DEQ	OFFICE OF DRINKING WATER AND MUNICIPAL ASSISTANCE POLICY AND PROCEDURE		DEPARTMENT OF ENVIRONMENTAL QUALITY
Original Effective Date: May 14, 2010 **Revised Date:** **Reformatted Date:** April 3, 2013	**Subject:** Freeze-proof Yard Hydrants **Division/Office and Program Names:** ODWMA-Well Construction Program **Number:** ODWMA-368-127-015	Page: 1 of 4	**Category:** ☐ Internal/Administrative ☐ External/Noninterpretive ☒ External/Interpretive

A Department of Environmental Quality (DEQ) Policy and Procedure cannot establish regulatory requirements for parties outside of the DEQ. This document provides direction to DEQ staff regarding the implementation of rules and laws administered by the DEQ. It is merely explanatory; does not affect the rights of, or procedures and practices available to, the public; and does not have the force and effect of law.

INTRODUCTION, PURPOSE, OR ISSUE:

Amendments to the Michigan Plumbing Code, R 408.30701 *et seq.* of the Michigan Administrative Code, by the Department of Licensing and Regulatory Affairs (DLARA) changed the criteria for freeze-proof yard hydrant installations. A policy and procedure was needed to ensure implementation of R 325.1674a(2) of the Groundwater Quality Control Rules by local health departments (LHDs) being consistent with these new requirements when yard hydrants are connected to a nonpublic water supply.

This policy and procedure replaces a memorandum dated May 14, 2010, prepared by the former Department of Natural Resources and Environment (DNRE), Well Construction Unit.

AUTHORITY:

Part 127, Water Supply and Sewer Systems, of the Public Health Code, 1978 PA 368, as amended, being 333.12714 *et. seq.* of the Michigan Compiled Laws, Michigan Water Well Construction and Pump Installation Code (Well Code), and R 325.1674a(2) and R 325.1612 of the Groundwater Quality Control Rules, promulgated under Act 399.

Safe Drinking Water Act, 1976 PA 399, as amended (Act 399), and Administrative Rules promulgated under Act 399, specifically R 325.11108(3).

STAKEHOLDER INVOLVEMENT:

The memorandum was developed by administration from the DNRE, Well Construction Unit, in 2010 based upon a DLARA notification. We anticipate seeking technical review comments on this topic from stakeholders during the anticipated Well Code statute/rules revision process.

DEFINITIONS:

"Freeze-proof yard hydrants" that drain the riser into the ground are considered to be stop-and-waste valves.

POLICY:

The DEQ, is advising that implementation of R 325.1674a(2) of the Groundwater Quality Control Rules by LHDs 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), yard hydrants connected to a public water supply shall be a style that does not drain into the soil.

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 currently authorized under the Michigan Plumbing Code or the Groundwater Quality Control Rules. We recognize that in some counties in Michigan in the past, this type of modification has been a locally accepted method for dealing with the frost-free hydrant issue. Under the current DLARA ruling however, such modifications are no longer acceptable.

1. The DEQ Well Construction Program recommends that Michigan-registered water well drilling contractors refrain from installing frost-free yard hydrants (weep hole type) on the water service line from the well, to the pressure tank.

2. 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:

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

3 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.

4. 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.

5. It is advised that a nonpotable hydrant draining into the soil be located at least 10 feet away from any well casing.

6. 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.

7. 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.

PROCEDURES:

WHO	DOES WHAT
DEQ Noncommunity and Private Drinking Water Supplies Unit, Staff	Provide instruction for LHD staff who are under contract with DEQ for the Private and Type III Public Water Supplies and Type II Drinking Water Programs
DEQ Well Construction Program Staff	Interface with well drilling contractors to provide guidance regarding the appropriate provisions of Part 127 involving frost free hydrant installation.
LHD Staff	Interface with well drilling contractors to provide guidance regarding the appropriate provisions of Part 127 involving frost free hydrant installation. When questions arise, contact DEQ Well Construction Program Staff.
Registered Water Well Drilling Contractors	Install hydrants that meet the provisions of the Michigan Plumbing Code and the Groundwater Quality Control Rules.

REFERENCES:

The Michigan Plumbing Code amendments, which became effective on August 20, 2010, adopted the 2009 International Plumbing Code (IPC) with state technical amendments. Identical yard hydrant provisions are also contained in the 2009 Michigan Residential Code for One- and Two-Family Dwellings. Those Michigan 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. Freeze-proof 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."
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> 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 inch 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.

OFFICE CHIEF APPROVAL:

Liane J. Shekter Smith, P.E., Chief — Date
Office of Drinking Water and Municipal Assistance

3/15/2013

DEPUTY DIRECTOR APPROVAL:

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4/8/2013