

2020 Annual Drinking Water Quality Report

**Swann Keys
Fenwick Island, DE
(443)-880-2402
PWSID #DE0000465**

In compliance with Safe Drinking Water Act amendments by Congress of 1996 and subsequent Federal and State regulations, Swann Keys is pleased to provide this annual water quality report for calendar year 2019. Swann Keys routinely monitors for contaminants in your drinking water and works off well water. For more information on the source of your water and the significant potential sources of contamination, contact Keith Merrill at 443-880-2402.

Is my water safe?

We are very pleased to provide you with this year's Annual Quality Water Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to enduring the quality of your water. Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. Local Water vigilantly safeguards its water supplies and once again we are proud to report that our system has not violated a maximum contaminant level over the last year.

Do I need to take special precautions?

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

How do we monitor for contaminants?

Swann Keys routinely monitors for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st to December 31st, 2019. As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It is important to remember that the presence of these contaminants does not necessarily pose a health risk.

Why are there contaminants in my drinking water?

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 (EPA) 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 can 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, 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 storm water 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 storm water 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.

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. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Educational Statement 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. Swann Key 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 EPA Safe Drinking Water Hotline at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Educational Statement on Radon

Radon is a radioactive gas that you cannot see, taste or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. You should pursue radon removal for your home if the level of radon in your air is 4 pCi/L of air or higher. There are simple ways to fix a radon problem that are not too costly. For additional information, call your state radon program or call EPA's Radon Hotline (800-SOS-RADON).

Water Quality Data Table

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Regulated Contaminants-Directly related to the safety of drinking water Disinfectants and Disinfection By-Products

| Contaminant, units | MCLG | MCL | Result | Range | | Sample Date | Violation | Typical Source | Health Effects |
|----------------------------|------|-----|--------|-------|-------|-------------|-----------|--|---|
| | | | | Low | High | | | | |
| Total Trihalomethanes, ppb | NA | 80* | 6.33 | 6.33 | 6.33 | 2019 | No | By-product of drinking water disinfection. | Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have increased risk of getting cancer. |
| Haloacetic Acids, ppb | NA | 60 | 5.716 | 5.716 | 5.716 | 2019 | No | By-product of drinking water disinfection. | Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. |
| Chlorine, ppm | 4 | 4 | 0.9 | 0.9 | 0.9 | 2019 | No | Water additive used to control microbes. | Eye/nose irritation; stomach discomfort. |

*= 80ppb is the MCL for Total Trihalomethanes (TTHMs). TTHMs consist of Chloroform, Bromodichloromethane, Dibromochloromethane, and Bromoform.

Inorganic Contaminants

| Contaminant, units | MCLG | MCL | Result | Range | | Sample Date | Violation | Typical Source | Health Effects |
|--------------------|------|-----|--------|--------|--------|-------------|-----------|--|---|
| | | | | Low | High | | | | |
| Fluoride, ppm | 2 | 2 | 0.1 | 0.0574 | 0.0574 | 2019 | No | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. | Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums. |

Radioactive Contaminants

| Contaminant, units | MCLG | MCL | Result | Range | | Sample Date | Violation | Typical Source | Health Effects |
|----------------------------------|------|-----|--------|-------|------|-------------|-----------|--|--|
| | | | | Low | High | | | | |
| Beta/photon emitters, pCi/L | 0 | 50* | 4.6 | 4.6 | 4.6 | 10/31/2018 | No | Decay of natural and man-made deposits | Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer. |
| Gross Alpha, pCi/L | 0 | 15 | 3.8 | 3.8 | 3.8 | 2019 | No | Erosion of natural deposits | Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer. |
| Combined Radium (226/228), pCi/L | 0 | 5 | 1.1** | 1.1 | 1.1 | 2019 | No | Erosion of natural deposits. | Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer. |

*= The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles.

