

Sandy Hook Water District Water Quality Report 2018

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| Water System ID: KY0320383 Manager: Bridgett Howard 606-738-6282 | CCR Contact: Kevin Winkleman 606-738-6282 shwater@mrtc.com | Mailing Address: P.O. Box 726 Sandy Hook, KY 41171 | Meeting location and time: 474 Howards Creek Road 2nd Thursday, monthly at 1 PM |
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The Sandy Hook Water District withdraws, treats, and distributes groundwater from wells drilled into the Lee Sandstone. We have completed a Wellhead Protection Plan which was approved by the Kentucky Division of Water in 2000. Part of this plan includes a source water assessment. This assessment includes a susceptibility analysis to determine the risk of contamination to our water supply from various land uses. The susceptibility is based on several factors such as well depth and type of aquifer, the proximity of the contaminant sources to the well or well field, and the nature of the potential contaminant source. Overall, the susceptibility rating for our source is moderate due to the potential sources from agricultural land use and septic systems. Under certain circumstances contaminants could be released that would pose challenges for water treatment, or even get into your drinking water. The Wellhead Protection Plan can be reviewed at our office.

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 may be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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 may pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include: Microbial contaminants, such as viruses and bacteria, (sewage plants, septic systems, livestock operations, or wildlife). Inorganic contaminants, such as salts and metals, (naturally occurring or from stormwater runoff, wastewater discharges, oil and gas production, mining, or farming). Pesticides and herbicides, (stormwater runoff, agriculture or residential uses). Organic chemical contaminants, including synthetic and volatile organic chemicals, (by-products of industrial processes and petroleum production, or from gas stations, stormwater runoff, or septic systems). Radioactive contaminants, (naturally occurring or from oil and gas production or mining activities). In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water to provide the same protection for public health.

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 (800-426-4791).

Information About 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. Your local public water system 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>.

Some or all of these definitions may be found in this report:

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 a 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 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.

Below Detection Levels (BDL) - laboratory analysis indicates that the contaminant is not present.

Not Applicable (N/A) - does not apply.

Parts per million (ppm) - or milligrams per liter, (mg/L). One part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) - or micrograms per liter, (µg/L). One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Parts per quadrillion (ppq) - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

Picocuries per liter (pCi/L) - a measure of the radioactivity in water.

Millirems per year (mrem/yr) - measure of radiation absorbed by the body.

Million Fibers per Liter (MFL) - a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) - a measure of the clarity of water. Turbidity has no health effects. However, turbidity can provide a medium for microbial growth. Turbidity is monitored because it is a good indicator of the effectiveness of the filtration system.

Variations & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system shall follow.

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

Spanish (Español) Este informe contiene información muy importante sobre la calidad de su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.

The data presented in this report are from the most recent testing done in accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data in this table, though representative, may be more than one year old. Copies of this report are available upon request by contacting our office during business hours.

To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Regulated Contaminant Test Results Sandy Hook Water District

