

2008 ANNUAL DRINKING WATER QUALITY REPORT
Warwick Township Municipal Authority
“Lititz” Water System
PWSID# 7360116

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

(This report contains very important information about your drinking water. Translate it, or speak with someone who understands it.)

WATER SYSTEM INFORMATION

This report shows our water quality and what it means. **If you have any questions about this report or concerning your water utility, please call the Warwick Township Municipal Authority (“WTMA”) office at (717) 627-2379.** We want you to be informed about your water supply. If you want to learn more, please attend any of our regularly scheduled meetings, held on the third Tuesday of each month at 7 p.m. at the Warwick Township Municipal Building, 315 Clay Road, Lititz, PA.

SOURCES OF WATER

The 3,076 connections to WTMA’s Lititz Water System are supplied by groundwater purchased from Lititz Borough through an Intermunicipal Agreement. The water enters the WTMA system through 13 entry points. The Borough’s water system is operated by Severn Trent Environmental Services, Inc. which prepares some of the statistics contained in this report. The Lititz Borough water supply consists of several wells located in Lititz Borough and Warwick Township.

WTMA and Lititz Borough continue in their efforts to protect our water sources by implementing the recommendations of the Wellhead Protection Programs adopted by both municipalities and approved by PA DEP.



MONITORING AND TREATMENT

The Lititz Water System is routinely monitored for contaminants in your drinking water according to federal and state laws. The following tables show the monitoring results for the period of **January 1 to December 31, 2008.** 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 our data is from prior years in accordance with the Safe Drinking Water Act. The date has been noted on the sampling results table.

DEFINITIONS AND ABBREVIATIONS

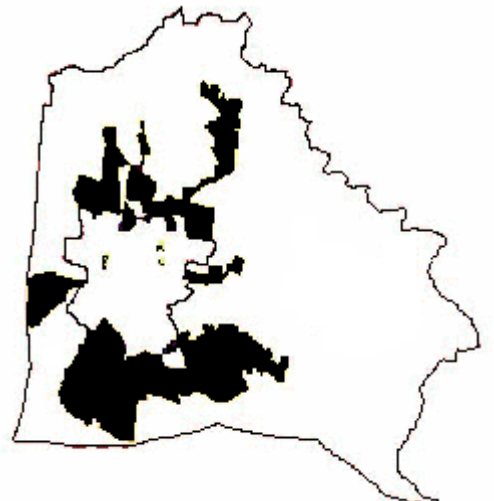
Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level (MCL) - 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 (MCLG) - 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.

Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of disinfectant is necessary for control of microbial contaminants.

Nephelometric Turbidity Unit (NTU) - Nephelometric turbidity unit is a measure of the clarity of the water. Turbidity in excess of



5 NTU is just noticeable to the average person.

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

Secondary Contaminants - Contaminants such as taste, color and odor are not considered to present a risk to human health at the SMCL. Since these contaminants are not health threatening at the SMCL, public water systems only need to test for them on a *voluntary* basis.

"Lititz" Water System Service

Secondary Maximum Contaminant Levels (SMCL) - EPA has established National

Secondary Drinking Water Regulations that set non-mandatory water quality standards. They are

established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations.

Secondary Maximum Contaminant Level Goal (SMCLG) - The EPA has not established goals for the SMCL. EPA believes that if these contaminants are present in your water at levels above these standards, the contaminants may cause the water to appear cloudy or colored, or to taste or smell bad. This may cause a great number of people to stop using water from their public water system even though the water is actually safe to drink. Secondary standards are set to give public water systems some guidance on removing these chemicals to levels that are below what most people will find to be noticeable.

