

SUMMARY REPORT OF AIR MONITORING AND TRAFFIC SURVEYS (prepared by LiJin and Maria Karpfinger)

INTRODUCTION

Greenpoint-Williamsburg is home to twenty-one commercial, waste-transfer facilities. With the closure of Staten Island's Fresh Kills Landfill In 2001, the city is looking to use the existing Infrastructure of the commercial facilities to take on the additional 13,000 tons per day of residential garbage to prepare it for export out of the city. Already, G-W has seen an increase in truck traffic as Fresh Kills is phased out. Many estimates have been spoken about regarding the impact of the closure of Fresh Kills Landfill on truck traffic in G/W. This study was conducted to collect data that could help paint a realistic picture of what our experience is as residents of G/W.

Our study has focused on two different areas: air quality and density of traffic. The following summary is based on data collected by students working in the TSO program at JHS 126 and St. Cecilia's School, and by four student interns who have been working with Council on the Environment after school since November, 1999.

HYPOTHESIS

We expect to find heavy truck traffic as it relates to the waste industry along Meeker Avenue and Metropolitan Avenue, and find a corresponding, high level of the pollutants that are associated with diesel trucks, such as particulate matter 2.5. We do not expect to see any significant levels of ozone as our monitoring so far has taken place during winter, and ozone is a secondary pollutant that is produced by photochemical reactions needing sunlight.

METHOD

Using the PAX Analytics ACCESS Environmental Monitoring System, we were able to test for all of the criteria pollutants (carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter 2.5, ozone) and carbon dioxide. We set the monitor up at the start of our session, zeroed the sensors, and tested the entire length of time we were out in the field (app. 45-60 minutes).

We developed traffic survey sheets, dividing our counts up into three different categories: garbage trucks and waste haulers, commercial vehicles, and noncommercial vehicles. We also wrote down the names of the different waste companies or contractors who were hauling the garbage.

SUMMARY OF RESULTS

For Traffic

At Metropolitan & Lorimer in the afternoon (3-4pm): Average count from five different sessions = 1 truck per minute

At Meeker and McGuinness & Meeker and Monitor In the morning (9-10:15 am) Average count from three sessions = 4.5 trucks per minute

Trends in Air Quality

Nitrogen Oxide readings exceeded the 53 part per billion limit in 100% of the cases in all monitoring sessions.

We did not see the high levels in PM2.5 that we expected during any of the sessions.

Carbon Monoxide and Sulfur Dioxide were not a problem during any session although they did spike a few times when a heavy polluter drove by.

CONCLUSIONS

Our high NO₂ readings should be cause for concern and indicate that further studies need to be done. The traffic counts indicate an unfair burden of diesel truck traffic associated the garbage industry. We were surprised not to find high levels of PM2.5 and wonder if this is hard to pick up due to wind patterns and lightness of particles.

Based on conversations with air experts, local residents and community leaders, we plan to carry out further air testing and traffic surveys. The air monitor will be set up for an extended time of three days and our truck survey will focus just on garbage trucks.