



Reducing the Threat of Wildland Fire

Hazardous Fuels Reduction Success Stories Around the Nation

Alabama

Russell Cave National Monument - NPS

Park and Homeowners Work Cooperatively to Protect Properties

After decades of fire suppression, the Montague Mountain area of Russell Cave National Monument near Bridgeport, Alabama was treated with prescribed fire in May 2005. Agreements and cooperation with adjacent private landowners allowed land managers to burn on a landscape scale, as opposed to burning land fragments on a smaller scale. Such cooperation across boundary lines not only protects people by reducing wildfire risk, but is also ecologically beneficial. The 350-acre burn unit consisted primarily of oak-hickory forest, with relatively steep topography. Approximately half of the land in the Montague unit is owned by private individuals who wanted to facilitate fuels reduction on their lands.

Alaska

Northway Village - BIA

BIA Sponsored FIREWISE Project Saves Native Community

In order to protect the native village of Northway surrounded by very flammable black spruce from a potentially devastating wildland fire, a ring of fuelbreaks have been put in around the village. During summer 2004 a fire ignited in the hills near Northway, and as firefighters conducted structural protection, they were able to skip a home because the homeowners had participated in a fuels reduction project, sponsored by Firewise. By thinning the spruce around the home, this family was spared a serious threat by the wildland fire, and firefighters could use their time where it was critically needed. Firefighters were able to protect nearby homes that had not participated in the fuels reduction project.

Arizona

BLM and Cocopah Indian Tribe - BIA

Neighboring Fuels Breaks Slow Spread of Wildfire

Due to high risk and high public use along the Colorado River corridor, the BLM completed a mulching and chipping project in vegetation on the west side of two Arizona communities. The Cocopah Indian Tribe followed suit and implemented similar fuels treatments west of the BLM project. In April 2008, the Paradise Cove fire originated between the two hazardous fuels projects and spread west, with flame lengths of 40-50 feet and no chance of control. As the wildfire moved into the area that had been treated, it started to lose intensity and flame lengths dropped four to eight feet. With the drop in fire intensity, firefighters were able to safely achieve the upper hand by allowing crews to construct hand line from the Colorado River south to a green farm field. Although the fuels treatment did not stop the 57-acre fire, the end result was accomplished by reducing and slowing the spread and intensity of the wildfire.



Arkansas

Buffalo National River - NPS

Largest Prescribed Fire in Hard-Wood Leaf Litter Protects Communities and Wilderness

During the first and second weeks of March 2007, Buffalo National River fire management staff and their partners successfully completed the largest prescribed fire project in hard-wood leaf litter in the National Park Service to date. Nearly 17,000 acres were treated with prescribed fire to reduce fuels, protect adjacent communities, and restore a natural ecological process to the Lower Buffalo Wilderness.

California

BLM

Joint BLM and Community Actions Protect Homes during Large Wildfire

Humans, rare plant species, and desert animals were all jeopardized in July 2006 when the Sawtooth Fire burned through nearby Pioneertown, California. Fortunately, the people of Morongo Valley had worked to clear away fuels from around their homes. As a result of BLM-funded grants, several years of good brush clearance, plus a community fire break on the north side of the valley, no homes were destroyed in that area of 4,500 residents of the Morongo Valley. The entire north side of Morongo Valley was evacuated – about 1,000 homes. Started by lightning, this fire ultimately grew to 24,000 acres as it merged with the Heart and Millard fires to create the largest fire the area had seen in 20 years.

Colorado

Southern Ute Agency and Southern Ute Indian Tribe - BIA

Joint Fuelbreak Helps Stop Forward Spread of Wildfire

Since 1996 the Southern Ute Agency and the Southern Ute Indian Tribe have jointly developed a fuelbreak along the top of Black Ridge, located 15 miles southwest of Durango, CO. Construction of the fuelbreak is ongoing with 98 acres covering approximately 1.5 linear miles completed and an additional 2.5 linear miles or 379 acres to be developed. On July 3, 2004 a lightning strike west of the existing fuelbreak ignited a fire in heavy, continuous fuels. The Cox Canyon Fire spread quickly and began a crown run upslope toward the fuelbreak pushed by 10 – 15 mph winds. Upon reaching the open fuels of the fuelbreak the fire dropped to the ground where aerial retardant from a single engine air tanker was effective at stopping its forward spread to the top of the ridge and possibly into the Animas River drainage.

