NebGuide

University of Nebraska–Lincoln Extension, Institute of Agriculture and Natural Resources

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Drinking Water: Bottled, Tap, and Vended

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This publication discusses the regulation and safety of drinking water from various sources.

While most Nebraskans rely on tap water, some use bottled water or vended water for their primary source of in-home drinking water. This publication compares bottled, tap, and vended water for human consumption.

Bottled Water

Bottled Water Defined:

Bottled water is water that is sealed in food-grade bottles and intended for human consumption. Bottled water can come from a variety of sources, including groundwater from a well, water from a protected spring, or water from a public water supply tap. Groundwater comes from an aquifer — an underground zone of saturated sand, gravel, or rock — that yields significant quantities of water. In most cases, a well is drilled in the ground and cased, and the water is pumped out. Spring water flows naturally to the surface from an underground formation. The source of water for a public water supply can be groundwater, surface water, or a combination. Bottled water from each of the sources is available to consumers.

Bottled Water Regulation and Quality:

With the increase in bottled water consumption, the Food and Drug Administration (FDA) has set standards of quality for bottled water intended for human consumption. Standards are established for artesian, mineral, purified, sparkling bottled, and spring water. Seltzer, soda, tonic, and certain sparkling waters are considered soft drinks and are regulated accordingly. Not all bottled water is regulated in the same way. It is important to know if the water is domestic or imported, and if it is sold through interstate commerce.

Domestic Bottled Water Distributed Through Interstate Commerce

Domestic bottled water sold in states other than that in which it was bottled (interstate commerce) is regulated as a food by the FDA. This water must meet FDA water identity and quality standards. To ensure that the standards are met, bottling companies must regularly test their products. The FDA also requires that bottled water products distributed through interstate commerce comply with its Good Manufacturing Practices. These practices cover the production and packaging and provide assurance that bottled water products are processed under sanitary conditions and are clean and safe for human consumption.

Bottled water is not pure water — as nearly all bottled water contains dissolved substances. Allowable levels have been established for a number of potential contaminants, and bottled water cannot contain more than the allowable level for any regulated contaminant. If a bottled water producer is in full compliance with regulations, the water should be suitable for drinking and cooking; however, not all potential contaminants are regulated and there is always some risk of contaminants going undetected between testing intervals.

Imported Bottled Water

Imported bottled water also is regulated as a food by the FDA and must meet all FDA water standards described above. To ensure those standards are met, bottled water imported from foreign countries is randomly tested at ports of entry.

Water Bottled and Sold In-State

FDA rules for bottled water exempt water that is packaged and sold within the same state. The quality of water packaged and sold in-state may be regulated by an agency in that state or may be unregulated. In states where it is regulated, the levels of contaminants allowed may be equal to, greater than, or less than

that allowed by FDA. **Water bottled and sold in Nebraska is regulated by the Nebraska Department of Agriculture and must meet FDA bottled water standards.**

Self-regulation by the Bottled Water Industry

The bottled water industry regulates itself through the International Bottled Water Association (IBWA.) The IBWA sets manufacturing requirements, which help ensure that bottled waters meet FDA health standards. Bottled water producers that are members of IBWA are inspected annually by a recognized independent organization, NSF International. Through unannounced inspections, members are evaluated on compliance with IBWA's performance requirements and FDA Quality Standards. Not all bottled water manufacturers are members of the IBWA. The label may indicate whether a bottled water comes from a member company.

Tap Water

Tap Water Defined:

Tap water is water that is supplied through a water distribution system and intended for human consumption. It can come from either a public or private water supply. A *public water supply* is defined as a system that provides water for human consumption to at least 15 service connections or regularly serves at least 25 individuals. A *private water supply* is defined as a system that provides water for human consumption to fewer than 15 service connections or does not regularly serve at least 25 individuals.

