

# 2016 REPORT OF THE STATE OF WATER IN NEW ORLEANS

The Sewerage and Water Board is pleased to provide you with this Annual Water Quality Report (also known as the Consumer Confidence Report) for the year 2016. (*Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien*). The Board is proud to provide the citizens of New Orleans each day with an abundant supply of quality water for personal and business needs and fire protection.

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.

## Source and Treatment

Our water source is the Mississippi River, a surface water source. A Source Water Assessment has been conducted by the State of Louisiana Department of Environmental Quality. This is an assessment of a delineated area around our water source through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources. According to the Source Water Assessment, our water system had a susceptibility rating of high. If you would like to review the Source Water Assessment, contact the Sewerage and Water Board Laboratory at (504) 865-0420 or [waterinfo@swbno.org](mailto:waterinfo@swbno.org).

The Mississippi River water is treated at the Carrollton Water Purification Plant for East Bank customers in Orleans Parish and at the Algiers Water Purification Plant for West Bank customers in Orleans Parish. In 2016, the Carrollton Water Purification Plant provided an average of 131.6 million gallons of drinking water per day to an estimated population of 348,420. The Algiers Water Plant provided an average of 9.7 million gallons of drinking water per day to an estimated population of 53,547. (Source of population figures is GCR, Inc). The treatment process at each plant is similar. The raw water is treated with chemicals called "coagulants" which cause the small particles in the water to come together to form larger particles which are then allowed to settle out of the water. Rapid sand filtration is used to remove even smaller particles. During the process, chloramine is added to disinfect the water. Lime is added to provide corrosion control and to increase the pH of the water to stabilize the disinfectant. Fluoride is added to prevent tooth decay.

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 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: (1-800-426-4791).

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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Contaminants 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, and wildlife.

- **Inorganic contaminants**, such as salts and metals, which 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**, 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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

- **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

## Cryptosporidium

Cryptosporidium is a microscopic organism which, if ingested, can cause diarrhea, nausea, cramps, fever, and other gastrointestinal symptoms. It is found in sewage and animal waste which is washed into rivers and streams when it rains. Cryptosporidium can be found in nearly all surface waters in the United States. The best defense a water utility can provide is an effective treatment process which includes the multiple barriers of effective and continuous coagulation, disinfection, and filtration.

In healthy persons, symptoms usually last two to three days. However, cryptosporidiosis can be very serious for people with severely weakened immune systems, such as chemotherapy and transplant patients and people with HIV infections. These people should consult a physician about extra protection, including boiling water, using certified bottle water, or using a home water filter capable of removing Cryptosporidium.

While we occasionally detect low levels of Cryptosporidium in our source water (Cryptosporidium was not detected in any of our 2016 monthly Mississippi River samples), it has only been detected in our tap water three times – twice in 1998 and once in March 2014. In each instance, the concentration was 1 oocyst or less per 100 liters of water. The test for Cryptosporidium cannot determine if an oocyst is viable or capable of causing illness, and an occasional oocyst in the drinking water of utilities that use surface water is not unusual and does not necessarily indicate a health problem.

## Who Tests Your Water?

Testing to determine if New Orleans' drinking water complies with State and Federal drinking water quality standards is performed by the Louisiana Department of Health and Hospitals, the Sewerage and Water Board Water Quality Laboratory, and DHH certified contract laboratories. Where a contaminant was detected in compliance monitoring, we have reported it in the table on the back of this page.

In addition to the compliance monitoring required by drinking water regulations, the S&WB performs daily quality control testing in its laboratory as well as continuous online monitoring of important water quality parameters.

## Checking for Chemical Spills in the Mississippi River

The Sewerage and Water Board participates in a program set up by the Louisiana Department of Environmental Quality called the Early Warning Organic Compound Detection System (EWOCDS). DEQ provides equipment at locations along the Mississippi River from Baton Rouge to New Orleans to check for volatile organic contaminants in the river.

