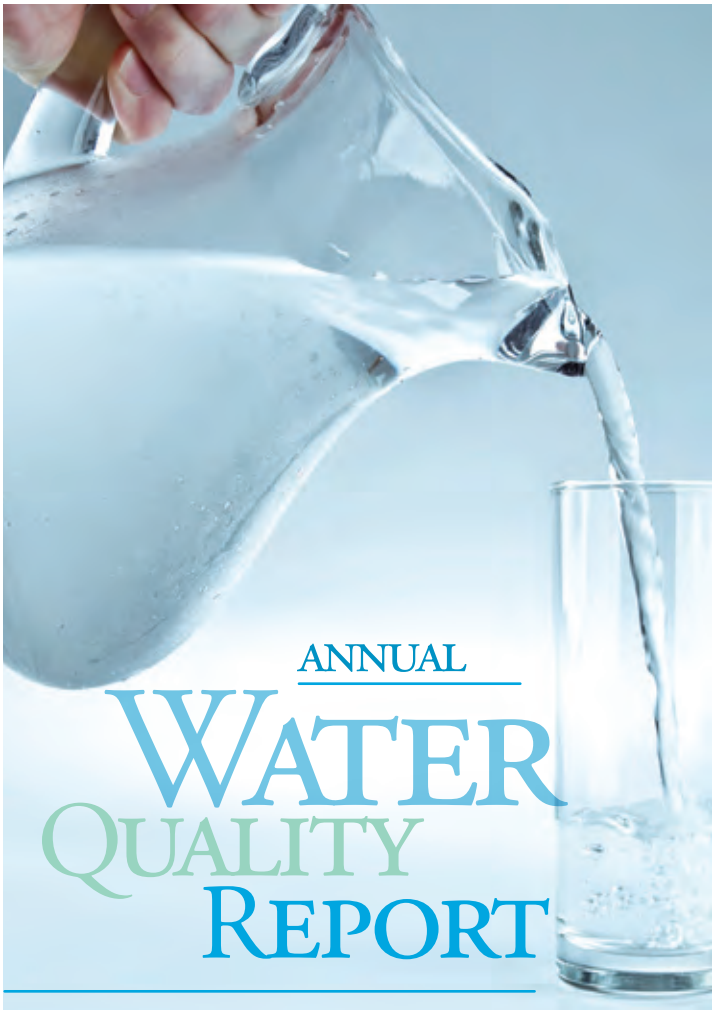

ANNUAL WATER QUALITY REPORT

Water testing performed in 2009

Presented By:

MONTCLAIR WATER BUREAU

Montclair

BOROUGH OF GLEN RIDGE, NEW JERSEY

PWS ID#: 0713001, 0708001

Maintaining High Standards

Once again we are proud to present our annual water quality report. This report covers all testing performed between January 1 and December 31, 2009. The events of the past few years have presented many of us with challenges we could not have imagined. Yet, in spite of this we have maintained our high standards in an effort to continue delivering the best quality drinking water possible. There may be other hurdles in the future but know that we will always stand behind you and the drinking water we work diligently to provide.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions, we are always available to assist you.

MTBE in the News

MTBE (Methyl tert-Butyl Ether) belongs to a group of chemicals commonly known as fuel oxygenates. Oxygenates are added to gasoline to reduce carbon monoxide and ozone levels in the air caused by auto emissions.

MTBE contamination of drinking water sources may result from leaking fuel storage tanks, pipelines, refueling spills, consumer disposal of old gasoline, emissions from older marine engines, and, to a lesser degree, stormwater runoff and precipitation mixed with MTBE in the air. Currently, the primary concern about MTBE in drinking water is that it causes taste and odor problems. There are no data showing significant health risks of MTBE at low-exposure levels in drinking water; however, it is a potential human carcinogen at high doses.

Source Water Assessment

The New Jersey Department of Environmental Protection (NJDEP) completed Source Water Assessment Reports and Summaries for all public water systems in 2005. Further information on the Source Water Assessment Program can be obtained by logging onto NJDEP's source water Web site at 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 Montclair Water Bureau at (973) 744-4600.

What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.

According to the U.S. EPA, the average American uses about 100 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet, twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to www.h2oconserve.org or visit www.waterfootprint.org to see how the water footprints of other nations compare.

Lead and Drinking Water

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 Montclair Water Department is responsible for providing high-quality drinking water, but we 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, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Where Does My Water Come From?

The Township of Montclair and the Borough of Glen Ridge obtain their water from NJDWSC (North Jersey District Water Supply Commission).The Township of Montclair and the Borough of Glen Ridge are partners in the NJDWSC, which owns and operates the 29.6 billion-gallon Wanaque Reservoir and Treatment Plant and the 7-billion-gallon Monksville Reservoir.

The water is received by the Township of Montclair through its Grove Street Pumping Station and is pumped through Montclair. The Montclair system also includes three municipal wells, one in each of the three pressure zones.

The Borough of Glen Ridge has three interconnections with Montclair, through which it receives its water supply.

Questions?

For more information about this report, or for any questions relating to your drinking water please call Gary Obszarny, Director of Utilities, Licensed Operator, at (973) 744-4600.

