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Lake States Fire Science Consortium

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Volume 2 Issue 5

OUR MISSION

Accelerate the awareness, understanding, and adoption of wildland fire science information by federal, tribal, state, local, and private stakeholders in Michigan, Minnesota, and Wisconsin

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JFSP AND NEW FIRE SCIENCE PARTNERSHIPS IN MIDWEST

Three New Consortia organizing in Madison WI, Columbia MO, Stillwater OK

We are pleased to announce that three new consortia are currently in the planning phase to join the JFSP fire science delivery network. These three consortia are:

- the Great Plains Fire Exchange Consortium, which will focus on fire in grasslands with a long history of fire and grazing, primarily in the Great Plains Ecoregion
- the Midwest Oak Woodland and Forest Fire Consortium will cover the forested regions in the Ozarks, east into Kentucky and Tennessee, and south into parts of Texas and Oklahoma.
- the Eastern Tallgrass Prairie and Oak Savanna Fire Science Consortium that will represent interests in the grassland ecosystems of the midwestern US.

Collectively, along with the Lake States Fire Science Consortium, these consortia will represent a broad range of fire-regulated ecosystems in the central portion of the country.

Like the Lake States group, these proposed consortia will focus on fostering collaboration and knowledge exchange between diverse regional groups of fire scientists, practitioners and Currently, the new advocates. consortia are working collaboratively to gather input from their regional fire communities to determine the ways in which they can best meet needs, fill knowledge gaps, and encourage information sharing. If you have any thoughts to share with them at this planning phase, they would welcome your comments. Or, if your geographic and/or ecosystem interests are represented by any of the proposed consortia, please feel free to contact them to join their network.

Contact Info:

Great Plains Fire Exchange

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<u>Midwest Oak Woodland and Fores</u>t Keith Grabner, USGS, kgrabner@usgs.gov

East. Tallgrass Prairie/Oak Savanna Amy Alstad, Project Coordinator, etpos.fireconsortium@gmail.com

Fire Seasonality in the Lake States

The season of fire is a critical here in the Lake States. factor in fire effects on our landscape. Most of our prescribed fire practice today takes advantage of past fire suppression experience during the dormant spring season. Cooler temperatures and higher soil moisture in the spring limit fire severity and fire hazard, making prescribed fires more practical to conduct. However. anecdotal evidence suggests that growing season burns under dry conditions were able to spread unimpeded over large areas, forming an important part of fire's role in the northern forest.



Although interest in using growing-season fire is increasing, very few documented studies exist that compare the ecological effects of growing-season burns to those in the dormant-season

example, the recent JFSP review of prescribed fire seasonality in the United States (www.fs.fed.us/ psw/publications/documents/ psw_gtr224/psw_gtr224.pdf) included the Lake States in the Eastern region. In that report, most of the studies used to represent the Eastern region were conducted in the southeastern United States and have limited relevance to northern ecosystems.

As part of our efforts to facilitate fire science information exchange in the Lake States, we searched the published literature to identify studies that focused on fire seasonality conducted in the region.

We used the Web of Science database to search for articles with the following terms:

- Any of: Upper Midwest, Great Lakes, Northwoods, Michigan, Minnesota, Wisconsin
- And: Fire or Burn*
- And: Season*

The literature search returned 86 published scientific articles.

- For •71 of the articles had no relevance to fire seasonality
 - •9 articles were somewhat relevant, by documenting that dormant-season burns were less effective than mechanical or herbicide treatments, or by showing different responses among species to the same treatment
 - 6 articles were directly relevant to fire seasonality: 4 of these were published by the same author (H.F. Howe, University of Illinois) and all were located in prairie plantings or oak savannas. No studies were located that discussed fire seasonality in remnant prairies, or in mixed pine forests.

We will be exploring this topic in more detail this fire season, culminating in a webinar this fall and summaries of the science to support it. Join us.

Please contact Robert Ziel at ziel.4@osu.edu if you have been using growing-season burns and would like to help increase our understanding of fire seasonality in the Lake States.