Delaware

Prime Hook National Wildlife Refuge – FWS

Chemical Treatment and Prescribed Fire Reduces Invasive Species

In 2003, this refuge entered its second year of using herbicides and prescribed fire to control several thousand acres of phragmites, a non-native, invasive tall grass that inhabits brackish and freshwater marshes, ditches, and dredge spoil areas. The program began after a 1,500-acre arson fire burned through the flammable phragmites, threatening homes along Slaughter Beach and Primehook Beach. The combined herbicide/prescribed fire treatments are reducing risk to these homes and restoring native plants.



Florida

Arthur R. Marshall Loxahatchee National Wildlife Refuge - FWS

Fire Dies Out at Fuelbreak and Saves Bird-Watching Paradise

In July, 2004 at Arthur R. Marshall Loxahatchee National Wildlife Refuge in Florida, a 7,000-acre prescribed burn conducted the month before caused a wildfire to fizzle out at 80-acres. The fuelbreak prevented the fire's spread onto almost 150,000 acres of refuge land in Palm Beach County. Due to the fuels treatment, habitat for more than 250 species of birds, including the endangered Everglades snail kite and wood stork, were spared from destruction.

Georgia

Kennesaw Mountain National Battlefield Park - NPS

Historic Civil War Site Protected by Fuelbreak

In 2005, Kennesaw Mountain National Battlefield Park completed a four-year project to create a 60-foot wide fuelbreak along the park boundary. The fuelbreak was designed to reduce hazard fuel loads to help minimize wildland fire threats to the park and adjacent properties. A number of the pine trees in the affected area were dead trees killed due to Southern pine beetle infestation. Crews took special precautions to avoid damaging earthworks, as the majority of the work was conducted in the area of the Union line dating back to the Civil War.

Hawaii

Pearl Harbor National Wildlife Refuge – FWS

Wildfire Threat Reduce on Oahu

The Kalaeloa Unit of Pearl Harbor National Wildlife Refuge began work in 2004 on reducing the severe fire hazard created by extreme accumulations of thick vegetation, made worse by drought in recent years. The vegetation grew on top of an ancient coral reef that is now above sea level. Local contractors were employed to use machines to mow down mesquite trees, brush, buffalo grass and pluchea shrubs. Ridding the refuge of this flammable vegetation will help prevent wildfire threats to two nearby residential communities as well as the adjacent Honolulu airport.

Idaho

Deer Flat National Wildlife Refuge – FWS

Thinning Brush and Trees Stops Fire Spread to Homes

In July, 2006 a fuelbreak previously constructed by mechanical treatment stopped the spread of the lightning-caused Greenhurst Fire at the edge of the Deer Flat National Wildlife Refuge in Idaho. The treated fuels protected homes in a growing community immediately adjacent to refuge boundaries.



Indiana

Indiana Dunes National Lakeshore - NPS

Prescribed Fire Protects Education Center from Wildfire One Month Later

In May 2005 Indiana Dunes National Lakeshore experienced an onslaught of eight wildland fires caused by passing trains along the southern edge of Lake Michigan. The Doug Center 1 Fire, posed an immediate threat to the Paul H. Douglas Interpretive Center, and was contained at 12 acres. Just one month prior, the fire program at the National Lakeshore had successfully completed an 8.5 acre prescribed fire surrounding the Paul H. Douglas Center. The fact that this unit had been successfully burned in April was the primary reason that the Doug Center 1 Fire did not burn up to the Paul H. Douglas Center. The eastern flank of the wildfire burned right up to and was stopped by the previously burned Douglas Center prescribed fire.

Kansas

Kirwin National Wildlife Refuge – FWS

Prescribed Fire on the Prairie Protects Communities and Native Species

At Kirwin National Wildlife Refuge in rural Kansas, prescribed fire and mechanical removal of trees are the tools of choice for reducing hazardous fuels while restoring native prairies and the grassland birds that depend on them. To protect nearby communities from potentially damaging wildfire, the refuge started to reduce hazardous fuels in 2003 by cutting and piling non-native Siberian elm, Russian olive, honey locust, black locust and eastern red cedar that have encroached on the prairie. The piles were then burned. Dead standing timber is being burned away on other parts of the refuge to enable staff to physically enter the areas to control noxious weeds. In addition to providing safer conditions, fuels reduction results in open areas for sandhill cranes, waterfowl and shorebirds and creates better hunting access. Fire also stunts sprouting cottonwood and willow trees, creating better habitat for the nesting.

