

GenX Exposure Study

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https://chhe.research.ncsu.edu/coec/projects/genx/the-genx-exposure-study/

April 10, 2018

Dear [INSERT HOUSEHOLD PARTICIPANT(S)],

Thank you for participating in the GenX Exposure Study. This study aims to see if GenX and related fluorochemicals are present in the bodies of New Hanover County residents. A fluorochemical is a chemical that contains fluorine; GenX is a fluorochemical used to make TeflonTM. As part of the study, we measured GenX and related fluorochemicals in tap water samples from your homes (Figure 1). This report describes initial results of that water sampling. The results from your home's water sample are presented on page 4.

We are currently analyzing the blood and urine samples collected in the study, so those results are not yet available. We are sharing the water results now because we did not want to delay reporting them back to you. We have shared the overall water results with the Cape Fear Public Utility Authority.

Figure 1 Water sample

collection

What did we do?

- We tested for 17 fluorochemicals, including GenX, in tap water samples from 198 homes in New Hanover County collected between November 3, 2017 and December 8, 2017.
- The fluorochemicals we tested for were chosen based on those chemicals that are well studied in the scientific literature, and knowledge of Chemours' chemical products.
- For the laboratory work, we followed the United States Environmental Protection Agency's (US EPA) standard procedures.
- To see a full list of the fluorochemicals tested, please visit the GenX Exposure Study website (tinyurl.com/GenXstudy).

What did we find overall?

- GenX was found in most tap water samples collected from homes serviced by CFPUA's Sweeney Water Treatment Plant which gets water from the Cape Fear River (see black dots for "Cape Fear River source" in Figure 2). No water samples were above the current public health goal for GenX of 140 parts per trillion). This health goal was based on animal studies with GenX.
- Tap water samples from homes serviced by CFPUA's groundwater plant (4 homes) did not have detectable GenX (see black dots for "Groundwater source" in Figure 2).

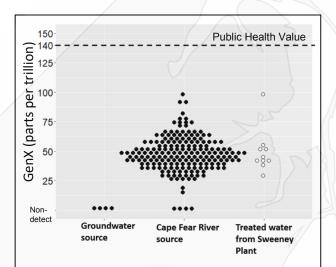
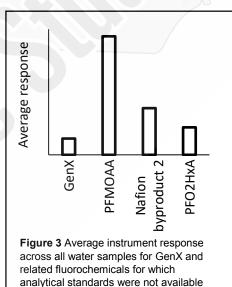


Figure 2 GenX concentrations parts per trillion in tap water samples (each dot represents one sample) collected in the study (black dots) and in treated drinking water from CFPUA's Sweeney Water Treatment Plant from October 2, 2017 through December 5, 2017 (white dots) (data from www.cfpua.org).

- "Non-detect" means GenX may not have been there at all, or it was at a low enough level that the lab could not measure it, or there was a problem with the sample and the lab could not measure it.
- In addition to GenX, we found other fluorochemicals such as a byproduct of Nafion (Nafion byproduct 2), perfluoro-2-methoxyacetic acid (PFMOAA), and perfluoro(3,5-dioxahexanoic) acid (PFO2HxA) in water samples. Results for these chemicals are considered *semi-quantitative* estimates (as described below). The average "response" of the laboratory instrument across all samples was higher for these chemicals than GenX's (see Figure 3). The word average means a result that is typical or "in the middle" of the water results from other homes. There are currently no public health goals for Nafion byproduct 2, PFMOAA, or PFO2HxA.



(PFMOAA, Nafion byproduct 2 and

PFO2HxA).

• The fluorochemicals PFNA, PFDA, 6:2 FTS, and PFO3OA were not present in most homes sampled. The maximum concentrations of PFO4DA, PFHxS and PFBS were 39, 17 and 25 ng/L, respectively. We are not showing these results here.

What are the limitations of the water sampling results?

The results on Page 4 show fluorochemical levels in tap water from your kitchen faucet at one point in time. We do not know the day-to-day changes in fluorochemical concentrations at the tap.

In most cases, only a single sample was collected from each home. Some changes in concentration are expected due to changes in GenX levels in treated water from the Sweeney plant over time (see the spread of white dots in the vertical direction in Figure 2). In other words, because GenX levels at Sweeney change over time, it is possible that levels of GenX and other fluorochemicals in your tap water change as well.

Another limitation is that the results for Nafion byproduct 2, PFMOAA, PFO2HxA, PFO3OA, and PFO4DA are considered *semi-quantitative*. This means that, while we are confident of whether each chemical was present or not, we do not know its exact concentration because the tools needed for quantification were not available at the time of the analysis.

Your home's water results

Your home's water sample results are presented on Page 4. As you are looking across each fluorochemical's plot, please be aware that the concentration range may change.

If you have questions, we are having a community meeting on April 17, 2018 from 6:30-8:00 PM at the Lumina Theater in the UNCW Fisher Student Center (615 Hamilton Dr., Wilmington, NC 28403). Please join us then for a further discussion of these results. Feel free to contact our study office by phone (855-854-2641) or email (genx-exposurestudy@ncsu.edu) as well.

Once again, on behalf of the GenX Exposure Study team, thank you for your participation in the study.

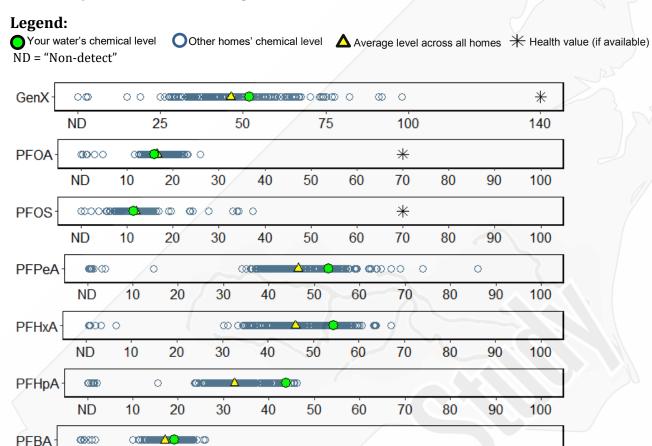
Sincerely,

Jane Hoppin, ScD

GenX Exposure Study, Principal Investigator

Below are your home's water sample results.

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For the three chemicals below, we do not show specific values because we estimated concentrations (as described on page 3). We only show where your home's water sample is in the distribution of all water samples, and where it is relative to the average. Estimates are not comparable across the three plots.

