



CHAPTER XVII

MONTGOMERY COUNTY HEALTH DEPARTMENT DIVISION OF WATER QUALITY MANAGEMENT INDIVIDUAL WATER SUPPLY SYSTEM REGULATIONS

Adopted February 1, 1997
Amendments effective August 1, 2003

Section 17-2 PURPOSE

To establish minimum standards for location, construction, modification or abandonment of individual water supply wells and system installation for protection of public health and welfare.

Section 17-3 SCOPE

After the effective date of adoption of these regulations, no individual water supply system shall be constructed or modified contrary to the provisions herein.

This Chapter does not apply to water supply systems regulated by the PA Department of Environmental Protection as set forth under the PA Safe Drinking Water Act (35 P.S. 721.1 et. seq.).

Section 17-4 DEFINITIONS

- 4.1 **Abandoned Well:** Any individual water supply well in existence prior to enactment of these regulations which has not been in service for a period of three (3) consecutive years or which has been replaced by an alternative water supply source.
- 4.2 **Agricultural Well:** Any water supply used specifically for farm crops or animals with no possibility of human consumption.
- 4.3 **Aquifer:** A saturated permeable geological formation that stores and transmits significant quantities of water under ordinary hydraulic gradients.
- 4.4 **Coliform:** All of the aerobic and facultative anaerobic, gram negative, non-spore forming, rod-shaped bacteria which are capable of fermenting lactose with gas formation within forty-eight (48) hours at thirty-five (35°C) degrees Celsius.
- 4.5 **Community Water 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.

- 4.6 **Construction of Wells:** All acts necessary to obtain groundwater, or artificially recharge groundwater. Provided, however, such term does not include acts necessary for obtaining or for prospecting for oil, natural gas, minerals, or products of mining or quarrying, or for inserting media to repressure oil, or natural gas formations for storing petroleum, natural gas, or other products and services. This includes the excavation or drilling of wells, but excludes installation of pumps and pumping equipment.
- 4.7 **Construction Specifications:** A MCHD document outlining methods and materials necessary for the installation of individual water supply wells.
- 4.8 **Disinfection:** A process which inactivates pathogenic organisms in water by chemical oxidants or equivalent agents, such as ultraviolet light.
- 4.9 **Drilling:** Any act of penetrating soil or rock such as by boring, coring, washing, jetting, driving or digging.
- 4.10 **Emergency Well:** A well drilled to address conditions which pose an immediate and significant danger to public health and welfare.
- 4.11 **Flowing Well:** A well that yields water by artesian pressure at the ground surface.
- 4.12 **Geothermal Well:** A well installed for the purpose of extracting water for heating or cooling.
- 4.13 **Groundwater:** Water occurring below the ground surface in saturated fractures, pores, channels, or voids in the underlying soil or rock.
- 4.14 **Hydrofracking:** A process to increase yield whereby water is pumped into a new or existing well to create new fractures or to clear existing ones.
- 4.15 **Individual Water Supply System:** A system including wells, pumps, piping, storage and/or treatment equipment supplying water for human consumption and not regulated under the Pennsylvania Safe Drinking Water Act (35 P.S. 721.1 et. seq.) or the regulations promulgated thereunder.
- 4.16 **Individual Water Supply Well:** A well associated with an individual water supply system.
- 4.17 **Modification:** Any action which necessitates entering a well with drilling tools; treating a well to increase yield; altering the physical structure or depth of the well; removal or replacement of well casing; or alterations to grouting.
- 4.18 **Monitoring Wells:** A well used to observe water levels and/or obtain samples of groundwater.

