

**THE CITY OF
SOUTH BEND
CONSUMER
CONFIDENCE
REPORT &
SUMMARY OF
WATER QUALITY
TESTING
COMPLETED IN
2017**

PWSID 5271014



SOUTH BEND WATER WORKS WAS 100% IN COMPLIANCE AGAIN IN 2017.

The South Bend Water Works utilizes ground water from the Saint Joseph Aquifer, the Saint Joseph Tributary Valley System and the Hilltop Aquifer as its drinking water source. There are nine well fields available for use containing wells ranging from 106 to 237 feet below the ground surface.

South Bend Water Works regularly conducts thorough testing on groundwater, water being treated, and water being sent to homes, schools, and businesses. South Bend goes beyond the level of testing required by regulations to closely monitor and manage its water quality at all times.

For more information on water quality or for additional copies of this report, call the Director of Water Quality at 574-235-5994 or the Water Quality Specialist at 574-235-9670.

You may also email waterquality@southbendin.gov.

For after hours concerns, call 574-235-9464.

The Board of Public Works meets on the 2nd and 4th Tuesday of each month at 9:30 AM. The meetings are open to the public and are held on the 13th floor of the County-City Building located at 227 West Jefferson Blvd.

This report can be viewed electronically at bit.ly/sbww2017CCR

***Este informe contiene informacion muy importante.
Traduzcalo o hable con algien que lo entienda bien.
Para discutir esta informacion en espanol, por favor llame al 311.***

Required Educational Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants and potential health effects 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 Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, 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 health care providers. U.S. Environmental Protection Agency and Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800)426-4791.

In order to ensure that tap water is safe to drink, the Indiana Department of Environmental Management and the Environmental Protection Agency prescribe regulations that limit the amount of certain contaminants in water provided by a public water supply. Federal Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Contaminants

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 dissolves naturally-occurring minerals and, in some cases, radioactive material; and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include the following:

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



Definitions

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 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 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

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

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

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

Units in the tables

ppm means parts per million or milligrams per liter (mg/L)

ppb means parts per billion or micrograms per liter ($\mu\text{g/L}$)

pCi/L means picocuries per liter, used to measure radioactivity

ND means not detected. In the tables, ND is used when some samples or the average results from all samples is below the level that the contaminant can be detected.

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

Results of Water Leaving the Treatment Facilities

Frequently Requested Water Quality Parameters		Range	Average
pH (s.u)	No MCL	7.0 - 8.1	7.5
Hardness (ppm as CaCO_3) *	No MCL	242 - 508	364
Alkalinity (ppm as CaCO_3)	No MCL	214 - 374	279
Calcium (ppm)	No MCL	75 - 105	90
Sodium (ppm)	No MCL	13 - 77	39
Magnesium (ppm)	No MCL	27 - 38	32
Chloride (ppm)	No MCL	38.7 - 144	82.7
Lead (ppm)	No MCL	ND	ND
Total Dissolved Solids (ppm)	No MCL	358 - 605	477
Sulfate (ppm)	No MCL	23 - 69	48
Ammonia (ppm)	No MCL	ND - 0.08	ND

*Average Hardness = 21 grains/gallon

Although this is the average hardness, we recommend setting your softener to 19 grains/gallon and increasing if you don't feel it is doing an adequate job. Setting your softener too high may make your water corrosive to your pipes.

Regulated Contaminants Detected

Contaminant (unit of measure)	EPA's Ideal Goal (MCLG)	Highest Level Allowed (MCL)	Range of Results	Average Level Detected	Any Violations?	Typical Source of the Contaminant
Regulated Inorganic Contaminants						
Arsenic (ppb)	0	10	ND - 4.9	ND	No	Erosion of natural deposits, runoff from orchards, runoff from glass or electronic waste
Barium (ppm)	2	2	0.034 - 0.260	0.102	No	Discharge from drilling or metal refineries, erosion of natural deposits
Chromium (ppb)	100	100	ND - 3.0	ND	No	Discharge from steel & pulp mills, erosion of natural deposits
Fluoride (ppm)	4	4	0.2 - 1.0	0.7	No	Water additive for strong teeth, erosion of natural deposits
Nickel (ppb)	100	100	ND - 1.8	ND	No	Discharge from electroplating, erosion of natural deposits
Nitrate (ppm)	10	10	ND - 5.24	1.2	No	Runoff from fertilizer, leaking septic tanks, or sewage, erosion of natural deposits
Regulated Organic Contaminants						
Carbon tetrachloride (ppb)	0	5	ND - 1.6	ND	No	Discharge from chemical plants and industrial factories
Cis-1,2-Dichloroethylene (ppb)	70	70	ND - 6.5	0.8	No	Discharge from industrial chemical factories
Tetrachloroethylene (ppb)	0	5	ND - 0.5	ND	No	Discharge from factories and dry cleaners
1,1,1-Trichloroethane (ppb)	200	200	ND - 0.5	ND	No	Discharge from metals degreasing sites and other factories
Radioactive Contaminants (2016)						
Radium (pCi/L)	0	5	0.263 - 2.26	0.955	No	Erosion of natural deposits
Gross Alpha (pCi/L)	0	15	-0.100 - 4.67	1.66	No	Erosion of natural deposits

