

**Natural Area Preservation**

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**PRESCRIBED ECOLOGICAL BURNS**

**Why Burn?**

**Natural Process**

Many ecosystems are vitally linked to fire. Historically, fire was a common feature of the midwest landscape. Prairies, wetlands, and woodlands burned with some frequency. As this area became more densely settled by people, fires were extinguished before they could spread. These actions halted historic disturbance patterns. By reintroducing fire we are reintroducing a natural process.

**Benefits of Burning**

Intact prairies, wetlands, and woodlands are rich with a diversity of plant and animal life. However, with the cessation of fire we have allowed many fire-intolerant, non-native plant species to outcompete the native, fire-adapted plants. With heavy competition from non-native plants, our natural areas have a tendency to become thickets of shrubs or weeds with very little diversity. Fire controls the invasion by killing the woody and non-native plants that would otherwise take over these sites. It stimulates native plants that are adapted to fire, and with the enriched soil and lengthened growing season after a burn, native plants regain their competitive edge. Thus, fire allows diverse, native plant and animal communities to thrive in our natural areas.

**Are Burns Safe?**

**Training and Safety Equipment**

The burn is conducted by well-equipped, fully-trained staff and volunteers.

**Air Pollution**

A prescribed burn will produce some smoke, which contains water vapor, carbon dioxide, other chemicals, and particulate matter. In general, emissions from burns are significantly less than those produced from mowing a comparably-sized site. Still, steps are taken to minimize the amount of smoke produced and also to limit the public's exposure to it. Although a burst of smoke does quickly return carbon to the atmosphere, research suggests that by stimulating the accelerated growth of plant materials, prescribed burns may actually increase the amount of carbon stored in nature over the long-term.

**Animal Life**

During the burn, most animals find cover by retreating to burrows, flying away, or moving to surrounding areas (remember, only a part of the park is burned at one time). Smaller animals need only be 1/2 an inch underground to easily avoid the heat of the fire. Surprisingly, animal habitat is generally improved as a result of fire in sites we burn – stimulating a diverse, healthy natural community. NAP also conducts annual breeding bird, salamander, and frog and toad surveys to monitor the effects of burns and other restoration activities on animal populations.

*The mission of Natural Area Preservation is to protect and restore Ann Arbor's natural areas and to foster an environmental ethic among its citizens.*

# F A C T S H E E T

PRESCRIBED ECOLOGICAL BURNS

## **Additional Safety Measures**

The local fire department is notified immediately before each burn, and a cellular phone and several two-way radios are carried by staff conducting a burn. If anything unexpected were to occur, staff and outside resources would be notified and respond immediately. Additionally, an ample number of portable water tanks and a water truck are present at each burn site. Each burn unit is also surrounded by a non-combustible strip of ground, called a “burn break,” which helps contain the fire.

## **What is Involved?**

### **Preparations**

Prior to conducting burns, Natural Area Preservation (NAP) staff assess each prospective site and determine which areas will be burned in a given season. Detailed maps are prepared showing areas targeted for burns, where fire breaks will be located, and neighborhoods in which people might see or smell smoke. Burn prescriptions are prepared for each area providing detailed information on the specific ecological benefits of burning, desired weather conditions, ignition pattern, personnel and equipment needs, and emergency phone numbers. City and township Fire Marshals issue permits for the prescribed burns before they occur.

### **Waiting**

In order to conduct a prescribed burn, we must wait. Weather conditions – temperature, wind direction and strength, humidity, barometric pressure, and ground moisture – all must be within the range specified in the prescription before we proceed.

## **How Quickly Will An Area Recover?**

Burned areas re-green very rapidly. Solar heat absorbed by the blackened surface warms soil quickly. Plants respond by vigorously sprouting and sending up shoots. This is one of the many ecological benefits of prescribed burning. It is amazing to visit these areas periodically after a burn and witness the fast rate of new plant growth.

## **Additional Information**

### **Where are prescribed burns planned?**

Burns are planned each winter for the upcoming spring, and again in summer for the upcoming fall. At that time NAP staff decide which sites to burn based on the ecology and burn histories of the different natural areas. Park neighbors adjacent to the selected sites are notified in advance by mail that a prescribed burn is planned and are given a chance to discuss concerns at a public burn meeting.

### **What is the burn schedule?**

NAP’s burn season runs from March through April and October through December. Because burns are so weather dependent, we are unable to schedule them in advance for specific days. However, when we decide that the conditions are suitable, we notify radio stations of our plans. You can also receive up-to-date information by calling our stewardship hotline at 734 •794 •6627. If you would like to be notified the morning we plan to burn in a park near you, please call the office.

### **Can prescribed burning be used to manage private and non-city property?**

The mission of the Michigan Prescribed Fire Council is to protect, conserve, and expand the safe use of prescribed fire on the Michigan landscape. A regularly updated list of consultants who have indicated they provide prescribed fire services on a pay basis is available on their website at <http://www.firecouncil.org>.

*Natural Area Preservation is funded by Ann Arbor’s voter-approved Repair and Restoration Millage.*