National Fire Plan

Successes of BLM Hazardous Fuels Projects ...

The Jackson Mississippi, BLM Prescribed

Burn Modules 104 and 103

The U.S. Fish and Wildlife Service, Region 4 and the Bureau of Land Management,Jackson Field Office, interagency prescribed burn program has just completed itsinaugural spring season, resulting in 16,153 acres successfully burned!

The crewprimarily worked within the Savannah, Santee, and PeeDee ecosystems, which cover National Wildlife Refuges located in North Carolina, South Carolina, and Georgia. Beginning in February, the crew started burning on the Carolina Sandhills National Wildlife Refuge(NWR) in South Carolina. Carolina Sandhills is well known for itsaggressive burn program to control midstory competition in longleaf pine stands whichsupport the largest population of endangered red-cockaded woodpeckers on U.S. Fish and Wildlife Service land.

Prescribed burning is essential to maintain this longleaf -wiregrass ecosystem and to provide optimum habitat needs for this woodpecker. Traveling south to the Santee National Wildlife Refuge in South Carolina, the module quickly accomplished several hundred acres of burning in a brief three day period. The burns completed on Santee NWR were especially satisfying because the refuge essentially had no target acres for prescribed burning as a fire management plan and new prescriptions had just been completed.

Fire exhibit at the Mississippi Natural Science Museum.

The crew worked with a contract helicopter and demonstrated remarkable flexibility as burn units were modified due to changing weather patterns and management considerations. The crew had to react quickly as relative humidity suddenly dropped during the course of the burns and spotting became a major concern. Leaving Santee NWR, the module traveled south once again to prepare for perhaps the most challenging burn of the season at Blackbeard Island National Wildlife Refuge. Logistically and operationally,

this prescribed burn and was certainly the most difficult and interesting of the season. Blackbeard NWR is a coastal barrier island in Georgia, famous for sea turtles and American alligators and for supposedly harboring Blackbeard, the famous seventeenth century pirate. Huge impoundments and open savannnah acres were threatened by woody encroachment and in dire need of burning. After the tremendous job at Blackbeard, the crew then turned its attention to Pinckney National Wildlife Refuge, another challenging island located in the highly populated area of Hilton Head Island, Beaufort, and Bluffton, South Carolina.

This was the first documented wildland urban interface burn within the Savannah- Santee-PeeDee ecosystem. The crew effectively burned more than 900 acres. The crew continued to burn successfully for the remainder of the season. The module stayed on the road burning at ACE Basin, PeeDee, Harris Neck, and Savannah Coastal Refuges. It was noted that the Jackson modules burned more acres at these refuges than in any other prescribed fire season. The module working out of Southeastern Louisiana was equally successful. It traveled and logged more than 4,000 miles and supported five additional refuges.

TOTAL ACRES: 26,493 Lamar Liddell, Superintendent, Jackson Hotshots (601) 977-5433

Crewmembers from the Slidell Module, igniting a burn. More than 30,000 acres were burned during the fall and spring season.

Prescription for Healthy Habitats

The new BLM-sponsored fire exhibit at the new Mississippi Natural Science Museum is complete. The collaborative venture highlights three firedependent habitats in Mississippi and the role of prescribed fire in simulating natural fire regimes. A touch screen kiosk gives

visitors simulated practice in dropping fire-retardant slurry from a plane and in selecting the parameters for prescribed burn.

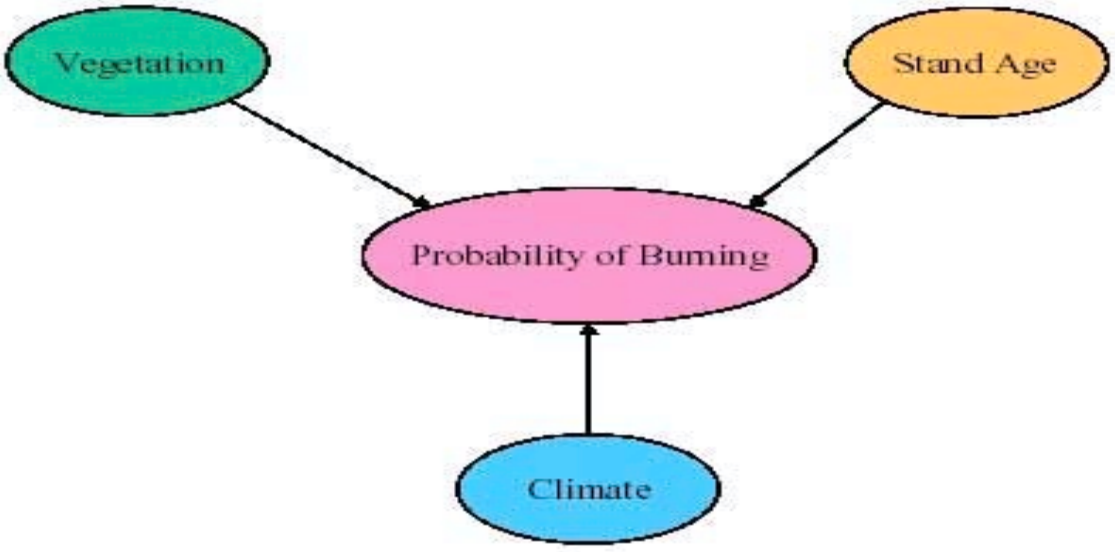
The exhibit also features dioramas of fire dependent plant communities and a red-cockaded woodpecker cavity tree, along with everyone's favorite, a fully-outfitted hotshot mannequin. With about 260,000 visitors in the first year, this new facility provides a valuable forum for BLM's national message on fire management.

