

With recent concerns about water quality in the Western United States, and especially in Montana, I thought I'd discuss some common definitions and how we determine if we are not only in compliance with pertinent rules, but being good stewards of water resources. I began to wonder more about this as I watched recent hearings in Washington D.C. regarding the Clean Water Act. The legislation goes back to the Federal Water Pollution Control Amendments of 1972 and the Clean Water Act of 1977 (the entire bundle of legislation is usually referred to as CWA); subsequent acts were put in place to regulate point source pollution.

The two types of pollution recognized today are point source and non-point source pollution. Point source pollution is a single, identifiable source of pollution, such as a discharge pipe from a waste water treatment or industrial facility. Sources that were identified as point source pollution may not discharge pollutants to surface waters without a permit from the National Pollutant Discharge Elimination System (NPDES), administered in Montana by the Department of Environmental Quality as the MPDES. Nonpoint sources of pollution include the collective impact of run-off from: animal feeding operations (such as feedlots), farms, parking lots, roads, lawns, and many other land uses.

In Montana, the state focuses on both surface water and ground water protection. Any pollution that is discharged into either one is regulated. Waters of Montana are briefly defined as any water above or below the ground, except that which is specifically contained in an engineered structure such as a lagoon at a waste water treatment plant or on an animal feeding operation.

Animal feeding operations (AFOs) are defined as any operation where animals are confined for 45 days or more per year (does not need to be consecutive) in an area that does not support vegetation, where feed is brought to them. A confined animal feeding operation (CAFO) meets the previous definition and a size threshold. The threshold for CAFOs is 1000 animal units; for some common commodities, this equals 1000 beef cattle, 700 mature dairy cattle or 2,500 swine over 55lbs. Most small operations do not qualify; however, the Clean Water Act still applies to everyone. This means that small land owners with few animals are still regulated under the Clean Water Act. In Montana, the Department of Environmental Quality (DEQ) investigates complaints and may designate any facility a CAFO if the "operation is found to be a significant contributor of pollutants."

There are some simple guidelines you can follow to reduce your liability. First, keep basic records of your operation including: manure tests, soil tests, and fertilizer records. Second, stay informed in your area as to what work the DEQ is currently doing. And third, attend a Water Quality for Small Acreage course. We are considering such a course here in Teton County.

A collection of small and medium sized acreages with livestock in a watershed can have significant impact on water quality. When viewed as a collective area, stocking rates may far exceed that of large commercial livestock operations. Though smaller and non-commercial herds and flocks are not often covered by specific rules and regulations, Montana and Federal law broadly states that no one can pollute waters of the state or nation. As part of being a good neighbor in Montana, here are some basic recommendations to protect water and conserve soil:

- Do not allow livestock to have direct contact with surface water and environmentally sensitive areas like wetlands. Instead, water from troughs or tubs on higher ground; fence out these areas leaving appropriate buffers.
- Scatter manure in small pastures for better distribution of nutrients and organic matter, and to expose possible pathogens or parasites to sunlight.
- Collect manure from pens, paddocks and stalls. Redistribute to pastures, crop land, gardens or export from property. Composting could be considered to reduce volume.
- Minimize manure run-off and soil erosion from pastures, pens, paddocks and corrals.
- Do not store manure piles or compost in flood plains, near wells or over very shallow ground water. Store on higher ground, preferably on soil with clay content.

- Create a conservation plan that addresses stocking rates, pasture management, manure management, land application of manure and fertilizers, and protection of water resources and riparian areas.

Proper manure and feed bunk management can also reduce odors, maintaining quality of life for the land owner and neighbors. Dispose of spoiled and spilled feed, and as previously recommended, store collected manure on higher dry ground. Keeping barns, corrals and paddocks clean will also help reduce nuisances like flies and parasites.

Who can help? There are several agencies and organizations that are currently helping producers. Some groups, like Extension, NRCS, and watershed groups are a good source of information. Other groups may offer grants or funding for improvements.

For more information on small acreages and water quality, please contact me at the Teton County Extension office at 466-2491, or Tommy Bass, MSU Livestock Environmental Extension Specialist, at 994-5733. I'm grateful to Tommy who helped in the review and writing of this article.