

Direct Benefits of Fire On Prairie Ecosystems

by Jen Young

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EAST ALTON – October through mid-April marks the prescribed burn season for the Habitat Strike Team, part of the National Great Rivers Research and Education Center (NGRRECsm).

Prescribed burns are controlled applications of fire to the landscape by a team of experts under specific weather conditions and is characterized as a low-intensity fire, as opposed to high-intensity wildfires that are unintendedly set.

“From a management perspective, fire is one of the most efficient and effective options to help restore habitat on the landscape,” Conservation Program Manager, Justin Shew said. “The fire is doing the work, instead of a chemical or chainsaw controlled by a human; therefore, it covers a lot more ground in the right conditions.”

The Habitat Strike Team works within a 90-mile radius of NGRREC’s Field Station, and depending on seasonal conditions, may conduct or assists on at least 25 burns in a season, covering over 6,200 acres.

“The public’s attitude toward prescribe fire appears to be changing,” said Dylan Smith, Strike Team Senior Assistant. “It seems to be a more widely accepted form of management as people learn more about its benefits when conducted by trained professionals.”

Fire was and continues to be an important part of prairie and forest ecosystems to keep them healthy. Fire on the landscape helps to:

- Recycle nutrients back into the soils more quickly
- Keep forest species from overcrowding
- Lessen the severity of wildfires
- Remove unwanted invasive species
- Promote native plant growth and often improve wildlife habitat

For the safety of crew and surrounding communities, the weather conditions must be within safe specifications or else the burn gets cancelled. These include 5-15 mile per hour windspeed coming from a specific and constant direction, a relative humidity of 30-55%, and predicted stable conditions throughout the day.

“It is important to determine the appropriate wind directions so as to avoid putting smoke onto roadways or adjacent structures,” said Phil Rathz, Habitat Senior Project Assistant. “It is important that we follow proper protocol and procedure to keep ourselves safe as well as the public.”

Each burn typically follows the same procedure.

1. Create a burn plan from an initial site visit with map, required resources, specific weather conditions and identifying potential hazards.
2. Create burn breaks of appropriate width, these are areas that are cleared of fuel sources such as leaf litter, dead vegetation, branches/logs or tall grass.
3. Start a backfire along the down-wind burn break. Burning into or against the wind keeps the fire low and slow burning. This often is done to create a wider burn break and creates safer conditions before for starting the head fire.

4. Light a head fire. This is the hot fire that will move across the landscape, propelled forward by both wind and fuel.
5. The prescribed burn is complete with the head fire meets the backfire and all hotspots are extinguished – also called “mop up”. Prescribed burns, depending on acreage and crew size can easily take upwards of 12 or more hours to complete safely.
6. If snags continue to smolder after the burn, they are monitored or fully extinguished during favorable daylight hours.

The Habitat Strike Team partners with the Illinois Department of Natural Resources and its Illinois Recreational Access Program, the Illinois Division of Natural Heritage, and the Illinois Nature Preserves Commission.

For more information on the Habitat Strike Team visit <http://www.ngrrec.org/HST/> or contact Shew at (618) 468-2843 or jshew@lc.edu.

Lewis and Clark Community College’s Restoration Ecology program trains students in many of these practices. Anyone interested can visit <https://www.lc.edu/program/restorationecology/> or contact Scott Moss at (618) 468-4875 or jkmoss@lc.edu to learn more.