ARTICLES

PRESCRIBED FIRE IN WILDERNESS AREAS IN A POST-*CHEVRON* WORLD

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SUMMARY

In order to manage California wilderness areas to preserve their natural and untrammeled character, as required by the Wilderness Act, federal land management agencies should adopt interpretations of the Act that allow prescribed burning and Indigenous cultural burning in areas where it existed pre-colonialism. Interpreting the Act this way will likely lead to lawsuits, but land management agencies should be able to defend against these even in a post-*Chevron* legal landscape because of California's unique history, the history of the Wilderness Act, and recognition of the importance of prescribed burns in forest management in California before and after the Act was passed.

> Our campaigns against wildfires have been so successful that we now must "unsell" the false impression that all fires are bad.[1]

What is "wilderness"? It has been defined as "a tract or region uncultivated and uninhabited by human beings."[2] Wilderness might also be thought of as "undeveloped," "natural," "primeval," "untrammeled," or as areas where "man himself is a visitor who does not remain."[3] These values are enshrined in one of the United States' most significant moves toward protecting nature, the Wilderness Act of 1964.[4] The Wilderness Act prescribes rules for the establishment and management of wilderness areas, which are granted heightened protection under the Act.[5] This includes prohibitions on roads, mechanized transportation, commercial enterprises, and a requirement that land managers "[preserve] the wilderness character" of wilderness areas.[6]

Wilderness Watch and other environmental groups have interpreted these standards to mean that federal land managers cannot use prescribed fire for ecosystem management in wilderness areas, and the groups have filed lawsuits to that effect.[7] Kevin Proescholdt, Wilderness Watch's conservation director, described prescribed fires as "human manipulations of the wilderness ecosystem" that "are the kind of manipulations that the Wilderness Act militates against."[8] This concept of wilderness as a land free from human influence is pervasive in the American mythos, but it is part of a harmful false narrative.[9] Often, lands characterized as "wild" have been actively managed by humans for thousands of years.[10]

More than 80% of earth's land area shows signs of direct human influence over the past 12,000 years, and this is almost certainly an underestimate.[11] Humans have been a part of nature in what is now known as California for millennia, living on the land and actively influencing its ecosystems.[12] In many areas of California, Indigenous groups used fire intensively to shape the landscape.[13] Over time, California's flora adapted to this intentional use of

1. Miron L. Heinselman, *Vegetation Management in Wilderness Areas and Primitive Parks*, 63 J. Forestry 440, 444 (1965).
2. Merriam-Webster Dictionary, *Wilderness*, https://www.merriam-webster.com/dictionary/wilderness (last visited Feb. 2, 2025).
3. The Wilderness Act of 1964, 16 U.S.C. §1131(c).
4. 16 U.S.C. §§1131-1136.
5. *Id.*
6. *Id.* §1133.
7. Amended Complaint for Declaratory and Injunctive Relief at 2-3, Wilderness Watch v. National Park Serv., No. 1:23-cv-01398-ADA-BAM (E.D. Cal. Nov. 17, 2023) [hereinafter Wilderness Watch v. NPS—Complaint]; Kevin Proescholdt, Conservation Director, Wilderness Watch, Public Comment on the Grass Valley Watershed Restoration Project 3-5 (May 29, 2018), https://wildernesswatch.org/images/wild-issues/2018/05-29-2018-WW-Comments-Pine-Valley-Mtn-W-burn.pdf [hereinafter Wilderness Watch Public Comment]; *Wilderness Across Two National Forests Threatened With Burning and Cutting*, Wilderness Watch (Nov. 17, 2024), https://wildernesswatch.org/842-448-wilderness-acres-threatened-with-burning-and-cutting/.
8. Wilderness Watch Public Comment, *supra* note 7, at 3-5.
9. *See* William Cronon, Uncommon Ground: Rethinking the Human Place in Nature 69-90 (1st ed. 1995).
10. Erle C. Ellis et al., *People Have Shaped Most of Terrestrial Nature for at Least 12,000 Years*, 118 PNAS e2023483118, at 2 (2021).
11. *Id.* at 7.
12. There is significant academic debate on the dates for the peopling of the Americas, with some scholars claiming as recent a date as 16,000 years ago (Bastien Llamas et al., *Ancient Mitochondrial DNA Provides High-Resolution Time Scale of the Peopling of the Americas*, 2 Sci. Advances 4, 5 (2016)), and others claiming that humans first settled on the continent 130,000 years ago (Steven R. Holen et al., *A 130,000-Year-Old Archaeological Site in Southern California, USA*, 544 Nature 479, 482 (2017)).
13. Jan W. van Wagtendonk et al., Fire in California's Ecosystems 388-92 (2d ed. 2018) [hereinafter Fire in CA Ecosystems]; Tony Marks-Block

fire by humans, which had lasting impacts on California's ecosystems that are still present today.[14] However, modern forest management in California's wilderness areas does not reflect this reality.

In order to manage California wilderness areas to preserve their natural and untrammeled character, as required by the Wilderness Act, federal land management agencies should adopt interpretations of the Act that allow prescribed burning and Indigenous cultural burning in areas where it existed pre-colonialism. This interpretation would be consistent with the Act's text and spirit because it would allow management of these areas according to their true "natural condition[s]," and would ensure that wilderness areas remain "unimpaired" as an "enduring resource."[15] Interpreting the Wilderness Act this way will likely lead to lawsuits by environmental groups, but land management agencies should be able to defend against these lawsuits because of California's unique history, the history of the Act, and recognition of the importance of prescribed burns in forest management in California before and after the Wilderness Act was passed.

Source: U.S. Department of Agriculture Advertising Council (1954).

Part I of this Article describes California's relationship with human-ignited fire prior to the year 1900 and the early impacts of colonialism on California's fire-adapted ecosystems. Part II discusses federal fire policy in California post-1900 and the current state of the wildfire problem in California. Part III analyzes the goals of the Wilderness Act and the context behind its passing, including the status of prescribed fire science at the time the Wilderness Act was passed.

Part IV analyzes the likelihood of success of lawsuits challenging prescribed fires in wilderness areas after *Loper Bright Enterprises v. Raimondo*.[16] Agency approvals of prescribed fires in wilderness areas should be afforded respect under *Skidmore v. Swift and Company*[17] because they are consistent with early interpretations of the Wilderness Act, reflect the agency's careful consideration of California's unique ecosystems and history, and are backed by decades of scientific research—including research prior to passage of the Wilderness Act. Part V concludes, and an Appendix addresses California law governing potential liability for prescribed burns.

I. Fire in California Pre-1900

> [S]ince earlier days, the white man has caused significant ecological changes, some of which threaten sound management and protection.[18]

Fire's role in an ecosystem is that of an ecological process.[19] Individual fires are discrete events, but repeated patterns of fires and their properties have long-term ecosystem impacts.[20] Fire patterns are influenced by regional climate, geography, and vegetation, which come together to create what is known as a "fire regime."[21] Fire regimes put unique pressures on the organisms in an ecosystem, and over time the organisms adapt to their region's unique fire regime.[22] Fires have been part of earth's ecosystems for around 400 million years, creating plant and animal species that were adapted to their unique fire regimes long before humans walked the earth.[23] In this respect, humans are not unlike other animal species—hominids evolved with fire in their landscapes and adapted to its presence.[24]

Where humans differ sharply from other species is our intentional ignition and manipulation of fire to our advantage.[25] Hominin use of fire predates homo sapiens as a spe-

& William Tripp, *Facilitating Prescribed Fire in Northern California Through Indigenous Governance and Interagency Partnerships*, 4 Fire 1, 3-4 (2021).

