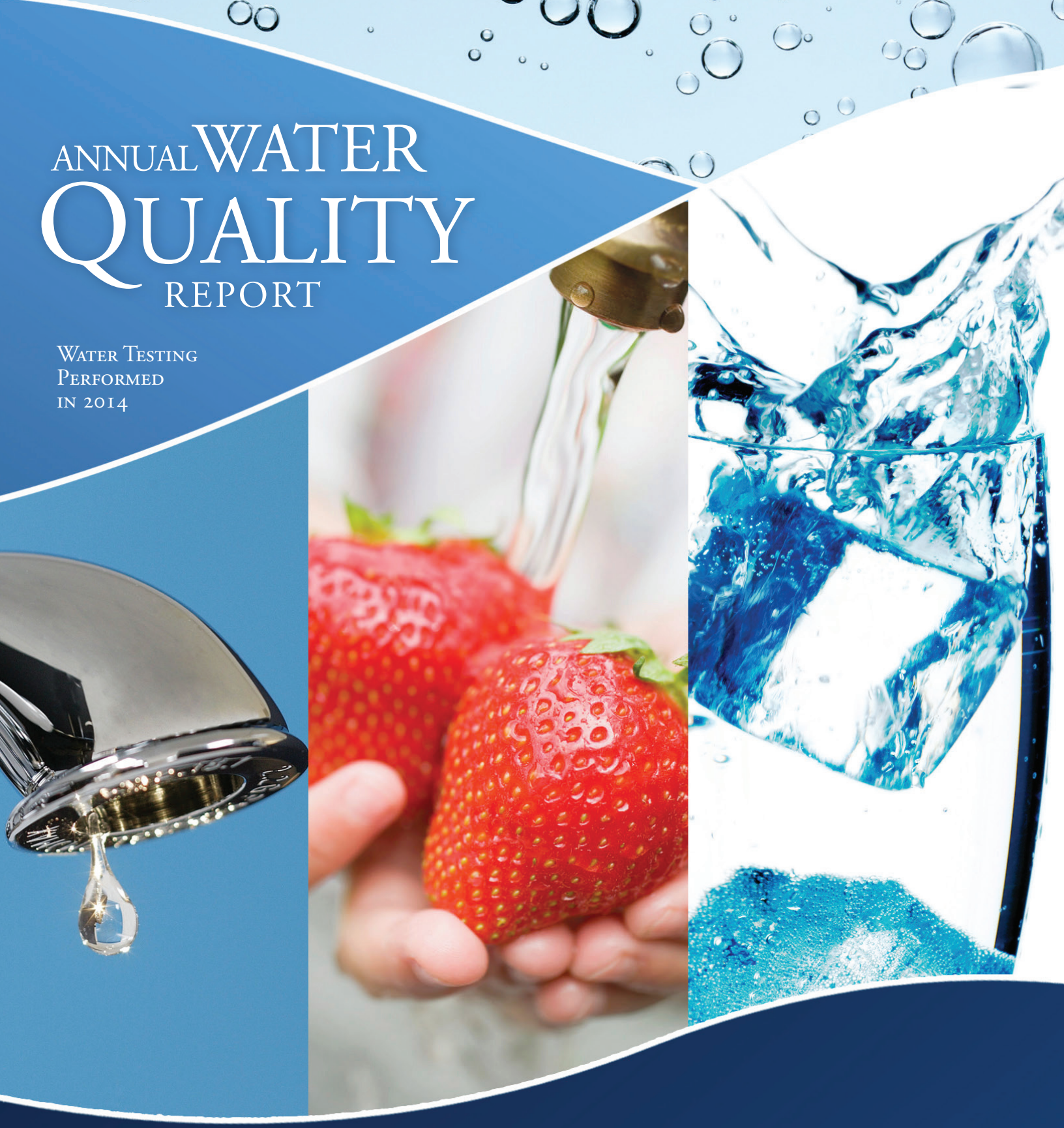
ANNUAL WATER QUALITY REPORT

Water Testing Performed in 2014



RICH WITH OPPORTUNITY
BEAUMONT
T • E • X • A • S

Presented By
City of Beaumont
Water Utilities Department

Este reporte incluye informacion importante sobre el agua para tomar. Para asistencia en espanol, favor de llamar al telefono (409) 866-0026.

