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Federal Environmental Regulations and Horse Farms

By Alayne Blicke • Feb 05, 2015 • Article #35282



Photo: Erica Larson, News Editor

[deck] The Environmental Protection Agency might not come knocking on your barn door anytime soon, but that's no reason not to practice environmentally friendly horse stewardship[/deck]

Regardless of whether you keep two horses or 20 at your farm, their grazing, stomping, and pooping is bound to impact the land at some point. But exactly what effect does your equine family—and your

facility as a whole—have on the environment? And do federal environmental regulations apply to you? If you operate on a small scale, probably not, but let's take closer look.

[pullquote source="Kelly Shenk"]Horse farms are generally small, so they fly under the (EPA's) radar."[/pullquote]

What kinds of things on horse properties might the government regulate? For one, “discharges (of manure) or land applications of manure as fertilizer,” says California-based environmental engineer Michael Beerends, of Conestoga-Rovers & Associates. Beerends, who aims to find agriculture and food-waste solutions for businesses, has helped several large racetracks and horse facilities comply with state and federal regulations. “Facilities need to eliminate discharges from their property if precipitation has contacted manured areas,” he says.

[sidebar type="text" width="half" title="Keep Your Property Ground- and Surface-Water Friendly" byline="Alayne Blickle"]

Here are some simple practices that horse facility owners can implement to keep properties and horses healthy and reduce the chances of contaminated runoff reaching surface waters.

1. Attach rain gutters to and install roof runoff systems in all barns, sheds, and outbuildings, and divert the clean rainwater away from high-traffic areas. This will reduce the amount of nutrients and sediments washed into the surface waters. This also offers the added benefit of substantially reducing the amount of mud in sacrifice areas.

2. Cross-fence pastures and rotate horses between them to avoid overgrazing fields and compacting soils. Horses are particularly hard on pasture; pounding hooves compact the soil and suffocate plant roots. Pasture grass needs at least three inches of leafy material for rapid regrowth and biofiltration of nutrients and sediments. Soil compaction makes water filtration and plant growth very difficult. Poor pasture management results in reduced grass quality and quantity, soil erosion, nitrogen runoff, increased weed growth, and increased feed costs.

3. In the winter keep horses off saturated and rain-soaked soils and dormant or frozen grasses to promote a healthy pasture next summer. Soggy soils and dormant plants simply cannot survive continuous grazing and trampling in winter months. In addition, when soil is wet, horse hooves act like plungers by loosening fine particles of topsoil that the rain then washes away.

4. Create and use a paddock or sacrifice area to keep your horses from damaging the pastures as described. This area should be on higher ground and away from creeks, wetlands, ponds, or other bodies of water. This also confines waste to an area that you can surround with a grassy strip or pasture to act as a filter for contaminated runoff. Using hogfuel (wood chips), sand, or crushed rock in sacrifice areas will help cut down on mud problems.

5. Cover manure storage facilities to prevent rainwater from leaching nitrogen from the

manure pile and carrying it to waterways. The material used to cover your manure pile can be as simple as a tarp or sheet of plastic. In the late spring and summer, when temperatures are high and the ground is no longer soggy, you can apply the manure as a soil amendment to your growing grasses.

6. Keep fill, especially manure and garbage, out of wetlands and wet meadows.

These areas serve as natural filters for water moving into our streams and groundwater supply. They cannot function properly when they are clogged with debris.

7. Fence off streams, lakes, wetlands, and other water bodies to limit livestock access. The direct input of horse waste and sediment degrades water quality and destroys the aquatic environment. Horses and other livestock tend to trample streamside vegetation, such as trees and undergrowth that are also natural filters. Streamside vegetation also helps prevent soil erosion and provides food and shelter for fish and other aquatic wildlife. Additionally, trees provide an overhead canopy that keeps water cool. Destroying these natural elements can create a toxic environment for fish and other stream life because the resulting warm water carries less beneficial oxygen than cool water does.[/sidebar]

A discharge is any kind of contaminated runoff. For example, “Heavy rains across a property could wash bacteria and nutrients contained within manure off the property,” explains Beerends. Runoff from livestock manure reaching streams and wetlands (surface water) can seriously damage the environment. Sediments cloud the water, and nutrients can disrupt vegetation growth. This reduces water quality, turning once healthy bodies of water into environments in which fish and other aquatic life cannot thrive. Bacteria from manure can also make waters unsafe for recreation and can contaminate shellfish harvested for human consumption. Even if you don’t have a stream or other body of water on your property, contaminated runoff from manure and soil erosion can still make its way into a local lake, creek, or even drinking water.

“The same applies for groundwater,” says Beerends. “Accumulations of manure could potentially affect groundwater, which would also be a concern. However, if facilities are managed properly, there should be little to no impact on surface or groundwater,” he adds.

Poor land management practices can damage the environment in ways beyond water contamination, such as stream bank and slope erosion, overgrazed pastures, soil compaction, and weed invasion—all damage that federal and even local statutes are designed to control on farms of a certain size. But what or who defines that size? Does the government actually regulate these types of land management practices on the average horse-keeping property, from a backyard horse facility to a boarding farm?

