



1053 SPRUCE ROAD * P.O. BOX 3348 * ALLENTOWN, PA 18106-0348
610-398-2503 * FAX 610-398-8413
email: service@lehighcountyauthority.org

MEMORANDUM

TO: LCA Board of Directors
FROM: Liesel Gross, CEO
DATE: February 7, 2022
RE: Emmaus Consecutive Division – PFAS Contamination

Attached: Public Notice – January 10, 2022
Memo to Borough of Emmaus – January 25, 2022

In December 2021, Lehigh County Authority learned that two drinking water supply wells in the Borough of Emmaus had test results indicating levels of Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA) (collectively known as “PFAS”) above the Lifetime Health Advisory level established by the U.S. Environmental Protection Agency (EPA). Contaminants in the PFAS category are currently not regulated, although there has been significant study and concern raised about PFAS in drinking water over the years. Additional information on PFAS has been prepared by the Agency for Toxic Substances and Disease Registry and is available here: <https://www.atsdr.cdc.gov/pfas/index.html>.

Due to the current unregulated status of PFAS, no specific action is required to address the issue beyond public notice. However, the Borough is actively seeking a solution to ensure public health is not at risk.

This issue is a concern to LCA due to the configuration of our Emmaus Consecutive Division, in which LCA purchases water from the Borough to supply drinking water to 417 homes located outside the Borough boundaries. These customers live in various locations in Upper Milford, Lower Macungie and Salisbury townships. Upon receipt of the notice from the Borough of Emmaus about the PFAS concern, LCA issued the attached public notice to its 417 Emmaus Consecutive Division customers.

In addition to notifying our customers, LCA began discussions with the Borough about its plans to address the water supply. Through these discussions, we learned that the Borough has taken one well offline so that it is no longer supplying water from this source to the Borough residents and LCA customers. The Borough has investigated the source of the PFAS contamination and linked it back to a leak of fire-fighting foam stored at its fire department training facility. The Borough is investigating solutions to address the water quality issue, including treatment options and alternative supply options.

To support the Borough’s investigation, LCA conducted a preliminary review of possible interconnections with LCA systems in the vicinity of the Borough. A copy of LCA’s preliminary findings is attached, and discussions are ongoing.

What is an EPA Lifetime Health Advisory?

EPA develops health advisories to provide information on contaminants that can cause human health effects when they are found in drinking water. EPA’s advisories are non-enforceable and non-regulatory. A “Lifetime Health Advisory” is used to describe health risks to individuals who consume two liters of water per day, every day, for a period of 70 years.

Every drop matters. Every customer counts.



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EMMAUS CONSECUTIVE DIVISION CUSTOMERS IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

ENVIRONMENTAL PROTECTION AGENCY (EPA) LIFETIME HEALTH ADVISORY EXCEEDANCE

**ESTE INFORME CONTIENE INFORMACIÓN IMPORTANTE ACERCA DE SU AGUA POTABLE.
HAGA QUE ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.**

Water Purchased from the Borough of Emmaus Has Levels of Perfluorooctane sulfonate (PFOS)/ Perfluorooctanoic acid (PFOA) Above EPA Lifetime Health Advisory Levels.

Lehigh County Authority (LCA) purchases all water for Emmaus Consecutive Division customers from the Borough of Emmaus, and it is important for you to be aware of this water quality issue. LCA recently learned that on October 21, 2021, the Borough received testing results that showed two of five wells in their system exceeded the EPA Lifetime Health Advisory Level of 70 parts per trillion (70 ng/L) for PFOS/PFOA. The Borough is responsible for all water quality testing of their wells.

What are PFOS and PFOA?

PFOS and PFOA are man-made chemicals that are part of a larger group referred to as perfluoroalkyl substances (PFAS). Because these chemicals have been used in consumer products, such as non-stick cookware, stain resistant coatings used on carpet and upholstery, water resistant clothing and cleaning products, most people have been exposed to them. PFOS is also a chemical used in firefighting foam.

According to their notice, PFOS/PFOA were found at both Well # 1 and Well # 2 within Emmaus Borough. According to notification from the Borough, Well # 1 tested at a slightly elevated level of 111 ng/L per tests conducted by the Borough. Well # 2 tested at 456.4 ng/L per tests conducted by PA Department of Environmental Protection (PA DEP) and at 700 ng/L per tests conducted by the Borough.

What happened? What was done?

The Borough of Emmaus has investigated the problem and discovered the source of the PFOS and PFOA at the Fire Training Facility located near Well # 2, and they are taking action to address the problem.

Well # 2, which was producing the high levels of PFOS and PFOA, was taken off-line and will not be used to supply water to the public until a new treatment system able to remove them is in place. This a new problem discovered late in 2021. Earlier tests conducted by the Borough in 2020 showed no evidence of PFOS or PFOA at these higher levels.

What does this mean?

