



EPA PFAS Community Meeting – Science Panel

Division of Water Resources

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August 14, 2018

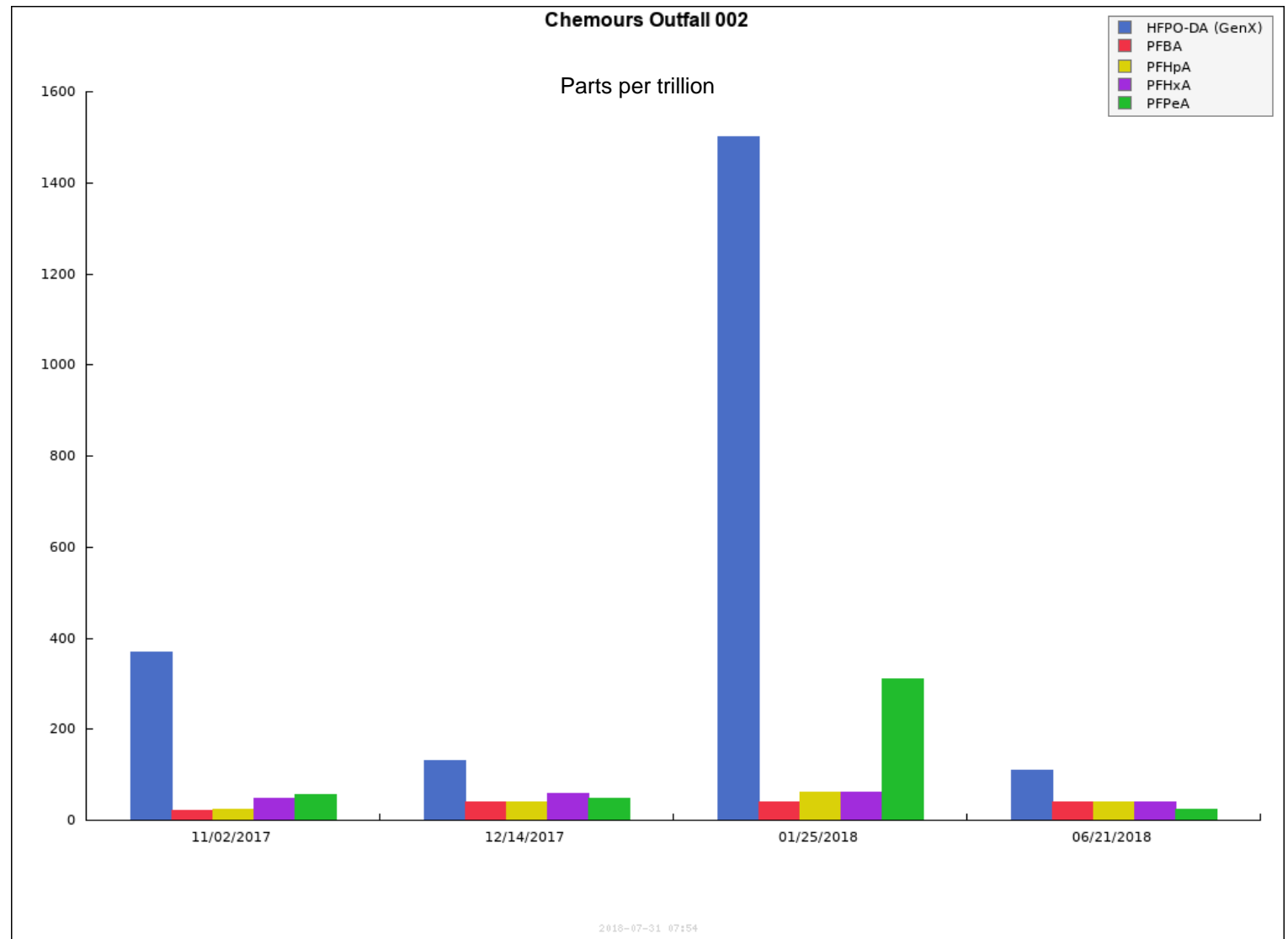


Current Water Sampling by DEQ, and Analysis by EPA Athens Laboratory

- Two composite samples weekly at Chemours wastewater outfall into the Cape Fear River:
Monday–Thursday and Friday–Sunday
- Drinking water facilities downstream are sampled weekly:
Bladen Bluff
International Paper
NW Brunswick
Pender County
CFPU Sweeney
- Starting ambient monitoring for PFAS across North Carolina
Jordan Lake watershed monthly Jan – June 2018
Falls Lake watershed monthly May – October 2018

