APPENDIX B
ROADLESS LOGGING IN MONTANA NATIONAL FORESTS

The projects below were the projects where the Forest Service disclosed logging and FOC was able to verify through National Environmental Policy Act documents. We omitted projects where the Forest Service disclosed roadless logging that we could not verify through NEPA documents.

The following abbreviations apply to the tables below.
IRA= Inventoried Roadless Area (equivalent to "roadless area" as referred to in this report and appendices)
EA=Environmental Assessment
DN-FONSI=Decision Notice and Finding of No Significant Impact (issued with EAs)
FEIS=Final Environmental Impact Statement; DEIS=Draft Environmental Impact Statement
ROD=Record of Decision (issued with FEISs)
CE=Categorical exclusion
DM=Decision Memo (issued with CEs)
*Unless otherwise noted, the NEPA documents in the same row as the project name in the first column (e.g. "FEIS") refer to the NEPA document for that are the NEPA documents from that project. are NEPA documents specific the project in the first column.

Project name, (year of decision), NEPA document (FEIS or EA)	National Forest	Size and type of activity in roadless area. Acreage outside of parenthesis approved by NEPA. Acreage inside parenthesis independently reported by the Forest Service in document referenced in column to right.	2001 Roadless Rule exception applied. *See* USDA, Forest Service, *MT Projects in IRAs_2001_without graphs_2008 to present* (disclosed 2017) (timber harvest in Montana roadless areas), on file with authors.	Forest Service's conclusion on whether there was a negative impact to the roadless area
Crockett Lake Whitebark Pine Demonstration (2014)	Beaverhead-Deerlodge National Forest	Slightly less than 30 acres because 200 feet buffer on the road not within the IRA	294.13(b)(1)(i)	All conifer trees within 66 feet of a whitebark or limber pine tree would be cut and burned within the project area. DM p. 1 "There is no impact or detrimental effects to

		boundary. *See* DM p. 1 (30 acres reported)		IRAs. The proposed actions within the IRAs in this project are consistent with the Roadless Area Conservation Rule." DM p. 3. No other analysis.
Trapper Creek (2014)	Beaverhead-Deerlodge National Forest	3,035 acres. *See* DN-FONSI, selecting Alternative 2. (3,400 acres reported)	294.13(b)(1)(ii)	"The proposed action would set-back the successional advance of Douglas-fir in sagebrush, mountain mahogany, aspen and willow vegetation types....[T]he proposed action will generally increase health and vigor, diversify age classes, and promote enhancement of native vegetation" to "help maintain the natural character...in the long-term." EA p. 113. "The appearance of different age classes of vegetation will only be short-term, if noticed at all." EA p. 113. "[P]roposed vegetation treatments would only result in minor short-term effects, the majority of those effects will occur within an area already influenced by development, and there are no long-term effects to the existing undeveloped character." EA p. 114.
Sweet Grass (2015)	Custer Gallatin	26,600 acres Treatment over a twenty-year timeframe. EA p. 282; *see also* DN-FONSI p. 11 (Alternative 2 selected). (10,000 acres reported)	294.13(b)(1)(ii)	"Restoration activities, specifically fuels reduction, could cause the irreversible or irretrievable commitment of resources in portions of the North Absaroka Roadless Area, #1-371, potentially affecting eligibility for inclusion into the wilderness system. Activities could also potentially affect unroaded areas." EA p. 279. "Mechanized fuel reduction activities utilizing chainsaws, handwork, and/or small ground-based equipment would likely result in temporary short-term effects on naturalness and undeveloped character within the IRA. The largest effect would be on the approximately 3,000 acres where the small rubber tracked equipment (skidsteer) would be

				used for the construction of burn piles. Stumps, minor ground disturbance or vegetation crushing, and burn piles in these areas would be visible for 3-5 years following treatment." EA pp. 282-83. And, in finding no significant impact and noting that 47,000 acres of the project area is within the Absaroka Inventoried Roadless Area, the Forest Service noted, "[H]owever, past management activities such as timber harvest, vegetation management, and fire management have had strong impacts on the natural appearance of the area." DN-FONSI p. 33
Quartz Haugen Precommercial Thinning (2010)	Lolo	126 acres. DM p. 2 (119 acres reported)	294.13(b)(1)(ii)	"Approximately 126 acres (3 percent) of the thinning would occur within the developed portion of two inventoried roadless areas (54 acres within the Marble Point IRA and 72 acres within the Stark Mountain IRA), which have been substantially altered by past road construction and timber harvest. The treatment areas within the IRAs are 20 year old clearcuts that are accessed by existing National Forest system roads. Precommercial thinning small diameter trees within existing clearcuts is not predicted to affect the existing roadless characteristics of the IRAs because these areas are currently substantially altered. Treatments would not preclude future designation or management as wilderness and would accelerate stands to maturity and thus reduce the appearance of past even-aged harvest treatments." DM pp. 2-3.
Cedar-Thom (2015)	Lolo	1200 acres. *See* ROD p. 9. (1305 acres reported)	294.13(b)(1)(ii), (b)(4)	"Proposed harvest on about 203 acres in the IRA...would leave cut stumps, which would remain for several decades as evidence of harvest activities...However, thinning activities

