

THE NATIONAL CENTER FOR LANDSCAPE FIRE ANALYSIS

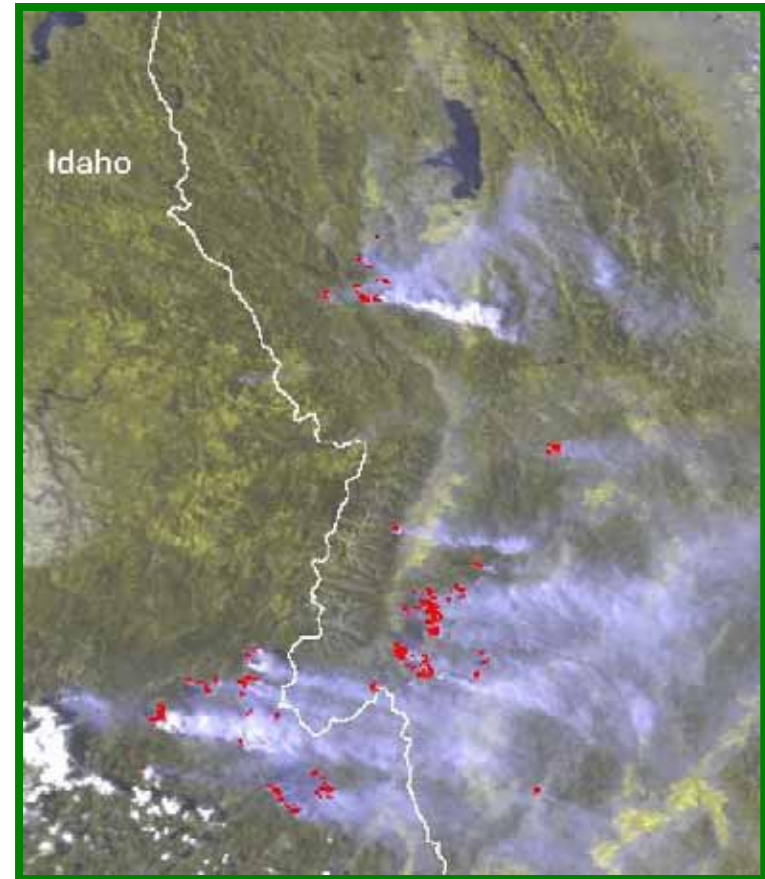
CHARTER





NAME AND AFFILIATION

The National Center for Landscape Fire Analysis is a locus for research, learning, and technology development located within the School of Forestry at the University of Montana, Missoula. Its work depends upon collaborative relationships with federal, state, and local partners engaged in fire, fuels management, and research in the western United States.



PURPOSE

The Center will develop, integrate, and synthesize remote sensing, social assessments, economic considerations, and other information technology applications to improve fire and fuels management at the landscape scale and develop innovative approaches for delivery of these products through training, education, and support for graduate level research. The Center's efforts revolve around six broad goals:



- Advance the effectiveness of fire management operations to improve fire-fighter safety, public safety, and natural resource protection;
- Contribute knowledge and applications that can be used in planning and implementation of management outcomes to sustain ecological processes while providing socially desirable goods and services from forest and grassland ecosystems;
- Develop assets and capabilities among natural resource professionals engaged in the administration and management of forests and grasslands;
- Expand knowledge of remote sensing, social and economic concerns, and information technology systems, their applications, and utility in addressing fire and fuels management through the research and educational programs at The University of Montana.
- Develop education training, and information delivery programs that meet the specific operational needs of the fire management community.
- Develop information and decision support for planning and managing wildland fire use.

Collaboration With Other Organizations



The Center will build programmatic relations with multiple partners within the fire management and fire research communities. Systematic interactions and ongoing consultations with partners will be instrumental to the success of the Center. These partners include but are not limited to multi-organizational offices such as the National Interagency Fire Center (NIFC) and the Joint Fire Sciences Program (JFSP), offices of the USDA Forest Service, such as the Fire Sciences Laboratory, the Remote Sensing Application Center, the Northern Rockies Coordination Center, and the Northern Regional Office, relevant units within the National Aeronautic and Space Administration (NASA), the Upper Midwest Aerospace Consortium, offices within Plum Creek Timber Corporation and other major private industrial forest landowners, state forests, and other relevant fire management organizations at the federal, state, and local level.

The Center's operations will be characterized by a transparency and collegiality that allows for interactive evaluation of products and applications. Center staff will work with targeted groups of managers to test emerging products and coordinate information systems with existing capabilities. The Center will strive to clarify barriers and opportunities within current information systems to create multiple-scale opportunities for information products to be more widely applied at the landscape level.