- 4.19 **New Construction:** Any building or structure which is constructed or whose use is modified between residential, commercial or industrial after the effective date of these regulations.
- 4.20 **Non-Abandonment Declaration:** (MCHD-WW-005), which states a previous water supply is to remain operational.
- 4.21 **PADCNR:** Pennsylvania Department of Conservation and Natural Resources or its successors or assignees.
- 4.22 **PADEP:** Pennsylvania Department of Environmental Protection or its successors or assignees.
- 4.23 **Person:** An individual, partnership, association, company, corporation, municipality, municipal authority, political subdivision or an agency of federal or state government. The term includes the officers, employees and agents of a partnership, association, company, corporation, municipality, municipal authority, political subdivision, or an agency of federal or state government.
- 4.24 **Test Wells:** A well constructed for the purpose of obtaining information on groundwater or hydrogeologic conditions including yield and quality.
- 4.25 **Water Well Completion Report:** The latest version of the Well Driller Log Form 8700-FM-TGS0015 or its replacement.
- 4.26 **Water Well Driller:** Any person licensed by the Commonwealth of PA performing or in responsible charge of drilling, altering or repairing a water well.
- 4.27 **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.
- 4.28 **Well Owner:** Any person who owns land on which a well has been drilled.

Section 17-5 PERMIT PROCEDURE

PURPOSE

- 5.1 To ensure a potable water supply protects public health and welfare, MCHD shall approve the location, construction and testing for all individual water supply wells; and approve the operation of an individual water supply system.

GENERAL

- 5.2 It shall be unlawful to install or modify an individual water supply well without first obtaining a permit from MCHD. 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 issued upon a two (2) part approval system which consists of a Permit to Construct and an Approval to Operate.
- 5.3 Monitoring, test, agricultural and geothermal wells not used for public consumption do not require permits. However, if a permit is issued for such a well, all permitting procedures must be met. A copy of the well driller log must be submitted to MCHD upon well construction completion.
- 5.4 All individual water supply wells shall be constructed by a PADCNR-licensed water well driller. The applicant and/or well driller is responsible for ensuring maintenance of all isolation distances set forth in Section 17-7 of this Chapter. It is recommended and may be required that the applicant have a driller, engineer or other qualified professional certify all isolation distances to required landmarks are met and accurate. The applicant and/or appointed representative shall accept full responsibility for any conditions associated with discovery of sewage system components or other potential sources of pollution not determined during the initial investigation. The applicant and/or appointed representative shall solely bear any and/or all expenses associated with remedying the encroachment.
- 5.5 All individual water supply wells shall be constructed according to MCHD's Individual Water Supply Well Construction Specifications unless any such specification is expressly waived in writing by MCHD. Said waiver may be granted upon the applicant demonstrating an inability to comply with the specifications.

PERMIT TO CONSTRUCT

- 5.6 Individual Water Supply Well Permit Applications must be filed on behalf of the current property owner or equitable owner. All permit applications for new construction must be completed in the same name as the valid on-lot sewage disposal permit, if applicable. If applicable, no permit will be issued until the sewage facilities planning module is approved by PADEP, unless a waiver is granted by MCHD.
- 5.7 Individual Water Supply Well Permit Applications must be submitted with an appropriate check or money order made payable to the "Treasurer of Montgomery County" for MCHD to review the application.
- 5.8 The MCHD Individual Water Supply Well Application must be completed and include the following:
1. Applicant name and signature, address, and telephone number.

2. Site address, subdivision name, lot number, and municipality.
3. Driller name, PADCNr license number and telephone number.
4. Type of construction.
5. Intended use.
6. Type of sewage disposal.
7. Tax parcel number.
8. Signed and notarized agent authorization form.
9. Sewage facilities planning module approval letter, if applicable.
10. Plot plan to include:
 - a. Property lines, lot dimensions, slope direction, adjacent streets, reference to North.
 - b. Marked distances from the proposed well to any existing and proposed water supplies, buildings, driveways, parking areas, two (2) non-parallel property lines, retention areas, surface waters, and chemical/fuel storage tank, if applicable, and other landmarks requiring compliance with isolation distances set forth under Section 17-7 of this Chapter.
 - c. Marked distances from the proposed well to any existing and proposed sewage system components within 125 feet on said property and *all* neighboring properties. All above sewage system components must be clearly identifiable on the site at time of MCHD inspection.

5.9 Applications for Individual Water Supply Well Permits shall be issued or denied within seven (7) working days of receipt of an administratively complete well application. MCHD shall notify applicants within five (5) working days if an application is determined to be incomplete or containing information unable to be verified. Upon receipt of the supplemental or amendatory information, MCHD has an additional seven (7) working days to issue or deny the permit.

