

Standards for Safe Drinking Water in New Jersey

Public health is of paramount importance in the determination of what constitutes safe drinking water. Drinking water standards are developed by both Federal and State governments. Quality standards adopted into regulation are the minimum considered necessary for the maintenance of public health. The standards are set for biological contaminants, dissolved chemicals and suspended particulate matter. These contaminants are naturally occurring, the result of industrial and/or domestic pollution, or both. Some people consider the standards too lenient, and others believe they are too stringent. The Bureau of Safe Drinking Water of the New Jersey Department of Environmental Protection (NJDEP) has principal responsibility to administer the programs and activities of the Federal Safe Drinking Water Act and the New Jersey Safe Drinking Water Act to ensure safe drinking water for both the citizens of New Jersey and its visitors.

Following are some frequently asked questions and answers regarding drinking water quality standards:

Does the federal government regulate drinking water quality?

Yes. The United States Environmental Protection Agency (USEPA) coordinates Federal Safe Drinking Water Act activities nationwide. However, in New Jersey, the NJDEP is the agency responsible for administering the Federal safe drinking water regulations. NJDEP regulates drinking water supplies under the authority of the Federal Safe Drinking Water Act and its amendments, and under the authority of the New Jersey Safe Drinking Water Act and its amendments. All Federal regulations are automatically adopted into New Jersey regulations by reference.

What chemical contaminants do the regulations protect against?

The regulated chemical contaminants fall into the following categories: inorganics, radionuclides, and synthetic organic chemicals including volatile organic chemicals, pesticides, herbicides, and disinfection by-products. A complete list of these regulated contaminants and the maximum permissible concentrations allowed in drinking water are listed in the insert to this brochure.

What biological contaminants do the regulations protect against?

The biological contaminants regulated in drinking water include coliform bacteria, which are found in the natural environment and in the gut of warm blooded animals. Other microorganisms such as *Legionella* bacteria, and parasites such as *Giardia* and *Cryptosporidium* are regulated indirectly through treatment requirements.

Water is disinfected to protect against waterborne bacterial diseases such as typhoid and cholera, and waterborne viruses. Waterborne parasites are removed from drinking water by a combination of disinfection and filtration, however, waterborne parasites are occasionally detected in treated water. Since some individuals with weakened immune systems may become seriously ill from waterborne parasites, these individuals, in consultation with their health care provider, might be advised to boil their drinking water (rolling boil for one minute).

Although not directly a biological contaminant, the turbidity (cloudiness) of the water is also tested because it can harbor biological contaminants, or it can interfere with the effectiveness of the disinfectant.

Is my water tested?

According to Federal law, all public community water systems and non-community water systems must test their water on a rigid schedule and at specific locations. Public community water systems include municipal water supplies and private water companies. Non-transient non-community water systems (e.g., schools, factories, office buildings, industrial parks) test for all regulated contaminants except secondary drinking water standards. Transient non-community water systems (e.g., highway rest stops, restaurants, motels, parks,) test for coliform bacteria, nitrates and nitrites.

Drinking water suppliers are required to notify customers if the levels of any monitored chemicals exceed the standards as described in the regulations. Notification can include public postings, the news media and mailings to individual customers, depending on the supplier.

Who sets these standards and how were they set?

The standards for drinking water quality in New Jersey are set by either the USEPA or the NJDEP. These standards, known as maximum contaminant levels (MCL), are the maximum permissible levels of all regulated contaminants allowed in public drinking water. Many MCLs in effect in New Jersey are adopted from Federal regulation by reference, except for specific contaminants which have either been designated with stricter requirements, or have not been regulated by the Federal Government as indicated on the following document <https://www.state.nj.us/dep/watersupply/pdf/dw-standards.pdf>. When standards are developed by both Federal and State drinking water agencies, the more stringent regulation applies.

One of the major reasons why New Jersey and Federal standards vary is that New Jersey law contains specific guidance for establishing MCLs that must be followed which differs from the Federal statutory requirements. The USEPA is required to set maximum contaminant level goals [MCLG], non-enforceable health goals, at the level at which no known or anticipated adverse effects occur. For carcinogenic (cancer-causing) chemicals, the USEPA sets MCLGs at zero. MCLs must be set as close to MCLGs as feasible. The Federal MCLs take into account the limits of testing methodologies, the capability of water treatment technologies, and the results of cost benefits analysis.

