

# Water and Sewer Rate Change

As with your household budget the Department of Public Utilities has had to take a hard look at the challenges facing the bottom line. While doing so we are still committed to providing you with high quality water and sewer services. In order to meet the demands of unfunded regulatory changes, make repairs to an aging infrastructure, and meet the rising costs of operations, the Department of Public Utilities has found it necessary to change the water and sewer rates.

## When will this happen?

July 1, 2013. City Council approved the rate change on February 26, 2013. The rate will increase 4.9% every year for an additional four years, with annual review by City Council.

## What issues have impacted the need for the rate change?

- ▶ Regional Consent Order – unfunded state/federal mandate to make improvements to the sewer system as a result of perceived deficiencies in the Hampton Roads area.
- ▶ Purchased water costs – water rates charged by the Cities of Norfolk and Portsmouth continue to rise for water purchased and provided to our customers.
  - ▶ System renewal, replacement and reliability – non-consent order project to replace aged equipment and pipes in the water and sewer system needed to provide reliable service.
  - ▶ Inflation – increases related to the cost of electricity, fuels, chemicals and materials to support day-to-day operations.

## Do these rate changes include increases from Hampton Roads Sanitation (HRSD)?

No. The rate changes do not include any increases planned by HRSD for sewer treatment. Contact HRSD at 757-460-2491 or go to their website to find out information on any rate increases that they are planning – [www.HRSD.com](http://www.HRSD.com).

More information is at [www.CityofChesapeake.net/ratechanges](http://www.CityofChesapeake.net/ratechanges) or for inquiries contact Customer Service at 382-6352.

## RATE TABLE

Measuring water usage: 1 consumption = 748 gallons = 100 cubic feet

| Charges per 1 consumption (748 gallons)  |          |                |
|--|----------|----------------|
|  | Current  | After 7/1/2013 |
| WATER  | \$4.178  | \$4.38         |
| SEWER  | \$3.971  | \$4.17         |
| TOTAL  | \$8.149  | \$8.55         |
| Minimum Bi-Monthly Service Charge (Includes 6 consumptions)<br><small>The minimum charge for larger meters varies.</small> |          |                |
| WATER  | \$37.00  | \$38.82        |
| SEWER  | \$17.90  | \$18.78        |
| TOTAL  | \$54.90  | \$57.60        |
| Average Bi-Monthly Bill (Based on 18 consumptions)   |          |                |
| WATER/SEWER  | \$152.69 | \$160.20       |
| Monthly Charge for users of the sewer system with unmetered water connections or private water supply                      |          |                |
| SEWER  | \$10.00  | \$26.07        |

The sewer charge provides for the transmission of wastewater from the residence or business to the Hampton Roads Sanitation District (HRSD) transmission lines. HRSD bills separately for treatment.

**Chesapeake**  
VIRGINIA

City of Chesapeake  
Department of Public Utilities

# Water and Sewer Rate Change

## Water Quality Report

2012 Data

This brochure contains very important information for you as a customer.

*We hope you will take a few minutes to review the rate change and water quality data.*

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## Reliability Comes from Many Sources

Chesapeake is fortunate to have two treatment plants and contracts to purchase treated water from the Cities of Norfolk and Portsmouth. Additional water is available from an auxiliary well source that is used during peak demands. These sources are described below.