The New Orleans location is the Sewerage and Water Board Water Quality Laboratory. Lab personnel analyze river samples each day and report any contamination to DEQ. The S&WB in turn benefits from advance notification of spills provided by upriver EWOCDS locations.

## Question: Is There Lead in New Orleans' Tap Water?

**Answer:** There is no lead in the treated water leaving our purification plants.

However, homes that are unoccupied and homes that are undergoing or have recently undergone plumbing renovation may experience elevated lead concentrations in their tap water. Homeowners should thoroughly flush all household plumbing before re-occupying the property.

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. The Sewerage and Water Board of New Orleans 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 drinking 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 US EPA Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

## Tips for Reducing Lead Exposure from Drinking Water

1. **Flush** your tap if your water has not been used for several hours. Depending on the source of lead, this may take from 30 seconds to 5 minutes. Lead can dissolve into drinking water from lead-containing plumbing when it sits in pipes for several hours.
2. **Use only cold water** for cooking and preparing beverages and infant formula. Lead dissolves more easily in hot water.
3. **Do not** boil water to remove lead. Boiling your water will not reduce lead.
4. **Ask your physician** to test your child's blood lead levels. Louisiana Law requires primary medical providers to perform lead testing on children ages 6 months to 6 years.
5. **Test** your water for lead. Contact the S&WB at 52-WATER for more information.
6. **Regularly clean** your faucets' aerators. Lead particles can collect in aerators.
7. **Install** "lead-free" fixtures. Prior to January 2014, fixtures containing up to 8% lead were allowed to be labeled lead-free. Now all fixtures are required to contain less than 0.25% lead.
8. **Replace** galvanized plumbing. Lead from lead service lines can build up in galvanized pipes and later be released.
9. **Replace** lead service lines. **The service line from the meter to the house is the property owner's responsibility.** If water testing finds high lead levels in your water, the S&WB may replace the service line from the water main to your meter if it is lead. **Be aware** that service line replacements may cause a temporary increase in lead in your drinking water. Studies have found elevated lead levels lasting from days to 6 months after a lead service line replacement.
10. **Consider** using a water filter. Not all filters remove lead. **Be sure the filter meets NSF Standard 53 for lead. Be sure** to replace and maintain the filter according to the manufacturer's instructions.

