PROTECTING YOUR WELL AND WATER SUPPLY

A GROUNDWATER PROTECTION PLAN FOR PRIVATE WATER WELL OWNERS

Groundwater is an important but vulnerable source of fresh water for drinking, household use, industry, and farming. You can protect your groundwater supply by carefully managing activities at the surface, especially in those areas where groundwater may be more easily contaminated, such as near sinkholes, around your septic system, and near your domestic water well.

The Energy and Environment Cabinet administrative regulation, 401 KAR 5:037 requires anyone participating in certain activities to develop and implement a **groundwater protection plan**.

You, as the owner of a private domestic-use water well **are required** to develop or adopt a groundwater protection plan, to certify that you will implement a groundwater protection plan, and to keep a copy of the certified groundwater protection plan on the site where the domestic water well is located.

Protecting Your Groundwater Supply

The goal of a groundwater protection plan is to protect your groundwater supply from potential pollution. You can protect the groundwater supply to your domestic well by following best management practices. Follow the best management practices outlined below to implement this generic groundwater protection plan.

- Inspect exposed parts of the well periodically for problems such as: - cracked or corroded well casing - broken or missing well cap - damage to protective casing - settling and cracking of surface seals.
- Slope the area around the well so that surface runoff drains away from the well.
- Provide a well cap or sanitary seal to prevent unauthorized use of or entry into the well.
- Disinfect drinking water wells at least once a year using bleach or hypochlorite granules (see Tables).
- Provide for sediment removal or well cleaning as necessary.
- Have the well tested annually for Total Coliform and *E. coli*. and/or other constituents of concern.
- Contact your local health department for assistance with well testing.
- Keep accurate records of any well maintenance, such as disinfection or sediment removal, that might require use of chemicals in the well.
- Use a Kentucky certified water well driller for any new well construction or modification and proper well abandonment.

- Locate your well a minimum distance from the following potential sources of contamination:
    - Leaching Pit (100 feet)
    - Livestock Pens, Corals, or Stables (50 feet)
    - Manure Pile or Animal Waste Storage Areas (75 feet)
    - Confined Animal Feeding Operations (75 feet)
    - Septic Tank or Sewer Line (50 feet)
    - Wastewater Treatment Disposal System (75 feet)
    - Sidewall or Lateral Trench Bed or Lagoon (70 feet)
    - Lateral Fields (70 feet), Cesspools (150 feet), or Pit Privy (75 feet)
    - Grave or Cemetery (75 feet)
    - Abandoned Water Wells and Geothermal Wells, Grouted (20 feet), Ungrouted (50 feet)
    - Chemical Storage Areas (75 feet)
    - Machinery Maintenance Areas (75 feet)
    - Waste Piles (75 feet)
    - Underground Storage Tanks for chemicals, fertilizers, or petroleum products (100 feet)
    - Above-Ground Storage Tanks for chemicals, fertilizers or petroleum products (100 feet)
    - Surface Water Body (25 feet)
- If an existing well is located closer than the specified distance for any of the above activities, then disinfection and appropriate well testing should be done more frequently than once a year.
- Avoid mixing or using pesticides, fertilizers, herbicides, degreasers, fuels, or other pollutants near your well.
- Do not use dry wells or wells that are not properly abandoned for disposal.
- Do not locate any type of potentially polluting activity up slope from your well.
- Do not cut off well casing below the ground surface because doing so leaves the well more vulnerable to contamination.

For Your Records

An important part of complying with the groundwater protection regulations is keeping accurate maintenance and disinfection records for the well.

Notes:

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_____

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Disinfection:

Method	Date

Other Well Maintenance:

Type of Maintenance	Date

You should test your water for bacteria each year, usually in the spring, or if there is any change in the taste, color or odor of your drinking water.

