

Freight Locomotives and Rail:

Issues, Impacts, Injustice and the need for Zero Emission Solutions Now!



MFN met with Administrator Rregan, March 15, 2023 with over 30,000 signatures demanding zero emission solutions across the freight transportation sector. ©MovingForwardNetwork

Agenda

Moving Forward Network (MFN)

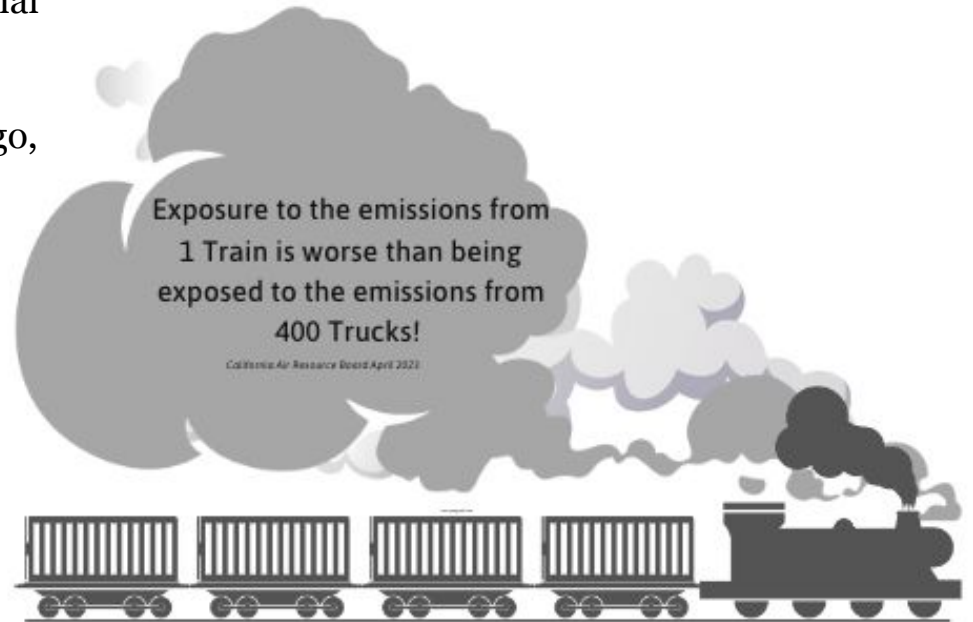
- ❖ Who is MFN
- ❖ Rail and Locomotives -a national issue

Rail and Locomotive Issues and Solution - National to Local

- ❖ José Cordova Acosta, [Little Village Environmental Justice Organization](#) Chicago, IL
- ❖ Ivette Torres, [People's Collective for Environmental Justice](#) Inland Empire, CA
- ❖ Beto Lugo Martinez, [CleanAirNow](#) Kansas City, KS

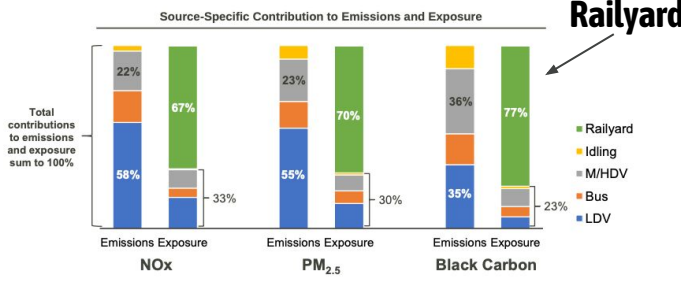
Call to Action

- ❖ Next Steps



Newark Community Impacts of Mobile Source Emissions

A Community-Based Participatory Research Analysis



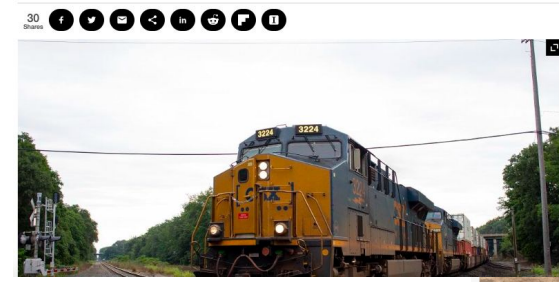
Railyard

The chart in Figure 8 shows that while total emissions emitted within the Ironbound, Newark NJ... **for black carbon, specifically), emissions that originate from outside the area (in this case, Oak Island railyard to the southeast) are largely responsible for the total emissions exposure experienced within the area**

The Filthy Emissions of Railroad Locomotives—and the Rail Unions Sounding the Alarm

Diesel engines have gotten a sweetheart deal from environmental regulators. It's time that changed.

