Town of Purcellville Virginia

2006

Drinking Water Quality Report

Town of Purcellville
130 East Main Street
Purcellville, VA 20132

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Acting Director of Public Works

Karin Fellers, PE
Acting Capital Projects and Engineering Manager

Alex Vanegas, CPM
Superintendent
Water Treatment Plant

Report Prepared by: Andrea Broshkevitch
Engineering Assistant

Category		Restrictions/Actions continued
Emergency Mandatory Water Restrictions		• Public/businesses are required to conserve. Penalties/sanctions are enforceable pursuant to Town Ordinance for failure to comply with restrictions as listed. • Signs may be posted in public with notification of "Mandatory water restrictions in effect" and press releases will be issued to the media • Reservoir and wells will be monitored daily and reports generated weekly • Mandatory Restrictions include: ◆ All Mandatory Restrictions listed for the Warning Level ◆ High water users, those that consistently use more than 1,000 gal/day, shall have prepared curtailment plans demonstrating how they shall respond to emergency situations and shall implement it (as provided in the Town Water Conservation and Curtailment Plan) ◆ No car washing or outside washing. Commercial carwashes will be permitted to operate if they can demonstrate that they recycle at least 50% of the water used during the car washing process. ◆ No lawn watering, including school ball fields. Limit watering to vegetable gardens and use gray water for water shrubs and plants. ◆ No "topping off" of swimming pools. Cover when not in use.

More ideas on water conservation can be found at
www.wateruseitwisely.com and www.purcellvilleva.com

Category	Restrictions/Actions continued
Warning Voluntary Water Conservation and some Mandatory Restrictions	◆ Mandatory Restrictions include: (continued) ◆ Developers and/or residents will not be permitted to install seed or sod during the "Warning" level unless they have committed to providing regular lawn watering without Town water even after the establishment of the lawn for the duration of the Town being at Warning or Emergency Ordinance Levels. Drought bond is in an amount designated by the Fee Schedule. ◆ No use of non-potable water meters (meters will be turned off) ◆ No community car washes ◆ No watering of lawns on rainy days ◆ Pool "topping off" should follow the odd/even day program listed above and pool should be covered when not in use ◆ High water users, those that consistently use more than 1,000 gal/day, shall prepare curtailment plans demonstrating how they shall respond to emergency situations and present to Town ◆ No use of any outside fountains, or decorative water structures ◆ Requested Conservation elements include: No watering lawns, washing cars or other outside objects during Voluntary Water Restrictions ◆ Restaurants/cafeteria/other food establishments shall provide water only by the patron's request ◆ No use of fire hydrants except for health and public service use ◆ No fire department training and no flushing of lines for development purposes unless determined necessary by Town Council or their representatives ◆ Voluntary Restrictions include: ◆ Reduce or stop non-essential washing such as washing cars, homes, driveways, sidewalks, etc. ◆ Reduce or stop watering lawns ◆ Limit watering of bushes and other plants carefully and conservatively or use gray water ◆ Reduce other non-essential water uses as much as possible

Town of Purcellville
130 East Main Street
Purcellville, Virginia 20132
www.purvcellvilleva.com

June 2007

Dear Water Customer:

The Town of Purcellville is committed to providing quality drinking water to its citizens. This report is the ninth annual water quality report and is intended to reassure you that your water is safe to drink. The U.S. Environmental Protection Agency (EPA) is authorized by Congress to enforce the Safe Drinking Water Act Amendments of 1996. The Amendments require all communities that provide water to their citizens to prepare and distribute a water quality report on an annual basis. The Virginia Department of Health has the responsibility for enforcing Federal Drinking Water Quality Standards in the Commonwealth of Virginia.

The report is commonly called a Consumer Confidence Report or Drinking Water Quality Report and its purpose is to:

- Help consumers make informed decisions about their health
- Inform consumers about the source and delivery of their water
- Encourage dialogue between consumers and Town staff, and
- Allow consumers to be more involved in water system decisions.

The Town strives to meet our mission of providing safe and dependable water supply. If you have any questions please call the office at 338-7421.