PWS ID#: 1230001

Our Mission Continues

We are proud to present once again our annual water quality report covering all testing performed between January 1 and December 31, 2014. Most notably, last year marked the 40th anniversary of the Safe Drinking Water Act (SDWA). This rule was created to protect public health by regulating the nation"s drinking water supply. We celebrate this milestone as we continue to manage our water system with a mission to deliver the best-quality drinking water. By striving to meet the requirements of the SDWA, we are ensuring a future of healthy, clean drinking water for years to come.

Please let us know if you ever have any questions or concerns about your water.

Where Does My Water Come From?

The City of Beaumont has two sources of water: 1) well water pumped from the Chicot Aquifer at three different well sites located in Hardin County and 2) surface water from the Neches River, with three separate intakes located at various spots upriver from Beaumont. Well water receives chlorination before it is pumped to the City. Surface water receives more complex treatment, including filtration and chlorination. The City of Beaumont checks and analyzes both sources of water daily to insure compliance with all Federal and State requirements. The water plant is manned 24 hours a day, 7 days a week to give you the best-quality water possible.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. For instance, sometimes the City has water line breaks. When they occur, the color in the water comes from iron and mineral deposits that become dislodged inside the pipe. After the water line is repaired, the water will clear and you may run your faucet to clear the discolored water in your home's pipes. To report a water line break, please call Water & Sewer Maintenance Division at 860-3221. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

Public Meetings

The Water Utilities Department is part of the City government and follows not only Federal and State regulations but also ordinances established by City Council. The City Council meets each Tuesday at City Hall, 801 Main Street, Beaumont, Texas 77704, at 1:30 p.m., or you may contact the Council members at 880-3770. You are invited to participate in our public forum and to voice your concerns about your drinking water.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it can acquire naturally occurring minerals, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include: Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife; Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems; Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact our business office. For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Important Health Information

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline at (800) 426-4791.

You may not be aware of it, but every time you pour fat, oil, or grease (FOG) down your sink (e.g., bacon grease), you are contributing to a costly problem in the sewer collection system. FOG coats the inner walls of the plumbing in your house as well as the walls of underground piping throughout the community. Over time, these greasy materials build up and form blockages in pipes, which can lead to wastewater backing up into parks, yards, streets, and storm drains. These backups allow FOG to contaminate local waters, including drinking water. Exposure to untreated wastewater is a public health hazard. FOG discharged into septic systems and drain fields can also cause malfunctions, resulting in more frequent tank pump-outs and other expenses.

Communities spend billions of dollars every year to unplug or replace grease-blocked pipes, repair pump stations, and clean up costly and illegal wastewater spills. Here are some tips that you and your family can follow to help maintain a well-run system now and in the future:

NEVER:

- Pour fats, oil, or grease down the house or storm drains.
- Dispose of food scraps by flushing them.
- Use the toilet as a waste basket.

ALWAYS:

- Scrape and collect fat, oil, and grease into a waste container such as an empty coffee can, and dispose of it with your garbage.
- Place food scraps in waste containers or garbage bags for disposal with solid wastes.
- Place a wastebasket in each bathroom for solid wastes like disposable diapers, creams and lotions, and personal hygiene products including nonbiodegradable wipes.

To the Last Drop

The National Oceanic and Atmospheric Administration (NOAA) defines drought as a deficiency in precipitation over an extended period of time, usually a season or more, resulting in a water shortage causing adverse impacts on vegetation, animals, and/or people. Drought strikes in virtually all climate zones, from very wet to very dry.

There are primarily three types of drought: Meteorological Drought refers to the lack of precipitation, or the degree of dryness and the duration of the dry period; Agricultural Drought refers to the agricultural impact of drought, focusing on precipitation shortages, soil water deficits, and reduced groundwater or reservoir levels needed for irrigation; and Hydrological Drought, which pertains to drought that usually occurs following periods of extended precipitation shortfalls that can impact water supply (e.g., stream flow, reservoir and lake levels, groundwater).

Drought is a temporary aberration from normal climatic conditions; thus it can vary significantly from one region to another. Although normally occurring, human factors, such as water demand, can exacerbate the duration and impact that drought has on a region. By following simple water conservation measures, you can help significantly reduce the lasting effects of extended drought.

To learn more about water conservation efforts, check out U.S. EPA's Water Conservation Tips for Residents at www.epa.gov/region1/eco/drinkwater/water_conservation_residents.html.

