

Testimony of Chris Wood

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Before the House Natural Resource Committee Subcommittee on Federal Lands

Legislative hearing on H.R. 7695, To provide that the final rule titled “Special Areas; Roadless Area Conservation” and issued on January 12, 2001 (66 Fed. Reg. 3244) shall have no force or effect and require the Secretary of Agriculture to construct certain roads on National Forest System lands, and for other purposes.

May 21, 2026

Chairman Tiffany, Ranking Member Neguse, and Subcommittee Members:

Thank you for the opportunity to testify today on H.R. 7695, legislation that would repeal the 2001 Roadless Rule. My name is Chris Wood. I am the President and CEO of Trout Unlimited (TU). I offer the following testimony on behalf of TU and its nearly 350,000 members and supporters nationwide.

TU’s mission is to bring together diverse interests to care for and recover rivers and streams so our children can experience the joy of wild and native trout and salmon. In pursuit of this mission, TU has long been involved in issues affecting the National Forest System, including the management of roadless areas. Our members are passionate anglers, hunters, outdoors-people, and conservationists that understand and appreciate the important role public lands play in providing healthy fish and wildlife habitat and sustaining our outdoor traditions. We also appreciate and support the need to actively manage our national forests to reduce the threats from unnaturally intense wildfires while also ensuring that the values of roadless areas persist long into the future.

To this end, TU has long partnered with the Forest Service across the country to conserve and restore important watersheds and aquatic habitats, to maintain and improve forest roads and transportation infrastructure, and to actively manage watersheds to reduce the risk of unnaturally intense wildfires and other natural disasters. We approach the management of our national forests not only as resource users but also as people who work hand-in-glove with the Forest Service across the country to improve the health, diversity and productivity of our shared public lands.

H.R. 7695 would nullify the 2001 Roadless Rule nationwide. Additionally, it would prevent any substantially similar new rules from being created in the future and prevent the Forest Service from administering or enforcing any substantially similar rules. In this way, H.R. 7695, would not only do away with the 2001 Roadless Rule, it could also undermine both the 2008 Idaho Roadless Rule and the 2012 Colorado Roadless Rule, both of which could be viewed as “substantially similar” to the 2001 Rule in that they generally prohibit road construction and industrial logging across millions of acres of national forest – over 13 million between the two states. Notably, both the Idaho and Colorado Rules have long enjoyed bipartisan support and were developed in collaboration with a broad set of diverse

stakeholders. In fact, I was a member of the Roadless Area National Advisory Committee that helped the states of Idaho and Colorado to develop their state-specific roadless rules.

Trout Unlimited supports the objectives of improving forest health and reducing unnaturally intense wildfire risk; however, these are outcomes best achieved by working together through the existing regulatory framework. Twenty-five years of experience under the Roadless Rule has shown that the rule improves, rather than impedes, the wise management of our national forests. Eliminating protections for roadless areas would harm fish and wildlife populations, reduce quality hunting and fishing opportunities and could burden taxpayers with even greater costs of unnecessary road repairs, and lead to even more human-caused wildfires.

Roadless Rule background

The Roadless Rule was promulgated in 2001 after extensive public participation over a three-year period that involved more than 600 public meetings and a record-breaking 1.6 million public comments. More than 90% of all public comments supported protecting roadless areas. The Rule has withstood six presidential administrations—three Republican and three Democratic—and continues to enjoy broad public support to this day. Most recently, when the U.S. Department of Agriculture proposed a new rulemaking to rescind the Roadless Rule across 45 million acres, the agency received about 626,000 comments, an estimated 99% of which opposed the rescission of the Roadless Rule.¹

The Roadless Rule enjoys overwhelming public support because it strikes a common-sense balance for the management of roadless areas. The rule generally prohibits new road construction and industrial logging on 58.5 million acres of multiple-use public lands across the National Forest System while providing broad allowances for forest health projects and hazardous fuel treatments. Uses such as off highway vehicles, mining, energy development, and firewood cutting, among other multiple uses, remain unaffected.²

Moreover, people benefit immensely from the values and characteristics of roadless areas. Consider these that were developed by the Forest Service:

High quality or undisturbed soil, water, and air. These three key resources are the foundation upon which other resource values and outputs depend. Healthy watersheds catch, store, and safely release water over time, protecting downstream communities from flooding; providing clean water for domestic, agricultural, and industrial uses; helping maintain abundant and healthy fish and wildlife populations; and are the basis for many forms of outdoor recreation.

