

PWSID# NJ1808001

## Annual Drinking Water Quality Report

### Franklin Township

For the Year 2008, Results from the Year 2007

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality 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. We are committed to ensuring the quality of your water. Our water sources are surface and well water from NJWA- Elizabethtown Water Company, the Township of South Brunswick Water Department, the North Brunswick Water Department and the New Brunswick Water Department. The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for all of these public water systems, which are 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 your public water system to obtain information regarding the Source Water Assessments.

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

The Franklin Township Water Department and all of our suppliers routinely monitor for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2007. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative, are more than one year old.

<b>Franklin Township Test Results</b>						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
<b>Inorganic Contaminants:</b>						
Asbestos Test results Yr. 2004	N	0.07	MFL	7	7	Decay of asbestos cement water mains; erosion of natural deposits
Barium Test results Yr. 2007	N	Range = ND - 0.04 Highest detect = 0.04	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper Test results Yr. 2007	N	0.51 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. 2007	N	ND - 0.6 Highest detect = 0.6	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	4.9 3 samples out of 51 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 - 1.7 Highest detect = 1.7	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Volatile Organic Contaminants – Disinfection Byproducts</b>						
TTHM Total Trihalomethanes Test results Yr. 2007	N	Average = 10 - 29	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids Test results Yr. 2007	N	Average = 19 - 35	ppb	N/A	60	By-product of drinking water disinfection
<b>Radioactive Contaminants</b>						
Alpha emitters Test results Yr. 2003	N	1.1	pCi/l	0	15	Erosion of natural deposits

NJAW-Elizabethtown Water Company's Test Results 2007						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
<b>Radioactive Contaminants</b>						
Alpha emitters	N	Range = ND – 14.5 Average = 9.5	pCi/l	0	15	Erosion of natural deposits
Combined Radium 226 & 228	N	Range = ND – Highest detect = 1.1	pCi/l	0	5	Erosion of natural deposits
<b>Inorganic Contaminants:</b>						
Arsenic	N	Range = ND – 3 Highest detect = 3	ppb	n/a	5	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	N	Range = ND – 0.3 Highest detect = 0.3	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper Test results Yr. 2004	N	0.52 1 samples out of 51 exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride	N	Range = ND – 1 Highest detect = 1	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead	N	10 1 samples out of 51 exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)	N	Range = 0.5 – 5.3 Highest detect = 5.3	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	N	Range = ND – 4 Highest detect = 4	ppb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
<b>Volatile Organic Contaminants / Disinfection Byproducts</b>						
TTHM Total Trihalomethanes	N	Range = 4 - 70 Average = 48	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids	N	Range = ND – 44 Average = 17	ppb	N/A	60	By-product of drinking water disinfection
Bromate	N	Range = ND – 0.2 Highest Detect = 0.2	ppb	0	10	By-product of drinking water disinfection
2,4D	N	Range = ND – 1 Highest detect = 1	ppb	70	70	Herbicide used on row crops
Dichloromethane (Methylene chloride)	N	Range = ND – 2.4 Highest detect = 2.4	ppb	0	3	Discharge from pharmaceutical and chemical factories
Ethylbenzene	N	Range = ND – 0.9 Highest detect = 0.9	ppb	700	1000	Discharge from petroleum refineries
Styrene	N	Range = ND – 3.7 Highest detect = 3.7	ppb	100	100	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene	N	Range = ND – 1.9 Highest detect = 1.9	ppb	0	1	Leaching from PVC pipes; discharge from factories and dry cleaners
Trichloroethylene	N	Range = ND – 1.9 Highest detect = 1.9	ppb	0	1	Discharge from metal degreasing sites and other factories
Toluene	N	Range = ND – 0.002 Highest detect = 0.002	ppm	1	1	Discharge from petroleum factories
Total Xylenes	N	Range = ND – 0.001 Highest detect = 0.001	ppm	1	1	Discharge from petroleum factories; discharge from chemical factories
<b>Microbiological Contaminants</b>						
Turbidity	N	Range = 0.3 – 0.56 Highest detect = 0.56	NTU	n/a	TT <0.3 in 95% of monthly samples	Soil runoff
Total Organic Carbon	N	Range = 1.0 – 3.6 Highest detect = 3.6	ppm	n/a	TT	Naturally present in the environment
<b>Regulated Disinfectants</b>		<b>Level Detected</b>	<b>MRDL</b>		<b>MRDLG</b>	
Chloramines		Range = 0.3 – 2.5	4.0 ppm		4.0 ppm	
<b>Unregulated Contaminants</b>						
DCPA	N	Range = 2 – 39 Average = 8	ppb	N/A	N/A	

Secondary Contaminant	Level Detected	Units of Measurement	RUL
Manganese	Range = ND - 100	ppb	50
Sodium	Range = ND - 88	ppm	50

### Manganese

The secondary Recommended Upper Limit (RUL) for manganese is based on staining of laundry. Manganese is an essential nutrient, and toxicity is not expected from levels which would be encountered in drinking water.

