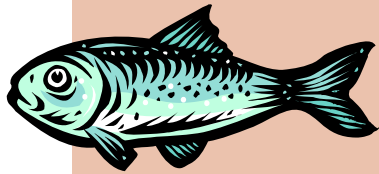


Animal Waste Problems

Did you know that the average horse (1000 pounds) will produce about 50 pounds of manure a day, and 8 to 10 tons per year? Manure must be handled in a way that it becomes an asset and a resource instead of a nuisance and pollutant.

Animal waste contributes to stream pollution when it is improperly stored or left uncovered. During rainfall, it is washed untreated into storm drains or directly into streams. Storm drains do not contain filters, so rainwater runs untreated through storm drains to the nearest stream or river.

Animal waste contains nutrients—phosphorus and nitrogen—as well as bacteria. The nutrients cause aquatic plants (algae) to increase rapidly which depletes oxygen in the water, killing stream life.



The high bacterial levels in the water can cause gastro-intestinal disorders and other medical problems for swimmers.

As these over-abundant aquatic plants die and because bacteria levels have increased, stream water starts to smell of decay.

Sediment is also a common pollutant washed from pastures and livestock facilities. It clogs the gills of fish, blocks light transmission and increases water temperature.

For more information about guidelines and Best Management Practices for Horsekeeping visit the following websites:

<http://www.nhhorsecouncil.com/bestpractice.htm>

http://www.cityofreno.com/gov/pub_works/stormwater/bmp/horse



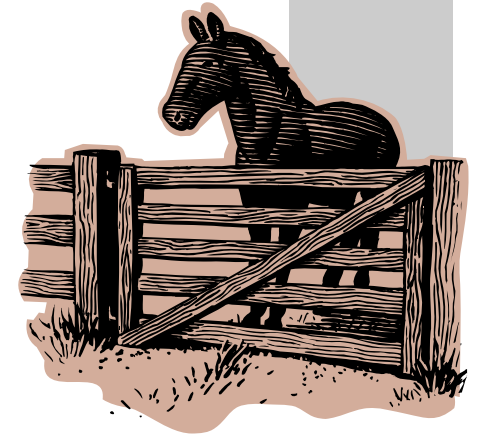
COUNTY OF JEFFERSON

Stormwater Management Program
PO Box 100
Hillsboro MO 63050
Phone: 636-797-6228
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Email: stormwater@jeffcomo.org

COUNTY OF JEFFERSON

Pollution Control Practices

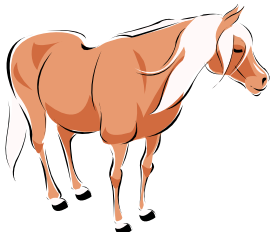
For Horse Owners and Small Farms



Stormwater Management Program
636-797-6228

Pollution Solutions

1. Cover your manure piles to protect manure storage piles from rainfall and surface runoff that enters lakes, ponds and wetlands and to reduce fly breeding and prevent well water contamination.
2. Site barns, corrals and other high-use areas on the portion of property that drains away from the nearest creek or stream.
3. Divert clean water away from your barnyard to minimize mud; prevent erosion; and reduce polluted runoff.
4. Install gutters that will divert runoff away from the livestock area.



Help keep water clean. Use your pollution solutions!

5. Design diversion terraces which drain into areas with sufficient vegetation to filter the flow.
6. Fence to keep horses out of lakes, ponds, streams and wetlands; and to promote healthy grass by subdividing grazing area to allow pasture rotation and rest.
7. Pick up manure daily from heavily used areas to store in a dry area or to compost.
8. Test pasture soils to save money and reduce pollution by not over-fertilizing; and maintain healthy grass to reduce erosion, mud and polluted runoff.

Collection and Storage of Manure

Manure should be picked up daily from the horse's stall and paddocks and placed in temporary or long-term storage units. Store in sturdy, insect resistant and seepage free units such as:

- Fly-tight wooden or concrete storage sheds
- Composters
- Pits or trenches lined with an impermeable layer

A storage about 12' x 12' x 5' will hold the manure for one horse for a year. A cement pad is advisable to prevent nitrogen build up over time.

Build grassy swales to help take care of potential run-off. This storage is a temporary solution.

Manure will need to be spread on cropland, composted, transported to topsoil companies or composting centers, or given away to greenhouses, nurseries or composting centers.

Pasture Management

- Confine animals in properly fenced areas except for exercise and grazing time.
- Corrals, stables and barns should be located on higher ground when possible and surrounded by pasture to act as a natural filtration system.
- Utilize fencing to keep horses away from environmentally sensitive areas and protect stream banks from contamination.
- Use manure and soiled bedding sparingly to fertilize pastures and croplands.

Grazing Management

- Establish healthy and vigorous pastures with at least 3 inches of leafy material present.
- Subdivide grazing areas into three or more units of equal size.
- Clip tall weeds and old grass to control weeds and stimulate grass regrowth.
- Rotate animals to clean pasture when grass is grazed down to 3-4 inches.
- Let pasture regrow to 8-10 inches before allowing regrazing.
- Keep animals away from wet fields when possible.
- During heavy rainfall, consider indoor feeding, a practice which keeps more manure under roof and away from runoff.

Chemical Controls

Use an Integrated Pest Management program for a long-term solution. Plan your IPM strategy in this order:

- Pheromone traps
- Tarps
- Bug Zappers
- Fly-Tight Storage Sheds

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