

The North Carolina Childhood Lead Poisoning Prevention Program

Ed Norman, MPH

**North Carolina DHHS
Division of Public Health
Environmental Health Section
Program Manager**

ed.norman@dhhs.nc.gov

(919) 707-5951



NC Childhood Lead Poisoning Prevention Program

State Childhood Lead Surveillance Team and Regional EHSs
Division of Public Health/Environmental Health Section

Data management

Coordinate training & response

Environmental investigation & sampling

Local Health Department EHSs/Lead Nurses

Blood Lead Testing

Environmental investigation & sampling

Clinical case management

Education

Primary Care Providers

Risk screening

Blood Lead Testing

Clinical evaluation & interventions

NC Childhood Lead Poisoning Prevention Program

CDC grant funded staff:

Tena Hand, Data Manager

Melanie Napier, PhD, Public Health Epidemiologist

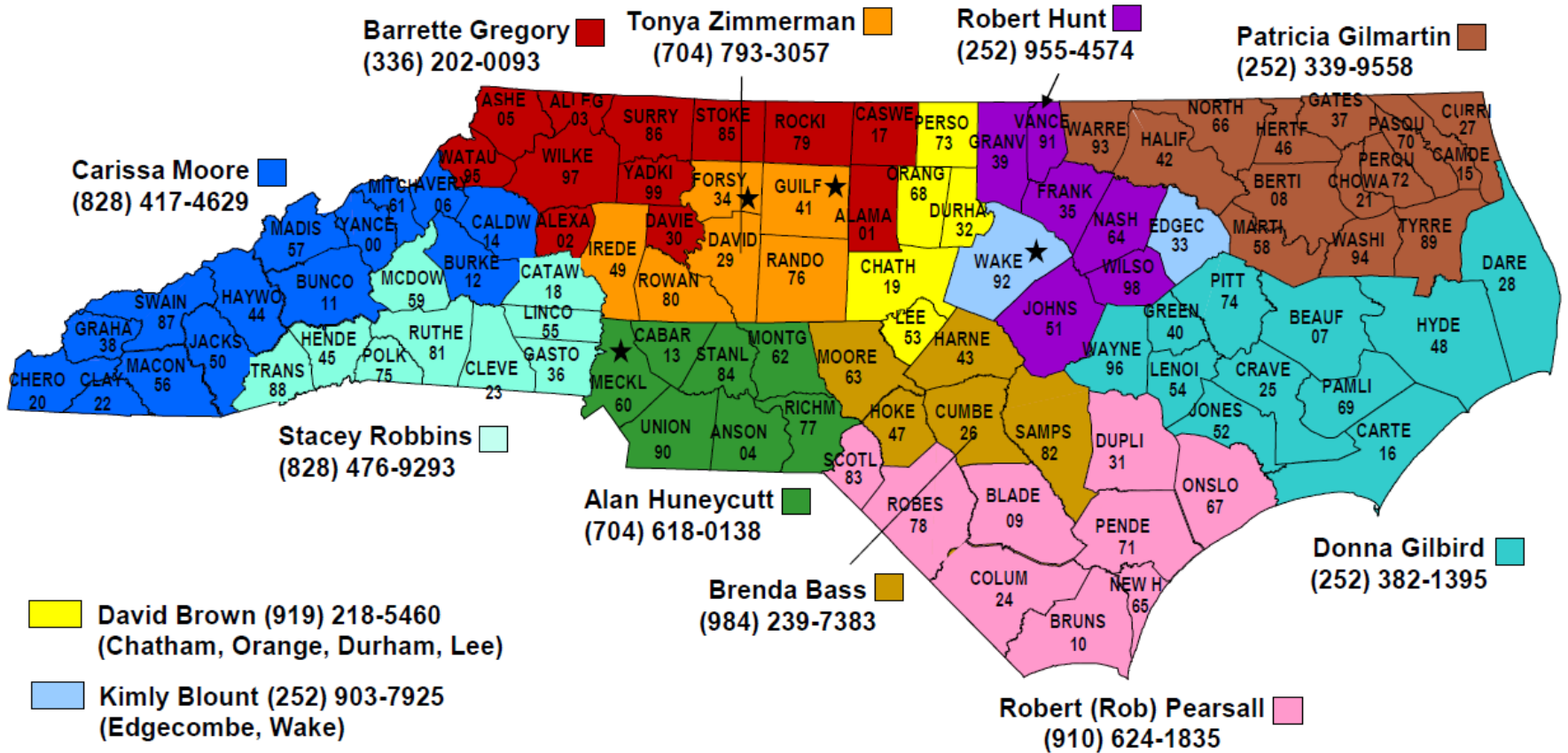
Samantha Sites, Public Health Epidemiologist

