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Recreational Horse Trails and Water Quality Protection

Does equestrian use have an impact on stream and lake water quality? See [Horse Owners Guide to Water Quality Protection \(pdf 908 kb\)](#); and [Equestrian-Related Water Quality Best Management Practices \(pdf 123 kb\)](#)

By Dr. Gene W. Wood

Professor and Extension Trails Specialist, Clemson University

Water quality has become the most basic indicator of ecosystem health. Any decline in the quality of water is being taken as a symptom suggesting that the ecosystem is being degraded. Because recreational trail horses are large and tend to leave obvious traces in the form of manure and hoof prints, they are often suspected as culprits in water quality decline in wild and semi-wild (managed forests and rangelands) ecosystems.

Concerns about recreational trail horse impacts are often focused on manure left on trails and the possibilities for the spread on potentially pathogenic organisms to humans or wildlife. Typically, the greatest causes for concern in the United States have been focused on *Giardia* spp., *Cryptosporidium* spp., and fecal *Escherichia coli*. U.S. studies have shown that the first two organisms are rare in horse manure, and the third occurs in densities far lower those found naturally in many wild mammal species. Therefore, as a source of potentially pathogenic organisms that might degrade water quality, the trail horse is not an important concern.

A source of more likely legitimate concern is impacts on riparian areas and the siltation of streambeds. Both of these problems are caused primarily by improper trail design, construction, and maintenance. To the extent possible, trails should be kept out of riparian zones, and cross these zones with minimal disturbance. This usually means crossing at minimum zone widths and hardening the trail tread as is appropriate to preventing the development of quagmires.

Where trails have been constructed on slope fall lines, soil erosion by water is guaranteed. These soils typically end up in streambeds as silt, and could potentially adversely affect aquatic life. This problem can develop on any trail regardless of type of use, but among non-motorized uses, recreational trail horse use exacerbates the problem to a greater extent than any other activity.

No recreational trail user needs direct access to water at a level equal to that of the recreational trail horse user. Horses must have adequate water or they risk colic followed by death on the trail. How the horse is provided water or access to natural surface water requires considerable forethought in trail design, construction, and maintenance. The degradation of banks of streams, ponds and lakes can be a significant problem and must be carefully considered by the trail manager and rider.

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The activities of the horse once in the water also must be considered by both the manager and the rider. Horses that routinely defecate in water should have water brought to them. Horses that tend to paw at the stream bottom must be removed from the water immediately. Horses must not be ridden up and down the streambed. Some of these problems can be mitigated by hardening the approach to the stream and the stream bottom. Barricades on either side of the watering point will also prevent the occurrence of any traffic above or below the watering place or trail crossing.

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and [Equestrian-Related Water Quality Best Management Practices \(pdf 123 kb\)](#)

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