

HEALTH IMPACT ASSESSMENT

RMG/SOUTHSIDE RECYCLING
PERMIT APPLICATION

Summary Report

February 2022

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INTRODUCTION

On November 11, 2020, Reserve Management Group (RMG), doing business as Southside Recycling, applied to the Chicago Department of Public Health (CDPH) for a [permit to operate a large metal recycling facility](#) on the Southeast side of Chicago. During CDPH's review of this application, the U.S. Environmental Protection Agency (U.S. EPA) recommended that CDPH complete a health impact assessment (HIA) to ensure a thorough consideration of health and environmental justice concerns. In response, CDPH immediately paused its permitting process and began work on the HIA in May 2021.

This report summarizes our findings from the HIA, which was conducted in close coordination with and reliance on both the U.S. EPA and our environmental consultant, and with input from community members, environmental justice advocates, and public health stakeholders.

BACKGROUND ON THE RMG/SOUTHSIDE RECYCLING FACILITY PROPOSAL

RMG is an Ohio-based metal recycling company. The company has operated recycling facilities on a 175-acre property on the Southeast side of Chicago – the location of a former steel mill – for more than 30 years. Today, there are four businesses on the campus: Napuck Salvage of Waupaca, South Shore Recycling, Reserve Marine Terminals and RSR Partners (Regency Technologies).

In 2019, RMG purchased General Iron, which was at that time operating a large metal recycling facility on Chicago's North side, and prepared to relocate certain recycling assets to RMG's existing campus on the Southeast side. RMG is currently seeking a permit to operate Southside Recycling – a new facility that would accept a large volume of scrap metal, including end-of-life vehicles, for processing and recycling – at 11600 S. Burley Ave.

The Illinois EPA issued RMG a state construction permit for Southside Recycling in June 2020.

Following standard procedure, RMG also received the necessary special use zoning approval from the City of Chicago in 2019. In March 2021, with support from CDPH, Chicago's City Council approved the [Air Quality Zoning ordinance](#), which now requires certain industrial zoning applicants to submit an air quality impact study and get a written recommendation from CDPH at the time of initial zoning decisions. RMG received its zoning approval prior to passage of this ordinance, and CDPH did not play a role in earlier siting decisions for the proposed Southside Recycling operation.

“ Recycling obsolete metal contributes to environmental sustainability by reusing resources instead of discarding metal waste in landfills, and it conserves energy and natural resources ”



The Air Quality Ordinance, approved by City Council in March 2021, regulates the construction and expansion of certain facilities that create air pollution. The ordinance requires site plan review and approval by the Department of Planning and Development (DPD), the Chicago Department of Public Health (CDPH), and the Chicago Department of Transportation (CDOT).

RMG requires a CDPH air pollution control permit and a recycling facility permit for Southside Recycling. Permits are issued only if applicants meet zoning and environmental requirements. The Commissioner of CDPH can require special permit conditions based on past violations or other concerns. Consistent with the permit previously issued by the Illinois EPA, CDPH issued an air pollution control permit to RMG in September 2020 for the installation, but not the operation, of pollution control equipment. The facility cannot start operations without first being issued a recycling facility permit.

Throughout the Illinois EPA and CDPH permitting processes, community members and environmental justice advocates have protested the location of Southside Recycling. These protests have centered on concerns about environmental and community impacts, as well as the equity implications of policy decisions that may support de-industrialization of more affluent neighborhoods, while industry continues to be concentrated in areas like Chicago's Southeast side.



LARGE RECYCLING FACILITIES

Large recycling facilities with shredders collect and process automobiles, appliances, and other large items containing recyclable material. Recovered metals are sold to other end users – for instance, manufacturers and foundries. As such, recycling facilities play an important role in keeping metal materials out of the waste stream and landfills by preparing them for reuse. Using recycled metal in manufacturing processes reduces the need for environmentally harmful mining activities.

