

Pits and Alcoves

A fact sheet for drillers and pump installers

Well pits and alcoves are below-ground enclosures that contain a wellhead, pressure tank and associated water system components. Well pits and alcoves are designed to prevent the wellhead and water supply equipment from freezing and to promote a sanitary wellhead area. Well pits and alcoves were in common use before the invention of the pitless adapter in the early 1950s. Pitless adapters rapidly replaced well pits and alcoves as the preferred method to provide protection from freezing. A pitless adapter creates less risk of contaminating groundwater and will cost significantly less to construct than well pits or alcoves.



DOES A PIT OR ALCOVE COMPLY WITH 812.36 or 812.42? Check the flowchart on the next page.



IMPORTANT FACTS ABOUT WELL PITS AND ALCOVES:

- **DNR APPROVAL** – A well pit constructed after April 10, 1953 requires approval from DNR to verify that the pit construction standards of NR 812.36 are met. The construction specifications are provided in s. NR 812.42(2) for well pits constructed on or before April 10, 1953 and in s. NR 812.36(2) for all other well pits. Extending the casing out of a noncompliant pit constructed on or before April 10, 1953 is a more common practice, requires no DNR approval and typically costs less than modifying the construction of the pit.
- **ALCOVES** – An alcove (also referred to as a subsurface pumproom) is a well pit that shares a wall with the foundation of a basement and has access from the basement. When a well is extended out of a pit, the pit must be backfilled. When a well is extended out of an alcove, the alcove does not have to be backfilled.
- **VALVE PITS** – A pit that only contains water supply pipe and a valve is a valve pit, not a well pit. A valve pit shall be watertight, may not be connected to a sewer, shall be drained to permeable soil or to the ground surface and may not be subject to flooding. Pits that contain a pressure tank are not valve pits and are therefore subject to well pit rules.
- **CASING HEIGHT** – The minimum casing height for an existing well installed within a pit or alcove is six inches if installed on or before April 10, 1953 and 12 inches if installed after April 10, 1953. A pit or alcove well installed on or before April 10, 1953 that has less than a six inch casing height must be extended out of the pit or alcove to 12 inches above the outside grade or the pit or alcove roof if the extension causes an obstruction.
- **WATER ENTRY** – If water enters into a well pit through the walls or floor, the casing must be extended out of the pit and the pit backfilled. If water enters into an alcove through the walls or floor, the casing must be extended out of the alcove. If the basement adjacent to an alcove is subject to flooding, the well shall be filled and sealed.

PLEASE NOTE:

