Accessing Wildland Fire Research: A Guide for Fire Practitioners

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Why do practitioners need to access fire science research? The wildland fire landscape in the Southeastern U.S. is complex, with many social and physical factors impacting management decision-making. Understanding the latest fire science helps ensure that fire practitioners are able to adapt to an ever-changing environment and make decisions fully informed by the best available information.

Unfortunately, accessing science can be difficult for those not affiliated with a research institution. Many scientific journals are "paywalled," requiring paid subscriptions to access published articles. Practitioners who do have access to research often struggle to find the time to read published papers.

This fact sheet outlines practical ways for fire practitioners and other professionals to access fire science research. These methods are roughly organized in order from least to most time intensive.

Third-Party Communicators

What are they?

Third-party communicators are organizations that work to communicate scientific findings to stakeholders such as private landowners and fire practitioners. Examples include Southern Fire Exchange, other Joint Fire Science Program Fire Science Exchange Networks, and Cooperative Extension.

How can I use them?

These organizations regularly share and produce resources such as fact sheets and webinars that translate scientific findings into accessible, practical information for fire practitioners. Some of these organizations, including the Southern Fire Exchange and the Northern Rockies Fire Science Network maintain custom fire research publication databases that cater to their specific regions. Many of these organizations, including the Southern Fire Exchange, also welcome input from users on needed resources and topics of interest.

Third-Party Communicator Considerations

- Are there any third-party communicators that address my subject of interest?

- Do those entities have resources that address my specific questions?

- If not, are they interested in and able to produce them? Is there a mechanism for submitting a request to get materials?

Peer to Peer Access

What is it?

Partner networks and other personal contacts that can help access paywalled resources and/or translate them into practical advice for practitioners.

How can I use them?

Authors of research papers are often willing to share their publications if you contact them directly. The email address of a corresponding author is often linked in the preview of the publication. Partner organizations may also be able to share specific articles, particularly those who are affiliated with a university or other organization with subscriptions to journals. Practitioners particularly well-informed on research findings may also be able to informally summarize papers they have read, or recommend resources they have created, such as this list of natural resource management journals compiled by The Nature Conservancy's Adam Warwick (**https://tnc.app.box.com/s/ypdfpv5zaj0tu3xfgnvvx9a2y7m82q12**)

Peer to Peer Access Considerations

- Do I know a colleague or partner who can access the resource I am interested in?

- If a resource is paywalled, is the author/s willing to share it directly?

- Do I know a colleague who keeps up with research findings who can advise me on the topic I am interested in?

Scientists and land managers exchange ideas during a field workshop in North Carolina. Photo credit: Laurel Kays.

Scientific Journals

What are they?

Scientific journals publish peer-reviewed research and are the most direct source for scientific papers. Some journals, such as *Fire, Fire Ecology,* and *Atmosphere* are open access, which means that papers published in these journals do not require a subscription or fee to access. However, many journals, such as *International Journal of Wildland Fire* and *Journal of Forestry,* are entirely or partially subscription based - meaning their articles are behind a paywall and require payment to access. Some professional societies such as the International Association of Wildland Fire may include digital journal access as a member benefit.

How can I use them?

Scientific journals and their articles tend to be very narrowly focused which can make finding topics that span multiple disciplines difficult. For example, fire practitioners may be interested in topics such as fire in wetlands or duff impacts on fire effects, which are covered by research published across multiple journals. In these cases, it may be more efficient to consider other approaches for gaining a comprehensive understanding of the topic.

Scientific Journal Considerations:

- Which journal or topics am I interested in?
- Is the journal open-access or does it charge for a subscription?
- If the journal is not open access, is my organization willing to purchase a subscription?
- If the journal is not open access, can I get the information I need from free paper abstracts?
- Does this specific journal routinely publish research that interests me? If so, does the journal offer an Rss feed or email notifications about new publications?
- Is my interest in a topic, journal, or other resource long-term enough to justify securing my own access?

Scientific journals are the primary outlet for most academic fire science research. Many journals provide free email notification services that will send subscribers email updates when new journal issues are published. This can be a easy way to stay abreast of emerging research findings and topics. Photo credit: David Godwin.

Research Databases and Search Engines

What are they?

Research databases return more narrow results, pulling from a collection of papers and other resources based on a specific topic, while search engines such as Google Scholar return a wide range of scientific and scholarly sources. Table 1 shows information about research databases that may be particularly useful for fire practitioners.