Large metal recyclers are fundamentally different from most other heavy industry in that they are dependent on suppliers to sort and process the materials they bring in for recycling. This includes “de-polluting” end-of-life vehicles by draining combustible fluids and removing batteries and other components. Similarly, suppliers (who often are individuals with pickup trucks full of miscellaneous scrap) are relied on to sort materials and exclude or separate out certain problematic items. The quality control issues inherent in this business model are different in kind from those of, say, large manufacturers with standardized parts, assembly processes, and final product testing and distribution.

Consequently, a facility like the one proposed for the Southeast side presents unique risks and uncertainties. As noted in a recent [U.S. EPA Enforcement Alert](#):

Significant amounts of non-metal materials are contained in the shredded materials, which can vaporize and become organic air emissions. These materials include plastics, paints, caulks, sealants, rubber, switches, fluids, and fluid residues. The process of grinding and shredding scrap metal generates heat, resulting in residual fluids and fuels becoming gases. The violent nature of the process creates the potential for particulate matter emissions of various sizes. Thus, the process generates emissions of VOCs, particulate matter, and hazardous air pollutants including lead, zinc, cadmium, mercury, and organic pollutants.

Beyond the risk of emissions, if fluids and certain materials are not properly removed and disposed of prior to shredding, there is a risk of fire and explosion – as occurred at General Iron on May 18, 2020. Industry experts have estimated that there are [hundreds of fires at metal recycling facilities each year](#). Recycling facilities also contribute to issues such as noise and traffic that impact the quality of life for nearby communities.

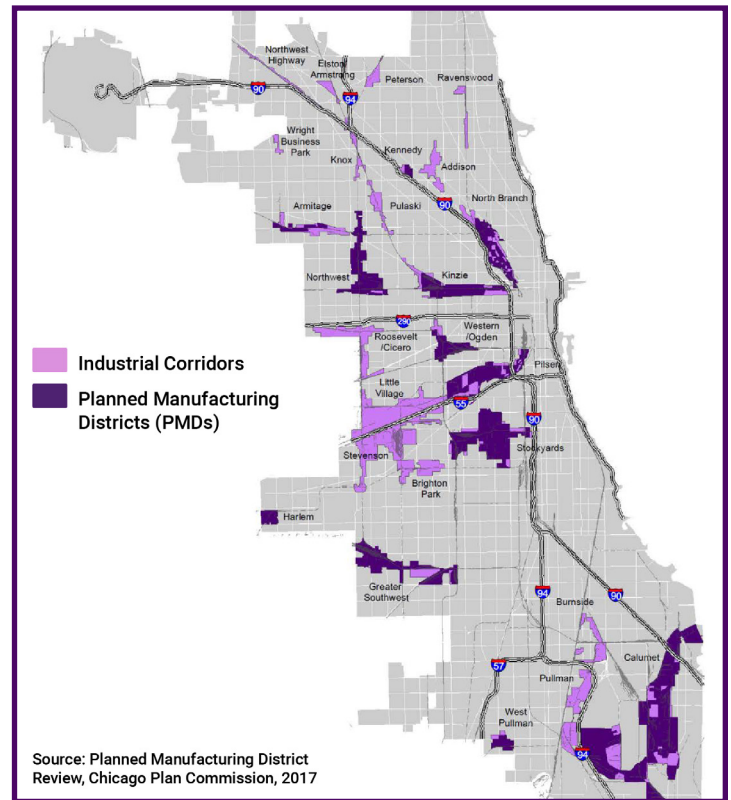
INDUSTRIAL CORRIDORS & PLANNED MANUFACTURING DISTRICTS

The city of Chicago is a center for industrial development with a rich industrial history, including strong freight and manufacturing clusters.

Chicago’s industrial corridors and planned manufacturing districts (PMDs) are designated areas with special land use provisions that support manufacturing, transportation, warehousing, and other industrial uses as part of a diversified economy. According to the [Department of Planning & Development](#), “each corridor has unique assets and characteristics that collectively function on behalf of the entire city, in which companies expand, relocate, and depend upon each other as their needs evolve within a changing economic landscape.” These industrial corridors and PMDs are located across the city of Chicago.

