

3rd EJ Rulemaking Stakeholder Meeting

Environmental and
Public Health Stressors

03/11/21

Rules for Engagement

- Please remain on mute unless speaking.
- When you want to speak during facilitated discussion, please use the "Raise Hand" function.
- Treat everyone with respect.
- Limit your comment or question to the topic being discussed.
- Limit facilitated discussion comments to two minutes. We will physically raise our hand as you approach 90 seconds.
- Please note that this meeting is being recorded and will be posted on the NJDEP website after the session concludes.

Agenda

- Introduction and rules for engagement
- Definitions relative to impact of pollution on overburdened communities
- Process for evaluating potential stressors
- Discussion of environmental stressors and conditions that may cause public health impacts
- Questions and answers

Next Steps

- Next stakeholder meeting: **April 8, 2021**
 - Topic: Compelling Public Need and Renewal Conditions
 - 10am: Business and Industry
 - 6pm: Environmental Justice and Environmental/Community Organizations
- This presentation, meeting recording, and follow up survey link will be emailed to participants and posted on **NJDEP OEJ website** shortly following the meeting

C.13:1D-158

Definitions
relative to
impact
of pollution on
overburdened
communities

“**Environmental stressors**” means sources of environmental pollution, including, but not limited to, concentrated areas of air pollution, mobile sources of air pollution, contaminated sites, transfer stations or other solid waste facilities, recycling facilities, scrap yards, and point-sources of water pollution including, but not limited to, water pollution from facilities or combined sewer overflows.

“**Public health stressors**” are conditions that may cause potential public health impacts, including, but not limited to, asthma, cancer, elevated blood lead levels, cardiovascular disease, and developmental problems in the overburdened community.

Environmental Justice Impact Statement

- 4.a.(1) Prepares an environmental justice impact statement that assesses the potential environmental and public health stressors associated with the proposed new or expanded facility, or with the existing major source, as applicable, including any adverse environmental or public health stressors that cannot be avoided if the permit is granted, and the environmental or public health stressors already borne by the overburdened community as a result of existing conditions located in or affecting the overburdened community;

Permit Conditions

- c. Notwithstanding the provisions of any other law, or rule or regulation adopted pursuant thereto, to the contrary, the department shall, after review of the environmental justice impact statement prepared pursuant to paragraph (1) of subsection a. of this section and any other relevant information, including testimony and written comments received at the public hearing, deny a permit for a new facility upon a finding that **approval of the permit, as proposed**, would, **together with other environmental or public health stressors affecting the overburdened community, cause or contribute to adverse cumulative environmental or public health stressors in the overburdened community that are higher than those borne by other communities within the State, county, or other geographic unit of analysis** as determined by the department pursuant to rule, regulation, or guidance adopted or issued pursuant to section 5 of this act, except that where the department determines that a new facility will serve a compelling public interest in the community where it is to be located, the department may grant a permit that imposes conditions on the construction and operation of the facility to protect public health.

Process for Evaluating Potential Stressors

- Brainstorming List:
 - Past DEP similar efforts
 - Others' similar efforts
 - Input from stakeholders
 - Input from DEP programs
- To be refined considering:
 - Data availability
 - Data quality
 - Appropriate geographic scale
 - Quantifiability
 - Marginal value

For Today

- We are going to review the Brainstorming List with you.
- We are going to stop and ask questions along the way.
- Throughout, please keep in mind three main questions:
 - What stressors did we miss?
 - What stressors do you suggest we remove?
 - What stressors do you see as being of particular importance or critical to this effort?

Concentrated Areas of Air Pollution

- Pollutants
 - Criteria Pollutants (Ground-level Ozone, Particulate Matter, Carbon Monoxide, Lead, Sulfur Dioxide, Nitrogen Dioxide)
 - Hazardous Air Pollutants (HAPs) – list of 187 toxic air pollutants
 - Diesel Particulate Emissions (not a HAP, but included in NATA)
 - Ultrafine (Black Carbon)
 - Greenhouse Gases
- Emissions/Releases
 - Allowable emissions/Potential to emit
 - Actual emissions
 - Fugitive
 - Emissions density/aggregated spatially (TPY/sq mile)
 - Community Corner provides access to air emission and permit data
 - <https://www.arcgis.com/apps/webappviewer/index.html?id=76194937cbb46b1ab9a9ec37c7d709b>

Concentrated Areas of Air Pollution (cont.)

