

Executive Order No. 246
*“North Carolina’s
Transformation to a Clean,
Equitable Economy”*



Background and Goals

Background

- Climate and Environmental Justice
- All-of-government approach to climate and environmental justice
- Additional to EO 80 (climate and clean energy), EO 143 (Andrea Harris), EO 218 (offshore wind)
- Decarbonize our economy while creating jobs and economic opportunity

Economywide Goals

- 50% reduction in statewide greenhouse gas emissions by 2030
- Net-zero emissions as soon as possible, no later than 2050

Transportation Goals

- 1.25M zero-emission vehicles registered in NC by 2030
- 50% of new vehicle sales in 2030 ZEVs



Environmental Justice

EJ and Equity Consideration

- Agencies shall incorporate EJ and equity considerations and benefits in implementing this EO.

EJ Leads

- Will serve as agency point person and raise awareness for environmental justice and equity considerations across agencies.

Public Participation Plans (PPP)

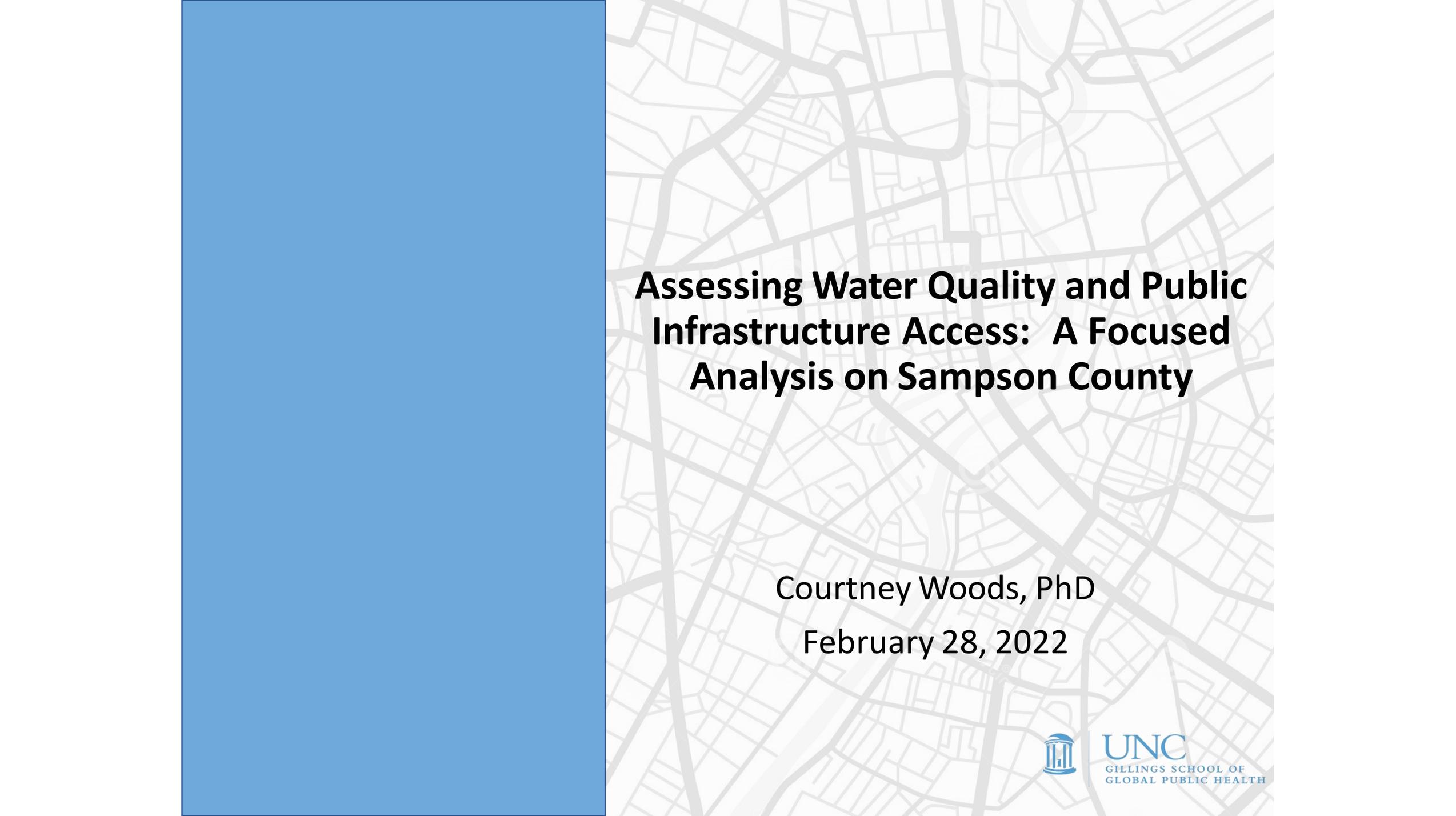
- Each agency will develop a PPP by June 1, 2022, to enhance community engagement and promote meaningful dialogue with public.

Stakeholder Input

- This will be a third party facilitated engagement where the Governor's Office and cabinet agencies partner with community stakeholders to inform additional executive action on environmental justice and equity.

Distribution of State and Federal Funds

- Invest applicable federal and state funding consistent with objectives outlined in EO 246, EO 80, and EO 218.



**Assessing Water Quality and Public
Infrastructure Access: A Focused
Analysis on Sampson County**

Courtney Woods, PhD

February 28, 2022



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Our Water Team



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Danielle Koonce, EJ CAN Board Member

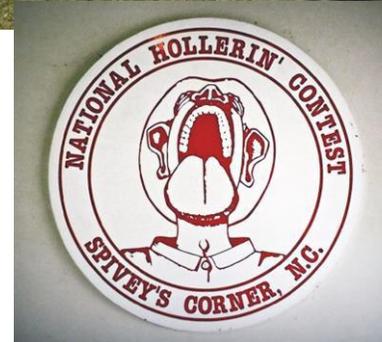
Naeema Muhammad, NCEJN Senior Advisor

Appalachian State Faculty and Students: Rebecca Witter, Shea Tuberty, Carol Babyak, Abby Hrabosky, Mollie Donovan

