

## 2010 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 and are pleased to present this year's Annual Drinking Water Quality Report detailing the services we deliver to you every day. 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 3,100 connections to WTMA's Lititz Water System, located within the darkened areas of this Warwick Township map, 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, identified by (LB) next to the contaminant. The Lititz Borough water supply consists of several wells located in Lititz Borough and Warwick Township.

### 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, 2010**. 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.

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 microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

### 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.

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                  |  |      |                        |                     |                |             |           |                                      |
|---|--|------|------------------------|---------------------|----------------|-------------|-----------|--------------------------------------|
| Contaminant                                   | MCL  | MCLG | Highest Level Detected | Range of Detections | Units          | Sample Date | Violation | Sources of Contaminants              |
| Turbidity Combined Filter Effluent (LB)       | TT=at least 95% of monthly samples $\leq 0.3$ NTU                | n/a  | 0.280                  | .021 to 0.280 (a)   | NTU            | 2010        | No        | Soil Runoff                          |
| Maximum Turbidity Finished Water (LB)         | TT=at least 95% of monthly samples $\leq 0.3$ NTU                |      | 0.070                  | 0.025 to 0.070 (a)  |                |             |           |                                      |
| Maximum Turbidity Single Filter Effluent (LB) | TT = all samples must be $\leq 1.0$ NTU for a single measurement |      | 0.350                  | 0.013 to 0.350 (a)  |                |             |           |                                      |
| Total Coliform Presence                       | 1 Positive Monthly Sample  | 0    | 0                      | 0 (b)               | # Col / 100 ml | 2010        | No        | Naturally present in the environment |

| INORGANIC CONTAMINANTS  |     |      |                        |                     |       |             |           |   |
|---|-----|------|------------------------|---------------------|-------|-------------|-----------|---|
| Chemical Contaminant  | MCL | MCLG | Highest Level Detected | Range of Detections | Units | Sample Date | Violation | Sources of Contaminants   |
| Arsenic (LB)  | 10  | 0    | ND                     | <3.0                | ppb   | 2006 - 2010 | No        | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.                   |
| Fluoride (LB)   | 2   | 2    | 0.29                   | 0.29 to 0.29        | ppm   | 2006 - 2010 | No        | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Nitrate (as Nitrogen)   | 10  | 10   | 7.0                    | 5.7 to 7.0          | ppm   | 2010        | No        | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits                               |
| Nitrite (LB)  | 1   | 1    | ND                     | < 0.1               | ppm   | 2010        | No        | Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits.                              |
| 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 a short period of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider. |     |      |                        |                     |       |             |           |   |

| LEAD AND COPPER      |              |      |                                   |                                 |       |             |           |   |
|----------------------|--------------|------|-----------------------------------|---------------------------------|-------|-------------|-----------|---|
| Chemical Contaminant | Action Level | MCLG | 90 <sup>th</sup> Percentile Value | # Sites above AL of total sites | Units | Sample Date | Violation | Sources of Contaminants   |
| Copper               | 1.3          | 1.3  | 1.0                               | 0 of 10                         | ppm   | 2010        | No        | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives. |
| Lead                 | 15           | 0    | 5                                 | 0 of 10                         | ppb   | 2010        | No        | Corrosion of household plumbing systems; erosion of natural deposits                                    |

## INFORMATION ABOUT 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. WTMA 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 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 <http://www.epa.gov/safewater/lead>.

| DISINFECTANTS & DISINFECTANT BY-PRODUCTS |     |      |                        |                     |       |             |           |   |
|--|-----|------|------------------------|---------------------|-------|-------------|-----------|---|
| Chemical Contaminant                     | MCL | MCLG | Highest Level Detected | Range of Detections | Units | Sample Date | Violation | Sources of Contaminants                   |
| TTHM (total trihalomethanes)             | 80  | NA   | 8.8                    | 1.2 to 8.8          | ppb   | 2010        | No        | By-product of drinking water chlorination |
| Haloacetic Acids (HAA5)                  | 60  | NA   | 1.7                    | 1.7                 | ppb   | 2010        | No        | By-product of drinking water chlorination |
| Chlorine (as Cl <sub>2</sub> )           | 4   | 4    | 0.56                   | 0.30 to 0.56        | ppm   | 2010        | No        | Water additive used to control microbes   |

