

PFAS in New Jersey Soils: A Statewide Survey and Geochemical Study

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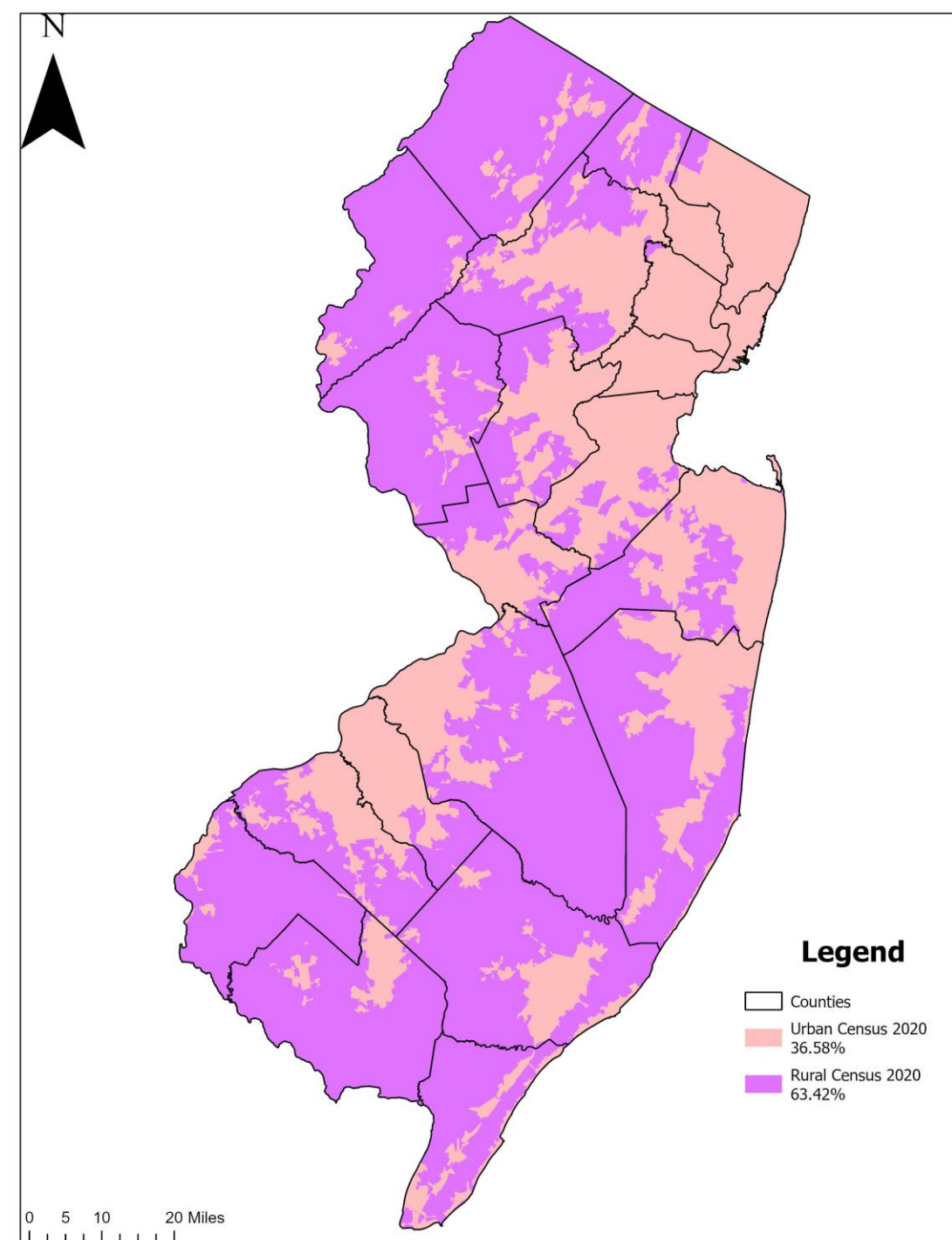
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Project Objectives

- ▶ Determine if there is anthropogenic PFAS soil contamination in NJ soils from non-localized atmospheric deposition
- ▶ Gain a better scientific understanding of PFAS adsorption by soils