- Air quality measurement
 - New Jersey Ambient Monitoring Network
 - Other Professional Monitoring
 - Citizen Measuring
 - Located in neighborhood with input from the impacted community
 - Air quality monitoring is expensive and not done in most block groups
- Modelling
 - American Meteorological Society (AMS)/EPA Regulatory Model (AERMOD)
 - Community Multiscale Air Quality (CMAQ)
 - Interpolation (Inverse Distance Weighting or Kriging, AirNow-AQI, California)
 - National Scale Air Toxics Assessment (NATA) uses AERMOD and CMAQ with the National Emission Inventory for air toxics and diesel
 - EPA Risk Screening Environmental Indicators (RSEI) uses AERMOD with Toxic Release Inventory (TRI)
 - EPA/CDC Hierarchical Bayesian statistics fusion model combining measurement and CMAQ (used in EJ Screen)

Mobile Sources of Air Pollution

- Major Roads
 - Annual Average Daily Traffic (AADT) (cars and trucks)
 - Congested roads (infrastructure Improvements)
- Non-Major Roads
 - Local roads and neighborhood impacts
- Other Source Types
 - Railroads and rail yards
 - Airports
 - Buses and transit stations
 - Ports, Warehouses, and Commercial Distribution centers
- Distance/Proximity
 - Within 500 or 1,000 feet of a major highway

Discussion of Air Pollution & Mobile Sources

Stressor / Indicator	EJ Screen	CalEnviroScreen 3.0
Ozone level in air	Ozone summer seasonal average of daily maximum 8-hour concentration in air in parts per billion (2016) using EPA, OAR (fusion of model and monitor data).	Mean of summer months (May-October) of the daily maximum 8-hour ozone concentration (ppm), averaged over three years (2012 to 2014). Using a modeling technique called Inverse Distance Weighting (IDW).
PM _{2.5} level in air	PM _{2.5} levels in air, $\mu\text{g}/\text{m}^3$ annual average (2016) using EPA, OAR (fusion of model and monitor data).	Annual mean concentration of PM _{2.5} (average of quarterly means, $\mu\text{g}/\text{m}^3$), over three years (2012 to 2014). Using a geostatistical method that incorporates the monitoring data from nearby monitors (ordinary kriging).
Air toxics cancer risk	Lifetime cancer risk from inhalation of air toxics using NATA.	Toxicity-weighted concentrations of modeled chemical releases to air from facility emissions and off-site incineration (averaged over 2011 to 2013). Using RSEI.
Air toxics respiratory hazard index	Air toxics respiratory hazard index (ratio of exposure concentration to health-based reference concentration) using NATA.	
Diesel	Diesel particulate matter level in air, $\mu\text{g}/\text{m}^3$ using EPA NATA, retrieved 2019.	Spatial distribution of gridded diesel PM emissions from on-road and non-road sources for a 2012 summer day in July (kg/day).
Traffic	Traffic proximity and volume count of vehicles (AADT, average annual daily traffic) at major roads within 500 meters, divided by distance in meters (not km).	Traffic density is the sum of traffic volumes adjusted by road segment length (vehicle-kilometers per hour) divided by total road length (kilometers) within 150 meters of the census tract boundary (2013).