Sources of public drinking water. National Forest System lands contain watersheds that are important sources of public drinking water. Roadless areas within the National Forest System contain all or portions of 354 municipal watersheds contributing drinking water to millions of citizens. Maintaining these areas in a relatively undisturbed condition saves downstream communities millions of dollars in water filtration costs. Careful management of these

watersheds is crucial in maintaining the flow and affordability of clean water to a growing population.

Diversity of plant and animal communities. Roadless areas are more likely than roaded areas to support greater ecosystem health, including the diversity of native and desired nonnative plant and animal communities due to the absence of disturbances caused by roads and accompanying activities. Inventoried roadless areas also conserve native biodiversity by serving as a bulwark against the spread of nonnative invasive species.

Habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land. Roadless areas function as biological strongholds and refuges for many species. Of the nation's species currently listed as threatened, endangered, or proposed for listing under the Endangered Species Act, approximately 25% of animal species and 13% of plant species are likely to have habitat within inventoried roadless areas on National Forest System lands. Roadless areas support a diversity of aquatic habitats and communities, providing or affecting habitat for more than 280 threatened, endangered, proposed, and sensitive species. More than 65% of all Forest Service sensitive species are directly or indirectly affected by inventoried roadless areas. This percentage is composed of birds (82%), amphibians (84%), mammals (81%), plants (72%), fish (56%), reptiles (49%), and invertebrates (36%).

Primitive, Semi-Primitive Non-Motorized, and Semi-Primitive Motorized classes of dispersed recreation. Roadless areas often provide outstanding dispersed recreation opportunities such as hiking, camping, picnicking, wildlife viewing, hunting, fishing, cross-country skiing, and canoeing. While they may have many Wilderness-like attributes, unlike Wilderness the use of mountain bikes, and other mechanized means of travel is often allowed. These areas can also take pressure off heavily used wilderness areas by providing solitude and quiet, and dispersed recreation opportunities.

Reference landscapes. The body of knowledge about the effects of management activities over long periods of time and on large landscapes is very limited. Reference landscapes of relatively undisturbed areas serve as a barometer to measure the effects of development on other parts of the landscape.

Natural appearing landscapes with high scenic quality. High quality scenery, especially scenery with natural-appearing landscapes, is a primary reason that people choose to recreate. In addition, quality scenery contributes directly to real estate values in nearby communities and residential areas.

Traditional cultural properties and sacred sites. Traditional cultural properties are places, sites, structures, art, or objects that have played an important role in the cultural history of a group. Sacred sites are places that have special religious significance to a group. Traditional cultural

properties and sacred sites may be eligible for protection under the National Historic Preservation Act. However, many of them have not yet been inventoried, especially those that occur in inventoried roadless areas.

Other locally identified unique characteristics. Inventoried roadless areas may offer other locally identified unique characteristics and values. Examples include uncommon geological formations, which are valued for their scientific and scenic qualities, or unique wetland complexes. Unique social, cultural, or historical characteristics may also depend on the roadless character of the landscape. Examples include ceremonial sites, places for local events, areas prized for collection of non-timber forest products, or exceptional hunting and fishing opportunities

The Forest Service provided three primary justifications when it adopted the 2001 Roadless Rule, all of which still apply today.

