

Field Notes



Virginia Department of Health Releases Rainwater Harvesting Guidelines

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The Virginia Department of Health (VDH) released new [Rainwater Harvesting and Use Guidelines](#) (Guidelines) on March 31, 2011. VDH provides guidance but is not regulation; therefore, it directs readers to the Virginia Uniform Statewide Building Code (USBC) (see [Field Notes Vol. 19 No. 3](#)), and to the applicable Virginia regulations for regulatory authority. The reference to the USBC indicates that the Guidelines concur with the USBC's storage time limitation (24 hours for subsurface irrigation and 72 hours for the flushing of water closets and urinals). This is in conflict with the recent U.S. Environmental Protection Agency (EPA) Section 438 stormwater guidance (EPA Guidance) (see [Field Notes Vol. 18 No. 5](#)), Virginia's upcoming stormwater management regulations (see [Field Notes Vol. 19 No. 2](#)), and the Virginia Department of Conservation and Recreation's (DCR) Stormwater Design [Specification No. 6, Rainwater Harvesting](#).

Specifically, both the upcoming Virginia stormwater management regulations and the EPA Guidance aim to reduce the volume of stormwater discharges through infiltration, evapotranspiration, and rainwater harvesting. Similarly, Specification No. 6 (Version 1.9.5, March 1, 2011) states that, "rainwater harvesting systems can also have environmental and economic benefits beyond stormwater management (e.g., increased water conservation, **water supply during drought and mandatory municipal water supply restrictions**... etc)," indicating that DCR expects water to be stored well beyond 72 hours after a rainfall event. However, the USBC storage limitation will result in very small harvesting systems that will not significantly reduce the volume of stormwater runoff and will not have adequate water supply during storm events.

As an example, Wetland Studies and Solutions, Inc.'s (WSSI) 4,000 gallon interior cistern, which stores water for flushing toilets, has the capacity to store only 0.25 inches of water from the building roof - far less than the 1.7" reduction required by the EPA Guidance. The cistern, however, has never gone dry, even during the height of summer and drought conditions, due to the lack of demand for flush water. To use the water within 72 hours, WSSI would only be allowed to store approximately 500 gallons of water or 0.03" of water from the roof, based on 75 people each flushing 2 times per day at 1.1 gallons per flush. (WSSI's office also has waterless urinals, which do not flush any water.)

Rainwater harvesting is an important component in reducing the demand on both stormwater and potable water infrastructure. Industry professionals who are interested in incorporating rainwater harvesting in their projects should encourage

VDH to allow longer periods of water storage. VDH can be contacted at:

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