Developing data performance parameters and establishing user confidence in models and data will occur within the context of other quality research products and models of Center partners. The application of products will be coordinated with work plans and research priorities of other federal agencies and research organizations. Efforts to standardize data and capture the administrative processes to deliver information will be a priority within Center protocols for information distribution.



Principles Of Operation

Accessible

The Center will strive to offer rapid, real-time access to quality data products that can assist professionals in decisions on the management of wildfire events, fuel treatments, and fire prevention activities. High quality information is a fundamental component of both plans and operational protocols in fire and fuels management. Making this information accessible to decision-makers is vital to effective landscape management efforts. The use of new technologies and web-based products will allow users in virtually any location to acquire information rapidly and easily.

Comprehensive

Center products and applications will incorporate the full range of available data affecting fire and fuel management conditions. Information systems will utilize clear pathways to individual data layers in step-wise fashion, embedding necessary levels of detail for more sophisticated analyses and assessments. Center products will include visual displays and maps to provide immediate, recognizable portrayals of landscapes that can assist managers who require full information to address fire events. All map products will be geo-spatially referenced to reduce ambiguity and ensure long-term applications.

Interactive

The development of data products within the Center will be directed toward the needs of managers to address those critical-path functions to manage fire events, fuel treatment operations and fire prevention activities. Center products will be tested and evaluated with a sample of resource professionals to make improvements and modifications that respect user needs and capabilities. Users will possess multiple pathways to incorporate their knowledge and new information into data products.

Responsive

The dynamics of forest and grassland ecosystems require continuous evaluation and updating of landscape data. The rapid changes of climate and fire behavior during fire events require adaptive data systems that can characterize changing fire suppression conditions. Center products will possess the flexibility to be updated and improved as real-time information is delivered, providing the most accurate and timely data to fire managers and decision-makers.

Valid

Quality control standards built into information and data application products will ensure that time-tested conventions of peer review and evaluation are protected. Field verifications of materials will be incorporated into protocols for application development and testing. The quantitative nature of many of the data products will allow appropriate statistical review and inference potential. Data and displays will contain necessary meta-data documentation and records of analytical review.

Integrated

Data applications will possess detailed content on resource conditions that can be integrated with other natural resource information systems. Geo-spatial references within the Center's data products will allow the information to be applied in the planning and implementation of vegetation management operations, wildlife habitat improvements, and other landscape level natural resource management activities. The Center's products will utilize standardized tools for mapping and geographic data storage for easy transference to other planning documents, reports, and environmental analyses.

Durable

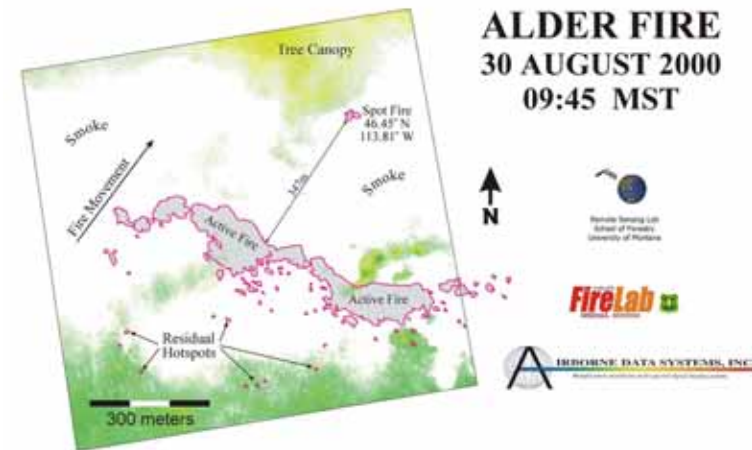
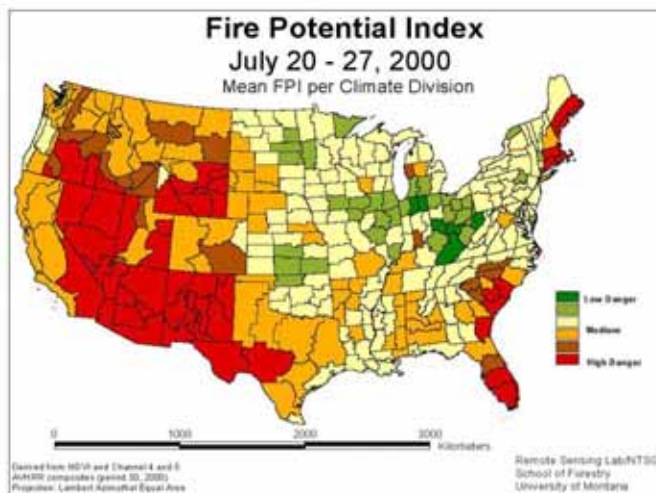
The Center's databases and information products will be designed to allow immediate archival of records and events. Efficient and comprehensive archival methods will ensure that future operations will have accurate, dependable, and permanent records of prior events. Electronic formats of the Center's products will allow inexpensive storage of information, such that future users will benefit by access to historical records.

