



Department of Environmental Protection

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Fact Sheet: Water Sampling

Why is water at your home or building being sampled?

Your tap water is being tested to find out whether contamination from a waste site is affecting your water supply. Results of earlier environmental testing indicate that chemicals from a waste site are present in soil or groundwater nearby and may be migrating to your water supply well.

Why is drinking water quality a concern?

Exposure to contaminated water could pose a risk to human health. People can be exposed to contaminants in water by drinking or cooking with it (including adding it to powdered drinks such as baby formula), bathing or showering in it, or breathing contaminants that can evaporate from the water. The potential for health effects depends on the length of time of the exposure, the amount and toxicity of the chemical, and an individual's sensitivity to the chemical.

What contaminants are typically of concern for tap water?

The chemicals that are most often a concern in tap water are those that dissolve in water or produce vapors. These chemicals include inorganics and metals (such as arsenic, lead, and chromium) and volatile organic compounds that produce vapors (for example: paint thinners, solvents, and gasoline).

What will the results of the laboratory tests show?

The results will show whether any of the chemicals tested are present, and if so, their concentration in the water. It is important to realize that most water has low levels of certain chemicals, metals, and minerals in it, so some of the chemicals present may not be from a waste site.

How is the source of the chemicals in drinking water identified?

The results of the laboratory tests are compared with levels of the chemical typically found in the groundwater in Massachusetts (i.e., the "background" levels). If the levels of chemicals in water are above background levels, further investigation may be required to determine whether those chemicals are from a waste site.

Chemicals from sources other than waste sites are often found in groundwater. The other sources include lawn treatment products, septic systems, or naturally occurring iron or arsenic. The MassDEP

This information is available in alternate format. Contact Michelle Waters-Ekanem, Director of Diversity/Civil Rights at 617-292-5751.

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waste site cleanup program usually does not regulate groundwater contamination from these other sources, but your local Board of Health may provide assistance if you are concerned about the quality of your water.

How is the potential for health effects evaluated?

When chemicals from a waste site are identified in tap water, the potential for health effects is evaluated. This evaluation is called a risk assessment and takes into account the toxicity and amount of the chemical that could be taken in to the body. In addition, the levels of chemicals are compared to national and state drinking water standards when they are available. The risk assessment and standards consider sensitive individuals (such as children) and assume a high level of water consumption and use (for example, that people drink two liters of the water a day) so that everyone who might use the water is protected.

What happens if there is contamination at levels of concern?

If contamination from a waste site is present in your drinking water at levels of concern, measures will be taken to minimize or eliminate your exposure to those chemicals. These measures may involve installing a treatment system or providing another source of drinking water, such as connecting to town water. In addition, the source of contamination will be identified and treated. These measures will be continued until sampling can show that the chemicals have been eliminated from the water, if that is feasible. If complete removal of the chemicals is not feasible, the levels must be reduced to below those of concern for human health.

Where can I find more information?

See resources from the [MassDEP Drinking Water Program](#).
The USEPA also has [information about managing your water](#).