

## **ORDINANCE #03 - 2002**

### **AN ORDINANCE ESTABLISHING MINIMUM STANDARDS FOR LOCATION, MODIFICATION, OR ABANDONMENT OF INDIVIDUAL WATER SUPPLY WELLS.**

**BE IT ENACTED AND ORDAINED** by the Board of Supervisors of West Manheim Township, York County, Pennsylvania, and it is hereby enacted and ordained by the authority of the same.

#### **ADMINISTRATION AND PERMITS**

##### **1. DEFINITIONS**

- A. Community Water Supply System: A system for the provision of water for human consumption if such system has at least fifteen (15) service connections or regularly serves at least twenty-five (25) individuals, as set forth under the P A Safe Drinking Water Act, 35 P.S. 721.1 et seq.
- B. Individual Water Well Supply System: A system including wells, pumps, piping, storage and/or treatment equipment supplying water for human consumption and not regulated under the PA Safe Drinking Water Act 35 P.S. 721.1 et seq.
- C. Water Well Driller: Any person licensed by the Commonwealth of Pennsylvania or the State of Maryland performing or in responsible charge of drilling, altering or repairing a water well.
- D. Well: Any excavation that is drilled, cored, bored, washed, driven, dug, jetted, or otherwise constructed when the intended use of such excavation is for the location, acquisition or artificial recharge of groundwater. This includes but is not limited to test wells, test borings, geothermal and monitoring wells, in addition to wells to be utilized as individual water supplies.
- E. Well Driller Log: The latest version of the Water Well Completion Report, DCNR Form . 8700-FM-TG-5100S, or its replacement.

##### **2. GENERAL**

- A. It shall be unlawful to install or modify an individual water supply well without first obtaining a permit from the township. Permits for an individual water supply well serving new construction must be obtained prior to the beginning of construction of any building(s) to be served by the well. Each permit will be granted upon a two (2) part approval system which consists of a Permit to Construct and an Approval to Operate.
- B. This ordinance shall apply to all wells which have not been completed, or which are not in operation or in operable condition at the time of passage of this ordinance.
- C. Monitoring, agricultural and geothermal wells not used for public consumption do not require permits. However, a copy of the well driller log must be submitted to the township upon well construction completion.

- D. All water supply wells shall be constructed by a licensed water well driller.
- E. This ordinance shall not apply to the normal maintenance and repairs required to keep wells in proper working order.
- F. Each building lot must be provided with an individual water supply system prior to the issuance of a Building Permit for dwelling units.

### **3. PERMITS**

A. Application for a well permit shall be made at the time the applicant applies for a building permit for any improvements to be erected on the premises, or, if no other improvements requiring a building permit are contemplated, prior to any work being started on the proposed well. The application shall be made upon a form supplied by the Township.

B. The application shall set forth:

- (1) Name, address and phone number of the owner of the property upon which the well construction, reconstruction or repair work is to be done.
- (2) Site address, subdivision name, lot number.
- (3) Name(s) and address (s) of the contractor(s) who shall perform the work. (4) Driller, Pennsylvania License Number and telephone number.
- (5) Type of construction, intended use.
- (6) Type of sewage disposal.
- (7) Plot Plan showing the address or location of the property; an accurate scale map of the premises showing the proposed location of the well; setback lines for wells; the exact location or proposed location of all buildings; existing wells and on-site sewage disposal systems, including sewage disposal drain fields and septic tanks; the boundary lines of the premises upon which the well is proposed to be located; the boundary lines of all adjacent premises; the location of any wells and sewage disposal systems, including drain fields, on adjacent properties; the location of any bodies of water and/or wetlands located on or abutting the premises; and the location of any underground storage tanks on the premises or adjoining premises known or readily determinable.

C. The well driller shall submit to the Township a copy of the Water Well Completion Report within thirty (30) days after any well is completed.

D. The well driller shall complete a "Certificate of Well Construction" provided by the Township after any well is completed. Said Certificate shall require that the well driller certify as to the procedures taken by the well driller to complete the well in accordance with this Ordinance.

