



# Water Quality Report 2012

## Township of Franklin

Dear Water Consumer:

This 2012 Water Quality Report is an annual report to all water consumers on the quality of water provided by the Township of Franklin. This report meets the Federal Safe Drinking Water Act requirements for Consumer Confidence Reports.

This 2012 Water Quality report provides our customers with information on the sources of our drinking water, our water system, applicable health information and the concentrations of detected contaminants with a comparison to water quality regulations.

We encourage you to read this report and study the water quality test results for the 2012 calendar year. We hope you find this report informative and that the information provides you with a better understanding of what is involved in bringing high quality water to your faucet.

The Township of Franklin is committed to providing our customers with high quality drinking water and information about the drinking water that we provide. We are pleased to report that, during the 2012 calendar year, our drinking water met all federal and state water quality standards.

If you would like additional information or if you have any questions concerning this report, feel free to call the Township Water Department at 732.249.7800. You can also call the EPA Safe Drinking Water Hotline at 800.426.4791 for further information.

Sincerely,  
**Hongdar Chi**  
Licensed Operator  
Township of Franklin

**English**  
This report contains important information about your drinking water. If you do not understand it, please have someone translate it for you.

**Spanish**  
Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo ó hable con alguien que lo entienda bien.

**Gujarati**  
આ અહેવાલ માં તમારા પીવાના પાણી વિષે સહાયતાની માહિતી આપવામાં આવી છે. અને તે સમજાવવા કે તેને સમજાવવા પડતી કોઈ ભાષા તેની સાથે આપ કરો.



# Annual Drinking Water Quality Report

## Franklin Township

For the Year 2013, Results from the Year 2012

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 New Jersey American Water Company, the Township of South 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 these 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. The tables show the results of ours and our suppliers monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2012. The state allows all of 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. A new Disinfection Byproduct Rule called Stage II took effect for these systems in 2012. The first compliance calculations for these systems will be available after the first quarter of 2013 once a full year of monitoring has been completed. After the first quarter of 2012, Stage I was phased out. Stage II HAA5 and TTHM compliance is based on the locational running annual average (LRAA) calculated at each monitoring location. The LRAA for Stage II HAA5s and TTHMs is not included in this report since Stage II monitoring began in the second quarter of 2012, so there were only three quarters of results for 2012 and the LRAA calculation is based on four completed quarters of results.

<b>Franklin Township Water Department</b>						
<b>PWS ID# NJ1808001</b>						
<b>Year 2012 Test Results</b>						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
<b>Inorganic Contaminants:</b>						
Copper Test results Yr. 2010 Result at 90 <sup>th</sup> Percentile	N	0.26 No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead Test results Yr. 2010 Result at 90 <sup>th</sup> Percentile	N	2 1 sample out of 42 exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits
<b>Microbiological Contaminants:</b>						
Total coliform Bacteria	N	1 positive routine sample in January, 1 in March, 1 in May, 1 in September and 3 in November. 1 positive repeat sample in November.		0	5% of monthly samples	Naturally present in the environment
<b>Disinfection Byproducts:</b>						
<b>Disinfection Byproducts Stage-1</b>						
TTHM Total Trihalomethanes	N	Range = 17 - 41 Annual Average = 20	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids	N	Range = 9 - 16 Annual Average = 9	ppb	N/A	60	By-product of drinking water disinfection
<b>Disinfection Byproducts Stage-2</b>						
TTHM Total Trihalomethanes	N	Range = 10 - 63	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids	N	Range = ND - 64	ppb	N/A	60	By-product of drinking water disinfection
<b>Regulated Disinfectants</b>		<b>Level Detected</b>		<b>MRDL</b>		<b>MRDLG</b>
Chlorine		Average = 0.6 ppm		4.0 ppm		4.0 ppm

We collect a minimum of 50 total Coliform Bacteria samples each month. 5% of those samples are allowed have positive results. All repeat – confirmation samples were negative, except in November when we had 1 positive repeat sample. All subsequent repeat samples were negative. Total Coliforms are bacteria that are naturally present in the environment and are used as an indicator as other, potentially-harmful, bacteria may be present.

**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 Franklin Township Water Department and all of its drinking water suppliers are 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 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>.

