Snapshots 2003

December 19

Colorado

Old Style Methods Still Work

Pinyon-Juniper woodlands around Canon City, Colorado have been heavily damaged in the past three years by a combination of beetle infestation and long term drought. As a result, between 15 and 30 percent of pinyon trees in the stand have died.

South of Canon City, private land is rapidly being developed for small lot, residential use. The expanding subdivisions are immediately adjacent to lands administered by BLM. Access to the area is limited to a single road across private land currently being developed. Typically, a fuels project might have been implemented in the area to reduce volumes of fuel that threaten the private lands. Because of the private access, a different approach was necessary to limit the amount of traffic across private lands, deal with the dead fuel load and produce a positive benefit to the Bureau.

Because access is so limited, the Royal Gorge Field Office elected to utilize inmate crews from the state prison located near by to cut standing dead trees. After the trees were cut, an Amish logger who had recently relocated to the area was contracted to haul the trees to the nearby road so that they could be removed. The skidding of trees was done the old fashioned way, with a horse. Use of the horse minimized the disturbance to the area, already subject to heavy erosion. It also eliminated the need for off road travel.

Hot and dusty work, the horses were changed out after five hours per day while the men worked ten hours. The hillside represents the condition of much of the stand.

The pinyon were "decked" along both sides of the road for later removal as firewood. Two cord permits were issued to the public, first come, first served.

Once the trees had been moved to the road, the wood was made available for removal by the public on a first come, first serve basis. Free-use permits were issued to those interested after a public announcement was made. A story in the local paper highlighting the use of the horse logger had already resulted in a lot of local interest in the project. Demand for permits was high and all wood was removed in two weekends, with the permission of the private landowner.

Members of the public have been highly complimentary about the project. They were especially pleased that the BLM had acted to remove the dead trees adjacent to private lands,

and that the Amish horse logger was chosen to remove the trees to the road. Making the wood available to the public was well received.

Additional work remains to be done on other nearby BLM lands and more conventional projects are in development in locations where access isn't an issue. Work also needs to be completed on the private lands and BLM will continue to work to get as much of this accomplished as possible.

Contact: Paul Trentzsch, (719) 269-8528

Some of the trees were limbed prior to removal, but most were not. Horses were used to thin dead trees from 50 acres, making as many as 175 trips per day per horse hauling trees to the road.

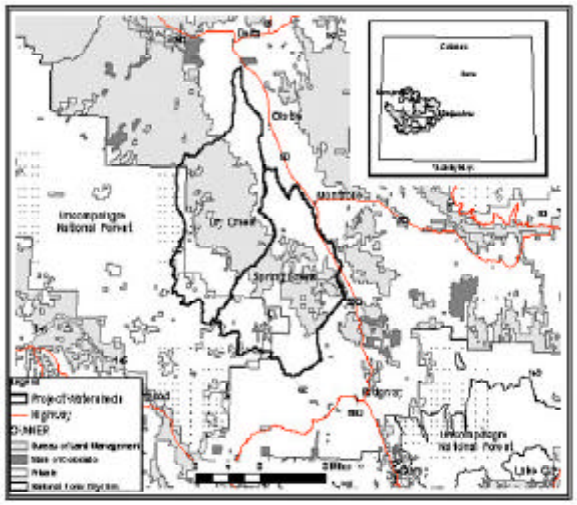
Uncompahgre Plateau Partners

BLM's Uncompahgre Field Office completed an environmental assessment for the Dry Creek-Spring Creek Vegetation Management Strategy in October this year. On November 7, 2003, the Uncompahgre Plateau Project staff conducted a public field trip to view a flagged site for a flail treatment along Western Area Power Administration's 345 kV line and Tri State Power's 115 kV power line. This plan and treatment project represent a major milestone for the partners as the first collaborative plan and on-the-ground treatment accomplished under the auspices of Uncompahgre project.

The project partners are a coalition of the Bureau of Land Management, US Forest Service, Colorado Division of Wildlife, and the Public Lands Partnership made up of citizens representing diverse interest groups from Ouray, Montrose, Delta, and San Miguel counties. The partnership was formed about three years ago to coordinate planning and management on roughly 1.5 million acres on the Uncompahgre Plateau. Other major partners such as the Western Area Power Administration and Tri State Power Company are coordinating efforts with the coalition.

