OCRF Grant Project Completion Report

Oregon Department of Fish and Wildlife

Introduction

Project Name* **OCRF 2023-20_Creswell Butte: Initiating Recreation & Conservation Phase 2**

Project Location* **Creswell, OR in Lane County 43°54'18.89"N, 123° 1'25.79"W**

Actual Impact Measurement Unit

Miles Acres – 10 acres of oak restoration
Number of volunteers engaged - 10

Oregon Conservation Strategy Species *

List the Oregon Conservation Strategy Species and Oregon Conservation Strategy Opportunity Areas that the Project benefited.

The project benefited multiple Oregon Conservation Strategy (OCS) Species associated with oak woodland, savanna, upland prairie, and associated habitat types in the Willamette Valley. Species specifically identified in project planning and implementation documents included:

- Acorn Woodpecker
- White-breasted Nuthatch
- Chipping Sparrow
- Western Gray Squirrel
- Western Rattlesnake (potential habitat benefit through retention of rocky oak habitat and reduced woody encroachment)
- Native pollinators and oak-associated wildlife species supported by prairie and oak restoration efforts.

The project also improved habitat conditions for Oregon Conservation Strategy plant species and rare upland prairie species, including:

- Timwort, an Oregon Biodiversity Information Center List 2 species documented on-site.

The project benefited Oregon Conservation Strategy Habitats including:

- Oak woodlands
- Oak savanna
- Upland prairie / grasslands

The project is located within the Willamette Valley Ecoregion and near the West Eugene Conservation Opportunity Area (approximately 2.25 miles away), helping improve habitat connectivity and functioning as a stepping stone habitat in a fragmented landscape.

Final Report Questions

Project Statement*

Briefly describe what the project accomplished and the problem(s) it addressed. Make a clear and concise statement; avoid jargon and acronyms.

Character Limit: 1000

Phase 2 of the Creswell Butte project built upon the initial restoration completed during Phase 1 and focused on expanding oak woodland and upland prairie restoration, reducing invasive vegetation, and improving long term habitat resilience. Project activities included oak release, conifer thinning, brush management, invasive species control, slash treatment, and native seeding on disturbed areas.

Despite challenging site conditions, including steep slopes, extensive boulder fields, and dense vegetation, the project successfully restored approximately 10 additional acres of oak woodland and upland prairie habitat. Restoration treatments removed encroaching Douglas fir and other woody vegetation competing with legacy Oregon white oaks, improving light availability, understory conditions, and overall habitat structure. Follow up invasive species treatments targeted Scot's broom, blackberry, and other undesirable vegetation to support native plant recovery.

Approximately 10 acres received brush management and invasive vegetation control treatments. Woody debris generated during restoration activities was chipped, piled and burned, scattered, or otherwise treated to reduce hazardous fuel loads and improve site conditions. Disturbed areas associated with restoration activities, skid trails, and slash pile burning were seeded with native grasses and forbs to promote native vegetation establishment, improve pollinator habitat, and reduce invasive species colonization.

The project improved habitat conditions for Oregon Conservation Strategy Species associated with oak woodlands and prairie habitats, including acorn woodpecker, white-breasted nuthatch, western gray squirrel, chipping sparrow, and western rattlesnake. Legacy Oregon white oaks were released from competition, improving their long-term health and ability to provide wildlife habitat.

Project implementation also improved access for future stewardship and wildfire response through maintenance of the access road system and continued redirection of travel away from sensitive upland prairie habitat. Educational and community benefits were achieved through project outreach, newsletters, social media updates, partner coordination, and discussions regarding future public access opportunities. Ten Coast Fork Willamette Youth Crew members participated in a project tour followed by stewardship activities.

Although restoration acreage was lower than originally anticipated due to extensive rocky terrain and access limitations, the project successfully achieved its primary objectives by focusing resources on the highest-priority habitat areas. The completed work reduced wildfire risk, improved native habitat quality, increased ecosystem resilience, and established a strong foundation for future restoration and stewardship efforts at Creswell Butte.

Summary of Goals*

Describe how project goals, objectives, and/or milestones were completed. Discuss any measurable and achieved benefits (# of volunteers engaged, acreage restored, retrofits, planning documents created, research results, etc.).

The project advanced its goals of restoring oak woodland and upland prairie habitat, reducing invasive species, improving wildfire resilience, and supporting long term stewardship of this permanently conserved natural area. Project implementation focused on oak release, conifer thinning, brush management, invasive species control, slash treatment, native seeding, and maintenance of site access infrastructure.