This is not an immediate risk. If it had been, you would have been notified immediately. However, exposure to PFOS and PFOA over certain levels may result in adverse health effects, including developmental effects to fetuses during pregnancy or to breastfed infants (e.g. low birth weight, accelerated puberty, skeletal variations), cancer (e.g. testicular, kidney), liver effects (e.g. tissue

damage), immune effects (e.g. antibody production and immunity), thyroid effects and other effects (e.g. cholesterol changes) The EPA calculates health advisory levels to offer a margin of protection against adverse health effects to the most sensitive populations: fetuses during pregnancy and breastfed infants.

What should I do?

Talk to your doctor if you have health concerns related to this information. You do not need to use an alternative (e.g., bottled) water supply, per PA DEP.

What is LCA doing?

LCA will work with the Borough to be sure you receive information about your water quality as this situation is being addressed.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

For more information, please contact the LCA Customer Care Team at 610-398-1444 or email us at service@lehighcountyauthority.org.



LEHIGH COUNTY AUTHORITY

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MEMORANDUM

Date: January 25, 2022

To: Shane Pepe, Borough Manager, Borough of Emmaus
From: Liesel Gross, CEO, Lehigh County Authority
Re: Water Supply Options for Borough of Emmaus

Background

It was recently discovered that the Borough of Emmaus water supply had experienced high levels of PFOA/PFOS due to a contamination incident. This incident affects two of the Borough's five water supply sources, and notice was issued to Borough residents as well as 417 Lehigh County Authority (LCA) water customers who receive water purchased from the Borough system. The Borough's notice indicated a filtration system would be placed in service to address the issue.

LCA's water system is extensive, and some water infrastructure exists in close proximity to the Borough. As a result of this incident, our staff has conducted a very preliminary review of opportunities to supply water to the Borough from the LCA system. This information is being provided as a courtesy for your consideration, and we invite you to contact us if you'd like to explore these options further.

Please rest assured that if the Borough has definitively determined that the filtration option is the best course to meet the Borough's and LCA's customer needs, we trust in your judgement and simply request open communication about the project as it moves forward.

The following two sections of this memo were provided to me directly by LCA's staff engineers.

Water Modeling

Several locations were investigated for an interconnection where the LCA systems abut the Emmaus system. To support this investigation, the following information was obtained from DEP's Drinking Water Reporting System website for the Emmaus Borough public water system: average production - 1,490,933 gpd, maximum production - 2,423,200 gpd, storage capacity - 2,560,000 gal. Additionally, the main Emmaus system has an HGL (hydraulic grade line) of approximately 646.5'. It was assumed that the interconnection should be sized to supply the average day demand of 1.5 mgd (1042 gpm). The maximum day and emergency (fire) flows would come from storage.

LCA's water system hydraulic model was run to examine locations for a possible interconnection. The following table summarizes our findings.

Location	System	Comments
Fernor St & 31 st St SW	LCA Allentown Division - 28 th St Zone	Existing pump station requires 860 gpm+ additional capacity, main extension with meter pit. HGL appears very similar in both systems.
31 st St SW & Lehigh St	LCA Allentown Division - Main Zone	Requires new pump station with 140' pump head and main extension.

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Location	System	Comments
31 st St SW & W Emmaus Ave	LCA Allentown Division - Main Zone	Similar requirements as 31 st St SW & Lehigh St.
Olympic Dr & Indian Creek Rd	LCA Suburban Division	Requires new pump station with 80' pump head and main extension with creek crossing.
Lower Macungie Rd & Macungie Rd	LCA Suburban Division	Requires new pump station with 57' pump head and main extension with creek crossing and Turnpike crossing.

The attached maps show the locations investigated.

Findings

It appears the existing pump station in the Allentown Division's 28th St Zone cannot serve Emmaus without a major upgrade or a complete replacement of the station, which may be cost-prohibitive.

The remaining two options for service from the LCA's Allentown system are connections to a 12" waterline in 31 St SW. Although there are newer mains at Lehigh St, a connection near W Emmaus Ave is much closer to the Borough. Note that City approval would be needed for an interconnection, whether temporary or permanent.

Connection to LCA's Suburban Division involves larger pumps, as well as potentially longer main extensions with a creek crossing.

While a connection to LCA's Allentown Division appears to be potentially more cost-effective, this is not a detailed evaluation. No detailed site investigations were performed, and any location selected for the interconnection would be subject to all state and local zoning and building permit requirements. Sufficient land, whether fee simple or easement, must be obtained for the pump station.

Providing a partial supply through more than one interconnection requires additional investment and was not further considered as sufficient supply is available from any of the locations investigated.

A high-level cost estimate can be provided upon request if any of the conceptual options described in this memo are of interest to the Borough.

Conclusion

I am hopeful the information shared in this memo is helpful and illustrates LCA's commitment to collaborating with the Borough in any way that supports our shared goals of providing high quality service to our community. If you'd like to discuss this topic, or any other ways that LCA can better support the Borough's goals related to water or sewer service, please contact me!



