGE 19**

**INCLUDES A NEW  
SECTION ENTITLED,  
“IMPROVED AERIAL  
FIRES SUPPRESSION  
TACTICS”, PAGE 20**

**SEE ADDITIONAL  
FUNDING  
REQUIREMENTS ON  
PAGE 24**

Sign-on to the *Petition* [Petition Link: <http://chnng.it/bGsyZvSb>]. As of July 23, 2021, there are 4,646 signatories for this *Call to Action*. In 2020, over 10 million acres were destroyed by wildfire. As of this update, another [2,680,600 acres](#) have already burned in 2021, about 44 percent more than the amount of last year’s very destructive campaign -- at the same time. The fire season never stops. Help make a change. There is a summary of this document available upon request to [mtrains7@verizon.net](mailto:mtrains7@verizon.net).

<sup>1</sup> Prepared by Michael T. Rains with comments included from a wide-range of professionals; 32 and counting. This paper has been updated to address the COVID-19 Pandemic and other critical components, such as “managed fire” that can halt the national crisis of destructive wildfires. Last update of this *Call to Action*: 7/25/2021 6:11:35 AM.

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**A National Crisis:  
Lack of Forest Maintenance Resulting  
in  
Destructive Wildfires**

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***A Call to Action***

## **Executive Summary**

The following represents a *Call to Action* -- a plea for a dedicated national effort to reduce the destructive impacts of uncontrollable wildfires. The *Call to Action* -- described in detail on page 19 of this document, includes a:

- National Commitment.
- Statement of Intent [example].
- Vision.
- Strategy.
- 10-Year Plan of Work.

The majority of the document [pages 5-19] establishes the foundation for the *Call to Action*.

Clearly, we are facing a crisis: 90+ million acres, or more, of our national forestlands are at high-risk to large, destructive wildfires. Why? Because for three decades, we have significantly underfunded forest management work that could restore the health and resiliency of our landscapes and help prevent large, intense wildfires. By shifting money *from* sustainable forest management actions *to* fire suppression, today's forests have become overgrown and act like tinderboxes. These tinderboxes cause larger, hotter, faster burning blazes that destroy everything in their path -- requiring billions of dollars each year to put out. It's a vicious cycle, and it's time we end it. How do we break the cycle?

We solicit an aggressive commitment -- *A Call to Action* -- from lawmakers to legislate and properly fund forest health maintenance work that creates and maintains a mosaic of vegetative stages that are productive and more resilient to catastrophic wildfire. By restoring the health of our landscapes, we break the cycle and help reduce the horrific destruction that these wildfires level against public health, infrastructure, and natural resources.

What can you do now?

First, we all must better understand a *Logic Sequence* that enables fires to stay as small as possible. This is the foundation of this document. This *Logic Sequence* is illustrated on the next page.

*Logic Sequence***Keeping Fires Small *Logic Sequence*****🌲 Forest Maintenance Helps Keep Fires Small:**

- ✓ Small fires = less risk to firefighters and the local citizenry:
  - Putting all fires out immediately is very cost effective; large fires are unimaginably expensive and destructive;
  - The concept of “managed fire”, for now, is simply an intellectual argument with mostly disastrous results:
    - Keeping fires small = saving valuable watershed values, including critical habitat for wildlife;
    - Keeping fires small = fewer smoke pollutants impacting nearby communities, as well as the firefighters themselves:
      - Well trained leaders at the local level = the best utilization of resources to keep fires small.

Please read this document that clearly establishes the foundation for a *Call to Action* and consider signing this [Petition](#). At the very least, share your voice of support in any way you feel is appropriate. We need your help.

The 2021 fire season well is upon us. During the 2020 fire season, about 10.4 million acres burned. But it’s so much more than just acres burned. People are dying from fire and smoke, along with countless wildlife and domestic animals. Towns and communities are being wiped away. Stories of loss and grief are gut wrenching. Current activity indicates the 2021 fire season will be more destructive than last year. And, when we review the 2021 Omnibus Spending Bill that was approved, there is a status quo budget in terms of forest maintenance. Ditto for the proposed 2022 budget. Why are Congressional Representatives and Senators turning away from this national disaster? Together we can be a force to make a long-needed change.

To this end, call your Members of Congress and advocate for expanded forest maintenance that enables healthy, resilient forests. Through legislation, funding and the optimization of our wildfire suppression strategies, we can dramatically decrease the threat of large, destructive wildfires.

Use the following links to find contact information for lawmakers in your state:

- **Senators:** [https://www.senate.gov/general/contact\\_information/senators\\_cfm.cfm](https://www.senate.gov/general/contact_information/senators_cfm.cfm)
- **Representatives:** <https://www.house.gov/representatives>
- **Governors:** <https://www.usa.gov/state-governor>
- **Mayors:** <https://www.usmayors.org/mayors/>



## Foreword

The intent of this document is to establish the framework for a *Call to Action*. This *Call to Action* is designed to reduce the impacts of large, intense wildfires on people’s lives, their communities, and lands along a rural to urban gradient resulting from lack of management of America’s forests.<sup>2</sup> The results of this *Call to Action* shall have a positive global impact, as well. The goal is to advance this *Call to Action* to key decision-makers [i.e., the President of the United States; Members of Congress; USDA<sup>3</sup> and DOI<sup>4</sup> Secretaries; and other leaders] – as a way to secure support, advancement of the concepts presented and finally, deploy pragmatic actions.<sup>5</sup> We cannot wait any longer for action. We are facing a national crisis.

As of July 23, 2021, there are 4,646 signatories for this *Call to Action*. [Please consider signing on](#), or at the very least share your voice of support in any way that you feel appropriate.

## COVID-19 Pandemic Update

When the original *Call to Action* was written, there was no COVID-19 pandemic. To date in the United States, 34,281,865 cases and 610,177 deaths have been reported – an average of about 16 percent of the global totals.<sup>6,7</sup> With the coronavirus pandemic continuing to collide head-on with the harshness of the 2021 fire season,<sup>8,9</sup> fire suppression tactics and care for firefighters and the citizenry has to change dramatically.<sup>10</sup> This makes addressing a *Call to Action* even more urgent. Accordingly, even though the maintenance of forests remains the most important overall goal, as the COVID-19 pandemic is being fought throughout the world, the following are the “Top 10 Actions” that must be deployed now and for the foreseeable future:<sup>11,12</sup>

1. All indications say the 2021 fires season will be more destructive than 2020 and the COVID-19 pandemic will still be with us. We must understand this and act accordingly or thousands of people will needlessly become ill or die.
2. The concept of “managed fires” must be taken off the table for now; no exceptions [see detailed attention to this action on page 10]. Clear, unambiguous direction from the Forest Service Chief’s Office on this matter cannot be overstated.
3. The goal is to put out every fire immediately. Reduce response time by 80 percent!
4. Smoke is also a killer. We must keep it to a minimum. See No. 3, above.
5. More fully utilize smaller, more agile aircraft and helicopters. They come with much less people needed to effectively operate, thereby reducing the COVID-19 risk profile [see page 20].
6. Use larger aircraft in a more appropriate role; their response time is slower. Keeping our focus on “Top 10 Action” No. 3 is key.
7. Fully utilize smokejumpers and other specialized firefighters to augment Initial Attack. [see page 21].

<sup>2</sup> In this *Call to Action*, the term *forest* represents more than just trees. For example, the Chaparral Forests of southern California and the wide-range of vegetation that make up the urban gradient, specific to the Wildland-Urban Interface.

<sup>3</sup> USDA: United States Department of Agriculture.

<sup>4</sup> DOI: Department of Interior.

<sup>5</sup> Petition Link: <http://chnq.it/bGsyZvSb>

<sup>6</sup> <https://www.cnn.com/interactive/2020/health/coronavirus-us-maps-and-cases/>

<sup>7</sup> <https://www.worldometers.info/coronavirus/>

<sup>8</sup> Wildfire Today™ reported on September 2, 2020 that 222 wildland firefighters have tested positive for COVID-19 and one has died. To date, actual numbers are hard to determine.

<sup>9</sup> <https://theconversation.com/smoke-from-wildfires-can-worsen-covid-19-risk-putting-firefighters-in-even-more-danger-145998>

<sup>10</sup> Geographic Action Plans to help address COVID-19:: <https://www.nifc.gov/fireInfo/covid-19.htm>

<sup>11</sup> A separate companion document to the *Call to Action* is also available highlighting the “Top 10 Action.”

<sup>12</sup> Based on results, weather patterns so far, including the lack of precipitation, indications are the 2021 fire season will be equally as destructive as 2020, perhaps more.

8. Pre-position resources much better than ever before. The current mantra needs to be: **“strive to be close to the incident, react quickly and put all wildfires out immediately.”**<sup>13</sup>
9. Seek added funds for the United States Forest Service.<sup>14</sup> If only the COVID-19 pandemic and fire suppression tactics are addressed, the estimate is +\$1.7 billion. If delayed forest maintenance -- including hazardous fuels reduction – is added, the cost is about +\$5.3 billion.<sup>15</sup> To be clear, the Forest Service does not have adequate funding to address the impacts of the historic 2020 year and what is currently happening in 2021 without significant action by the United States Congress. See [Appendix A.1.1](#), page 24. **Again, the lack of forest and wildland maintenance to enhance ecosystems productivity over the last 30 years cannot be over stated.**<sup>16</sup>
10. We must do all we can to keep people safe and well.

Faced with the added impacts of the COVID-19 pandemic, there is a *logic sequence* that is fundamental. And, all three steps are inextricably linked:

- **Behave very differently** to remain safe. For example, the notion of traditional, large fire camps in the foreseeable future seems irresponsible.
- **Keep all fires small** and put them out immediately; reduce smoke.
- **Keep the focus on forest maintenance**, the ultimate “brass ring.” Over time, this will ensure America’s forests can become more resilient to disturbances; habitats are improved; forest mosaics become commonplace; and fires are smaller and less intense. And, the current national crisis can begin to dissipate and eventually end.

## Managed Fire

This concept deserves added attention and must be addressed head on.<sup>17</sup> Managed fires are natural ignitions [some refer to them as “unplanned”]<sup>18</sup> which under suitable weather and soil moisture conditions are allowed to burn to meet desired ecological objectives in Wilderness Areas only where pre-planned and approved in Forest Plans. 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 key is to identify the right kind of fire at the right time at the right place. However, 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.<sup>19</sup> This is not to be confused with “Prescribed Fire” which is conducted under very specific conditions.

“... These are different times. With the current land conditions and the impacts of a changing climate, the notion of allowing a fire to burn anywhere, for whatever reason, for the foreseeable future, is unacceptable and must be stopped now; no exceptions.”

<sup>13</sup> Pre-positioning in order to be more efficient and effective in fire suppression was carefully addressed in a letter to the USDA Secretary by the National Wildfire Institute dated May 4, 2020.

<sup>14</sup> The Department of Interior will need to review their level of resources, as well.

<sup>15</sup> In response to the Senator Wyden-led letter addressed to the Forest Service Chief on April 30, 2020.

<sup>16</sup> Current predictions indicate the 2021 fire season will be just as destructive. And, when reviewing the 2021 Omnibus Spending Bill just approved, there is a status quo budget in terms of forest maintenance.

<sup>17</sup> On July 19, 2021, several conservation professionals, under the leadership of Philip S. Aune [Program Manager (RET), Pacific Southwest Research Station], discussed the concept of “managed fire” and concluded that under the current time, its use is completely inappropriate. The group will be sharing their views with the new Chief Designee, Randy Moore for his consideration.

<sup>18</sup> The term “natural” is often used by states and the federal government to describe the type of wildfire. Sometimes, the term “unplanned” is used. The terms have been used interchangeably. For example, a *natural* lightning strike causing a wildfire is *unplanned*. Prescribed fires are *planned*. They are not *natural* or *unplanned*.

<sup>19</sup> Derr, William. United States Forest Service (Ret.). Email correspondence. May 18, 2020.

Item No. 2 on the list of “Top 10 Action” in this *Call to Action* calls for – without exception – the elimination of “managed fires” for the foreseeable future. This includes Wilderness Areas. The reality is, with the clogged-up conditions of our forests; hard to predict weather events; and the extremely high level of expertise required to perfectly “herd” a wildfire, “managed fires” quickly become escaped fires. The notion of effectively directing a wildfire to help restore the forest has become largely an intellectual argument and puts others needlessly in harm’s way; causes deaths due to smoke inhalation; and, significantly increases fire suppression costs that continue to shift more funds away from badly needed traditional forest maintenance.

In 2021, with the risks associated with the COVID-19 pandemic, letting fires burn to help accrue forest restoration targets is unconscionable. There is a strong connection between smoke inhalation and the more dire effects of Covid-19?