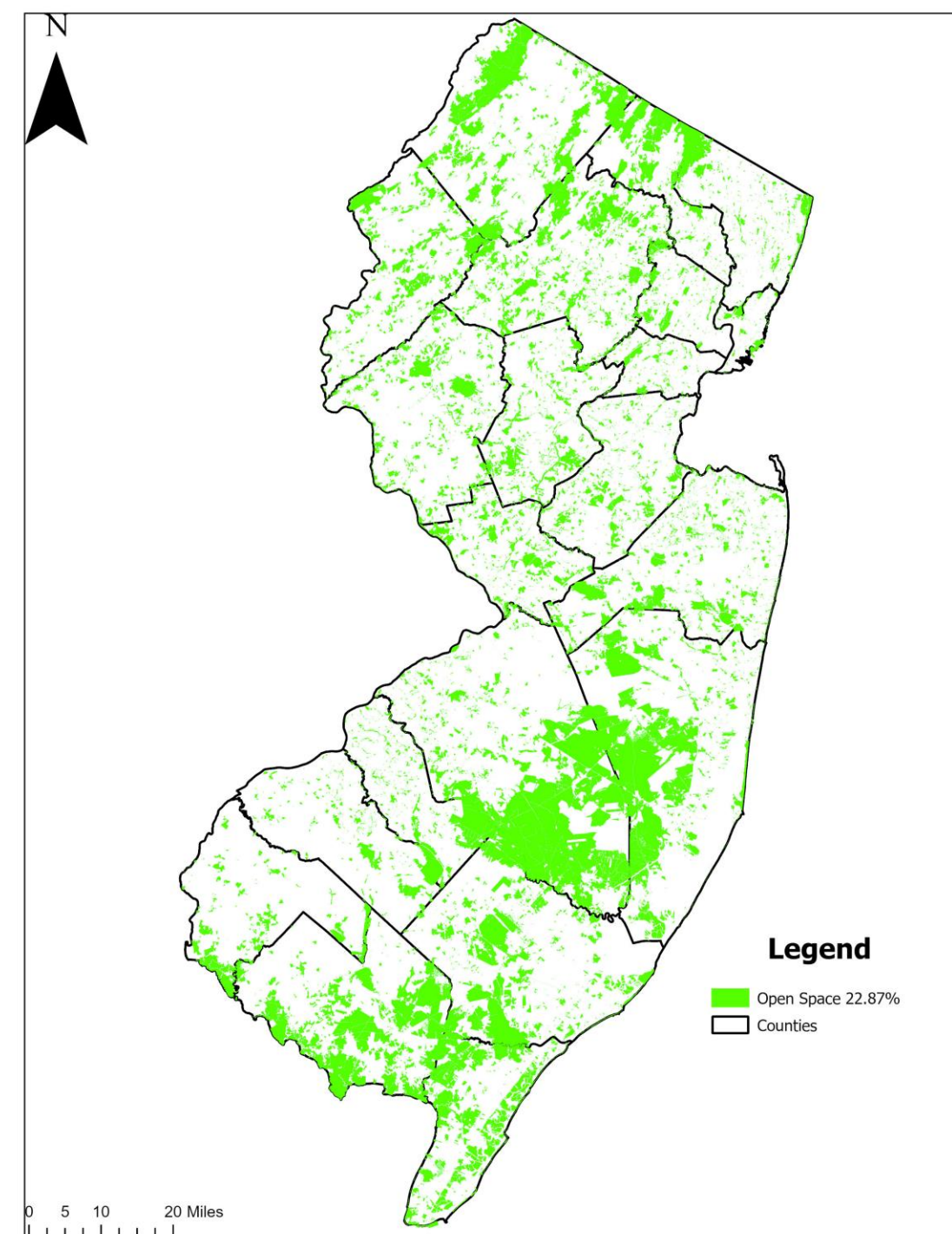
Experimental Design

- ▶ 8 surficial (0-6 inch) samples per county
 - ▶ 4 urban, 4 rural
 - ▶ U.S. Census definition



