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# Town of Poolesville



# Water Quality Report

2007-2008



# The Commissioners of Pooleville Annual Water Quality Report

2007-2008

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PWSID#150002

This report describes Pooleville's drinking water sources and quality, and the program that protects the high water quality of our water supply.

The information in this report is also submitted formally and routinely to the Maryland Department of The Environment, which monitor our compliance with the many regulatory standards and testing protocols required to assure safe drinking water.

We test the drinking water quality for many constituents as required by State and Federal Regulations. *This report shows the results of our monitoring for the period of January 1 – December 31 2007.*

Pooleville staff work around the clock to ensure that each home is provided with the best quality water possible. We are pleased to report that our drinking water is safe and meets and/or exceeds Federal and State requirements. If you have any questions about your water, please contact Wade Yost, Town Manager at 301-428-8927.

## **Frequently Asked Questions**

### **What is the pH of Pooleville's water?**

The pH of Pooleville's water after treatment ranges from 7.0 to 8.0.

### **Is Pooleville's water hard or soft?**

Pooleville's water is hard. It averages about 15 grains of hardness per gallon. Homeowners should be vigilant about flushing hot water heaters at least once per year.

### **Does Pooleville add fluoride to the water?**

No. Due to the numerous points of entry into the system, it would be expensive and impractical. Parents of young children may want to consult with their dentist about the need for fluoride treatments to prevent tooth decay.

### **Why does my water sometimes look milky?**

The hardness in the water comes from naturally occurring calcium carbonate. As the water is exposed to the atmosphere, the carbonate escapes as a gas much like the carbonation in a soft drink. Some residents have installed water softeners and are satisfied with the results.

### **How much water do we use?**

In 2007, the annual average production was 466,526 gallons per day; however, we are capable of producing over 1,000,000 gallons per day.

## Poolesville's Water Sources and System Operations

Poolesville relies entirely upon ground water to supply residents and businesses. Water is withdrawn from nine wells located throughout Town. These wells are drilled from 285 to 800 feet deep into the New Oxford Formation Aquifer. Groundwater is derived from rainwater, creek and riverbed percolation. As the water travels downward through the soils, many of the impurities are removed. This results in water that is usually clean enough to drink without any treatment. The groundwater quality in Poolesville is very good and requires minimal treatment as mandated by the Safe Water Drinking Act. Currently, chlorine, which protects against bacteria, is the only type of chemical treatment used.

Poolesville's system consists of about eighteen miles of ductile iron water pipe and two storage tanks. A 500,000-gallon elevated storage tank is located near the High School and a 1,000,000-gallon standpipe is located in the Woods of Tama.

**Name of System:** Poolesville Municipal Water System

**Population Served:** 5,167

**Number of Services/Connections:** 1,682

**Average Daily Demand:** 550,000    **Maximum Daily Demand:** 770,000

| Well #         | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Depth (ft)     | 453 | 285 | 600 | 500 | 500 | 700 | 500 | 800 | 762 |
| Diameter (in)  | 6   | 6   | 6.5 | 6   | 8   | 8   | 8   | 8   | 8   |
| Capacity (gpm) | 100 | 60  | 40  | 100 | 110 | 45  | 65  | 124 | 75  |
| Treatment      | CL2 |

### Additional General Information On Drinking Water

All Drinking water, including bottled water, may reasonably be expected to contain at least a small amount 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 USEPA's Safe Drinking Water Hotline (1-800-426-4791).

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. USEPA/Centers for Disease Control guidelines an appropriate means to lesson the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline.

# Town of Poolesville Annual Water Quality Report

In order to ensure that tap water is safe to drink, USEPA and the Maryland Department of the Environment (MDE) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The tables below list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The MDE requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, are more than one year old.

**The MDE requires certain health effects language for some contaminants even though a violation may not exist.**

- **Nitrate:** Infants who drink water containing nitrates in excess of the MCL could become seriously ill and, if not treated, may die. Symptoms include shortness of breath and blue baby syndrome.
- **Radon:** Radon has been detected in all samples tested. There is no Federal regulation for drinking water. However, exposure to air transmitted radon over a long period of time may cause adverse health effects.
- **Alpha Emitters:** Results for Wells 7,9 and 10 show levels near the MCL. The Town and MDE will perform quarterly testing in the upcoming year. Alpha Emitters have the potential to cause an increased risk of cancer if consumed in excess of the MCL over a lifetime.