E. No well permit shall be issued for an unimproved lot or a lot on which a new or modified sewage disposal system is to be installed until a sewage permit has been issued therefor.

#### 4. INSPECTION

- A. Upon receipt of any application for a well permit, the Township shall within thirty (30) days perform an inspection of the premises on which the well is to be constructed to determine if the location, which must be staked by the applicant, conforms to the standards set forth herein. In situations involving an unimproved lot, said inspection shall be coordinated with the inspections performed pursuant to a building permit application and on-lot septic system application, if any.
- B: The inspection shall be conducted in accordance with the provisions of this ordinance and the provisions of any and all other relevant ordinances of the Township. Upon completion of the inspection, the Township Officer shall either (a) issue a permit to the applicant indicating the approved location for the well and special instructions for construction, if any; or (b) refuse to issue the said permit, and, in such event, shall provide the applicant with written reasons for such refusal.
- C. Upon completion of the well, and notice to the Township of said completion, provided by the owner or well driller, the Township, through its duly authorized Officer, shall perform a second inspection of the premises to determine that the well has been constructed in accordance with the terms hereof.

#### 5. YIELD TEST

- A. Upon completion of the individual water supply well, a well pump test must be performed. and the following information submitted to the township:
- (1) Depth of well, depth of pump intake and static water level, undisturbed for twenty-four (24) hours.
- (2) The measured water level after pumping as follows:
- |                 |                             |
|-----------------|-----------------------------|
| Well Capacity   | Pumping Time                |
| 1 to 4 gpm      | Pump 6 hours after drawdown |
| Over 4 to 8 gpm | Pump 3 hours after drawdown |
| Over 8 gpm      | Pump 3 hours                |
- B. Each well or combination of wells must yield one gallon per minute (1 gpm) for a building permit to be issued.

#### 6. ISSUANCE OF PERMITS

- A. All permits shall be issued on a form provided by the Township.

#### 7. REVOCATION OF PERMITS

- A. A permit may be revoked by the Township at any time for anyone or more of the following reasons, which reasons shall be provided to the permit holder in writing by the appropriate Township Officer:
- (1) When any change has occurred in the physical condition of any lands which will materially affect the operation of a permitted well.
- (2) When an applicant has presented false information on his/her permit application. (3) When the permit issued by the Township fails to comply with the provisions of this Ordinance.
- (4) When the applicant has violated the provisions of this ordinance

B. Upon receipt of a notice of revocation from the Township Officer, the applicant shall have the right to appeal said revocation to the Township Board of Supervisors for a hearing held in accordance with the provisions of the Local Agency Law.

**8. ISOLATION DISTANCES**

Minimum Distance

A. Minimum isolation distances shall be maintained from the proposed well as follows:

- (1) Distance from a property line to allow easement or right-of-way access access to the well without encroaching on adjoining properties. 10 feet
- (2) Distance from dedicated road right-of-way line or any established future future roadway widening easement, whichever is greater. 15 feet
- (3) Distance from a building foundation, for the purpose of protecting the well the well from a foundation or soil treated to control pests, insects, or vermin. A distance less than thirty (30) feet may be considered - in the replacement of an existing well which does not meet this thirty (30) feet distance requirement. 30 feet
- (4) Distance from the nearest part of any existing or proposed on-site sewage sewage absorption system, including the drain field, or fifty (50) feet feet from the nearest part of any existing or proposed septic tank, whether on the land of the applicant or adjoining lands. 100 feet
- (5) Distance from any gravity sewer line except that said distance may be be reduced to ten (10) feet when the gravity sewer is constructed of cast iron pipe with water- tight bell and spigot joints, or flanged joints fitted with water-tight gaskets or mechanical joints, or is constructed of solvent welded schedule 40 or SDR equivalent PVC or bell and spigot SDR PVC pipe. 50 feet
- (6) Distance from any sewage force main. 50 feet
- (7) Distance from the nearest part of any existing or proposed storm water seepage pit. 100 feet
- (8) Distance from any driveway 10 feet

B. A well may not be located within or under any building other than a separate structure constructed specifically for the housing of pumping equipment.

