



Water Quality Report

City of North Myrtle Beach www.nmb.us

System No. 2610011

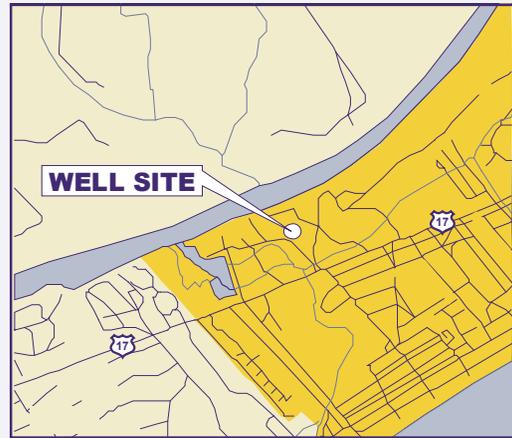
July 2019

North Myrtle Beach's water meets or exceeds all drinking water standards!

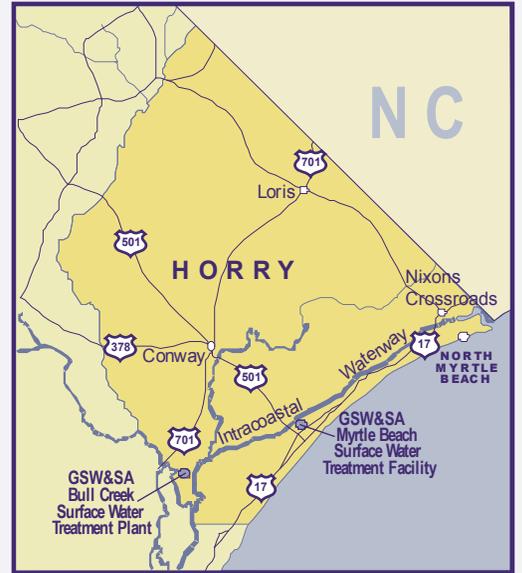
Where does my water come from?

North Myrtle Beach blends water from the Grand Strand Water & Sewer Authority (GSW&SA)'s Myrtle Beach Surface Water Treatment Facility and Bull Creek Regional Treatment Facility, and groundwater from a well located in North Myrtle Beach.

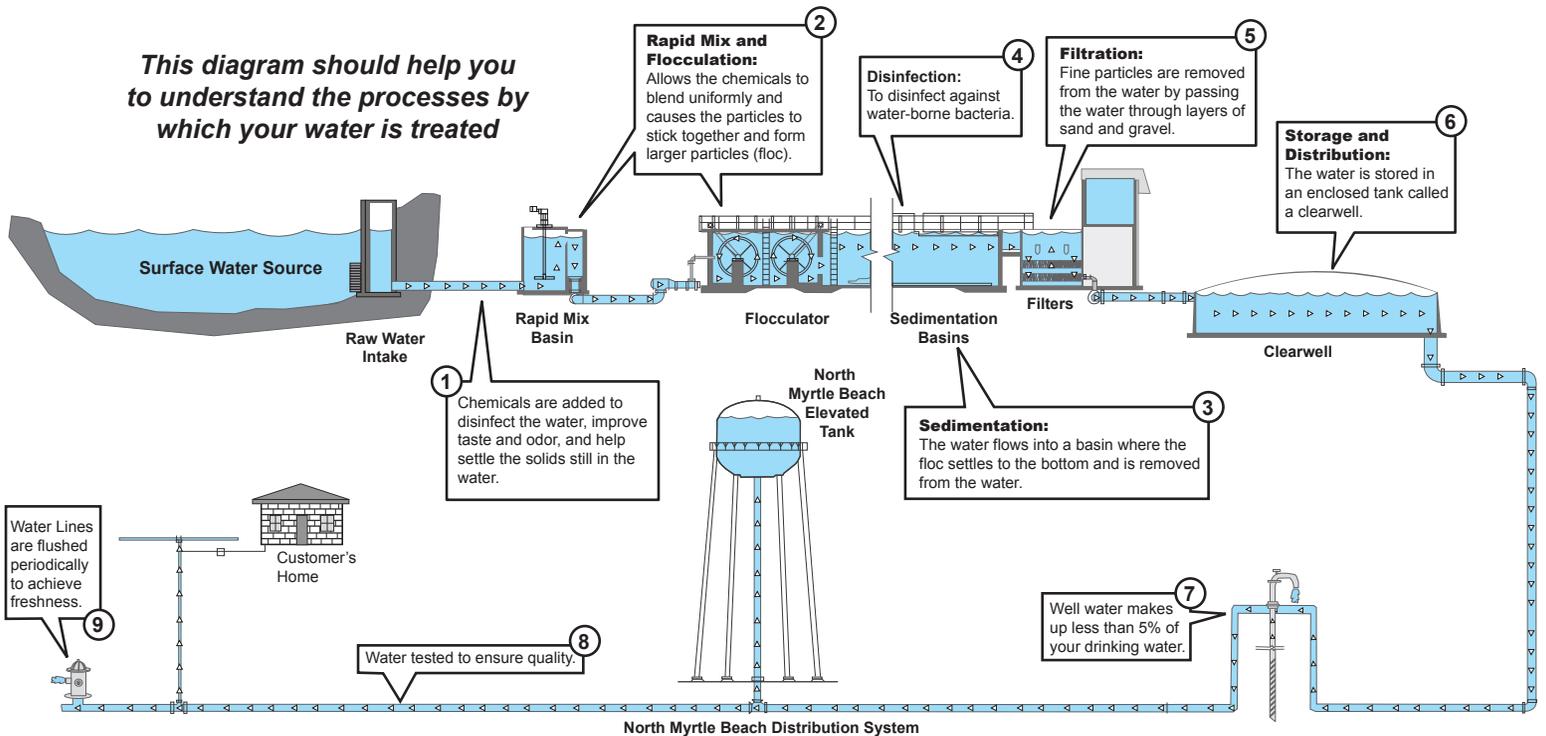
GSW&SA's Myrtle Beach Surface Water Treatment Facility treats water from the Intracoastal Waterway. Several rivers feed into the Intracoastal Waterway such as the Waccamaw River and the Pee Dee River. The Intracoastal Waterway is not sea water.