				with tree removal primarily conducted by a helicopter would leave the stand with a more open appearance, but it would not likely be very noticeable to the casual observer. The more open stand conditions would be consistent with historic stand conditions, prior to the advent of fire suppression activities. So although stumps of cut trees would be evident to observers on the ground within the treatment areas, the overall natural and undeveloped character would, for the most part, remain unchanged." EIS p. 3-288.
Antimony (2012)	Lolo	61 acres. *See* DN-FONSI p. 14. (1 acre reported)	294.13(b)(1)(ii)	"Although project activities (e.g. prescribed fire, slashing performed with chainsaws) could temporarily reduce the feeling of solitude during the time of implementation, there would be no long-term effects to the roadless characteristics of the IRAs []." DN-FONSI p. 15 "The pre-slashing of small diameter trees prior to burning on about 61 acres in Unit 35A-35E to protect large overstory trees from fire-induced mortality would also have no noticeable effect on the roadless character. Slashing would be accomplished by hand with chainsaws. Because cut stumps of typically less than seven inches in diameter and slashed material would generally break down after a few years following burning there would be no long-term effect on apparent naturalness...Cumulatively, the current roadless characteristics and wilderness suitability of the Maple Peak Inventoried Roadless Area would not be affected by this project because: 1) activities proposed inside the Maple Peak Inventoried Roadless Area are of short duration; do not disturb the ground in areas previously unaltered by human activity; and prescribed burning mimics a natural disturbance process

				under controlled circumstances; and 2) activities proposed outside the Maple Peak roadless area would occur within areas that have been previously developed on both Forest Service and private lands." EA pp. 64-65.
Tenmile South Helena (2017)	Helena-Lewis and Clark	5,359 acres. *See* ROD p. 5 (3,351 acres reported)	294.13(b)(1)(ii)	"The anticipated effects of treatments that allow cutting of small diameter trees in roadless areas in the Tenmile-South Helena project area are expected to be within the exceptions [identified in the column to the left]." EIS p. 942 (Vol. 2). "[T]he effect from Alternative 4 is expected to be minor and short term, and no [roadless] characteristic is expected to experience a degrading trend." EIS p. 969. For impacts to ecological processes, "There would be consequently less impact to naturalness from human manipulation of the environment than in Alternative 2 and slightly more than in Alternative 3 in Jericho Mountain. However, unnatural condition would continue to prevail over more the roadless expanse than in Alternative 2 due to lack of intervention. The effects of the mountain pine beetle epidemic would continue in a large portion of the area along with associated impacts to the natural ecosystem. The potential of negative post-wildfire impacts would be more likely than in Alternative 2, but less than in Alternatives 1 and 3...Stumps from the hand slashing of generally small diameter trees may remain visible for several seasons following the prescribed fire...Evidence of development and use would be present in the short term in the form of burn piles, active harvest management, and brushing/limbing and skid trails for machinery access to units." EIS p. 970. Cumulative effects

				with Telegraph project: "The long-term impacts of other ongoing and reasonably foreseeable activities, such as noxious weed treatment and vegetation projects, when added to the activities proposed in the Tenmile-South Helena Project, have the potential to cumulatively impact the natural and undeveloped characteristics by causing changes to the scenic qualities within the project area and creating a setting where resource modifications and utilization practices are evident. Most of these effects would ultimately be beneficial because they would increase the resiliency of forest conditions and reduce the risk of potential negative impacts from wildfire, therefore maintaining the roadless and wilderness qualities that are currently valued by the public." EIS p. 973. "Long-term, the action alternatives would have a neutral to positive impact on roadless values by improving some components of the natural and undeveloped attributes, such as improved functioning of the natural ecosystem." EIS p. 975.
Telegraph Vegetation Project (2017)	Helena-Lewis and Clark	346 acres. *See* ROD p. 15 (579 acres reported)	294.13(b)(1)(ii)	"The action alternatives would potentially have no long-term effect on wilderness attributes of the roadless expanse....A certain amount of short-term downward effect on the natural, undeveloped and opportunities for solitude or primitive and confined recreation attributes would be noticeable, due to the human manipulation of the environment, visually apparent management activities, and temporary displacement of visitors." FEIS p. 820. On long-term ecological processes: "[D]ue to the MBP epidemic and decades of fire suppression, ecological processes have departed from what

