Sequoia & Kings Canyon

National Park Service U.S. Department of the Interior

National Parks California



Public Scoping Information for KNP Complex Wildfire Tree Hazard Mitigation in Sequoia and Kings Canyon National Parks

The National Park Service (NPS) is seeking public feedback on a proposal to mitigate fire-killed tree hazards in Sequoia and Kings Canyon National Parks.

Purpose and Need for Action

The KNP Complex Wildfire (KNP) burned over 88,000 acres of Sequoia and Kings Canyon National Parks (parks) in fall of 2021, resulting in high levels of tree-mortality. Where fire crossed roadways, many of the fire-killed trees are now considered tree hazards ¹ - meaning they pose a direct risk to human safety and property due to the likelihood of their failure and potential to hit a human or man-made target ².

Given these considerations, the purpose and need of the proposed action, and of this planning effort, is to minimize the threat to public safety and property from tree hazards killed or otherwise damaged by the KNP Complex Wildfire.

Proposed Action

Sequoia and Kings Canyon National Parks (parks) are proposing to mitigate³ roughly 10,000-15,000 roadside tree hazards within the burn perimeter of the 2021 KNP Complex Wildfire.

Affected Area

Areas subject to the proposed action are in or immediately adjacent to roadways that burned during the KNP, including sections of the Generals Highway, Mineral King Road, Crystal Cave Road, Crescent Meadow Road, and Redwood Canyon Road (see maps in Appendix A). Action may also be taken in other developed areas within the KNP burn perimeter if necessary to meet desired conditions, safety, and resource protection goals.

¹ See Appendix B.

² See Appendix B.

³ See Appendix B.

Tree Hazard Determination and Mitigation

The NPS completed an extensive tree hazard windshield survey in the fall of 2021 and estimates that there were approximately 10,000-15,000 tree hazards along roadways and within developed areas affected by the KNP.

Prior to mitigating trees, survey crews would identify and mark tree hazards using the 7-point rating system guidance outlined in the 2015 Regional Directive on Hazard Tree Management (PW-62) (see attachment in PEPC). Trees meeting the threshold for mitigation would include all dead trees or those with identified defects.⁴ having a reasonable probability of striking the road or other infrastructure should they fail. The striking distance would be measured at 1 - 1.5 times the height of the tree; therefore, the distance from the road where trees would be marked as hazards would vary depending on tree height. Typically, this distance averages around 75 – 100 feet, though may be up to 200 feet for taller trees.

Marked trees hazards would be felled away from the road unless safety concerns required the tree to be felled toward the road. All marked trees would be felled by NPS staff or contractors.

Table 1 on page 3 shows the preliminary estimated maximum acreage and road miles affected by proposed tree hazard mitigation. As indicated above, trees subject to removal within the action area are those meeting the definition of a tree hazard; no action would be taken on healthy trees or those that pose no threat of falling and striking a person or property within a developed area.

Site Clean-Up and Debris Management

Following tree hazard mitigation, felled trees, and associated debris⁵ (i.e., logs, branches, and limbs), would be treated within a minimum of 20 feet, and no more than 80 feet, from the road's edge based on metrics developed by the NPS. In some cases, areas subject to debris removal would be entirely within the road prism⁶ which is routinely cleared of debris during road maintenance activities.

In these treatment areas, woody debris that has naturally fallen onsite would be left in place; debris resulting from tree hazard mitigation actions would largely be removed while ensuring a minimum number of large logs (12 inches in diameter or greater) are retained along each section.

The NPS anticipates that most slash (branches and limbs) would be piled and burned on site. Remaining debris, including logs, or remaining slash, may be chipped on site, hauled to a designated woodyard and chipped, lopped and scattered, or removed from the parks for disposal.

Table 1 on page 3 shows the estimated total acreage affected by proposed debris treatment. As indicated above, debris subject to removal would be located within a minimum of 20 feet, and no more than 80 feet, from the road's edge and would be the sole result of tree hazard mitigation actions. The

⁴ See Appendix B

⁵ See Appendix B

⁶ See Appendix B

NPS would not remove woody debris that has naturally fallen onsite and would retain felled large diameter logs within the action zone as necessary to meet debris treatment metrics.

Burn Severity	Maximum Acres Subject to Mitigation. ⁷	Maximum Acres Subject to Debris Treatment ⁸	Linear Road Miles Affected
Low	998.85	477.65	23.89
Moderate	545.11	240.98	11.34
High	511.19	203.38	8.56
Total	2055.15	922.01	43.79

Table 1: Estimated Acreage and Linear Road Miles Affected by Proposed Tree Hazard Mitigation and Debris Management

Closures

Temporary closures, extending from a few minutes to several days in some locations, may be necessary to ensure safe and efficient felling and cleanup operations. Proposed closures would be shared with the public through a variety of media tools in advance of being implemented.

