

Yellowstone National Park, United states

High certainty forest loss due to fire

Medium certainty forest loss due to fire

Low certainty forest loss due to fire

Forest loss due to non-fire drivers

National Park thrives a rich and diverse ecosystem, boasting an extraordinary array of flora and fauna. However, this ecological paradise faces mounting challenges from both natural phenomena and human activities.

Human endeavors such as logging, hunting, mining, recreation, residential development, and industrial operations pose direct threats to the delicate balance of plant and animal life within the park. These activities not only degrade habitats but also disrupt crucial wildlife corridors, hindering the movement and survival of species. Moreover, the park contends with the recurring scourge of forest fires, which exert a profound influence on its ecosystem dynamics. Data from recent years reveal a concerning trend: an increase in both the frequency and intensity of wildfires within Yellowstone. These fires not only ravage vast expanses of vegetation but also disrupt habitats and alter ecological processes, impacting the survival of numerous species. Illustrated in Figure 1, the habitats of endangered species such as the Sceloporus graciosu, Canada Lynx, and American Bison intersect to varying degrees with areas prone to wildfires and the network of roads constructed by human activity. This overlap underscores the urgent need for adaptive management strategies to mitigate these impacts and preserve the ecological integrity of the park for future generations. By employing a combination of proactive measures, including habitat restoration, wildfire management, and sustainable tourism practices, Yellowstone National Park can continue to serve as a beacon of conservation success, ensuring the survival of its precious biodiversity for generations to come.