Contaminant (unit of measure)	EPA's Ideal Goal (MCLG)	Highest Level Allowed (MCL)	Range of Individual Results	Highest Rolling Annual Average	Any Violations?	Typical Source of the Contaminant
Disinfection and Disinfection By-products						
Free Chlorine Residual (ppm)	(MRDLG) 4.0	(MRDL) 4.0	0.3 - 1.4	0.8	No	Drinking water disinfection
Total Trihalomethanes (ppb)	NA	80	ND - 24.1	24.3	No	By-product of drinking water disinfection
Haloacetic Acids (ppb)	NA	60	ND - 7.0	5.0	No	By-product of drinking water disinfection

Contaminant (unit of measure)	EPA's Ideal 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%	0% - 0.7%	4/1884	No	Naturally present in the environment
E. Coli (#Positive/month)	0	0	0	0/1884	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. Because 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 positive samples are also tested for E.coli. E. coli is a total coliform that is commonly found in the intestines of animals and humans.

Nitrate in drinking water at levels above 10 ppm 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 health care provider.

Important Health Information on Lead

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 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 <http://www.epa.gov/safewater/lead>.

Homeowner Guide to Managing Lead in Drinking Water

The City of South Bend treats, tests, and distributes high quality water to you and the community. Water provided by the City of South Bend is lead-free when it leaves our treatment plants. The city water mains that distribute water throughout the community are made mostly of iron. After water leaves the city water main, its quality may change as the water flows through customer-owned service lines and in-home plumbing and fixtures that may contain lead. The City of South Bend takes the issue of lead in drinking water very seriously, and as a result, we offer this fact sheet to help you identify potential sources of lead in your home, learn how lead can affect your health and, most importantly, how to maintain high quality water and reduce exposure to lead.

Potential Sources of Lead
Lead is a naturally occurring material used in many residential and industrial products, meaning we may be exposed to it at work or at home. Historically, lead was considered a good material for plumbing because it easily forms into different shapes and resists leaks. For this reason, many homes may have lead-containing service lines to the house, pipes in the house, and kitchen and bath fixtures. Lead may also be found in paint and other products, especially in older homes. See the illustration below for more information.

Exposure to Lead Can Affect Your Health
The U.S. Environmental Protection Agency and the Centers for Disease Control and Prevention agree that there is no known safe level of lead in children. Lead exposure can damage the brain and nervous system and affect growth and development, learning and behavior, and hearing and speech. Lead can also pass from pregnant or nursing mothers to their children. In adults, lead can affect cardiovascular and reproductive health, increase blood pressure, and decrease kidney function.

Where might lead be found near your home?

- 1 South Bend provides a source of drinking water that is routinely tested to verify it is safe. Additionally, South Bend water mains are not made of lead.
- 2 All or a portion of the customer-owned service line may be made of lead and could affect water quality inside a home.
- 3 Homes may contain lead piping and lead solder, which can affect drinking water quality.
- 4 Drinking water quality may be affected at the point of use if your plumbing fixtures and faucets contain lead.
- 5 Other potential sources of lead in a home include lead-based paint, dust, soil, jewelry, and some plastics.

Although South Bend's water is not corrosive to pipes, it is still possible for lead to leach into your water for other reasons. In 2017, the City provided residential customers with a "Homeowner Guide to Managing Lead in Drinking Water". The guide explains tips to help minimize your exposure to lead that may enter your water from your pipes. To download a copy of this document, visit bit.ly/leadwaterfacts or obtain a hard copy by visiting our customer service office located at 125 W Colfax Avenue. You may also request a copy via mail by calling 574-235-5994 or 574-235-9670 or by emailing waterquality@southbendin.gov

In addition to this document, South Bend Water Works is now distributing hang tags to customers that are having repairs done on their lead service line through the water leak insurance program. The hang tag explains how to minimize exposure to lead after a service line disruption. Call or email using the contacts above for more Information.



Contaminant (unit of measure)	EPA's Ideal Goal (MCLG)	EPA's 90th Percentile Action Level	Number of Samples Over Action Level	Our 90th Percentile	Any Violations?	Typical Source of the Contaminant
2016 Lead and Copper (Analyzed every 3 years)						
Copper (ppb)	1300	1300	1	180	No	Corrosion of household plumbing
Lead (ppb)	0	15	2	4.3	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. One home had both lead and copper over the action level. Steps were taken to correct the home plumbing and follow up sample results were below the action level. One other home had lead over the action level. Results in follow up samples were all below the action level. Apart from these two homes, the highest level of lead found was 12.0 ppb and 23 out of 58 samples had no detectable lead at all. Samples were only collected from homes believed to have either a lead service line/lead pipes or copper pipes with lead solder.

