DRIP TORCH operator Tony Davis dribbles lit diesel fuel on the perimeter of the fire area, creating a fire line that will burn into the woods until it meets fires lit by the helicopter crew. Davis is the fire management officer for the Eleven Point and Doniphan Ranger districts. (Quill/Vaughn)

BURN *Continued from Pg. 1*

On blueskied March 13, when John Hoskins saw the big smoke plume rising seven miles to the south of his farm at Fremont, his helper, fearing wildfire, left work and rushed home, he said. The burn probably produced more smoke than "all the wood stoves in Carter County," he said.

Hoskins, a vocal opponent of the restoration burns, said committing so many acres to a landscape scale project is "too big, too uncertain, and too costly." As retired director of the Missouri Department of Conservation, he's well aware that natural resource management is an inexact science with many variables that can change through time. Restoration goals may or may not be achieved, but in the short term, "consequences are too severe," he said. Instead of restoration, he sees "charred, burned over woods."

Jeff Smith, Fremont, completely disagrees. His property adjoins the March 13 burn area; he runs a 1,300-acre cattle and timber operation, about half forested. The Forest Service burns his land along with theirs, which means the agency doesn't have to spend money dozing fire lines to keep the flames off his property.

"It's a win-win," said Smith. "It keeps the woods clean and the fire danger low." When curious neighbors call him, asking, "Will it kill the timber?" and "Is this something I should do?" he touts its benefits, he said.

Neighbor Gary Sullivan, Fremont, said he burns his own property to keep down brush and ticks. Smoke from the prescribed fires hasn't bothered him, but said he doesn't want them to kill all the oaks.

Davidson said the Forest Service isn't trying to convert pure oak stands to pure pine stands, an impractical proposition, but rather is encouraging a higher percent of pine in areas where it is already doing well and where historical records show that it once dominated.

MFPA OPPOSES RESTORATION

Among those displeased with pine restoration are members of the Missouri Forest Products Association (MFPA), who protested but were overruled when it was first announced as a component of the Mark Twain's 2005 Forest Plan. The forest industry is geared for marketing red and white oak lumber for flooring, barrel staves and other products. Pine is currently less valuable and is harder to sell.

In particular, industry objects to the thinning, where small-diameter trees, both pines and oaks – a source of future sawtimber – are lopped, dropped and left to burn. MFPA director Brian Brookshire would prefer those stems to be utilized, but he acknowledges the current lack of markets for material that size.

Not all prescribed fires behave as planned, and March 2012 fires in the Pineknot area developed hot spots, scorching bark on full-grown pines as high as 20 and 30 feet and killing some pines outright.

This visible damage added fuel to opponents' arguments. Brookshire says a situation where a control burn turns into a wildfire is "simply not acceptable."

"It was never a wildfire," said Eberly. "It was a controlled fire with pockets of high intensity. Sometimes the intensity is less and sometimes more than we intend."

"We don't want to burn up residual trees," conceded Davidson. "But when you apply fire across the landscape, it sometimes happens." Of the 12,000 acres involved with the March 2012 burn, Davidson figures the patches of damaged trees total 20 acres.

To complicate the disagreement, one of MFPA's objections centers on setting priorities. Aging red and scarlet oaks are dying in large numbers across the Ozarks, victim to oak decline, a condition with multiple causes that can include fungus attacks, bugs, and drought.

Brookshire says the Forest Service shouldn't be focusing on pine restoration when so many oaks are dying. He wants to see those trees salvaged before they're too deteriorated to run through a sawmill.

Timber Resources Officer Jack Courtenay said the majority of timber harvests now on the Mark Twain address oak decline, "but with our budget, we can only do so much."

THE CONGRESSMAN'S CONCERNS

The forest products industry has an ally in Congressman Smith, who in November attached an amendment onto a forestry bill, H.R. 1526, which passed the U.S. House and is currently awaiting action in the Senate Energy and Natural Resources Committee. If passed, it would stop all prescribed burning on the Mark Twain until the Forest Service submits a report to Congress that evaluates effects of the practice.

A statement from Smith's office said that the congressman's chief concern with the restoration program has always been that it was burning up valuable timber that could be used to make wood products, and that it was not actually achieving its goal of forest restoration.

In early February, Smith met with a Washington, D.C., undersecretary who oversees the Forest Service to discuss the management of the Mark Twain. An agreement was reached in which that agency would work with the forest industry to address concerns with timber harvests and burning, he said.

IN THE FUTURE

Computer models show that within the next 100 years, the Ozarks are expected to gradually become hotter and drier, especially in the summer. Drought and wildfires will become more likely. Mature oaks are expected to live out their natural lives, but seedlings may have difficulty becoming established, a new study says.

"Shortleaf pine is well-adapted to future conditions," said Davidson.

As an ecologist, Nelson had a major voice in planning the pine restoration. He said Missouri has a long history of climate change, sometimes warmer, sometimes colder, and is home to 85 distinct ecosystems, adapted to varying conditions: wetlands, glades, dry upland forests, moist bottomland hardwoods and more, with many on the Mark Twain. Over centuries, these plant communities migrate, shift, expand and contract as ground conditions change. But they typically move slowly, and can't move at all without parent plants to seed them.

Fire-adapted and drought-resistant, the natural plant community known as shortleaf pine-bluestem woodlands represents a biological seed bank that could become important if moisture-dependent oak-hickory forests suffer under upcoming climactic conditions.

That's one reason why Nelson is adamant about restoring the fragments of that ecosystem, of which the pockets at Cane Ridge and Pineknot are among the most intact.