- First, road construction is a major cause of the alteration and fragmentation of landscapes that results in the loss of roadless area values and characteristics. Roads, especially those that are not maintained, erode and their sedimentation increases the cost of downstream water filtration.³ The drinking water for more than 60 million Americans flows across roadless areas. Then, as is the case today, roads fragment and degrade sensitive fish and wildlife habitats and are among the most impactful activities on our public lands.
- Second, the size and costs associated with the existing forest road system prevent the agency from managing its roads to the safety and environmental standards to which they were built.⁴ Today, the Forest Service remains unable to take care of its existing roads – 370,000 miles of them – and is saddled with a \$10.8 billion deferred maintenance backlog, 55% of which is due to its decaying road system.⁵
- Finally, national concern over road building and timber sales in roadless areas generate immense controversy, including costly and time-consuming litigation and appeals.

A more comprehensive history of the roadless issue is attached and from *From Conquest to Conservation: Our Public Lands Legacy* (Island Press: 2003). In short, the need for the Roadless Rule was driven by the first rule of holes; that is, when the hole you have dug is over your head, put down the shovel. Picking the shovel back up by allowing road construction in roadless areas makes neither social, economic or ecologic sense. Perhaps most important, Forest Service data indicates that it would not make our communities safer from wildfire, and in fact could lead to more fires.

The Roadless Rule supports active management to improve forest health.

A common misconception about the Roadless Rule is that it prevents hazardous fuels treatments and contributes to so-called mega fires. The reality of the past 25 years demonstrates that the Roadless Rule allows hazardous fuels treatments within roadless areas.

The Forest Service's own research demonstrates that fuel management activities in roadless areas have been more numerous on a per-square kilometer basis than elsewhere on national forests.⁶ This research, which was supported by the Forest Service's Rocky Mountain Research Station, evaluated nearly twenty years of monitoring data and concludes that "a lack of roads in IRAs [Inventoried Roadless Areas] has neither prevented fuel treatment nor led to substantially more fire."

The paper goes on to state that "records show that a lack of roads has not stopped fire prevention measures," and that while "IRAs contain approximately 21% of the total tree cover across NFS; those areas accounted for 34% of the total fuel treatment activities and 8% of the total area treated."

The Forest Service Activity Tracking System (FACTS) database reveals that nationally, more than four million acres of hazardous fuels treatment projects have been conducted in roadless areas⁷. Many of these areas that have been treated to reduce fire risk are in dry, fire prone states such as Utah, where 38 percent of national forest lands treated for hazardous fuels have been within roadless areas. Similar percentages of hazardous fuels treatments can be found in roadless areas on national forests in Wyoming (32%), Idaho (36%), Montana (20%), and Nevada (40%).⁸

Notably, treatment types are consistent regardless of whether the landscape is within a roadless area or not. For example, thinning comprises 17 percent of treatments in roadless areas compared to 19 percent in roaded forests; broadcast burning accounts for about half of all treatments in both roadless and roaded forests.⁹

Additional analysis of Forest Service data supports the conclusion that building more roads will lead to more wildfire starts. For example, 78 percent of human-caused fires on National Forests nationwide start within ½ mile of a road.¹⁰ When considered alongside the fact that 85 percent of all wildfires are human-caused,¹¹ it becomes clear why the same research that evaluated hazardous fuels activities in roadless areas also concluded that, "when considered across the entire National Forest System over a long period of time, fire risks are approximately equal inside and outside of roadless areas."¹²

Wildfires generally start along roads and are generally started by people. Instead of building new and costly roads into existing backcountry roadless areas, the federal government should focus its wildfire-protection and prevention efforts in the front country on "at risk communities" adjacent to national forests—the vast majority of which are almost by definition not in roadless areas.

Roadless areas secure the last, best habitat for fish and wildlife and provide unmatched hunting and fishing opportunity

It is difficult to overstate the importance of roadless areas to native and wild trout and salmon. Although habitat loss from road construction and other development activities have reduced the range of native trout and salmon, roadless areas remain an important refuge for many important and sensitive species.