**Cryptosporidium** is a microbial pathogen found in surface water throughout the United States. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100% removal. New Jersey American Water Company monitoring indicates the presence of these organisms in their source water. Current test methods do not allow them to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at a greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

New Jersey American Water Company (Raritan System)						
PWS ID# NJ2004002						
Year 2012 Test Results						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
<b>Radioactive Contaminants</b>						
Alpha emitters	N	Range = 3 - 5 Highest detect = 5	pCi/l	0	15	Erosion of natural deposits
<b>Inorganic Contaminants:</b>						
Copper Test results Yr. 2010 Result at 90 <sup>th</sup> Percentile	N	0.5 No samples out 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 Test results Yr. 2010 Result at 90 <sup>th</sup> Percentile	N	5 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)	N	Range = 0.4 - 5 Highest detect = 5	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Disinfection Byproducts:</b>						
<b>Disinfection Byproducts Stage-1</b>						
TTHM Total Trihalomethanes	N	Range = 1 - 25 Annual Average = 14	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids	N	Range = ND - 23 Annual Average = 12	ppb	N/A	60	By-product of drinking water disinfection
<b>Disinfection Byproducts Stage-2</b>						
TTHM Total Trihalomethanes	N	Range = 13 - 87	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids	N	Range = 3 - 50	ppb	N/A	60	By-product of drinking water disinfection
Bromate	N	Range = ND - 3 Highest detect = 3	ppb	0	10	By-product of drinking water disinfection
<b>Regulated Disinfectants</b>		<b>Level Detected</b>		<b>MRDL</b>		<b>MRDLG</b>
Chloramines		Range = 0.5 - 0.9		4.0 ppm		4.0 ppm
<b>Microbiological Contaminants</b>						
Turbidity	N	99% < 0.3 Highest detect = 0.3	NTU	N/A	TT < 0.3 in 98% of monthly samples	Soil runoff
Total Organic Carbon	N	Range = 1 - 2.9 Highest detect = 2.9	ppm	N/A	TT > 1% Removal	Naturally present in the environment
Total Coliform Bacteria	N	Range = 0 - 0.4%	% positive monthly samples	N/A	5%	Naturally present in the environment
<b>Secondary Contaminants</b>		<b>Level Detected</b>	<b>Units of Measurement</b>			<b>RUL</b>
Sodium		Range = 23-64	ppm			50
Aluminum		Range = ND - 0.1	ppm			0.2

The New Jersey American Water Company exceeded the secondary Recommended Upper Limit for Sodium. 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 Recommended Upper Limit (RUL) may be of concern to individuals on a sodium restricted diet.

Unregulated Contaminants	Level Detected	Units of Measurement	Likely source
N-nitrosopyrrolidine (NPYR)	Range = ND - 0.003	ppb	Byproduct from manufacturing of rubber, leather and plastics
Perfluorooctanic Acid (PFOA)	Range = ND - 0.05	ppb	A man-made chemical used in the manufacture of fluoropolymers
Hexavalent Chromium	Range = ND - 0.26	ppb	Discharges from steel and pulp mills

The New Jersey American Water Company, the City of New Brunswick Water Department and the South Brunswick Township Water Department participated in the Unregulated Contaminant Monitoring Rule, results from that testing is included in their respective test results table. 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.

City of New Brunswick Water Department PWS ID# NJ1214001 Year 2012 Test Results						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
<b>Radioactive Contaminants</b>						
Combined Radium 228 & 226 Test results Yr. 2006	N	1.3	pCi/l	0	5	Erosion of natural deposits
Alpha Emitter Test results Yr. 2006	N	1.3 +/- 0.6	pCi/l	0	15	Erosion of natural deposits
<b>Inorganic Contaminants:</b>						
Barium	N	0.03	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper Result at 90 <sup>th</sup> Percentile Test results Yr. 2011	N	0.02 No samples out exceeded the action level	Ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride	N	0.06	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead Result at 90 <sup>th</sup> Percentile Test results Yr. 2011	N	2 No samples exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nickel	N	2	ppb	N/A	N/A	Erosion of natural deposits
Nitrate (as Nitrogen)	N	0.7	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Microbiological Contaminants:</b>						
Turbidity	N	100% of samples < 0.3 Range = 0.02 - 0.29		N/A	TT 95% of samples < 0.3	Soil runoff, naturally present in the environment.
Total coliform Bacteria	N	Highest Month = 3%		0	5% of monthly samples	Naturally present in the environment
<b>Disinfection Byproducts:</b>						
<b>Disinfection Byproducts Stage-1</b>						
TTHM Total Trihalomethanes	N	Range = 28 - 67 Annual Average = 40	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids	N	Range = 5 - 9 Annual Average = 11	ppb	N/A	60	By-product of drinking water disinfection
<b>Disinfection Byproducts Stage-2</b>						
TTHM Total Trihalomethanes	N	Range = 30 - 72	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids	N	Range = ND - 29	ppb	N/A	60	By-product of drinking water disinfection
<b>Regulated Disinfectants</b>		<b>Level Detected</b>		<b>MRDL</b>		<b>MRDLG</b>
Chlorine		Range = 0.3 - 1.4 ppm		4.0 ppm		4.0 ppm
<b>Unregulated Contaminants:</b>						
PFBA - Perfluoro Butanoic Acid	N	0.07	ppb	N/A	N/A	Used in the manufacturing of fluoropolymers