Tools and Equipment

Equipment used for mitigation and debris management may include chainsaws, explosives, hydraulic tree jacks, boom trucks, dump trucks, front-end loaders, stump-grinders, chippers, pick-up trucks, come-alongs and rigging. Heavy equipment would remain on paved road surfaces.

Resources of Concern

The NPS is preparing an Environmental Assessment (EA) to evaluate alternatives that meet the purpose and need for action and has preliminarily identified several resources that may require further analysis within the EA including, but not limited to:

- Cultural Resources
- Health and Human Safety

⁷ Acreage was calculated using the tree height of 200 feet to capture the full extent of the action. Because tree height averages between 75 -100 feet, the total acreage affected will be lower than that calculated.

⁸ Acreage was calculated using the 80-foot maximum distance from the road edge where action may occur to capture full extent of the action. The distance beyond the road edge may be less in some areas due to variations in road width and quantity of debris resulting from mitigation actions therefore, the total acreage affected will be lower than that calculated.

- Wildlife, including Fisher
- .Soundscapes
- Visitor Use and Experience, including scenic driving
- Wilderness (adjacent to the road corridor)

How to Comment

Public feedback on the proposed action will be accepted via the PEPC project website (<u>https://parkplanning.nps.gov/KNPTreeHazards</u>) from July 22nd until midnight, August 21st, 2022. Comments that provide insights about feasible alternatives the NPS should consider, resource considerations in addition to those identified, or scientific information the NPS should consider in the EA are particularly helpful.

Written feedback may also be sent via mail or hand-delivery to:

Superintendent Sequoia and Kings Canyon National Parks Attn: KNP Complex Wildfire Tree Hazard Mitigation Project 47050 Generals Highway Three Rivers, CA 93271

Next Steps

Following the public scoping period, the NPS will analyze and consider all feedback and prepare an environmental assessment (EA) in accordance with the National Environmental Policy Act to develop and evaluate alternatives. As the EA is developed, the NPS will also be completing reviews and analyses and consulting with tribes, the California State Historic Preservation Officer, and the United States Fish and Wildlife Service in compliance with the National Historic Preservation Act, the Endangered Species Act, the Wilderness Act, and other applicable laws and policies.

Project Website

https://parkplanning.nps.gov/KNPTreeHazards



KNP Complex Hazard Trees

Sequoia and Kings Canyon National Parks National Park Service U.S. Department of the Interior



Treatments on the Generals Highway (Near Grant Grove)



KNP Complex Hazard Trees

Sequoia and Kings Canyon National Parks National Park Service U.S. Department of the Interior



Treatments on the Generals Highway



KNP Complex Hazard Trees

Sequoia and Kings Canyon National Parks National Park Service U.S. Department of the Interior

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00 Where 1 inch equals 0.79 miles NAD 1983 UTM Zone 11N

FRAME

MAP



Treatments on the Mineral King Road



80 ft Action Area 200 ft Action Area Fire Severity Fire Severity No Change Detected No Change Detected Low Severity Low Severity Moderate Severity

High Severity

Not Mapped



North

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SCALE 1:50,000

Quarter Mile Buffer

Fire Perimeter

Reference Layers

- Roads

Appendix B: Definitions

Debris – the term debris applies to any woody material resulting from tree hazard mitigation efforts including slash, brush, and logs (boles).

Defect – an imperfection or condition of the tree that may have been caused by growth, disease, insects, decay, fire, wind, or physical injury/wounds or environmental factors.

Hazard Tree/Tree Hazard – any tree, or other large vascular plant, either alive or dead, which, due to outwardly visible defects, has potential to fail (in part or in its entirety) and strike a person or property within a developed area. Some types of trees, with or without defects, may have parts that are potentially hazardous, such as pinecones, or other naturally shed parts of a tree. Hazard incorporates not just the condition of the tree but also the potential target. If there is no identifiable target, then a tree is not considered hazardous.

Mitigation – direct control action, including removal or limbing/topping of tree hazard to reduce or eliminate a tree hazard.

Road prism – all parts of a road including cut banks, roadside drainages, ditches and channels, road surfaces, road shoulders, guard-walls, and road fills.

Target – the object, structure, or person that potentially may be hit or impacted by a tree failure.