There is an almost direct correlation between the persistence of native trout and salmon and roadless areas. Roadless watersheds almost always offer the last, best habitat for these species. In fact, within the current range of native trout and salmon, they are 40% more common in roadless areas than in roaded forest lands.¹³

This pattern holds true for native trout and salmon and steelhead across the National Forest System:

- On the Tongass National Forest in Alaska, more than 70 percent of Chinook, coho, pink, and chum salmon, and more than 65 percent of sockeye salmon and steelhead in the Tongass are found in areas without roads;¹⁴
- In Utah 88 percent of conservation populations of Bonneville cutthroat trout are fed by streams flowing from roadless areas;¹⁵
- In Oregon, 18 of the 20 watersheds where westslope cutthroat trout persist are found in roadless areas¹⁶ and 79 percent of remaining spawning and rearing habitat for Bull trout on National Forests is found in unroaded watersheds containing roadless and wilderness lands.¹⁷
- In Idaho we have lost 65 percent of the historic range of Chinook salmon and 61 percent of the historic range of steelhead. Roadless and wilderness lands now account for half of all remaining salmon and steelhead habitat.¹⁸
- In Colorado, we have lost more than 90 percent of the habitat for native cutthroat trout, yet 70% of Colorado Greenback cutthroat trout populations on national forests are found within roadless and wilderness lands.¹⁹

Roadless areas comprise less than two percent of the American land base but provide habitat for 25 percent of our threatened and endangered species. The presence of roadless areas have, for example, supported decisions by the U.S. Fish and Wildlife Service to *not list* species under the Endangered Species Act, such as the 2003 decision not to list Westslope cutthroat trout²⁰ and the 2006 decision not to list the Yellowstone cutthroat trout.²¹ The impact of roads on watershed health becomes especially stark when viewed through the Forest Service's Watershed Condition Framework, which shows that roadless areas are nearly twice as likely to have properly functioning watersheds compared to roaded areas.²² Two-thirds of roadless area watersheds are "functioning properly" compared to nearly two-thirds of roaded area watersheds that are "at risk" or "impaired."

Roadless areas supply the cold clean water that drive anglers from all over the world to support local economies in Colorado, Wyoming, and Utah, whose Gold Medal and Blue-Ribbon streams depend on them.

Similarly, big game needs big country, and roadless areas provide exceptional wildlife habitat and unmatched backcountry hunting opportunities that sustain our outdoor traditions. Big game such as elk, bighorn sheep, and mule deer require high-quality summer and winter range, secure cover that supports breeding and migration, and core areas for forage and rest. For elk in particular, numerous studies have shown that they avoid roads, reducing the effective habitat available to them.²³ In Montana alone, 93 percent of roadless areas are home to elk summer range and nearly 30 percent of

all calving areas in the state are in roadless areas.²⁴ Elk crucial summer range is 2.6 times more concentrated in Nevada's roadless areas than in the state overall²⁵ and in Idaho, 98% of roadless lands safeguard elk habitat.²⁶

Declining mule deer populations are increasingly a concern for hunters and wildlife managers, and intact, high-quality spring, summer, and fall ranges – like those found in roadless areas – are key to the survival of this iconic western big game species. Underscoring the importance of roadless areas for mule deer is the fact that over 99% of roadless areas in Utah are designated as either crucial or substantial habitat for mule deer.²⁷

In Idaho, three in four elk hunters typically go home empty-handed every year,²⁸ but research shows hunters have better odds if they get away from roads.²⁹ Quite simply, elk actively avoid areas near roads, especially during hunting season, and seek out areas with low road density and good cover for security.³⁰ While official statewide hunter success rates can be heavily influenced by areas with easy access that attract many hunters, the odds dramatically increase for individuals willing to put in the effort in roadless tracts. These remote zones often serve as production and security areas, providing the foundation for healthy and huntable populations.

If the Roadless Rule were to be repealed or nullified, we should expect that road construction and other attendant development activities will spread habitat losses to the remaining fish and wildlife and strongholds in roadless areas.

Impacts of roads on fish and wildlife

Healthy watersheds, free from sedimentation and run-off from neglected road systems, are the nurseries for future salmon and trout populations. Moreover, in addition to protecting seasonal habitat for big game, unroaded areas further enhance connectivity and protect migration corridors big game need to move between summer and winter ranges. Roads and attendant impacts upset this balance.

