



# Memorandum

To: Evanston Residents

CC: Erika Storlie, Interim City Manager and Kimberly Richardson, Acting Assistant City Manager, Ikenga Ogbo, Director of Health and Human Services Department

From: Kumar Jensen, Chief Sustainability and Resilience Officer  
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Subject: Air Quality Study Findings (RFP 18-57)

Date: June 8, 2020

## Budget/Funding:

Funding for the study was provided from the Capital Improvement Program (CIP) (Account 415.40.4219.62145-119005). This account draws funds from the settlement funds awarded to the City in 2016 the per ton host fee paid to the City. The City issued three payments to the consultant, RHP Risk Management for a total contract award of \$229,300.00. All payments have been made to the contractor.

## Summary:

Staff received the first draft of the report findings from the project team in early December, 2019. After reviewing the first draft staff submitted multiple rounds of questions, comments and requested revisions to the consultant for incorporation in the report. Concurrently staff reached out for technical advisory support from two local scientists who had been involved in the project in 2017 and 2018 and the U.S. Environmental Protection Agency Region 5 Air and Radiation Division. Officials at the US EPA and the local scientists raised many concerns that staff shared with the consultants. Many of the changes were made but many were left unaddressed. Below is a summary of the findings and recommended next steps.

## Study Results:

The data set is quite large (approximately 12 million data points) so many conclusions and analysis are possible. The below findings were developed to be easy to communicate publicly and were the result of conversations between the consultant and the Evanston Health and Human Services Department and Office of Sustainability. The study results and recommendations by the consultant fell short of making definitive statements about the overall air quality within the study area. This study provides the City with a better picture of ambient air quality within the area, rather than direct impacts of operations of the waste transfer station. In addition, the summary of results below

show which parameters (or pollutants) were of the most concern based on study results and according to the consultant warranted further study or investigation.

Table 1. Summary of Findings

Parameter	Weight of Evidence (WOE) Score Total	Prioritization
Formaldehyde (CH <sub>2</sub> O)	+6	1st Tier Parameters
Nitric Oxide (NO)	+6	
Sulfur Dioxide (SO <sub>2</sub> )	+5	2nd Tier Parameters
Nitrogen Dioxide (NO <sub>2</sub> )	+4	
Volatile Organic Compounds (VOC)	+3	
Noise (dB)	+2	
Carbon Monoxide (CO)	+1	
Methyl Mercaptan (CH <sub>3</sub> SH)	+1	
Hydrogen Sulfide (H <sub>2</sub> S)	0	Deprioritized Parameters
Ozone (O <sub>3</sub> )	-1	
Particulate Matter (PM <sub>TOTAL</sub> )	-2	
Particulate Matter (PM <sub>2.5</sub> )	-4	
Particulate Matter (PM <sub>10</sub> )	-4	

Based on Table 1. the results from the study would indicate that there are two pollutants that should be prioritized initially for further investigation and the rest should be deprioritized. However, staff and US EPA officials, find it very confusing that the bottom four parameters show up as low priorities because the Chicago region is known to have high concentrations of Ozone<sup>1</sup> and the nature of the operations of the facility are assumed to generate particulate matter from vehicle exhaust and the processing of waste.

Consultant Recommendations:

The consultant’s recommendations do not make definitive statements about the overall air quality in the vicinity around the waste transfer station. They indicate that in order to make comparisons between the collected data and federal standards such as the U.S. National Ambient Air Quality Standards (NAAQS) would require a longer term study and a different methodology than what was used. Further, the consultant’s findings support a correlation between some parameters and the waste transfer station, not all parameters.

Conclusion & Next Steps

This study was never designed to be able to definitively say whether or not air quality in the area met federal air quality standards, however, staff did hope that the study would provide results that would be able to show site attribution for parameters and indicate if any further action would be needed. The study results do indicate that Tier 1

<sup>1</sup> [https://aqs.epa.gov/aqsweb/airdata/download\\_files.html#AQI](https://aqs.epa.gov/aqsweb/airdata/download_files.html#AQI) and <http://www.stateoftheair.org/city-rankings/states/illinois/cook.html>

Parameters should be further studied and secondarily some Tier 2 Parameters, however staff and US EPA officials question some of the results and subsequent analysis that lead to the prioritization of parameters.

The study and subsequent analysis alone cannot be used to make statements about the public health impact of the station in definitive terms, only to indicate correlative relationships that would then require future investigation.

Next step include reaching out to the US EPA and any other relevant officials to identify next steps that will have a positive impact on the neighborhood surrounding the station. Staff believe there are productive steps that can be taken to continue to address concerns from residents.

Finally, staff recommend that any future project work related to air quality be done in partnership or with guidance from county, state or federal agencies with technical knowledge and expertise in air quality monitoring. Staff believe that more input from governmental officials responsible for regulating air quality would have improved the results from this study and would improve the outcomes from any future work.