

# CITY OF SOUTH BEND 2020 ANNUAL DRINKING WATER QUALITY REPORT

MAYOR JAMES MUELLER



## SUMMARY

**South Bend Drinking Water meets all state and US Environmental Protection Agency (EPA) water quality standards.**

**Delivered 5.26 billion gallons of safe and reliable drinking water for residents, businesses and visitors in 2019.**

**An average of 14.4 million gallons was treated and distributed to 112,400 customers every day.**

### CONTACT INFORMATION

This report has been prepared by the City of South Bend Department of Public Works - Division of Utilities. For more information on water quality, contact the Director of Water Quality at [waterquality@southbendin.gov](mailto: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/waterquality](http://southbendin.gov/waterquality).

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

## WHERE DOES SOUTH BEND DRINKING WATER COME FROM?

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 104 to 237 feet below the ground surface. There is a treatment plant at each well field. 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. Water Works closely monitors and manages its water quality, and goes above the level of testing required by regulations.

**NOTE: Previous report titles included the year that the data was collected rather than the year it was published.**

# 2019 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 Ideal Goal (MCLG)	Highest Level Allowed (MCL)	Range of Results	Average Level Detected	Any Violations?	Typical Source of the Contaminant
<b>Regulated Inorganic Contaminants</b>						
Barium (ppm)	2	2	0.047 - 0.13	0.088	No	Discharge from drilling or metal refineries, erosion of natural deposits
Chromium (ppb)	100	100	ND - 2.1	1.0	No	Discharge from steel and pulp mills, erosion of natural deposits
Fluoride (ppm)	4	4	0.3 - 1.0	0.7	No	Water additive for strong teeth, erosion of natural deposits, discharge from fertilizer and aluminum factories
Nickel (ppb)	100	100	ND - 1.3	ND	No	Discharge from electroplating, erosion of natural deposits
Nitrate (ppm)	10	10	ND - 7.2	2.7	No	Runoff from fertilizer, leaking septic tanks, sewage, erosion of natural deposits
<b>Regulated Organic Contaminants</b>						
Cis-1,2-Dichloroethylene (ppb)	70	70	ND - 0.8	0.3	No	Discharge from industrial chemical factories
Trichloroethylene (ppb)	0	5	ND - 1.0	ND	No	Discharge from metal degreasing sites and other factories
<b>Radioactive Contaminants</b>						
Combined Radium (pCi/L)	0	5	0.48 - 1.25	0.86	No	Erosion of natural deposits
Gross Alpha (pCi/L)	0	15	-0.49 - 8.30	3.90	No	Erosion of natural deposits

Contaminant (unit of measure)	EPA's Ideal 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
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### Disinfection and Disinfection By-Products

Free Chlorine Residual (ppm)	(MRDLG) 4.0	(MRDL) 4.0	0.2 - 1.8	1 - 1	1	No	Drinking water disinfection
Total Trihalomethanes (ppb)	NA	80	12.5 - 38.8	15.4 - 28.0	28.0	No	By-product of drinking water disinfection
Haloacetic Acids (ppb)	NA	60	ND - 4.4	2.1 - 4.4	4.4	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
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### Microbial Contaminants

Total Coliform (% Positive month)	0	5% of monthly samples positive	0 - 1.25%	2/1778	No	Naturally present in the environment
E. coli (#Positive/month)	0	0	0	0/1778	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 samples are also tested for E.coli. E.coli 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 (AL)	Number of Samples Over the AL	Our 90th Percentile	Any Violations?	Typical Source of the Contaminant
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### 2019 Lead and Copper

Copper (ppm)	1.3	1.3	0	0.198	No	Corrosion of household plumbing
Lead (ppb)	0	15	0	2.6	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). Forty-eight samples were collected from homes believed to have a lead service line or lead pipes with two samples from homes that may have 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
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### Unregulated Organic Contaminants

Bromodichloromethane (ppb)	0	No MCL	ND - 1.7	ND	NA	By-product of drinking water disinfection
Bromoform (ppb)	0	No MCL	ND - 0.8	ND	NA	By-product of drinking water disinfection
Chlorodibromomethane (ppb)	60	No MCL	ND - 2.3	ND	NA	By-product of drinking water disinfection
Chloroform (ppb)	70	No MCL	ND - 0.8	ND	NA	By-product of drinking water disinfection

## 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
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### 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

### Unregulated Contaminants in Finished Water

Manganese (ppb) Current SMCL 50 ppb	2019	ND - 162	28.7
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### Unregulated Contaminants in Raw Source Water

Bromide (ppb)	2019	ND - 128	51.5
Total Organic Carbon (ppb)	2019	ND - 1260	ND

# EDUCATIONAL INFORMATION

## Commonly Found Drinking Water 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 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 storm water 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 storm water runoff, or residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production and can also come from gas stations, urban storm water run-off, 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, the Indiana Department of Environmental Management and EPA prescribe regulations that limit the amount of 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. 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. 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 ten (10) parts per million is a health risk for infants of less than six (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. Nitrate levels can be found on page 2.

## 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 20 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 [epa.gov/safewater/lead](http://epa.gov/safewater/lead).

## Public Outreach

Water Works has plumbers distribute door hangers to residents prior to a repair through the service line insurance program. Special door hangers are provided to residents who are likely to have a lead service line. Recent studies have shown that lead may temporarily increase in tap water when a lead service line has been disrupted. Transparency with customers is key to their well-being, which is why Water Works is making customers aware of these precautions in order to minimize lead exposure after a scheduled disruption.

To view the frequently requested water quality parameters, visit [southbendin.gov/waterworks](http://southbendin.gov/waterworks).



## DEPARTMENT OF PUBLIC WORKS Division of Utilities

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### Terms & Measurements

**Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements 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 ( $\mu\text{g/L}$ )

**ppm:** Parts per million or milligrams per liter ( $\text{mg/L}$ )

**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.

## PROTECTING DRINKING WATER WITH BACKFLOW PREVENTION

Did you know that certain hazards in homes or businesses may contaminate drinking water for you and your neighbors if there is no control in place to prevent it? For example, if the system's water pressure drops and there is no control in place on the irrigation system, chemicals, animal waste and organisms in the lawn may be siphoned back into the drinking water supply. Contamination may also occur through connections at businesses like hair salons, car washes, bars and restaurants, etc. To prevent contaminants from entering the drinking water, Indiana regulations direct local utilities to implement a cross connection control program that requires customers with certain hazards to have an air gap or approved backflow prevention device installed, maintained and tested at least annually by a certified tester. Test results must be reported to the Utility.

To learn more, visit the Indiana Department of Environmental Management's Cross Connection Control and Backflow Prevention Manual online at <http://bit.ly/BFPManual>. Questions can be emailed to [backflow@southbendin.gov](mailto:backflow@southbendin.gov).