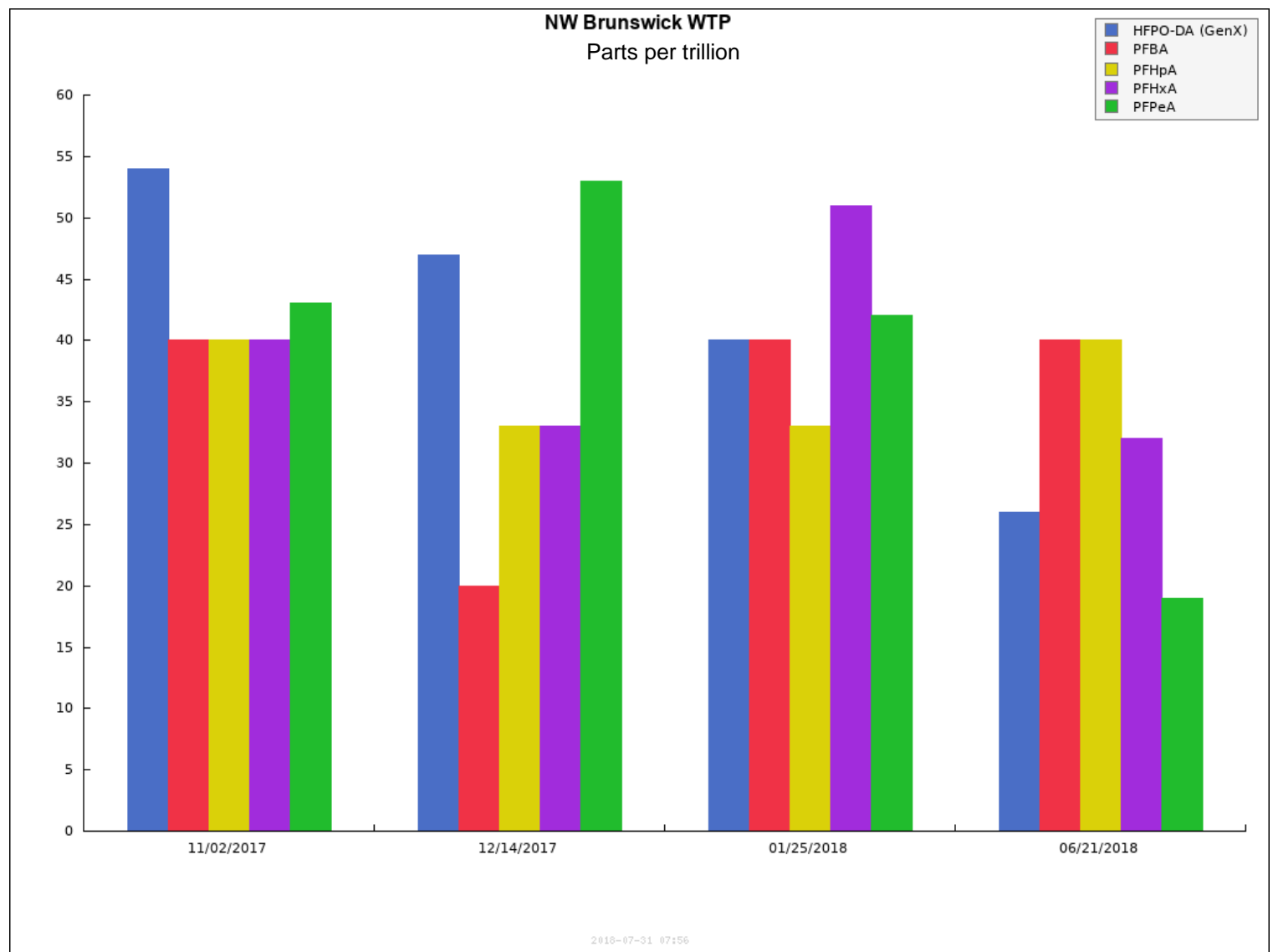


Data from Chemours
Wastewater outfall
(parts per trillion)



Example of Data from Drinking Water Facility (parts per trillion)