C. All suction lines from wells shall be at least one hundred feet from all identifiable sources of contamination.

D. Any pressure water supply line shall be at least 10 feet removed from any subsurface disposal area.

E. All wells shall be located so as to be accessible for cleaning, treatment, repair, testing, inspection, and such other attention as may be necessary.

F. All well heads shall be protected from surface wash or flooding.

## **9. ABANDONMENT**

A. If the use of a well is permanently discontinued, the well shall be filled and sealed in such a way that it will not act as a channel for the interchange of waters of undesirable quality with those whose quality is desirable and to prevent the contamination of groundwater.

B. Only concrete, cement grout or bentonite clay, or a combination of these materials, may be used to seal a well.

C. Before the well hole is filled, the casing shall be removed. If the casing cannot be removed, it shall be perforated to assure that sealing material fills all annular spaces and voids.

D. Sealing material shall be placed from the bottom of the well upward by methods that will avoid dilution and/or separation thereof.

E. When a well is to be abandoned, the person abandoning it or the owner of the property (if not the person abandoning the well) shall notify the Township prior to initiating the procedures set forth above. The Township shall arrange with the person abandoning the well to be present to inspect the sealing process. Records of all abandoned wells and the process undertaken to seal same shall be maintained by the Township.

## **10. FEES**

A. All applications for a well permit shall be accompanied by a fee, payable to the Township in accordance with a schedule of fees established from time to time by Resolution of the Board of Supervisors.

## **11. EFFECTIVE DATE OF PERMITS**

A. The Township shall act upon each such application for permit within thirty (30) days after said application has been filed, and in the event of failure on the part of the said officer to render and communicate a decision to the applicant within said time period, the applicant shall have the right to request a hearing before the Township Board of Supervisors.

B. All permits shall be in effect as of the date of issuance, and shall remain in effect for a period of one (1) year thereafter. In the event that construction under the permit has not been completed at the expiration of one (1) year from the date of issuance, the permit shall expire, the validity of the permit shall cease and terminate and all fees paid shall be forfeited.

## **CONSTRUCTION SPECIFICATIONS**

### **12. CASING**

- A. All wells supplying residential individual water supplies shall be equipped with water-tight steel casing of a minimum thickness of 0.188 inch and weight of thirteen (13) lbs./ft. The minimum casing length or depth shall be 40 feet, with the casing set a minimum of two feet (2) feet into hard bedrock or other impervious strata and the casing top terminating a minimum of 12 inches above finished grade, resulting in a minimum casing length of 42 feet. A minimum annular clearance of 1.5 inches must be maintained so that grout may be placed. The criteria established in A WW A Standard A 100-90, as amended, must be followed.
  
- B. Steel casings shall be new pipe meeting ASTM or API specifications for water well construction. If minimum thickness is not considered sufficient to assure reasonable life expectancy of the well, additional thickness will be provided. Steel casing will be equipped with a drive shoe, if needed, and have full circumference welds or threaded pipe joints.
  
- C. Casing other than steel requires prior written approval from the Board of Supervisors .. Failure to receive such approval for use of alternate casing types will result in enforcement action and prohibition on use of the water supply.
  
- D. Water-tight well casing and grout must be placed at a sufficient depth to prevent the entrance of pollution from surface runoff and polluted aquifers. The casing shall be grouted along its entire length with a Portland cement or bentonite grout.
  
- E. The casing shall extend above the finished grade a minimum of twelve (12) inches or to such height as is necessary to prevent entrance of surface water from runoff or flooding at the 100-year flood level. The casing top shall be fitted with a sealing, bug proof cap.

### **13. GROUT MATERIALS AND LOCATION**

- A. All grout information (i.e., type of grout and number of bags of material used for grouting) must be submitted in writing on the required Pennsylvania Department of Environmental Protection by the licensed water well driller within thirty (30) days of completion of the well drilling process.
  
- B. In all well installations an annular space shall be provided between the well casing and the earth formation. The annular space shall be completely filled with approved grout materials in one continuous operation from the bottom to the natural land surface within twenty-four (24) hours after completion of the drilling. Before placement of grout, the annular space shall be completely cleared of all obstructions prior to the placement of the grout material. Exterior grouting methods must be used.