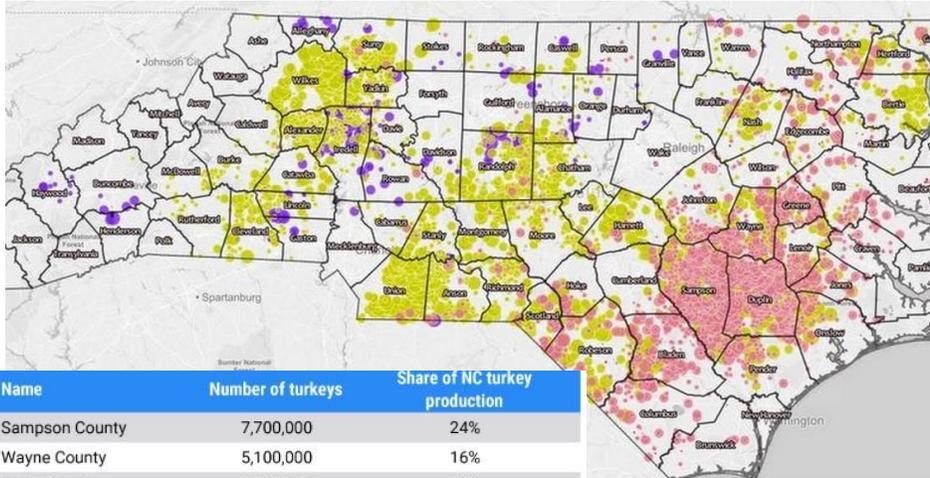


Sampson County

- One of the largest counties (by area) in NC
- Fairly racially diverse
- Ranked among the top 12 counties for person living in poverty (21.2%) and uninsured
- Hosts several major environmental hazards



Hogs and Poultry Operations in Eastern, NC



Name	Number of turkeys	Share of NC turkey production
Sampson County	7,700,000	24%
Wayne County	5,100,000	16%
Union County	4,200,000	13%
Duplin County	3,700,000	11%
Onslow County	1,900,000	6%
Bladen County	1,650,000	5%
Lenoir County	1,550,000	5%
Anson County	1,200,000	4%
Greene County	1,150,000	4%
All Other Counties	4,350,000	13%
NC Total	32,500,000	100%

Source: USDA NASS

CAROLINA
DEMOGRAPHY



- 1.8 million hogs and 1.9 million turkey (2018)
- Previous research from UNC Gillings demonstrated impacts on respiratory health, mood, quality of life and the disproportionate presence in communities of color and of low income

Sampson County Landfill

- Largest regional landfill in the state
- Managed by GFL Environmental (formerly Waste Industries)
- Receives approximately 1.5 million tons of trash per year
- Receives 5000 tons per day from approx. 250 20-20 ton trucks 6 days a week.
- Accepts waste from all counties of NC
- Approx. 1300 acres; has a 50 -year lifespan



Qualitative Research Themes

- Nuisances from landfill and hog houses (odors, buzzards)
- Water Quantity and Quality Concerns
- Mistrust in local officials/services
- Cost burden

“And even now, sometimes, you take a shower and you try to run to your car so that smell won’t stick on you. You stink when you go outside down here.”

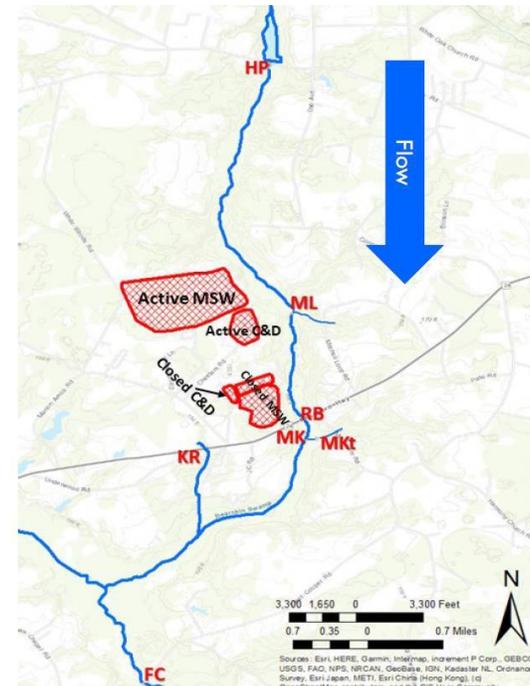
“...we lost our well water, they took it, they dug down so deep”

“And everything is costing me. I got to pay an extra cost for everything that uses water because I can't use my well anymore. High cost for access to good water”

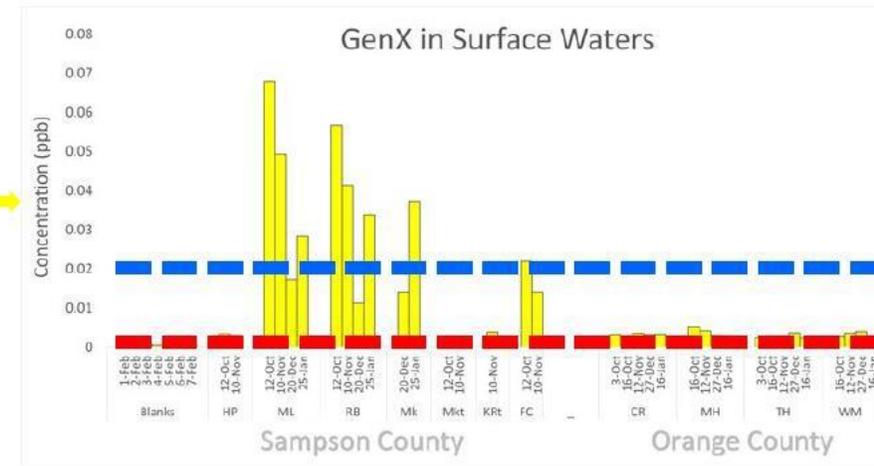
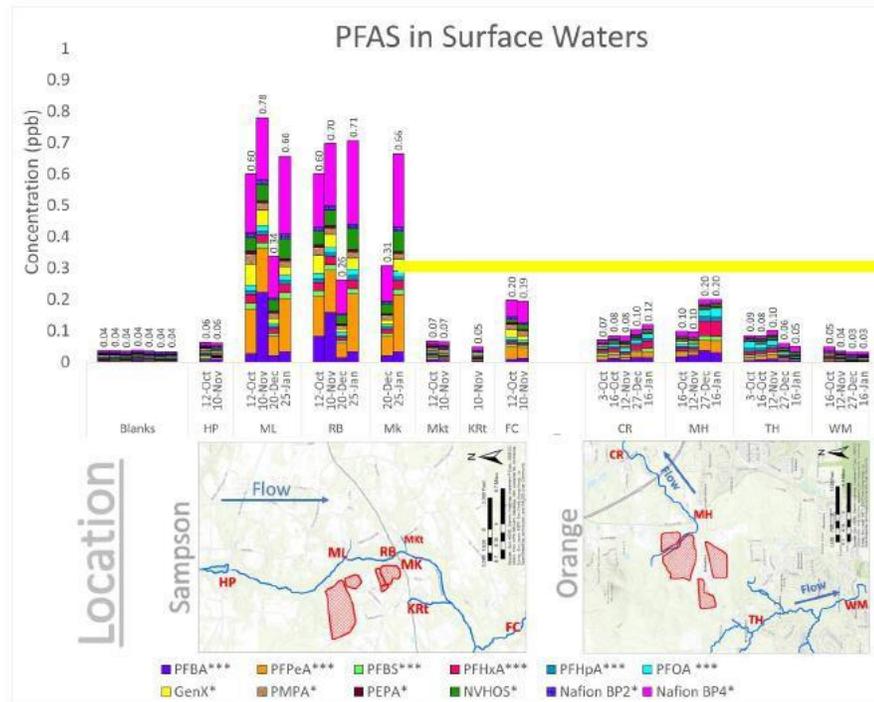
Environmental Monitoring



