

WATER HARVESTING



Water management is a major concern for equine operators, especially for those who get their water from wells and during droughts. 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 just a few 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 habitats 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

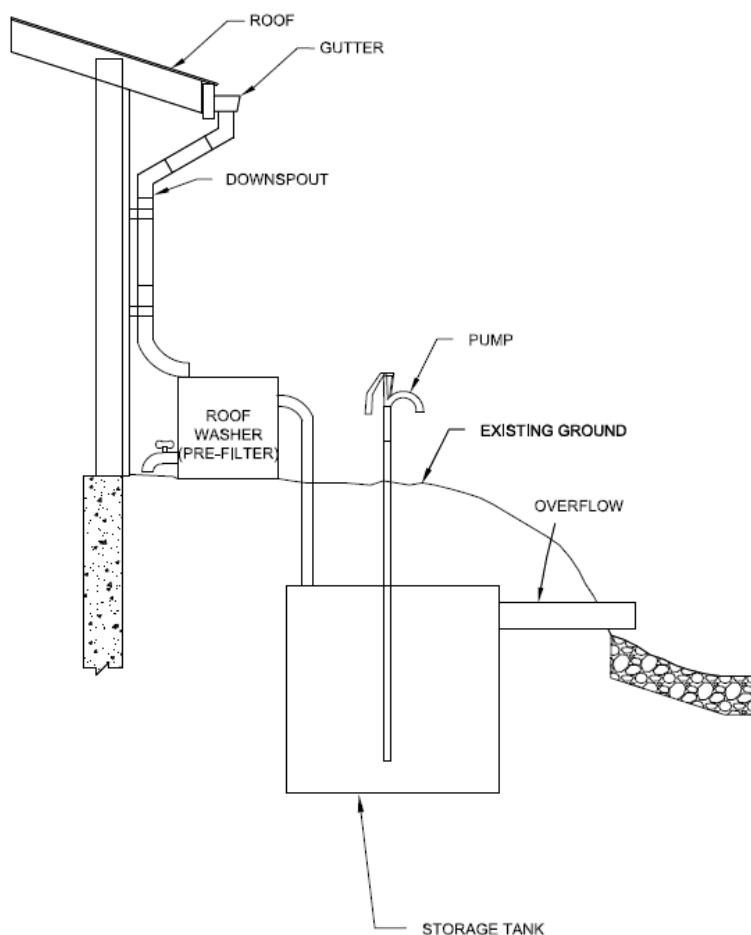
additional filtering and treatment to remove pathogens. An overflow pipe from the storage tank allows excess water to drain away in a controlled and less damaging way.

Planning for a water harvesting system requires careful observation and recordkeeping to track water consumption amounts and patterns.

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BASIC COMPONENTS OF A WATER HARVESTING SYSTEM



For more information on horse manure management and other soil conservation and water quality practices, contact your local Soil Conservation District. Addresses and phone numbers can be found through mda.maryland.gov/HOW.

The Horse Outreach Workgroup (HOW) provides information to horse owners on pasture and manure management. HOW consists of representatives from local Soil Conservation Districts, the Maryland Department of Agriculture, USDA Natural Resource Conservation Service, University of Maryland Extension, and the Maryland Horse Industry Board.

*Reviewed by: Eileen Beard, Maryland Department of Agriculture.
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