Fuel break helped protect Fort Greely from 1999 wildfire.

Alaska

Shaded Fuel Breaks Effects Studied

Shaded fuel break treatment and control.



Computer model calculates burning probability based on several factors.

Recent large wildfires have captured the nation's attention and caused many communities, homeowners, and agencies to seek methods to reduce wildfire risks to homes and property at the urban interface. Cleared fuel breaks or prescribed burns have been employed, but sometimes less dramatic treatments are desirable for ecological, aesthetic, or engineering Fuel break helped protect Fort Greely from 1999 wildfire. reasons. In interior Alaska, removal of shading vegetation can cause permanently frozen soils to melt and subside, potentially destabilizing house foundations.

The BLM Alaska Fire Service and Tanana Chiefs Conference, Inc—a non-profit corporation formed by and for Alaska Native villages—have initiated a three-year Fuels Treatment Demonstration Project, with funding from the Joint Fire Science Program. The Joint Fire Science Program is a six-agency partnership authorized by Congress in 1997 to develop information and tools for managers and specialists who deal with wildland fuels issues (http://www.nifc.gov/joint_fire_sci/jointfiresci.html). The Tanana Chiefs project entails three demonstration sites across the Interior and is intended to compare degrees of fuel reduction by thinning with or without pruning in boreal black spruce while documenting the concomitant hazard reduction, visual impact, environmental effects, and cost/benefit ratio.

Two demonstration areas were located at Fort Wainwright, near Fairbanks, and on land belonging to the Toghotthele Village Corporation about 45 miles southwest of Fairbanks. A third site was tentatively identified about 125 miles southeast of Fairbanks, near Delta Junction. Data collected at the sites includes tree density; tree diameter; total height, and height to live crown; seedling density; litter and duff depth; down woody fuel load; ladder fuel height; understory vegetation cover; ground cover; overstory cover; active layer depth (the seasonal thaw zone in permafrost soils); photographs; and cost of the various treatment levels.

Computer Model to Simulate Long Term Impact of Fire Management on Landscapes

The University of Alaska is leading an effort along with the BLM, U.S. Geological Survey, and several federal and state partners to develop a computer model for landscape-level analysis of fire-human interactions, vegetation change over time, and prediction of regional fire risk in interior Alaska's boreal forest.
The interagency Joint Fire Science Program has granted funding for this project for 2002-2004 with a goal of building a prototype model that will provide land managers with thematic representations spanning years to centuries into the future of how forest cover and probability of large fire events respond to different scenarios of fire anagement and climatic change.
The model will utilize physical, biological, and human thematic layers and simulate ecosystem dynamics specific to boreal forest that influence wildlife, hydrology, and soil processes. Vegetation Stand Age Probability of Burning Climate Computer model calculates burning probability based on several factors.

Monitoring Effects of Prescribed Fires and Fire Use

The Alaska Fire Service and BLM field offices have established long-term vegetation monitoring plots at the site of several prescribed or managed fires to look at vegetation changes that may impact land users and wildlife. Partners include the State of Alaska, Army Corps of Engineers (Chena Lakes Flood Control Project) and Tanacross Village Corporation. In addition, a USDA Forest Service Pacific Northwest Research Station team led by Dr. Roger Ottmar is determining how weather and fuel dryness affect the reduction in mossy forest floor duff during fire. This question is integral in targeting revegetation with desired plant species in many wildlife habitat improvement projects, as well as in determining erosion potential and the extent of smoke pollution during wildfires and prescribed fires.

Transects monitoring tundra fire effects on the Seward Peninsula were re-surveyed in August 2001—24 years after burning.

Roger Ottmar and a field crew from the USFS Pacific Northwest Research Station measure duff consumption by a large 2001 wildfire near Fairbanks.

Thinning and prescribed burning.

Plots on 1977 Fire Re-surveyed

A team led by the BLM Northern Field Office revisited the oldest active tundra fire effects transects in the state, established in 1977 after a hot, dry summer resulted in thousands of acres burned in the arctic tundra in northwest Alaska. A set of nine permanent transects were established near Imuruk Lake in what is now the Bering Land Bridge National Park to monitor the recovery of vegetation and soils following one of the tundra fires. With assistance from the National Park Service and guidance from the original investigator—Dr. Charles Racine of the Army Cold Regions Research and Engineering Lab—the transects were relocated and resampled in 2001. Vegetation and permafrost depths are being compared to results from previous stages of recovery.

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For additional information on the National Fire Plan, visit www.fireplan.gov