- C. Grouting shall be accomplished by inserting a minimum one-inch diameter tremie pipe to the bottom of the casing annulus and pumping grout through the tremie pipe using a positive displacement pump, until grout of the same density as what is being pumped returns to the ground surface. The casing shall be sealed effectively against entrance of water from water bearing zones which are subject to pollution. During the installation of a Pitless Adaptor, grout material may be removed from the exterior of the casing in order to provide a water-tight seal between the casing and the Pitless Adaptor.
- D. When drilling is to be continued after grouting, a curing time of twelve (12) hours must be provided during which drilling is not permitted, unless a bentonite plug with cement grout bentonite grout is used.
- E. The annular space of all well installations must be filled with one of the grout materials described below.
- F. Neat cement grout shall consist of a mixture of Portland cement Type **I**, **II**, or **III** and water in the ratio of 0.67 cu. ft. (five (5) gallons) of water per ninety-four (94) pound sack weighing approximately 228 lbs/cu.ft. A maximum of five (5) percent by weight bentonite, and two (2) percent by weight of calcium chloride may be added.
- G. Bentonite or sealing clay shall consist of a manufactured clay product that expands in contact with moisture to form a seal that prevents the movement of water. Bentonite must be activated with water prior to resumption of drilling.
- H. In all well installations, if rapid loss of grout material occurs during placement, clean, coarse fill material (e.g., sand, gravel, crushed stone, chunk bentonite) may be used in the zone(s) in which the rapid loss is occurring. The remainder of the annular space shall be grouted as provided below. In no case shall pouring, dumping, or shoveling of grout material into the annular space be deemed an approved method of grout placement.

#### **14. GROUT PLACEMENT**

##### **A. GROUT PIPE OUTSIDE CASING**

(1) The annular space shall be a minimum of 1.5 inches (the diameter of the drilled hole shall be greater than or equal to the casing outer diameter plus three (3) inches). All grout shall be placed by pumping through the grout pipe. The entire interval to be grouted shall be open and without obstructions. Washing or jetting with water is recommended for cleaning the borehole and may serve to remove obstructions caused by caving, which otherwise would prevent a proper grout. It is required that the grout pipe extend from the surface to the bottom of the interval to be grouted. The grout pipe may remain extended to the bottom in of the interval during and after grouting, or it may be raised slowly as the grout is placed provided that the discharge end of the grout pipe remains submerged in

the placed grout at all times until grouting is completed.

- (2) With grouting depths of forty (40) feet and less, grout may be placed slowly from the surface provided that the entire interval to be grouted is clearly visible from the surface and is dry. An annular space larger than the minimum 1.5 inches may be required to assure visibility from the surface. Any bridging of grout material must be cleared by removing the casing or rodding prior to placement of grout above the bridged area.

**B. UNSTABLE FORMATIONS (i.e., fractured limestone, saturated soils etc.)**

- (1) When drilling through an unconsolidated formation that caves in, steel casing and a steel drive shoe shall be required.
- (2) If caving conditions are experienced on wells, the annular space shall be kept open with an outer casing and shall be grouted from the bottom of the inner casing, which shall be at least ten (10) feet below where caving occurred.

**C. OTHER**

- (1) Other grouting methods and materials may be used subject to prior written approval from the Board of Supervisors.
- (2) Packers shall be of materials that will not impart taste, odor, toxic substances or bacterial contamination to the well water.

**15. PITLESS ADAPTORS**

- A. Pitless installations where the casing terminates above the ground surface and the well pump discharges through a buried adapter fitting shall be of a design which provides an effective seal against the entrance of ground or surface water into the well. All buried suction lines shall be effectively encased, or otherwise protected to prevent external damage or contamination.
- B. Pitless installations must be so designed as to be structurally sound and to provide for ready removal of drop piping without excavation. The access casing shall be effectively protected against corrosion and shall extend at least twelve (12) inches above the natural ground surface and to a point below the frost line. The ground level at this point shall be elevated above the adjacent ground level and graded to drain away in all directions. The top of the access shall be effectively sealed against the entrance of water, insects, and rodents. The pitless adaptor shall not be submerged in water or used in areas used by automobiles and other vehicles unless adequately protected.

