



# **PFAS in NC: Public health response**

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**November 6, 2020**

# Public health role

- **Determine whether detected contaminants pose a risk to human health**
- **Provide health-based guidance on levels of exposure to such contaminants**
- **Conduct risk assessments and risk communication**
- **Provide surveillance of contaminants and conditions**



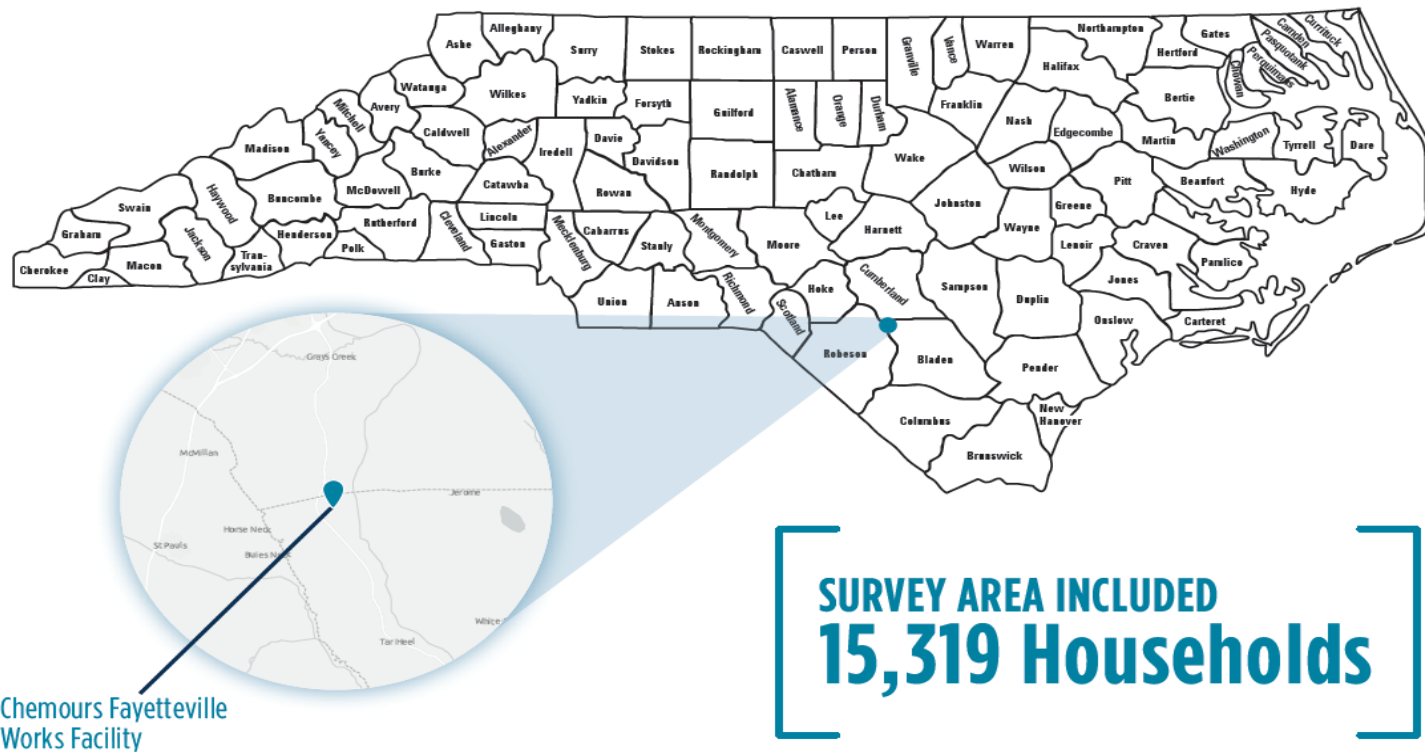
# PFAS activities

- **Calculated the provisional drinking water health goal for GenX of 140 ppt (2017)**
- **Conducted a biomonitoring study (N=30) near Chemours plant (2018)**
- **Applied for biomonitoring funds from CDC to measure PFAS exposure in NC residents (2019, good score but not funded)**
- **Conducted a community survey documenting how residents in the Cape Fear region have been impacted by PFAS (2019)**
- **Health education: web, fact sheets, physician's memo, calls**
- **Collaborate on research about PFAS and health, e.g.:**
  - **PFAST Network**
  - **GenX Exposure Study**
  - **PFAS UNITEDDD (national study including NC)**