**Terms used in the following tables**

**AL**= Action Level

**MCL**= Maximum Contaminant Level

**MCLG**= Maximum Contaminant Level Goal

**mrem/year**= millirems per year (a measure of radiation absorbed by the body)

**N/D**= Non Detectable

**pCi/l**= Pico curies per liter (a measure of radioactivity)

**ppm**= parts per million= milligrams per liter (mg/L)

**ppb**= parts per billion= micrograms per liter (ug/L)

**ppt**= parts per trillion

## Distribution Test Results

| Contaminant            | Violation Y/N | Level Detected | Unit Measurement | MCLG | MCL    | Major Sources in Drinking Water  |
|------------------------|---------------|----------------|------------------|------|--------|--|
| Alpha Emitters (pCi/l) | No            | 2              | pCi/l            | 0    | 15     | Erosion of natural deposits  |
| Lead (ppb)             | No            | .006           | ppm              | 0    | AL=15  | Corrosion of household plumbing systems; Erosion of natural deposits.                                  |
| Copper (ppm)           | No            | 0.59           | ppm              | 1.3  | AL=1.3 | Corrosion of household plumbing systems; Erosion of natural deposits leaching from wood preservatives. |
| Trihalomethanes        | No            | 13.95          | ppb              | 0.06 | 80     | Disinfection byproduct   |
| Haloacetic acids       | No            | 5.93           | ppb              | 0.3  | 60     | Disinfection byproduct   |
| Coliform Bacteria      | No            | 0              | mg/L             |      |        | Naturally present in the environment   |

# Straight From The Well

## Well 2 Turbidity Results – May thru October, Average 0.13, Max Avg. 0.2, MCL 0.3

### Radioactive Contaminants

| Contaminant               | Violation Y/N | Level detected well # |     |       |      |     |      |       |      |      |       | Unit Measurement | MCLG | MCL                                    | Major sources in drinking water |
|---------------------------|---------------|-----------------------|-----|-------|------|-----|------|-------|------|------|-------|------------------|------|--|---------------------------------|
|                           |               | 2                     | 3   | 4     | 5    | 6   | 7    | 8     | 9    | 10   |       |                  |      |  |                                 |
| Beta/pton emitters        | No            | 4                     | 10  | 4.25  | <3   | 4   | 7.6  | 11    | 6.2  | 6.2  | pCi/l | 0                | 50   | Decay of natural and man-made deposits |                                 |
| Alpha emitters (adjusted) | No            | 7                     | 4   | 6.5   | 9    | 7   | 0.4  | 8.1   | 7.1  | 7.1  | pCi/l | 0                | 15   | Erosion of natural deposits            |                                 |
| Combined radium           | No            | 1.5                   | 0.3 | 0.5   | <2.3 | 1.6 | 1.2  | 0.4   | 1.47 | 1.47 | pCi/l | 0                | 5    | Erosion of natural deposits            |                                 |
| Uranium                   | No            | 21.9                  | 2.4 | 11.5  | 4.7  | 9.5 | 21   | 38.9* | 19.8 | 19.8 | pCi/l | 0                | 30   | Erosion of natural deposits            |                                 |
| Radium 226                | No            | 0.2                   | 0.2 | 0.35  |      | 0.8 | 0.37 | 0.4   | 0.52 | 0.52 | pCi/l | 0                | 5    | Erosion of natural deposits            |                                 |
| Radium 228                | No            | 1.3                   |     | 0.125 |      | 0.8 | 0.86 |       | 0.95 | 0.95 | pCi/l | 0                | 5    | Erosion of natural deposits            |                                 |

\* Inconclusive test, MDE will increase monitoring.

### Inorganic Contaminants

| Contaminant | Violation Y/N | Level detected well # |     |      |     |     |     |     |      |      |     | Unit Measurement | MCLG | MCL   | Major sources in drinking water |
|-------------|---------------|-----------------------|-----|------|-----|-----|-----|-----|------|------|-----|------------------|------|---|---------------------------------|
|             |               | 2                     | 3   | 4    | 5   | 6   | 7   | 8   | 9    | 10   |     |                  |      |   |                                 |
| Barium      | No            | .018                  | .2  | .039 | .14 | .88 | .8  | .55 | .57  | .57  | ppm | 2                | 2    | Discharge from drilling wastes; Erosion of natural deposits.  |                                 |
| Fluoride    | No            | 1.2                   | 0.2 | 0.1  | <.2 | <.2 | <.2 | <.2 | .13  | .13  | ppm | 4                | 4    | Erosion of natural deposits; water additive that promotes strong teeth, discharge from fertilizer and aluminum factories. |                                 |
| Nitrate     | No            | 4.8                   | 6.2 | 5.9  | 5.3 | 2.8 | .5  | 2   | 1.2  | 1.7  | ppm | 10               | 10   | Runoff from fertilizer use4; leaching from septic tanks, sewage, erosion of natural deposits.                             |                                 |
| Chromium    | No            |                       |     |      |     |     |     |     | .01  | .01  | ppm | .1               | .1   | Erosion of natural deposits; used in metal alloys such as stainless steel.  |                                 |
| Selenium    | No            | .001                  |     |      |     |     |     |     |      |      | ppm | .05              | .05  | Erosion of natural deposits; used in electronic and photocopier components.   |                                 |
| Arsenic     | No            |                       |     |      |     |     |     |     | .002 | .002 | ppm | 0                | .01  | Erosion of natural deposits; Runoff from orchards glass and electronic production wastes.                                 |                                 |