**16. PUMP INSTALLATIONS**

- A. All pump information must be completed on the required form and submitted within thirty (30) days of installation of the pump.

## **17. DISINFECTION**

- A. Following completion of construction of an individual water supply and installation of the pumping equipment, or alternations, repair or maintenance work, the well shall be pumped continuously until the water discharged is clear. The well, pump, piping system, and other fixtures, shall be filled with water containing a concentration of not less than fifty (50) parts per million (ppm) of free chlorine. A portion of the chlorine solution shall be circulated directly to the well in order to insure proper agitation.
  
- B. The water shall not be used for a period of twenty-four (24) hours. Other combinations of concentration and time intervals, or other disinfectants such as HTH Tablets may be used if demonstrated to be equally effective. One-half ounce of dry hypochlorite (eventy (70) percent available chlorine) dissolved in fifty-two and one-half (52.5) gallons of water, makes a fifty (50) ppm strength disinfectant solution. Various proportions can be worked out. The purged water shall not be discharged into any subsurface sewage disposal system and shall not be discharged at a point so as to minimize adverse effects to aquatic life
  
- C. After well disinfection., water samples shall be collected and analyzed for pH, Total Solids; Iron, Nitrate-Nitrogen and coliform bacteria. One copy of the analysis results from a Certified laboratory shall be provided the owner and the Township. shall

## **18. CROSS-CONNECTIONS**

- A. If pump and piping is not installed by the well driller, the owner is responsible for proper installation of check valves and backflow prevention valves.
  
- B. Backflow prevention valves must be incorporated into the system and shall be used as needed for each outside water hose connection. At least two check valves must be incorporated into each water system, that derives water from a well.
  
- C. Except where not practical, a cross-connections prevention assembly shall be provided.

## **ENFORCEMENT**

### **19. WAIVER**

- A. If an applicant has shown that any mandatory provisions of this Ordinance are unreasonable or cause undue hardships as they may apply to the subject property, the Board of Supervisors shall schedule a public hearing, upon written request of the applicant, and upon payment of the required fee, and may in their discretion grant a variance or waiver to such applicant from the mandatory provision of this Ordinance so that substantial justice may be done and the public interest secured. The granting of any such variance or waiver shall not have the effect of nullifying the intent and purpose of this Ordinance. In granting variances, waivers, or modifications, the Supervisors may impose such conditions as will, in their judgment, substantially secure the objectives of the standards or requirements so modified. Any such hearing shall be held in accordance with the provisions of the Local Agency Law.

### **20. VIOLATIONS**

- A. Any person who violates any provision of this ordinance shall be subject to prosecution by the Township for a summary offense under the Pennsylvania Rules of Criminal Procedure and upon conviction before a District Justice, shall be subject to pay a fine up to One Thousand (\$1,000.00) Dollars and court costs or, in default thereof, shall be committed to the county jail for a period not exceeding thirty (30) days.
- B. For the purpose of this Ordinance, each day of a continuing violation shall be considered a new and separate violation of this Ordinance.
- C. The Township may, in addition to any other remedies available to it, institute an action in equity to enjoin or otherwise restrain or prevent the violation of the provisions of this ordinance.

### **21.' DISCLAIMER**

- A. Approval of the application and issuance of a permit for a well does not constitute a)Y guarantee or warranty by the Township regarding either quality or quantity of water that may be obtained as a result of any well drilled under the permit. The permit provides the Township's approval to drill a well at the site shown on the permit and does not provide any other guarantees, approvals or warranties.

### **21. SEVERABILITY**

- A. The provisions of this Ordinance shall be severable, and if any of its provisions or the application of any of its provisions shall for any reason be held to be unconstitutional, illegal, or invalid, such unconstitutionality, illegality, or invalidity shall not affect or impair the validity of any of the remaining provisions of the ordinance. It is hereby declared as the intent of the Township that this ordinance would have been enacted had such unconstitutional, illegal or valid provision not been included.