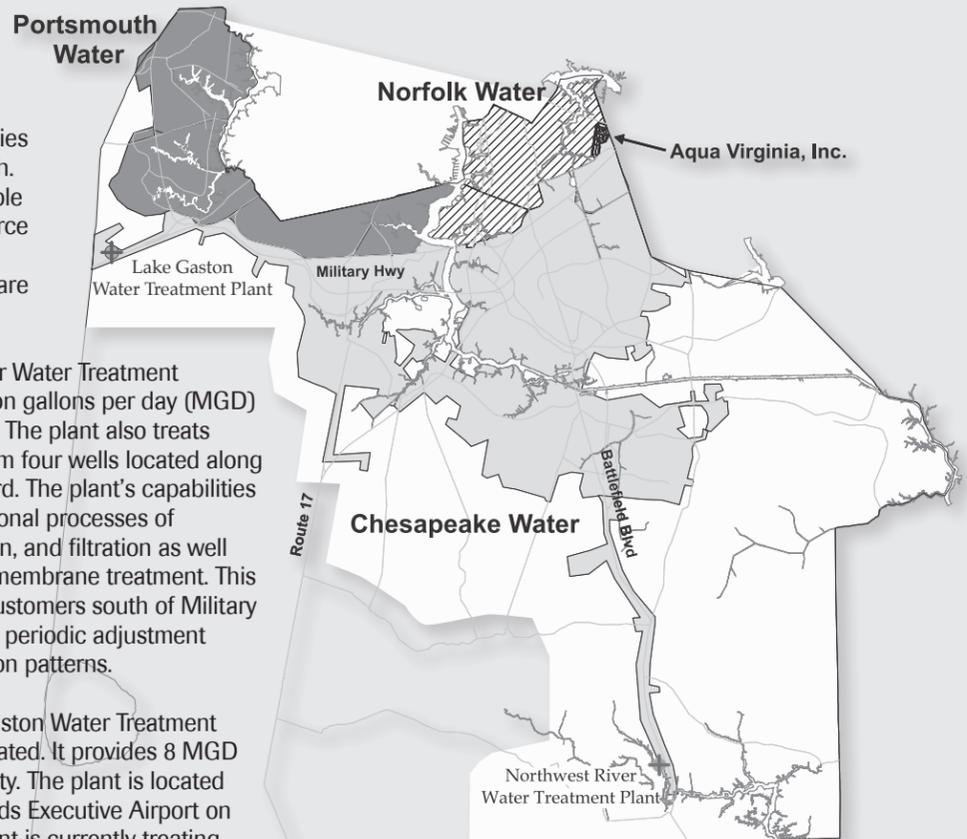
The City's Northwest River Water Treatment Plant treats up to 10 million gallons per day (MGD) from the Northwest River. The plant also treats brackish groundwater from four wells located along South Battlefield Boulevard. The plant's capabilities include both the conventional processes of coagulation, sedimentation, and filtration as well as reverse osmosis (RO) membrane treatment. This supply generally serves customers south of Military Highway, but is subject to periodic adjustment depending on consumption patterns.

In April 2006, the Lake Gaston Water Treatment Plant (LGWTP) was dedicated. It provides 8 MGD of treated water for the City. The plant is located west of the Hampton Roads Executive Airport on Virginia Route 58. The plant is currently treating raw water purchased from Norfolk. Treatment is provided using low pressure ultrafiltration technology. Upgrades to the Lake Gaston plant will allow treatment of the City's 1/6 portion of Lake Gaston raw water when needed in the future. With this added source, we expect to be able to meet our projected water demands beyond the year 2040.

Customers in the Indian River and South Norfolk areas, generally north of Military Highway, receive treated water from the City of Norfolk. Water customers in Western Branch and Deep Creek, generally north of Military Highway, receive treated water from the City of Portsmouth. These sources are of excellent quality and also meet or exceed the SDWA standards.

The Western Branch wells are located near the Hampton Roads Executive Airport. This source consists of groundwater from Wells #1 and #3 and the Aquifer Storage and Recovery (ASR) well. Since fluoride occurs naturally in the native water, the wells are used to provide natural fluoridation to treated water from the LGWTP.

A private water company, Aqua Virginia, Inc., has a franchise area in the Norfolk Highlands neighborhood which serves approximately 450 customers. The Aqua Virginia customer service number is 1-800-537-4865.



**Chesapeake**  
VIRGINIA

Department of Public Utilities  
Post Office Box 15225  
Chesapeake, VA 23328

# WATER QUALITY REPORT

## Drinking Water of the Highest Quality

The federal Safe Drinking Water Act (SDWA) sets the standards and this annual water quality report is one of the provisions of those standards. Chesapeake meets or surpasses these standards to ensure that reliability, quality and affordability are at the heart of our mission in Public Utilities.

