

# Forest Management

Active Management Means Healthier Forests

### FOREST MANAGEMENT

### Key Takeaways:

- Healthy forests provide many economic and environmental benefits to communities and the planet. If improperly managed, however, America's forests are an economic, environmental, and public safety liability.
- Forest management through controlled burns, mechanical thinnings, and timber development will reduce the risks communities face from wildfires and will prevent the release of hundreds of millions of metric tons of carbon dioxide into the atmosphere. An ounce of prevention is worth a pound of cure.
- Reducing regulatory barriers and modernizing funding pathways will improve the health of America's forests and reduce the damage caused by wildfires.

Healthy forests provide many economic and environmental benefits to communities and the planet. Wood products are ubiquitous in the global economy, and forests promote healthier ecosystems by providing food and shelter to a wide range of animals and plants. Importantly, more robust, resilient forests are a natural climate solution. Trees, plants, and greenery purify the air and absorb carbon dioxide. In fact, forests in the United States sequester about 16 percent of annual domestic carbon dioxide emissions.<sup>1</sup>

If improperly managed, however, America's forests are an economic, environmental, and public safety liability. Wildfires threaten communities, lives, and livelihoods and spew exorbitant amounts of pollutants and carbon dioxide emissions into the atmosphere. In 2020, California's wildfires emitted more carbon dioxide than the entire state's fossil fuel emissions.<sup>2</sup> Meanwhile, 2021's wildfires in North America and Eurasia released an estimated 176 billion tons of CO2, a 150% increase over the annual mean between 2000 and 2020.<sup>3</sup>

Not only are wildfires damaging lives and the environment, but they are economic burdens as well. A January 2023 study in the *American Economics Association* totaled the suppression costs for 11 states at more than \$13 billion from 1995-2016.<sup>4</sup> The Forest Service spent \$3.7 billion and the Department of Interior spent \$648,000 in suppression costs in 2021. The five-year average for federal suppression costs is more than \$2.8 billion annually.<sup>5</sup> State, local, and private suppression costs can also reach tens of millions of dollars per year. In California's case, it was more than \$1 billion (which includes federal reimbursement).<sup>6</sup>

Perhaps the most comprehensive analysis of the economic burden of wildfires is a 2017 report from the National Institute for Standards and Technology. The authors provide a literature review and explanation for calculating intervention costs, prevention, mitigation, suppression, and direct/indirect net losses. They find: "The annualized economic burden from wildfire is estimated to be between \$71.1 billion to \$347.8 billion (\$2016 US). Annualized costs are estimated to range from \$7.6 billion to \$62.8 billion. Annualized losses are estimated to range from \$63.5 billion to \$285.0 billion."<sup>7</sup> Although the NIST study does not include the economic damages of more recent fires, the report is wide-ranging and comprehensive in its literature review and estimates.

### THE IMPORTANCE OF ACTIVE FOREST MANAGEMENT

Climate change is exasperating drought-like conditions and prolonging fire seasons. One study by UCLA estimates that the number of days with extreme fire weather in the fall has more than doubled over the past 40 years.<sup>8</sup> In 2023, Americans and Canadians have seen the impacts of dry conditions first-hand as wildfires ravaged throughout Canada, sending smoke into cities along the eastern United States. As of June 2023, "About 4.3 million hectares (10.6 million acres) have already burned, roughly 15 times the annual average of the past decade."<sup>9</sup>

Today, about 85 percent of wildfires are caused by humans who engage in risky activities such as burning debris or leaving campfires unattended.<sup>10</sup> While global decarbonization will help minimize human-induced warming's impact on wildfires and wildfire seasons, a more immediate and effective solution to reduce the size and intensity of wildfires is to proactively take



care of forests. The most pressing issue for forest managers and communities threatened by wildfires is density and overgrowth, which creates a greater fuel load for fires. The fuel load includes grass, shrubs, small trees, dead leaves, and materials on the forest floor.<sup>11</sup> When a fire occurs in a forest with a full fuel load, the fire races up the trees and rages across the canopy, making a fire more intense and widespread and therefore more difficult to contain.

