



Forest Service
U.S. DEPARTMENT OF AGRICULTURE

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Proposed Rule: Special Areas; Roadless Area Conservation; National Forest System Lands

Cost Benefit Analysis and
Consideration of Impacts on Small Entities

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Summary

The U.S. Department of Agriculture proposes to rescind the 2001 Roadless Area Conservation Rule (2001 Roadless Rule) (66 FR 3244, 36 CFR Subpart B (2001)), which established broad prohibitions on road construction, road reconstruction, and timber harvesting within inventoried roadless areas (IRAs) on National Forest System lands, subject to limited exceptions. The intent of this proposed action is to reduce regulatory burden and return decision-making for the management of inventoried roadless areas to the land management planning process at the individual national forest level. Rescission of the national-level prohibitions provides responsible officials with flexibility to better guide management of National Forest System lands and respond to changing local resource conditions. The 2001 Roadless Rule applies to approximately 44.7 million acres of National Forest System lands, including in Alaska. The 2001 Roadless Rule is not in effect in Colorado or Idaho because those states have state-specific roadless rules.

Under the current Administration, the USDA has refocused policies, programs, and resources on increasing rural economic opportunity, decreasing Federal regulation, and streamlining Federal government services. Specifically, this deregulatory action would advance the policy objectives of Executive Order 14192, *Unleashing Prosperity Through Deregulation*, to alleviate unnecessary regulatory burdens. In Executive Order 14225, *Immediate Expansion of American Timber Production*, the President declared that “the United States has an abundance of timber resources that are more than adequate to meet our domestic timber production needs, but heavy-handed Federal policies have prevented full utilization of these resources.” In Executive Order 14154, *Unleashing American Energy*, the President likewise declared that “it is in the in the national interest to unleash America's affordable and reliable energy and natural resources.”

The proposed regulatory revision has been determined to be significant for the purposes of Executive Order 12866, and so requires review by the Office of Management and Budget. The Forest Service has, therefore, prepared an economic analysis for this rule. Throughout this analysis, the proposed regulatory revisions are referred to as the “proposed rule” and compared to a baseline, which is the continuation of current regulatory conditions. The economic analysis provides a cost-benefit analysis, as required by Executive Orders 12866 and 13563, which direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health, and safety effects and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, reducing costs, maximizing net benefits, harmonizing rules, and promoting flexibility and efficiency. This proposed rule has been considered in light of Executive Order 13272 regarding proper consideration of small entities and the Regulatory Flexibility Act (5 U.S.C. 601 et seq.) as amended by the Small Business Regulatory Enforcement Fairness Act, and as a result, the agency has completed a regulatory flexibility analysis summarized in this report.

Costs and benefits are possible from the proposed rule. Though the rulemaking itself does not compel any future activities that would result in costs and benefits, the economic analysis assumes that timber, roads, and mineral activities could occur and estimates the potential degree of effects based, in part, on current land management plan direction for such activities. Costs of the proposed rule are possible from an increase in road building and fuel treatments (agency cost), displaced recreation visitation and benefit loss (public cost), and impacts to passive use values (public cost). Benefits of the proposed rule are possible from increases in timber, minerals, and energy revenue (benefit to agency and industry), increased access for recreation (benefit to public), and possible reduced wildfire risk (benefit to public). Table 1 provides a summary of quantifiable costs and benefits between the current and proposed rules.

While the scope of quantified annual economic effects range between the amounts shown in Table 1, the additional impacts from the proposed rule could exceed \$100 million. The cost benefit analysis discusses potential industry impacts in more detail for timber, recreation (including tourism), commercial fishing and seafood processing, minerals and energy, some of which may experience tradeoffs as a result of the proposed rule.

Table 1. Summary of quantifiable costs, benefits and transfers for current rule and proposed rule within IRAs

	Current Rule	Proposed Rule
Annual Forgone Benefits		
Lost recreation benefits	\$0	-\$6.1 million
Forgone passive use values	\$0	-\$5.3 to -\$11.5 million
Annual Benefits		
Timber benefit to society	\$0	\$9.9 to \$22.0 million
Annual Transfers		
Recreation expenditure loss		\$9 million
Total annual forgone benefits	\$0	-\$5.3 to -\$17.6 million
Annual benefits	\$0	\$9.9 to \$22.0 million
Annual transfers	\$0	\$9 million

The proposed rule is expected to provide some opportunities for both large and small entities and is not expected to result in significant impacts to a substantial number of small entities, as defined by E.O. 13272 and SBREFA, and therefore no additional analysis is required for the proposed rule.

Introduction

The U.S. Department of Agriculture is proposing to rescind the 2001 Roadless Area Conservation Rule (2001 Roadless Rule) (66 FR 3244, 36 CFR Subpart B (2001)), which established broad prohibitions on road construction, road reconstruction, and timber harvesting within inventoried roadless areas on National Forest System lands. State-specific roadless rules for Idaho and Colorado at 36 CFR 294 Subparts C and D will not be affected by this proposed rule and will remain in effect. Rescinding the 2001 Roadless Rule is intended to reduce regulatory burden and return decision-making for the management of inventoried roadless areas to the land management planning process at the individual national forest level. This action is also being proposed in accordance with Executive Order 14153: *Unleashing Alaska's Extraordinary Resource Potential*, and would have the same result as reinstating the 2020 Alaska Roadless Rule (85 FR 68688) that exempted the Tongass National Forest from the 2001 Roadless Rule.¹

¹ This analysis includes the Tongass National Forest and updates some information included in the 2020 Final Environmental Impact Statement for the 2020 Alaska Roadless Rule, and supporting analysis. It does not replace or supersede that information and provides distinct analysis for the regulatory process, as explained here.

The relationship between regulations, land management plans, and national forest projects is of particular importance. A land management plan, developed under the National Forest Management Act and the Planning Rule at 36 CFR Part 219, provides a framework for future site-specific project analysis and decision making. All land management plans conform to existing laws and regulations and are administratively changed as needed to conform to new statutory and regulatory requirements (36 CFR 219.1(f) and 219.13(c)).

The 2001 Roadless Rule did not amend, revise, or compel amendment or revision of any land management plans (36 CFR 294.14(b) (2001); 66 FR 3273); however, the Roadless Rule supersedes individual land management plans where a provision of the Rule is more restrictive than a plan. Similarly, for some areas, the plans may contain plan components that are more restrictive than the 2001 Roadless Rule. Under the 2012 Planning Rule, inventoried roadless areas are treated as a type of designated area, with the option to also identify these areas as unique geographic areas or management areas in the plans. Plans may also include additional plan components for inventoried roadless areas if they are compatible with the restrictions of the applicable roadless rule. Within land management plans, inventoried roadless areas currently overlap other management areas, such as core habitats, research natural areas, alpine areas, or areas managed for backcountry recreation where there are expected to be low levels of development, including timber harvest and road construction.

All site-specific project decisions must be consistent with land management plans. Any site-specific impacts on inventoried roadless areas and other resources must be analyzed, including National Environmental Policy Act compliance prior to a decision.

The proposed rule has been determined to be significant for the purposes of Executive Order 12866, and so requires review by the Office of Management and Budget. The Forest Service has prepared an economic analysis for this rule. The economic analysis provides a cost-benefit analysis, as required by Executive Orders 12866 and 13563, which direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility.

As a result of the significance determination, this report also considers small entity impacts consistent with requirements of the Regulatory Flexibility Act, as amended by the Small Business Regulatory Flexibility Enforcement Fairness Act of 1996, and Executive Orders 13272 and 13563 (*Proper Consideration of Small Entities in Agency Rulemaking*).

Need for Regulation

The Department is proposing this rule rescission to reduce regulatory burden and return land management decision-making for inventoried roadless areas to local Forest Service officials. In 2001, the Roadless Area Conservation Rule established a single, nationwide set of prohibitions intended to provide lasting protection for inventoried roadless areas within the National Forest System in the context of multiple-use management. Today, the Department believes increased management flexibility in the administration of these lands is needed to better meet the multiple-use mission and provide benefits to the American people. There is a need to increase local management flexibility and, where necessary, allow for active management to respond to changing and localized conditions, such as increasing wildfire risk, the spread of insect and disease infestations, and the need for community protection in the wildland-urban interface.

Under the current Administration, the USDA has refocused policies, programs, and resources on increasing rural economic opportunity, decreasing Federal regulation, and streamlining Federal

government services. Specifically, this deregulatory action would advance the policy objectives of Executive Order 14192, *Unleashing Prosperity Through Deregulation*, to alleviate unnecessary regulatory burdens. In Executive Order 14225, *Immediate Expansion of American Timber Production*, the President declared that “the United States has an abundance of timber resources that are more than adequate to meet our domestic timber production needs, but heavy-handed Federal policies have prevented full utilization of these resources.” In Executive Order 14154, *Unleashing American Energy*, the President likewise declared that “it is in the national interest to unleash America's affordable and reliable energy and natural resources.” USDA is also proposing this action in accordance with Executive Order 14153, *Unleashing Alaska's Extraordinary Resource Potential*, in which the President declared that “it is the policy of the United States to fully avail itself of Alaska's vast lands and resources” and “maximize the development and production of the natural resources located on both Federal and State lands within Alaska.”

As resource conditions and national policy have evolved, the Department has determined that a single, national blanket approach to the management of inventoried roadless areas taken in the 2001 Roadless Rule constrains responsible officials from exercising the timely, place-based discretion needed to meet the Forest Service's multiple-use mission. In addition, evolving national priorities and changed conditions have required more active management approaches. The 2001 Roadless Rule limited the Forest Service's ability to conduct vegetation management within IRAs and has contributed to the lack of active management of the national forests, which has contributed to challenges in addressing forest health concerns. The 2001 Roadless Rule prohibited cutting, sale, or removal of timber—except when one of a limited set of exceptions applied. Per the Rule's text, the use of these exceptions was “expected to be infrequent” (36 CFR 294.13(b) (2001)). Furthermore, the limited number of roads within IRAs and the inability to reconstruct or build new roads to provide the needed access further limit management flexibility. Taken together, the prohibitions have removed important management tools for key areas where there are needs or opportunities to address overgrown and fuel-loaded national forests.

This proposed rescission is intended to return primary authority for determining the appropriate management of inventoried roadless areas at the local level to the land management planning process mandated by the National Forest Management Act of 1976 (NFMA, 16 U.S.C. 1600 *et seq.*). The NFMA requires that plans shall assure multiple use and sustained yield of NFS products and services and include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness (16 U.S.C. 1604(e)(1)). The Agency's land management planning process, updated by the 2012 Planning Rule (77 FR 21162), requires consideration of the plan area in the context of the broader landscape and requires that each “plan reflects the unit's expected distinct roles and contributions to the local area, region, and Nation” (36 CFR 219.2(b)(1)). The requirements of the 2012 Planning Rule ensure each land management plan addresses similar conservation objectives as the 2001 Roadless Rule was intended to address, such as: ecological integrity (including air, soil, and water), sources of public drinking water, diversity of plant and animal communities (including federally listed threatened and endangered species), sustainable recreation, scenic character, and protection of cultural and historic resources (see 36 CFR 219.8 through 219.11). At the same time, this planning approach allows for place-based, collaborative decision-making that is responsive to specific on-the-ground resource conditions, rather than a “one-size-fits-all” national mandate.

In 2001, USDA and the Forest Service asserted that a national prohibition was the best means to reduce conflict and potential for incremental impacts to the ecological and social values of these areas. Since then, conditions across National Forest System lands have changed substantially, especially in the Western United States where many inventoried roadless areas are located, with increasing drought, extreme temperatures, wildfire frequency and severity, and insect and disease outbreaks. Alongside these landscape changes, the Agency's land management planning framework has become more adaptive, science-based, efficient, and effective under the 2012 Planning Rule. These changes, combined with

evolving Agency priorities for active forest management and deregulation, diminish the basis for a national prohibition. The proposed rule would return land management decision-making for inventoried roadless areas to local Forest Service officials—giving them the flexibility to address conservation and resource issues informed by input from stakeholders, communities, and state, local, and tribal governments. Local decision-making would remain subject to the substantive requirements of the Endangered Species Act, National Forest Management Act, 2012 Planning Rule and other related laws and regulations.

The Secretary of Agriculture has broad authority under statutes such as the Organic Administration Act of 1897 and the Multiple-Use Sustained-Yield Act of 1960 to manage the National Forest System for a variety of uses. Just as the establishment of the 2001 Roadless Rule was discretionary, this proposed rule is an exercise of discretion to determine the most appropriate process for balancing competing values and uses in inventoried roadless areas within that legal framework.

Description of the Proposed Rule

The USDA proposes to rescind the 2001 Roadless Area Conservation Rule by removing and reserving 36 CFR part 294, subpart B. If this proposed rule is finalized, the management direction for inventoried roadless areas would be governed by the applicable land management plans for each unit of the National Forest System. The state-specific roadless rules for Idaho (36 CFR part 294, subpart C) and Colorado (36 CFR part 294, Subpart D) will not be affected by this proposed rule and will remain in effect.

The proposed rule would not authorize any specific ground-disturbing projects, nor does it require or compel the amendment or revision of any land management plan. Any future proposals for timber harvesting or road construction within an IRA would require site-specific compliance with the National Environmental Policy Act (NEPA) and other applicable laws, and would have to be consistent with the governing land management plan. The proposed rule would not alter existing regulatory requirements for environmental analysis, public engagement, or administrative review.