Table 1 - Research Databases for Fire Science Research

Database	Created and Maintained by	Purpose and Content	Includes Paywalled Content?	Where to Access
Treesearch	USDA Forest Service	Compiles scientific publications written or published by employees of the USDA Forest Service. Publications may be slightly delayed in appearing on Treesearch, all publications in the database are available in their entirety for free.	No	**https://www.fs.usda.gov/ treesearch/**
Regional Fire Science Publication Database (RFSPD)	Southern Fire Exchange	Publications relevant to the Southern Fire Community and updated weekly Available both on the SFE website and in Zotero. Other Fire Science Exchange Networks also maintain research publication databases curated for their specific regions.	Yes	**https:// southernfireexchange.org/ publications/regional-fire-science-pubs-searchbar/**
Fire Research and Management Exchange System (FRAMES) Resource Catalog	USDA Forest Service, University of Idaho	Contains nearly 60,000 wildland-fire related resources, including nearly 34,000 publications from the Tall Timbers E.V. Komarek Fire Ecology Database.	Yes	**https://www.frames.gov/**
Fire Effects Information System (FEIS)	USDA Forest Service	Online collection of reviews of scientific literature about fire effects on plants and animals and about fire regimes of plant communities in the United States. The database includes thousands of entries of various types.	No	**https://www.feis-crs.org/feis/**
Joint Fire Science Program Research and Publications	Joint Fire Science Program	Research and resulting publications from Joint Fire Science Program funded research	No	**https://www.firescience. gov/JFSP_research.cfm** **https://www.firescience. gov/JFSP_publications.cfm**

How can I use them?

Most search engines and research databases include results that are both open access and paywalled. However, they also often offer the ability to sort and filter results, sometimes including restricting results to open access sources. Results from Google Scholar specifically often have a direct link to a PDF of the paper when available.

Research Database and Search Engine Considerations:

- Am I looking for something specific (i.e., article or author) or general (i.e., recent research on a particular topic)?
- Which database or search engine is best suited to what I need?
- What search parameters do I want to use (ex. date, topic, author, etc.)
- Can I narrow my search terms to find results more tailored to what I need?

Libraries

What are they?

University and public libraries both loan physical resources and provide access to online ones. Public libraries generally have much more limited access to research publications

How can I use them?

Accessing university libraries generally requires a person to be employed by or taking courses at that institution. However university libraries are more likely to provide access to paywalled research papers. Public libraries generally have much more limited access to fire science research, however most local areas have a public library that residents can use. Public libraries may be able to access scientific publications through the interlibrary loan system. For all libraries, consulting a librarian can be helpful in finding the resource you need.

Library Considerations:
- Which library do I have access to, and what research publications will that allow me to access?
- Does this library have resources to help me find what I'm looking for, such as a librarian on staff?

Table 2 - Overview of Research Access Methods. For details on considerations for accessing each of these methods, see the corresponding sections in the above text.

Source or Method of Access	Best Use	Suggestions for Access
Third-Party Communicators	• Keeping updated about a specific topic or geographic area • Requesting needed resources	SFE: **http://southernfireexchange.org/** Other Fire Science Exchanges: **https://www.firescience.gov/JFSP_exchanges.cfm** FAC Net: **https://fireadaptednetwork.org/blog/** Search "'state of interest,' Cooperative Extension" - Note some states, particularly those in the South, have two land grant universities that host Extension programs
Peer-to-Peer Access	• Accessing a specific publication, journal, or other method of access	ResearchGate: **https://www.researchgate.net** Contact the "Corresponding Author" listed on the paper
Scientific Journals	• Reading full research papers (if you have a subscription) or abstracts • Accessing research published in a particular journal	Consider using a research search engine for initial general research (e.g., **https://www.jstor.org/**) Visit websites for the journal or publisher and subscribe to notifications. Libraries, Peer-to-Peer Access, or Third-party Communicators (below) can then be used to source the full text.
Research Databases & Search Engines	• Reading full research papers • Accessing research on a particular topic, by a particular author, or from a particular source • Finding research or citations from a broad range of sources	Treesearch: **https://www.fs.usda.gov/treesearch/** SFE Regional Fire Science Publication Database: **https://southernfireexchange.org/publications/regional-fire-science-pubs-searchbar/** FRAMES: **https://www.frames.gov/search/resource-catalog** Fire Effects Information System: **https://www.feis-crs.org/feis/** Google Scholar: **https://scholar.google.com/**
Libraries	• Accessing research on a particular topic, by a particular author, or from a particular source • Finding research or citations from a broad range of sources	USA.gov Find a Library: **https://www.usa.gov/libraries** WorldCat Find a Library: **https://www.worldcat.org/libraries**

*The Fire Research and Management Exchange System (FRAMES) contains over 60,000 wildland fire related science resources. Visit **https://frames.gov** to search for information by topic, keyword, or region.*