Note: scale is different from prior slide



GenX Private Well Data Summary

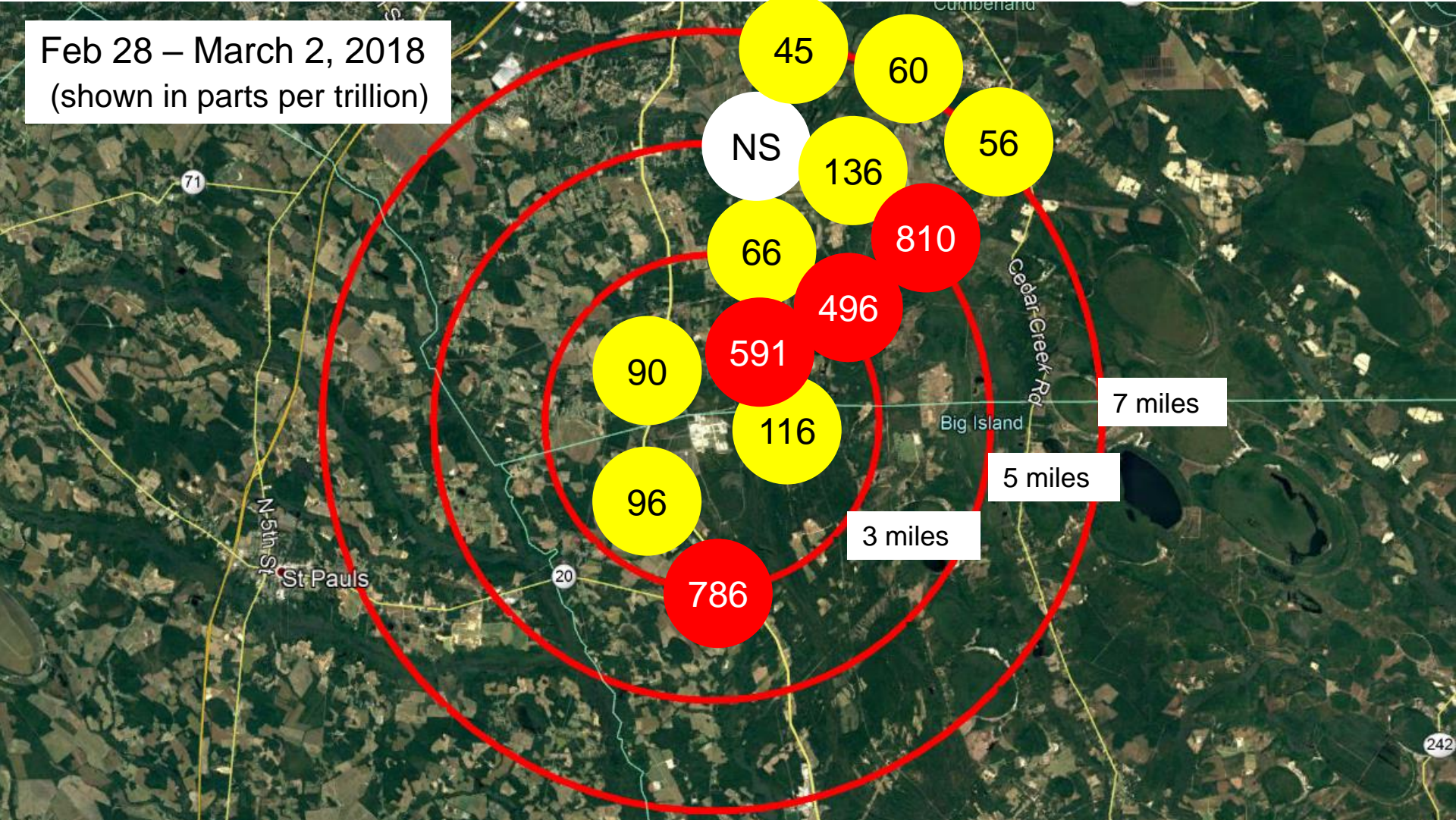
Combined Phase I, II, III, IV (partial) Private Well PFAS Data,
also includes Robeson Co. and DEQ-collected Data

Private Well Water GenX Summary	Combined Well Data
Distance from Chemours' border	Up to 5.5 miles
Well Collection Dates	9/6/2017 – 6/13/18
Number of Wells tested	823
Number of Exceedances of the GenX Provisional Health Goal	164
Number of Not-Detected (“ND”) GenX Analyses <small>a. The NC DHHS Provisional Drinking Water Health Goal for GenX is 140 ng/L (July 2017)</small>	220
Number of GenX Detections Less than the Health Goal ^a	439
Maximum Detected GenX Concentration	4000 ng/L



GenX Rainwater Data around Chemours

Feb 28 – March 2, 2018
(shown in parts per trillion)



Path Forward

- Chemical analysis – develop and harmonize existing test methods
 - Wastewater, sediment, soil, food, air emissions, blood serum, urine
 - Reporting limits and throughput
- Research on human health and ecological toxicity
 - Rapid bioassays
 - Chemical mixtures – evaluate additive and synergistic effects
 - Evaluate the need for new wastewater Whole Effluent Toxicity methods for aquatic toxicology (add new organisms for surrogate testing)
 - Evaluate bioaccumulation in food chain
 - Toxicity bench marks (Reference Dose, similarity in chemical families, cumulative exposure)
- NC is using the Secretaries' Science Advisory Board to make recommendations on health values and to prioritize chemicals for evaluation



Human and Ecological Health-Effect Needs

- A suite of toxicity assays providing a comprehensive database of translatable human and ecosystem health endpoints, that can be generated in a time period (<1-2 years) suitable for emerging contaminant issues, such as newly identified PFAS and PFAS mixtures
 - Prioritize PFAS for study on the prevalence of human and ecological exposures, exposure concentrations, and anticipated toxicity potency
- Guidance on human and ecological health risk assessment for combined exposures to PFAS mixtures
- Fate and bioaccumulation studies to evaluate the mobility and bioavailability of different chemical classes of PFAS across varied abiotic environmental matrices and biotic ecosystem components, including human food sources
- Widely accessible, cost effective analytical methods to identify and quantify environmentally relevant concentrations of known and unknown PFAS



Reference material:

Department of Environmental Quality GenX information:

<https://deq.nc.gov/news/hot-topics/genx-investigation>

Division of Water Resources: <https://deq.nc.gov/about/divisions/water-resources/>

Thank you for joining us today.