- Collected samples along the Bearskin creek
- Measured heavy metals, PFAS, nutrients

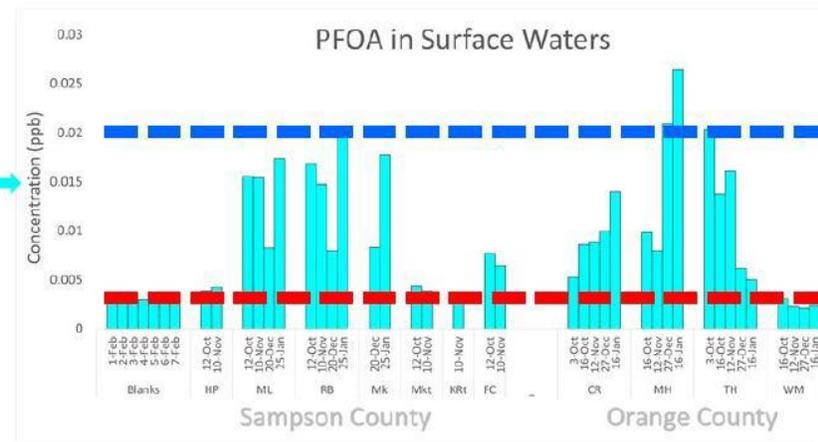
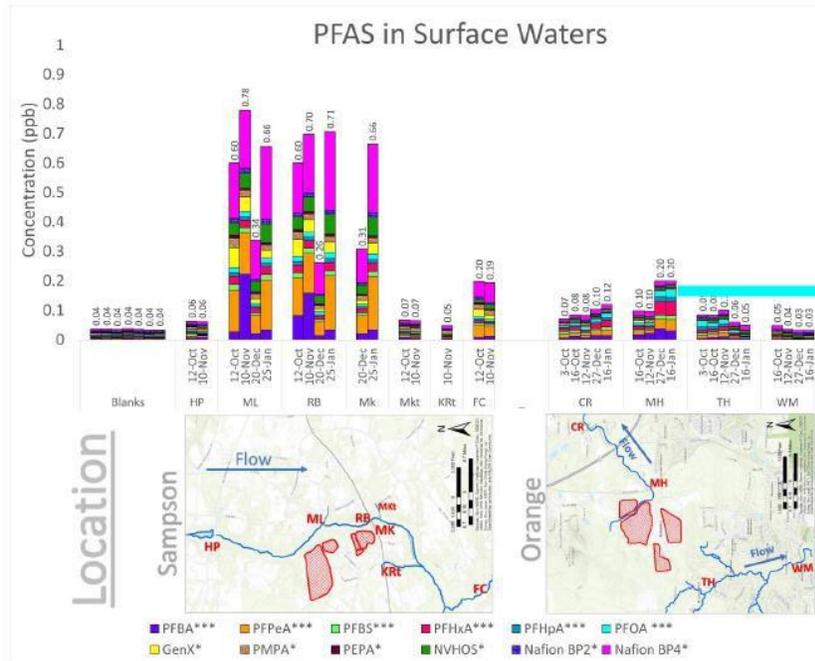