				would have historically taken place on this landscape thus, the current state of this attribute is degrading." FEIS p. 826. "The impact of human activity is present on much of the area. Past mining, recent reclamation, firewood cutting, recreation use, private land and access and some past harvest and fuels activities are a few examples of what has contributed to defining the degree to which development and uses are apparent to most visitors and departure from the undeveloped characteristic within the IRA. FEIS p. 828. "Since the 1986 analysis of roadless lands, the Helena National Forest, consistent with Forest Plan direction, has completed harvest and fuels activities within the roadless expanse....These activities have also contributed to some evidence of human activity." FEIS pp. 831-32. "The Electric Peak roadless expanse, bordering the project area to the south, as a higher base level of natural and undeveloped qualities than does the Jericho roadless expanse. Activities that have altered natural processes, including evidence of past and present human activities such as mineral or logging activities or development activities, are minimal within the Electric Peak roadless expanse." FEIS p. 832. No action alternative: "In the event of a wildfire due to continuing high fuel loads and mortality associated with the MBP outbreak and the roadless resources could be at risk to irretrievable outcomes...." FEIS p. 835. "Management treatments are a form of 'modern human control or manipulation' and would to some extent affect the 'untrammeled' and natural character within the roadless areas. There is disagreement about whether the effects

				of additional management actions such as prescribed fire (i.e., trammeling) to correct the effects of previous management actions such as the suppression of natural fire is appropriate []. FEIS p. 839. "Within units proposed with a prescription of clearcut there are no other options due to the high levels of mortality." FEIS p. 842. "Slashing, burning, mechanical rearrangement of fuels and regeneration harvest could potentially impact components of natural processes and resources, including soils, botanical resources, and wildlife in the short term...In the long term, forest health and resiliency would be most improved over the other alternatives due to the development of a less homogenous forest, more diversity of species, and a mosaic of age classes...Due to these proposed treatments [clearcut], human manipulation of the environment, or trammeling, would be the greatest under this alternative." FEIS pp. 843-44. "Evidence of development and use would be present in the short term in the form of burn piles, active harvest management, and bushing/limbing and skid trails for machinery access to units...Removal or cutting of trees would create evidence of use such as tree stumps in some areas and would be greater in alternative 4 than 2 and 3. This evidence would be evident on 7 percent of the entire roadless expanse. The remaining portion of the roadless expanse would remain in its current state." FEIS p. 844. Past timber harvesting and road construction contributed to the existing condition of roadless expanse, creating an area where human activity is evident, and there is only moderate existing potential for most

				wilderness attributes. These proposed treatments would have the potential to maintain or restore the characteristics of ecosystem composition and structure by reducing the risk of uncharacteristic wildfire effects within the Jericho Mountain roadless expanse." FEIS p. 846
Hogum (2011)	Helena-Lewis and Clark	DM does not specify. (793 acres reported)	294.13(b)(1)(ii)	"[T]he project will improve the characteristics of the Roadless Area." DM p. 2. "Timber cutting in the roadless area is consistent with the 2001 Roadless Rule exception [noted in the left column] because it will slash (timber cut) generally small diameter trees prior to prescribed burning for the purpose of restoring ecosystem composition and structure; and one or more roadless area characteristics will be maintained or impoved...[T]he extent of the timber cutting was based on what was necessary to reintroduce fire and restore ecosystem components." DM p. 3.
Roadside 7 (Jul. 2014)	Beaverhead-Deerlodge	203 acres. DM p. 8 (203 acres reported)	294.13(b)(2)	"The activities will occur within a narrowly specified corridor (up to 150 feet of existing road edges), where existing roadless values are low. Reasons contributing to this existing low roadless value include: motorized use occurring in close proximity to these acres, previous timber harvest, and other development and use that currently degrades the roadless value. The existing roadless value of the approximately 203 total acres within IRA proposed for hazard tree removal is thus considered low and...will not further degrade these values. Furthermore the magnitude of the area within IRAs where hazard trees are to be removed is less than one half of one percent in each of the IRAs. As such, negligible effects to the roadless and wilderness

