

FACT SHEET

Office of Ground Water and Drinking Water

WELLHEAD PROTECTION PROGRAM

Ground water is used by the majority of the people in the United States for drinking water purposes. Ground water is less costly to use as a drinking water source than surface water primarily because of land acquisition costs and treatment requirements for surface water supplies. Once ground water becomes contaminated, however, cleanup can be very costly, and the probable causes of contamination can be difficult to identify.

What Is Wellhead Protection?

The Wellhead Protection Program was established by Section 1428 of the Safe Drinking Water Amendments of 1986. The purpose of the program is to protect public ground-water supplies from contamination and prevent the need for costly treatment of wells to meet drinking water standards. The program is based on the concept that the development and application of land-use controls and other preventative measures can protect ground water.

Under the Act, states are required to develop and submit Wellhead Protection Programs to EPA. EPA then reviews the program for completeness and consistency. As of February, 1993, the following states and territories have received approval of their programs from EPA.

Alabama	Maryland	Oklahoma
Arizona	Massachusetts	Puerto Rico
Arkansas	Nebraska	Rhode Island
Connecticut	New Hampshire	South Carolina
Delaware	New Jersey	South Dakota
Georgia	New Mexico	Texas
Illinois	New York	Utah
Louisiana	North Dakota	Vermont
Maine	Ohio	West Virginia

Unlike most EPA programs, which are regulatory in nature and address specific sources of contamination, the Wellhead Protection Program is designed to focus on the management of the ground-water resource rather than on controlling a limited set of activities or contamination sources.

What Are The Elements Of A Wellhead Protection Program?

A comprehensive Wellhead Protection Program comprises several distinct and essential elements:

1. Summary and Purpose of the program should be included to provide a discussion of how the WHP goal in the Statute will be achieved;
2. Designation of Responsibilities to develop and implement the program among state agencies, local governments, and public water suppliers;
3. Delineation of Wellhead Protection Areas (WHPAs) based on all reasonably available hydrogeologic information on ground water flow, recharge and discharge, and other information that the state deems necessary to adequately determine the wellhead protection area;
4. Identification of Sources of Contaminants within each WHPA, including all man-made sources that may have adverse effects on public health;
5. Development of Management Approaches to protect the ground-water well from contaminants, including technical assistance, financial assistance, implementation of control measures, education, training, and demonstration projects;
6. Contingency Planning for the provision of alternate drinking water supplies in the event of well or wellfield contamination;
7. New Water Supply Source Protection from contamination in the area of new public water supply wells; and
8. Provisions for Public Participation in the development of a state's program.

What is A Wellhead Protection Area?

The 1986 Amendments define a Wellhead Protection Area as "the surface and subsurface area surrounding a water well or wellfield supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or wellfield." Defining these areas can be a complex technical task requiring the skills of geologists and hydrogeologists. Unlike surface watersheds that can be easily determined from topography, WHPAs can vary in size depending on their geology, pumping rates, and well construction techniques. There are many methods by which the technical information concerning the WHPA can be expressed on maps for display purposes. These include simple fixed radius techniques, analytical equations, numerical modeling, and geologic mapping.

What Information is Available on the Wellhead Protection Program?

The Ground Water Protection Division of the EPA Office of Ground Water and Drinking Water has prepared many documents on the Wellhead Protection Program. Many of these provide information on specific sources of contamination to WHPAs, while others are program summary documents:

- *Protecting Local Ground-Water Supplies Through Wellhead Protection.* 1991.
- *A Review of Sources of Ground Water Contamination from Light Industry.* 1990.
- *Guide to Ground Water Supply Contingency Planning for Local and State Governments.* 1990
- *Wellhead Protection Programs: Tools for Local Governments,* 1989.
- *WHPA 2.0: A Modular Semi-Analytical Model for the Delineation of Wellhead Protection Areas, Version 2.0.* 1992.
- *VIRALT 2.0: A Modular Semi-Analytical Model for Simulating Viral Transport in Ground Water, Version 2.0.* 1992.
- *Guidelines for Delineation of Wellhead Protection Areas.* 1987.
- "Why Do Wellhead Protection?" 1991.

An updated listing of WHP documents available from EPA can be obtained by calling (800) 426-4791.

Where Do I Go For More Information?

Additional information on Wellhead Protection Programs in your area can be obtained by contacting your nearest EPA Regional Office:

EPA Region I (CT, MA, ME, NH, RI, VT)
JFK Federal Building, Boston, MA 02203
(617) 565-3600

EPA Region II (NJ, NY, PR, VI)
Rm 842, 26 Federal Plaza, New York, NY 10278
(212) 264-5635

EPA Region III (DC, DE, MD, PA, VA, WV)
841 Chestnut Street, Philadelphia, PA 19107
(215) 597-2786

EPA Region IV (AL, FL, GA, KY, MS, NC, SC, TN)
45 Courtland Street, NE, Atlanta, GA 30365
(404) 347-3866

EPA Region V (IL, IN, MI, OH, MN, WI)
230 S. Dearbourn Street, Chicago, IL 60604
(312) 886-1490

EPA Region VI (AR, LA, OK, NM, TX)
1445 Ross Avenue, Dallas TX 75202
(214) 655-6446

EPA Region VII (IA, KS, MO, NE)
726 Minnesota Avenue, Kansas City, KS 66101
(913) 551-7033

EPA Region VIII (CO, MT, SD, UT, WY)
999 18th Street, Denver, CO 80202
(303) 293-1708

EPA Region IX (AS, AZ, CA, GU, HI, NV, CNMI)
75 Hawthorne Street, San Francisco, CA 94105
(415) 744-1831

EPA Region X (AK, ID, OR, WA)
1200 6th Avenue, Seattle, WA 98101
(206) 553-1216

FOR MORE INFORMATION, CONTACT:

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Groundwater Protection Division (WH-550G)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
(800) 426-4791.