Active forest management through prescribed or controlled burns<sup>12</sup> and through timber harvesting will significantly reduce the fuel load. Yet federal and state policies can delay or prevent the use of forest thinning, prescribed burns, and timber development. Both processes must go through a lengthy approval process and could be subject to the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), and the Clean Air Act. NEPA review alone delays mechanical thinning on federal lands 3.6 years on average and prescribed burns on federal lands by 4.7 years on average.<sup>13</sup> Prescribed burns must also comply with federal, state, and local air quality standards, which restrict the days forest managers may conduct them. Of course, delaying burns increases the likelihood that a wildfire will be larger and more difficult to contain, resulting in poorer air quality and higher levels of greenhouse gas emissions.

While global decarbonization will help minimize humaninduced warming's impact on wildfires and wildfire seasons, a more immediate and effective solution to reduce the size and intensity of wildfires is to proactively take care of forests.

Even if a forest management plan secures the permits, litigious activists may block the project<sup>14</sup>. Jonathan Wood, a research fellow at the Property and Environment Research Center (PERC) noted, "What you'll often find is that there are projects which have been extremely well-vetted, which have been years in the works. There will be a 5,000-page document, which no one could conceivably ever read because it's so long and complicated, but then the project will still get put on hold for an indefinite period of time, because some special interest group filed a lawsuit."<sup>15</sup> Wood has documented several instances where litigation blocked a forest management project for years<sup>16</sup>.

## POLICY REFORMS FOR WILDFIRE PREVENTION AND HEALTHY FORESTS

Forest management will reduce the risk communities face from wildfires and will prevent the release of hundreds of millions of metric tons of carbon dioxide into the atmosphere. Welcomingly, policymakers at the federal and state level are turning their attention to prevention, leaning into the expression: *an ounce of prevention is worth a pound of cure.* 

An April 2021 report by PERC research fellows Jonathan Wood and Holly Fretwell offers compelling evidence for the benefits of forest restoration and includes many practical recommendations to expedite restoration processes and encourage collaborative partnerships for healthier natural ecosystems.<sup>17</sup> They include:

- Clarifying the language for categorical exclusion applications, which take an average of seven months to navigate. More specific guidance should cut that average application to 30 days and categorical exclusions should be issued in one year or less.
- Expanding the acreage limit for categorical exclusions so that a prescribed burn can safely cover more ground under one restoration project.
- Allowing prescribed burns to be excluded from state emissions calculations.
- Narrowing the scope of who can file lawsuits, limiting preliminary injunctions and stays to 60 days, and setting a six-month statute of limitation on National Environmental Policy Act challenges.



- Limiting Endangered Species Act consultation to projects with on-the-ground impacts on protected species.
- Lifting the export ban on unprocessed timber from federal lands. A portion of the revenues from timber exports could be used at the Forest Service's discretion for forest management and fire prevention.
- Permanently reauthorizing the Forest Service and the Bureau of Land Management to be a "Good Neighbor" through longer, more flexible partnerships with states, tribes, and counties and define prescribed burns and reforestation as program objectives. The bipartisan, bicameral Root and Stem Project Authorization Act, introduced by Senator Steve Daines (R-MT) and Dianne Feinstein (D-CA) and Congressman Dan Newhouse (R-WA) would allow the Forest Service and Bureau of Land Management (BLM) to enter into agreements with local entities to conduct certain forest management projects on federal lands. The success of the pilot project in Washington's Colville National Forest could serve as a model for future endeavors.<sup>18</sup>
- Solving burdensome budgeting challenges of long-term forest restoration projects. As the PERC report underscores: "Under the Antideficiency Act and appropriations rules, the Forest Service cannot obligate funds in advance of appropriations or after funding has expired. This constrains its ability to participate as an equal financial partner when states, tribes, or private groups are willing to contribute funds to forest restoration."<sup>19</sup> PERC recommends the creation of a restoration fund that would provide funding certainty and commitment toward long-term projects.