The group initially focused on developing partnerships to leverage money for projects and research. They funded three fire research studies and a landscape health assessment as well as a native seed source initiative and numerous public outreach and education programs. The goal of 2003 was to jointly complete a plan and implement projects.

As a first step to implementing projects, 35 people representing federal, state, and local agencies as well as local interest groups prioritized more than 20 watersheds on the plateau. At the meeting, participants selected the Dry Creek and Spring Creek watersheds for analysis and planning.



The map shows the Dry Creek and Spring Creek watershed areas of analysis.

The criteria used for selecting these watersheds included the potential to improve conditions in areas previously treated, a high density of wintering mule deer combined with a low amount of good winter range, an opportunity to improve Gunnison sage grouse habitat, and a large number of wildland-urban interface areas – or areas with power lines, homes, or infrastructure developments.

Once the area of analysis was identified, the real work began. Specialists from all elements of the partnership worked together to create a coordinated, interagency plan to serve as a guide for planning at the watershed scale.

Based on research and watershed land health assessment data, the vegetation within the Dry Creek and Spring Creek watersheds appear to be out of balance with the normal range of variation for vegetation communities and the habitat needs of many native wildlife species. The current vegetation pattern increases the risk of uncontrollable wildfire, the spread of insects and tree disease, and declines in mule deer and Gunnison sage grouse populations. The watersheds seem to be subject to more erosion than is normal, and seem to be producing less diversity and abundance of vegetation than they should.

The Dry Creek-Spring Creek Vegetation Management Strategy was developed to remedy this imbalance, outlining the major vegetation changes that need to occur over the next ten to 15 years in the watersheds to reach ecological health and agency management objectives. In addition, the plan includes a monitoring and research component, and a mechanism to refine or alter planned actions based on new information.

The area of analysis consists of 255,712 acres, which includes 124,030 acres of private land, 92,976 acres of BLM, 38,340 acres of Forest Service, and 366 acres of State land managed by the Colorado Division of Wildlife.

Under this plan, approximately 14,000 acres of BLM land and 6,800 acres of forest service land will be treated over the next ten to 15 years. The plan proposes using a variety of vegetation treatment tools, including prescribed fire, mechanical treatment, seeding, chemical treatment, and protection from disturbance to allow some areas of vegetation to mature. This Vegetation Management Strategy is the first of several interagency, watershed-level plans intended within the project area.

Uncompahgre project field trip participants watch a demonstration of the fecon flail.

The intersection of the Western Area Power Administration and Tri State Power Company transmission lines on the Uncompahgre Plateau.v

The November 7 field trip was a showcase for the treatment area along the high voltage power lines to illustrate the importance of interagency planning, funding, and implementation. While the primary objective for the treatments to be conducted is to reduce the fire hazard along the power lines, the treatment was laid out to also accomplish objectives for wildlife and overall land health. The design of this and future work will enhance the aesthetic impact of the utility corridor treatments. There will be no "clearcuts" across the landscape. In addition, these treatments will be planned within a larger framework of vegetation management at the landscape scale aimed at restoring the health of the watershed.

Participants work together to establish priority for more than 20 watersheds on the plateau.

Contact: Amanda Clements, UFO Ecologist, (970) 240-5306 or Bruce Krickbaum, Southwest Fuels Team Planner (970) 240-5384.

A map and photos of the project area can be downloaded at: http://www.Upproject.org

County Mapping Project Aids Firefighters

Detailed computer maps that will help local fire-protection districts battle wildland blazes and aid landowners in reducing fire risks are nearly finished in Montezuma County. In 2000, the Colorado State Legislature passed a bill authorizing counties to develop fire-management plans as opposed to strict fire-suppression plans, and implement mapping programs that would mesh with wildfire maps done for public lands.

Using grant money from the Bureau of Land Management, Montezuma County has become one of the first counties on the Western Slope to finish its work, according to county mapping specialist James Dietrich. The county's "Polygon Project" is essentially complete, with only some technical tasks remaining in order to make the information available to local fire districts and the public.

The term "polygon," familiar to legions of geometry students, refers in this case to chunks of land that are designated according to their susceptibility to wildfire and their road access, Dietrich explained. Using data compiled by the county planning department, Dietrich has divided the entire county, except for public and tribal lands, into 86 polygons, each of which is given a designation from A to D.

"A" Polygons are those areas wildfire has the potential to cause great losses and result in high suppression costs. Polygons often contain wildland urban interface neighborhoods where

wildfire will threaten life and property. But, an A-Polygon may surround any value that fire is likely to seriously damage and where little can be done to make fire burn less dangerously.

