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**ONLY YOU CAN STOP THE US FOREST SERVICE
FROM BURNING OUR FORESTS**



Prescribed Burns: 20 Myths and Facts

Scroll down to see the scientific sources supporting these facts!

Myth #1: The US Forest Service is burning selected underbrush in prescribed burns and thinning a few dead trees to make the forest healthier.

Fact #1: The Forest Service's stated goal is removing 95% of *all* growth. The scale of prescribed burns in the West is increasing exponentially, to the immense profit of the privatized burn industry. The public is unaware of the scale. The Forest Service's current plans are to firebomb more than 1 million acres--almost 1,600 square miles--in Northern New Mexico alone.

Think about it: how could they selectively burn "underbrush" by aerial chemical firebombing (the method used to ignite almost every prescribed burn)?

Myth #2: Decades of fire suppression have made our forests unhealthy.

Fact #2: The US Forest Service began its fire suppression policy in 1935 and abandoned it in 1972. Modern firefighting equipment (helicopters, etc.) wasn't introduced until after World War II. Effective fire suppression was practiced for less than 30 years.

Myth #3: Fire suppression was a failed policy.

Fact #3: The 1940s through the 1970s were the only decades since modern records were kept of low forest fire incidence in our National Forests (less than 300,000 acres per year). Fire suppression was a successful policy.

Myth #4: Prescribed burning has made our forests healthier.

Fact #4: Since 1978, when prescribed burning began, the number of catastrophic fires in our forests has sharply risen and the number of acres burned in wildfires increases every year. Prescribed burning is a failed policy. It is now an accepted scientific fact that climate change is the primary driver of wildfire incidence and severity, and that prescribed burning has little to no mitigating effect.

Myth #5: Historically, all southwestern Ponderosa pine forests burned every 5 to 20 years. Fire is a natural element of the forest which keeps it healthy.

Fact #5: Historically, most southwestern forests burned, on average, every 50 to 300 years. It takes at least 50 fire-free years for Ponderosa pines to regenerate. Lightning fires were an occasional and not a regular feature of the pre-colonial landscape.

Myth #6: The density of trees and vegetation in our forests is a result of fire suppression.

Fact #6: The density of trees and vegetation is a result of loggers clear-cutting the forests a century ago.

Myth #7: There are too many trees in our forests, 150 to 800 per acre compared with 35 per acre in previous centuries.

Fact #7: This oft-repeated myth is based on now debunked science. We now know that forests were not "park like" meadows with only a few trees in the past. Current science shows that trees need to be close to others of their own species in order to thrive. Trees in a "thinned" forest will live significantly shorter and less healthy lives.

A forest in which 95% of the trees have been incinerated and logged is not a forest; it is deforestation.

Several hundred small young trees contain the same amount of carbon as a few dozen big old growth trees. Those trees need to be there. When we "thin" and burn trees, we impoverish the soil and contribute massively to global warming.

Myth #8: The trees are so thick that they form a continuous canopy shading the forest floor.

Historically we had open forests shading less than 20% of the forest floor. We need to open up the forests to let more sun in.

Fact #8: Historically, big old growth trees formed a continuous canopy. Letting the sun in removes moisture from trees and soil and creates a fire hazard. Historically, the Southwest was habitat for the endangered Mexican spotted owl, which required closed canopy forests to breed.

Myth #9: We need to space the trees farther apart so fires won't spread from one tree to another.

Fact #9: Historically, lightning fires started more often in open stands of trees than in dense forests. Thinning and prescribed burning make forests more—not less—likely to burn in the future. This is now an established fact.

Myth #10: Most forest fires are started by lightning.

Fact #10: More than 90% of forest fires, both in modern and in pre-colonial times, have been started by humans. And that figure does not include the millions—yes millions—of acres burned by the Forest Service. Lightning usually is accompanied by rain and is much less likely to burn a forest down than fires that are started by humans.

Myth #11: Prescribed fires don't damage the forest.

Fact #11: Old growth trees four feet in diameter could withstand some fires. Today's young trees cannot. Prescribed fires always damage the forest and often get out of control. With global warming, it is more and more difficult for forests to recover.

Myth #12: A controlled burn now will prevent a catastrophic fire later.

Fact #12: Historically, a forest that burned once was more, not less, likely to burn again. Decades of peer-reviewed science support that conclusion.

