

# TOWN OF BOONTON

100 WASHINGTON STREET  
BOONTON, NEW JERSEY .07005

## ANNUAL WATER QUALITY REPORT TO CUSTOMERS

PWS ID# NJ1401001

Town of Boonton Water Department, Morris County, New Jersey  
For the Year 2009, Results from 2008

### **Dear Customer:**

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality of water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources.

The Town of Boonton Water Department continually monitors and reports on the quality of our drinking water in an effort to meet or exceed all State and Federal water quality standards. The table in this report shows the results of our monitoring for the period of January 1 to December 31, 2008. We are pleased to report that our drinking water meets all Federal and State water quality standards.

Informed consumers are our best allies in maintaining safe drinking water. Please read this report carefully and if you have any questions, please call us at (973) 402-9460. We encourage public interest and participation in our community's decisions affecting drinking water. Meetings of our Governing Body that deal with decisions about our water are held monthly. The schedule of these meetings is posted in the municipal building. Please plan to attend one soon.

### **WHERE DOES MY WATER COME FROM?**

The Town of Boonton is supplied with up to 21 million gallons of surface water per month from the Taylortown Reservoir. We also withdraw up to 40 million gallons of groundwater per month from four wells set in the Stratified Drift Formation. These sources supply different sections of our water system and at times, are blended in the system to meet the daily demands of the system.

The New Jersey Department of Environmental Protection (NJDEP) has completed and issued a Source Water Assessment Report and Summary for all public water systems, which is available at [www.state.nj.us/dep/swap](http://www.state.nj.us/dep/swap) or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. You may also contact the Town of Boonton Water Department at (973) 402-9460.

The Town of Boonton's drinking water system susceptibility ratings and a list of potential contaminant sources are attached. Please note, a high rating reflects only the potential for contamination as determined by the NJDEP based on surrounding land uses, well depth, water source, etc. A high rating does not indicate existing contamination.

### **SECURITY**

In light of the terrorist attacks of September 11, 2001, and in response to the State's Domestic Security Preparedness Act, the Town of Boonton Water Department has completed a vulnerability assessment, strengthened existing security measures, and reviewed operations to include a greater emphasis on security issues. We maintain close contact with state and federal authorities to coordinate security measures and to assist in the protection of the water supply.

### **WHAT'S IN THE SOURCE WATER BEFORE WE TREAT IT?**

In general, 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 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:**

- \* **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- \* **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- \* **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.
- \* **Organic chemical contaminants**, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
- \* **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

### **DO I NEED TO TAKE SPECIAL PRECAUTIONS?**

In order to ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same 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 (800) 426-4791.

## **PLEASE CONSERVE WATER**

Water conservation measures are important to protect our water supply. Such measures not only save the supply of our source water, but can also save you money by reducing your water bill. Here are a few suggestions:

### ***Conserving water inside your home:***

- ~ Repair leaking toilets. A leaky toilet can waste up to 200 gallons of water per day.
- ~ Repair leaking faucets and pipes. A slow steady drip can waste 350 gallons of water per month.
- ~ If upgrading appliances or plumbing fixtures, choose those that conserve water.
- ~ Run washing machines only when full and on the proper load size selection.
- ~ Take shorter showers or a shower instead of a bath.
- ~ Turn off water while shaving or brushing your teeth.
- ~ Run the dishwasher only when full.

### ***Conserving water outdoors:***

- ~ Water the lawn and garden in the early morning or evening.
- ~ Don't water on windy days.
- ~ Use mulch around plants and shrubs.
- ~ Repair leaks in faucets and hoses.
- ~ Use water-saving nozzles.
- ~ Use water from a bucket to wash your car; save the hose for rinsing.

Information on other ways that you can help conserve water can be found at [www.epa.gov/safewater/publicoutreach/index.html](http://www.epa.gov/safewater/publicoutreach/index.html). You can also visit the NJDEP web site <http://www.njdrought.org> for up-to-date information on drought information, including reservoir levels, current rainfall statistics, and water conservation practices.

## **UNREGULATED CONTAMINANTS**

The U.S. Environmental Protection Agency (EPA) has created the Unregulated Contaminants Rule (UCMR). The purpose of monitoring for unregulated contaminants in drinking water is to provide data to support the EPA Administrator's decisions concerning whether or not to regulate these contaminants in the future for the protection of public health. Under the Safe Drinking Water Act, a national representative randomly- selected sample of 800 community water systems (CWSs) and non-transient, non-community water systems (NTNCWS) serving 10,000 or fewer persons must monitor for 12 unregulated chemical contaminants.

