AGENDA CONSENT CALENDAR MEMO

Memorandum Date: September 20, 2024

Order Date: September 24, 2024

TO:	Board of County Commissioners
DEPARTMENT:	Lane County Public Works, Parks Division
PRESENTED BY:	Brett Henry, Parks Division Manager
AGENDA ITEM TITLE:	ORDER/ In the Matter of Approving a Permit to Lane County Parks to Conduct Prescribed Burns in Howard Buford Recreation Area

I. MOTION

II. AGENDA ITEM SUMMARY

The Lane County Parks Division is requesting that the Board permit implementation of prescribed burns in Howard Buford Recreation Area between September 24 2024 and June 30 2025. The permit is needed to comply with the requirements of ORS 476.380.

III. BACKGROUND/IMPLICATIONS OF ACTION

A. Board Action and Other History

In 2018, the Board adopted the Howard Buford Recreation Area (HBRA) Habitat Management Plan (HMP) as a refinement to the Lane County Rural Comprehensive Plan. Goal 6 of the HMP is to "achieve significant restoration of prairie, savanna, oak woodland, and wet prairie habitats in HBRA". Strategy 6.1 is to "continue ongoing collaboration with Oregon Dept. of Forestry Eastern Lane District, Rivers to Ridges partnership, and other qualified fire management entities to design and implement ecological burns on an average of 50 -250 acres annually". Additional background information on the use of prescribed fire to improve habitat conditions and reduce fuel loads in included in Chapter 8 of the HMP.

Prescribed or ecological burns are a means of safely using fire within defined boundaries and under conditions where fire can be safely used as a management tool. Following the adoption of the HMP in 2018, Lane County Parks and partners have successfully conducted prescribed burns in the park in 2021, 2022, and 2023.

This is the continuation of a program of regular prescribed burning in the park that was initiated in 1999. A map showing the locations of proposed prescribed burn units in 2024 attached.

B. Policy Issues

Howard Buford Recreation Area lies outside the boundaries of any Oregon Dept. of Forestry (ODF) Forest Protection District. Because of this, Lane County Parks has contracted with ODF for fire protection in HBRA. HBRA also lies outside the boundary of any rural fire protection district.

It has recently come to the attention of Parks that Oregon Revised Statutes require that for any lands outside of a rural fire protection district or a forest protection district, a permit to conduct prescribed burns must be secured from the county court or board of county commissioners. This requirement is found in ORS 476.380.

In compliance with Oregon law, Lane County Parks is now working to correct an inadvertent oversight by asking the Board to permit prescribed burning in HBRA between September 24, 2024, and June 30, 2025 (the term of our current agreement with ODF for fire protection).

C. Board Goals

The Lane County Parks vision aligns with the 2022-2024 Lane County Strategic Plan under Strategic Priority 2: Vibrant Communities. “Invest in Lane County residents by fostering engaged communities with affordable housing options, equitable opportunities, economic vitality and a healthy environment”.

D. Financial and/or Resource Considerations

Staff believes that the financial implications to Lane County of the Board permitting prescribed burning in HBRA are minimal. The cost of the planned prescribed burns in 2024 is being covered entirely by grants (primarily a Community Assistance grant from the Bureau of Land Management) and in-kind contributions from Rivers to Ridges prescribed burn program partners, and local fire protection providers.

E. Health Implications

Howard Buford Recreation Area provides a variety of health benefits to the citizens of Lane County. The park is an inexpensive venue for citizens to recreate and exercise. Prescribed burning improves the quality of habitats within HBRA, and access to a diversity of native animals and plants for park visitors. Prescribed burning reduced fuel loads, and thus reduces the chance of a high intensity wildfire. Prescribed burns are only allowed when weather and atmospheric conditions are such that fire can be contained within the boundaries of the planned burn units, and the smoke that is generated is directed by prevailing

winds away from densely populated areas, rises well up into the atmosphere.

F. Analysis

As noted under Section A, the Board providing a permit to Lane County Parks to conduct prescribed burns in HBRA is necessary to comply with the requirements of ORS 476.380.

