

# How Natural Gas Pollution Is Affecting the Health of Our Families



## Who We Are

HealthFirstPA is a coalition of health care professionals, public health advocates, parents, and faith leaders who defend children and other vulnerable populations from the health risks posed by harmful pollution from natural gas development. Our kids, grandkids, and families all need protections. That's why we do all that we can to ensure proper safeguards from the pollution that leaks from Pennsylvania's natural gas production.



## The Problem

### ***The gas industry is releasing high rates of pollution***

The oil and gas industry emits methane and volatile organic compounds (VOCs) throughout the entire natural gas development process. Methane, the main component of natural gas, is a potent greenhouse gas contributing to climate change. VOCs, such as benzene, can cause cancer and contribute to ozone or smog that can trigger asthma attacks. The good news is that by implementing strong pollution standards, the industry can reduce methane emissions by 40-50% *at no net cost* – protecting the health of families and communities.

### ***Natural gas pollution impacts the health of Pennsylvanians***

Nearly 311,000 children attend 1,118 schools within a half mile of oil and gas facilities, exposing them to methane and other toxins. Overall, more than 1.5 million Pennsylvanians live in this danger zone.

Pollution from natural gas extraction and production raises the risk of numerous health issues among Pennsylvania's children, pregnant women, and other vulnerable populations.

According to peer-reviewed medical research, these are the threats to life and health for the commonwealth's most vulnerable residents, who live close to natural gas development:

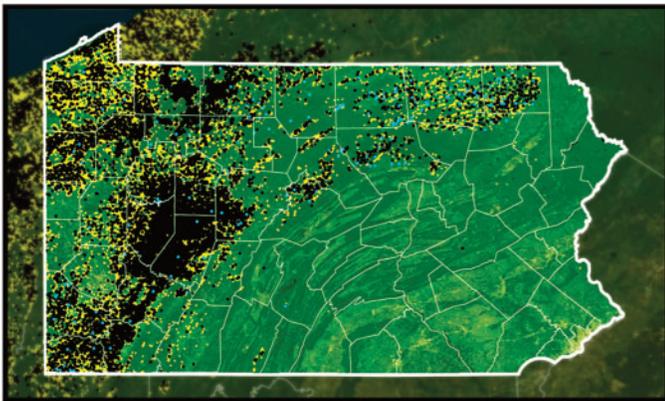
- A 25% increase in low birth weight infants and significant reductions in infant health, which predisposes individuals to lifelong health concerns
- Increased brain, spine, or spinal cord birth defects
- Increased congenital heart defects
- Up to 25% increase in children's asthma
- Up to 86 times greater exposure to known cancer-causing chemicals such as benzene and toluene for those living approximately 1 mile or less from unconventional drilling sites
- Increased anxiety and depression in pregnant women



## Natural gas air pollution travels long distances

You don't have to live near a gas well to feel the health impacts of the natural gas industry.

Pollution from natural gas operations can travel long distances compounding existing air quality problems and increasing ozone or smog, resulting in tens of thousands of additional asthma attacks each year. According to the American Lung Association, air quality in the cities of Philadelphia, Pittsburgh, Johnstown, Lancaster, Harrisburg, and York ranks them among the 25 most polluted in the U.S. Today, more than 236,000 children and 945,000 adults in Pennsylvania have asthma.



*The black areas indicate oil & gas facilities operating in and around Pennsylvania. The yellow areas shows the extent of the 5-mile threat radius surrounding these facilities.*

## Natural gas sites release methane, a harmful greenhouse gas

Unfortunately, that's not all the bad news for our health. Methane is a powerful greenhouse gas that is more than 86 times more effective at trapping heat than carbon dioxide. Methane is responsible for 25% of the humanly produced

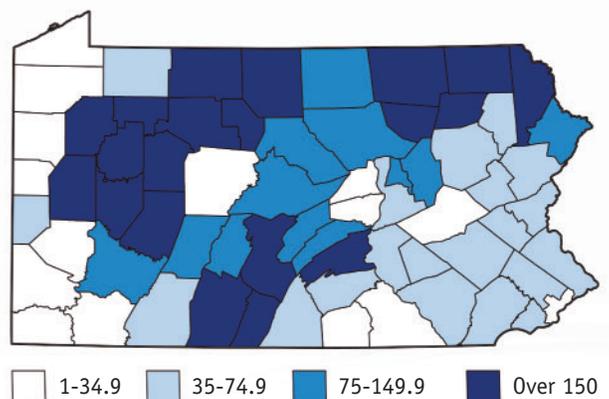
warming we are experiencing today, resulting in more extreme weather events such as flooding along with hotter temperatures.

Pennsylvania, like the rest of the world, is getting warmer – and it's affecting our health. Higher temperatures make smog even worse, further threatening the wellbeing of children and adults with respiratory or cardiac diseases. Heat-related deaths are also expected to increase as the mercury rises. It is predicted that a 2.7°F temperature increase will result in 800 deaths in Philadelphia alone.

At the same time, wetter conditions coupled with increased temperatures are creating the ideal environment for insects such as mosquitoes, as well as ticks that carry illnesses like Lyme disease, to become more prevalent. Our state has the largest incidence of the disease in the U.S., with over 10,000 reported cases. However, most medical research, including studies from the Center for Disease Control, suggest the reported cases represent only 10% of the total infections.

## LYME DISEASE AVERAGE ANNUAL INCIDENCE

Average annual cases per 100,000 population, 2013-2017



# What You Can Do for Your Family



- ✓ Defend children's health by being aware of the concerns and acting accordingly.
- ✓ Get involved with your neighbors, faith leaders, and health care professionals and share your concerns.
- ✓ Call and write to your state representative, senators, and Pennsylvania's Department of Environmental Protection and Department of Health, and urge them to defend our kids by implementing the following changes:
  - Set strong pollution rules for both unconventional (fracking) and conventional drilling
  - Require safe buffer zones between drilling sites and schools, playgrounds, streams, housing developments, and hospitals
  - Require reporting of spills, safety violations, or other actions or accidents that threaten public health

**HealthFirstPA**

For more information, including citations for all research referenced in this document, go to

**[www.HealthFirstPA.org](http://www.HealthFirstPA.org)**

or email **[info@HealthFirstPA.org](mailto:info@HealthFirstPA.org)**