Community Spotlight

Custer County Disaster and Emergency Services has teamed up with Eastern Montana jurisdictions, Rosebud, Powder River, Big Horn, and the Northern Cheyenne Tribe in mapping coal seams and identifying ways to mitigate potential fires.

What is a coal seam/fire? A coal seam is an underground coal vein that has the potential to be either ignited from a wildfire, or other source. Once it has been ignited it burns underground and may eventually surface, causing surrounding grasses to ignite.

In Eastern Montana, a total of 261,000 acres burned the summer of 2021. 201,000 of those acres were burned due to an existing coal seam. In the last 10 years almost 500,000 acres have burned from coal seams; 369,000 of those acres on private lands. This causes such a significant economical loss to the main contributing businesses in Eastern Montana; agriculture producers, local fire departments, private land owners, counties, state, federal, and tribal nations. In addition, they can also contribute to a large amount of green house gas emissions. By identifying these coal seams, we can help find a way to reduce these emissions to help the current climate crisis.

The project is mapping existing burning coal seams, using a plane outfitted with a Forward Looking InfraRed (FLIR) camera. The mapping has been proven effective with an 86% accuracy. The first part of a long term mitigation plan has been broken into phases: (1) Identify all burning coal seams in Eastern Montana, (2) inventory them into ArcGIS with a list of attributes that can show priority for each coal seam, such as location near infrastructure, and (3) overlay previous fire perimeter maps to show the heel of the fire from these locations. Once all the known locations are proofed, we will look at mitigation actions for each location based on the priority from the collected data.

Subsequent potential mitigation strategies for existing coal seams include; (1) Use heavy equipment to excavate the burning coal, (2) Create a defensible space zone around the coal seam by removing hazardous fuels, (3) Utilize ground sterilant to spray a perimeter around a burning coal seam to remove surface fuel. This project could save millions of dollars when you compare the amount of money that has already been spent fighting these wildland fires over the past 10 years.
Montana is updating the state’s Drought Management Plan (DMP) through an open and collaborative process led by the Department of Natural Resources and Conservation (DNRC). A Drought Task Force comprised of the key state agencies that make up the Governor’s Drought and Water Supply Advisory Committee is providing guidance through the process. The Task Force includes the Montana Departments of: Military Affairs – Emergency Services, Agriculture, Livestock, Commerce, Environmental Quality, and Fish, Wildlife and Parks. The update will include insights from Regional Stakeholder Groups that represent each of Montana’s seven climate divisions to ensure that local perspectives and public input will be incorporated into the plan. Federal, tribal, and university partners in drought sciences will contribute their expertise to the planning process.

The current DMP was developed in 1995. Since then, advances in technology have revolutionized how drought is detected, quantified, and addressed and how information is disseminated. Meanwhile, drought management has become increasingly complex as the demand for water within the state has grown and climate change has impacted the magnitude and timing of water availability.

The goals of the update are to:

1. Develop a modern, progressive state plan that improves and formalizes drought preparedness, monitoring, and response.
2. Evaluate and summarize information on water supply, including past droughts and impacts, current hydrologic patterns, and predicted future conditions.
3. Integrate robust input from stakeholders and agency partners to ensure the plan is accessible, engaging, and actionable for a broad audience.
4. Identify and document the operational and administrative framework for drought management and response in Montana. The plan will review and update all phases of drought management including, drought monitoring and reporting, communication and outreach, adaptation strategies, and drought emergency response.
5. Identify and develop recommendations for statewide policies and programs.

Please visit the DNRC’s new Montana Drought Plan Information HUB mtdroughtinfo.org to learn more about this multi-agency, stakeholder-driven effort to make Montana more drought resilient, and find out how you can participate in the process.