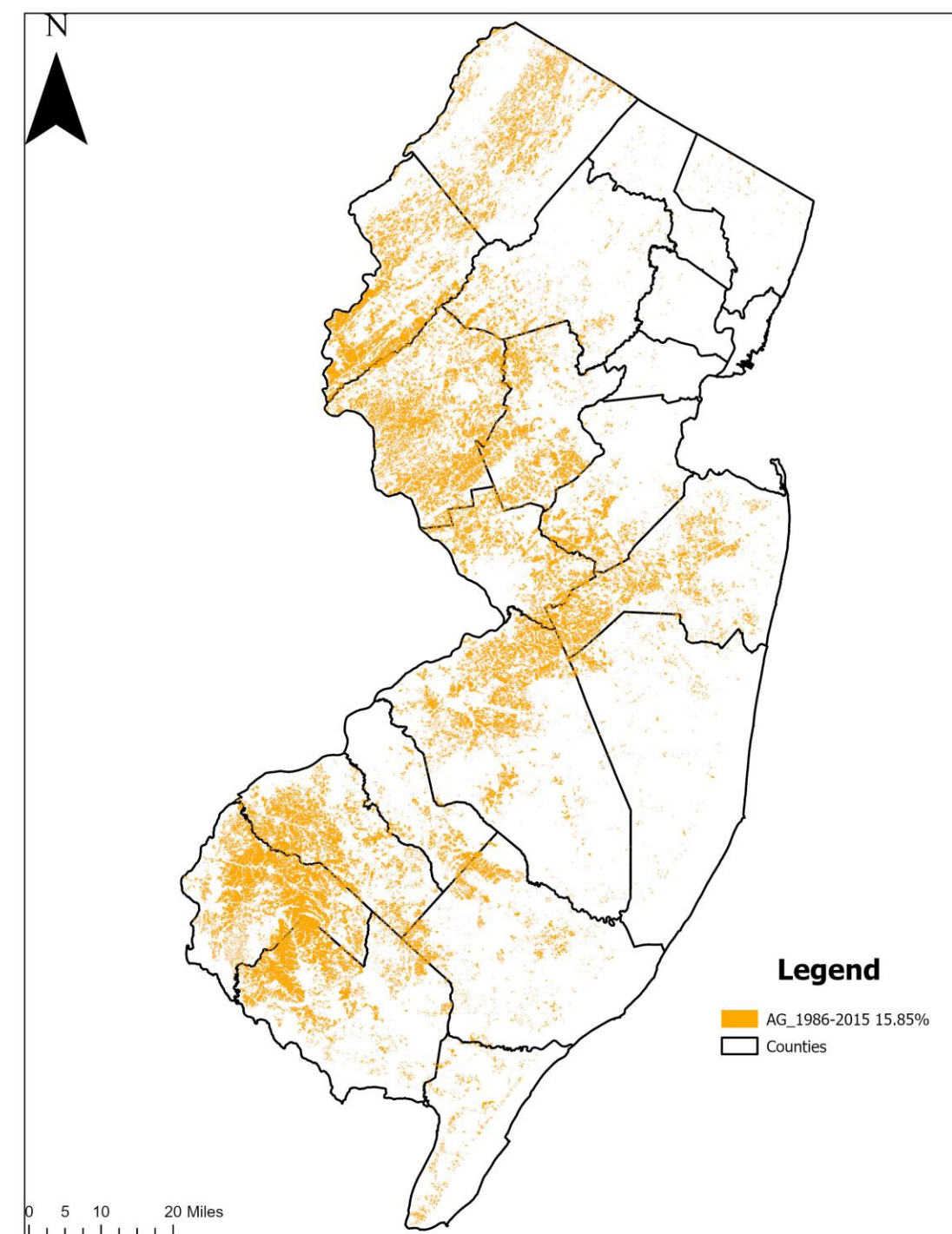
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 - ▶ State, county, municipal parks, etc.



