

	OFFICE OF DRINKING WATER AND MUNICIPAL ASSISTANCE POLICY AND PROCEDURE		DEPARTMENT OF ENVIRONMENTAL QUALITY
Original Effective Date: May 5, 1966 Revised Date: January 1, 1994 Reformatted Date: June 1, 2016	Subject: Criteria for Approval of Water Well Equipment Program Name: ODWMA-Well Construction Program Number: ODWMA-368-127-001 Page: 1 of 4		Category: <input type="checkbox"/> Internal/Administrative <input type="checkbox"/> External/Non-Interpretive <input checked="" type="checkbox"/> External/Interpretive Type: <input type="checkbox"/> Policy <input type="checkbox"/> Procedure <input checked="" type="checkbox"/> Policy and Procedure

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. DEQ staff shall follow the directions contained in this document.

ISSUE:

Part 127, Water Supply and Sewer Systems, of the Public Health Code, 1978 PA 368, as amended and the administrative rules promulgated thereunder, referred to as the Groundwater Quality Control Rules (State Well Code), states that buried pressure tanks may be used if the manufacturer's unit is approved, in writing, by the director. Wherefore, the DEQ is responsible for evaluating and approving buried pressure tanks for use in Michigan.

The DEQ is responsible for evaluating pitless well adapters and units to determine if they comply with state regulations. Pitless adapters and pitless units are devices used to make sanitary below grade connections to well casings for installation of a water service line. They permit termination of the well casing above ground surface, protect the water from temperature extremes, and provide access to the well for maintenance and repair. Pitless adapters eliminate the need for well pits, which are a health and safety hazard.

Other equipment, such as well caps, hand pumps, and yard hydrants, shall be evaluated and approved prior to use in the state of Michigan.

AUTHORITY:

Michigan Public Health Code, 1978 PA 368, as amended, Part 127, Groundwater Quality Control Rules, R 325.1642

Michigan Public Health Code, 1978 PA 368, as amended, Part 127, Groundwater Quality Control Rules, R 325.1656(2)

STAKEHOLDER INVOLVEMENT:

Pitless Adapters and Units: Original Guidance document was approved by the Well Driller Advisory Board on January 16, 1967. The document was updated on April 30, 1984, and a draft policy was completed on January 1, 1994.

Buried Pressure Tanks: Original Guidance document (Department Letter No. 36-2), dated May 5, 1966, was adopted by the Well Driller Advisory Board on January 16, 1967.

OFFICE OF DRINKING WATER AND MUNICIPAL ASSISTANCE
POLICY AND PROCEDURE

Subject: Criteria for Approval of Water Well Equipment

Number: ODWMA-368-127-001

Page 2 of 4

DEFINITION:

A pitless adapter is affixed to the permanent well casing below the frost line. A pitless unit includes the upper portion of the casing and is installed by threading or welding to the permanent well casing below the frost line.

POLICY:

Criteria for approval of pitless well adapters and units by the DEQ are as follows:

1. Pitless units shall have either a threaded or welded connection to the well casing. Compression-type connections to the well casing are not permitted. The pitless unit casing may not be a smaller diameter than the well casing.
2. Clamp-on (saddle style) pitless adapters shall be designed so that the gasket between the saddle portion of the adapter and the well casing is pressurized with water from the pump such that any water leakage will be from the pressure system outward.
3. After the portion of the pitless adapter that is attached to the pump drop pipe is removed from the well, there shall be no part(s) of the adapter protruding into the interior of the casing.
4. Pitless adapters and units shall provide for venting of the casing, except for those designed for single-pipe deep well jet pump systems.
5. Pitless units or adapters for jet pump systems must provide connections for concentric piping to meet the concentric piping provisions of R 325.1654, Rule 154, of the Groundwater Quality Control Rules promulgated under Part 127.
6. All components in contact with potable water shall be constructed of materials that will not leach harmful contaminants into the water at levels exceeding drinking water standards and will not impart taste or odor to the water. Compliance with ANSI/NSF Standard 61 or FDA food grade approval of materials is required.
7. Manufacturers shall submit all of the following to the DEQ:
 - a. A letter requesting evaluation of the product that gives the product model name, model number(s), casing sizes, and pump type for the product.
 - b. Detailed installation instructions and promotional literature for the product.
 - c. An actual model of the pitless adapter or unit or scaled shop drawings. The model adapter will be retained by the DEQ unless the manufacturer specifically requests that it be returned.

