2023

CITY OF SOUTH BEND

DRINKING WATER QUALITY

ANNUAL REPORT

South Bend Drinking Water meets all state and US Environmental Protection Agency (EPA)

water quality standards.

Delivered

5.46 billion

gallons of safe and reliable drinking water to residents, businesses and visitors in 2022.

An average of

15 million

gallons was treated and distributed to 115,000 customers daily.

WHERE DOES SOUTH BEND DRINKING WATER COME FROM?

South Bend Municipal Utilities utilizes groundwater from the St. Joseph Tributary Valley System and St. Joseph and Hilltop aquifers as its sources for drinking water. There are nine wellfields available for use containing wells ranging from 104 to 237 feet below the ground surface. There is a treatment plant at each wellfield. Some of the treatment plants filter out naturally occurring iron and manganese. Two of the plants have granular activated carbon to remove any volatile organic compounds the water may contain. All treatment plants add fluoride for dental health and chlorine for disinfection. South Bend Municipal Utilities closely monitors and manages its water quality, going above the level of testing required by regulations.

Educational Information

To view the frequently requested water quality parameters, visit **southbendin.gov/waterworks.**

Commonly Found Drinking Water Contaminants

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the land surface or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material. It can pick up substances resulting from the presence of animals or human activity. Contaminants that may be present include the following:

- Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations or wildlife.
- Inorganic contaminants, such as salts and metals, can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides may come from a variety of sources such as agriculture, urban stormwater runoff or residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, are byproducts of industrial processes and petroleum production and can also come from gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants can be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, IDEM and EPA impose regulations that limit certain contaminants in water provided by public water systems. 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 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons, such as people undergoing chemotherapy for cancer, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers. The EPA and Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426.4791.

Nitrate in Drinking Water

Nitrate in drinking water at levels above 10 parts per million is a health risk for infants of less than 6 months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, seek advice from your healthcare provider. Nitrate levels can be found under the Regulated Contaminants section.

Lead in Drinking Water

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. South Bend Water Works is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When water has been sitting for several hours, minimize the potential for lead exposure by flushing the tap for 30 seconds to two minutes before using water for drinking or cooking.

Although South Bend Municipal Utilities has always met the regulations for lead, it is still possible for some lead to get into your water if you have lead pipes or a lead service line. Residential customers can request a free lead test by emailing waterquality@southbendin.gov or by calling 574.235.5994. To view our Homeowner's Guide to Managing Lead in Drinking Water, visit southbendin.gov/leadwaterfacts.

More information on lead in drinking water, testing methods and steps to minimize exposure is available through the Safe Drinking Water Hotline or at epa.gov/safewater/lead.

Arsenic in Drinking Water

While your drinking water meets EPA standards for arsenic, it does contain low levels. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

2022 Water Quality Test Results

Note: Not all contaminants are required to be analyzed annually. The year those contaminants were detected is listed in the report.

REGULATED CONTAMINANTS DETECTED

Contaminant (unit of measure)	EPA's MCL Goal (MCLG)	Highest Level Allowed (MCL)	Range of Results	Average Level Detected	Any Violations?	Typical Source of the Contaminant
Regulated Inorganic Contaminants						
2020 Arsenic (ppb)	0	10	ND - 5.7	ND	No	Erosion of natural deposits, runoff from orchards and glass or electronic waste
2020 Barium (ppm)	2	2	0.033 - 0.270	0.106	No	Discharge from drilling waste or metal refineries, erosion of natural deposits
2020 Chromium (ppb)	100	100	ND - 2.7	1.1	No	Discharge from steel and pulp mills, erosion of natural deposits
Fluoride (ppm)	4	4	0.2 - 0.9	0.7	No	Water additive for strong teeth, erosion of natural deposits, discharge from fertilizer and aluminum factories
2020 Nickel (ppb)	100	100	ND - 2.1	ND	No	Discharge from electroplating, erosion of natural deposits
Nitrate as Nitrogen (ppm)	10	10	ND - 6.8	2.1	No	Runoff from fertilizer, leaking septic tanks, sewage, erosion of natural deposits
Regulated Organic Contaminants						
Cis-1,2-Dichloroethylene (ppb)	70	70	ND - 3.1	1.2	No	Discharge from industrial chemical factories
1,1,1-Trichloroethane (ppb)	200	200	ND - 0.51	ND	No	Discharge from industrial chemical factories
Radioactive Contaminants						
Gross Alpha (pCi/L)	0	15	ND - 3.1	1.36	No	Erosion of natural deposits
Radium-228 (pCi/L)	0	5	ND - 1.98	0.48	No	Erosion of natural deposits

