

# LEVERAGING RESOURCES

## *UNC SRP BOLSTERS GOVERNMENT AGENCY EFFORTS WITH DECISION SUPPORT TOOLS AND OUTREACH ASSISTANCE*

Kathleen Gray

Co-Leader, Research Translation Core  
UNC Superfund Research Program

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# UNC Superfund Research Program

- The SRP **advances the scientific bases required to understand and reduce risks to human health** associated with several high priority Superfund chemicals.
- The SRP Research Translation Core (RTC) builds capacity of government agencies charged with protecting human health and the environment by...
  - ▣ developing decision support tools
  - ▣ assisting with community engagement
  - ▣ facilitating development of improved cleanup technologies
  - ▣ participating in policy discussions



# TrAC: Tracking and Analyzing Contaminants in Private Wells in NC

- TrAC Goals
  - ▣ To develop the capacity of NCDHHS to identify NC populations at greatest potential risk from well water contamination.
  - ▣ To assist agency in developing public health action strategies to reduce exposure.

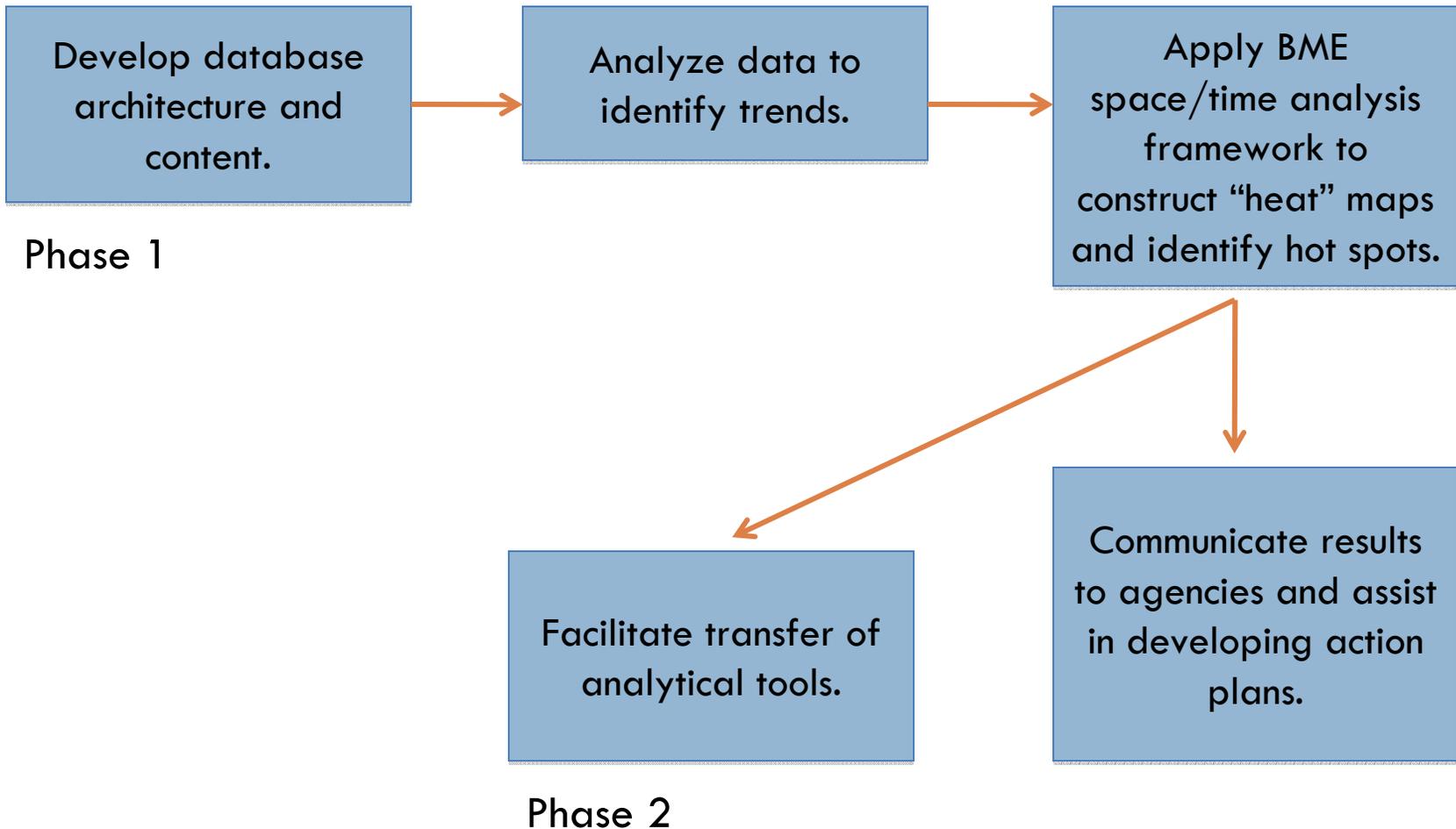


# TrAC Partners

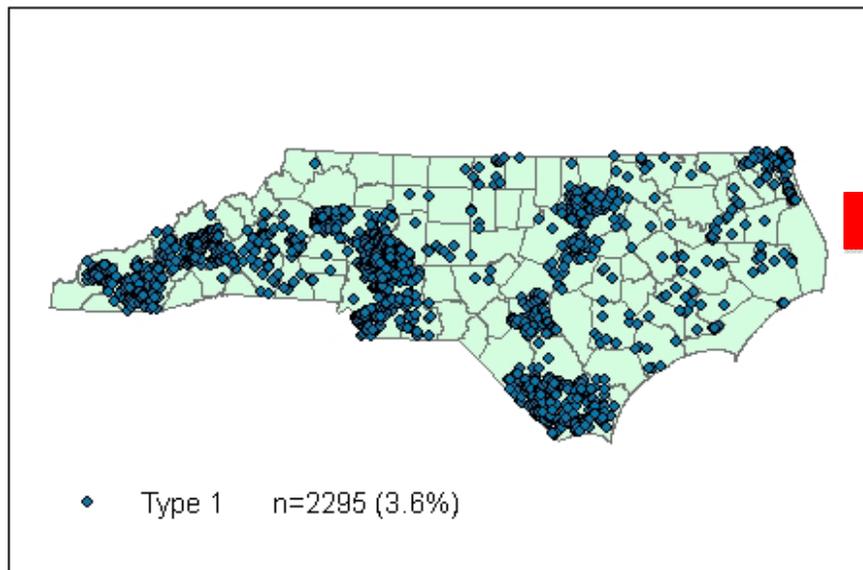


- UNC SRP
- Division of Public Health, NCDHHS
  - ▣ Epidemiology Section
    - Occupational and Environmental Epidemiology Branch
    - State Laboratory of Public Health
  - ▣ Chronic Disease and Injury Prevention Section
    - State Center for Health Statistics

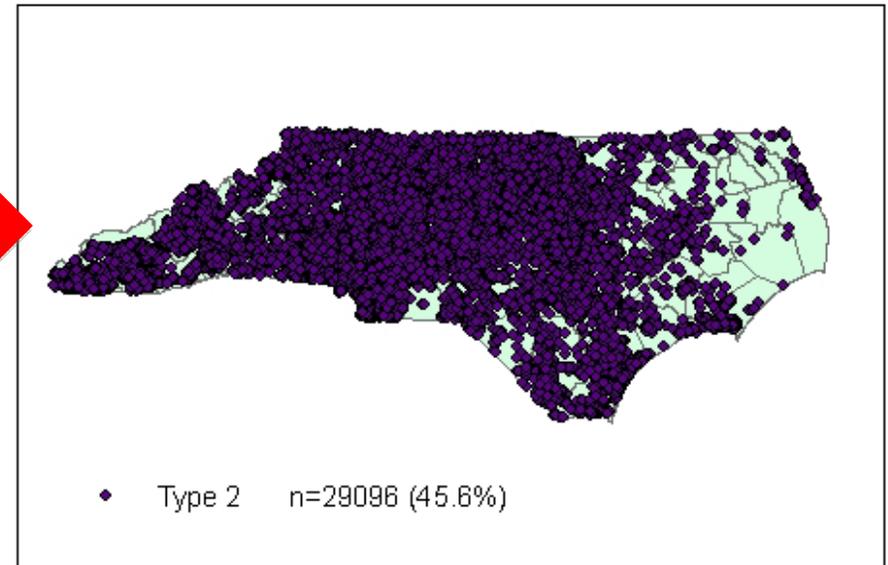
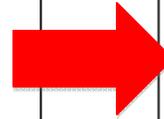
# TrAC Milestones



