

# Tallgrass Prairie and Oak Savanna Fire Science Consortium

A JFSP KNOWLEDGE EXCHANGE CONSORTIUM



## Where is prescribed fire an appropriate tool for land management?

Fire was a historical disturbance across the upper Midwest, but the use of prescribed fire for ecosystem management on the modern landscape is limited. Prescribed fire use is limited in part because land managers face restrictions related to urban development, endangered species, weather conditions, and staff limitations. Further, there is a lack of landscape scale information as to how much of the landscape can be managed with prescribed fire and how often community types should burn to maintain desired conditions. Without fire, vegetation can rapidly change and may no longer support species of concern. For example, woody encroachment into prairies negatively impacts Karner blue butterfly populations. Understanding where on the landscape fire is beneficial to the ecosystem, or where prescribed fire supports existing conservation efforts, can help land managers decide where and how often to use prescribed fire.

### To address the issue of where to use prescribed fire for conservation and restoration,

the Tallgrass Prairie and Oak Savanna Fire Science Consortium is conducting a Fire Needs Assessment (FNA). This project will use LANDFIRE vegetation data ([www.landfire.gov](http://www.landfire.gov)) to identify where fire depended communities are located, and their overlap with existing conservation priority areas. The assessment will also take into account the effort needed to maintain these communities (e.g., fire return interval) and feasibility of fire as a management tool on the landscape (e.g., housing density) to gauge the potential for successful long term management with prescribed fire. This project will start with a FNA for the state of Wisconsin, building off of a similar assessment completed for Michigan, with plans to expand to additional states in the region.

### Project goals

- Produce a series of maps which identify areas on the ecological landscape that are a high priority for management with prescribed fire
- Quantify how much fire would be necessary to maintain or restore the ecological landscape to desired ecological conditions
- Continue to update and refine maps as data sources are updated
- Expand to other states in upper Midwest to address prescribed fire planning and use on a regional scale

### Potential Uses

- Building partnerships among agencies that use fire as a land management tool
- Identifying regions where priority areas are on private lands, to target outreach efforts
- Determining where prescribed fire alone will not restore desired conditions, but additional restoration tactics (e.g., mechanical) could be used
- To inform species recovery plans, where habitat restoration plans call for prescribed fire

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To learn more about the Tallgrass Prairie & Oak Savanna Fire Science Consortium, visit [www.tposfirescience.org](http://www.tposfirescience.org)