



BRISTOL-BURLINGTON HEALTH DISTRICT

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PRIVATE WELL WATER REGULATIONS

SECTION II

1. PURPOSE:

The intent of this regulation is to ensure the quality and safety of private well water used for drinking purposes by establishing testing of new and existing wells, in order to protect the health of the citizens of the Bristol-Burlington Health District.

Private wells are regulated by the Bristol-Burlington Health District to ensure proper location and installation, and a safe water supply. The District ensures compliance with the Connecticut Department of Consumer Protection, Well Drilling Regulations, Section 25-126 through 137 and 25-128-1 through 64, and the Connecticut Public Health Code, Section 19-13-B51a-m and 19-13-B101 and amendments thereto. All sections of the General Statutes of the State of Connecticut which apply to potable water are hereby in their entirety made a part of the Private Well Water Section of the Bristol-Burlington Health District except where provisions prescribed by the district are more stringent.

2. DEFINITIONS:

- A. "BBHD" means the Bristol-Burlington Health District.
- B. "LDOH" means the Local Director of Health of the Bristol-Burlington Health District. .
- C. "Private Well" means an artificial excavation, constructed by any method, for the purpose of getting water for drinking or other domestic use.
- D. "Approved Private Well" means any private well that has received official approval of the local Director of Health.
- E. "Approval" means approval of potability granted by the local Director of Health to a private well upon receipt of acceptable water test results.
- F. "Well Owner" means the owner, at time of water sample collection, of the property on which the well is located.
- G. "Public Health Code" means all regulations adopted by the Commissioner of Health Services pursuant to Title 19a-36 of the General Statutes of the State of Connecticut (CGS).

- H. "Parameter" means any measurable physical, chemical, radiological, or bacteriological substance which may be found in drinking water.
- I. "Acceptable Level" means the maximum permissible level of a parameter found in water for potable use.
- J. "Potable Water" means water free from impurities in amounts sufficient to cause disease or harmful physiological effect and having bacteriological, chemical, physical and radiological quality conforming to applicable regulations and standards.
- K. "mg/l" means milligram per liter and is equivalent to parts per million.
- L. "Notice" means an official document, signed and dated by the local director of health, containing a statement of the reason for the failure of a private well water supply to comply with drinking water standards and copies of the results of all relevant water analyses.
- M. "Confirmed test results" means the well water has been sampled and, if necessary, re-sample in accordance with procedures set forth in the "Private Well Water Section of the Sanitary Codes and final judgment on potability (safety) has been made by the local Director of Health.
- N. "Re-drilling" of wells is defined as the reworking, deepening or repairing of the existing well site.

3. REGULATIONS

- 3.1 The following regulations shall govern the construction and re-drilling and the testing for water purity and adequacy of all private wells which use ground water as the source of supply in the area subject to jurisdiction of the BBHD.
- 3.2 All possible sources of potential pollution existing or proposed, including private subsurface sewage disposal systems, drainage ditches, footing drains, sewer piping and highway water runoff, etc., located within 100 feet of the well shall be recorded on all well permit applications prior to the issuance of a well drilling permit.
- 3.3 Prior to the construction of any new or replacement private water well, or the renovation of an existing private water well, including but not limited to, hydro fracture or re-drilling, a well Drilling Permit application shall be submitted to the Director of Health. A site inspection may be made to ensure the well site meets all applicable codes. Any proposed geothermal well shall meet all applicable requirements of the Connecticut Department of Consumer Protection, Well Drilling Regulations, and the Connecticut Public Health Code.

- 3.4 The well application shall be accompanied by a permit fee as specified in the BBHD fee schedule.
- 3.5 The application shall include a plot plan of the property that must show all property boundaries and potential sources of pollution existing or proposed, including private subsurface sewage disposal systems, drainage ditches, footing drains, sewer piping and highway water runoff, etc., located within 75' feet of the well.
- 3.6 Upon completion for the work for which a permit has been issued, the applicant shall submit a well completion report to the Director of Health.
- 3.7 No new potable well permit shall be issued for any parcel when the boundary of the parcel of property is within 200ft measured along a street alley or easement of any approved public water supply having at least 15 service connections or regularly serving at least 25 individuals. A parcel owner may seek an exception to 19-13-B51m from the CT Department of Public health (through BBHD). Approval may also be needed by the public water company
- 3.8 Where possible and economically feasible, extensions of public water supplies shall be developed in preference to the development of private water supplies.
- 3.9 The type of water supply to be used shall be indicated in all plans submitted for proposed subdivisions reviewed by the BBHD.
- 3.10 All wells proposed within any Subdivision of lots shall have all or substantially all of their protective radius within their property bounds. A well radius that extends outside the property bounds to a conservation or other unbuildable area may be allowed. New wells shall be proposed on the highest part of the property in compliance with the Connecticut Public Health Code section 19 13-B51d (a).
- 3.11 In an emergency situation, such as the existence of a contaminated or defective well, a temporary supply of water from one private well supply may be permitted. The temporary water supply shall be connected in such a manner as to prevent contamination.

