

WATER SUPPLY REGULATIONS:

Section 1: Authority and Purpose

- 1.1 The Board of Selectmen of the Town of Windham, N. H. acting under R.S.A Chapter 147:1, and by any other power thereto enabling and acting hereunder and in accordance therewith, has, in the interest of protecting public health and ensuring appropriate development, duly made and adopted the following regulations.
- 1.2 The word "well" as used in these regulations, shall include any pit, pipe, excavation, casing, drill hole or other source of water to be used for any purpose of supplying water in Windham, N.H.
- 1.3 The words "water system" as used in this regulation, shall include pipes, valves, fittings, tanks, pumps, motors, switches, controls and appurtenances installed or used for the purpose of storage, distribution, filtration, treatment or purification of potable water for any use whether or not inside a building.
- 1.4 The words "Potable Water" as used in this regulation shall mean: Water that is safe and fit for human consumption as defined by the International Plumbing Code subject to testing, per the parameters listed in New Hampshire Department of Environmental Services Standard Analysis.

Section 2: Wells Approval Process

- 2.1 No well shall be constructed until the Town of Windham Building Inspector has issued a permit. For each well constructed after the effective date of these regulations there shall be:
 - a) A well construction permit application;
 - b) A well construction permit;
 - c) A well certificate of completion report;
 - d) A well driller's log report.
 - e) Water Analysis
- 2.2 No permit shall be issued except to persons licensed under RSA 482-B unless a statutory exemption is applicable.
- 2.3 The well contractor shall observe reasonable sanitary measures and precautions in the performance of his/her work in order to prevent contamination of the well. Disinfection procedures should be followed as outlined in the NH DES Environmental Fact Sheet WD-WSEB-1-2, as may be amended.
- 2.4 There shall be a separate well for each dwelling or a connection to an approved well system. The Town of Windham Building Inspector Health Officer may allow more than one dwelling to be served by a single well if said well complies with the well yield requirements State of New Hampshire well requirements and an easement has been granted, which has been recorded at the Registry of Deeds and a copy of the recorded document is on file with the Community Development Department.

- 2.5 All wells shall be situated a minimum of 75 feet from any septic system leach field.
 - 2.5.1 If placement of a well is necessary within 74-50 feet of the owners septic system leach field, a waiver from NH DES must be granted and provided to the Community Development Department as part of the application.
 - 2.5.2 If placement of a well is necessary within 74-50 feet of any abutting properties septic system leach field, a "standard release form" is required to be approved by NH DES, recorded with the registry of deeds (see RSA 485-A:30-b), and provided to the Community Development as part of the application.
 - 2.5.3 If placement of a well is necessary within 74-50 feet of any abutting properties septic system leach field and there is an existing NH DES waiver to the abutter's well, this must be provided to the Community Development Department as part of the application.
 - 2.5.4 Well easement on adjacent land or dedicated open space can be substituted for a well release. The easement must be recorded at the Registry of Deeds and a recorded copy provided to the Community Development Department as part of the application.
- 2.6 The well location shall be shown on a sketch plan, which shall show the distance from at least two permanent landmark and 50' from the edge of pavement from any State or Town Road.
- 2.7 Drilled Wells:
 - 2.7.1 A six-inch (6") casing of seventeen pound per foot pipe shall be required.
 - 2.7.2 This casing shall be set sufficiently into solid bedrock to act as a seal to keep out surface water; a minimum of ten feet (10') shall be considered sufficient.
- 2.8 Point wells and dug wells:
 - 2.8.1 Point wells shall follow the well design guidelines outlined in the NH Environmental Services Fact Sheet WD-DWGB-1-6 as amended.
 - 2.8.2 Dug Wells shall follow the well design guidelines outlined in the NH Environmental Services Fact Sheet WD-DWGB-1-4 as amended.
- 2.9 Every well must supply adequate potable water for the purpose for which it is intended and shall provide satisfactory evidence of continuing capability to do so. The following are guidelines for what will be considered satisfactory and may be varied by the Town of Windham Building Inspector in cases where there is otherwise demonstrated an adequate supply of water for the purpose for which the well is intended.
 - 2.9.1 The well construction details and pump test results must be documented and provided to the Town on a form available from the Community Development Department.

2.9.2 The pump test must be overseen and documented by a licensed water well contractor or licensed pump installer, or a licensed geologist or professional engineer with appropriate qualifications. If a well fails to meet the required pumping rate and performance standards, the Town of Windham Building Inspector may allow the additional water volume needed to be met by adding a water storage tank to the domestic water system.

2.10 The Town requires that all drinking water wells are tested for the contaminants listed within the NHDES “Standard Analysis” as published by NHDES within its Water Testing Guide. The results must demonstrate that contaminant levels in raw water are below state and federal Maximum Contaminant Levels (MCLs) or are removed to below MCLs through the use of a water treatment system.

Each well shall be tested at the wellhead prior to allowing the building framing to begin. The well is required to be tested again prior to the issuance of a certificate of occupancy at the kitchen faucet for any parameters that failed to meet the recommended levels.

Lead and Copper should be tested from home’s internal plumbing. Bacteria should be tested at wellhead and from internal plumbing.

