Southeast Oregon Wildfire Resiliency Project: Progress and Recent Developments

Cutting juniper, spraying invasive annual grasses with herbicides and re-seeding of native plants is yielding wildfire resilience results in the Southeast Oregon sagebrush sea landscape.

July 2024

By James Williams

Wildfire Resiliency project. Photo by Brandon McMullen.

Just a few years ago, a stroll through the vast sagebrush rangelands in Southeastern Oregon would likely see a landscape dotted with western juniper trees. And that's a problem. Junipers crowd out other species, monopolize water and tend to contribute to hotter, faster-spreading wildfires.

But thanks to the work from the Harney County Wildfire Collaborative (HCWC)—a consortium of public and private entities—those junipers are getting the chop, which makes for a more biodiverse, wildfire-resilient ecosystem.

Pictured: Juniper cut on private property in 2023 as part of the Southeast Oregon

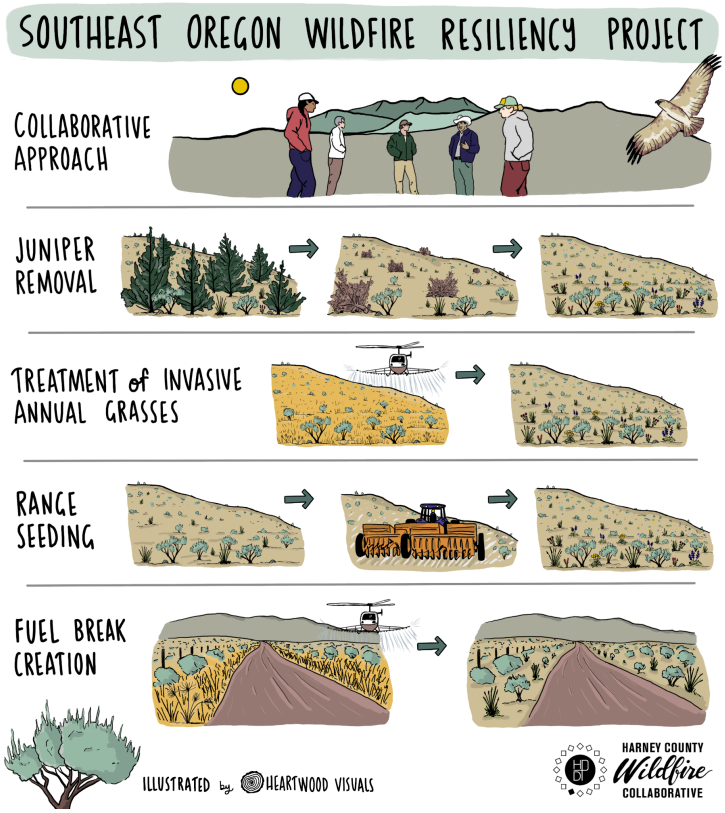
Such juniper removal, along with the treatment of invasive grasses, has been the group's focal point this spring and summer—a project funded by Oregon Senate Bill 762. The first round of work, completed in 2023, consisted of critical fuel treatments to enhance wildfire resilience across more than 80,000 acres of Southeast Oregon's sagebrush steppe. But in the middle of 2023 the drivers of this project, the HCWC's Southeast Oregon Wildfire Resiliency Project (SOWR), received exciting news. Their application for further funding had been approved, which meant they had an additional $3.8 million coming to them to help implement wildfire resiliency treatments on a further 22,000 acres of public and private land in Harney and Malheur Counties. The work that began this spring marks round two of the SOWR project, an effort which will continue through June of 2025.

How did we get here?

Such non-historic junipers didn't traditionally grow in Harney and Malheur counties—aside from areas that are naturally fire-resistant, like rocky outcroppings, scree fields and zones with unproductive soils—but that has since changed due to factors both human and environmental. Over the last 100-plus years, as we've actively worked to prevent all wildfires, even naturally occurring ones, junipers have proliferated. As a result, they've worked to crowd out more fire-resistant native species, outcompeting shrubs, forbes and native grasses that are so crucial to wildlife and livestock. Furthermore, stands of junipers tend to contribute to hotter wildfires that spread more quickly. And they're also water hogs, slurping up millions of gallons of water that could otherwise stay in the soil, helping foster the health of native species.

Jason Kesling, District Manager with the Harney County Soil & Water Conservation District (HSWCD) and a partner of the Harney County Wildfire Collaborative, has been working in Harney County to reduce the approximately one million acres of juniper-invaded habitat. According to Kesling, those junipers consume yearly about as much water as is found in the Warm Springs Reservoir—a body of water that irrigates most of Ontario and covers an area of 4,194 acres and boasts a maximum depth of 140 feet.

"For SOWR we had just the Stinkingwater Mountains," Kesling said. "But then for SOWR II we opened it up all the way to the forest boundary going north to Buchanan, all the way to the Harney County boundary."