In order to produce the approximately 16.4 million gallons a day for about 62,500 accounts, more than 252,336 analyses throughout the treatment process are performed annually for treatment of drinking water. Water quality sampling in approximately 400 homes and businesses around the City tells the story of how well we are doing.

### 2012 WATER QUALITY TABLE

The table contains the highest level and range, if available, detected by analyses performed in calendar year 2012, or the most recent testing in accordance with the regulations. An additional 130 compounds were tested for and not detected.

| REGULATED SUBSTANCES          |   |                   |  |  |  |   |                 |
|-------------------------------|---|-------------------|--|--|--|---|-----------------|
| Substance (Unit)              | MCL                                       | MCLG              | NWR & LG   |  |  | Likely Source   | Meets EPA Stds. |
|                               |   |                   | highest & range  | highest & range  | P  |   |                 |
| Arsenic (ppb)                 | 10  | NA                | 0.36<br>ND - 0.36  | ND   | ND   | Erosion of natural deposits; runoff from orchards, glass & electronics production wastes    | Yes             |
| Barium (ppb)                  | 2000                                      | 2000              | 26<br>ND - 26  | 40<br>20 - 40  | 27<br>NA   | Erosion of natural deposits; discharge from metal refineries                                | Yes             |
| Chlorine, Total (ppm) annual  | MRDL<br>4                                 | MRDLG<br>4        | 2.89<br>ND - 4.24  | 2.08<br>ND - 3.75  | 2.03<br>0.04 - 3.44  | Water additive used to control microbes   | Yes             |
| Nitrate (ppm)                 | 10  | 10                | 0.19<br>0.06 - 0.19  | 0.33<br>0.12 - 0.33  | 0.07<br>ND - 0.07  | Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits | Yes             |
| Total Organic Carbon [TOC]    | TT<br>(1.00 annual average removal ratio) | NA                | 1.54<br>1.07 - 1.54<br>(Ratio of actual organic removal to required removal) | 3.4<br>2.3 - 3.4<br>(Lowest annual avg. Raw values are in ppm) | 3.9<br>1.8 - 3.9<br>(Lowest annual avg. Raw values are in ppm) | Naturally present in environment  | Yes             |
| Fluoride (ppm) level detected | 4   | EP#1<br>0.9<br>NA | EP#2<br>0.8<br>NA  | 0.7<br>0.1 - 1.08  | 1.27<br>0.54 - 1.38  | Naturally present in environment, water additive which promotes strong teeth                | Yes             |

| RADIONUCLIDES  |     |      |                  |                   |                  |           |  |                 |
|--|-----|------|------------------|-------------------|------------------|-----------|--|-----------------|
| Substance (Unit)   | MCL | MCLG | NWR & LG (2008)# |                   | N (2010)         | P (2012)  | Likely Source                          | Meets EPA Stds. |
|  |     |      | EP#1             | EP#2              |                  |           |  |                 |
| Beta/positron emitters* (pCi/L)<br>*Average for the year       | 50  | 0    | 13.0             | 2.7*<br>3.2 - 4.1 | 3.3<br>3.3 - 3.3 | 4.5<br>NA | Decay of natural and man-made deposits | Yes             |
| Gross alpha particle (pCi/L)                                   | 15  | 0    | 8.3              | ND                | NA               | 1.7<br>NA | Erosion of natural deposits            | Yes             |
| Combined radium-226/228 (pCi/L)<br># next test will be in 2014 | 5   | 0    | 0.98             | 0.13<br>ND - 0.5  | NA               | 0.4<br>NA | Erosion of natural deposits            | Yes             |

1. EPA considers 50 pCi/L to be the level of concern for Beta particles  
2. Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of developing cancer.