Novel PFAS



LOQ
Blank

Legacy PFAS



LOQ
Blank

Public Data on Measurements of PFAS in Landfill Leachate

Parameter	Sample ID		9222-1	8202-1
	Sampling Date		09/18/19	09/18/19
	Landfill Name		Wake County South Wake MSWLF ¹	Sampson County Disposal, LLC
	Laboratory Method	Units ²		
Fluorotelomer sulfonate 4:2 (4:2 FTS)	EPA 537.1 Mod	ng/L	ND ³	ND
Fluorotelomer sulfonate 6:2 (6:2 FTS)	EPA 537.1 Mod	ng/L	ND	ND
Fluorotelomer sulfonate 8:2 (8:2 FTS)	EPA 537.1 Mod	ng/L	ND	ND
N-ethylperfluoro-1-octanesulfonamidoacetic acid (NEtFOSAA)	EPA 537.1 Mod	ng/L	ND	43.8
N-methylperfluoro-1-octanesulfonamidoacetic acid (NMeFOSAA)	EPA 537.1 Mod	ng/L	35.8J	104
Perfluorobutyric acid (PFBA)	EPA 537.1 Mod	ng/L	600	4770
Perfluorobutanesulfonate (PFBS)	EPA 537.1 Mod	ng/L	1420	7530
Perfluorotetradecanoic acid (PFTeDA)	EPA 537.1 Mod	ng/L	ND	ND
Perfluorotridecanoic acid (PFTriDA)	EPA 537.1 Mod	ng/L	ND	ND
Perfluorodecanesulfonate (PFDS)	EPA 537.1 Mod	ng/L	ND	ND
Perfluorodecanoic acid (PFDA)	EPA 537.1 Mod	ng/L	17.3J	90.9
Perfluorododecanoic acid (PFDoA)	EPA 537.1 Mod	ng/L	7.40J	9.17J
Perfluoroheptanesulfonate (PFHpS)	EPA 537.1 Mod	ng/L	ND	ND
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 Mod	ng/L	241	5520
Perfluorohexanesulfonate (PFHxS)	EPA 537.1 Mod	ng/L	237	424
Perfluorohexanoic acid (PFHxA)	EPA 537.1 Mod	ng/L	2940	6730
Perfluoronanesulfonate (PFNS)	EPA 537.1 Mod	ng/L	20.7	ND
Perfluorononanoic acid (PFNA)	EPA 537.1 Mod	ng/L	28.8	128
Perfluorooctanesulfonamide (PFOSA)	EPA 537.1 Mod	ng/L	ND	ND
Perfluorooctanesulfonate (PFOS)	EPA 537.1 Mod	ng/L	82.3	222
Perfluorooctanoic acid (PFOA)	EPA 537.1 Mod	ng/L	803	1790
Perfluoropentanesulfonate (PFPeS)	EPA 537.1 Mod	ng/L	32.3	61.0
Perfluoropentanoic acid (PFPeA)	EPA 537.1 Mod	ng/L	577	86400
Perfluoroundecanoic acid (PFUdA)	EPA 537.1 Mod	ng/L	ND	10.2J
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA) ⁶	EPA 537.1 Mod	ng/L	NA ⁷	10800
1,4-Dioxane	EPA 8270 SIM	µg/L	30.0	184

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Recommendations

- Frequent monitoring of surface and groundwater wells at the Sampson County Landfill
 - add PFAS compounds to the list of chemicals that are tested
- Monitoring of upgradient, downgradient and landfill-proximal water samples along Bearskin Creek
- Water testing among residents on private wells.
- Identification of an alternative disposal site for Chemours sludge until it is determined that cumulative concentrations detected in surface and groundwater samples are below the EPA's recommended threshold.
- Lower the proposed drinking water limits for PFAS from 70 ppt to 1 ppt.

Our Current Work: Residential Water Quality in Sampson Co.

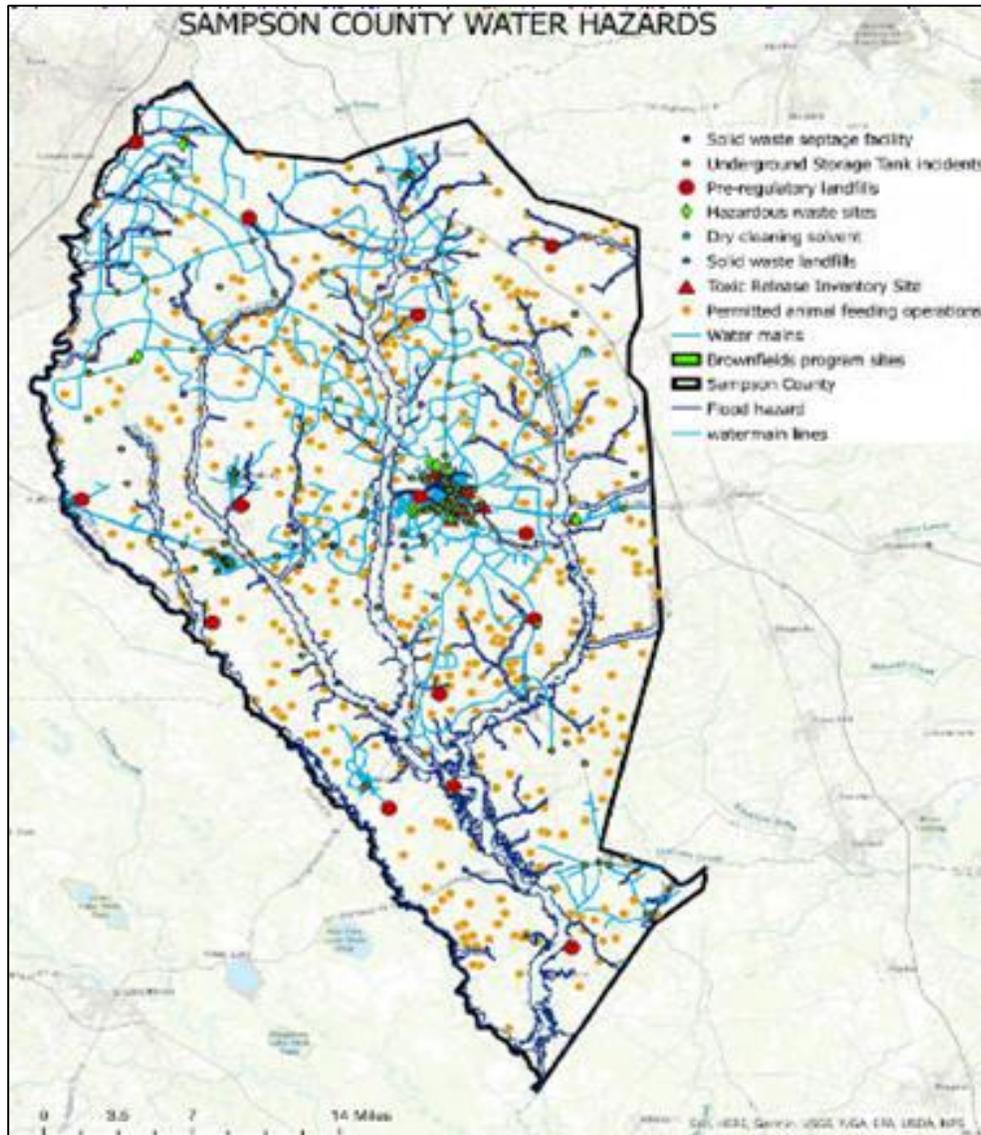


Photo Credits: Rebecca Witter



Goal: 1) Determine extent and type of water contamination across the county, 2) Provide residents with data on their water quality and 3) understand their perceptions of contaminant exposure risk

