



Water, Water Everywhere

Water Harvesting

Water management is a major concern for equine operators, especially for those who get their water from wells and during times of drought. Water harvesting provides one possible solution to the challenges of having enough water for the farm while controlling water movement on the property.

Water harvesting is a system that collects, stores, and distributes rainwater to benefit the farm. Reducing soil erosion, protecting waterways from polluted runoff and reclaiming a valuable natural resource are but a few of the benefits of water harvesting. Water harvesting relieves the demands on increasingly limited and expensive potable water supplies.

The amount of rainfall that runs off a barn roof is substantial. One inch of rainfall produces 416 gallons of water per 1,000 square feet of roof area. The rush of water from a roof is capable of washing out foundations, damaging equipment, and creating gullies that threaten the safety of people and livestock. Rainwater flowing unimpeded from a roof moves large amounts of soil, manure and other contaminants into waterways, and threatens wildlife habitat and drinking water supplies.

The basic components of a water harvesting system include the barn roof, gutters, downspouts, roof washer (pre-filter), storage tank, pump, and an overflow outlet.

Rainwater runs from the roof into gutters and empties via downspouts into a roof washer. The roof washer is a filter that prevents bulk contaminants like dirt, bird droppings, leaves, twigs and nuts from entering the tank. The filtered rainwater flows into the storage tank, which is often installed underground to prevent freezing or above ground in areas with milder winters. A pump takes water from the storage tank for uses like dust control, pad washing, and pasture irrigation. Water collected for livestock to drink would need additional filtering and treatment to remove pathogens. An overflow pipe from the storage tank allows excess water to drain away in a controlled and less damaging way.

Planning for a water harvesting system requires careful observation and recordkeeping to track water consumption amounts and patterns. Contact your local Soil Conservation District office for advice and assistance in designing a water harvesting system for your operation.

For more information on horse manure management and other soil conservation and water quality practices, contact your local Soil Conservation District. For more information contact your local Soil Conservation District/ Natural Resources Conservation Service/ (SCD/ NRCS) office or county University of Maryland Extension office. Addresses and phone numbers can be found at www.mda.state.md.us/resource_conservation/technical_assistance/index.php, www.md.nrcs.usda.gov/contact/directory or extension.umd.edu or check the listing County Government for SCD/MCE or US Government, Department of Agriculture for NRCS of the phone book blue pages. The Horse Outreach Workgroup was established to provide information to horse owners on pasture and manure management issues. Technical assistance is available from local county Soil Conservation Districts/Natural Resource Conservation Service and the University of Maryland Extension office. The workgroup consists of representatives from local Soil Conservation Districts, Maryland Department of Agriculture, Natural Resource Conservation Service, University of Maryland, the Equiery, and the Maryland Horse Council. The Maryland Department of Agriculture's Office of Resource Conservation provides coordination for the workgroup. January 2010

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