

# MARSHFIELD PRIVATE DRINKING WATER WELL REGULATIONS

## Part 1 GENERAL

### Section 1.1 PURPOSE

The purpose of this regulation is to further protect the health and welfare of the residents of the Town of Marshfield.

Section 1.2 AUTHORITY In accordance with M.G.L. Ch. 111 S. 31, the State Sanitary Code- Chapter II- The minimum standards of Human Habitation, Ch 40 S. 54, and any other powers thereto enabling, the Marshfield Board of Health adopted the following Regulations for Private Wells at its regularly scheduled meeting on January 9, 1989.

### Section 1.3 DEFINITIONS

**ABANDONED WELL-** The discontinuance or nonuse of a private drinking water well as a water supply with the intent to abandon for a period of one year or more.

**BOARD-** Board of Health of the Town of Marshfield, Massachusetts.

**BUILDING SEWER—**The pipe which begins 10 feet outside the inner face of the building wall and extends to the public sewer, septic tank or other place of sewage disposal.

**COMPLETED APPLICATION—**For the purpose of this regulation "completed application" means an application containing information satisfactory to the Board regarding the engineered plans, site inspections, testing requirements, final decisions or variances, and any other information required by any part of these regulations.

**DRYWELL—**A seepage (leaching) Pit, with or without stones around it used to leach stormwater runoff from roof drains.

**DWELLING—**A privately or publically owned permanent fixed structure containing a dwelling unit or dwelling units.

**IRRIGATION WELL—**Wells for the sole purpose of watering or irrigation. These shall not be connected at any point in time to a dwelling or a building unless they meet the requirements of a Private Drinking Water Well.

**LOT—**An area or parcel of land in common ownership, designated by its owner or owners as a separate lot on a plan filed with the Town of Marshfield and the Plymouth County Registry of Deeds, used or available for use, as the site of one or more buildings.

**POTABLE WATER SUPPLY—**A water supply of sufficient quantity and pressure to meet the needs of the occupants of the dwelling, lot, or building, connected with a public water system or with any other source that the Board of Health or agent has determined, by requiring the

water to be tested, does not endanger the health or any potential user and is fit for human consumption.

A source shall be deemed potable which meets, at a minimum all the current primary drinking water standards. Other tests may be required, by The Board or agent, if it is deemed necessary.

**PRIVATE DRINKING WATER WELL**-- Any well supplying water for human consumption. Any pit, pipe, excavation, shaft spring casing, hole or other source of water to be used for any purpose of supplying water to be used as a potable drinking water supply.

**RIGHT(S) OF WAY**—(ROW) For the purpose of this regulation shall refer to any roadway or thoroughfare on which public passage is made and any corridor of land over which facilities such as railroads, pipeline, powerline, conduit, channel or communication lines are located.

**SURFACE DRAIN**—Any underground conduit used for the conveyance of water, including curtain drains.

**WELL DRILLER**-- Any person, association, partnership, company, corporation or trust that constructs a private well who is licensed by the Water Resource Commission, established under Chapter 620 or the Acts of 1956.

#### Section 1.4 NOTICE OF INTENT

No work shall commence on a proposed Private Drinking Water Well until a Notice of Intent is filed with the Marshfield Board of Health. This shall be done in the form of a letter to the Board of Health and shall not constitute approval, in any way, of the Private Drinking Water Well.

#### Section 1.5 APPLICATION FOR A PRIVATE DRINKING WATER WELL

Prior to any Private Drinking Water Well being approved as a potable drinking water source or an abandoned well being placed into service in the Town of Marshfield, an application must be filed with the Board of Health. This shall be done on a form provided by the Board. A non-refundable application fee will be charged to the applicant. See current fee schedule and refer to section 12 herein.

Submission of an engineered plan shall be made at the time of application. The plan shall include, but not be limited to, a scaled drawing showing the following.

- a. The proposed Private Drinking Water Well
- b. The building or dwelling
- c. The Subsurface Sewerage Disposal System and adjacent systems currently existing within 200 feet.
- d. Lot lines
- e. Water lines
- f. Sewer lines
- g. Surface and subsurface drains (excluding drywells)
- h. Golf courses, cranberry bogs, residential underground fuel storage tanks (show all for a distance of 200 feet)

- i. Commercial underground fuel storage tanks, landfills, and airports (show for a distance of 400 feet)

In the case where an individual subsurface disposal system will be installed on the building lot, the initial plan submitted with the application for the individual subsurface sewerage system shall include the information a., b., c., d., e., g., h., i. listed above if a Private Drinking Well is to be located on the lot.