Kentucky

Mammoth Cave National Park - NPS

Prescribed Fire Enhances Diverse Natural Areas in Park

To date, approximately 15 miles of boundary have been treated with fire. In 2007, an 86-acre fire in the Chaumont area reduced nonnative clovers, grasses, vines, and other woody plants in this karst valley that holds remnants of native prairie. In cooperation with adjoining landowners and the Commonwealth of Kentucky, the burn area included 11 acres of private property. A second prescribed fire in the Big Woods area was 1540-acres and included uplands, ravine, river slope, and riparian areas. It also contained Wilson Cave, home to the endangered Indiana Bat, required that the outside air temperature be above 54 degrees so the cave would “breathe out” at the time of the fire and not cause smoke to enter the cave. A third 790-acre burn in the Dennison Ferry area included an oak-hickory forest with dense thickets of mature eastern red cedar. Along the eastern park boundary, the reduced hazardous fuels created a safety buffer for private lands. In fiscal year 2008, Mammoth Cave National Park completed another 3,827 acres of prescribed fire.



Maine

Petit Manan National Wildlife Refuge – FWS

Prescribed Burning Protects Historic Lighthouse

Refuge personnel have burned a portion of the island every spring since 2002. The fires reduce vegetation to heights preferred by roseate terns, while keeping valuable, historic structures safe from the potentially devastating effects of wildfire. A lighthouse keeper's home, light tower and associated structures are listed on the National Register of Historic Places. The island has been one of the most important seabird colonies in the Gulf of Maine, as well as home to some significant historic lighthouses. The island supports a large mixed colony that includes federally endangered roseate terns, as well as Atlantic puffins, razorbills, and Arctic terns, which are listed as threatened by the Maine Department of Inland Fisheries and Wildlife.

Maryland

Chesapeake Marshlands National Wildlife Refuge Complex - FWS

Mechanical Thinning Creates Defensible Space and More

In 2005, the refuge completed mechanical treatment of 900 acres at Chesapeake Marshlands National Wildlife Refuge Complex in Maryland. It included chainsaw thinning of 17 forested stands surrounding the refuge complex to support hazardous fuels reduction and habitat restoration near communities in the wildland-urban interface, or fire-prone areas near public lands. It reduced excess fuels loads, decreased the risk of wildfires, provided defensible space near communities, improved road access and safety for firefighters, and promoted habitat improvement and healthy forest lands.

Minnesota

Big Stone National Wildlife Refuge – FWS

Prescribed Burn Stops Wildfire from Spreading to Town and Highway

In May 2004, a wildfire at Big Stone National Wildlife Refuge in Minnesota was stopped in part due to a 35-acre prescribed burn that had been conducted earlier that spring. The treatment, which was implemented to protect private lands and the endangered Ball cactus, kept the 344-wildfire from spreading into the community of Ortonville and prevented closure of a major state highway nearby.

Mississippi

Bayou Sauvage National Wildlife Refuge – FWS

Fuels Treatment Allows Quick Suppression of Wildfire near Interstate

In May 2006, an area treated with prescribed fire 2 years earlier allowed quick suppression of a wildfire that could have caused dangerous smoke conditions for drivers on a major freeway. Lightning ignited the wildfire between Interstate 10 and Lake Pontchartrain on Bayou Sauvage National Wildlife Refuge in southern Mississippi. Despite strong north winds and rapidly dropping humidity, crews were easily able to contain the fire at 16 acres, due to slow spread in treated fuels.



Missouri

Wilson's Creek National Battlefield – NPS

Prescribed Burns Protects Civil War Battlefield Surrounded by Homes

Just outside of Springfield, Missouri, Wilson's Creek National Battlefield is witnessing development around its boundaries at an unprecedented rate. The steadily increasing wildland-urban interface, in addition to two tornadoes and a catastrophic ice storm, spurred park managers and fire program specialists to react quickly to these events by planning and implementing a comprehensive fuels reduction effort. Seven prescribed burns totaling 841 acres conducted in spring 2007 simultaneously met important goals for maintaining the cultural landscape and ecosystem restoration.

