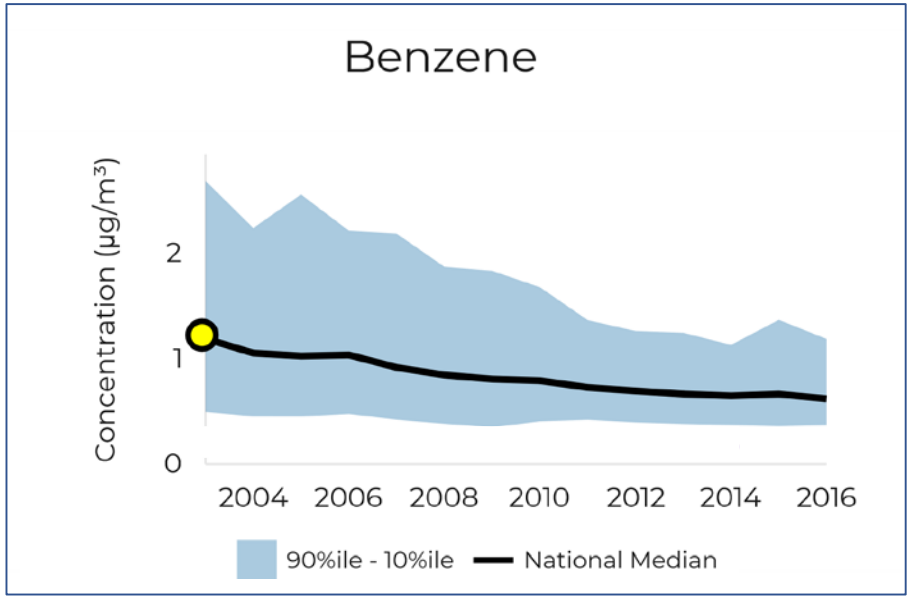
2014 National Air Toxics Assessment (NATA)

August 28, 2018 Webinar

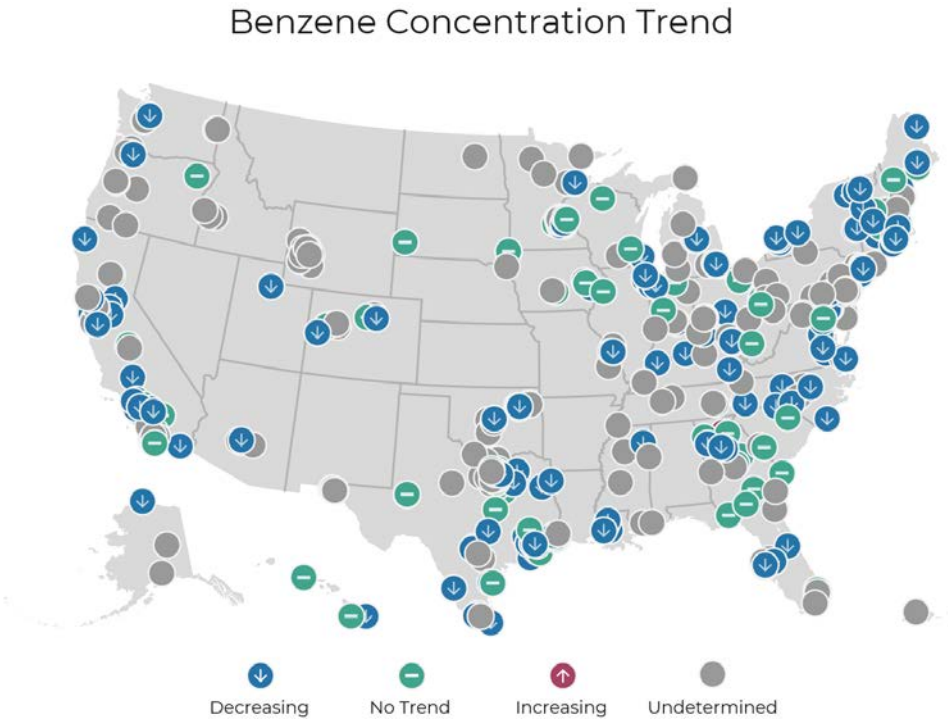
What is NATA?

