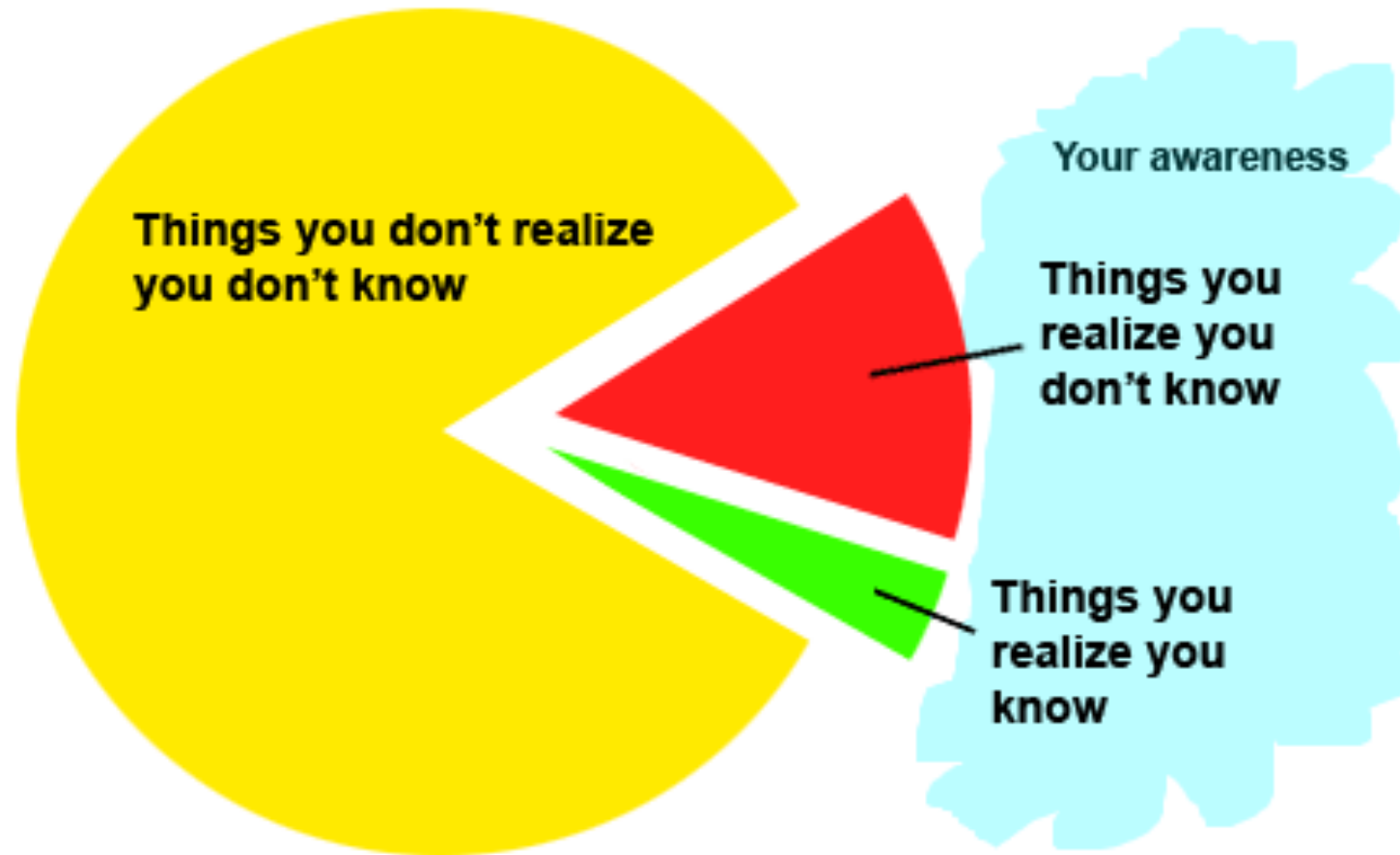


National Association of Clean Air Agencies Meeting May 15 – 16 2024

Back to Basics on Air Toxics
The New Jersey Story



Body of all possible knowledge



Two Things
Needed to
Properly
evaluate
local risk
impact



- Appropriate Permitting Applicability Levels
- Appropriate Reporting Value



Equipment Type	Regulatory Citation
1 MMBTU Boiler	N.J.A.C. 7:27-8.2(c)18
2,000 Gallon VOC Storage	N.J.A.C. 7:27-8.2(c)9
Processing >50 lb/hr *Not Emissions – material processed	N.J.A.C. 7:27-8.2(c)19
Fumigation 0.1 lb/hr	N.J.A.C. 7:27-8.2(c)22
Can see all permitting thresholds at N.J.A.C.8.2(c)	