5.10 If construction of the individual water supply well does not commence within three (3) years from issuance date, said permit shall expire.

5.11 If an emergency well condition exists, MCHD may give a verbal Permit to Construct an individual water supply well. This Permit will be voided within twenty-four (24) hours unless the following conditions are met:

1. A complete Individual Water Supply Well Application is submitted to MCHD.
2. The drilling process has commenced.

The PADCNr-licensed well driller must adhere to all other requirements set forth in this Chapter unless granted a waiver by MCHD.

APPROVAL TO OPERATE

5.12 Upon completion of the individual water supply well, a well pump test must be performed and the following information submitted to MCHD:

1. Depth of well, pump intake, and static water level (undisturbed for twenty-four (24) hours).
2. The measured water level after pumping the well at four (4) gallons per minute (gpm) for two (2) hours.
3. Water quality test results on water collected at the end of the pump test.

5.13 Laboratory analysis from a PADEP certified laboratory of the individual water supply well must be performed for all parameters required pursuant to Section 17-10.2 and Section 17-10.3 of this Chapter. A waiver may be granted by MCHD for Volatile Organic Analysis upon applicant submission of a written non-economic justification.

5.14 An Approval to Operate an individual water supply system shall be issued or denied within seven (7) working days upon receipt of a complete submission of the information referenced in 5.11 and 5.12 and, if applicable,

1. Description of any treatment system installed pursuant to Section 17-11, of this Chapter.
2. Water Well Completion Report.
3. Additional information as required by MCHD.

GENERAL

5.15 Any permit or approval issued pursuant to this Chapter may be revoked or modified by MCHD for any of the following reasons:

1. A new condition has been identified which will affect the quality of an individual water supply well.
2. Information material to issuance of the permit or approval has been falsified.
3. The applicant has violated the provisions of this Chapter.
4. The on-lot sewage permit has been revoked.

Section 17-6 INSPECTION PROCEDURE

6.1 Twenty-four (24) hours notice must be given to MCHD prior to commencement

of well installation.

- 6.2. Any relocation of the well beyond ten (10) feet from the permitted location must be submitted in writing and subsequently approved by MCHD prior to drilling.
- 6.3. If MCHD is not on-site for the grouting procedure, all grouting information must be submitted to MCHD within twenty-four (24) hours.
- 6.4. All sewage system component locations within one hundred twenty-five (125) feet of the proposed well on said property and all neighboring properties must be clearly identifiable prior to commencement of well drilling. Failure to comply upon time of MCHD inspection will result in termination of drilling activities.

Section 17-7 ISOLATION DISTANCES

Minimum isolation distances shall be maintained from the proposed well to the facilities listed below:

<u>SOURCE OF POLLUTION</u>	<u>MINIMUM DISTANCE</u>
1. Delineated wetlands or floodplains.	25 feet
2. Lakes, ponds, streams or other surface waters.	25 feet
3. Storm drains, retention basins, storm water stabilization ponds, rainwater pits.	25 feet
4. Community spray irrigation site: sewage sludge and septage disposal sites.	100 feet
5. Farm silos, barnyards, manure pits or tanks or other storage areas of animal manure.	200 feet
6. Subsurface sewage absorption areas, elevated sand mounds, cesspools, sewage seepage pits, single family spray irrigation system, etc.	100 feet
7. Septic tanks, aerobic tanks, sewage pump tanks, holding tanks.	50 feet

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| 8. | Gravity sewer lines and drains carrying domestic sewage or industrial waste (unless item 9 applies). | 50 feet |
| 9. | Gravity sewer lines and drains using cast iron pipe with watertight lead caulked or neoprene gasketed joints, or Schedule 40 polyvinylchloride (PVC) pipe with solvent welded joints. | 10 feet |
| 10. | Sewer lines and drains carrying domestic sewage or industrial waste under pressure (except welded steel pipe or concrete encased pipe). | 50 feet |
| 11. | Commercial preparation area or storage area of hazardous spray materials, fertilizers or chemicals; salt piles. | 300 feet |
| 12. | Other potential sources of pollution as determined by MCHD. | As approved |

Any proposed deviation or modification from the above isolation distances must be submitted in writing to MCHD stating reasons for such deviation or modification. Upon review of the material, a waiver may be granted. Additional conditions may be required prior to permit issuance. These conditions may also apply to isolation distances unable to be determined by the applicant.