The Environmental Protection Agency, or EPA as it's more commonly known, is headquartered in Washington, D.C., and is the federal agency charged with overseeing the protection of human health and the environment. Horse properties are subject to federal regulations covered in the 1972 Clean Water Act, which was designed to keep our country's waters safe and clean. Under the Clean Water Act the EPA regulates animal feeding operations (those where animals are kept and raised in confined situations, without grazing) that can potentially discharge into U.S. waters under the National Pollutant Discharge Elimination System's Concentrated Animal Feeding Operation (NPDES CAFO) regulations. These regulations' purpose is to keep things such as bacteria and sediments from manure or other nutrient sources, such as feed or bedding, from running into creeks, wetlands, ditches, lakes, or other bodies of water.

Whether the EPA would regulate a large equine facility depends on how many horses are managed on the property, whether they have pasture access, and whether there is a leachate (water that extracts solutes from other matter as it passes through it) discharge off the property from manure or other nutrient sources.

"If a horse facility confines and feeds 500 or more horses for 45 days or more in any 12-month period in an area without vegetation, it would need to either prevent any polluted runoff from reaching a river, stream, or lake or apply for a CAFO (Confined Animal Feeding Operation) permit," explains Kelly Shenk, the head of EPA's CAFO permit program. Very large horse facilities such as some race tracks or show grounds might fall under this category.

"An NPDES CAFO permit requires that the facility implement a nutrient management plan which includes practices sufficient to protect water quality," Shenk says. "In general, NPDES CAFO regulations pertain to animal feeding operations above certain size thresholds that can impact water quality. Horse farms are generally under this size."

Beerends agrees: "Horse farms are generally small, so they fly under the radar. There still are management procedures they should be doing—they just aren't going to require permitting."

[sidebar type="text" width="full" title="Finding Local Assistance" byline="Alayne Blicke"]

Many agencies and organizations work with rural landowners and livestock owners, providing education and technical assistance on land management practices. Agency names vary greatly from state to state, but they generally fall under these categories:

Natural Resource Conservation Service (NRCS) This federal agency is a part of the USDA that works with farmers and ranchers on issues relating to wise use of the natural

resources, such as crop management, irrigation, and manure management. Locate your nearest NRCS office with an Internet search using your county's name and "NRCS."

Conservation Districts (CDs) These divisions of state government work with farmers and livestock owners on natural resource issues, including pasture, manure, and mud management, as well as stream restoration and erosion control. Some of the free services your CD might offer include individualized farm plans, education, technical assistance, and native tree sales. Locate your nearest CD office with an Internet search using your county's name and "conservation district."

University Extension Your state's land grant university likely has an extension office in your county. Extension offers a wealth of information on topics ranging from pasture renovation to horse management. Extension offers many excellent educational handouts and bulletins at a low cost, as well as technical assistance and education. Locate your nearest extension office with an Internet search using the word "extension" and your county or state name.

Additional natural resource agencies to consider contacting:

- If waterways are involved (such as with flooding, permits for bridges, etc.) contact your state's Department of Ecology or Environmental Services;
- Most counties have weed control programs to help property owners identify and control noxious plants;
- State Department of Agriculture;
- State or county Department of Natural Resources.
- State or county Forest Service (might be listed under Department of Natural Resources); and
- State or national Department of Fish & Wildlife[/sidebar]

Best Environmental Practices for Farms

Just because you're not being regulated does not mean you can't still be a good environmental steward. Horse owners can take steps to control erosion such as fencing off streams and encouraging good grass growth in pastures. "It's all an expense, but as an industry, (horse owners) need to make those changes," Beerends says.

Fortunately, what's good for the environment also turns out to be good for the horse owner,

the horses, the property, and the community. Environmentally speaking, the golden rule for horse farms is to “keep clean rainwater clean.” Following this rule helps prevent nutrients and sediments from manure and mud from seeping into surface waters. It also reduces mud, dust, flies, and odors on your property and makes it easier to care for horses. Other environmental practices that can benefit you and your horses include maintaining healthy pastures, following a manure management plan, and creating vegetative buffers to help prevent erosion and act as filter strips for any runoff.

Keep in mind that some state or county regulations are stricter than the federal. “Each county may have its own permitting requirements, dependent on the size of the horse operation,” adds Beerends. “In California this is typically the case. In several instances California adopts stricter standards than federal requirements.”

“Researching this at the county level would be a good place to start,” suggests Beerends. “If regulations are complicated or you have a large facility, you can also contact an environmental consultant.”

Take-Home Message

The key to establishing and maintaining an environmentally sound horse facility is minimizing its equine impact. As horse owners, we need to be especially aware of how we affect the environment and take the necessary steps to minimize our impact; the end result will help preserve the land and way of life we enjoy.

Seek the advice of a qualified veterinarian before proceeding with any diagnosis, treatment, or therapy.

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