Ann Chelminski, MD, Public Health Physician

Long-term contract: UNC Institute for the Environment
(Health Education, Outreach & Training)

Neasha Graves & Megan Rodgers

Children's Environmental Health Program Environmental Health Staff Regions



Updated: 02/18/2020
Effective: 04/01/2020

North Carolina Law



- **laboratory reporting of all blood lead test results**
- **investigation of confirmed lead poisoning and EBL cases**
- **remediation of identified hazards for confirmed lead poisoning cases**

2017 Amendments to North Carolina Law

- Confirmed lead poisoning defined as:
10 $\mu\text{g}/\text{dL}$ or greater
- Elevated blood lead level defined as:
5 $\mu\text{g}/\text{dL}$ or greater
- 12 months allowed for confirmation
- Pregnant women included
- 6 new Medicaid funded regional positions

CDC Terminology

**Reference Value:
5 $\mu\text{g}/\text{dL}$ or greater**

North Carolina State Law

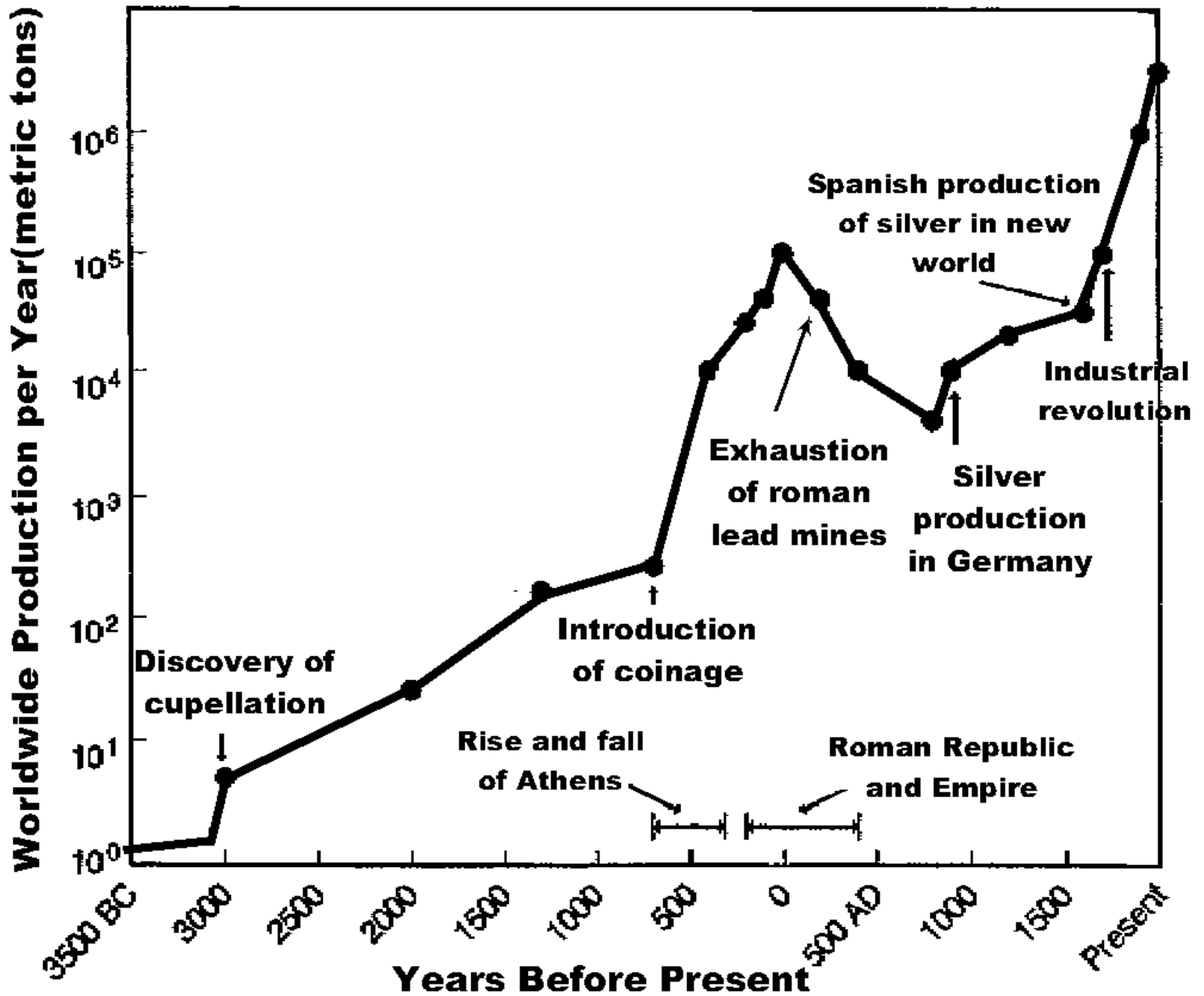
**Elevated blood lead level (EBL):
5 $\mu\text{g}/\text{dL}$ or greater**

