

# Bottled Water Facts

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**B**ottled water has become an increasing popular source of drinking water in Pennsylvania. Surveys have indicated that consumers are turning to bottled water as a healthy alternative to soft drinks or because they are concerned about the safety or taste of their drinking water. For homeowners with wells and springs, bottled water may be the easiest and least costly method of avoiding some water pollutants. Regardless of the reasons, the many varieties of bottled water and its increasing popularity have raised questions from consumers about the types and the safety of bottled water sold in Pennsylvania.

## Types of Bottled Water

The wide variety of bottled water available today can be very confusing to consumers. While there are many types, they can all be defined as water that comes from an approved source, meets all applicable federal and state standards, is sealed in a sanitary container and is sold for human consumption.

Bottled water may not contain sweeteners or chemical additives and must be calorie-free and sugar-free. Flavors, extracts and essences that are derived from spice or fruit can be added to bottled water, but these additions must comprise less than one percent by weight of the final product. Some bottled waters may also contain natural or added carbonation.

Approval of a bottled water source is the responsibility of the state where the source is located. About 75% of bottled water comes from approved natural sources such as springs or wells. By law, these sources must be protected from contamination. The remaining 25% of bottled water comes from approved municipal water supplies like those that serve communities. Most bottled water companies treat the water using methods such as distillation, reverse osmosis, deionization, filtration, ozonation or

ultraviolet light disinfection. Companies that bottle water from public water supplies without any additional treatment must label it as “municipal”.

Bottled water labels may reveal the source of the water and other useful information. The following label definitions by the U.S. Food and Drug Administration (FDA) will help interpret the water that you consider buying.

Artesian Water comes from a ground water aquifer that is under pressure. As a result, the water rises above the natural ground water level and in some cases can reach the surface of the ground.

Drinking Water is water that is obtained from an approved source, meets all applicable federal and state standards, and has undergone minimal treatment consisting of filtration and some type of disinfection.

Mineral Water emerges from a protected underground source that naturally contains at least 250 parts per million (or 250 milligrams per liter) of total dissolved solids. Minerals cannot be added to this product.

Purified Water has undergone various treatment processes that meet the definition of purified water in the United States Pharmacopoeia. Purified water may also be labeled as distilled water if it is produced by distillation, deionized water if the water is produced by deionization, or reverse osmosis water if the process used is reverse osmosis.

Sparkling Water contains the same amount of carbon dioxide that it had at emergence from the source. The carbon dioxide may be removed and replenished after treatment. Sparkling water does not include soda water, seltzer water and tonic water which are

regulated separately as soft drinks because they may contain sugar and calories.

Spring Water flows naturally to the ground surface or through a bored hole tapping an underground formation that feeds a spring. Spring water may undergo some treatment but it must maintain the same properties as the natural spring water.

Well Water is from a hole bored, drilled or otherwise constructed in the ground which taps underground water.

## **How is Bottled Water Regulated?**

Bottled water that is produced and/or sold in Pennsylvania is subject to a variety of regulations meant to protect the consumer. These regulations are also applicable to foreign bottled water sold within the state. The federal and state regulations listed below are mandatory while the majority of companies also submit to voluntary regulations by industry groups.

### *Federal Regulation*

Unlike community water supplies, which are regulated by the U.S. Environmental Protection Agency (EPA), bottled water is regulated as a food product by the U.S. Food and Drug Administration (FDA). FDA regulations set guidelines on the quality of the water and requirements for labeling and manufacturing practices. The quality standards generally follow the same drinking water standards used by the EPA for public water supplies. Labeling regulations standardize the definitions for terms found on bottled water labels (see the definitions above). For example, the word “spring” can only appear on the label if it meets the definition given above. FDA also enforces “Good Manufacturing Practices” that govern such areas as facility design and construction, sanitary maintenance of buildings and fixtures, record keeping, and process controls. FDA regulations are generally enforced through inspections at the bottling facility.