"You can plant shortleaf pine in a cornfield in north Missouri, but you can't plant a system with 600 vascular plants. An ecosystem will not follow," said Nelson.

On March 13, the U.S. Forest Service attacked 4,125 acres south of Fremont, dispersing upon it 28 fire experts, who operated two wildland fire engines, two bulldozers, seven utility vehicles and a helicopter.

They weren't fighting a fire. Instead they created one, using technology and weather conditions to manipulate its size, intensity and even its smoke pattern.

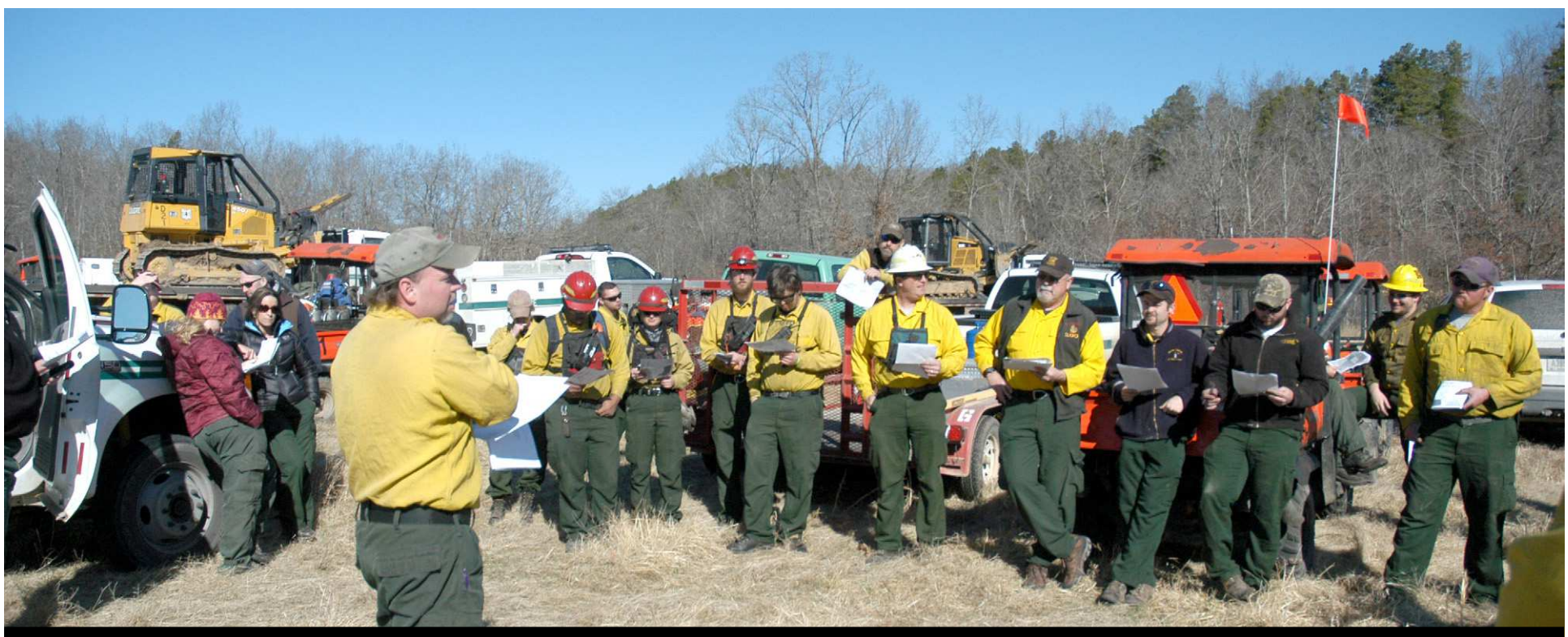
All involved cooperated, especially the weather, resulting in what veteran Forest Service fire specialist Bill Paxton, Poplar Bluff, called "a textbook burn."

Neither too hot nor too cool, the fire burned brush but not trees. A light wind from the southwest pushed smoke up and out, so risks to both highway travelers and workers' health were minimized. Wind increased in the late afternoon, but by then, most areas had burned.

The prescribed fire burned within the Eleven Point Ranger District of the Mark Twain National Forest, in an area south of Fremont and east of J Highway.

SMOKE RISES IN LINES as inflammable balls drop and catch fire. Helicopter crew member Angie Ruble took this aerial photo. (Photo provided to The Quill)

TORCHING THE ROADSIDE at the junction of J Highway and Bennett Road is a fire-spitting gun mounted on the back of this Polaris RZR, operated by Corey Large, Doniphan. A fire truck follows behind at a safe distance, ready to act if needed. As the smoke spreads, road monitors stop highway travelers from both directions; they take turns proceeding through the haze, led by a pilot vehicle. (Quill/Vaughn)



BURN BOSS Tim Perren, foreground, briefs a staff of 28 in preparation for the prescribed burn. Months earlier Perren had written the 72-page fire plan that detailed dozens of contingencies. It covers fire ignition techniques, smoke management models, wind speed, wind direction, humidity level, soil and fuel moisture levels, plans to contain escaped fire, and medical emergencies. Clockwise, from left are Patrick Marlow (behind mirror), Erin Yeoman, Angie Ruble, Matt Brickner, Clare Holdinghaus (tan hat), Michael McLemore (red hat) Danny Olivas-Zuniga, Danielle Wess, Sean Kerr, Dan Burch, Keith Holland (in trailer), Tony Davis, Bill Paxton, Corey Large, Nate Patterson, Kody Cox and Jason Stork. Crew members were employees of the Forest Service, National Park Service, and AmeriCorps. (Quill/Vaughn)