# Cape Fear Per- and Polyfluoroalkyl Substances (PFAS) Community Survey

NORTH CAROLINA • 2019

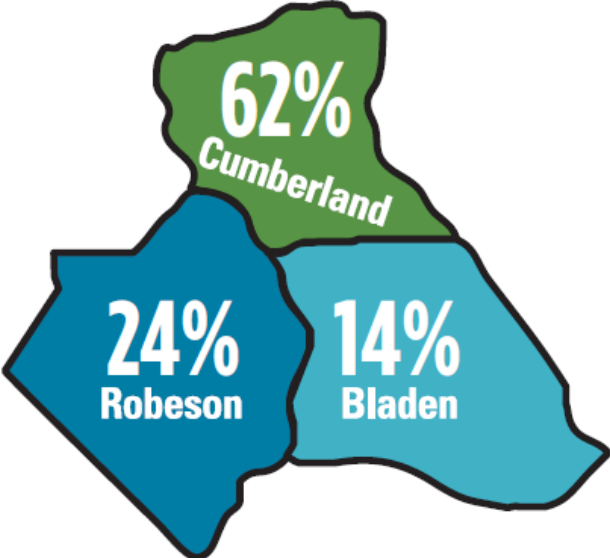
FIGURE 1. MAP OF NC COUNTIES WITH THE 10-MILE RADIUS SURVEY AREA PULLED OUT



# Results – Demographics

**FIGURE 2. SURVEY RESPONSES BY COUNTY (N=1,837)**

NOTE: 21 Respondents did not provide their county.



**1,858 Responses**  
12% OF SURVEYED HOUSEHOLDS

# Results – Water Usage

FIGURE 4. WATER SOURCE

Main Source of Drinking Water at Home • Questions #3 and 10\* • N=1,803 \* Respondents were able to select more than one drinking water source for their home.



62%  
Private Well



35%  
Public Water  
(I.E. CITY OR COUNTY)



13%  
Bottled Water



2%  
Other  
(INCLUDES COMMUNITY WELL & FILTER/FILTRATION SYSTEM)



<1%  
Don't Know

# Results – Water Usage

Water Usage after Receiving Recommendations • Question #7\* • N=86

\*Respondents were able to select more than one response for this question.



# Results – Water Usage

**34% changed water use**  
WITHOUT BEING TOLD TO CHANGE USAGE

- **62% now use bottled water**
- **16% using filter or filtration system**
- **Why?**
  - **42% concerned about GenX or other PFAS**
  - **14% not related to PFAS**
  - **28% said because of how water looks, smells, tastes**