Road construction introduces three primary stressors that impact stream health: sedimentation, habitat fragmentation, and accelerated run-off.³¹ Sedimentation occurs both through the chronic bleed of silt from rutted surfaces and the catastrophic failure of aging roadbeds. This fine sediment fills spawning gravels, and suffocates developing eggs.³² Additionally, undersized or poorly installed culverts often act as barriers to migration. These structures isolate populations, preventing fish from reaching spawning grounds or thermal refuges during summer heat, which leaves small, fragmented populations vulnerable to local extinction from wildfire or drought.³³ Lastly, roads act as artificial drainage networks. By intercepting groundwater and surface flow, compacted roadbeds funnel concentrated pulses of water into streams, leading to more violent, destructive peak flows and significantly lower summertime base flows.³⁴

Similar impacts affect big game and other wildlife. Roads fragment landscapes, displacing wildlife and reducing the effectiveness of remaining habitat to support robust big game populations. Roads serve

as primary vectors for noxious and invasive weeds like cheatgrass and spotted knapweed.³⁵ These species degrade native forage, increase wildfire intensity, and cost land managers hundreds of millions annually.³⁶ Recent research has shown that the cost of controlling invasive weeds is 25 times higher than the cost of prevention.³⁷ Beyond habitat loss, roads increase disturbance and hunting pressure.³⁸ While vehicular access is important, too many roads prevent deer, elk and other big game from reaching maturity. This degrades the population's age structure and reduces the availability of the mature animals that many hunters seek.³⁹

Multiple uses in roadless areas

Roadless areas are not synonymous with Wilderness areas, and the two land types are managed very differently.

Motorized trails in roadless areas are commonplace, and motorized use *within roadless areas* is widely available. Roadless areas offer some of the premier off highway vehicle routes in the country.

Similarly, livestock grazing is prevalent in roadless areas, including 14.8 million acres of grazing allotments within roadless areas in Utah, Montana, Arizona and Wyoming.⁴⁰ Neither does the Roadless Rule restrict mining; developing hardrock mining claims and access for the exploration of locatable minerals is allowed pursuant to the General Mining Law of 1872. Additionally, while oil and gas potential is typically low in roadless areas, the Roadless Rule provides access for preexisting oil and gas leases and new leases can be accessed using directional drilling.

As noted previously, active forest management – including mechanical treatments that are not allowed in wilderness areas – are commonplace in roadless areas. Twenty-five years of Forest Service data and research supported by the agency all point to a clear conclusion: eliminating the Roadless Rule is not needed to reduce fire risk and the Roadless Rule has not been an impediment to active management.

Conclusion

To be clear, a lot has changed in the quarter century since the 2001 Roadless Rule was first promulgated. We have longer fire seasons and more uncharacteristically large fires, in large part due to a hotter, drier climate. A century of fire suppression from fire dependent forests has left our forests overstocked in some cases with an unnatural build-up of fuels. Decline of timber and sawmill operations limit markets for forest products provided by thinning projects needed to reduce those fuels. Agency budgets have been cut and diminished Forest Service staff capacity limits the agency. We need to safely reintroduce wildfire to fire dependent landscapes and recognize that fire has an integral role in certain ecosystems. These are but a few of the issues facing the management of our public lands.

America needs a Forest Service that can promote the benefits of multiple use through collaborative stewardship and watershed (and forest) restoration. By extension, the Forest Service is granted social

license that allows them to bring communities together to better care for the land and serve the people. I do not know of a single Forest Service field employee that is anxious to return to the days of arguing about money-losing timber sales in roadless areas.

Instead, they want to continue to help rural communities to rebuild roads and reknit communities devastated by flooding in the southeast. They want to continue to accelerate thinning around wildland urban interface communities in the southwest and California to protect people from uncharacteristically intense wildfires. They want to continue to use process-based restoration to protect and create natural fuel breaks on forests in Colorado. They want to continue thinning second- and third-growth forests in Alaska to facilitate a sustainable timber supply for local communities while also working with mining companies to recover streams.

For the past quarter century, through three Democratic and three Republican administrations, in no small part because the roadless controversy was off the table, the Forest Service demonstrated the kind of conservation leadership that made it the envy of every other state or federal natural resource agency in the country.