Messages are very mixed. On one hand, national direction from leaders seems to suggest no more “managed fires” due to current conditions. Events on the ground show a far different scenario. This misguidance may be due to available budgets. A steady flow of funding from fire suppression is being used to “manage fires” or in reality, attempt to manage fire. The application of pre-approved and planned prescribed fire comes with a much more constrained budgetary account. Using an unplanned ignition as a de facto prescribed fire and claiming restoration credits is simply wrong. Perhaps an Office of Investigation [OIG] accounting of this practice is warranted.

As stated above, the practice of “managed fire”, especially in the western part of our country, is a huge gamble that can quickly accelerate to an “escaped fire.” This has become all too common in recent years, regardless of good intentions.<sup>20,21</sup> And, regardless of weather and all the other “fire factors,” the practice of “managed fire” requires far too much knowledge and authority by the person making this immediate call; it’s not a fair fight. There are simply too many factors at risk. The unpredictability of the fire and its destruction in the current time and place will always win. As stated earlier, this is a practice that must be separated from prescribed burning.

The outcome of prescribed fire is much more predictable. In recent studies, prescribed fires have shown to be much safer and if deployed carefully can significantly help reduce hazardous fuels. Increased appropriations by Congress for prescribed burning is a critical step in the right direction.

The concept of *managed fires* must be stopped and the careful use of prescribed fire needs to be a key tool in a pragmatic forest maintenance regime. It is interesting to note that recently, an extremely well-respected former Forest Supervisor for the Forest Service stated: “...If I were Chief, I would never allow “managed fires”; not this year, not EVER.

“Managed fire” seems to be, as some have suggested, an intellectual theory, that should never<sup>22</sup> be applied, while “prescribed fire” is a great tool that needs much more funding.”<sup>23</sup>

**Here is the bottom line:** It is time to declare that all wildfires will be promptly and aggressively extinguished, period; no exceptions.

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<sup>20</sup> A classic case is the Tamarack Fire in Northern California. [Tamarack Fire Information - InciWeb the Incident Information System \(nwcg.gov\)](#). The fire started on July 4, 2021 and was “monitored” for 13 days before any action. As of July 23, 2021, the Tamarack Fire is 50,129 acres burned with only 4 percent containment. Control expected August 31, 2021.. Go to “Top 10 Action” No. 3, page 9. This incident did not have to be this way.

<sup>21</sup> Congressman Tom McClintock [CA-4-R] weighs in: [Rep. McClintock Requests Information About Tamarack Fire Response | myMotherLode.com](#)

<sup>22</sup> “Never” is a long time. But, let’s be pragmatic. With the current land conditions and the impacts of a changing climate, the notion of allowing a fire to burn, for whatever reason, for the foreseeable future, is unacceptable and must be stopped now.

<sup>23</sup> Stubblefield, Ted. Forest Supervisor, United States Forest Service (Ret.). Email correspondence. October 30, 2020.

## A National Crisis with Global Implications

Currently, there are over one billion burnable acres of landscapes across America. And, during the last three decades or so, the size and intensity of wildfires has left a path of destruction with annual losses in wildfire-related damages to infrastructure, economic effects of evacuations and lost tourism, public health, and natural resources estimated to be \$70 to \$350 billion each year.<sup>24</sup> But it is more than just acres burned or the size of the fire. As Ernesto Alvarado, professor of wildland fire at the University of Washington says, "...we should concentrate more on human losses."<sup>25</sup> Often, the human cost of wildfires has little to do with the fire size. For example, the Camp Fire, which burned more than 18,000 structures and killed 88 people in Paradise, California, isn't even in the state's top 20, ranked by acreage. A 1,000-acre fire in the west may go almost unnoticed. The same size fire in the Pinelands of New Jersey would be a disaster.

Sometimes we take the power of healthy forests for granted. In addition to their role in helping reduce the intensity of wildfires, healthy forests reduce the impacts of a changing climate by offsetting as much as 20 percent of the country's annual greenhouse gas emissions.<sup>26</sup> Healthy forests also reduce flooding by catching rainwater, creating permeable soils and reducing erosion. Healthy forests are crucial for good quality water and air. Over one-half of Americans depend on healthy forests to capture and filter their drinking water. Healthy forests remove millions of tons of pollutants each year helping to reduce respiratory problems, such as asthma and even premature death that pollutants may cause. Healthy forests create habitat for a wide array of plants and animals, including those in which their continued existence is threatened.

The degradation of America's forests due to the lack of management and the subsequent destruction by uncontrollable wildfires has brought us to a pivotal point. That is, a lowered capability of our forests to help mitigate the adverse impacts of a changing climate and produce the air and water we need to survive, is resulting in planetary conditions that are threatening the very existence of humans and wildlife. Simply put, without the protection that healthy forests provide, we are also jeopardizing the future of planet Earth.

For example, smoke from wildfires does not only affect people's health, it can speed up the melting of polar icecaps. Particulate matter in smoke – soot -- settles on glaciers and darkens the ice surface, thereby speeding up melting as more of the sun's heat is absorbed. A growing body of research suggests that wildfire soot will contribute to accelerating the Arctic meltdown in the decades ahead.

With a projected rise in sea levels of about 2 meters [some predictions are higher] by 2100 – due to ice melting - - the impacts along coastal communities throughout the world will be devastating. According to research by Cornell University in 2017, "...2 billion people – about one-fifth of the world's population – could become climate change refugees due to rising ocean levels by 2100."<sup>27</sup> The social and economic impacts of this level of displacement is almost incalculable. As conservation leaders, we cannot stand by and allow this to take place. We must do all that can be done to mitigate the adverse impacts, now and ahead.

Declining forest health and large, high intensity wildfires that accompany this decline is *the* land conservation issue of our time. We must be vigilant. The lack of forest management is a safety issue. It is an economic issue. It is a security issue. This lack of forest management in America and the associated consequences is now a national crisis contributing to global degradation.

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<sup>24</sup> The annualized economic burden from wildfire is estimated to be between \$71.1 billion to \$347.8 billion (\$2016 US). NIST Special Publication 1215. The Costs and Losses of Wildfires: A Literature Survey. Douglas Thomas, David Butry, Stanley Gilbert, David Webb and Juan Fung. Applied Economics Office Engineering Laboratory. November 2017.

<sup>25</sup> Wildfire Today, October 8, 2020, reporting on an NPR article.

<sup>26</sup> [https://www.fs.fed.us/climatechange/advisor/scorecard/Carbon\\_Infographic\\_Final.pdf](https://www.fs.fed.us/climatechange/advisor/scorecard/Carbon_Infographic_Final.pdf)

<sup>27</sup> <https://news.cornell.edu/stories/2017/06/rising-seas-could-result-2-billion-refugees-2100>

## Discussion

In 2018, the *Camp Fire* wiped away the town of Paradise, California, "...burning homes, shops, restaurants, parks – many treasured pieces of an old mining town. It also left thousands of children displaced from their schools – at least from the campuses or even their teachers and peers."<sup>28</sup> 88 people perished. Other fires during the year accounted for over 2,000 civilian deaths. The 2018 fire season was horrific in terms of its destruction. But it was not that much different than what happened in 2017-2015; 2012-2011; 2009-2004; and, 2001-2000.<sup>29</sup> 2019 proved to be somewhat of a reprieve overall, even though the number of fires and acres burned across the country were still significant<sup>30</sup>. However, this *reprieve* has unfortunately become an anomaly. We cannot become complacent. The 2020 fire season was historic in its destruction. According to the [National Interagency Fire Center](#), there were about 57,000 fires and 10.4 million acres burned. The total *10-year average* is about 61,000 fires and about 6.7 million acres burned. The 2020 wildfire season has ended. The loss of life, directly from fire and more indirectly from smoke inhalation, and destroyed towns and communities was horrific. This destruction is continuing in 2021.<sup>31</sup> With all due respect, the current approach to wildfire management has become stodgy.<sup>32</sup> Simply put, enough is enough. It is time for all of us – from the newly elected President to Congress to government officials to state leaders, and to the local citizenry to garner the courage to stand up and begin to put an end to this horrific and totally unnecessary destruction.

### *Smoke is Also a Killer*

Although it may not be as obvious as a raging inferno, smoke from wildfires is also a killer. America's population is expected to decline between 2000 and 2100. However, the mortality attributable to wildfire smoke is expected to triple between now and the end of the Century - from as much as 25,000 to about 75,000 deaths per year.<sup>33</sup> More conservative estimates show this range to be from about 15,000 to 44,000 annual deaths.<sup>34</sup>

According to the US Climate and Health Alliance<sup>35</sup>, "...wildfire smoke is primarily made of carbon dioxide, water vapor, carbon monoxide, particulate matter, hydrocarbons and other organic chemicals, nitrogen oxides, and many other trace elements. Smoke composition can vary, depending on the fuel type, fire temperature, and wind conditions. Of these pollutants, "particulate matter [PM] is the most concerning, given their very small size and ability to be inhaled deeply into the lungs." According to the Environmental Protection Agency<sup>36</sup>, numerous scientific studies have linked long-term PM<sub>2.5</sub> [also called particle pollution] exposure to a variety of problems, including:

- Cancer.
- Stroke.
- Irregular heartbeat and heart attacks.
- Respiratory problems, such as irritation of the airways, coughing or difficulty breathing.

<sup>28</sup> The Enterprise-Record. November 8, 2019.

<sup>29</sup> For the latest fire statistics, use this website: <https://www.nifc.gov/fireInfo/nfn.htm> See also [Incident Activity Charts and Tables](#).

<sup>30</sup> 2019 wildland fire statistics: Number of Fires [50,477] and Acres Burned [4,664,364]. That is about 75 percent in Number of Fires and 67 percent in Acres Burned of the reported 10-year average [66,993 Number of Fires and 6,972,600 Acres Burned].

<sup>31</sup> As of July 23, 2021, there has already been 35,975 fires that have burned 2,680,600 acres – a 44 percent increase at the same time in 2020.

<sup>32</sup> [Wildfire solutions | Stanford News](#)

<sup>33</sup> B. Ford, M. Val Martin, S. E. Zelasky, E. V. Fischer, S. C. Anenberg, C. L. Heald, J. R. Pierce. Future Fire Impacts on Smoke Concentrations, Visibility, and Health in the Contiguous United States. *GeoHealth*, 2018.

<sup>34</sup> <https://grist.org/article/44000-americans-could-end-up-dying-from-wildfire-smoke-every-year/>

<sup>35</sup> <http://usclimateandhealthalliance.org/wildfires-public-health-view-front-lines/>

<sup>36</sup> <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>

People with asthma, heart or lung diseases, children<sup>37</sup> and older adults are the most likely to be affected by particle pollution exposure.<sup>38</sup> Research is also showing that smoke from wildfires is also causing significant harm to skin health, accelerating skin aging and skin cancers.<sup>39</sup>

According to atmospheric researchers, led by a team from Yale and Harvard, “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.”<sup>40</sup> An obvious and immediate concern should be the vulnerability of the first responders, our wildland firefighters. Now we have the COVID-19 pandemic to accentuate his issue.

### *It’s a Tie for the Top Spot*

Large, high intensity wildfires throughout America – especially in the west – have created this national crisis. The three primary reasons are, with a tie for the top spot:

1. Lack of forest management [*maintenance*]
1. The impacts of a changing climate.
3. The expansion of the Wildland-Urban Interface

In some past writings on this subject, it has been stated that *the* primary culprit for the deterioration of America’s forests [reminding us all that *forests* represent more than trees]<sup>41</sup> and the incredible destruction caused by wildfires, is the *lack* of forest management. Further, it was concluded that the impacts of a changing climate represents a real force, no doubt, but not the driving force. Lately, however, the lines between the two – impact of wildfires and impacts of a changing climate on the warming of our planet have become much too blurred to make a rationale distinction; there probably is none. As Jad Daley, President and CEO of American Forests concluded in his November 2018 article, “Climate Change = More Fire = More Climate Change.”<sup>42</sup> Or, as Bob Berwyn of Inside Climate News stated in his August 2018 news note, we are in a “vicious cycle when the results of warming produce yet more warming.”<sup>43</sup>

The Paris Climate Agreement of 2015<sup>44</sup> provided worldwide awareness, leadership and goals to help ensure post Industrial Revolution global warming would not exceed a +2°C threshold [from pre-Industrial Revolution levels]. To many, re-committing to the Paris Climate Agreement [also known as, the Paris Accord] has indicated to the world that the United States continues to care about global warming and its impacts on the health, economy and security of current and future generations. And, we must do our part.

Since 1895, temperatures in the United States have increased by about one-half degree Fahrenheit; some projections by mid-Century are plus 2 to 4 degrees.<sup>45</sup> That’s huge. The consequences will be devastating. Whatever path is chosen to highlight our role, we must be vigilant and sustain our responsibility as visionary and scientific leaders to help mitigate the impacts of a changing climate. Time is running out.