BY SARAH LAZARE MARCH 14, 2023



No injuries were reported when a BNSF Railway train derailed Thursday morning in the Southern California desert (San Bernardino County Fire Dept., via Twitter)

THE CLIMATE 202

EPA quietly signals to California it can set stricter train emissions rules

Analysis by Maxine Joselow with research by Vanessa Montalbano
 April 18, 2023 at 7:42 a.m. EDT



As Rail Profits Soar, Blocked Crossings Force Kids to Crawl Under Trains to Get to School

by Topher Sanders and Dan Schwartz, ProPublica, and Joce Sterman, Gray Television/InvestigateTV; Video by Scotty Smith, Gray Television/InvestigateTV; Photography by Jamie Keltner Davis for ProPublica

April 26, 12 p.m. EDT



When trains block a crossing for hours on end, kids risk their lives to get to school.

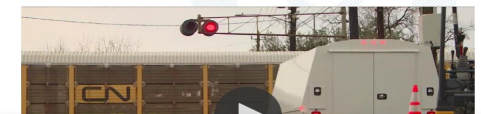


The site of the train derailment in East Palestine, Ohio, on Feb. 4. Gene J. Puskar/Associated Press

"In our community, we have homes and a middle school right next to railroad tracks" where trains emit pollution that increases cancer risk and worsens smog, said Golden, a member of the **Moving Forward Network**, a collection of environmental justice groups.

Stopped trains in Houston create more than just delays

"In 2021, we had over 1,300 instances in which our emergency crews had to reroute because they were being blocked by a stopped train," HFD Chief Samuel Peña said.



CURRENT EPA REGULATIONS ARE OUTDATED

Current regulations are based on old technology.

Existing Federal Locomotive Emission Standards for Line Haul Locomotives

Emissions Tier	Year of Original Manufacture	NO _x Standard (g/bhp-hr)	PM Standard (g/bhp-hr)
Pre-Tier 0	1973-1999	13.5 ⁵¹	0.6 ⁵²
Tier 0	2000-2001 ⁵³	9.5	0.60
Tier 0+	1973-1992	8.0	0.22
Tier 1	2002-2004	7.4	0.45
Tier 1+	1993-2004	7.4	0.22
Tier 2	2005-2011	5.5	0.20
Tier 2+	2005-2011	5.5	0.10
Tier 3	2012-2014	5.5	0.10
Tier 4	2015 or later	1.3	0.03

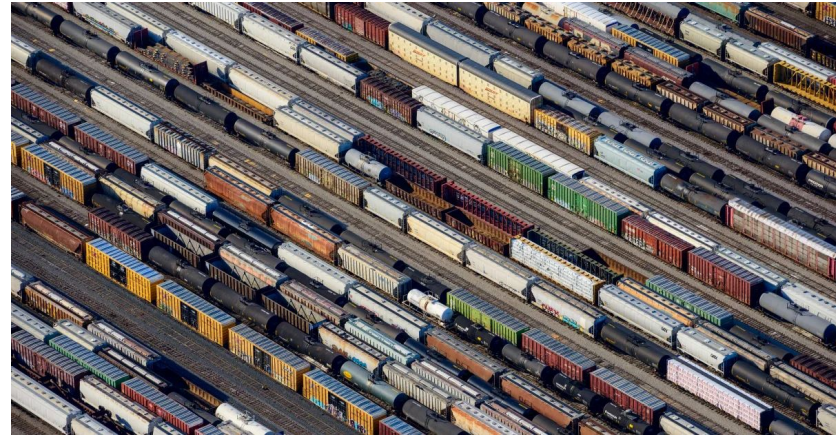
Existing Federal Locomotive Emission Standards Switch Locomotives

Emissions Tier	Year of Original Manufacture	NO _x Standard (g/bhp-hr)	PM Standard (g/bhp-hr)
Pre Tier 0	1973-1999	17.4 ⁵¹	0.72 ⁵²
Tier 0	2000-2001 ⁵⁴	14.0	0.72
Tier 0+	1973-2001	11.8	0.26
Tier 1	2002-2004	11.0	0.54
Tier 1+	2002-2004	11.0	0.26
Tier 2	2005-2011	8.1	0.24
Tier 2+	2005-2010	8.1	0.13
Tier 3	2011-2014	5.0	0.10
Tier 4	2015 or later	1.3	0.03

