

## **GRAZING ON PASTURE FOLLOWING FLOODING**

Casey Matney, Rangeland Extension Specialist, Peaks & Plains Region

Having a flood push its way through your pasture can bring a lot of change. Before releasing cattle or livestock into a pasture following a flood, there are a number of things to consider.

### **Wait to Let Animals in the Pasture**

Before letting animals into a pasture, you will want to make sure that all standing water has receded, including puddles and water caught in depressions. You do not want animals drinking or walking around in contaminated water. After the water has receded and the land is dry, it may be advisable to wait approximately 30 days or so to allow the vegetation to regrow and any chemicals or waste accumulated on plants to dissipate. During this time, you can stay busy by clearing the pasture of debris and hazards as well as checking fence. If a portion of your pasture is going to remain inundated by water for a long period of time and your animals still need a place to be, you may want to consider putting up a temporary fence to allow some use of the dry pasture but while also keeping the animals safe from the wet portions. Keeping animals off of wet soil will not only protect your animals but will also benefit your pasture, since allowing animals access to wet pastures can often result in pugging and compaction of the soil. Pugging and compaction of soil often has long-term complications for a pasture.

### **Debris and Hazards**

With flood waters come debris, of every shape, size, and material. You will want to survey your pasture and remove anything that could pose a structural or biological hazard to your animals. Not only could you have things like pieces of metal, wire fencing, electrical wire, boards with nails, pipe, plastic, foam, appliances, trees, and woody debris come downstream with the flood water but the water could have also brought down things like gas cans, propane tanks, batteries, biological waste, garbage, and even dead fish, birds, and animals. Here is a link to a document that discusses the proper Management and Disposal of Flood Debris <http://www.nchd.org/Downloads/EH/Flood%20debris%20guidance.pdf> Make sure you wear proper safety equipment while clearing your pasture. If you have questions in NE Colorado about potential health concerns, you can also call the NE Colorado Health Department.

### **Vaccinations**

Before entering a flood impacted area, you will want to make sure that you, your pets, and your livestock have the proper vaccinations. Your local health department will be able to recommend the vaccinations you will need. It would be a good idea to contact a veterinarian to make sure your animals are protected.

### **Fences**

Your fences may be gone, or they might need work. You will want to survey your fence line and make sure your fence is secure and safe before moving animals into your pasture. Make sure you wear proper safety equipment while working with the fence.

### **Drinking Water for Animals**

Don't put animals out into a pasture unless you can provide clean drinking water. Don't allow animals to drink flood waters or water contaminated by the flood. Any standing water affected by the flood should be considered contaminated. If your stock tanks are maintained by a well, you will want to test your well to make sure it is safe

to be used for your animals. If you think your well has been affected by the flood and want to know what to do, here is a link to a document that tells you what to do

<http://www.nchd.org/Downloads/EH/Wells%20Contaminated%20by%20Flood%20Waters.pdf>

#### Livestock Exposed to Flood Water or Grazing on Flood Affected Lands

If you put out livestock on land that was affected by the flood and those animals become sick or die, then remove the surviving animals off of the flood affected land and have a veterinarian examine them. Don't move or touch the dead animals until you have talked to a veterinarian.

For more information about livestock health issues related to flooding, please review the article by Michael Fisher titled "Livestock Health Following Floods."

#### Pugging or Compacted Soils During or Following Flooding

Pugging is what happens when livestock walk on wet/muddy soil and leave large and deep footprints in the soil. Pugging can kill plants and compact soil. It also leaves large depressions in the soil that affects nutrient capture and rainfall infiltration. Soil compaction occurs when wet or damp soil is walked on by animals. Compaction isn't a primary concern on the sandiest of soils, but soils with silt and clay are largely affected by compaction. With compaction, pore spaces in the soil that allow water and air movement in the soil are squashed by the weight of animal traffic, and as the soil dries, the soil remains molded in this squashed state. These compacted soils have a reduced capacity for allowing water to infiltrate and less pore space means less ability to hold water for plants. In addition, compacted soils become more dense and can become more difficult for plant roots to penetrate and grow.

If your soils have become severely damaged by pugging and/or compaction, you may want to consider aerating the soil with machinery or doing soil modification by disking or other methods. The methods used should be tailored to your unique situation. Consider contacting your local Extension or NRCS office to try and determine what options you have available to improve compacted soils. Soil treatments are often coupled with the seeding of desirable plants.

#### Sediment Deposition and Erosion

Areas in a flood zone are often subject to the deposition of sediment carried down by stream flow. This can cover the area of pasture nearest the stream or river during a flood with sand, silt, and clay. Often, after a few weeks, existing vegetation can grow up through this sediment, but in some instances the sediments can be too deep and they can restrict plant growth. Sometimes this sediment is carried down along with the seed of weeds or undesirable plants. Additionally, cottonwood and willow branches may be carried down and deposited in sediments. Often, these plant parts may begin to sprout and initiate plant growth to start new plants. These areas of deposition should be closely monitored for weeds during the growing season – taking management actions if undesirable plants begin to grow. Lastly, areas of deposition or erosion should be seeded with desirable plants this fall. Seeding this fall will maximize the chances of maintaining desirable vegetation in the pasture, while limiting the chances of leaving areas for weeds to establish.