### *Pennsylvania State Regulation*

In addition to federal regulation, companies that sell bottled water in Pennsylvania are subject to additional more stringent regulations. Pennsylvania has strict bottled water regulations outlined in the Bottled Water Law that are enforced by the Department of Environmental Protection (DEP). Bottled water companies that use a source of water in Pennsylvania

must obtain a permit that requires water testing that shows compliance with the same drinking water standards that must be met by community water supplies. Furthermore, water laboratories that have been certified by the DEP must complete the water testing on each source. Companies that wish to sell bottled water in Pennsylvania that is bottled in another state or country must still show results of water testing to obtain a permit. The bottled water company is given a certification number that usually appears on the label or cap. State regulations also allow for plant inspections to ensure sanitary conditions.

### *Industry Regulation*

Approximately 85% of the bottled water sold in the United States comes from the 1,200 companies that are members of the International Bottled Water Association (IBWA). Companies in the IBWA must meet additional more stringent regulations known as the “Model Code”. Membership includes an annual inspection administered by an independent third party (National Sanitation Foundation) to ensure compliance with federal, state, and industry regulations. The words “IBWA Bottler” or “Member of IBWA” on the bottle indicate membership.

### *National Sanitation Foundation*

Bottled water companies can voluntarily submit to additional certification through the “National Sanitation Foundation” (NSF). The NSF Bottled Water Certification Program verifies that a bottling facility and its bottled water products meet the requirements of FDA regulations. Their testing program provides for annual unannounced plant inspections and includes extensive annual product testing for over 160 chemical, radiological, and microbiological contaminants. Test reports can usually be obtained directly from the bottler. Companies that meet all requirements can place the NSF seal on their bottled water products.

## **Frequently Asked Questions**

### *Is Bottled Water Safer Than My Water?*

Bottled water sold in Pennsylvania is subject to nearly the same regulations as public water supplies. Thus, if both your public water supplier and the bottled water producer are complying with regulations, their products should be equally safe to drink. Your public water supplier is required to notify you if the water supply does not meet drinking water standards.

If you have a private well or spring, you will need to arrange for a private water test to determine if your water is safe to drink. Publications are available from your local Penn State Cooperative Extension office to help you decide where to get your water tested and what contaminants to test for. If your water test report indicates a problem with your well or spring, the use of bottled water is one solution to the problem. Other solutions, like purchasing water treatment equipment or developing a new water supply should also be investigated.

#### *Will Bottled Water Taste Better Than my Household Water?*

In a very competitive market, bottled water companies realize that their product must have a pleasing taste to be successful. Surveys have shown that many consumers purchase bottled water because of taste and odor concerns with their home water supply.

#### *How Should I Choose a Bottled Water?*

Always read the bottled water label carefully. Study the words used to describe the water and compare them with the label definitions listed above to ensure that you buy the type of water that you desire (i.e. spring water, mineral water, etc.). Remember that IBWA and NSF certifications on the label indicate

that the product has been subject to additional voluntary standards. Most bottled waters are not fluoridated. This may be a consideration if the bottled water is to be used by infants. If you are on a low sodium diet, look for water labeled as “low sodium” or “no sodium”. Contacting the bottled water company directly can answer questions about the source of the water, treatment processes, additives, and water test results that are not apparent from the label.

#### *How Should Bottled Water be Stored?*

Store bottled water in a cool, dark place away from chemicals. There is no shelf life for bottled water so it can be used indefinitely if stored properly.

### **For More Information on Bottled Water**

#### **Independent sources of information**

U.S. Environmental Protection Agency - [www.epa.gov](http://www.epa.gov)

National Sanitation Foundation – [www.nsf.org](http://www.nsf.org)

#### **Industry Association**

International Bottled Water Association - [www.bottledwater.org](http://www.bottledwater.org).

### **Additional Resources**

For further information and resources on:

- Drinking Water Quality (see fact sheet F 101 *Drinking Water Publications from the Penn State College of Agricultural Sciences*)
- Groundwater Protection Watershed Monitoring & Control Systems

Please access:

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For more information about other Outreach Publications and Resources from the Department of Agricultural and Biological Engineering:

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