

DEQ's Title VI Policy

It is the policy of the North Carolina Department of Environmental Quality (NCDEQ) that no person shall, on the ground of race, color, national origin, sex, age or disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance as provided by Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, the Rehabilitation Act of 1973, and all other related nondiscrimination laws and requirements.



North Carolina Department of Environmental Quality

Public Meeting: Well Sampling

Wilmington
May 9, 2022
6:00-7:30 p.m.





Chemours Interim Drinking Water Plan and Sampling Updates

North Carolina Department of Environmental Quality

May 9, 2022



Discussion Topics

- PFAS and GenX
- Groundwater sampling and the Consent Order
- DEQ November 3rd letter
- Lower Cape Fear Area Private Well Sampling update
- Additional information

Emerging Compounds: GenX and PFAS

- **GenX = HFPO-DA or C3 Dimer Acid = $C_6HF_{11}O_3$**
- **GenX** is a trade name for a manmade, unregulated chemical used in manufacturing nonstick coatings and for other purposes.
 - Is an *emerging compound* in a family of chemicals known as per- and poly- fluorinated alkyl substances (PFAS)
 - Produced and emitted by one company in NC – Chemours (formerly Dupont)
 - Has been discharged into the Cape Fear River for 30+ years.
 - Until the past couple of years, labs couldn't measure it.

Emerging compounds:

- No (or limited) specific limits in environmental regulations.
- Little is known about how they behave in the environment.
- Little known about their effects on human health and environment.
- Presents significant challenge for regulatory agencies.

Emerging Compounds – GenX Case History

- **Early-mid 2017:** Focus on surface water issues
- **Mid 2017:** Groundwater issues discovered
- **Mid-late 2017:** Air emission contributions
- **Through 2018:** Testing of emissions and drinking wells
- **Feb. 2019:** Consent Order signed
- **Dec. 2019:** Thermal Oxidizer
- **2019-2022:** Ongoing private well testing (around the plant)
- **Currently:** **Lower Cape Fear Region Sampling**



Groundwater Testing

- Found high levels of PFAS compounds in onsite monitoring wells at the Chemours plant in Bladen County in 2017
- In 2017, NC DHHS established a GenX drinking water health goal of 140 ng/L (ppt)
- DEQ tested wells on properties adjacent to Chemours first and found high levels
- Asked Chemours to test additional wells in the area to determine extent of contamination
- **November 3, 2021: DEQ letter stating that Chemours is responsible for contamination of groundwater monitoring wells and water supply wells in New Hanover County and potentially other counties**



Legend

GenX Sampling Locations

- 0 ng/L - 1,800 ng/L
- 1,801 ng/L - 12,500 ng/L
- 12,501 ng/L - 22,900 ng/L
- 22,901 ng/L - 37,000 ng/L
- 37,001 ng/L - 61,300 ng/L
- Chemours Facility Property

Chemours – Consent Order Feb. 2019

Addressing contamination

- NC DEQ signed a Consent Order with Chemours Feb. 26, 2019: <https://deq.nc.gov/news/hot-topics/genx-investigation>
- Consent Order included:
 - Requirements to reduce air emissions and to achieve maximum reductions of all remaining PFAS contributions to the Cape Fear River on an accelerated basis, including groundwater.
 - Notify and coordinate with downstream public water utilities when potential discharge of GenX compounds into the Cape Fear River above 140 ppt.
 - Sample wells and provide drinking water
 - Additional penalties will apply if Chemours fails to meet the conditions and deadlines established in the Consent Order.



