N.C. Department of Health and Human Services/Public Health Role in Response to Drinking Water Contamination with GenX and Other Per- and Polyfluoroalkyl Substances

State and local public health agencies have been actively engaged in the response to GenX and related compounds since the issue came to light in June 2017. The main roles for public health have been to determine whether compounds detected through environmental sampling could pose a risk to human health; to provide health-based guidance on levels of exposure to such contaminants; and to conduct risk assessments and risk communication. Selected public health actions have included the following:

Initial Actions

1. Rapidly reviewed all available health information from a variety of sources and consulted with the EPA and other federal and state agencies.

2. Calculated a provisional health goal of 140 nanograms per liter (ng/L) or parts per trillion (ppt) for GenX in drinking water (https://deq.nc.gov/news/hot-topics/genx-investigation/health-related-resources-about-genx-pfoa-and-pfas).

3. Reviewed cancer incidence rates during 1996–2015 for Bladen, Brunswick, New Hanover, and Pender Counties to determine if the incidence of certain cancers differed from the state rate (findings summarized at https://www.ncdhhs.gov/news/press-releases/nc-dhhs-releases-summary-selected-cancer-rates-counties-cape-fear-region).

Current Actions

1. Routine coordination with the N.C. Department of Environmental Quality to review all new and ongoing environmental testing results from surface water and groundwater samples and other situational updates.

2. Participation in routine calls with local water utilities, local health officials, and other local partners (weekly or more frequently if needed) to review updated information and identify new or ongoing concerns.

3. Ongoing coordination with the Centers for Disease Control and Prevention (CDC), Environmental Protection Agency (EPA), and National Institute for Environmental Health Sciences (NIEHS) to review new and updated health and toxicology information regarding GenX and other per- and polyfluoroalkyl substance (PFAS).

4. Ongoing review of all available toxicology and epidemiologic data sources.

5. Working with the Agency for Toxic Substances and Disease Registry (ATSDR) at CDC to conduct a public health assessment of GenX and other PFAS. A public health assessment evaluates a site or sites for hazardous substances, health outcomes, and community

concerns. A PHA also looks at whether people could be harmed by coming into contact with site-related substances and includes recommendations to help reduce, eliminate, or prevent ongoing exposure to environmental contaminants when there is an increased risk (https://www.atsdr.cdc.gov/hac/products/pha.html).

6. Providing support to and coordinating with the Secretaries' Science Advisory Board. The newly-reconstituted board will help the state Departments of Environmental Quality (DEQ) and Health and Human Services (DHHS) by examining new and emerging chemicals and providing guidance on how to manage the compounds to better protect public health and the environment. Additional information and updates are available at https://deq.nc.gov/news/hot-topics/genx-investigation/secretaries-science-advisory-board.

7. Communicating information to the public regarding known or potential health effects of exposures to GenX and other PFAS, including: Providing written materials regarding GenX and PFAS health effects (https://deq.nc.gov/news/hot-topics/genx-investigation/health-related-resources-about-genx-pfoa-and-pfas); working with Department of Environmental Quality on to provide health risk evaluations for individual well water users in the vicinity of the Fayetteville Works plant; participating in community information sessions and other public forums; and providing individual consultation to persons with concerns about exposures.

Next Steps

1. Work with subject matter experts at ATSDR to analyze environmental and health data collected as part of the public health assessment, and make recommendations to reduce risk and recommendations regarding areas where additional studies are needed.

2. Work with academic partners to monitor and respond to results of epidemiologic studies and testing of clinical specimens (such as blood or urine) for PFAS.

3. Review and interpret testing data from other environmental media as they become available- e.g. testing of air, soil, fish tissue or other sample types.

4. Provide communities with information and assist with outreach and health education based on public health assessment results and input received from the Secretaries' Science Advisory Board and other agencies (e.g., EPA).