The Roadless Rule both re-established and allowed Forest Service employees to return to their conservation roots. Rekindling these controversies will only compromise the public trust they have worked so hard to earn.

I do not suggest that the 2001 Roadless Rule was carried on stone tablets down the mountain by Moses. As mentioned earlier, I helped with the development of the Idaho and Colorado roadless rules that are exempt from the proposed rescission of the rule by the Department of Agriculture.

The Forest Service has learned a lot since the Roadless Rule was enacted 25 years ago. If there are, for example, better ways to protect communities from unnaturally intense wildfires while also protecting the values of roadless areas that are so important to the American people, we should have that discussion.

Echoing that sentiment is a highly unusual letter from four former Forest Service Chiefs, two from Democratic administrations and two from Republican administrations, cautioning that “repealing the 2001 Rule will not be in the long-term interest of the American people, Forest Service employees, and the communities they serve.”⁴¹

Please know that I and all Trout Unlimited stand ready to help lawmakers and the agency chart a collaborative path forward.

¹ Center for Western Priorities. (2025, September 23). *Comment analysis finds over 99% opposition to repealing 2001 Roadless Rule* [Press release] <https://westernpriorities.org/2025/09/comment-analysis-finds-over-99-opposition-to-repealing-2001-roadless-rule/>

² See Special Areas; Roadless Area Conservation, 66 Fed. Reg. 3244, 3245-47 (Jan. 12, 2001).

³ *Id.* at 3244.

⁴ *Id.*

⁵ USDA, National Forest System Statistics – Fiscal Year 2024

https://www.fs.usda.gov/sites/default/files/fs_media/fs_document/FY24-forest-system-stats.pdf

⁶ Sean P Healey 2020 *Environ. Res. Lett.* **15** 104023

⁷ Derived from analysis of S_USA.Activity_HazFuelTrt_PL. 2025. U.S. Department of Agriculture. <https://data.fs.usda.gov/geodata/edw/datasets.php?xmlKeyword=Hazardous+Fuel+Treatment>

⁸ Derived from analysis of S_USA.Activity_HazFuelTrt_PL. 2025. U.S. Department of Agriculture. <https://data.fs.usda.gov/geodata/edw/datasets.php?xmlKeyword=Hazardous+Fuel+Treatment>

⁹ *Id.*

¹⁰ Derived from analysis of S_USA.FireOccurrence. 2025. U.S. Department of Agriculture. <https://data.fs.usda.gov/geodata/edw/datasets.php?xmlKeyword=National+USFS+Fire+Occurrence+Point>

¹¹ National Interagency Fire Center. (n.d.) Wildfire Prevention. Retrieved September 15, 2025 from <https://www.nifc.gov/fire-information/fire-prevention-education-mitigation/wildfire-prevention>

¹² Sean P Healey 2020 *Environ. Res. Lett.* **15** 104023

¹³ Trout Unlimited. 2015. State of the Trout: A Report on the Status and Trends of Native Trout in the United States. Trout Unlimited, Arlington, Virginia.

¹⁴ Trout Unlimited. 2006. Where the Wild Lands Are: Southeast Alaska. The Importance of Roadless Areas to Southeast Alaska's Fish, Wildlife, Hunting & Angling.

¹⁵ Trout Unlimited. 2015. State of the Trout: A Report on the Status and Trends of Native Trout in the United States. Trout Unlimited, Arlington, Virginia

¹⁶ Trout Unlimited. 2004. Where the Wild Lands Are: Oregon. The Importance of Roadless Areas to Oregon's Fish, Wildlife, Hunting & Angling.

¹⁷ Derived from analysis of Bull Trout Distribution. 2019. Pacific States Marine Fisheries Commission, Portland, OR.

¹⁸ IDFG (Idaho Department of Fish and Game). 2024. Fisheries Management Plan 2025 to 2030: A comprehensive Guide to Managing Idaho's Fisheries Resources. Idaho Department of Fish and Game, Boise, Idaho.