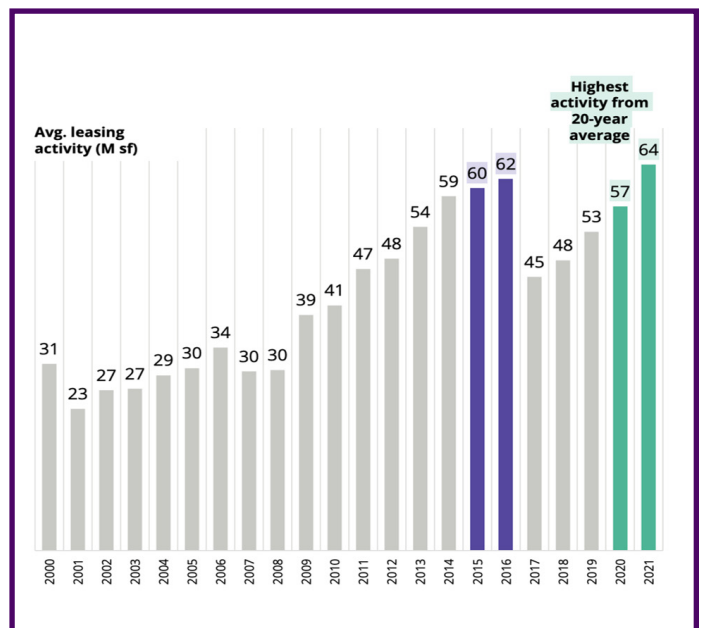
Today, the City’s 26 formal industrial corridors range in size from 70 to 3,500 acres, and contain about 12 percent of all city land.

Post COVID, Chicago’s industrial market has grown at a record rate, with industrial leasing activity up 48.3% from 2020-2021 versus the prior 20-year annual average leasing activity. (Chicago Industrial Market Report, Avison Young)



“Developed and emerging economies around the world have been transformed in recent years by new technologies, advances in freight and logistics, and evolving consumer demand. These trends and climate change will increasingly shape global commerce. Metropolitan Chicago is well-positioned not just to withstand these complex factors but to seize new opportunities due to our strengths among a range of industries and our diverse and skilled population. The region is also endowed with the preeminent North American freight hub, active and engaged civic leadership, and world-class institutions of education and research.”

Chicago Metropolitan Agency for Planning, On to 2050



PROMOTING HEALTH & RACIAL EQUITY

CDPH is committed to promoting health and racial equity. Even before the COVID-19 pandemic, Black Chicagoans lived an average 71.4 years while life expectancy for white Chicagoans was 80.2 years. Chronic disease is the leading driver of this nearly 9-year life expectancy gap, as well as decreasing life expectancy in Chicago’s Latinx population. Pollution exposure can both increase the risk of chronic illnesses like heart and lung diseases and contribute to worse outcomes for people living with certain health conditions.

In [Healthy Chicago 2025](#), our citywide plan to close this life expectancy gap, we lay out strategies to address the root causes of health – including by identifying and redressing policies and systems that create inequities in community conditions. The plan identifies improving the



environment as a priority, so that all Chicagoans – and particularly people who live in communities disproportionately burdened by pollution – can “breathe clean air free of harmful pollutants.”

CDPH recognizes that low-income communities and communities of color are disproportionately impacted by pollution. In 2020, CDPH published the [Air Quality and Health Report](#) outlining community-level data on air quality, health, and social factors to identify, for the first time, which neighborhoods should be prioritized for efforts to mitigate and reduce air pollution. We have already seen other City departments use this report to, for example, prioritize the electrification of bus routes and plan for tree planting initiatives.

**HEALTHY CHICAGO
2025 VISION**

A city where all people and all communities have power, are free from oppression and are strengthened by equitable access to resources, environments and opportunities that promote optimal health and well-being.