It should also be mentioned that additional permits for prescribed burning have been or will be obtained from the Lane Regional Air Pollution Agency, and the Oregon Dept. of Forestry, South Cascade District. These permits give requirements for weather conditions, resource requirements, and other factors necessary to safely implement prescribed burns.

G. Alternatives/Options

1. Approve the Board Order to permit Lane County Parks to conduct prescribed burns in Howard Buford Recreation Area between September 24, 2024 and June 30, 2025.
2. Do not approve the Board Order to permit Lane County Parks to conduct prescribed burns.

IV. RECOMMENDATION

Parks Division recommends Option #1 - Approving the Board Order to permit Lane County Parks to conduct prescribed burns in Hoard Buford Recreation Area between September 24, 2024 and June 30, 2025.

V. TIMING/IMPLEMENTATION

If the Board Order is approved, parks staff will work with ODF and other partners to implement planned prescribed burns in Howard Buford Recreation Area between September 24, 2024 and June 30, 2025.

VI. ATTACHMENTS

A. Map of planned prescribed burn units in HBRA.
B. Excerpt from the Howard Buford Habitat Management Plan, Chapter 8: Fire as a Management Tool
C. Photos taken during and after a prescribed burn in HBRA

BEFORE THE BOARD OF COMMISSIONERS OF LANE COUNTY, OREGON

ORDER NO: 24-09-24-07	In the Matter of Approving a Permit to Lane County Parks to Conduct Prescribed Burns in Howard Buford Recreation Area

WHEREAS, In 2018 the Board of Commissioners adopted the Howard Buford Recreation Area Habitat Management Plan as a refinement to the Rural Comprehensive Plan; and

WHEREAS, Goals and Strategies of the Habitat Management Plan identify prescribed burning as an important management tool to achieve plan goals; and

WHEREAS, Howard Buford Recreation Area lies outside the boundaries of any fire protection district or forest protection district; and

WHEREAS, Lane County Parks has a current contract with the Oregon Dept of Forestry for Fire Protection for Howard Buford Recreation Area; and

WHEREAS, ORS 476.380 requires that for any lands outside of a rural fire protection district or a forest protection district, a permit to conduct prescribed burns must be secured from the county court or board of county commissioners.