Chemours – Addressing Contamination

Consent Order Feb 2019 : Groundwater

Sample Wells and Provide Drinking Water for impacted private drinking water wells

- Sample drinking water wells
 - ¼ mile beyond the closest well that had PFAS levels above 10 parts per trillion
 - Annually retest wells that were previously sampled
 - Bottled water in 3 days if exceed a Consent Order limit
- For those with GenX above 140 parts per trillion or applicable health advisory:
 - Provide permanent drinking water supply within 9 months
 - Public waterline connection or whole-building GAC filtration system
- For those with combined PFAS levels above 70 parts per trillion or any individual PFAS compound above 10 parts per trillion:
 - Provide, install and maintain up to three under-sink reverse osmosis (RO) systems per residence
 - Provide RO systems within 6 months of Consent Order or receiving test results

Lower Cape Fear Region Well Sampling

- November 3, 2021 letter from DEQ to Chemours
 - <https://deq.nc.gov/genx/consentorder/deq-notice-chemours-about-downstream-counties/download?attachment>
- Requirement to submit a plan within 90 days to conduct a comprehensive assessment of groundwater contamination in New Hanover County and other affected counties in accordance with 2L and the 2019 Consent Order.
- Requirement to submit an updated drinking water compliance plan within 90 days pursuant to the Chemours Consent Order. The plan shall provide for sampling of drinking water wells in downstream counties to identify affected parties entitled to provision of replacement water supplies.
- DEQ responded with additional comments to the Chemours drinking water compliance plan on May 2, 2022, requiring further revision, expedited sampling and shared recent DEQ groundwater data from the region.



Sampling Your Well

- Most wells can be sampled without entering a residence.
- Personal protective equipment and social distancing guidelines are being used.
- To request well testing in the Lower Cape Fear Region, call Chemours at: **910-678-1100**
- DEQ can also assist residents in the Lower Cape Fear with well sampling questions
- Parsons Environment and Infrastructure – known as “Parsons” – is the independent water testing contractor for Chemours.
- Parsons and Chemours are prioritizing private wells for sampling based on several criteria: proximity to the Cape Fear River, groundwater wells with known PFAS detections, and municipal water and sewer lines.



Chemours Letters to Private Well Users

- Chemours has mailed out 11,000 letters to private well owners in the Lower Cape Fear Region
 - Additional letters will be sent later this month
- Letters are being sent to well owners based on initial criteria to include: proximity to the Cape Fear River and municipal water and sewer lines; known detections of PFAS in groundwater wells
- These letters from Chemours ask for information about the private well and request contact information from the well owner to assist with scheduling sampling

The Chemours Company
Fayetteville Works
22828 NC Highway 87 W
Fayetteville, NC 28306

Chemours

«TodaysDate»

«RecipientName»
«RecipientAddressStreets»
«RecipientAddressCity», «RecipientAddressState» «RecipientAddressZip»

RE: Residential Drinking Water Well Information Request

Dear Owner/Resident/Tenant:

Chemours has begun a drinking water well testing program in New Hanover, Brunswick, Columbus and Pender counties. The testing is being performed per the Interim Four Counties Sampling and Drinking Water Plan (New Hanover, Brunswick, Columbus and Pender Counties) submitted to North Carolina Department of Environmental Quality (NCDEQ) on April 1, 2022.

The purpose of this letter is to request information about the source of your drinking water. Chemours is in the process of identifying private drinking water wells that may qualify for testing. The water will be tested for the 12 per- and polyfluoroalkyl substances (PFAS) compounds listed in the Consent Order (CO), additional PFAS compounds and also other non PFAS compounds. If you are using a private well for drinking water purposes, Chemours will call you to get consent for scheduling sampling. For more information, please check the Fayetteville Works website at: <https://www.chemours.com/en/about-chemours/global-reach/fayetteville-works>.

Sincerely,


Dawn M. Hughes, Plant Manager
Chemours – Fayetteville Works

Please complete the form below and return in the envelope provided or call (910) 678-1100 and leave a message. A team member will call you back within three business days.

Name: «RecipName2»
If incorrect, add correct name here: _____
Address: «ResidentAddressStreets»
«ResCityStateZip»
If incorrect, add correct address here: _____
I own this residence: Yes No I live at this residence: Yes No
This home is connected to public water: Yes No
Primary source of drinking water is a private well: Yes No
Phone: _____ Can we text this number: Yes No



¹ Chemours entered into a Consent Order with NCDEQ and Cape Fear River Watch. The Superior Court for Bladen County approved Consent Order on February 25, 2019.

