

GROUNDWATER SOURCE PROTECTION AREAS

Community Water Systems

Public water systems are required to develop Source Protection Areas (SPAs) and plans to protect their drinking water sources. A **Groundwater SPA** is the land area beneath which groundwater flows to a well, spring, or infiltration gallery. A contaminant released to the land surface or subsurface in a Groundwater SPA would be reasonably likely to move toward, and reach, the drinking water source.

Included in most SPAs are Zones 1, 2, and 3 and a Two-Year Travel Time (2YTT) Zone. These zones are developed to help water systems prioritize source protection efforts. The following is a description of those zones:

Zone 1 is the area immediately around the water source. This is the area where impacts from contamination are likely to be immediate and certain. For public community water systems, this area is generally 200' around the well, spring, or infiltration gallery.

Zone 2 includes the area where groundwater flows to the source from outside Zone 1 and where there would be probable impacts to the water supply if contamination were to occur.

Zone 3 consists of the remaining area that recharges Zone 2 and where impacts from potential sources of contamination are possible. This is usually, but not always, the area upslope from Zone 2 to the watershed boundary.

The **Two Year Travel Time Zone** is identified as an area where bacteria and virus threats (such as those from onsite disposal of sewage) would reach the drinking water source in less than two years by traveling through the soils. Two years is the time it takes most viruses to die off or become non-infectious in a groundwater environment.

The public water system develops a Source Protection Plan based on the approved SPA. Implementing the plan generally involves cooperation with landowners within the SPA to help protect groundwater from contamination. The water system does not have authority to control land uses on any land within the SPA unless they own the land or have specific legal agreements with the landowner. Some towns have local ordinances with overlay districts that correspond with the SPAs for public water supply sources.

If you own land or live within a SPA, protecting groundwater takes on extra importance. This is because everything you spill on the land or dump down your septic system may ultimately come out of someone's drinking water tap. Examples of things you can do to protect groundwater are not disposing of hazardous wastes, such as oil, pesticides, and fertilizers, on your property and routinely pumping out your septic tank. Care of your septic system is especially important if you live within a 2YTT Zone.

Some state rules, such as those administered by the DEC Wastewater and Drinking Water Groundwater Protection Divisions, may restrict activities within SPAs. Specifically, new landfills and sludge disposal sites are prohibited within Groundwater SPAs. In addition, proposed new septic systems within some SPAs require an extra level of permit review to ensure they will not adversely impact the public drinking water source. The Agency of Agriculture considers public drinking water source protection in its pesticide application permits. Public drinking water source protection is also factored into Act 250 decisions.

This guidance sheet and related environmental information are available electronically at:
<http://dec.vermont.gov/water>

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