14. Fire in CA Ecosystems, *supra* note 13, at 388-92; Marks-Block & Tripp, *supra* note 13, at 3-4.
15. 16 U.S.C. §1131(a)-(c).
16. 144 S. Ct. 2244 (2024).
17. 323 U.S. 134 (1944).
18. Harold Weaver, *Fire as an Enemy, Friend, and Tool in Forest Management*, 53 J. Forestry 499, 504 (1955).
19. Neil G. Sugihara et al., Fire in California's Ecosystems 57 (1st ed. 2006).
20. *Id.*
21. *Id.* at 60-69.
22. *Id.* at 60.
23. Claire M. Belcher, Fire Phenomena and the Earth System 233-35, 237 (2013); Stephen J. Pyne, Fire: A Brief History 11 (2019).
24. Pyne, *supra* note 23, at 29-31; Richard W. Wrangham & Rachel Naomi Carmody, *Human Adaptation to the Control of Fire*, 19 Evolutionary Anthropology 187, 189-91 (2010).
25. Wrangham & Carmody, *supra* note 24, at 187, 189.

cies and goes back around 400,000 years.[26] The consensus among anthropological scholars is that early use of fire by hominins centered around cooking food.[27] Cooking food has numerous biological benefits, including making food easier to digest, killing parasites and bacteria, and increasing the energetic value of foods.[28] Over time, human use of fire for cooking grew into large-scale ecosystem manipulation.[29] Human burning was so extensive in many places that it became a major ecosystem influence, with the local flora and fauna adapting to human-influenced fire regimes.[30] Therefore, in many places, "[t]he notion of 'restoring natural fire regimes' without anthropogenic influence is neither possible nor useful."[31]

The first humans to walk in North America would have brought hundreds of thousands of years of knowledge of how to create and wield fire with them.[32] The archaeological record in California reveals dramatic human influences on its ecosystems beginning as soon as humans came on the scene, including influences from extensive use of fire in many areas.[33] For tens of thousands of years prior to European colonialism, Indigenous peoples in California used fire to "keep the country open; provide forage for wildlife; drive and capture animals; fell trees; manage pests and diseases; encourage the growth of plant material that could be used to manufacture cultural items; [and] enhance the growth of plants, plant parts, and fungi used for food and medicine."[34] The extent, frequency, and intensity of human use of fire varied across California ecosystems, but it was present in nearly the entire state.[35] Over time, Indigenous use of fire had significant ecological effects, and by the time of European colonization, it was a deeply interconnected part of California's ecosystems.[36]

Europeans began altering California's fire regimes from the moment they landed on its shores, both unintentionally and intentionally.[37] The first major impacts on California's fire regimes came from the spread of disease, which preceded the Spanish invasion of California by hundreds of years.[38] European diseases decimated the populations of the Indigenous peoples whose fire practices the local flora were adapted to.[39]

During the mission era, the Spanish "sought to convert the land as well as the natives, the one being essential to the other."[40] This forced separation of Indigenous communities from their land by Spanish colonizers meant that these communities were no longer able to practice focused and intentional ecosystem management.[41] In areas adapted to heavy use of fire by Indigenous communities, the loss of so many Indigenous lives from murder and disease meant that the species composition in the areas changed rapidly, increasing the risk of hazardous fires.[42]

The Spanish also brought with them a myriad of invasive species that colonized the Californian environment, changing its fire regimes alongside the Europeans.[43] The genocide of California's Indigenous peoples and the corresponding dramatic decrease in cultural burning and ecosystem management meant that invasive plant and animal species were able to take hold quickly and outcompete native species.[44] Invasive plant species spread rapidly across California and substantially increased fuel loads in many of its ecosystems, leading to an increased risk of severe wildfires.[45]

European economic exploitation of both domesticated and native animal species in California played a parallel role in altering the state's fire regimes. Europeans hunted native California herbivores like deer, elk, and bighorn sheep relentlessly, decimating their populations, and removed keystone species like the California grizzly bear from the state entirely.[46] Simultaneously, large numbers of domesticated species were introduced to the state.[47] Populations of feral horses, cattle, and pigs grew rapidly and began damaging California's ecosystems.[48] These feral populations "grazed largely unhindered across the landscape, where they consumed, disturbed, and trampled native vegetation."[49] This change in animal species composition created an environment where invasive weeds thrived and native plant species withered, further altering California's fire regimes.[50]

As Spanish colonialism gave way to the gold rush era and to dramatic economic exploitation of California by American colonizers, California's ecosystems experienced further

26. Ran Barkai et al., *Fire for a Reason*, 58 Current Anthropology 314, 315 (2017).
27. *Id.*
28. Wrangham & Carmody, *supra* note 24, at 188; Pyne, *supra* note 23, at 129; Barkai et al., *supra* note 26, at 315.
29. David M.J.S. Bowman et al., *The Human Dimension of Fire Regimes on Earth*, 38 J. Biogeography 2223, 2224 (2011).
30. *Id.* at 2225.
31. *Id.*
32. Fire in CA Ecosystems, *supra* note 13, at 381.
33. Mark Hardiman et al., *Fire History on the California Channel Islands Spanning Human Arrival in the Americas*, 371 Phil. Transactions Royal Soc'y B 1, 8-9 (2016); see *supra* note 12, for discussion on the timing of the peopling of California and the Americas.
34. Fire in CA Ecosystems, *supra* note 13, at 382.
35. Zachary L. Steel et al., *The Fire Frequency-Severity Relationship and the Legacy of Fire Suppression in California Forests*, 6 Ecosphere 1, 2-3 (2015).
36. Fire in CA Ecosystems, *supra* note 13, at 388-92.
37. *Id.* at 399.
38. William Preston, *Serpent in the Garden: Environmental Change in Colonial California*, 76 Cal. Hist. 260, 262 (1997).
39. *Id.*; Fire in CA Ecosystems, *supra* note 13, at 399.
40. Stephen J. Pyne, World Fire: The Culture of Fire on Earth 224 (1995).
41. Fire in CA Ecosystems, *supra* note 13, at 400.
42. *Id.* at 399-400.
43. Preston, *supra* note 38, at 262.
44. *Id.* at 268-69.
45. Kent G. Lightfoot et al., *European Colonialism and the Anthropocene: A View From the Pacific Coast of North America*, 4 Anthropocene 101, 108, 112 (2013).
46. California Department of Fish and Wildlife, *Sierra Nevada Bighorn Sheep Facts*, https://wildlife.ca.gov/Conservation/Mammals/Bighorn-Sheep/Sierra-Nevada/Recovery-Program/Sheep-Facts (last visited Feb. 2, 2025); California Department of Fish and Wildlife, *Tule Elk*, https://wildlife.ca.gov/Conservation/Mammals/Elk/Tule-Elk (last visited Feb. 2, 2025); David J. Mattson & Troy Merrill, *Extirpations of Grizzly Bears in the Contiguous United States, 1850-2000*, 16 Conservation Biology 1123, 1124, 1126 (2002); Lightfoot et al., *supra* note 45, at 104.
47. Lightfoot et al., *supra* note 45, at 105.
48. *Id.*
49. *Id.*
50. *Id.*

alteration.[51] To support farming, mining, and a burgeoning population, dams and irrigation canals were erected across the state throughout the 1800s, altering the state's hydrologic systems and further devastating native plant and animal species.[52] At the same time, California faced massive deforestation as its growing population demanded lumber for buildings and hearths, and as agricultural enterprises took over previously forested environments.[53] During the late 1800s, these changes in California began creating large and destructive wildfires.[54] The federal government began to fear that the nation's forests would be destroyed by logging and fires, leading the U.S. Congress to authorize the creation of forest reserves in 1891.[55]

II. Fire in California Post-1900

> For the last century, humans have been conducting an unwitting experiment in fuels manipulation across the western U.S.[56]

The establishment of the forest reserve system in 1891 ushered in a century of fire suppression by the federal government.[57] Forest reserves were created partially due to Congress' belief that the nation's forests were being destroyed by fires, and early forest managers took this to heart.[58] The first chief of the U.S. Forest Service, Gifford Pinchot, believed one of his organization's purposes was to ensure that the nation's "timber was not burnt up."[59] It was under Pinchot's leadership that the Forest Service began its era of systematic fire suppression and prioritizing fire suppression as the Forest Service's "number one job."[60]

During the 1900s, "fire suppression effectively excluded fire from many western U.S. forest ecosystems."[61] This policy was supported by the science of the time. In 1924, the U.S. Department of Agriculture (USDA) commissioned a study by forest scientists to analyze the effectiveness of prescribed burning (then referred to as "light-burning") versus fire suppression as forest management strategies in California.[62] The study concluded that while "[s]ome beneficial uses of fire appear," the cost of prescribed fire was nonetheless "greater than the cost of fire exclusion" for California forests.[63] This conclusion was based on observations that fires result "in the loss of timber resources," and that "each fire paves the way for greater and more serious losses from subsequent fires."[64] This study contributed to Congress passing the Clarke-McNary Act in 1924, which created a national policy of fire suppression that continued until the 1960s.[65]

Interest in prescribed fires started to spark among federal forest managers in the 1960s, when the National Park Service commissioned a report on elk management in Yellowstone National Park.[66] This report, now called the Leopold Report, revealed fire suppression as a major cause of habitat loss and unhealthy forests in the park.[67] The National Park Service began experimenting with prescribed fire in national parks shortly after this report, and used prescribed fire regularly in the 1960s and early 1970s.[68] Other federal land management agencies soon followed suit. The Forest Service began incorporating prescribed fires and a "let burn" policy into its forest management plans in the mid-1970s, including for the Gila and Selway-Bitterroot Wilderness Areas, although the Forest Service was more conservative than the National Park Service in its actual use of prescribed fires during this period and rarely conducted prescribed burns in wilderness areas.[69]