# Data Analysis: Application of Geocoding Algorithms



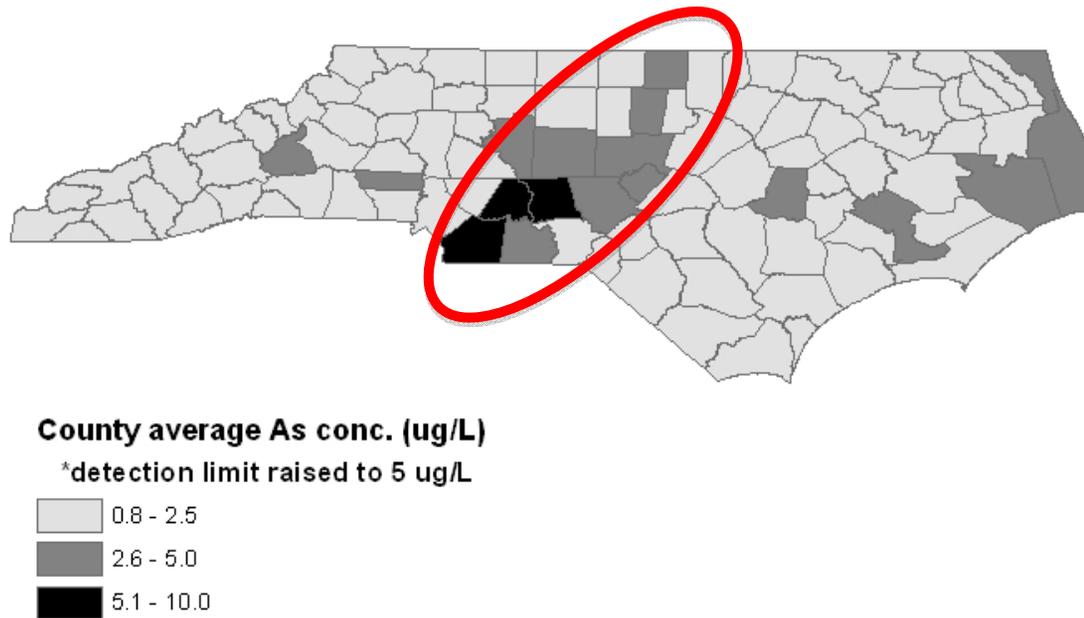
Pre-applied algorithm (n=2295)



Post-applied algorithm (n=29,096)