It is a fresh water source. GSW&SA's Bull Creek Regional Treatment Facility treats water from Bull Creek which is a branch of the Pee Dee River. Bull Creek is located north of the confluence of the Waccamaw and Pee Dee Rivers. The area of the City west of the Intracoastal Waterway at the Barefoot Resort is served by Bull Creek water alone. All other portions are served by blended water from all sources.



This diagram should help you to understand the processes by which your water is treated



About this report...

Each day, our employees work to ensure that the water delivered to your home meets all regulatory requirements and your expectations for safety, reliability and quality. For your protection, the staff at the Water Treatment Facilities test your drinking water for many parameters. In addition, North Myrtle Beach collects fifty samples each month from various locations around the water distribution system to further test the quality of our water. The tables below show only the parameters detected in your water during calendar year 2018.

Why am I getting this report now?

The U.S. Environmental Protection Agency (EPA) requires water suppliers to provide annual drinking water quality reports to their customers. This requirement was adopted in the 1996 Amendments to the Safe Drinking Water Act. These reports give consumers valuable information to make personal health-based decisions regarding their drinking water consumption.

Why are there contaminants in the 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 EPA's Safe Drinking Water Hotline (1-800-426-4791).

Definitions of Terms:

Inorganic Compounds: Compounds such as salts, minerals, and metals.

Trihalomethanes (THMs) and Haloacetic Acids (HAAs): By-products of the disinfection process.

Volatile Organic Compounds (VOCs): Natural and manmade substances used for a variety of industrial purposes. VOCs vaporize and become airborne.

ppm (parts per million): One ppm equals one minute in two years or 1 penny in \$10,000.

mg/L (milligrams per liter): In water, mg/L means the same as ppm.

ppb (parts per billion): One ppb equals one minute in 2,000 years or 1 penny in \$10,000,000.

ND: Not Detected

Nephelometric Turbidity Unity (ntu): Units for measuring turbidity.

Running Annual Average (RAA): A moving average based on the four most recent quarterly averages.

Turbidity: Turbidity is a measure of the cloudiness of the water. It can be an indicator of the possible presence of contaminants. As an example, milk is turbid because you cannot see through it. Tea is not turbid because you can see through it.

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.

MCL Violations: Violations are rare. When there is a violation of a MCL, the elevated level of the contaminant usually occurs for just a day or so. MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, 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.

Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary to control microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of drinking water disinfectant below which there is no known or expectant risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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

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

µg/L (micrograms per liter): In water, µg/L means the same as ppb.

ppt (parts per trillion): One ppt equals one penny in \$10 billion.

ng/L (nanograms per liter): In water, ng/L means the same as ppt.

