OCRF Grant Project Completion Report

Oregon Department of Fish and Wildlife

Introduction

Project Name* **OCRF 2022-01 _ Creswell Butte: Initiating Recreation & Conservation Phase 1**

Project Location* Creswell, OR in Lane County 43°54'17.15"N 123° 1'15.09"W

Actual Impact Measurement Unit

Miles - .25
Acres – 13 ac oak release
Number of volunteers engaged - 11
Acre Feet

Other (please explain)

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 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

The project restored and improved oak woodland and upland prairie habitat on Creswell Butte, a permanently conserved natural area near Creswell. Work included removing encroaching conifers and invasive vegetation, protecting legacy Oregon white oaks, reducing wildfire risk, improving habitat for native wildlife and pollinators, seeding disturbed areas with native plants, and improving access for long term stewardship and future public use. The project addressed habitat loss and degradation caused by past fire suppression, invasive species, and dense tree growth that were reducing biodiversity, harming native oak habitat, and increasing wildfire risk near the community.

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.).

Character Limit: 3000

Phase 1 of the Creswell Butte project focused on restoring degraded oak woodland, savanna, and upland prairie habitat while improving access for long term stewardship, wildfire response, and future public use. The project sought to reduce conifer encroachment, control invasive vegetation, improve native understory conditions, and protect legacy Oregon white oaks on this permanently conserved 74 acre natural area south of Creswell.

During implementation, the project team encountered extensive boulder fields, steep slopes, and extremely rocky terrain across much of the site. These conditions significantly limited equipment access, slowed operations, increased costs, and made portions of the property unsafe or impractical for mechanical treatment. Due to these unforeseen site conditions, restoration efforts were strategically focused on the most accessible and ecologically valuable portions of the property.

Approximately 13 acres of oak woodland and prairie habitat were restored through selective tree thinning, oak release, brush management, and fuels reduction treatments. Dense stands of Douglas fir and invasive woody vegetation competing with legacy oaks were removed to improve habitat structure, increase sunlight to native understory plants, and reduce wildfire risk along the wildland urban interface. Follow up invasive species treatment targeted species such as Scot's broom and nonnative blackberry.

Disturbed soils created during restoration work, skid road decommissioning, and slash pile burning were seeded with native grasses and forbs to support pollinator habitat and native plant recovery. Woody debris generated during thinning operations was chipped, piled and burned, scattered, or removed from the site depending on terrain and accessibility.

The project also completed approximately 0.25 mile of improved access road and redirected travel away from sensitive upland prairie habitat. Due to the high cost of the oak release only 0.18 miles were able to be gravelled and the remaining 0.7 miles are dirt track. These improvements support future restoration work, long term maintenance, wildfire response, and eventual recreational and educational use of the property.

Project outcomes included:

• Approximately 13 acres of invasive forbs and woody vegetation treated with herbicide completed two times for a total of 26 acres treated over the life of the grant.
• Approximately 13 acres of oak woodland and prairie restoration completed
• Approximately 13 acres of invasive and undesired woody vegetation management
• Legacy Oregon white oaks released from conifer competition
• Native seed installed on disturbed areas to improve understory diversity
• Reduced fuel loading and wildfire risk near the Creswell urban interface
• Improved long term access for stewardship and emergency response
• Habitat improvements for Oregon Conservation Strategy Species including acorn woodpecker, white-breasted nuthatch, western gray squirrel, chipping sparrow, pollinators, and western rattlesnake
• Five Coast Fork Youth Crew spent time on the project pulling weeds and spreading native seed following a tour of the site focusing on the habitat values and restoration work.

Community engagement included project updates shared through CFWWC newsletters, social media, partner coordination, held a bird walk (6 attendees), and Science on Tap (public meetings) regarding oak habitat restoration and wildfire resilience. The project established a strong foundation for continued restoration and future public access opportunities at Creswell Butte.

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 Creswell Butte 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 treatment across approximately 30 acres, but final implementation focused on approximately 13 acres of oak woodland, savanna, and prairie restoration and 13 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 canopy targets in some units 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.

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 and long-term stewardship at Creswell Butte.

Next Steps*

Describe any next steps for the project, if any.

Character Limit: 5000

Future work at Creswell Butte will focus on maintaining and building upon the restoration accomplishments completed during Phase 1. Priority next steps include follow up invasive species treatment, continued maintenance of restored oak woodland and prairie habitat, additional native seeding where needed, and long-term monitoring of vegetation response and oak health. Ongoing maintenance will be necessary to prevent reinfestation by species such as Scot's broom, blackberry, and woody encroachment.

The Coast Fork Willamette Watershed Council and project partners also plan to pursue additional funding opportunities to continue restoration on untreated portions of the property that could not be accessed during this phase due to steep slopes, dense vegetation, and extensive boulder fields.

Future restoration efforts may include expanded hand treatments, additional fuels reduction, oak release, understory enhancement, and prescribed fire where feasible and appropriate.

Additional work is anticipated to further improve long term access and stewardship capacity at the site while minimizing impacts to sensitive prairie habitat. Future planning efforts may also include development of trails, educational signage, guided walks, volunteer stewardship events, youth engagement opportunities, and other low impact public access improvements consistent with the conservation easement and long-term habitat goals for the property.

