



WELLHEAD PROTECTION FOR MINNESOTA

What Is It? - Wellhead protection is a means of safeguarding public water supply wells* by preventing contaminants from entering the area that contributes water to the well or wellfield over a period of time. The wellhead protection area is determined by using geologic and hydrologic criteria, such as the physical characteristics of the aquifer and the effects which pumping has on the rate and direction of groundwater movement. The management plan is developed for the wellhead protection area that includes inventorying potential sources of groundwater contamination, monitoring for the presence of specific contaminants, and managing existing and proposed land and water uses that pose a threat to groundwater quality.

What Is a public water supply well? A public water supply well provides piped drinking water for human use to 15 or more service connections or to 25 or more persons for at least 60 days a year. A public water supply well is further defined as either a community or noncommunity water supply well.

A community water supply well serves 15 or more service connections used by year-round residents or at least 25 year-round residents. Examples include municipalities, subdivisions, and nursing homes.

Noncommunity water supply wells are divided into two groups:

- A nontransient noncommunity supply well serves at least 25 of the same people over six months of the year. Examples include schools, factories, and hospitals.
- A transient noncommunity supply well serves all other public water systems. Examples include restaurants, gas stations, and churches.

What laws require wellhead protection? - The Minnesota Groundwater Protection Act of 1989 grants the commissioner of health authority to develop wellhead protection measures for wells serving public water supplies. Also, the 1986 Amendments to the federal Safe Drinking Water Act require states to implement wellhead protection programs for public water wells.

Who administers wellhead protection? - The Minnesota Department of Health (MDH) is the lead agency for administering Minnesota's wellhead protection program. However, wellhead protection will be effective only through the cooperation of state and local governments, public water suppliers, contaminant source owners, and general public.

Will wellhead protection be required for all public water supply wells? - The long-term goal is to implement wellhead protection measures for all public water supply wells. However, the large number of public water supply wells (13,000), the diversity of geologic conditions in Minnesota, and current resource constraints require that wellhead protection be implemented in phases. MDH anticipates implementing wellhead protection measures in 1996 beginning with new community wells. Existing community wells and other types of public water supply wells will be phased in.

Between June 1998 and June 2003, all public water suppliers will be required to:

- 1) Maintain the isolation distances from potential contamination sources defined in the state Well Code;
- 2) Monitor noncomplying sources located on their property; and
- 3) Report to MDH other violations to the isolation distance, or ask a local governmental unit to regulate these sources.

In addition to maintaining the isolation distances, owners of community and nontransient noncommunity wells, when notified by MDH or a new well is added to a municipal water supply system, must develop a wellhead protection plan which includes:

- 1) A map of the wellhead protection area,
- 2) A vulnerability assessment of the well and the wellhead protection area,
- 3) An inventory of potential sources of contamination within the wellhead protection area,
- 4) A plan to manage and monitor existing or proposed potential source(s) of contamination, and
- 5) A water supply contingency strategy.

There has been a bit of a misunderstanding about the time frame for the completion of a wellhead protection plan. It is not required that all public water suppliers complete a wellhead protection plan by the summer of 1996.

What are the costs associated with the contamination of public water supplies in Minnesota? -

Since 1982, 26 community water supplies in Minnesota have spent \$44,401,724 to provide safe and adequate drinking water to their consumers following groundwater contamination of their wells. For communities where the population served is less than 1,000 people, the average cost per capita was \$1,336. For larger communities (i.e., greater than 1,000), the average cost per capita was \$336.

A 1995 U.S. Environmental Protection Agency report entitled "Benefits and Costs of Prevention: Case Studies of Community Wellhead Protection" concludes that the combined average per well benefit-cost ratio for a basic prevention program considering the results of all seven communities is 27:1.

How were state wellhead protection rules developed? - MDH established an advisory committee in early 1993 to assist with rule development, and draft language was prepared in May 1995. Public involvement in rule development and program implementation will be encouraged and is mandated by state and federal law. Copies of the draft rule language and the statement of need and reasonableness are available at MDH.

For further information about wellhead protection, please contact:

Wellhead Protection Program - (612) 215-0800



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