"B" Polygons are areas where wildfire is viewed as undesirable under current fuel and drought conditions, but where fire could be part of a management plan once conditions change. Altering the wildland vegetation through thinning or prescribed fire can create conditions where fire is acceptable or desirable.

"C" Polygons include areas where fire is acceptable – even desirable – but where special concerns such as smoke may restrict how wildland fires are managed. Typically fire in these areas can benefit wildlife habitat or rangeland vegetation as well as contribute to ecosystem sustainability.

"D" Polygons are areas where wildland fire is acceptable or desirable and where the potential for damage is insignificant. In "D" Polygons fires that start may be managed to enhance natural resource and ecological values. Fires may be allowed to spread as they would naturally as long as they burn within a previously designated management area and meet other conditions. When they approach the limits of the management area or conditions make fire undesirable, they will be put out.

The county's "A" and "B" Polygons have each been named and analyzed according to slope, vegetation, and features such as buildings and roads. Dietrich will conduct a detailed analysis of the other polygons at a later date.

The maps are based on aerial photographs, the state database, and U.S. Geological Survey information. They are detailed enough that individual stands of trees can be discerned when the user zooms in with the computer.

Mesa Verde National Park will conduct similar mapping soon. The Forest Service and Bureau of Land Management have already mapped most of their lands.

Eventually, all the data will mesh seamlessly with maps of public lands and neighboring counties. The goal, Dietrich said, is for each fire district to have the information on disk, so that when a wildfire breaks out, firefighters with a laptop computer can see how best to reach remote areas, review information on slopes and vegetation, and evaluate how the fire will likely behave.

In addition, Montezuma County Fire Warden Sherman Kennell can use the information to decide which landowners he needs to contact regarding fire-risk reduction. Dietrich said that despite the ongoing drought and the bark-beetle infestation that has decimated pinyons, much of Montezuma County is not at critical risk for wildfire. "It's so chopped up with agricultural parcels and such, what you have is really a number of hot spots with areas between as fire breaks," he said. "If we can work on those hot spots, maybe we won't ever have a Missionary Ridge fire here."

Dietrich has been helping landowners in large subdivisions, such as the 139-lot Cedar Mesa Ranches subdivision near the Mesa Verde entrance, to use the maps to plan fire-mitigation work and develop evacuation routes. "We're trying to empower the community to do as much planning on their own as they can, and communicate those plans to the fire Districts", he said. The Cedar Mesa Subdivision Homeowners Association recently received a rural community assistance grant from the BLM that will help them complete planning for defensible space and set up defensible-space demonstration areas within the subdivision.

Although the mapping is largely complete, the data will have to be updated regularly as development continues to ensure it doesn't become static.

The information is not yet available on the Internet, but eventually it will be. In the meantime, anyone who wants to look at a particular polygon or receive fire-planning assistance for a subdivision can contact Dietrich at his office in the Montezuma County Courthouse, 565-8525.

Contact: James Dietrich or Mike Preston at 970-565-8525

Fire Council Formed in Southwest Colorado

One of the recommendations of the La Plata County Community Fire Plan, which was completed in 2002, was to develop a Fire Council. While fire chiefs and others talked about it, nothing happened until spring of 2003 when the Durango Fire & Rescue Authority hosted a National Firewise Workshop as part of Fire Prevention and Education Month in April. Almost 100 people attended the Workshop and over half of them lived in La Plata County. Deputy Chief Dan Noonan encouraged the group to think about harnessing their collective energy and enthusiasm and starting a Fire Council.

FireWise Southwest Colorado

The FireWise-Southwest Colorado Council logo.

The community-driven Council held a kick-off meeting in May and now meets monthly and is known as FireWise – Southwest Colorado. The purpose of the group is to help mitigate the threat of wildfire through education, advocacy, mitigation and implementing community projects.

The Council is supported by "Community Partners" who include the Colorado State Forest Service, San Juan Public Lands Center, La Plata County Planning Department, Durango Fire and Rescue Authority and other interested fire departments and fire-fighting entities in La Plata County, and the Office of Community Services at Fort Lewis College. The Community Partners attend meetings, serve on committees, and offer help, support and in-kind resources.

The meetings are open to all interested citizens and an e-mail tree also exists for those who want to stay informed on happenings of the group. The Council will be electing officers and finalizing by-laws in December.