Unregulated Contaminants

Contaminant (unit of measure)	EPA's Ideal Goal (MCLG)	Highest Level Allowed (MCL)	Range of Results	Average Level Detected	Any Violations?	Typical Source of the Contaminant
Unregulated inorganic Contaminants (2013 - last round of testing)						
Chromium, Hexavalent (ppb)	No MCLG	No MCL	ND - 0.53	0.10	NA	Naturally occurring and used for anti-corrosion and dyes
Molybdenum (ppb)	No MCLG	No MCL	ND - 2.0	ND	NA	Naturally occurring and a chemical reagent
Strontium (ppb)	No MCLG	No MCL	76 - 170	120	NA	Naturally occurring & used in steel production and to scavenge lead
Vanadium (ppb)	No MCLG	No MCL	ND - 0.4	ND	NA	Naturally occurring & used in the production of other substances
Unregulated Organic Contaminants						
Bromodichloromethane (ppb)	No MCLG	No MCL	ND - 4.1	ND	NA	By-product of drinking water disinfection
Bromoform (ppb)	No MCLG	No MCL	ND - 2.5	ND	NA	By-product of drinking water disinfection
Chlorate (ppb) - 2013	No MCLG	No MCL	ND - 250	28	NA	By-product of drinking water disinfection
Chlorodibromomethane (ppb)	60	No MCL	ND - 5.9	0.6	NA	By-product of drinking water disinfection
Chlorodifluoromethane (ppb) - 2013	No MCLG	No MCL	ND - 0.11	ND	NA	By-product of drinking water disinfection, discharge from industry
Chloroform (ppb)	No MCLG	No MCL	ND - 1.9	ND	NA	By-product of drinking water disinfection
1,1-Dichloroethane (ppb)	No MCLG	No MCL	ND - 0.9	ND	NA	Discharge from Industry
1,4-Dioxane (ppb) - 2013	No MCLG	No MCL	ND - 0.54	0.19	NA	Discharge from paper, cotton, textile, coolant, or cosmetics production

The Environmental Protection Agency uses the Unregulated Contaminant Monitoring Rule (UCMR) 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 (SDWA). This data set is one of the primary sources of occurrence and exposure information the Agency uses to develop regulatory decisions for emerging contaminants.

Precautionary Boil Water Advisory

Date: _____

The water service in your immediate area has been interrupted in order to complete a repair. After your service has been restored, flush your lines for at least 15 minutes or until the water runs clear with no visible color or odor. Although contamination of the water is highly unlikely, it is possible when the water main is not under pressure. As a precaution, we recommend that you boil any water used for consumption for at least 3 minutes and let cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, and food preparation. After interruptions like this, South Bend Water Works takes a series of samples to verify that your water is still safe. It can take up to 72 hours to receive results from the tests, therefore please continue to boil your water for 72 hours. If contamination were ever found, you **WOULD** be notified within the 72 hour period. If 72 hours has passed and you have not been notified, rest assured you may resume normal water consumption. Thank you for your patience and cooperation.

If you have questions about water quality, please call 574-235-5994 or email waterquality@southbendin.gov

If you have questions about your water service or the repair work, please call 574-235-9464.

Para discutir esta información en español, por favor llame al 311.

Precautionary Boil Water Advisories

Aging pipes and extreme weather changes often lead to “main breaks” throughout South Bend. Often, the water needs to be turned off to complete the necessary repairs. Valves in the area of the repair are turned to isolate the leak and customers within the isolated area lose water pressure. When this occurs, South Bend Water Works distributes the “Precautionary Boil Water Advisory” hang tags to the homes and businesses that are affected. Getting one of these hang tags **does not mean** the water has been contaminated. It is given out because there is some possibility that bacteria could get into the system when it is not under pressure. However, contamination is very unlikely. After the repair, when your water is turned back on, please run your water to flush the line. Samples are taken from a hydrant to confirm there has been no contamination. During the time it takes to get the sample results (which can be up to 72 hours):

It is recommended to boil your water or use bottled water for: Drinking, Making Ice, Preparing Food, and Brushing Teeth.

However, you may: Shower, Bathe, or Do Laundry. As an extra precaution, you can use hand sanitizer after washing hands and rinse dishes in water containing a small amount of bleach (1 Tbsp. per gallon) to further reduce any risk .

If contamination were ever found, you would be notified during the 72 hour period after your water is turned back on. If it has been 72 hours and you have not been notified, you can rest assured your water is safe to drink.