

# Potential Impacts of Increase in HAP Data Due to Proposed AERR Updates

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**EPA will have additional data on HAP emissions and sources under the proposed AERR updates.**

**What will they do with it?**

# How will EPA use additional HAP emission data?

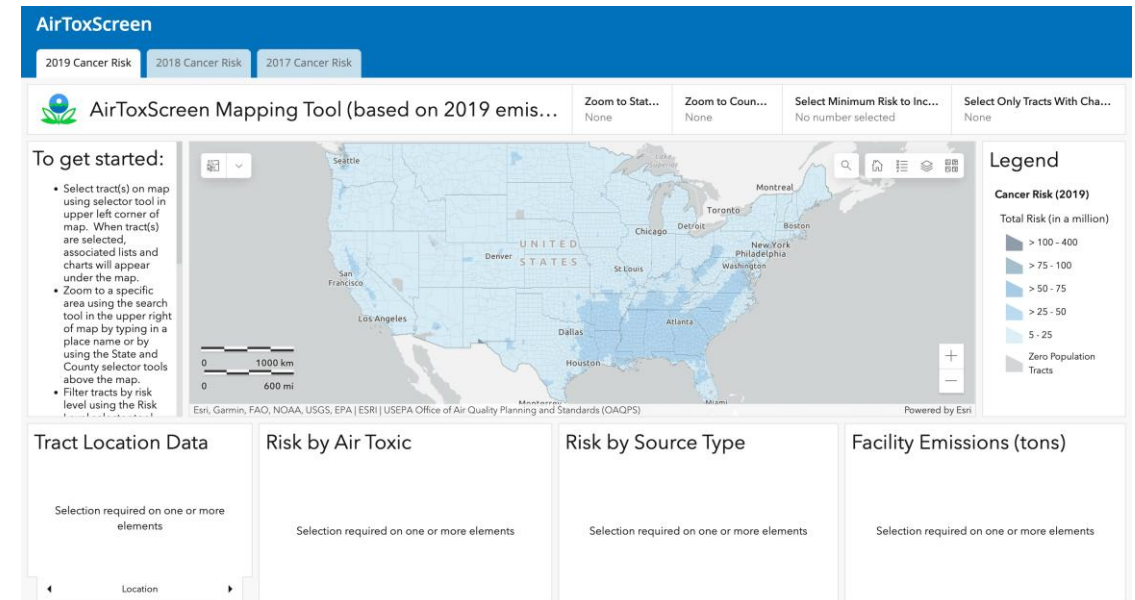
## Regulatory Purposes

- ▶ Protect public health and inform communities of potential risks from these pollutants
- ▶ Currently a gap in the data that is available to EPA and data needed for EPA to meet regulatory requirements
- ▶ Facilitate future residual risk and technology reviews (RTR)
  - Review and revise current standards
- ▶ New source categories with “maximum achievable control technology,” (MACT) standards

# How will EPA use additional HAP emission data?

## Risk Assessment

- ▶ AirToxScreen/NATA
  - Ongoing review of air toxics in the US
  - Used to learn which air toxics and emission source types may raise health risks in certain places
- ▶ 4 Step Process
  - 1) Compile emissions data
  - 2) Estimate ambient concentration of air toxics
  - 3) Estimate population exposure
  - 4) Determine potential public health risks



# How will EPA use additional HAP emission data?

## Risk Assessment

- ▶ Integrated Risk Information System (IRIS) Program
  - Pollutant toxicity value from chronic exposure
  - HAP data will help inform priorities for nominations
- ▶ Compliance and enforcement
  - Discrepancies between reported and monitored data
  - Facility search based on risk
- ▶ Siting of ambient air monitors



# Case Study: Ethylene Oxide

- ▶ Highly carcinogenic per USEPA
- ▶ Industries that emit EtO
- ▶ As part of the 2014 National Air Toxics Assessment (2014 NATA), ethylene oxide risk value lowered
  - USEPA lowered the IRIS value (Inhalation Unit Risk) to  $0.003 \mu\text{g}/\text{m}^3$  from  $0.1 \mu\text{g}/\text{m}^3$
  - Inhalation Unit Risk = Concentration at which 1 cancer case is expected
  - Expected cancer impacts suddenly >30x higher
- ▶ Several census tracts that were below cancer risk of 1 in  $10^6$  MM were now over 50 in  $10^6$  after 2016 toxicity change for EtO
  - ◆ Contributes to being classified as an overburdened census tract

