

ANNUAL WATER QUALITY REPORT

Reporting Year 2021



Presented By
Town of Nags Head

We've Come a Long Way

Once again, we are proud to present our annual water quality report covering the period between January 1 and December 31, 2021. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at all hours—to deliver the highest-quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Where Does My Water Come From?

Our drinking water is purchased from the Dare County Regional Water System. Two water treatment plants operated by Dare County process groundwater from wells located in the Upper and Middle Yorktown Aquifers. The groundwater from the Upper Yorktown Aquifer is processed from wells located in the Skyco area of Roanoke Island. The groundwater from the Middle Yorktown Aquifer is processed from wells located in Kill Devil Hills and Nags Head.



Community Participation

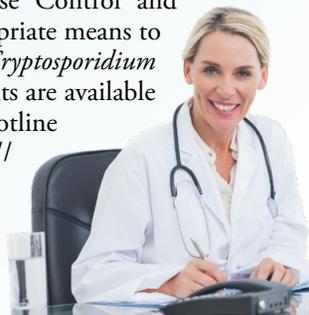
We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. The Town of Nags Head Board of Commissioners generally meets at 9:00 a.m. on the first Wednesday of the month. Midmonth meetings are held on the third Wednesday of each month at 5:30 p.m. October through March and at 7:00 p.m. April through September. Meetings are held in the Board of Commissioners Meeting Room, 5401 South Croatan Highway, Nags Head. For more information on meeting times, please contact Carolyn Morris, Town Clerk, at (252) 449-2009, or you may view meeting schedules and minutes of past meetings at www.nagsheadnc.gov.

Water Rates

The town is required by the North Carolina Local Government Commission to receive enough cash from operations to cover cash outflows necessary to provide water services. Water Fund revenues must cover the costs of providing water services. The town's current rates and usage for each meter size factor in future capital needs identified in the Water Master Plan, existing debt service, and any inflationary or new expenditures in order to sustain reliable operations.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) 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 or <http://water.epa.gov/drink/hotline>.



Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 two 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 at (800) 426-4791 or at www.epa.gov/safewater/lead.

QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please call Nancy Roop Carawan, Interim Public Services Director, at (252) 449-4210.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Source Water Assessment

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to potential contaminant sources (PCS). The results of the assessments are available in SWAP assessment reports that include maps, background information, and a relative susceptibility rating of higher, moderate, or lower.

The relative susceptibility rating of each source for Dare County's water was determined by combining the contaminant rating (number and location of PCS within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). It is important to understand that a susceptibility rating of higher does not imply poor water quality, only the system's potential to become contaminated by PCS in the assessment area. The assessment findings are summarized in the table below:

| SUSCEPTIBILITY OF SOURCES TO POTENTIAL CONTAMINANT SOURCES (PCSS) | | |
|--|-----------------------|------------------|
| SOURCE NAME | SUSCEPTIBILITY RATING | SWAP REPORT DATE |
| NRO Well 17 Skyco Wells 2, 4, 5, 6, 8, 10, 13 | Lower | September 2020 |
| NRO Wells 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15 Skyco Wells 7, 11 | Moderate | September 2020 |

The complete SWAP report may be viewed at <https://www.ncwater.org/?page=600>. Note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this website may differ from the results that were available at the time this Consumer Confidence Report was prepared. If you are unable to access your SWAP report online, you may mail a written request for a printed copy to Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634, or email requests to swap@ncdenr.gov. Please indicate your system name and number and provide your name, mailing address, and phone number. If you have any questions about the SWAP report, please contact the Source Water Assessment staff at (919) 707-9098.



BY THE NUMBERS

The number of Americans who receive water from a public water system.

300
MILLION

1
MILLION

The number of miles of drinking water distribution mains in the U.S.

The number of gallons of water produced daily by public water systems in the U.S.

34
BILLION

135
BILLION

The amount of money spent annually on maintaining the public water infrastructure in the U.S.

The number of active public water systems in the U.S.

151
THOUSAND

199
THOUSAND

The number of highly trained and licensed water professionals serving in the U.S.

The age in years of the world's oldest water, found in a mine at a depth of nearly two miles.

2
BILLION

Tip Top Tap

The most common signs that your faucet or sink is affecting the quality of your drinking water are discolored water, sink or faucet stains, a buildup of particles, unusual odors or tastes, and a reduced flow of water. The solutions to these problems may be in your hands.

Kitchen Sink and Drain

Handwashing, soap scum buildup, and the handling of raw meats and vegetables can contaminate your sink. Clogged drains can lead to unclean sinks and backed-up water in which bacteria (i.e., pink or black slime growth) can grow and contaminate the sink area and faucet, causing a rotten egg odor. Disinfect and clean the sink and drain area regularly and flush with hot water.

Faucets, Screens, and Aerators

Chemicals and bacteria can splash and accumulate on the faucet screen and aerator, which are located on the tip of faucets and can collect particles like sediment and minerals, resulting in a decreased flow from the faucet. Clean and disinfect the aerators or screens on a regular basis.

Check with your plumber if you find particles in the faucet screen, as they could be pieces of plastic from the hot water heater dip tube. Faucet gaskets can break down and cause black, oily slime. If you find this slime, replace the faucet gasket with a higher-quality product. White scaling or hard deposits on faucets and showerheads may be caused by water with high levels of calcium carbonate. Clean these fixtures with vinegar or use water softening to reduce the calcium carbonate levels for the hot water system.

Water Filtration/Treatment Devices

A smell of rotten eggs can be a sign of bacteria on the filters or in the treatment system. The system can also become clogged over time, so regular filter replacement is important. (Remember to replace your refrigerator filter!)



Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels. We are pleased to report that your drinking water meets or exceeds all federal and state requirements.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

| REGULATED SUBSTANCES | | | | | | | | | |
|--|--------------|------------|--------------|-----------------------------|----------------------------|-----------------------------|----------------------------|-----------|---|
| | | | | Town of Nags Head | | Dare County | | | |
| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | MCL [MRDL] | MCLG [MRDLG] | AMOUNT DETECTED | RANGE LOW-HIGH | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE |
| Chlorine (ppm) | 2021 | [4] | [4] | 0.76 | 0.71–1 | 0.81 | 0.20–1.19 | No | Water additive used to control microbes |
| Fluoride (ppm) | 2021 | 4 | 4 | NA | NA | 0.67 | 0.48–0.86 | No | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| Haloacetic Acids [HAAs]–Stage 2 (ppb) | 2021 | 60 | NA | 10 | 10–10 | 4.5 | 2–8 | No | By-product of drinking water disinfection |
| TTHMs [total trihalomethanes]–Stage 2 (ppb) | 2021 | 80 | NA | 55 | 55–55 | 18.5 | 9–39 | No | By-product of drinking water disinfection |
| Tap water samples were collected for lead and copper analyses from sample sites throughout the community | | | | | | | | | |
| | | | | Town of Nags Head | | Dare County | | | |
| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AL | MCLG | AMOUNT DETECTED (90TH %ILE) | SITES ABOVE AL/TOTAL SITES | AMOUNT DETECTED (90TH %ILE) | SITES ABOVE AL/TOTAL SITES | VIOLATION | TYPICAL SOURCE |
| Copper (ppm) | 2021 | 1.3 | 1.3 | 0.219 | 0/10 | 0.257 | 0/30 | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead (ppb) | 2021 | 15 | 0 | <0.003 | 0/10 | 4 | 1/30 | No | Lead service lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits |

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters under the Stage 2 Disinfectants and Disinfection By-products Rule.

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.

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.

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 (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).