Sincerely,

Karin Fellers, PE
Acting Capital Projects and Engineering Manager

2006 Drinking Water Quality Report
Purcellville Water System
PWSID # 6107600

INTRODUCTION

This Annual Drinking Water Quality Report for calendar year 2006 is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

If you have questions about this report, or if you want additional information about any aspect of your drinking water or want to know how to participate in decisions that may affect the quality of your drinking water, please contact:

Karin Fellers, PE
Acting Capital Projects and Engineering Manager
Telephone: (540) 751-2313

Town Council meetings, which are open to the public, are the second Tuesday each month at 7:00 p.m. in the Town Office.

GENERAL INFORMATION

Drinking water, including bottled drinking 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 can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791) or their web site www.epa.gov/safewater. Another source of independent information about drinking water issues is the NSF International toll-free consumer hotline at 877-867-3435 or their web site at www.nsf.org.

Category	Restrictions/Actions
Normal Wise Water Use	◆ Public/businesses asked to use water wisely. ◆ Focus on Wise Water Use
Watch Voluntary Water Conservation	◆ Public/businesses asked to review their water usage and be aware of and limit high water use practices that needlessly waste water, e.g., over watering lawns, washing sidewalks, and driveways. If they haven't fully implemented the Wise Water Use Program, they are asked to do so. ◆ Residents are asked to water on even or odd days based on their address. If their address is an even number they should water on even numbered days of the month, if their address is odd, they should water on odd numbered days of the month. ◆ Daily and weekly water levels checked at the reservoir and monthly drought outlook ◆ Emphasis on water conservation outside the home or office ◆ Reminders about year round wise water uses
Warning Voluntary Water Conservation and some Mandatory Restrictions	◆ Public/businesses should conserve water on both a voluntary and Mandatory Restriction basis. There are no penalties or sanctions for failure to follow the voluntary measures, however, if conditions worsen one or more of these measures could become mandatory and enforceable. The mandatory restrictions will be enforced if necessary. Signs may be posted in public locations with notification of "Voluntary and Mandatory water restrictions in effect" and press releases will be issued to the media. ◆ Reservoir and wells will be monitored daily and reports generated weekly ◆ Mandatory Restrictions include: ◆ Residents are required to water on even or odd days based on their address. If their address is an even number they should water on even numbered days of the month, if their address is odd, they should water on odd numbered days of the month.

WATER CURTAILMENT LEVEL	TRIGGERS
Normal Wise Water Use	◆ Water supply adequate to meet all demands (demand < 75% of capacity) ◆ NOAA drought index neutral to DO ◆ All Town Facilities operating within normal parameters
Watch Voluntary Water Conservation	◆ Level in Hirst Reservoir – Back lake draining to front lake 4.5 feet below normal pools and front lake full with no overflow ◆ All wells functioning properly at normal levels ◆ NOAA drought index D1, moderate drought ◆ Current demand between 75% and 85% of system capacity on average for a week ◆ Current demand requires the use of any Town water supplies above the safe yield capacity for more than two consecutive days ◆ Announce voluntary water conservation recommendations
Warning Voluntary Water Conservation and some Mandatory Restrictions	◆ Level in Hirst Reservoir – Back Lake draining to front lake 4.5 feet below normal pool and front lake 1.5 feet below spillway and/or some wells not functioning properly or with moderate draw-down ◆ Tank out of service for maintenance ◆ NOAA drought index D2, severe drought ◆ Current demand between 85% and 95% of system safe yield on average for a week ◆ Current demand requires the use of any Town water supplies above the safe yield capacity for more than two consecutive days
Emergency Mandatory Water Restrictions	◆ Level in Hirst Reservoir – Back lake draining to front lake 4.5 feet below normal pools and front lake 3 feet below spillway ◆ One or more wells not functioning properly or with extreme draw-down ◆ Storage drawn below 65% of total capacity ◆ Major waterline break ◆ Current Demand at or above 95% of system safe yield on average for a week ◆ NOAA drought index D3, extreme drought, or greater

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those 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 (800-426-4791).

