

2008 CONSUMER CONFIDENCE REPORT

PAMLICO COUNTY WATER SYSTEM

PWSID # 04-69-025

JUNE 2008

Pamlico County Water System is pleased to present to you the 2008 Consumer Confidence Report. This report is a snapshot of last year's water quality. Included are details about where your water comes, what it contains, and how it compares to standards set by regulatory agencies. We want you to understand the efforts we make to continually improve the water treatment process for our community. Our constant goal is to provide you with a safe and dependable supply of drinking water. We presently get our water from a ground water supply, the Castle Hayne Aquifer. There are five (5) water treatment plants and ten (10) wells in our system. The treatment plants are located in Bayboro behind the main office, in Vandemere on NC 307, on Kershaw Road near Arapahoe, in Grantsboro on NC 306 South, and Millpond Road in front of the prison. Each treatment plant is served by two (2) wells that are located near the plants. Currently, the Bayboro water treatment plant is not operating.

Pamlico County Water System routinely monitors for over 150 contaminants in your drinking water according to Federal and State laws. **These test results cover the period of January 1st to December 31st, 2007 and the last test results of contaminants that were not due to be tested in 2007.** 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's important to remember that the presence of these contaminants does not necessarily pose a health risk.

To better understand the test results, the following definitions have been provided:

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

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

Maximum Contaminant Level - The "Maximum Allowed" (MCL) is 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 - The "Goal" (MCLG) is 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.

Maximum Residual Disinfection Level Goal - The "Level" (MRDLG) 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.

Maximum Residual Disinfection Level - The "Highest Level" (MRDL) of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Not-Applicable (N/A) - Information not applicable / not required for that particular Rule.

TEST RESULTS						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants						
Copper (Eighty-one samples taken. Result is 90 th percentile average from two rounds of sampling. One sample above AL.)	N	0.263	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride (Tested in 2003. Result is highest detected.)	N	0.81	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead (Eight-one samples taken. Result is 90 th percentile average from two rounds of sampling. Three samples above AL.)	N	5.5	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen) (Result is highest detected.)	N	1.09	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radioactive Contaminants						
Beta/photon emitters (Result is average of 5 composite samples taken in 2005/2006.)	N	12.1	PCi/L	0	50	Decay of natural and man-made deposits
Disinfection By-Product Contaminants						
TTHM [Total Trihalomethanes] (Result is average of 20 samples taken. Range: highest detected 83 ppb, lowest detected 6 ppb.)	N	31.5	ppb	N/A	80	By-product of drinking water chlorination
HAA5 [Total Haloacetic Acid] (Result is average of 20 samples taken. Range: highest detected 41 ppb, lowest detected 1 ppb.)	N	13.9	ppb	N/A	60	By-product of drinking water disinfection
Total Chlorine (Result is average of field test done during compliance sampling through out the distribution system. Range: highest detected 3.9 ppm, lowest detected 0.2 ppm)	N	1.4	ppm	MRDLG= 4	MRDL = 4	Water additive used to control microbes

The following Inorganic Contaminant was tested for and not detected: Nitrite (as Nitrogen)

The following Microbiological Contaminants were tested for monthly and not detected: Total Coliform Bacteria; Fecal Coliform; E.coli.

The following Volatile Organic Chemical Contaminants were tested for and not detected: Benzene; Carbon tetrachloride; Chlorobenzene; o-Dichlorobenzene; p-Dichlorobenzene; 1,2-Dichloroethane; 1,1-Dichloroethylene; cis-1,2-Dichloroethylene; trans-1,2-Dichloroethylene; Dichloromethane; 1,2-Dichloropropane; Ethylbenzene; Styrene; Tetrachloroethylene; 1,2,4-Trichlorobenzene; 1,1,1-Trichloroethane; 1,1,2-Trichloroethane; Trichloroethylene; Toluene; Vinyl Chloride; Xylenes

The following Synthetic Organic Contaminants including Pesticides and Herbicides were tested for and not detected: 2,4-D; 2,4,5-TP (Silvex); A lachlor; Atrazine; Benzoapyrene; Carbofuran; Chlordane; Dalapon; Di(2-ethylhexyl)adipate; Di(2-ethylhexyl)phthalate; DBCP; Dinoseb; Endrin; EDB; Heptachlor; Heptachlor epoxide; Hexachlorobenzene; Hexachlorobenzene; Hexachlorocyclopentadiene; Lindane; Methoxychlor; Oxamyl(vydate); PCBs; Pentachlorophenol; Picloram; Simazine; Toxaphene

The following Radioactive Contaminants were tested for and not detected: Alpha emitters, Combined Radium, Uranium

UNREGULATED CONTAMINANTS: The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. If you would like more information on unregulated chemicals you may call the EPA Hot Line at 1-800-426-4791.