**= values base on the "Proposed Radon in Drinking Water Rule," but are not currently enforceable.

Volatile Organic Contaminants

| Contaminant, units | MCLG | MCL | Result | Range | | Sample | | Typical Source | Health Effects |
|--------------------|------|-----|---------|---------|---------|--------|-----------|--|--|
| | | | | Low | High | Date | Violation | | |
| Xylenes, ppm | 10 | 10 | 0.00072 | 0.00072 | 0.00072 | 2019 | No | Discharge from petroleum factories; Discharge from chemical factories. | Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system. |

Secondary Standards-Related to the aesthetic quality of drinking water

| Substance, units | Suggested Limit | Average Result | Range | | Violation | Typical Source | Noticeable Effects above Suggested Limit |
|--------------------------|-----------------|----------------|-------|---------|-----------|---------------------|--|
| | | | Low | High | | | |
| Alkalinity, ppm (2019)** | N/A | 96.7 | - | 96.7 | No | Naturally Occurring | NA |
| Chloride, ppm (2019) | 250 | 11.1628 | - | 11.1628 | No | Naturally Occurring | Salty Taste |
| Sodium, ppm (2019)*** | NA | 70.1 | - | 70.1 | No | Naturally Occurring | NA |
| Iron, ppm (2019) | 0.3 | 0.1171 | | 0.1171 | No | Naturally Occurring | NA |

**= Delaware Secondary Standard. Not included on the list of "National Secondary Drinking Water Regulation."

***Delaware Primary MCL

Units Description:

SU: Standard Unit

NA: Not applicable

ND: Not detected

MNR: Monitoring not required, but recommended.

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

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

pCi/L: picocuries per liter (a measure of radioactivity)

< This means less than

ppt: parts per trillion, or nanograms per liter (ng/L)

of monthly positive samples: Number of samples taken monthly that were found to be positive

mrem/yr: millirems per year (a measure of radiation absorbed by the body)

NTU: Nephelometric Turbidity Units (a measure of water clarity)

Important Drinking Water Definitions:

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

MCLG: Maximum Contaminant Level Goal: 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.

MCL: Maximum Contaminant Level: 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.

Level 1 Assessment: A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

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

MRDL: Maximum Residual Disinfectant Level: 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.

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.

Source Water Assessment Summary

"The Delaware Department of Natural Resources and Environmental Control's (DNREC) Division of Water Resources has completed the Source Water Assessment for the public water supply wells for Swann Keys as required under the 1996 amendments to the Safe Drinking Water Act. This assessment has been performed using the methods specified in the State of Delaware Source Water Assessment Plan (DNREC, 1999).

Swann Keys uses two wells to provide drinking water to the system. Both wells have a moderate vulnerability because they withdraw water from the semiconfined Pocomoke aquifer. These wells are classified as 'Semi-Confined' because significant clay layers exist locally or in the aquifer subcrop nearby. As unconfined wells capable of pumping over 50,000 gallons per day, the wellhead protection areas were delineated using a computer model that attempts to simulate ground-water flow.

This public water supply system provides water to an average daily population of 360 residential consumers from January 1 to December 31 through 588 residential service connections.

There are no discrete source sites within the wellhead protection areas for this water system, but if there were, the sites could have substantial contaminant potentials that may pose a significant threat to the drinking water resources.

An analysis of land use activities in the area show over 82 percent of the total wellhead protection area for the system contains residential land uses. The next largest land use is water covering approximately 7 percent of the wellfield.

Although water samples may have been taken from within the distribution system, no raw water (well tap) samples have been recorded for this Public Water Supply System.

Overall, Swann Keys has a moderate susceptibility to nutrients, a moderate susceptibility to pathogens, a moderate susceptibility to petroleum hydrocarbons, a moderate susceptibility to pesticides, a very low susceptibility to PCBs, a very low susceptibility to other organic compounds, a very low susceptibility to metals and, a low susceptibility to other inorganic compounds."

For more information or to obtain a full copy of the Source Water Assessment please call (302) 739-4793.

Source:

State of Delaware; Department of Natural Resources and Environmental Control; Division of Water Resources, 2003. *Public Water Supply: Source Water Assessment for Swann Keys*. <http://delawaresourcewater.org/assessments>