Analytical Requirements and Methods

Executive Orders 13563 and 12866 direct agencies to conduct a cost-benefit analysis, including an assessment of costs and benefits (cost-benefit analysis) and select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity considerations). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. Analysis is required to “assess both the costs and benefits” of the intended regulation, recognizing quantifiable analysis is not always possible, but that a reasoned determination be made that the benefits justify the regulatory costs. This analysis considers costs and benefits to the agency (government), industry, and the public.

The 15-year time period is consistent with Office of Management and Budget guidance (Circular A-4). It is not possible to state a specific time period for this proposed rule, and OMB’s A-4 guidance indicates that when there is uncertainty about time periods, it is appropriate to use a sufficiently long horizon so as to capture all important effects. In the longer term (up to 20 years and beyond), the extent of activities is more uncertain. Still, it is reasonable to expect a greater proportion of the potentially affected environment could be impacted by activities over time. Factors affecting long term change include natural events such as storms and wildfires, local decision-making through projects and land management plan amendments and revisions, national policy changes, technological changes, industry and economic changes, etc. Areas that are least likely for development in the short term (currently restricted, less developed, etc.) could be impacted by change, in the longer term.

The proposed rule has been considered in light of Executive Order 13272 (E.O. 13272) regarding proper consideration of small entities and the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), which amended the Regulatory Flexibility Act (5 U.S.C. 601 et. seq.). The RFA generally requires an agency to prepare a regulatory flexibility analysis describing the impact of the regulatory action on small entities as part of rulemaking. This is required of any rule subject to notice and comment requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a “significant economic impact on a substantial number of small entities.” The RFA acknowledges small entities have limited resources and makes it the responsibility of the regulating Federal agency to avoid burdening such entities unnecessarily. If, based on an initial assessment, a regulation is likely to have a significant economic impact on a substantial number of small entities, the RFA requires a regulatory flexibility analysis (initial regulatory flexibility analysis (IRFA) for the proposed rule, and final or FRFA analysis for the final rule).

The RFA requires analysis of a rule’s economic impact on the small entities that will be subject to the rule’s requirements; rules that do not establish requirements applicable to small entities are thus not subject to RFA analysis. The RFA states that the purpose of the analysis is to identify and address regulatory alternatives “which minimize any significant economic impact of the proposed rule on small entities” (sections 603 and 604). Consequently, rules that relieve regulatory burden, or otherwise have a positive economic effect on small entities subject to the rule, should not require an IRFA or FRFA. Small entity impacts and opportunities are examined in the section below titled Regulatory Flexibility Analysis.

Baseline Conditions

Inventoried roadless areas total approximately 58.5 million acres, or about 30 percent of all National Forest System lands. The 2001 Roadless Rule applies to approximately 44.7 million acres of National Forest System lands, including about 9.3 million acres within the Tongass National Forest. The 44.7 million acres exclude approximately 9.3 million acres in Idaho and 4.2 million acres in Colorado, which are under state-specific roadless rules.

More than 95 percent of inventoried roadless areas managed under the 2001 Roadless Rule (outside of Colorado and Idaho) are in ten Western states, including (from largest inventoried roadless area acreage to smallest): Alaska, Montana, California, Utah, Wyoming, Nevada, Washington, Oregon, New Mexico, and Arizona.

While they are referred to as ‘roadless’, because of the history of their inventory and designation, there are thousands of miles of existing roads within lands designated under the 2001 Roadless Rule, including National Forest System roads as well as county, state, or other ownerships. About half of these lands are within 1 mile of a road and 31 percent are within 0.5 miles of a road (13.3 million acres). These roaded areas were included as inventoried roadless areas under the 2001 Roadless Rule because of mapping errors in the second iteration of the Roadless Area Review and Evaluation (RARE II) and road construction between the time RARE II was completed and the 2001 rule. In addition, some road construction occurred between 2001 and 2010 while the rule was enjoined, or pursuant to the 2001 Roadless Rule’s exceptions.

Timber

Since 1980, the amount of timber sold from the NFS has declined by more than 80 percent. The decline is attributable to multiple factors, including (but not limited to) changing legislative directives and related forest management policies and practices, changing market dynamics for wood products, public preferences, and litigation (Congressional Research Service, 2022). From 1980 to 2023, Forest Service timber harvest peaked at 12.7 billion board feet in 1987, then declined to a low of 1.7 billion board feet by

2002 owing largely to steep declines in harvest from national forests in the Pacific Northwest and Pacific Southwest Regions (Washington, Oregon, and California). For the last 15 years, timber harvest volume remained relatively constant, averaging about 2.5 billion board feet. In 2023, 2.9 billion board feet of timber was harvested from NFS lands, at a value of approximately \$163 million. In 2024, harvested timber value across all NFS lands was \$151 million and sold was nearly \$144 million (USDA Forest Service 2025c).

Declining timber supply from western national forests caused log shortages for many mills, contributing to changes in the structure of forest related industry nationally. Regardless of national trends, timber supply changes at smaller scales elicit a variety of responses from local industry. Typically, in response to short-term conditions, facility managers make curtailments, add or remove shifts, and schedule overtime or downtime. Longer-term decisions include building new mills, investing in capacity-boosting capital improvements in existing mills, or permanently closing facilities. Spelter (2002a, 2009) described the number of sawmills closed and opened and overall capacity changes that impacted the softwood lumber sector between 1995 and 2009. The number of softwood sawmills in the United States and Canada declined from 1,258 to 891, even as the combined sawmill processing capacity increased from 150 to 168 million cubic meters. In addition, the sawmill industry in the United States experienced a process of industrial concentration over this period. While the number of sawmills has decreased, larger sawmills have come to dominate the softwood industry (Spelter 2002a), a trend that continues to have implications for forest landowners, policymakers, and rural regions affected by sawmill closures.

Other than the drop during the recession of 2008, U.S. production and consumption of industrial roundwood, which comprises pulpwood, sawlogs and veneer logs, from 1961 to 2019 has remained largely unchanged, averaging around 250 million cubic meters (or 55.2 billion board feet applying the industry standard conversion factor for roundwood of 1 mbf = 4.53 cubic meters (Spelter 2002b)) per year (Johnston et al. 2023).

The reduction in timber harvest on national forests has resulted in increased harvests from private and state lands and increased lumber imports, mostly from Canada (MacCleery 2008). The shift towards state and private lands has impacted timber producing regions of the country differently. In the West, Northwest Forest Plan implementation drastically reduced Forest Service timber harvest in the Pacific Southwest and Pacific Northwest regions, contributing, along with market changes, mill efficiency improvements, and industry consolidation, to mill closures and consolidation (Helvoigt and Adams, 2009) shifting timber harvest to state and private forestlands (Gale et al. 2012). In Oregon and Washington, most of the mills able to process large diameter logs had retooled to handle smaller logs or closed by the early 2000s. With the closure of sawmills and shift to shorter rotation forestry, the forest industry had to retool to cut smaller, more uniform saw logs to remain competitive in the global marketplace (U.S. Government Publishing Office, 2012). Adams and Haynes (1996) found that industrial production shifted from the West to the South in the 1990s following reduction of harvest from public lands in the West. The U.S. South contains few national forests and wood supply already originated on private and industrial lands engaging in short rotation forestry. In the Northeast, the timber industry is comprised of specialty hardwood lumber and higher end products like furniture along with commodity production of softwood lumber from both federal and private sources.

Timber harvest contributes to local economies and rural community well-being by supplying raw materials, generating local jobs and income, and stimulating economic activity in supporting sectors. Timber harvest activities make positive contributions to rural communities, especially if wood harvested is processed locally. Economic contributions can expand more widely, as the ripple effect of job creation and money spent circulates throughout the related industries and economic sectors. In 2023, harvest and processing of forest products from NFS lands contributed approximately \$5.8 billion to the Gross

Domestic Product of the U.S. economy, and supported about 51,200 jobs, both full-time and part-time (USDA Forest Service 2025a). Timber harvesting, whether for wood production or restoration objectives, provides employment and tax revenue in many counties throughout the Nation. These are especially important contributions to rural economies where there may not be other opportunities.

Direct employment in industries associated with timber and wood products include forestry, fishing and agriculture services and manufacturing, as displayed in Table 2 for North American Industrial Classification System for industries 113 (logging), 1153 (support services for forestry), 321 (wood product manufacturing), and 322 (paper manufacturing) (U.S. Department of Labor 2024). Overall, timber sector employment has declined by 30.5 percent since 2001 with losses in paper manufacturing (37.3 percent), forestry and logging (33.1 percent), and wood product manufacturing (25.1 percent). On the other hand, employment in support services for forestry has grown by 25.5 percent. This category typically includes jobs associated with forest stand improvement and stewardship activities, such as pre-commercial tree thinning to reduce wildfire risk and ecological restoration to improve watersheds and fish and wildlife habitat. The expanding use of Forest Service authorities to engage in “goods for services” stewardship contracting and Good Neighbor Authority agreements to achieve ecological restoration goals is reflected in the support services employment trends. By providing opportunities for living wage jobs through local contracting and workforce development, Forest Service management activities contribute to economic opportunities in rural communities.

Table 2. United States timber industry employment (U.S. Department of Labor, 2024)

Timber Industry Sector	NAICS code	2001	2005	2010	2015	2020	2022
Forestry and logging	113	75,045	69,839	55,208	54,454	51,592	50,225
Support activities for forestry	1153	16,124	15,318	14,002	15,102	17,873	20,238
Wood product manufacturing	321	570,406	558,313	339,619	380,564	394,349	427,443
Paper manufacturing	322	578,412	483,789	393,931	372,145	352,149	362,711
Total		1,239,987	1,127,259	802,760	822,265	815,963	860,617

Timber volumes harvested from NFS lands are expected to increase by 25 percent under baseline conditions due to Executive Order 14225, *Immediate Expansion of American Timber Production*. This would result in increased economic contributions, jobs and income, to the timber industry overall. Even though overall agency timber harvest may increase nationally, in accordance with current agency direction, timber harvest from inventoried roadless areas would not increase under the baseline condition. Timber harvest from IRAs would not contribute to the agency’s overall timber production and therefore there would continue to be no revenue, or benefits to the timber industry, from timber harvest in inventoried roadless areas under the baseline condition. In addition to the Roadless Rule, land management plans currently restrict (do not allow or generally do not allow) timber harvest on 26.7 million acres (about 66.5 percent of the potentially affected IRAs).

In addition to the economic impacts from timber harvest, many local communities rely on revenue-sharing payments from Secure Rural Schools Act or the 1908 Amended Act that are generated through multi-use activities, such as grazing, timber production, and special use permits. These funds are

distributed to eligible counties to help maintain essential services, such as local roads and schools. The Secure Rural Schools Act disburses revenue to counties by providing payments based on the three highest revenue-sharing payments from FY1986 to FY1999, the proportion of Forest Service lands in the county, and the county's per capita per income index. Therefore, timber revenue after FY 1999 does not impact the calculation of payments to states and counties from the Secure Rural Schools Act. The Secure Rural Schools payments are legislated by Congress and payments not covered by Forest Service revenues are covered through funding from Congress. The 1908 Act 25% payments² go to 63 out of 745 counties and those are mostly related to recreational ski resorts and not necessarily timber operations. Counties that do not elect 1908 payments receive Secure Rural Schools payments (USDA Forest Service 2026b).

Minerals and Energy

In 2023, energy and mineral production from NFS lands contributed more than \$7.6 billion to the Nation's economic activity in terms of Gross Domestic Product and supported approximately 37,800 jobs (USDA Forest Service 2025a). Even where its share of total U.S. supplies is small, National Forest System production can be very important to local economies.

Locatable minerals, such as gold, silver, copper, and iron, may be located and removed from Federal lands open to location and entry under the authority of the Mining Law of 1872, as amended ("the mining laws"). The mining laws authorize citizens to enter Federal lands that are open to the operation of the mining laws, including NFS lands reserved from the public domain, to prospect, explore, and develop valuable minerals on lands, unless those lands have been withdrawn from entry and appropriation under the mining laws. The mining laws also provide for access suitable to conduct these activities. Depending on the stage of exploration or development, reasonable access can range from unimproved temporary roads for prospecting or drilling to more permanent improved roads for full mine development and transportation of ore. The Forest Service cannot prohibit reasonably necessary activities required for the exploration, prospecting, or development of valuable mineral deposits on NFS lands open to mineral entry, though the agency has the authority and the obligation to regulate locatable mineral operations in order to prevent or minimize damage to NFS surface resources.

The Forest Service receives approximately 198 plans of operations for locatable minerals each year; primarily from individual operators or small operations with no commercial output, but which may contribute to local economies. The Forest Service estimates that revenue generated in 2024 from 11 large mines on NFS lands totaled about \$1.4 billion (USDA Forest Service 2025b).

Valuable deposits of locatable mineral resources may occur in inventoried roadless areas. The reasonable access to locatable minerals, including construction or reconstruction of roads where warranted, is a right of access provided by the General Mining Law. The Forest Service (with Bureau of Land Management) review and approve locatable mineral operations based on the mining laws and requirements in the regulations at 36 CFR Part 228, Subpart A.

