

LANDFIRE IMPACT REPORT



A Joint Program of the Department of Interior - Office of Wildland Fire and USDA Forest Service - Fire and Aviation Management, with major partners including the US Geological Survey and The Nature Conservancy

Why LANDFIRE Matters

LANDFIRE is not simply a spatial dataset—it is essential infrastructure that provides the foundation for wildland fire and natural resource management. Unlike fragmented datasets, LANDFIRE's vegetation, fuels, and ecological data are integrated and compatible across all spatial data layers, ensuring consistency for modeling and analysis. This spatial data connects scientific research, field collection, and operational decisions across the wildland fire and land management communities. Dozens of critical systems, hundreds of organizations, and thousands of practitioners depend on LANDFIRE's geospatial data.

The Dependency Web

LANDFIRE's integrated and compatible geospatial vegetation, fuels, and ecological data sits at the center of a complex ecosystem of dependencies. Because all data layers are designed to work together seamlessly, critical systems can reliably model fire behavior, assess risk, and plan treatments.

- ▶ **Operational fire management systems** (WFDSS, IFTDSS, FlamMap, FSPPro) require LANDFIRE fuels and vegetation data to function
- ▶ **National risk assessments** (Wildfire Risk to Communities) rely exclusively on LANDFIRE for consistent nationwide coverage to support agency planning and decision-making
- ▶ **Insurance company risk assessments** use LANDFIRE fuels data for fire spread predictions affecting millions of properties nationwide
- ▶ **Prescribed fire planning tools** use LANDFIRE to model smoke impacts and predict fire behavior for thousands of burns annually
- ▶ **Forest management decisions** depend on LANDFIRE vegetation and disturbance data for timber planning and forest health assessments
- ▶ **Habitat conservation projects** use LANDFIRE to map species distributions, assess ecosystem condition, and prioritize restoration
- ▶ **Research and development** builds on LANDFIRE's 3,000+ supporting publications to advance fire science and land management

Why the Dependency Web Needs Government Involvement

The dependency web only functions because LANDFIRE's integrated, compatible geospatial vegetation, fuels, and ecological data is government-produced with guaranteed continuity. University datasets disappear when grants end. Private datasets serve proprietary interests and lack cross-layer integration. Only federal production ensures the permanence, neutrality, technical consistency, and universal access that hundreds of dependent systems require.

Breaking the dependency web would be crippling: If LANDFIRE ceased production, operational fire management systems would lose their spatial data foundation and the integrated data structure that enables accurate modeling. National risk assessments would become impossible. State and local agencies would need to independently recreate vegetation, fuels, and ecological mapping—duplicating efforts at massive cost while losing both cross-boundary consistency and cross-layer integration. The private sector would lose access to authoritative geospatial data, forcing expensive proprietary alternatives.

By The Numbers

2B+

Acres of Data

3,000+

Journal Articles

100%

Free Access

20+

Years Serving

Annual

Data Updates

National

Consistency

Economic Impact & Value

Without LANDFIRE, each federal, state, and local agency would need to independently produce geospatial vegetation, fuels, and ecological data for their jurisdictions—a costly and redundant undertaking that would require substantial budgets across hundreds of agencies while losing cross-boundary consistency. Free access to LANDFIRE's authoritative spatial data enables **billions in private sector activity**—insurance risk models for millions of properties, utility vegetation management, environmental consulting, and commercial fire modeling. With wildfire suppression costs of **\$3-4 billion annually** and losses of **\$10-20 billion in extreme years**, improved fuel treatment effectiveness and faster operational decisions enabled by LANDFIRE's geospatial data generate returns many times the program's cost.

Who Relies on LANDFIRE

Federal Agencies: USFS, BLM, NPS, FWS, BIA, FEMA, DOD, EPA • **Critical Systems:** WFDSS, IFTDSS, FlamMap, FSPro • **Partners:** State forestry, tribal nations, conservation groups, universities, consultants, insurance, utilities

Without LANDFIRE

- ▶ **No standardized fire modeling** compromising incident team safety
- ▶ **Fragmented decisions** from incompatible datasets
- ▶ **Insurance industry disruption** as property risk models lose authoritative fuels data
- ▶ **Duplicated efforts** as each agency independently recreates mapping
- ▶ **20+ years of refinement** abandoned
- ▶ **3,000+ studies** lose their reference dataset

LANDFIRE's geospatial vegetation, fuels, and ecological data provides the essential foundation that transforms research into operational capability and enables coordination across all jurisdictions. The web of dependencies—from incident command systems to habitat conservation—demonstrates why LANDFIRE must remain a federal priority. Disrupting this critical data infrastructure would cascade across wildland fire management, prescribed fire programs, forest management, and conservation efforts nationwide.