mg/L - milligrams per liter

ppq - parts per quadrillion or picograms per liter

ppm - parts per million

ppt - parts per trillion or nanograms per liter

ppb - parts per billion or micrograms per liter ($\mu\text{g/L}$)

pCi/L picocuries per liter (a measure of radioactivity)

mrem/year - millirems per year (a measure of radiation absorbed by the body)

| MICROBIOLOGICAL CONTAMINANTS | | | | | | | | |
|------------------------------|--|------|------------------------|------------------------|----------------|-------------|-----------|--------------------------------------|
| Chemical Contaminant | MCL | MCLG | Highest Level Detected | Range of Detection s | Units | Sample Date | Violation | Sources of Contaminants |
| 3. Turbidity | TT - at least 95% of monthly samples < 0.3 NTU | n/a | .060 | .025-.060 100 % (a) | NTU | 2008 | No | Soil Runoff |
| Total Coliform Presence | 1 Positive Monthly Sample | 0 | 0 | 0 (b) | # Col / 100 ml | | No | Naturally present in the environment |

| INORGANIC CONTAMINANTS | | | | | | | | |
|---------------------------|--------|------|------------------------|----------------------|-------|-------------|-----------|---|
| Chemical Contaminant | MCL | MCLG | Highest Level Detected | Range of Detection s | Units | Sample Date | Violation | Sources of Contaminants |
| 10. Barium | 2 | 2 | .0424 | .0424 | ppm | 2004 | No | Discharge of drilling wastes Discharge from metal refineries Erosion of natural deposits |
| 13. Chromium | 100 | 100 | 7.3 | 7.3 | ppb | 2004 | No | Discharge from steel and pulp mills Erosion of natural deposits |
| 14. Copper | AL=1.3 | 1.3 | 1.2500 | .0101-1.2500 (c) | ppm | 2007 | No | Corrosion of household plumbing systems Erosion of natural deposits Leaching from wood preservatives |
| 16. Fluoride | 2 | 2 | 1.31 | 0-1.31 | ppm | 2008 | No | Erosion of natural deposits Water additive which promotes strong teeth Discharge from fertilizer and aluminum factories |
| 17. Lead | AL=15 | 0 | 9.8 | 0-9.8 (d) | ppb | 2007 | No | Corrosion of household plumbing systems Erosion of natural deposits |
| 19. Nitrate (as Nitrogen) | 10 | 10 | 7.72 | 5.80-7.72 | ppm | 2008 | No | Runoff from fertilizer use Leaching from septic tanks, sewage Erosion of natural deposit |

| DISINFECTANTS & DISINFECTANT BY-PRODUCTS | | | | | | | | |
|--|-----|------|------------------------|----------------------|-------|-------------|-----------|---|
| Chemical Contaminant | MCL | MCLG | Highest Level Detected | Range of Detection s | Units | Sample Date | Violation | Sources of Contaminants |
| 73. TTHM (total trihalomethans) | 80 | 0 | 17.8 | 1.7-6.5 | ppb | 2004-2008 | No | By-product of drinking water chlorination |
| 77. Haloacetic Acids (HAA5) | 60 | 0 | 4.6 | ND-3.0 | ppb | 2004-2008 | No | By-product of drinking water chlorination |
| 78. Chlorine (as Cl ₂) | 4 | 4 | 1.4 | .02-.98 | ppm | 2008 | No | Water additive used to control microbes |

| OTHER ORGANIC CONTAMINANTS | | | | | | | | |
|----------------------------|-----|------|------------------------|----------------------|-------|-------------|-----------|--------------------------------------|
| Chemical Contaminant | MCL | MCLG | Highest Level Detected | Range of Detection s | Units | Sample Date | Violation | Sources of Contaminants |
| Total Organic Carbon | TT | n/a | .7 | 0-.7 | ppm | 2004 | No | Naturally present in the environment |

| Secondary Contaminants | | | | | | | | |
|------------------------|------|--------|------------------------|----------------------|-------|-------------|-----------|--|
| Chemical Contaminant | SMCL | SMCL G | Highest Level Detected | Range of Detection s | Units | Sample Date | Violation | Noticeable Effects |
| Total Dissolved Solids | 500 | n/a | 533 | 380-533 | ppm | 2004-2008 | No | Hardness Deposits Colored Water Staining Salty Taste |
| Chloride | 250 | n/a | 109 | 60-109 | ppm | 2004-2008 | No | Salty Taste |

