

ANNUAL WATER QUALITY REPORT

Water testing performed in 2007



TOWN OF KEARNY
WATER DEPARTMENT

PWS ID#: 0907001

Meeting the Challenge

We are once again proud to present to you our annual water quality report. This edition covers all testing completed from January 1, 2007 through December 31, 2007. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal drinking water standards. We continually strive to adopt new and better methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please share with us your thoughts about the information in this report. After all, well-informed customers are our best allies.



Council Meetings

If you want to learn more about the Kearny Water Department, please attend any of our regularly scheduled town council meetings at the Town Hall, 402 Kearny Avenue, Kearny, New Jersey. The meetings are held on the second and fourth Tuesday of each month at 7:00 p.m.

Information on the Internet

The U.S. EPA's Office of Water (www.epa.gov/watrhome) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide information on many issues relating to water resources, water conservation, and public health. Also, the New Jersey Department of Health's Web site (www.state.nj.us) provides complete and current information on water issues in New Jersey, including valuable information about our watershed.

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.

Source Water Assessment

The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment report and summary for this public water system, which is available at www.state.nj.us/dep/swap/ or by contacting the NJDEP, Bureau of Safe Drinking Water, at (609) 292-5550. The sources were rated on their susceptibility to seven contamination categories (and radon). Those categories are listed below.

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 and that are both naturally occurring and man-made. Examples include nitrogen and phosphorus.

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

Pesticides: Man-made chemicals used to control pests, weeds, and funguses. Common sources include landscape applications 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 man-made. Examples include arsenic, asbestos, copper, lead, and nitrate.

Radionuclides: Radioactive substances that are both naturally occurring and man-made. Examples include radium and uranium.

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

Disinfection By-product Precursors: A common source is naturally occurring organic matter in surface water. Disinfection by-products are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material, for example, leaves, that are present in surface water.

The Source Water Assessment performed on our five sources determined the following:

Our five sources were rated “high” for pathogens, nutrients, inorganics, and disinfection by-product precursors.

All five sources were rated “medium” for volatile organic compounds.

All five sources were rated “low” for radon and radionuclides.

Pesticides were rated at “medium” for two sources and “low” for three sources.

NJDEP considered all surface water highly susceptible to pathogens; therefore, all sources received a high rating for the pathogen category. For the purpose of the Source Water Assessment Program, radionuclides are more of a concern for groundwater than for surface water. As a result, surface water intakes' susceptibility to radionuclides was not determined and they all received a low rating. If a system is rated highly susceptible for a contamination 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 initiate treatment if any contaminants are detected at frequencies and concentrations above allowable levels. If you have questions regarding the Source Water Assessment report or summary, please contact the Bureau of Safe Drinking Water at swap@dep.state.nj.us or (609) 292-5550.

Questions?

If you have any questions or concerns about your drinking water, please contact the Kearny Water Department at (201) 955-7406 or on the Web at www.kearnynj.org. For information on various water-related topics, free instructional materials, and directions to related water links, visit www.njajwa.org. The U.S. EPA's drinking water Web site is www.epa.gov/safewater, or you can contact the New Jersey Department of Environmental Protection (NJDEP), Bureau of Safe Drinking Water, at (609) 292-5550.

IDSE Sampling

Under the Stage 2 Disinfectants/Disinfection By-products Rule (D/DBPR), our public water system was 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. Beginning in 2012, the locations selected for the IDSE may be used for compliance monitoring under Stage 2 DBPR. Disinfection by-products are the result of continuous disinfection of your drinking water and form when disinfectants combine with organic matter that naturally occurs in the source water. Disinfection by-products are grouped into two categories: Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5). The U.S. EPA sets standards for controlling the levels of disinfectants and disinfectant by-products in drinking water, including both TTHMs and HAA5s.

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 your home's plumbing. The Kearny 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 two minutes before using the 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 at (800) 426-4791 or at www.epa.gov/safewater/lead.

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council (NRDC), bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25% of bottled water is actually just bottled tap water (40% according to government estimates).

The U.S. Food and Drug Administration (FDA) is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70% of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion of the NRDC study results, check out their Web site at www.nrdc.org/water/drinking/bw/exesum.asp.



Contamination from Cross-Connections

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand) causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Fertilizers, cesspools, or garden chemicals may contaminate garden hoses that are left lying on the ground. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed all industrial, commercial, and institutional facilities in the service area to make sure that all potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test each backflow preventer to make sure that it is providing maximum protection.

For more information, review the Cross-Connection Control Manual from the U.S. EPA's Web site at www.epa.gov/safewater/crossconnection.html. You can also call the Safe Drinking Water Hotline at (800) 426-4791.

Where Does My Water Come From?

The town of Kearny receives its water from the North Jersey District Water Supply Commission (NJDWSC). NJDWSC gets its water from two of the most pristine water supply reservoirs in the country, namely, the 29.6-billion-gallon Wanaque reservoir and the seven-billion-gallon Monksville reservoir. The Commission also operates two pump stations designed to pump 250 million gallons per day of water from the Pompton River and 150 million gallons per day from the Ramapo River into the Wanaque Reservoir, as needed. The water is then pumped through underground pipes to the town of Kearny.

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 table below shows only those contaminants that were detected in the water. Although all of the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance was present 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.

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							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2007	5	0	0.60	ND–0.60	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2007	2	2	0.00779	ND–0.00779	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	2007	4	4	0.095	ND–0.095	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2007	60	NA	32	28–35	No	By-product of drinking water disinfection
Mercury [inorganic] (ppb)	2007	2	2	0.055	ND–0.055	No	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland
Nitrate (ppm)	2007	10	10	0.50	ND–0.50	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2007	80	NA	51	46–57	No	By-product of drinking water chlorination
Total Organic Carbon (% removal)	2007	TT	NA	42.2	32.77–53.62	No	Naturally present in the environment
Tap water samples were collected from 30 sample sites throughout the community.							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	ACTION LEVEL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE ACTION LEVEL	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2006	1.3	1.3	0.0564	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2006	15	0	1	1	No	Corrosion of household plumbing systems; Erosion of natural deposits

IDSE				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Haloacetic Acids [HAA]- IDSE Results (ppb)	2007	28.8	6.1–36.7	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–IDSE Results (ppb)	2007	60.4	46.2–77.6	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 Safe Drinking Water Act regulations allow for monitoring waivers in order 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.

Definitions

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

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).

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