Little Village Environmental Justice Organization

Chicago is the freight hub of North America

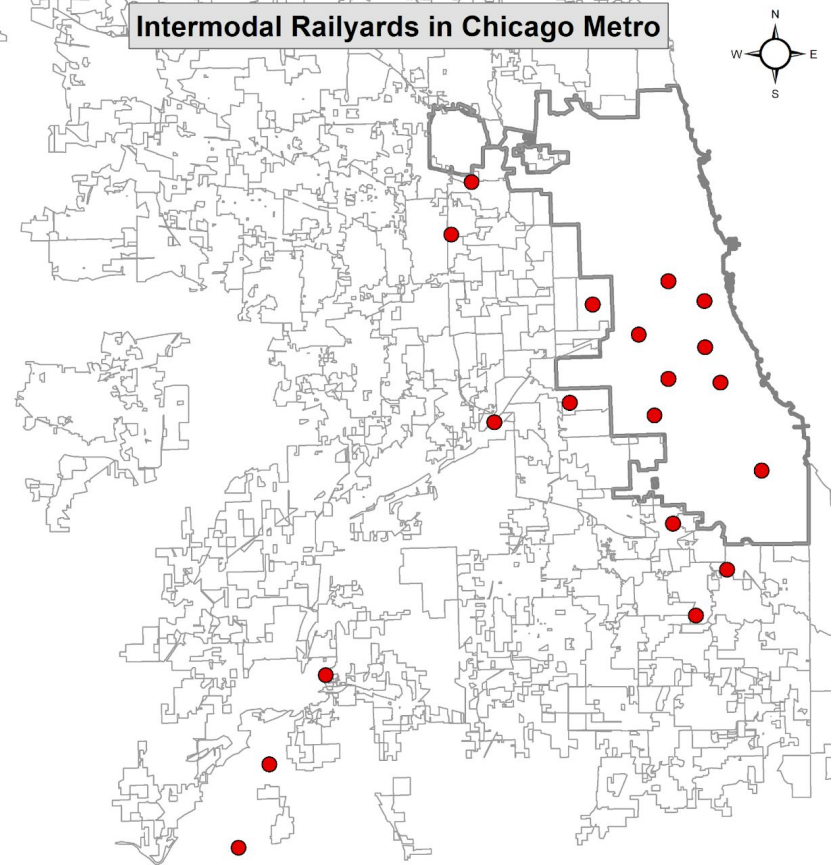
- 6 out of 7 Class I railroads - Where the Eastern meet the Western (6 with the CP/KCS merger)
- Approximately 25 percent of all freight trains and 50 percent of all intermodal trains in the U.S. pass through metropolitan Chicago
- Approximately 1.1 billion square feet of industrial development supporting freight and manufacturing activity - largest in U.S.
- Industries that rely on the frequent shipment of goods -- manufacturing, construction, retail trade, and wholesale trade -- represent over one-quarter of all jobs in the region and add over \$158 billion per year to the regional economy.
- \$3 trillion in goods pass through Chicago
- One of most congested rail hubs - more congestion means more pollution as rail cars are constantly stop and go



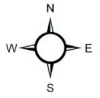


Chicago, the Inland Port City

- Over 17.9 million TEUs in 2018, 16.5 million in 2022
- Second busiest port city in U.S., 10th largest in the world
- 19 intermodals/inland ports in Chicago region
- 8 within city limits
- Chicago's most direct connection to global trade
- Primarily located in low income and communities of color