| OTHER ORGANIC CONTAMINANTS              |  |      |                        |   |       |             |           |   |
|---|--|------|------------------------|---|-------|-------------|-----------|---|
| Chemical Contaminant                    | MCL  | MCLG | Highest Level Detected | Range of Detections                         | Units | Sample date | Violation | Sources of Contaminants   |
| Synthetic Organic Chemicals (SOCs) (LB) | Various concentrations depending on chemical |      | ND                     | All SOCs tested were below detection limits | ppb   | 2010        | No        | Potential residue from pesticides, herbicide, insecticide, discharge from chemical factories, discharge from petroleum factories.   |
| Volatile Organic Chemicals (VOCs) (LB)  | Various concentrations depending on chemical |      | ND                     | All VOCs tested were below detection limits | ppb   | 2010        | No        | Potential discharge from industrial chemical factories, petroleum factories, textile-finishing factories, pharmaceutical factories, rubber/plastic factories, dry cleaners. |

| SECONDARY CONTAMINANTS      |      |       |                        |                     |       |             |           |  |
|-----------------------------|------|-------|------------------------|---------------------|-------|-------------|-----------|--|
| Chemical Contaminant        | SMCL | SMCLG | Highest Level Detected | Range of Detections | Units | Sample Date | Violation | Noticeable Effects                                       |
| Total Dissolved Solids (LB) | 500  | n/a   | 469                    | .378 to 469         | ppm   | 2010        | No        | Hardness; deposits; colored water; staining; salty taste |
| Chloride (LB)               | 250  | n/a   | 89.8                   | 59.6 to 89.8        | ppm   | 2010        | No        | salty taste  |

- (a) In 2010, there was 100% compliance with the turbidity limits.
- (b) In 2010, there was 100% compliance with the total coliform limit. No total coliform was present.
- (c) None of the samples exceeded the action level. There was 100% compliance with the lead and copper limits in Warwick Township.

A Source Water Assessment of the Lititz Borough wells, which supply water to the Lititz Borough Water Treatment Plant, was completed in July 2004 by the PA DEP. The Assessment has found that the wells are potentially most susceptible to industrial, residential and agricultural activities, accidental spills along roads and railways, auto repair shop activities, and dairy/egg laying operations. Overall, the Lititz Run Watershed has a medium to high risk of significant contamination. You can obtain a copy of the report's Executive Summary by contacting the WTMA office.

## WHAT THIS MEANS

As you can see under the 'violations' heading in the first table, the "Lititz" water system had **no** violations in 2010. We have 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.

## EDUCATIONAL INFORMATION

In accordance with our Wellhead Protection Program, approved by PA DEP in 2002, WTMA continues to encourage people to take positive steps that will protect our water supply. One initiative is to join with other organizations in supporting the Lititz Run Watershed Alliance's Water Day event for all Warwick School District fifth grade students. This educational event provides hands on activities for students to experience the importance of protecting our water supply. WTMA continues to look at positive steps that can be taken, both by our municipalities and citizens, to protect our 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. Persons interested in serving on the Wellhead Protection Committee should contact the Authority office.



2011 Water Day - 5<sup>th</sup> Grade Students tour the Wastewater Treatment Plant

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 bottled 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.**

In order to comply with the new Pennsylvania Tier-One Notification regulations, WTMA has contracted with Swift-Reach, Inc. to provide telephonic notifications to our customers for WATER EMERGENCIES. If you have not already done so, please use one of the following methods to ensure that you can be contacted during a water emergency:

- Include your phone number with your next payment
- Go to the web portal at [www.warwicktownship.org](http://www.warwicktownship.org), click on SwiftReach 911 in the upper right-hand corner to enter your information.
- Provide your phone number by e-mail to [WTMA@warwicktownship.org](mailto:WTMA@warwicktownship.org)
- Call us at 627-2379.
- If you have a dial "1" solicitation blocker on your land line, call \*58 from your home phone and follow the prompts to unblock our number (717) 627-2379.