



What's in
your water?

To find up-to-date information on Trihalomethanes and nitrate as nitrogen visit Tucson Water's website at www.cityoftucson.org/water.

To stay up-to-date on water quality issues and to learn more about your water, subscribe to the *EMPACT – Water Info Now* Newsletter. It's free! Get on the mailing list by calling 791-5080, Ext. 1372 or email DQuinta1@ci.tucson.az.us.

Trihalomethanes and
Nitrates as Nitrogen

THM
NO3-N



What is a primary drinking water standard?

A primary drinking water standard is the maximum level of a chemical or microbe legally allowed to be present in your drinking water. As part of the Safe Drinking Water Act, the U.S. Environmental Protection Agency (USEPA) sets primary standards for approximately 90 contaminants in drinking water.

For each of these, USEPA sets a legal limit called a maximum contaminant level (MCL) for drinking water. Tucson Water must, by law, provide drinking water that meets the primary standards and is safe to drink.

What is a secondary drinking water standard?

Secondary standards relate to the taste, odor, or appearance of drinking water. USEPA sets non-enforceable guidelines that address aesthetic characteristics and cosmetic effects. Public water utilities and states are not legally required to meet these secondary standards, but Tucson Water works to comply with them.

For more information about water standards visit the EPA website at <http://www.epa.gov> or Tucson Water's website at <http://www.cityoftucson.org/water>.

One milligram per liter is the same as one part per million. To give you an idea of how small an amount this is, it's the same as 1 teaspoon in 1,320 gallons.

One microgram per liter is the same as one part per billion, and is the equivalent of one teaspoon in 1.3 million gallons.

THMs

Trihalomethanes

Using chlorine as a disinfectant has made the nation's drinking water supply free from illness producing bacteria and almost eliminated water-borne diseases such as typhoid fever, cholera, and dysentery. Chlorine is used worldwide to keep drinking water safe and is used by Tucson Water. Although the use of chlorine provides a health benefit, it can also, under certain circumstances, produce chemicals that may have a long-term health risk.

Whenever a chlorine is used in water, there is a possibility of the chlorine combining with natural organic material in the water to form compounds known as Disinfection By-Products (DBPs). Among these are Trihalomethanes.

Trihalomethanes (THMs) are a group of four compounds: chloroform, bromoform, dibromochloromethane, and bromodichloromethane. When found in water, this group is reported as the total of all four of these compounds and is expressed as total trihalomethanes and measured in micrograms per milliliter (ug/L).

THMs are regulated by the United States Environmental Protection Agency (USEPA), which has set a primary standard of 80 ug/L. The level of THMs in drinking water in Tucson averages 2.5 ug/L.

Nitrates

Nitrates as Nitrogen

Nitrogen is one of the most abundant elements on earth and is essential for all living things. Organic nitrogen is found in proteins and is continually recycled by plants and animals. Inorganic nitrogen occurs in several forms such as nitrate or ammonia.

Nitrates as nitrogen is a compound that can be found in both groundwater and in lakes, rivers and streams. In the Tucson area, nitrates as nitrogen are often found near agricultural activities because of fertilizer use. Over time, rainfall can cause nitrates as nitrogen to soak down through the ground and eventually reach the water table.

Nitrates as nitrogen levels in your drinking water average about 1.8 milligrams per liter (mg/L). The United States Environmental Protection Agency (USEPA) primary standard for nitrate as nitrogen in drinking water is 10 mg/L.

Nitrates in water are undetectable without testing because it is colorless, odorless, and tasteless. Tucson Water tests your drinking water for nitrates as nitrogen on a regular basis to make sure that increases in nitrogen compounds are not occurring.

**What essential product that you rely on every day is tested for purity an average of every 60 seconds, 24 hours a day?
Your drinking water!**