Contaminated Sites

- Known Contaminated Sites List (KCSL)
- Deed Notice Areas
- Groundwater Contamination Areas
 - Classification Exception Areas (CEA)
 - Currently Known Extent (CKE)
- Brownfield Development Areas (BDA)

Solid Waste Facilities

Transfer stations, recycling facilities, scrap yards, landfills

- Potential Facility Types
 - Landfills
 - Recyclers (Class B, C, D)
 - Transfer Stations
 - Hazardous Waste Facilities
 - Scrap Yards
- Potential Impacts/Stressors
 - Air releases
 - Surface water/ground water/stormwater
 - Truck traffic/Rail traffic
 - Odors
 - Noise
- California Combines Solid Waste and Scrap Yard Sites
 - Capture quality of life and other stressors (odor, noise, dust, etc.)
 - Sites within 1,000 meter (2,000 for compost)

Other Facilities Considered Stressors

- Facilities covered by the Law:
 - (1) major source of air pollution;
 - (2) resource recovery facility or incinerator;
 - (3) sludge processing facility, combustor, or incinerator;
 - (4) sewage treatment plant with a capacity of more than 50 million gallons per day;
 - (5) transfer station or other solid waste facility, or recycling facility intending to receive at least 100 tons of recyclable material per day*;
 - (6) scrap metal facility*;
 - (7) landfill*;
 - (8) medical waste incinerator (with exceptions)
- And other suggested facilities:
 - major regulated sites (TCPA, DPCC) not already covered by the Law
 - solid and hazardous waste facilities not already covered by the Law

Point-sources of Water Pollution...

...including, but not limited to, water pollution from facilities or combined sewer overflows

- Discharge Monitoring Reports (DMR)
- Combined Sewer Overflows [Interactive Map](#)
- In Stream Water Quality Integrated Report
 - Designated Uses
 - [2016 Integrated Report](#)
- EJ Screen
 - EPA Risk Screening Environmental Indicators (RSEI) using DMR and TRI data
- California CalEnviroScreen
 - 303(d) List of Impaired Water Bodies

Conditions that may cause potential public health impacts...

...including, but not limited to, asthma, cancer, elevated blood lead levels, cardiovascular disease, and developmental problems in the overburdened community

- Health Outcomes
 - Low Birth Weight, Infant Mortality
 - Emergency Department Visits
 - Asthma
 - Cancer
 - Community Health Surveys

Conditions that may cause potential public health impacts...

...including, but not limited to, asthma, cancer, elevated blood lead levels, cardiovascular disease, and developmental problems in the overburdened community

- Environmental
 - Ozone
 - PM_{2.5}
 - National Scale Air Toxics Assessment (NATA) - Cancer and Non-Cancer
 - Drinking Water
 - Age of Housing
 - Pesticides
 - Naturally Occurring
 - Radon
 - Arsenic in ground water

Conditions that may cause potential public health impacts...

...including, but not limited to, asthma, cancer, elevated blood lead levels, cardiovascular disease, and developmental problems in the overburdened community

- Lack or Absence of Environmental and Public Health Benefits
 - Lack of open spaces and parks
 - Lack of tree canopy
 - Lack of pervious surface
 - Lack of safe bicycle and pedestrian corridors
 - Lack of green infrastructure

Conditions that may cause potential public health impacts...

...including, but not limited to, asthma, cancer, elevated blood lead levels, cardiovascular disease, and developmental problems in the overburdened community

- Social Determinants

- Age (5 and under and over 65)
- Social Vulnerability Index
- Education (less than high school)
- Unemployed
- Disabled
- Single family household
- Carless households
- Household energy burden
- % population without health insurance, access to health care
- Lack of maternal and prenatal health care
- Lack of access to healthy food
- Lack of access to quality public housing
- Lack of access to quality public transportation
- Lack of access to clean energy alternatives

Conditions that may cause potential public health impacts...

...including, but not limited to, asthma, cancer, elevated blood lead levels, cardiovascular disease, and developmental problems in the overburdened community

- Climate Change
 - Flooding, Sea Level Rise
 - Heat, Heat Islands
 - Increased vulnerability to climate change, limited access to mitigate climate change stressors

Q&A

- What stressors did we miss?
- What stressors do you suggest we remove?
- What stressors do you see as being of particular importance or critical to this effort?
- Do you have suggestions for how to narrow down the list of potential stressors in addition to what we are doing?

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EJ Rulemaking Email Address

- Email ejrulemaking@dep.nj.gov comments and questions related to rulemaking.
- Continue to ask permit questions through the proper channels.

Survey

- Please respond by April 12, 2021.
- <https://www.surveymonkey.com/r/X8DH5WS>