This pro-fire blip was short-lived, however, as federal land management agencies significantly reduced their use of prescribed fires in the late 1970s after large and destructive wildfires burned in the Yellowstone and Rocky Mountain National Parks and in the Lewis and Clark National Forest.[70] This ushered in an era of fire suppression that continued through the 1990s.[71] Of course, some of this fire suppression was necessary to protect human lives and settlements. The population of California's wildland-urban interface, which is the area where homes are exposed to or intermingled with wildland vegetation, increased dramatically over the 20th century.[72] This meant more and more people were, and still are, living close to wildfire-prone areas in the state, increasing the pressure on land managers to suppress wildfires that could reach human settlements.[73]

This is not to say, however, that federal land management agencies failed to utilize beneficial fire in forest management throughout all of the late 1900s or in the 2000s. The Forest Service conducted 77,278 prescribed fires from

51. Fire in CA Ecosystems, *supra* note 13, at 400.
52. David P. Billington et al., The History of Large Federal Dams: Planning, Design, and Construction 9 (2005); Rebecca M. Quinones et al., *Dam Removal and Anadromous Salmonid (*Oncorhynchus *spp.) Conservation in California*, 25 Revs. in Fish Biology & Fisheries 195, 196-97 (2015).
53. Preston, *supra* note 38, at 285.
54. Fire in CA Ecosystems, *supra* note 13, at 400.
55. *Id.*
56. Steel et al., *supra* note 35, at 3.
57. Fire in CA Ecosystems, *supra* note 13, at 400.
58. Gerald W. Williams, Forest Service Office of Communication, The USDA Forest Service—The First Century 8 (2005), https://www.fs.usda.gov/sites/default/files/media/2015/06/The_USDA_Forest_Service_TheFirstCentury.pdf.
59. Fire in CA Ecosystems, *supra* note 13, at 400.
60. *Id.*
61. Alexandra D. Syphard et al., *Human Influence on California Fire Regimes*, 17 Ecological Applications 1388, 1389 (2007).
62. Stuart B. Show & Edward I. Kotok, USDA, Bulletin No. 1294, The Role of Fire in the California Pine Forests 2-3 (1924), https://archive.org/details/roleoffireincali1294show/mode/2up.
63. *Id.* at 79.
64. *Id.* at 78.
65. Fire in CA Ecosystems, *supra* note 13, at 401.
66. *Id.*; Aldo S. Leopold et al., U.S. Department of the Interior, Wildlife Management in the National Parks (1963), https://npshistory.com/publications/leopold_report.pdf.
67. Fire in CA Ecosystems, *supra* note 13, at 401; Leopold et al., *supra* note 66.
68. Fire in CA Ecosystems, *supra* note 13, at 401-02.
69. Jan W. van Wagtendonk, *The History and Evolution of Wildland Fire Use*, 3 Fire Ecology 3, 5-7 (2007); Scott L. Stephens & Lawrence W. Ruth, *Federal Forest-Fire Policy in the United States*, 15 Ecological Applications 532, 533 (2005).
70. van Wagtendonk, *supra* note 69, at 8.
71. *Id.* at 8-11.
72. Alexandra D. Syphard et al., *What Makes Wildfires Destructive in California?*, 5 Fire 133, 134 (2022).
73. Fire in CA Ecosystems, *supra* note 13, at 509.

1996 to 2014, treating more than 23 million acres.[74] Of these fires, only 330 escaped, with 71% of those escapes happening before 2003.[75] Despite this low escape rate, fear of escapes is a major barrier federal agencies face when considering prescribed burns.[76] This fear makes sense—prescribed fire escapes are destructive, embarrassing, and expensive for the federal government. This is especially true given that under the Federal Tort Claims Act, federal forest managers can be held liable for escaped prescribed burns in California, although they tried valiantly to escape liability in the 1990s.[77]

Fear of escape is just one of many barriers federal forest managers face when trying to utilize prescribed burning. Federally conducted prescribed burns must also comply with federal environmental laws, including the Clean Air Act, Endangered Species Act, and National Environmental Policy Act.[78] These statutes treat prescribed fire as an agency action and a potential harm to the environment, as opposed to treating it as a natural and fundamental ecosystem process.[79] These barriers have led to a preference for mechanical fuels treatment over burning and to inadequate use of prescribed fire in many parts of California.[80] Additionally, managers of wilderness areas face the barrier of the uncertain legal status of prescribed burns in wilderness areas under the Wilderness Act.[81]

Climate change, the environmental impacts of colonialism, and the effects of a century of intense fire suppression have altered fire regimes across California and turned the state into a tinderbox, making prescribed fires more necessary than ever.[82] The past 20 years have seen 16 of California's most destructive recorded wildfires and 18 of California's largest recorded wildfires.[83] More than 24 million acres in the United States were consumed by wildfires from 2020 to 2022,[84] and nearly 30% of those acres were in California.[85] Federal land management agencies have responded to the wildfire crisis in California by increasing their use of prescribed fire and mechanical fuels reduction, and by attempting to standardize wildfire-reduction programs across agencies.[86]

However, the Forest Service has been artificially inflating its wildfire-reduction treatment numbers in reports to Congress,[87] and the Forest Service has halted all prescribed burning in California "for the foreseeable future" as of October 2024 due to their desire to prioritize fire suppression at this time.[88] The timing of this announcement was ironic, the same week the Forest Service also announced that they are "investing in projects . . . that reduce risks to communities, like prescribed fire."[89] Currently, federal agencies are reluctant to increase prescribed fires in wilderness areas, despite a pressing need.[90]

The need to increase prescribed burning is especially pressing in California, where fire suppression is at odds with the pre-colonialism ecosystems of the state and where large and destructive wildfires are becoming commonplace. Although there are many barriers to increasing prescribed fires in California wilderness areas, the Wilderness Act should not be one of them. Prescribed burning in

74. Anne E. Black et al., *Organizational Learning From Prescribed Fire Escapes: A Review of Developments Over the Last 10 Years in the USA and Australia*, 6 Current Forestry Reps. 41, 46 (2020).
75. *Id.*
76. Crystal A. Kolden, *We're Not Doing Enough Prescribed Fire in the Western United States to Mitigate Wildfire Risk*, 2 Fire 1, 7 (2019).
77. Anderson v. United States, 55 F.3d 1379, 1384 (9th Cir. 1995); see Appendix for more information regarding liability for prescribed burns.
78. Sara A. Clark et al., *Realignment of Federal Environmental Policies to Recognize Fire's Role*, 20 Fire Ecology art. 74, at 13-14 (2024).
79. *Id.* at 4, 9.
80. Kolden, *supra* note 76, at 7-8; Scott L. Stephens, *The Effects of Forest Fuel-Reduction Treatments in the United States*, 62 BioScience 549, 550-51 (2012).
81. Western Colorado University & USDA Forest Service, Prescribed Fire and U.S. Wilderness Areas: Barriers and Opportunities for Wilderness Fire Management in a Time of Change 5-6 (2023), https://www.fs.usda.gov/rm/pubs_journals/2023/rmrs_2023_wcu_alwri.pdf [hereinafter Prescribed Fire and U.S. Wilderness Areas].
82. Arash Modaresi Rad et al., *Human and Infrastructure Exposure to Large Wildfires in the United States*, 6 Nature Sustainability 1343, 1343-45 (2023); Christopher C. French, *America on Fire: Climate Change, Wildfires & Insuring Natural Catastrophes*, 54 U.C. Davis L. Rev. 817, 863-64 (2020); Steel et al., *supra* note 35, at 19-20.
83. Although there is some overlap, the list of the most destructive wildfires is distinct from the list of the largest wildfires. California Department of Forestry and Fire Protection, Top 20 Most Destructive California Wildfires (2025), https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/-/media/calfire-website/our-impact/fire-statistics/top20_destruction.pdf; California Department of Forestry and Fire Protection, Top 20 Largest California Wildfires (2024), https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/-/media/calfire-website/our-impact/fire-statistics/top-20-largest-ca-wildfires.pdf.
84. National Interagency Coordination Center, Wildland Fire Summary and Statistics Annual Report 2020, at 6 (2020), https://www.nifc.gov/sites/default/files/NICC/2-Predictive%20Services/Intelligence/Annual%20Reports/2020/annual_report_0.pdf [hereinafter NICC Report 2020] ("[r]eported wildfires consumed 10,122,336 acres nationally"); National Interagency Coordination Center, Wildland Fire Summary and Statistics Annual Report 2021, at 7 (2021), https://www.nifc.gov/sites/default/files/NICC/2-Predictive%20Services/Intelligence/Annual%20Reports/2021/annual_report_0.pdf [hereinafter NICC Report 2021] ("[r]eported wildfires consumed 7,125,643 acres nationally"); National Interagency Coordination Center, Wildland Fire Summary and Statistics Annual Report 2022, at 6 (2022), https://www.nifc.gov/sites/default/files/NICC/2-Predictive%20Services/Intelligence/Annual%20Reports/2022/annual_report.2.pdf [hereinafter NICC Report 2022] ("[r]eported wildfires consumed 7,577,183 acres nationally").
85. NICC Report 2020, *supra* note 84, at 36-37 (showing that 4,092,150 acres burned in California in 2020); NICC Report 2021, *supra* note 84, at 37-38 (showing that 2,233,666 acres burned in California in 2021); NICC Report 2022, *supra* note 84, at 38 (showing that 309,287 acres burned in California in 2022); this totals to 6,635,103 acres burned in California from 2020-2022.
86. Bruce Greco, Northern Arizona University Ecological Restoration Institute, Planning for and Implementing Prescribed Fire in Fire-Dependent Forests 3 (2018), https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd624550.pdf.
87. Adiel Kaplan & Monica Hersher, *The Forest Service Is Overstating Its Wildfire Prevention Progress to Congress Despite Decades of Warnings Not To*, NBC News (Aug. 9, 2022), https://www.nbcnews.com/news/investigations/forest-service-overstating-wildfire-prevention-progress-congress-decad-rcna41576.
88. Danielle Venton, *Forest Service Halts Prescribed Burns in California. Is It Worth the Risk?*, KQED (Oct. 24, 2024), https://www.kqed.org/science/1994972/forest-service-halts-prescribed-burns-california-worth-risk.
89. Press Release, USDA, USDA Forest Service Announces Open Grant Opportunity to Strengthen Forest Products Economy and Forest Sector Jobs as Part of Biden-Harris Investing in America Agenda (Oct. 24, 2024), https://www.usda.gov/about-usda/news/press-releases/2024/10/24/usda-forest-service-announces-open-grant-opportunity-strengthen-forest-products-economy-and-forest.
90. Clare E. Boerigter et al., *Untrammeling the Wilderness: Restoring Natural Conditions Through the Return of Human-Ignited Fire*, 20 Fire Ecology art. 76, at 2 (2024).

