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Quality Water for Idaho

Drinking Water Standards

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Health Concerns

Contaminants in drinking water always are cause for concern. However, it is important to distinguish between the acute and chronic effects of harmful substances.

Acute Effects

Acute effects appear shortly after ingestion of contaminated water, usually within several weeks. They usually appear soon after exposure to a toxic substance. For example, a farmer who accidentally spills a pesticide may shortly thereafter suffer nausea, dizziness and vomiting.

In Idaho and the rest of the nation the most commonly detected drinking water problem is bacterial contamination caused by improper well construction and maintenance. Bacterial contamination is a common cause of acute toxicity, producing symptoms as mild as upset stomach and diseases as serious as dysentery, typhoid fever and hepatitis. Household cleaners and garden chemicals are other examples of contaminants that can produce acute effects.

Chronic Effects

Chronic effects appear after longer incubation periods, possibly even after a number of years. Chronic effects result from exposure to a substance over weeks or years. For example, a coal miner who breathes traces of coal dust for many years may later develop serious respiratory problems.

Over time, some drinking water contaminants can damage the liver, kidneys, heart and other body organs. Health officials are almost always concerned about chronic effects of drinking-water contaminants such as low-level nitrates, radon and volatile organic chemicals. Such effects may include cancer or damage to the central nervous system.

Drinking Water Standards

The Environmental Protection Agency (EPA) standards for drinking water fall into two categories — primary standards and secondary standards.

Primary Standards

Primary standards are based on health considerations and are enforced by the EPA. They protect you from three classes of toxic pollutants: pathogens, radioactive elements and toxic chemicals. Primary standards set a limit, called the maximum contamination level (MCL), on the highest allowable concentration of a contaminant in drinking water supplied by municipal water systems. The MCL is usually expressed in milligrams per liter (mg/l), which is the same as parts per million (ppm).

Secondary Standards

Secondary standards cover contaminants that cause offensive taste, odor, color, corrosivity, foaming and staining. The concentration limit is called the secondary maximum contaminant level (SMCL). Secondary standards are not enforced. They are guidelines for water treatment plant operators and state governments attempting to provide communities with the best possible water quality.

Idaho Standards

The state of Idaho has established water quality standards based on the actual or intended use of water. These uses include domestic, agricultural and recreational uses and use for aquatic organisms.

Contaminants or potential contaminants covered by Idaho regulations include hazardous, deleterious and radioactive materials; floating, suspended or submerged matter; excess nutrients; oxygen-demanding materials

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and sediment. Standards for Idaho water quality are established and enforced by the Division of Environmental Quality, Idaho Department of Health and Welfare. While existing standards help ensure safe water, standards do not exist for many additional contaminants.

- Idaho drinking water standards do not apply to individual water systems, only to community water systems serving 10 or more residences or 25 people.
- Idaho drinking water standards are established based on current knowledge to provide a reasonable assurance that water will not cause health problems. They cannot always guarantee zero risk.
- Idaho drinking water standards can be made less or more restrictive in accordance with the Idaho Administrative Procedures Act to meet specific water conditions at a particular site.

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Idaho standards for domestic water supplies.

Substance	Maximum allowable concentration
	(mg/l or ppm)
Arsenic	0.050
Barium	1.000
Cadmium	0.010
Chromium	0.050
Cyanide	0.200
Fluoride*	
Degrees	
up to 12.0°C (54°F)	2.400
12°C (55°F) — 15°C (58°F)	2.200
15°C (59°F) — 18°C (64°F)	2.000
18°C (65°F) — 21°C (71°F)	1.800
22°C (72°F) — 26°C (79°F)	1.600
26°C (80°F) — 32°C (90°F)	1.400
Lead	0.050
Mercury	0.002
Nitrate (as N)	10.000
Selenium	0.010
Silver	0.050
Endrin	0.0002
Lindane	0.004
Methoxychlor	0.100
Sodium	No maximum established; 20 suggested as optimum
Toxaphene	0.005
Trihalomethanes	0.100
2, 4-D	0.100
2, 4, 5-TP Silvex	0.010
Coliform bacteria	2 per hundred milliliter (ml) for any individual sample
Turbidity	5 nephelometric turbidity units (NTU) for any individual sample

*As determined by the average annual maximum daily air temperature for the area where the water is to be used.

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