Montana

BLM

BLM Funds Fuels Treatments for Three Counties and Adjacent Public Lands

Over 250 homes are situated near these BLM-administered lands in the Helena Valley. Planned treatments to reduce the hazard associated with wildfire include 1,160 acres of ponderosa pine, Douglas fir and grassland/shrubland habitat types. The Tri-Country FireSafe Working Group, representing Jefferson, Lewis & Clark and Broadwater Counties, is working to complete wildland fire mitigation work on adjacent private ground. The BLM Butte Field Office is currently helping to fund mitigation projects through a Community Assistance agreement.

Nebraska

Winnebago Agency – BIA

Fuels Project Creates Buffer around Community and Restores Native Prairie

A two-year project to reduce the encroachment of eastern red cedar on native prairie grasslands has thus far restored 4,000 acres of tribal rangeland within the boundaries of the Santee Sioux Reservation and provided a buffer of defensible space around the community of Santee, Nebraska. The fuels reduction project involved thinning and hand piling, followed by prescribed broadcast and pile burning. The burning phase reestablished the natural fire cycle on much of the landscape around Santee.

Nevada

BLM

Harvesting Trees Protects Watershed and Generates Revenue

Harvesting biomass makes dollars and sense in eastern Nevada, where the BLM signed stewardship contracts that will help reduce the risk of catastrophic wildfire and restore and maintain watershed health near Ely, Nevada. Contractors are harvesting the wood for resale as firewood and chipping the harvested biomass for use in a fuels-schools project. One project has been selectively thinning piñon and juniper trees on approximately 520 acres of public land. The project reduces fuel overloading and serves as a demonstration and study site featuring differing tree-thinning densities. Another 1,000-acre project will help protect life and property and the Ward Mountain watershed from suffering the effects of catastrophic wildfire. Stewardship contracts account for about 500 acres of the overall Ward Mountain project.



New Jersey

Supawna Meadows Grassland – FWS

Prescribed Fires Reduce Hazardous Fuels

Supawna Meadows National Wildlife Refuge uses prescribed fire to control hazardous fuels and reduce the chances of wildfire on refuge land. Fire managers burned two areas on the refuge February 2005. Refuge managers targeted one burn area because it was covered mostly by phragmites, a tall, reed-like non-native plant that has invaded marshlands and become a fire hazard. The burn will improve wildlife habitat by returning nutrients to the soil as well as open the marsh to native vegetation.

New Mexico

Bandelier National Monument – NPS

Bandelier's Prescribed Fire Program Back on Track

In fiscal year 2008, 60 acres were treated during the Unit 40 Prescribed Fire. The November 2007 Upper Frijoles (Unit 9) Prescribed Fire treated approximately 1,500 acres – the park's first large scale burn in the past seven years. Bandelier has worked very closely with their interagency partners and the nearby community of Los Alamos in getting their prescribed fire program back on line since the Cerro Grande Fire of May 2000.

New York

Wertheim National Wildlife Refuge – FWS

Regular Brush Thinning Stops Marsh Fire and Saves Sixty Homes

Annual prescribed burns and mechanical thinning of brush and weeds helped keep a wildfire at Wertheim National Wildlife Refuge at 20 acres, and a nearby 60-home subdivision safe. The human-caused fire started in a refuge marsh in 2003 within the boundaries of the New York Central Pine Barrens but was extinguished quickly because of an agreement between the U.S. Fish and Wildlife Service, New York State Forest Rangers and the Brookhaven Volunteer Fire Department that gave firefighters the tools to coordinate the quick response. The agreement also allowed Brookhaven to assist with a 35-acre prescribed burn on the refuge, which is bordered on three sides by single-family homes, Long Island Railroad, a shopping plaza, and a school.

North Carolina

Alligator River National Wildlife Refuge – FWS

Treatment Helps Quickly Contain Wildfire and Save Money

In June, 2004 a wildfire at Alligator River National Wildlife Refuge in North Carolina was quickly contained at less than one-half acre, due to a prescribed fire treatment that had been conducted four months before. The treatment is estimated to have saved tens of thousands of dollars of potential suppression costs that would have otherwise been incurred to fight that lightning-caused wildfire.