Table 1 shows a method disinfection for a drilled well

Well diameter in Inches	Amount of household bleach required to disinfect well per 100 Feet of Water
3	2 cup
4	3 cups
5	1 quart
6	1.5 quarts
8	2.5 quarts
10	4 quarts
12	6 quarts

Table 2 shows a method well disinfection for a dug/bored well

Well Diameter in Inches	Amount of household bleach required to disinfect well Per Depth of Water in Well (Feet)									
	5'	**10'**	**15'**	**20'**	**25'**	**30'**	**40'**	**60'**	**80'**	**100'**
12	1C	1.5C	1.5C	2C	2C	3C	1Q	1Q	2Q	2.5Q
24	2C	1Q	1.5Q	2Q	2.5Q	1G	1G	1G	2G	2G
36	1Q	2.5Q	1G	1G	1.5G	1.5G				
C	Cup									
Q	Quart									
G	Gallon									

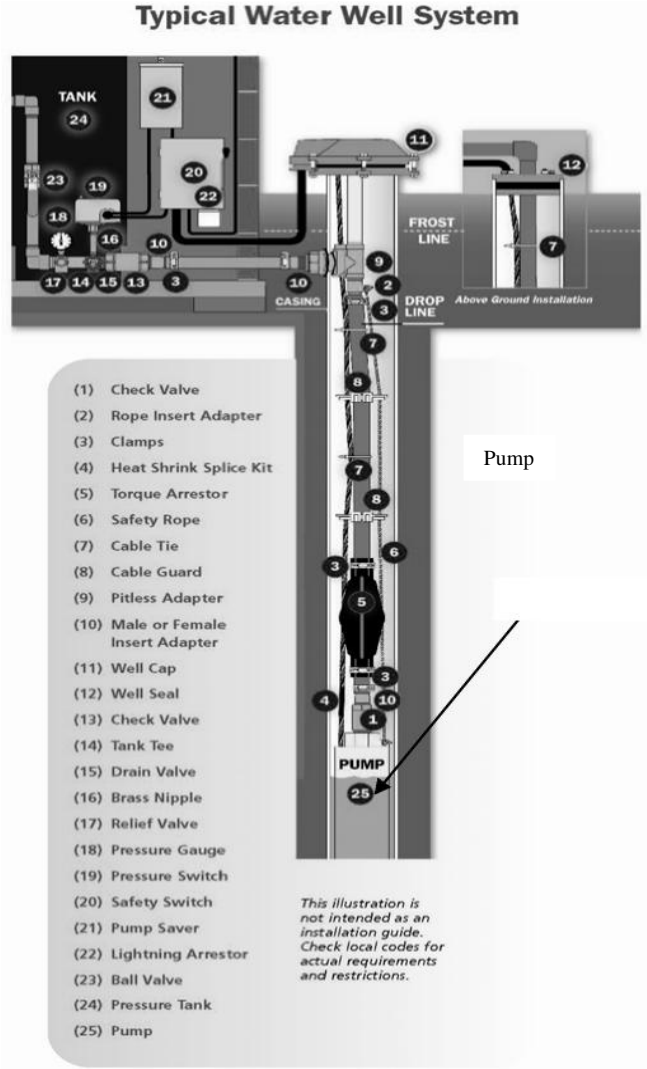
Certification

Each domestic water well owner is required to implement a groundwater protection plan. You may fulfill this requirement by using this document and signing the certification statement below. You must retain this document at the location served by the well.

I certify that I have read and will implement this groundwater protection plan.

_____

(Signature of Well Owner) ***(Date)***



For more information contact:

Groundwater Protection Program Coordinator
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Kentucky Division of Water
Watershed Management Branch
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Frankfort, KY 40601
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Groundwater Protection Plan Regulation 401 KAR 5:037
http://water.ky.gov/groundwater/Pages/GroundwaterProtection.aspx

Sketch Well Location Here

Well Diameter	(Ft.)
Well Depth	(Ft.)
Depth to water	(Ft.)
Height of Water Column	(Ft.)
Well Volume	Gallons

Well Testing

Parameter	Present	Absent	Test Date
Total Coliforms			
E. Coli			
Tested By			
Total Coliforms			
E. Coli			
Tested By			