

there may be moments when you are unable to evacuate any livestock, the following are additional best practices:

- Establish “safe areas” for your livestock to shelter in place. This can include green or irrigated land, preburned areas, or open areas with no tree coverage.
- Create a fire barrier using tractors or equipment.
- Tag or mark all of your animals with the proper identification so you can identify them later when it is safe for you to return to the area.
- Maintain adequate livestock records.
- Make fresh water available beforehand, if time allows.

Postfire

Once you and your animals are at a safe location or the danger of nearby fires have passed, evaluate and monitor your livestock for any signs of respiratory distress, heat stroke, burns, etc. Report any concerns to your herd veterinarian. Discard any contaminated feed and clean out any contaminated water troughs as well. Lastly, photograph and inventory any losses and/or recovery costs for submission to your insurance company.



Further Reading

Herman, J. 2022. “Effects of Wildfire Smoke on Cattle: What Research Is Out There?” Beef Quality Assurance. <https://www.bqa.org/about-us/newsroom/effects-of-wildfire-smoke-on-cattle-what-research-is-out-there>.

Macon, D., K. Low, R. Busch, and T. Schohr. n.d. “Keeping Livestock Safe and Healthy During Wildfires.” University of California Agriculture and Natural Resources (Fire Network). 2 p. <https://ucanr.edu/sites/default/files/2024-01/blog104190.pdf>.

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MANAGING LIVESTOCK DURING WILDFIRE SEASON



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Table 1. Air Quality Index (AQI) and concerns. Asterisk indicates use of [AirNow.gov](https://www.airnow.gov) for AQI standards.

	AQI*	Quality/Health Concerns
Good (Green)	0–50	None
Moderate (Yellow)	51–100	Mild respiratory effects (coughing)
Unhealthy for Sensitive Groups (Orange)	101–150	Runny noses/eyes possible. Reduce moderate to intense exercise.
Unhealthy (Red)	151–200	Respiratory damage can start to occur. Limit all activity.
Very Unhealthy (Purple)	201–300	Panting, open-mouthed breathing may occur.
Hazardous (Maroon)	301–500	Severe respiratory distress. Emergency conditions.

Before Fire Season

WHEN WILDFIRE SEASON APPROACHES, effective livestock safety and management become especially important. Although fire season can be intimidating, preparing ahead of time makes all the difference. It will help you stay focused and sharp so that you can make the best decisions in disastrous conditions whose volatility often requires rapid responses.

Before the fire season begins, establish wildfire-response best practices. The following are just a few:

- Develop an Emergency Response Plan (ERP)
 - » Ready trucks/trailers when fires begin for quick evacuation
 - » Set priorities. In an evacuation event, what will be moved first
 - » Know where livestock will be transported to during an evacuation

- Make sure all animals have proper identification (brand, tag, neck chain, etc.)
- Update livestock and inventory records
- Review insurance policies and requirements

The ERP

An ERP is an important resource when preparing for wildfire season. Establish your plan with guidance from your herd veterinarian or Extension educator to ensure that it will be comprehensive. Identify and develop the following information and materials:

- Emergency contacts, like local authorities, employees, neighbors, anyone who can provide transport help or gather livestock in an emergency.
- An evacuation plan, including how long it will take to hook up trailers, gather animals, load, etc.
- The evacuation “danger zone.” Identify what conditions denote that evacuation is necessary versus those that suggest it is safe enough to wait it out. Note, however, that it is always better to evacuate before a wildfire reaches the danger zone so that you and your animals have time to safely evacuate.
- An emergency kit packed and ready that includes human and livestock first-aid supplies; halters; ropes; and herding equipment, such as flags and paddles.



Respiratory Effects

One common area of concern for livestock producers during wildfire season is the health of their livestock. Various signs of respiratory distress to watch for in cattle and other livestock include the following:

- Coughing
- Fast/Heavy breathing or panting
- Discharge from nose or eyes
- Disorientation
- Stumbling

Although the creation of smoke cannot always be prevented, there are ways producers can help to decrease the amount of respiratory stress on their animals. The first is to reduce excessive exercise or movement by postponing any stressful activities such as vaccinating, weaning, or branding until the air quality improves (under 151 ppm, see Table 1). The second involves water availability. One of the most crucial factors for cattle during fire season is **water**. It is **essential** that livestock have access to fresh, clean water **at all times**. This helps the immune system to process any smoke inhalation particles, to keep airways moist and clear, and to minimize heat effects. Although water may not always be available during emergency situations, it is important that livestock have access to it as soon as they are relocated to a safe area.

When You Cannot Evacuate a Herd

At some point in a fire emergency, you might need to decide whether to go forward with your ERP or leave your livestock behind. Because human safety is the most important aspect and