2.11 Required, additional Test Parameters;

VOCs (solvents and hydrocarbons) (special bottle required)

Radon (special bottle required)

Analytical Gross alpha (AGA),

Section 3: Well Yield Requirement

3.1 WELL YIELD TEST REQUIREMENT - The supply well must be able to provide 960 gallons over a four-hour period. This volume can be met by a combination of the aquifer yield to the well and water storage within the well borehole. Considering the available well storage volume, the minimum well recovery rate (aquifer yield) must be calculated using the following equation:

3.2 Minimum Required GPM = $\frac{960 \text{ gallons} - \text{Available Storage Volume}}{240 \text{ minute}}$

3.3 Available Storage Volume = [(Pump Depth -- 20 feet) – DEPTH TO STATIC Water LEVEL Depth] X 1.5 gallons/foot:

3.4 This equation assumes a well diameter of 6-inches. If the well is another diameter, use one of the following values in the Available Storage Volume equation:

_____ 3-inch = 0.4 gallons/foot

_____ 4-inch = 0.7 gallons/foot

_____ 5-inch = 1.0 gallons/foot

_____ 7-inch = 2.0 gallons/foot

_____ 8-inch = 2.6 gallons/foot

- 3.5 Upon completion of the drilling and development of the well, the well must be pumped with a submersible pump located at the likely depth the permanent well pump would be set and at least 25 feet above the bottom of the well.
- 3.6 The determination of the usable well yield must be performed by completing a pump test up to four hours in duration.
- 3.7 The pumping level must always be at least 20 feet above the pump intake during the pump test.
- 3.8 The pump test can be terminated in less than four hours if the water level draw down rate is measured as less than 1 -inch per MINUTE FOR at least a 30-minute period and the pumping rate being maintained is no less than four gallons per minute.
- 3.9 Upon completion of the pump test, the water level must fully recover within 24 hours of cessation of pumping to the static water level measured prior to commencement of the pump test. The pumping Test Log shall be signed and submitted to the Town of Windham Building Inspector for review and approval.
- 3.10 The Well must have a minimum aquifer Yield of no less than 2 gallon per minute.
- 3.11 Some common statistics for sample a six-inch diameter well:

$$\frac{\text{GPM Required Storage}}{\div 1.5} = \text{Well Depth} + \text{safety factor} = \text{Required Well Depth}$$

2	480	320	365 + depth to swl
2.5	360	240	285 + depth to swl
3	240	160	205 + depth to swl

Where swl = static water Level

Section 4: Water Systems Installation

- 4.1. There shall be a separate water system for each dwelling, and it shall not be constructed or materially altered hereafter until the Town of Windham Building Inspector has given a permit. The Town of Windham Building Inspector will require a description of the installation with each application for such permit. Emergency work for repairs or service of existing equipment not amounting to substantial renovation or overhaul may be done without a permit.
- 4.2. The electric supply lines from the house to the well pit or pitless adapter shall be enclosed in a 160 lb. pressure pipe, said pipe to be of the same size as the water supply pipe.
- 4.3. All pumps, motors and tanks shall be placed on a suitable foundation and all equipment and parts of the system that may require adjustment-or service shall be made readily accessible.
- 4.4. Pump house, pump or pipe pits and wells shall be designed and constructed so as to prevent flooding and otherwise to prevent the entrance of pollution or contamination.

- 4.5. The Town of Windham Building Inspector shall require the installation of all necessary switches, controls and devices and the satisfactory performance pressure and operating test of the system before final approval and the test must demonstrate that the system will deliver adequate pressure and volume consistent with the well and the well requirements. The Town of Windham Building Inspector must be given at least 24 hours notice of when the installation is ready for inspection.

Section 5: Certificate of Occupancy

- 5.1 No certificate of occupancy can be issued until all the provisions of these regulations have been met. The required inspections and these regulations cannot be construed as a guarantee by the Town of Windham or its agents that the water system will function satisfactorily or have continuous water quality or quantity.

Section 6: Waivers

- 6.1 The Building Inspector may grant exceptions to any part of these regulations, except for Section 2.5 and 2.6 which can only be granted by the Board of Health, with respect to any particular case when, in its opinion the enforcement thereof would do manifest injustice, and the applicant has proven that the same degree of public health and environmental protection required under these regulations can be achieved without strict application of a particular provision(s).

If an applicant or aggrieved party wishes to appeal a decision granted under this Section, that appeal must be made to the Board of Health within 10 business days of the decision being made.

Section 7: Unconstitutionality Clause

- 7.1 Each section of these regulations shall be construed as separate to the end that if any section, item, sentence, clause or phrase shall be held invalid for any reason, the remainder of these rules and regulations shall continue in full force and effect.

Section 8: Effective Date

- 8.1 These regulations shall take effect upon approval by the Board of Selectmen, publication and being recorded by the Town Clerk, Town of Windham, N.H.

Approved: April 21, 2014

_____/Ross McLeod
 _____/Al Letizio
 _____/Roger Hohenberger
 _____/Bruce Breton
 _____/Joel Desilets
 Board of Selectmen