**WEST MANHEIM TOWNSHIP  
APPLICATION FOR WELL CONSTRUCTION**

APPLICANT	ADDRESS	
PROPERTY OWNER/OWNERS	ADDRESS	
WELL DRILLER	ADDRESS	CERTIFICATION NO.

CHECK ONE:  
NEW                                      REPAIR                                      ALTERNATE WELL

TOTAL NUMBER OF WELLS ON PROPERTY (COMPLETED)

SITE INSPECTION PRIOR TO DRILLING (DATE)

GROUTING INSPECTION (DATE)

FINAL INSPECTION (DATE)

APPLICANT TO NOTIFY TOWNSHIP OF ALTERNATE DRILLING  
ALTERNATE SITE (DATE)

APPLICANTS' COMMENTS:

INSPECTORS' COMMENTS

APPLICANT HEREBY ACKNOWLEDGES RECEIPT OF A COPY OF THE CURRENT TOWNSHIP'S  
WELL CONSTRUCTION ORDINANCE,

INSPECTING OFFICER	DATE	APPLICANT	DATE
--------------------	------	-----------	------

**WEST MANHEIM TOWNSHIP  
CERTIFICATE OF WELL CONSTRUCTION**

TO BE COMPLETED BY WELL DRILLER

APPLICANT

ADDRESS

PROPERTY OWNER/OWNERS

ADDRESS

PROPERTY ADDRESS

NUMBER OF WELL SITES

WELL DRILLER

ADDRESS

CERTIFICATION #

AMENDED SITE PLAN

WELL COMPLETION REPORT (DATE RECEIVED)

CONSTRUCTION PROCEDURES AND MATERIALS USED BY WELL DRILLER:

DEPTH OF WELL

DEPTH OF CASING

YIELDINGPM

STATIC WATER LEVEL

TYPE AND SIZE OF CASING

TEST PUMP TYPE

DATE OF COMPLETION

NARRATIVE:

I certify that the information annotated above is accurate and complete to the best of my knowledge.  
If State form is submitted, attach and fill in any information not on State form.

SIGNATURE OF WELL DRILLER

INSPECTORS' COMMENTS

CERTIFICATE OF WELL USE GRANTED THIS  
INSPECTING OFFICER

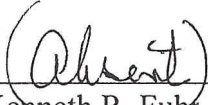
DAY OF

2002

**RELEASE**

The undersigned applicant for a building permit hereby acknowledges that the well(s) located on the subject property should be tested for the presence of contaminants, including but not limited to, bacteria, volatile organic compounds and heavy metals. The undersigned applicant further acknowledges that the issuance of a building permit by the Township carries with it no representation or warranty regarding the quality of water to be found in any well located in the township.

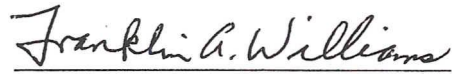
APPLICANT \_\_\_\_\_

WITNESS \_\_\_\_\_  
\_\_\_\_\_  \_\_\_\_\_  
Kenneth R. Fuhr

DATE

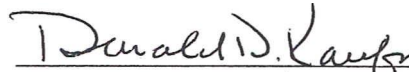
ENACTED AND ORDAINED THIS 19<sup>th</sup> day of March, 2002.

BOARD OF SUPERVISORS  
WEST MANHEIM TOWNSHIP  
YORK COUNTY, PENNSYLVANIA



Franklin A. Williams, Chairman

man, Vice Chairman

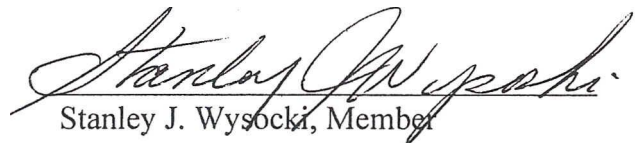


Donald D. Kaufman, Member



George J. Gross, Member

Cornelia A. Craumer, Secretary  
*waterwell8.wpd*



Stanley J. Wysocki, Member