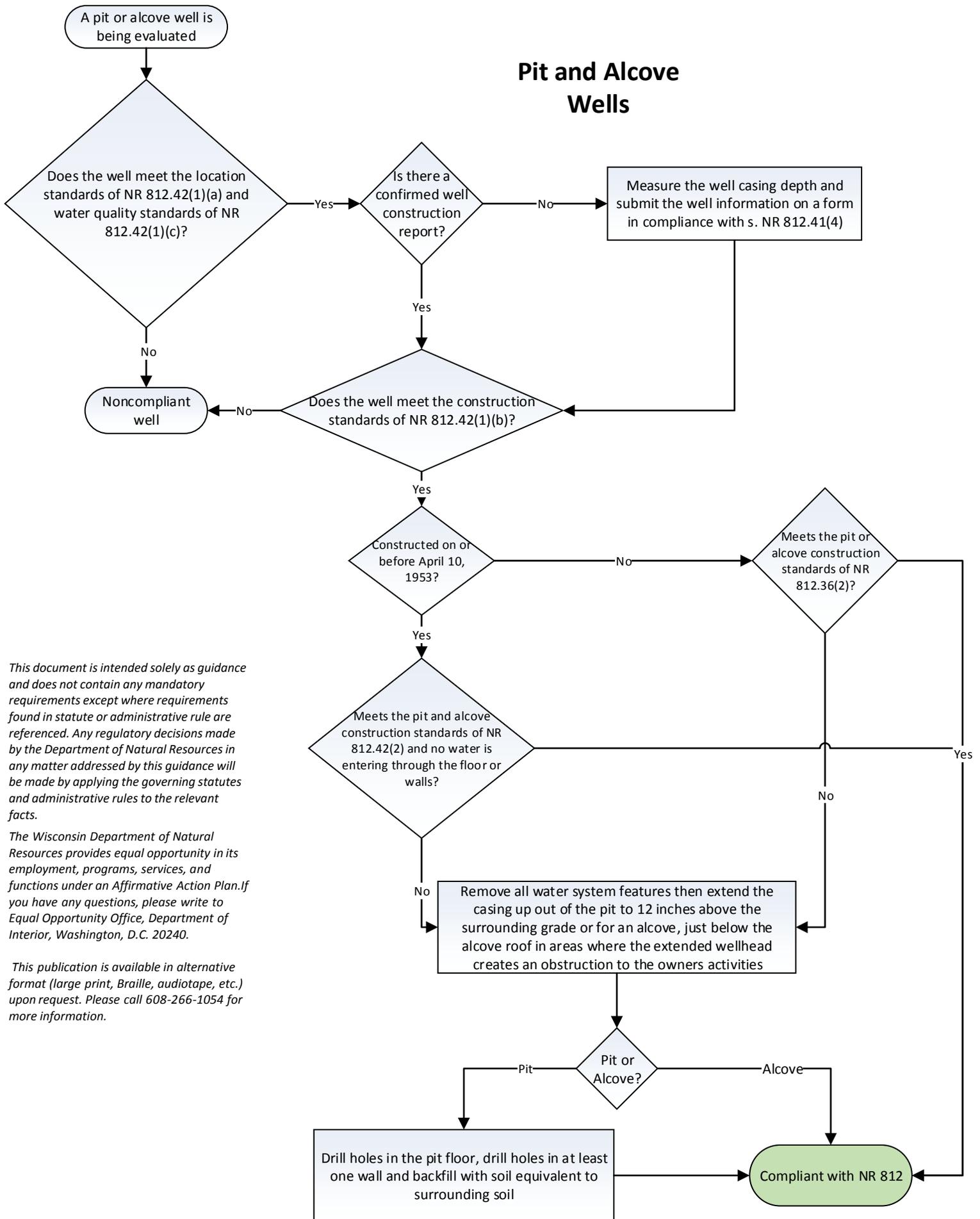
If the well casing is extended out of a pit or alcove, and there is no confirmable well construction report available, the well casing depth and well total depth must be measured prior to extending the casing as described in NR 812.42(11)(a). This is done to prevent extending casing upward on a well that does not meet the minimum code requirements in ch. NR 812 for the casing length and the minimum well depth.

This fact sheet and flow chart do not replace or supersede specific code language about pits and alcoves, which is found in s. NR 812.36 and 812.42 Wis. Adm. Code. See disclaimer language at the bottom of the flow chart on the next page.

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This document is intended solely as guidance and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

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WISCONSIN DEPARTMENT OF NATURAL RESOURCES NOTICE OF FINAL GUIDANCE & CERTIFICATION

Pursuant to ch. 227, Wis. Stats., the Wisconsin Department of Natural Resources has finalized and hereby certifies the following guidance document.

DOCUMENT ID

DG-19-0013

DOCUMENT TITLE

PUB DG-085 - Pits and Alcoves - a fact sheet for drillers and pump installers

PROGRAM/BUREAU

Drinking Water and Groundwater Program

STATUTORY AUTHORITY OR LEGAL CITATION

NR 812, Wis. Adm. Code

DATE SENT TO LEGISLATIVE REFERENCE BUREAU (FOR PUBLIC COMMENTS)

12/02/2019

DATE FINALIZED

01/23/2020

DNR CERTIFICATION

I have reviewed this guidance document or proposed guidance document and I certify that it complies with sections 227.10 and 227.11 of the Wisconsin Statutes. I further certify that the guidance document or proposed guidance document contains no standard, requirement, or threshold that is not explicitly required or explicitly permitted by a statute or a rule that has been lawfully promulgated. I further certify that the guidance document or proposed guidance document contains no standard, requirement, or threshold that is more restrictive than a standard, requirement, or threshold contained in the Wisconsin Statutes.

1/24/2020

Signature

Date