<sup>37</sup> [Wildfire smoke is particularly harmful to kids’ respiratory health, study finds \(statnews.com\)](#)

<sup>38</sup> Recent [2020] studies by Stanford University [researchers say smoke](#) from the recent California wildfires led to 1,200 excess deaths and 4,800 additional ER visits among the elderly – and that’s just for people ages 65 and over.

<sup>39</sup> Y. Claire Change. [Caring for Skin After Wildfire Smoke Exposure and Irritation | Allure](#) [Dougher, K.9/24/2020].

<sup>40</sup> <https://www.cbsnews.com/news/2019-wildfire-season-smoke-from-wildfires-increases-health-risks-for-millions-of-americans/>

<sup>41</sup> For example, the Chaparral Forests of Southern California and the wildland-urban forests [a wide-range of vegetation and tree species] are in critical need of improved management. Fuels treatment represent far more than just trees.

<sup>42</sup> Daley, Jad. *New Math: Climate Change = More Fire = More Climate Change*. American Forests. Nov 27, 2018.

<sup>43</sup> Berwyn, Bob. How Wildfires Can Affect Climate Change (and vice versa). Inside Climate News. August 23, 2018.

<sup>44</sup> The Paris Agreement [Accord de Paris]. United Nations Framework Convention on Climate Change [UNFCCC]. 2015.

<sup>45</sup> <https://www.americangeosciences.org/webinars/wildfire-management-in-the-21st-century>

An estimated 120 million Americans in more than 46 million homes are at risk due to wildfire; 72,000 communities are directly in harm's way. Thousands of heroic firefighters have died protecting people and property. How many more reasons does it take before we can begin to improve America's forests so fire can eventually be used as a conservation tool and no longer feared for their destruction? We have a national crisis. The American people are calling for a solution. What is happening does not need to happen. We know what to do to stop this destruction. Now is the time for a *Call to Action*.

### ***The National Fire Plan***

It has been over 20 years since the report entitled, "Managing the Impacts of Wildfires on Communities and the Environment" [the *National Fire Plan*] was written by the Departments of Agriculture and Interior. A critical feature of the *National Fire Plan* was "hazardous fuels reduction improves forest health and its resiliency to fire." Unfortunately, not much has changed since then. In fact, land conditions have deteriorated. For example, in 2001 there was an estimated 38 million acres on our National Forests considered to be at high risk from destructive wildfires. Today, the estimate is about 80 million acres; some recent analysis suggest as high as 90 million acres.

### ***A Funding Gap That Is Forever Increasing***

As already stated, a primary culprit for this deterioration is the lack of forest management. And, this is due in part to the lack of adequate resources, caused by 25+ years of shifting funds *from* management actions *to* the fire suppression effort.

For example, about 65+ percent of the current Forest Service budget goes toward controlling fires. In 1995 this amount was about 16 percent. As more and more of the agency's resources continue to be shifted to the fire effort, fewer funds are available to support forest management work – the same restorative projects that reduce the fire threat. Clearly, a paradox has been created. As funds are shifted away from forest management work, fires have become larger and much more destructive because forests are not being maintained. The loss of funds for forest management over the last decades has not been restored to the Forest Service through the appropriation process. This gap equates to a *minimum* of about \$2.2 billion up to \$3.6 billion.<sup>46</sup> The specific *minimum* investment of just the Forest Service amount [+ \$2.2 billion] should be guided as follows:<sup>47,48</sup>

- +\$97 million for "federally assisted state programs [the Forest Stewardship Program] to address the "...strengthening the stewardship of private lands", as stated by USDA Secretary Perdue.

**ALERT:** Indications are, the new Administration's Infrastructure Bill that is under negotiations, may target +\$3.5 billion for the Forest Service. This is a 5-year Bill so we have to think more short-term and effectively link expenditures with the annual appropriations process. If asked, this is how I would distribute the funding:

1. +\$3.047 billion for hazardous fuels treatment. With the current program, this brings the overall level to about \$1.1 billion annually from 2021-2026. The needs are greater but this would be a significant start.
2. +\$33 million for biomass uses and marketing for low value wood; a game changer!
3. +\$70 million for securing defensible space in high priority WUI area.
4. +\$250 million for prescribed fire – a key feature of forest maintenance.
5. +\$100 million for the stewardship on nonfederal forests adjacent to high-risk NFS lands; could not be more critical.

<sup>46</sup> See [Appendix A.1](#). The +\$3.61 billion is based on documented needs. The +\$2.2 billion represents *minimal* requirements. The primary difference is due to resource requirements for hazardous fuels reduction.

<sup>47</sup> These estimates are for the Forest Service only. Additional amounts, if any, will need to also be determined for the DOI.

<sup>48</sup> After adjusting for LWCF [Land and Water Conservation Fund] and a restructure of the Forest Service budget, the 2021 budget appears to represent a net increase of about \$19 million; essentially a status quo budget.

- +\$600 million for hazardous fuels reduction [this brings the overall level for the Forest Service to \$1.05 billion]. Not the \$2.4 billion per year called for in some estimates but an important increase none-the-less over the completely inadequate \$445.3 million.<sup>49</sup>
- +\$26 million for fire science and technology development [including defensible space protection in the Wildland-Urban Interface].
- +\$45 million for the cooperative fire programs.
- +\$14 million for forest health protection [specifically, invasive species control].
- +\$1.385 billion for management actions on the National Forests.
- +\$33 million for biomass uses that include wood-based nanotechnology [cellulose nanomaterials], specifically addressing low value wood, such as hazardous fuel.

### ***Caution: A “Fire Fix” is Not a “Forest Fix”***

On March 23, 2018, H.R. 1625 [Consolidated Appropriations Act of 2018] was signed into law. This included the “Wildfire and Disaster Funding Adjustment” [Title I, Sec. 102], whereby additional funds for wildfire emergencies shall be authorized from 2020 – 2027, ranging from \$2.25 to \$2.95 billion. These emergency funds are intended to halt the momentum-killing process known as “fire borrowing”, whereby funding for other programs are siphoned away for the fire effort. The Act would also halt the ever-increasing percentage of the overall United States Forest Service budget going to wildfire control by freezing the “10-year average” for fire suppression – a figure used by the Forest Service for budget development purposes -- at the 2015 level. These are all very good things. Accordingly, the action commonly referred to as the “fire fix” has been accomplished. However, we need to fully understand that the *fire fix* is only the first step toward a *forest fix*. Allow for an explanation.

In 1995, expenditures in fire equated to about 16 percent of the total Forest Service budget. It is now about 60+ percent. Over this span, there was a tremendous decline in forest management [*maintenance*] work across the country. Everything – money, skills and emphasis -- was being shifted to the fire effort. The “fire fix” hopefully enables this shift to stop. Again, this is very good news.

However, it must be clear, the “fire fix” certainly does not backfill the huge gap that was created in lost non-fire skills and forest management actions foregone, as examples, especially during the last two decades. Accordingly, it is important that this notion be recognized and new momentum be immediately established for the next step. That is, to deploy a comprehensive forest maintenance strategy so wildfires will be smaller and less destructive. This forest maintenance strategy will require new the funding levels outlined above. The 2021 “Omnibus Spending Bill” does not include these additional funds. Unless these funds are provided for, the “fire fix” will have little to do with helping reduce the impacts of large, intense wildfires, perhaps especially for the 90 million acres of National Forests that are now considered to be at high-risk from destructive wildfires.

As one Member of Congress succinctly concluded, “...It [the “fire fix”] doesn’t solve the problem. Solving the problem is stopping the damn fires, not spending more money to put them out once they get started.” Fundamentally, increased fire management requires aggressive forest maintenance. Otherwise, we simply spend more and more money to control wildfires, with no end in sight.

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<sup>49</sup> The 2022 proposed budget includes an increase of \$476 million for hazardous fuels treatment. If enacted, this would bring the total funding level for hazardous fuels treatment for the Forest Service to about \$989 million or about 40 percent of needs.



## ***Lack of Forest Management That Halts Resilient Vegetative Mosaics***

At an August 16, 2018 Cabinet Meeting<sup>50</sup>, the former President of the United States [Trump] spoke about the need to improve the *maintenance* of the forests. The former Secretary for the Department of Interior [Zinke] stated that the current situation of uncontrollable wildfires is due to “gross mismanagement [of the forests] for decades.” Actually, what former Secretary Zinke said was not true. It is not *gross mismanagement*. It is little or no management. Nobody knows how to manage forests better than the Forest Service. But, “...you cannot do when you do not have.”<sup>51</sup>

In a November 19, 2018 opinion piece entitled “...Who or What Is Really Responsible for the Huge Forest Fires in California? [by Bruce Bialosky],” a quote from Chris French, now Acting Deputy Undersecretary for the Department of Agriculture, stated: “the primary cause of the intense forest fires is the forests are overstocked. There are more trees than 100 years ago.”<sup>52</sup>

Accounting for amounts of wood exports and imports, we essentially use each year about one-half of the wood that is produced from all our forestlands. That in itself has created a problem. Simply put, our forests are getting clogged up. Each year, about 317 billion board feet of new wood is produced from the forests and woodlands in the United States – 60 billion board feet from our National Forests.<sup>53</sup> The current harvest level from these National Forests, for example, is 3 billion board feet -- or about 5 percent of the annual growth. More biomass *can* and *should* be removed. Our forests – which are much more than just trees [for example the Chaparral Forests of Southern California] -- are getting stressed, they are dying, and are becoming a tinderbox for fire. And, once a fire gets a foothold, they become destructive behemoths that destroy everything in their paths. Productive ecosystems are being completely altered or destroyed. Simply put, more vegetation *can* and *should* be sustainably, economically, and safely removed from our forestlands.

But let’s be clear. This *Call to Action* is not just about biomass production and uses. In fact, available biomass – including biochar as an example -- is simply a “by-product” of a much more dynamic approach to maintaining America’s forests. That is, the focus of expanded forest maintenance shall be on wildlife habitat condition treatments across very large landscapes. The goal shall be to create and maintain a mosaic of seral vegetative stages that are highly resistant to catastrophic fires, as well. That is, well-planned, methodical steps in the process of enabling productive ecological succession across priority watersheds that are especially high risk to wildfires. The 10-year plan-of-work in the *Call to Action* will outline specific treatments that place wildlife habitat first and foremost across large geographic ecotypes and agency regional boundaries. Cooperation and collaborative approaches, with a wide-range of partnership, will be commonplace resulting in the eventual reduction of large, intense fires.<sup>54</sup>

### ***Forest Management: Pace and Scale***

Repeating, a dominant reason for the deterioration of America’s Forest and the incredible destruction caused by wildfires, is the lack of forest management. But whenever the term “forest management” surfaces, there are many that conclude, “that’s just a coverup for “*indiscriminate logging*.” And, as former Forest Service Chief Jack Ward Thomas said, “gladiators form and fights ensue.” To be clear, forest management focuses on

<sup>50</sup> See time 11:53 of the Cabinet meeting: <https://www.youtube.com/watch?v=mNddZ4cwzRU>

<sup>51</sup> Rains, Michael T. Forest Management and Fire Management: In Sync or at Odds [A “Short Paper”]. November 20, 2018.

<sup>52</sup> Comments made while serving as the Deputy Chief for the National Forest System, United States Forest Service.

<sup>53</sup> U.S. Forest Resource Facts and Historical Trends. USDA Forest Service, FS-1035. 2014:

[https://www.fia.fs.fed.us/library/brochures/docs/2012/ForestFacts\\_1952-2012\\_English.pdf](https://www.fia.fs.fed.us/library/brochures/docs/2012/ForestFacts_1952-2012_English.pdf)

<sup>54</sup> [LaMalfa Introduces RESTORE Act to Improve Forest Health, Mitigate Wildfire Risk | Congressman Doug LaMalfa \(house.gov\)](https://www.house.gov/legislation/record/115788). The proposed legislation would be a solid “...set of good tactics that would fit nicely into a more cohesive *Call to Action*.”

managing vegetation, restoring ecosystems, reducing hazards and maintaining forest health. Vegetation management<sup>55</sup> activities that will help improve habitat -- including timber harvesting, timely salvage, thinning, pruning and prescribed fire are fundamental to the management of trees, forests and forest ecosystems and wildlife habitat conditions. Over the last 30 years, timber harvest levels, for example, have declined by about 80 percent. Excessive regulations, disguised as important to an *environmental movement* have in fact contributed to a reduction in environmental health.

Most who are in the profession of caring for the land along a rural to urban gradient, consider themselves *environmentalists*. But, with a *conservation* bent. That is, to keep our forests healthy, sustainable and more resilient to disturbances. Maintenance, protection and use – stewardship – is key. Doing nothing means nothing ever changes. Thus, we find ourselves in this current mess.