Myth #13: We have to prevent another Cerro Grande catastrophe.

Fact #13: The Cerro Grande fire--the worst in New Mexico History--was a prescribed burn intentionally set by the National Park Service. It would never have happened if government agencies did not start fires.

Myth #14: The Cerro Grande Fire was a rare accident. It won't happen again.

Fact #14: Many of the disastrous fires in New Mexico and elsewhere during the last 40 years have been escaped prescribed burns, lit by government agencies, not lightning. Nearly all the disastrous fires in the U.S. from the mid-1970s through the mid-1980s were escaped prescribed burns. The number of escaped prescribed burns per year, in California and Nevada alone, rose steadily from zero in 1970 to more than 900 in 2002.

Myth #15: The smoke from prescribed fires is harmless.

Fact #15: Wood smoke without toxic chemicals is extremely hazardous. Prescribed fires are ignited by firebombing with a mixture of the neurotoxin potassium permanganate and antifreeze, and expanded with gasoline and diesel fuel. Our wild areas, soil, and water are being massively polluted with poisons. So is our air, year round.

Myth #16: Opening up the canopy lets more rain and snow fall to the ground, replenishing groundwater, springs, and reservoirs.

Fact #16: Most of the water in the desert is stored in the trees and their roots. Tree roots also aerate the soil and make it able to absorb water. Thinning the forest causes rain to run off and erode instead of soaking into the soil. The soil dries up and washes away, and springs and streams disappear.

Myth # 17: Thinning the forest ameliorates climate change by preventing wildfires.

Fact #17: It is federal policy, put in place in 2002, to thin 190 million acres of forests, which will release over 3 billion tons of carbon. Trees store carbon. Burning trees releases carbon and contributes to global warming. We should be planting and protecting trees.

Myth #18: Our forests are “fire-adapted.” The aspens depend on periodic fire.

Fact #18: There is no such thing as a fire-adapted squirrel, bird, bear, or tree. Certain species, including aspens, recolonize the forest when it is damaged by fire. So do non-native weeds and destructive insects. The dominant climax species here is not the aspen but the ponderosa pine, which Forest Service officials have called a “weed.”

Myth #19: Wildlife instinctively escape prescribed burns.

Fact #19: The Forest Service intentionally burns the perimeter of a prescribed area first, making it impossible for wildlife to escape. Prescribed burns decimate wildlife populations.

Myth #20: Forest policy is driven by science.

Fact #20: Forest policy is driven by profit. Prescribed burning is partially funded by timber sales. Unlimited federal funds are available to fight large fires, not small ones. Both firefighting and prescribed burning are outsourced to private industry. Follow the money.



Prescribed Burns: Myths and Facts: Fact Sources:

Effective Fire suppression was practiced for less than 30 years, not 100 years:

(1) In 1926, the Forest Service adopted a “10-acre policy” (all fires should be controlled before they reach 10 acres in size).

(2) In 1935, it added a “10:00 a.m. policy” (for fires exceeding 10 acres, efforts should focus on control before 10 a.m. the next day).

- (3) Despite the 10 acre, 10 a.m. policy period, prescribed burning (then called “light burning”) occurred continuously within National Forests with tacit Forest Service approval in some areas of the south.
- (4) Despite the 10 acre, 10 a.m. policy, the Forest Service itself resumed controlled burns in southern pine forests in 1943.
- (5) During the 1950s the Forest Service was setting prescribed burns in the Mendocino National Forest in California, and along the Mogollon Rim and in the Tonto National Forest in Arizona.
- (6) In 1950 the National Park Service began controlled burning in Sequoia National Park in California and at Pipestone National Monument in Minnesota.
- (7) Forty-nine prescribed burns were set in Everglades National Park between 1958 and 1973, and fifty-two more between 1973 and 1979.
- (8) In 1968, the National Park Service officially abandoned its policy of fire suppression and instituted prescribed burning throughout the national park system.
- (9) In 1972 the Forest Service followed suit, adopting a “letburn” policy (allowing lightning fires to burn in designated forests).
- (10) In 1978 the Forest Service adopted both prescribed burning and “prescribed natural fires,” extending the letburn policy throughout the national forest system.
- (11) The period of consistent fire suppression lasted only 20 to 30 years; helicopters, smoke jumpers, and other modern technologies were not available until after World War II.