Such plan can then be used for application for a Private Drinking Water Well. If this information is omitted from the plan submitted for the Individual Subsurface Disposal System, a separate plan or an amendment to the above plan will be required for application for a Private Drinking Water Well.

In the case where a municipal sewerage system will service the building lot a plan with a, b, c, d, e, f, g, h, & i listed above shall be submitted with an application for a Private Drinking Water Well.

The plan intended as application for the Private Drinking Water Well shall be submitted by the applicant to the following boards for comments: Conservation Commission and Department of Public Works. Comments are to be submitted to the Board of Health within 10 business days of receipt of the plan if they are to be considered.

An application is considered filed on the date upon which it is presented by the applicant or the well driller or the Board's agent. When the Board or agent deems that application complete, it will be stamped "This application is deemed complete by the Board or agent." No final actions will be taken on applications until they are complete.

Date:

Time:

Chairman or Agent's signature:

If Private Drinking Water Wells are to be used as a water supply for one or more lots in a subdivision, the Board of Health should be notified in writing of this fact when the Definitive Subdivision Plan is submitted.

#### **Section 1.6 REGISTRATION IS REQUIRED OF ALL WELL DRILLERS.**

No person shall engage in the business of construction of Private Drinking Water Wells or irrigation wells within the Town of Marshfield unless he, she, or it is registered with the Water Resources Commission, Division of Water Resources, as required by Well Drillers Registration Act, MGL Chapter 21, Section 16. Proof of such registration must be submitted to the Marshfield Board of Health when the Notice of Intent is filed and must also be recorded on the well driller's report. Approval for the Private Draining Water Well will not be issued unless the proposed well driller is registered.

Section 1.7 WELL DRILLER'S REPORT Within 30 days after completion of a productive Private Drinking Water Well or irrigation well, a well driller shall send a carbon copy of the well driller's report to the Marshfield Board of Health and to the Department of Public Works prior to approval. This report must be received by the Board of Health prior to approval. This report shall include the driller's current registration number.

#### **PART 2 STEPS FOR NEW PRIVATE DRINKING WATER WELL APPROVAL**

**Section 2.1 REGISTERED ENGINEERED, REGISTERED WELL DRILLER, OR ENVIRONMENTAL CONSULTANT TRAINED AND EXPERIENCED IN WATER SUPPLY.**

A registered engineer, environmental consultant trained and experienced in water supply, or well driller shall be hired by the applicant for the Private Drinking Water Well.

A site examination shall be conducted by the engineer, consultant, or the well driller. After the site inspection, the registered engineer/consultant/well driller shall determine the following and submit the data to the Board for their review. Note: a and c will only be required if a variance from section 3.1 is requested.

a. Direction and rate (in feet/day) of groundwater flow which may be determined by two upgradient and at least one downgradient monitoring wells or another Board approved means. An alternate method of determining groundwater direction and rate may be used upon written approval by the Board.

b. A minimum of a two hour pumping test is required, longer if the well driller or board deems it is necessary.

There shall be a minimum of 150 gallons per bedroom per day at 20 pounds per square inch at the highest fixture serviced as demonstrated by the two hour pump test. Less yields per minute may be allowed if adequate storage capacity acceptable to the Board is provided.

c. The elliptical protection zones shall be delineated and shown on the engineered plan if deemed necessary by the board.

All costs of developing and presenting the foregoing data will be borne by the applicant.

**Section 2.2 INSTALLATION OF THE PRIVATE DRINKING WATER WELL**

The Private Drinking Water Well shall be installed by a registered well driller and should take into consideration the method detailed in the ENVIRONMENTAL PROTECTION AGENCY MANUAL OF WATER WELL CONSTRUCTION PRACTICES, and any applicable State, Federal or local regulations or requirements regarding well installation.

The Private Drinking Water Well must be curbed and covered to prevent entrance of contamination and to divert surface drainage.

**Section 2.3 THE NUMBER OF PRIVATE DRINKING WATER WELLS SERVING EACH BUILDING LOT**

There shall be a separate Private Drinking Water Well for each dwelling. The well serving the dwelling shall be located within the lot boundaries of the lot. No Private Drinking Water Wells shall be used to supply more than one dwelling.