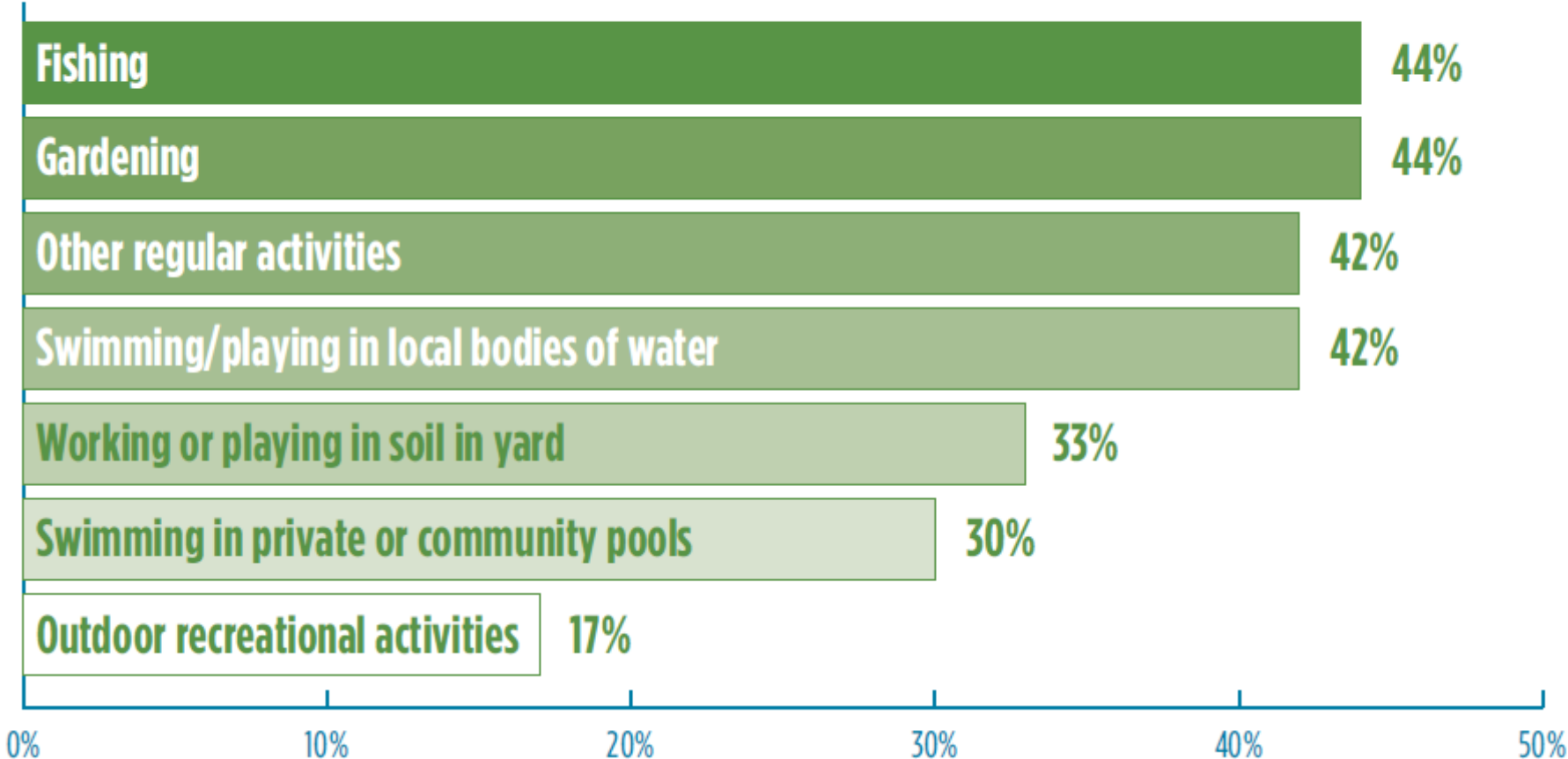


# Results – Behavior Change in 38% of respondents

FIGURE 7. BEHAVIORAL CHANGE AFTER LEARNING ABOUT GENX OR OTHER PFAS

Percentage of households decreasing activities • Questions #18 and 19\* • N=709

\*Respondents were able to select more than one activity.



# Results – Health Concerns

- **44% expressed concerns about health effects**

THEME*	DESCRIPTION OF THEME	N	%
→ <b>Uncertain</b>	Don't know, unknown, not sure, uncertain, what are the effects?, need more information	237	35
→ <b>Cancer</b>	Cancer, carcinogen, cancerous	162	24
<b>Other health**</b>	Other health effects noted less frequently, including headaches/dizziness, developmental effects, neurological effects, diabetes, stress or fear, allergies, liver effects, etc.	109	16
<b>Long-term/Chronic effects</b>	Long-term effects, chronic health, concern about future health effects	72	11
<b>Animals</b>	Animals' health (e.g. livestock, chickens, horses, dogs, cats, pets)	49	7
<b>General health</b>	General health risk, all health concerns, anything	47	7
<b>Skin</b>	Skin, eczema, rashes, itching, boils	46	7
<b>Respiratory</b>	Asthma, lung effects, COPD, coughing, sinus issues, respiratory effects	40	6
<b>Gastrointestinal</b>	Stomach, esophageal, gallbladder, intestinal, or gastrointestinal effects, digestive issues, indigestion, nausea	38	6

# Results – Communications

- **Need better and more timely communication, especially about exposure and potential health effects**
- **Most households want communication by mail**

FIGURE 11. PREFERRED METHODS OF COMMUNICATION

Upcoming events • Questions #27\* • N=1,701

\*Respondents were able to select more than one communication method.



# Ongoing questions from residents

- **Should I test my water? How?**
- **Can I grow a garden and eat the food?**
- **Are the fish safe to eat?**
- **Can my pets/animals drink this water?**
- **Is my illness caused by PFAS?**
- **How can I stop being exposed to PFAS?**

# Public Health Next Steps

- **Health education and outreach**
  - Webpages, factsheets
  - Community Involvement Plan
  - Presentations
- **Collaboration**
  - Researchers
  - Community groups
  - State and local government partners

# Acknowledgements

## **NCDHHS**

- Jamie Pritchett
- Jess Rinsky
- Beth Dittman
- Ariel Christensen
- Ashley Graham
- Kim Gaetz
- Rick Langley
- Zack Moore
- Aaron Fleischauer
- Kate Koehler
- Mina Shehee

## **NCEH/ATSDR**

- Rachel Rogers
- Antonia Calafat
- Patrick Breysse
- Audra Henry

## **Cumberland County Health Department**

- Laconial Esters
- Rodney Jenkins

## **Bladen County Health Department**

- Faye Collins
- Debra Conner

***This work was made possible by  
CDC support and Grant Number  
NU61TS000291 from ATSDR.***

# Questions?

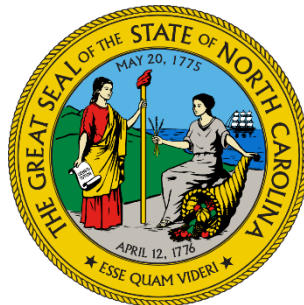
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