Assessing Community Exposure to Perfluorochemicals (PFCs)

What was the issue?

In May 2014, a drinking water well on the Pease Tradeport tested high for levels of perfluorooctane sulfonic acid (PFOS), perfluorooctanoic acid (PFOA), and perfluorohexane sulfonic acid (PFHxS). In response to community concerns about exposure to these chemicals, the NH Department of Health and Human Services (DHHS) conducted blood testing between April and October 2015 during which 1,578 individuals had their blood tested for various PFCs.

Beginning in March 2016, PFOA was also discovered at high levels in private drinking water wells in several Southern NH communities around the Saint-Gobain Performance Plastics facility in Merrimack, as well as at lower levels in the Merrimack Village District public water system.

What did the NH Tracking Program do?

The NH Environmental Public Health Tracking Program, working with DHHS, Division of Public Health Services (DPHS) and the NH Public Health Laboratory, provided a second round of blood tests for individuals who lived on, worked at, or attended childcare at the Pease Tradeport. Blood tests were also provided for residents in Southern NH communities where PFCs contaminated private drinking water wells. As of October 2017, serum samples from 477 individuals were tested by DPHS.

The Tracking Program was also involved in the design and implementation of a community exposure assessment, testing a random sample of individuals who were customers of the Merrimack Village District (MVD) public water system, to address community concerns about possible low-level exposure to PFCs. Tracking staff analyzed results to determine the extent of exposure, including evaluating the relationship between water consumption, residential history, and serum PFC levels.

How did this improve public health?

The Tracking Program responded to communities impacted by contaminated private drinking water wells and public drinking water systems. The blood testing characterized PFC serum levels in communities with low-level, non-occupational exposure. This response lays the groundwork for a statewide biomonitoring effort to support public health actions in communities facing contamination from PFCs and other pollutants of concern. Aggregate PFC blood test results from each testing location are publicly available on the NH Health WISDOM data portal.

“Blood test results will provide people with helpful information about their levels of exposure so they and their healthcare providers can be proactive about their health.”

Dr. Ben Chan, NH State Epidemiologist