North Dakota

Aeser Waterfowl Production Area – FWS

Treatment Slows Wildfire and Lends Increased Safety for Firefighters

In 2003, after three years of drought led to an intense fire season, a wildfire on the Aeser Waterfowl Production Area in North Dakota slowed and was easily controlled after it ran into a prescribed burn treatment completed in 2002. The previous treatment allowed the fire to be controlled within 3 days and limited it to 200 acres of private land and 300 acres of land managed by Tewaukon National Wildlife Refuge. This also reduced the number of firefighters needed and contributed a large measure of safety during a busy season when resources were stretched thin.

Oregon

BLM

Treatment Helps Contain Lightning Fire and Save Homes

A collaborative fuels treatment reduced the potential for a high intensity wildfire on the Crooked River National Grassland next to private property on Round Butte. The fuels treatment thinned juniper trees and limbed remaining trees. In July 2007, an incident sparked by lightning tested the prescription. Fire crews and a Type 1 helicopter quickly responded, and had the fire contained within four hours of dispatch with no lives lost or homes destroyed. The fire remained a surface fire, attributed entirely to the thinning and pruning accomplished with the fuels project. The treatment and the efforts of the suppression crews prevented the wildfire from reaching a nearby power substation, and saved the cost of extended suppression and rehabilitation.

Pennsylvania

Erie National Wildlife Refuge – FWS

Treatment Reduces Invasive Species and Fire Risk

In September 2007 crews completed a project to remove 35 acres of fire-prone exotic pine and a sprawling thicket of invasive noxious weeds in the Erie National Wildlife Refuge near local homes. The project was part of a multi-year invasive plant control effort to reduce hazardous fuels and restore habitat on more than 55 acres. Located adjacent to state highway 27, local roads, and residences, the pine plantations were non-native remnants from an old Christmas tree farm planted many years ago. The pines had significantly edged out the native hardwood in the area, and were regarded as a fire threat to the local community. The trees were cut down, limbed and mulched, and left on site.



South Carolina

Kings Mountain National Military Park – NPS

Prescribed Fire Prevents Careless Wildfire from Spreading to Park

In March 2008, the park completed two successful prescribed burns on 429 acres that had been previously burned. The prescribed fire program can also be credited for preventing a fire start from turning into a wildfire. Recently, a neighbor lost control while burning leaves, the fire spread to the edge of the park where it stopped as a result of a prescribed burn completed in 2007. Now in the eighth year of the prescribed fire program, the park has completed 32 prescribed burns totaling over 5,643 acres. The positive results can be seen in the battlefield landscape which is now more like the forest of the 18th century Revolutionary War battle of Kings Mountain.

South Dakota

Huron Wetland Management District – FWS

Treatment by Black Liner Helps with Very Quick Containment of Wildfire

In February 2008, a homeowner living near the Maga-Tahohpi Waterfowl Production Area was burning paper in a burn barrel when a spark escaped into the grass on his private property. The fire grew and moved onto the federal land, and the homeowner called the local volunteer fire department. "We had burned a 2-mile-long black line in that area last October," said Prescribed Fire Specialist Charles Frohme. He said the black line that had been previously burned clearly stopped the wildfire. He noted that the on-site fire department was able to contain the two-acre fire within an hour using hand tools, and a fire engine for mop-up. "You can see where the fire burned right up to it," he said. In 2007, the FWS Huron Wetland Management District in South Dakota tested and approved the use of a new Black Liner Machine designed to create more effective fire break lines.

Tennessee

Great Smoky Mountains National Park – NPS

Prescribed Burn Protects Cades Cove and Popular Trails

In early summer 2007, fire management staff at Great Smoky Mountains National Park implemented a planned hazardous fuels reduction project in the heavily visited Cades Cove area of the park. In all, over 1,500 acres were burned to reduce the accumulation of hazardous fuels from the Stony and Arbutus creek drainages. Numerous significant cultural sites and popular trails adjoin or were encompassed by the burn units. These cultural values were at threat from wildfire due to the accumulation of forest fuels. A secondary objective for this prescribed fire was to provide a second entry fire into the drainages in an effort to reduce the hardwood crowding of pine stands.



