

Dear Water Consumer:

The Pennsylvania Department of Military and Veterans Affairs are pleased to provide its customers with this 2015 annual drinking water report. This consumer confidence report is designed to inform you of the results of monthly, quarterly, and annual drinking water analyses, as well as any other pertinent information concerning the treatment and distribution of your drinking water.

This report is required by the Federal Environmental Protection Agency (EPA) and is provided to assist the consumer in making informed choices, which may affect their health. This report also serves to make the consumer aware of the efforts of this Department in assuring that the water meets all the requirements of the Safe Drinking Water Act.

Please see the attached 2015 Consumer Confidence Reports for Fort Indiantown Gap and the City of Lebanon Authority. As noted in the data tables, there were no drinking water violations in 2015. Please distribute to all employees that do not have e-mail access. To request paper copies of this report, please contact the DMVA Bureau of Environmental Management at 717-861-8181.

## 2015 ANNUAL DRINKING WATER QUALITY REPORT

PWSID #: 7380044 NAME: Fort Indiantown Gap

*Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, ó hable con alguien que lo entienda.*

### **WATER SYSTEM INFORMATION:**

This report shows our water quality and what it means. If you have any questions or would like to request a paper copy of this report please contact the DMVA Bureau of Environmental Management at 717-861-8181. We want you to be informed about your water supply.

### **SOURCE(S) OF WATER:**

The Fort Indiantown Gap Community Water System is a consecutive system, purchasing all water from the City of Lebanon Authority. All of our water supply is surface water from the Swatara Creek and/or the Christian E. Siegrist Reservoir. The raw water is treated at the City of Lebanon Authority's water treatment plant and requires no additional treatment prior to distribution, at Fort Indiantown Gap. The 2015 City of Lebanon Authority Consumer Confidence Report is attached.

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 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).

### **MONITORING YOUR WATER:**

We routinely monitor for contaminants in your drinking water according to federal and state laws. The following tables show the results of our monitoring for the period of January 1 to December 31, 2015. 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:**

**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 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 contaminants.

**Minimum Residual Disinfectant Level (MinRDL)** - The minimum level of residual disinfectant required at the entry point to the distribution system.

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

**Mrem/year** = millirems per year (a measure of radiation absorbed by the body)

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

**ppb** = parts per billion, or micrograms per liter (µg/L)

**ppm** = parts per million, or milligrams per liter (mg/L)

**ppq** = parts per quadrillion, or picograms per liter

**ppt** = parts per trillion, or nanograms per liter

**DETECTED SAMPLE RESULTS:**

<b>Chemical Contaminants</b>								
Contaminant	MCL in	MCLG	Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine	4	4	0.87	0.05 – 0.87	ppm	April, 2015	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	60	60	32.3	15 – 42.5	ppb	2015	N	By-product of drinking water Chlorination
Total Trihalomethanes (TTHMs)	80	80	55.2	26.6 – 78.6	ppb	2015	N	By-product of drinking water Chlorination

<b>Lead and Copper</b>							
Contaminant	Action Level (AL)	MCLG	90 <sup>th</sup> Percentile Value	Units	# of Sites Above AL of Total Sites	Violation Y/N	Sources of Contamination
Lead	15	0	3.3	ppb	1	N	Corrosion of household plumbing.
Copper	1.3	1.3	0.077	ppb	0	N	Corrosion of household plumbing.

<b>Microbial</b>					
Contaminant	MCL	MCLG	Highest # of Positive Samples	Violation Y/N	Sources of Contamination
Total Coliform Bacteria	1	0	0	N	Naturally present in the environment.

## ***EDUCATIONAL INFORMATION:***

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 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 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 and DEP prescribes 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* (800-426-4791).

### **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. 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>.



# 2015 ANNUAL DRINKING WATER QUALITY REPORT

## CITY OF LEBANON AUTHORITY

### LEBANON, PENNSYLVANIA

**City of Lebanon Authority Public Water System Identification Number: 7380010**

#### **Summary**

We are pleased to present to you the 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 to protect our water resources. We are committed to ensuring the quality of your water.