Sources:

- (1) Congressional Research Service Report RL30755
- (2) Gorte, R.W. Forest Fire/Wildfire Protection. CRS Report for Congress, Order Code RL 30755, p. CRS-5 (2000)
- (3) S.J. Pyne, Fire in America, Princeton University Press (1988)
- (4) H. Weaver, Fire and Management Problems in Ponderosa Pine Forests, Proceedings of the Annual Tall Timbers Ecology Conference 3:60-79 (1964);
- (5) H.K. Rothman, A Test of Adversity and Strength: Wildland Fire in the National Park System, National Park Service (2005);

(6) J.W. Van Wagtenonk, Dr. Biswell's Influence on the Development of Prescribed Burning in California, *The Biswell Symposium: Fire Issues and Solutions in Urban Interface and Wildland Ecosystems*, USDA Forest Service Gen. Tech. Rep. PSW-GTR-158, pp. 11-15 (1995).

(7) W.H. Romme, An Historical Perspective on the Yellowstone Fires, *Renewable Resources Journal* 11:10-12 (1993).

(8) J.E. Keeley, C.J. Fotheringham, and M. Morais, Reexamining Fire Suppression Impacts on Brushland Fire Regimes, *Science* 283: 1829-1835 (1999).

(9) M. Rollins, T. Swetnam, and P. Morgan, Twentieth-century Fire Patterns in the Selway-Bitterroot Wilderness Area, Idaho/Montana, and the Gila/Aldo Leopold Wilderness Complex, New Mexico. In: Cole, D.N. et al., eds., *Wilderness Science in a Time of Change Conference*, May 23-27, 1999, Missoula, MT, vol. 5, *Proceedings RMRS-P-15-VOL-5*, USDA Forest Service, Ogden, UT, pp. 283-287 (2000).

The 1940s through 1970s were the only decades when less than 300,000 acres of National Forests Burned.

Source: R.W. Gorte, *Forest Fire/Wildfire Protection*, CRS Reprt for Congress, Order Code RL30755 (2006); also National Interagency Fire Center statistics.

Historical fire frequency was 50 to 300 years in the southwest.

Source: W.L. Baker and D. Ehle, *Uncertainty in Surface-fire History: the Case of Ponderosa Pine Forests in the Western United States*, *Canadian Journal of Forestry Research* 31: 1205-1226 (2001). See also attached email from William L. Baker.

"Fires were rare in interior ponderosa and mixed conifer forest after the 1850s," long before the creation of the Forest Service, and long before fire suppression became government policy. Source: T.W. Swetnam and J.H. Dieterich, *Fire History of Ponderosa Pine Forests in the Gila Wilderness, New Mexico*. In: *Proceedings, Symposium and Workshop on Wilderness Fire; 1983 November 15-18; Missoula, MT* (J.E. Lotan et al., eds.), *General Technical Report INT-182*, USDA Forest Service, pp. 390-397 (1985).

Ponderosa pines require 50 fire-free years to regenerate.

Source: Baker and Ehle, op. cit. (2001), at p. 1224; W.L. Baker and D. Ehle, Uncertainty in Fire History and Restoration of Ponderosa Pine Forests in the Western United States, Fire, Fuel Treatments, and Ecological Restoration, USDA Forest Service Proceedings RMRS-P-29, pp. 319-333, at p. 326 (2003).

Dense second and third growth forests are the result of logging.

Sources: T.T. Veblen. Key Issues in Fire Regime Research for Fuels Management and Ecological Restoration, Fire, Fuel Treatments, and Ecological Restoration, Forest Service Proceedings RMRS-P-29, pp. 259-275 (2003); Baker and Ehle, op. cit. (2001); Pyne, op. cit. (1988); P.F. Hessburg and J.K. Agee, An Environmental Narrative of Inland Northwest United States forests, 1800-2000, Forest Ecology and Management 178: 23-59 (2003).

Letting the sun in removes moisture from trees and soil and creates a fire hazard.