STRENGTHENING ENVIRONMENTAL PROTECTIONS

The CDPH Environmental Permitting and Inspection Program is responsible for permitting, inspections and enforcement of environmental regulations in Chicago. CDPH conducts thorough reviews of permit applications to ensure that they meet all applicable requirements.

CDPH and the City of Chicago have adopted recent policy changes to strengthen environmental enforcement and reduce environmental impacts, particularly in vulnerable communities. In June 2020, given new findings about the impacts of facilities such as General Iron, CDPH released the [Rules for Large Recycling Facilities](#). Created with input from local environmental justice groups and industry representatives, these standards are the first ever

Everybody doesn't breathe the same air. Air quality is worse in low-income neighborhoods located near industrial areas and major roadways.

CDPH Air Quality and Health Report

put in place in Chicago that specifically address the impacts of larger scale recycling facilities. The rules impose extensive requirements, including: air impact study and continuous air monitoring, real-time notification to CDPH of air monitor exceedances, noise impact assessment and monitoring, and more stringent record-keeping requirements. The rules also prohibit dust from leaving the site and include many requirements to minimize and control dust and pollution, such as submission of a fugitive dust plan, requirements to pave surfaces, regular street sweeping, visible dust opacity monitoring, height limits on stockpiles, thermal camera hotspot monitoring of stockpiles, development of a stormwater pollution prevention plan for facilities that discharge to storm sewers or that are near the river, and full enclosure of shredding equipment and waste. Most of these rules apply to all recyclers going forward, including those with existing permits when they apply for permit renewals.

In recent years, CDPH and the City have additionally:

- ▶ Issued **Rules for Control of Emissions from Handling and Storing Bulk Materials** that require continuous particulate matter and meteorological monitoring at facilities that process, handle, transfer, load, unload, stockpile, or store bulk solid materials. Any manganese-bearing bulk material facilities that do not enclose material must install and operate a filter-based sampler that measures ambient metals.
- ▶ Increased **environmental fines** to address more serious issues related to violations of air pollution, fugitive dust and demolition ordinances.
- ▶ Drafted **rock crusher rules** to require enhanced environmental controls. We expect to promulgate the rules later this year.
- ▶ As above, passed the **Air Quality and Zoning ordinance**, which requires industrial zoning applicants to submit an air quality impact study and get a written recommendation from CDPH and the Chicago Department of Transportation (CDOT) as a condition for site plan approval.

HEALTH IMPACT ASSESSMENT PROCESS SUMMARY

A health impact assessment (HIA) is a practice that aims to increase considerations of health and equity in decision making. HIAs use a range of data sources, methods, and stakeholder input to increase understanding of how a proposed policy, plan, or project will impact the health of a population. Once the potential health impacts are assessed, an HIA makes recommendations to maximize health benefits and mitigate health threats.¹

Considerable diversity exists in the practice and products of HIA. While an HIA must meet certain minimum elements described in the [Minimum Elements and Practice Standards for Health Impact Assessment](#), the specific application varies based on the timeline, decision context, available resources, and expertise.² This summary of the RMG/Southside Recycling HIA follows the standard six-step process of health impact assessment methodology. Steps include (1) screening, (2) scoping, (3) assessment, (4) recommendations, (5) reporting and (6) monitoring.

- ▶ For a description of how our HIA meets the [Minimum Elements and Practice Standards for Health Impact](#), see our HIA Process Evaluation (Appendix A)



step 1 SCREENING: Determine the need and value of an HIA for the decision-making process.

The U.S. EPA recommended an HIA as a process to inform CDPH's decision on the Large Recycling Facility permit application. After considering key screening questions, CDPH determined that an HIA would provide necessary additional insight into the health equity impacts of the RMG/Southside Recycling proposal.

step 2 SCOPING: Determine which health impacts to evaluate, methods for analysis, and priority populations.

