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## Montana

### Our Changing Landscape and Lewis and Clark

Two hundred years ago Lewis and Clark and the Corps of Discovery traveled across Montana and the Dakotas in search for a water route to the Pacific Ocean. In celebration of that epic journey, organizers of the Lewis and Clark Bicentennial created an educational road show called the Corps of Discovery II which traveled the Lewis and Clark National Historic Trail. The Montana and Dakotas BLM Fuels Programs participated in this educational opportunity with a fire education display. Beginning in Bismarck, North Dakota, in October of 2004 and traveling west across Montana in 2005, the fire education program finished its Lewis and Clark adventure at Pompeys Pillar east of Billings, Montana on July 25, 2006.

This was 200 years to the day since William Clark carved his name into a sandstone pillar along the Yellowstone River in Montana. Unbeknownst to Clark, his graffiti would be the basis for a national monument established almost 200 years later and a four-day Lewis and Clark Bicentennial National Signature Event at Pompeys Pillar (called Clark on the Yellowstone and held July 22-25) which brought out an estimated 47,000 visitors.

Using the journals of the expedition, fire educators recreated an image of what the short-grass prairie looked like 200 years ago. These written accounts and historic photos (much more recent than Lewis and Clark's journey) enabled wildland fire educators to describe to today's visitors along the trail what Lewis and Clark may have seen in terms of



*Retired BLM employee, Pat Mullaney, talks fire prevention to two of the younger visitors.*

vegetation and enable visitors to contrast that with what they see today. Just as important as *how* the landscape has changed is *why* it has changed. Educators staffing the booth pointed out to visitors how homesteaders in eastern Montana had to survive on the land for five years and that the loss of one year's crops to wildfire could be catastrophic. BLM staff also assisted the Forest Service with a presentation on Native American use of fire.

Conducting wildfire education at the Pompeys Pillar event was especially timely because a week before the start of the event, wildfires in eastern Montana burned nearly 400,000 acres. Two of the fires, the Bundy Railroad Fire and the Pine Ridge Fire, burned 230,000 acres within sight of the Pillar. The Montana and Dakotas Fuels Programs created the traveling fire display for the Lewis and Clark events for a little over \$10,000. Staffed by

mitigation and education specialists, fuels specialists and some firefighters, the display attended eight different events across Montana and North Dakota. These combined events had a total estimated attendance of over 112,000 visitors.

## Wyoming

### Western Zone Wyoming Fire Crew Completes Sawyer Training

The Western Zone Wyoming Fire Crew recently completed their annual sawyer training on Prospect Mountain. The 20-member crew was joined in the training by 10 employees of the BLM Western Zone.

Rookie firefighters must first complete the three-day S-212, "Wildland Fire Power Saws" before they are allowed to participate in the training field day. The three classifications of felling a tree are:

- Proficiency in felling a tree at 8-inch Diameter at Breast Height (DBH);
- Proficiency in felling a tree at 8 to 12-inch Diameter at Breast Height (DBH); and,
- Proficiency in felling a tree at 12-inch or above Diameter at Breast Height (DBH) or complexity of the necessary certification.



*Karen Michaud talking to a visitor about BLM's prescribed fire program.*

Students are taught about bucking and limbing. These terms refer to the ability to recognize stress points, binds, and fractures that may create potential kickbacks once the tree is cut into more manageable pieces. “We want to keep everyone safe and aware of the hazards that come with felling a tree,” said LeRoy Evans, assistant engine module leader with the Western Zone.

Safety is paramount both in training and in actual fire suppression. “We teach the students every aspect of felling a tree. We have them size up the tree to determine if there are any hazards or circumstances such as snags, “widow makers,” and/or signs of disease on the ground (such as fungus or mold at or around the tree base). They also walk the lay of the tree (where the tree is expected to fall). Students must then determine their escape routes and safety zones,” added Evans.

The average tree cut is between 20 to 40 feet tall. After sizing the tree, students are then taught how to properly make the face cut – the initial cut that determines which way the tree will fall. The back cut is designed to create the spacing for the wedge that will help tip the tree. Once the tree is on the ground, the instructors will conduct a stump evaluation, although the training doesn’t stop there.

The Western Zone Wyoming Fire Crew policy calls for S-211- Wildland Fire Pumps, S-212, and their annual Fire Refresher Course. “Based on how the fire season shapes up, more courses may be added to their training regimen,” said Evans.

Serving as a wildland firefighter is challenging and rewarding work. If anyone is interested in being a wildland firefighter, contact Kyle Cowan, Fire Management Officer for the Western Zone BLM Wyoming at (307) 352-0217 or visit the BLM website at <http://www.fire.blm.gov/recruit.htm> or [www.usajobs.opm.gov](http://www.usajobs.opm.gov) for more information and career opportunities.