## Sewerage & Water Board of New Orleans 2016 Water Quality Data

| Contaminant                                    | Meets Requirements? | Units   | Amounts East Bank                | Detected West Bank               | Highest Level Allowed (MCL)   | MCL Goal (MCLG)   | Likely Sources  |
|--|---------------------|---|----------------------------------|----------------------------------|---|-------------------|---|
| <b>REGULATED CONTAMINANTS detected in 2016</b> |                     |   |                                  |                                  |   |                   |   |
| Total Coliform Bacteria                        | Yes                 | % Positive Samples per Month                    | 0 – 1.3                          | 0 – 4.0                          | 5   | 0                 | Naturally present in the environment  |
| Turbidity <sup>1</sup>                         | Yes                 | NTU:<br>Lowest monthly % of samples ≤ 0.3:      | 0.05 – 0.3<br>100.0              | 0.06 – 0.3<br>100.0              | 1.49 for any one sample;<br>95% of samples each month should be ≤ 0.3 | N/A               | Soil runoff   |
| Fluoride                                       | Yes                 | ppm   | 0.26 – 0.92<br>Avg = 0.71        | 0.53 – 0.92<br>Avg = 0.76        | 4   | 4                 | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Nitrate+Nitrite (as Nitrogen)                  | Yes                 | ppm   | 1.7 – 1.7                        | 1.9                              | 10  | 10                | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits                               |
| Copper   | Yes                 | 90th percentile ppm:<br>No. sites exceeding AL: | 0.2<br>0 of 60 sampled           | 0.1<br>0 of 47 sampled           | Action Level = 1.3 ppm for 90th percentile                            | 1.3               | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives                    |
| Lead   | Yes                 | 90th percentile ppb:<br>No. sites exceeding AL: | 7<br>1 of 60 sampled             | 3<br>1 of 47 sampled             | Action Level = 15 ppb for 90th percentile                             | 0                 | Corrosion of household plumbing systems; erosion of natural deposits  |
| Barium   | Yes                 | ppm   | 0.046 – 0.047                    | 0.025                            | 2   | 2                 | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits                                |
| Selenium                                       | Yes                 | ppb   | ND                               | 0.52                             | 50  | 50                | Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines                          |
| Uranium  | Yes                 | ppb   | 0.53 – 0.54                      | 0.87                             | 30  | 0                 | Erosion of natural deposits   |
| Combined Radium                                | Yes                 | pCi/L   | ND – 2.3                         | ND                               | 5   | 0                 | Erosion of natural deposits   |
| Gross Beta Particle Activity <sup>2</sup>      | Yes                 | pCi/L   | 2.5 – 3.9                        | 1.4                              | 50  | 0                 | Decay of natural and man-made deposits  |
| Total Chlorine Residual                        | Yes                 | ppm   | 0.5 – 5.0<br>highest RAA = 3.4   | 0.0 – 4.9<br>highest RAA = 2.7   | MDRL:<br>RAA should be ≤ 4  | MDRLG:<br>RAA ≤ 4 | Disinfectant added during water treatment   |
| Total Organic Carbon Removal <sup>3</sup>      | Yes                 | ratio   | 1.00 – 2.08<br>lowest RAA = 1.19 | 1.00 – 1.58<br>lowest RAA = 1.01 | TT<br>RAA should be ≥ 1   | N/A               | Naturally present in the environment  |
| Total Trihalomethanes (TTHMs)                  | Yes                 | ppb   | 15 – 39<br>highest LRAA = 30     | 11 – 57<br>highest LRAA = 34     | LRAA should be ≤ 80   | N/A               | Byproduct of drinking water disinfection  |
| Total Haloacetic Acids (HAA5s)                 | Yes                 | ppb   | 6 – 29<br>highest LRAA = 26      | 7 – 46<br>highest LRAA = 31      | LRAA should be ≤ 60   | N/A               | Byproduct of drinking water disinfection  |

### UNREGULATED CONTAMINANTS<sup>4</sup> detected in 2014 and 2015 (from EPA's Unregulated Contaminant Monitoring Regulation 3)

|                       |     |     |                         |                           |     |     |   |
|-----------------------|-----|-----|-------------------------|---------------------------|-----|-----|---|
| 1,4-Dioxane           | N/A | ppb | ND – 0.40<br>Avg = 0.18 | 0.10 – 0.21<br>Avg = 0.15 | N/A | N/A | Used in the manufacture of paper, cotton, textile products, automotive coolant, cosmetics, and shampoos.  |
| Vanadium              | N/A | ppb | 0.5 – 1.1<br>Avg = 0.8  | 0.5 – 4.1<br>Avg = 2.4    | N/A | N/A | Naturally present in the environment; used as vanadium pentoxide which is a chemical intermediate and a catalyst.   |
| Molybdenum            | N/A | ppb | ND – 2.6<br>Avg = 1.6   | ND – 2.2<br>Avg = 1.2     | N/A | N/A | Naturally present in the environment; molybdenum trioxide is a commonly used chemical reagent.  |
| Strontium             | N/A | ppb | 120 – 230<br>Avg = 176  | 110 – 180<br>Avg = 139    | N/A | N/A | Naturally present in the environment; was used in the glass of CRT televisions.   |
| Chromium – total      | N/A | ppb | ND – 0.26<br>Avg = 0.06 | ND – 0.80<br>Avg = 0.27   | N/A | N/A | Naturally present in the environment; used in the manufacture of steel and other alloys.  |
| Chromium – hexavalent | N/A | ppb | ND – 0.09<br>Avg = 0.03 | ND – 0.12<br>Avg = 0.09   | N/A | N/A | Naturally present in the environment; used in the manufacture of steel and other alloys, chrome plating, dyes and pigments, leather tanning, and wood preservation. |
| Chlorate              | N/A | ppb | 120 – 490<br>Avg = 273  | 92 – 1100<br>Avg = 438    | N/A | N/A | Byproduct of drinking water disinfection; agricultural defoliant; used in the production of chlorine dioxide.   |

<sup>1</sup> Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Its sources include soil runoff.

