

ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2019



Presented By
**Town of Kill
Devil Hills**

Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2019.

Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available should you ever have any questions or concerns about your water.

Information on the Internet

The U.S. EPA (www.epa.gov) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation and public health. Also, the nonprofit organization, Clean Water for North Carolina, has a Web site (www.cwfnc.org) that provides complete and current information on water issues in North Carolina, including valuable information about our watershed.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those 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 <https://www.epa.gov/ground-water-and-drinking-water>.



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 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 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.

Where Does My Water Come From?

Our drinking water is purchased from the Dare County Regional Water System. The County's Skyco Treatment Facility, located on Roanoke Island, processes ground water from fresh water wells using nanofiltration and ion exchange technologies. The North Reverse Osmosis (RO) Treatment Facility, located in Kill Devil Hills, processes ground water drawn from brackish water wells and uses reverse osmosis technology. These two facilities combine to meet regional water demands.

QUESTIONS?

This report is developed to keep you informed about your water quality, and we encourage you to share your thoughts with us on the information contained in this report. After all, well-informed customers are our best allies. For more information about this report, or for any questions relating to your drinking water, please call Alfred Burton, Water Plant Supervisor, at (252) 480-4090. Thank you for allowing us to continue providing you and your family with high-quality drinking water.

Community Participation

The Board of Commissioners annually adopts its regular meeting schedule for the following year. Meetings, which typically begin at 6:00 p.m., are held in the Meeting Room at the Administration Building, 102 Town Hall Drive, off Colington Road. All meetings of public bodies are open to the public. Please check www.kdhnc.com for further information on meeting dates and times. Agendas for meetings of the Board of Commissioners are posted on the Town's Web site, www.kdhnc.com, and Facebook page, <https://www.facebook.com/townofkdh>. Meeting materials, including minutes, are posted for public review on the Town's Web site. Regular meetings of the Board are videotaped, and videos may be viewed on YouTube by entering Town of Kill Devil Hills in the search bar. The Board of Commissioners welcomes and encourages community participation and interest. To learn more about what's going on and how you can participate, please send questions, comments, and interests to info@kdhnc.com.



BY THE NUMBERS

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

34
BILLION

1
MILLION

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

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

135
BILLION

300
MILLION

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

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

2
BILLION

151
THOUSAND

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

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

199
THOUSAND

93 The number of federally regulated contaminants tested for in drinking water.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. Also, the water we deliver must meet specific health standards. Here, we show only 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.

The state recommends monitoring for certain substances less often 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

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Town of Kill Devil Hills				Dare County Regional		VIOLATION	TYPICAL SOURCE
		MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Chlorine (ppm)	2019	[4]	[4]	0.93	0.31–1.48	0.58	0.20–1.05	No	Water additive used to control microbes
Fluoride (ppm)	2019	4	4	NA	NA	0.68	0.64–0.75	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
HAA5 ¹ (ppb)	2019	60	NA	2.9	2.9–2.9	1.12	0–1.9	No	By-product of drinking water disinfection
Nitrate (ppm)	2019	10	10	NA	NA	>1	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2019	80	NA	16.9 ¹	16.9–16.9 ¹	6.8	3.2–12	No	By-product of drinking water disinfection
Total Coliform Bacteria (Positive samples)	2019	TT	NA	0	NA	0	NA	No	Naturally present in the environment

Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Town of Kill Devil Hills				Dare County Regional		VIOLATION	TYPICAL SOURCE
		AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES		
Copper (ppm)	2018	1.3	1.3	0.170	0/42	0.15 ²	3/30 ²	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2018	15	0	5	2/42	<3 ²	2/30 ²	No	Lead services lines; Corrosion of household plumbing systems including fittings and fixtures; Erosion of natural deposits

¹ Reduced monitoring

² Sampled in 2019

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 that, if exceeded, triggers treatment or other requirements that 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 Byproducts 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).

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



Source Water Assessment

The North Carolina Department of Environmental Quality (DEQ), 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 (PCSs). The results of the assessment 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 was determined by combining the contaminant rating (number and location of PCSs 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 PCSs in the assessment area. The assessment findings are summarized in the table below:

Susceptibility of Sources to Potential Contaminant Sources (PCSs)		
SOURCE NAME	SWAP REPORT DATE	LEVEL DETECTED
Skyco Wells #2, 4, 5, 6, 8, 10, 13	April 2017	Lower
Skyco Wells #7, 11, 14	April 2017	Moderate
NRO Wells #11, 15, 17	April 2017	Lower
NRO Wells #1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12	April 2017	Moderate

We remain vigilant in delivering the best-quality drinking water

The complete SWAP Assessment report may be viewed on the Web 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 Web site may differ from the results that were available at the time this CCR was prepared. If you are unable to access your SWAP report on the Web, 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 by phone at (919) 707-9098.

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 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 at (800) 426-4791 or at www.epa.gov/safewater/lead.