The 2001 Roadless Rule provides that the responsible official may grant certain limited exceptions to the road construction prohibitions, including for reserved or outstanding rights, existing or renewed mineral leases (36 CFR 294.12(b) (2001)). Since 2018, agency records indicate Regional Foresters approved exceptions for road construction, reconstruction, or tree cutting related to at least 19 locatable operations within IRAs, the majority of which were for exploration operations. In addition, of the 11 large mines

² The 1908 Act directs 25% of gross revenues generated from U.S. Forest Service lands (for all resources, such as timber sales, mineral leases, grazing fees, and recreation fees) within a county to be shared with that county for the benefit of public schools and public roads.

referenced in the previous paragraph, 6 of them are operating partially or entirely within an IRA. Therefore, in the long term, it is reasonable to assume that future exploration, mining, and mineral processing activities will continue to occur in inventoried roadless areas where valuable deposits exist.

Leasable minerals are certain types of minerals, primarily energy resources (for example, oil, gas, coal, and geothermal resources) not subject to mining claim location but are available for exploration and development under provisions of the Mineral Leasing Act of 1920. Figure 1 shows that U.S. energy production over the next twenty-five years for natural gas is projected to remain relatively unchanged, while oil and coal production is expected to decrease slightly (U.S. Energy Information Administration 2026).

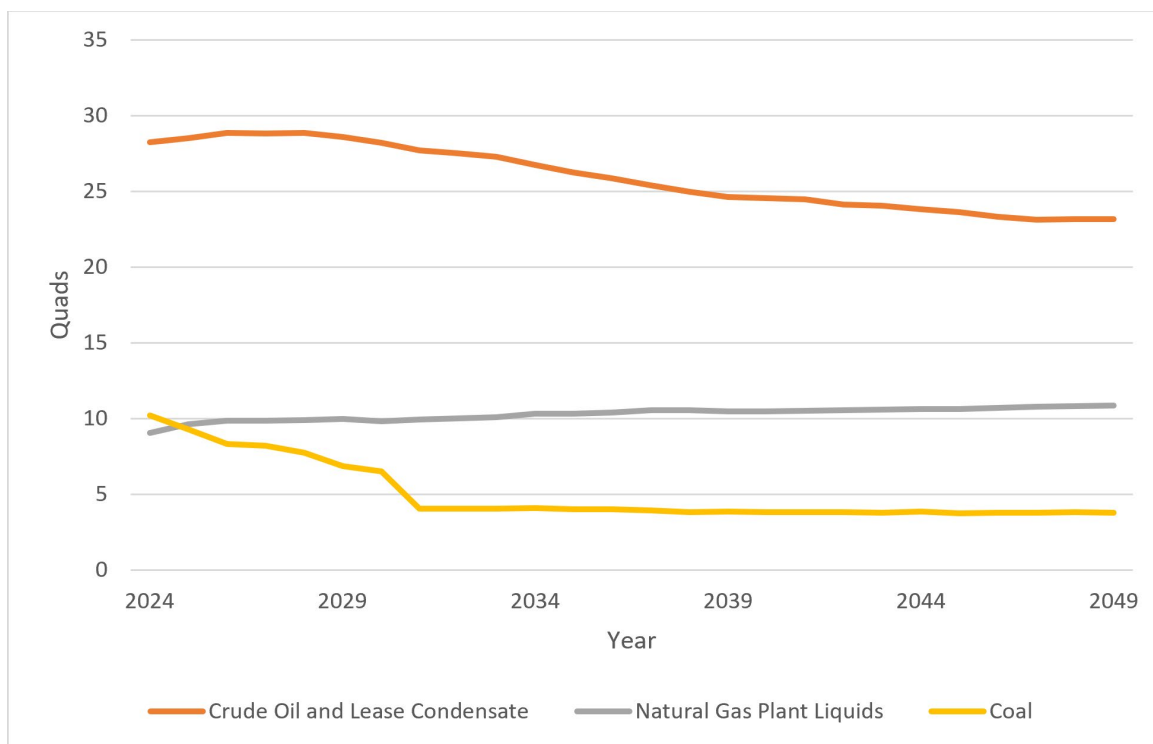


Figure 1. U.S. Energy Production (U.S. Energy Information Administration 2026)

Currently, 3.4 million acres of NFS lands are leased for oil, natural gas, coal, phosphates, other leasable mineral commodities, and geothermal resources. In 2024, energy and mineral development from federal leases on NFS lands produced commodities valued at over \$4.8 billion, which generated \$533 million in revenue through royalties and other payments to the U.S. Treasury (\$106 million from coal, \$402 million from oil and gas, and \$25 million from other leasable mineral commodities) (USDA Forest Service 2025b). Leases for oil and gas and coal that pre-date the 2001 Roadless Rule continue within the potentially affected IRAs (they are considered ‘valid existing rights’ under the rule).

According to the Minerals Lands Records System, there are 18 authorized federal coal leases within existing IRAs, totaling 13,050 acres of land. All of these coal leases are within Region 4 on the Manti-La Sal National Forest in Utah. Underground methods of extraction are authorized on these leases with limited surface disturbance for exploration, powerlines, vent shafts and pipelines. The federal coal leases are also adjacent to private and state coal tracts that are developed or will be developed during mine development.

There are approximately 1.3 million acres of coal-bearing rocks within inventoried roadless areas located within the Intermountain areas, primarily Utah and the Wasatch Plateau (not including Colorado or Idaho). Coal mining from inventoried roadless areas is not extensive, but the Manti-LaSal National Forest has active coal mining either within or contiguous to inventoried roadless areas, that employ underground mining methods of extraction. Three potential coal tracts remain on the Wasatch Plateau that total 36,200 acres and contain recoverable reserves of about 185 million tons of high-BTU bituminous coal. Two of these tracts are currently leased. Approximately 40 percent of those reserves are in inventoried roadless areas. One tract would require full development of an underground mine (e.g. transportation and portal facilities) in an inventoried roadless areas; surface development of another could be done outside any inventoried roadless area. The third tract could be developed from an adjacent underground mine. However, development of the three tracts would depend on the ability to conduct both pre-lease exploration drilling and post-lease development drilling. Included in the recoverable reserve estimate are about 22 million tons of recoverable coal reserves in inventoried roadless areas that were transferred to the State of Utah School and Institutional Trust Lands Administration (SITLA) under the Utah Schools and Land Exchange Act of 1998 (Public Law 105-335). Leases issued prior to the 2001 Roadless Rule have valid existing rights and therefore are not subject to the road building prohibitions in the rule. The rights to the coal would revert to federal ownership once the SITLA portion is recovered.

There are about 542,000 acres currently leased for oil and gas within IRAs. See Table 3 for the distribution of leases across Forest Service regions. The Eastern Region (Region 9) has the greatest acres leased for oil and gas. Oil and gas lease sales are scheduled on a regular basis for lands where there is interest in leasing and where environmental analyses have been completed. The Roadless Rule has no effect on areas currently under lease. The Roadless Rule contains an exception that would allow road construction or reconstruction on those lease areas for the continuation, extension, or renewal of a mineral lease. New leases could also be issued upon expiration of an existing lease, and the exception would still apply.

Table 3. Oil and gas acres and leases on Forest Service IRAs

Forest Service Region	Acres oil and gas leased in IRAs	Number of oil and gas leases in IRAs
1	42,592	289
2	5,453	36
3	12,806	41
4	22,495	131
5	912	10
8	46,629	135
9	411,602	219

Under the baseline condition, there would be no change to mineral and energy resources in inventoried roadless areas – locatable mineral exploration and development could continue and existing leases for oil and gas and coal could continue. Mineral and energy activity on National Forest System lands would continue to depend upon such factors as market conditions, environmental regulations, tax policies, technological advances, and mineral and energy resource potential.

For leasable minerals, the road prohibition has not affected road construction and reconstruction providing access to and development of land under lease prior to the 2001 Roadless Rule, where valid existing rights exist. However, the 2001 Roadless Rule precluded expansion of existing lease areas into

adjacent inventoried roadless areas, due to road building restrictions. Leases issued after 2001 within IRAs would have “no surface occupancy” stipulations (NSO) incorporated into the lease on land where the 2001 Roadless Rule applied.

Commercial Fishing and Seafood Processing

The proposed rule could have impacts on the commercial fishing and seafood processing industries across the country where commercially producing waterways are potentially affected by management of connected NFS lands and inventoried roadless. However, these effects occur most notably in Southeast Alaska where the seafood industry relies heavily on the Tongass National Forest.

Data for the Southeast Alaska region on seafood production, seafood industry harvest and value from Alaska Department of Fish and Game is provided in the Southeast Conference report on 2023 activities (Southeast Conference 2024). In 2023, an estimated 325 million pounds of seafood was harvested in Southeast Alaska with a value of \$261 million. While this represented the largest catch since 2013, it was one of the lowest catch values on record; only 2020 was lower in recent history. In terms of value, salmon accounted for more than half (54 percent) of the total 2023 commercial catch in Southeast Alaska, with the remainder divided among black cod (15 percent), halibut (15 percent), crab (6 percent), herring (4 percent), and other (6 percent) (Southeast Conference 2024).

Employment in seafood harvesting and processing remained relatively stable from year to year despite fluctuations in the annual volume and value of harvested salmon. Salmon harvesting employed an estimated 656 people in Southeast Alaska in 2023, down from 864 people in 2018, with an additional 1,084 people employed harvesting other fish; down from 1,275 in 2018 (Alaska DOL 2023a). Further, 3,300 people were employed in fish processing in 2023. Together, seafood harvesting and processing sectors supported approximately 5,000 regional jobs (Alaska DOL 2023b). Seafood harvesting and fish processing employment from 2000 to 2013 are shown in the Tongass forest plan final EIS (USDA Forest Service 2016).

Unlike other basic sectors of Southeast Alaska’s economy, employment in the seafood industry is distributed throughout the region with an important presence in virtually every community. The seafood processing sector is characterized by high seasonality and low resident hire, as well as low hourly wages, with a median annual wage of \$24,689 in 2013 (Strong 2014). The industry does, however, have several higher paid occupations, including ship engineers, captains, mates, boat pilots, and general and operations managers, which accounted for 1.2 percent total employment, but 6 percent of wages, with a median annual wage of \$66,720 (Strong 2014).

Recreation

Slightly more than half of the U.S. population engages in some form of outdoor recreation, including exercise and outdoor sports (White et al. 2023, Outdoor Foundation 2021). About 13 to 16 percent of individuals over age 6 in the United States engage in each of the most popular nature-based recreation activities: day hiking, camping, and fishing (White et al. 2023). Other activities, such as mountain biking, rafting and kayaking, skiing and snowboarding, hunting, and wildlife viewing, attract between 1 and 10 percent of the U.S. population aged 6 and older (White et al. 2023, Outdoor Foundation 2022).

Recreation is the primary way most people engage with forests and other natural resources. Exercise and spending time with friends and family are the most common motivations for recreation (Outdoor Foundation 2018). Other leading motivations for recreating include spending time in nature and viewing scenery. The most popular outdoor recreation activities in the United States, such as using developed

recreation sites, outdoor swimming, and day hiking (White et al. 2023), provide opportunities for exercise, socializing, and engaging with nature in forested settings.

Visitors to national forests support the economies of communities around national forests when they spend money during their recreation trips to lands managed by the Forest Service. To complete recreation trips, visitors may incur a wide range of expenses, but the most common trip-related expenses are for food and beverages in restaurants and grocery stores, fuel, and lodging (within or nearby national forests). Visitors to national forests and grasslands also often spend money on outfitter and guide services, souvenirs, and local businesses selling sporting goods. The economies of many communities around national forests depend on this recreation trip spending. Recreation uses across the NFS are well established and have grown over time. The 193 million acres administered by the Forest Service experienced approximately 164 million visits in FY2024. These visitors spent more than \$13.4 billion in rural economies surrounding NFS lands in FY2023. Some communities located around federal recreation lands have a high dependence on economic inputs from recreation spending and may experience negative economic conditions if participation numbers decline or visitor spending patterns change significantly in the future (White et al. 2016). Visitor spending in FY2023 contributed approximately \$16.2 billion to the Gross Domestic Product of the U.S. economy and supported about 167,000 jobs, both full-time and part-time (USDA Forest Service 2025a). In FY 2023 there were a total of 16.9 million recreation visits where the main activity was wildlife-related (fishing, hunting, and viewing wildlife). These visitors spent more than \$1.2 billion in economies surrounding NFS lands. Wildlife-related visitor spending contributed approximately \$1.4 billion to the Gross Domestic Product of the U.S. economy and supported about 14,600 jobs, both full-time and part-time (USDA Forest Service 2024a).