Sources: E.J. Martinson and P.N. Omi, Performance of Fuel Treatments Subjected to Wildfires, Fire, Fuel Treatments, and Ecological Restoration, USDA Forest Service Proceedings RMRS-P-29, pp. 7-13 (2003) (“Fire intensity may be exacerbated by fuel treatments”); William L. Baker, Fire Ecology in Rocky Mountain Landscapes, Washington: Island Press, pp. 373-374, 426 (2009) (“Thinning that lowers canopy cover can actually increase, rather than decrease, fire risk” (at p. 426)); Aldo Leopold, “‘Paiute Forestry’ v. Forest Fire Prevention,” Southwestern Magazine, vol. 2, pp. 12-13, at p. 12 (1920) (Prescribed burning “would not only fail to prevent serious fires but would ultimately destroy the productiveness of the forests”).

Burning the ground cover dries out the forest, increasing the risk of future fires. Decayed woody debris contains the majority of ectomycorrhizae, which are essential to the absorption of water by tree roots. Source: R.T. Graham et al., Managing Coarse Woody Debris in Forests of the Rocky Mountains. USDA Forest Service Research Paper INT-RP-477 (1994).

Historically, forests that have burned once are more, not less likely to burn again.

Sources: K.S. McKelvey and K.K. Busse, Twentieth-century Fire Patterns on Forest Service Lands, Sierra Nevada Ecosystem Project: Final Report to Congress, vol. II, pp. 1119-1138, at p. 1130 (1996) (There is no evidence that areas that have burned in the past are less likely to burn in the future”); D.C. Idion et al., Patterns of Fire Severity and Forest Conditions in the Western Klamath Mountains, California, Conservation Biology 18(4): 927-936, at p. 927) (2004); Baker

(2009), op. cit. (at 415) (“Ineffectiveness is documented by rising amounts of burned area in spite of increasing fire control and fuel reduction”); C. Hanson, *Forest and Wildland Fire Science Synthesis: Sierra Nevada*, August 28, 2013, p. 6 (“Often the most fire-suppressed forests have lower levels of high-intensity fire”).

Historically, high-severity fire occurred in less dense forests.

Source: D.C. Odion et al., *Patterns of Fire Severity and Forest Conditions in the Western Klamath Mountains, California*, *Conservation Biology* 18(4): 927-36, at p. 927 (2004) (“Considerably less high-severity fire occurred where fire had previously been absent since 1920 in closed forests compared to where the forests had burned since 1920”).

190 million acres are scheduled for thinning...

Source: *Healthy Forests: An Initiative for Wildfire Prevention and Stronger Communities*, August 22, 2002. The White House, 22 pages.

. . . which will release over 3 billion tons of carbon.

Source: USDA Forest Service, *Science Basis for Changing Forest Structure to Modify Wildfire Behavior and Severity*, General Technical Report RMRS-GTR-120, p. 24 (2004) (“2 billion tons of excess fuels” on 97 million acres of timberland in fifteen western states”) (Extrapolating to 190 million acres gives over 3 billion tons of carbon).

Thinning contributes to climate change.

Sources: J.L. Campbell et al., *Can Fuel-reduction Treatments Really Increase Forest Carbon Storage in the Western US by Reducing Future Fire Emissions?* *Front. Ecol. Environ.* 2011, doi: 10.1890/11057 (“Forests that burn less often store more carbon than forests that burn more often”); S. Luysaert et al., *Old-growth Forests as Global Carbon Sinks*, *Nature* 455: 213-215 (2008); D.G. Neary et al., *Soil Carbon in Arid and Semiarid Forest Ecosystems*. In: J.M. Kimble et al., eds., *The Potential of US Forest Soils to Sequester Carbon and Mitigate the Greenhouse Effect*, CRC Press, Boca Raton, FL (2002), pp. 293-310 (“Current forest management direction in the Intermountain West will result in... decreases in forest floor, and aboveground biomass, and mineral soil carbon pools”).

Mexican spotted owls require a closed canopy. Efforts to create more open conditions in ponderosa pine forests “are not compatible with maintaining roosting habitat for spotted owls.”
Source: J.L. Ganey, W.M. Block, J.S. Jenness, and R.A. Wilson, Mexican Spotted Owl Home Range and Habitat Use in Pine-Oak Forest: Implications for Forest Management, *Forest Science* 45: 127-135 (1999).

The forest is ignited with gasoline and diesel fuel from ground torches, and potassium permanganate and antifreeze from helicopters.

Sources: Interagency Aerial Ignition Guide. NFES #1080, p. IV-1 (2004); Dale Wade, Ignition Devices for Prescribed Burning, Southern Fire Exchange Fact Sheet 2013-3, USDA Forest Service, Southern Research Station.