				attributes of these IRAs are predicted as a result of this decision. DM p. 8
Little Belt Roadside Hazard Tree Removal (2014)	Helena-Lewis and Clark	Unclear. A decision notice signed in 2012 noted 1,238 acres in roadless areas. A 2014 decision notice modified the project without explicitly discussing whether the modification extended to roadless areas. (no roadless disclosed)	294.13(b)(2)	No-action alternative: "Dead and dying trees would remain standing until natural conditions felled the trees or they were removed by the public for firewood. The removal of hazard trees for firewood could result in several impacts including undesirable slash accumulations and illegal off-route travel." EA p. 50. "The felling, and removal within IRAs, of hazard trees could slightly degrade the natural character of the IRAs and WSA. This impact would be minimal because the treatments would only occur within 150 feet on either side of the roads. Further, proposed management activities may be less of an impact to the natural character than the presence of the roads themselves, which are located within or adjacent to the IRAs and WSA. The removal of hazard trees would initially create stumps and slash within 1 ½ tree-lengths of Forest roads. The landing areas where slash had been piled and chipped, removed, or burned would also appear unnatural for a period of about five years until new vegetation covers the landscape." EA p. 52. "Alternative 2 would only slightly impact the undeveloped character of the IRAs and WSA...The existence of the roads themselves may have a greater impact on the undeveloped character than the removal of adjacent hazard trees." EA p. 52. "There would be no irreversible or irretrievable commitments with either of the two action alternatives because new trees and other vegetation would grow in those areas where hazard trees had been removed. EA p. 53.

Beaver/Soup Habitat Enhancement	Helena-Lewis and Clark	Unclear because "[a]bout 1,577 acres of the...Devils Tower IRA...and 717 acres of the...Middleman/Hedges IRA...will receive a combination of treatments." DM p. 1. (1364 acres reported)	294.13(b)(2)	Treatments selected "to increase key habitat for local wildlife communities and to promote diverse landscape patterns similar to those under natural fire disturbances." DM p. 1. "Activities are designed to maintain or restore the characteristics for ecosystem composition and function and will maintain or improve roadless character with the anticipated diversity of plan and animal communities after treatment." DM p. 8.
Cutoff (2010)	Lolo	323 acres. *See* DN p. A-5. (328 acres reported)	294.13(b)(2)	"[T]hese activities will not affect the undeveloped character or lead to any permanent structures on the landscape of the IRAs. Although project activities (e.g. aerial ignition of prescribed fire, slashing performed with chainsaws) could temporarily reduce the feeling of solitude during the time of implementation, there would be no long-term effects to the roadless characteristics of the IRAs." DN-FONSI p. A-5 through A-6. "Because cut stumps of typically less than seven inches in diameter and slashed material would generally break down after a few years following burning there would be no long-term effects on apparent naturalness." EA p. 37.
Rennic Stark (2013)	Lolo	Unspecified. *See* EA pp. 15-38 (describing alternative) and pp. 143-146 (describing number of acres planned for prescribed burning, but not mentioning acres of trees to be cut) (100 acres reported)	294.13(b)(2)	Developed areas of IRA "currently do not meet criteria for placement on potential wilderness inventory...because they contain forest roads and past harvest, which are visually evident on the landscape." EA p. 143. But, "Alternative 2 would not reduce the existing capability of this IRA to be suitable for wilderness recommendation." EA p. 145.

South Fork Fish (2010)	Lolo	430 acres. *See* DN p. 16 (87 acres reported)	294.13(b)(2)	"[T]hese activities will not affect the undeveloped character or lead to any permanent structures on the landscape of the IRAs...Treatments will enhance the natural integrity, apparent naturalness and remoteness for both IRAs...." DN-FONSI p. 17. "Fire exclusion has resulted in ecological conditions (vegetation characteristics, fuel composition, and fire frequency, severity, and pattern) that depart from the estimated natural range of variability...Without fire as a disturbance agent that influences stand succession, the forested lands are shifting towards uniform, overstocked stands dominated by shade tolerant species." EA p. 118. "Treatments would reshape and open vegetation communities to provide a fuels break for managing future unplanned wildfire or proposed ignited prescribed fire." EA p. 4

Sparring Bull (2012)	Kootenai	11 acres. ROD p. 11. (11 acres reported)	294.13(b)(2)	No action: "Since no new management actions are authorized, Wilderness characteristics would be maintained under this alternative." EIS p. 234. "Harvest of Unit 13 (11 acres) within the Cabinet West IRA would have some short-term affects to the **natural** and **undeveloped** attributes of the area with evidence of stumps and saw cuts as well as temporary trails associated with the harvest and fuels treatments. However, these are not permanent effects and over time the appearance would recover as vegetation and other natural effects reduce the initial impacts...Reducing the fuels through harvesting of the dead and dying trees in this stand would reduce the potential for uncharacteristic wildfire, which could spread to/from both the adjacent private lands and/ort he more remote locations of this IRA...Overall effects to the whole of the Cabinet West IRA would be minimal...0.00089 percent of the total IRA area. EIS p. 236.