

## A Vanishing Ecosystem...



Remaining oak savannas and woodlands play an essential ecological role in the Willamette Valley and provide some of the ecoregion's most valuable wildlife habitat. The Oregon White oak provides habitat for over 200 animal species alone, including over 35 species of insects and butterflies. Oak trees provide shade, fertile organic matter, perches for large birds, forage for large animals, and nesting cavities that together increase the amount of wildlife diversity. Unlike many conifers, oaks do not retain their lower branches, therefore minimizing the chances of creating "fuel ladders" for unexpected fires that are common to Oregon and California. The lack of native upland prairies and oak savannas contribute to the decline of important at risk wildlife species such as the western meadowlark, western rattlesnake, as well as once dominant plant species such as Roemer's fescue, California oat grass, and red fescue. The Walama Restoration Project believes that immediate action in the form of habitat rehabilitation and education is the only way to preserve and restore some of the remaining fragments of our region's native ecology.

# How Should I Restore and Preserve My Oak Habitat?

When walking through your property considering oak restoration, the question, "Where do I begin?" will inevitably arise. Oak communities display a variety of conditions and characteristics throughout the valley, so objectives for restoring your oak community should be decided with care and with a professional. Depending on the habitat structure on your property, restoration work can vary from clearing small trees around a few existing oaks or planting native grasses in a remnant savanna, to clearing a large area to improve an established oak stand. The following management options are effective for preserving oak habitats:

**Tree thinning:** Oregon oaks are critically threatened by the encroachment of trees species such as Douglas fir. As oak stands become dense with fast growing conifers, they lose the ability to maintain their vast canopy structure and acorn production rates, leading to mixed stands of more shade tolerant trees, and ultimately, the decline and disappearance of oak trees altogether. Tree thinning is a practice that removes species to increase the growth of existing oaks. It is a widely used practice on private land and has many ecological and economic benefits. Advantages to tree thinning include opportunities to select specific species within your stand and to generate income on sustainably harvested trees.

## Spencer Creek Biodiversity Reserve Eugene, OR

The Spencer Creek Biodiversity Reserve is a private property located in Lane County and encompasses 257 acres, of which 115 acres are being managed to conserve oak and prairie habitats. Since 1998, the owners have sought to actively maintain oak/ponderosa pine savanna, mixed conifer woodlands, upland prairie, and other increasingly rare ecosystems. This project has received help from the National Fish and Wildlife Foundation, the American Bird Conservancy, The Nature Conservancy, the Oregon Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service. To support the conservation of these ecosystems, the landowners also seek to reduce regulatory disincentives for conserving and maintaining them on private land. For more information on this project, please visit the Oregon Oak Communities Working Group at [www.oregonoaks.org](http://www.oregonoaks.org).



Before

*These pictures, taken by landowner Adam Novick, are an example of prescribed tree thinning by WRP technicians.*



After Thinning

**Snag and Downed Log Creation:** After trees die, their role in an ecosystem remains just as vital as it was when they were alive. Snags (standing dead trees) and decaying logs will continue to provide nutrients to the soil and provide habitat for over 90 reported species. Girdling, which is the removal of a ring of bark around the tree to disrupt the transfer of water and nutrients to the rest of the tree, is a successful way to create appropriate snags in your woodland/savanna. Additionally, previously thinned trees can be strategically placed as logs to improve your woodland's habitat structure.

## Maintaining Your Oak Savanna:

Historically, controlled fire was the most effective way to reduce invasive vegetation, to inhibit growth of conifer seedlings, and to aid in preserving native plant communities. Today, controlled fire has been used at places like Mt. Pisgah in Eugene and on several private properties in the Willamette Valley to preserve remaining endangered oak savanna habitats. Advantages to controlled burning include reducing the fuel load among trees in selected areas to prevent forest fires, eliminating the need for chemical herbicides on your property, and lastly, encouraging an annual display of colorful native wildflowers. Manual weed control such as weed whacking, mowing, scything, and hand removal is another low impact alternative to controlled burns.