19_4C_ResidenceWellInfoLetter
«ResID».«LetterTrackingID».«BatchID»

Bottled Water Information

- If a private well is tested by Chemours / Parsons and found to have Chemours PFAS above 10ppt, bottled water will be provided to the resident within 3 days.
- Chemours is using a new bottled water voucher system that may help some residents with their requests for different water volume sizes.
- The voucher card would allow residents to purchase the type of water and size of container they prefer with pre-paid money voucher cards provided by Chemours.

Next Steps if Chemours PFAS are Detected

Installation of water treatment systems if Chemours PFAS are detected above 10ppt

- Two types of well water treatment systems are used
- Whole-house treatment and under-sink versions
- DEQ has tested both systems for their effectiveness

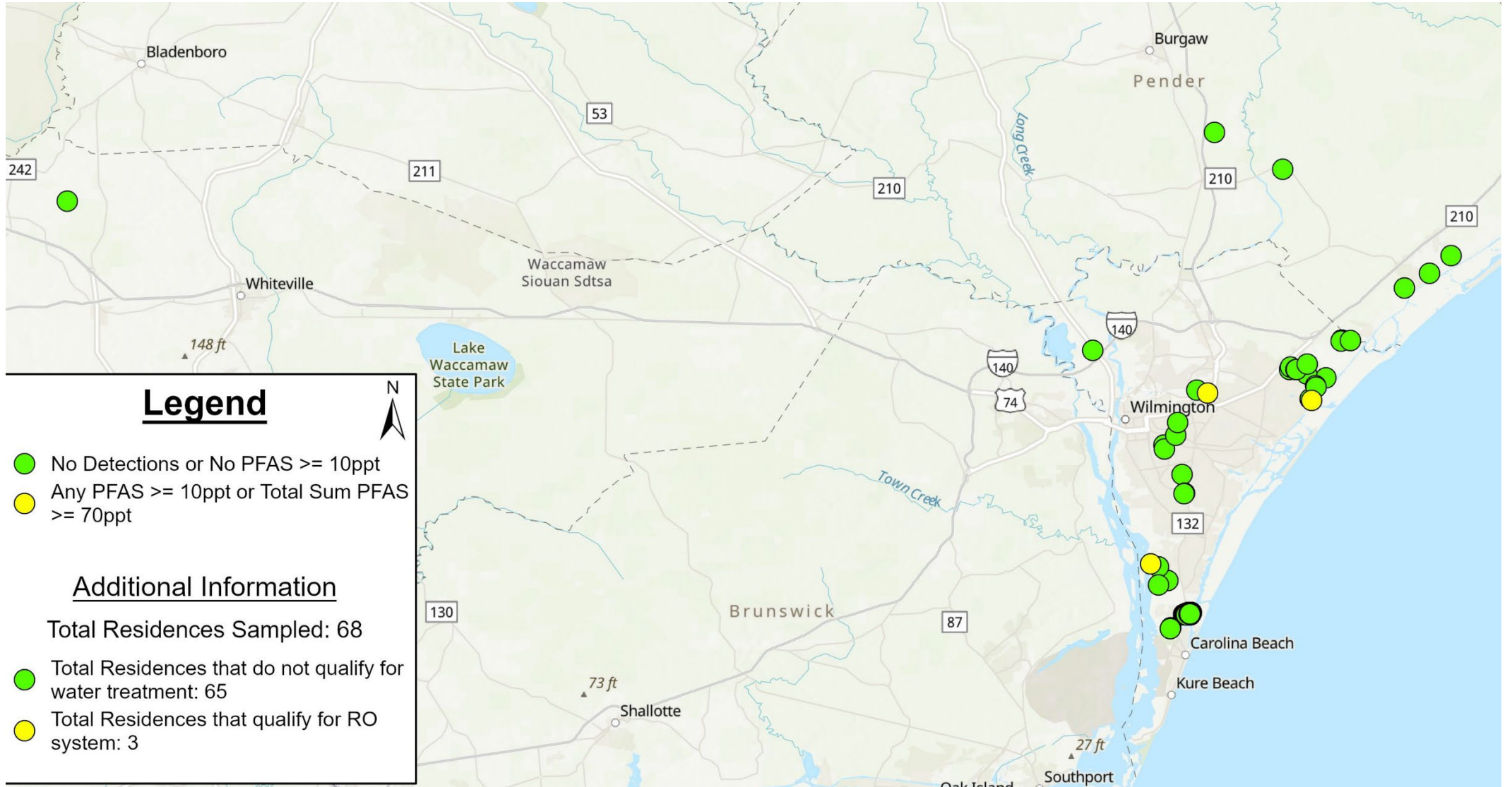
Reverse
Osmosis
System
(right)