Substances That Could Be in Water

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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater 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 stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

While your drinking water from the Montclair Water Bureau meets the U.S. EPA's standard for arsenic, it does contain low levels of arsenic. The EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES [1]

				Montclair Water Bureau		NJDWSC		Glen Ridge Water			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2009	15	0	4.28	2.43–7.35	NA	NA	NA	NA	No	Erosion of natural deposits
Arsenic (ppb)	2009	5	0	2.7	NA	0.2	ND–0.2	NA	NA	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2009	2	2	0.0501	NA	0.010	ND–0.010	NA	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2009	[4]	[4]	0.815	0.12–1.41	1.09	NA	0.358	0.10–0.94	No	Water additive used to control microbes
Combined Radium (pCi/L)	2009	5	0	1.16	0.48–1.67	NA	NA	NA	NA	No	Erosion of natural deposits
Fluoride (ppm)	2009	4	4	ND	NA	0.029	ND–0.029	NA	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2009	60	NA	31.92	15.7–53.5	33	31–36	20	10–31	No	By-product of drinking water disinfection
Mercury [inorganic] (ppb)	2009	2	2	ND	NA	0.038	ND–.038	NA	NA	No	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland
Methyl tert-Butyl Ether [MTBE] (ppb)	2009	70	NA	0.51	ND–0.51	NA	NA	NA	NA	No	Leaking underground gasoline and fuel tanks; Gasoline and fuel oil spills
Nitrate (ppm)	2009	10	10	2.575	ND–4.36	0.21	ND–0.21	NA	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2009	80	NA	53.6	35.5–99.89	61	53–80	37	18–51	No	By-product of drinking water chlorination
Total Coliform Bacteria (% positive samples)	2009	5% of monthly samples are positive	0	1.18	NA	0.55	NA	ND	NA	No	Naturally present in the environment
Total Organic Carbon (% removal)	2009	TT	NA	NA	NA	35.38	24.85–45.55	NA	NA	No	Naturally present in the environment
Turbidity[2] (NTU)	2009	TT	NA	NA	NA	0.15	ND–0.15	NA	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2009	TT	NA	NA	NA	100	NA	NA	NA	No	Soil runoff
Uranium (pCi/L)	2009	30	0	2.29	1.54–3.08	NA	NA	NA	NA	No	Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the communities

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	Montclair Water Bureau: AMOUNT DETECTED (90TH%TILE)	Montclair Water Bureau: SITES ABOVE AL/ TOTAL SITES	Glen Ridge Water: AMOUNT DETECTED (90TH%TILE)	Glen Ridge Water: SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2007	1.3	1.3	0.0535	0/30	0.057[3]	0/21[3]	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2007	15	0	1.8	0/30	9.8[3]	1/21[3]	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	RUL	Montclair Water Bureau: AMOUNT DETECTED	Montclair Water Bureau: RANGE LOW-HIGH	NJDWSC: AMOUNT DETECTED	NJDWSC: RANGE LOW-HIGH	EXCEEDANCE	TYPICAL SOURCE
Aluminum (ppb)	2009	200	73	ND - 219	25	NA	No	Erosion of natural deposits; Residue from some surface water treatment processes
Chloride (ppm)	2009	250	150	116 - 168	46.1	NA	No	Runoff/leaching from natural deposits
Color (Units)	2009	10	NA	NA	2	NA	No	Naturally occurring organic materials
Hardness [as CaCO3] (ppm)	2009	250	243.33	150–332	56	NA	No	Naturally occurring
Iron (ppb)	2009	300	ND	NA	11	NA	No	Leaching from natural deposits; Industrial wastes
Manganese (ppm)	2009	50	ND	NA	0.0009	NA	No	Leaching from natural deposits
pH (Units)	2009	6.5–8.5	7.7	7.6–7.8	8.01	NA	No	Naturally occurring
Sodium (ppm)	2009	50	26	21.7–30.6	24.7	NA	No	Naturally occurring
Sulfate (ppm)	2009	250	34.6	21.9–54.7	10.5	NA	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids [TDS] (ppm)	2009	500	601	NA	131	NA	Yes[4]	Runoff/leaching from natural deposits
Zinc (ppm)	2009	5	ND	NA	0.009	NA	No	Runoff/leaching from natural deposits; Industrial wastes

INITIAL DISTRIBUTION SYSTEM EVALUATION[5]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Montclair Water Bureau: AMOUNT DETECTED	Montclair Water Bureau: RANGE LOW-HIGH	Glen Ridge Water: AMOUNT DETECTED	Glen Ridge Water: RANGE LOW-HIGH	TYPICAL SOURCE
Haloacetic Acids [HAA]–IDSE Results (ppb)	2008	23.17	6–29.9	27.9	14–37.3	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–IDSE Results (ppb)	2008	40.66	2.2–65.3	44.5	38.6–47.3	By-product of drinking water disinfection

[1] Under a waiver granted on December 30, 1998, by the State of New Jersey Department of Environmental Protection, our system does not have to monitor for synthetic organic chemicals/pesticides because several years of testing have indicated that these substances do not occur in our source water. The SDWA regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals, and synthetic organic chemicals. Our system received monitoring waivers for synthetic organic chemicals and asbestos.

[2] Turbidity 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 turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU (and that no sample may exceed 1 NTU).

[3] Sampled in 2009.

[4] TDS was detected at a level exceeding the established state Recommended Upper Limit (RUL), which was set to protect against unpleasant aesthetic effects such as color, taste, odor, and staining of plumbing fixtures (e.g., tubs and sinks) and of clothing during laundering. There are no adverse health effects expected with this exceedance.

[5] We were required by the U.S. EPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is intended to identify locations in our distribution system that have elevated disinfection by-product concentrations. Disinfection by-products (e.g., HAAs and TTHMs) result from continuous disinfection of drinking water and form when disinfectants combine with organic matter that naturally occurs in the source water.

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL (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.

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (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.

MRDLG (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.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

RUL (Recommended Upper Limit): The highest level of a contaminant recommended in drinking water. RULs are set to protect the odor, taste, and appearance of drinking water.

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