

Klamath National Forest HARLAN



Partners

US Forest Service



Project Overview

This project lies within a critical winter condition area for deer and elk within the Klamath National Forest - Goosenest area. The purpose of this project is to reduce fuels, restore hydrology, remove invasive Juniper, and aid in protection against wildfires.



Fuels cut and laid for future burning

Treatment

Mastication
Juniper Removal

Hazardous Fuels Removal
Adding Fuel Management
Zones Riparian Restoration

Benefits

Restoring Hydrology
Fire Resiliency
Healthy Forest Regeneration

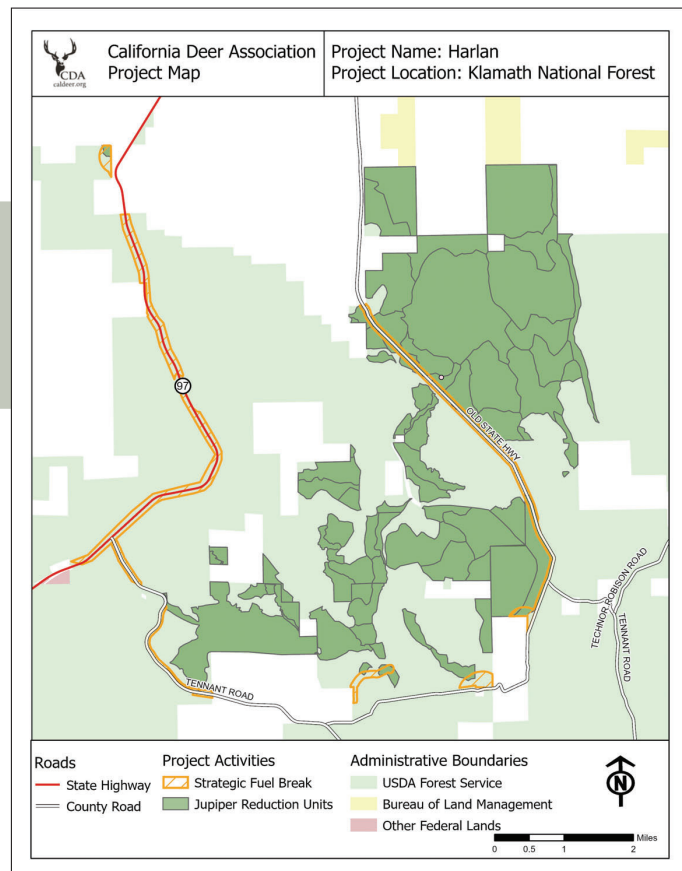
Increased Biodiversity
Food Generation for Wildlife
Natural Protection for
Wildlife



Hot saw placing cut Juniper in stacked burn pile



Cut Juniper stacked in burn piles





Sequoia National Forest SEQUOIAS



Partners
US Forest Service



Project Overview

CDA's work in the Sequoias included restoration improvements, hazardous fuel reduction, and various service work across the Sequoia National Forest. Implementation of these activities improve habitat for a variety of species, reduce fuel loadings in strategic locations, and promote desired conditions in project areas across the Kern River Ranger District.



CDA and US Forest Service project site meeting

Treatment

- › Roadside Restoration
- › Hazardous Fuels Removal
- › Campground Improvement
- › Wildlife Powerline Corridors

Benefits

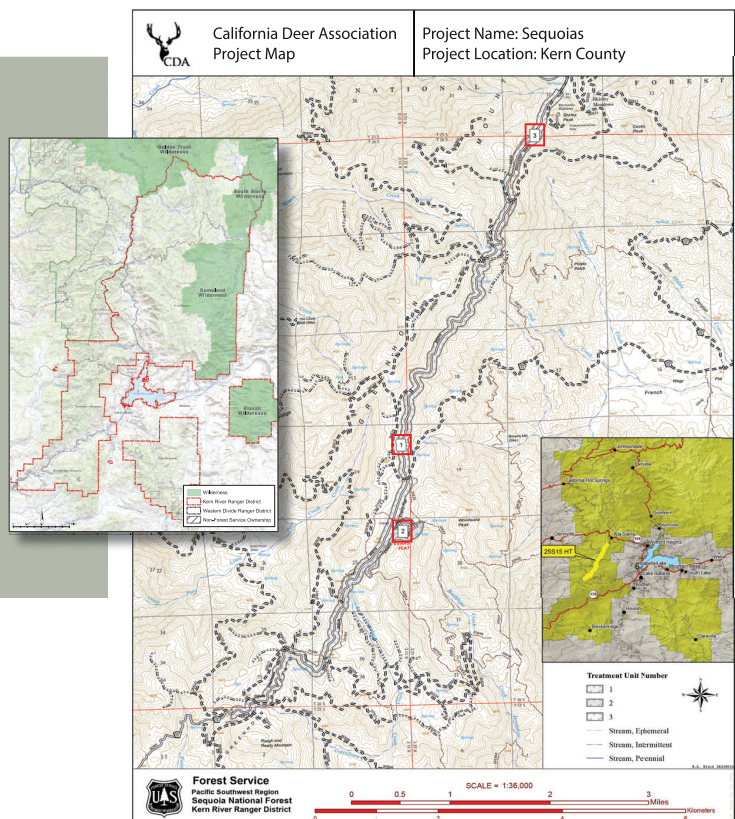
- › Fire Resiliency
- › Understory Regeneration
- › Healthy Forest Regeneration
- › Increased Biodiversity
- › Food Generation for Wildlife



Meeting on roadside project site



CDA with US Forest Service meeting about the Sequoia powerline corridor



Treating the Burn: Different Post-Fire Strategies to Restore Wildlife Habitat

California Deer Association performs many different types of restoration activities across the state to enhance and restore wildlife habitat for deer and other wildlife species. Some enhance wildlife habitat in unburned areas, otherwise known as (“green” projects”), and others restore habitats impacted by fire, or (“black” projects”). With each fire season seeing larger and hotter fires burning across California, restoration of post-fire landscapes back to functioning habitats is an increasingly crucial objective for land managers.