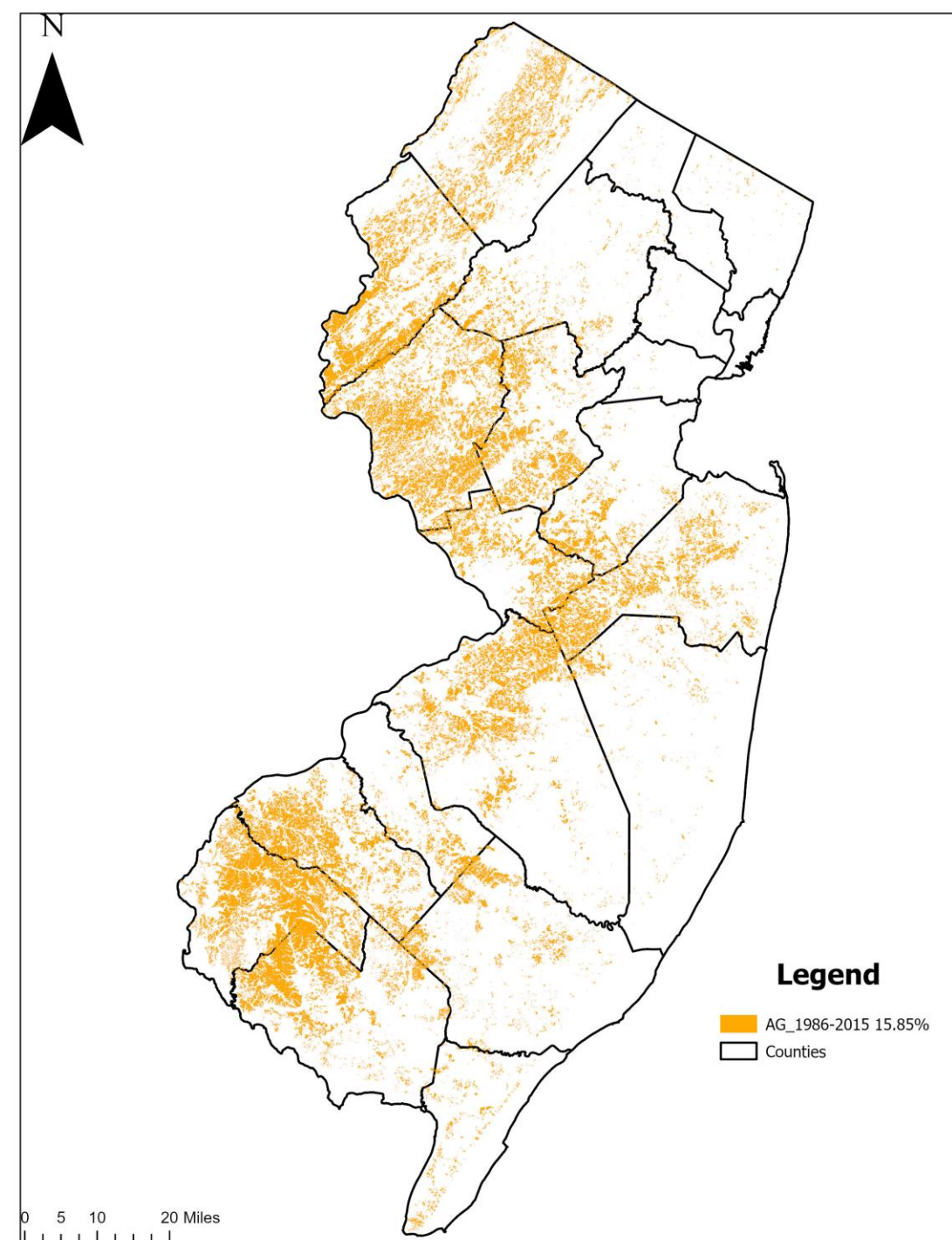
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- ▶ No history of agricultural use since 1940
- ▶ Spatially distant from known or presumptive PFAS contamination