| Contaminant [code] (units) | MCL | MCLG | Report Level | Range of Detection | Date of Sample | Violation | Likely Source of Contamination |
|--|-------------|--------------|---|---|-------------------|-----------|---|
| Inorganic Contaminants | | | | | | | |
| Arsenic [1005] (ppb) | 10 | N/A | 3 | 3 to 3 | Apr-17 | No | Natural erosion; runoff from orchards or glass and electronics production wastes |
| Barium [1010] (ppm) | 2 | 2 | 0.217 | 0.217 to 0.217 | Apr-17 | No | Drilling wastes; metal refineries; erosion of natural deposits |
| Beryllium [1075] (ppb) | 4 | 4 | 1 | 1 to 1 | Apr-17 | No | Coal-burning factories; metal refineries; electrical, defense, and aerospace industries |
| Cadmium [1015] (ppb) | 5 | 5 | 2.9 | 2.9 to 2.9 | Apr-17 | No | Natural deposits; corrosion of galvanized pipes; metal refineries; batteries and paints |
| Chromium [1020] (ppb) | 100 | 100 | 1 | 1 to 1 | Apr-17 | No | Discharge from steel and pulp mills; erosion of natural deposits |
| Copper [1022] (ppm) sites exceeding action level 0 | AL = 1.3 | 1.3 | 0.986 (90 th percentile) | 0.019 to 1.3 | Jun-17 | No | Corrosion of household plumbing systems |
| Fluoride [1025] (ppm) | 4 | 4 | 0.64 | 0.64 to 0.64 | Apr-17 | No | Water additive which promotes strong teeth |
| Lead [1030] (ppb) sites exceeding action level 0 | AL = 15 | 0 | 1.2 (90 th percentile) | 0.1 to 2.1 | Jun-17 | No | Corrosion of household plumbing systems |
| Nickel (ppb) (US EPA remanded MCL in February 1995) | N/A | N/A | 5 | 5 to 5 | Apr-17 | No | N/A |
| Selenium [1045] (ppb) | 50 | 50 | 1 | 1 to 1 | Apr-17 | No | Discharge from petroleum and metal refineries or mines; erosion of natural deposits |
| Thallium [1085] (ppb) | 2 | 0.5 | 2.4 | 2.4 to 2.4 | Apr-17 | YES | Leaching from ore-processing sites; discharge from glass, electronics, and drug factories |
| Disinfectants/Disinfection Byproducts and Precursors | | | | | | | |
| Chlorine (ppm) | MRDL = 4 | MRDLG = 4 | 1.13 (highest average) | 0.72 to 1.71 | 2018 | No | Water additive used to control microbes. |
| HAA (ppb) (Stage 2) [Haloacetic acids] (Annual Sample) | 60 | N/A | 3 (high site) | 3 to 3 (range of individual sites) | 2018 | No | Byproduct of drinking water disinfection |
| TTHM (ppb) (Stage 2) [total trihalomethanes] (Annual Sample) | 80 | N/A | 24 (high site) | 21 to 24 (range of individual sites) | 2018 | No | Byproduct of drinking water disinfection. |

Violation: 2018-9936214

We received a violation for failing to submit our Monthly Operating Report to the Division of Water for February 2018 by March 10, 2018. The report was submitted late. We have taken steps to ensure timely submittal of all reports in the future. There were no health effects associated with this violation. We returned to compliance the following month with an on-time submittal of the report.

Violation 2018-9936215

We received a violation for incorrectly advertising the online location of our 2017 Consumer Confidence Report. This report can be found at www.krwa.org/2017ccr/sandyhook.pdf We apologize for making a typo in the web address.

We also inadvertently reported incorrect results for some of our Inorganics in the 2017 Consumer Confidence Report. Our laboratory chose to re-analyze our sample after reviewing quality control data and then re-issued results to Division of Water, but failed to notify us of the changes. Our laboratory has assured us that this will not happen again. We reported Barium results of 0.098mg/L as the only result for our Inorganics testing. The corrected results for Arsenic, Barium, Beryllium, Cadmium, Chromium, Nickel, Selenium and Thallium are reported in the table above. As a result of failing to notify us of our revised report, we incurred another violation for exceeding the MCL for Thallium. A full Public Notice is below.

Violation: Thallium Exceedance

Our water system recently violated a drinking water standard. Although this is not an emergency, as our customers, you have a right to know what happened, what you should do, and what we did (are doing) to correct this situation.

We routinely monitor for the presence of drinking water contaminants. We received notice that the sample collected on 4/7/2017 showed that our system exceeds the standard, or maximum contaminant level (MCL), for Thallium. The standard for Thallium is 0.002 mg/L. The average level of Thallium found in our water in 2017 was 0.0024 mg/L.

- There is nothing you need to do. **You do not need to** boil your **water** or take other corrective actions. However, if you have specific health concerns, consult your doctor.
- If you have a severely compromised immune system, have an infant, are pregnant, or are elderly, you may be at increased risk and should seek advice from your health care providers about drinking this water.

This is not an emergency. If it had been, you would have been notified within 24 hours.

Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.

We were initially told by our laboratory that our sample did not contain detectable levels of Thallium. After reviewing the quality control data, the laboratory chose to analyze the sample again and did not inform us of the change in report levels. We did not have an opportunity to pull a confirmation sample during the compliance period because of our lab's failure to inform us of the change. We have taken a sample for analysis of Thallium in the first quarter of 2019 and are awaiting the results to determine if we have returned to compliance.

For more information, please contact Bridgett Howard at 606-738-6282 or P.O. Box 726 Sandy Hook, KY 41171.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This report will not be mailed unless requested. Please call our office if you have any questions.