



Emerging Compounds Update – Division of Air Quality

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Department of Environmental Quality



Emerging Compounds

DAQ's investigation involving GenX and other PFAS from Chemours

- **GenX emissions data**
 - Started with only estimates
 - Required stack tests
 - Method development
 - First of its kind measurements

Chemours 2016 emissions estimates as originally reported to DAQ	Chemours revised 2016 emissions estimates as of October 2017	Latest calculations, including January through April 2018 stack test measurements
66.6 lb/yr	594 lb/yr	2758 lb/yr

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Air Emissions Testing or “Stack Testing” at Chemours

- 10 weeks of stack testing (so far) this year.
- Sources, control systems, room air.
- Focused primarily on C₃ Dimer Acid (GenX)
 - Also tested HFPO & E1



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Ambient Air Quality - Atmospheric Deposition

Needed information immediately

- Purchased temporary rain collection equipment.
- Used lab protocols to prepare equipment.
- Split the samples... sent to EPA for full PFAS analysis.

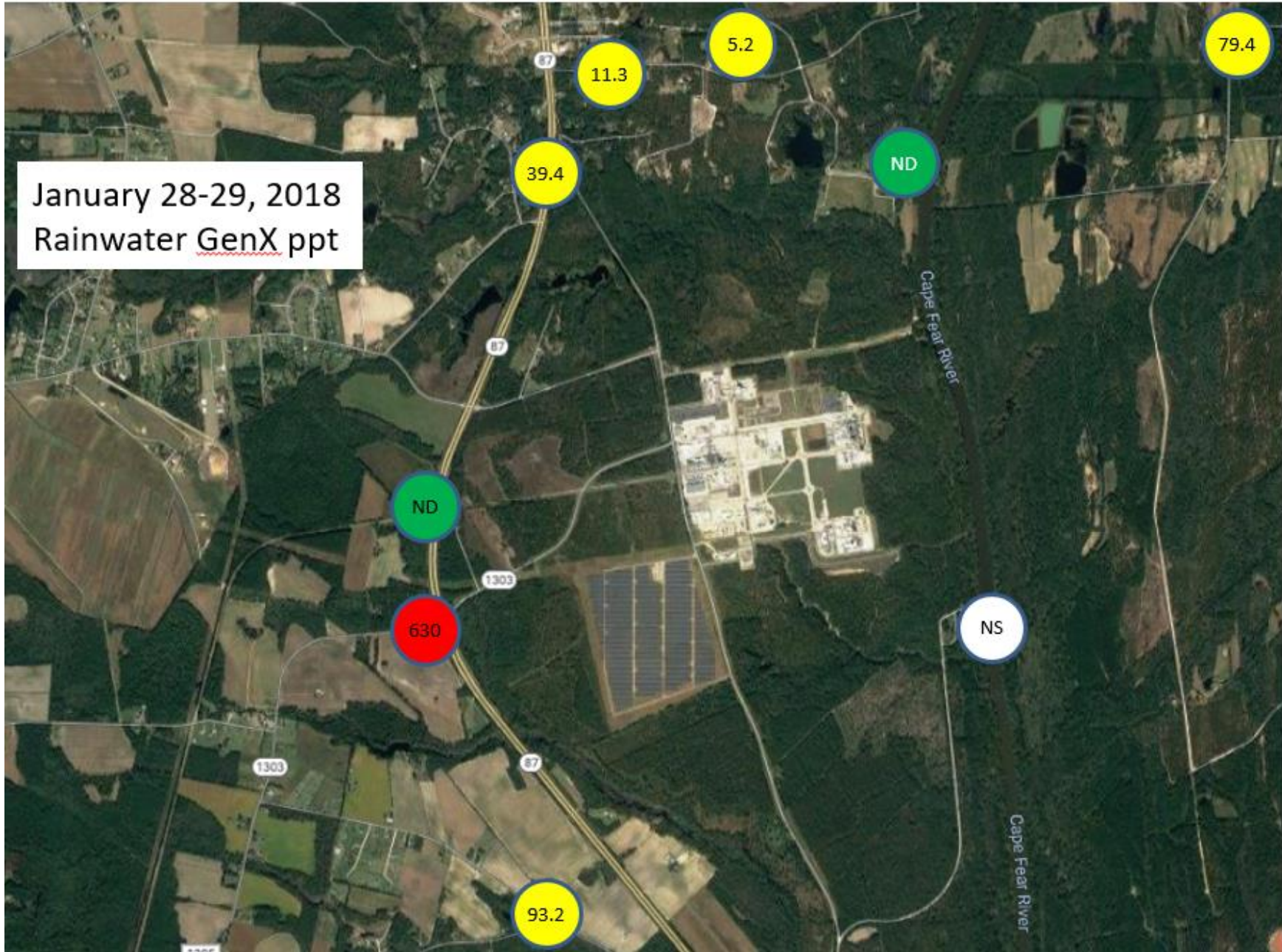




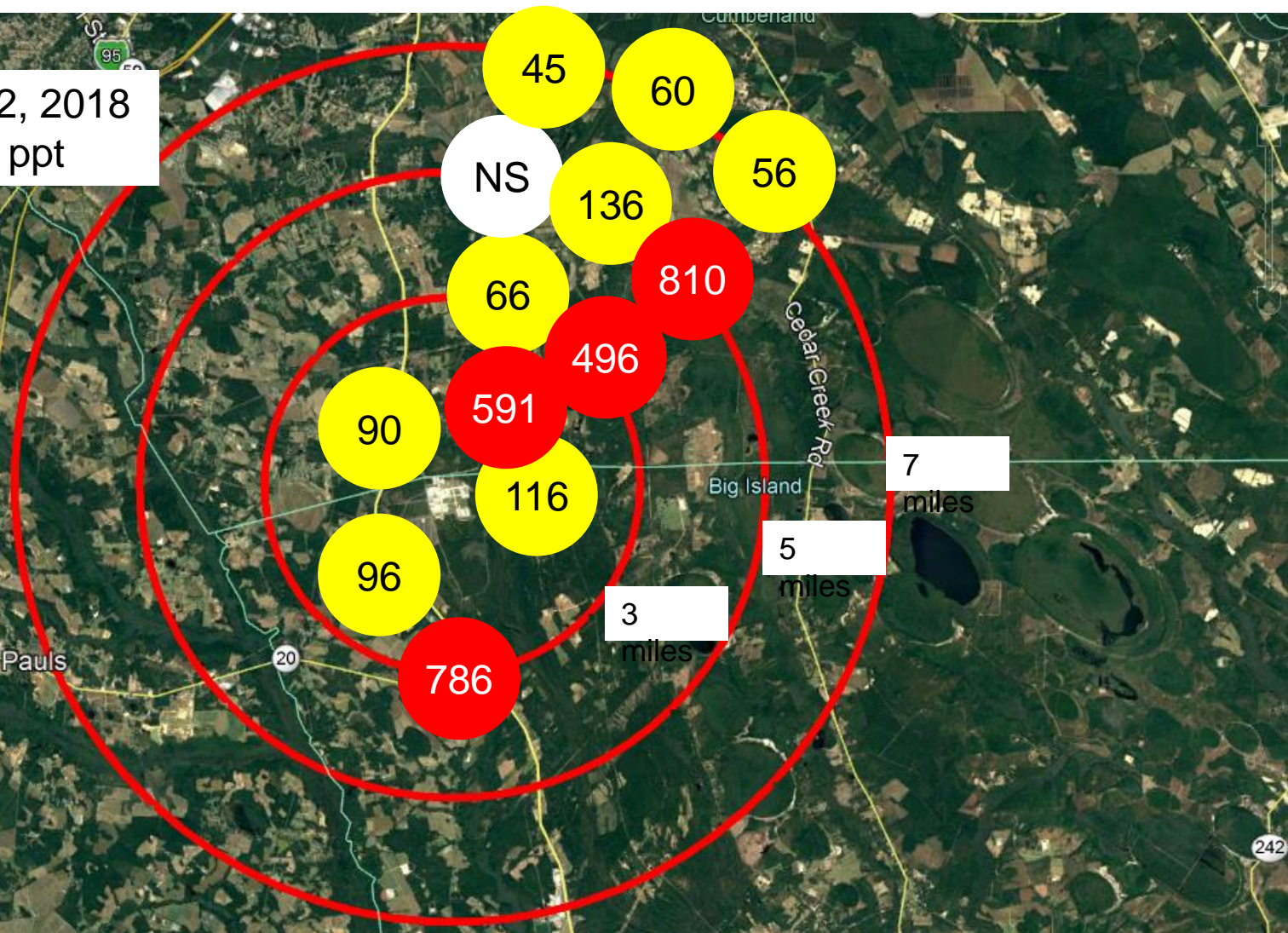
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January 28-29, 2018
Rainwater GenX ppt



Feb 28 – March 2, 2018
Rainwater GenX ppt



Emerging Compounds

DAQ's investigation involving GenX and other PFAS from Chemours

Summary of facts:

- The measured air emissions of GenX compounds are significantly higher than previously understood and reported.
- DAQ has measured GenX deposition through rainfall as far as 20 miles from the facility.
- The evidence of atmospheric deposition of GenX shows a geographic footprint that is similar to the detection of GenX in groundwater samples.



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GenX - Recent Actions

April 6, 2018:

- **60 day notice of intent to modify Chemours' air permit:**
 - **Requires demonstration that emissions of GenX compounds do not or will not cause or contribute to violations of groundwater rules.**

The science and data collected informed this action.