CDPH solicited broad input on the RMG/Southside Recycling permit. Through public town halls, an extended public comment period, and daily media monitoring, we received insight from thousands of community members, local organizations, environmental advocacy groups, public health professionals, and other stakeholders to help us understand the impacts – both positive and negative – of greatest interest. CDPH used this feedback to establish the HIA scope, which we validated through additional engagement meetings during the HIA process. The U.S. EPA provided guidance on methods for analysis.

step 3 ASSESSMENT: Gather existing conditions data and evaluate potential health impacts.

CDPH conducted a mixed-methods assessment to understand existing conditions and potential environmental, health, and social/quality of life impacts on the Southeast side. We reviewed literature to help us analyze the environmental, health, and quality of life impacts of industrial facilities. We received input directly from community residents through small-group feedback sessions and a survey conducted as part of the HIA process. The U.S. EPA, Agency for Toxic Substances and Disease Registry (ATSDR), and CDPH's environmental consultant provided new analysis, sampling, and modeling to help us quantify current exposures and associated health risks, as well as the potential impacts of the proposed Southside Recycling operations.

step 4 RECOMMENDATIONS: Make recommendations to mitigate negative impacts and maximize positive impacts.

CDPH reviewed best and promising practices from around the country and also sought input from stakeholders on policy or process reforms that would advance racial and health equity and environmental justice. Community members offered their recommendations through small-group feedback sessions and a survey.

step 5 REPORTING: Develop a summary report to communicate findings and recommendations.

CDPH has made our materials associated with the HIA process – including the permit application, public comments, HIA meeting documentation, and underlying data – publicly available on our [website](#). With this report, CDPH is sharing our analysis, interpretation, and recommendations.

step 6 MONITORING: Evaluate the effects of the HIA on the decision, implementation of the project, as well as community health effects.

CDPH is committed to applying the findings of the HIA to the ultimate RMG/Southside Recycling permit decision, as well as tracking the effects of this decision on the community. Our HIA includes a monitoring plan.

SCREENING & SCOPING

SCREENING

Screening was conducted by CDPH and U.S. EPA and was informed by discussions and input from environmental organizations, community groups and residents through town hall meetings held in July and December 2020 and written comments as part of the permitting process. The following factors supported the use of HIA for this decision-making process:

- The potential to explicitly consider environmental justice and health equity in the review of this permitting decision;
- The opportunity to comprehensively review pertinent data not limited to just environmental impacts of the permitted facility, but existing and potential environmental, social and health impacts;
- The support of U.S. EPA;
- CDPH authority to review applications to determine whether or not to grant permits, request additional information, and recommend special conditions or mitigation strategies in the event a permit is granted; and
- The opportunity to highlight recommendations for broader policy and process change and to discuss these potential strategies with community partners.

SCOPING

Scoping was conducted by CDPH and informed by guidance from the U.S. EPA, literature review, as well as discussions and input from environmental organizations, community groups and residents through community town hall meetings, review of written comments submitted as part of the permitting process, and public engagement sessions as part of the HIA process.

