

MEMORANDUM

Date: May 16, 2016

To: Mayor Piercy and City Council

From: Shelly Miller, Ecological Services Team Supervisor, 541-682-4888

Subject: Exception to Open Burning Ordinance for Controlled Ecological Burns in West Eugene

1. Introduction

The use of fire, an important natural process, under carefully managed conditions and circumstances is currently referred to as ecological burning. Controlled ecological burns have been successfully conducted in West Eugene, under a City Council exemption from the prohibition of open burning, since 1986. The purpose of this memo is to provide specific information regarding the proposed application of ecological burns in West Eugene over the next five years. Background information regarding the justification and need for ecological burning is provided in the attached white paper, "Use of Controlled Ecological Burns in Willamette Valley Native Prairies," by Ed Alverson (2011) and "Comparison of Burning and Mowing Treatments in a Remnant Willamette Valley Wet Prairie, 2001-2007 (Nuckols, et al. 2011).

2. Description of acreage and locations to be burned

Over the next five years, agencies responsible for managing protected wetland sites in west Eugene propose controlled ecological burns on a maximum of 250 acres within the City limits annually, and a maximum of 75 acres outside City limits but within the urban growth boundary annually. Ordinance Exhibit A shows the areas that are proposed for ecological burning at some point within the next five years.

3. Description of Potential impacts to Adjacent Properties

Potential impacts to adjacent properties depends largely upon the location of the property relative to the prevailing wind direction at the time of the burn. Controlled burns in West Eugene would be conducted only under conditions where the prevailing wind is coming from the north or northeast. Thus, impacts to properties to the north or northeast of the burn site

would generally be negligible, as smoke is dispersed to the south and southwest. Burns would also be conducted under atmospheric conditions that result in optimal lift and dispersion of smoke. The smoke column would likely be visible overhead from properties within a half mile of the burn sites. Some slight ash fall might also be experienced with most ash fall occurring within 500 feet downwind of the burn site.

Special precautions will be taken for burns at sites that are adjacent to manufacturing facilities where smoke is a special concern. Burns would only be conducted with prevailing winds that carry the smoke away from these facilities, and at a time when the manufacturing process is not in operation and air intake systems are not in use.

4. Reasons for When, How Often, and Where Burning Will Occur

Controlled ecological burns will be conducted in the late summer or early fall. This is the season in which herbaceous vegetation is dormant and is not permanently damaged by fire. Burns will occur only on days when the weather conditions (temperature, relative humidity, and wind speed) provide the proper window to conduct a safe burn. Generally controlled ecological burns are conducted after the first fall rains have reduced regional fire hazards somewhat but fine fuels such as grasses are still brown and dormant.

Research to date indicates that the optimal burn frequency for meeting site ecological goals is once every three to six years. Thus, most of the sites will only be burned once during the next five year period. Decisions of which parcels to propose for burning and when is decided annually using information from site assessments.

The areas selected for ecological burning typically include the highest quality native prairie remnants under protective management. These are typically the sites that will benefit most from burning. Many of these prairie sites contain endangered plant species which have been shown to benefit from such burns.

5. Description of Burning Procedures

Controlled ecological burns will be conducted by trained personnel from the U.S. Bureau of Land Management (BLM), The Nature Conservancy (TNC), the Eugene-Springfield Fire Department (ESFD), trained Parks and Open Space Division staff, contract crews, and other partner fire protection agencies (e.g., Oregon Department of Forestry). Beginning in 2008, the City of Eugene Fire Department (now ESFD) began serving as the lead agency for burns on City-owned land. This allows EFD the additional benefit of using controlled burns as valuable wild-land fire training opportunities for staff.

The State of Oregon has delegated to the Lane Regional Air Pollution Authority (LRAPA) the authority for management of air quality within the Eugene-Springfield area. In order to conduct controlled ecological burns, partners must submit a permit application to LRAPA that includes all of the planned burn sites for the next year. The LRAPA reviews the application and issues a special permit. In addition, both LRAPA and the Oregon Department of Agriculture are involved in determining whether burning can be conducted on a given day and site, based on the impact that expected weather conditions will have on smoke dispersal.

Controlled ecological burns are conducted only under the authority of an approved burn plan (as described above), which identifies specific parameters under which the burn may be accomplished.

