

## Nature Notes, October 2022

### Fire On The Prairies: Why It Matters

By Renny W. Grilz

FIRE! Images of smoke-filled air from northern forest fires or the catastrophic wildfire events in recent years come to mind when we hear the word “fire”. It is a natural process in our prairie and forest ecosystems, and we are living in a fire deficit which can result in these catastrophic events.

Our prairie grasslands evolved over thousands of years under three main ecological drivers: grazing, fire and climate. Our prairie plants have deep root systems, allowing the plants to respond to these drivers. The prairies endure drought, floods, heat waves and cold snaps; these extreme conditions shaped our prairie plants. Millions of plains bison grazed the Great Plains from Texas to Saskatchewan. After European settlement we replaced bison with cattle, sheep, and other livestock to graze the prairie. Fires historically occurred naturally (lightning), accidentally (escaped campfires), and culturally on our landscapes. Indigenous peoples used fire extensively on the prairie landscape, managing the prairie to attract bison, renewing areas for specific food plants, and numerous other reasons. With colonization, the cultural use of fire on our prairie landscapes has been lost. In Saskatoon region, prairies would have burned naturally every seven to 15 years, according to research from the University of Saskatchewan.

To maintain a healthy prairie ecosystem, all three ecological drivers are needed for prairie management. With the removal of fire or grazing, our prairies may become more tree covered or invaded with non-native species due to the lack of natural disturbances.

Fire as a prairie management tool is implemented through a technique called prescribed fire. A plan is written with very specific “prescriptions” including weather conditions when the fire can occur (wind speed, wind direction, temperature and relative humidity), required equipment and trained personnel to be on site, and specific management objectives to be achieved.

In the late 1980s, University of Saskatchewan’s Dr. Jim Romo started to reincorporate fire as a prairie management tool at the University’s Kernan Prairie. Through Dr. Romo’s research and training of grassland ecologists, other organizations began to reintroduce fire. Luc Delanoy, Meewasin’s former Resource Management

Officer, started using prescribed fires each spring and autumn at Meewasin sites including Beaver Creek Conservation Area, Cranberry Flats Conservation Area, Northeast Swale and other sites. Meewasin uses fire to enhance biodiversity of its prairie sites, control woody shrub encroachment, reduce spread of invasive species



**Before starting the main fire, a line of vegetation is burned along the edge of the planned fire unit by Meewasin and City of Saskatoon, Naturalized Parks staff to create a fire guard and contain the main fire.** Photo provided by Meewasin.

and reduce fire risk. People often notice an increase in wildflowers, especially prairie crocus, the year following a prescribed fire. Prescribed fire in the Saskatoon Region has been successful for over 35 years because of partnerships with various organizations including University of Saskatchewan, City of Saskatoon, Saskatchewan Provincial Parks, Canadian Wildlife Service, Wanuskewin Heritage Park, Nature Conservancy of Canada and Meewasin.

Canadian Prairies Prescribed Fire Exchange (CPPFE) was created in 2021 through the generous support of the Weston Family Foundation. CPPFE provides training, planning and knowledge sharing around the use of prescribed fire as a management tool for enhancing healthy prairie ecosystems. It is a prairie-wide partnership between conservation groups, provincial and federal government agencies, Indigenous groups and livestock producers. More information about prescribed fire can be found at [www.grasslandfire.ca](http://www.grasslandfire.ca)

Fire is a natural process that formed our prairie ecosystems. It can be safely applied through proper planning, training and resources, to enhance prairies for biodiversity, wildlife habitat and forage production. If you see smoke in the air this fall around Saskatoon, it may be a prescribed fire.

*Renny W. Grilz, P.Ag. is Meewasin’s Resource Management Officer and one of the founding members of the Canadian Prairies Prescribed Fire Exchange. He has worked across the three prairie provinces in conservation. In the spring or the fall, you may see Renny and his colleagues lighting the prairie on fire in the Saskatoon Region. He is also a member of the Saskatoon Nature Society.*