The number of recreation visits to IRAs is unknown and, thus, the recreation visitor spending in local communities associated with IRA recreation cannot be directly quantified. However, using information from the Forest Service National Visitor Use Monitoring (NVUM) Program (USDA Forest Service 2026a), it is possible to quantify the amount of visitor spending associated with recreation to engage in the types of activities likely occurring within IRAs for the set of national forests and grasslands potentially affected by the roadless rule rescission. In addition, by assuming a percentage of those expenditures are caused by IRA recreation, one can estimate the potential magnitude of expenditures associated with IRA recreation. In 2024, visitors to the national forests potentially affected by the roadless rule rescission spent \$8.5 billion in communities around those national forests during their recreation visits. Of that amount, about \$2.2 billion in spending came from visitors engaging in trail-based and dispersed recreation (such as hiking, backpacking, Off-Highway Vehicle (OHV) recreation, snowmobiling, cross-country skiing and snowshoeing, motorized and non-motorized boating) in non-Wilderness, dispersed areas of those forests and grasslands. Further, about \$753 million of the \$8.5 billion in spending came from visitors engaging in fishing, hunting, and viewing wildlife in the non-Wilderness dispersed areas of those forests. The potentially affected IRAs represent about 31% of the non-wilderness NFS ownership within the national forests potentially affected by the roadless rule rescission. Applying that percentage (31%), the potential magnitude of expenditures associated with trail-based and boating recreation in affected environment of IRAs is \$660 million and \$226 million in spending is associated with fishing, hunting, and viewing wildlife (for a total of \$886 million of visitor spending associated with IRAs potentially affected by a roadless rescission). Hjerpe and Aldrich (2018), using figures also derived from the NVUM data, estimated that visitors spent \$53.10 (2016 dollars) in communities near IRAs during their IRA visits. Those authors estimated there were 11.4 million visits to IRAs in 2017 (by assuming that IRA visitation rates mirror Wilderness visitation rates). Combining the Hjerpe and Aldrich (2018) figures yield an estimate of visitor spending from IRA recreation of about \$605 million in 2017. That figure compares well with the \$886 million in IRA visitor spending in 2024 estimated here.

Those engaging in outdoor recreation on public lands receive an economic benefit because their gains in economic well-being from having access to recreation opportunities outweigh their costs of engaging in the recreation trips to use those opportunities (Mendelsohn and Markstrom 1988, Swanson and Loomis 1996). These benefits are measured as the consumer surplus of visitors or the difference between a visitor's willingness to pay to access a recreation resource and what they had to pay to create their recreation trip. The sum of consumer surplus values across all visits to NFS lands reflect the benefits to society from government investments in providing NFS recreation opportunities. For the NFS units that have potentially affected IRAs, the economic benefits to visitors engaging in recreation anywhere in the unit in 2024 was about \$15 billion, using the economic benefit values (in current year dollars) and approach described in Rosenberger et al. (2017) and current estimates of visits by primary activity from the Forest Service NVUM Program.

The recreation opportunities presently available within IRAs primarily support trail-based dispersed recreation activities, such as hiking, backpacking, OHV use, snowmobiling, cross-country skiing, snowshoeing, and boating and wildlife-related recreation. Based on Agency recreation visit estimates, there are about 39 million visits for trail-based and dispersed recreation activities and 10 million visits for fishing, hunting, and viewing wildlife in the non-Wilderness portions of national forests that contain potentially affected IRAs. Those visits translate to about \$4.9 billion in economic benefit to those engaging in trail-based and dispersed recreation and \$1.3 billion in economic benefit to those who are engaging in wildlife-related recreation. The potentially affected IRAs represent about 31 percent of this area. Applying 31 percent to the above values, the potential aggregated economic benefits to visitors engaging in trail-based and dispersed recreation activities within the potentially affected IRAs is upwards of \$1.5 billion and the economic benefits to those engaging in fishing, hunting, and wildlife viewing is upwards of \$419 million. These values are greater than those reported in Hjerpe and Aldrich (2018) for inventoried roadless areas (nearly \$500 million) because we are using the activity-specific economic benefit values and the benefit calculation approach reported in Rosenberger et al. (2017) and we estimate more visits (in 2024) to potentially affected IRAs.

Beyond the benefits to recreationists from having access to recreation opportunities, recreation is a key engine of the U.S. economy. Considering expenditures on trips to engage in outdoor recreation and purchases of gear and equipment to engage in recreation (that is used typically on multiple trips), U.S. outdoor recreationists supported about \$639 billion of U.S. GDP (or about 2.3 percent of total U.S. GDP) (U.S. Bureau of Economic Analysis 2024).

Under the baseline condition, in the short-term, the aggregate economic benefits to recreationists visiting IRAs would likely remain largely unchanged. In the long-term, it is probable that the aggregate economic benefits to recreationists visiting IRAs would increase (or at least not decline, although the experience per visit will be discussed elsewhere in this document) as the demand for trail-based and dispersed area recreation (and hence the number visits to IRAs) increases in the coming decades.

Fuels Management and Wildfire

Over the past century, fire suppression, logging, and grazing have disrupted natural fire cycles across the National Forest System. Many forests that once experienced frequent low-severity fires are now outside their historic fire regimes and are experiencing uncharacteristic high-severity fires. Within potentially affected IRAs, 9.8 million acres (24.4 percent) overlap with the Healthy Forests Restoration Act (HFRA) definition of the Wildland-Urban Interface (WUI).

Severe wildfires, even when limited in extent, have often occurred near population centers, critical infrastructure, and other high-value resources, amplifying their impacts well beyond the burned footprint. The WUI includes areas where homes, businesses, and infrastructure intermingle with wildland

vegetation. This overlap increases the likelihood wildfire events in IRAs will directly affect public safety, property, and the continuity of vital services such as transportation, energy, and water supply.

Compounding these risks are other stressors, including widespread insect and disease outbreaks that have intensified in recent decades. These disturbances reduce forest health, contribute to hazardous fuel accumulation, and heighten the probability of severe wildfire. The combination of ecological stress, accumulated fuels, and expanding development in the WUI creates conditions where even relatively small fire events can result in disproportionate social, economic, and ecological consequences.

When the Roadless Area Conservation Rule was finalized in 2001, the Environmental Impact Statement projected large-scale fire reduction efforts would not be needed in IRAs for at least 20 years. Since then, however, the WUI has expanded, and wildfire activity, insect outbreaks, and forest health concerns have intensified.

Forest restoration and fuels management have multiple benefits to society. Benefits range from enhanced ecosystem services (such as clean air and water) to avoided wildfire costs. Based on a study in the Western U.S., over seven dollars of benefit may be returned to society for every dollar invested in forest restoration in high risk, high-value watersheds (though it should be noted that the cost accounting reflected in the seven-to-one ratio is quite limited, omitting some categories of cost acknowledged in this regulatory impact analysis document). Significant variation in the value of restoration and fuel treatment benefit types was found in the study, indicating that restoration benefits differ in value based on societal importance (Hjerpe et al 2024).

The national budget for fuels management on NFS lands exceeds \$400 million annually as part of broader wildfire resilience and forest health initiatives. Costs for individual fuel management projects currently range from approximately \$100 to \$500 per acre, depending on terrain, treatment type, extent of ecological departure, and ecological value. High-value or complex ecosystems often require investments greater than \$2,000 per acre. The Forest Service is treating over 3 million acres of NFS lands annually, reflecting a strategic expansion in response to increasing wildfire risks and extended wildfire seasons. Prescribed fire remains a primary treatment method, though mechanical thinning and mastication are increasingly used in wildland-urban interface zones and ecologically sensitive areas. When conditions support the use of natural ignitions to play their ecological role, fire managers attempt to use this low-cost nature-based tool to reduce fire risk. The Southern Region continues to account for a significant share of treated acreage, though western states have seen notable increases due to intensified fire seasons. Mechanical pretreatment costs average between \$300 and \$2,000 per acre, reflecting higher labor, equipment, and compliance costs compared to earlier estimates.

Under the 2001 Roadless Rule, hazardous fuels treatments can occur within inventoried roadless areas if they do not include road construction or tree cutting, or if exceptions are granted by the Responsible Official. Agency management records show that a lack of roads has not prevented fire prevention or protection measures, especially wildland fire use and prescribed fire. However, road restrictions limit opportunities for mechanical thinning and fire control.

Roads

The public, industry, and the agency benefit from the NFS road system. Roads are used to access recreation sites, timber harvest, residences, fire and safety resources, to name a few. There are approximately 17,000 miles of roads within Inventoried Roadless Areas managed under the 2001 Roadless Rule (outside of Idaho and Colorado). 51.5 percent of lands designated as Inventoried Roadless Areas acres managed under the 2001 Roadless Rule (outside of Idaho and Colorado) are within 1 mile of a road (22.3 million acres) and 30.8 percent of lands designated as Inventoried Roadless areas managed

under the 2001 Roadless Rule (outside of Idaho and Colorado) are within 0.5 miles of a road (13.3 million acres).

A Fiscal Year 2023 Service-wide Asset Summary for the Forest Service estimated current replacement value (CRV) for NFS roads and bridges at \$39 billion (USDA Forest Service 2024b). Using the industry standard 4 percent of CRV to estimate annual funding needs to maintain the existing NFS road network in a state of good repair, maintenance funding needed is an estimated \$1.6 billion annually. This figure includes reoccurring maintenance and cyclic replacement and repair of major assets such as bridges, drainage structures, pavements, and gravel surfacing. Per a budget review of Fiscal 2023 funding, the Forest Service received approximately \$270 million, or less than 20 percent, of the estimated funding needed to maintain its existing road infrastructure.

Annual appropriations for construction and maintenance of the road system have drastically declined in the last 20 years. Annual appropriation funding reached a peak of \$234 million in 2004 and dropped to \$73 million 2024.

The difference in funding available for roads and the need to maintain the roads system has resulted in a deferred maintenance backlog. In 2024, the Forest Service estimated a deferred maintenance backlog of \$6.9 billion for roads and bridges. This estimate is based on passenger car roads only (maintenance levels 3-5). In 2001, the deferred maintenance backlog was estimated at \$8.4 billion for all maintenance levels of roads. The 2024 estimate does not include maintenance level 1 or 2 roads as there is no current tracking mechanism for these lower maintenance level roads.

Non-Market Values

In addition to economic benefits, there are social values and benefits associated with roadless areas on NFS lands. Forest values are relatively enduring beliefs people hold about forests and the good, importance, or worth of specific aspects of them (Tarrant and Hull 2005, also see Cervený et al. 2018 for a review). Once these values are established, they shape the relationships between people and forests, influencing both attitudes (tendencies to react favorably or unfavorably to situations, conditions, people, objects, or ideas) and actions (Bengston et al. 2020, Cervený et al. 2018). Values and attitudes are thus at the core of conflicts over forest management (Brown and Reed 2000, Cervený et al. 2018). Understanding the values held by different groups of people is essential for successful policy development, informed decision-making, and the effective implementation of management actions (Bengston and Xu 1995, Bengston et al. 2020). People value the ecological, recreation, passive use, and aesthetic benefits that roadless areas provide. Some of these values include:

- Maintenance of ecosystem health,
- Conservation of plant and animal species,
- Conservation of air and water quality,
- Scenic quality,
- The desire to experience solitude and personal renewal in wild areas,
- Feeling a sense-of-place attachment to a specific area,
- Wanting to know that natural areas exist for their own sake,
- The desire to leave a legacy of natural areas for future generations to experience and benefit from,
- Protection of fisheries,

- Protection of wildlife for viewing and hunting opportunities,
- Provision of recreation opportunities associated with primitive and semi-primitive classifications,
- Preventing the spread of nonnative invasive species that degrade ecosystems,
- Providing current and future supplies of medicinally valuable plants,
- Well-functioning ecosystems and biodiversity,
- Enhanced quality of life.

Cost-Benefit Analysis

The cost-benefit analysis identifies the potential economic costs and benefits associated with the proposed rule. Baseline conditions are equal to operations under existing regulations and policy. Because more than 95 percent of inventoried roadless areas managed under the 2001 Roadless Rule (outside of Colorado and Idaho) are in ten Western states (Alaska, Montana, California, Utah, Wyoming, Nevada, Washington, Oregon, New Mexico, and Arizona), changes in costs and benefits and associated economic impacts would be concentrated in those states if there are changes to activities allowed in IRAs.

In general, it is reasonably foreseeable that activities with potential for costs and benefits could occur within or near inventoried roadless areas under the proposed rule, and that more road construction and timber harvest activities are reasonably foreseeable. However, the rulemaking would not compel, require, or authorize any site-specific activities. Therefore, site-specific locations and amounts of activities and their associated costs and benefits that could occur in the future are uncertain. Any future decisions on these activities are greatly influenced by factors beyond the proposed rulemaking such as local decision-making through land management plans and projects, informed by the local community, local industry capacity, agency budget allocations and resources, and other regulations and policies.

The cost benefit analysis discusses some benefits and costs that are not readily quantifiable, but nonetheless demonstrate benefits, costs and efficiencies gained from the proposed rule. Because the proposed rule does not prescribe site-specific activities, it is difficult to predict quantitative changes in costs or benefits. Many benefits and costs are therefore not quantified but discussed in a qualitative manner. It should also be emphasized that the types of benefits derived from the uses of roadless areas are far-ranging and include several non-market, non-use, or otherwise challenging-to-quantify benefit categories (that is, roadless characteristics such as biological diversity, habitat, physical values, scenic quality, recreation opportunities, traditional cultural properties and sacred sites, and locally identified unique characteristics). As a consequence, the benefits are largely discussed qualitatively.

