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DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENT


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TO: Local Health Departments
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Michigan Registered Water Well Drilling Contractors
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FROM: Michael S. Gaber, Chief 
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DATE: May 14, 2010

SUBJECT: Freezeproof Yard Hydrants

Recent amendments to the Michigan Plumbing Code, R 408.30701 to R 408.30785, by the Department of Energy, Labor and Economic Growth (DELEG) will change the criteria for freezeproof yard hydrant installations.

The Department of Natural Resources and Environment, Groundwater Division, is advising that implementation of R 325.1674a(2) of the Groundwater Quality Control Rules, Michigan Water Well Construction and Pump Installation Code (well code) by local health departments be modified to be consistent with these new requirements when yard hydrants are connected to a nonpublic water supply. Since buried stop-and-waste valves are prohibited under R 325.11108(3) of the Michigan Safe Drinking Water Act, 1976 PA 399, yard hydrants connected to a public water supply shall be a style that does not drain into the soil.

The Michigan Plumbing Code amendments, which become effective on August 20, 2010, adopt the 2009 International Plumbing Code (IPC) with state technical amendments. Identical yard hydrant provisions will also be contained in the 2009 Michigan Residential Code for One- and Two-Family Dwellings, which is currently in the adoption process. The new plumbing code regulations are not retroactive, therefore, changes to existing installations are not mandated.

Section 608.7 of the IPC states:

“608.7 Valves and outlets prohibited below grade. Potable water outlets and combination stop-and-waste valves shall not be installed underground or below grade. Freezeproof yard hydrants that drain the riser into the ground are considered to be stop-and-waste valves.

“Exception: Freezeproof yard hydrants that drain the riser into the ground shall be permitted to be installed, provided that the potable water supply to such hydrants is protected upstream of the hydrants in accordance with Section 608 and the hydrants are permanently identified as nonpotable outlets by approved signage that reads as follows: ‘Caution, Nonpotable Water. Do Not Drink.’”

The exception above allows yard hydrants to drain into the soil when they are isolated by acceptable backflow preventers and properly identified as nonpotable.

Words on the signage shall be indelibly printed on a tag or sign constructed of corrosion-resistant waterproof material or shall be indelibly printed on the fixture. The letters of the words shall be not less than 0.5 inches in height and color in contrast to the background, on which they are applied. The sign shall be visible on both sides of the hydrant.

Freezeproof yard hydrants draining directly into the soil create a potential cross connection associated with backflow of soil or water-transported contaminants, therefore, the water supply must be protected from backflow. Backflow preventers, such as a pressure vacuum breaker, double check valve assembly (consisting of two check valves, test cocks, and shutoff valves in an assembled unit) or a reduced pressure principle backflow preventer, shall be installed on the water line upstream of the hydrant. Some points to remember when installing backflow preventers are:

- Backflow preventers must be properly installed in accordance with manufacturers' instructions.
- They cannot be buried or subject to freezing or flooding.
- A backflow preventer must be installed in a location where it is accessible for maintenance and testing.
- When a pressure vacuum breaker is used, it must be installed a minimum of 6 inches above all downstream piping and the hydrant outlet.
- Backflow preventers should be the same size as the supply pipe size.
- Backflow preventers with venting ports should discharge in a location where spillage will not be a problem.

If the hydrant is intended as a potable water outlet, the provisions of R 325,1674a(2) of the Groundwater Quality Control Rules shall apply and only models that do not drain into the soil are allowed. R 325.1674a(2) prohibits a yard hydrant stop-and-waste valve from draining into a well. Where buried pressure tanks are used, hydrants that do not drain into the soil may be the only practical choice, since there is generally not a suitable location for a backflow preventer. It is advised that a nonpotable hydrant draining into the soil be located at least 10 feet away from a well casing.

Modifying a hydrant, by installing piping or tubing into the weephole of the stop-and-waste valve with an air intake valve for winterization with compressed air, is not authorized under the Michigan Plumbing Code or the Groundwater Quality Control Rules.

Information about backflow and backsiphonage hazards, cross connection control regulations, and a listing of Michigan approved backflow preventers can be found in the Cross Connection Rules Manual at: www.michigan.gov/documents/deq/CrossConnectionManual_251521_7.pdf. Questions may be directed to the Well Construction Unit at 517-241-1377.

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