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 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 can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Source Water Assessment

SCDHEC has conducted an assessment of the City of North Myrtle Beach groundwater source as well as the source waters of our wholesale water supplier (Grand Strand Water & Sewer Authority). The assessments include a list of all potential contamination sources. Information about Source Water Assessments and whom to contact to read the report is available on the internet at <http://www.dhec.sc.gov/HomeAndEnvironment/Water/SourceWaterProtection/>. If you do not have internet access, but would like to make arrangements to view the Source Water Assessment Report, please feel free to contact us at (843) 280-5500.

For People with Special Health Concerns

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 (1-800-426-4791).

Any Questions?

To know more about the quality of your drinking water, please contact the City of North Myrtle Beach Public Works Department at (843) 280-5500. City Council meets the 1st and 3rd Monday of each month at 7:00 pm in the City Council Chambers at the Municipal Complex. For additional information on City Council meetings, visit the City's website at www.nmb.us. Find more information about drinking water on the EPA's drinking water web site at <https://www.epa.gov/ground-water-and-drinking-water>.

About Lead in Drinking Water

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. The City of North Myrtle Beach 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 is available from the Safe Drinking Water Hotline or at <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>.

Microorganisms/Indicators

Parameter	Treatment Requirement	Levels Detected	Violation?	Potential Sources
Turbidity	95% of combined filter effluent samples less than 0.3 ntu and no single sample >1.0 ntu	100% less than 0.3 ntu; highest single sample of 0.13 ntu³	No	Soil runoff
Total Coliform	≤ 1 sample that is positive	0 positive samples	No	Naturally present in environment

Inorganic Contaminants

Parameter	MCL	MCLG	Highest Level Detected	Violation?	Potential Sources
Fluoride	2 ppm*	2 ppm*	0.31 ppm¹ 0.22 ppm² 1.03 ppm³	No	Erosion; discharge from fertilizer; drinking water additive to prevent tooth decay
Nitrate	10 ppm	10 ppm	0.12 ppm¹ 0.068 ppm² 0.62 ppm³	No	Erosion; runoff from fertilizer; leaching from septic tanks
Sodium	N/A	N/A	46 ppm¹	No	Salt intrusion, mineral deposits
Dalapon	0.2 ppm	0.2 ppm	0.0012 ppm¹	No	Runoff from herbicides

* EPA's MCL and MCLG for fluoride is 4 ppm. However, SC DHEC has set a lower level to ensure human health. ** Based on most recent sample results (2018).

Organics Removal

Parameter	MCL	Required % TOC Removal	Level Detected	Range	Sample Frequency	Violation?	Potential Sources
Total Organic Carbon	TT	50% ³	4.63%² 66.5%³	3.87 – 4.91% ppm² 54.4 – 83.3%³	Monthly	No	Leaching from vegetation

Disinfectants

Parameter	MRDL	MRDLG	Highest Compliance Value	Range of Monthly Averages	Violation?	Potential Sources
Chlorine/Chloramines	4 ppm (RAA)	4 ppm	2.77 ppm¹ (RAA)	1.73 – 2.77 ppm¹	No	Drinking water additive used to control microbes

Disinfection Byproducts

Parameter	MCL	MCLG	Highest Compliance Value	Range Detected	Violation?	Potential Sources
Total THM	80 ppb (LRAA)	N/A	36 ppb¹ (LRAA)	17 – 51 ppb¹	No	Byproduct of drinking water disinfection
HAA5	60 ppb (LRAA)	N/A	53 ppb¹ (LRAA)	1.4 – 111 ppb¹	No	Byproduct of drinking water disinfection

Metals

Constituent (unit of measure)	MCLG or MRDLG	AL	Your Water	# Samples Exceeding AL	Exceeds AL (Yes/No)	Sample Date	Typical Source
Copper-action level at consumer taps (ppm)	1.3	1.3* ppm	0.16	0	No	2016	Corrosion of household plumbing systems. Erosion of natural deposits.
Lead-action level at consumer taps (ppb)	0	15* ppb	1.7	0	No	2016	Corrosion of household plumbing systems. Erosion of natural deposits.

* Based on 90th Percentile

Radioactive Parameters

Parameter	MCL*	Level Detected	Violation?	Potential Sources
Alpha in Drinking Water	15 pCi/L	2.89 pCi/L¹ 9.67 pCi/L² 2.88 pCi/L³	No	Erosion of natural deposits
Beta in Drinking Water	N/A	4.68 pCi/L¹	No	Erosion of natural deposits
Combined Radium 226/228	5 pCi/L	0.808 pCi/L^{*2} 0.623 pCi/L^{**3}	No	Erosion of natural deposits

*Based on most recent sample results (2013). **Based on most recent sample results (2016).