**Confirmed lead poisoning:
10 $\mu\text{g}/\text{dL}$ or greater**

New Rule Amendment

Effective October 1, 2019

- Amendment to Child Care Sanitation Rule .2816**
- Water testing at all licensed Child Care Centers**
- Required testing using EPA 3Ts Methodology**
- Follow-up testing, notification & mitigation**



Historical record of industrial lead production in last 5,000 years

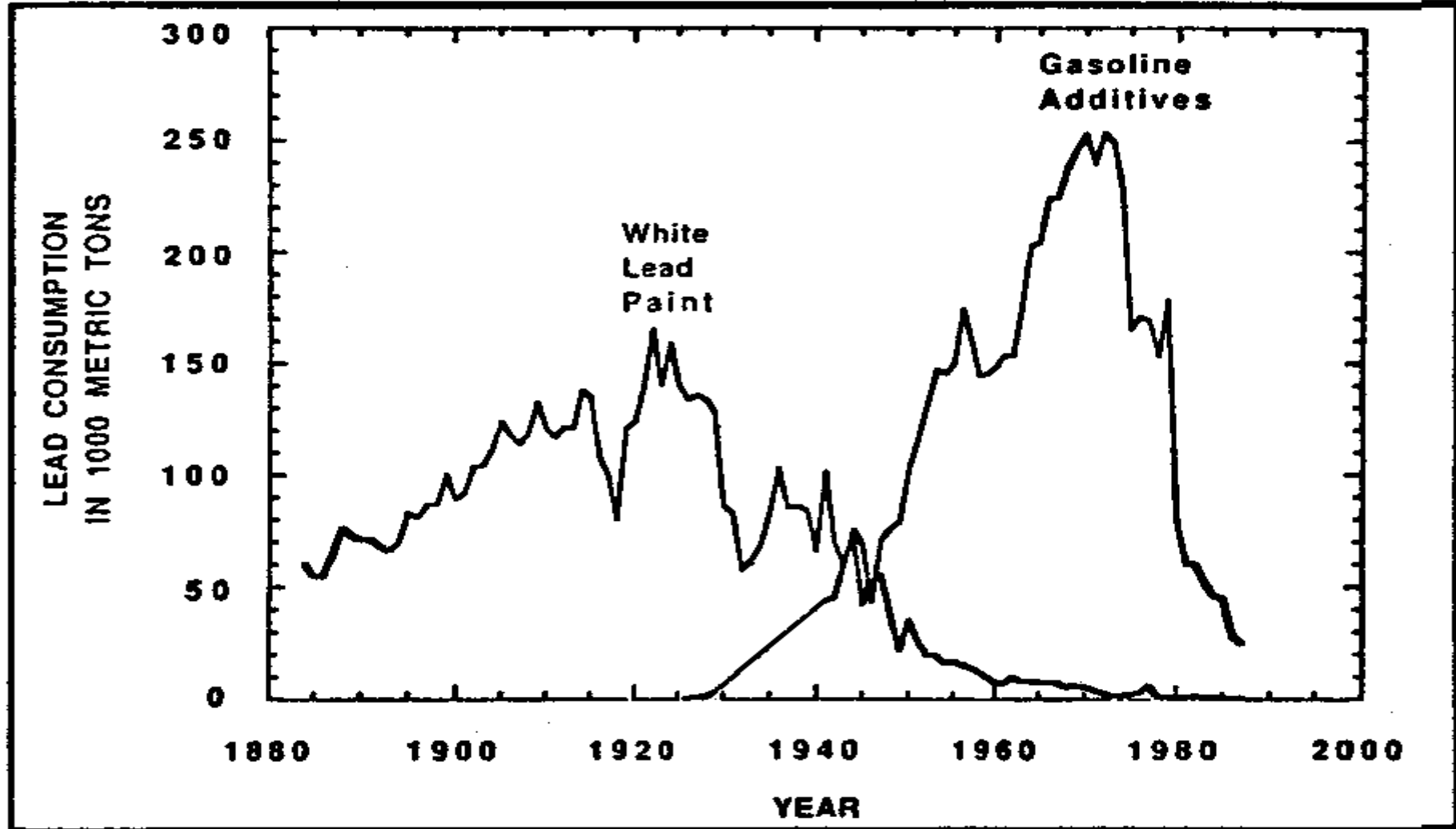
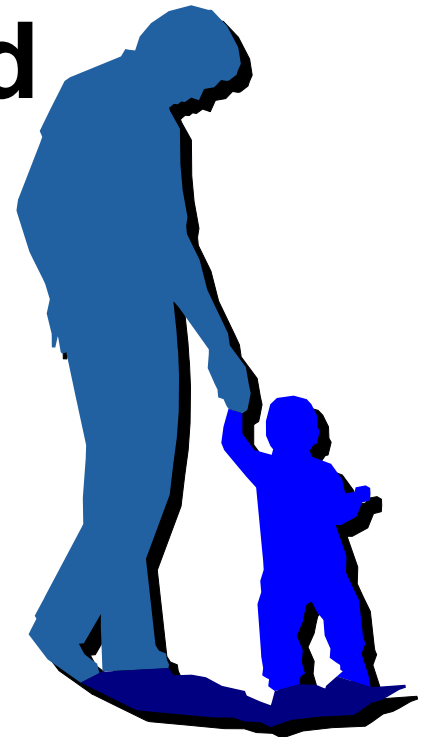