Section 17-8 ABANDONED WELLS

- 8.1 All abandoned wells must be filled and sealed by a PADCNR licensed water well driller according to the PADEP/DCNR Water Well Abandonment Guidelines. A copy of the PADEP/DCNR Water Well Abandonment form shall be submitted to MCHD within thirty (30) days of abandonment.
- 8.2 If applicant/homeowner chooses not to abandon the well, a non-abandonment declaration must be signed and submitted to MCHD within thirty (30) days.
- 8.3 Abandonment procedures may be subject to MCHD inspection.

Section 17-9 DISINFECTION

Following completion of construction of an individual water supply well and installation of the pumping equipment, or alterations, or maintenance work, the well shall be pumped continuously until the water discharge is clear. The well, pump, piping system, and other fixtures shall be

disinfected according to MCHD Individual Water Supply Well Construction Specifications.

Section 17-10 WATER QUALITY

- 10.1 All water analyses must be conducted by a PADEP certified laboratory.
- 10.2 All individual water supply systems must meet current PADEP drinking water standards for the following required parameters:

<u>PARAMETER</u>	<u>*CURRENT PADEP LIMIT</u>
Total Coliform	0 cfu/100ml
pH	6.5 to 8.5
Nitrate as N	10 mg/l
Volatile Organic Compounds	-- mg/l
Benzene	0.005 mg/l
Carbon Tetrachloride	0.005 mg/l
o-Dichlorobenzene	0.6 mg/l
para-Dichlorobenzene	0.075 mg/l
1, 2 - Dichloroethane	0.005 mg/l
1, 1 - Dichloroethylene	0.007 mg/l
cis-1, 2 - Dichloroethylene	0.07 mg/l
trans-1, 2 - Dichloroethylene	0.1 mg/l
Dichloromethane	0.005 mg/l
1, 2 - Dichloropropane	0.005 mg/l
Ethylbenzene	0.7 mg/l
Monochlorobenzene	0.1 mg/l
Styrene	0.1 mg/l
Tetrachloroethylene	0.005 mg/l
Toluene	1 mg/l
1, 2, 4 - Trichlorobenzene	0.07 mg/l
1, 1, 1 - Trichloroethane	0.2 mg/l
1, 1, 2 - Trichloroethane	0.005 mg/l
Trichloroethylene	0.005 mg/l
Vinyl Chloride	0.002 mg/l
Xylenes (total)	10 mg/l

To further ensure a potable water supply, adherence to the following parameters is recommended, unless required under Section 17-10.3 of this Chapter:

<u>PARAMETER</u>	<u>*CURRENT PADEP LIMIT</u>
Chlorides	250 mg/l
Total Dissolved Solids (TDS)	500 mg/l
Iron	0.3 mg/l
Manganese	0.05 mg/l

mg/l = *milligrams/liter*
cfu = *colony forming units*
ml = *milliliters*

*Limits subject to change per state and/or federal law.

- 10.3 Analyses for additional parameters may be required if MCHD has reason to suspect that substances may be present in the water in amounts that could affect potability. All individual water supply systems must meet PADEP drinking water standards for such parameters.

Section 17-11 TREATMENT

- 11.1 If total coliform, nitrates or VOCs are not within the specified standards noted in Section 17-10.2 of this Chapter, treatment of the individual water supply well is required to achieve compliance with the standards.
- 11.2 If iron, manganese, chloride or Total Dissolved Solids (TDS) are in excess of the above listed standards in Section 17-10.2, or pH is not within the listed range, treatment is recommended.
- 11.3 Additional treatment of the water may be required if MCHD has reason to suspect that substances may be present in the water in amounts that could affect potability.

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