If you have any questions about this report or the Lebanon water system, please contact Jonathan R. Beers, Executive Director, City of Lebanon Authority, at (717) 272-2841 or [jbeers@lebanonauthority.org](mailto:jbeers@lebanonauthority.org). We want our customers to be informed about their water utility. If you want to learn more about the Lebanon water system, please attend any of our regularly scheduled Board meetings. They are held at 3:00 p.m. on the second Monday of each month at the Authority's office, located at 2311 Ridgeview Road in Lebanon or visit our website at [www.lebanonauthority.org](http://www.lebanonauthority.org).

In order to ensure the quality of your tap water, the U.S. Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water supply systems. Standards are set in two categories. Primary standards relate to public health. Secondary standards relate to aesthetic qualities, such as taste, odor, and color.

We are proud that your drinking water not only meets, but is better than Federal and State requirements. Through our monitoring and testing programs, some constituents have been detected; however, the EPA has determined that your water is safe at these levels for the general population.

Landlords, apartment managers, businesses, schools, and others are encouraged to share this Annual Drinking Water Quality Report with all water consumers at their respective locations. We thank you for your cooperation in distributing this important information.

Este informe contiene informacion muy importante sobre su agua beber. Traduzcalo o hable con alguien que lo entienda bien.

#### **Water Supply Sources and Distribution System**

All of our water supply is surface water from the Swatara Creek and/or the Christian E. Siegrist Reservoir, which has a total storage capacity of 1.2 billion gallons. Raw water from these sources is treated at the Authority's water treatment plant before being pumped to water customers in the distribution system. The Lebanon water system serves about 57,000 people through over 15,100 residential service connections. Water is also provided to commercial, industrial, institutional, and bulk customers, including Cornwall Borough, West Lebanon Township, the Village of Fredericksburg, the Indiantown Gap Military Reservation, and Pennsylvania American Water.

#### **Potential Contaminants**

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 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 byproducts of industrial processes and petroleum production, but can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or the result of oil and gas production and mining activities.

#### **Contamination Potential**

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or manmade. 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 (800-426-4791) or visiting the EPA Office of Water website at [www.epa.gov/OGWDW](http://www.epa.gov/OGWDW).

#### **Vulnerability**

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) or the EPA website at [www.epa.gov/OGWDW](http://www.epa.gov/OGWDW).

#### **Monitoring**

The City of Lebanon Authority routinely monitors for constituents in your drinking water according to Federal and State laws. The City of Lebanon Authority feeds gaseous ammonia and gaseous chlorine to form chloramines, in which it is used in our disinfection process. The following tables show our monitoring results for the period January 1 to December 31, of this past year. These tables show only the contaminants that were detected and the levels at which they were detected. There are many other contaminants that we tested for throughout this past year and previous years that were not detected.

Because the Authority is not required to sample for all contaminants every year, the data shown in the following tables are for the most recently collected sample for each contaminant. All other data shown in the tables are from samples collected in 2015. Remember that the presence of certain constituents does not necessarily pose a health risk. All drinking water may be reasonably expected to contain at least small amounts of some constituents.

#### **Lead in 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 City of Lebanon Authority 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 (800-426-4791) or the EPA website at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

#### **Notice of Reporting Violation**

During the past year, we are pleased to report that there were no reported violations of water quality limitations.

**Definitions**

In the following tables you will find some terms and abbreviations with which you might not be familiar. To help you better understand these terms, we've provided the following definitions:

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

- **Nephelometric Turbidity Unit (NTU)** - A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **Non-Detect (ND)** - Laboratory analysis indicates the constituent is not present.
- **Not Applicable (n/a)** - Does not apply.
- **Parts per billion (ppb) or Micrograms per liter (ug/l)** - One part per billion corresponds to 1 minute in 2,000 years, or a single penny in \$10,000,000. 1,000 ppb = 1 ppm.
- **Parts per million (ppm) or Milligrams per liter (mg/l)** - One part per million corresponds to 1 minute in 2 years, or a single penny in \$10,000. 1 ppm = 1,000 ppb.
- **Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- **<** - Less than the value indicated.