Whole-house
Granular
Activated
Carbon system
(left)

Current Private Well Sampling Data in the Lower Cape Fear Region

(as provided by Chemours / Parsons)



Well Sampling Information for Lower Cape Fear Area Residents

- <https://deq.nc.gov/news/key-issues/genx-investigation>

- <https://deq.nc.gov/lowercape-fear-wellsampling>

Private Drinking Water Well Sampling Requests

If you live in New Hanover, Brunswick, Pender or Columbus counties, call Chemours at (910) 678-1100 to request well sampling or for more information.

At DEQ's direction, Chemours is sampling for PFAS contamination in private drinking water wells in four downstream counties: New Hanover, Brunswick, Columbus and Pender. Private drinking water well sampling began in February. To have your well sampled, call Chemours at (910) 678-1100. Messages to the Chemours call-line are monitored during regular business hours (Monday through Friday, 9 a.m. to 5 p.m.); Chemours should respond within 24-to-48 hours starting on the next business day. Chemours is also sending letters to well owners/residents requesting information about primary drinking water sources and offering sampling.

GenX Investigation

[Chemours Consent Order](#)

[GenX Information for Fayetteville-area Residents](#)

Well Sampling Information for Lower Cape Fear Area Residents

[Recent Actions, Investigations and Enforcement](#)

[Chemours Permit Information](#)

[Air Quality Sampling](#)

[GenX Surface Water Sampling Sites](#)

[Groundwater](#)

[Health Related Resources](#)

Well Sampling Take-aways

- There will be multiple stages of private well sampling.
- Additional letters will be mailed out to residents in the Lower Cape Fear Region this month to request private well information.

If you live in New Hanover, Brunswick, Pender or Columbus counties,
call Chemours at (910) 678-1100
to request well sampling or for more information.



Waste Management

Michael E. Scott, Director
217 W. Jones Street
1464 Mail Service Center
Raleigh, NC 27699-1646

919-707-8246

<http://portal.ncdenr.org/web/wm>

Questions???