Choosing the appropriate treatment to restore a post-fire landscape depends on several factors: the habitat type, the severity of the fire, and the land management objectives. Because fire is a natural part of the ecology of California landscapes and many habitats are adapted to withstand and benefit from periodic fire, active restoration usually is activities are usually only necessary when a landscape burns at high severity. Areas that burn at low severity generally do not experience any major changes to the soil chemistry or plant species composition, whereas areas that burn at high severity often demonstrate major changes in the soil chemistry and complete mortality of all the vegetation in the area.

Salvage

When a forest burns at high severity and the management objective is to restore the landscape back to its pre-disturbance con-

dition to a healthy forest,, salvage logging is often the first step towards achieving that goal. Salvage logging is the practice of harvesting trees killed during a natural disturbance, like a catastrophic wildfire. It is commonly performed by private, state, and federal forest managers to reclaim the economic value of the timber stand lost in the fire and to prepare the stand for reforestation. It may be surprising to learn that a tree scorched in a wildfire can still be valuable for wood, worth any money, but usually, conifers can often still be harvested for timber up to two years following the fire. Usually, in a salvage operation, any tree that looks like it may have a chance to survive the fire will be left standing during a salvage operation, as well will any dead tree that displays wildlife habitat characteristics, such as cavities, complex crowns, and large lateral branches will be left standing for wildlife habitat. Many different species of birds and mammals like to live in standing dead trees, otherwise known as snags, for the protection and shelter they offer. Salvage logging also is an especially valuable practice in that it can help offset the cost for the next step of the post-fire in the restoration process: reforestation.

Reforestation

Reforestation is the practice of involves restoring forest cover following a major disturbance to the pre-disturbance habitat structure. Reforestation following a catastrophic wildfire usually takes place following salvage logging and requires two steps:



Total canopy loss and scorched soil are two characteristics of high burn severity wildfire.



CDA crew member preparing a salvage timber harvest in the Tennant Fire scar in Klamath National Forest.

site preparation and replanting. Site preparation which entails involves clearing the land of brush and other undesired vegetation, like brush, to reduce the competition for light, water, and soil resources and enhance the survival rate of the planted tree seedlings. Site preparation can be performed mechanically, using bulldozers or tractors, or through broadcast burning. Often, some amount of large woody debris is intentionally left on the forest floor on-site to encourage nutrient cycling of the soil and to serve as a wildlife habitat.

The replanting process begins with collecting cones from forests near the disturbed area to preserve the local genotype of the tree species, which produces trees that are subsequently more likely to survive the specific climate and site characteristics of the region. The cones are collected and brought to a nursery, where the seeds are isolated, germinated, and grown into seedlings that are ready to be planted. Once the site has been prepped, tree seedlings are placed into the ground, by hand or mechanically, following placement and density specifications that have been pre-determined by a forester considering the specific site characteristics of the forest, such as slope, aspect, and soil quality.

CDA is partnering with Klamath National Forest to perform reforestation in the footprints of the 2021 Tennant and Antelope Fires. These fires burned high severity across large swaths of forest, resulting in thousands of acres of total canopy loss. By performing active reforestation treatments, CDA will help to restore these forests back to functional, high-quality wildlife habitat.

Seeding

If the habitat burned at high severity was not a forest, or if the land management objectives do not call for reforestation, spreading native grass and forb seeds across the landscape may be the appropriate treatment to restore the landscape to its pre-disturbance condition. The seeds used in these operations are usually collected from the treatment area before the fire or from an undisturbed area that demonstrates similar habitat characteristics and is near the treatment area. This is to ensure that the local genotypes of the plant species, which are adapted to the specific climate and site characteristics of the region, are preserved and the seeds are more likely to successfully establish. Seeding can be

performed by hand or mechanically. For the Slink Fire Restoration Project in Mono County, CDA took to the skies to disperse native grass, forb, and shrub seeds across the 2020 Slink Fire burn scar by helicopter. By doing this, we were able to treat thousands of acres of burned areas in the Little Antelope Valley and Slinkard Valley areas, restoring critical winter forage habitat for mule deer.

Benefits of Active Post-Fire Restoration

Reforestation or seeding of a burned area can have other beneficial effects to a post-fire habitat besides providing forage for deer and other wildlife species. First, it can prevent sedimentation, or erosion of topsoil from the forest floor to into streams during a rain event. This action helps keep nutrients in the soil that are important for regenerating vegetation and keeps water quality healthy for fish and other aquatic animals. Also, active treatments can restore habitats to their predisturbance condition



A conifer seedling planted in a burn scar.

more quickly than if they are left for nature to take its course. Consequently, the ecosystem services these landscapes provide, such as quality habitat for wildlife, can be restored more rapidly without active intervention

With the growing threat of severe wildfires and subsequent fragmentation of critical wildlife habitat across the state, CDA's restoration efforts are more important than ever to maintain wildlife habitat for our deer and critical wildlife species. CDA is dedicated to mitigating the impacts of catastrophic wildfire on our valuable wildlife habitats by implementing these important post-fire restoration treatments.



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