

## *Protecting Public Health through Private Water Well Standards*

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## *Chester County Health Department*

- The 1<sup>st</sup> implementation of the CCHD Water Well Construction Regulations was 1978 ( First Private Well Regulations implemented in Pa.)
- These Regulations were created at the request of the Environmental Health Specialists
- The original Regulations were modeled after those used in the State of Maryland
- Maryland Regulations were rumored to have been modeled after those from the State of Wisconsin (Best website for well related topics)

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Chapter 501 continues to be work in progress. A new draft was approved by the Chester County Board of Health on 9-26-07 and is expected to become effective on 1-1-08.

Chapter 501 has been revised several times since 1978.  
1983, 1987, 1989, 1993, 1997, 2000, 2002, 2008

## *Chester County Health Department Rules and Regulations Chapter 500, Subchapter 501*

One of the key provisions of the CCHD Well Regulations is that they include a requirement that every Well Drilling Contractor and Pump Installation Contractor be licensed by the CCHD.

Contractors must take a proficiency test, based on the CCHD Regulations, for the specific activity for which they want to be licensed.

Contractors may only perform those activities for which they are licensed.

Contractor Licenses include: water supply wells, geothermal wells<sup>2</sup>, pump installation, or any combination

Well permits are issued for the construction of any well for any purpose.

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The contents of Chapter 501 include provisions that govern the:

- Physical location of a well by establishing isolation distance requirements from specific features and structures
- Construction of the borehole and installation of casings. This includes casing types, minimum casing lengths, set into bedrock and grouting of the annular space between the casing and the surrounding soil
- Basic water well system yield requirements
- Standards for water quality to ensure that the supply meets the general potability standards established by US EPA

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Site location considerations:

1. Water related wetlands, floodplains, lakes & ponds, streams, springs, surface waters, stormwater absorption areas
2. Sewage related bio-solids areas, farm silos & barnyards, animal manure pits, sewage absorption areas, septic treatment tanks, sewage lines

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### Site location considerations (cont.)

3. Chemical related hazardous materials storage, storage tanks, cemeteries, NPL sites
4. Miscellaneous building foundations (except pump house), mobile homes, wooden structures, driveway & parking lots, property lines and rights-of-way.

And any other identified source of pollution.

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### Construction considerations:

- Casings new pipe, type (steel or PVC), wall thickness depending on the pipe type
- Casing set 5ft minimum into solid bedrock
- Grout (Bentonite clay<sup>2</sup> or cement) fills the annular space
- Insect resistant well cap is required
- All installations use pitless adapter (no more pits<sup>2</sup>)
- Casings extend 12" above surrounding final grade

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### Exceptions to the site location and construction requirements:

1. GSHP (Closed Loop Geothermal) well installations
2. Monitoring wells
3. Public Water Supply wells

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### Minimum Well Yield Requirements:

1. Individual Water Supply System Standard  
Not less than 480 gal. of water within a 2 hr. period to be provided through natural recharge and/or borehole or tank storage.
2. Well Yield  
1gpm absolute minimum w/ 400 gal storage required.  
2-4 gpm must have sufficient storage to meet the System Standard (above)
3. A 2<sup>nd</sup> well (maximum required) must be drilled if the 1<sup>st</sup> well does not meet the yield requirement.

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### Other physical considerations:

All well pumps (new or replacement) installed by a CCHD Licensed Pump Installer

Whenever a pump is replaced an insect resistant cap must be installed

Whenever any well maintenance is performed the well must be disinfected

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### Water Quality

Original copy of the laboratory analysis to avoid alteration (no FAX copies accepted for final approval)

Water samples taken by a CCHD Licensed Well or Pump Contractor or an employee from a DEP certified laboratory

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**Water Quality (cont):**

<u>Required treatment</u>	Total Coliform	<1/100ml
	Turbidity	5 NTU
	Nitrate + nitrites (Total N)	10 mg/l

<u>Recommended treatment</u>	pH	Outside of	6.5 to 8.5
	Iron		0.3 mg/l
	Manganese		0.05 mg/l
	Chloride		250.0 mg/l
	Color		5 Units
	Odor		5 Units
	MBAS		0.5 mg/l

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**Other items to consider:**

Superfund Sites

Water Source Replacements

Old unused wells

Agricultural wells and water supply wells in agricultural areas

Open Loop Geothermal wells

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Questions??

[www.chesco.org](http://www.chesco.org)

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