Intermodal Railyards in Chicago Metro



● Intermodal Railyards/Inland Port

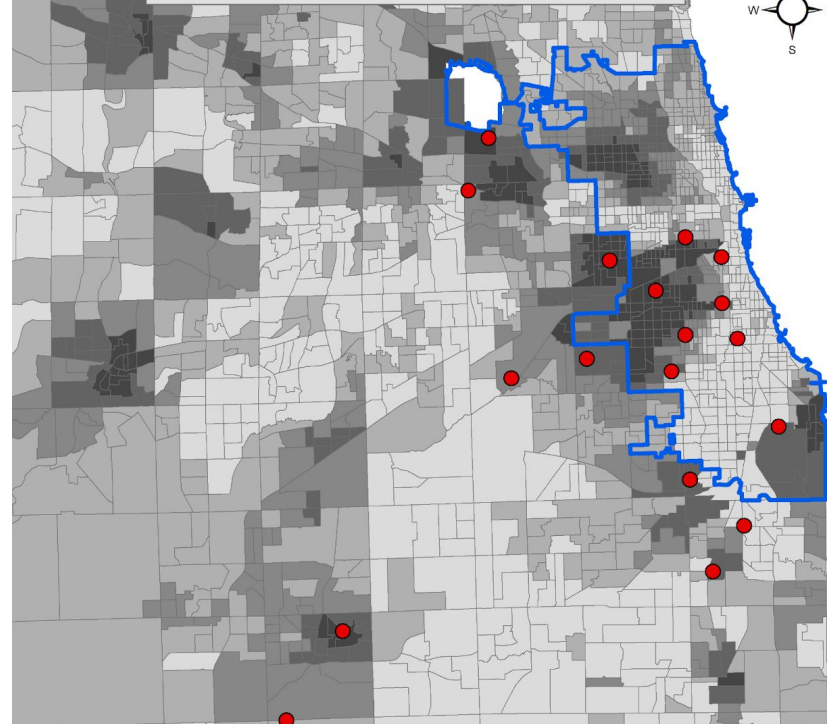
□ Municipalities of Chicago Metro

□ City of Chicago

Map Created by
Jose Acosta,
LVEJO

0 5 10 20 Miles

Intermodal Railyards in Chicago Metro



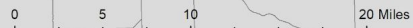
● Intermodal Railyards/Inland Port

▭ City of Chicago

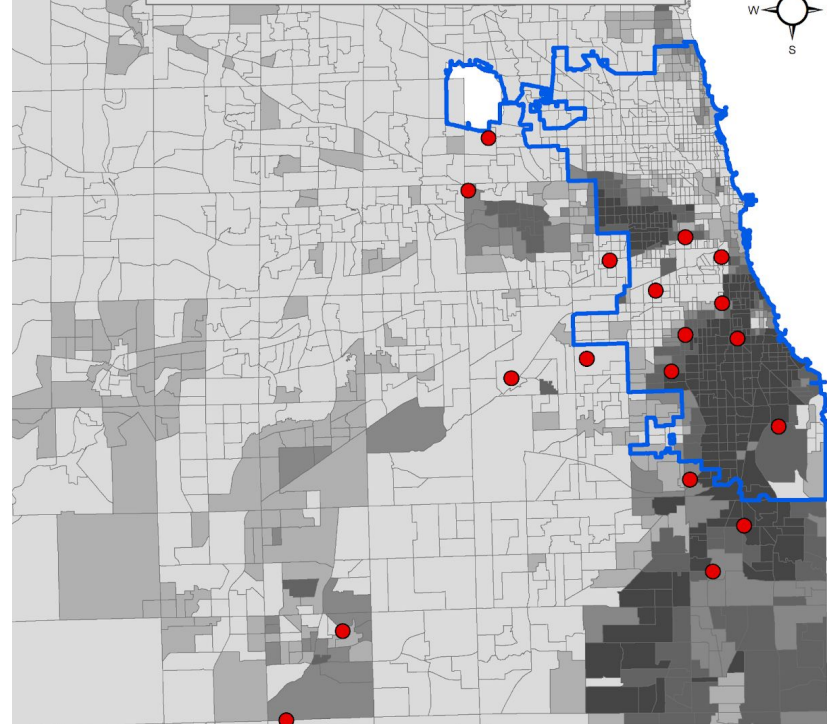
Total Percentage Latino/a/x

- 0% - 8.92%
- 8.93% - 21.1%
- 21.11% - 39.8%
- 39.81% - 65.91%
- 65.92% - 97.84%

Map Created by
Jose Acosta,
LVEJO



Intermodal Railyards in Chicago Metro



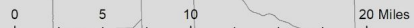
● Intermodal Railyards/Inland Port

▭ City of Chicago

Total % African American

- 0% - 8.26%
- 8.27% - 24.25%
- 24.26% - 49.7%
- 49.71% - 77.56%
- 77.57% - 97.39%

