ALBANY SOUTH END COMMUNITY AIR QUALITY STUDY

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Summary

October 2019

About the Study

Albany's South End residents have long reported concerns about health, proximity to rail cars, odors, noise, vehicle speed, and heavy truck traffic. The air quality near port communities like Albany's South End is impacted by diesel trucks, trains, marine vessels, cargo-handling equipment, oil and gasoline storage, commercial area sources, and industrial facilities handling petroleum products.

In 2014, the New York State Department of Environmental Conservation (DEC) responded to residents' concerns with a short-term air screening study of volatile organic compounds (VOCs). The results from that first study found that VOCs are in line with concentrations routinely measured at other locations across the state.

The community asked for further study. In 2017, DEC launched a year-long community air quality study to better understand area air quality issues and respond to local concerns, including VOCs and other traffic-related air pollutants (TRAP). This factsheet is an overview of the major 2017 study findings.

Major Study Findings

- Trucks and buses contribute more to higher particle concentrations in the Ezra Prentice community than activities in the Port of Albany.
- Pollution is greater along South Pearl Street at Ezra Prentice due to trucks and buses.
- Port activities contribute to local benzene concentrations.
- DEC and other agencies are taking steps to reduce traffic pollutants and benzene, as outdoor air affects indoor air concentrations.

More particles are coming from motor vehicles than from activities in the Port of Albany.

Portable air monitors stationed at Ezra Prentice repeatedly showed brief periods of high ultrafine particles and black carbon concentrations, which are used in this study as markers for TRAP. These concentration peaks are characteristic of the higher-polluting vehicles that travel South Pearl Street near the Ezra Prentice Homes.

It is unlikely these peaks are from other transportation sources, such as trains or marine vessels on the Hudson River, which move much slower and less frequently. Air monitors near the train tracks in the Port of Albany did not show repeated peak measurements like those collected near South Pearl Street. While not identified as an important contributor of emissions in this study, train activities have other negative impacts on the community, such as noise, ground vibration, and safety concerns.

DEC stationary air monitoring found greater large- and small-size particle concentrations at the Ezra Prentice Homes on weekdays as compared to other nearby stationary monitors, such as the Albany County Health Department's (operating since 1973), and the study background monitor on 3rd Avenue, which both showed lower concentrations. DEC concluded the increase in concentrations is due to the local higher volume of truck traffic. Additionally, time of day, wind speed, and wind direction impacted local exposure to particle concentrations.

Pollution is greater along South Pearl Street at Ezra Prentice due to trucks, buses, and other vehicles.

Portable air monitors show considerably greater TRAP at the Ezra Prentice Homes than in the rest of the Albany South End and similarly busy streets such as Southern Boulevard.

The stationary air monitor at Ezra Prentice also found higher concentrations of TRAP (ultrafine particles and black carbon) when compared to a background stationary air monitor on Third Avenue. Third Avenue is not a truck route and has lower traffic volume than South Pearl Street at the Ezra Prentice Homes.

Along South Pearl Street at Ezra Prentice, 24% of the vehicles were identified as trucks and buses, as compared to 4% identified at Southern Boulevard. High-emitting vehicles that travel through the area to the Port of Albany and the City of Albany are the greatest source of the traffic-related pollution and comprise a small fraction of the overall vehicles. Less than 10% of all the vehicles contribute to more than 25% of the total traffic-related air pollution.

Port activities contribute to local benzene concentrations.

The highest benzene concentrations collected during the study were within the ports of Albany and Rensselaer, near operations that store and transfer gasoline and petroleum products. The Port of Rensselaer consistently had higher concentrations.

Benzene concentrations near the Ezra Prentice Homes were lower than concentrations near the Albany County Health Department. Benzene annual averages collected near the Albany County Health Department since March 2015 were higher compared to other DEC monitors in urban areas.

Actions to reduce pollution and exposure:

Reducing traffic pollution

- DEC is working with identified vehicle fleets to evaluate ways fleets can reduce emissions (removing or retrofitting specific high-emitting vehicles.
- DEC and DOT are making $20 million available from the Volkswagen settlement and other resources to fund clean trucks statewide, with a focus on environmental justice communities like the South End. DEC has allocated an additional $52.4 million for future projects to replace transit, school, and paratransit buses statewide.
- DEC continues to conduct periodic enforcement checks on South Pearl Street and impose fines on trucks and buses with high emissions.
- DOT has reclassified four roads within the Port of Albany. This change will make the routes within the port eligible for transportation grants.
- DOT is committed to providing technical support to the City of Albany, including direct engineering assistance, in support of the city's continued assessment of South Pearl Street and potential alternative routes for truck traffic.
- The City of Albany's Mayor's Office is helping to coordinate the voluntary rerouting of frequent truck traffic by several businesses in the South End, and has directed the Albany Department of General Services (DGS) to prohibit its vehicles from using South Pearl Street other than for regularly scheduled solid waste pickup and street cleaning. DGS will also purchase a street-cleaning vacuum (not a sweeper) to help reduce road dust.
- DEC, the Mayor's Office, and the Albany Housing Authority (AHA) are leading a workgroup to develop mitigation strategies and ensure implementation of overall approaches. The workgroup will evaluate the effectiveness of roadside barriers, such as green walls, where appropriate.

Reducing air pollutants indoors

- AHA is working to minimize residents' exposure to airborne pollutants by providing professionally installed window air conditioners at Ezra Prentice, beginning with residences closest to South Pearl Street and moving outward.
- AHA is also evaluating other strategies, such as the effectiveness of central air conditioning.
- AHA will conduct door-to-door advocacy with healthcare partners to increase awareness and education related to indoor air quality.

Reducing benzene

- DEC is conducting more frequent leak detection inspections at gasoline and petroleum distribution facilities, followed by enforcement, as appropriate.

Where Can I Find More Information?

- Read the full Albany South End Air Quality Study at: https://on.ny.gov/southendstudy.

Next Steps

- DEC and partners are evaluating the effectiveness of reduction strategies by continuing to monitor pollutants related to traffic.

CONTACT INFORMATION

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