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 and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

(1) *Microbial contaminants*, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
(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, oil and gas production, 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 can also come 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 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.

In a one-hundred year period, a water molecule spends 98 years in the ocean, 20 months as ice, about two weeks in lakes and rivers and less than a week in the atmosphere.

SOURCES AND TREATMENT OF YOUR DRINKING WATER

The sources of your drinking water are surface water and groundwater as described below (see graph on page 18 for yield):

1. Two springs known as the Harris Spring and Potts Spring, as well as some surface runoff, flow into the J. T. Hirst Reservoir. Cooper Spring is piped to the 12-inch pipeline just below the reservoir which carries water to the water treatment plant.
2. Forbes Well System, Main Street Village (MSV) Well System, and Hirst Farm Well System are the groundwater sources.

The surface water and groundwater supplies are treated before entering the distribution system. A brief description of the treatment is provided below:

1. **Hirst Reservoir:** The water from the reservoir flows through a 12-inch pipeline to the water treatment plant. At the treatment plant, chemicals are added to facilitate removal of contaminants, which are then removed in the settling basins before passing through mixed media filters to remove smaller particles. Chlorine is added for disinfection and fluoride is added to promote strong teeth before the water is introduced to the distribution system.
2. **Forbes Well System:** The water from the two wells contains iron and manganese. The water is treated with potassium permanganate to oxidize the iron and manganese, which is subsequently removed through a greensand filter. Chlorine is added for disinfection and fluoride is added to promote strong teeth. This well filtration system was placed in service in 2006 and has improved the iron and manganese removal of these wells.

Town water conservation brochures include:

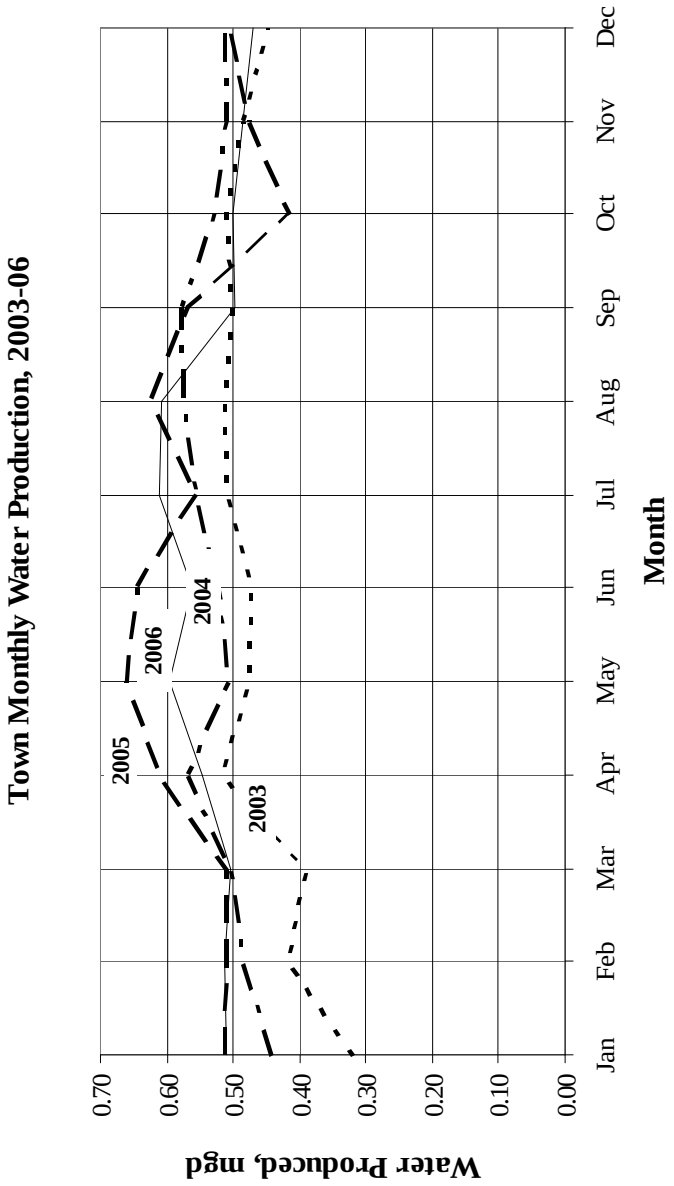
- Rain Barrels & Cisterns
- Watering Your lawn
- Water Theft
- Water Savings Tips
- Is Your Water Bill High?
- Save Water By Fixing Leaks Kit
- Hot Water Tank Flushing