Due to the site's steep slopes, dense vegetation, and extensive boulder fields, restoration work was more time consuming and costly than originally anticipated. As a result, efforts were concentrated in the most accessible and ecologically valuable portions of the property. Approximately 10 acres of oak woodland and upland prairie habitat were restored through the removal of encroaching Douglas fir and other woody vegetation competing with legacy Oregon white oaks. These treatments improved habitat structure, increased sunlight to native understory plants, and enhanced overall ecosystem function.

10 acres received invasive and undesired woody vegetation management treatments. Follow up control efforts targeted Scot’s broom, blackberry, and other invasive species to reduce competition and promote native plant recovery. Woody debris generated during restoration activities was chipped, piled and burned, scattered, or removed from the site to reduce hazardous fuel loads and improve long term site conditions.

Native seeds were seeded in disturbed areas created by restoration work, skid trails, and slash pile burning to support pollinator habitat, stabilize soils, and improve native plant establishment. The project also maintained and improved access routes needed for future stewardship, wildfire response, and ongoing management while continuing to direct travel away from sensitive upland prairie habitat.

Benefits included improved habitat for OCS Species associated with oak woodlands and prairie habitats, including acorn woodpecker, white-breasted nuthatch, western gray squirrel, chipping sparrow, and western rattlesnake. Legacy Oregon white oaks were released from competition, improving their health, longevity, and wildlife value.

Accomplishments included community outreach through newsletters, social media updates, partner coordination, and Science on Tap regarding oak habitat restoration and wildfire resilience. While restoration acreage was reduced due to unforeseen terrain challenges, the project achieved meaningful ecological outcomes by strategically focusing resources on the highest priority habitat areas and established a strong foundation for future restoration and stewardship efforts at the butte.

An additional accomplishment of the project was supporting future recreation and public access planning at Creswell Butte. A University of Oregon landscape architecture student selected this area as a multi-term design project and developed conceptual plans for future public use of the property. Working with project partners, the student evaluated site opportunities and constraints and created

design concepts that included parking areas, trail alignments, viewpoints, interpretive signage, gathering spaces, and other visitor amenities. These conceptual designs provide a valuable template for future recreation planning and help advance the long-term vision of creating a publicly accessible natural area that balances habitat conservation, environmental education, and community enjoyment.

Character Limit: 3000

Lessons Learned*

Describe lessons learned and challenges faced during the grant performance period. Examples being delays, contractual issues, permitting, funding, changes to the project Scope of Work or amendments, etc.

Character Limit: 3000

The project provided valuable lessons regarding restoration implementation in steep, rocky oak woodland environments. The largest challenge encountered during the grant performance period was the extensive presence of large surface and subsurface boulders throughout much of the project area. Dense vegetation and limited site access prior to implementation prevented the full extent of the rocky terrain from being identified during initial planning. While drone imagery and site visits helped inform project design, many of the boulder fields were obscured by dense brush and young trees until restoration work began.

These conditions significantly limited equipment access and slowed implementation. Forestry mulchers and other mechanical equipment frequently encountered buried rock, resulting in repeated equipment damage, higher contractor costs, and increased time needed to safely complete treatments. In many locations, excavators were required to relocate or pile boulders before vegetation work could continue. Steep slopes and thin soils further constrained access and reduced the efficiency of restoration operations.

As a result, the project scope was modified during implementation. The original proposal anticipated restoration of approximately 20 acres during Phase 2, but final implementation focused on approximately 10 acres of oak woodland and upland prairie restoration and 10 acres of invasive and undesired woody vegetation management. Rather than attempting to treat the entire property, the project team prioritized the most accessible and ecologically valuable areas where restoration actions would provide the greatest habitat benefit and wildfire risk reduction. Areas surrounding legacy Oregon white oaks, high-quality prairie remnants, and infrastructure were prioritized for treatment.

The project also demonstrated the importance of adaptive management and flexibility in restoration planning. Treatment methods were adjusted throughout implementation, including greater reliance on hand crews in inaccessible areas, resequencing work activities, and modifying treatment priorities to reflect realistic operational constraints. Despite reduced acreage, the completed work

successfully improved habitat structure, reduced invasive species pressure, enhanced native understory conditions, and reduced wildfire fuels in priority areas.