line with historical Indigenous fire practices in California should not be considered "trammeling" under the Wilderness Act, and should instead be considered ecosystem restoration and management.[91] The state of forest science on prescribed burns when the Wilderness Act was passed, the legislative history of the Wilderness Act, and early interpretations of the Act support this interpretation.

III. The Wilderness Act and Fire Science

> [W]e cannot put our wilderness areas in "cold storage"—it is just not quite that simple.[92]

The Wilderness Act was passed in 1964 to "secure for the American people of present and future generations the benefits of an enduring resource of wilderness."[93] This desire to "secure" the wilderness stemmed from growing fear among environmentalists that natural areas were being threatened by tourism and industrial interests.[94] The era leading up to the Wilderness Act's passage saw an explosion in tourism at national parks, with national parks seeing 6 million visitors in 1943, 45 million visitors in 1953, and 101 million visitors in 1963, the year before the Wilderness Act passed.[95] This increase was largely attributed to the "democratization of tourism" that came with an increasingly interconnected network of national highways and the affordability of cars for the American masses.[96] The wilderness was becoming commodified, as Americans sought out "windshield wilderness"—during this period the National Park Service built more and more roads to satiate visitors,[97] and even cut holes through giant sequoia and redwood trees for visitors to drive their cars through.[98]

At the same time, federal lands were facing threats from the industrial sector. The United States' economy and its population were booming after World War II, and mining, oil drilling, and timber harvesting were increasing rapidly on and off federal lands.[99] During this period, timber companies were submitting proposals to shrink national parks to allow more logging, and the Bureau of Reclamation was pushing for more dam projects on federal land.[100] Proposed projects included dams that would have flooded parts of Glacier National Park, the Grand Canyon, and Dinosaur National Monument.[101] After environmental groups successfully stopped a dam from being built in Dinosaur National Monument, they grew emboldened and started looking for more proactive strategies for environmental protection.[102]

Howard Zahniser, the author of the Wilderness Act, expressed this sentiment in a speech he delivered to the Sierra Club in 1951, where he said:

> Let's try to be done with a wilderness preservation program made up of a sequence of overlapping emergencies, threats, and defense campaigns! Let's make a concerted effort for a positive program that will establish an enduring system of areas where we can be at peace and not forever feel that the wilderness is a battleground.[103]

The idea behind the Wilderness Act was to set up a protective system that would keep certain areas safe from development, industrial exploitation, and excessive recreation.[104] The final version of the Wilderness Act directly addressed the concerns about excessive car-based tourism and commercial exploitation of the wilderness by banning roads and commercial uses in wilderness areas.[105]

The passing of the Wilderness Act was no small feat: the bill underwent 66 revisions over the course of eight years before it became law.[106] From when the bill was first proposed, it faced strong opposition from western states and industrial groups, who were concerned the bill would "lock up" natural resources and prevent exploitation of timber, oil and gas, and minerals on federal lands.[107] Recreational groups also argued that wilderness areas would be effectively "useless" because the proposed Wilderness Act would prohibit roads, hotels, ski resorts, and recreational facilities like tennis courts.[108] At a hearing before the U.S. Senate on the proposed Wilderness Act in June 1957, the bill's sponsor Sen. Hubert Humphrey (D-Minn.), who went on to serve as vice president to Lyndon B. Johnson, gave a speech where he said that "the tremendous pressures for economic gain, the tremendous pressures of population, the tremendous pressures of industrialization, are cutting deeply into our great natural resources . . . our wilderness areas."[109]

At the same hearing, David R. Brower, then-executive director of the Sierra Club, gave a statement to the Senate in support of the Wilderness Act. Discussing the inadequacy of existing protections for wilderness under the National Park and National Wildlife Refuge Systems, which opponents of the Wilderness Act argued were already enough

91. *Id.* at 7-8.
92. Heinselman, *supra* note 1, at 443.
93. 16 U.S.C. §1131(a).
94. Nathalie Massip, *The 1964 Wilderness Act, From "Wilderness Idea" to Governmental Oversight and Protection of Wilderness*, 20 Miranda 1, 2-4 (2020), https://journals.openedition.org/miranda/26787.
95. National Park Service, *About Us—Visitation Numbers*, https://www.nps.gov/aboutus/visitation-numbers.htm (last updated Feb. 22, 2024).
96. Massip, *supra* note 94, at 3.
97. *Id.*
98. National Park Service, *Sequoia & Kings Canyon National Parks California—The Myth of the Tree You Can Drive Through*, https://www.nps.gov/seki/faq-tunnel.htm (last updated Aug. 9, 2023).
99. Massip, *supra* note 94, at 3.
100. *Id.*
101. *Id.*
102. *Id.* at 4.
103. Douglas W. Scott, Campaign for America's Wilderness, A Wilderness-Forever Future: A Short History of the National Wilderness Preservation System 10 (2001), https://www.umt.edu/media/wilderness/toolboxes/documents/awareness/Doug%20Scott-A_Wilderness-Forever_Future-history.pdf.
104. *Id.* at 2-3.
105. 16 U.S.C. §1133(c).
106. Wilderness Society, *The Wilderness Act*, https://www.wilderness.org/articles/article/wilderness-act (last visited Feb. 2, 2025).
107. *Congress Passes Wilderness Act*, 20 CQ Almanac 485 (1964), https://library.cqpress.com/cqalmanac//document.php?id=cqal64-1303184.
108. *Id.*
109. *National Wilderness Preservation Act: Hearings Before the Senate Committee on Interior and Insular Affairs*, 85th Cong. (1957) (statement of Hon. Hubert H. Humphrey, U.S. Senator from the State of Minnesota) [hereinafter Statement of Senator Humphrey].

to preserve the natural state of the parks, Brower said that "one striking exception to the trend towards naturalness in park preservation" was that "[f]ire is declared evil and destructive just as coyotes and mountain lions were designated as evil and destructive in parks 25 years ago."[110] Brower hoped that "[g]round fires someday will be reinstated in the regime of natural factors permitted to maintain the parks."[111]

While the idea that fire is a destructive force was present in the Senate and congressional hearings on the Wilderness Act, these discussions centered predominantly around the proposed rule that wilderness areas be roadless and the firefighting concerns stemming from that rule.[112] For instance, Richard E. McArdle, a Forest Service fire chief, spoke in opposition of the Wilderness Act's roadless requirement at a 1958 hearing before the Senate, saying, "[f]ire, insects, and disease are no respecters of boundaries and occur on wilderness areas as well as other national-forest land. Fire protection without roads is costly, time consuming, and hazardous."[113]

The roadless requirement and its relationship with fire protection was still contentious five years later in 1963, when Spencer Smith, the secretary of the Citizens Committee on Natural Resources, testified before the Senate on the committee's concerns regarding the protection of wilderness areas.[114] The committee was of the belief that roads were necessary for firefighting, and worried that, under the Wilderness Act, preemptive roadbuilding to prepare for fires would be prohibited and that "you can't build roads after a fire starts."[115]