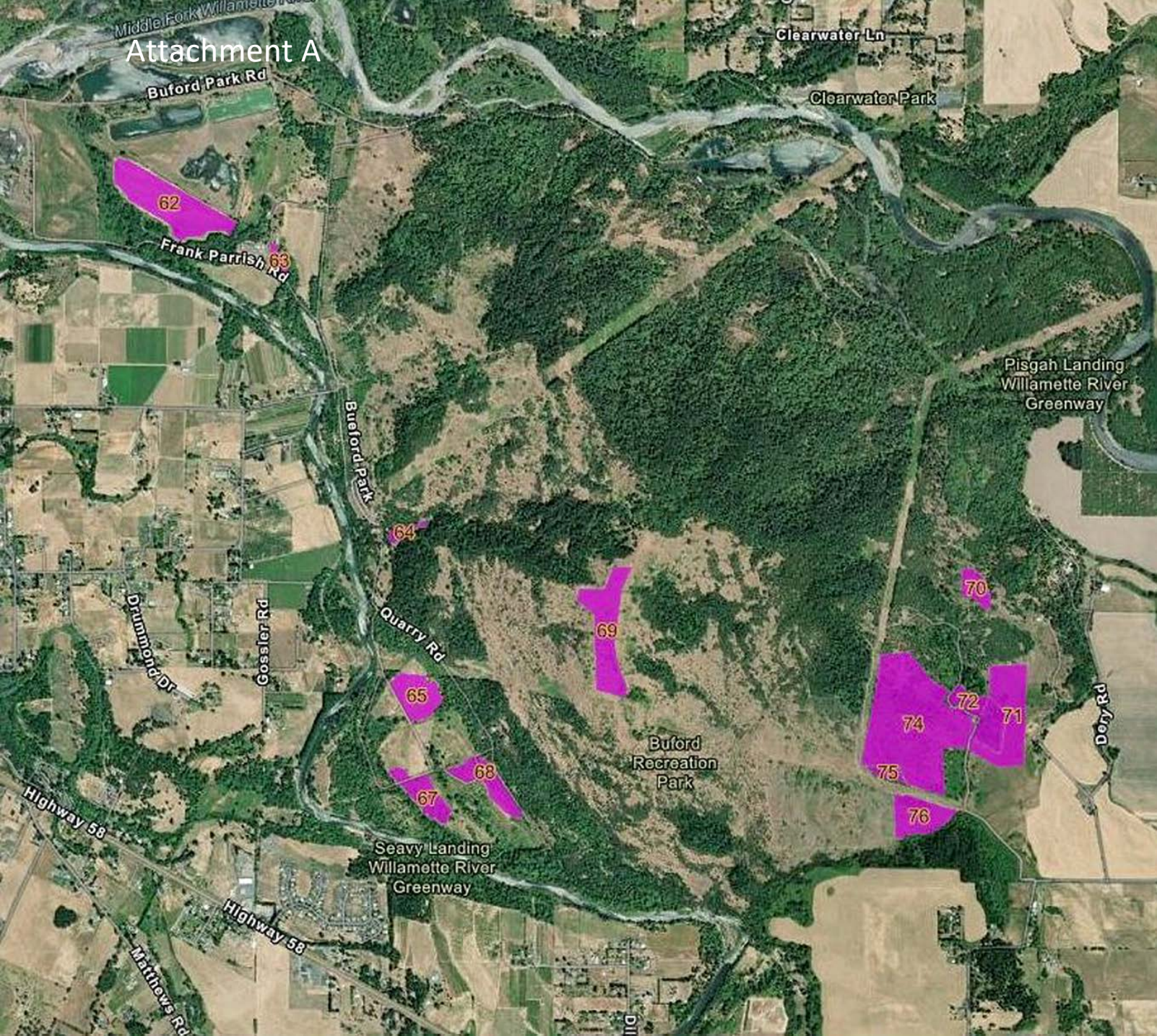
NOW, THEREFORE, the Board of County Commissioners of Lane County **ORDERS** as follows:

1. Lane County Parks be permitted to conduct prescribed burns in Howard Buford Recreation Area between December 24, 2024 and June 30th, 2025

ADOPTED this 24th day of September, 2024.

Laurie Trieger, Chair
Lane County Board of Commissioners

Attachment A



Chapter 8: Fire as a Management Tool

8.1 The Historic Role of Fire in Chaparral, Prairie, Savanna, & Woodland Habitats

8.1.1 Historic Climate Variations

Significant portions of Oregon's ecoregions support habitats that are dependent on fire for their continued health and survival. Climate conditions approximately 5,000 to 8,000 years ago that were warmer and drier than today likely influenced the establishment of prairie and savanna habitats in the Willamette Valley ecoregion. As the climate subsequently cooled, frequent low intensity wildland fires maintained extensive prairies and savannas, which would otherwise have declined in the absence of fire. While some fires may have been the result of lightning strikes, deliberate ignition by the indigenous peoples of the area as a land management practice is likely to have been an important ecological influence (Walsh et al. 2010; Walsh et al. 2015).

8.1.2 Observations of Early Explorers

The first Euro-American explorers and settlers who arrived in the Willamette Valley in the early 1800's described the Willamette Valley as having extensive areas of prairie and oak savanna. Land surveys conducted by the General Land Office of the US Government in the 1850's documented that about one million acres of the Willamette Valley was prairie, and 500,000 acres were savanna (Christy and Alverson, 2011; Appendix B). These native prairie and savanna habitats have been greatly reduced in extent due to agriculture, grazing of domestic livestock, residential and urban development, and expansion of forest vegetation into former prairies. Only a few thousand acres of high quality native prairie and savanna are currently known to survive in the Willamette Valley, a reduction of 98 percent or more from the original extent of prairie and savanna.