Contaminant (unit of measure)	EPA's MCL Goal (MCLG)	Highest Level Allowed for Rolling Annual Average (MCL)	Range of Individual Results	Range of Rolling Annual Averages	Highest Rolling Annual Average	Any Violations?	Typical Source of the Contaminant
Disinfection and Disinfection By-Products in the Distribution System							
Free Chlorine Residual (ppm)	(MRDLG) 4.0	(MRDL) 4.0	0.2 - 1.6	1 - 1	1	No	Drinking water disinfection
Total Trihalomethanes (ppb)	NA	80	12.9 - 25.3	18.9 - 30.6	30.6	No	By-product of drinking water disinfection
Haloacetic Acids (ppb)	NA	60	ND - 7.5	2.5 - 5.3	5.3	No	By-product of drinking water disinfection

Contaminant (unit of measure)	EPA's MCL Goal (MCLG)	Highest Level Allowed (MCL)	Range of Results	# Positive Samples/ Total # Collected	Any Violations?	Typical Source of the Contaminant
Microbial Contaminants						
Total Coliform (% Positive/month)	0	5% of monthly samples positive	0 - 2.1%	7/1733	No	Naturally present in the environment
E. Coli (# Positive/month)	0	0	0	0/1733	No	Human and animal waste

Total coliforms are a group of closely related, mostly harmless bacteria that live in soil and water as well as the gut of animals. Since total coliforms are common inhabitants of ambient water and may be injured by environmental stresses (lack of nutrients) and water treatment (chlorine disinfection) in a manner similar to many pathogens, EPA considers them a useful indicator of these pathogens. Total coliform samples are also tested for E.Coli. E. Coil is a total coliform that is commonly found in the intestines of animals and humans.

Contaminant (unit of measure)	EPA's Ideal Goal (MCLG)	EPA's 90th Percentile Action Level	Total Number of Samples Collected	Number of Samples Over Action Level	Our 90th Percentile	Any Violations?	Typical Source of the Contaminant
Lead and Copper							
Copper (ppm)	1.3	1.3	176	0	0.174	No	Erosion of natural deposits, Corrosion of household plumbing
Lead (ppb)	0	15	176	5	4.1	No	Corrosion of household plumbing

Compliance for the lead and copper rule is based on whether 90% of samples have results less than EPA's Action Level (AL).

5th Liter Lead Testing in Preparation for Future Compliance

Contaminant (unit of measure)	EPA's MCL Goal (MCLG)	EPA's 90th Percentile Action Level	EPA's 90th Percentile Trigger Level	Total Number of Samples Collected	Number of Samples Over Trigger Level	Our 90th Percentile	Typical Source of the Contaminant
5th Liter Lead Results - Non-Compliance Samples Collected During Compliance Period							
Lead (ppb) 5th Liter	0	15	10	176	4	2.6	Corrosion of household plumbing

Beginning in 2025, EPA will determine compliance with lead based on the 5th liter of sample collected, rather than the 1st liter, because it is more likely measuring the impact of a lead service line. South Bend Water Works had customers sample both the 1st and 5th liters for lead in 2022. EPA is also introducing a new Trigger Level (TL) of 10 ppb for lead in addition to the Action Level (AL) of 15 ppb. The 2022 90th Percentile was well below both at 2.6 ppb.

UNREGULATED CONTAMINANT MONITORING RULE SAMPLING (UCMR 4)

The EPA uses the Unregulated Contaminant Monitoring Rule to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act. This data set is one of the primary sources of occurrence and exposure information the Agency uses to develop regulatory decisions for emerging contaminants.

Unregulated Contaminant (unit of measure)	Sample Year	Range of Concentrations Found	Average Concentration Found
2019 Unregulated Disinfection By-Products in Distribution System			
Bromochloroacetic acid (ppb)	2019	1.42 - 2.14	1.65
Bromodichloroacetic acid (ppb)	2019	ND - 1.08	0.669
Chlorodibromoacetic acid (ppb)	2019	0.503 - 1.36	0.874
Dibromoacetic acid (ppb)	2019	0.967 - 1.53	1.18
Dichloroacetic acid (ppb)	2019	0.891 - 1.38	1.11
Monobromoacetic acid (ppb)	2019	ND - 0.442	ND
Tribromoacetic acid (ppb)	2019	ND - 2.36	ND
Trichloroacetic acid (ppb)	2019	ND - 0.65	ND
2019 Unregulated Contaminants in Finished Water			
Manganese (ppb) Current SMCL 50 ppb	2019	ND - 162	28.7
2019 Unregulated Contaminants in Raw Source Water			
Bromide (ppb)	2019	ND - 128	51.5
Total Organic Carbon (ppb)	2019	ND - 1260	ND

TERMS & MEASUREMENTS

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

Maximum Contaminant Level (MCL): 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.