Map Created by
Jose Acosta,
LVEJO



People's Collective for Environmental Justice

Community Members home in Colton California



BNSF Intermodal Facility San Bernardino California



Community Impacts in the Inland Empire

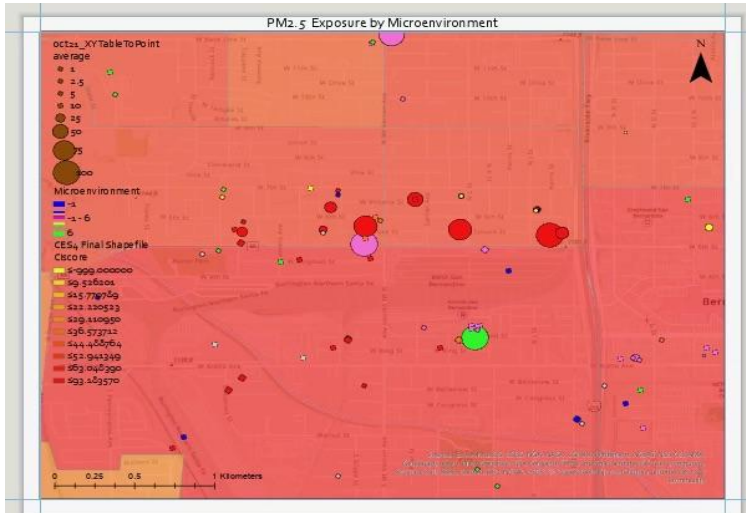
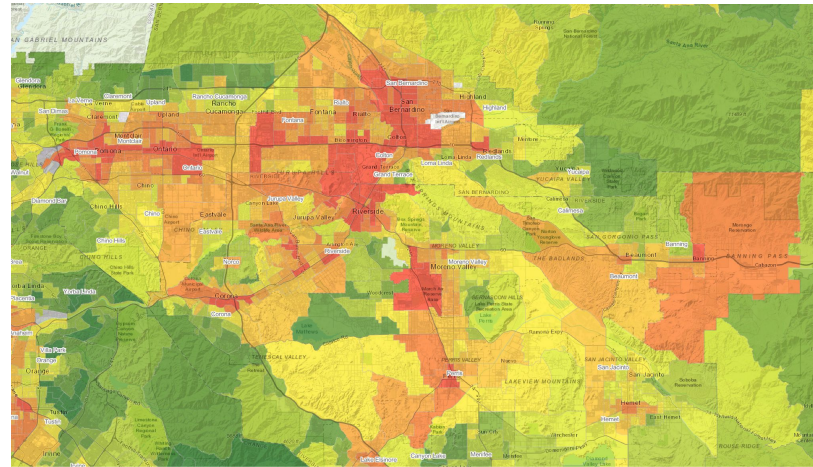


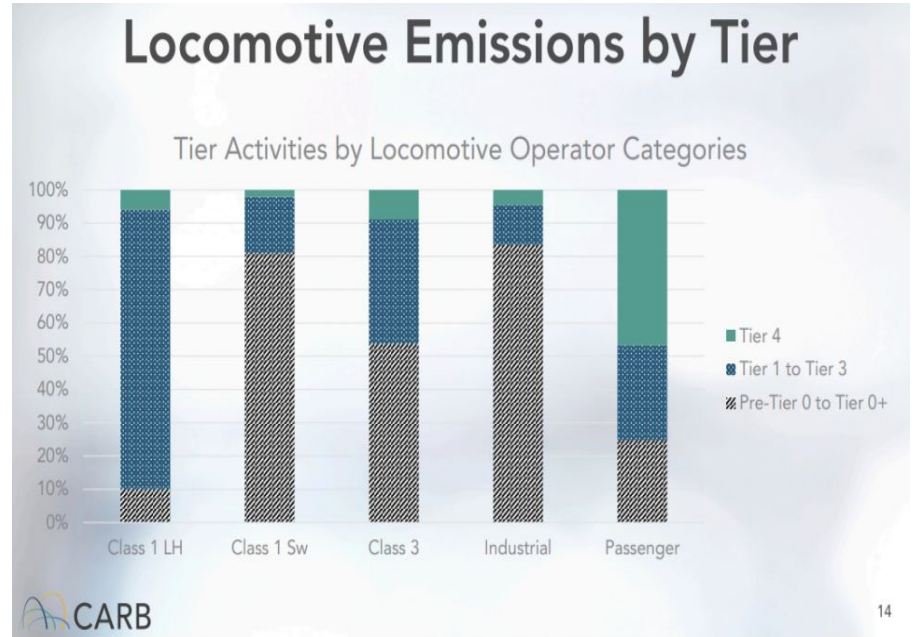
Table II-1: Comparison of Diesel PM Emissions (tons per year) from Four Major Source Categories within Eighteen Railyards.