Recent Progress and Ongoing Work

The SOWR project's three-pronged approach—cutting out juniper, spraying invasive annual grasses with herbicides and the re-seeding of native plants—has already yielded significant results. In areas where juniper have been removed, there's an increase in groundwater in the form of springs and healthy riparian zones. Plus, the removal of thousands of acres of junipers is helping to create a more resilient, biodiverse and fire-resistant landscape. And that's the point.

Kesling explained that this second phase of work, the juniper thinning efforts that are part of SOWR II, started in early March of 2024 with a bid tour of the focus area: nearly 4,200 acres of habitat near Drewsey, Oregon. With $1.3 million to work with and knowing that, according to the funding model, the work must be completed by June of 2025, Kesling was anxious to get started. On March 21, Kesling's group selected some contractors and, happily, they came in way under budget, charging closer to $200 per acre of juniper thinning versus the $400 per acre Kesling was expecting.

"We had a significant amount of money remaining so we started opening up and finding different projects," Kesling said. Initially, they were hoping to simply manage those original 4,200 acres—no small task. But because they were under budget, Kesling's group went back to the project list and added land that sprawled across 11 other landowners' properties as well as a controlled burn on state land. All told, Kesling said they were able to treat an additional 3,200 acres.

Work on that original 4,200 acres was completed in early June. There, a crew of 20 individuals working for approximately a month and a half, removed juniper and created potential control lines.(A potential control line is a boundary where vegetation and other flammable materials have been removed or reduced to help stop the spread of fire.)

What does the cutting process look like? It's a three-phase process in which a first-wave crew manages the smallest invaders with loppers, breaking them down to four-foot lengths or less. Phases two and three involve hand cutting and then machine piling for burning. Kesling explained that, because of the remote nature of the area, the cheapest way to remove the juniper is to burn it on site.

The importance of juniper removal cannot be overstated, Kesling said. If we continue to allow juniper to expand, he noted, then in 60-to-100 years we'll have nothing but juniper—a monoculture. This is problematic because it takes so long for biodiversity to occur, about 200-plus years, according to Kesling.

Joseph Sullivan, a fuels management specialist with the Burns District BLM and also a participant of HCWC agreed. He reiterated the importance of juniper thinning which should, “minimize the severity of fire on the landscape.” He was quick to point out that such work won’t stop fire, but will make it smaller and less severe.

But both experts were optimistic. Kesling said that this second round of SOWR—being able to focus so much money and human power on a single area—has been “massive.”

Challenges and Strategies

The scale of the problem, however, is immense. In Harney County alone, there are approximately one million acres of "invaded habitat.” Beyond the juniper thinning, are all the invasive annual grasses, which extend the fire season and prevent the return of native vegetation. A new chemical treatment is being used to suppress cheatgrass across 3,000 acres north of the Stinkingwater Mountains near Drewsey. Suppressing those invasive grasses also allows native seeds to germinate and come back, hopefully within about five years.

“We call that the ‘Defend the core, grow the core concept,” Kesling said. “So the areas we want that are good habitat, that haven't been burnt yet, that still have good native grass—we’re defending that with the fire fuel break, spraying and juniper cutting.”

Looking Ahead

Despite these challenges, the collaborative is making progress through strategic planning and partnerships. Current efforts include the continued creation of fuel breaks and control lines near Crane Creek. Sullivan also noted work near the Hines logging road as a recent success.

“We’re doing a fuel break off that [the logging road] and that will give a line to help protect the city of Hines and Burns,” Sullivan said. “And that’s our main population.” Sullivan also mentioned important work done in collaboration with HDP to lessen the severity of fire around infrastructure, namely cell towers near Burns.

While significant progress has been made, there's still much work to be done. The collaborative focuses on creating connected treatments to maximize impact. "We're taking a more strategic approach," Sullivan noted. "We're trying to hit multiple objectives: fire safety, healthier landscapes, and improved habitat."

The High Desert Partnership and the Harney County Wildfire Collaborative have played a crucial role in coordinating these efforts and Sullivan praised their work. “They’ve done awesome—bringing everyone to the table and getting us on the same page, helping us speak consistent language.”

As the SOWR II project continues, the focus remains on removing juniper, reducing the amount of dry, invasive grasses and securing additional funding. The goal is to create true fuel breaks that can significantly impact fire behavior across this vast landscape. While it takes time, money, and planning, the collaborative remains committed to enhancing wildfire resiliency in Southeast Oregon, protecting communities, and restoring ecological balance to the high desert ecosystem.

For questions about this news contact Aaron Johnston, High Desert Partnership Forest & Range Ecological Coordinator at aaron@highdesertpartnership.org and 541 573 7820.

This article is provided by High Desert Partnership; a Harney County nonprofit convening and supporting six collaboratives including the Harney County Wildlife Collaborative.

HIGH DESERT Partnership