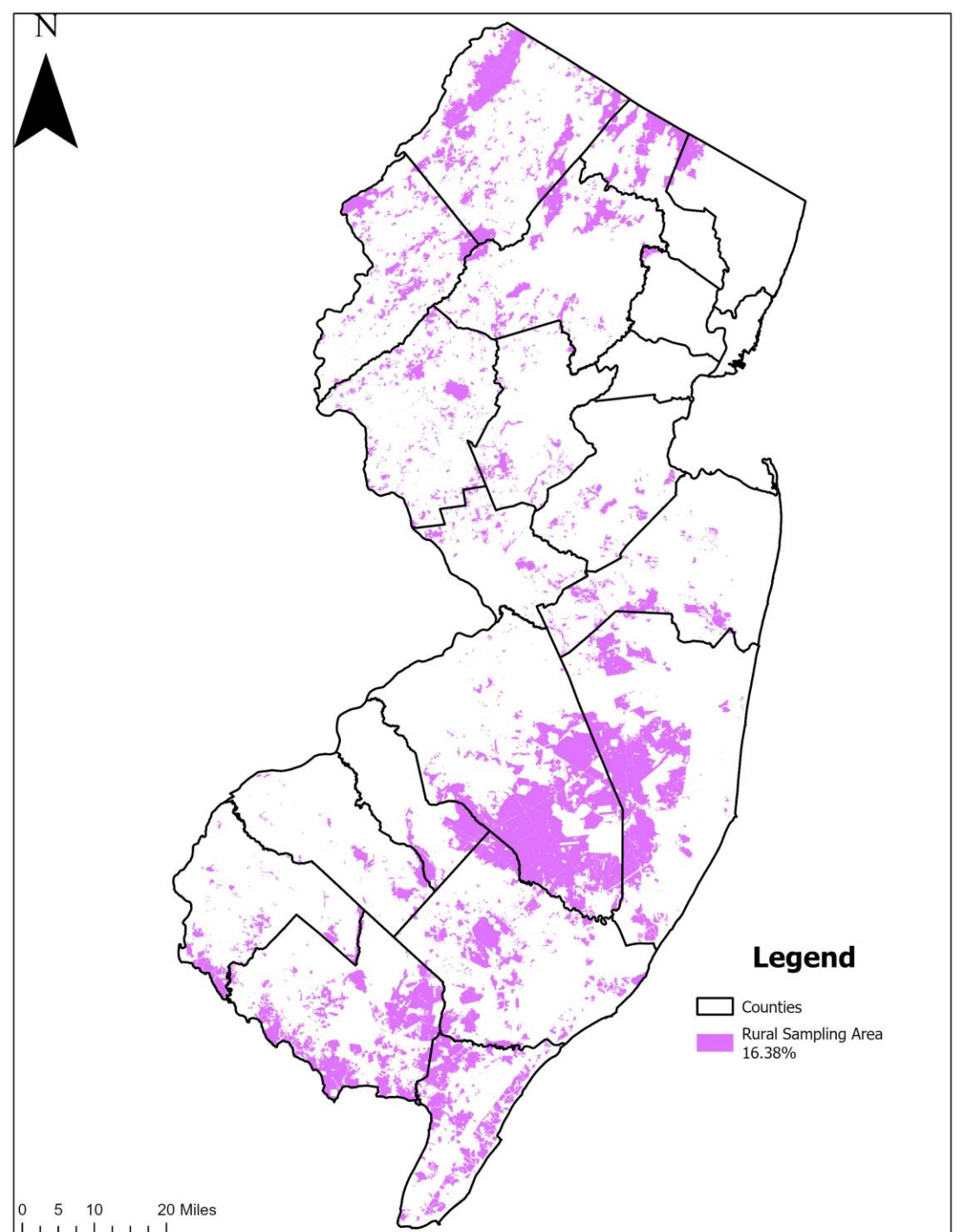
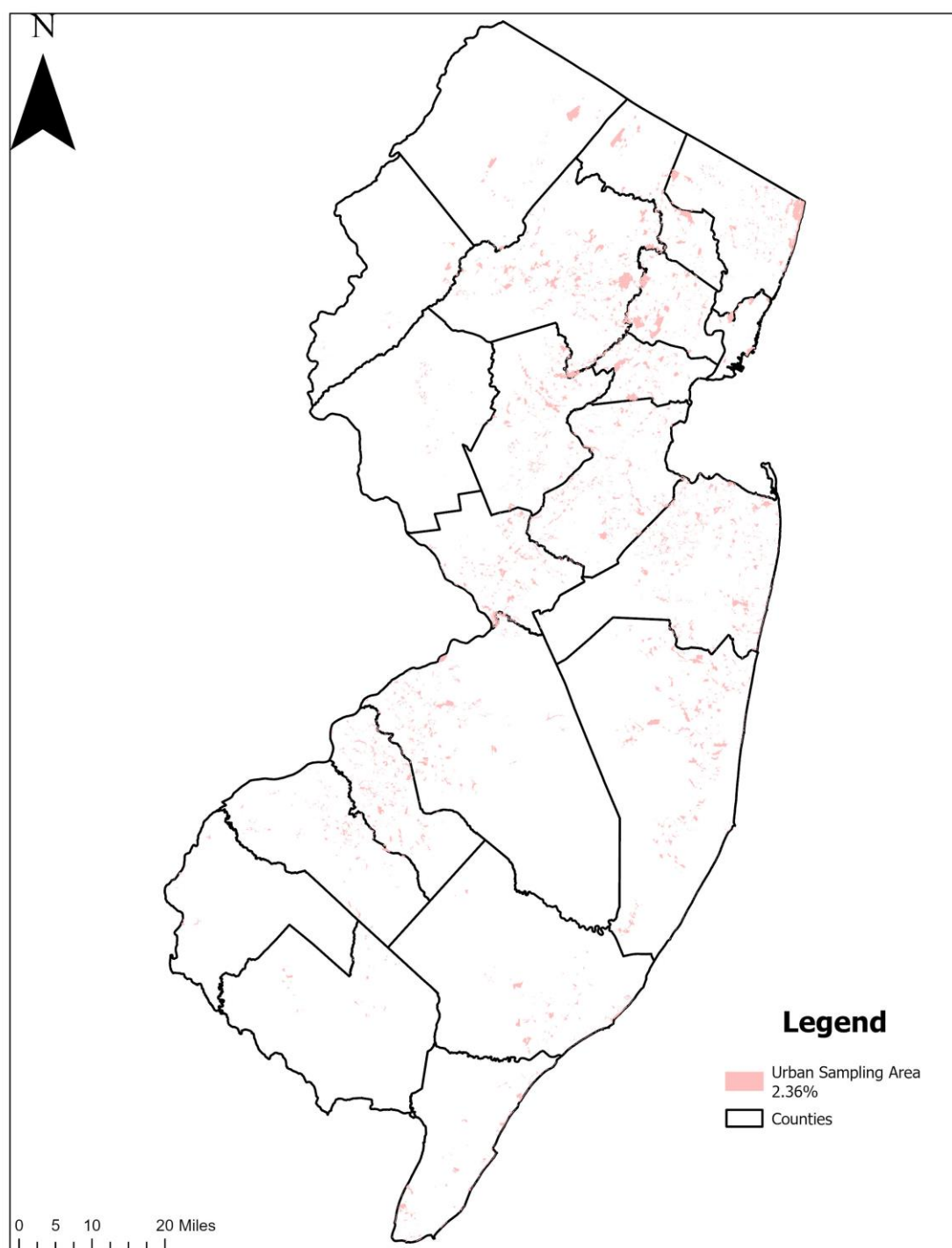
PFAS Contamination

Known (0.5 Mile Buffer)

- Potable Well GWQS Exceedances
- Soil Exceedances
- NJEMS Sites GW Exceedances (HAZSITE)
- Safe Drinking Water Exceedances
- NPL PFAS Sites
- Reported AFFF Incidents
- Discharge to GW PFAS Permits
- Fire Training Facilities
- Sludge Incinerators
- Emerging Contaminants Survey
- DEP Case Manager Screening

Presumptive (0.25 Mile Buffer)

- Airports
- Landfills
- Fire Stations
- PFAS NAICS SIC Codes
- FUDS Properties
- Military Bases
- Sludge Application Sites



Laboratory Analyses

- ▶ PFAS in soil (40 compounds)
- ▶ Total organic carbon
- ▶ Grain size with hydrometer
- ▶ Percent solids
- ▶ TAL metals & mercury
- ▶ pH
- ▶ Cation exchange capacity
- ▶ SPLP

Current Status

- ▶ Sampling by Bureau of Environmental Measurement and Site Assessment
 - ▶ 10 counties complete
- ▶ Initial results being reviewed by the Office of Data Quality

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Questions?