As enacted, the Wilderness Act does allow for temporary roads as needed to administer wilderness areas, including for fire protection.[116] However, McArdle and Smith's concerns would also be addressed by use of prescribed fire in wilderness management. This idea was somewhat broached by John B. Barnard, the first assistant attorney general in Colorado at the time, when he spoke in opposition to the Wilderness Act before the Senate in February 1961.[117] Barnard, whose legal practice was focused on water law,[118] was concerned that the Wilderness Act's strict prohibitions would prevent more of the "experiments . . . in the control of disastrous fire and increasing water supply by controlled brush burning" that he had observed in Colorado.[119]

Barnard's concern did end up getting addressed in the Wilderness Act, which states that "wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use."[120] However, the current need for prescribed fire in wilderness areas goes far beyond the need for prescribed burns to be studied scientifically—this work has been done and has shown their benefits—the need now is prescribed fire science to be put into practice. While Barnard's statement to the Senate made it seem as though prescribed burning was on the fringes of forest science in the 1960s, this is not the case. Even as far back as 1924, the USDA study discussed above referred to the purported benefits of "light-burning" as one of "[t]he old misconceptions regarding the role of fire," indicating that some forest scientists may have already recognized the value of prescribed burning in California by the early 1900s.[121]

By the mid-1900s, prescribed fire experimentation by forest scientists was well underway. In the 1940s, Harold Biswell, then a Forest Service research scientist, was conducting experimentation in Georgia on the benefits of prescribed fire in national forests.[122] Biswell was originally skeptical about prescribed burns, and believed fire to be antithetical to forest management; he later wrote about these early experiments that "[a]t the time the idea of burning was fairly new to me and I looked upon fire as the arch enemy of forests and forestry."[123] His mind was changed, however, by observing that local farmers and Indigenous people had been using prescribed burns extensively in Georgia, to the great benefit of the forests there.[124] These observations and the experiments he conducted in Georgia convinced Biswell of prescribed fire's potential benefits, and he took that conviction with him when he became a professor at the University of California, Berkeley's Department of Forestry and Conservation, where he continued to research prescribed fire.[125]

At Berkeley, Biswell spent seven years, from 1951 to 1958, conducting prescribed burn experiments in California to study their suitability in California's forests and to compare his findings with what he observed in Georgia.[126] Biswell wrote that prescribed fire in California had not yet been widely studied, with the 1924 USDA study discussed above being a notable exception.[127] He also noted that, although "[a]t that time 'light burning' was not found useful" by the USDA study, "great changes have taken place

110. *National Wilderness Preservation Act: Hearings Before the Senate Committee on Interior and Insular Affairs*, 85th Cong. (1957) (statement of David R. Brower, Executive Director, Sierra Club) [hereinafter Statement of David R. Brower].
111. *Id.*
112. *National Wilderness Preservation Act: Hearing Before the Senate Committee on Interior and Insular Affairs*, 85th Cong. (1958) (statement of Richard E. McArdle, Chief, USDA Forest Service) [hereinafter Statement of Richard E. McArdle]; *National Wilderness Preservation Act: Hearings Before the Senate Committee on Interior and Insular Affairs*, 88th Cong. (1963) (statement of Spencer M. Smith Jr., Secretary, Citizens Committee on Natural Resources) [hereinafter Statement of Spencer M. Smith].
113. Statement of Richard E. McArdle, *supra* note 112.
114. Statement of Spencer M. Smith, *supra* note 112.
115. *Id.*
116. 16 U.S.C. §1133(c).
117. *The Wilderness Act: Hearings Before the Senate Committee on Interior and Insular Affairs*, 87th Cong. (1961) (statement of John B. Barnard, First Assistant Attorney General, State of Colorado).
118. Archives West, *John B. Barnard Papers, 1940-1962*, https://archiveswest.orbiscascade.org/ark:80444/xv200227 (last visited Feb. 2, 2025).
119. Statement of Spencer M. Smith, *supra* note 112.
120. 16 U.S.C. §1133(b).
121. Show & Kotok, *supra* note 62, at 79.
122. Scott L. Stephens et al., *Introduction to the Article by Harold Biswell: Prescribed Burning in Georgia and California Compared*, 17 Fire Ecology art. 9, at 1 (2021).
123. *Id.*
124. Rebecca Miller, *Prescribed Burns in California: A Historical Case Study of the Integration of Scientific Research and Policy*, 3 Fire art. 44, at 4 (2020).
125. *Id.*
126. Harold Biswell, *Prescribed Burning in Georgia and California Compared*, 11 J. Range Mgmt. 293 (1959).
127. *Id.* at 294.

since then and some of the reasons advanced at that time for not burning are no longer valid."[128] In 1959, Biswell's research in California revealed that prescribed fires were useful for reducing forest density and thereby allowing trees to grow larger; reducing fuels loads; and reducing "wildfire hazard and risk."[129] Biswell recommended further study into prescribed burning across other California ecosystems and proposed that prescribed burning should be included in forest management plans in California.[130]

Around the same time, Harold Weaver, a forest scientist with the Bureau of Indian Affairs, was conducting his own experiments on prescribed fire.[131] Weaver published a number of other studies on prescribed fire in the 1940s and 1950s, including one in 1947 in which he studied fire's role as a thinning agent in the Pacific Northwest.[132] Weaver conducted the study from the perspective of a logger, trying to determine how to produce large healthy trees.[133] He first concluded that "[o]bviously, the unburned [stand of trees] is practically worthless" because "[it] has been suppressed and stagnated for so long."[134] He also observed that the trees in the burned stand were "considerably larger than the average tree of the unburned [stand]."[135] Weaver then suggested that, as a solution to the "increasingly critical" "fire protection problem," "controlled fire can be applied successfully for the proper thinning" of overly dense forests to increase timber production and reduce the risk of severe wildfires.[136] Weaver also concluded in a 1951 study on the impacts of prescribed fire on perennial grasses in ponderosa pine forests that prescribed burning "appears beneficial through removal of competing vegetation and pine-needle mats."[137]

By 1955, Weaver's perspective on prescribed fire came into alignment with what prescribed fire advocates are still pushing for today, almost 70 years later.[138] He wrote that "the white man" had drastically changed fire-dependent ecosystems by excluding fire, causing "[f]ire hazard [to increase] tremendously."[139] Weaver believed "this to be the most threatening and potentially dangerous change that has occurred since early days."[140] He also believed "that success in forest management is dependent on knowledge of fire in all of its aspects, not only in its control as a destructive agent but including its ecological role . . . and possible benefits that may result through its employment as a tool . . . in regeneration and hazard reduction."[141] Therefore, Weaver concluded, prescribed fire "should also be used under proper control towards correction of adverse conditions . . . where, since earlier days, the white man has caused significant ecological changes, some of which threaten sound management and protection."[142]

Biswell and Weaver became friends during this period and often reviewed each other's work.[143] The two scientists published numerous articles on the benefits of prescribed fires in the 1940s, 1950s, and 1960s.[144] Although the commercial timber industry fought hard against this research, Biswell gained an academic following at the University of California, Berkeley School of Forestry and at the University of California, Davis School of Agriculture.[145] Faculty at both schools supported Biswell when he was threatened with dismissal over the controversy his work stirred up in the timber industry, and many of Biswell's students went on to devote their careers to the study of fire and its beneficial uses in forest ecosystem management.[146] While the timber industry's attempt to silence Biswell and Weaver shows that prescribed fire was not entirely in vogue in the period before the Wilderness Act was passed, Congress enacted the Wilderness Act to shield America's forests from the very same industry that was fighting against their research.

