

FIRE MANAGEMENT

Prescribed Burning on the Old Woman Plateau



UTAH'S
WATERSHED
RESTORATION
INITIATIVE



INTRODUCTION

The Old Woman Plateau (OWP) lies within Fishlake National Forest (Fishlake NF) in central Utah. The OWP contains many different ecosystems. Some, such as ponderosa pine forests have evolved with frequent low-intensity fire, while others, such as mixed conifer and aspen forests have evolved with infrequent high-intensity fire. Less frequent fires have led to an increase in heavy fuels and larger higher-severity fires. Prescribed burns are often used to reintroduce fire to an ecosystem of interest, reduce heavy fuel loads, and limit the size of high-severity fires. Prescribed burns require accurate forecasting of weather patterns and collaboration among managers and landowners at landscape scales. The OWP prescribed burns and the restoration project of 2022-2023 conducted by the Fishlake NF, helped reduce heavy fuel loads, restore historic fire regimes, and create a mosaic of different burn sizes and severities across the landscape.



Firefighter Moves Away from Wall of Fire During a Prescribed Burn

KEY ISSUES ADDRESSED

Hotter, drier climate conditions and accumulation of fuels have heightened risk of large, high-severity fire, that can harm local ecosystems and put nearby communities at risk.

As fires burn more frequently, expansion of native pinyon-juniper species are reducing the size of sage, mountainbrush, and oak communities reducing the extent of important habitat for many priority wildlife species on the OWP.

To re-establish fire in sagebrush ecosystems, biologists must implement management actions that balance the needs of wildlife species that may be impacted by fire.

PROJECT GOALS

- Reintroduce low-severity fire using prescribed burns that mirror a naturally ignited fire to reduce heavy fuel loads and achieve a more fire-resilient landscape
- Reduce cover of pinyon and juniper in sage, mountainbrush, and oak communities to create fuel breaks and limit spread of fire
- Improve the Salina Creek watershed on the OWP to benefit multiple species of wildlife

BURNING FOR THE FUTURE

Pro-active management strategies, such as prescribed burning, are becoming increasingly important to implement into land management activities to effectively get ahead of adverse ecosystem impacts from the Wildfire Crisis.



Elk Looking Across the Landscape in Front of an Installed Water Guzzler

PROJECT HIGHLIGHTS

Preparing Prescribed Burns: The Fishlake NF used hand tools and heavy machinery to remove ladder fuels and pinyon-juniper trees as a pre-fire preparation. As of 2023, Fishlake NF thinned 4,461 acres with hand tools and 966 acres via thinning/mastication with heavy equipment, and completed 14,580 acres of prescribed burning.

Developing Ecosystem-Centric Burn Prescriptions: The Fishlake NF created prescribed burns that mirror natural fire behavior. This included creating a mosaic of burnt and unburnt forest areas across the landscape that closely mimic wildfire behavior.

Reducing Fire Severity in Sagebrush by Treating Pinyon and Juniper: As of 2023, 5,427 acres of pinyon-juniper have been thinned or masticated to reduce fuel continuity and reduce the risk of severe wildfire in sagebrush.

Improving Wildlife Conditions in the Watershed: Fishlake NF conducted prescribed burns in sage and mountainbrush communities to reduce cover of pinyon-Juniper species and help resist the long-term impacts of conversion from sagebrush to pinyon-Juniper woodlands. Four wildlife guzzlers were also installed across the OWP for Rocky Mountain elk (*Cervus canadensis*), mule deer (*Odocoileus hemionus*), moose (*Alces alces*) and other wildlife species.

Collaborators

- Fishlake National Forest
- Central Utah Interagency Fire Center
- See online for full list of partners

CART Author: Alexandra Gerber, University of Arizona, September 2024.

Photos courtesy of Kreig Rasmussen, USFS
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LESSONS LEARNED

While the project was successful on the OWP, there is a need to continue frequent conversations among agencies and the public to efficiently develop and implement effective fire prescriptions at larger scales. The Fishlake NF collaborated with state and federal agencies to proactively reduce potential delays to prescribed burns and keep the public informed.

Additionally, collaborations with adjacent large private landowners were done to increase the size and scale of the project area being treated. This allowed landowners to mitigate fire risks to their property.

Fuels modeling is important in understanding how a fire will behave in a certain landscape. The Fishlake NF developed a prescription that accounted for the sagebrush, mountainbrush, and oak communities that dominate the OWP by using the Standard fire behavior fuels model. The understanding that these communities burn at high-severities under normal fire conditions is crucial in deciding when to burn the landscape and account for the weather conditions occurring during the fire to keep the burn manageable.

NEXT STEPS

- Collaborate with nearby communities and private landowners to establish forest management practices that protect the public from extreme fire
- Continue focused improvement to the Salina Creek Watershed
- Establish annual treatments for 40,000 to 124,000 acres of the FNF using a combination of prescribed fire and forest thinning practices

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Burned Sagebrush Ecosystem with New Growth Sprouting