WATER EMERGENCY ORDINANCE

A Water Conservation and Curtailment Plan has been developed by the Town. The purpose of the Ordinance is to provide for the reduction and curtailment of water usage through voluntary and mandatory restrictions during drought conditions and other water supply emergencies. In 2006 the Town was forced into mandatory restrictions due to high demand and dry weather that taxed the water system. The Town's curtailment plan includes specifically defined triggers for entering different levels of water conservation. Demands to the system of more than 85% of capacity will trigger the warning level of the plan. Once the warning level is triggered it is likely that it will remain in place until the end of the hot or dry season. So attention to water use early on in the dry season will reduce the need to enter curtailment.

Any business or person who violates or fails to comply with any of the mandatory provisions of the current Ordinance can be charged with a Class 3 misdemeanor. We are hopeful that the Town will not have to use this Ordinance since we are connecting new wells to the system and are continuing our search for additional sources of water. Practicing water conservation at all times is a good way to conserve this precious resource. There are some good ideas on water conservation at the American Water Works Association web site at www.awwa.org/waterwiser.

The table on the next page outlines the triggers, categories and restrictions as they apply to the public and businesses:



3. **Main Street Village Well System:** The water from Main Street Village Wells and Village Case Well also contains iron and manganese. This water is also treated with potassium permanganate for oxidation of the iron and manganese, which is subsequently removed through a greensand filter. The water then goes through a granular activated carbon filter to remove volatile organic compounds and Methyl Tertiary Butyl Ether (MTBE). Chlorine and fluoride are added before the water is introduced to the distribution system.
4. **Hirst Farm Well System:** The water from Hirst Farm Well is treated with potassium permanganate for the oxidation and removal of the iron and manganese, which is subsequently removed through a greensand filter. Chlorine and fluoride are added before the water is introduced to the distribution system.

A source water assessment of our system has been conducted by the Virginia Department of Health. All of the town wells were determined to have high susceptibility to contamination and J.T. Hirst Reservoir was a moderate susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program. The assessment 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. Additional information is available by contacting your water system representative at the phone number or address given on page 4 of this drinking water quality report.

In response to the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, the Town of Purcellville has increased security measures at all our critical facilities. The protection of public infrastructure is an ongoing process and the Town takes this responsibility very seriously. The town continues to work with security and engineering industry professionals to create a security system that is seamless to our core operations yet effective at protecting our system.

SYSTEM IMPROVEMENTS

The Town is currently developing a new water resource study to evaluate and recommend new resources to address

expected increase to the Town's demand. This study is expected to be complete in July 2007.

The Town is also conducting a water distribution evaluation. This study will involve GPS location of water valves, hydrants, blow offs, etc. and development of a new calibrated model of the distribution system. This model will help to evaluate the pressure and flows throughout the system and will also help to identify areas where water quality may be able to be improved. The evaluation will provide the necessary information to develop an improvement program in order to maintain the excellent quality of Town water.

NEW TIERED-WATER RATE STRUCTURE

On June 13, 2006, Town Council adopted a new water and sewer rate that became effective on July 15, 2006. This was a tiered-rate structure where every 6,000 gallons used is charged with an increasing water rate. The new water tiered-rate structure is intended to encourage wise water users with lower water rates. Sewer use is based on the water meter reading but charged under a flat-rate structure as required under Virginia law.