4. CONSTRUCTION PRACTICES:

- 4.1 Well casing height, material and construction shall be in compliance with the Connecticut Well Drilling Board Regulations.

5. YIELD

5.1 All water supply sources for domestic and commercial use shall be of an adequate quantity and quality to fulfill sanitary requirements.

5.2 The minimum yield of a new private water well shall be in compliance with the Connecticut Well Drilling Board Regulations. A wx-trol 250 or equal water tank shall be required on all new wells with yields less than 3gpm.

5.3 The minimum yield required shall be increased at least 50% for 2 family dwellings (adequate water storage tanks may also be considered).

6. **PRIVATE WELL WATER SAMPLE COLLECTION PROCEDURES:**

6.1 Private well water samples collected pursuant to any section of these regulations shall be collected by a representative of a testing laboratory certified by the State of Connecticut Department of Health Services or by any person attesting to knowledge of the standard methods of collection and transportation of samples.

7. **MAXIMUM ACCEPTABLE LEVELS FOR WATER QUALITY PARAMETERS:**

7.1 The following standards for the quality of private well water shall be met by all private well water supplies, located within the BBHD and used for drinking water, when tested in accordance with any of the requirements of this section of the Sanitary Codes. From time to time the BBHD may amend these standards and said standards should not be interpreted as excluding other bacteriological, chemical, or physical tests. When more stringent water quality standards are established by the State of Connecticut those standards shall apply and not be interpreted as excluding other bacteriological, chemical, or physical tests.

REQUIRED WATER QUALITY STANDARDS

<u>Parameter</u>	<u>Maximum Acceptable Level</u>
Bacteriological	
Coliform Bacteria	Zero colony per 100 ml using membrane filter method
	"Absent" using 5 fermentation technique of 10 ml each
Physical	
Turbidity	5 N.T.U
pH	6.5 To 8.4
Hardness (total)	150.0 mg/l
Color (apparent & true color)	15.0 Units
*Odor	None

Reference: CT DPH Action Level List for Private Wells as revised and Federal EPA levels.

Chemical Contaminants and Action Levels	Maximum Acceptable Level ug/L (ppb)
Arsenic	10 ug/L
Barium	2,000 ug/L
Lead	15 ug/L
Mercury	2 ug/L
Nitrate Nitrogen	10,000 ug/L
Nitrite Nitrogen	1,000 ug/L
Ammonia	20,000 ug/L (Aesthetic only)
Sodium	250,000 ug/L (notify @ 28,000)
Chloride	250,000 ug/L MCL
Chromium (total)	15 ug/L
Copper	1300 ug/L
Iron	300 ug/L
Manganese	500 ug/L
Polychlorinated byphenyls (PCBs)	0.2 ug/L
Selenium	50 ug/L
Silvex	50 ug/L (secondary)
Uranium	30 ug/L MCL
Benzene	1ug/L MCL
Carbon Tetrachloride	0.5 ug/L MCL
Chlordane (technical)	0.3 ug/L
Dishloromethane	5 ug/L
Methoxychlor	40 ug/L
Methylene and MBAS (foaming agent)	500 ug/L (secondary)
Chemical Contaminants and Action Levels (cont.)	Maximum Acceptable Level ug/L (ppb)
Methy t-butyl ether (MTBE)	70 ug/L
Tertiary-butyl alcohol (TBA)	100 ug/L
Tetrachloroethylene	5 ug/L
Trichloroethylene	1.0 ug/L
Toluene	150 ug/L
Total petroleum hydrocarbon (TPH)	250 ug/L
1,1/Dichloroethane	25 ug/L
1,1,1 Trichloroethane	200 ug/L
1,4 Dichlorobenzene	5 ug/L
1,4 Dioxane	3 ug/L
1,2 Dichloroethane (EDC)	0.5 ug/L
1,2 Dichloropropane	1 ug/L
1,2,3-trichloropropane	0.05 ug/L
Xylenes (total)	10,000 ug/L
1,1 Dichloroethylene	7 ug/L
Dieldrin	0.03 ug/L
Endrin	2.0 ug/L
Ethylbenzene	700 ug/L
Ethylene dibromide (EDB)	0.05 ug/L

Isopropanol	2,300 ug/L
2,4-dichlorophenoxyacid (2,4-D)	70 ug/L
Vinyl chloride	0.5 ug/L

adopted by BBHD Board 7-12-2018

7.2 Approval of a potable water supply shall be presented by the issuance of a Certificate of Compliance by the BBHD. A Certificate of Compliance shall not be issued, unless a **well** completion report and a copy of an acceptable laboratory analysis report for each well has been received by the BBHD.