Texas

San Marcos National Fish Hatchery – FWS

Defensible Space Project Educates and Protects Homeowners

In 2003, the U.S. Fish and Wildlife Service worked with neighbors around the San Marcos National Fish Hatchery and Technology Center to develop a demonstration project. The project showcases the need for and effectiveness of defensible space, as the community has experienced several large wildfires in recent years. Service personnel helped reduce overgrown, hazardous vegetation around 34 homes. Each of the homeowners agreed to have the work used as a demonstration area for others interested in seeing what realistic defensible space looks like.

Utah

BLM and Zion National Park – NPS

Multi-Agency Fuels Reduction Projects Saves Community

In June 2005 lightning ignited the Blue Spring Fire south of New Harmony. Over five days it grew to 12,286 acres to the backyards of Harmony Heights. BLM's and Dixie National Forest's fuels treatments influenced the movement of the fire, allowing firefighters to protect the homes from the blaze. The BLM had completed a 1,500 acre project from I-15 to the Dixie National Forest boundary to reduce the threat of wildfire to homeowners in the New Harmony area while also restoring ecosystem health. Also, across the interstate, Zion National Park completed a hazardous fuels reduction project for the purpose of protecting the Kolob Visitor Center and surrounding private structures in the event of a wildfire. With three federal agencies implementing fuelbreaks in the area, New Harmony had fuels treatments on the east, west, and south sides of the community, and fire managers from partner agencies worked with individual home owners to reduce fuel loading. The fuels projects were dominant factors in reducing the rate and direction of the fire's spread.

Virginia

Prince William Forest Park – NPS

Fuels Reduction and Mapping Aids Firefighting Efforts

In 2004, park staff began a multi-year hazardous fuels reduction and wildland-urban interface mapping project. The work paid off when a fire broke out in March 2006. Firefighters and command staff found less flammable material in key locations and important interface information at their fingertips. Since 2004, Park staff had removed dead and standing brush within 50 feet of any roadbed or park boundary line. This hindered the fire's ability to spread even farther. Park staff, including interns with the Student Conservation Association, had also assessed and mapped the potential wildfire danger to many houses along the park boundary. With this information, command staff quickly confirmed that the fire threatened no homes.



Washington

Colville Indian Reservation – BIA

Treatments Provide Greater Range of Firefighting Options

Fuels treatments completed in previous years played a major role in saving the Mt. Tolman Fire Center on the Colville Indian Reservation in September 2007. Besides the Fire Center, there were also two homes and numerous other structures that were threatened by the fire. Burnout operations were planned to mitigate the extreme fire behavior and save these structures. The firefighters' ability to successfully complete the burnout operations under adverse weather conditions was the direct result of hazard fuels reduction projects completed since 2004.

Wisconsin

Necedah National Wildlife Refuge - FWS

Cutting Trees Saves Imperiled Ecosystem, Reduces Danger to Nearby Community

Necedah Wildlife Refuge in central Wisconsin is home to a globally imperiled oak savanna ecosystem, but lack of routine, natural fires was not only threatening the quality of the habitat, but the neighboring town of Necedah. In the late 1990s, the refuge began returning the savanna to its natural state by embarking on selective-cut timber sales. Brush and overgrown vegetation was burned with prescribed fire, which further reduced the fuel load and encouraged the growth of favored savanna grasses and plants. The fuels reduction efforts not only reduced the threat of wildfire to the community, it also more than doubled habitat for the rare Karner blue butterfly.

Wyoming

Grand Teton National Park – NPS

Prescribed Burns Keep Lightning Fire Small

When lightning struck a tree in June 2007 in Grand Teton National Park igniting the Uhl Hill Fire, this fire start had potential to become a large fire. Instead it burned only 4 acres and ran into the treatment area of the 800-acre Eynon Ridge Prescribed Fire that had been completed just eight months earlier. In 2005, interagency crews completed the 1,260-acre Diamond L Prescribed Fire on the Bridger-Teton National Forest side of the boundary. In October 2006, Teton Interagency fire crews conducted the Eynon Ridge prescribed fire along the Grand Teton National Park and the Bridger-Teton National Forest boundary, for a combined treatment of more than 2,000-acres of mixed conifer, aspen, sage and grass meadows.