Please contact WRP to find out more about oak habitat management and maintenance options.

## Oaks and Their History in the Willamette Valley

For thousands of years prior to early 19th Century Euro-American settlement, oak woodlands and savannas covered hundreds of thousands of acres across the valley floor. Oak woodlands were characterized by a mix of oaks and other trees in dense forest. The savannas were a park-like landscape: grasslands punctuated with either islands of tree groves or large single trees. Oak savanna habitat was historically maintained by controlled fires that swept through the valley. The fires suppressed the growth of woody vegetation, such as that of Douglas firs and allowed larger trees ample space to flourish. Plants associated with oak savannas, prairies and woodlands including tarweed, camas, and several woodland berries, were among the most valuable natural resources to the native Kalapuya tribes in the Willamette Valley. During the early 20th Century fire suppression, colonization, and agricultural practices increased, assisting the transformation of oak savannas into mixed fir woodlands. Faster growing trees such as Douglas fir began encroaching on remaining pockets of oak habitat while non-native invasive vegetation began to choke out regenerating young oaks. While urbanization has led to the elimination of oak stands by rapidly expanding metropolitan areas, oak woodlands in more rural areas have been replaced with rapidly growing conifer trees and understory invasive vegetation. Oak woodlands and savannas play a critical role in the Willamette Valley by providing habitat for hundreds of wildlife. Unfortunately, most protected state and federal lands are concentrated in areas that are not suitable sites for growing oaks.

## The Walama Restoration Project ..... Consulting and Restoration Services

The Walama Restoration Project is a non-profit organization founded in 2001, and dedicated to the enhancement and restoration of the waterways, forests, and grasslands in and adjacent to the Willamette Valley. **As practitioners, we have conducted restoration efforts on over 2,000 acres of public and private land from Salem to Eugene.** We value the long-term health of rare and endangered ecosystems. Consequently we take a sustainable approach to restoration, and advocate for successful alternatives to chemical herbicides on our projects. We have professional consultants that will provide information and help landowners construct management plans to restore and preserve their oak communities.



**Our trained technicians perform the following restoration services:**

**Tree Thinning and Girdling  
Fuels Reduction and Controlled Burns  
Landslide/Slope Stabilization  
Native re-vegetation and Site Design  
Native Seed Collection  
Noxious Weed Removal**

*We provide individual estimates for site-specific projects. Please contact us for a consultation.*

## Sources and Additional Information for Landowners

The following sources are essential guides for private landowners restoring native habitat on their property.

Vesley, David and Gabe Tucker. 2004. *A Landowner's Guide for Restoring and Managing Oregon White Oak Habitats*. Pacific Wildlife Research, USDA Bureau of Land Management, Salem District, et al. 76 pp.

Campbell, Bruce H. 2004. *Restoring rare native habitats in the Willamette Valley: A landowner's guide for restoring oak woodlands, wetlands, prairies, and bottomland hardwood and riparian forests*. Defenders of Wildlife, West Linn, OR & Washington D.C. 111 pp.

Moriarty, John. *Brochure: Oak Habitats. Protection and Restoration in Eugene*. Hendricks Park, The City of Eugene Parks and Open Spaces Division.

*There are federal and state programs that help fund upland restoration projects on private land. Please contact WRP or your local watershed council to find out how your property could be eligible for landowner incentive programs.*

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*WRP is committed to community supported rehabilitation and native re-vegetation of our watersheds.*

## Restore and Protect a Native Ecosystem in Your Backyard...

*Oregon Oak habitat is one of the most endangered ecosystems in the Pacific Northwest. Most of the remaining oak habitat that has not already been designated in parks or wilderness reserves exists primarily on private property. It is now up to landowners to help continue the preservation and regeneration of remnant oak woodlands and savannas. Whether you own 250 acres, 20 acres, or just two, oak trees provide a lasting benefit to your property that will extend for generations to come.*