Another lesson learned was the importance of building contingency funding and realistic implementation timelines into restoration projects occurring on difficult terrain. Mechanical treatment costs in rocky environments can vary substantially from initial estimates, particularly when safety concerns limit operational efficiency. Future projects would benefit from additional pre-treatment assessments where possible, though some site limitations may not become apparent until active restoration begins.

The project team also learned that even smaller treatment areas can provide meaningful ecological benefits when focused strategically. Restoration efforts successfully released legacy oaks, improved wildlife habitat, reduced fuel loading near the urban interface, and established a strong foundation for future restoration phases. The project also highlighted the value of integrating recreation planning with habitat restoration. Collaboration with a University of Oregon landscape architecture student resulted in conceptual designs for future parking, trails, viewpoints, and educational features, helping advance the long-term vision for public access while maintaining the site's conservation values.

Next Steps*

Describe any next steps for the project, if any.

Character Limit: 5000

The next phase of work at Creswell Butte will focus on maintaining and building upon the restoration accomplishments achieved through Phases 1 and 2. Priority activities include follow-up invasive species treatment, continued monitoring of restored areas, maintenance of released Oregon white oaks, maintenance of the gravel access road, and additional native seeding where necessary to improve understory diversity and prevent reinfestation by Scot’s broom, blackberry, and other invasive species.

The Coast Fork Willamette Watershed Council and project partners will continue pursuing funding opportunities to restore untreated portions of the property that remain impacted by conifer encroachment and invasive vegetation. Future restoration efforts may include additional oak release, fuels reduction, understory enhancement, and prescribed fire where feasible and appropriate. These activities will further improve habitat conditions for oak woodland and prairie-associated wildlife while increasing the site's resilience to wildfire and climate change.

Certification

Drafts of final reports for review may be submitted to ODFW.OCRF@odfw.oregon.gov

Certifying Statement*

I certify that the above and attached information is true and accurate.

Choices

Yes

Applicant Authorized Representative Name* **Amanda Gilbert**

Character Limit: 200

Authorized Representative Title* **Executive Director**

Character Limit: 200

Creswell Butte
Planting Summary

Summary of Planting Actions

Seeded 6 acres of disturbed ground after oak release at a rate of 6 lbs./acre in Fall of 2024.

Species in Seed Mixes

Graminoids:

Bromus sitchensis, Carex pachystachya, Elymus glaucus, Elymus trachycaulus, Festuca roemeri, Koeleria macrantha, Poa secunda (P. scabrella),

Forbs:

Achillea millefolium, Amsinckia menziesii var. intermedia, Aquilegia Formosa, Artemisia douglasiana, Camassia leichtlinii, Clarkia amoena, C. purpurea, C. rhomboidea, Collomia grandiflora, Epilobium densiflorum, Eriophyllum lanatum, Geum macrophyllum, Gilia capitata, Heracleum maximum (lanatum), Heuchera chlorantha, Iris tenax, Ligusticum apiifolium, Lomatium dissectum, Lomatium utriculatum, Lotus purshianus, Lupinus rivularis, Madia elegans, Madia gracilis, Phacelia nemoralis var. oregonensis, Plectritis congesta, Potentilla (Drymocallis) glandulosa, Prunella vulgaris var. lanceolata, Ranunculus occidentalis, Rumex salicifolius, Rupertia physodes (Psoralea), Sanguisorba annua (occidentalis), Sidalcea campestris, Solidago elongate, Thalictrum polycarpum

Summary of Plant Establishment Completed

Disturbed areas were treated with a broad spectrum herbicide to control annual species that resprouted following ground-disturbing activities. These areas were then seeded with a native mix of grasses and forbs. Follow-up treatments included targeted spot spraying of resprouting woody vegetation, primarily Scot's broom and nonnative blackberry.

Plant Survival Analysis

A total of 15 acres were seeded with native forbs and grasses between Phase 1 and Phase 2 of this project. Establishment success varied by site conditions, particularly the amount of exposed soil at the time of seeding.

Areas with greater amounts of exposed bare soil showed the strongest response. In approximately 65% of the seeded area, native vegetation established successfully, with less than 20% cover by nonnative forbs.

In contrast, about 35% of the seeded area had limited bare soil due to deep wood chip layers left by the mulching equipment. In these areas, native forbs and grasses established on only about 40% of the ground surface, while the remaining area stayed largely unvegetated because the depth of wood chips inhibited germination and plant emergence.

