

Springs as a Potable Water Supply

A fact sheet for drillers and pump installers and Property Owners

State law requires written approval from the Department of Natural Resources (DNR) before using a spring as a potable water supply. Spring flow, or water coming up from the ground, can vary greatly in water quality based on local geology, landscape position and local land use. Spring flow can result from a leak in an artesian (free flowing at the surface) aquifer, can seep from the edge of a hillside where groundwater comes to the surface or can result from very shallow groundwater that comes up to the ground surface. If the latter is the case, it is less likely that bacteria and other contaminants will be filtered out of the water by rock, sand, gravel and soil layers. Due to the bacterial risk involved with spring water supplies, the department discourages the use of spring water as a source of potable water. If a developed spring becomes contaminated with bacteria and routinely tests positive after disinfection, the department may require the spring be abandoned.

**DOES THE SPRING BOX
COMPLY WITH
ch. NR 812 Wis. Adm. Code?
Please review the checklist on
the back of this page.**



REGULATIONS:

NR 812.09(4)(i), Wisconsin Administrative Code requires prior DNR approval for development of a spring as a potable water supply. If you wish to develop a spring as a drinking water source it must be captured in a sanitary structure called a spring box, and meet minimum requirements outlined in section NR 812.25, Wisconsin Administrative Code.

Before You Apply:

When considering using a spring as your source of drinking water, it is important to ensure that the rate of flow is reliable during all seasons of the year. Spring flow that fluctuates greatly throughout the year is an indication that the source may be unreliable or may have the potential for contamination. Sample the spring source water before you plan to develop a spring box to ensure a safe water supply is possible. If your spring box is already in place, review the Critical Features Checklist below to determine if it meets the minimum critical requirements for a spring box. Make any system updates or corrections before submitting an application.

This fact sheet, checklist and diagram do not replace or supersede specific code language about spring boxes, which is found in s. NR 812.25 Wis. Adm. Code.

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.

The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240.

This publication is available in alternative format (large print, Braille, audiotope, etc.) upon request. Please call 608-266-1054 for more information.

Wisconsin Department of Natural Resources
101 S. Webster St., Box 7921
Madison, WI 53707-7921
(608) 266-1054



How to Apply:

Requests for approval shall be in writing on the application form provided by DNR.

Application Requirements:

- Completed application form, signed and dated.
- Coliform bacteria-negative test result from a sample collected from distribution pipe downstream from the developed spring box within the last 6 months.
- Water system map with all parts of the system labeled, identifying distances to possible contaminant sources (see example diagram).
- For an existing spring box, checklist below indicating how all critical features are met.
- Submit the application materials to your local DNR Private Water Supply Specialist. DNR will review the application for completeness, conduct an on-site inspection and issue a decision within 65 business days after receipt of a complete application.

Spring Box – Critical Features Checklist

- Spring comes from an underground source with at least 25' of overburden (estimated from a plane 100' into the hillside).
- Most important for springs is the protection and restriction of the area around the spring from human or animal uses or agricultural practices.
 - Area 200' up-gradient of spring or immediately upslope from the spring to a point beyond the crest of the slope, 100' on either side and 50' downgradient and not used for any land uses.
- Critical Separation Distances:
 - Any animal barns/pens/stock fields, barn gutter and milk house drain greater than 50'.
 - Manure stack or earthen manure storage or animal processing or composting sites greater than 250'.
 - Human waste systems such as a privy/outhouse or human waste composting sites greater than 50'.
- Spring is **free from bacteria**...as proven by a coliform bacteria-negative sample collected within the last 6 months (attach laboratory report).
- Spring is maintained in a **sanitary condition** with no cracks or access by rodents or insects.
- Spring box is 4' x 4' in size with 5" thick poured concrete walls and roof reinforced with 3/8" rebar or heavy wire wrapped around the corners.
 - if different please describe _____
- Cover has a tight overlapping shoebox style cover (steel cover required).
- Overflow pipe discharges at least 2 pipe diameters above the maximum water level at its discharge point with a screen over end; located on the downslope side of the spring box and discharges to a hard, non-erodible surface.
- Any buried water supply line must remain under constant/positive gauge pressure at all times.
 - Utilizes an elevated surge tank that is maintained full to provide water to house/barn.
 - Positive pressure maintained by constant flow in pipe due to artesian or spring flow.

