Overview of the NC PFAS Testing Network

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October 23, 2019

NORTH CAROLINA PFAS Testing Network

Legislative Mandate: 2018 Appropriations Act *(S99; SL 2018-5)*

Section 13.1.(f) – NC General Assembly finds that academic expertise & instrumentation in public & private universities in NC should be "maximally utilized to address the occurrence of PFAS, including GenX, in drinking water resources."

NC STATE UNIVERSITY · UNCW · Duke UNIVERSITY · UNC CHARLOTTE · THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL · ECU · North Carolina Agricultural and Technical State University

Legislative Mandate: 2018 Appropriations Act *(S99; SL 2018-5)*

Section 13.1.(l) – Other Research Directives

- Predictive modeling of private well contamination
- Performance testing of removal technologies
- Air emissions & atmospheric deposition
- Evaluate other research opportunities

Legislative Mandate: 2018 Appropriations Act *(S99; SL 2018-5)*

Section 13.1.(h) – Reporting requirements

Quarterly progress reports to NCGA Environmental Review Commission and regulatory agencies (NCDEQ, NCDHHS, EPA)

first report: **Oct. 1, 2018** > > > > *final report*: **Dec. 1, 2019**

(provisional timeline extending 1 more year, pending passage of relevant legislation)

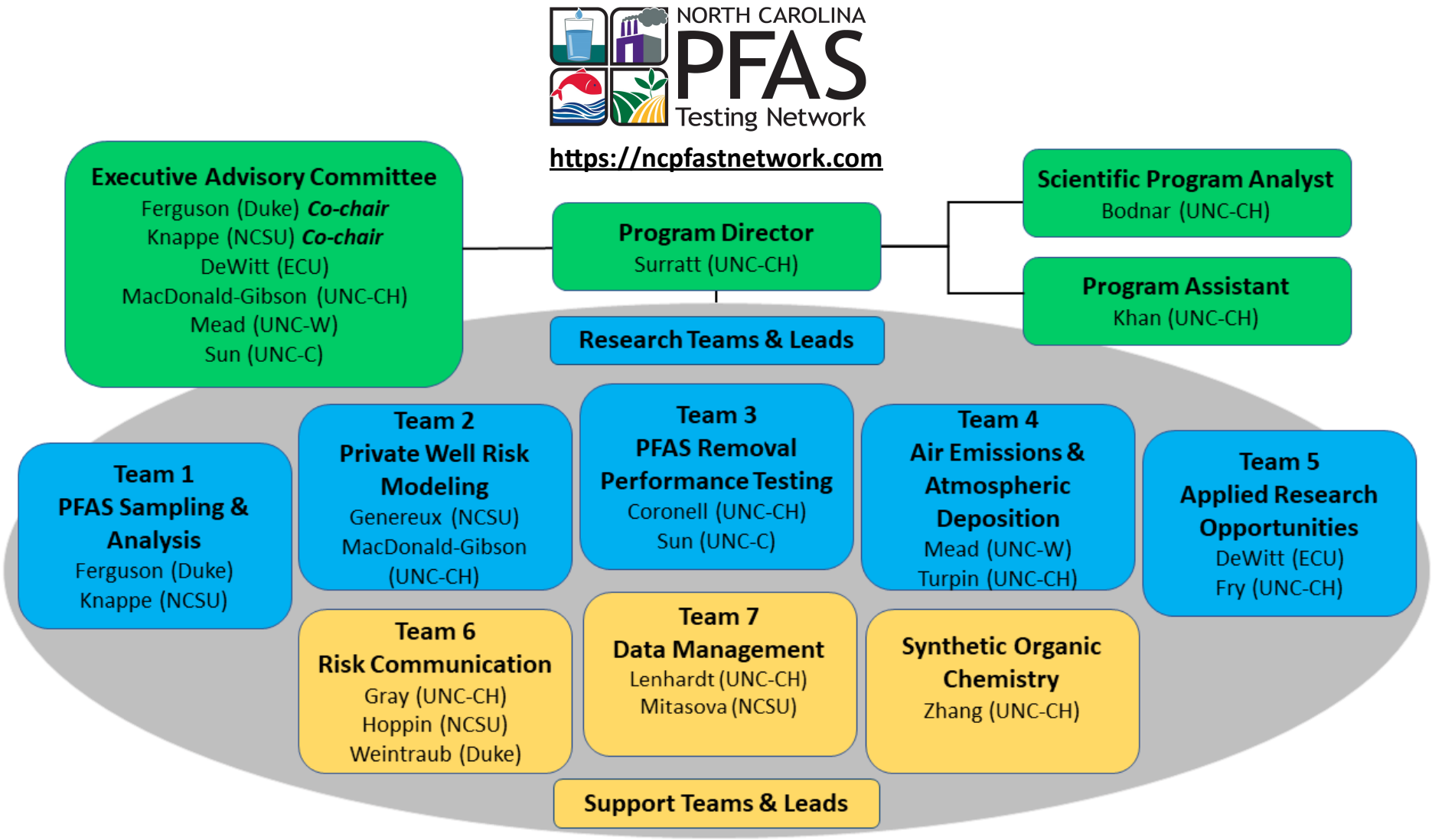
Section 13.1.(i) – Appropriation

$5,013,000

NC Policy Collaboratory

(FY 2018-19; non-recurring; non-reverting)

Additional $1.7 M provided by NC Policy Collaboratory (through grant matching)



NC STATE UNIVERSITY · UNCW · Duke University · UNC Charlotte · The University of North Carolina at Chapel Hill · ECU · North Carolina Agricultural and Technical State University