Thus, it was a "natural" landscape shaped (largely) by human-set fires that the first Euro-American explorers and settlers encountered in the early 1800's (Habeck 1961, Johannessen et al 1970, Towle 1974). Morris (1934), Johannessen (1971) and Boyd (1986) document this practice through reviews of the early Euro-American explorers' and missionaries' journals (David Douglas-1826, John Work-1834, C. Wilkes-1845, B. Hines-1881, etc.). These records report that fires were set annually in late summer and early fall, and covered extensive portions of the Willamette Valley. The main difficulty with historic observations and descriptions is that they do not clearly describe how often fires returned to any specific location, and that is a pertinent question that remains to be answered.

Drastic population declines resulting from introduced diseases, and ultimately, the removal of the Kalapuya Indians to the Grand Ronde Reservation halted wide scale burning in the Willamette Valley in the 1830s and 1840s. Without fire, wet prairies that have been left undisturbed have in many cases gradually changed into willow and ash forests, while the drier prairies have converted to oak woodlands and maple and Douglas-fir forests.

8.1.3 Cultural Use of Fire as a Management Tool

The Winefelly group of the Kalapuya people (a primary tribe in the Willamette Valley), who spoke the Central Kalapuya dialect, were the primary native inhabitants of the Mount Pisgah/Confluence area. The Mount Pisgah area was likely used for seasonal hunting and food plant gathering activities.

Because of the Willamette Falls at Oregon City, the Willamette was not historically a major salmon stream, and the Kalapuya did not utilize salmon as a food source to the extent that tribes along the Columbia River did. Instead, the Kalapuya, hunted game such as deer and elk, and gathered food plants from the native flora. The prairies provided the majority of their food plants, including camas (*Camassia* spp.) bulbs, yampah (*Perideridia* spp.) roots, and tarweed (*Madia* spp.) seeds.

Though they were not farmers in the conventional sense, the Kalapuya used fire to maintain prairie habitats for valued food plants, increase production of native nut and fruit trees, and facilitate harvest of food plants such as tarweed. In addition, they may have found fire useful in hunting game, by attracting animals to browse on the fresh green growth that emerges soon after a fire (Boyd 1986). During the many millennia that the Kalapuya subjected the Willamette Valley to frequent low intensity fires, a diverse flora and fauna evolved that had appropriate adaptations to avoid, withstand, or even depend upon fire. In some cases, these were species occurring nowhere else in the world except the Willamette Valley.

From the mid-1800s, settlers stopped the periodic wild land fires that jeopardized homes and towns and generally discontinued the practice of prescribed burning. Cessation of frequent fires has resulted in significant alteration of habitats and landscapes even if they have not been converted to economic uses such as agriculture and urbanization.

For instance, fire suppression resulted in the development of "closed form" oak forests, and consequently closed form oak habitat (where the tree canopy is continuous) is now relatively more abundant than the open grown trees that were once common within the Willamette Valley's savannas (Towle 1982). The increased density and extent of conifers such as Douglas-fir, which expands in the absence of periodic fire, has also resulted in loss of prairie and oak savanna habitat. The fast growing conifers overtop, shade out and eventually kill the oak trees in a decades-long process of ecological succession. Evidence for this process can be seen in historical aerial photographs of HBRA that go back to 1936 (see Appendix C); even since the park was first established in 1972, significant ecological changes in habitat types have occurred (see photo comparison on the cover).

8.1.4 Ecological Fire as a Habitat Management Tool

Since 1999, ecological burning has been used as a management tool in HBRA. Based on careful planning and preparation, prescribed ecological burns are implemented in specific areas of the park to help create and maintain prairie, savanna, and woodland habitat. These burns are conducted in collaboration with the Oregon Department of Forestry (ODF), U.S. Fish & Wildlife Service, Bureau of Land Management, U.S. Forest Service, and The Nature Conservancy. All burns are implemented in compliance with Lane Regional Air Pollution Authority (LRAPA) permit regulations.