Maximum Contaminant Level Goal (MCLG): 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.

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

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

ND: Not detected. ND is used when some samples or the average results from all samples is below the level that the contaminant can be detected.

pCi/L: Picocuries per liter, used to measure radioactivity.

ppb: Parts per billion or micrograms per liter (µg/L)

ppm: Parts per million or milligrams per liter (mg/L)

Secondary Maximum Contaminant Level (SMCL): Non-mandatory water quality standard level set as a guideline for drinking water aesthetic considerations such as taste, color and odor. Parameters at an SMCL are not considered a risk to human health.

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

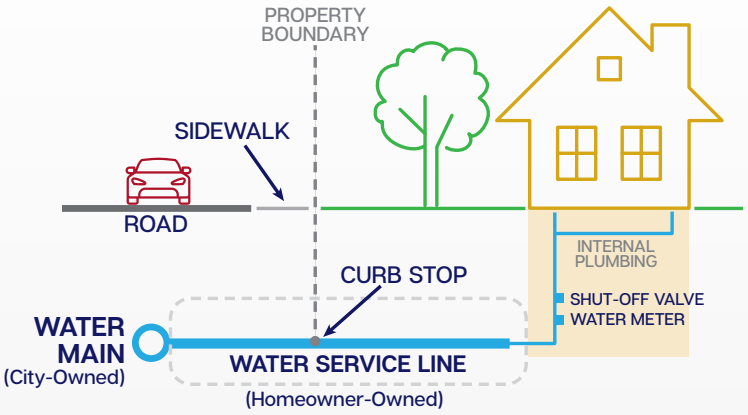
DO YOU HAVE A LEAD SERVICE LINE?

Did you know homeowners in South Bend own their entire water service line from the main to the home? It is common in older homes to have a lead service line from the main to the curb and a galvanized line from the curb to the home. The service line for homes built after 1980 are often made of copper or another material.

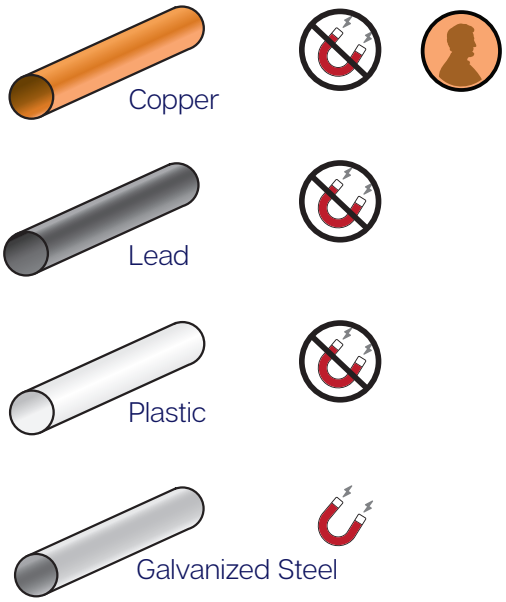
You can determine the material of your service line by doing this simple test with a penny and magnet.

1. Locate where the service line enters your home. This is typically in the lowest level of your home or basement. You'll test the portion of the line closest to where it enters the wall of your home.
2. If you do not have a metal line, it may be plastic, which is usually white, black or blue.
3. If you have a metal line, scratch it with a penny. Afterwards, try to stick a magnet in the same spot.
   - If the scratched portion is the color of the penny and the magnet does not stick, the service line is likely copper.
   - If the scratched portion is a dull grey and a magnet does stick, the service line is likely galvanized steel.
   - If the scratched portion is a shinier grey and a magnet does not stick, the service line is likely lead.

The EPA now requires drinking water utilities to inventory materials of all service lines. In order to meet this requirement, we need your help. Send your results, address and photo of the pipe to **waterquality@southbendin.gov**.



Possible Pipe Material



CONTACT INFORMATION

This report has been prepared by the South Bend Municipal Utilities. For more information, contact **waterquality@southbendin.gov** or **574.235.5994.** For after-hours concerns or water emergencies, call **574.235.9464.** To download this report electronically, visit **southbendin.gov/2023WQR.**

Este informe contiene información muy importante. Tradúzcalo o hable con algien que lo entienda bien. Para discutir esta información en español, por favor llame al 311.

DEPARTMENT OF PUBLIC WORKS
Division of Utilities

MAYOR JAMES MUELLER

South Bend Municipal Utilities
125 W Colfax Ave
South Bend, IN 46601

southbendin.gov