All future site-specific project decisions, including those to authorize road construction, reconstruction, and timber harvesting, must be consistent with land management plans. Future project decisions must comply with applicable Federal and State laws, such as the National Environmental Policy Act, Clean Water Act, the Clean Air Act, Endangered Species Act, National Historic Preservation Act, and the Wilderness Act, as well as provisions for government-to-government consultation with Tribes and Alaska Native Corporations.

Timber

The proposed rule does not include changes to the projected timber sale quantity guided by existing land management plan direction. While projected harvest levels are not expected to be significantly different under the proposed rule, the roadless rule can influence the potential location or likelihood of future timber harvesting. In other words, the proposed rule examines increases in management flexibility for

how the forest plan's timber harvest goals can be better achieved, but does not alter the plan's underlying goals or projected outcomes. The proposed rule would not compel the amendment or revision of any land management plan. While the rulemaking would not require such changes, plans may be amended in any manner whatsoever and are revised periodically (16 U.S.C. 1604(f)). Local responsible officials (forest supervisors and regional foresters) would continue to have discretion to amend or revise a land management plan as deemed necessary.

Under the proposed rule, it is reasonably foreseeable that an increasing proportion of timber volume sold would come from within the potentially affected inventoried roadless areas. Timber harvest would potentially increase within the affected IRAs due to the removal of prohibitions; however, harvest could only occur where allowed by land management plans and agency policy and in areas where mechanized equipment can safely operate. Areas far from existing road networks, on steep slopes (greater than 70 percent), or that are not vegetated are less likely to present management opportunities due to decreased economic viability. However, where conditions are operable, and the current land management plans allow, timber harvest may occur. The exact locations and actual amounts of timber harvest depend on many factors, including individual forest plan direction and demand from the wood products industry. In the long term, land management plan amendments and revisions could increase the area where timber harvest would be allowed. The additional harvest volume may result in increases in revenue from timber harvest estimated below.

We estimated potential volume available for timber harvest based on operable areas in IRAs, average annual harvest rates, and volume of timber on NFS lands. Value of that potential volume was then estimated based on average stumpage rates (predicted high bid prices) for timber sold on NFS lands, characterized by FIA forest type. Forest Service stumpage rates (predicted high bid prices) were used because they reflect previous Forest Service timber sales (price per species) and are readily available in the Forest Service Timber Information Manager system. In addition, predicted high bid is a useful estimate of stumpage value plus all additional expenses from removal of timber; such as logging, hauling, and overhead, and often a profit margin for the logger or supplier. The stumpage values are potential revenue to the Forest Service that result in benefits to the public such as payments to local governments and projects on NFS lands. In addition, revenue to the timber industry is characterized by producer surplus (profit) estimated by subtracting predicted high bid for stumpage from the delivered log prices.³ See Appendix A for more information on stumpage price methodology and assumptions.

Stumpage value is presented in broad ranges and is best interpreted at broad scales due to the limited statistical reliability of FIA data. Figure 2 shows potential estimated annual timber harvest values of merchantable sawtimber per year. Estimates are based on observed stumpage rates and current national forest harvest levels and apply forest plan constraints to better reflect current timber harvest opportunity. This only includes acres and volumes in likely operable or likely operable but complex categories within roadless areas that have current land management plan direction that generally allows forest management

³ The stumpage rate and the delivered log price represent two different points in the timber value chain. The stumpage rate is the price paid to the landowner—such as the federal government—for the timber “on the stump” in the forest. It reflects only the value of the trees as they stand and does not include any costs for cutting, hauling, or transporting the logs. In contrast, the delivered log price is what a mill pays for logs delivered to its yard. This price includes the stumpage cost plus all additional expenses such as logging, hauling, and overhead, and often a profit margin for the logger or supplier. Because of these added costs, delivered log prices are typically higher than stumpage rates, depending on terrain, distance to mills, and species. Predicted high bid is used to estimate stumpage, since market values for the forest service are not available, and the process for estimating predicted high bid includes costs beyond just stumpage, such as cutting, hauling, or transporting the logs.

activities in these areas. It is not possible to fully predict annual harvest given local decision-making authority and local market conditions.

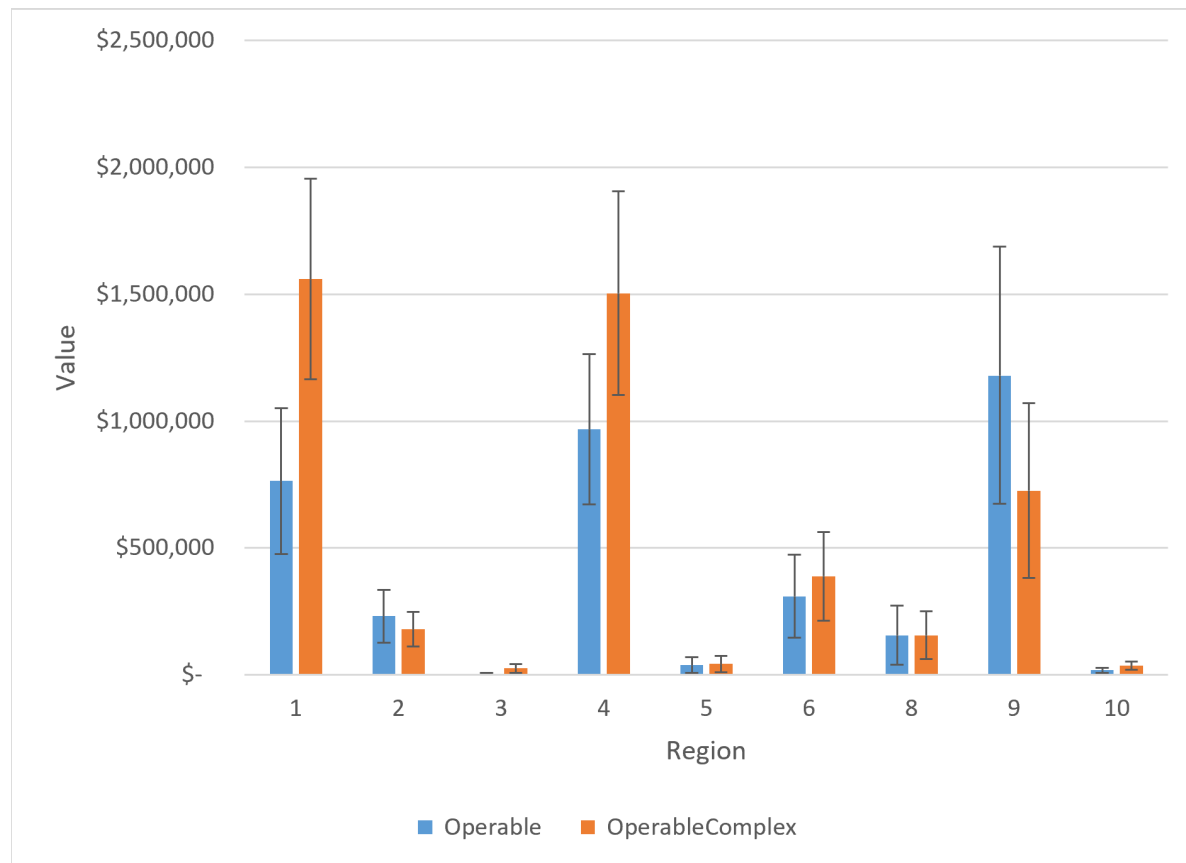


Figure 2. Potential Merchantable Sawtimber Harvest Value per year in operable inventoried roadless areas applying current land management plan direction

The proposed rule is estimated to potentially provide opportunity for an increase in annual timber harvest compared to the baseline condition, valued at \$5.2 to \$11.4 million per year in revenue for the Forest Service benefiting the public from payments to local governments and projects on NFS lands. These values are attributable to both anticipated harvest in likely operable areas valued at \$2.2 to \$5.2 million per year and an additional \$3.1 to \$6.2 million per year of harvest within the operable but complex areas (where not restricted by land management plans). If all potential harvest occurred, it could represent a 5 to 10 percent annual increase in total sawtimber harvest on National Forest System lands. In the long term, land management plan amendments and revisions could expand the area where timber harvest would be allowed as well as increase potential timber harvest volumes and revenue for the agency and, subsequently, the timber industry.

As detailed above in the Baseline Condition section, timber revenue does not impact the payments to states and counties from the Secure Rural Schools Act (and most counties with timber production elect for Secure Rural Schools payments) because the payments are calculated based on the three highest revenue-sharing payments from FY1986 to FY1999 (before SRS was enacted), proportion of Forest Service lands in the county, and the county's per capita per income index (USDA Forest Service 2026b). Thus, changes in stumpage revenue under the proposed rule would not change SRS payments because payments are calculated based on the period from FY1986 to FY1999.

The proposed rule provides flexibility for local land managers to tailor forest management, as appropriate to local land conditions and consistent with local land management plans. This potentially changes the composition of species available for industry to harvest. The timber industry could realize cost savings from lower hauling costs to get to the mill if roads are constructed in areas where they have been prohibited by the 2001 roadless rule. The proposed rule provides flexibility for timber managers for designing timber sales that appraise positively. Cost savings from improved flexibility could, in turn, potentially improve the Forest Service's ability to offer economically feasible sales that meet the needs of the industry.

Information on delivered log prices is used to calculate revenue to the timber industry. Delivered log prices account for profit and a variety of costs beyond stumpage value that include cutting, loading, hauling and delivering stumpage to mills. Using data on stumpage and delivered log prices (SilvaStat360 2026, Timber Mart South 2026, Timber Mart North 2026), we estimated regional ratios to obtain delivered log value from stumpage value that range from 1.73 to 2.37. Using these ratios, we estimate the revenue to industry to be the total delivered log value of \$9.9 to \$22 million annually. Subtracting stumpage value (estimated using predicted high bid prices) provides producer surplus since the process for estimating predicted high bid includes all costs beyond just stumpage, such as cutting, hauling, or transporting the logs. This difference between the stumpage value (estimated using predicted high bid) and delivered log value is \$4.6 to \$10.6 million annually. We request comment that would further facilitate producer surplus quantification.

We examined an alternative (see Alternative 3 social and economic impacts detailed in the Environmental Impact Statement) that would remove 2001 Roadless Rule prohibitions in areas that are within ½ mile of existing roads or within Wildland Urban Interface (WUI) to increase management flexibility, while retaining roadless rule prohibitions on timber harvest and road construction outside of those areas. Applying land management plan direction, national annual increases in stumpage value would be approximately \$4.2 to 9.7 million per year (this is comparable to the agency effect of \$5.2 to 11.4 million for the proposed rule) benefiting the public from payments to local governments and projects on NFS lands. If all of this harvest occurred, it could represent a potential 4 to 9 percent annual increase in total sawtimber harvest on National Forest System lands. In the long term, land management plan amendments and revisions could increase the area where timber harvest would be allowed as well as increase potential timber harvest levels and revenue for the timber industry.

Minerals and Energy

Exploration and development of any domestic mineral or energy resources is a function of fluctuating commodity prices, environmental and permitting costs associated with domestic mineral or energy resource development, accessibility to domestic mineral or energy resources, and level of public support for mineral and energy resource development on Federal lands.

Road construction and reconstruction for locatable mineral exploration and development is a right of access as provided by the General Mining Law, and therefore there are no anticipated changes in locatable mineral production and associated costs and benefits under the proposed rule.

Under the proposed rule, construction or reconstruction of roads that are reasonable and necessary for development of existing energy or mineral leases, for access to new or existing energy or mineral leases, and for access to associated product conveyance lines could be allowed as necessary in accordance with the terms of the lease, where they are consistent with land management plans. The removal of prohibitions within the potentially affected IRAs could generate renewed interest in mineral leasing where road building was previously not allowed. In accordance with the terms of the lease, approval of operations involving road building within areas previously designated as IRA would be more likely

without the no surface occupancy lease stipulation. This does not suggest that lands no longer subject to the 2001 Roadless Rule would be leased for mineral development without road building restrictions. Site specific lease stipulations would still be developed for leasing (with additional conditions prescribed during permitting), which may restrict how the lease may be developed for mineral extractive activities. Such restrictions would be in accordance with all applicable laws and regulations and subject to the land management plan.

NFS lands designated as IRAs are currently open for leasable mineral development for entities that have existing leases or would like to apply for a lease (43CFR3200, 3400, 3500; 36CFR228 Subpart E). The current prohibition is that roads cannot be built in IRAs to access leasable minerals. Future leasing under the proposed rule may not require a “no surface occupancy” stipulation because of the 2001 Roadless Rule, but is still subject to site specific lease stipulations, which may preclude road development.

In order to make site specific leasing decisions, reasonably foreseeable development scenarios for a given area or location are necessary for the analysis. However, reasonably foreseeable development is not possible to estimate for the proposed rule at the national scale because the development decision is dependent on the leasable commodity, method of extraction (with consideration for geologic constraints and market conditions), operability of the land for building roads and accessing the mineral resources, land management planning, and other local considerations.