8.1.5 Ecological benefits of frequent low intensity fire

Having established that fires likely were a significant feature of the landscape prior to Euro-American settlement, scientists began developing hypotheses regarding the specific roles that fire plays in maintaining prairie and savanna habitats. Historical analyses of vegetation change at individual sites led to the development of a number of hypotheses, including:

A 1999 wildfire (pictured above) closed HBRA. Fires in prairies and savannas usually burn with low intensity and cause little damage to native forbs or oak trees.

- Fires occurring at frequent intervals maintained open prairie habitats and prevented colonization of trees and shrubs on sites where they would be able to occur if fire was excluded;
- Many native herbaceous prairie species may possess tolerance or even adaptation to fire as a frequent influence; and
- Some non-native plant species, particularly those coming from regions where fires do not occur, may be negatively affected by fire.

Thus, ecological burning can reduce cover of encroaching woody plants, enhance the populations of native plant species, and help reduce the abundance of some undesirable non-native plants.

Experience with prescribed burning in Willamette Valley prairie and oak habitats began in the 1970s at Finley National Wildlife Refuge, and continued in the 1980's on Corps of Engineers prairies at Fern Ridge reservoir and BLM and Nature Conservancy land in West Eugene. Prescribed burning began in HBRA in 1999. In general, the results of the burns have supported the hypotheses listed above. Typically, new green growth begins to sprout within two weeks after the burn; species such as tufted hairgrass (*Deschampsia cespitosa*), the dominant native grass in wet prairies, grow more vigorously through the fall and winter than in unburned areas. The following year, and often the following two years, see increases in the flowering and seed production of many native prairie plants such as camas.

With increased flowering and seed production, the fire adapted species may gradually increase in population size. For example, a study of the federally listed endangered Bradshaw's lomatium (*Lomatium bradshawii*) found that within two years of a fire the populations showed an increase in density of vegetative and reproductive plants, and demographic analyses suggest that without fire, Bradshaw's lomatium will not persist (Pendergrass et al., 1999, Kaye et al., 2001). In addition, researchers have observed that some invasive plant species, such as the ox-eye daisy (*Leucanthemum vulgare*), decrease in abundance in the year immediately following a fire (Nuckols et al. 2011).

Woody plants, which have encroached into these native prairie remnants, have also been negatively affected by prescribed burns. Observations suggest that the burns are successful in killing smaller conifers as well as seedlings of deciduous trees and shrubs. Fires also kill the above ground portions of the majority of deciduous woody plants, which are subject to subsequent resprouting from the stump. However, the large oaks that were historically present at low density in savannas, have thick bark and are resistant to damage from fire (Niemiec et al., 1995). Manual or mechanical removal of woody plants may also be needed in conjunction with prescribed burns, to help speed progress toward achieving site management goals.

8.1.6 Potential drawbacks to ecological burning

The main drawback of prescribed burns from the point of the general public is that smoke that is generated. While a prescribed burn may resemble a grass field burn, the amount of smoke produced by a prescribed burn in a native prairie is much less than a burn of an equal area of grass seed field. This is because the amount of fuel present in a grass seed field is typically two to four times greater per unit area than in a native prairie. Prescribed burns are only conducted under atmospheric conditions that provide for the most efficient upward dispersal of smoke. Generally small burn units also mean that the actual length of time during which the burns occur is quite short. Risk of escape of prescribed burns is minimized by ensuring that conditions the day of the burn are within the designed prescription, and the personnel and equipment used to conduct the burn are sufficient and appropriately trained.

8.1.7 Wildfire versus ecological burning:

Public safety is the number one goal of wildfire management at HBRA. Unlike controlled fire used as a management tool (ecological burns), wildfire is a significant safety threat for park patrons and neighbors. It also has the potential for devastating impacts on important natural habitats throughout HBRA. The most recent large wildfire in HBRA occurred in September 1999. The fire started in the Mount Pisgah Arboretum and moved upslope toward the summit. The fire was suppressed along the summit ridge in the Southern Uplands Stewardship Zone. 119 acres burned in total through prairie, savanna, and woodland. Several Douglas-fir trees were killed by the fire or by subsequent fire suppression actions. Lane County contracts with the Oregon Department of Forestry (ODF) for development of wildfire plans