The Council is divided into three interest areas: education-awareness, regulations-policy, and on-the-ground efforts. The education group has developed five "Wildfire Awareness" brochures that target not only homeowners, but also real estate and insurance professionals.

The on-the-ground group is investigating slash-disposal options, including working with Native American tribes in New Mexico to take some of the material, and other alternatives.

The policy group is looking at county efforts to promote better access, and building materials through regulations.

Contact: Pam Wilson, Fire Information Officer 970-385-1230 or Marsha Porter-Norton, Office of Community Services at 970-375-0753

Alaska

Research Furthers Goals for Fire Safety

Recent large wildfire events 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. Science plays a key role in helping to determine the most effective methods. The BLM Alaska Fire Service, working with a variety of cooperators, is engaged in several research projects to increase our knowledge about fire and its effects.

Fuels Reduction

Cleared fuel breaks or prescribed burns have been employed as fire safety measures, but sometimes less dramatic treatments are desirable for ecological, aesthetic, or engineering reasons. Alaska Fire Service and the Tanana Chiefs Conference began a three-year Fuels Treatment Demonstration Project in 2001, with funding of $93,000 from the national interagency Joint Fire Science Program. This study is intended to compare degrees of fuel reduction by thinning with

Student Conservation Association volunteer Jen Rhobak collects a duff sample for a study of soil characteristics and moisture content in Interior Alaska.

or without pruning in boreal black spruce with the resulting risk reduction, visual impact, environmental effects, and cost/benefit ratio.

Preliminary results after two years of monitoring the treated and control sites have demonstrated changes in live moss cover, shrub and seedling development, microclimate, permafrost and forest floor moistures. Attempts to predict change in fire behavior using the fire modeling program *BEHAVE* indicated tradeoffs between increased rates of spread due to higher average wind speed in thinned and pruned treatments but an increase in the fire intensity threshold required for sustaining crown fire.

Fire Management of Landscape

The University of Alaska-Fairbanks is leading an effort along with Alaska Fire Service, 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 granted funding of $442,000 for this project for 2002-2004. The goal is to build a 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 management and climatic change. The model utilizes physical, biological, and human thematic layers and simulates ecosystem dynamics specific to boreal forest that influence wildlife, hydrology, and soil processes. University field crews have been systematically sampling trees to establish stand age and fire regimes across interior Alaska in 2002-2003.

Fire Effects Research

The US Forest Service Pacific Northwest Research Station is determining how weather and fuel dryness affect the reduction in moss-duff forest floor 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. In June 2003, the Joint Fire Science board granted funding for a proposal by the research station, Alaska Fire Service, National Park Service and U.S. Fish and Wildlife Service entitled "Forest Floor Consumption and Smoke Characterization in Boreal Forested Fuelbed Types of Alaska." Fuel consumption data and smoke emissions data were collected on active wildfires and prescribed fires in June-August. The data will

Kristen Manies of the U.S. Geological Survey in Berkeley, Calif., flags a plot for a fire effects study after a prescribed fire near Fairbanks.

be used to develop forest floor fuel consumption models (i.e. how much bare soil is exposed by burns under various conditions) and to develop emission rate equations for boreal forest type. Due to the thick layer of moss and organic material in boreal forest, large quantities of pollutants can be released by fire, and this issue is only beginning to be realized thanks to ongoing research.

The National Aeronautics and Space Administration approved a proposal by Laura Bourgeau-Chavez of an Ann Arbor, Michigan company named Veridian Systems Division to fund a project entitled "Remotely monitoring plant and soil fuel moisture for wildfire danger assessment using satellite radar data." The proposal will study the relationship between Fire Weather Index and Alaska fire occurrence and soil moisture as detected by Synthetic Aperture Radar remote sensing satellite.

Monitoring Studies

Alaska Fire Service and BLM field offices have established long-term vegetation monitoring plots at the site of several prescribed fire or fuel treatment sites to look at vegetation changes which may impact land users and wildlife. Partners include the State of Alaska, Army Corps of Engineers and Tanacross Village Corporation. An interagency Fire Effects Task Group meets regularly to exchange information on fire research and monitoring studies and to look at means of standardizing some data collection on certain types of studies.

Contact: Randi Jandt, Alaska Fire Service, (907) 356-5864

A field crew from the Pacific Northwest Research Station conducts post fire monitoring near Tetlin.

