Oak Savanna and Upland Prairie Habitat Restoration at Kime's

Project Background & Description

This project benefitted approximately 80 acres of some of the highest quality remaining oak savanna and upland prairie in the southern Willamette Valley. The Kimes chose to partner with the Council to benefit wildlife habitat and to improve their ranching operations. Young oak trees and Douglas fir were encroaching upon much of their oak savanna, turning them into closed-canopy forests. Many of the oaks present were going to lose the ability to grow large crowns, reducing habitat value.

The Council thinned stand density to allow the retained trees to grow unrestricted and improve the savanna habitat. This also ensured that sunlight could continue to reach the prairie plants that grow within the savanna. Many of these plants are quite rare and cannot survive in the deep shade of a closed-canopy forest. Thinning was conducted by shear-equipped skid steers and hand-crews. Harvested material was forwarded to a centralized location for chipping, and the biomass was enough that the haulers took it for free.

Much of the Kime's property is high-quality upland prairie. The Kimes wished to practice rotational grazing within this prairie. With help from the Council, they installed fencing and water stations to facilitate rotational grazing. Grazing can reduce the encroachment of woody vegetation, thus mimicking the effects of prescribed fire. The landowner and Council hope to see rotational grazing improve both habitat and pasture quality.

Before the project: Former oak savanna was becoming overgrown with young trees. Underneath these pines were some rare, native plants that were being shaded out.

After thinning: This area now has appropriate tree density (1-3/acre) for oak savanna. Seasonal grazing and occasional burning will prevent shrub and tree encroachment and promote the growth of native grasses and flowers.

Project Location

Project Funding & Support

Partners & Project Cost:

Oregon Watershed Enhancement Board:	$102,904
US Fish & Wildlife Service:	$ 10,000
Landowners:	$ 22,640
Total	**$ 135,544**

Restoration Techniques

- A survey of the vegetation on-site was used to formulate a restoration plan.

- Contractors were hired to remove trees with either shear-equipped skid steers or chainsaws.

- Cut material was moved to centralized landing with a Forwarder.

- Cut material was either used for firewood, or ground and removed from the site.

- Areas disturbed during thinning were seeded with native grasses.

- Scot's broom and blackberry were treated with herbicide to restore prairie biodiversity and structure.

- Rotational grazing is helping to reduce woody vegetation encroachment, thus ensuring the prairie doesn't become overgrown again.

Pre-project: This legacy oak was being threatened by numerous young trees in the understory.

Post-thinning: Legacy oaks have been released and more light reaches the forest floor, stimulating the growth of native flowers, such as native lilies, checkermallow & larkspur.

Environmental & Economic Benefits

- Less than 2% of oak savanna and 1% of upland prairie—essential habitat for as many as 200 species—remains in the Willamette Valley. Restoration on private land is key to restoring these habitat types

- Thinning allows mature oaks to expand their crowns and produce more acorns, which provide food for wildlife. More cavities are formed in oaks with larger crowns. Many wildlife species, such as Western bluebirds, nest in the cavities present in large oak trees.

- Thinning the savanna increases light to the forest floor, increasing growth of native flowering plants and benefitting pollinators.

- Installing fencing and water stations has improved the Kime's rotational grazing system, benefiting both forage and upland prairie quality

- Removing invasive, non-native plants improves the pasture and increases native prairie grasses and wildflowers.

- Contractors were used from the surrounding area, which helps support the local economy.

Implementation: Skid steers used shears to cut each tree at ground level. This facilitates later management via mowing.