Creswell Butte
Planting Summary



Plectritis congesta and Collinsia grandiflora



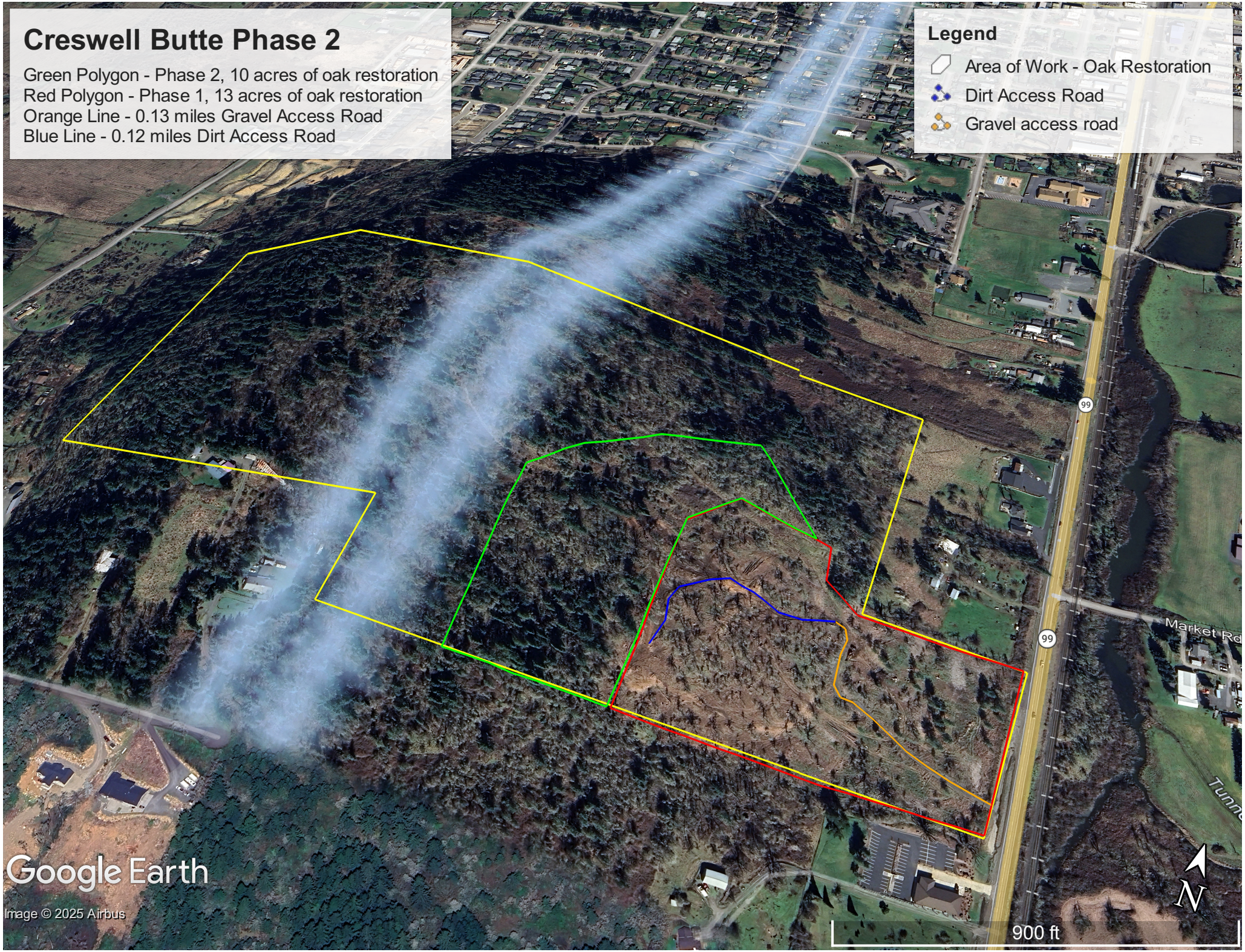
Madia elegans



Sisyrinchium hitchcockii



Dichelostemma congestum


Creswell Butte Phase 2
Green Polygon - Phase 2, 10 acres of oak restoration
Red Polygon - Phase 1, 13 acres of oak restoration
Orange Line - 0.13 miles Gravel Access Road
Blue Line - 0.12 miles Dirt Access Road
Legend
Area of Work - Oak Restoration
Dirt Access Road
Gravel access road
99
99
Market Rd
Google Earth
Image © 2025 Airbus
N
900 ft


Before (2023)


After (2025)


Before (2023)


After (2025)


Before (2023)


After (2025)