- The National Air Toxics Assessment (NATA) uses the best science and emissions data available to estimate health risks from air toxics.
- The NATA is updated periodically the reflect the latest estimates—2014 NATA is the 6th assessment conducted by the EPA.
- NATA is intended as a *screening tool* for use by the EPA and states/locals and tribes to help determine which pollutants or areas of the country to investigate further, to better understand risks.
- NATA should not be used:
  - to pinpoint risk or exposure values at a specific place (like a home or school);
  - to characterize or compare risks or exposures at local levels (such as between neighborhoods);
  - as the sole basis for risk reduction plans or regulations, or
  - to control specific sources or pollutants.

National air toxics trends are downward: Benzene Example



[Our Nation's Air: Status and Trends Through 2017](#) : Benzene (2003 – 2017)



2014 NATA analytical steps

Compile National Emissions Inventory (2014 NEI)	Estimate ambient concentrations of air toxics across the U.S.	Estimate population exposures	Characterize potential public health risks from inhalation
2014 NEI includes stationary, mobile and natural sources (fires, biogenics). NATA includes 180 air toxics plus diesel particulate matter (PM).	Uses models (CMAQ and AERMOD) to predict census-tract ambient concentrations nationwide.	Includes an exposure model (HAPEM7) to account for human activity data, commuting patterns, and near-roadway exposures.	Census-tract level cancer and noncancer risks nationwide.

How can states/locals and tribes use NATA?

- States/locals and tribes can use NATA results to:
  - prioritize pollutants and emission source types;
  - identify locations for further, more detailed study;
  - get a starting point for local assessments;
  - focus community efforts;
  - inform monitoring programs;
  - prioritize sensitive locations for monitoring of emissions and outdoor air quality.

- Using NATA as an initial screening tool, air agencies can then study areas in more detail, focusing on where the risks to people may be greatest.
  - They may also choose to perform a smaller scale local assessment, which allows them to use more detailed data than we can in NATA.

How can communities use NATA?