In general, oil, gas, and coal production is dependent on global markets and conditions. Figure 1 demonstrates that domestic oil, gas, and coal production are projected to be steady (natural gas) or decline (oil and coal) over the next 25 years (U.S. EIA 2026). Under the proposed rule, there is additional flexibility for potential future leasable mineral development opportunities and it is reasonably foreseeable that some development could occur in potentially affected IRAs, resulting in associated costs (environmental compliance, road building, loss in passive use values, etc.) and benefits (revenue to agency and industry). Exploration and development could only occur where allowed by land management plans and agency policy (such as lease stipulations and programmatic leasing availability decisions). We anticipate that there would be no net change, relative to baseline conditions, in domestic leasable minerals production under the proposed rule because domestic oil, gas, and coal production are projected to be steady or decline (U.S. EIA 2026). In addition, leasable mineral development in IRAs did not occur prior to 2001 or since then with available technological methods of extraction without the use of roads. We are requesting comments on effects related to anticipated leasable mineral production.

As detailed in the EIS, under alternative 3 there is additional flexibility for potential future leasable mineral development opportunities and some development and associated social or economic effects could occur, though less than the proposed rule. However, we anticipate that there would be no net change in domestic leasable production on NFS lands under the proposed rule and alternative 3 relative to the baseline condition because leasable mineral development in IRAs could still occur based on technological methods of extraction without the use of roads or would replace or substitute existing development outside of IRAs on federal, state, or private lands resulting in no net change in domestic production.

Commercial Fisheries

The proposed rule is not expected to have a significant change to the commercial fishing or fish-processing industries over the planning period. Because of its coastal environment, most of the commercial fishing and fish processing industry affected by the proposed rule would be on the Tongass National Forest. The absence of an effect in the area surrounding the Tongass is based on the remaining management direction of the 1997 Tongass forest plan. The final EIS for the Tongass forest plan (USDA Forest Service 1997) noted that the amount of acreage of timber harvest was at most less than 20,000

acres per year, representing approximately 0.5 percent of the total remaining productive old-growth (or 5 percent over the next decade) and less than 0.02 percent of the entire Forest. That final EIS concluded this level of timber harvesting was not expected to result in a significant change to commercial fishing. The proposed rule would allow considerably less timber harvest than the 1997 maximum estimate within the Tongass National Forest (USDA Forest Service 2020).

Across the entire affected environment an additional 0.025 percent of all NFS lands (193 million acres) could be harvested annually from within inventoried roadless areas. The EIS biodiversity section for the proposed rule details that in the short-term, potential adverse effects to aquatic species and habitats are less likely, but in the long-term these effects could be more likely to occur if there is an increase in timber harvest. In both the short term and long term, in compliance with land management plan requirements and through project-specific planning, future activities would be designed to avoid or minimize adverse impacts from timber harvest to biodiversity and in some cases could incorporate design features beneficial to aquatic animal species and habitats, however, complete avoidance of adverse effects may not be possible. Riparian management standards and guidelines established in forest plans remain in place under the proposed rule. Although there would be some variation in the level of protection, the variation is not expected to affect the fishing industry. The future of the fishing industry more likely depends upon conditions outside of the national forests such as hatchery production, offshore harvest levels, and changes in ocean conditions.

Therefore, any changes in the long term to forest plans could result in effects to commercial fisheries if resource conditions are affected. However, given the small amount of operable areas for timber harvest in roadless areas, we do not anticipate these effects to be significant. We are requesting comments on effects related to commercial fisheries.

Recreation

Under the proposed rule, shifts in land use for increased timber and mineral development have implications for benefits and costs. One of the main costs to the public is the benefit loss to recreationists from the degraded user experience from effects to solitude, scenery, and from new roads. Impacts could occur where timber management and development activities conflict with recreation opportunities used by visitors and/or commercial recreation operators and their clients. If timber harvest and road construction yield permanent roads open to the public or other recreation infrastructure, some recreation users could experience more access to recreation opportunities within current IRAs. However, relatively few new permanent roads open to the public are anticipated under this rule rescission and the agency has constructed relatively few new developed recreation sites over recent decades.

In the short-term, because vegetation actions would likely be limited in scope and spatial extent, the economic benefits to recreationists would likely change little from baseline conditions. In the long-term, any changes in aggregate economic benefit to recreationists that occur under the proposed rule are most likely to be losses because timber harvest and road construction is anticipated to negatively change the recreation settings and opportunities for trail-based and dispersed area recreation within potentially affected IRAs and yield little positive increase in road-based and developed site recreation within potentially affected IRAs. The magnitude of those losses is unknown.

Losses in economic benefit to recreationists are most likely to be associated with the operable areas of current IRAs. Nationally, the likely operable and likely operable but complex areas under the proposed rule represent about 32 percent of the affected IRA environment. Applying that percentage to the affected IRA environment, annual economic benefit values (\$1.5 billion for trail-based and dispersed recreation and \$406 million for wildlife-related recreation calculated using the consumer surplus values and approach described in Rosenberger et al. 2017 and current estimates of visits by primary activity from the

Forest Service NVUM Program), the annual economic benefit associated with recreation in the likely operable and likely operable but complex areas is \$477 million for trail-based and dispersed recreation and \$131 million for wildlife-related recreation. On average per region, NFS harvests less than 1 percent of operable areas annually (Forest Service Cut and Sold Reports 2014-2024, USDA Forest Service 2025c). Assuming an upper limit of a 1 percent annual loss of economic benefit within the likely operable and likely operable but complex areas translate into potential annual losses for trail and dispersed area recreation of \$4.8 million and \$1.3 million for wildlife-related recreation, nationally. Any losses could be temporary if the conditions of landscapes altered in the course of management activity trend back towards prior conditions (e.g., temporary roads used in management revert to native vegetation and are closed to traffic). USDA is interested in comments on analysis of rule impacts on recreation upon implementation of the proposed rule.

Fuels Management and Wildfire

Timber harvest, mechanical thinning, and prescribed fire remain the primary tools for restoring and maintaining healthy ecological conditions on NFS lands. These activities reduce hazardous fuel loads, lower wildfire risk, improve habitat for fish and wildlife, and support the long-term sustainability of forest ecosystems.

The proposed rule allows for additional flexibility to manage wildfire within inventoried roadless areas. Of particular concern is the potential effect of wildfire in the wildland–urban interface (WUI), where communities and infrastructure are most vulnerable. With increased road construction, there could be increased hazard (which carries a cost) from human-caused ignitions and increased opportunities for wildfire risk mitigation (which carries costs and benefits). Although lifting restrictions on road construction could expand treatment options in the WUI, the high cost of road building and declining budgets for road construction and maintenance mean the overall increase in treatment capacity would be modest.

Under the proposed rule, additional active forest management, including some level of road construction, would likely occur with the extent varying by location. With increased road construction, especially open-access roads, and other human activity, there could be increased hazard from human-caused ignitions. If there is an increase in public road access, the number and frequency of wildfires could rise (though public access could be limited, to minimize fire hazard in high-risk areas).

The proposed rule would also provide increased opportunities for wildfire risk mitigation, especially within higher risk firesheds or other priority areas (such as near communities) and activities that involve mechanical treatment or are integrated with vegetation management. Substantial acreage within potentially affected IRAs has a relatively high likelihood of burning under high-intensity conditions that are difficult to manage or that could expose communities, infrastructure, or drinking-water sources. These areas may therefore represent priority opportunities for hazardous fuel reduction. In addition, certain strategically placed roads may confer fire control benefits not currently attainable.

While wildfire risk reduction in IRAs is not quantified in this analysis, any reduction in risk provides meaningful benefits to the public, industry, and the agency. These benefits include reduced risk to homes and communities, protection of clean drinking water supplies, preservation of forest products vital to local economies, uninterrupted power and communication services, sustained access to recreational sites, and maintenance of healthy ecosystems. Such benefits can be measured in terms of avoided costs, for example, the costs of replacing destroyed homes, businesses, powerlines, communication infrastructure, timber resources, recreation facilities, and water treatment capacity following a wildfire.

Fuel treatment and wildfire risk reduction also carry costs, primarily borne by the agency. These costs include the expense of any new roads constructed for management purposes and the per-acre costs of treatment. Currently, fuel treatment costs range from approximately \$100 to \$500 per acre, with treatments in high-value or complex areas reaching \$2,000 per acre or more. Mechanical pretreatments, often necessary in dense stands or WUI zones, typically cost \$300 to \$1500 per acre.

Roads

Though the primary purpose of the NFS road network is for management of NFS resources, users of the NFS depend on road access for both commercial and individual uses of the national forests and grasslands, and the use of NFS roads as recreational opportunities. Road construction, reconstruction, maintenance, and decommissioning activities have costs to the agency and benefits to industry and the public.

There are costs to the agency associated with building and maintaining roads. Roads that are added to the NFS road system after use for their initial purpose such as timber harvest, are considered permanent and there are costs to the agency to maintain these roads in perpetuity. The cost of road construction varies widely, depending on the type of road, intended use, environmental conditions, and other factors. A Forest Service survey related to average cost for new construction indicates that NFS road construction cost in the lower 48 states varies between \$80,000 to \$100,000 per mile for native surface (dirt) roads. Adding gravel surfacing is an additional \$300,000 to \$500,000 per lane mile, and approximately \$1,000,000 to \$2,000,000 per lane mile for asphalt paved roads. In Forest Service Region 10, Alaska, road costs are typically four to five times that of the lower 48 states, or approximately \$500,000 per mile for native surface roads. These costs do not include significant drainage structures such as bridges, retaining walls, or other substantial slope stabilization measures.

Road maintenance and decommissioning costs can vary greatly based on treatment, location, material needs, terrain, and drainage. Based on current agency data, typical costs for annual road maintenance can range from \$5,000 to \$50,000 per mile annually. A review of route decommissioning projects from various regions for Fiscal Years 2022 to 2024 indicated decommissioning costs from as low as \$2,000 per mile for minor treatments such as blocking entrances or installing water bars to an excess of \$50,000 per mile for more complex treatments such as removing culverts and restoring drainages.

Costs to construct and maintain temporary roads and permanent roads are typically the same (within intended road maintenance level) because both types of roads must meet design standards for the intended road purpose. However, temporary roads do not obligate the agency to long-term maintenance requirements and costs as temporary roads are decommissioned following the completion of the project or purpose for which it was constructed.

The objective of the NFS transportation system is to provide a minimum road system. Permanent roads are constructed where needed for safe and efficient travel and for administration, utilization, and protection of NFS lands. It is not reasonable to anticipate specific mileage changes that would result from the proposed rule. Any future decisions on these activities are greatly influenced by factors beyond the proposed rulemaking such as local decision-making through land management plans and projects, informed by the local community, local industry capacity, agency budget allocations and resources, and other regulations and policies. Under the proposed rule, an increase in the area available for potential development increases potential for added mileage to the NFS road system. Additional NFS road system mileage increases maintenance costs. With an increase in acreage available for potential development within IRAs, there is increased potential for change in the total deferred maintenance for the NFS road system. However, the anticipated potential for road development within IRAs is not significant compared

to the total mileage of the NFS road system. As a result, a change in overall NFS road system maintenance cost due to the proposed rule may require reprioritization of limited funds and resources.

The benefits of any additional road building resulting from the proposed rule would be related to improving access for timber harvest and wildfire risk reduction, as discussed in previous sections.

Passive Use Values

The construction and use of roads can degrade the unique characteristics of roadless areas, such as their undeveloped nature, pristine landscapes, leading to loss of conservation values. The construction of roads also contributes to soil erosion, sedimentation, risk of invasive species and habitat fragmentation, potentially impacting water quality, fisheries, and wildlife. These impacts from road development could negatively impact tourism and outdoor recreation, which are often drawn to the scenic beauty and intact ecosystems found in these areas. The recreation section above examines the costs and benefits from use values related to recreation. This section examines the non-use values associated with roadless characteristics.

Under forest plans, timber management activities are governed by several rules and regulations designed to protect or mitigate adverse impacts on natural resources that provide ecosystem services. The effects of the alternatives on these types of services are assessed in the Draft Environmental Impact Statement (EIS) for the 2001 Roadless Area Conservation Rule Rescission (referred to as the 2026 EIS) (USDA Forest Service 2026c), specifically the sections that address fisheries, wildlife and subsistence use, and timber and vegetation, among others. Monetary values are not assigned in market transactions to these services, but this does not lessen their importance in the decision-making process. Passive use values represent the value that individuals assign to a resource independent of their use of that resource and typically include existence, option, and bequest values. These values represent the value that individuals obtain from knowing that expansive roadless areas provide ecosystem services by virtue of being roadless and that they exist, knowing that they are available to visit in the future should they choose to do so, and knowing that they are available for future generations to inherit.

Passive use values are also nonmarket values and exist for individuals and households across the Nation so should be considered alongside changes to roadless protection. Forest ecosystems provide many important nonmarket services, and thus values, to society (for example, clean air, clean water, biological regulation, climate regulation, biodiversity, cultural and recreational services, etc.). However, markets and governments often fail to fully account for those economic and ecological values, as well as their significance. The incorporation of nonmarket values into public decision making has been limited due to institutional and methodological barriers. The cost and benefit analysis below quantifies a potential range of values held by U.S. residents using a measure of willingness to pay to preserve roadless areas (Holmes et al 2015; Hjerpe and Aldrich 2018). These values are passive values of wilderness to date, and are similar to passive use values specific to inventoried roadless in Alaska (Hjerpe and Hussain 2016).