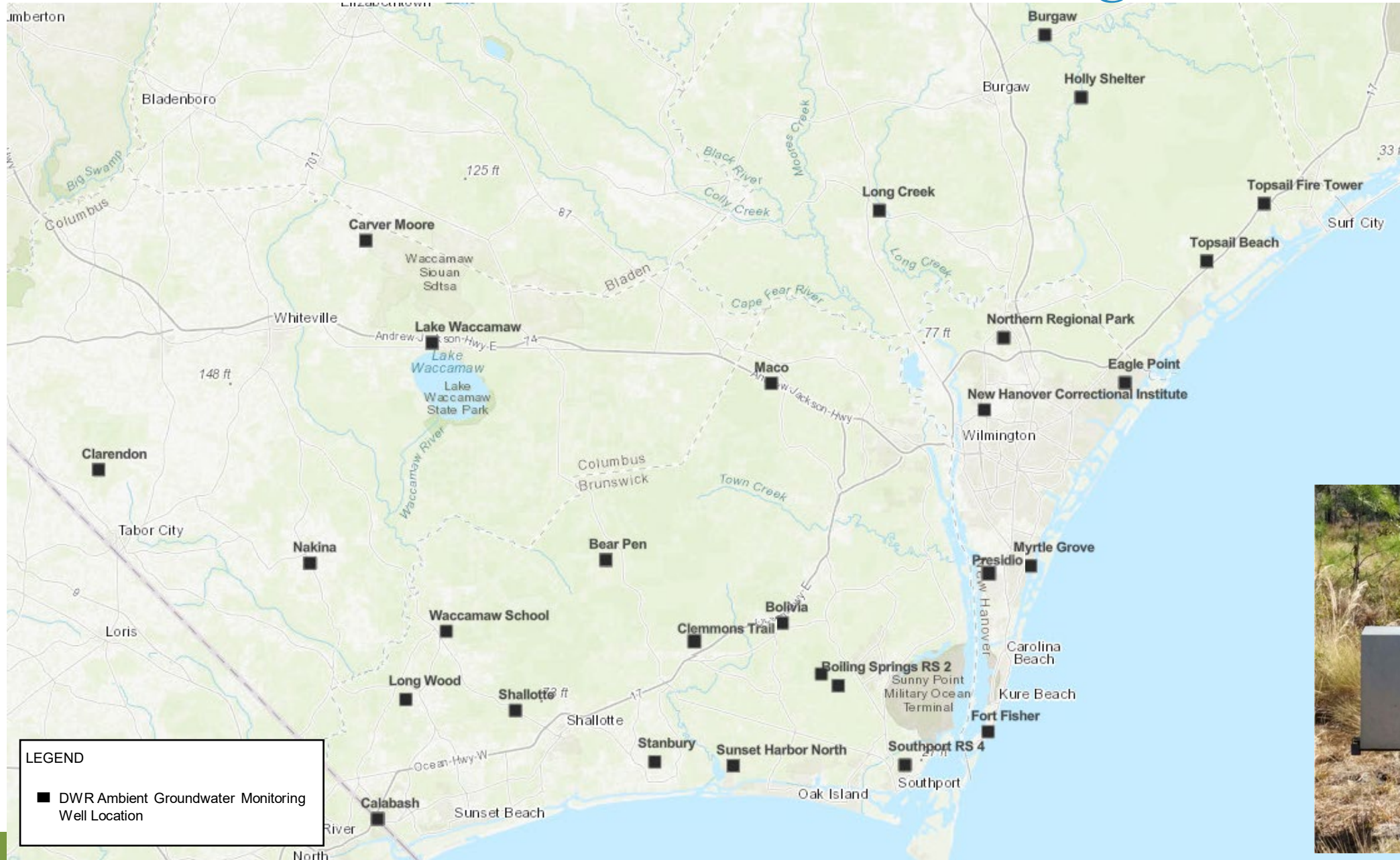
Lower Cape Fear Groundwater Monitoring Well Data Overview