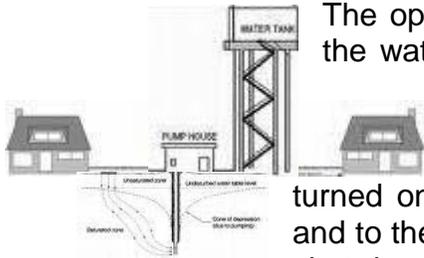
### Synthetic Organics

| Contaminant              | Violation Y/N | Level detected well # |      |     |      |     |     |     |      |      |     | Unit Measurement | MCLG | MCL  | Major sources in drinking water |
|--------------------------|---------------|-----------------------|------|-----|------|-----|-----|-----|------|------|-----|------------------|------|--|---------------------------------|
|                          |               | 2                     | 3    | 4   | 5    | 6   | 7   | 8   | 9    | 10   |     |                  |      |  |                                 |
| Chlordane                | No            |                       | 0.12 |     |      |     |     |     |      |      | ppb | 0                | 2    | Residue of banned termiticides   |                                 |
| Di(2-ethylhexl phthalate | No            | .7                    | 1.2  | 1   | 1    | 1.2 | 1   | .9  | .7   | .7   | ppb | 0                | 6    | Discharge from rubber and chemical factories   |                                 |
| Dibromochloro-propane    | No            |                       |      | .03 |      |     |     |     | .5   |      | ppt | 0                | 200  | Runoff/leaching from soil fumigants used on soybean, cotton, pineapples and orchards |                                 |
| 2,4,5, - TP (silvex)     | No            |                       |      |     | 1.05 |     |     |     | .05  |      | ppb | 50               | 50   | Residue of banned herbicide  |                                 |
| Picloram                 | No            |                       |      | 0.5 |      |     |     |     |      |      | ppb | 500              | 500  | Herbicide Runoff   |                                 |
| Pentachlorophenol        | No            | .05                   |      | .11 |      |     | .12 | .14 | .001 | .001 | ppb | 0                | 1    | Discharge from wood preserving factories   |                                 |

## Unregulated Contaminants

| Contaminant          | Violation Y/N | Level detected well # |      |      |      |      |      |      |      |       |  | Unit Measurement | Major sources in drinking water |
|----------------------|---------------|-----------------------|------|------|------|------|------|------|------|-------|--|------------------|---------------------------------|
|                      |               | 2                     | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10    |  |                  |                                 |
| Sodium               | No            | 9.8                   | 18   | 11   | 17   | 15   | 23   | 20   | 22.4 | 22.4  |  | ppm              | Erosion of natural deposits     |
| Sulfate              | No            | 5.25                  | 27   | 27   | 18   | 10   | 10.7 |      |      |       |  | ppm              | Erosion of natural deposits     |
| Radon-222            | No            | 820                   | 560  | 2500 | 405  | 815  | 1280 | 850  | 1930 | 1930  |  | pCi/l            | Erosion of natural deposits     |
| Chloromethane        | No            |                       | 0.5  |      |      |      |      |      |      |       |  | ppb              | Erosion of natural deposits     |
| Calcium              | No            | 94.3                  | 81.8 | 66.5 | 67.3 | 58.6 |      | 79   | 47   | 46    |  | ppm              | Erosion of natural deposits     |
| Magnesium            | No            | 9.4                   | 9.21 | 7.83 | 8.87 | 11.8 |      | 14.3 |      |       |  | ppm              | Erosion of natural deposits     |
| Dicamba              | No            |                       |      |      |      |      |      | 0.13 |      | .0005 |  | ppb              | Erosion of natural deposits     |
| 3-Hydroxycarbofuran  | No            | 5                     |      |      | 5    |      |      |      |      |       |  | ppb              | Erosion of natural deposits     |
| Chloroform           | No            | 0.6                   |      |      |      |      |      |      |      |       |  | ppb              | Disinfection Byproduct          |
| Bromodichloromethane | No            |                       |      |      |      |      |      | 0.7  |      |       |  | ppb              | Disinfection Byproduct          |
| Dibromochloromethane | No            | 0.7                   |      |      |      |      |      | 0.8  |      |       |  | ppb              | Disinfection Byproduct          |

## How Does Our Water System Work?



The operation of our system is based on the water level in the water tanks, which provide the water pressure for your home. When the water level in the tanks drops to a preset elevation, all nine wells are automatically

turned on. The wells pump water into our distribution pipes and to the water tanks. Once the water tanks are full, the wells shut down. This process takes about 8 to 12 hours depending on the actual use during the filling process. Many folks have wells located near their homes, but for the most part, everyone receives a blended mix of water from all the wells.

### How small is one part per million?

Money = 1 cent in \$10,000

Time = 1 minute in 1.9 years

Length = 1 inch in 16 miles

Volume = 1 ounce of dye in 7,350 gallons of water

Kitchen = 1 ounce of salt in 62,500 pounds of sugar

Please contact us if you are interested in learning more about Poolesville's Water Department or our water quality. Questions about water quality can be answered by calling Wade Yost at 301-428-8927.

### For Public Participation:

Poolesville Town  
Commissioner meetings are held at Town Hall, 19710-C Fisher Avenue at 7:30 p.m., on the first and third Monday of each month.