Conservative Reporting Values

- N.J.A.C. 7:27-17 Control and Prohibition of Air Pollution by Toxic Substances and Hazardous Air Pollutants
 - First Operative in 1979
 - Sets Reporting Values for HAPs to be reported in permit applications
- Does Science change? YES!
 - Amended rules in 2017 for appropriate levels of reporting
 - Some reporting values went up, many went down, many stayed the same
 - EtO was a great example of updated scientific studies to allow States/EPA to refine our regulations/permitting requirement to reflect levels of concern.

Excerpt of the NJ Rule

7:27-17.9 Reporting and state-of-the-art thresholds for hazardous air pollutants, toxic substances, and New Jersey Hazardous Air Pollutants

- (a) The reporting thresholds for HAPs, TXS, and NJHAPs, referenced at N.J.A.C. 7:27-8, 21, and 22, and the state-of-the-art thresholds for HAPs, TXS, and NJHAPs, referenced at N.J.A.C. 7:27-8 and 22, are as listed in Tables 3A and 3B below.
- (b) There are two distinct and independent reporting thresholds for air contaminants listed in Table 3B (annual and hourly). The provisions at N.J.A.C. 7:27-8, 21, and 22 referenced at (a) above apply if the potential to emit the listed air contaminant satisfies the provision's threshold requirement, using either the annual or hourly threshold.

TABLE 3A
Reporting and SOTA Thresholds (HAPs and NJHAPs that are not TXS)⁶
(Potential to emit)

<u>CAS Number</u>	<u>Air Contaminant</u>	<u>Reporting Threshold (lbs/yr)</u>	<u>SOTA Threshold (lbs/yr)</u>
75070	Acetaldehyde	21	10,000
60355	Acetamide	2	2,000
75058	Acetonitrile	2,000	8,000
98862	Acetophenone	1	2,000
53963	2-Acetylaminofluorene	0.04	10
107028	Acrolein	1	80

Was it Easy?

- Balanced Stakeholder Process - Multiple Meetings
- 149 Page Proposal, 110 page adoption document
- Added 3(2) NJ HAPs – n propyl bromide*, Sulfuryl Fluoride, Hydrogen Sulfide
- Follow Up Rule Making in 2022 for Fumigation
- Stay tuned for Fumigation Workshop on May 21, 2024

Between the time that NJ proposed and adopted the “NJ HAPs”, EPA adopted n-propyl bromide as a HAP



So what do
we do in NJ?

- Reportable substance shows up in permit application
- Substance is evaluated for risk
 - Risk Screening
 - Modeling



What is negligible risk?

- Single source
 - Less than 1 in million carcinogenic risk
 - Hazard Index , 1.0
- Multi Source/Facility-Wide
 - Less than 10/million carcinogenic risk
 - Hazard Index < 1.0

Connection to AirToxScreen (NATA) Data?

- AirToxScreen is good for identifying hot spots for known emissions at known emission source types
- Great as a screening tool. A good starting point to do further analysis.
- ETO Sterilizers is a great example of this.
 - EPA Cancer 100 in 1M vs. NJ 1 (or 10) in 1M
- What about those that we don't know?
 - Formaldehyde in Engines?
 - H₂S from waste treatment operations?
 - Fumigation?

Can a State rely solely on AirToxScreen and MACTs?

Too many holes in the data

Too high reporting threshold

How conservative do you want
to be?