| TURBIDITY                 |   |      |                     |                     |                     |                     |               |                 |
|---------------------------|---|------|---------------------|---------------------|---------------------|---------------------|---------------|-----------------|
| Substance (Unit)          | MCL   | MCLG | NWR                 | LG                  | N                   | P                   | Likely Source | Meets EPA Stds. |
| Turbidity - clarity (NTU) | Max TT, 1   | NA   | 0.43<br>0.15 - 0.43 | 0.11<br>0.06 - 0.11 | 0.29<br>0.05 - 0.29 | 0.12<br>0.04 - 0.12 | Soil run-off  | Yes             |
|                           | Min TT, less than or equal to 0.3, greater than 95% of the time | NA   | 99                  | 100                 | 100                 | 100                 |               |                 |

| DISINFECTION BYPRODUCTS            |     |      |                          |                           |                          |                           |                          |                           |   |                 |
|------------------------------------|-----|------|--------------------------|---------------------------|--------------------------|---------------------------|--------------------------|---------------------------|---|-----------------|
| Substance (Unit)                   | MCL | MCLG | NWR & LG                 |                           | N                        |                           | P                        |                           | Likely Source                             | Meets EPA Stds. |
|                                    |     |      | Range at Sampling Sites* | Highest Running Average** | Range at Sampling Sites* | Highest Running Average** | Range at Sampling Sites* | Highest Running Average** |   |                 |
| THM - Total Trihalomethanes (ppb)  | 80* | 0    | 35 - 72                  | 39                        | 39 - 82                  | 57                        | 40 - 71                  | 54                        | By-product of drinking water chlorination | Yes             |
| HAA - Total Haloacetic Acids (ppb) | 60* | 0    | 15 - 49                  | 32                        | 11 - 65                  | 41                        | 23 - 53                  | 37                        | By-product of drinking water chlorination | Yes             |

\*Range of individual readings. \*\*MCL is the highest running annual average allowed for the year.

| MICROORGANISMS          |  |      |                       |                       |                        |                                      |                 |
|-------------------------|--|------|-----------------------|-----------------------|------------------------|--------------------------------------|-----------------|
| Substance               | MCL  | MCLG | NWR & LG              | N                     | P                      | Likely Source                        | Meets EPA Stds. |
| Total Coliform Bacteria | 5.0% or less of monthly samples are positive | 0    | 2.0%<br>December 2012 | 2.0%<br>December 2012 | 8.5%<br>September 2012 | Naturally present in the environment | See notes below |

Both the Northwest River/Lake Gaston and South Norfolk systems met the EPA standard. The Western Branch system met the EPA standard eleven out of twelve months. In September 2012 the Western Branch service area exceeded the MCL for total coliform bacteria. Forty seven samples were collected and four tested positive for total coliform bacteria (8.5% of the samples collected). The water distribution system in the affected area was thoroughly flushed and additional samples were collected. All samples were negative for coliform bacteria. Public Notice was provided, as required, to the affected area. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

| LEAD AND COPPER (90th PERCENTILE)           |        |      |   |                                    |                                    |                                 |                 |
|---|--------|------|---|------------------------------------|------------------------------------|---------------------------------|-----------------|
| Substance (Unit)                            | MCL    | MCLG | NWR & LG <sup>1</sup><br>90% Range (2010) | N <sup>2</sup><br>90% Range (2011) | P <sup>2</sup><br>90% Range (2012) | Likely Source                   | Meets EPA Stds. |
| Copper (ppm) (house tap)                    | AL=1.3 | 1.3  | 0.100<br>ND - 0.108                       | 0.100<br>ND - 0.105                | 0.172<br>ND - 0.254                | Corrosion of household plumbing | Yes             |
| Lead (ppb) (house tap)                      | AL=15  | 0    | 5<br>ND - 41                              | 1<br>ND - 5                        | 12<br>ND - 30                      | Corrosion of household plumbing | Yes             |
| # of Samples above AL of 1.3 ppm for copper |        |      | 0 out of 61                               | 0 out of 30                        | 0 out of 31                        |                                 | Yes             |
| # of Samples above AL of 15 ppb for lead    |        |      | 1 out of 61                               | 0 out of 30                        | 1 out of 31                        |                                 | Yes             |