Elements of the plan include:

1. The identification of the resource/ecological fire objectives.
2. The prescription "window" under which the burn can be accomplished, which includes temperature, relative humidity, wind speed and direction and the conditions of the fuel to be consumed.
3. A communications plan.
4. A notification plan (for emergency services and interagency information).
5. An ignition and holding plan, which defines specifically how the area will be ignited and what resources will be used to suppress the fire along the perimeter.
6. An equipment and staffing plan which defines specifically the amount of staff that will be needed, the amount and type of equipment that will be used in the ignition and holding actions.
7. A contingency plan, identifying the amount and type of resources that will be on site, in addition to ignition and holding resources, in event an escapement occurs.

Prior to ignition, all required permits will be obtained and all jurisdictional interagency fire departments will be notified of the proposed burn. Immediately after the burn, aggressive mop up is implemented to extinguish all smoldering embers and latent heat.

All personnel active on the ecological burns receive extensive training in the use and application of fire in wild land and urban interface situations. In addition, ecological burns provide agencies with a unique controlled opportunity to train staff in wildland fire fighting techniques and to become familiar with fire- fighting equipment operation.

In all cases a fire break is established around a planned burn. This may consist of an existing road, trail, or a mowed line which will be used as a holding line with proper water/foam support. The ecological burn area is evaluated well in advance to ascertain the location of the fire lines, holding areas, water sources and values at risk. A thorough safety briefing for all participants is conducted prior to ignition. By conducting the briefing, all personnel are informed of the sequence of events that will occur as the burn progresses.

All weather parameters required by the appropriate agencies are measured. This is accomplished by launching helium balloons to verify transport wind direction and by obtaining the meteorological conditions at the site. The weather conditions are documented each fifteen minutes throughout the duration of the burn.

In the event traffic control is required professional, certified flaggers will be used, required ODOT permits will be obtained and proper signing per OSHA regulations will be instituted. A burn boss is assigned to each burn project. The burn boss has access to a cellular phone at the burn site and numerous interagency radio frequencies are at the boss's discretion to use. Lookouts are posted downwind to keep the boss apprised of any abnormalities. In most cases a qualified EMT is on site to assist with medical situations.

6. Description of Public Notice and Outreach

We will follow the typical procedure for notification of the Council's public hearing on this item. Postcards will be sent to all neighbors within ¼ mile of each burn unit. If individual addresses are not available for residents in neighboring apartment complexes alternative methods will be used such as door hangers and posters. When burn season is active, the partners will maintain a web-based blog, Facebook page, and 1-800 number to provide updates on active burns and near-term plans.

7. Controlled ecological burns and recent state legislation

Controlled ecological burns are exempted from recent state legislation curtailing open burning on commercial grass seed farms. The City lobbied for this exemption in order to provide both an important tool for protecting and restoring biological diversity in wetland prairies and to provide opportunities for training fire staff in wildland fire-fighting techniques.

8. Costs and Who Pays for Burning

Costs of burning are paid by either the land-owning agency or the agency providing the burn crews. The fee for obtaining the burn permit from the Lane Regional Air Pollution Authority (LRAPA) is paid on a rotating basis by the Bureau of Land Management, U.S. Army Corps of

Engineers, City of Eugene, Friends of Buford Park and Mt. Pisgah or The Nature Conservancy. These organizations pool all of their native prairie ecological burns under a single LRAPA permit.

BLM crews serve as the lead agency for burns on federal lands. The Nature Conservancy uses its own trained staff along with contract crews to provide burn resources at the Willow Creek Preserve. The Eugene-Springfield Fire Department provides lead support with trained Parks and Open Space Division staff on City burns. However, all of these organizations, along with other partner agencies such as the Oregon Department of Forestry, have historically collaborated, volunteering support for each other to ensure adequate resources are available at each ecological burn, regardless of who owns the land.

9. Conclusions

This pending proposal for authorization to conduct controlled ecological burns follows the course of past requests authorized by the Eugene City Council. We believe the proposed burning can be accomplished with minimal, temporary, negative impacts to adjacent property owners and multiple, long-term benefits to natural areas and local plant and animal life in and surrounding the City of Eugene.