**Part 3**

**Section 3.1 WELL LOCATION WITH RESPECT TO POTENTIAL CONTAMINANTS**

In establishing the location of a Private Drinking Water Well, the plan submitted shall show potential sources of contamination listed below and in section 1.5 which exists on or adjacent to the site. All Private Drinking Water Wells shall be located the required distances from the potential sources of pollution unless the applicant demonstrates by clear and convincing

evidence, and the Board finds, that the installation of the Private Drinking Water Well closer than 200 feet to a leaching facility or reserve area will not adversely affect the health and/or safety of the occupants of any proposed or existing residence. In no case shall a variance for new construction be granted to allow the Private Drinking Water Well to be located less than 100 feet from the leaching facility or reserve area.

In making their determination the Board will consider the direction and rate of groundwater flow, soil permeability, whether the well is located laterally or downgradient, and well depth.

Distances shall be measured from the top of the well which is seen above the ground (the cap or seal), or in the case of a well below the ground, the distance shall be measured from the area directly over the well at ground level to the closest edge of the potential pollution source.

Source of Potential Contamination	Minimum Lateral Distance
Subsurface Sewage Disposal System, cesspools, seepage pits	200 feet
Subsurface sewage disposal reserve area	200 feet
Septic tank	50 feet
Municipal sewers, building sewers	50 feet

Note: Private Drinking Water Wells located within 100 feet of a Right of Way shall be marked in accordance with 333 CMR 11.04: 2(c).

The Private Drinking Water Well shall be no less than 10 feet from a lot line. The grade adjacent to the well shall slope at least 2% to prevent the accumulation of surface water. Provisions shall be made to minimize the flow of surface water over the area of the well.

Section 3.2 RESERVED

Section 3.3 RESERVED

#### **Part 4**

##### **Section 4.1 TESTING REQUIREMENT**

All chemical and bacteriological testing will be performed by a State Certified Laboratory with current State Certification Status in the tests they are performing in order to be accepted as valid results by the Board.

Water samples shall be taken and a copy of the completed test results shall be forwarded to the Board of Health and to the Department of Public Works for review.

##### **Section 4.2**

The tests in this section are required for a Private Drinking Water Well to be approved by the Board or agent as a potable water supply.

TOTAL COLIFORM (P)  
FECAL COLIFORM  
STANDARD PLATE COUNT  
TURBIDITY  
ODOR & TASTE & COLOR  
pH  
CHLORIDE  
COPPER  
TOTAL IRON  
SODIUM  
MAGNESIUM  
CALCIUM  
SULFATE  
TOTAL HARDNESS  
NITROGEN-NITRITE  
**INORGANIC CHEMICALS**  
ARSENIC (P)  
BARIUM (P)  
CADMIUM (P)  
CHROMIUM (P)  
LEAD (P)  
MERCURY (P)  
NITROGEN (AS IN NITRATE (P)  
SELENIUM (P)  
SILVER (P)  
FLUORIDE (P)  
**RADIONUCLIDES**  
Radium 226 and 228 (P)  
**VOLATILE ORGANIC CHEMICALS**  
BENZENE (P)  
CARBON TETRACHLORIDE (P)  
1,1-DICHLOROETHYLENE (P)  
1,2-DICHLOROETHANE (P)  
PARA DICHLOROBENZENE (P)  
TRICHLOROETHYLENE (P)  
  
1,1,1 TRICHLOROETHANE (P)  
VINYL CHLORIDE (P)

The following test and any other tests may be required at the discretion of the board. Parameters for additional volatile organics, other organic chemicals, pesticides and herbicides. See Separate Current Listing of these required parameters. Not to exceed drinking water standards i.e. Maximum Contaminant Levels, or Health Advisories. If two different standards are provided the lower number shall prevail.

The costs of all water testing will be borne by the applicant.

#### **Section 4.3**

Failure to meet the current drinking water standards in the parameters tested may constitute a reason for disapproval of the Private Drinking Water Well. However, all of the primary drinking water standards, indicated in (P) in section 4.2 must not be exceeded to gain approval.

#### **Section 4.4**

The Board may require that testing be repeated periodically after the well is approved and installed to serve a dwelling at the landowners expense if the Board feels a health hazard exists.

### **Part 5**

#### **Section 5.1 APPROVAL OF ANY NEW PRIVATE DRINKING WATER WELL.**

All Private Drinking Water Wells shall be approved by the Board of Health prior to issuance of a building permit. Site inspection by the Board's Agent shall be made prior to approval by the Board. Board of Health approval will not be given until all State, Federal and local approvals are demonstrated in writing. Final approval by the Board of Health shall only be given in writing to the applicant. No oral approval shall be valid. No occupancy permit shall be issued with respect to any structure served by a Private Drinking Water Well until the Board Has certified that the well is properly installed and operational.

