Groundwater Protection Plan for Domestic Well Owners

Why is protecting my well important?
Groundwater is an important but vulnerable source of fresh water for drinking, household use, industry, and farming. It is also the only source of water for private wells and many public utilities. Kentucky's groundwater supply can be polluted by activities above ground. Implementing groundwater protection best management practices (*e.g.* proper well siting, construction, and maintenance) is essential to safeguard your groundwater supply and to protect groundwater for generations to come.

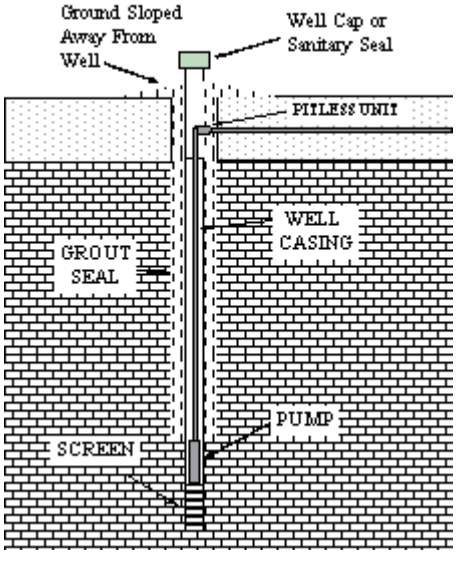
How do I protect my groundwater?
You can protect your groundwater supply by carefully managing activities at the surface, especially in those areas where groundwater may be more easily contaminated, such as near sinkholes, around your septic system, and near your domestic water well. Best management practices are outlined in this generic groundwater protection plan for activities near and related to your domestic water well. Implementing this groundwater protection plan will go a long way toward preventing groundwater pollution and ensuring the safety of your water source, now and in the future.

What is a groundwater protection plan?
The Natural Resources and Environmental Protection Cabinet administrative regulation, 401 KAR 5:037 requires anyone participating in certain activities to develop and implement a groundwater protection plan. Construction, operation, closure, and capping of water wells are some of the activities that require a groundwater protection plan. The cabinet has developed groundwater protection plans for these activities. This publication is the generic groundwater protection plan for domestic well owners.

Am I required to have a groundwater protection plan?
Yes. If you own a domestic-use water well, regulation 401 KAR 5:037 requires you 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.

How does this groundwater protection plan protect my groundwater supply?
This groundwater protection plan outlines operation and maintenance practices to protect your well from contamination. It includes an area for simple record keeping of operation and maintenance practices. The plan also outlines activities and practices to be avoided in the operation and maintenance of your well, including procedures for proper well abandonment. It also includes some potentially polluting activities to be avoided near your well.

Typical properly constructed well:



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.

1. 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.
2. Slope the area around the well so that surface runoff drains away from the well.
3. Provide a well cap or sanitary seal to prevent unauthorized use of or entry into the well.
4. Disinfect drinking water wells at least once a year using bleach or hypochlorite granules (see Table I).
5. Provide for sediment removal or well cleaning as necessary.
6. Have the well tested once a year for fecal coliform or other constituents that may be of concern.
7. Contact your local health department for assistance with well testing.
8. Keep accurate records of any well maintenance, such as disinfection or sediment removal, that might require use of chemicals in the well.
9. Use a Kentucky certified water well driller for any new well construction or modification and proper well abandonment.
10. Located your well a minimum distance from the following potential sources of contamination:
    - animal pens or feedlots (50 feet) and manure storage areas (75 feet)
    - septic tanks (50 feet), lateral fields (70 feet), cess pools (150 feet), or pit privy (75 feet)
    - chemical storage areas (suggest 75 feet)
    - machinery maintenance areas (suggest 75 feet)
    - waste piles (suggest 75 feet), lagoons (suggest 150 feet), sewers (15-50 feet, depending on type)
    - underground storage tanks for chemicals, fertilizers, or petroleum products (suggest 75 feet)
    - above-ground tanks for chemicals, fertilizers or petroleum products (suggest 75 feet)
11. 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.
12. Avoid mixing or using pesticides, fertilizers, herbicides, degreasers, fuels, or other pollutants near your well.
13. Do not use dry wells or wells that are not properly abandoned for disposal.
14. Do not locate any type of potentially polluting activity up slope from your well.
15. 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. The following table will help you maintain proper records for your well.

Disinfection:

Method	Date

Other Well Maintenance:

Type of Maintenance	Date

Table 1 shows one method of well disinfection.

Well diameter in Inches	Amount of Bleach Required to Disinfect Well per 100 Feet of Water in Well
3	1 cup
4	2 cups
5	3 cups
6	4.5 cups
8	8 cups
10	12 cups
12	18 cups

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)

Last updated: 03/01/98 by Brenda Taylor