7.3 A Certificate of Occupancy shall not be issued by any other governmental authority for any new structure served by a private well governed by this regulation without a certificate of compliance by the BBHD

7.4 The owner shall have a new well sampled for water quality in accordance with **Section 7.01 of the BBHD Sanitary Codes and Section 19-13-351(1) of the Public Health Code**. The LDOH may require testing for additional parameters, such as **VOCS hydrocarbons, pesticides**, heavy metals, or radio- activity, prior to approval. The well water shall not be used for potable purposes until approval of the LDOH is obtained. If the LDOH deems the water potable and the well construction meets the requirements of the Private Well Water Section of the Sanitary Code, the LDOH shall issue a “Certificate of Compliance” **in accordance with Section 7.02 of the Sanitary Code**. The BBHD shall maintain a record of all new well test results.

7.5 If a new private well is found to exceed the established water quality standards, based on either the initial or additional re-sampling analyses, the LDOH may require the installation of water treatment as a condition of, and prior to issuance of a “Certificate of Compliance”. Water quality tests following the installation of the treated water may then be used as the basis for approval.

7.6 **Water treatment wastewater discharges to subsurface sewage disposal systems shall be in compliance with the Connecticut Public Health Code.**

7.7 If chemical or physical limits, as stated in Section 7.1 of the Sanitary Code are exceeded, homeowners shall be notified by the BBHD.

8. TESTING OF PRIVATE WELL IN RESPONSE TO COMPLAINTS:

8.1 The BBHD may, and upon complaint shall investigate, any private well for any parameters of interest or concern. If the results of the analysis of a sample exceeded any of the minimum acceptable levels established in **Section 7.1, and the CT Public Health Code re-sampling may be conducted** or the LDOH deems the water non-potable, (i.e. maximum acceptable levels of any parameter are exceeded) the BBHD shall provide information about alternate water sources and remedial processes.

9. NEIGHBORHOOD TESTING:

9.1 If an existing well is found to exceed any maximum acceptable level for any parameter, the LDOH may sample nearby wells to give others, un-knowingly affected, the opportunity to take remedial action. Nearby wells shall be selected according to location of the potential contaminant source(s), the probable groundwater flow direction, gradient, and topography.

10. PERIODIC MONITORING OF EXISTING CONTAMINATED WELLS:

10.1 For research purposes and/or to update information contained in any notice placed on land records, the LDOH may require periodic monitoring of a well found to be contaminated.

11. PROTECTION OF ABANDONED WELLS:

11.1 Section 19a-39 of the Connecticut General Statutes shall govern the protection of wells. Sections 25 - 128 and 25 - 134 of the Connecticut General Statutes shall govern the abandonment of wells.

11.2 Abandoned wells shall be properly sealed to preserve the quality of ground water. Wooden logs or "hole caps" are unacceptable. A casing should be pulled, if feasible, prior to sealing a well. Artesian wells should be sealed by using a cement plug (i.e. a neat cement grout plug) set near the top of the well or a developed fluid pressurized borehole plug used to counteract the artesian flow to sealing. An appropriate method of abandonment shall be evaluated and determined on an individual basis.

12. PENALTY:

12.1 Pursuant to the authority granted to Municipal Health Authorities under Chapter 3368a of the Connecticut General Statutes to enact this code, any person who violates a provision of this code for which no other penalty is provided shall be provision of this code for which no other penalty is provided shall be prosecuted pursuant to Section 19a-230 of the Connecticut General Statutes; under which a person may be fined not more than \$100.00 or imprisoned not more than three months or both. Each day the violation exists shall constitute a separate violation.

13. UNCONSTITUTIONALITY CLAUSE:

13.1 Should any section, paragraph, sentence, clause, or phrase of this ordinance be declared unconstitutional or invalid for any reason, the remainder of said ordinance shall not be affected thereby.

Note: In emergency situations, such as a well being flooded, pump failure, or struck by lightning, etc., the BBHD should be immediately notified.

The foregoing regulation was approved and adopted at a meeting of the Bristol-Burlington Health District on November 12, 1991.

The foregoing regulation was revised and approved and adopted at a meeting of the Bristol-Burlington Health District on July 12, 2018.