WATER THEFT

Water theft is an ongoing problem for the Town and can cause discolored water. If you notice any suspicious activity around a fire hydrant, immediately call the Police Department at 338-7700. ONLY fire trucks and Town of Purcellville vehicles are permitted to use water from fire hydrants. A $50 credit, applied to your water bill, will be issued for any tips that result in the apprehension of the thief!

DON'T DRINK HOT TAP WATER!

Did you ever use hot water out of your tap for making tea in order to speed up the process? Don't do it! Even though the cold water entering your home is of top quality and is safe for drinking, chemical processes triggered by the heating of the water can

Table 3 Disinfectants and Disinfection Byproducts

Contaminant (units)	MCLG	MCL	Level Detected	Range Low-High	Violation	Date of Sample	Typical Source of Contamination
TTHMs [Total tri-halomethanes] (ppb)	NA	80.0	49	5-202	No	2006	By-product of drinking water chlorination
Chlorine (ppm)	MRDLG= 4	MRDL=4	1.6	0.45-3.5	No	2006	Water additive used to control microbes
Haloacetic acids (HAAs) (ppb)	NA	60.0	17	1-50	No	2006	By-product of drinking water dis-infection

Table 4 Lead and Copper Contaminants

Contaminant (units)	MCLG	Action Level	Level Detected	Action Level Exceeded	# of Sites Exceeding AL	Date of Sampling	Typical Source of Contamination
Lead (ppb)	0	AL = 15	nd	No	0	2006	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	1.3	AL = 1.3	0.6	No	0	2006	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Table 2 Regulated Contaminants (continued)

Contaminant (units)	MCLG	MCL	Level Detected	Range Low-High	Violation	Date of Sample	Typical Source of Contamination
Toluene (ppm)	1	1	0.0015	nd-0.0015	No	2006	Discharge from petroleum factories
Xylenes (ppm)	10	10	0.0005	nd-0.0005	No	2006	Discharge from petroleum factories; discharge from chemical factories
Arsenic (ppb)	n/a	10	2.0	nd - 2.0	No	2006	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Atrazine (ppb)	3	3	1.0	nd - 1.0	No	02006	Runoff from herbicide used on row crops
Barium (ppm)	2	2	0.03	nd - 0.03	No	2006	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrate as N (ppm)	10	10	0.12	nd - 0.12	No	2006	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

change and degrade the water quality for consumption purposes. It is completely safe to use for showering, bathing and cleaning, just don't drink it. So next time you want something hot to drink, take the extra minute to make coffee or tea from cold water and your water quality will be greatly improved.

VIOLATION INFORMATION

There were no violations of the Maximum Contaminant Level (MCL) for any regulated contaminants, as contained in the Commonwealth of Virginia/State Board of Health Waterworks Regulation during the year 2006.

WATER TESTING REQUIREMENTS

We constantly monitor for various contaminants in the water supply to meet all regulatory requirements and ensure the town is providing top quality water. The tables list only those contaminants that were detected but not above the MCL in at least one of our water sources. The sources were tested for many other contaminants but were not able to be detected by the testing.

Much of our water quality data is from testing done in 2006. However, the state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Thus, some of our data, though representative, may be more than one year old.

MCL's are set at very stringent levels by the U.S. Environmental Protection Agency (EPA). In developing the standards, EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCL's at levels that will result in no adverse health effects for some contaminants or a one-in-ten-thousand to one-in-a-million chance of having the described health effect for other contaminants.

Regulated contaminants detected in the Town water are listed below and also listed in Tables 2-4 on pages 15-17.

- *Lead and Copper* were detected in the distribution system at low

levels when we conducted our tap monitoring. The levels detected did not exceed limits specified by the Virginia Department of Health (see Table 4).