The project team will continue coordinating with conservation partners and local stakeholders. Creswell Butte remains an important long term restoration site due to its proximity to the City of Creswell, visibility within the community, habitat connectivity value, and potential to serve as a demonstration site for oak woodland and prairie restoration in the southern Willamette Valley.

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 9 acres of disturbed ground after oak release at a rate of 7 lbs./acres in Spring 2023.

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 9 acres were seeded with native forbs and grasses. 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.

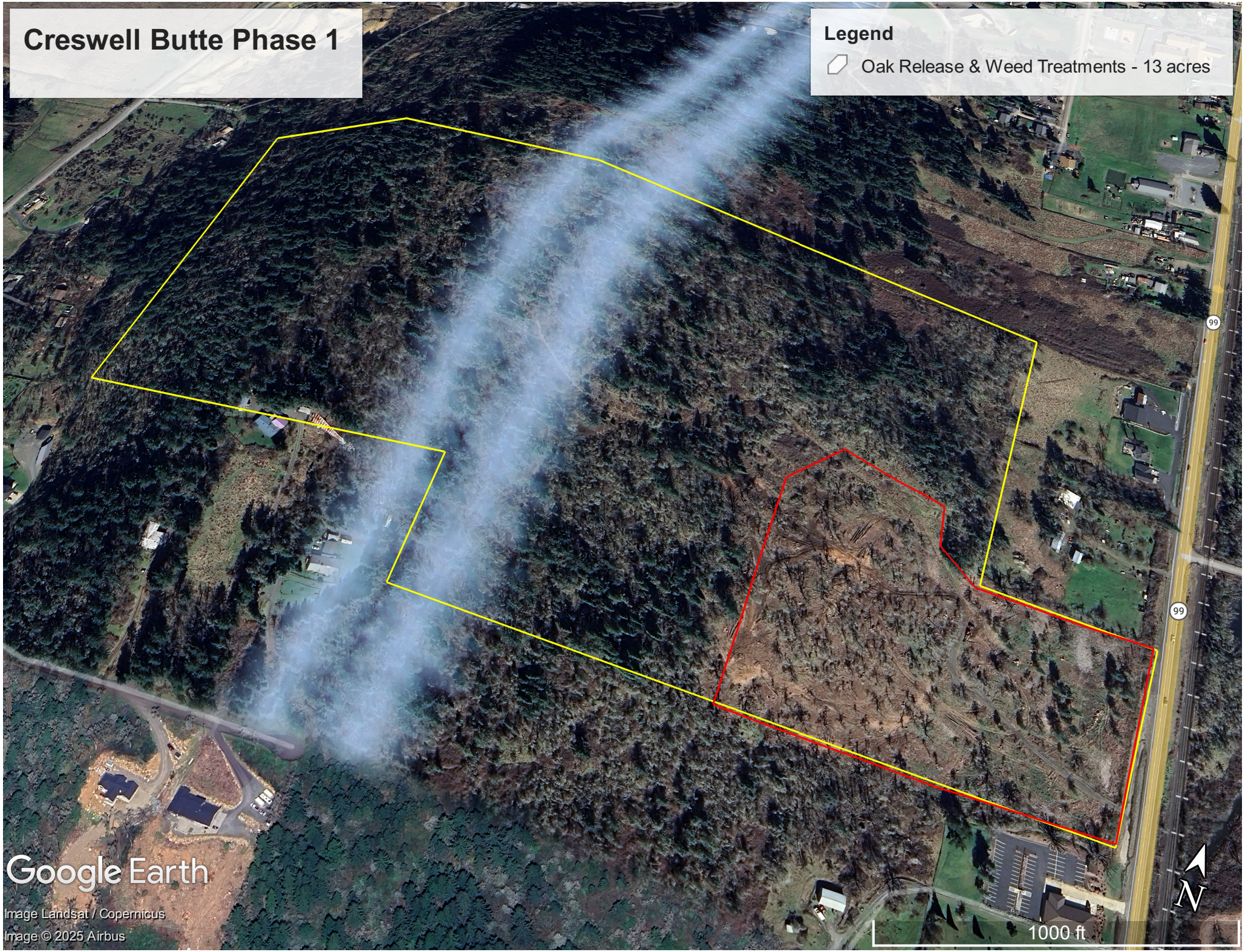
Creswell Butte
Planting Summary



Collomia grandiflora & Eriophyllum lanatum



Gilia capitata


Creswell Butte Phase 1
Legend
Oak Release & Weed Treatments - 13 acres
99
99
Google Earth
Image Landsat / Copernicus
Image © 2025 Airbus
N
1000 ft

Before (2021)



After (2026)



After access road is complete, but before thinning (2022)



After (2026)





Before (2021)



After (2026)


Before (2018)


After (2025)


Before
Before (2022)


After (2026)

Before (2022)





After (2026)







These photos shows an area where legacy Oregon white oaks have been successfully released from encroaching conifers and dense brush. Large boulders are scattered throughout the site, illustrating the challenging terrain that limited equipment access and slowed implementation. Some boulders have been piled to facilitate oak release while many remain in place. The images highlight both the restored open structure and the on the ground constraints that shaped restoration methods at this site.