The Town of Boonton Water Department conducted testing for these 12 unregulated contaminants on April 15, 2002. These contaminants were not detected in the water system. The water system was tested for the following unregulated contaminants: 2,4-dinitrotoluene, 2,6-dinitrotoluene, Acetochlor, DCPA mono-acid degradate, DCPA di-acid degradate, 4,4'DDE, EPTC, Molinate, MTBE, Nitrobenzene, Perchlorate, and Terbacil. Additionally, in 1996 and in 2005, the Town of Boonton Water Department tested for Cryptosporidium and conducted other microscopic particulate analyses on our groundwater supplies. This testing was done to determine if our groundwater supplies are under the influence of surface water. The results of these tests indicated that our groundwater supply wells are not under the influence of surface water, since no evidence of giardia, cryptosporidium, coccidia, diatoms, rotifers, or insect parts was detected. Our surface water treatment plant provides the required inactivation and removal of these contaminants by the filtration and disinfection processes.

## **ADDITIONAL INFORMATION FOR LEAD**

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Town of Boonton Water Department 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 is available from the Sage Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

## **VARIANCES AND EXEMPTIONS**

The Safe Water Drinking Act regulations allow monitoring waivers, which give permission to not meet a MCL or a treatment technique under certain conditions. The Town of Boonton Water Department was granted a waiver from the New Jersey Department of Environmental Protection to reduce testing for synthetic organic compounds and pesticides. The waiver was granted based on three years of testing with negative results for synthetic organic compounds and pesticides.

## **Boonton Water Department- PWSID# 1401001**

The Town of Boonton Water Department is a public community water system consisting of 5 wells, 1 surface water intake, and 1 emergency purchase ground water source. The system's groundwater source comes from a glacial sand and gravel aquifer in the Stratified Drift formation. None of the wells are under the influence of surface water. The system's surface water source is the Taylortown Reservoir. The Town of Boonton Water Department has an emergency interconnection to the Denville Water Department. Water is not regularly purchased by the Boonton Water Department from this source.

## Susceptibility Ratings For Boonton Water Department Sources

The Source Water Assessment Report and Summary for this public water system is available at [www.state.nj.us/dep/swap](http://www.state.nj.us/dep/swap) or by contacting the NJDEP, Bureau of Safe Drinking Water at 609-292-5550.

The table below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The table provides the number of wells and intakes that rated high (H), medium (M), or low (L) for each contaminant category. For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report.

**If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water.** The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, DEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

Sources	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radio-nuclides			Radon			Disinfection Byproduct Precursors		
	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
Wells - 5		5		5				5				5			5	5			3	2		1	4	
GUDI - 0																								
Surface water intakes - 1	1				1				1		1			1				1			1	1		

**Pathogens:** Disease-causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.

**Nutrients:** Compounds, minerals and elements that aid growth, that are both naturally occurring and manmade. Examples include nitrogen and phosphorus.

**Volatile Organic Compounds:** Manmade chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.

**Pesticides:** Manmade chemicals used to control pests, weeds and fungus. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine, and insecticides such as chlordane.

**Inorganics:** Mineral-based compounds that are both naturally occurring and manmade. Examples include arsenic, asbestos, copper, lead, and nitrate.

**Radionuclides:** Radioactive substances that are both naturally occurring and manmade. Examples include radium and uranium.

**Radon:** Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to <http://www.nj.gov/dep/rpp/radon/index.htm> or call (800) 648-0394.

**Disinfection Byproduct Precursors:** A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.

TOTAL ORGANIC CARBON				
	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER
	RAA	RAA	RAA	RAA
Result (mg/l)	1.03	1.03	1.01	0.99
MCL	>1mg/l	>1mg/l	>1mg/l	>1mg/l
VIOLATION?	N	N	N	Y

Our treatment system is required to remove 35% of total organic carbon (TOC) from our drinking water on a monthly basis. For the calendar year 2008, the running annual average (RAA) of this percent removal is less than 35% for the last quarter of the year only. This represents a treatment technique (TT) violation.

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 maximum containment level (MCL) may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to increased risk of getting cancer.

Water quality test results for THMs and HAAs in our system of the calendar year 2008 reveal THM and HAA levels that are far below the MCL. Therefore, despite this TT violation, our water continues to be safe to drink, due to the high quality of our source water.

This problem was resolved on January 22, 2009.

