

ENVIRONMENTAL Fact Sheet



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Site Selection for Private Drinking Water Wells

Drinking water wells are required to be installed in certain locations following specific construction methods in order to reduce the likelihood of contamination from sources of pollution at or near the ground surface. **This document only pertains to private wells installed for domestic use purposes.** Wells regulated as a public water supply or wells installed for irrigation, geothermal or monitoring groundwater investigations have separate requirements.

NHDES regulates site selection of private wells under RSA 482-B and associated rules We 600 and RSA 485-A and associated rules Env-Wq 1000. These laws and rules define protective well radii [circular area(s) around the well] where certain entities or land uses are prohibited. For septic system design flows up to 750 gallons per day (residential homes up to 5 bedrooms) this radius is at least 75 feet. The Env-Wq 1000 rules define protective well radii distances where design flows exceed 750 gallons per day. The following table details well location setback requirements for a residential home up to five bedrooms or septic design flows up to 750 gallons per day.

RESIDENTIAL DRINKING WATER WELL LOCATION SETBACKS	
Entity	Setback (ft.)
Effluent Disposal Area (leach field/bed)	75 ¹
Septic Tank	75 ²
Property Boundary	75
Livestock Pen	75 (100 for dug wells)
Automobile Salvage Yard	75
Underground Storage Tanks (containing gas or diesel fuel)	250
Storage of Regulated Substance (except gas or diesel fuel)	75
Solid Waste Disposal Site	75
Bulk Storage of Material (ex. fertilizer, manure, salt)	75
Stump Dump	75 ³
State Highway Right-of-Way	50 ⁴
Sewer Component	50 ⁵
Surface Water / Swamp	50 ⁶
Public Road Surface	75 ⁷
Other Sources of Contamination	75

Notes:

¹ NHDES site visit and approval required for wells within 25 feet of an effluent disposal area.

² Setback can be 50 feet if SDR 26 pipe is used and the tank is plastic or coated with a sealant to prevent infiltration and exfiltration.

³ The burial of on-site tree stumps is not considered solid waste if greater than 75 feet from a well. As such, wells must be 75 feet from stump burial sites.

⁴ A well that is constructed within 50 feet from a state highway right-of-way or in a location that does not allow or provide for adequate surface drainage is not eligible for DOTs well replacement program.

⁵ Under certain conditions the distance to septic system components to water supply lines may less than 50 feet. Contact NHDES for site-specific information.

⁶ 50-foot setback required from all surface waters including inundated wetlands, bogs, and swamps.

⁷ Setback reduction requirements must be followed if a road surface is within 75 feet of the well.

Some municipalities in New Hampshire have adopted local regulations pertaining to on-lot setback distances for private wells. Water Well Contractors and property owners should contact the local building code official to inquire as to whether additional well siting criteria apply.

If there is a location on a property where all setbacks can be met, all efforts to install the well at that location must be taken. In these cases, the homeowner may need to remove debris, trees and/or have the driller construct a temporary landing or path for access. *If you can comply with the setbacks, you must comply.* A well (bedrock, dug, gravel, point) that meets all setback requirements may be constructed as stipulated in We 600 without any special methods of construction or setback reduction requirements.

SETBACK REDUCTION REQUIREMENTS

If site conditions prevent compliance with one or more setback requirements, well installation may be prohibited or the water well contractor must follow *setback reduction requirements* (We 602.13 through We 602.16). **When setbacks cannot be met, the water well contractor must alert the property owner of the potential for contamination at the proposed location** and inform the homeowner that they may need to consult with a septic designer to receive approval for a well location before it is drilled. Refer to fact sheet WD-DGWB 21-8 “**Drinking Water Well Locations Relative to Septic Systems**” for important information on drilling new well and replacement wells on lots with septic systems.

Non-bedrock well installations that do not meet setbacks - For dug wells, point wells and gravel wells, the *setback reduction requirements* include the submittal of a Setback Reduction Form with the Well Completion Report. No special methods of construction apply to dug wells or point wells. Gravel wells installed by methods that allow for grouting, must be grouted.

Bedrock well installations that do not meet setbacks - For bedrock wells proposed to be installed on a property where setbacks cannot be met, and all efforts to meet the setbacks are not practicable, the well is to be installed one of the following ways:

OBTAIN SETBACK REDUCTION FORM:

1. **Obtain a written acknowledgement** from the property owner using the Setback Reduction Form and submit with the Well Completion Report.
2. Install no less than 40 feet of casing, with no less than 10 feet into competent rock.
3. Seal the annular space outside of the well casing with **grout** material.

OR

USE SPECIAL METHODS OF CONSTRUCTION:

1. Inform the homeowner that setbacks are not met and the risks involved.
2. **Install a minimum casing length** per the tables defined in the We 600 rules (shown below, derived from the Pythagorean Theorem). The minimum casing length is from ground surface.
3. Seal the annular space outside of the well casing with **grout** material.

Note: The Setback Reduction Form is not the Well Release Form required in the septic system approval process.

Minimum Casing Length (from ground surface)
Where a 75-foot Setback is Required

Horizontal Setback (ft.)	Minimum Casing Length (ft.)
75 or greater	20
70-74	27
65-69	37
60-64	45
55-59	51
50-54	56
45-49	60
40-44	63
35-39	66
30-34	69
25*-29	71

*NHDES must inspect any proposed well location within 25 feet of a septic system.

Grouting of Well Casings is required when setbacks are not met. This means the void space between the outside of the casing and the natural earth needs to be filled with an impervious material (neat cement, cement-sand grout, cement bentonite grout or high solids bentonite grout). We 600 specifies the methods for grouting bedrock wells and gravel wells. Grouting requirements do not apply to dug wells, point wells or wells constructed with drive and wash methods.

For More Information

Please contact the Drinking Water and Groundwater Bureau at (603) 271-2513 or visit www.des.nh.gov.

Note: This fact sheet is accurate as of September 2019. Statutory or regulatory changes or the availability of additional information after this date may render this information inaccurate or incomplete.