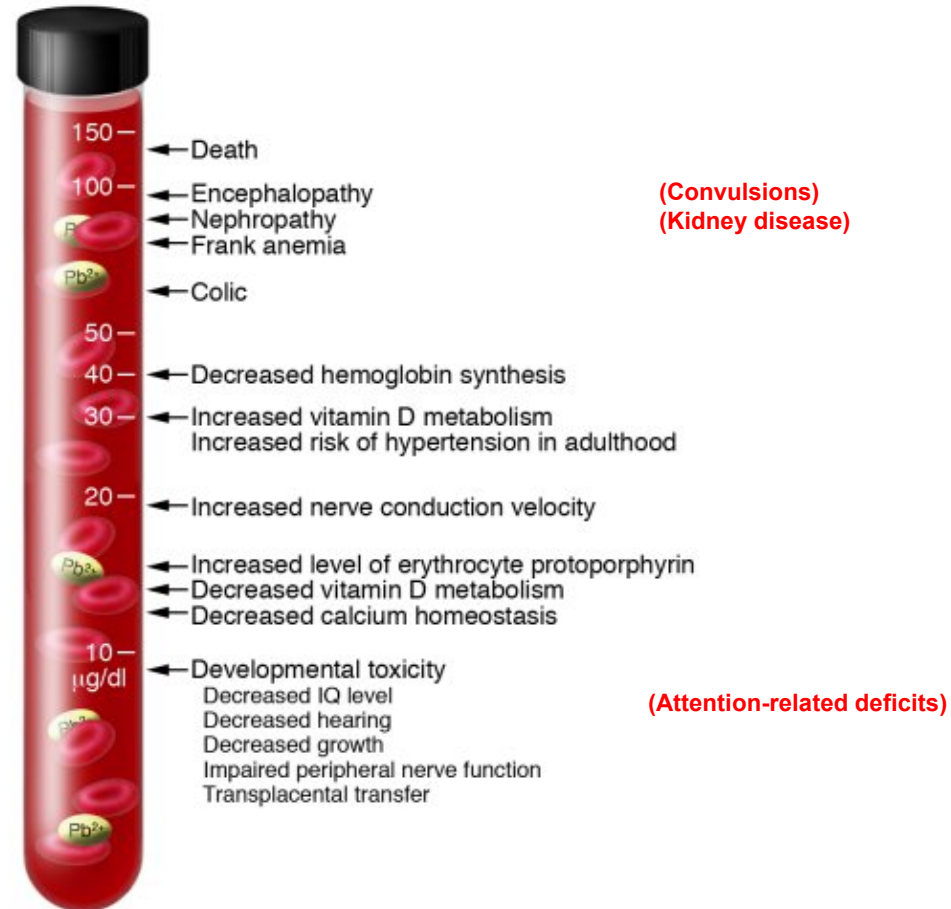
Figure 2. United States lead consumption, 1880-1987. Reprinted with permission from Clark S et al. Urban lead exposures of children in Cincinnati, Ohio. *Chemical Speciation and Bioavailability*. 1991;3:163-171. Copyright © 1991.

Children are at Greater Risk

- **hand to mouth activity**
- **greater sensitivity to lead**
- **absorb more lead**



Health Effects of Lead in Children



Childhood Lead Poisoning Costs To The State:

Direct Medical & Public Health Costs

Special Education

Juvenile Justice

Lost Future Earnings

CDC Screening Guidelines

Universal assessment/targeted screening at 12 and 24 months or at first entry before age 6

In North Carolina, mandatory blood lead testing for Medicaid, WIC, & HealthChoice