Let there be no doubt, the health of America’s forests is declining. Wildfires are destroying lives and property, reducing air quality, altering critical wildlife habitat and killing millions of animals needlessly. Forests in declining health, the impacts of a changing climate, and the expanding Wildland-Urban Interface, has created a volatile mixture that has led to the current national crisis. Now, it is time to step forward with a concentrated effort and begin to address the 19-20 million acres annually of forests across our country that need some type of restorative action – about 8 million acres each year on the National Forests.

The goal of this restoration commitment is 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.<sup>56</sup>

### ***Reduction in Hazardous Fuels***

This large, fundamental task cannot be accomplished with such a meager level of funding. In the late 1990s, a General Accounting Office [GAO] report noted that “the most extensive and serious problem related to the health of forests in the interior West is the over-accumulation of vegetation, which has caused an increasing number of large, intense, uncontrollable, and catastrophically destructive wildfires.” When the *National Fire Plan* was written, it was thought that about \$850 million annually was the minimum required to more effectively address the issue of hazardous-fuels removal. More recently, a 2013 Congressional Research Service report suggests costs for a comprehensive hazardous fuels treatment program for the National Forests could exceed \$2 billion a year.

The point is, cost estimates to effectively address the removal of hazardous fuels range from about \$1 to \$2 billion dollars a year for just the Forest Service depending on the acres that can be treated. The current agency budget for this activity is about \$445 million. Thus, with only a fraction of required funds available, focusing work on the highest-priority areas is fundamental to success. But let’s be candid: no amount of focusing can offset this level of funding shortfall. Simply put: at the current investment level, the effort in reducing hazardous fuels is not making a difference that is even close to what is needed. A recent Farm Bill, authorized the collection of “excess KV funds,” termed K2, to be collected and used for varied needs throughout the geographic region in which collected. This created an opportunity by Forest Service to use such funding for desperately needed fuel reduction projects, specifically within the Wildland Urban Interface [WUI] where fire risks are great.

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<sup>55</sup> Vegetation management includes a wide-range of vegetation types and tree species. Perhaps a newer phrase in our communications needs to emerge. That is, instead of the lack of *forest management* we should say, lack of *vegetation management* or the lack of *forest maintenance*. Our forests are more than just trees!

<sup>56</sup> Initially, due to lack of capacity and funding and other constraints, a goal of about 5-7 million additional acres annually would be a very reasonable objective, especially if these acres are targeted to the highest priority “firesheds.” As capacity and funding increase, the pace and scale of forest maintenance will also increase.

## ***Biomass Uses***

Most people are aware that traditional timber harvesting, thinning, and timely salvage of dead and dying trees, as examples, represent biomass removed and then used; shorthand for *biomass uses*. Recently, biomass uses have turned to more innovative solutions that offer opportunities for high-volume, high-value markets for lower quality wood. For example, wood-based nanotechnology<sup>57</sup>, a biomass use example, offers a revolutionary technology to create new jobs and strengthen America’s forest-based economy through industrial development and expansion as well as providing means to enable forests to remain healthy and sustainable through accelerated restoration. Wood-based nanotechnology applications include packaging barrier coatings; printing paper coatings; structural composite panels for construction; flexible electronic displays; printed electronics; lightweight structural and non-structural panels and parts for aerospace; automotive applications; and, a host of industrial tools and consumer products.

Other examples include innovations in the development, application and technology transfer of cross laminated timber – CLT -- for use in nonresidential building construction. And, torrefied wood and biochar for energy. For example, torrefied wood and coal have similar heat producing capabilities and can generate electricity at about the same efficiency rate while torrefied wood emits significantly less particulate matter.

These science-based innovations are critical to forest restoration, thus healthy forests. The greater the level of hazardous fuels that can be economically removed, the more efficient the forest maintenance campaign becomes.

It is estimated that a strong, well-established program in cost-effective biomass uses could create high-value markets from low-value wood [i.e., hazardous fuels] that could reasonably help restore about 20 million forested-acres annually. About one-half of the nation’s 885 million acres of forestland currently requires some type of restorative action. This pace and scale of restoration could reduce future fire suppression costs in the range of 12-15 percent [some say as high as 23 percent]. In terms of what the 2020 fire suppression expenditures were, this represents a savings of about \$1 billion! These are funds that could be redirected for vegetation management uses, which will in turn help reduce the size and intensity of unwanted fires. Simply put, it makes good economic sense to aggressively invest in biomass uses to help achieve more resilient forests throughout the rural to urban land gradient. As stated earlier, funding in the range of \$33 million per year equates to a “strong, well-established program” in innovative biomass uses.<sup>58</sup>

## ***Be Fire Wise and Safe***

As the Wildland-Urban Interface [WUI] continues to expand across America, emphasizing the maintenance of vegetation and individual property care in the WUI will be a critical aspect of the *Call to Action*. This includes helping expand the number of Fire Safe Councils<sup>59</sup>, Fire Safe USA<sup>®60</sup> sites, and defensible space around homes. And, any other tactics that will enable the WUI to be more resilient to fire in order to save lives and property. We know that [“defensible space”](#) [also known as the “home ignition zone”] and preparing [“hardening”]<sup>61</sup> is critical for the protection of homes from wildfire. Yet, less than 2 percent of the 72,000 communities at risk have been formally designated as fire wise and safe. The *Call to Action* will help change this through activities that include, additional grants and funding; minimizing risks; improved insurability; application of K2 funding;

<sup>57</sup> [https://www.fpl.fs.fed.us/documnts/pdf2014/fpl\\_2014\\_rains001.pdf](https://www.fpl.fs.fed.us/documnts/pdf2014/fpl_2014_rains001.pdf)

<sup>58</sup> The 2021 Omnibus Spending Bill does not provide any increase in funding for Research and Development and specifically for biomass uses. Thus, in terms of funding and focus, nothing has changed.

<sup>59</sup> [Home | California Fire Safe Council | Learn More Today \(cafiresafecouncil.org\)](#)

<sup>60</sup> [NFPA - Firewise USA®](#)

<sup>61</sup> [Hardening Your Home - Ready for Wildfire](#)

and expanded partnerships with first responders. The short-term goal -- working with existing organizations -- is to provide additional funding to protect the highest priority areas, immediately. The long-term goal is to help enable at least one-half of all communities-at-risk to be designated *fire wise and safe*. This will require significant resources over a long period of time. See Appendix A.1.2, page 25, for additional details.

Once again we must ask a driving question. That is, where is Congress on this serious financial need? As well, where is for example, NACo [the National Association of Counties] on this matter? Why are so many silent regarding the need for adequate forest maintenance funding?

### ***Improved Aerial Fire Suppression Tactics***

In 2013, the U.S. Government Accountability Office, in their Wildland Fire Management report to Congress, recommended a nationwide, multi-year Aerial Firefighting Use and Effectiveness [AFUE] study. The study was chartered by the United States Forest Service to answer a pivotal question given the growing wildfire threat across America.<sup>62</sup> That is, "...What are the best mixes of aircraft to do the fire suppression job?" AFUE findings included:

- The majority of retardant drops were completed by large aircraft [Large Air Tankers (LATs), Very Large Air Tankers (VLATs), Multi-Engine Scoopers (MES), and Type 1 helicopters] in an effort to control large wildfires, including those that were allowed to burn [i.e., "managed fires"] across landscapes to remove fuels.
- Smaller aircraft [i.e., Single-Engine Scoopers (Fire Bosses), Type 2 and 3 helicopters, and retardant-dropping Single-Engine Air Tankers (SEATs)] were predominantly used to subdue small fires during Initial Attack.
- Based on the results of the AFUE study, and following the parallels of the 2012 Rand Institute Study on "Determination and Cost-Benefit Analysis of the Optimal Mix of Helicopters and Airtankers for the U.S. Forest Service"<sup>63</sup>, the Forest Service should be acknowledging that smaller, more agile "scooping" aerial firefighting assets such as single engine scoopers [i.e., Fire Bosses and others] can help fill the role to achieve goals and outcomes that are best suited for many fire prone western states.

Accordingly, in this *Call to Action*, another paradox has emerged. That is, since the concept of "managed fire" needs to be eliminated due to ramifications of much greater and destructive fires, the use of smaller aircraft to enable more cost-efficient and effective fire suppression needs to be expanded ["Top 10 Action" 2 and 3].

Here is what experience is telling us:

- Large airtankers certainly have a place in fire suppression efforts, but oftentimes they are not the most effective in helping achieve Goal No. 3 in the "Call to Action": "...Put out every fire immediately. Reduce response time by 80 percent!"
- Large airtankers are expensive and limited in number. There are just over 30 LATs or VLATs that can fight fires across the entire fire landscape in a given season.
- Due to these high costs, often times Incident Commanders are reticent to call for aerial assets and try to mitigate the fire risk without these assets, often with disastrous results.
- Smaller, more agile aircraft and helicopters are cost-efficient and effective.
- There are also significantly more of these smaller aircraft, with the number reaching to almost 100 retardant-dropping Single-Engine Air Tankers (SEATs) and 25 single engine scoopers [Fire Bosses]. This

<sup>62</sup> [AFUE FINAL REPORT.pdf](#)

<sup>63</sup> [Identifying a Cost-Effective Aviation Fleet for the U.S. Forest Service | RAND](#)

would allow for a simple and cost effective “network” of rapid response, Initial Attack assets to be positioned across much of the fire prone areas in a season.

- The firefighting agencies – federal, state and local – need to embrace a more agile, effective approach in aerial fire suppression tactics. Essentially, seek a better balance of aerial suppression tactics and a quick response force.
- A recent evaluation by this author suggests that up to 20 percent of the acres burned in 2020 [about 2 million acres] might have been avoided if a more agile, aerial approach to fire suppression would have been deployed throughout.
- A goal of 65 percent of all aerial wildfire firefighting tactics would probably be a more effective target for smaller aircraft usage.
- All the above should result in a greater reduction in exposure to Covid-19; less the need for fewer fire camps and fewer crews.

### *Improved Usage of Smokejumpers*

It should also be note that another critical feature of *Improved Aerial Fire Suppression Tactics* is the expanded use of Smokejumpers [“Top 10 Action” No. 7] in Initial Attack. In a recent article by Chuck Sheley<sup>64</sup>, a former Smokejumper, the following was a conclusion: “...reverse the trend and let smokejumpers be used as they were designed to be used in 1940 -- initial attack as soon as possible. USFS [United States Forest Service] smokejumper use in 2018 went down by over 300 fire jumps compared with the 10-year average.” In 2019, there were 604 *jumps*, down about 47 percent of the 10-year average of about 1,300. In 2020, and by all consensus a “horrible fire season,” *jumps* represented about 74 percent of the 10-year average [959 *jumps*]. A reduction of 26 percent from the 10-year average of fire jumps in one of the worst fire seasons on record, clearly needs to be discussed and evaluated.

It is our combined opinion that today’s Agency Administrators/Line Officers are not being adequately trained or informed of the valuable skills that Smokejumpers bring “to the table” for a quick reactionary force on fires at the point of Initial Attack.

With the wildfires America is facing, and assuming safety protocols are being met, there should be few to **NO** available smokejumpers on the *daily status report*. We must maximize the use of these iconic resources, if at all where possible.

Again, the optimal use of aerial suppression tactics, including a fuller utilization of the Smokejumper force must be discussed, analyzed and determined to reduced damages and costs and save lives from wildfires. It seems clear that currently an optimal level on both tactics is not being attained.

### **A Call to Action**

Conservation leaders are concluding that in order to “create healthy, sustainable forests that are more resilient to disturbances -- so the linkage between environmental health and community stability can be more fully realized” -- a *Call to Action* is required. That is, a well-coordinated partnership that bands together, shares resources and avoids duplication will ensure a successful campaign that improves our forests and the economy and protects lives and property.

This *Call to Action* will include a:

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<sup>64</sup> [Smokejumpers.com](https://www.smokejumpers.com) - National Smokejumper Association

1. **National Commitment.** This shall include a formal declaration of an unprecedented national federal, state and local commitment to aggressively care for America’s forests along the complex rural to urban land gradient, so the destructive nature of large, high intensity wildfires will be reduced. The national commitment must address the current lack of resources that have dictated a lack of *forest maintenance*, resulting in the landscape scale destruction from wildfires that we are seeing every year. This cannot be overstated. Estimates suggest this amount is more than \$2 billion annually for just the Forest Service; some suggest as high as about \$5 billion. The total investment level for all involved shall be determined and budgeted. Leading the way for this national commitment will be a clear and powerful “Statement of Intent” to be issued jointly by the Secretaries of the Departments of Agriculture [USDA] and Interior [DOI]. Success of this national commitment will be enhanced by local and regional coalitions seeking to resolve common problems.
  
2. **Statement of Intent.** An example “Statement of Intent” is as follows:
 

“The lack of forest management across the country has greatly contributed to the current wildfire situation and the associated horrific impacts on people’s lives and their communities. This is going to change. Immediately, we [USDA and DOI Secretaries] will be meeting with the new Administration leaders and Congress to gain adequate funding for the *Toward Shared Stewardship Across Landscapes: An Outcome-Based Investment Strategy*<sup>65</sup> and other corporately-used guides.