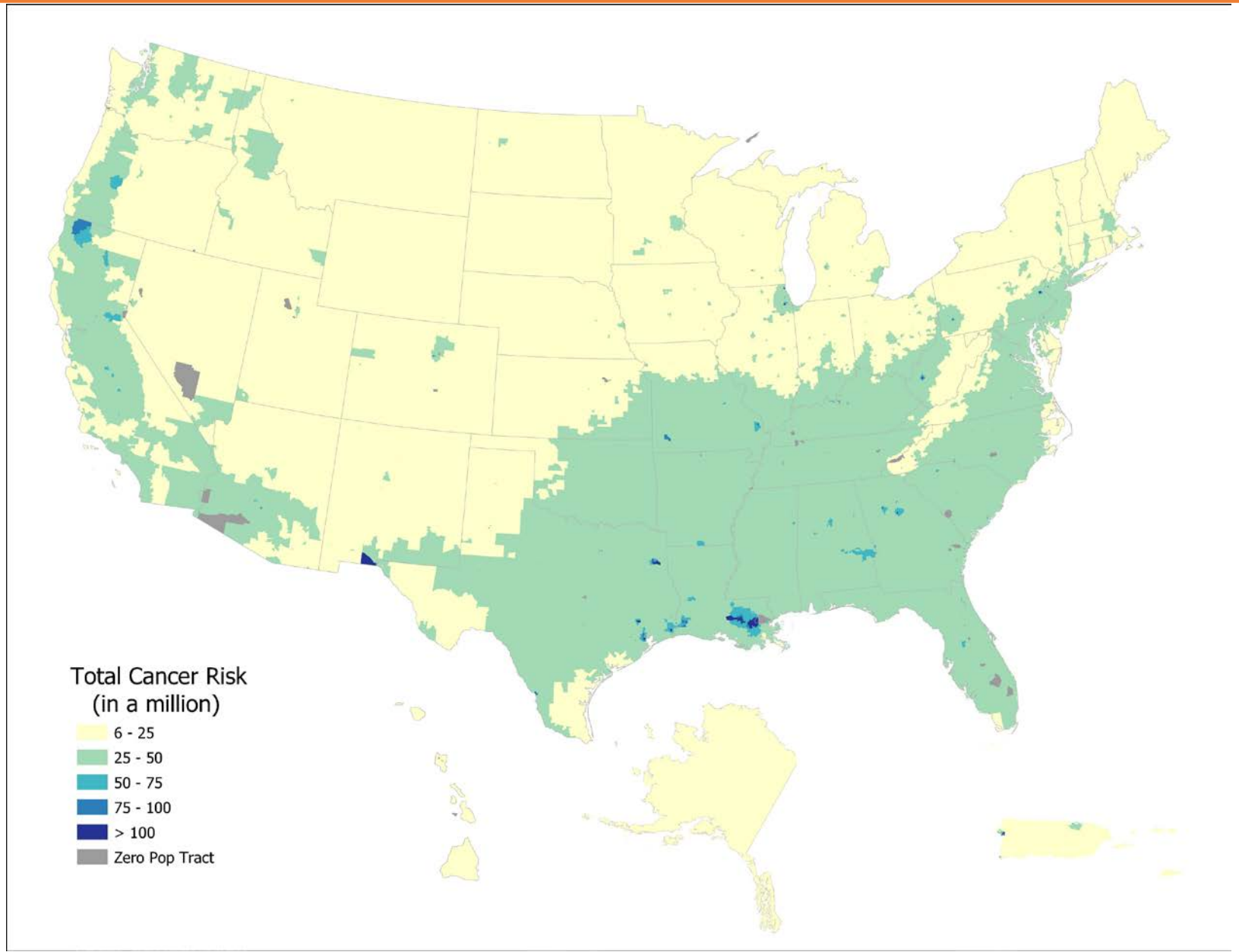
- Communities can use NATA to:
  - learn which air toxics may be of concern to you;
  - better understand risks from air toxics;
  - open a dialogue with your local air agency about air quality in your area.

What NATA tells us

- National average cancer risk estimated to be 30 in 1 million.
  - In terms of average risks nationwide, two common pollutants (formaldehyde and acetaldehyde) contribute about half of the overall risk.
  - Pollutants can come from both manmade sources of emissions (e.g., facilities or cars) or natural sources (e.g., trees).

- In some locations, NATA estimates elevated risk levels.
  - Fewer than 1% of the census tracts in the country have an estimated cancer risk above 100 in 1 million, mostly in urban areas.
  - Tracts with estimated cancer risks greater 100 in 1 million are primarily driven by pollution from facilities that release ethylene oxide, chloroprene, and coke oven emissions.

2014 NATA Results: National Average Cancer Risk



New risk estimates for ethylene oxide

- 2014 NATA results suggest that several areas of the country could have elevated cancer risks from long-term exposure (many years) to the chemical ethylene oxide.
- These elevated risks are largely driven by an EPA risk value that was updated in late 2016.
- EPA has begun to gather additional information in identified areas, focusing first on those areas with the largest estimated potential for risk.

To view NATA results for your area:

- The 2014 NATA Map Application (Map App) can quickly display risks and other NATA data—simply click on the map (https://www.epa.gov/national-air-toxics-assessment/2014-nata-map).
- The map's search tool lets you "zoom" to places of interest anywhere in the country. Users can also download NATA data and results, and run queries to find the information they want.
- Map layers include:
  - cancer risks and respiratory hazard indexes;
  - annual ambient concentrations;
  - all emission sources modeled in NATA; and
  - air toxics monitoring sites with recent-year air toxics monitoring data.
- The NATA Map App is available for use on a computer or mobile device.

Next Steps

- 2014 NATA can be found on the following website: *https://www.epa.gov/nata*

- EPA has a separate website to keep you updated as we work to address ethylene oxide: *https://www.epa.gov/ethylene-oxide*