| Other Monitoring | | | | | | | | |
|----------------------|------|--------|------------------------|----------------------|-------|-------------|-----------|--------------------------------------|
| Chemical Contaminant | SMCL | SMCL G | Highest Level Detected | Range of Detection s | Units | Sample Date | Violation | Noticeable Effects |
| Total Alkalinity | n/a | n/a | 414 | 177-414 | ppm | 2004 | No | Naturally present in the environment |

- (a) In 2008, there was 100% compliance of the turbidity limits.
- (b) In 2008, there was 100% compliance with the total coliform limit. Not total coliform was present.
- (c) None of the samples exceeded the action level. There was 100% compliance with the copper limits.
- (d) None of the samples exceeded the action level. There was 100% compliance with the lead limits.

WHAT THIS MEANS

As you can see under the 'violations' heading in the first table, the "Lititz" water system had **no** violations in 2008. Severn Trent Environmental Services, Inc. has learned through monitoring and testing that a very small amount of a few constituents have been detected. All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or man made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. MCL's are set at very stringent levels for health effects. The EPA has determined that your water is safe at these levels. To understand the possible health effects described for many regulated constituents, a person would have to drink two liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect. Lititz Borough and Warwick Township Municipal Authority are proud that your drinking water meets or exceeds all Federal and State requirements.

NOTICE

In January 2008, the presence of a minty taste was detected for a period of several days. Severn Trent Environmental Services, Inc.'s immediate response was to take the wells located closest to pharmaceutical manufacturer McNeil-Johnson & Johnson off line and initiate an investigation into the source of the minty taste. As a result of a thorough investigation by Severn Trent Environmental Service, Inc., Lititz Borough, Warwick School District, McNeil- Johnson & Johnson facility personnel and the PA DEP, the source of the minty taste was traced to a broken process drain pipe under the concrete floor at the McNeil-Johnson & Johnson facility. Water samples were collected during the investigation and the lab results indicated the water quality supplied to the public was safe to drink. Upon the completion of repairs to the broken process drain line by McNeil-Johnson & Johnson, the wells located closest to their facility were placed back into service one at a time. Water samples were again collected and analyzed and the results continued to indicate the water quality supplied to the public was safe to drink.

In February 2008, a local laboratory contracted by Severn Trent Environmental Services, Inc. to sample and analyze drinking water within the Lititz Borough distribution system for total coliform and disinfectants residual, failed to report results of their January analysis to DEP in the required time frame. However, the results of the analysis did not detect any coliform and the disinfectant residuals were within an acceptable range. They are now reporting the results to PA DEP as required.

Also, while the nitrate levels were below the MCL of 10 ppm, the quarterly samples did show the nitrate levels range between 5.80 ppm and 7.72 ppm. Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short period of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

EDUCATIONAL INFORMATION

A Joint Wellhead Protection Task Force, which includes representatives and citizens of Lititz Borough and Warwick Township along with state and county officials, meets periodically to discuss water issues that affect both municipalities. This Committee has been in existence for more than eight years, initially working to create Wellhead Protection Programs which were officially approved by PA DEP on 9/12/02. Now that the recommendations listed in the original programs have been achieved, the Committee continues to look at positive steps that can be taken, both by our municipalities and citizens, to protect our water supply. One of the current initiatives is to continue to educate the public on what can be done to protect the water supply. Periodically, information about what you can do to enhance Wellhead Protection will be enclosed in your quarterly billing. We encourage you to read this information when it is provided and to do your part in protecting our water supply.

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 materials, 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 stormwater run-off, 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 can also come from gas stations, urban stormwater run-off 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 and DEP prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. FDA and DEP regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottle 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) 426-4701.