#### **Section 5.2 DISAPPROVAL OF A PRIVATE DRINKING WATER WELL**

Notice of Disapproval shall be given to the applicant in writing from the Board of Health stating the reasons for disapproval.

#### **Section 5.3**

A final decision of disapproval or approval shall be rendered by the Board or agent within 15 business days after the receipt of all of the following information.

- a. Completed applications as defined in section 1.5 hereof
- b. The well drillers report required in sec 1.7
- c. The information required by Part 2
- d. Testing requirements
- e. Variance requirements if applicable
- f. Agent's inspections of the well. Reinspection will be performed if the Board deems it necessary.
- g. Non-refundable application fee
- h. Any other requirements by the board or agent.

### **Part 6**

#### **6.1 VARIANCE PROCEDURE**

Any variance from these Regulations must:

- a. Be requested in writing from the Board of Health
- b. Be approved by a majority vote of the Board of Health

- c. Be granted in writing by Board of Health
- d. A copy shall be maintained in the permanent files of the Board of Health and available to the public at reasonable hours.

6.2 If a variance is requested from any portion of these regulations the applicant must demonstrate to the Board by clear and convincing evidence that there will be no adverse effect on the environment or the public health and safety if the variance is given.

## **Part 7**

### **Section 7.1 REQUIREMENTS FOR IRRIGATION WELLS**

Irrigation wells are for the sole purpose of irrigation and shall not be deemed or used as a potable water supply for human consumption.

Irrigation wells shall not be connected to the dwelling unless they are approved as a Private Drinking Water Well by the Board.

### **Section 7.2 THE APPLICATION AND PERMIT PROCESS IS NOT APPLICABLE**

The application and permit process does not apply to wells not used as a source of potable water (i.e. irrigation). The applicant shall contact the Department of Public Works to register their irrigation well. The applicants shall post on the property a placard reading "Irrigation Well, not a Drinking Water Supply."

### **Section 7.3 SETBACK DISTANCES FOR IRRIGATION WELL**

The well driller should be cognizant of the distance requirements in section 3.1 of these regulations and attempt to adhere to them. The lot line distance for irrigation well is no less than 10 feet.

## **Part 8**

### **Section 8.1 PENALTIES**

Any person who shall violate any provision of these regulations for which a penalty is not otherwise provided in any of the Massachusetts General Laws or in any other provision of these regulations, shall upon conviction be fined not less than \$10.00 nor more than \$300.00.

Any person who shall fail to comply with any order issued pursuant to the provisions of these regulations shall upon conviction be fined no less than \$10.00 nor more than \$300.00. Each day of failure to comply with an order shall constitute a separate violation.

## **Section 9**

### **Section 9.1 BOARD OF HEALTH RESPONSIBILITY**

The maintenance of a Private Drinking Water Well or irrigation well is the homeowner's responsibility. The Marshfield Board of Health will enforce these regulations within the scope of its authority. However, the responsibility of future monitoring, maintenance, testing, treating remains with the homeowner.

Note: M.G.L. Chapter 21E and the Solid Waste Acts of 1987 require that liable parties compensate affected well owners for the costs of mitigating contamination.



**Part 10 FURTHER REVIEW**

These Regulations will be reviewed and updated by the Board of Health as data becomes available.

**Part 11 EXPERT CONSULTANTS**

The applicant shall agree in writing to pay the costs and expense of any mutually agreed upon expert consultant deemed necessary by the Board to review the application plans or test results, etc.

**Section 12 FEES**

A non-refundable fee will be charged when the application form is submitted, (Refer to Section 1.5) Also see current fee schedule. In addition, if the Board or agents must reinspect the well a separate fee will be charged for each reinspection. See current fee schedule.

**Section 11- SEVERABILITY**

If any provision of this regulation is declared unlawful by a valid judgment or decree of any court of competent jurisdiction such invalidity shall not affect any of the remaining provisions of this regulation. This regulation shall take effect upon publication in a newspaper in the town and shall be filed with the DEQE in Lakeville.

Christine M Ryan, Chairman  
Gerald J. Maher, Vice Chairman  
Douglas A. Little, Clerk

1/11/89