- Measure heavy metals, nutrients, PFAS and fecal bacteria
- Understand risk perception and water source preference
- Tested approximately 60 residences



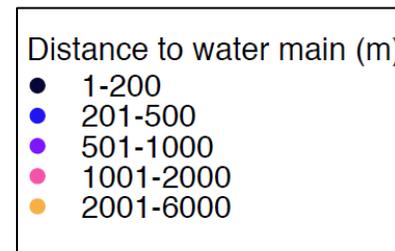
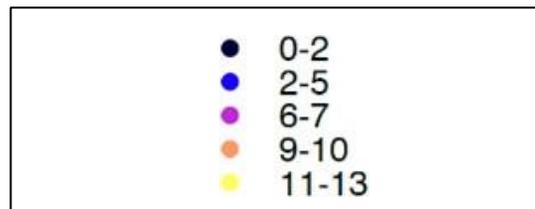
Our Current Work: Spatial Analysis of Water Hazards & Infrastructure

- **Goal:** Develop an index to help identify “high-impact” communities for water- related interventions
- Spatial analysis of water hazard flood plains & and water lines
- Statistical analysis to identify factors that may influence potential exposure risk

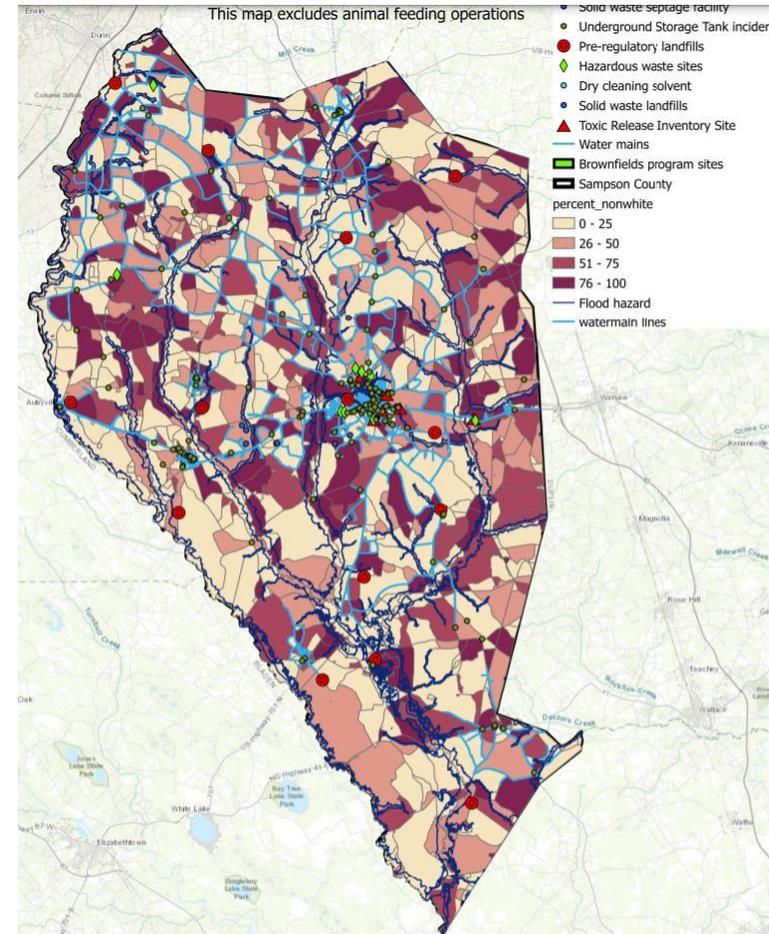
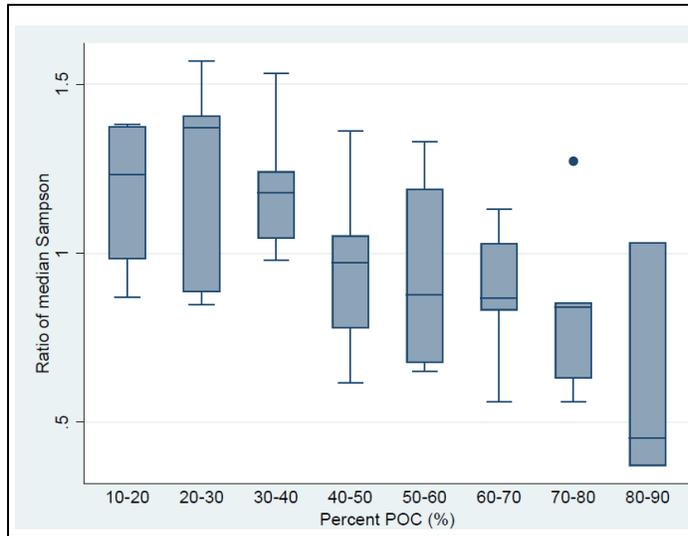
Our Current Work: Spatial Analysis of Water Hazards & Infrastructure