This will be the beginning of a long-term campaign to ensure our landscapes become healthy, sustainable and more resilient to disturbances. We will be counting on the aggressive, promotional leadership of everyone to ensure our direct and indirect roles in the stewardship of America’s forests is achieved, now and ahead. The Forest Service Chief and the Director of the Bureau of Land Management will be relentless in leading the way.”
  
3. **Vision.** The vision of the national commitment will be guided by the following: “To ensure America’s forests are healthy, sustainable and more resilient to disturbances in order to protect people, landscapes and communities from the destruction of large, high intensity wildfires.”
  
4. **Strategy.** *Toward Shared Stewardship Across Landscapes: An Outcome-Based Investment Strategy* shall be a guiding strategy for the Forest Service.<sup>66</sup> This will be augmented by the 2014 *National Cohesive Wildland Fire Management Strategy*.<sup>67</sup> The strategy shall include specific levels of vegetative management to improve ecosystem health through actions such as hazardous fuel treatment, timely timber salvage, thinning, pruning, prescribed fire and reforestation. A focus shall be to create and maintain a mosaic of seral vegetative stages that are highly resistant to catastrophic fires and provide for quality wildlife habitat conditions. Quantifying associated outputs and expected outcomes with specific investment levels targeted to specific geographic areas [i.e., high priority watershed and landscapes] that are at high risk to wildfire.
  
5. **10-year Plan of Work.** A comprehensive 10-year Plan of Work shall be developed to deploy the *Call to Action*. This Plan of Work will include monitoring and the annual evaluation of progress and outcomes, with adjustments as needed. The Plan of Work will need to include detailed tactics, including additional investment strategies to increase the pace and scale of forest restoration; optimal fire suppression methods; agency workforce requirements; outlining of specific roles; identification and deployment of improved organizational processes; comprehensive reform management; and the delineation of specific outcomes. These annual outcomes shall include, but not be limited to, the amounts of prescribed burning; targeted

<sup>65</sup> <https://www.fs.fed.us/sites/default/files/toward-shared-stewardship.pdf>

<sup>66</sup> <https://www.fs.fed.us/sites/default/files/toward-shared-stewardship.pdf>

<sup>67</sup> <https://www.forestsandrangelands.gov/strategy/thestrategy.shtml>

hazardous fuels reduction; increasing the production of traditional and innovative new forest products; the creation of varied wildlife habitat conditions; and reducing the backlog in critically needed reforestation.

The recent “Increasing Workforce Capacity” report<sup>68</sup> developed by the National Association of Forest Service Retirees [NAFSR], as an example, provides a strong foundation for many elements of an effective 10-year Plan of Work for the *Call to Action*. The decline of non-fire skills sets within the Forest Service over the last 30 years cannot be overstated.

NAFSR has also produced a position paper entitled “America’s Forest Management Crisis – A National Catastrophe.” The details in this “Call to Action” help augment NAFSR’s position paper.<sup>69</sup>

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<sup>68</sup> <https://www.nafsr.org/advocacy/2019/072619%20Workforce%20Capacity%20Study.pdf>

<sup>69</sup> <https://www.nafsr.org/advocacy/2021/042921%20Cover%20Letter%20to%20Congress%20on%20America's%20Forest%20Management%20Crisis.pdf>

### Appendix A.1.1. Additional Cost Estimates to Address COVID-19, Effective Fires Suppression Tactics and Forest Maintenance.<sup>70,71,72</sup>

Category	Amount
<b>COVID-19:</b>	\$ in millions
Supplies and Equipment [Protection and Care]	\$128.0
Planning and Response [On Incidents and Within the Community]	34.5
Infection Control [Identification and Mitigation]	88.6
Cost Recovery of Businesses Associated with Fire]	108.3
Behavior and Health Response [First Responders and Citizenry]	34.5
Medical Team [s] Assistance [Newly Established IC Teams]	44.3
Medical Assistance [Direct Assistance]	24.6
Medical Assistance [Insurance and Added Hospital Facilities]	19.7
Community Outreach [Technical Assistance to Ensure Safety]	9.8
<b>COVID-19, Subtotal</b>	<b>492.4</b>
<b>Wildland Fire Suppression:</b>	
Expanded Contracts for Shorter Response Times	579.6
Personnel [Additional to Keep Fires Small]	326.0
Personnel [Replacements Due to Sickness]	157.0
Community Assistance to Ensure and Deploy Defensible Space	69.5
Community Assistance For Structure Preparedness	320.0
<b>Fire Suppression, Subtotal</b>	<b>1,452.2</b>
<b>Fire Suppression Plus COVID-19</b>	<b>1,944.6</b>
<b>Forest Maintenance:</b>	
Hazardous Fuels Reduction [HFR], Subtotal	1,855.0
<b>Fire Suppression, COVID-19 and HFR, Subtotal</b>	<b>3,799.6</b>
Delayed Maintenance of Forestlands	1,755.0
<b>Total Estimated Costs</b>	<b>\$5,554.6</b>

<sup>70</sup> Additional costs ranged between +\$130 up to +\$250 per acres burned in 2020 [projections estimate 2021 will be the same or higher]. This includes new suppression tactics ["preparedness closer to the incident"]; new skill sets in and around incidents; equipment; medical assistance; backup personnel due to sickness; etc.]. The projection for 2020 is in the range of about 7.1 to 10.2 million acres burned [the actual count was 10.4 million acres]. Costs are expected to exponentially increase above 8.8 million acres. The estimates, additional annual costs, also include additional resources for hazardous fuels reduction and delayed maintenance of forestlands based on questions presented in the Senator Wyden-led letter to the Forest Service Chief on April 30, 2020.

<sup>71</sup> The USDA Forest Service budget for 2021 is status quo. The additional needs for 2021 that are illustrated in Appendix A.1.1 remain basically the same. The 2022 proposed budget includes \$1.7 billion for high-priority hazardous fuels and forest resilience projects, an increase of \$476 million over the 2021 enacted level.

<sup>72</sup> [HHRG-117-AP06-Wstate-ChristiansenV-20210415.pdf \(house.gov\)](https://www.house.gov/committees/hhr/HHRG-117-AP06-Wstate-ChristiansenV-20210415.pdf)



## Appendix A.1.2. Cost Estimates to Address Defensible Space and Home Hardening Requirements<sup>73</sup>

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### Assumptions:

#### 1. Defensible Space [DS]:

- a. 1 community averages 600 homes and 50 percent of these homes need DS work: thus 300 homes per community at an average cost of \$1,750 per home:
  - 1 crew = 4 homes per month.
  - 1 month = 20 days; 1 day = 7 hours; 1 month = 140 hours of work per month.
  - 140 hours x \$50/hour = \$7,000.
  - $\$7,000 \div 4 = \$1,750$  per home for DS work.
  - 1 community = \$525,000 [ $\$1,750 * 300$  homes] for DS work.

#### 2. Home Hardening [HH]:

- a. \$8,000 per home.
- b. 1 community averages 600 homes and the goal will be to Hardened [HH] 50 percent of the homes in each community served.
- c. 1 community will cost \$2.4 million [ $(\$8,000 * 600) * 0.50$ ] to HH.

#### 3. Total Communities:

- a. There are 72,000 communities at high risk to wildfire across the country. Only 2 percent have been designated as “fire wise and safe.” Thus, 70,560 communities need DS and HH.
- b. **Goal:** treat one-half of the total communities at risk to wildfire *and* in need of DS and HH work: 35,280 communities.
- c. Time period to accomplish work: 20 years [or, 1,764 communities treated annually].

#### 4. Cost-share Requirement: 75 percent federal share/25 percent non-federal share.

#### 5. Calculations:

- a. **DS:**  $\$525,000 * 1,764$  [communities] = \$926.1 million \* 0.75 ~ \$694.6 million each year.
- b. **HH:**  $\$2.4$  million \* 1,764 [communities] = \$4.2 billion \* 0.75 ~ 3.2 billion each year.
- c. **Total Annual Federal Costs:** ~ \$3.85 billion.
- d. **Revised Amount in the “Call to Action” for DS and HH [Appendix A.1]:** 10 percent of estimated costs to help comply with overall budget constraints: DS [\$69.5 million]; H [\$320 million] for a total of \$389.5 million for the first 5-7 years. As fire suppression costs decline, funds for DS and HH can increase.

#### 6. Definitions:

- a. **Defensible Space.** Defensible space is the buffer between a building on your property and the grass, trees, shrubs, or any wildland area that surround it. This space is needed to slow or stop the spread of wildfire, helping protect your home from catching fire -- either from direct flame contact or radiant heat. Defensible space is also important for the protection of the firefighters defending your home.<sup>74</sup>
- b. **Home Hardening.** Preparing your home to provide maximum wildfire protection with appropriate building materials and related design features. To provide maximum protection, home hardening must be used in combination with adequate defensible space.<sup>75</sup>

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<sup>73</sup> Prepared by Michael T. Rains on February 23, 2021 [revised].

<sup>74</sup> [Defensible Space - Ready for Wildfire](#)

<sup>75</sup> [Hardening Your Home - FIRESafe MARIN](#)

## Appendix B. The Use of “Managed Fire” [Dialogue]

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### The Use of “Managed Fire”

#### 1. Has “Managed Fire” been used in the past?

Ray Haupt, [haupt@sisqtel.net](mailto:haupt@sisqtel.net), 5/22/2021

Prior to 2010, the year I retired managed fires **were only allowed in Wilderness** (emphasis added), the ignition must be from lightning and had to be recorded under a G Code. OMB reprogrammed Suppression dollars, P-Code for this purpose at the beginning of the fiscal year. Resource benefits recorded in FACTS database was prohibited. In these days the process was highly regulated. It required a LMP that allowed it, an approved Fire Management Plan outlining the parameters, a documentation process that looked at short/long term fire behavior, a checklist of signatures documenting ignition and compliance with all the above, a trained DR with fire quals including Wilderness policy and advanced fire behavior and the courses leading to this level, an equally trained District Fire Management Officer who is also a current ICT 3 who trained with the DR at Marana in Advanced Fire Applications and the same training and qualifications for the Forest FMO. I know this well as I was the only line officer in R5 to qualify in those years and wrote R5's handbook Fire/Wilderness policy implementation in 2007. The whole thing was turned on its head shortly after 2010. I believe due to limited line requisite qualifications as the agency got dummed down.

#### 2. Managed Fire in 2012 expressed concerns over use of managed fire:

Email from Bill Derr[[billlecfm@me.com](mailto:billlecfm@me.com)] June 3, 2012 to Jim Hubbard

Hi Jim:

It seems that the field has failed to heed the policy direction that you so well-articulated to retirees on numerous occasions in the past two years that: "All wildfires on or threatening NFS lands, regardless of cause or location, would receive full suppression during fire season". The R-3 fire now at 190,262 acres, which was caused by lightning on May 9th and allowed to burn by the Forest Service, is one of many recent examples of cases where the direction you so well expressed in not being followed by the field.

Can you enlighten me on any changes since we last spoke which may have altered the policy direction you indicated to retirees that you intended to convey to all field personnel?

What efforts are planned to assess definitively the forest ecosystem benefits referred to in the Gila National Forest News Release of May 17th (following email) on the Whitewater/Baldy Complex?

There is a growing concern among retirees about the unintended consequences and damage to valuable natural resources and private property resulting from the escape of let burn fires managed by the Forest Service to achieve ecosystem benefits.

There is the potential for civil & even criminal liability exposure to the Forest Service and its officials when decisions allow wildfires that could have been easily suppressed in their incipient stages to escape causing unacceptable natural resource damage and damage to private property and threaten and/or take the lives of persons.

It would be unfortunate if retirees, who are wildland fire experts, were asked to investigate the aforementioned

incidents and subsequently testify as expert witnesses for plaintiffs who had brought legal action against the Forest Service for recovery of damages alleged to have been the result of negligent acts by Forest Service officials. We would not welcome this role, but, in good conscience, we would have no choice.

I strongly recommend that the Forest Service:

1 ) "Stand Down" from the current practice of allowing selected fires to burn to accomplish management objectives.

2) Adhere to the policy direction you have previously stated to "immediately suppress all wildfires regardless of cause or location during fire season".

3) Appoint an independent group of wildland fire suppression experts to conduct an objective and comprehensive review of the Whitewater/Baldy Complex

Fire and other recent fires where the Forest Service has allowed them to burn in lieu of immediate full suppression. The review should address:

1) The soundness of Forest Service policy to not take immediate full suppression actions on the subject fires and an assessment of damages to natural resources and property resulting therefrom,

2) The decision process and identification of Forest Service officials involved in making the subject decisions including their wildland fire suppression qualifications, and

3) A reassessment of Risk Management criteria which appears to be impeding responsible initial attack fire suppression actions, thereby, increasing overall risks to firefighters by placing more firefighters on more acres over longer periods of time.