1. The Northwest River system completed the first reduced monitoring program in 2010. The next monitoring period will be in 2013 for 50 samples. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water occurs primarily from materials and components associated with service lines and home plumbing. The City of Chesapeake is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has not been used for several hours, you can minimize the potential for lead exposure by flushing your tap for 15 to 30 seconds or until it becomes cold or reaches a steady temperature 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 about lead in drinking water, testing methods, and steps you can take to minimize exposure are available from the Safe Drinking Water Hotline, 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.  
2. Chesapeake, Norfolk and Portsmouth systems are on Reduced Monitoring. This means after meeting three consecutive years of lead and copper monitoring with results below the Action Level, EPA reduces sampling frequency to once every three years. The next testing for Norfolk will be in 2014 and Portsmouth will be in 2015.

| ADDITIONAL WATER QUALITY PARAMETERS (Non-Regulated)  |                 |                                   |                            |                            |
|--|-----------------|-----------------------------------|----------------------------|----------------------------|
| These substances are not considered harmful, but some can affect the taste and odor of drinking water. |                 |                                   |                            |                            |
| Substances (Unit)  | Suggested Limit | NWR & LG<br>highest level & range | N<br>highest level & range | P<br>highest level & range |
| Aluminum (ppm)   | 0.05 - 0.20     | ND                                | 0.09<br>0.06 - 0.09        | 0.137<br>NA                |
| Ammonia (ppm)  | None            | 0.63<br>0.58 - 0.63               | 0.5<br>NA - 0.5            | 0.40<br>NA                 |
| Chloride (ppm)   | 250             | 89<br>39 - 89                     | 23<br>15 - 23              | 19<br>NA                   |
| Diethylphthalate (ppb)   | NA              | NA                                | NA                         | 1.1<br>NA                  |
| Hardness - total (ppm)   | None            | 30<br>1 - 30                      | 46<br>25 - 46              | 29<br>15 - 29              |
| Manganese (ppm)  | 0.05            | 0.006<br>ND - 0.006               | 0.04<br>ND - 0.04          | NA                         |
| Nickel (ppb)   | 100             | 0.56<br>ND - 0.56                 | 3<br>ND - 3                | NA                         |
| pH (pH units)  | 6.5 - 8.5       | NWR*<br>7.8<br>7.7 - 7.8          | LG*<br>7.8<br>7.6 - 7.8    | 7.6*<br>7.5 - 7.6          |
| Silica (ppm)   | None            | 5.82<br>1.42 - 5.82               | 5<br>2 - 5                 | 4<br>NA                    |
| Sodium (ppm)   | 250             | 70<br>62 - 70                     | 26<br>16 - 26              | 84<br>58 - 84              |
| Sulfate (ppm)  | 250             | 15<br>ND - 15                     | 35<br>25 - 35              | 59<br>NA                   |
| Zinc (ppm)   | 5               | 0.263<br>0.235 - 0.263            | 0.13<br>0.01 - 0.13        | NA                         |

### TABLE DEFINITIONS

Substances in your drinking water are routinely reported to the Virginia Department of Health in accordance with Federal and State Regulations. The 2012 Water Quality Table shows the results of our monitoring for the period of January 1st to December 31st 2012 unless otherwise stated. In the table and elsewhere in this report you will find many terms and abbreviations you might not recognize. The following definitions are provided to help you better understand these terms:

**Additional Water Quality Parameters** - non-regulated compounds that may affect drinking water aesthetics such as taste, odor and color.

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

**EP#1 (Entry Point #1)** - water from the Northwest River Water Treatment Plant.

**EP#2 (Entry Point #2)** - water from the Lake Gaston Water Treatment Plant.

**HAAs (Haloacetic Acids)** - byproducts of disinfection.

**Likely Source** - the major sources of the compounds detected in finished water.

**LG (Lake Gaston)** - compounds detected in the finished water processed at the Lake Gaston Water Treatment Plant (Entry Point #2).

**MCL (Maximum Contaminant Level)** - the highest level of a contaminant that is allowed in drinking water. MCLs are set by EPA 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 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 contamination.

**mrem/year** - Millirems per year is a measure of radiation.

**N** - finished water supplied by the City of Norfolk for Chesapeake customers.

**NA** - not available.

**ND** - not detected, lab analysis indicates that the contaminant is not present or was below the level of detection based on EPA approved analysis techniques.

**NTU (Nephelometric Turbidity Unit)** - a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**NWR (Northwest River)** - compounds detected in the finished water processed at the Northwest River Water Treatment Plant (Entry Point #1).