Boonton Water Department is taking the following steps to ensure that this does not happen again:

- We will more closely monitor the treatment process and make adjustments as needed, as source water changes.
- We will replace the filter media used in the treatment process.
- We will maintain greater consistency in the treatment process.
- We will take samples more frequently. (more often than required)

**WATER QUALITY TABLE**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

<b>TEST RESULTS</b>						
<b>Contaminant</b>	<b>Violation Y/N</b>	<b>Level Detected</b>	<b>Units of Measurement</b>	<b>MC LG</b>	<b>MCL</b>	<b>Likely Source of Contamination</b>
<b>Microbiological Contaminants:</b>						
1Turbidity	N	Highest Detect = 0.27	NTU	n/a	TT	Soil runoff
<b>Radioactive Contaminants</b>						
Gross Alpha Test results yr. 2006	N	Range = ND – 2.6 Highest average = 1.7	pCi/l	0	15	Erosion of natural deposits
Radium-228 Test results Yr. 2006	N	Range = ND – 1.4 Highest Average = 0.5	pCi/l	0	5	Erosion of natural deposits
Uranium Test results Yr. 2006	N	Range = ND – 2.7 Highest Average = 2	ppb	0	30	Erosion of natural deposits
<b>Inorganic Contaminants:</b>						
Barium Test results Yr. 2006	N	Range = ND – 0.01 Highest detect = 0.01	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper Test results Yr. 2007	N	0.42 No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride Test results Yr. 2006	N	Range = 0.06 – 0.07 Highest detect = 0.07	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead Test results Yr. 2007	N	< 13 2 samples out of 20 exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen) Test results Yr. 2007	N	Range = ND – 0.7 Highest detect = 0.7	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Volatile Organic Contaminants / Disinfection Byproducts</b>						
2TTHM Total Trihalomethanes Test results Yr. 2007	N	Range = 3 - 42 Average = 30	ppb	N/A	80	By-product of drinking water disinfection
2HAA5 Haloacetic Acids Test results Yr. 2007	N	Range = 1 - 2 Average = 2	ppb	N/A	60	By-product of drinking water disinfection

**WQT Footnotes:**

<sup>1</sup> 100% of the samples were below the TT value of 0.3 NTU. The MCL for turbidity requires no more than 5% of monthly samples may exceed 0.3 NTU and no sample may exceed 1 NTU. Turbidity is a measure of the cloudiness of the water. We monitor as a requirement and because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

<sup>2</sup>The reported Average Level is the highest Quarterly Running Average throughout the year of testing. The Quarterly Average is calculated by averaging the current month's testing results with the most recent three quarter's testing results and rounding to the nearest whole number.

<b>Regulated Disinfectants</b>	<b>Level Detected</b>	<b>MRDL</b>	<b>MRDLG</b>
Chlorine	Average = 0.2 – 0.7	4.0 ppm	4.0 ppm

<b>Secondary Contaminant</b>	<b>Level Detected</b>	<b>Units of Measurement</b>	<b>RUL</b>
Sulfate Test results Yr. 2006	Range = 19 – 26 Highest detect = 26	ppm	250
3Sodium Test results Yr. 2006	Range = 23 – 36 Highest detect = 36	ppm	50

**WQT Footnotes**

<sup>3</sup> For healthy individuals, the sodium intake from water is not important, because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the RUL may be of concern to individuals on a sodium restricted diet.

**READING THE WATER QUALITY TABLE**

Unless otherwise noted, the data presented in the previous table is from testing done in 2007. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. The EPA or the State requires us to monitor for over 80 contaminants. We monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

**Important Drinking Water Definitions**

<b>MCL</b>	Maximum Contaminant Level: 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.
<b>MCLG</b>	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.
<b>TT</b>	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
<b>AL</b>	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
<b>MRDLG</b>	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 contaminants.
<b>MRDL</b>	Maximum Residual Disinfectant Level: 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.
<b>RAA</b>	Running Annual Average: The average of four yearly quarters of sampling results.

<b>mg/L</b>	mg/L: number of milligrams of substance in one liter of water
<b>ppm</b>	ppm: parts per million, or milligrams per liter
<b>ppb</b>	ppb: parts per billion, or micrograms per liter
<b>ppt</b>	ppt: parts per trillion, or nanograms per liter
<b>pCi/L</b>	pCi/L: picocuries per liter ( a measure of radioactivity)
<b>NA</b>	NA: not applicable
<b>ND</b>	ND: not detected
<b>NR</b>	NR: monitoring not required, but recommended
<b>NTU</b>	NTU: Nephelometric turbidity unit

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