- *Turbidity* is a regulated contaminant (see Table 2). It is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The Town's levels stayed within the required limits during 2006.
- *Fluoride*, another regulated contaminant, was introduced for the promotion of strong teeth and was therefore detected at the Water Treatment Plant and all of our well systems (see Table 2).
- *Cyanide*, was detected at the Forbes Well System (see Table 2).
- *Arsenic*, was detected at Hirst Well (see Table 2).
- *Combined radium* (regulated radiological contaminants) were detected at very low levels during 2006, but the levels detected did not exceed limits specified by the Virginia Department of Health (see Table 2).
- *Barium*, was detected at the Forbes Well System, Hirst Well, and the Water Treatment Plant at very low levels during 2006 (see Table 2).
- *Total organic carbon (TOC)* is present in our water system. A minimum TOC removal ratio is required, based on a running annual average of the monthly removal ratios. The running average for the Town waterworks is within the limit specified by the Virginia Department of Health (see Table 2).
- *Total trihalomethanes (TTHMs) and haloacetic acids (HAAs)* were detected in our water system during 2006. The 12-month running average was below the MCL limit specified by Virginia Department of Health (see Table 3).
- *Chlorine*, another regulated contaminant, was introduced to control microbes and was therefore detected in our distribution systems (see Table 3).
- *Nitrate*, was detected at the Hirst Well at very low levels (see Table 2).

1. Microbiological Contaminants – The Town is pleased to report to you that there were no detections of total coliforms or fecal coliforms in the monthly samples collected during calendar year 2006.

Table 2 Regulated Contaminants

Contaminant (units)	MCLG	MCL	Level Detected	Range Low-High	Violation	Date of Sample	Typical Source of Contamination
Combined Radium (pCi/L)	0	5	1.70	nd - 1.70	No	2006	Erosion of natural deposits
Total organic carbon [TOC](ppm) (removal ratio)	NA	TT	1.43	0.95-1.43	No	2006	Naturally present in the environment
Turbidity (NTU)	NA	TT, 5 NTU Max TT, $\leq$ 0.3 (95% of time)	0.54 100%	NA	No	NA	Soil runoff
Fluoride (ppm)	4	2	1.89	0.01–1.89	No	2006	Water additive which promotes strong teeth
Cyanide (ppb)	200	200	9.0	nd - 9.0	No	2006	Discharge from steel/metal factories; discharge from plastic and fertilizer factories

per million corresponds to one minute in two years or a single penny in $10,000.

- *Parts per billion (ppb) or Micrograms per liter (µg/l) - 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.*
- *Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.*
- *Treatment Technique (TT) - a required process intended to reduce the level of a contaminant in drinking water.*
- *Maximum Contaminant Level (MCL) - the highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs (see definition below) 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.*
- *Maximum Residual Disinfectant Level (MRDL) - 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.*
- *Maximum Residual Disinfectant Level Goal (MRDLG) - the level of 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.*
- *Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment of other requirements which a water system must follow.*

- *Atrazine,* was detected at the Forbes Well System (see Table 2).
- *Toluene,* was detected at the Forbes Well System (see Table 2).
- *Xylene,* was detected at the Forbes Well System at very low levels (see Table 2).
- No *microbiological contaminants* were detected during 2006.
- Several other contaminants found (present in very low amounts) in the Town water are considered unregulated contaminants. Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants. The unregulated compounds present in the Town water are at very low concentrations and have not created concern by VDH.

All the contaminants detected were well below the regulated limit.

ADDITIONAL HEALTH INFORMATION

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms.

These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

Some people who use water containing chlorine well in excess of the Maximum Residual Disinfectant Level (MRDL) could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.

Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.

Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.

Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

Some people who drink water containing haloacetic acids (HAAs) in excess of the MCL over many years may have an increased risk of getting cancer.

Some people who drink water containing trihalomethanes in excess of the MCL over many years could experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous systems effects, and may lead to an increased risk of getting cancer.

Additional information is available from the Safe Drinking Water Hotline and the EPA's drinking water web site mentioned earlier.

DEFINITIONS

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The Tables 2-4 on the next few pages show the results of our monitoring for the period January 1 to December 31, 2006. In the tables and elsewhere in this report you will find many terms and abbreviations with which you might not be familiar. The following definitions are provided to help you better understand these terms.

- *Non-detects (nd) - lab analysis indicates that the contaminant is not present.*
- *Parts per million (ppm) or Milligrams per liter (mg/l) - one part*