Illustrative Examples Of Center Products

Center products will focus on a new generation of maps and information systems. These systems will integrate remotely sensed data and other key landscape attributes to produce field-capable products that allow managers to access critical information for managing forest and grassland landscapes. Components of this information include attributes such as topography, landscape cover, fuel status, and fire histories. Additionally, the Center will pursue the development of appropriate information technology tools and interfaces to support individual program objectives.

Examples of program elements:

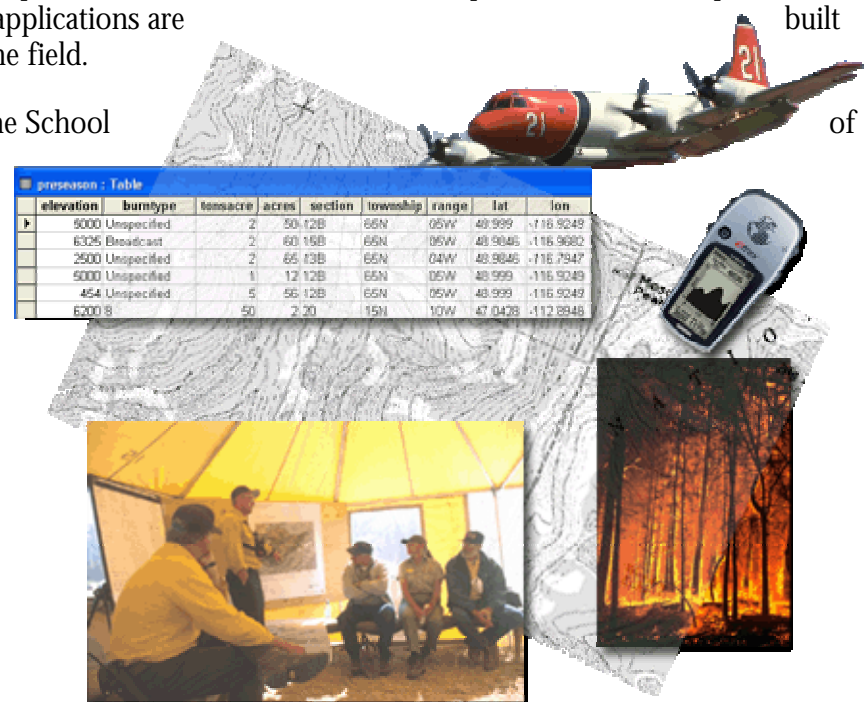
- Wildland and Prescribed Fire Reporting Systems
- Fire Location and Mapping
- Burn Area Assessment and Mapping
- Fuels Mapping and Characterization
- Mapping of Structures and Facilities
- Human Population Distribution and Migration



Research And Education

The Center's focus on the development, testing, and distribution of accessible, quality data products for fire management professionals will generate opportunities for scientific research and graduate student education. Located at The University of Montana, the Center will be able to utilize the research expertise of highly skilled graduate students, faculty from various disciplines, and collaborative research efforts with other academic and research institutions. These relationships insure that the Center's scientific products are developed within the rigorous standards of academic review and that the products and applications are built on the most current technologic and scientific developments within the field.

Through a variety of initiatives The University of Montana, and the School of Forestry, have established themselves as important partners in managing natural resources and working collaboratively with diverse interests. Within this context the Center will be well placed to provide opportunities for training, education and outreach to both academic and non-academic audiences. Training efforts in the form of conferences, workshops, and specific product utilization and implementation seminars will be a part of the Center's educational offerings.



Personnel

Leadership and responsibility for the Center will rest with the Center Director. Other Center staff will be accountable to the office of the Center Director.



Professional staff will be functionally oriented to meet the demands of Center operations. Operating within the context of a university setting, the Center will take advantage of the skills and administrative support provided by other faculty and staff of The University of Montana. The office of the Associate Dean for Research in the School of Forestry and the Bolle Center for People and Forests will provide particular support and assistance in working with organizational partners and citizen groups.

Technical and scientific expertise within the Center will be enhanced by the support of faculty and graduate students across The University of Montana. It is through this on-going graduate research that many aspects of the Center's products will be developed. Also, the work of the Center will provide important educational opportunities for graduate students through interactions with fire management professionals.

The Center will form and provide administrative services for the Fire Center Advisory Council. The Advisory Council will provide insight and advice regarding emerging opportunities and ways to improve the services of the Center. The Advisory Council will meet once per year to provide direct consultation to the leadership of the Center. Members on the Council will be drawn from some of the major partners of Center activities. These individuals will be seasoned observers of fire management or fire research who understand emerging needs and demands among users of the Center's products.



Contact



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