### Sodium

For healthy individuals the sodium intake from water is not important, because a much greater of sodium takes place from salt in the diet. However sodium levels above the Recommended Upper Limit (RUL) may be of concern to individuals on a sodium restricted diet.

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

Based on the toxicological information currently available for DCPA, the New Jersey Department of Environmental Protection – Bureau of safe Drinking Water has established an action level of 70 ppb.

**South Brunswick Test results Year 2007**  
**In 2007 all of South Brunswick's water was purchased directly from the NJ American Water Company. Their test results are listed above**

City of New Brunswick Year 2007 Test Results						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
<b>Radioactive Contaminants</b>						
Radium-228 Test results Yr. 2006	N	1.3	pCi/l	N/A	N/A	Decay of natural and man-made deposits
Combined Radium Test results Yr. 2006	N	1.3	pCi/l	0	5	Decay of natural and man-made deposits
Uranium Test results Yr. 2006	N	2.2	pCi/l	0	30	Decay of natural and man-made deposits
<b>Inorganic Contaminants:</b>						
Barium Test results Yr. 2007	N	0.04	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper Test results Yr. 2005	N	0.06 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. 2007	N	0.06	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead Test results Yr. 2005	N	3 1 sample 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	1.3	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Microbiological Contaminants</b>						
Turbidity	N	100% sites < 0.3		n/a	TT	Soil runoff
<b>Regulated Disinfectants</b>		<b>Level Detected</b>	<b>MRDL</b>		<b>MRDLG</b>	
Chlorine		Range = 0.3 – 0.7	4.0 ppm		4.0 ppm	

City of North Brunswick Test results Year 2007						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
<b>Inorganic Contaminants:</b>						
Barium	N	0.04	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	N	0.4	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen)	N	1.1	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Copper	N	0.13 No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead	N	6 2 samples out of 31 exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
<b>Volatile Organic Contaminants / Disinfection Byproducts</b>						
TTHM Total Trihalomethanes	N	Range = 2 - 70 Highest annual average = 26	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids	N	Range = 3 - 45 Highest annual average = 24	ppb	N/A	60	By-product of drinking water disinfection
<b>Microbiological Contaminants</b>						
Turbidity	N	Highest detect = 0.9 99% lowest monthly avg.		n/a	TT	Soil runoff
<b>Radioactive Contaminants</b>						
Alpha emitters Test results Yr. 2005	N	Range = 1.5 - 2.3 Highest detect = 2.3	pCi/l	0	15	Erosion of natural deposits
Radium 228 Test results Yr. 2005	N	Range = ND - 2.1 Highest detect = 2.1	pCi/l	0	5	Erosion of natural deposits
Radium 226 Test results Yr. 2005		Range = ND - 0.8 Highest detect = 0.8	pCi/l	0	5	Erosion of natural deposits
<b>Regulated Disinfectants</b>						
Chlorine		Range = 0.2 - 2.2 Average = 2.4		MRDL 4.0 ppm		MRDLG 4.0 ppm

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:

- 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 water runoff, industrial or domestic wastewater discharges, oil and gas projection, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- 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.
- 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.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

## **DEFINITIONS**

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

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

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

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

Millirems per year (mrem/yr) - measure of radiation absorbed by the body.

Million Fibers per Liter (MFL) - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

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.

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

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

Maximum Contaminant Level - The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal -The "Goal"(MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Secondary Contaminant- Substances that do not have an impact on health. Secondary Contaminants affect aesthetic qualities such as odor, taste or appearance. Secondary standards are recommendations, not mandates.

Recommended Upper Limit (RUL) – Recommended maximum concentration of secondary contaminants. These reflect aesthetic qualities such as odor, taste or appearance. RUL's are recommendations, not mandates.

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 Goal (MRDLG): 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

**We inadvertently missed monitoring for Lead & Copper in 2006. We did monitor in 2007 and we were in compliance. All of the companies that supply us water did perform their required Lead & Copper monitoring and they were also in compliance.**

### **Lead**

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. 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. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Franklin Township and its water suppliers are responsible for providing high quality drinking water, but can not 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 second to 2 minutes before using water for drinking and cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water hotline or at <http://www.epa.gov/safewater/lead>.

### **Copper**

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.

**If you have any questions about this report or concerning your water utility, please contact Joseph Yacone – Utilities Manager at 732-873-2500 ext. 292. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Town Council meetings.**