Eastern States

As an encore to their successful 2002 season, BLM's Jackson Field Office renewed their successful partnership with Region IV of the US Fish and Wildlife Service for the primary purpose of fuel load reduction on National Wildlife Refuges across the southeastern U.S. for 2003. Through an Intra-Agency Agreement, the two fire modules, each with six to eight crew members, burned over 61,000 acres during the two prescribed fire seasons. After two great seasons, the Jackson hotshot crew plans to continue, and expand, their prescribed fire work in coming years.

Even though fire season has slowed down, construction on the Southeast Regional Fire Training Facility and home for the Jackson Hotshots continues. The complex is scheduled for completion early 2004. This project is the culmination of a partnership between BLM, the U.S. Forest Service and the Mississippi Forestry Commission.

Jackson Hotshots igniting a prescribed burn on a National Wildlife Refuge in Louisiana. The hotshots have burned more than 61,000 acres in the past 24 months.

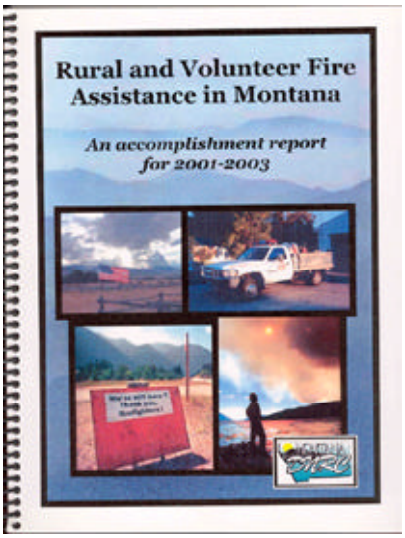
The Regional Fire Training facility will be used to as an interagency center to train fire crews in fire suppression and prescriptive fire use. Federal and state crews from all over the southeast are expected to benefit from this facility.

Contact Duane Winters (601) 977-5400

New sign at the Southeast Regional Fire Training Facility. The new complex is the result of a partnership between BLM, Forest Service and Mississippi Forestry Commission.

Montana

In football, there is a saying that the best defense is a strong offense. It is also recognized in all team sports, if you don't work as a team, you are bound to lose. The same is true in wildland firefighting. Rural fire departments provide a valuable role in initial attack on wildfires and it is essential that they be properly equipped and trained. To assist in providing the resources for training, equipment, and prevention efforts, Congress funded the Rural Fire Assistance and Volunteer Fire Assistance programs. The Departments of Agriculture and Interior both receive pass through grant funds intended to build local fire service prevention and suppression capabilities. To manage these valuable programs, Montana, North Dakota, and South Dakota have each organized interagency teams. Spearheaded by the State Forester's office in each state; local, state, and federal agencies come together to collaborate to identify local fire service needs which they prioritize. Federal funds are then allocated through the State Forester's office in the form of grants to help meet the local fire service needs.



Within each state there is one application and one application period, thus simplifying the process. All applications are mailed to the State Forester's office, where the interagency team assembles to evaluate, prioritize, and fund the grant requests.

"It's amazing how long we've saved money to build a truck of this nature… and now our dream of five to seven years down the road has come true!"- Fire Chief Jess Berry, McCone County, Montana.

Testimonies like this show the benefit of all agencies working together as a team. In Montana the grant dollars are pooled together and then allocated by county. The percent of agency jurisdiction within the county determines which agency dollars are used to fund projects. By pooling the grant monies together, the interagency team insures that every county in the state receives funds. The Montana Department of Natural Resources and Conservation has completed an accomplishment report that shows how the combined funds have been distributed. This report is available on the web at http:/www.dnrc.state.mt.us/forestry/dnrcfiresite/index.htm.

For more information about the VFA/RFA programs in Montana and the Dakotas, call Mike Dannenberg, BLM, at 406-896-2913 or Paula Rosenthal, MT-DNRC, at 406-542-4235.

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Private Landowners Reduce Fuels

In rural Fergus County of central Montana, hazardous fuel reduction on private land is gaining momentum. Fergus County Conservation District was an early participant in BLM's program, signing an Assistance Agreement in September 2001.

Initial progress during the first year was slow, as the Conservation District developed and refined its outreach and administrative processes for a hazardous fuel reduction cost-share program for private landowners. Many private landowners were at first cautious, concerned about the visual impacts of thinning and removing small trees and brush.