Thinning the forest increases evaporation, depleting groundwater.

Source: K. Simonin et al., The Influence of Thinning on Components of Stand Water Balance in a Ponderosa Pine Forest Stand During and After Extreme Drought, *Agricultural and Forest Meteorology* 143:266-276 (2007).

Prescribed fire makes the forest more vulnerable to invasion by non-native weeds.

Source: W.L. Baker (2009), op. cit. at p. 263 (“Even low-intensity fire can cause cheatgrass expansion in ponderosa pine forests, increasing rather than reducing fire risk”); and at p. 378 (Invasion by nonnative plants, which increases fire risk, can create “a positive feedback loop [which can] lead to near monoculture of the invasive species”).

Prescribed fire makes the forest more vulnerable to insect damage.

Source: Aldo Leopold (1920), op. cit.

Thinning and burning decimates wildlife.

Sources: Aldo Leopold, *Game Management* (1933), at p. 346; D.C. Odion et al., Examining Historical and Current Mixed-Severity Fire Regimes in Ponderosa Pine and Mixed-Conifer Forests of Western North America, *PLoS One* 9(2): e87852, at p. 2 (2014); Arizona Game and

Fish Department, Comments on proposed USFS and DOI Categorical Exclusions, Jan. 14, 2003, at pp. 4, 6-7; State of California Resource Agency, Comments on USDA proposed categorical exclusions, Jan. 30, 2003, at pp. 3-4.

Escaped prescribed burns in California and Nevada increased from zero in 1970 to more than 900 in 2002.

Source: C.A. Kolden, Climate Impacts on Escaped Prescribed Fire Occurrence in California and Nevada. Master's Thesis, University of Nevada, Reno, May 2005.

Prescribed burning is funded by timber sales.

Source: Pioneer Forest Products has been given the contract to "treat" the first million acres of the Four Forests Restoration Initiative in Arizona. The "treatments" involve harvesting 300,000 acres of timber and then burning the rest of the forest.

Unlimited federal funds are available to fight large, not small fires.

Source: FLAME Act of 2009, <https://www.law.cornell.edu/uscode/text/43/1748a> (43 U.S.C. 1748(e)(2)(B) requires a minimum of 300 acres or a threat to

human life, property or resources for availability of funds)

Firefighting and prescribed burning are outsourced to private industry.

Sources:

For prescribed burning, see attached Request for Proposals, dated October 25, 2012 ("The Bureau of Land Management, Bureau of Indian Affairs, Fish and Wildlife Service, National Park Service, and U.S. Forest Service plan to issue multiple contracts for a wide range of fuels projects to reduce the risk of wildland fires. These agencies are looking for contractors to conduct wildfire hazard reduction, prescribed burning, and related services.").

For firefighting, see:

Chasing Fire, Aljazeera Oct. 24, 2013,
<http://www.aljazeera.com/programmes/faultlines/2013/10/chasing-fire-2013102012346461304.html>

(“There is often a blank check for necessary supplies, equipment and aircrafts - much of it contracted out to private companies, making wildfire suppression a profitable and growing industry”).

A Little More Faith, by Sherry Devlin,
<http://www.mountainwestnews.org/Page3.aspx?a=Perspectives&ID=57> (“It is a billion-dollar-a-year business. Just visit a fire camp some day and look at the vendors lined up at the gate: yurt suppliers, caterers, bulldozer operators, vans loaded with contract fire crews, helicopters pulled off construction because their owners know where the big money is come summer”).

Another costly war that America can never win? The Economist, August 15, 2002,
<http://www.economist.com/node/1282578> (“A less vocal group which plainly has no interest in reducing the number of fires is what might be called the “fire-industrial” complex. A big fire can chew up several million dollars a day... The serious money goes to an entourage of private contractors, who supply everything from earth-moving equipment and helicopters to portable showers. Nine companies control a fleet of 40 fixed-wing aircraft; it costs around \$6,000 an hour to rent them. The same group of people travel from one blaze to the next”).

Before Fires, Bush Cut Fire Preparedness Budgets, Outsourced Forest Service Work. Huffington Post, October 26, 2007. (“In other instances, the service's reliance on contractors extended to even the firefighters themselves”).

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