4) Charter a study group of wildland fire experts (including retirees) to assess current and past wildland fire control and management practices and make specific recommendations to ensure that the National Forest System's valuable natural resources are: "Properly protected, consistent with the Organic and Multiple Use Acts, to ensure that the American people continue to benefit from the valuable goods and services that the National Forests provide in perpetuity".

The Forest Service and its leaders have the opportunity to exercise bold leadership at this time by addressing this issue in an objective and forthright manner. Failure to do so will, in my opinion, not bode well for the Forest Service in the long run.

In closing, I must inform you that in my opinion, it is only a matter of time before States, County's, and private parties damaged by Forest Service decisions to allow some fires to burn by not taking immediate full suppression action will bring legal action against the Forest Service requesting a Restraining Order to halt the Forest Service policy and practice of allowing some fires to burn in lieu of full and immediate suppression. Further, the concerns expressed herein, absent a definitive response from the Forest Service, will be shared with the Press, Congress, State politicians, and other parties of interest by like-minded individuals who have grave concerns regarding the protection and management of the National Forests today.

I look forward to your response. Retirees would be happy to discuss further our concerns.

Best Regards, Bill

**Response from Jim Hubbard****From:** "Hubbard, James E -FS" <[jehubbard@fs.fed.us](mailto:jehubbard@fs.fed.us)>**Subject: Re: Whitewater/Baldy Complex****Date:** June 3, 2012 at 8:02:45 AM PDT**To:** "[billlecfm@me.com](mailto:billlecfm@me.com)" <[billlecfm@me.com](mailto:billlecfm@me.com)>

I've been out all week Bill, but read your email and sent on to Tom Harbour. We have been to the RLTs this spring emphasizing aggressive IA and elevating multiple objective strategy decisions to the RFs. More work to do and I'll take a closer look next week.

**3. Managed Fire in 2016 expressed concerns over use of managed fire:**

Email from Bill Derr [[billlecfm@me.com](mailto:billlecfm@me.com)] 4/12/2016 to Jim Hubbard

Hi Jim: The forthrightness & candor in your discussions with retirees on F&AM & related issues is much appreciated. In that regard, I believe we have an obligation to respond in kind on the issue of using fire suppression funds to perform work on wildfires wherein the USFS is allowing them to burn to reduce fuel loads & benefit the resource.

Whatever term &/or how it is defined to describe this activity & how it may be referenced in Forest Plans may not be sufficient to provide authority to spend said funds without violating Federal laws governing the use of appropriated funds. It appears, based on the Chief's April 5, 2016 Letter of Intent, "expand the use of fire", that the USFS may be planning to increase "the use of fire" as a method of reducing fuel loads & to provide other beneficial outcomes associated with forest management. The risks (escapes & exposure to criminal & civil liability) & environmental restrictions associated with prescribed fire have curtailed this activity sufficiently to cause the USFS to explore other methods of accomplishing prescribed fire objectives. I am concerned that those persons or groups who may object to any aspect of the Chief's intent to, "expand the use of fire", may elect to voice their concerns to Congress, OMB, OIG, OSC, & the Press. Besides a general objection, I would expect that they would allege that the USFS was guilty of misappropriation of funds.

As to a general objection, that could cover many aspects of, "expanding the use of fire", such as:

- (1) Smoke pollution & associated health & economic impacts.
- (2) Unacceptable resource damage, including damage to wildlife & their habitat.
- (3) Unnecessary risk to firefighters, especially when fires escape.
- (4) Lack of pre-planning & pre-approved burn plans.
- (5) Decisions to allow wildfires to burn made by persons without the necessary KSA's to be qualified to do so.
- (6) Potential for loss of life & damage to private property creating exposure to criminal & civil liability.
- (7) The depletion of firefighting resources engaged in managing "the use of fire" from availability to respond to emerging wildfires which require immediate

containment.

As you know I share many of the above concerns. Establishing direction in the form of guidelines & standards to implement a program for "the use of fire" is very complex & fraught with a host of variables, many of which are unpredictable by nature. Further, the consistency of application is equally variable given the different KSA levels of the decision-makers involved.

The "Window of Opportunity" during fire season when the full criteria of guidelines & standards were met would be slim indeed, notwithstanding the issue of appropriation integrity. Further, engaging in "expanding the use of fire" would put the USFS on a dangerously slippery slope.

To some degree, masking the "the use of fire" in terminology & Forest Plans could look like a shell game & would compound sanctions leveled at the USFS &/or it's officials should appropriation integrity become an issue.

The greatest danger to the USFS would be a public accusation of misappropriation of funds which could tarnish the USFS reputation & severely inhibit Congress's inclination to properly fund the USFS in subsequent years.

Just a few thoughts to follow-up on the related question I raised in our meeting today. No doubt, the USFS has considered much of the above, however, perhaps a careful second look could be a wise investment.

Best Regards, Bill

#### **Response from Jim Hubbard**

**From:** "Hubbard, James E -FS" <[jehubbard@fs.fed.us](mailto:jehubbard@fs.fed.us)>

**Subject: Re: NAFSR Fire Committee Meeting 4/12/16**

**Date:** April 13, 2016 at 4:47:31 AM PDT

**To:** william derr <[billlecfd@gmail.com](mailto:billlecfd@gmail.com)>

All good points Bill. Thank you for the thinking.

#### **4. Managed Fire in 2021 expressed concerns over use:**

Email from Frank Carroll] [fcarrolls1@msn.com](mailto:fcarrolls1@msn.com) 7/13/2021 on OP-ED by Gabbert

Responding to commenters on Wildfire Today's Bill Gabbert's Op-Ed on putting fires out quick. July 13, 2021.

The issue for me is that large fire teams are using offensive backfiring to extremes in the name of "risk management." The history of large fires around Globe, AZ in Gila and other counties is a case in point. If we start late in the chain of large managed fires with the 2017 Pinal Fire, the FS was completely clear that the objective for the fire was to allow the area to burn to "reintroduce fire to fire-depleted ecosystems." The 4000-acre fire burned for three weeks and did significant damage to riparian areas and woodland communities. In April 2018 Forest officers met with the Gila County Cattle Growers Association to inform them (not ask their opinion) that the FS intended to "burn every acre of public land" in the county over the next several years as opportunities arose. The Woodbury fire in 2019 was an extension of that declared intent. But the Bush fire in 2020 along with Salt and Griffin and others really showed FS intent. Those fires were nursed and lit on purpose to cover hundreds of square miles to meet some aspirational objective of land and resource management. The practice of aggressive and offensive burning continued unabated to the present day, most recently when the FS used two fires started by military aircraft, the Telegraph, and Mescal, to burn off East Mountain and Six-

Shooter Canyon among other pristine places in a massive burn that should have been put out southwest of Miami. It's not just managed fires being allowed to drift around and burn where they will; it's also backfiring big fires to make them bigger on purpose.

Thanks, Bart. Yes, we do. We have the annual Chief's letter describing "restoration wildfire" objectives for each year. We have the FSM and handbooks. We have the detailed National Fire Plan. We have regional and local unit documents and correspondence that detail how the policies will be implemented. We have done and are doing extensive analyses of every iteration of every WFDSS, every Letter of Intent, every Delegation of Authority, and documents, letters, and observations of affected people, and communications between and among people actively engaged on these fires. We have one blow-by-blow account by a senior air attack supervisor over the fires who gave us aircraft use and impact reports detailing how air tankers were used for point protection and herding fires away from communities but pulled and grounded when the fires began to die or interfere with backfiring plans. We have interviewed leading ops people and line officers, often on a daily basis, across the spectrum (who you know very well and began fire careers in the early 70s just as I did in Arizona). We have meeting notes and handouts from permittees, local government officials, and elected reps. We have the direct observations of wildlife conservation groups and their officers, state officials, and others with intimate knowledge of the difference between declared intent and outcomes. We have forest plan standards and guidelines, records of what plans call for versus what is actually happening, and the legal and regulatory framework against which the current fire policy must be judged. We have prepared an extensive document detailing the conduct of these fires, including the recent cynical renaming of "managed fires" to "defensive fires" which differ from each other in no material way. We will present this information to almost 50 interested and affected groups and organizations in Phoenix on July 27 preparatory for a major lawsuit designed to enjoin the FS from continuing the "managed fire" program absent required legal planning and records of decision. To understand that part, remember that the fire-retardant program had to pass the

NEPA NFMA test for the same reasons "managed Fire" does; They are premeditated and preplanned major federal actions, and the cumulative effects must be disclosed in advance. We are joined in the suit by forest users across the spectrum of organizations and elected officials. You are correct that the FS does not want to intentionally burn the Sonoran Desert, and yet their backfiring on the Bush Fire alone destroyed tens of thousands of saguaros and thousands of protected Arizona cypress trees, not to mention thousands of acres of critical habitat for flycatchers and other wildlife. When you fall back to the next best lakeshore or state highway, you're not able to cleave to your stated intent to protect things that need protecting. Our intent is to help the FS and the fire program managers get back in line with law, regulation, and policy as quickly as they can. By "our" I mean a dedicated group of former ICs, line officers to the Chief's level, deputy chiefs, associate chiefs, fire program managers, district rangers, forest supervisors, wildlife conservation groups, grazing associations, the list goes on. Stay tuned.

## **5. "Monitoring Fires" another term for Managed Fires?**

Dave Nelson, [dknelson@comcast.net](mailto:dknelson@comcast.net), 08/01/2020

I am not judging the validity of the monitoring of the 17 monitored fires as I do not know their location or the specific conditions. I do agree with Mike and Stub about the analysis that "managing wildfire for resource benefits" has its place. However, some questions, observations of past practices, planning, lack of specific established satisfactory results, cost analysis of the program (total, not just fire by fire, etc. are:

1. First, how are 17 fires being allowed to burn with no suppression action considering the Chief's "put the fire out" at least for the 2020 fire season?
2. And as to some of Bill's concerns:

- a. How does this meet current appropriation limits on EFF (may be called something else now)? Has new legislation or appropriation guidelines been approved by Congress?
  - b. What about environmental analysis other than a blanket approach in the Forest Plan? Or how is the analysis done in the Plan? By large contiguous units or smaller sub-units such as were established in the 1980-90 planning process?
  - c. What criteria have been established to determine whether or not to allow the burning to continue such as time of year, preparedness level, fire danger rating, other fire activity, resource availability, public vulnerability, etc.?
  - d. What criteria are used to determine when and how the fire is allowed to continue or suppression to begin? I have witnessed several fires that were less than an acre, in the rocks, and determined to not be going anywhere that didn't follow the script and burned out of the wilderness or Park and destroyed private property.
  - e. What analysis goes into the risk of requiring suppression resources when they are needed for new starts and fires that do threaten the WUI or other areas requiring the fire to be suppressed?
  - f. What is the level and completeness of any "After Action Analysis (AAA)" is done on "managed wildfires" or any fire escaping IA and extended attack?
  - g. Does the AAA analyze the costs vs. benefits, the impact of suppression resource diversion, the impact on the public, etc.?
  - h. Does the AAA adequately analyze the end vs. anticipated results?
  - i. Is there a requirement to develop an annual report for the "managed fire" program documenting the overall results of the program?
  - j. Are or will these AAA's include any non-Agency evaluators?
  - k. Are these AAA's and annual reports readily available to the public?
3. And what about limiting the size of a managed wildfire so that when it does get into the wrong area and/or increases the intensity and spread you actually have the necessary suppression resources to do something about it?
  4. And why, if using wildfire for managing resource benefits is such a good deal do you have to wait for a lightning bolt to start it? Wouldn't it make more sense to just go out there and manage it like an Rx burn depending on the randomness of lightning?

This is not intended to be a comprehensive list and I am sure it can be easily expanded. It is just a number of items that come to mind easily that I think should be a part of a "managed wildfire" program. As well as for an Rx Burn program. Why should they be any different? As always the old adage of "playing with fire" does not usually reference the good that can occur.

David K. Nelson

## 6. “Let fire play it’s natural role on the landscape” terminology means let it burn in managed fire concepts:

Ted Stubblefield, [highdesertstub@gmail.com](mailto:highdesertstub@gmail.com), 06/13/2021

**Subject:** Re: | Gila NF: Johnson Fire Update for June 13, 2021 NM Fire Info. Ah ha, a new term for "managed fire:" *let fire play it's natural role on the landscape*. They just forgot to mention the additional millions of dollars their playing around will cost the public.

Costs really don't seem to matter any more; spend it like you got it is their new motto.

I mean this very seriously. The ones directing this kind of "management of fires" (and I include ICs) have forgotten WHO THEY WORK FOR, and it sure as hell isn't the agency!