**P (Portsmouth)** - finished water supplied by the City of Portsmouth for Chesapeake customers.

**pCi/L (Picocuries per Liter)** - a measure of radioactivity.

**ppb (parts per billion)** - one part per billion is the equivalent of one minute in 2,000 years, or one penny in \$10,000,000.

**ppm (parts per million)** - One part per million is the equivalent of one minute in 2 years, or one penny in \$10,000.

**TOC (Total Organic Carbon) TT** - This value represents the waterworks' ability to meet TOC percent removal requirements based on an annual average of the monthly percent removal ratios. TOC percent removal requirements are met when the value is greater than or equal to 1.00.

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

**THMs (Total Trihalomethanes)** - compounds formed during the disinfection of drinking water.

### Want More Information?

If you have any questions about this report or need more information, please contact the Water Quality Laboratory at 757-382-3550. The following telephone numbers are provided for specific issues or questions:

**Customer Service (billing)** ..... 757-382-6352  
**Laboratory (water quality)**..... 757-382-3550  
**Water Quality Hot Line**..... 757-382-6360

Visit our web site for online information at [www.CityOfChesapeake.net](http://www.CityOfChesapeake.net) then click on Public Utilities. Contact us by E-mail at [water@CityOfChesapeake.net](mailto:water@CityOfChesapeake.net).

Our Business Office is located at City Hall, second floor, 306 Cedar Road, Chesapeake, VA 23322. Normal business hours are 8:00 a.m. to 5:00 p.m., Monday through Friday. Address correspondence to Chesapeake Department of Public Utilities, P.O. Box 15225, Chesapeake, VA 23328.

Interim Director of Public Utilities  
Acting Assistant Director  
Financial/Customer Service Administrator  
Water Resources Management Administrator  
Water and Wastewater Administrator

William J. Meyer, Jr., P.E., BCEE  
S. Dean Perry, P.E.  
Markiella A. Moore  
A. Craig Maples  
Theodore F. Garty, P.E.

### Water Works Permit Identification Numbers

Northwest River System (including the Lake Gaston Water Treatment Plant) - PWSID 3550051  
South Norfolk/Indian River System - PWSID 3550052  
Western Branch System - PWSID 3550050

### Public Participation

Public Utilities is an enterprise department and is funded by customer fees, not taxes. We are, however, a part of the City of Chesapeake government. Our legislative body is the Chesapeake City Council, which holds hearings on budget and other financial matters, approves contracts, and considers ordinances that create or amend local laws.

Some of these matters affect the operation of Public Utilities. The City Council meets on the 2nd, 3rd and 4th Tuesdays of each month at 6:30 p.m. in the City Council Chambers, First Floor, City Hall Building, at 306 Cedar Road. The meetings are televised live on WCTV Chesapeake Television, the local government access cable channel, and on the City web site, [www.CityOfChesapeake.net](http://www.CityOfChesapeake.net). Agendas for upcoming meetings are available on the City's web site, or may be requested from the City Clerk's office at 757-382-6151.

### Information for Special Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer and undergoing chemotherapy, those who have undergone an organ transplant, persons 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. The Environmental Protection Agency/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Act Hotline at 1-800-426-4791.

### Information about Source Water

A detailed source water assessment was conducted in 2001 by the Hampton Roads Planning District Commission. The Northwest River, like other surface water sources, was determined to have a high susceptibility to contamination. Our deep wells, like other groundwater sources, were determined to be low in susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program. The report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last 5 years. The report is on file at the Public Utilities Department.

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 and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in source water include: (1) microbial contaminants, such as viruses and bacteria, which may come from wildlife, sewage treatment plants, septic systems, and agricultural livestock operations; (2) inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, mining, or farming; (3) pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; (4) organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and may also originate from gas stations, urban storm water runoff, and septic systems; (5) radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure the tap water is safe to drink, the EPA prescribes regulations that limit the amount of contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide similar 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 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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791 or accessing the EPA web site at [www.epa.gov/safewater/](http://www.epa.gov/safewater/).