The following unregulated Volatile Organic Chemicals were detected

Chloroform : highest level detected 47 ppb

Bromodichloromethane : highest level detected 31 ppb

Dichloroacetic Acid : highest level detected 20 ppb

Monobromoacetic Acid: highest level detected 1ppb

Bromoform: highest level detected 3 ppb

Chlorodibromomethane : highest level detected 11 ppb

Trichloroacetic Acid: highest level detected 26 ppb

Dibromoacetic Acid : highest level detected 2 ppb

The following unregulated Inorganic Contaminant was detected in 2003: Sulfate (7.7 ppm).

WATER CHARACTERISTICS CONTAMINANTS: These contaminants, required by the NC Public Water Supply Section to be tested, are substances that affect the taste, odor, and/or color of drinking water. These aesthetic contaminants normally do not have any health effects and normally do not affect the safety of your water.

The following Water Characteristics Contaminants were detected:

Manganese (0.026 ppm tested in 2003)

Sodium (highest level detected in 2003 was 176.360 ppm)

pH (average 7.6 units)

Water Hardness (average 136 ppm)

PAMLICO COUNTY WATER SYSTEM HAD NO VIOLATIONS. We are proud that your drinking water meets or exceeds all Federal and State requirements.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can be microbes, such as viruses and bacteria; inorganic, such as salts and metals; pesticides and herbicides, which may come from agriculture, storm water runoff, or residential use; organic, including synthetic and volatile organic chemicals, which are a by-product of industrial processes and petroleum production, and can come from gas stations, storm water runoff, and septic tanks; and radioactive, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

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.

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. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Two of twenty samples taken in 2007 for TTHM (Total Trihalomethanes) exceeded the MCL. 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 an increased risk of getting cancer. Pamlico County Water System has taken steps over the last year to deal with this problem. The system has converted from using free chlorine as a disinfectant to using chloramines. Chloramines are produced in water by the reaction between free chlorine and ammonia. By adding ammonia to the treatment process, the formation of Trihalomethanes have been greatly reduced.

Pamlico County Water System tested for Lead in drinking water 81 times from 41 locations in 2007. There were three sites found to have elevated levels of lead during these rounds of testing. 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. Pamlico County Water System 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 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 <http://www.epa.gov/safewater/lead>.

Hardness in water is caused mainly by the presence of calcium and magnesium. The water being treated in Pamlico County from the Castle Hayne Aquifer has a natural hardness close to 300 mg/L (parts per million). Currently, the treated water being produced and sent out to our customers has a hardness level on average of 136 mg/L. Most standards define hard water as water with a hardness of more than 100 mg/L. Hard water does not have an adverse effect on health, but can create several unwanted side effects, such as scale and calcium buildup on fixtures and in hot water heaters, inhibit the cleaning action of soap, and shorten the life of certain types of fabrics. Pamlico County Water System plans to take the necessary steps to further soften its drinking water in the near future.

Source Water Assessment Program (SWAP) Results: 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 (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 for Pamlico County Water System 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 and its delineated assessment area.) The assessment findings, as of March 30, 2007 report date, are as follows:

Source Name	Susceptibility Rating
Bayboro Wells 1 and 2	Higher
Grantsboro Wells 1 and 2	Lower
Vandemere Wells 1 and 2	Lower
Kershaw Wells 1 and 2	Lower
Millpond Wells 1 and 2	Lower

It is important to understand that a susceptibility rating of "higher" does not imply poor quality, only the systems' potential to become contaminated by PCS's in the assessment area.

The complete SWAP Assessment report for Pamlico County Water System may be viewed on the Web at: <http://www.deh.enr.state.nc.us/pws/swap>. To obtain a printed copy, please mail a written request to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh NC 27699-1634, or email request to swap@ncmail.net. Please indicate your system name (Pamlico County Water System), PWSID (04-69-025), 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 919-715-2633.

If you have any questions concerning this report, please contact Charles Hardison (Operator in Responsible Charge) at (252) 745-5453, Monday through Friday, 8:00 a.m. to 5:00 pm. To learn more about your water utility or other county functions, you may wish to attend County Commissioner Meetings. These meetings are normally held in the courthouse on the first and third Monday night of each month starting at 7:00 p.m. You may contact Tim Buck, County Manager, for more information at 745-3133.

Thank you for allowing us to continue providing your family with a clean and safe water supply.

**PAMLICO COUNTY
WATER DEPARTMENT**
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