Notes for all tables

¹ North Myrtle Beach Data ² Grand Strand Water & Sewer Authority (Myrtle Beach Surface Water Treatment Plant) ³ Grand Strand Water & Sewer Authority (Bull Creek Regional Water System)

Saving Water in South Carolina

South Carolinians are fortunate to have an abundance of clean, fresh water. Statewide, South Carolina receives an average of about 48 inches of water per year from precipitation. That's significantly more than the 36 inches per year that famously rainy Seattle receives.

However, the state has experienced a number of droughts in recent years; in fact, South Carolina's worst drought on record occurred in 2008. South Carolina's population is also projected to increase nearly 18% between 2010 and 2030. These strains on South Carolina's freshwater supply highlight the need for water efficiency in the Palmetto State. Here are some tips to help conserve water.

1 Bathroom
Less Flush: Fill a plastic bottle with water, place it in your toilet tank. It will lessen the amount of water used per flush.

2 Bathroom
Don't Let It Flow: When brushing your teeth or washing your hands, turn off the faucet when you are not actively using it. You lose 2 gallons every minute when it's allowed to flow freely.

3 Kitchen
Use Only Full Loads: Clothes washer or dish washers use many gallons of water. By only using full loads, you are not only saving water, but doing laundry and the dishes less often.

4 Yard
Rain Barrel: Keep a barrel to collect rain water. This can prevent you from using the hose to hydrate your plants.

5 Yard
Water Early: Watering your grass or plants early in the morning when it is cooler helps prevent water from evaporating as much as it would later in the day.



Unregulated Contaminant Monitoring Rule (UCMR)

Unregulated contaminants are those that don't yet have a drinking water standard set by USEPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. Below are required monitoring results for unregulated parameters.

GSW&SA - Bull Creek Water Plant

Parameter	Average Concentration	Range of Concentrations	Source of Contaminant
1,4-Dioxane	0.120 µg/L	0.089-0.153 µg/L	Used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics, and shampoos.
Chlorate	243 µg/L	170-390 µg/L	Agricultural defoliant or disiccant; disinfection byproduct.
Chromium	0.32 µg/L	0.32 µg/L	Naturally-occurring element; used in making steel and other alloys.
"Hexavalent Chromium (Dissolved)"	0.076 µg/L	0.043-0.120 µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservations.
Strontium	55 µg/L	49-60 µg/L	Naturally-occurring element.
Vanadium	0.98 µg/L	0.34-1.4 µg/L	Naturally-occurring elemental metal.

GSW&SA - Myrtle Beach Water Plant

Parameter	Average Concentration	Range of Concentrations	Source of Contaminant
Chlorate	433 µg/L	320-580 µg/L	Agricultural defoliant or disiccant; disinfection byproduct.
Chromium	0.28 µg/L	0.22-0.34 µg/L	Naturally-occurring element; used in making steel and other alloys.
"Hexavalent Chromium (Dissolved)"	0.062 µg/L	0.035-0.094 µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservations.
Strontium	70 µg/L	67-76 µg/L	Naturally-occurring element.
Vanadium	1.45 µg/L	0.26-2.3 µg/L	Naturally-occurring elemental metal.

White Point Booster Pump Station

Parameter	Average Concentration	Range of Concentrations	Source of Contaminant
Bromochloromethane	83 ng/L	83 ng/L	Used as a fire-extinguishing fluid, an explosive suppressant, and as a solvent in the manufacturing of pesticides
Chlorate	50.5 µg/L	43-58 µg/L	Agricultural defoliant or disiccant; disinfection byproduct.
Chromium	0.36 µg/L	0.36 µg/L	Naturally-occurring element; used in making steel and other alloys.
Molybdenum	4.4 µg/L	4.3-4.5 µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservations.
Strontium	150 µg/L	150 µg/L	Naturally-occurring element.
Vanadium	1.8 µg/L	1.8 µg/L	Naturally-occurring elemental metal.

Distribution System

Parameter	Average Concentration	Range of Concentrations	Source of Contaminant
Chlorate	315 µg/L	200-430 µg/L	Agricultural defoliant or disiccant; disinfection byproduct.
Chromium	0.38 µg/L	0.38 µg/L	Naturally-occurring element; used in making steel and other alloys.
Hexavalent Chromium (Dissolved)	0.057 µg/L	0.055-0.058 µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservations.
Molybdenum	1.8 µg/L	1.5-2.0 µg/L	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservations.
Strontium	95 µg/L	75-110 µg/L	Naturally-occurring element.
Vanadium	1.7 µg/L	1.6-1.8 µg/L	Naturally-occurring elemental metal.