*Shane McCormick works on the face cut of a tree on Prospect Mountain.*



*Mike Wengert demonstrates the proper method to buck a downed tree.*

## Idaho

### Partnering to Create a Firewise Community

Limited firebreaks, high fuel loads, flat topography and arid climate make Atomic City, located 40 miles west of Idaho Falls, highly susceptible to fire. In 1997 and 1999 two major wildfires occurred near the town site of Atomic City. Realizing the potential disastrous effects wildfires pose, Bingham County identified the Atomic City fuels project as a crucial need in the Bingham County Community Wildfire Prevention Plan (CWPP).

This small community, consisting of 26 residents with limited resources, partnered with the BLM to devise a fuel reduction treatment and mitigation plan. In 2001, BLM contracted with Dynamac Corporation to assess the fire risk associated with Atomic City. Dynamac identified the town site as high risk, showing that a fuel break would be highly effective in reducing the risk of fire in the area.



*Mowing along the main ingress and egress routes, this John Deere tractor mower will be purchased by BLM for Atomic City to maintain this fuel break.*

To reduce the risk of wildfire in the wildland-urban interface, Atomic City and the BLM created an inexpensive and effective 120-acre fuel break around the city with funding from the Communities-at-Risk-Wildland-Urban Interface Program.

Located largely on private land, the fuel break is 50-100 feet wide and consists of planted alfalfa and crested wheatgrass. The mowed fuel break reduces the flammable grasses surrounding the city and creates firebreaks at specific locations around the town site. This reduces the risk wildfire poses to human life and property and decreases the chance of a wildfire spreading from private lands onto BLM lands. Atomic City's mayor, Lee

Mangum, cannot be more pleased with the outcome and quoted, "This has been a good cooperative effort between the city and BLM which will produce substantial mutual benefits. The BLM has always been fantastic to work with past and present."

The Atomic City fuel break project serves a two-fold purpose in reducing the catastrophic effects wildfire may have on the city and hindering noxious weed growth by reducing the ability of fire to spread invasive plant species seeds. Because the mowing and disking has minimal impact on the environment, it poses little threat to the animal species located in the area.

The city will purchase a tractor and mower and will become self-sufficient and have the materials necessary to maintain its own fuel break. Using this new equipment, the city will not need additional federal funding in the future to mitigate risk. With no irrigation available, the city will mow the fuel break during dry years and harvest the alfalfa and crested wheatgrass during wet years. "Due to this year's heavy spring rains, one resident has already harvested and used the crop to feed his horses," says Mangum.

"The fuel break is a great cost-effective way to help both the city and BLM. By reducing the risk of fire hazard, the cost of fire suppression should go down saving the BLM money as well as protecting the town," says Kevin Conran, Idaho Falls District Mitigation Specialist. "We hope to continue utilizing this program to help fund projects identified in other counties' CWPPs to reduce the risk of fire to communities."



*Atomic City Mayor, Lee Mangum, along with several other residents, plan to annually mow and harvest the 120-acre fuel break surrounding the town.*



*(Left) North edge of 50'-100' wide fuel break. (Below) East edge of fuel break separating the continuous sagebrush from main routes.*



## Boise District BLM Sponsors FIRE Up for Summer

The Boise District BLM recently teamed up with the Meridian School District and Northwest Nazarene University (NNU) to conduct the third annual FIRE-Up (Field Inquiry Research Experience) project, which took place in Garden Valley, Idaho during the month of June. The program is designed for high school students who want to earn high school science or transferable NNU college credits by collecting data and doing a research project.

Nineteen biology students from the Meridian School District participated in the program in 2006, which was designed to help students learn about wildland fire behavior, its effect on natural ecosystems, and what can be done to minimize rural communities' susceptibility to wildfire. Students collected data on vegetation and structures in the Mountain Shadow, Shilo, and Terrace Lakes Subdivisions and the BLM's Garden Mountain Project Area and mapped the area using GIS/GPS data. The students analyzed data about structures in the subdivisions using Red Zone software. The students also used Firemon to collect vegetation data in the project area.

Red Zone software is used to calculate wildfire risk for homes and communities by analyzing data about water source locations, vegetation in and around each structure, topography, access to the structure, type of building, construction materials, and fire response in the analyzed area. Students answer questions by doing an exterior assessment of the home. The Redzone software then calculates a hazard value and suggests specific mitigation measures a homeowner can take to decrease their hazard value.

The students presented their findings on June 30<sup>th</sup> at Northwest Nazarene University in Nampa, Idaho. The presentations were open to all Garden Valley residents, local educators, BLM employees, and anyone interested in the program. BLM employees will use the students' findings to give homeowners suggestions on improving their homes' resistance to wildfire as well as treatment options for fire-prone vegetation in and around the study areas, which will improve the community's resistance to wildfire.

*For more information, please contact: Bob Narus  
(208)384-3444*



*FIRE Up student notes fire hazard near homes.*



*Students measure depth of duff layer near homes.*



*Recording fuel density near Garden Valley, Idaho.*