# Regulatory Fallout of new EtO Standards

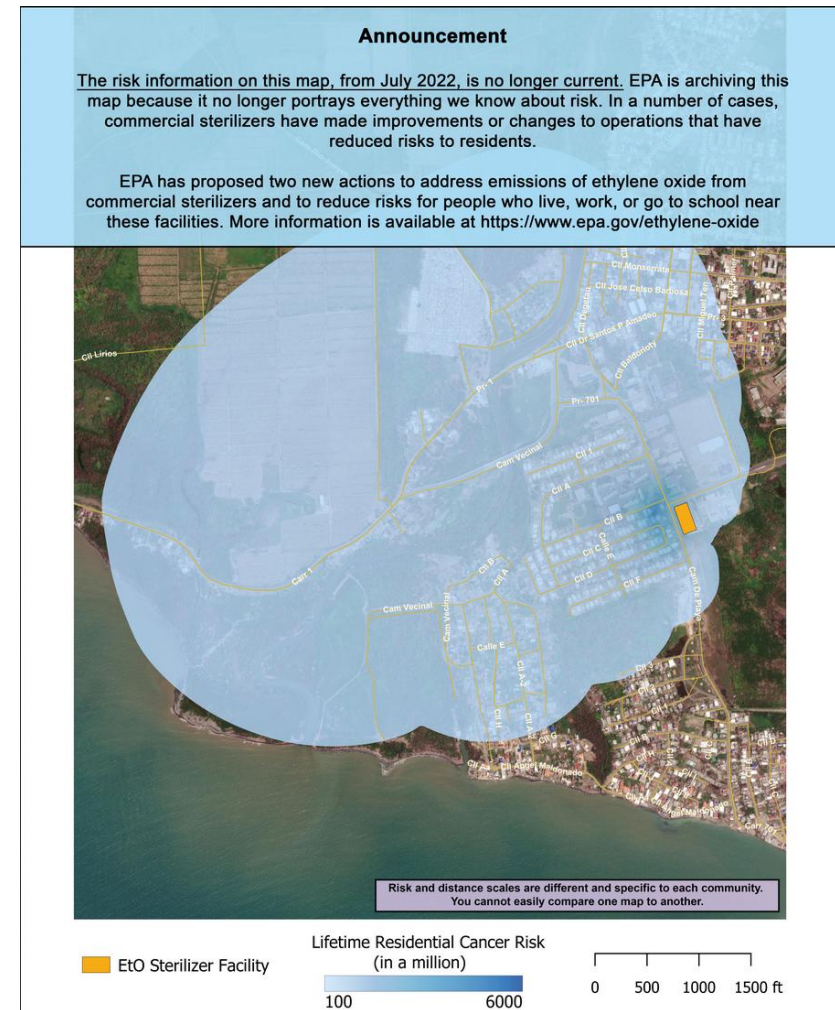
- NESHAP – Subpart FFFF – Miscellaneous Organic Chemical Manufacturing (MON)
  - ◆ Final rule addressing the toxicity of EtO
  - ◆ Revised as part of the RTR (Residual Risk & Technology Review)
- NESHAP – Subpart O – Sterilization Plants
  - ◆ Proposed rule
    - EJ is a significant focus in EPA’s proposed rule analysis
  - ◆ Draft RTR aimed for  $<100$  in  $10^6$  cancer risk for all facilities.
  - ◆ **Higher cancer risk main driver in revising regulation**

Table 2—Summary of Cancer Risk Reductions

	Current cancer risks	Cancer risks if proposed amendments are finalized
Maximum Individual Risk (MIR) <sup>1</sup>	6,000-in-1 million	100-in-1 million.
Number of People with Cancer Risks $>100$ -in-1 million	18,000	0.
Number of People with Cancer Risks $\geq 1$ -in-1 million	8.3 million	1.26 million. <sup>2</sup>
Estimated Annual Cancer Incidence (cases per year)	0.9	0.1.

# Additional Transparency and Community Involvement

- ▶ Community engagement page
  - Specific sources identified
- ▶ High visibility in local communities
- ▶ Community engagement webinar had >700 attendees
- ▶ Published into EJScreen – public attention
- ▶ Litigation?
- ▶ Changes to control requirements





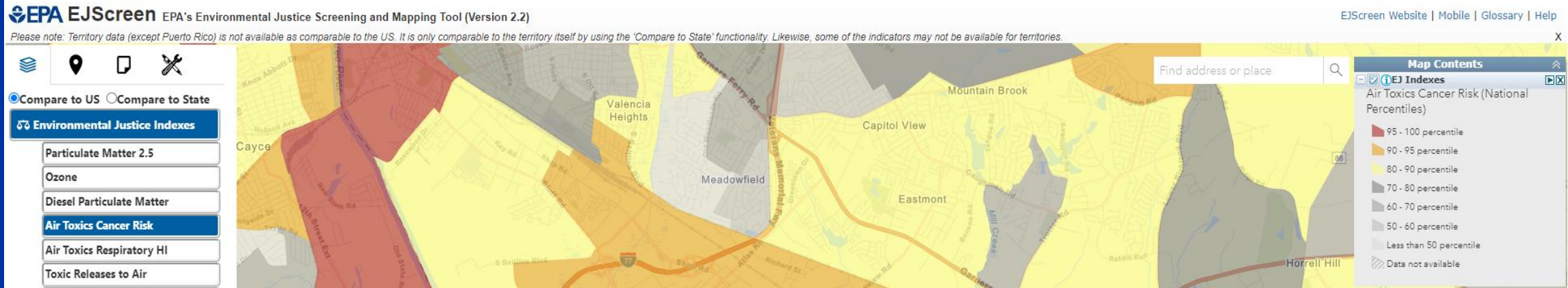
# What does this hold for the future?

- ▶ More focus on specific hazardous pollutants vs criteria pollutants
  - Targeted industries may look different than before
- ▶ Risk and Technology Review for existing Maximum Achievable Control Technology standards
- ▶ Additional MACT standards will continue to be evaluated
- ▶ Per- and polyfluoroalkyl substances (PFAS)
  - Reportable substance under Toxic Release Inventory (TRI)
  - EPA collecting comments on “PFAS Option” for AERR
  - No health benchmarks for inhalation toxicity currently



# What does this hold for the future?

- ▶ Executive Order (E.O.) 12898 (59 FR 7629, February 16, 1994) directs Federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission
- ▶ Additional HAP Data -> AirToxScreen -> EJScreen
- ▶ More information will lead to more accurate risk modeling
  - Close gap in understanding impacts of HAPs on communities



# How to Prepare?

- ▶ Review proposed AERR rule and consider submitting comments
  - EPA extended comment period to 11/17/2023
- ▶ Be aware of AirToxScreen impacts via EJScreen or AirToxScreen mapping tool
- ▶ Assure reported data is accurate and not overly reported
  - Reported information feeds into tools
- ▶ Foster ongoing community engagement
- ▶ Be aware of hazardous air pollutants of interest (heavy metals, EtO, PFAS, etc.)