Division of Water Resources

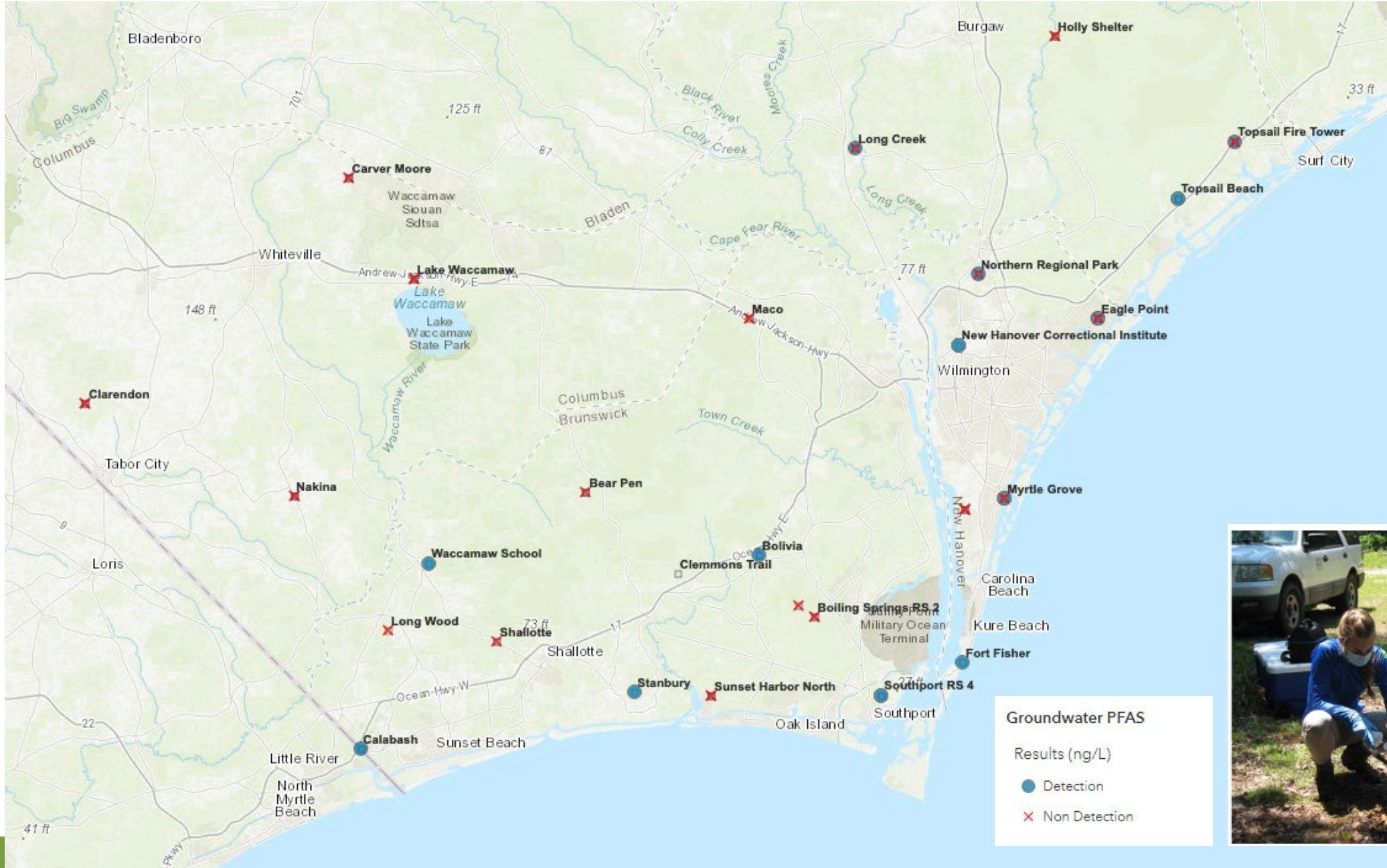
May 9, 2022



DWR Ambient Groundwater Monitoring Well Network



Chemours-Related Results at DWR Monitoring Wells



Questions?