Spring box must be **SANITARY** with no cracks or holes and have no access to water, vermin or insects

Spring must produce water that is **CONTINUOUSLY FREE** from coliform bacteria and other contaminants

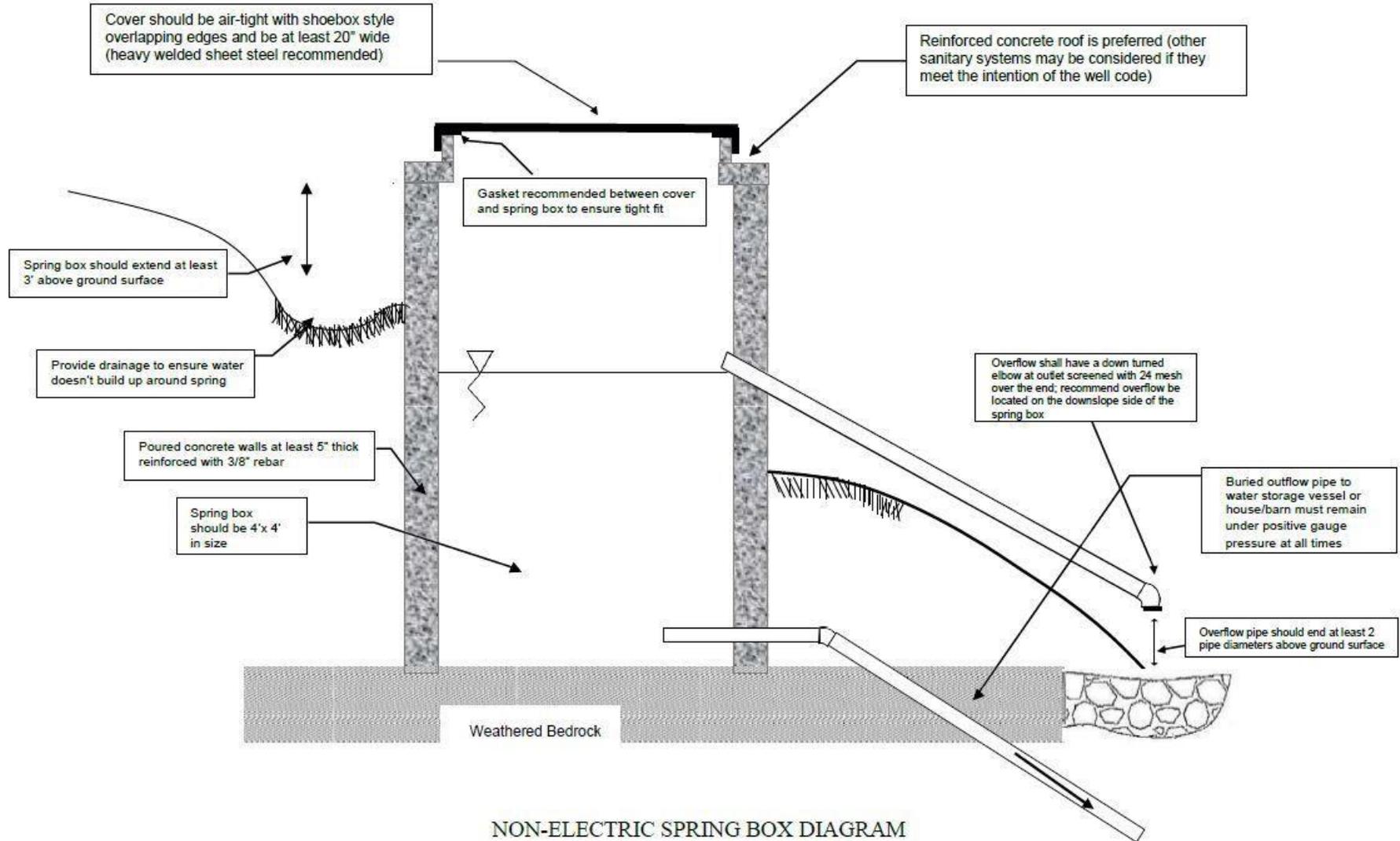


Figure 1. Example of a typical spring box. Designs may vary and must be evaluated on a case by case basis and must meet requirements of NR 812.25 (2) (b)



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-19-0017

DOCUMENT TITLE

Springs as a Potable Water Supply, A Fact Sheet for Drillers and Installers and Property Owners, DG-094

PROGRAM/BUREAU

Drinking Water and Groundwater Program

STATUTORY AUTHORITY OR LEGAL CITATION

NR812, Wis. Adm. Code

DATE SENT TO LEGISLATIVE REFERENCE BUREAU (FOR PUBLIC COMMENTS)

12/23/2019

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.

A handwritten signature in black ink, appearing to be 'Stanley'.

1/24/2020

Signature

Date