Dave Nelson, [dknelson@comcast.net](mailto:dknelson@comcast.net), 06/15/2021 response to Ted Stubblefield note above.

Stub – not that it changes anything, but they have referred to these “let burn (my term)” fires as “*let fire play it's natural role on the landscape*” from the beginning back in the early 1970s as I remember.

This fire was started by lightning at noon on May 20. Wonder what the Initial Attack amounted to? My guess is that they evaluated and decided to “let it burn” with a contain/confine strategy. By 5/21 it was 250 acres w/ 1 Hotshot Crew, 1 Ten-person hand crew (HC). 1 T3 Engine, 1 T1 Helicopter, and a 10 Person Fire Use Module on order.

By 5/24 it was 6,093 acres with 1 Hotshot crew, 1 ten-person crew, a 10-person Fire Use Module, and 1 T3 Helicopter.

A week later on 6/1 it was 34,944 acres with 2 Hotshot crews, 1 Ten person HC, 3 Ten-person Fire Use Modules, 3 T3 engines, 2 T6 engines, 1 WT, and 2 T3 Helicopters.

On 6/14 it was 65,289 acres with 11% of the perimeter lined and 3 Hotshot crews, a 12 person HC, 1 10-person Fire Use Module, a 20 person HC, a 20 person IA Crew, 5 T6 engines, 4 water tenders, 2 T3 Helicopters, and a T2 Helicopter.

They say their strategy is confine/control, but sounds to me more like “let burn/managed fire” to me. The confine/control strategy is more a strategy dictated by the fire as opposed to just letting the fire take its course. However, if a fire is to be “managed to benefit resources” what they are doing here is how I would suggest doing it. But it again raises the questions of in declared fire season, having an EA or EIS, setting limits, using FF dollars, setting objectives and evaluating how well they are met, etc.

Didn't know there were so many different hand crews – hotshots, 10-, 12 - and 20-person hand crews, fire use modules, 20 person IA Crew. Looks to me like maybe the ICS terminology has slipped somewhat. Nice gig when you can spend over 3 million which wouldn't be budgeted in a millennium.



## 7. **Current fires of concern:**

Ron Raley, [ronraley@comcast.net](mailto:ronraley@comcast.net) 07/18/2021

- **Lava Fire** - The initial attack resources left the fire after the first operational period violating a long-standing principle “Never leave a fire until 24 hours after the last observable smoke” On the second day it ran and threatened the communities of Lake Shastina, Weed and Mt Shasta. People are very upset because it was until day three that they began a robust fire suppression effort.
- **Beckworth Complex** – Once again, as has been reported, the original Sugar fire was contained then allowed to escape days later due to neglect. The community of Doyle suffered a large number of homes and businesses lost
- **Tamarack Fire** - The Tamarack fire was ignited by a lightning fire on July 4th. It was being “monitored” until July 16th when it blew up and threatened the community of Markleeville and others.

## Appendix C. Congressional Inquiry, Tamarack Fire, CA [McClintock (CA-4-R)] [Official Letter]

TOM McCLINTOCK  
4TH DISTRICT, CALIFORNIA

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Congress of the United States  
House of Representatives  
Washington, DC 20515-0504

July 19, 2021

COMMITTEE ON THE JUDICIARY

SUBCOMMITTEE ON  
IMMIGRATION AND CITIZENSHIP  
RANKING MEMBER

SUBCOMMITTEE ON  
CONSTITUTION, CIVIL LIBERTIES,  
AND CIVIL RIGHTS

COMMITTEE ON NATURAL RESOURCES

SUBCOMMITTEE ON  
WATER, OCEANS, AND WILDLIFE

SUBCOMMITTEE ON  
NATIONAL PARKS, FORESTS, AND PUBLIC LANDS

COMMITTEE ON THE BUDGET

Ms. Vicki Christiansen  
Chief  
U.S. Forest Service  
1400 Independence Avenue, SW  
Washington, DC 20250

Dear Chief Christiansen,

I am writing to request information about the Tamarack Fire on the Humboldt-Toiyabe National Forest. Reports indicate that this fire was put in monitor status by the U.S. Forest Service (USFS) upon discovery on July 4, 2021 and had no suppression action until sometime after July 10, 2021. This fire has now burned over 23,000 acres with no reported containment, threatening nearby communities and forcing evacuations.

I ask that you provide answers to the following questions:

1. When was the decision made to monitor this fire instead of immediately acting to suppress it?
2. Why was this decision made?
3. Who made this decision and which USFS officials were consulted and informed?
4. What legal authority authorized the USFS to allow this wildfire to burn in lieu of immediate full suppression?
5. Were air and ground firefighting resources available to provide initial and extended attack on this fire?
6. What role did the District Ranger, District Fire Management Officer, Forest Supervisor, and Forest Fire Management Officer have in the decision process to monitor this fire in lieu of full suppression?
7. When did the first fire suppression actions commence?
8. Where and with what firefighting resources, by day, were fire suppression actions taken from first attack to the time when the fire escaped and became a major wildfire? Please indicate what specific fire suppression actions were taken, by type, on each day.

Additionally, please provide the following documents:

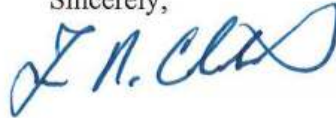
1. Incident Status Summaries (ICS-209's) from July 4, 2021 to the date the fire escaped and became a major wildfire.

2. Fire Decision Support Documents (WFDSS) from the start of the fire to the present.
3. Letters of delegation and leader's intent in force at ignition to the present.
4. Incident Action Plans (IAP's) from ignition to the present.
5. Fire progression maps from ignition to the present.
6. The Environmental Impact Statement and Record of Decision related to allowing the fire to be monitored and not suppressed, including references in the Forest Plan.

Please do your best to answer these questions and provide the requested documents within 30 days.

Given the number of wildfires and their increasing size coupled with severe fire danger conditions throughout the West, I recommend that you immediately reevaluate current U.S. Forest Service direction that allows wildfires to burn and instruct all Regional Foresters that all wildfires be suppressed as soon as possible.

Sincerely,



Tom McClintock

CC: Randy Moore, U.S. Forest Service

## Appendix D. Underutilization of Smokejumpers and Use of Smaller Aircraft and Related Issues [Dialogue]

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### Underutilization of smokejumpers, use of smaller aircraft and related issues

Murry Taylor, [murrytay@sisqtel.net](mailto:murrytay@sisqtel.net), June 20, 2021, Suggestion for immediate action on the underutilization issue.

Murry Taylor here. I'm responding to Ted Stubblefield's comment, the No, 2 issue: "Line officers throughout the region where smokejumpers are used, must have immediate training (use Zoom for God's sake) on the appropriate uses for smokejumpers. They don't know!! What they don't know, they don't use or worry about."

This goes to the heart of why jumpers aren't used more nowadays. On the "Co-operators" teleconference two weeks ago here on the Klamath, when I spoke of how jumpers only made 4 fire jumps last year--in one of the worst seasons ever, a fellow responded from North Ops down in Redding. He's Anthony Masovero (Op's guy for the FS) and he came right out and said that one of his biggest tasks was "trying to inform the users (read the National Forests) about the capabilities of smokejumpers. So, yes, informing these "users" is critical. Also, some words from the Region pushing for expanded and effective use could do a whole lot of good. As Dave Nelson pointed out before, this has been a prob. for a long time. Time for strong leadership to step up, get out the message then follow up to make sure the change is taking place.

As I said, good point, Ted. All the best, Murry

Dave Nelson, [dknelson@comcast.net](mailto:dknelson@comcast.net), April 4, 2021, on the history of underutilization.

1. Smokejumpers have been underutilized in California almost from the first day they were a unit. I agree with you that there may be good reasons for that, but it is not that simple,

The best example that I personally experienced was in 1965, my first year back as the base manager. The Mendocino had a lightning bust and flew air tankers all day. The lead plane pilots out of Redding that were also the jumper plane pilots tried to sell them some jumpers all day long to no avail. We sat all day in Redding with 25 available jumpers and the capability of bringing in another 10-15 retreads and/or bringing in some Cave Jct. jumpers for backup.

A week or so later I read in the Mt. Shasta paper that the local district (where I started as a permanent) had curtailed all projects and sent their people to help save the Mendocino. I don't think I have to explain in detail the fallacy of that.

I have to admit we were better used in 1966 and 1967. In fact, in 1967 we set the record for fire jumps out of Redding with the additional use of around 20 retreads, one retread, Jim Klump, got 10 fire jumps that year. Of course, we jumped fires from Cave Jct.-Redmond-LaGrande-Boise-Missoula. I don't know if that record still stands today or not.

I started jumping at Redding in 1959 which was a pretty busy year also as the Shasta National Forest had a number of project size fires. Mostly in areas accessible by ground resources.

Why is the underutilization a problem now? Because we continue to get large fires from not taking prompt initial attack for whatever reason. There are any number of major fires like the Biscuit and Chetco Bar fires in SW Oregon that are prime examples and there are many more. Smokejumpers are similar to hotshot crews with an additional delivery system.

I asked the local Forest Supervisor last year about whether or not they were increasing the initial attack response and he said they were. I then asked about their policy on using off forest resources such as smokejumpers. His reply was that they consider all available resources (not sure I buy that, but will take his word for it), but considered the safest response before considering higher risk resources like smokejumpers and air tankers.

It is like your reference to “high winds” as a reason for not using them. My question to you would be “who is making the decision” as to what is high wind or other existing hazards. In my experience, it is often the local fire manager who is not that knowledgeable as to the jumper capabilities. I know that I experienced that back in 1965-67 and am sure that it occurs today.

At the other extreme, I heard a number of years ago that Redding jumped a couple of fires in Big Bear Valley. I was the DR there for 5+ years and cannot think of one place within the valley that would make sense to jump unless they were the only suppression resources available – not likely.

I would also think it a problem as a matter of cost if smokejumpers are underutilized. My guess is that it costs significantly more to field a smokejumper vs. a regular firefighter. Of course, the cost is lower if you don’t use them.

According to the 2020 Smokejumper Report, there were 290 jumpers at 7 bases, and they jumped a total of 1130 fires for an average of 3.9 fire jumps/jumper and spent almost as many man-days on single resource assignments as they did on both fire jumps and ground fire actions.

Question: Why in the world do we have a specialized resource with multiple capabilities being siphoned off for single resource assignments? Seems to verify more and more that the agency has no idea of their worth as an IA resource.

Oh, and by the way, your big increase in IA forces in the 2000 Fire Plan included 50 smokejumpers. Today they have 35 and are still used well below their capability.

And has anyone analyzed why Redding only jumped 29 fires when we had the high level of lightning this year? Many of which were lumped into complexes with the most prominent being the Mendocino Complex of over 1 M acres.

2. It is true that local units want to rely upon their own resources – always has been the case. Nothing wrong with that as long as they can put the necessary resources on the fire within established time frames. The problem comes in when they really can’t get it done. And now with the mantra of “don’t take action where the risk doesn’t match the success of outcome” combined with “managing wildfire for resource benefits – more fire on the land” the delay can be more often and longer.

This change in fire response adds time to the response time until IA action is actually initiated. Of course, that is not the case on most fires which are the 98% that are being caught. It is trying to reduce the 2% that causes all the damage, loss of life, and cost. We will never catch them all, but with putting forth well-thought-out planning and significant effort we should be able to catch some of them. Actually, 2020 had a number of fires that could likely have been caught with a more prompt IA effort. That is the crux of Michael Rains “A Call to Action!”

3. And now the pitch for more smaller air tankers. You say the contracts call for all air tankers to meet a 15-minute getaway standard. That said, how many fire managers are going to call out a large air tanker (LAT) for an initial attack without getting a look at the situation? Especially when it will have to come out of a valley airport. And since they are national resources, they might not even be available. In fact, this past fire season that was often the case.

The smaller aircraft (SEATs, Fire Bosses, and S-2Ts) and medium aircraft (AT) can operate out of smaller airports. The S-2Ts are already at fixed bases and SEATs/ATs could be located at any number of airports located closer to the potential need. They could be located as a single or double resource and easily be moved around as to need. They can easily be put into the Planned Dispatch Plan as part of the automatic response to at least high fire hazard areas during periods of high to extreme fire danger.

They have the same or less getaway capabilities and get to the fire sooner at a much lower cost. And with an Air Attack Aircraft dispatched at the same time an early analysis for the need of a larger air tanker can be made.

4. One last little disagreement has to do with the 2000 fire plan build-up as you mentioned the 274 Type 3 engine build-up. As you may or may not recall I had made a decision in the late 1980s to reduce the number of large engines on the Tahoe, replace them with smaller engines, and use the savings to supplement hand crews that were doing brush disposal and TSI projects with BD and TSI funds. The original smaller engines available were the M-40s which were marginally adequate. However, the new Model 42 became available shortly thereafter and the Tahoe was able to make the transition. Unfortunately, I had retired by then, so I didn't get in on their use.