Questions?

For questions about the information in this report, please contact Karin K. Warren, Water Quality Control Manager, at (409) 785-3006.

What's a Cross-Connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed all industrial, commercial, and institutional facilities in the service area to make sure that all potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and require annual testing of each backflow preventer to make sure that it is providing maximum protection.

For more information, review the Cross-Connection Control Manual from the U.S. EPA's Web site at http://water.epa.gov/infrastructure/drinkingwater/pws/crossconnectioncontrol/index.cfm. You can also call the Safe Drinking Water Hotline at (800) 426-4791.

Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. This water supply is responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Source Water Assessment

A Source Water Assessment Plan (SWAP) is currently being updated by the Texas Commission on Environmental Quality. This information describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment allows us to focus source water protection strategies. Some of this source water assessment information is available on Texas Drinking Water Watch at http://dww.tceq.state.tx.us/DWW/. For more information on source water assessments and protection efforts at our system, please contact us.

Chemical Characteristics

The City has two sources of water, and some locations throughout the City may receive a mix of surface water and groundwater.

	Surface Water	Groundwater
Disinfection used		
Alkalinity (mg/l)	less than 40	greater than 165
Conductivity (umhos/cm)	~200	~450
Hardness as CaCO3 (mg/l or gpg)	soft (25–35) or 2 gpg	soft (11–15) or 1 gpg
pH (Unit)	7.0 - 9.0	8.1 - 8.3
Sodium (mg/l)	25 - 45	90 - 135
Fluoride (mg/L)	0.70	0.20 - 0.80

Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The State requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We participated in the 3rd stage of the U.S. EPA's Unregulated Contaminant Monitoring Regulation (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2014	[4]	[4]	2.51	0.03–4.23	No	Water additive used to control microbes
***E. coli* [at the groundwater source]** (# positive samples)	2014	NA	0	0	NA	No	Human and animal fecal waste in untreated groundwater
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2014	60	NA	20.5	5.9–35.1	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2014	80	NA	4.7	32.8–50.8	No	By-product of drinking water disinfection
Total Coliform Bacteria (% positive samples)	2014	More than 5% positive monthly samples	0	0.07	NA	No	Naturally present in the environment
Total Organic Carbon[1] (ppm)	2014	TT	NA	3.70	2.88–4.52	No	Naturally present in the environment
Turbidity[2] (NTU)	2014	TT	NA	0.43	0.06–0.43	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2014	TT=95% of samples <0.3 NTU	NA	99.86	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2012	1.3	1.3	0.1487	0/49	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2012	15	0	1.3	0/49	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2014	200	NA	193	NA	No	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2014	250	NA	28.5	25–32	No	Runoff/leaching from natural deposits
Copper (ppm)	2014	1.0	NA	0.0689	NA	No	Corrosion of household plumbing systems; Erosion of natural deposits
Fluoride (ppm)	2014	2.0	NA	0.745	0.64–0.85	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Manganese (ppb)	2014	50	NA	16.7	NA	No	Leaching from natural deposits
pH (Units)	2014	6.5–8.5	NA	7.5	7.3–7.8	No	Naturally occurring
Sulfate (ppm)	2014	250	NA	23.5	2–45	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids [TDS] (ppm)	2014	500	NA	224	139–309	No	Runoff/leaching from natural deposits
Zinc (ppm)	2014	5	NA	0.0171	NA	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED SUBSTANCES [3]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2014	10.2	1.0–13.3	By-product of drinking water disinfection
Bromoform (ppb)	2014	1.2	1.0–3.1	By-product of drinking water disinfection
Chloroform (ppb)	2014	18.5	1.0–34.7	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2014	3.8	2.0–11.3	By-product of drinking water disinfection
Nickel (ppb)	2014	0.004	NA	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED CONTAMINANT MONITORING REGULATION STAGE 3 (UCMR3) [3]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Molybdenum (ppb)	2014	1.3	1.0–3.0	Runoff/leaching from natural deposits and/or industrial sources
Strontium (ppb)	2014	34	0.30–74	Runoff/leaching from natural and/or industrial sources

[1] Raw water TOC range was 6.16 to 14.48 ppm.

[2] Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

[3] Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of monitoring unregulated contaminants is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.