# **ENDNOTES**

- Penn State Extension, "How Forests Store Carbon," September 24, 2020, https://extension.psu.edu/how-forests-store-carbon#:~:text=According%20to%20the%20US%20Forest,mainly%20 in%20trees%20and%20soil.
- 2 Elizabeth Claire Alberts, "Off the chart': CO2 from California fires dwarf state's fossil fuel emissions," Mongabay, September 18, 2020, https://news.mongabay.com/2020/09/off-the-chart-co2-from-california-fires-dwarf-statesfossil-fuel-emissions/
- 3 University of California Irvine, "Wildfires in 2021 emitted a record-breaking amount of carbon dioxide," March 2, 2023, https://news.uci.edu/2023/03/02/wildfires-in-2021-emitted-a-record-breaking-amount-of-carbon-dioxide/
- 4 Patrick Baylis and Judson Boomhower, "The Economic Incidence of Wildfire Suppression in the United States," American Economic Association, Vol 15., No 15, https://www.aeaweb.org/articles?id=10.1257/app.20200662
- 5 National Interagency Fire Center, "Suppression Costs," https://www.nifc.gov/fire-information/statistics/suppression-costs
- 6 Austin Troy et al, "The True Cost of Wildfire in the Western U.S., 2022," Prepared for the Western Forestry Leadership Coalition, October 2022, https://www.thewflc.org/sites/default/files/True%20Cost%20of%20Wildfire\_For%20 Web\_0.pdf
- 7 Douglas Thomas et al., "The Costs and Losses of Wildfires A Literature Review," National Institute of Standards and Technology, November 2017, https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.1215.pdf
- 8 Michael Gross et al., "Climate change is increasing the likelihood of extreme autumn wildfire conditions across California," Environmental Research Letters, August 20, 2020, https://iopscience.iop.org/article/10.1088/1748-9326/ ab83a7
- 9 Nia Williams and Ismail Shakil, "International help rolls in to fight persistent Canadian wildfires," Reuters, June 9, 2023, https://www.reuters.com/world/americas/wildfires-burn-across-canada-with-little-relief-sight-2023-06-08/
- 10 National Park Service, "Wildfire Causes and Evaluations," U.S. Department of the Interior, March 8, 2022, https://www. nps.gov/articles/wildfire-causes-and-evaluation.htm
- 11 U.S. Department of Interior Office of Wildland Fire, "Fuels Management," https://www.doi.gov/wildlandfire/fuels
- 12 National Geographic, "Controlled Burning," https://www.nationalgeographic.org/encyclopedia/controlled-burning/
- 13 Eric Edwards and Sara Sutherland, "Does Environmental Review Worsen the Wildfire Crisis?" The Property and Environment Research Center, June 2022, https://www.perc.org/wp-content/uploads/2022/06/PERC-PolicyBrief-NEPA-Web.pdf
- 14 Sam Rutzick, "Federal Regulations Have Made Western Wildfires Worse," Reason, September 14, 2020, https://reason. com/2020/09/14/western-wildfires-can-be-prevented-if-burdens-on-forest-management-are-eased/
- 15 Ibid.
- 16 Holly Fretwell and Jonathan Wood, "Fix America's Forests: Reforms to Restore National Forests and Tackle the Wildfire Crisis," The Property and Environment Research Center, April 12, 2021, https://www.perc.org/2021/04/12/fixamericas-forests-reforms-to-restore-national-forests-and-tackle-the-wildfire-crisis/
- 17 Holly Fretwell and Jonathan Wood, "Fix America's Forests: Reforms to Restore National Forests and Tackle the Wildfire Crisis," The Property and Environment Research Center, April 12, 2021, https://www.perc.org/2021/04/12/fixamericas-forests-reforms-to-restore-national-forests-and-tackle-the-wildfire-crisis/
- 18 Hannah Downey, "Harnessing Partnerships to Accelerate Forest Project Environmental Reviews," Frontier Institute, November 29, 2022, https://frontierinstitute.org/harnessing-partnerships-to-accelerate-forest-project-environmentalreviews/
- 19 Holly Fretwell and Jonathan Wood, "Fix America's Forests: Reforms to Restore National Forests and Tackle the Wildfire Crisis," The Property and Environment Research Center, April 12, 2021, https://www.perc.org/2021/04/12/fixamericas-forests-reforms-to-restore-national-forests-and-tackle-the-wildfire-crisis/

