A close-up photograph of a clear glass pitcher pouring water into a matching glass. The water is captured in mid-pour, creating a dynamic, crystalline stream. The background is softly blurred, showing hints of other glassware and a warm, golden light source, possibly a lamp or window, creating a clean and refreshing atmosphere.

ANNUAL  
**WATER  
QUALITY  
REPORT**

WATER TESTING PERFORMED IN 2015



*Presented By*  
**Town of Kill Devil Hills**

## Meeting the Challenge

Once again we are proud to present our annual drinking water report, covering all drinking water testing performed between January 1 and December 31, 2015. Over the years, we have dedicated ourselves to producing drinking water that meets all State and Federal standards. 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 of our water users.

Please remember that we are always available to assist you should you ever have any questions or concerns about your water. Staff is available daily 7a.m. to midnight seven days per week. To reach a water plant operator, please call (252) 480-4090.

## 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 <http://water.epa.gov/drink/hotline>.



## 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.

## 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 or at [www.epa.gov/lead](http://www.epa.gov/lead).



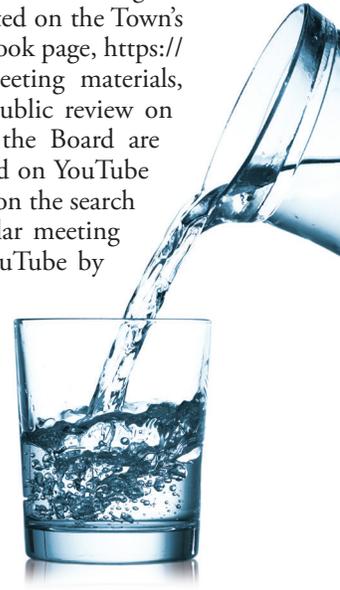
## Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

## Community Participation

The Board of Commissioners annually adopts its regular meeting schedule at its December meeting. Meetings typically begin at 5:30 p.m. and 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](http://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 website, [www.kdhnc.com](http://www.kdhnc.com), and Facebook page, <https://www.facebook.com/townofkdhd>. Meeting materials, including minutes, are posted for public review on the website. Regular meetings of the Board are videotaped and videos may be viewed on YouTube by entering Town of Kill Devil Hills on the search bar. Video summaries of each regular meeting are also available for viewing on YouTube by entering Kill Devil Hills Spotlight 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, interests to [info@kdhnc.com](mailto:info@kdhnc.com).



## 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 groundwater from fresh water wells using ion exchange technology. The North Reverse Osmosis (RO) Treatment Facility, located in Kill Devil Hills, processes groundwater drawn from brackish water wells and uses reverse osmosis technology. These two facilities combine to meet regional water demands.

## QUESTIONS?

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.

## Source Water Assessment Program

The North Carolina Department of Environment and Natural Resources (NCDENR), 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 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 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. The July 6, 2015, assessment findings are summarized below:

SOURCE/WELL	SUSCEPTIBILITY RATING
Skyco Wells #5,13	Lower
North RO Well #17	Lower
North RO Wells #1,2,3,4,5,6,7,8,9,10,15	Moderate
North RO Wells Orville & Wilbur	Moderate
Skyco Wells #2,4,6,7,8,10,11,14	Moderate

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 potential contaminant sources in the assessment area.

The complete SWAP Assessment report for the Dare County Regional Water System may be viewed on the Web at <http://www.ncwater.org/pws/swap/>. Click on the Source Water Assessment Reports block in the upper right corner. Please note that because the PWS section periodically updates SWAP results and reports, the results available on the Web site may differ from the results that were available at the time this report was prepared. To obtain a printed copy of a report, please mail a written request to Source Water Assessment Program, Report Request, 1634 Mail Service Center, Raleigh, North Carolina, 27699-1634, or e-mail a request to [swap@ncdenr.gov](mailto:swap@ncdenr.gov). Please indicate the system name (Dare County Regional Water System) and Public Water System ID (04-28-030), 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.



### Is tap water cheaper than soda?

Yes! You can refill an 8 oz. glass of tap water approximately 15,000 times for the same cost as a six-pack of soda pop. And, water has no sugar or caffeine.

### How long can a person go without water?

Although a person can live without food for more than a month, a person can only live without water for approximately one week.

### When was drinking water first regulated?

The Safe Drinking Water Act (SDWA) of 1974 represents the first time that public drinking water supplies were protected on a federal (national) level in the U.S. Amendments were made to the SDWA in 1986 and 1996.

### Seventy-one percent of Earth is covered in water: how much is drinkable?

Oceans hold about 96.5 percent of all Earth's water. Only three percent of the earth's water can be used as drinking water. Seventy-five percent of the world's fresh water is frozen in the polar ice caps.

### How much water do we use every day?

The average person in the U.S. uses 80 to 100 gallons of water each day. (During medieval times a person used only 5 gallons per day.) It takes 2 gallons to brush your teeth, 2 to 7 gallons to flush a toilet, and 25 to 50 gallons to take a shower.

### When was chlorine first used in the U.S.?

In 1908, Jersey City, New Jersey and Chicago, Illinois were the first water supplies to be chlorinated in the U.S.

### How much water is in our atmosphere?

Forty trillion gallons of water are carried in the atmosphere across the U.S. each day.

## Sampling Results

During the past year, Town Water Department Staff have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The State requires us to monitor 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.

We participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality.

### REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	Town of Kill Devil Hills		Dare County Regional		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Chlorine (ppm)	2015	[4]	[4]	0.96	0.22–1.57	0.60	0.31–1.13	No	Water additive used to control microbes
Fluoride (ppm)	2015	4	4	NA	NA	0.84	0.52–1.20	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 1 (ppb)	2015	60	NA	6.2 (Highest LRAA)	2.2–16.1	7.96 <sup>1</sup> (Highest LRAA)	2.8–17.0	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 1 (ppb)	2015	80	NA	31.3 (Highest LRAA)	13–80	32.5 <sup>1</sup> (Highest LRAA)	10.0–68.0	No	By-product of drinking water disinfection
Total Coliform Bacteria (# positive samples)	2015	No more than 1 positive monthly sample	0	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%TILE)	SITES ABOVE AL/TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES				
Copper (ppm)	2015	1.3	1.3	0.250	0/20	0.286	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits		
Lead (ppb)	2015	15	0	<0.003	0/20	ND	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits		

### UNREGULATED SUBSTANCES - DARE COUNTY REGIONAL <sup>2</sup>

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromomethane (ppb)	2013	0.7	0.7–0.7	Man-made pesticide; Naturally occurring in the ocean

### UNREGULATED CONTAMINANT MONITORING RULE PART 3 (UCMR3) - DARE COUNTY REGIONAL <sup>2</sup>

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Chlorate (ppb)	2013	258	124.0–469.0	Disinfection by-product
Chromium (ppb)	2013	0.3	0.24–0.50	Natural erosion
Chromium, Hexavalent (ppb)	2013	0.05	0.036–0.085	NA
Strontium (ppb)	2013	138	94–168	Natural erosion

<sup>1</sup>A Stage 2 extension request was approved for Dare County, the water system from which your system purchases its drinking water. As such, this extension has been extended to your system, Town of Kill Devil Hills. The Stage 2 implementation date was for a 2-year period (until Sept. 30, 2015). During the period of this extension, Town of Kill Devil Hills will continue to determine DBP MCL compliance based upon a running annual average, and the Operational Evaluation Level (OEL) reporting requirements of the rule will not apply.

<sup>2</sup>Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of monitoring unregulated contaminants is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.

## Definitions

**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

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**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).