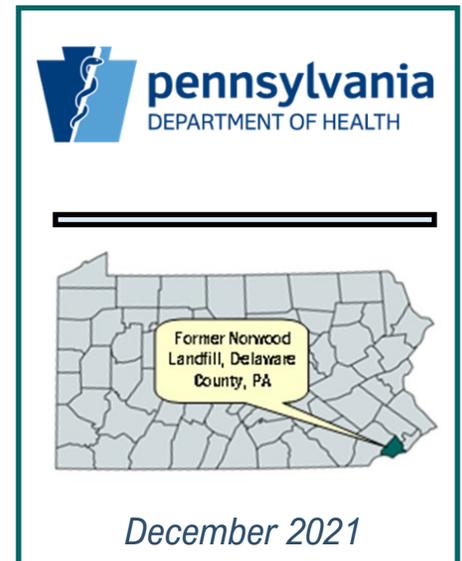


Norwood Health Assessment Report Status Update - Dec. 2021

Norwood Borough, Delaware County, PA



The Pennsylvania Department of Health (PADOH) is evaluating the U.S. Environmental Protection Agency (EPA) sampling data of residential and non-residential locations at and near the former Norwood landfill to determine if detected chemical concentrations could potentially harm people's health. This document describes PADOH's approach to assessing the health impact of the former landfill and provides a status update on the report.

How is PADOH evaluating EPA's data?

- The PADOH first determines whether an exposure pathway exists. An exposure pathway describes how people are or may be exposed to a chemical from an environmental release. People are primarily exposed to a chemical by breathing, eating or drinking, or by skin contact.
- Once PADOH determines that an exposure pathway exists, it compares EPA's sampling data to health-based screening levels for soil, sediment, or water, which are set by the Agency for Toxic Substances and Disease Registry (ATSDR), EPA, or another relevant agency. If a chemical exceeds a screening level, PADOH evaluates it further. Exceedance of a screening level does not necessarily mean there is a health concern.

What happens when PADOH evaluates a chemical further?

- For chemicals that exceed screening levels, PADOH estimates a **daily human exposure level** to that chemical and compares it to reference health effect levels established by ATSDR or EPA. These reference levels are the estimated amounts of a chemical a person can eat, drink or breathe each day without experiencing negative health effects. They are meant to be protective for the health of the general population as well as for certain people who are usually more sensitive to chemicals, such as young children, older adults, or someone who is nutritionally- or immuno-compromised. If adverse health effects are possible, PADOH makes recommendations on how to reduce or eliminate exposures.

How does PADOH determine if chemicals detected at Norwood pose a cancer risk?

- For chemicals exceeding the screening levels that are known or suspected to cause cancer, PADOH estimates cancer risk. This is the theoretical risk of the number of people who could get cancer if exposed to the same amount of a substance during their lifetime. The actual (true) increased risk is unknown and may be as low as zero. An example of an increased lifetime cancer risk from exposure to a chemical might be "one in one-hundred thousand." This would indicate that based on the levels of a chemical detected at Norwood, there could be one increased cancer case per one hundred thousand people.
- Generally, cancer risk estimates indicate possible risk over existing background lifetime cancer risk in a population. In the U.S., background lifetime cancer risk is approximately 4 in 10 Americans. Cancer takes many years to develop before it's diagnosed. Some people with known risk factors may not develop cancer; others may develop cancer even without a known risk factor. Multiple risk factors increase someone's risk of developing cancer, including age, genetics (e.g., family history), lifestyle (e.g., smoking, diet, physical activity), and environmental factors (e.g., biological, physical, or chemical agents). Given these factors and many limitations, it is often difficult to understand exactly why one person develops cancer and another person does not.

How will PADOH determine if cancer rates were higher among Norwood residents?

- PADOH will analyze cancer rates between 1985-2017 to determine if cancer rates for selected cancers were significantly higher (meaning, less likely to have occurred by chance) at Norwood compared to rates seen in Delaware County and Pennsylvania overall. PADOH is also reviewing these rates at Norwood, Prospect Park, and Folcroft Boroughs compared to Delaware County and the state. PADOH will use the PA Cancer Registry for this analysis. However, except for age, cancer rate analysis does not account for other risk factors, such as family history, behaviors (smoking), etc., which are known to influence cancer rates. Information on these risk factors are not collected as part of the PA Cancer Registry.

How will PADOH determine if multiple sclerosis (MS) or related autoimmune diseases were higher among Norwood residents?

- Currently, Pennsylvania does not have a MS registry similar to a Cancer Registry to conduct an MS rate analysis. The exact cause for MS is unknown. The most common risk factors include low vitamin D, infection of Epstein Barr-Virus, and smoking. MS is more common in women than men and in people between the ages of 20 and 40 years.
- There are no definitive studies at this time showing that MS is caused by exposure to environmental contamination. PADOH will compare Norwood exposure estimates to levels that have caused immune system and neurological effects in scientific studies. However, this evaluation **cannot** associate a specific chemical to the cause for MS.

Is PADOH addressing chemical exposures from the garden or fish consumption?

- Crop and backyard garden samples were not taken. However, garden vegetable uptake of chemicals from soil is low. Several techniques for urban gardening can be used to further reduce possible exposures. These include a) using raised garden beds and pots filled with clean soil, b) mixing additional compost into in-ground gardens, and c) washing produce, peel root crops and outer leaves of leafy vegetables before eating.
- As part of its analysis PADOH will assess a scenario of tending to one's garden (although it won't assess the ingestion of crops due to lack of sampling).
- Darby Creek fish were not sampled. A [Pennsylvania Fish Consumption Advisory](#) is in effect for the Darby Creek Basin for channel catfish, which recommends 1 meal per month due to polychlorinated biphenyls (PCBs). There is also a Consumption Advisory for the tidal portions of all Pennsylvania water bodies that feed the Delaware River Estuary for several other species of fish.

What is the status of PADOH's report and next steps?

- PADOH is preparing a Health Consultation document of the EPA's environmental data. When it is finalized PADOH will make the report publicly available. PADOH and ATSDR will continue to assist stakeholders when requested to evaluate additional environmental or health data from the former Norwood landfill area and will continue to review and respond to community health questions about the site.

If you have questions about the information of this fact sheet, please contact the Pennsylvania Department of Health at:
env.health.concern@pa.gov