**TABLE 1 - DETECTED PRIMARY CONTAMINANTS**

Contaminant (Unit of measurement)	Violation (Y/N)	Level Detected	Range	MCLG/MRDLG	MCL/ MRDL	Likely Source of Contamination
Total Coliform Bacteria (Percent of monthly samples positive)	N	1.7% of samples positive	0 to 1.7%	0	5%	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present.
Turbidity (NTU)	N	100% of samples <0.1	0.04 to 0.06	n/a	TT = 95% of samples <0.3	Soil runoff.
Chlorine (Entry Point) (ppm)	N	0.62	0.62 to 1.98	4	4	Water additive used to control microbes.
Chlorine (Distribution System) (ppm)	N	1.39 (a)	1.24 to 1.54 (a)	4	4	Water additive used to control microbes.
Copper (ppm) (2013)	N	0.013 (b)	(c)	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Fluoride (ppm)	N	0.70 (d) (f)	0.66 to 0.74 (a) (f)	2 (e)	2 (e)	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Haloacetic Acids (HAA5) (ppb)	N	34.1 (g)	18.3 to 65.0 (h)	n/a	60	By-product of drinking water chlorination.
Lead (ppb) (2013)	N	0.0000 (b)	(c)	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits.
Nitrate (ppm)	N	0.22	n/a	10	10	Runoff from fertilize use; leaking from septic tanks, sewage; erosion of natural deposits.
Nitrite (ppm)	N	0.00	n/a	1	1	
Arsenic (ppm)	N	0.0000	n/a	n/a	0.010	Naturally present in the environment.
Total Organic Carbon (ppm)	N	2.4 (g)	1.9 to 3.2 (g)	n/a	TT <2.0	Naturally present in the environment.
Total Trihalomethanes (TTHMs) (ppb)	N	48.9 (g)	29.8 to 74.3 (h)	n/a	80	By-product of drinking water chlorination.

- (a) Monthly average values.
- (b) 90<sup>th</sup> percentile value.
- (c) No samples exceeded the Action Level (AL).
- (d) Annual average value.
- (e) State standard of 2 ppm is less than Federal standard of 4 ppm.
- (f) Fluoride is added to the water at the treatment plant.
- (g) Running annual average value.
- (h) Range includes samples collected for special monitoring, which are not included in the "Level Detected" Running Annual Average value used for compliance determination

**TABLE 2 - DETECTED SECONDARY CONTAMINANTS**

Contaminant (Unit of measurement)	Violation (Y/N)	Level Detected (a)	Range (b)	Recommended Limit (c)
Alkalinity (ppm)	N	24	20 to 35	n/a
Aluminum (ppb)	N	48	30 to 70	200
Hardness (ppm)	N	48	44 to 54	Soft Water < 75 Hard Water >150
Iron (ppb)	N	28	20 to 40	300
Manganese (ppb)	N	7	0 to 10	50
pH	N	9.4 (d)	9.2 to 9.8 (d)	6.5 - 8.5
Sulfate (ppm) (2014)	N	29.0	n/a	250

- a) Annual average value.
- (b) Monthly average values.
- (c) Recommended limits on compounds that might be a nuisance to the customer. These compounds affect aesthetic quality (appearance, taste, odor, etc.), but do not pose a health risk.
- (d) A higher pH is maintained to help control corrosion in the distribution system mains and is approved by the State Dept of Environmental Protection.

Contaminant	Minimum Disinfection Residual	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Entry Point Disinfection Residual 0999	0.2	0.62	0.62 to 1.52	ppm	02/15/2015	N	Water additive used to control microbes

**Source Water Assessment Public Summary**  
**Lebanon Water Authority**  
*Seigrist Dam and Swatara Creek Intakes*

**Introduction**

As required by the 1996 Safe Drinking Water Act, the Pennsylvania Department of Environmental Protection (Pa. DEP) is completing assessments of potential contaminants that may degrade the raw water quality of public drinking water sources. This summary of information has been provided to support local and state efforts to preserve raw water quality of the Lebanon Water Authority's water sources. This assessment pertains to the Swatara Creek Watershed, where Lebanon Water Authority's drinking water sources are located. This assessment is of the source water, not the finished drinking water distributed by Lebanon Water Authority.

