

Guidance Values and Standards for Contaminants in Drinking Water

PARTNERS IN SAFE DRINKING WATER

The United States Environmental Protection Agency (US EPA), the Minnesota Department of Health (MDH), public water systems, and citizens work in partnership to keep our drinking water clean and safe for all Minnesotans.

The 1974 federal Safe Drinking Water Act directs the US EPA to set national drinking water standards for naturally occurring and man-made contaminants in public drinking water. These standards represent legally enforceable limits. MDH enforces these drinking water standards for public water systems in Minnesota.

Public water systems regularly test drinking water supplies. Public water supplies must meet the drinking water standards set by the Safe Drinking Water Act. Results of this testing are available to each customer through an annual consumer confidence report.

The 1989 Groundwater Protection Act directs MDH to develop health-based guidance values for groundwater that is used for drinking water. These values are used by state programs to protect people and the environment. These values are especially important when no other guidance value is available.

Drinking Water Standards and Guidance

MDH uses and develops several types of standards and guidance to protect Minnesotans' health from contaminants in drinking water. Drinking water that is contaminated above a standard or guidance may pose some level of health risk to some people drinking the water.

No water is completely free of contaminants. All Minnesotans can use standards and guidance values to determine what level of a contaminant in water is acceptable for themselves and their family.

Treatment options may be available to reduce levels of contaminants in your drinking water if testing, either by you or a public water system, shows that contaminants have been found.

Maximum Contaminant Levels (MCLs)

- Established By: US EPA
- Considerations: Health impact, cost and technology of prevention and/or treatment
- Review: Changes to MCLs are rarely made

All public water systems in Minnesota must meet these standards. For most people, water that meets all MCLs is safe to drink.

MCLs are established through a scientific process that evaluates the health impacts of the contaminant and the technology and cost required for prevention and/or treatment. States are allowed to enforce lower (more strict) standards than MCLs, but are not allowed to enforce higher (less strict) standards. New MCLs or changes to existing MCLs are rarely made.

Maximum Contaminant Level Goals (MCLGs)

- Established By: US EPA
- Considerations: Health impact only
- Review: Changes to MCLGs are rarely made

MCLGs are very protective, even for sensitive populations like infants, children, and others who may be at increased risk of negative health impacts. MCLGs do not consider cost and technology needs of prevention and/or treatment and may be set at levels that are costly, challenging, or impossible for a water system to meet. MCLGs are not enforceable and public water systems in Minnesota are not required to meet these values.

Health Advisories

- Established By: US EPA
- Considerations: Non-cancer health impact only
- Review: Changes to the table of Health Advisories are made every two to three years

Health advisories for contaminants in drinking water are based on non-cancer health effects for different lengths of exposure (one day, ten days, or lifetime). Health advisories provide technical guidance to the US EPA and other public health officials and are not regulatory values.

Health-Based Values (HBVs) and Health Risk Limits (HRLs)

- Established By: MDH
- Considerations: Health impact only
- Review: New or revised guidance for eight to ten chemicals per year

An HBV or HRL is the level of a contaminant that can be present in water and pose little or no health risk to a person drinking that water. HBVs and HRLs are guidance used by the public, risk managers, and other stakeholders to make decisions about managing the health risks of contaminants in groundwater and drinking water. HBVs are updated when significant new information is available. HRLs are guidance values that have been through the Minnesota rulemaking process, which includes at least one public comment period for stakeholders to provide feedback on the proposed guidance values.

HBVs and HRLs do not consider cost and technology of prevention and/or treatment and may be set at levels that are costly, challenging, or impossible for a water system to meet.

Risk Assessment Advice (RAA)

- Established By: MDH
- Considerations: Health impact only
- Review: Rare; only developed when there is not enough information to develop an HBV or HRL

An RAA can be a level of chemical in drinking water that poses little or no health risk to a person drinking that water, similar to HBVs or HRLs. RAAs can also be a written description of how harmful a chemical is, compared to a similar chemical. RAAs are generally based on more limited information than HBVs and HRLs or use an alternative risk assessment method.

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