Analysis at no charge through the State Laboratory



Percent of NC Children Tested for Lead Poisoning, 1 and 2 Year-olds

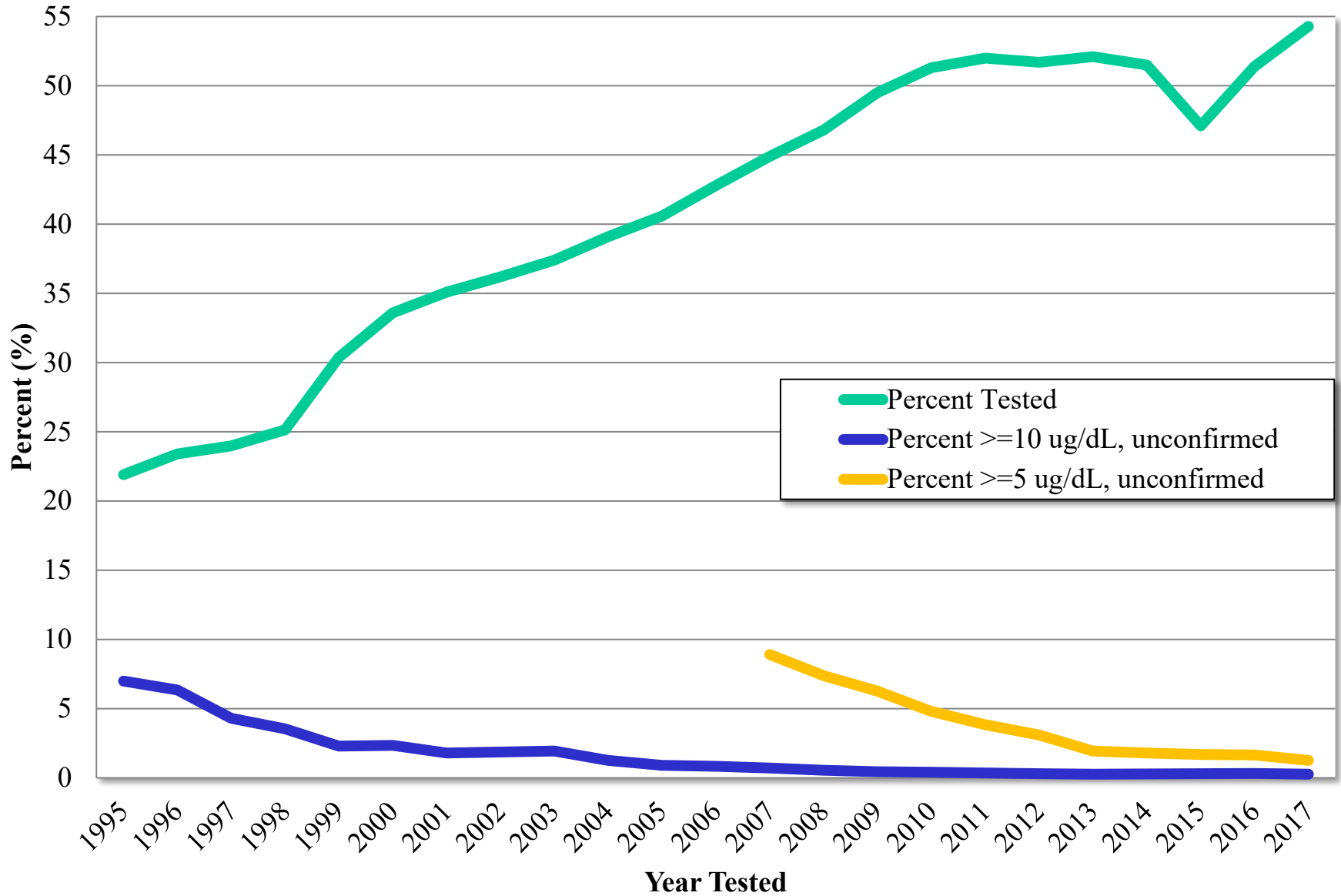
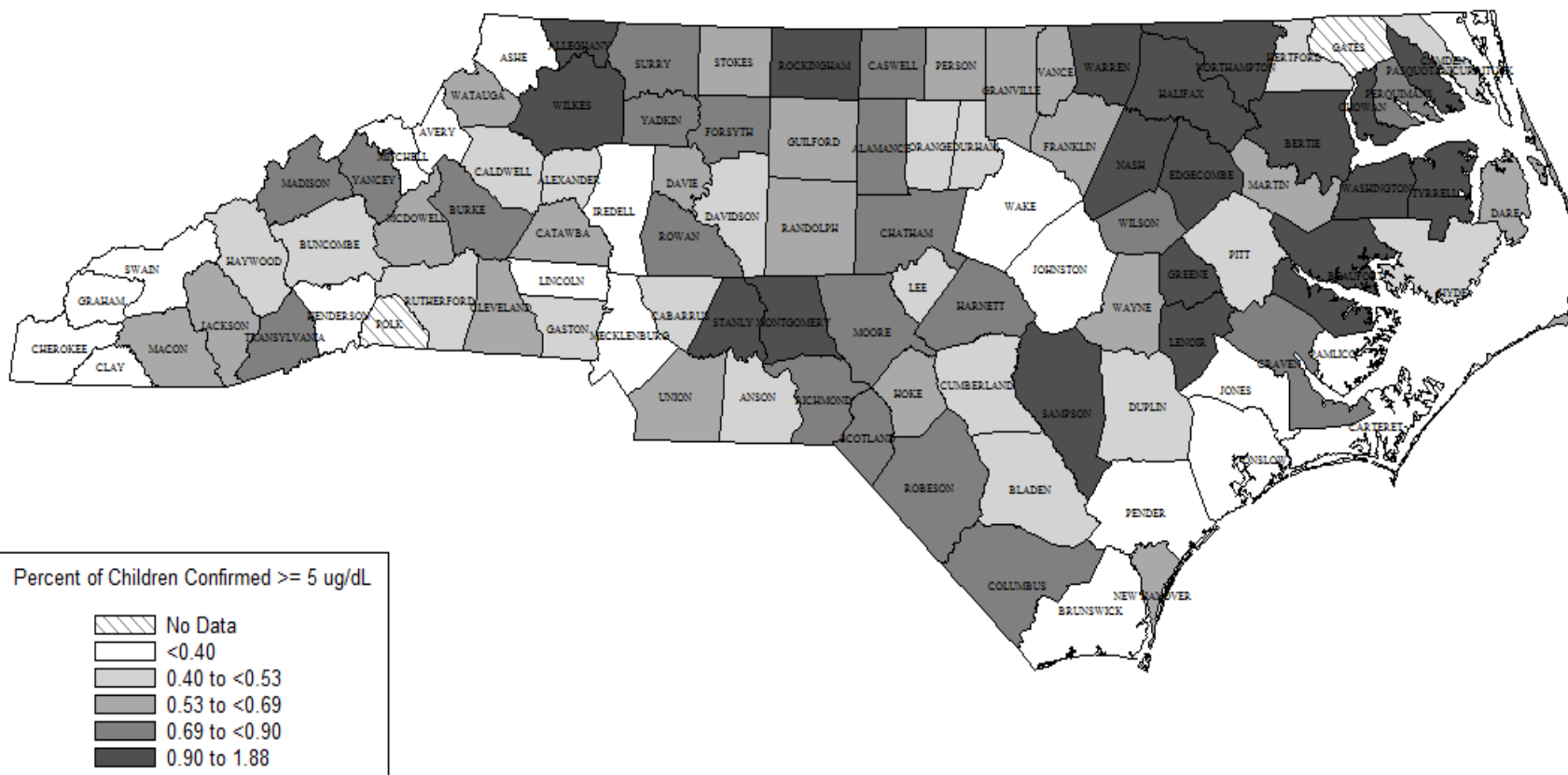


FIGURE 2.
Percent of North Carolina Children (6 months to 6 years old) Confirmed to Have Blood Lead Levels $\geq 5 \mu\text{g}/\text{dL}$ between 2013-2017, by County



Other State & Federal Lead Laws

- **Abatement (EPA/DPH)**
- **Renovation, Repair & Painting (EPA/DPH)**
- **Disclosure (EPA/HUD)**
- **Lead Hazard Control (HUD)**
- **Worker Protection (OSHA)**