Tap Water Regulation and Quality

Tap Water from a Public Water Supply

Like bottled water, tap water is not pure water — all tap water contains dissolved substances. The Environmental Protection Agency (EPA) regulates the quality of tap water from a public water supply. Allowable levels for a number of potential contaminants have been established by the Safe Drinking Water Act, and water must be tested on a scheduled basis. Currently, public water supplies are tested for nearly 100 contaminants, and tap water cannot contain more than the allowable level for any regulated contaminant. If a public water supplier is in full compliance with regulations, the water should be suitable for drinking and cooking, although not all potential contaminants are regulated and there is always some risk of contaminants going undetected between testing intervals.

If the water from a public water system violates a Safe Drinking Water Act standard, the local water supplier is required to notify users about the violation and provide information on alternative sources of drinking water. In some instances, if a local water supply has been contaminated, the local water supplier may distribute bottled water to its customers until the problem has been remedied. Any time a situation occurs where there is the potential for human health to be immediately impacted, water suppliers have 24 hours to notify people who may drink the water. Water suppliers must use media outlets such as television, radio, and newspapers; post a notice in public places; or personally deliver a notice to customers in these situations. Any time a water system provides water with levels of a contaminant that exceed EPA standards or that hasn't been treated properly, but that doesn't pose an immediate risk to human health, the water system must notify its customers as soon as possible, and within 30 days of the violation. When a water system violates a standard that does not have a direct impact on human health (for example, failing to take a required sample on time), the water supplier has up to a year to provide notice of this situation to its customers.

In addition, the Safe Drinking Water Act requires all public water suppliers to provide annual water quality reports, referred to as consumer confidence reports. Reports are required to identify any regulated contaminants that are present in the water, their concentration, and indicate if they exceed the maximum allowable level. For information on the quality of tap water from a public system, contact the water supplier.

Tap Water From a Private Water Supply

In Nebraska, as in most states, the quality of tap water from a private water supply is not regulated by federal or state laws. Unless regulated at the county or city level, there are no requirements to test for potentially harmful contaminants. As a result, the burden is on the private water supply owner and user to determine if the water is safe to drink. There is no single test to determine the safety of drinking water.

There are many contaminants that can present a health risk if present in sufficient concentrations. Tests for nitrate and bacteria often are used as general indicators of the safety of private drinking water, but bacteria and nitrate tests alone do not guarantee the water is free of other potential contaminants. Testing for other contaminants should be performed when a specific contaminant is suspected. For additional information on private drinking water testing, see NebGuide G907, *Drink-ing Water: Testing for Quality*.

Vended Water

Vended Water Defined:

Vended water typically comes from a public water supply. Water is distributed through vending machines — systems where customers fill containers. Vending machines may be located in grocery stores, convenience stores, or other locations in a community.

Vended Water Regulation and Quality:

Vended water is not considered bottled water and is not regulated as such.

The water source for vending machines is typically the local public water supply, which must be in compliance with EPA drinking water standards. Additional treatment may occur to reduce dissolved substances and disinfect the water supply.

Water vending machines are regulated by local authorities. In Nebraska, the Department of Health and Human Services permits vending machines, and periodic tests are done for coliform bacteria and nitrate. While you can expect the water supply to a vending machine to be potable, inadequate cleaning or unsanitary handling of the vending machine or the container used to collect and store the water could result in bacterial contamination. Good sanitation measures are important to keep vended water safe.

Sensitive Populations

Individuals with a compromised immune system, or those who react adversely to disinfectants or specific minerals in water should consult their health-care provider on their drinking water source.

Summary

Allowable maximum levels for potentially harmful contaminants are enforced for public water supplies, imported bottled water, and domestic bottled water sold through interstate commerce. Individual states may or may not enforce allowable maximum levels for bottled water that is sold only in the state in which it is bottled. Private water supplies in Nebraska are not subject to federal or state regulation.

Bottled water sold in Nebraska and publicly supplied water in Nebraska will be suitable for drinking and cooking if in full compliance with respective FDA or EPA regulations. The quality of privately supplied water in Nebraska is not regulated except where county or city regulations may be in effect.

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