

Mobile Prescribed Fire Crews

Pooling Resources and Expertise to Restore Landscapes



The Refugio-Goliad Prescribed Burn Module uses fire to help restore valuable prairie habitat in coastal Texas. Pictured here is Chris Lindquist (TNC) igniting a head fire, with some Aransas National Wildlife Refuge fire staff in the background. Photo by Alphonso Porras/TNC

Across the U.S. land managers are struggling to put fire on the ground in all the places that need it. Scarce funding, development adjacent to conservation areas, a shortage of qualified staff, narrow burn windows and liability issues are just some of the challenges that hinder landowners and managers from using fire as an ecological management tool in landscapes that could benefit. One strategy that addresses the lack of prescribed burning expertise and capacity in largely private landscapes or where there are many different managers/owners is to create **mobile fire crews** that work across a pre-defined geography. Teams can be staffed and operated in a variety of ways, depending on local needs.

VISION ■ Sustained, landscape-scale application of ecological prescribed fire in areas that are largely privately owned or where there is a mix of ownership

LOCATIONS ■ Florida, Texas and Iowa

AREA TREATED ■ More than 73,000 acres treated since 2000

PARTNERS ■ **Florida:** Archbold Biological Station; Brevard County, Environmentally Endangered Lands Prog.; Florida Audubon; Florida Dept. of Environmental Protection; Florida Div. of Forestry; Florida Fish & Wildlife Conservation Comm.; Historic Bok Sanctuary; Polk County Environmental Lands Prog.; South and Southwest Florida Water Mgt. Districts; The Nature Conservancy; U.S. Dept. of Defense; U.S. Fish & Wildlife Service

Texas: Coastal Prairie Conservation Initiative (Grazing Lands Conservation Initiative, U.S. Fish & Wildlife Service, TX Parks & Wildlife Dept., Natural Resources Conservation Service [NRCS], The Nature Conservancy); Coastal Bend Prescribed Burn Assn.

Iowa: Agren Inc.; Golden Hills RC&D; Iowa Dept of Natural Resources; Loess Hills Alliance; Natl. Park Service; NRCS; Plymouth County Conservation; Pottawattamie County Conservation; The Nature Conservancy; U.S. Fish & Wildlife Service

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A typical crew includes a burn boss and four or more crew members and associated equipment. They operate out of a central location, conducting prescribed burns up to five days a week. The crews typically work with local partners who might supply an additional crew member or two to fill out the day's complement. In some cases, burn priorities are set by the cooperators at the beginning of the burn season. Some teams charge landowners by the acre to help offset the cost of maintaining staff and equipment. Most crews also receive funding through a diverse mix of private, state and federal grants.



Eastern red cedar spreads rapidly in the Waubonsie Special Landscape Area of the Loess Hills (Fremont County, Iowa) between 1994 and 2002, before a combination of brush clearing and prescribed fire began reversing the trend. Photo credits: 1994 orthophoto courtesy of US Geological Survey; 2002 CIR orthophoto courtesy of Iowa Department of Natural Resources; 2005 orthophoto courtesy of USDA-National Agriculture Imagery Program.

The Nature Conservancy and regional U.S. Fire Learning Networks and landscapes are catalyzing the development of some of these teams, and they are making an impact today in Arkansas, Florida, Iowa, Missouri and Texas, with several more in the planning stage. Challenges of funding and keeping qualified staff remain, but more lands are getting the treatments they need. Additional benefits of using mobile crews include building prescribed burning capacity across multiple organizations, strengthening partnerships and catalyzing larger conservation outcomes. Each of the three teams described below is trying to increase the amount of land treated, but each also has a distinct focus.

Florida Scrub-jay Fire Strike Team

Across Florida, about half of the approximately 9.5 million acres in conservation management require fire every few years. Because the job is so large, and resources are often limited, many of these lands have gone without fire for years.

This has led to a critical problem for a species of special interest in the central part of the state — the Florida scrub-jay — which relies on fire-maintained habitat. To address this situation, a group of public and private land managers came together in 1999 to find ways to conduct more prescribed fires by sharing resources and expertise. They created the Florida Scrub-jay Fire Strike Team.

Since 2000, the Fire Strike Team has burned 29,353 acres. Thanks to those efforts, scrub-jays and other rare species that need fire-maintained habitat are now able to use lands that had been overgrown for decades. Moreover, the threat of devastating wildfires has been reduced for people living adjacent to these natural areas.

Refugio-Goliad Rxfire Module

The Refugio-Goliad Prairie, which spans 500,000 acres along the Gulf Coast of Texas, is one of the largest and highest-quality expanses of coastal tallgrass prairie remaining in the state.

Because frequent fire is essential to maintain plant and animal diversity in this ecosystem, as well as improve cattle forage, the Conservancy hired a prescribed fire crew to conduct burns on private ranchlands. Twenty local ranchers have already taken advantage of the fire module's services, and since December 2003 the crew has burned 42,629 acres of private lands. At present the team does not charge ranchers for its services, instead relying on a variety of state and federal grants to fund the work.

According to Wade Harrell, Texas coastal prairies project director for the Conservancy, "once TNC started burning private lands in Refugio-Goliad, landowners' perceptions of the Conservancy changed for the better, and we have been welcomed by landowners with open arms... Our work here has increased the

visibility of TNC to landowners throughout the state in a positive way."

Loess Hills Mobile Fire Crew

Iowa's Loess Hills is a highly fragmented landscape of remnant tallgrass prairie. Ownership is almost entirely private, and agriculture is an important part of the region's economy and culture. In addition to its benefits for biodiversity, fire is an important weapon in the battle to control the spread of eastern red cedar, which is rapidly degrading productive pastureland.

The Loess Hills landscape has been involved in the FLN since 2002, and the mobile fire crew embodies one of the strategies that emerged from the landscape's participation in the Network. With funding from a variety of sources, four seasonal crew members are hired for eight weeks each spring and for six weeks each fall. There are also 29 on-call crew members, representing volunteer fire departments, state and county agencies, NRCS and private landowners. A full-time burn boss coordinates the program.

Since 2004 the crew has treated more than 1,200 acres and helped plan burns for another 3,300 acres, with funding in place through 2008. The small tract sizes typical of this region mean that crews can seldom treat large units, which is generally more efficient. Proactive outreach efforts are beginning to pay off, however, and as public support for prescribed fire builds, more landowners are seeking the crew's services.



The U.S. Fire Learning Network — a cooperative project of the USDA Forest Service, U.S. Department of the Interior and The Nature Conservancy — was created in 2002 to accelerate the restoration of fire-adapted ecosystems, those places where fire has been an essential natural process for centuries. The Network promotes learning and innovation among communities, public land managers and conservation practitioners around the country.