<sup>2</sup> The MCL for Beta Particles is 4 mrem/yr. EPA considers 50 pCi/L to be the level of concern for Beta Particles.

<sup>3</sup> Total Organic Carbon Removal is reported here as the ratio of TOC removal credits to that required by regulation.

<sup>4</sup> Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. Monitoring for these contaminants helps EPA decide whether these contaminants should have a standard. N/A = not applicable

In the table above, you will find many terms and abbreviations, some with which you might not be familiar. To help you better understand these terms, we provide the following definitions:

**Parts per million (ppm)** – This is a measure of concentration which corresponds to one milligram of a substance in one liter of water (mg/L), or about one drop in 10 gallons.

**Parts per billion (ppb)** – This is a measure of concentration which corresponds to one microgram of a substance in one liter of water (ug/L), or about 1 drop in 10,000 gallons.

**Parts per trillion (ppt)** – This is a measure of concentration which corresponds to one nanogram of a substance in one liter of water (ng/L), or about one drop in 10,000,000 gallons.

**Running Annual Average (RAA)** – average of data from the previous 12 months, calculated after each monitoring event or period.

**Locational Running Annual Average (LRAA)** – average of data at a specific monitoring location from the previous 12 months, calculated after each monitoring event or period.

**Nephelometric Turbidity Unit (NTU)** – This is a measure of the cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the average person. We monitor turbidity because it is a good indicator of the effectiveness of our treatment process.

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

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

**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 (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.

Notice of Monitoring Violation at East Bank Water Treatment Plant: Louisiana and Federal regulations require us to monitor the turbidity of the water from individual filters at least once every four hours and to monitor the turbidity and chlorine residual of the combined water from all of the filters just before it leaves the water plant at least once every two hours. On March 22, 2016, complications from maintenance activities at the S&WB Carrollton Water Treatment Plant resulted in an electrical outage affecting the continuous turbidity and chlorine monitoring equipment in one of the two filter galleries at the water treatment plant for a period of five hours. During this five hour period, we did not perform this required monitoring in the filter gallery affected by the electrical outage. This incident constituted a monitoring violation of Louisiana Administrative Code 51:XII.1123.C, E.1, and 1125.B. Actual filter operations and water treatment processes were not affected by this incident. Monitoring in other parts of the water treatment plant and in the distribution system demonstrated that the water supply met drinking water quality standards. While there is no reason to believe that this incident resulted in any microbial contamination of the drinking water, people with severely compromised immune systems, infants, and some elderly may have been at increased risk. This incident only affected the water treatment plant for the East Bank of New Orleans. Algiers has a separate water system and was not affected. Public notification of this violation was made after the incident as required by LAC51:XII.1139.D.

An online version of our water quality report which includes additional interesting information about drinking water is available on our web site in the section titled "Documents and Reports". If you have questions about your drinking water, or this report, please contact the Sewerage & Water Board using one of the following methods:

**Sewerage and Water Board of New Orleans**

**Laboratory: (504) 865-0420**

**Emergency Department: (504) 52-WATER (529-2837)**

**E-mail address: [waterinfo@swbno.org](mailto:waterinfo@swbno.org)**

**Internet Home Page: [www.swbno.org](http://www.swbno.org)**

More information can be obtained at Sewerage and Water Board meetings which are held on the third Wednesday of every month at 625 St. Joseph St., New Orleans, LA 70065, at 9 a.m.

**U.S. E.P.A. Safe Drinking Water Hotline: 1-800-426-4791**

**U.S. E.P.A. Drinking Water Internet Home Page:**

**[www.epa.gov/safewater](http://www.epa.gov/safewater)**

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