Decades of fire suppression has resulted in larger "fuel loads" in the park's forest and woodlands. The dense woody vegetation increases the risk of a catastrophic "crown fire" that will damage or destroy mature oak trees and large conifers.

and wildfire control services at HBRA. Because of the threat fire poses to park visitors, as well as the park's location in the midst of rural residential properties, the primary objective of wildfire control is suppression. It is important to note that much of the prairie and oak savanna restoration work identified in this *Habitat Management Plan* will also serve to reduce wildfire risks in HBRA by reducing potential

fuels and reducing the likelihood of high severity wildfire. Implementation of the *Habitat Management Plan* will help reduce the risk of wildfire in the years ahead. In addition, Lane County Parks and park partners will continue to work with ODF to reduce, as much as possible, negative impacts on native habitat caused by fire suppression activities.

8.2 Ecological Burn Strategy

Utilize ecological burning (prescribed fire) to maintain chaparral, upland and wetland prairie, savanna, and oak woodlands following recommended fire return intervals identified for each conservation target within Chapter VI (Goals and Objectives).

8.2.1 Implement ecological burns annually in accord with habitat management plan

- Burn 50 to 250 acres/year. (See Figure 8-1: Ecological Burn Units Map)
    - Where feasible keep vehicles and equipment on designated trails and access corridors.
    - Secure annual permit from Lane Regional Air Pollution Authority
        - Collaborate with Rivers to Ridges partnership to prepare and secure annual multi-agency permit.
        - Comply with permit to minimize impact of smoke drifting into the Eugene-Springfield metropolitan area, the City of Pleasant Hill, and the City of Oakridge.
- Coordinate all ecological burn activities with the Oregon Department of Forestry (ODF).
    - Utilize ecological burns to train fire suppression personnel and improve the capacity of local forestry districts, fire protection personnel, and other natural resource agency staff.
    - Collaborate with and utilize non-ODF fire teams and other resources when available.
    - Consider using contract fire crews to implement ecological burns if ODF crews are not available and the burn's timing is important to achieve the desired habitat outcomes.
- Provide public notice of the upcoming ecological burns.
    - Post notice at trailheads and in proximity to the burn unit.
    - Notify adjacent landowners of the upcoming annual ecological burn activities.
    - Release Public Service Announcements in advance of implementation.
- Prepare ecological burn sites.
    - Implement site preparation prescriptions in late June or early July to minimize adverse effects to wildlife, botanical resources, and public safety (resulting from a wild land fire).
    - Follow specified Best Management Practices as described in Chapter XII.
- Implement ecological burn(s)
    - Lane County Parks Manager or his/her designee reviews and approves the burn plan and coordinates with designated "burn boss" to approve ignition of the burn in HBRA.

8.2.2 Factors to consider when planning ecological burns:

- First, apply research on the effects of prescribed fire and alternate management methods on the vegetation associated with each of the conservation targets identified for ecological burning.
    - The timing of burns may affect the response of vegetation.
    - When feasible, participate in and support studies to evaluate the responses of species to fire and to evaluate the efficacy of alternative management manipulations in stewardship efforts. These alternatives may include but are not limited to mowing with removal of cut material, "flash grazing," hand-removal of woody species, and no manipulation.
- Second, evaluate populations of nonnative plants occurring within each management unit where ecological burns will occur.

    - Implement site preparation strategies to neutralize the threat posed by those species that have the capability to change the species composition and structure of the conservation target if left untreated.
        - Site preparation and associated stewardship tasks may occur for several years preceding implementation of the ecological burn to provide adequate control.
- Third, consider smoke-management rules and variable weather conditions when planning and implementing ecological burns.
    - Give preference to scheduling burns during the season when fires most commonly occurred within the given conservation target.
    - If appropriate, implement burns during a non-traditional season to minimize adverse impacts to air quality, such as during a cold, dry period in winter.

8.3 Chapter 8 References

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Attachment C

4 October 2023

29 April 2024