OFFICE OF DRINKING WATER AND MUNICIPAL ASSISTANCE
POLICY AND PROCEDURE

Number: ODWMA-368-127-001

Subject: Criteria for Approval of Water Well Equipment

Page 3 of 4

8. Weather-tight and vermin-proof caps shall be provided with all pitless adapters and units.
9. Well caps that accompany a pitless adapter or unit designed for submersible, shallow well jet, two-pipe deep well jet, or reciprocating pumps shall meet the well cap and vent design criteria in R 325.1657, Rule 157, and R 325.1658, Rule 158, of the Groundwater Quality Control Rules.
10. Support brackets (brackets that rest on the top of the casing or affix to the casing) for submersible pump installations shall have provisions for attachment of electrical wires for grounding of the pump.

Criteria for approval of buried pressure tanks by the DEQ are as follows:

1. Buried tanks shall be constructed of metal at least 3/16" in thickness or other material that is equal in strength, life expectancy, and resistance to corrosion.
2. All connections to the tank shall be welded or threaded.
3. The exterior and interior of tanks may be coated to prolong life and prevent rusting. If an interior coating or bladder is used. It shall be free of contamination, nontoxic, and not capable of producing tastes or odors, it shall also meet or surpass ANSI/NSF standard 14, 60, or 61 as required in R 325.1640, Rule 140, of the Groundwater Quality Control Rules.
4. Dewatering and special air charging devices are not required under the regulation, but should be incorporated in the design of the installation. Such connections and facilities shall incorporate anti-contamination protection in their entirety.
5. Buried pressure tanks shall not be used in areas where their location will penetrate the groundwater or be subjected to undue flooding conditions. If a slab-type home is required due to high groundwater condition, a buried pressure tank should not be approved for such home.

The above criteria are not retroactive. Pitless adapters and units approved by the DEQ prior to January 1, 1994, are acceptable for use in Michigan.

OFFICE OF DRINKING WATER AND MUNICIPAL ASSISTANCE
POLICY AND PROCEDURE

Subject: Criteria for Approval of Water Well Equipment

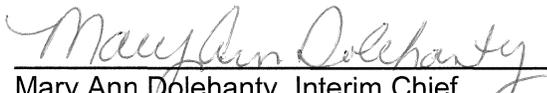
Number: ODWMA-368-127-001

Page 4 of 4

PROCEDURES:

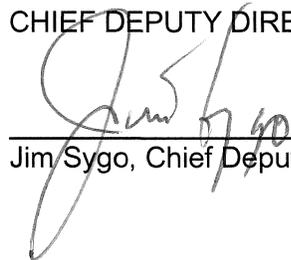
Step	Who	Does What
1.	Manufacturers	Apply this policy when submitting water well equipment for evaluation and approval.
2.	DEQ, ODWMA staff	Apply this policy when evaluating pitless adaptors and units for compliance with R 325.1642.
3.	DEQ, ODWMA staff	Apply this policy when evaluating buried pressure tanks for compliance with R 325.1656.
4.	DEQ, ODWMA staff	Add the water well equipment that meets the criteria to the Water Well Equipment Approved List located under the Documents Section on the DEQ/Water/Drinking Water/Water Well Construction Web page.

OFFICE CHIEF APPROVAL:



Mary Ann Dolehanty, Interim Chief
Office of Drinking Water and Municipal Assistance

CHIEF DEPUTY DIRECTOR APPROVAL:



Jim Sygo, Chief Deputy Director