**Drinking Water Sources**

Lebanon Water Authority treats water from 2 sources – the Lebanon Reservoir (Christian E. Seigrist Dam) and Swatara Creek. The primary source is the Lebanon Reservoir, which is fed by Fishing Creek and Evening Branch. The area around the Seigrist Dam intake is 97 percent forested, 2 percent of the land is disturbed, and the remaining 1 percent is divided between agricultural lands and water. The area around the Swatara Creek intake is 71 percent forested, 25 percent agricultural land, 1 percent water, and 4 percent of the land is developed or disturbed. An average of 7 million gallons of water is withdrawn from the intakes daily. The Lebanon Authority's distribution system serves approximately 57,000 people in the City of Lebanon and surrounding municipalities in Lebanon County.

**Water Quality and Water Treatment Information**

Raw water is filtered and treated with chlorine for disinfection, prior to being distributed to customers. Water quality testing is continuously performed by the Lebanon Water Authority. Additional information about treated water quality can be obtained from Lebanon Water Authority's *Annual Water Supply Report*.

**Evaluation of Significant Potential Sources of Contamination**

This assessment addresses contaminants that may enter the water drawn from the Lebanon Reservoir and

Swatara Creek before being treated at Lebanon Water Authority's plant. The contaminants evaluated in this assessment include regulated discharges and non-point sources of pollution. The tables below describe the significant potential sources of contamination. Each source has been given a qualitative susceptibility rating (A = highest priority and F = lowest priority) according to its potential to impact the water supply source. For a complete listing of sources, refer to the Source Water Assessment and Protection (SWAP) Report for the Lebanon Water Authority.

**Protection Priority for the Swatara Creek Intake**

Potential Sources of Contamination	Contaminants of Concern	Protection Priority
Agricultural Activities	Nitrogen, phosphorous, microbiological pathogens	A
Urban Runoff	Metals, nitrates, VOCs and SOCs	A
Sewage Discharges	Nitrogen, phosphorous, microbiological pathogens	B
Industrial Discharges	Oil and grease, metals, nitrates/nitrites	B
Gas Stations, Truck Terminals, Auto Repair	Oil and grease, metals, VOCs and SOCs	B

**Protection Priority for Seigrist Dam Intake**

Potential Sources of Contamination	Contaminants of Concern	Protection Priority
Acid Mine Drainage	Metals	B
Roads	Metals and SOCs	C
Pipeline	Petroleum hydrocarbons, VOCs	D
Agricultural Activities	Nitrogen and phosphorous	D

As indicated above, agricultural activities and urban runoff are the most significant potential sources of contamination to the Swatara Creek. Fertilizer and pesticide use could contribute nitrogen and phosphorous to the creek, and the frequency of road crossings above the Swatara Creek intake poses a concern due to the possibility of spills along the major

interstates. An abundance of abandoned mines are located in the northern section of the watershed, which may contribute high concentrations of metals to the Lebanon Reservoir.

However, no contaminants are found in concentrations that require the Lebanon Water Authority to alter their treatment procedures.

#### *Ongoing Watershed Protection Activities*

Industrial discharges into the Swatara Creek and its tributaries are addressed by state and federal regulations. The Swatara Creek Watershed Association and several sub-watershed groups are actively involved in addressing important issues throughout the watershed. There is also a Comprehensive Water Resources Study in progress for the Swatara Creek Watershed to address water quality, water use, water supply, and land use issues. This study will also offer potential solutions to water resource problems. Remediation efforts for acid mine drainage are also underway in the northern sections of the watershed.

#### *Source Water Protection Needs*

Based on this assessment, several critical areas within the watershed require attention to reduce the potential for nutrient concentrations to enter streams. Emphasis should be placed on addressing agricultural activities, in order to diminish the nitrogen and phosphorous concentrations that may contaminate surface streams in the Swatara Creek Watershed.

#### *Additional Information*

The final SWAP report for the City of Lebanon Water Authority's intakes at Siegrist Dam and on the Swatara Creek are available through the Pa. DEP.