A big boost to the program occurred when the Conservation District contracted with a professional forester to complete assessments and develop hazardous fuel reduction plans for landowners on an as-needed basis. The forester also serves as an advisor to the Conservation District board, to ensure that bids for projects are priced appropriately for the work entailed.

The Conservation District board makes all decisions on which projects are approved and the level of support. Cost-share amounts can range as high as 90 percent. Once the board approves a project, the landowner signs a contract and has the work completed. All contracting is done through individual landowners choosing their own contractors. The landowner notifies the Conservation District when the work is completed, and the forester certifies that the project has been completed to the standards required. Upon certification, a check is issued to the landowner for the cost-share portion of the project.

Since the start of the project 327 acres have been completed or are under contract for completion. All but 11 acres of that total has been contracted since the professional forester was hired in September 2002. Parcel size has ranged from two to 20 acres, averaging four acres and spread among 29 contracts. The amount covered by the cost-share agreements has averaged $236 per

Rural Fergus County residence with defensible space. Small logs stacked for post and pole use.

(Above) Defensible space completed for recreational residence in rural Fergus County. (Below) Forest after thinning under Fergus County Conservation District cost-share agreement.

Adjacent unthinned forest. Note remnant large trees being crowded by regeneration.

Skidder with home-engineered "brush buster" at work.

Results of thinning with brush busting skidder.

acre. Eight more applications have been received and are pending approval.

Environmental benefits to the community include defensible space established around rural and intermix residences, and a reduction in unnatural tree density which reduces competition, improves tree growth and vigor, and reduces susceptibility to insects and drought-induced mortality. As an added benefit, many of these areas could now be safely maintained with prescribed fire for future treatments. BLM and Montana Department of Natural Resources and Conservation are discussing ways to cooperate to implement prescribed fire on private lands, with the goal of developing local capacity among rural fire districts or contractors.

Economic benefits to the community have also occurred. Some of the thinned material has been sold or used by landowners for firewood or posts and poles. One landowner and contractor has retrofitted his skidder with a self-engineered "brush busting" blade that allows mechanical harvest and piling of sub-merchantable material. He is now set up to pursue contracts on both federal and private land for hazardous fuel reduction.

For further information contact: Shannon Downey Iverson (406) 538-1989

BLM Central Montana Fire Management

Public Lands Day in South Dakota

This year's Public Lands Day event for the BLM South Dakota Field Office took place in the City of Lead, South Dakota. For Public Land Day activity, an area within the city limits adjacent to BLM land was chosen for fuels reduction. Along with members of the Lead Fire Department and BLM, about 80 volunteers spent the day reducing hazardous fuel by constructing hand piles and seeding piles that were had been burned the previous winter. The land is part of the Hearst Addition, and is owned by the city.

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Three groups of volunteers worked to hand pile construction and seed burned piles. The Fort Meade Fuels Module and the Lead City Fuel Reduction Crew used chainsaws to cut, limb and buck all the trees to be piled the week before. The volunteers needed only to pile the trees already cut into six foot high and wide piles. About 30 piles constructed by the volunteers will be burned by the Lead City Fuel Reduction Crew sometime this winter.

Large trees that were cut into firewood size pieces were set aside free for the public to pick up. Seeding piles consisted of sprinkling native grass seed by hand over the burned circle of an old pile. Volunteers also picked up trash in each area.

After the work was completed, lunch was provided to all workers and volunteers. Dianne Miller with South Dakota Project Learning Tree provided games and educational activities for some of the youngest volunteers.

Beautiful September weather helped to spark the enthusiasm and positive attitude of all the volunteers during the Public Lands Day event. South Dakota Field Office manager Marian Atkins and County Commissioner Terry Wiesenberg presented award certificates to the participants.

Removing hazardous fuel in this and other forested areas within Lead city limits is part of the Lead FireWise Program partially funded with National Fire Plan funds in cooperation with the BLM. Event coordinator Terry Chaplin was pleased with the community participation for the event and stated that this was an excellent opportunity for volunteers to work side by side with Federal, state and local agencies to make a difference, truly providing "Helping Hands for America's Lands." Other partners along with the City of Lead were Project Learning Tree, BLM, South Dakota State Wildland Fire Suppression, Eagles Club, County Commissioners and Mayor of Lead.

Public Land Day morning briefing in Lead, South Dakota city park.

Public Lands Day volunteers constructing hand piles in the community of Lead, South Dakota.

Volunteers of all ages helped with Public Lands Day.