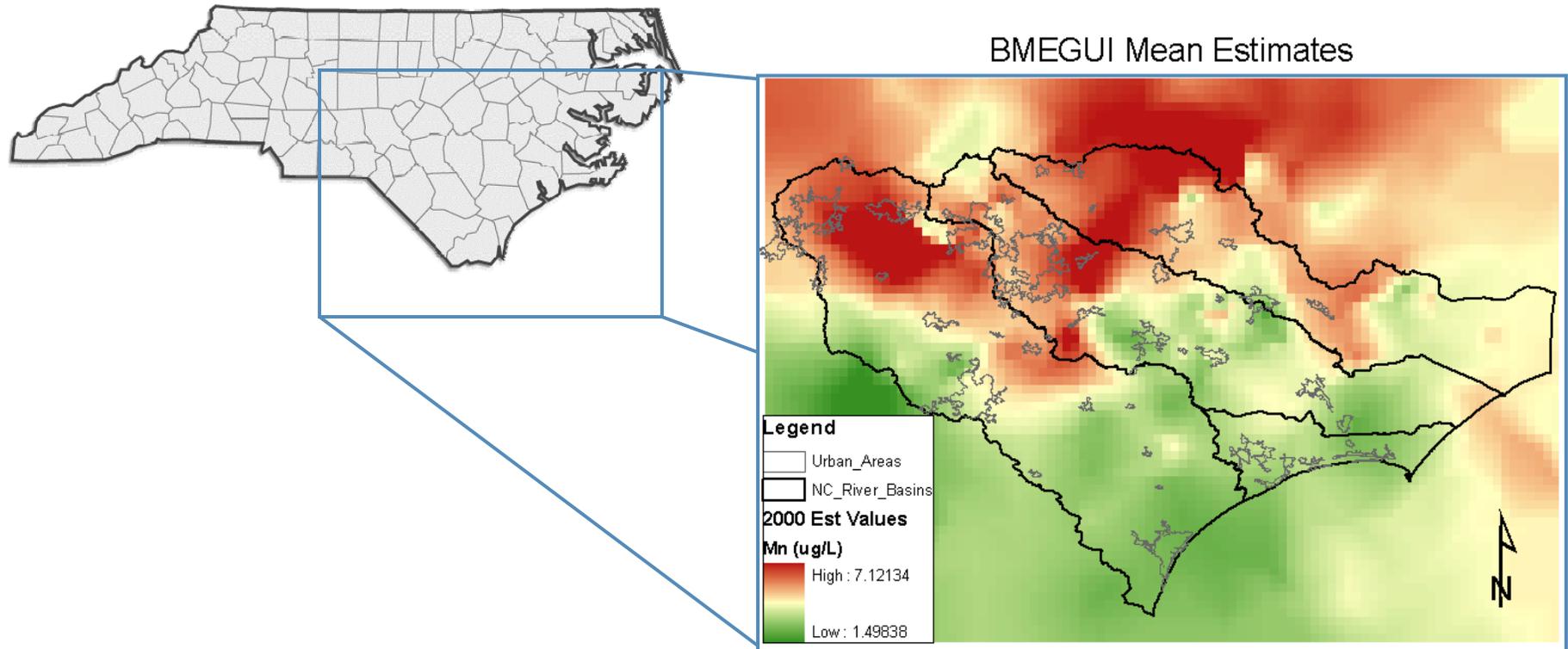
> 10-fold increase in knowledge of contaminant locations

# Initial Mapping of Contaminants



Identification of At-Risk Counties in NC, using Average Arsenic Concentrations from 2009

# Mapping of Contaminants Using BME Methods



## Levels of Manganese in Southeastern NC

Map Generated by Students in Dr. Marc Serre's Course, ENVR468: Advanced Functions of Temporal GIS

# TrAC: Lessons Learned



- ❑ Established relationship with NCDHHS laid the foundation for collaboration.
- ❑ Bringing in other DPH offices and NCDENR facilitated transfer of analytical tools and data synthesis.
- ❑ Shared long term vision is helping overcome the clash between agency desire for rapid action and traditional pace of academic investigation.
- ❑ Added value of helping set the stage for environmental public health tracking efforts in NC.

# Engaging Communities around the Ward Transformer NPL Site



Partners: Lake Crabtree County Park, NCDENR, Neuse River Foundation, USEPA



PCB contamination from electroplating facility in recreational lake and its tributaries, Morrisville, NC

# Using Videos to Raise Awareness



Partners: Lake Crabtree County Park, NCDENR, NCDHHS, Neuse River Foundation, UNC School of Journalism and Mass Communications, USEPA

- ❑ Documentary introduces site, history and PCB contamination.
- ❑ Bilingual PSA focuses on fish advisories and health risk.
- ❑ [www.uncsrp.org](http://www.uncsrp.org)



# Ward Transformer: Lessons Learned

- Residents mostly wanted to understand the direct impacts on their health or daily lives.
- Diverse partners enabled us to implement different kinds of outreach and engage varied audiences.
- University resources enabled us to create tailored educational materials inexpensively and quickly.
  - ▣ Additional oversight/management costs when using students.

# Contributors

- SRP RTC Staff
  - RTC Leader: Dr. Fred Pfaender
  - RTC Staff: Brennan Bouma, Dana Haine
- TrAC Project
  - UNC researchers: Dr. Rebecca Fry, Dr. Marc Serre
  - UNC graduate students: Kyle Messier, Alison Sanders
  - NCDHHS: Dr. Mina Shehee, Dr. Ken Rudo, Dr. Leslie Wolf , Patrick Fleming, John Neal
- Ward Transformer Project
  - UNC graduate students: Amanda Greenberg, Renee Jackson, Ku McMahan
  - Lake Crabtree County Park: Drew Cade
  - NCDENR: Jack Butler, Nile Testerman
  - Neuse River Foundation: Alissa Bierman, Dean Najouks
  - USEPA: Luis Flores



**Thank You!**