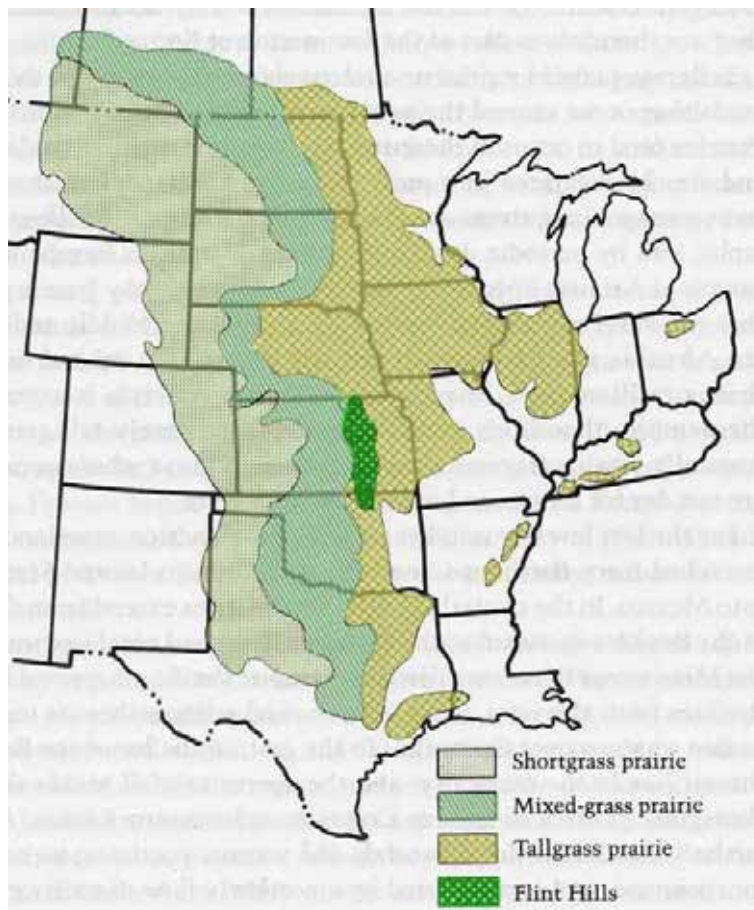


## What is Prescribed Burning?

Prescribed burning is the intentional burning of a specific plot of land for the purposes of managing or restoring vegetation. The use of prescribed fires appears to be increasing throughout the Midwest and within Nebraska. Although prescribed fires do not completely duplicate natural wildfires, they do accomplish many of the same results:

- destruction of invasive species such as red cedar and locust trees,
- increasing species diversity with respect to native long- and mixed-grass prairie species,
- release of nutrients back into the soil to promote growth of prairie grasses and forbs, and
- reduction of hazardous fuel loads and uncontrolled wildfire risk.

The map below shows the original range of prairies in the central plains, including the Flint Hills region in Kansas and Oklahoma. The remaining tallgrass prairies in the Flint Hills comprise approximately 4% of the 170 million acres once covered by tallgrass prairie. It is primarily in this region where concentrated annual prescribed burning occurs.



Source: [www.kawmission.org](http://www.kawmission.org)

Prescribed burning is also used in forested areas to reduce fuel loads, including areas in Nebraska such as state parks and recreation areas and the Halsey National Forest.

### **Why Do Prescribed Burns Occur Every Spring?**

As KDHE explains in its [news release](#)\*, large areas of the Flint Hills rangeland are burned. These burns help preserve the tallgrass prairie, control invasive species such as Eastern Redcedar and Sumac, and provide better forage for cattle. Prescribed burning minimizes risk of wildfires and is effective in managing rangeland resources.

An informational video is available at the Kansas Flint Hills Smoke Management webpage: <http://www.ksfire.org/> \*

### **Additional Resources and Links**

Below are several resources related to Prescribed Burn issues. They include:

[Novel Air Measurement Technology Supports Smoke Management Practices for Prescribed Burns](#)\*, by the U.S. EPA

[Act Now or Pay Later](#) – from the University of Nebraska. The article evaluates the cost of reactive versus proactive Eastern Redcedar Management.

**Wildland Fires and Reducing Smoke Exposure** -- This document was created in collaboration with the Large-scale Rangeland Conservation Lab in the University of Nebraska's Department of Agronomy and Horticulture and includes information from the U.S. EPA and the Agency for Toxic Substances and Disease Registry (See PDF above.)

[Eastern Redcedar Threatens School Funding](#) – from the University of Nebraska – Lincoln.

### **The 2023 Prescribed Burn Season**

It is likely that Nebraska air quality will be impacted by prescribed fires in 2023. Extensive use of prescribed burning in the Flint Hills has impacted Nebraska air quality in the past. Moreover, increased use of prescribed burning in areas outside the Flint Hills region can impact air quality in the state as well. These smoke impacts on Nebraska occur most often during the month of April; in contrast, impacts from wildfire smoke can occur at almost any time of year.

### **How can I evaluate the impact of smoke in the air?**

- Check the AQI – current conditions and the forecast are available on EPA's [AirNow website](#). For data from Nebraska monitors and sensors, please visit <https://fire.airnow.gov/>. Click on the individual monitor or sensor to open the data window and scroll for data and information. Please note that data from past smoke incidents indicate that the AirNow forecasts lack some accuracy in relating current air quality conditions to the 24-hour average conditions.
- Check local health agency and NDEE webpages and social media for updates.
- Use your senses. Is the air hazy? Does it smell smoky? Elevated concentrations of PM<sub>2.5</sub> produce a visible haze that may indicate smoke impact before you smell the odor of smoke.
- Past incidents tend to follow a similar pattern:
  - Prescribed burning – smoke tends to accumulate in the late afternoon or evening hours, is most noticeable in the early morning hours, and then dissipates in mid-late morning as temperatures increase.
  - Wildfires – smoke may accumulate at any time of the day, and can be persistent and

linger, sometimes over a period of days.

- Plan activities accordingly to avoid periods of highest PM<sub>2.5</sub> and smoke impacts using the AQI table as a guide

While burning in the Flint Hills is often referred to as adversely impacting air quality in southeast Nebraska, it is important to recognize that air quality is occasionally impacted by wildfires from as far away as northern Canada and the west coast.

NDEE is committed to working with other states and sources of smoke to minimize and, if possible, eliminate adverse impacts. Comments, suggestions and questions regarding air quality issues and agency activities are welcomed. For more information, contact NDEE at (402) 471-2186, or toll free at 1-877-253-2603; e-mail – [NDEE.moreinfo@nebraska.gov](mailto:NDEE.moreinfo@nebraska.gov).