Even government-funded research in the early 1960s was beginning to catch on to the benefits of prescribed burning. One example of this is the Leopold Report, which was commissioned by the National Park Service in 1963 to study elk management in Yellowstone National Park after elk populations began increasing at an alarming rate.[147] The committee that prepared the report was headed by now-famous conservationist Aldo Leopold, after whom the committee and the report are named.[148] The Leopold Commission produced a 14-page report to Secretary of the Interior Stewart Udall describing how the commission believed wildlife management by the National Park Service should look going forward.[149]

The Leopold Report's primary focus was on controlling the elk population in Yellowstone.[150] One way of doing this was to reduce undergrowth in Yellowstone's forests, which the commission recommended doing via prescribed burns.[151] The commission wrote that "when the objective is to manage 'invisibly'—that is, to conceal the signs of management. Controlled burning is the only method that may have extensive application."[152] As discussed above,

128. *Id.*
129. *Id.* at 294-97.
130. *Id.* at 297.
131. Miller, *supra* note 124, at 4.
132. Harold Weaver, *Fire—Nature's Thinning Agent in Ponderosa Pine Stands*, 45 J. Forestry 437 (1947).
133. *Id.* at 437, 443.
134. *Id.* at 443.
135. *Id.*
136. *Id.* at 443-44.
137. Harold Weaver, *Observed Effects of Prescribed Burning on Perennial Grasses in the Ponderosa Pine Forests*, 49 J. Forestry 267, 269-71 (1951).
138. *Compare* Weaver, *supra* note 18, *with* Boerigter et al., *supra* note 90, *and* Kolden, *supra* note 76, at 7.
139. Weaver, *supra* note 18, at 501-02, 504.
140. *Id.* at 502.
141. *Id.* at 499.
142. *Id.* at 504.
143. Miller, *supra* note 124, at 4.
144. *Id.*
145. *Id.* at 4-6, 12.
146. *Id.*
147. Fire in CA Ecosystems, *supra* note 13, at 401-02.
148. Heinselman, *supra* note 1, at 443; National Park System Advisory Board Science Committee, Revisiting Leopold: Resource Stewardship in the National Parks 3-4 (2012), https://www.nps.gov/calltoaction/pdf/leopoldreport_2012.pdf.
149. Leopold et al., *supra* note 66.
150. *Id.*
151. *Id.* at 7-8.
152. *Id.* at 7.

this report led to an increase in prescribed burning by the National Park Service.[153]

This understanding colored one of the first interpretations of the Wilderness Act following its passage. Dr. Miron L. Heinselman was a forest ecologist and research scientist for the Forest Service from 1948 to 1974, and was active in the environmental and wilderness movements.[154] Less than a year after the Wilderness Act was signed into law, Heinselman published an article in the *Journal of Forestry* outlining how he believed the newly created wilderness areas should be managed.

Heinselman wrote that the Wilderness Act's mandates "and the history of the wilderness and national park movements show clearly that Congress and the people want our wilderness areas and parks to be places where the natural landscape will exist in perpetuity."[155] He interpreted this to mean that wilderness managers "have a mandate to preserve, or where necessary to recreate, the primitive American scene," and that "the goals of the entire wilderness program center around maintaining the natural landscape—especially its biotic communities."[156] Heinselman recognized that the "near exclusion of wildfires" by forest managers had caused "changes in the fire regime [that] have had profound effects," and that "the strict 'hands-off' policies advocated in the past are not sound."[157]

Heinselman therefore "envision[ed] prescribed burning as the major tool for producing new successions in most wilderness areas."[158] In this early interpretation of the Wilderness Act, Heinselman did not consider prescribed burns to be trammeling or "introducing civilization" to the wilderness.[159] Rather, he understood that the Wilderness Act requires forest managers to "employ natural agents to the maximum extent possible" "when maintaining and restoring the natural landscape."[160] To Heinselman, writing in 1965, this meant that the "mechanical removal of forest products violates the whole wilderness concept by introducing civilization, and by leaving an obvious and long-lasting unnatural impact on the landscape," and that "[f]ire, on the other hand, is a natural agent, [that] can and should be employed."[161]

IV. Challenges to Prescribed Burns in Wilderness Areas

> Fire is declared evil and destructive just as coyotes and mountain lions were designated as evil and destructive in parks 25 years ago.[162]

Despite this history, in 2023 and 2024, environmental groups, including Wilderness Watch, Sequoia Forest-Keeper, Sierra Club, Tule River Conservancy, and Earth Island Institute, filed lawsuits challenging prescribed burn plans in wilderness areas and proposed wilderness areas by the Forest Service and the National Park Service.[163] The 2024 lawsuit alleges that the National Park Service's decision to ignite prescribed fires in wilderness areas is arbitrary and capricious under the Administrative Procedure Act (APA) because it "reengineer[s] the natural landscape into reflecting the wildfire fuel conditions most desired by managers," which "directly contravene[s]" the Wilderness Act's mandate to "administer [wilderness] areas in an 'untrammeled' state reflecting the free flow of natural processes."[164] Further, the lawsuit disregards thousands of years of Indigenous knowledge and a century of scientific research by stating that "there is critical scientific debate about the assumptions and effects inherent in such intensive 'fuels reduction' practices."[165]

After the U.S. Supreme Court's 2024 holding in *Loper Bright Enterprises v. Raimondo*, legal challenges to prescribed burns under the APA will be decided without *Chevron* deference.[166] Under *Chevron*, agencies were entitled to judicial deference to their interpretations of ambiguous statutes when the interpretations were reasonable.[167] Now, under *Loper Bright*, agency interpretations of the law will not receive deference under *Chevron*, and it will be "the responsibility of the court[s] to decide whether the law means what the agency says."[168] To decide what the law means, courts will likely analyze the factors the Supreme Court used in *Loper Bright* for deciding whether the APA required courts to give deference to agencies similar to what they had been doing under *Chevron*, and/or by giving "respect" to agency interpretations under *Skidmore v. Swift & Co.*[169]

In deciding that agencies are not entitled to deference, the Court looked at the relationship between courts and agencies prior to enactment of the APA,[170] the legislative history of the APA,[171] and early interpretations of the APA.[172] In looking at the relationship between agencies and the courts before the APA, the Court majority noted that during the New Deal era, while the administrative state proliferated, courts "continued to adhere to the traditional understanding that questions of law were for the courts to decide, exercising independent judgement."[173] The Court

153. Fire in CA Ecosystems, *supra* note 13, at 401; see discussion *supra* Part II.
154. Martin E. Alexander, *Introduction to the Article by H.E. Wright and M.L. Heinselman*, 10 Fire Ecology 1, 2 (2014).
155. Heinselman, *supra* note 1, at 441.
156. *Id.*
157. *Id.* at 442.
158. *Id.* at 444.
159. *Id.* at 443.
160. *Id.*
161. *Id.*
162. Statement of David R. Brower, *supra* note 110.
163. Wilderness Watch v. NPS—Complaint, *supra* note 7; Complaint for Declaratory and Injunctive Relief, Sierra Club v. U.S. Forest Serv., No. 3:24-cv-1080 (N.D. Cal. Feb. 22, 2024).
164. Wilderness Watch v. NPS—Complaint, *supra* note 7, at 17.
165. *Id.* at 16.
166. 144 S. Ct. 2244 (2024).
167. *Id.* at 2254.
168. *Id.* at 2261.
169. 323 U.S. 134 (1944); Daniel Deacon, *Loper Bright, Skidmore, and the Gravitational Pull of Past Agency Interpretations*, Yale J. on Regul.: Notice & Comment Blog (June 30, 2024), https://www.yalejreg.com/nc/loper-bright-skidmore-and-the-gravitational-pull-of-past-agency-interpretations/.
170. *Loper Bright Enters.*, 144 S. Ct. at 2258.
171. *Id.* at 2261-63.
172. *Id.* at 2263-64.
173. *Id.* at 2258.

then delved into the legislative history of the APA, examining U.S. House of Representatives and Senate reports and the statements of the APA's proponents in legislative hearings.[174] Turning to early interpretations of the APA, the Court looked at the observations of "[v]arious respected commentators," mainly law professors, and their understandings of the APA when it was first passed.[175]

Courts reviewing prescribed fire plans in California wilderness areas should follow this approach when interpreting the Wilderness Act. As discussed above, the scientific consensus prior to the enactment of the Wilderness Act supports treating prescribed burns as part of the untrammeled, natural state of many of California's ecosystems[176]; statements by proponents of the Wilderness Act and its legislative history show that it was passed to prevent commercial interests from destroying forests, rather than to stop ecosystem-appropriate forest management[177]; and early interpretations of the Wilderness Act came to the conclusion that prescribed fire is an acceptable management tool where it existed as part of the pre-colonialism ecosystem.[178]

Fourteen years after the Wilderness Act was passed, three Forest Service research scientists wrote the book, as the saying goes, on managing wilderness areas.[179] The book, titled *Wilderness Management*, contains an entire chapter on "Fire in Wilderness Ecosystems," which was co-authored by the same Heinselman who wrote the early interpretation of the Wilderness Act discussed above.[180] This chapter "explores [the Forest Service's] current knowledge of fire's role" as of its publication in 1978, and how to incorporate this knowledge into wilderness management.[181] The chapter first discusses fire's roles in ecosystems, including its influences on plant reproduction, vegetation composition, fuels accumulation, pathogens and parasites, wildlife habitat, and overall ecosystem function and stability.[182] The chapter also highlights "fire-dependent ecosystems" in California's wilderness areas and the importance of ensuring fire's presence in those wilderness areas in order to manage them according to their natural conditions.[183]