PFOA – Perfluoro Octanoic Acid	N	0.01	ppb	N/A	N/A	Used in the manufacturing of fluoropolymers
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<b>South Brunswick Township Water Department</b> <b>PWS ID# NJ1221004</b> <b>Year 2012 Test Results</b>						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
<b>Inorganic Contaminants:</b>						
Barium	N	Range = 0.04 – 0.3 Highest detect = 0.3	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	N	Range = ND – 0.7 Highest detect = 0.7	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen)	N	Range = 1.5 – 3.5 Highest detect = 3.5	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Chromium	N	Range = ND – 4.8 Highest detect = 4.8	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Copper Test results Yr. 2009 Result at 90 <sup>th</sup> Percentile	N	0.11 No samples exceeded the action level	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead Test results Yr. 2009 Result at 90 <sup>th</sup> Percentile	N	ND No samples exceeded the action level	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nickel	N	Range = ND – 40.7 Highest detect = 40.7	ppb	N/A	N/A	Erosion of natural deposits
<b>Volatile Organic Contaminants:</b>						
Methyl <i>tertiary</i> butyl ether (MTBE)	N	Range = ND – 0.6 Highest detect = 0.6	ppb	70	70	Leaking underground gasoline and fuel oil tanks. Gasoline and fuel oil spills.
<b>Radioactive Contaminants:</b>						
Alpha emitters	N	Range = 2.3 – 8.2 Highest detect = 8.2	pCi/1	0	15	Erosion of natural deposits
Combined Radium 228 & 226	N	Range = ND – 1.7 Highest detect = 1.7	pCi/1	0	5	Erosion of natural deposits
<b>Disinfection Byproducts:</b>						
<b>Disinfection Byproducts Stage-1</b>						
TTHM Total Trihalomethanes	N	Range = 9 - 29 Annual Average = 28	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids	N	Range = 3 - 11 Annual Average = 8	ppb	N/A	60	By-product of drinking water disinfection
<b>Disinfection Byproducts Stage-2</b>						
TTHM Total Trihalomethanes	N	Range = 0.3 - 94	ppb	N/A	80	By-product of drinking water disinfection
HAA5 Haloacetic Acids	N	Range = ND - 41	ppb	N/A	60	By-product of drinking water disinfection
<b>Regulated Disinfectants</b>		<b>Level Detected</b>		<b>MRDL</b>		<b>MRDLG</b>
Chlorine		Average = 0.4 ppm		4.0 ppm		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 production, 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.

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## ***Postal Patron***

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.

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 Level 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

Total Organic Carbon - Total Organic Carbon (TOC) has no health effects. However, TOC provides a medium for the formation of disinfection byproducts. The *Treatment Technique* for TOC requires that 35% - 45% of the TOC in the raw water is removed through the treatment processes.

Turbidity - Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium microbial growth.

Turbidity is measured as an indication of the effectiveness of the filtration process. The *Treatment Technique* for turbidity requires that no individual sample exceeds 1 NTU and 95% of the samples collected during the month must be less than 0.3 NTU.

If you have any questions about this report or concerning your water utility, please contact the Franklin Township Public Works Department at 732-249-7800 ext. 6414. 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.

**We all work hard to provide top quality drinking water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.**