The M-42 was very close to meeting the same standards as the M-51 which was a 300-gallon minimum and the same pump. The only short come was it could only carry 3 firefighters vs. the 5 required for a Type 3. It also only carried 280 gallons which was 20 gallons less than the 300. Not long after I retired the Tahoe went back to all large engines and sent all of their M-42s to the South Pacific. I saw the Downieville and Foresthill M-42s in Guam who loved them.

The biggest drawback with the M-42 in my estimation was the reticence of large fire organizations to order anything less than a Type 3 engine. I didn't see this as a major problem as I could send my larger engines and keep my 42s on the forest. However, the firefighters on the 42s were understandably upset that they would not be getting the off-forest assignments. I proposed a rotation of firefighters between the engines to even up the off-forest opportunities, but it never really worked.

Now with Type 3 engines costing \$250,000 plus per copy and a road system that isn't that navigable by the larger engines I still think there is value to a mix of engines. I suppose I am just venting about the demise of my analysis and plan, but I do think the FS is caught up in the bigger is better. Just look at the air tanker situation. No matter how big they get the fires get bigger every year especially since 2000. I was on the two largest CA fires prior to 1990 (Laguna, 1970 at 170,000 acres) and the Marblecone, 1977 at 177,000 acres). Small potatoes now.

Sorry about the long diatribe, but you know how I am.

David K. Nelson

Response from Murry Taylor, [murrytay@sisqtel.net](mailto:murrytay@sisqtel.net), April 5, 2021.

Hey there,

I agree wholeheartedly with Dave's assessment of smokejumper use and the lack thereof. This is the main thing I'm going to emphasize in my time slot on the Fires in the Pacific Northwest teleconference. Other IA resources like rappellers and helitack can be more aggressively used as well. If only one of these mega-fires in 2020 was stopped by the use of jumpers it would have been a very big deal, perhaps saving hundreds of millions of dollars, tens of thousands of acres, and likely a life, maybe more. Who knows where this group's efforts will go but if (in this case) it results in increased jumper use, we can be certain it will be a good thing for the national forests?

Again, my take is that most of these fire managers don't fully understand the capabilities of the jumpers. For example: In Happy Camp, I think in 2014, a group of jumpers had demobed into town after putting their fires out. While waiting for a ride to Redding they offered to take on a local fire at that time unstaffed. They were initially discouraged but later were allowed to give it a try. The jumpers got a hotshot crew (on standby there) and hit the fire, splitting up, and started digging line, flanking up both sides. By morning they had it contained at the top of the ridge at 80 acres. According to the jumper in charge, the local fire manager was amazed and said something like, "I never would have thought that fire could be caught the way you did."

There are so many stories like this. I know, I talk with jumpers all the time.

Murry Taylor

## Appendix E. Wildland Fire Suppression – And *Managed Fire* Congressional Intent of Appropriation Expenditures [Evaluation]

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### Wildland Fire Suppression – And *Managed Fire* Congressional Intent of Appropriation Expenditures<sup>76</sup>

- A. **Foreword.** The following is a brief analysis of the Appropriation Languages [s] and other anecdotal information on the use of Wildland Fire Suppression funding for “managed fire.”
- B. **Managed Fire.** Managed fires are natural ignitions [some refer to them as “unplanned”], which under suitable weather and soil moisture conditions are allowed to burn to meet desired ecological objectives in Wilderness Areas only where pre-planned and approved in Forest Plans. 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 key 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. This is not to be confused with “Prescribed Fire” which is conducted outside of Wilderness Areas and under specific conditions. The term “managed fire” is also being called “defensive fire.”
- C. **The Current Issue.** Under current conditions, the concept of “managed fire” – without exception – needs to be eliminated for the foreseeable future. The reality is, with the clogged-up conditions of our forests; hard to predict weather events; and the extremely high level of expertise required to perfectly “herd” a wildfire, “managed fires” can [and do] quickly become *escaped fires*. The notion of effectively directing a wildfire to help restore the forest has become largely an intellectual argument and puts others needlessly in harm’s way; causes deaths due to burning and smoke inhalation; and, significantly increases fire suppression costs that continue to shift more funds away from badly needed traditional forest maintenance.

Yet, with the Forest Service, and perhaps other agencies, the messages to stop the use of “managed fire” is mixed. Thus, confusion prevails. And there is a legal question. That is, is it the intent of Congress that Appropriated funds for wildfire suppression be used for “managed fire.”

- D. **Here is What Some Are Saying.** Recently, I<sup>77</sup> have checked with several current and *former* staff on the Appropriations Subcommittees [both House and Senate] regarding using Appropriated wildfire suppression funds for “managed fire.” The conclusions were clear. Simply put, Appropriated funds for fire suppression are intended to put the fire out as soon as possible.

What has incumbered this Congressional intent over the last decade, at least, is ambiguity in Appropriations Language and discussions by Forest Service leadership to enable wildfire to be a restoration tool to accumulate “restoration accomplishments.” It is one thing to deploy to the “next best ridge” for safety and effectiveness. It’s quite another to use the concept to increase target attainment.

The Congressional intent seems to be quite clear, according to my discussions. The Agency interpretation due to conflicting messages; skills; and what appears to be questionable target attainment, is probably the fly in the ointment. But, I must be blunt. I think the Forest Service currently believes that “managed fire”

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<sup>76</sup> Compiled by Michael T. Rains, July 11, 2021 [revised].

<sup>77</sup> Rains, Michael T.



[or, “defensive fire”] is the appropriate path, when you look at their budget justification statements and their behavior.

If we want to restore our forests [and forests are more than just trees], funds for forest maintenance is the answer. The other way [using suppression funds for restorative actions], as we have seen over and over again, is a very risky proposition at this point in time. And, as we know, lives are lost – especially from excess smoke -- and landscapes destroyed needlessly. Additionally, global warming is increased; safety of fire fighters is compromised; public funding is being abused; and long-term ecosystem benefits are not being achieved. That’s a pretty hefty price for an inflated target attainment.

Recently, a Forest Service Forest Supervisor in the west concluded that she was supportive of “managed fire”, but not now. With the extremely high temperatures; clogged forests; and lack to available skills to ensure success, this Forest Supervisor concludes, “managed fire” needs to be halted.

Several have questioned the lack of accountability of decision-makers. Besides becoming an “escaped fire” and incinerating everything in its path, nothing seems to slow these very risky choices associated with “managed fire.” That’s not right.

At this point in time, and probably in my life time, the notion of “managed fire” is basically an intellectual argument. It needs to be stopped.

**E. Here Is What the Bottom Line Should Be – For Now.** The concept of “managed fires” must be taken off the table; no exceptions. Clear, unambiguous direction from the Forest Service Chief’s Office on this matter cannot be overstated. The goal is to put out every fire immediately.

Let’s look at some specific budget development and Appropriation language.<sup>78</sup>

## **F. 2021 USDA EXPLANATORY NOTES – FOREST SERVICE**

**1. Wildfire Suppression.** The Suppression program is the primary funding source for wildfire extended attack suppression response and large fire support. The Suppression program allows the Forest Service to maintain a strong emergency response role, working alongside other Federal, state, tribal, and local government partners to protect life and property in suppression response operations. **In addition, this program helps improve forest conditions and maintain resilient landscapes by managing naturally ignited, unplanned wildfires to accomplish resource management goals.**

- **Conclusion.** It’s clear the Forest Service is advancing the concept of “managed fire” in their budget justification to Congress.

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<sup>78</sup> I [Rains] have deleted some of the language in order to just highlight the key aspects of this discussion.

## G. EXPLANATORY STATEMENT FOR THE DEPARTMENT OF THE INTERIOR, ENVIRONMENT, AND RELATED AGENCIES APPROPRIATIONS BILL, 2021

### Page 105:

1. **Wildfire Suppression.** The Committee expects the Forest Service to continually evaluate the effectiveness of how the Federal Government manages our national forests for optimum health and risk-management. The Committee continues to believe that the Service should more precisely and effectively target management activities to reduce the threat of catastrophic wildfires, improve management of the National Forest System, and assist in protection of other Federal, State, and private lands from the ravages of catastrophic fire. This is a function of both prioritization and budgeting practices and should include an evaluation of the impacts to non-Federal lands when the Service forgoes initial attack to suppress a fire, especially within proximity to communities.
  - **Conclusion.** Lots of flexibility in the interpretation, but the language does underscore the need for pre-planning and solid evaluation when “managed fire” is being considered.

## H. 2022 USDA EXPLANATORY NOTES – FOREST SERVICE:

### Page 97:

1. **APPROPRIATIONS LANGUAGE.** For necessary expenses for forest fire presuppression activities on National Forest System lands, for emergency wildland fire suppression on or adjacent to such lands or other lands under fire protection agreement, and for emergency rehabilitation of burned-over National Forest System lands and water, to remain available until expended: Provided further, that of the funds provided, not less than \$100,000,000 shall be for activities related to climate change, including wildfire risk management.
  - **Conclusion:** Inconclusive, but does suggest to me that “managed fire” seems to be appropriate from a Congressional intent, point of view. “Not less than” could equate to all available funds.

## I. 2022 USDA BUDGET SUMMARY

### Page 86:

1. **Summary Language.** The Budget proposes \$1.01 billion for Suppression to fund firefighters and equipment in direct support of wildfire incidents; aviation asset operations; incident support functions; and wildfire management administration.
  - **Conclusion:** Appears to be silent on “managed fire.” I do not interpret “wildfire management administration” to be associated with on the ground fire suppression tactics.

## J. Overall Conclusions: The following are my conclusion, to be associated only with my view of the issue:

1. From practitioners on the ground; to Appropriations staff; to Forest Service direction; to Congressional intent, it is clear why the issue of “managed fire” and using “wildland fire suppression funds for *managed fire*” is confusing. The messages are mixed and vague, at least to me.
2. Many practitioners, with hundreds of years of leading-edge experiences suggest taking “managed fire” off the table FOR NOW. Let us not confuse an “intellectual argument” with reality.
3. The Forest Service *does* seem to endorse the concept of “managed fire” with their budget justification documents and messages from the leadership that enable too much interpretation.

4. Congress, as expected, provides flexibility. They assume the Departments and agencies have the skill-set to match flexibility with reality, on-the-ground.
5. In the last 30+ years, the Forest Service has lost about 46 percent of its “landscape scale conservation [my term]” skill-set. The fire management staff has become extremely large due to the transfer of funds from forest maintenance to fire suppression – 16 percent in the mid-1900’s to about 67 percent [my calculations, including the “fire fix” funding] now.
  - a. **A Key Point:** When you lose this much of your “landscape scale conservation” capacity, respectfully, one cannot be surprised that the concept and tactics of “managed fire” might be foreign.
  - b. **Let’s Get Real:** With the loss of skill-set over the last 30+ years, is it not reasonable to expect so many employees to instantly understand to implications of “managed fire?” This comes under the category of, “A Miracle Occurs.”
6. A paradox has been effectively created: Reduce the funding for items that help reduce large, intense wildfires and increase funding to fight the resulting larger, more intense wildfires.
7. The “Call to Action”, or a similar plan, will help alleviate this conundrum, if deployed.
8. Until actual Congressional Appropriation language for the Forest Service specifically states what Congressional staff are saying – “fire suppression funds are intended to put the fire out as soon as possible.” – it seems hard to make an argument on misappropriation of funds – even though I personally believe this is the case.
9. Our two-key messages for the foreseeable future needs to be:
  - a. The Forest Service must take “managed fire” off the table; no exceptions. The new Forest Service Chief, Randy Moore, must be clear and resolute. Clearly, we must not second guess the Incident Commander [s]. There are times, when due to safety and effectiveness, going to “the next best ridge” is the answer. This should be the exception.
  - b. Strive to put out every fire immediately.

## **Appendix F. Legal Use of Appropriated Suppression Funds [Opinion Piece]**

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### **Legal Use of Appropriated Suppression Funds**

#### **A Driving Question: Is it Legal?**

Frank Carroll, [fcarrolls1@msn.com](mailto:fcarrolls1@msn.com), 6/29/2020

There is no legal basis for “using unplanned fire in the right place at the right time” to meet aspirational natural resource management objectives.

Managed fires are major federal actions as defined by CEQ requiring documentation and public input, records of decision, an objection process, and major revisions to extant forest plans.

With few exceptions, no such authority exists despite Forest Service assertions otherwise.

It is illegal to use emergency fire-fighting funds to meet objectives other than putting the fire out. It is especially egregious to then count acres burned on purpose in illegally managed wildfires as natural resource management targets accomplished.

It is illegal to burn private property to achieve public purposes without compensating affected landowners.

We are engaged in tort claims and litigation to prove these points and expect to prevail.

Frank Carroll  
Managing Partner  
Professional Forest Management, LLC  
PFMc Wildfire Pros