

The City of Prairie du Chien has prepared a Wellhead Protection Plan for its municipal wells. Wellhead protection planning is a requirement of the 1986 Amendments to the Safe Drinking Water Act and is intended to minimize the risk of contamination of public wells. For new municipal wells, a plan must be approved by the DNR and adopted by the municipality before the well can be placed in service. For older existing wells, these plans are voluntary, although strongly encouraged by the DNR. Prairie du Chien has four existing wells, all of which draw water from the sand and gravel aquifer that lies beneath the city. The first step in the process is to delineate the area contributing groundwater to a well. Groundwater is recharged by infiltration of rainfall that moves downward to the water table. Below the water table, groundwater moves in a more horizontal direction, generally toward a lower point such as a river. At Prairie du Chien, groundwater flows generally toward the Mississippi River. By knowing this, plus the permeability of the aquifer, plus the pumping rate of the well and a few other factors, the size and shape of the "capture area" of groundwater for a well can be determined.

Then the potential contaminant sources in the capture area are identified to determine the possible types of contaminants that might be released to the ground and the types of possible sources. Potential sources include fuel tanks, pesticide storage and application, industrial facilities, landfills, wastewater treatment, and many other types of structures and activities. With this information, the most effective protective measures can be selected. Protective measures can range from enforceable zoning or ordinances to simply making people aware of the wellhead protection area, its purpose and the importance of being extra careful with polluting materials in the area.

Larry Gates, Water Superintendent for the City, has been working with Ed Morse, Groundwater Specialist with the Wisconsin Rural Water Association (WRWA), to prepare the plan. WRWA is an association of public water and wastewater utilities, of which Prairie du Chien is a member. As Mr. Morse says, wellhead protection makes a lot of sense. It's much less expensive to prevent contamination than to have to treat contaminated water or to replace a contaminated well.

For more information to expand this article:

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