Lake States Spotlight



Michigan Climate Coalition The MCC was founded in Nov. 2010 by Michiganders from the public and private sectors to foster action on climate science, energy efficiency, sustainability and related disciplines. Contact Maya Fischoff (mayaef@msu.edu) for more information

Climate Studies

Nortwoods Climate Change

Response Framework. Stephen Handler is the Climate Change Specialist for the USFS Northern Research Station. The NCCRF is a new model to connect climate science to forest management, with resources to support adaptation and mitigation decisions

http://www.firescience.gov

LASH

SCIENCE YOU CAN USE

PUBLICATION SUMMARIES

USDI National Park Service; 2003; Fire Monitoring Handbook; Boise, ID: Fire Management Program Center, National Interagency Fire Center; 247p



A comprehensive desktop reference of monitoring protocols and techniques. Chapter 2 is an excellent review of monitoring of the fire environment and fire behavior associated with the fire event. Though somewhat dated, it remains the source for many of the field protocols in the Integrated Monitoring Protocols in FFI. Mixed Severity Fire Events Halofsky, J. E., D. C. Donato, D. E. Hibbs, J. L. Campbell, M. Donaghy Cannon, J. B. Fontaine, J. R. Thompson, R. G. Anthony, B. T. Bormann, L. J. Kayes, B. E. Law, D. L. Peterson, and T. A. Spies. 2011. Mixed-severity fire regimes: lessons and hypotheses from the Klamath-Siskiyou Ecoregion. Ecosphere 2:art40. [doi:10.1890/ES10-00184.1]

This recent publication from the Pacific Northwest suggests some lessons for consideration in our own mixed severity fire regime communities, such as Dry Mesic Oak and Pine communities in the Lake States.

OTHER REFERENCES

The Northwoods Climate Change Response Framework

Another important example of manager/practitioner partnerships, the project is expanding an effort that began in northern Wisconsin to the Lake States. Included are a <u>Climate</u> <u>Change Tree Atlas</u>, several basic Climate references, and a <u>Climate Change Resource</u> <u>Center</u>

<u>CONSORTIA</u> <u>CORNER</u>

LAKE STATES ANNOUNCEMENTS

- Webinar: Ecological
 Burn Prioritization
 Model, May 18th@12 CT
- SAF National Workshop on Climate and Forests, May 16-18, Flagstaff, AZ
- <u>4th Fire in Eastern Oak</u> <u>Forests Conference,</u> <u>May 17-19, Springfield</u> <u>Missouri</u>
- Graduate Research
 Opportunity in
 Ecosystem Ecology, for
 more info, contact
 Brian.Benscotter@fau.edu
- Barrens and Dry Northern Forest Field Trip, St. Ignace and Raco, Michigan, June 28-29. Contact ziel.4@osu.edu

Lake States Advisory Committee

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Other pending Members

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Wisconsin Department of Natural Resources

Unaffiliated Tribal Representatives

Monitoring Burn Severity

While the need for evaluating fire effects may differ with wildfires and prescribed burns, the opportunity to evaluate the direct, or first order, fire effects for each fire event is fleeting.

Most prescribed fire programs and wildfire reporting systems have requirements for documenting the burn day itself, along with some general characterization of the fire size and fuels burned. Several agencies even make detailed efforts to compare conditions before and after a burn. But few make a serious attempt to relate the fire's direct effects to the prescription window go-no go decision.

There are several protocols defined in the combined FFI system (<u>http://frames.nbii.gov/ffi</u>) for burn severity. Employing them effectively requires at least 3 visits to the burn site itself:

- The first site visit can occur on burn day, but should occur within a few days of the burn to document fuel, vegetation and site conditions just prior to ignition.
- The second site visit should occur shortly after the fire's heat pulse is complete to document fuel consumption, scorch and char heights, and to document unburned areas.
- The third site visit should be timed to document the vegetation response in the following growing, either in the current year following winter or early spring, or the next year for growing season burns.

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