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GenX - Recent Actions

April 27, 2018:

- **Chemours response to 60 day notice**
 - **Chemours committed to:**
- **Install & operate a Regenerative Thermal Oxidizer by 2020**
 - **Expected 99% reduction of GenX emissions**



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GenX - Recent Actions

Carbon Adsorbers in place – late May 2018



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GenX - Recent Actions

June 11, 2018:

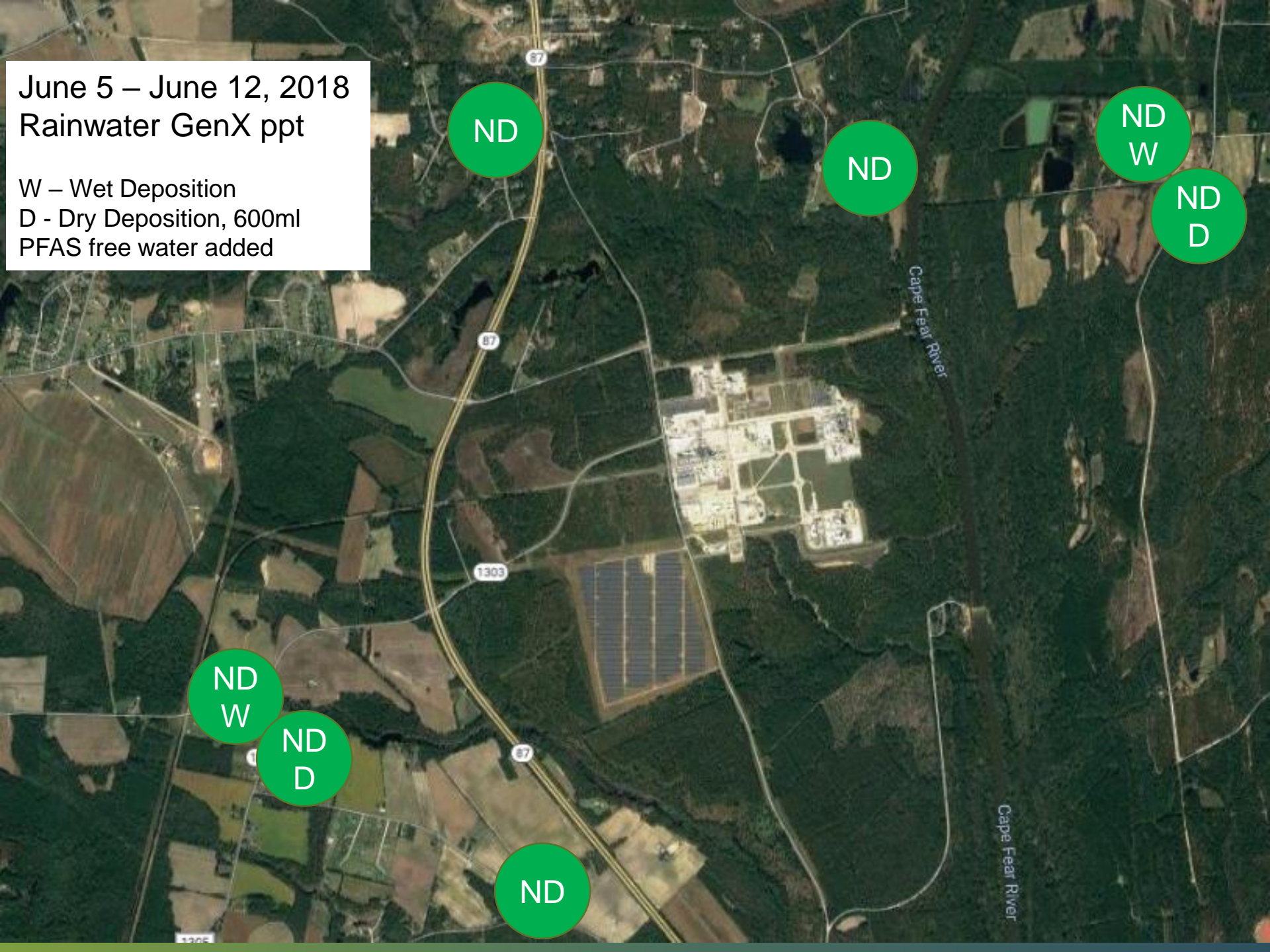
- **DEQ proposed a court order to require reductions of air emissions due to groundwater impacts**
- **30 day comment period ended 7/11/18**
- **Reduce facility-wide air emissions of GenX compounds by at least 97% by August 31, 2018 with a 99% reduction by December 31, 2019**





June 5 – June 12, 2018
Rainwater GenX ppt

W – Wet Deposition
D - Dry Deposition, 600ml
PFAS free water added



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GenX - Recent Actions

Permit application received from Chemours on July 2, 2018 for the construction and operation of the RTO control device.

- **RTO will achieve 99% reduction in GenX air emissions.**
- **DAQ has 90 days to act on the application.**



Emerging Compounds

Take home message for:

- **EPA:** We need each other!
 - Emissions stack test method development
 - Source attribution starts with good emissions data
 - Ambient air monitoring
 - Does EPA have capabilities that states don't?
 - How to prioritize emerging compounds?
 - Prevalence, concentrations, toxicity.
- **Industry:** Know what is in your waste streams!
- **State:** Monitoring and surveillance is a must!
 - Get the resources in place!
 - Must look beyond GenX... What are the possible needs?
 - Do we have the lab and field equipment that we need?



Thank you!

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