Research Objectives of NC PFAS Testing Network

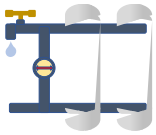
Statewide Baseline Water Testing

- measure PFAS levels by targeted analysis
- estimate total organic fluorine
- identify more PFAS with non-target analysis

Private Well Contamination Risk Modeling

- calculate time for PFAS to flush from aquifer
- analyze contributions to well contamination
- create app for private well owners to predict risk

PFAS Removal Performance Testing



- evaluate commercial options
- test tap water with in-home filtration
- develop and test novel Fluorogel materials
- assess electrochemical degradation

Air Emissions & Atmospheric Deposition

- identify PFAS present in air and rainwater
- analyze geographic distribution of PFAS
- calculate contribution of wet dep. to watershed
- investigate multiphase atmospheric chemistry

Applied Research Projects

- assess importance of other PFAS sources (landfills, WWTPs) to surface and ground waters

- study PFAS bioaccumulation and biomagnification in ecologically relevant species

- test PFAS in mouse model of immunotoxicological response

- examine PFAS uptake in food crops and effects of soil composition

- study effects of PFAS on pregnancy and placental health and function

- develop computer models to predict where PFAS go in organisms and the environment

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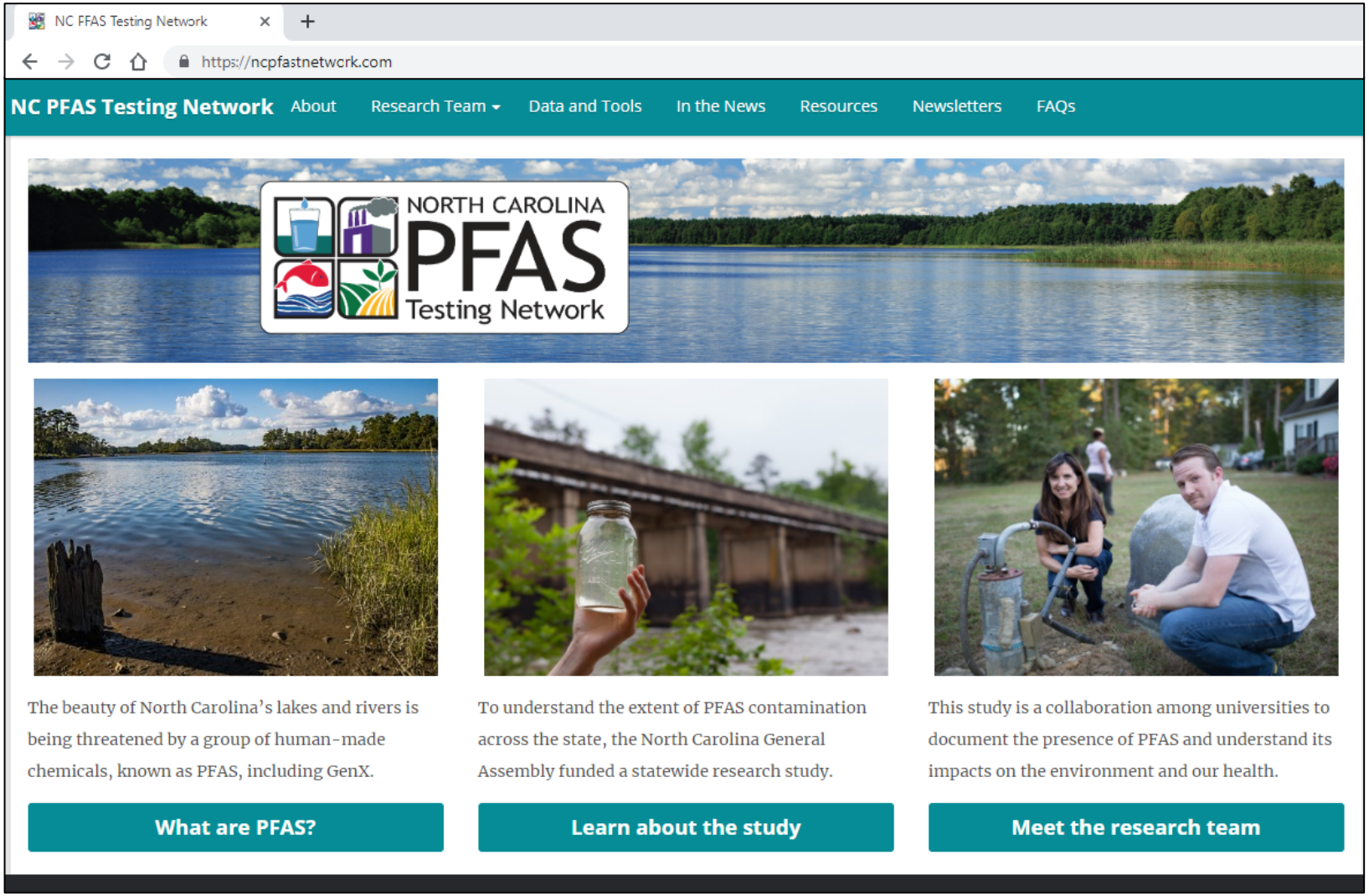

Acknowledgements


Detlef Knappe, PhD
NCSU


P. Lee Ferguson, PhD
Duke


David Genereux, PhD
NCSU


Jacqueline MacDonald Gibson, PhD
UNC-CH


Orlando Coronell, PhD
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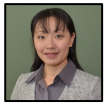
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Morton Barlaz, PhD
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James Levis, PhD
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Scott Belcher, PhD
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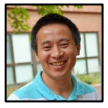
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