

FIRE MANAGEMENT

Nature-Based Solutions for Community-Level Preparedness to Wildfire



In the forests of California's Sierra Nevada Mountains, more frequent and catastrophic wildfires threaten human life and infrastructure. Since 1999, the area has experienced 13 wildfires, including the 2018 Camp Fire, the deadliest and most destructive wildfire in California history. To reduce the damage of future wildfires, the Paradise Recreation and Park District (PRPD) is establishing multi-benefit greenspaces on the outskirts of Paradise as nature-based solutions to reduce the spread of wildfire to the town's urban center by providing a break in fuel loads. The greenspaces will also protect the natural environment to support habitat and wildlife conservation, enhance community water and air quality, and increase opportunities for positive experiences with nature, such as exercise and mental restoration. To establish the greenspaces, PRPD is acquiring private land through easements, donation, or purchase.



Southwest Climate Hub
U.S. DEPARTMENT OF AGRICULTURE



Oak Creek Park View of Camp Fire Burns

KEY ISSUES ADDRESSED

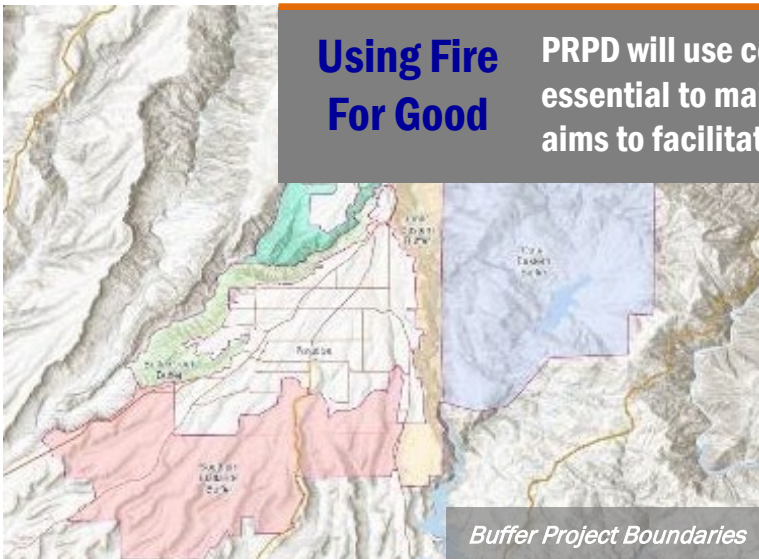
Active wildfire suppression over decades has resulted in frequent catastrophic wildfires due to the accumulation of forest fuels. Paradise's topography also contributes to wildfire risk because the surrounding ridges provide momentum for wildfires as they build upslope. Because common wildfire mitigation actions include home hardening methods that are too difficult and/or expensive for renters and some landowners to implement, Paradise does not have community-wide wildfire protection. Evacuation and damage from wildfires can be traumatic experiences, especially for children. Adverse childhood experiences have been linked to both mental and physical health conditions in adulthood, such as depression and heart disease.

PROJECT GOALS

- Identify and acquire land parcels with high wildfire risk around the town's urban center to establish greenspaces
- Design greenspaces to scale-up wildfire mitigation and remove burden from individuals
- Use greenspaces to increase community wellbeing and prevent future trauma by providing a multitude of recreational activities, conservation benefits, and local economic opportunity

Using Fire For Good

PRPD will use controlled burns to reinstate the historic fire patterns essential to maintaining the local forest ecosystem. This project aims to facilitate safe and effective ways to live with fire.



Buffer Project Boundaries

PROJECT HIGHLIGHTS

Strategic Parcel Identification: Researchers identified key land parcels based on heightened wildfire risk from land cover and topography, and each key parcels' abilities to protect biodiversity and provide recreational opportunities. According to their analysis, if every identified parcel is converted to greenspace, community wildfire risk will decrease by 60%.

Multi-Benefit Greenspace: In addition to creating a fuel break, the greenspaces will provide wildlife habitat, recreational activities, and improved air and water quality. Some spaces may be converted to agriculture or other community uses to increase economic activity and food security. Additional plans include spaces to teach kids wilderness survival skills.

Providing Incentives for Landowners: PRPD provides incentives to landowners to donate their land, including relocation assistance, decreased home insurance premiums, and the new opportunities the greenspaces will provide.

Community Engagement: To ensure effective wildfire protection, the entire community must be engaged in the solutions. Outreach activities include sharing the multi-purpose design of the greenspaces, town hall meetings, and on-site tours to burned areas and land that has been converted to greenspaces.

Collaborators

- The Paradise Recreation and Park District
- The Nature Conservancy
- Conservation Biology Institute

CART Author: Jackelyn Alessi, Drought Learning Network (DLN), February 2024.

Photos courtesy of Sunny Quigley/PRPD.

For more information on CART or DLN, contact Karlee Jewell (karlee_jewell@fws.gov) or Maude Dinan (mdinan@nmsu.edu).

Visit CART:



LESSONS LEARNED

Small agencies like PRPD will need to rely on grants and creative partnerships and approaches to implement nature-based community-level approaches to wildfire mitigation. Factors to consider include the costs of acquiring land, the construction of the greenspaces, and the costs of their continued maintenance. PRPD is using FEMA grants to fund community outreach efforts.

Because private land ownership is prevalent in Paradise, PRPD put considerable effort into leveraging landowner devotion to the land. While providing incentives and raising awareness of wildfire risk to landowners are important, working with the landowners' strong sense of place and love for the community is key to acquiring every parcel necessary for community-level protection from wildfire. Tours to sites already converted to parks can help motivate landowners and change their perspective of how they want their own land managed.

NEXT STEPS

- Continue outreach efforts that support landowners to manage their property for community wellbeing and wildfire mitigation.
- Apply FEMA funds to buy land from property owners to convert land to greenspaces. Explore partnerships to find additional funding for acquiring land and maintaining greenspaces over time.
- Use the wildfire risk reduction maps used in parcel identification in communication with insurance firms to justify decreasing residential home insurance premiums.

For more information on this project, contact the district:

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Previously Burned Site to be New Park