Project Plan

• During the summer of 2022, between May and August, a large-scale fish collection event will take place in the Middle and Lower Cape Fear River for PFAS analysis.

• There will be ~300 individual fish collected that represent both migratory and non-migratory freshwater fish and saltwater fish that are all commonly consumed by North Carolinians. Water samples will be collected at each location for BAF derivation.

• The data will serve DEQ surface water standards development for a suite of PFAS compounds and DHHS fish consumption advisories if appropriate.

• The water and fish tissue samples will be analyzed at GEL laboratories for the suite of Consent Order PFAS and any other PFAS that can be analytically detected.

• This will enable 2B regulatory values to be generated once the EPA and/or NC SSAB derive RfDs.
Collaborative Effort

Summer 2022 Fish Collection Event

- NCDEQ
  - Division of Marine Fisheries
  - Division of Water Resources
- NCDHHS
  - Secretary’s Office
  - Public Health
- NCWRC
  - Inland Fisheries Division

Department of Environmental Quality
PFAS in North Carolina – all will be reported for fish tissue and any other PFAS able to be analytically detected.

Department of Environmental Quality
2022
Fish & Surface Water Collection Project

BAF Derivation
Bio-concentration and Bio-accumulation Factors

BCF/BAF - an indicator of a chemical substance’s tendency to accumulate in the living organism.

- Can be expressed as the ratio of the concentration of a chemical in an organism to the concentration of the chemical in the surrounding environment.
  - Water and fish tissue concentrations

- A measure of the extent of chemical sharing between an organism and the surrounding environment.
- A value greater than 1 is indicative of accumulation.
2022 Fish Collection Sampling Plans
2022 Fish Collection Sampling Plans
2022 Fish Collection Sampling Progress

Sites Complete

In Progress
2022 Fish & Water Collection Event Estimated Timeline

- **Project Design**
  April - May

- **Fish Tissue Processing**
  June - August

- **Fish Collection**
  May - August

- **Send for Laboratory Analysis**
  August - September

- **Data Review**
  October - December

- **Regulatory Applications**
  2023
2022 Fish & Water Collection Event Estimated Timeline

Fish Collection
June - August

Fish Tissue Processing
June - August

Data Review
October - December
Thank you