The Forest Service research scientists and Heinselman then examine "five theoretically available policy alternatives with respect to fire: (1) Fire exclusion, (2) no fire-control program, (3) management of lightning-caused fires, (4) prescribed fire, (5) mechanical manipulation of vegetation and fuels."[184] They determined that "[w]ilderness fire management is important" for maintaining "large-scale functioning ecosystems" and that prescribed fires can be an effective way of restoring fire to "fire-dependent" wilderness area ecosystems that complies with management directives in the Wilderness Act.[185] They came to this conclusion after analyzing prescribed fire science in the 1960s and 1970s, and after examining wilderness fire management programs that included prescribed fire, including in the Sequoia & Kings and Yosemite National Parks in California.[186]

In a post-*Chevron* world, courts will likely turn to *Skidmore* for guidance in cases involving agency interpretations of statutes like the Wilderness Act.[187] Although the Court was careful not to adopt "*Skidmore* deference" in *Loper Bright*, the Court repeatedly cited *Skidmore* approvingly, referring to it as the Court's "time-worn path" and stating that overturning *Chevron* and requiring courts to "exercise[e] independent judgement is consistent with the 'respect' historically given to Executive Branch interpretations."[188] The level of "respect" granted to agency interpretations of law under *Skidmore* depends "upon the thoroughness evident in [the agency's] consideration, the validity of its reasoning, its consistency with earlier and later pronouncements, and all those factors which give it power to persuade, if lacking power to control."[189]

The Forest Service's manual on fire management in wilderness areas allows prescribed fire in very limited circumstances. Prescribed fires are only allowed in wilderness areas managed by the Forest Service

> to reduce unnatural buildups of fuels only if necessary to meet one of the wilderness fire management objectives set forth in FSM 2324.21 and if all of the following conditions are met:
>
> a. The use of prescribed fire or other fuel treatment measures outside of wilderness is not sufficient to achieve fire management objectives within wilderness.
> b. An interdisciplinary team of resource specialists has evaluated and recommended the proposed use of prescribed fire.
> c. The interested public has been involved appropriately in the decision.
> d. Lightning-caused fires cannot be allowed to burn because they will pose serious threats to life and/or property within wilderness or to life, property, or natural resources outside of wilderness.[190]

There are two "objectives set forth in FSM 2324.21," and they are similarly limiting.[191] "The objectives of fire management in wilderness are to: 1. Permit lightning-caused fires to play, as nearly as possible, their natural ecological

174. *Id.* at 2262.
175. *Id.*
176. *See* Show & Kotok, *supra* note 62, at 79; Miller, *supra* note 124; Weaver, *supra* note 18, at 501-04; Heinselman, *supra* note 1; Leopold et al., *supra* note 66.
177. *See* Statement of Senator Humphrey, *supra* note 109; Statement of David R. Brower, *supra* note 110.
178. *See* Heinselman, *supra* note 1, at 441.
179. John C. Hendee et al., USDA Forest Service, Wilderness Management iii (1978).
180. *Id.* at 249; see discussion *supra* Part III.
181. Hendee et al., *supra* note 179, at 250.
182. *Id.* at 250-54.
183. *Id.* at 256-57.
184. *Id.* at 264.
185. *Id.* at 267-68.
186. *Id.* at 271-72.
187. Deacon, *supra* note 169; Skidmore v. Swift & Co., 323 U.S. 134 (1944).
188. Loper Bright Enters. v. Raimondo, 144 S. Ct. 2244, 2265 (2024) (citing *Skidmore*, 323 U.S. at 140).
189. *Skidmore*, 323 U.S. at 140.
190. USDA, Forest Service Manual 2300—Recreation, Wilderness, and Related Resource Management FSM 2324.22 (2021).
191. *Id.* FSM 2324.21-.22.

role within wilderness," and "2. Reduce, to an acceptable level, the risks and consequences of wildfire within wilderness or escaping from wilderness."[192] These guidelines demonstrate a misguided preference for lightning-caused fire in wilderness ecosystems that strays from historical and modern fire science. This preference is prevalent among federal land managers across land management agencies responsible for wilderness areas.[193]

The Leopold Institute, in a 2023 report for the Forest Service on prescribed fires in wilderness areas, recommended increasing the use of prescribed fire in areas where Indigenous burning shaped the landscape pre-colonialism.[194] The Leopold Institute concluded that one way to increase prescribed fire use in wilderness areas would be by gaining "[c]larification that prescribed fire is legal and permissible in wilderness areas where it is the minimum action necessary for preserving wilderness character."[195] The Leopold Institute's recommendation to go beyond merely using prescribed fire for the "control of fire," as specifically allowed in the Wilderness Act, to using prescribed fire "to restore and maintain wilderness ecosystems" reflects the growing movement toward ecosystem-appropriate management and comports with early interpretations of the Wilderness Act.[196]

Heinselman's 1965 interpretation of the Wilderness Act as a Forest Service research scientist recommended using prescribed fire for "maintaining and restoring the natural landscape" in fire-adapted ecosystems.[197] He believed this would help achieve the goals of the Wilderness Act, which "center around maintaining the natural landscape—especially its biotic communities."[198] This same understanding of the Wilderness Act and its mandates was present in the Forest Service's 1978 book on wilderness management, which recommended incorporating prescribed fire into the management of fire-adapted wilderness ecosystems.[199] Under *Skidmore*, this weighs toward respecting modern agency interpretations of the Wilderness Act that allow prescribed fire for fire-adapted wilderness ecosystem management because it shows "consistency with earlier and later pronouncements."[200]

Using prescribed fire to restore wilderness ecosystems that were previously shaped by Indigenous fire should be considered "untrammeling" of the wilderness.[201] A "trammel" is "something impeding activity, progress, or freedom."[202] Wilderness managers have effectively "trammeled" California's fire-adapted wilderness ecosystems by excluding fire, and thereby altering the ecosystems in ways that have harmed forest health and increased the risk of severe and destructive wildfires.[203] Excluding fire from fire-adapted ecosystems was even understood as something akin to trammeling in 1947, when Weaver wrote that excluding fire from a forest "suppressed and stagnated" the trees to the point of rendering them "practically worthless."[204]

Restoring human-ignited fire through prescribed and Indigenous burning would "untrammel" fire-adapted wilderness ecosystems by bringing the ecosystems back into their pre-colonization ranges, and therefore should be allowed under the Wilderness Act.[205] Federal wilderness managers should update their management policies to frame prescribed fire in this way and to encourage prescribed fire use in areas where it was present pre-colonialism. This interpretation of the Wilderness Act is defensible under *Loper Bright* in light of the legislative history of the Wilderness Act, developments in prescribed fire science before the Act was passed, historic interpretations of the Wilderness Act, and modern understandings of forest health management. Further, this interpretation of the Wilderness Act may be persuasive under *Skidmore* given that it would reflect thoroughness in the agency's consideration, would be valid reasoning based on nearly 100 years of forest science, and would be consistent with early interpretations of the Wilderness Act.[206]

V. Conclusion

California's 154 wilderness areas take up more than 15 million of the state's acres,[207] meaning that 15% of the state's land area is managed under the most protective and restrictive federal land designation scheme.[208] Many of California's wilderness ecosystems have adapted to human-ignited fires over tens of thousands of years.[209] Over the past 200 years, these ecosystems have been subjected to policies of fire exclusion, causing a significant rise in dangerous, large, and destructive wildfires.[210]

Advocates in California are now pushing for fighting fire with fire by reintroducing prescribed fires to the landscape on a large scale.[211] In fire-adapted wilderness areas, "the strict 'hands-off' policies advocated in the past are not sound," and a hands-on approach may be needed to pre-

192. *Id.* FSM 2324.21.
193. Prescribed Fire and U.S. Wilderness Areas, *supra* note 81, at 5.
194. *Id.* at 1.
195. *Id.* at 6.
196. *Id.* at 1; *see also* Heinselman, *supra* note 1.
197. Heinselman, *supra* note 1, at 443.
198. *Id.*
199. Heinselman, *supra* note 1; Hendee et al., *supra* note 179, at 249.
200. Skidmore v. Swift & Co., 323 U.S. 134, 140 (1944).
201. *See* Boerigter et al., *supra* note 90.
202. Merriam-Webster Dictionary, *Trammel*, https://www.merriam-webster.com/dictionary/trammel (last visited Feb. 2, 2025).
203. Boerigter et al., *supra* note 90, at 3.
204. Weaver, *supra* note 132, at 443.
205. Boerigter et al., *supra* note 90, at 5-8.
206. Heinselman, *supra* note 1; Hendee et al., *supra* note 179, at 249.
207. Wilderness Connect, *Learn About Wilderness: Fast Facts*, https://wilderness.net/learn-about-wilderness/fast-facts/ (last visited Feb. 2, 2025); Wilderness Connect, *Wilderness: Acreage by State*, https://wilderness.net/practitioners/wilderness-areas/summary-reports/acreage-by-state.php (last visited Feb. 2, 2025).
208. University of Colorado Boulder Natural Resources Law Center, Protective Designations on Federal Lands: Case Studies of National Conservation Areas, National Monuments, National Parks, National Recreation Areas, and Wilderness Areas 8 (2004), https://scholar.law.colorado.edu/cgi/viewcontent.cgi?article=1024&context=books_reports_studies.
209. Hardiman et al., *supra* note 33, at 8-9; Fire in CA Ecosystems, *supra* note 13, at 291.
210. Rad et al., *supra* note 82, at 1343-45; French, *supra* note 82, at 863-64; Steel et al., *supra* note 35, at 19-20.
211. *See* Sara A. Clark et al., Good Fire II (2024); Boerigter et al., *supra* note 90, at 11.