Uncertainty exists about applying those values to all roadless acres because the removal of roadless restrictions does not mean benefits from passive use values are not provided on these lands. Even if areas are harvested, these services and benefits would still be provided, per legal requirements (for example, NFMA implementing regulations, 36 CFR Part 219) to provide for ecological sustainability, species of concern, and multiple uses such as wildlife habitat and clean water⁴ but at possibly lower or altered levels from those valued.

The Hjerpe and Aldrich (2018) analysis derived a total annual passive use value by multiplying the mean willingness to pay by U.S. households and reducing the estimate to account for households living below the poverty line and a reduction for households living far away from roadless areas, revealing a total passive use value of \$10 billion dollars (2025 dollars). A per acre value is obtained by dividing this value by the number of roadless acres for an average willingness to pay of \$238 per acre (2025 dollars). This willingness to pay value is adopted as a proxy for measuring forgone conservation value from potential harvest in roadless through changes in roadless designations.

The \$238 willingness-to-pay-per-acre value was applied to an estimate of total acres in operable areas to estimate loss of passive use benefits to U.S. residents. Willingness to pay values were applied to estimates of total likely operable areas (2.2 million acres) and likely operable but complex areas nationwide (2.6 million acres). In all regions, less than 1 percent of likely operable and likely operable but complex land area is anticipated to be involved in timber harvest or road construction annually under the proposed rule. This provides a maximum range of \$5.3 to \$11.5 million annually in forgone passive use values from roadless areas that would be harvested.

Net Present Value of Benefits and Costs

Net benefits (costs subtracted from benefits) described above are discounted over 15 years and at both 3 and 7 percent, per OMB Circular A-4 - Regulatory Analysis (2003) and as shown in Table 4, the net present value discounted at 3 percent over 15 years is estimated to be -\$92 to \$199 million (-\$70 to \$152 million discounted at 7 percent) and uses maximum potential costs and benefits that do not account for uncertainty.⁵ For example, it is uncertain how much of the estimated timber volume in operable areas will be harvested annually so maximum potential annual harvest is assumed. Actual harvest depends on many things, such as site-specific resource considerations and market conditions. Detailed below are ways that the benefits and costs could differ from the maximum potential values and shows how NPV could be positive if maximum potential benefits occur alongside lower costs (the NPV upper bound).

Passive use value losses from estimated annual harvest in roadless areas could also be less than the maximum potential estimated. It is uncertain how much of the estimated timber volume in operable areas will be harvested annually so maximum potential annual harvest is used to estimate passive use value losses. Actual harvest, and associated loss in passive use value, depends on many things, such as site-specific resource considerations and market conditions. Even if areas are harvested, these services and benefits would still be provided, per legal requirements (for example, NFMA implementing regulations, 36 CFR Part 219) to provide for ecological sustainability, species of concern, and multiple uses such as wildlife habitat and clean water, but at possibly lower or altered levels from those valued.

⁴ The National Forest Management Act (NFMA) directs that forest plans assure that timber will be harvested from National Forest System lands only where soil, slope, or other watershed conditions will not be irreversibly damaged. 16 U.S.C. 1604(g)(3)(E). In addition, the harvest of timber is subject to the legal context (for example, Clean Water Act, Clean Air Act, Endangered Species Act, National Historic Preservation Act, etc.) within which forest plans and site-specific environmental analyses (NEPA) are performed.

⁵ The upper bound NPV is the sum of the high estimate of timber benefits to society and low estimate of forgone passive use value. The lower bound NPV is the opposite, summing the low estimate of timber benefits to society, the high estimate of forgone passive use value, and forgone recreation benefits. The intent is to provide high and low estimates of revenue and costs to ‘bound’ the NPV range within the realm of plausible outcomes.

Table 4. Benefits and Costs of Proposed Rule

Category	Primary Estimate	Minimum Estimate	Maximum Estimate
Annual timber benefit to society	N/A	\$9.9 million	\$22.0 million
Unquantified benefits	Increased recreation access; reduced wildfire risk; greater management flexibility	N/A	N/A
Annual costs ⁶	N/A	-\$5.3 million	-\$17.6 million
Qualitative (unquantified) costs	Degraded recreation quality; ecological and water impacts; increased ignition risk; agency road maintenance burden	N/A	N/A
Minerals and Energy	No change in domestic leasable minerals production	N/A	N/A
Seafood Processing	Given the small amount of operable areas for timber harvest in roadless areas, no significant effects	N/A	N/A
Annual transfers ⁷	N/A	\$0	\$9 million
Effects on small entities	Potential small shifts in receipts for timber, recreation, and minerals firms; minimal significant impacts expected	N/A	N/A

The cost benefit analysis discusses potential industry impacts in more detail for timber, recreation and tourism, commercial fishing and seafood processing, mineral and energy though USDA is interested in comments on what evidence demonstrates whether the industries would experience direct effects or distributional effects or both, with a description of the data and analytic methods used to determine these effects.

⁶ Costs include forgone recreation benefits (minimum of \$6.1 million annually) and forgone passive use values (\$5.3 to \$11.5 million annually) from increases in timber harvest in roadless areas. Lost recreation visitation expenditures are gross spending (trip costs) so they were excluded from cost estimates to avoid double counting with the forgone recreation benefits (consumer surplus).

⁷ Transfers are the recreation expenditure loss.

Regulatory Flexibility Analysis (Impacts to Small Entities)

This section summarizes the effects of the proposed rule on small entities in the context of requirements under the Regulatory Flexibility Act (RFA). The RFA (RFA, 5 U.S.C. et seq., Public Law 96-354) as amended by the Small Business Regulatory Flexibility Enforcement Fairness Act of 1996 (SBREFA), generally requires an agency to prepare a regulatory flexibility analysis describing the impact of the regulatory action on small entities as part of rulemaking. This is required of any rule subject to notice and comment requirements under the Administrative Procedure Act (APA) or any other statute unless the agency certifies that the rule will not have a “significant economic impact on a substantial number of small entities.” The RFA acknowledges small entities have limited resources and makes it the responsibility of the regulating federal agency to avoid burdening such entities unnecessarily. If, based on an initial assessment, a regulation is likely to have a significant economic impact on a substantial number of small entities, the RFA requires a regulatory flexibility analysis (Initial Regulatory Flexibility Analysis (IFRA) for the proposed rule, and Final or FRFA analysis for the final rule).

The RFA requires analysis of a rule’s economic impact on the small entities that will be subject to the rule’s requirements. Furthermore, section 605 of the Regulatory Flexibility Act allows an agency to certify a rule, in lieu of preparing an analysis, if the proposed rulemaking is not expected to have a significant economic impact on a substantial number of small entities. This proposed rule is not expected to impose any direct requirements or compliance obligations on small entities. The Department nevertheless has considered the effects of the proposed rule on small entities and prepared a regulatory flexibility analysis.

This section provides that analysis to make a determination of whether there is a significant economic impact on a substantial number of small entities based on a review of numbers of small entities potentially impacted and the types of impacts the proposed rule may create. The analysis below demonstrates the factual basis by which the agency has determined that a substantial number of impacted small entities are not expected to incur significant economic impacts under the proposed rule. The agency certifies that there is not a significant economic impact on a substantial number of small entities, and therefore, no additional analysis is needed.

Small entity⁸ characteristics are first described, in the next section, in the region potentially affected by the proposed rule. Then, analyses address (1) opportunities for small businesses associated with industry sectors projected to experience effects under the proposed rule (that is, timber, recreation, and mining), and (2) opportunities for small governments (that is, boroughs and municipalities in Census Areas) such as infrastructure effects.

The RFA references the definition of “small business” found in the Small Business Act. The Small Business Act further authorizes the Small Business Administration (SBA) to define “small business” by regulation, which it does for each of the business categories listed in the North American Industrial Classification System (NAICS). Size standards are provided by the SBA for each NAICS code and are determined by the number of employees or average annual receipts (SBA 2023). Business and size standards for industries related to resource uses potentially affected by the proposed rule are listed in Table 5 below.

⁸ Small entities include small businesses (as defined by U.S. Small Business Administration size standards regarding number of employees or annual receipts, by North American Industrial Classification System codes), small organizations (“not-for-profit enterprise which is independently owned and operated and is not dominant in its field”), and small governments (government of city, county, town, school district or special district with a population of less than 50,000).

The proposed rule is programmatic and does not authorize the implementation of any ground-disturbing activities. Because the rule does not directly subject small entities to regulatory requirements, the Forest Service does not believe that the Regulatory Flexibility Act and subsequent amendments (SBREFA) apply to the rule. However, given public and agency interest in the effects of the rule on small entities, including rural counties and economies, and efforts to be consistent with related rule making analysis in the past, this document characterizes the adverse indirect effects or reasonably foreseeable losses in potential small entity opportunities associated with the proposed rule.

Methods used to examine the impacts on small business opportunities rely on estimates of recreation expenditure related to visitors associated with roadless, stumpage value from average annual harvest estimates and reasonably foreseeable minerals development. Resource areas discussed include timber and wood products, recreation, and minerals. Analysis of these sectors uses detail from the effects analysis for the EIS and descriptions of small entity characteristics. Effects on small organizations such as not-for-profit enterprise are not anticipated; however, information from public comment will be used to evaluate the final rule. Small government effects are discussed qualitatively below.

Small Entity Characteristics

Entities potentially impacted by the proposed rule include businesses in the following North American Industry Classification System (NAICS) industry sectors listed in Table 5. The U.S had an estimated total of 36.2 million small businesses, employing 62.3 million in 2022⁹. These small businesses made up 99.9 percent of all businesses and 45.9 percent of total private employment in 2022 (SBA 2025).

Table 5. Small business size standards by NAICS for sectors that could be impacted by the proposed rule (SBA 2023)

NAICS Codes	NAICS Industry Description	Small Business Size Standard (SBA)
Timber		
115310	Support Activities for Forestry	\$11.5 million
321113	Sawmills	550 employees
321114	Wood Preservation	550 employees
321211	Hardwood Veneer and Plywood Manufacturing	600 employees
321212	Softwood Veneer and Plywood Manufacturing	1,250 employees
321213	Engineered Wood Member (except Truss) Manufacturing	500 employees ¹⁰
321214	Truss Manufacturing	500 employees
321219	Reconstituted Wood Product Manufacturing	750 employees
321911	Wood Window and Door Manufacturing	1,000 employees
321912	Cut Stock, Resawing Lumber, and Planing	500 employees

⁹ Includes non-employer firms and is based on a general standard of fewer than 500 employees, adopted as a generic standard recognizing that standards vary by industry classification according to current Small Business Administration classification (See Table 5); some standards are specified in terms of average annual receipts (e.g., Forestry Services (NAICS 1153)).

¹⁰ NAICS sector 321215 Engineered Wood Member Manufacturing does not exist in the 2025 data from the U.S. Census Bureau however these sectors are used to examine effects below. The size standard for 32125 is listed because there are no size standards for the sectors provided by SBA 2023.

NAICS Codes	NAICS Industry Description	Small Business Size Standard (SBA)
321918	Other Millwork (including Flooring)	500 employees
321920	Wood Container and Pallet Manufacturing	500 employees
321991	Manufactured Home (Mobile Home) Manufacturing	1,250 employees
321992	Prefabricated Wood Building Manufacturing	500 employees
321999	All Other Miscellaneous Wood Product Manufacturing	500 employees
Recreation		
485111	Mixed Mode Transit Systems	\$29 million
485112	Commuter Rail Systems	\$47 million
485113	Bus and Other Motor Vehicle Transit Systems	\$32.5 million
485119	Other Urban Transit Systems	\$37.5 million
485210	Interurban and Rural Bus Transportation	\$32 million
485310	Taxi and Ridesharing Services	\$19 million
485320	Limousine Service	\$19 million
485410	School and Employee Bus Transportation	\$30 million
485510	Charter Bus Industry	\$19 million
485991	Special Needs Transportation	\$19 million
485999	All Other Transit and Ground Passenger Transportation	\$19 million
487110	Scenic and Sightseeing Transportation, Land	\$20.5 million
487210	Scenic and Sightseeing Transportation, Water	\$14 million
487990	Scenic and Sightseeing Transportation, Other	\$25 million
488111	Air Traffic Control	\$40 million
488119	Other Airport Operations	\$40 million
488190	Other Support Activities for Air Transportation	\$40 million
488210	Support Activities for Rail Transportation	\$34 million
488310	Port and Harbor Operations	\$47 million
488320	Marine Cargo Handling	\$47 million
488330	Navigational Services to Shipping	\$47 million
488390	Other Support Activities for Water Transportation	\$47 million
488410	Motor Vehicle Towing	\$9 million
488490	Other Support Activities for Road Transportation	\$18 million
488510	Freight Transportation Arrangement ¹⁰	\$20 million
488991	Packing and Crating	\$34 million
488999	All Other Support Activities for Transportation	\$25 million
713910	Golf Courses and Country Clubs	\$19 million
713920	Skiing Facilities	\$35 million
713930	Marinas	\$11 million
713990	All Other Amusement and Recreation Industries ¹¹	\$9 million

NAICS Codes	NAICS Industry Description	Small Business Size Standard (SBA)
721110	Hotels (except Casino Hotels) and Motels	\$40 million
721120	Casino Hotels	\$40 million
721191	Bed-and-Breakfast Inns	\$9 million
721199	All Other Traveler Accommodation	\$9 million
721211	RV (Recreational Vehicle) Parks and Campgrounds	\$10 million
721214	Recreational and Vacation Camps (except Campgrounds)	\$9 million
721310	Rooming and Boarding Houses, Dormitories, and Workers' Camps	\$14 million
722511	Full-Service Restaurants	\$11.5 million
722513	Limited-Service Restaurants	\$13.5 million
Mining and Energy		
212220	Gold Ore and Silver Ore Mining	1,500 employees
212230	Copper, Nickel, Lead, and Zinc Mining	1,400 employees
211120	Crude Petroleum Extraction	1,250 employees
211130	Natural Gas Extraction	1,250 employees
212110	Coal Mining	1,250 employees
213111	Drilling Oil and Gas Wells	1,000 employees
213112	Support Activities for Oil and Gas Operations	\$47 million
213113	Support Activities for Coal Mining	\$27.5 million
221116	Geothermal Electric Power Generation	250 employees
237310	Highway, Street, and Bridge Construction	\$45 million

Source: Small Business Administration small business standards effective March 17, 2023 (SBA 2023).