Number of Hazards
within 1000 meters

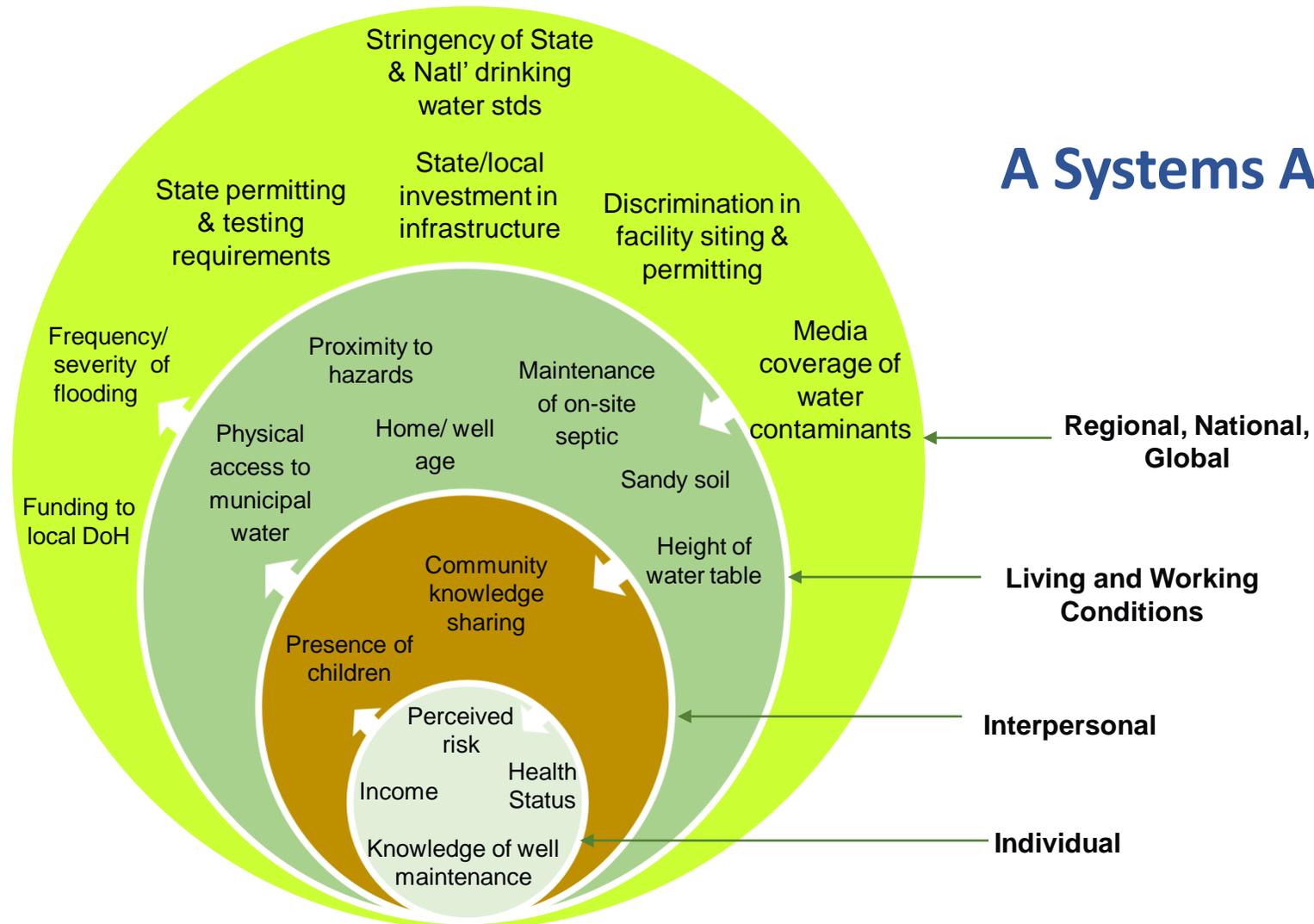
Distance to public
water infrastructure



Race, wealth and proximity to hazards and/or water infrastructure



Factors Impacting Water Quality Among Rural Residents



A Systems Approach

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SCIENCES AND ENGINEERING



NORTH CAROLINA

Department of Transportation

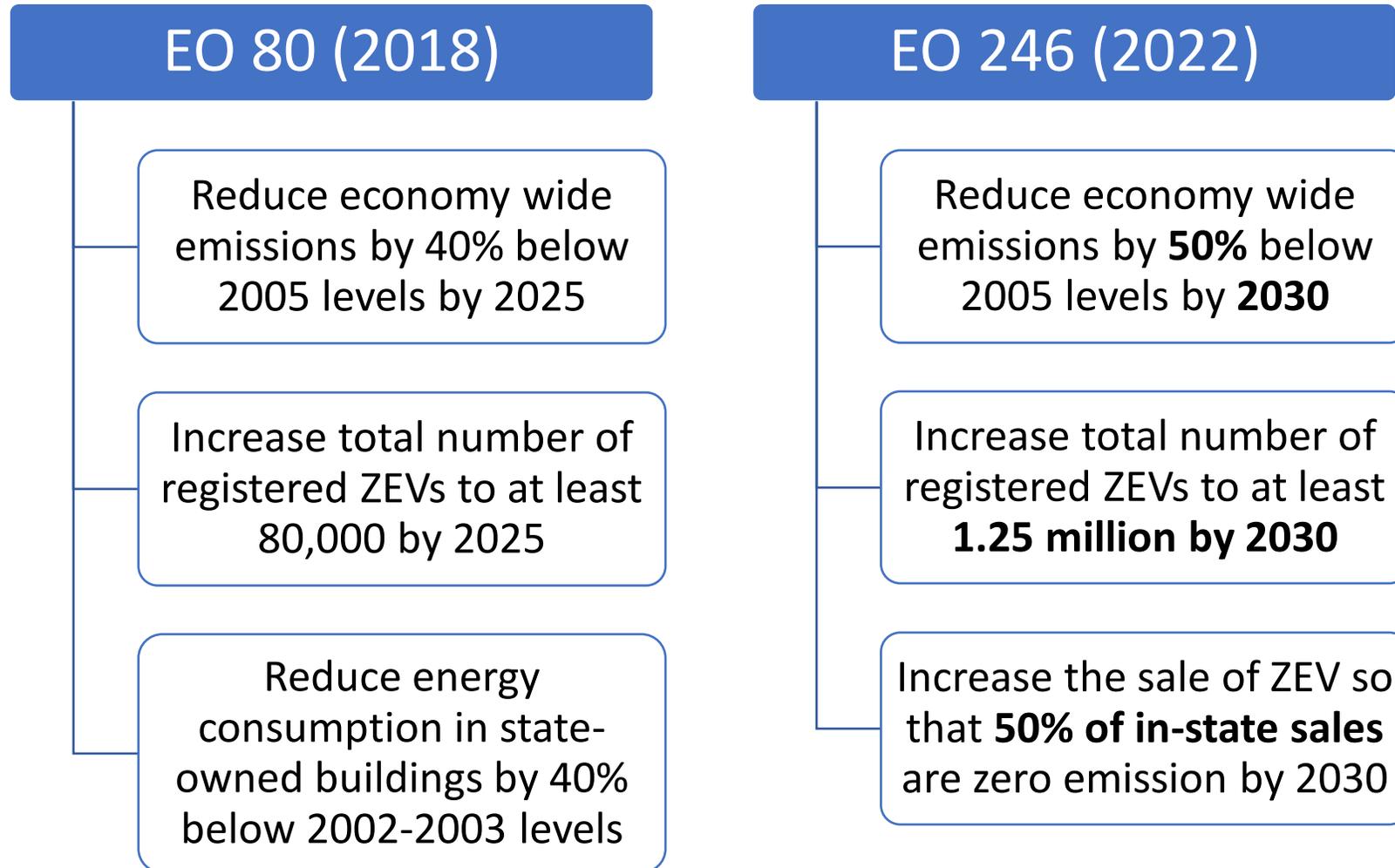


NC Clean Transportation Plan

EJ and Equity Advisory Board

February 28, 2022

Executive Orders 80 and 246



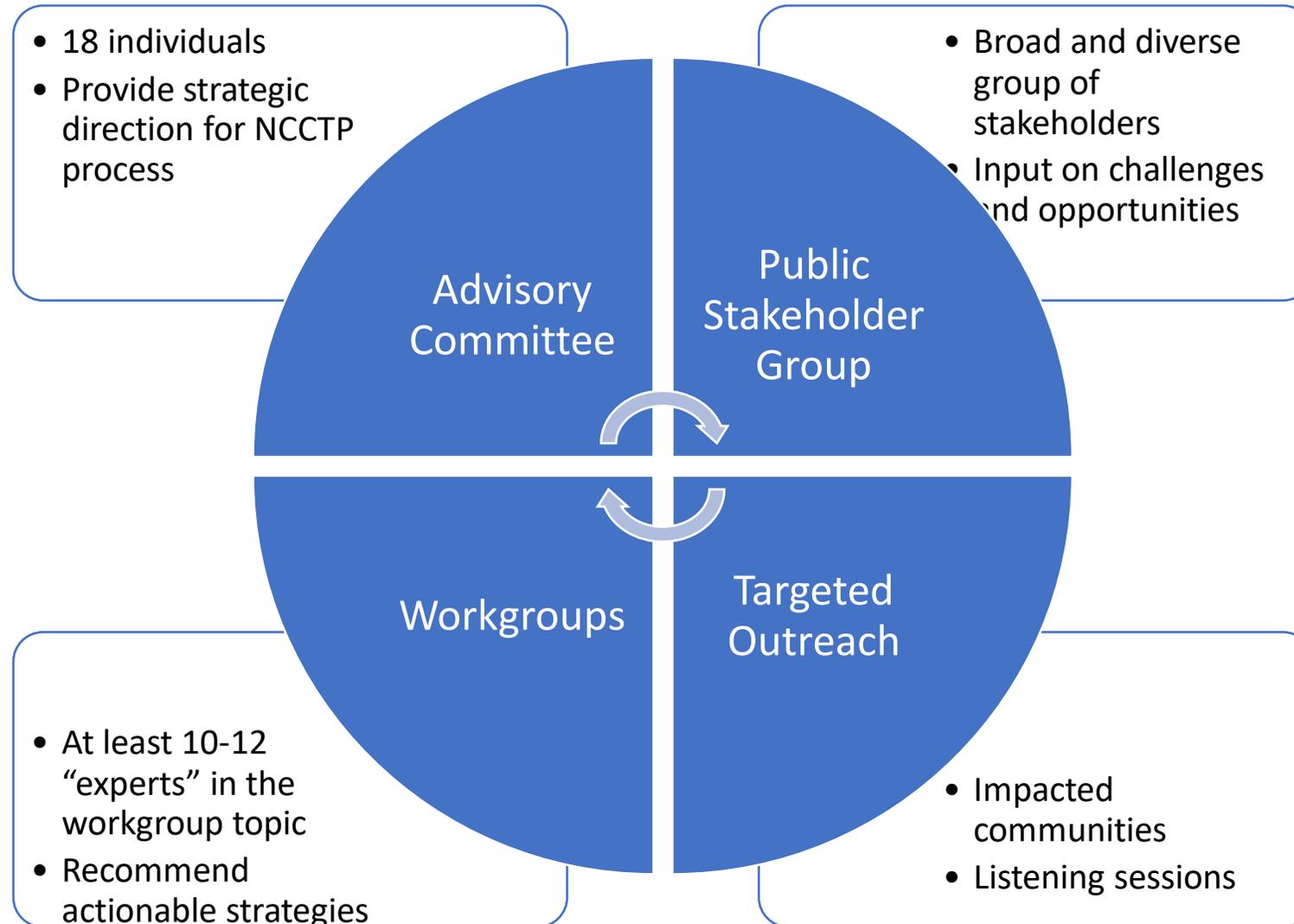
NC Clean Transportation Plan

1. Availability, sales, and usage of zero-emission vehicles to levels beyond current market projections, including a focus on Medium- and Heavy-Duty ZEVs;
2. Reductions in vehicle miles traveled;
3. Investment in clean transportation infrastructure;
4. Equitable access to clean mobility options;
5. Increased availability of non-vehicle transportation modes;
6. A transition to zero- and low-emission fuels; and
7. Other relevant topics.

NCCTP Objectives

- Share **best-practices** and **increase awareness** of the current landscape of clean transportation initiatives in North Carolina;
- Assess the **opportunities, challenges, and considerations** with creating a more equitable clean transportation system in the state, with a specific focus on the potential impacts on **underserved populations** and communities;
- Develop **actionable strategies**, with an emphasis on near-term action, that will support achievement of the goals in E.O. 246 and any other goals developed as part of NCCTP process.
- Develop **accountability metrics** to track progress for priorities such as ZEV registrations, ZEV sales, environmental justice, and workforce development.

