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To: Mike Koerber, Hillary Ward, Kelly Rimer, and Matt Woody, EPA

From: Barbara Morin and Paul Miller, NESCAUM

Re: State Air Toxics Data Needs

Date: August 30, 2021

Thank you for meeting with us on July 27, 2021 to discuss state air toxics data needs for 2017 and future years. NESCAUM states are particularly concerned that EJSCREEN, the vehicle that EPA has chosen for future data releases, does not provide essential data that were previously included in the National Air Toxics Assessment (NATA). At your request, NESCAUM, in consultation with member states, identified the following data gaps in the air toxics information provided in EJSCREEN, along with examples of issues that the missing data would help the states to address.

Pollutant-specific concentration, cancer risk, and hazard index data

EJSCREEN's air toxics indicators are cancer risk and noncancer hazard indices, aggregated for all pollutants. States need pollutant-specific air toxics concentration, cancer risk, and hazard index data, as was provided in NATA. EPA recently released pollutant-specific cancer risk and hazard index data for high-risk point sources on its Air Toxics Sharepoint site. Although concentration data were not provided, EPA subsequently posted on that site a list of the health benchmarks used to assess those risks that could be used to back-calculate concentrations. However, the Sharepoint site provides only point source data and reports those data on a different scale (census block versus census tract) than that used for the EJSCREEN indicators.

States need comprehensive pollutant-specific data to:

- Identify pollutants that are risk drivers statewide and in specific census tracts.
- Identify areas with predicted elevated concentrations of a particular pollutant.
- Compare modeled pollutant concentrations to monitored values to ground-truth predictions, taking into account relative locations.
- Respond to questions from the public and elected officials about elevated risks.
- Evaluate levels of specific pollutants in areas where high rates of cancer, asthma, or another health effect have been observed.
- Target locations and pollutants for future monitoring.
- Identify background/existing concentrations of ambient toxics for use in permitting and environmental impact assessments.

- Some states are using spatial variations in the concentrations of a particular pollutant (e.g., benzene) as an indicator in environmental justice assessments.
- Track specific climate action goals.
- Track the effectiveness of federal and state regulations in reducing toxic air pollutants.

Source category contributions to predicted air toxic concentrations, by pollutant and census tract

As noted above, the EPA Sharepoint site provides some pollutant-specific 2017 risk data for point sources, but those data, which apply to the maximum census block, are not on the same spatial scale as the EJSCREEN indicators (census tract). EPA has not provided information about impacts of the other source categories (area, on-road, non-road, background, biogenic, secondary formation) included in the EJSCREEN air toxics indicators. In addition, EJSCREEN and its supporting data files do not provide information on source category contributions to the diesel particulate indicator on that platform (concentration as a percentage of the national average). Note that the databases accessible via the *Pollutant Specific Results* and *State Summary Files* dropdown menus on the 2014 NATA Results webpage provide the information for 2014 requested in this and the previous item for 2017.

Source category-specific data are needed by states to:

- Determine whether EPA emissions data and modeling parameters are consistent with state data.
- Identify source categories that contribute significantly to predicted levels of pollutants associated with elevated risks.
- Respond to questions from the public and elected officials.
- Develop risk mitigation strategies.

Unit Risk Estimates (UREs) and Reference Concentrations (RfCs) used to calculate risks and hazard index

EPA recently posted a list of the UREs and RFCs that the Agency used to calculate cancer risks and hazard index in the preliminary assessment of point source impacts reported on the Sharepoint site. This health benchmark information should be updated as necessary and should be provided on a publicly available site.

This information is important for:

- Understanding how risk trends are influenced by changes in toxicity values.
- Comparison with toxicity values used by states to ensure consistent messaging.

Information about emissions calculations and modeling procedures

The Sharepoint site includes emissions estimates and modeling parameters for high-risk point sources. In addition, on an August 3, 2021 air toxics inventory call with states, EPA agreed to provide a technical support document identifying the procedures that were used to model point sources. EPA should also provide information about the methods used to estimate emissions and modeling parameters and procedures for other source categories.

This information is important for:

- Understanding how changes in methods used to calculate emissions or to model impacts affect trends in predicted concentrations.
- Comparing EPA methodology with that used by states.
- Examples of issues raised by states include EPA's use of surrogate parameters to estimate emissions (e.g., use of construction expenditures to estimate diesel PM emissions from construction equipment) and how TRI data are used in emissions estimates.

Thank you for your responsiveness to states' urgent need for air toxics data. If you have any questions about the issues discussed above, please contact Barbara Morin at bmorin@nescaum.org, (401) 829-6182. NESCAUM will also be working with NACAA to provide further feedback to EPA on this issue.