¹⁹ Derived from analysis of Greenback Cutthroat Trout Conservation Populations. 2020. Colorado Parks & Wildlife, Denver, CO.

²⁰ See *Endangered and Threatened Wildlife and Plants: Reconsidered Finding for an Amended Petition to List the Westslope Cutthroat Trout as Threatened Throughout its Range*, 68 Fed. Reg. 46989 (Aug. 7, 2003).

²¹ See *12-Month Finding for a Petition to List the Yellowstone Cutthroat Trout as Threatened*, 71 Fed. Reg. 8,818 (Feb. 21, 2006).

²² Derived from analysis of USFS Surface Ownership Parcels and USFS Watershed Condition Classification.

²³ Backcountry Hunters and Anglers. 2014. Literature Review: The Impact of Roads on Elk. <https://www.backcountryhunters.org/media/details/literature-review-the-impact-of-roads-on-elk>

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- ²⁴ Derived from analysis of Montana elk winter ranges, summer ranges, calving areas, and migration areas. 1999. Montana Fish, Wildlife and Parks, Helena, MT.
- ²⁵ Derived from analysis of Occupied Elk Distribution. 2025. Nevada Department of Wildlife, Reno, NV
- ²⁶ Derived from analysis of Species Ranges. 2025. Idaho Department of Fish and Game, Boise, Idaho.
- ²⁷ Derived from analysis of Utah Mule Deer Habitat. 2023. Utah Division of Wildlife Resources, Salt Lake City, UT.
- ²⁸ Idaho Fish and Game. 2025. Hunter Harvest Report. State of Idaho. <https://idfg.idaho.gov/article/hunter-harvest-report-idaho-deer-and-elk-hunters-go-3-3-2024>
- ²⁹ Michael W. Gratson and Craig L. Whitman. 2000. Road Closures and Density and Success of Elk Hunters in Idaho. Wildlife Society Bulletin.
- ³⁰ Mary M. Rowland, Michael J. Wisdom, Bruce K. Johnson and Mark A. Penninger. 2004. Effects of Roads on Elk: Implications for Management in Forested Ecosystems. U.S. Department of Agriculture, Forest Service. https://www.fs.usda.gov/pnw/pubs/journals/pnw_2004_rowland001.pdf
- ³¹ U.S. Forest Service. 2000. Roadless Area Conservation, Final Environmental Impact Statement. Volume 1. U.S. Department of Agriculture, Washington, DC.
- ³² *Id*
- ³³ *Id*
- ³⁴ *Id*
- ³⁵ Sylvia Wright. 2003. Roads Pave the Way for Weed Invasions. UC Davis, Davis, California. <https://www.ucdavis.edu/news/roads-pave-way-weed-invasions>
- ³⁶ Joshua Zaffos. 2003. Another roadside detraction. High Country News, Paonia, CO. <https://www.hcn.org/issues/issue-258/another-roadside-detraction/>
- ³⁷ Ross N. Cuthbert, Christophe Diagne, Emma J. Hudgins, Anna Turbelin, Danish A. Ahmed, Céline Albert, Thomas W. Bodey, et al. 2022. Biological invasion costs reveal insufficient proactive management worldwide, Science of The Total Environment, Volume 819.
- ³⁸ Mary M. Rowland, Michael J. Wisdom, Bruce K. Johnson and Mark A. Penninger. 2004. Effects of Roads on Elk: Implications for Management in Forested Ecosystems. U.S. Department of Agriculture, Forest Service.
- ³⁹ Backcountry Hunters and Anglers. 2014. Literature Review: The Impact of Roads on Elk. <https://www.backcountryhunters.org/media/details/literature-review-the-impact-of-roads-on-elk>
- ⁴⁰ Derived from analysis of S_USA.Range_Allotment (2025), U.S. Department of Agriculture.
- ⁴¹ Letter from Mike Dombeck, Dale Bosworth, Tom Tidwell, and Vicki Christiansen, Former Forest Service Chiefs, to USDA Secretary Brooke Rollins (Sept. 15, 2025).