Mike Ranck, PG
N.C. Division of Water Resources
mike.ranck@ncdenr.gov





Proposed Barrier Wall and NPDES Draft Permit Updates

Division of Water Resources

May 9, 2022

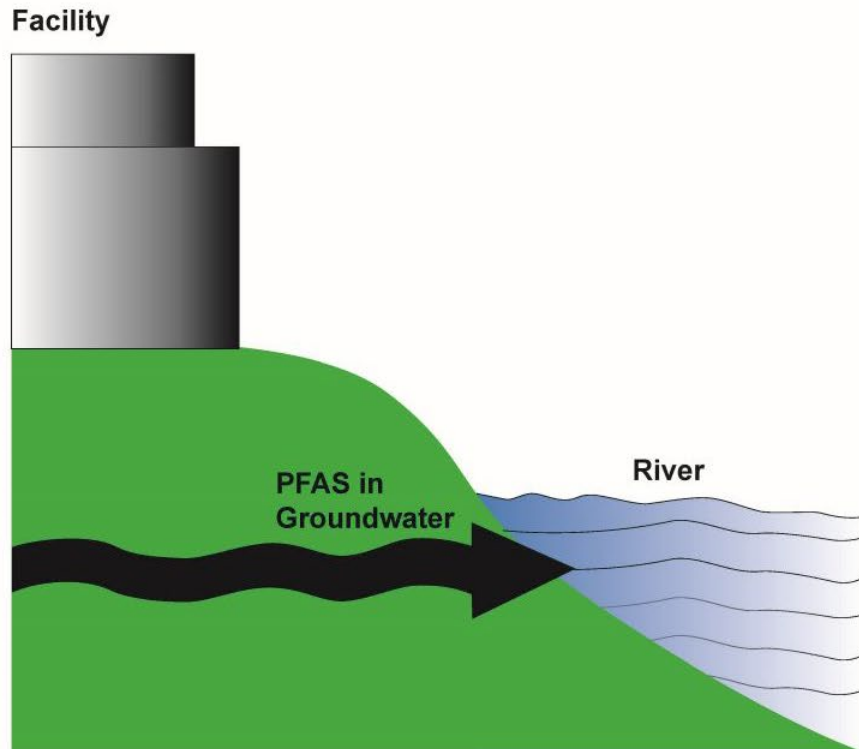


Barrier Wall and NPDES Permit for Outfall 004

- **Groundwater from decades of contamination from the Chemours Fayetteville Works site continues to flow into the Cape Fear River.**
- **This is the largest reoccurring source of PFAS from the Chemours site impacting the Cape Fear.**
- **Under the Consent Order, Chemours is required to address the flow of contaminated groundwater and remove at least 99% of PFAS compounds currently being discharged to the Cape Fear River.**

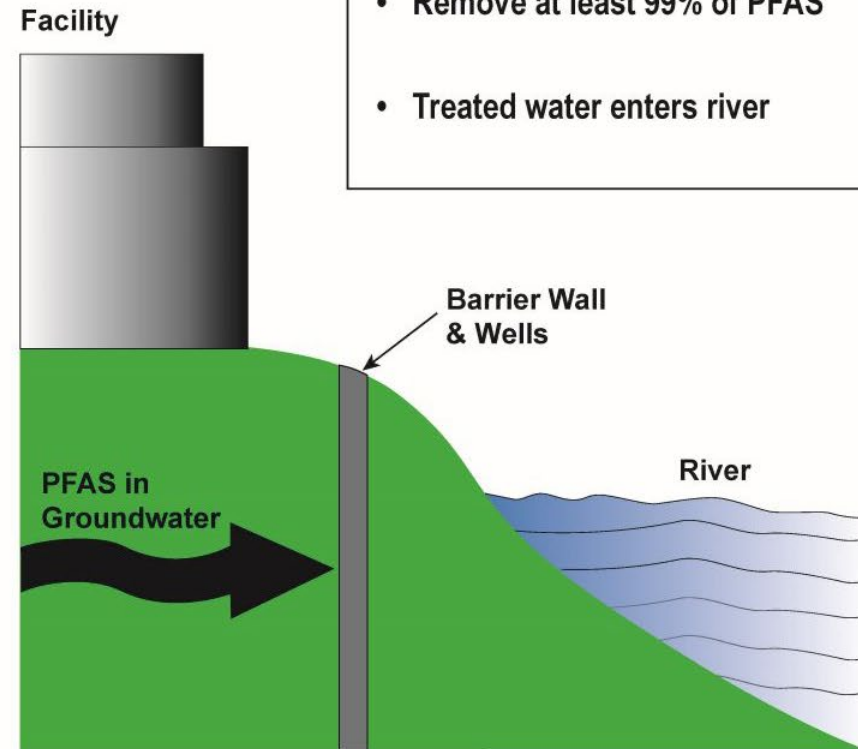
Proposed Groundwater Treatment System

Current Groundwater
Contaminating Cape Fear River



Proposed Groundwater
Treatment:

- Intercept contaminated groundwater
- Remove at least 99% of PFAS
- Treated water enters river



Barrier Wall And Draft Discharge Permit

- **Proposed Barrier wall**
 - More than 1 mile long
 - 70-80 feet deep
 - 2.5 feet thick
- **Extraction wells behind the wall will collect the contaminated groundwater and pump it to a treatment system for the removal of PFAS compounds.**
- **The draft NPDES permit requires:**
 - Treatment to remove at least 99% of the PFAS compounds from captured groundwater
 - Comprehensive stream sampling and performance monitoring during construction and after completion

Barrier Wall And Draft Discharge Permit

- Staff is reviewing comments received so far
- Scheduling a public hearing to be held in Wilmington in June
- 30 days notice is required for the hearing
- Comment period will be reopened

Questions?



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