Averaging the revenues of a dispersed set of small businesses in an analysis of regulatory impacts can cause the majority of small businesses to be misrepresented. The Small Business Administration provides revenues across 16 business size breakouts and recommends performing regulatory analysis on finer-grained size-groups than an average based on the thresholds identified in Table 5 (McManus 2018). The Statistics of U.S. Businesses, a U.S. Census Bureau dataset cosponsored by the Office of Advocacy and used here, shows that most industries are made up of a significantly larger number of businesses with fewer than 20 employees (or “sub-20” businesses). For example, sub-20 sawmill businesses (NAICS 321113) make up more than 70 percent of the firms with less than 500 employees and average receipts per firm were much smaller (\$2 vs \$10 million, in 2025 dollars) (U.S. Census Bureau. 2025).

Average receipts for sub-20 businesses in Table 5 are used in the analysis of effects to small businesses. Eighty-five percent of the logging and harvesting firms (NAICS 11) and wood product manufacturers (NAICS 32) were sub-20 firms employing less than 20 people (10,214 sub-20 firms of 12,017 total). For these sub-20 firms average receipts per firm was \$1.6 million in 2022 (reported in 2025 dollars) and the average number of employees per firm was 5 (Table 6).

Recreation related firms depicted in Table 5 and used in analysis were selected based on surveys of national forest and grassland recreation visitor spending patterns conducted as part of the NVUM Program for all national forests and grasslands across the nation. Seventy-six percent of the recreation related industries in Table 5 were sub-20 firms (409,318 sub-20 firms of 537,135 total) employing less

than 20 people. Average receipts per firm was \$19,000 in 2022 (in 2025 dollars) and the average number of employees per firm was 6 (Table 6).

Seventy-seven percent of mining and energy related firms in Table 6 were sub-20 firms employing less than 20 people in 2022. For these minerals and energy sub-20 firms average receipts per firm were \$2.2 million (in 2025 dollars) and the average number of employees per firm was 4 (Table 6).

Table 6. Characteristics of sub-20 firms (U.S. Census Bureau. 2025)

	Percent sub-20	Sub-20 count	Total firm count	Average receipts per firm (millions of 2025 \$)	Average number of employees per firm
Logging, harvesting and wood product manufacturing	85%	10,214	12,017	\$1.57	5
Recreation	76%	409,318	537,135	\$19.14	6
Mining and Energy	77%	17,538	22,642	\$2.23	4

Small Business Opportunities and Effects

Methods used to examine the impacts to small business opportunities rely on recreation expenditure related to visitors associated with roadless, stumpage value from average annual harvest estimates, reasonably foreseeable minerals development and other effects from the DEIS for the proposed rule. Resource areas discussed include timber and wood products, recreation, and minerals. Analysis of these sectors uses information from the analysis of effects from the DEIS and descriptions of small entity characteristics.

Timber Industry

Under the proposed rule, more acres of suitable land would allow the Forest Service greater flexibility in the selection of future timber sale areas, as well as the potential for more flexibility in sale design, depending on the planning areas selected. This improved flexibility could, in turn, potentially improve the Forest Service's ability to offer economic sales that meet the needs of industry.

The **Cost Benefit Analysis** section above provides an analysis of delivered log value under the proposed rule that could increase by approximately \$4.6 to \$10.6 million annually. This increase is hypothetical because harvest has not been proposed under the current baseline in areas designated as roadless. Stumpage value increase would accrue to both small and large entities purchasing timber as depicted in Table 4, however only sub-20 firms are used to narrow the scope on finer-grained size-groups as recommended by the Small Business Administration (McManus 2018). The high and low range of industry effects is from \$4.6 to \$10.6 million annually, divided by the total sub-20 firm receipts for sub-20 firms results in a change ranging from 0.03 to 0.07 percent of average annual receipts (U.S. Census Bureau 2025). These estimates provide a range for consideration of potential stumpage value change to the timber industry and should not be used as precise estimates outside this analysis.

Recreation Industry

The proposed rule has the potential to affect recreation opportunities or desirable landscape conditions on national forests. In the short-term, associated recreation expenditures in communities near potentially affected roadless areas would likely be similar to baseline conditions. In the long-term, losses in trail and dispersed recreation visits (from changes in the recreation opportunities or desirable landscape conditions)

could yield lower aggregate expenditures in the communities around roadless areas. Those losses in visits are most probable in the likely operable and likely operable but complex portions of the affected environment—accounting for about 32 percent of the affected areas IRAs nationally. Applying that percentage to the baseline annual visitor expenditures (\$2.2 billion for trail-based and dispersed recreation and \$753 million for wildlife-related recreation) (USDA Forest Service 2026a), the annual expenditures in communities around roadless areas by visitors to the likely operable and likely operable but complex areas is \$704 million for trail-based and dispersed recreation and \$241 million for wildlife-related recreation. In all regions, less than 1 percent of likely operable and likely operable but complex land area is anticipated to be involved in timber harvest or road construction annually under the proposed rule (Forest Service Cut and Sold Reports 2014-2024, USDA Forest Service 2025c). Assuming an upper limit of a 1 percent loss in visits translates to a potential nationwide loss of \$7 million in expenditures around national forests by those engaging in trail-based and dispersed area recreation and an overall \$2 million loss in expenditures from those engaging in wildlife-related recreation. Losses to specific communities around potentially affected IRAs would reflect the amount of visitation displaced and the size of the local recreation economy. Any potential loss in visitor expenditures may be mitigated if visits displaced from roadless areas are shifted to Wilderness areas or other recreation locations near the affected communities. Further, any losses could be temporary if the conditions of landscapes altered in the course of management activity trend back towards prior conditions (e.g., temporary roads used in management revert to native vegetation and are closed to traffic).

Recreation expenditure loss is hypothetical because harvest has not been proposed under the current baseline in areas designated as roadless. Loss of recreation-related expenditure would accrue to both small and large entities however only sub-20 firms are used to narrow the scope on finer-grained size-groups as recommended by the Small Business Administration (McManus 2018). The \$9 million loss in recreation-related expenditure (\$7 million from trail-based and dispersed area recreation and an overall \$2 million from wildlife-related recreation), divided by the total firm receipts for sub-20 firms results in a change of less than a 100th of a percent of average annual receipts (U.S. Census Bureau 2025). These estimates are not costs to recreation-related firms but rather a reduction in expenses made by visitors and thus subject to displacement-related changes. While some firms may lose these receipts if visitors choose not to travel, others may see increases in receipts if visitors choose to stay longer or travel to substitute sites, for example wilderness areas.

Minerals and Energy Industry

Road construction and reconstruction for locatable mineral exploration and development is a right of access as provided by the General Mining Law, and therefore there are no anticipated changes in locatable mineral production and associated effects to large or small entities.

Under the proposed rule, there is additional flexibility for potential future leasable mineral development opportunities and it is reasonably foreseeable that some development could occur in potentially affected IRAs, resulting in associated costs and benefits. However, we anticipate that there would be no net change, relative to baseline conditions, in domestic leasable production under the proposed rule because domestic oil, gas, and coal production are projected to be steady or decline (U.S. EIA 2026). In addition, leasable mineral development in IRAs did not occur prior to 2001 or since then with available technological methods of extraction without the use of roads.

Small Government Opportunities and Effects

With some exceptions, federal and state road development is presently limited in IRAs. Exceptions include roads with reserved or outstanding rights, roads provided by statute or treaty, or road development related to a Federal Aid Highway project. Roadless protection would be removed to various degrees under the proposed rule with corresponding implications for regional highway development. In most cases,

changes in roadless management, as well as changes in the number of acres managed as roadless, would be more permissive with respect to regional road systems. Areas removed from roadless protection would remove roadless rule-related restrictions on road building. As a result, more areas would be available for additional types of regional road development under the proposed rule. Future road projects would be subject to funding constraints, forest land management plans, and evaluated in detail on a project-by-project basis.

The proposed rule is not expected to substantially affect the development of energy projects or related infrastructure. Removing roadless designations in areas under the proposed rule would simplify the process for projects but would not necessarily result in an increase in the number of projects developed.

Conclusions

The proposed rule is programmatic and does not authorize the implementation of any ground-disturbing activities. The proposed rule would allow additional timber harvest opportunities provided by removing prohibitions on timber harvest in areas that are currently designated as IRAs under the 2001 Roadless Rule. Under the proposed rule, greater flexibility is provided for the selection of future timber sale areas and could, in turn, potentially improve the Forest Service's ability to offer economic sales that meet the needs of industry and provide benefits from additional revenue to the agency and timber industry. The proposed rule is also expected to result in a benefit loss to recreationists based on changes to recreation opportunities from any additional road construction and timber harvest and losses to passive use values.

The proposed rule has been considered in light of Executive Order 13272 regarding proper consideration of small entities and the Regulatory Flexibility Act (5 U.S.C. 601 et. seq) as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA). This proposed rule is not expected to impose any direct requirements or compliance obligations on small entities. However, given public and agency interest in the effects of the rule on small entities, including rural counties and economies, and efforts to be consistent with related rule making analysis in the past, this document characterizes the adverse indirect effects or reasonably foreseeable losses in potential small entity opportunities associated with the proposed rule. Based on the evidence summarized above, the proposed rule is expected to provide some opportunities for both large and small entities and is not expected to result in significant impacts to a substantial number of small entities, as defined by the E.O. 13272 and SBREFA, and therefore no additional analysis is required for the proposed rule.

Appendix A: Stumpage Price Methodology and Assumptions

Stumpage prices are derived from Timber Information Manager (TIM) data, using species level bid prices, calculated by dividing bid value by quantity of volume in hundred cubic feet (CCF). By region, species level prices were derived after conducting sensitivity analysis on the aggregation method of transactions that occurred over time and across forests with varying harvest constraints and markets.

Sales represented in the TIM data range from fiscal years 2002 to 2024 (data were retrieved October 8, 2024). Dollar values were adjusted for inflation using the GDP deflator. Still, an important consideration for the data is that earlier observations took place under alternative market conditions, so it is expected that more recent observations are more representative of a current market stumpage price. Second, to obtain a representative price, it is important that the price be derived from several transactions. We established a minimum sample size of 15 per region. For species that do not meet this threshold, we use the older observations to at least establish a plausible price. To track which species meet recent sample size restrictions, we create a variable named ‘current’ (which equals 1 when enough observations occurred in the time period 2018 to 2024, and which equals 0 when sufficient observations were only possible using all of the data).

Aggregation Procedures

The following options were assessed to determine which aggregation method produces reasonable estimates for a representative species price.

1. Average: The unit prices (p) from transactions in a region were averaged, where n is the number of observations.

$$\frac{\sum p}{n}$$

2. Volume-weighted average: The unit values were summed and divided by the sum of respective volumes (v).

$$\frac{\sum p \cdot v}{\sum v}$$

3. Median: The median of unit prices from transactions was calculated as follows after ranking the n observations.

$$\text{if } n \text{ is odd: } \left(\frac{n+1}{2}\right)^{th} \text{ term; ; if } n \text{ is even: } \frac{\left[\left(\frac{n}{2}\right)^{th} \text{ term} + \left\{\left(\frac{n}{2}\right) + 1\right\}^{th} \text{ term}\right]}{2}$$

4. Probability and volume-weighted average (“Likely”): Unit prices in the region were characterized by a gamma distribution estimated from the data (see Figure 1). The probability of observing a unit price (γ) was multiplied by the respective values, which were added, then divided by the sum of the probability-weighted quantities associated with those transactions.

$$\frac{\sum p \cdot v \cdot \gamma}{\sum v \cdot \gamma}$$

By species, unit prices are typically skewed. Among the examined methods, the average and volume-weighted average showed greater tendencies to be the maximum or minimum price among the alternative aggregation procedures. Therefore, those techniques led to more bias, whereas the median and likely prices tended to reside in the middle. Both the median and likely price methods place lower weight on extreme observations, so these techniques minimize the effects of outliers on the representative price, whether those outliers come from rare values observed in particular sales, rare market conditions, or database errors.

The median and likely price methods produced similar values. However, the median price is obtained with fewer assumptions and is therefore both a satisfactory measure of expected price and also a parsimonious choice.

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