Drinking water standards set by NJDEP are established for carcinogens based upon the goal of the cancer risk being no greater than a one in one million over a lifetime exposure period. For chemicals causing effects other than cancer (noncarcinogens), the goal is the

elimination of all adverse health effects from lifetime exposure. The level established for the final standard may exceed these human health-based goals if there are limitations in testing methodologies and/or the capability of water treatment removal techniques. For noncarcinogens, costs may also be taken into consideration in standard setting.

Some standards are not numerical in nature and are called "treatment techniques." A treatment technique is established as a standard for a number of contaminants that are not readily measurable in water. The most notable ones are biological in nature and come from surface water. The treatment technique standards for *Giardia* and viruses are established as minimum levels of treatment that results in removal of these contaminants.

In addition to MCLs, the USEPA regulates drinking water through "action levels" (AL). To date, ALs have been established for lead and copper only. An AL is not an MCL. ALs are the measurements used for stating the concentration of lead and copper in public drinking water supplies that, if exceeded, determine whether a water system must install corrosion control treatment, monitor source water, replace lead service lines and undertake a public education/ notification program.

How will the standards improve my drinking water?

The standards lead to the improvement of drinking water through periodic tests, evaluation of results and corrective actions. The test results are sent to the NJDEP. If the level of any regulated contaminant is above the MCL, additional samples are taken to confirm that a problem exists. The supplier of that water is then required to eliminate the problem by changing to another water source or by improving water treatment. Fortunately, there are techniques to remove these contaminants from water at a reasonable cost. Treatment techniques vary depending on the contaminant[s]. Techniques include but are not limited to chemical precipitation, filtration, packed tower aeration (air stripping) and granular activated carbon.

What tests do you recommend for my private well?

State regulations require that drinking water wells are tested for certain specific contaminants prior to being placed in service, as well as at the point of sale of the property.

As with public water systems, there are benefits of performing periodic water testing of your private well. NJDEP recommends that bacteriological testing for total coliform be done annually, and more often if you or members of your household experience problems with diarrhea. Testing for nitrate, lead and volatile organic compounds is also recommended. Private well owners statewide should consider annual testing of gross alpha and arsenic. Private well owners in southern and central New Jersey should consider annual testing for mercury. Private well owners in central and northern New Jersey should consider annual testing for uranium. Additional information regarding these recommendations can be obtained by visiting the Private Well Testing Act (PWTA) web site at www.state.nj.us/dep/pwta.

Your local health department or the NJDEP's Office of Quality Assurance (OQA) can provide the names of NJ State certified drinking water laboratories in your area. OQA can be contacted at (609) 292-3950 or visit their website at <https://www.nj.gov/dep/enforcement/oqa.html>. Homeowners are responsible for the costs of testing. Your local health department can provide you with guidance if your water exceeds any drinking water standards.

Some county and local health departments have additional requirements regarding tests for private wells and will be able to provide information if such regulations are established in your community.

What is the Private Well Testing Act? *Sampling as required under the Private Well Testing Act is mandatory, not optional.*

The Private Well Testing Act (PWTA) was signed into law on March 23, 2001, and testing became effective in September 2002. The PWTA and corresponding regulations (N.J.A.C. 7:9E) require specific sampling and analysis of raw (untreated) water from private potable wells (non-public water systems) whenever a property is transferred by contract of sale. Testing is also required every five years if the property is leased. It is required that these drinking water test results be shared among the seller and buyer, or landlord and renter, either at closing on the contract of sale of a property, or when the property is rented. Additionally, the county or local health department may have more stringent testing requirements than the PWTA and implementing regulations, and we recommend contacting them before performing PWTA testing. The program has a website that can be accessed via the internet at www.state.nj.us/dep/pwta.

Should you have any unanswered questions regarding PWTA, either call the PWTA program at (609) 292-5550 or e-mail your question(s) to: watersupply@dep.nj.gov.

Who is responsible for enforcing the standards?

The NJDEP's Bureau of Safe Drinking Water, along with the regional Bureaus of Water Compliance and Enforcement, reviews monitoring data (provided by the water systems in accordance with Federal and State law) and initiates appropriate legal actions ranging from Notice of Violation letters to Administrative Orders with financial penalties, for water that exceeds standards.

For a detailed explanation of the Safe Drinking Water Program, refer to the Federal Safe Drinking Water Act regulations [40 CFR Parts 141, 142, 143] and the New Jersey Safe Drinking Water regulations [N.J.A.C. 7:10-1 *et seq.*]