Railyard	Locomotive	Cargo Handling Equipment	On-Road Trucks	Others (Off-Road Equipment, TRUs, Stationary Sources, etc.)	Total*
BNSF Barstow	27.1	0.03	0.04	0.75	27.9
BNSF San Bernardino	10.6	3.7	4.4	3.4	22.0
BNSF San Diego	1.6	N/A	0.007	0.04	1.7
UP ICTF/Dolores	9.8	4.4	7.5	2.0	23.7
UP Colton	16.3	N/A	0.2	0.05	16.5
UP Oakland	3.9	2.0	1.9	3.4	11.2
UP City of Industry	5.9	2.8	2.0	0.3	10.9
UP Roseville*	25.1	N/A	N/A	N/A	25.1
BNSF Hobart	5.9	4.2	10.1	3.7	23.9
UP Commerce	4.9	4.8	2.0	0.4	12.1
UP LATC	3.2	2.7	1.0	0.5	7.3
UP Stockton	6.5	N/A	0.2	0.2	6.9
UP Mira Loma	4.4	N/A	0.2	0.2	4.9
BNSF Richmond	3.3	0.3	0.5	0.6	4.7
BNSF Stockton	3.6	N/A	N/A	0.02	3.6
BNSF Commerce Eastern	0.6	0.4	1.1	1.0	3.1
BNSF Sheila	2.2	N/A	N/A	0.4	2.7
BNSF Watson	1.9	N/A	<0.01	0.04	1.9

* The UP Roseville Health Risk Assessment (ARB, 2004a) was based on 1999-2000 emission estimate, only locomotive diesel PM emissions were reported in that study. The actual emissions were estimated at a range of 22.1 to 25.1 tons per year.
 N/A = Not applicable.
 - Numbers do not add precisely due to rounding.



California Air Resources Board In Use Locomotive Rule







**CLOPPER
FIELD**
A FAMILY PARK

**NO
MOTORIZED
VEHICLES
ALLOWED
ON GRASS**

PARK HOURS
6:00AM-MIDNIGHT
EMERGENCY CALL 911
SHERIFF 913-596-3000
PARKS 913-573-8327
24 HOURS 913-573-8365



NEW AT 10:00
BREAKING NEWS LEADER
ENVIRONMENTAL GROUP: FUMES POSING HEALTH RISKS



Train derailment blocks street in East Bottoms



Hispanic News
 4 de Agosto, 2022

KCTV Story: Emissions from KC rail yard affecting neighborhood health
 on June 24, 2019 in Argentine-Turner-Kansas, Goods Movement

KANSAS CITY, KS
 Watch the news story at KCTV
 Community members in the Argentine neighborhood are concerned about their health because of a nearby rail yard.

Train carrying hazardous materials derails in Bonner Springs; KCC firefighters respond

BNSF - "There is no truth to air quality report"
BNSF - "No hay nada de cierto en el reporte de calidad del aire"

Environmental Injustice: Cumulative Impacts in Kansas City

The EPA is responsible for setting environmental regulations to limit the amount of pollution industrial facilities release. This approach has been ineffective in controlling exposures because they do not take into account the cumulative impacts or toxic air contaminants.



Rail yard pollution in Kansas City, Kan., requires a closer look by the EPA and BNSF



A Union Pacific train derailment ended up blocking at least one street in Kansas City's East Bottoms on Monday. (KCTV5 News) By Zoe Brown and David Pinter

Moving Forward Network

September 21, 2022

Call to Action/ Next Steps

1. Committee should recommend that EPA adopt a Tier 5 zero-emission locomotive standard by the end of 2023. Including the development of a scrapping program to ensure that the dirtiest locomotives and switchers are take offline.
2. Coordinate with the Federal Railroad Administration's Climate & Sustainability Division to support further zero-emission locomotive deployment, funding & development.
3. Distribute air monitors near railyards around the United States to better understand on the ground emission impacts. Data should be public and accessible.
4. Conduct emissions modeling that looks at proximity of railyards to sensitive receptors, cumulative impacts, and health impacts, accounting for race & socio-economic factors.
5. Develop a nationwide locomotive registry that includes locomotive tier, years in operation, locations, routes, and hours of operation.
6. Establish stakeholder process to continue ongoing engagement with frontline and fenceline communities, such as monthly meetings. Engagement should be included throughout the planning, development and implementation of 1-5

Question/Answer