NCCTP Stakeholder Groups



NCCTP Advisory Committee

Organization Type	Name/Organization
Chair	Jen Weiss, NC Dept. of Transportation
Academic	Steve Kalland, NC Clean Energy Technology Center
Auto industry (manufacturer)	David Trebing, Thomas Built / Daimler
Auto industry (dealer)	John Policastro, NC Automobile Dealers Association
Clean transportation	Stan Cross, Southern Alliance for Clean Energy
Community	Jonathan Barfield, New Hanover County
Environmental	Kym Hunter, Southern Environmental Law Center
Environmental Justice	Khrystle Bullock, Hip Hop Caucus
EVSE (charging stations)	Whitney Schmidt, Chargepoint
EVSE (grid Integration)	Abby Campbell Singer, Siemens
Land Use	Dr. Danielle Spurlock, UNC Chapel Hill
Local government	Darrell Hinnant, City of Kannapolis
Utility	Mark McIntire, Duke Energy
NC Dept. of Administration	Haley Pfeiffer Haynes
NC Dept. of Commerce	Jennifer Mundt
NC Dept. of Environmental Quality	Brian Phillips
NC Dept. of Health and Human Services	Virginia Guidry
NC Dept. of Transportation	Heather Hildebrandt
Office of the Governor	Zach Pierce

NCCTP Workgroups

ZEV Plan 2.0

- Focus on light duty vehicle transition
- Vehicle availability and consumer education
- Incentives and affordable financing options

M/HD ZEV Action Plan

- Builds off the multistate M/HD MOU
- Environmental Justice outreach to impacted communities
- Includes low-carbon fuels

Fleet Transition Plan

- Public entities (state and local fleets)
- Private entities
- School buses

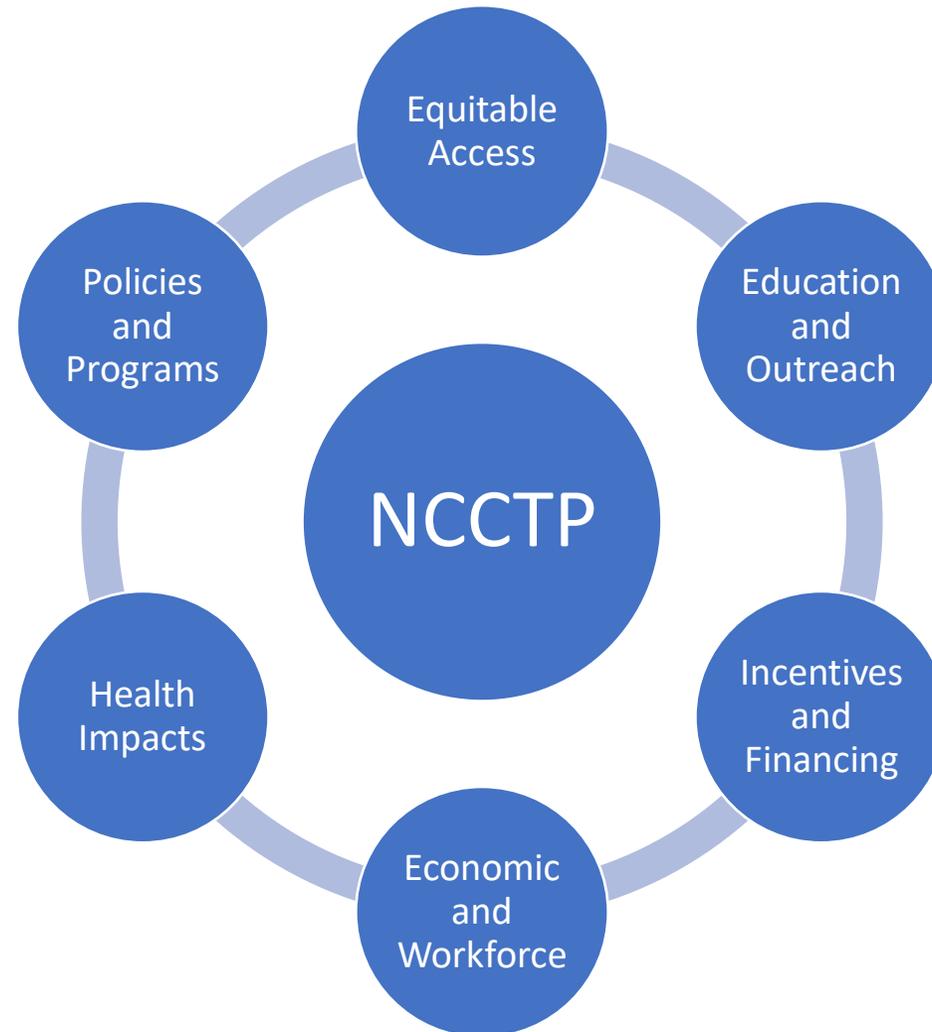
VMT Task Force

- Builds off existing VMT Task Force
- Includes transit, bike-ped, passenger rail and other non-vehicle transportation modes

Clean Transportation Infrastructure

- EV Charging Infrastructure
- Alternative fuels infrastructure
- Includes mapping, siting and identification of gaps

Cross-cutting Themes



NCCTP Timeline



NCCTP Timeline



MHD ZEV MOU Update

- Last update to EJ & Equity Board was February 2021. Goals of the MOU:
 - 30% Sales by 2030
 - 100% Sales by 2050
- NESCAUM developed Draft Action Plan shared with Multi-state Taskforce
- Draft Action Plan has Environmental Justice and Equity included throughout
- Plan included input from:
 - Moving Forward Network – environmental justice recommendations
 - MJ Bradley Associates – utility recommendations
 - Multi-state Taskforce
- Marilyn Marsh-Robinson and William Barber, III were instrumental in providing feedback for NC EJ & Equity Board
- NC Inter-Agency Workgroup provided additional feedback:
 - NC DEQ / DAQ
 - NC DOT
 - NC DOA
 - Commerce
 - Governor's Office

MHD ZEV MOU Next Steps

- NESCAUM will release M/HD Action Plan for Public Comment beginning of March
 - Comment Period will be open for 60 – 90 days
 - Thoughts on how to equitably share throughout NC to get feedback
- Clean Transportation Plan will be developing their own MHD ZEV Plan for NC
 - Partners:
 - EJ & Equity liaisons
 - Warehouse Distribution Centers
 - Clean Cities Coalitions
 - Health Organizations
 - Impacted Communities
 - Others?
 - The Final Plan will be developed by September 30, 2022 to align with the CTP

Discussion

- Help design the community listening sessions
 - Identify communities
 - Identify people / organizations to attend
 - Identify topics
- Identify people to be involved in workgroups
 - M/HD Workgroup
 - Other Workgroups

Thank you!

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