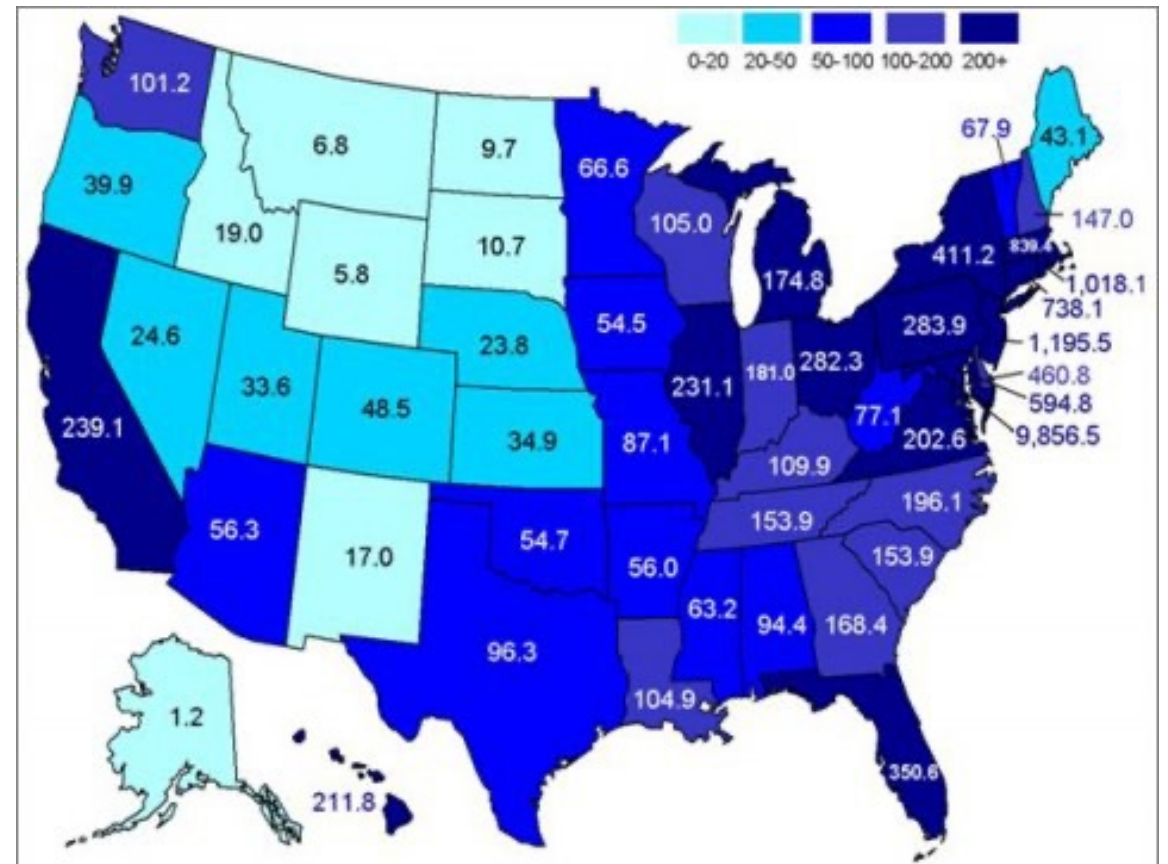
EJ Considerations?

Density of Population
consideration

Population Density

U.S. Population, Population Density, and Rank by State, 2010

STATE	POPULATION	POPULATION DENSITY (PEOPLE PER SQUARE MILE)	POPULATION DENSITY RANK
District of Columbia	601,723	9,856.5	1
New Jersey	8,791,894	1,195.5	2
Rhode Island	1,052,567	1,018.1	3
Massachusetts	6,547,629	839.4	4
Connecticut	3,574,097	738.1	5



Can you duplicate NJ Approach to Air Toxics?

- You sure can!
- Our host, the City of Philadelphia, did just that with reporting values
 - 11,936 citizens per square mile
 - 1.56 million people
- As a downwind area, we are extremely appreciative of their efforts
- Some other states do have similar programs, maybe not as stringent as our combo of low permit thresholds and low reporting values – but any gain is a good gain



Recommendations

Keep following the Science

Improvements to the MACT approach

- Too slow
- Threshold Values too high
- Different (more stringent) reporting/evaluation in urban areas (frequently EJ areas)
- Address Sources of High Concern even if not specifically stipulated in law (ex. Fumigation)

Re-consider what is negligible – Put the questions to yourself
“Would you want this risk in your backyard?”

Expand the list of Air Toxics

- New substances every year?
- PFAS – a good start

Lower Regulatory Thresholds



Thank you!





Questions