serve their wilderness character.[212] Reintroducing human-ignited fire to the landscape in California's wilderness areas may prove difficult, however, because Wilderness Watch and other environmental groups believe prescribed burns are "trammeling" in violation of the Wilderness Act and have already filed lawsuits to stop prescribed burn plans in wilderness areas.[213]

Before 2024, these lawsuits would have been decided under *Chevron v. Natural Resources Defense Council*, which, according to the *Loper Bright* majority, "demand[ed] that courts mechanically afford *binding* deference to agency interpretations," even when "a pre-existing judicial precedent" disagreed with the agency's interpretation.[214] Although agency interpretations of the Wilderness Act will no longer be entitled to such extreme deference, interpretations allowing for prescribed burns as a form of ecosystem restoration and management may still survive judicial review. Post-*Chevron*, courts will likely afford respect to agency interpretations under *Skidmore* if the interpretations are based on thorough consideration and valid reasoning and are consistent with early interpretations of the statute.[215]

Agency interpretations of the Wilderness Act that promote prescribed fire in California wilderness areas should be given respect under *Skidmore* because they would reflect consistency with early interpretations of the Wilderness Act like Heinselman's[216] and the Forest Service's 1978 book on wilderness management,[217] would be based on thorough consideration of the unique histories and needs of Californian ecosystems,[218] and would be backed by nearly a century of scientific research.[219] Further, such an interpretation is in line with the legislative intent behind the Wilderness Act to preserve wilderness ecosystems for future generations, because fire-adapted wilderness ecosystems rely on prescribed and Indigenous burning in order to stay in their pre-colonialism state.[220]

The tides are turning for prescribed fires in the modern era. While the Wilderness Act already allows such measures "as may be necessary in the control of fire, insects, and diseases," it is time to do more[221]; as Heinselman wrote in 1965, "we now must 'unsell' the false impression that all fires are bad."[222] Federal land management agencies are already changing their messaging to be pro-prescribed fire and are using information about prescribed burns in their advertising materials.[223]

However, federal agencies have been slow to adopt prescribed burn policies in wilderness areas.[224] Part of this hesitancy stems from uncertainty among land managers on whether the Wilderness Act's mandates allow prescribed burning in wilderness areas for ecosystem management.[225] This hesitancy is misplaced, as demonstrated by the history of the Wilderness Act, the state of forest science when it was passed, and early interpretations of the Wilderness Act. As such, agencies should be able to defend against lawsuits challenging prescribed burns in fire-adapted wilderness ecosystems even without *Chevron* deference.

APPENDIX—LIABILITY FOR PRESCRIBED BURNS

California has officially recognized the historic importance of Indigenous fire in the state, and has committed to increasing the use of prescribed fire in the state's fire-adapted ecosystems.[226] There are a multitude of entities that might wish to conduct prescribed burns in California, including tribal governments; federal, state, and local land managers; for-profit and not-for-profit entities; and individual landowners.[227] Liability for federal land managers and private landowners is especially relevant in California, because federal and private landowners control 95% of California's land.[228]

It was first decided in 1995 by the U.S. Court of Appeals for the Ninth Circuit in *Anderson v. United States* that private persons, and by extension the federal government, are liable for prescribed burn damages.[229] In *Anderson*, the Forest Service conducted a prescribed burn in southern California in the Cleveland National Forest.[230] The Forest Service negligently allowed the fire to escape and it destroyed a portion of a residential neighborhood near Corona, California.[231] The homeowners then sued the Forest Service under the Federal Tort Claims Act.[232] Under that Act, the United States is liable "where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred."[233] This means that the question in *Anderson* was whether a private person would be liable for

212. Heinselman, *supra* note 1, at 442.
213. Wilderness Watch v. NPS—Complaint, *supra* note 7.
214. Loper Bright Enters. v. Raimondo, 144 S. Ct. 2244, 2265 (2024).
215. Deacon, *supra* note 169; Skidmore v. Swift & Co., 323 U.S. 134, 140 (1944).
216. Heinselman, *supra* note 1.
217. Hendee et al., *supra* note 179, at 249.
218. Fire in CA Ecosystems, *supra* note 13; Steel et al., *supra* note 35.
219. *See* Show & Kotok, *supra* note 62; see discussion *supra* Part III.
220. 16 U.S.C. §1131(a); Fire in CA Ecosystems, *supra* note 13, at 388-92; Marks-Block & Tripp, *supra* note 13, at 3-4.
221. 16 U.S.C. §1133(d)(1).
222. Heinselman, *supra* note 1, at 444.
223. U.S. Department of the Interior, *Fuels Management*, https://www.doi.gov/wildlandfire/fuels (last visited Feb. 2, 2025); National Park Service, *Wildfires, Prescribed Fires, and Fuels*, https://www.nps.gov/orgs/1965/wildfires-prescribed-fires-fuels.htm (last updated Jan. 12, 2022); U.S. Forest Service, *Prescribed Fire*, https://research.fs.usda.gov/rmrs/fire/prescribed (last updated Sept. 27, 2024).
224. Prescribed Fire and U.S. Wilderness Areas, *supra* note 81, at 4-5.
225. *Id.* at 6.
226. Forest Management Task Force, California's Wildfire and Forest Resilience Action Plan 19 (2021), https://wildfiretaskforce.org/wp-content/uploads/2022/04/californiawildfireandforestresilienceactionplan.pdf.
227. *Id.*
228. Yoohyun Jung, *Here's How Much of California Is Owned by Different Government Agencies and Why That Matters*, S.F. Chron. (Jan. 14, 2022), https://www.sfchronicle.com/bayarea/article/Here-s-how-much-of-California-is-owned-by-16773882.php (noting the federal government owns 46% of California's land and private landowners own 48%).
229. 55 F.3d 1379 (9th Cir. 1995).
230. *Id.* at 1380.
231. *Id.*
232. *Id.*
233. 28 U.S.C. §1346(b).

damages from an escaped prescribed fire they ignited on their property.[234]

In answering this question, the Ninth Circuit noted that "California courts have assiduously enforced [the] principle . . . that people are generally liable when they negligently injure others," unless "some powerful public policy dictates a contrary result."[235] The court looked at whether there is a public policy promoting prescribed fires in California, and found that "California has not described any such public policy in the area of firesetting" that would compel the court to find immunity.[236] The court chided the Forest Service for "invit[ing] us to hold that all landowners in California are immune because it hopes to ride those coattails to victory," and found that private landowners, and by extension the federal government, are liable for damages from prescribed burns.[237] Now, 30 years later, California does have a public policy strongly favoring prescribed fires.[238]

In light of this public policy, and after years of advocacy by Indigenous leaders, California recently changed its liability scheme for prescribed burns in the state.[239] The Indigenous advocacy behind the change was led predominantly by the Karuk Tribe of northern California, who brought together a coalition of diverse interest groups, including other tribes, ranching associations, environmental nonprofits, and timber companies, to push for liability reform.[240] The result was Senate Bill 332, which was enacted in 2021 with the goal of encouraging "private entities to engage in prescribed burning for public benefit."[241] Senate Bill 332 raised the bar for recovery of fire suppression costs for escaped prescribed and cultural burns from a showing of simple negligence to gross negligence.[242] Under *Anderson*, this change would apply to federal agencies as well for suits brought under the Federal Tort Claims Act.[243]

234. *Anderson*, 55 F.3d at 1381.
235. *Id.*
236. *Id.* at 1380.
237. *Id.* at 1384.
238. *See* Forest Management Task Force, *supra* note 226.
239. S.B. 332, 2021-2022 Reg. Sess. (Cal. 2021).
240. Press Release, Karuk Tribe et al., Groups Seek Liability Reforms to Fight Wildfire (Apr. 27, 2021); Sara A. Clark et al., Good Fire 11 (2021).
241. S.B. 332, 2021-2022 Reg. Sess. (Cal. 2021).
242. Cal. Civ. Code §3333.8.
243. Anderson v. United States, 55 F.3d 1379, 1384 (9th Cir. 1995).