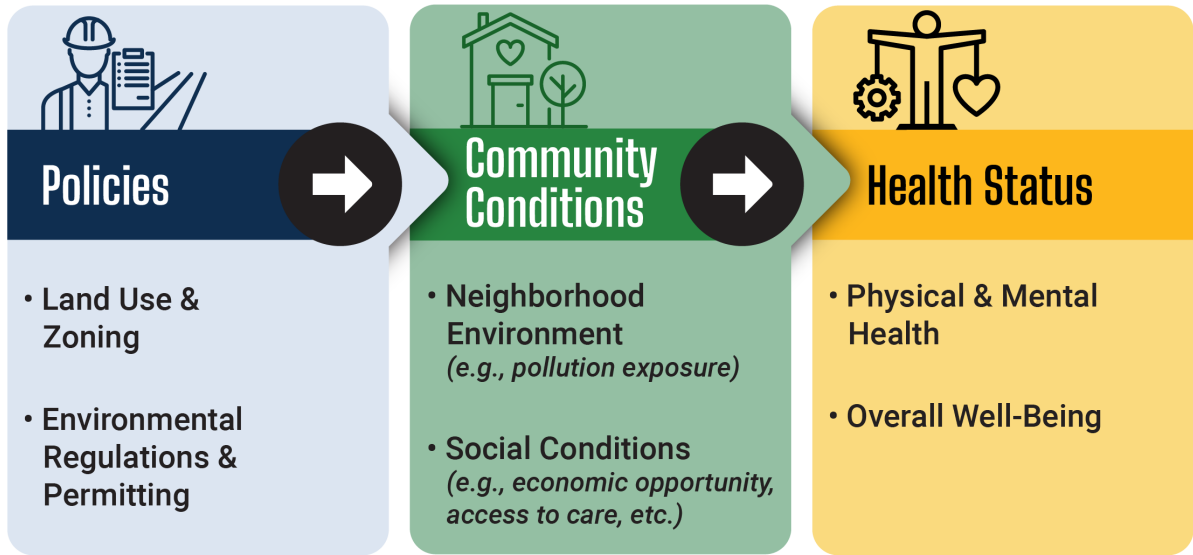
CONCEPTUAL FRAMEWORK, RESEARCH QUESTIONS, AND PATHWAY DIAGRAM

Assessing health impacts through a racial and health equity and environmental justice perspective requires moving beyond traditional risk assessment models that focus primarily on exposure to chemicals and their associated health effects. We must expand to consider how structural and social determinants of health – the conditions in which people are born, grow, live, work, and age – together with environmental pollution contribute to inequities in health and well-being. Indeed, the U.S. EPA has established that research is required to understand the extent to which these factors contribute to disproportionate risk and health inequities in overburdened communities, noting that this understanding of cumulative exposures must ultimately guide informed and effective regulatory and community-based decisions and interventions.³

“We will continue to advocate for our safety and wellbeing and hope you can join us by protecting our quality of life. Imagine your company being located where you live; have that same level of concern for our community.”



In the absence of existing practice standards for applying cumulative impact assessment, CDPH was compelled to use the best available evidence, supplementing it with theory and promising practices. For the purposes of this HIA, we developed a conceptual framework for examining how industrial development affects conditions on the Southeast side, which in turn contribute to residents' health status.



Ecosocial Theory and the concept of embodiment helps us connect environmental exposures and outcomes. Because people incorporate biologically the conditions in which they live - history and context matter. We know that systemic racism permeates the systems and policies that shape community conditions, driving inequities and producing the lived realities of embodied (in)justice.^{4,5} Similarly, the concept of weathering helps us understand the cumulative biological impact being chronically exposed to, and having to cope with, socially structured stressors.⁶

Because racial inequities can be perpetuated through policies like zoning and permitting, CDPH incorporated theory and elements from race equity impact assessment within this HIA. This approach is intended to broaden understanding of how structural and social determinants contribute to disproportionate risk and must be considered within an assessment of cumulative impacts of this permitting decision on already overburdened communities.

Tools such as race equity impact assessments (REIA), can help us unpack these connections between systemic racism, social determinants, and health inequities, and integrate explicit consideration of racial equity into decision-making.⁷ One of the defining elements of REIA practice is asking who benefits and who is burdened, along with identifying strategies to mitigate unintended consequences and advance racial equity.

“ Approving Gill’s permit will place another source of environmental pollutants in a mostly Latinx and Black community already burdened by serious health threats...It continues an unjust pattern of environmental racism and undermines our future aspirations for economically and environmentally sound planning across Chicago. ”

Metropolitan Planning Council

Therefore, in scoping our HIA, we developed research questions that blend traditional environmental and health risk assessment with emerging cumulative impact analysis and best and promising practices in racial equity impact assessment. This approach allowed us to take a holistic view of potential impacts and to identify how the permit decision would either reduce, maintain, or increase racial equity. Our research questions were:

1. *What are the current community conditions on the Southeast side?*
2. *What are the potential impacts (both positive and negative) of the proposed Southside Recycling operations for Southeast side residents?*
3. *Who would benefit and who would be burdened by a decision to grant the permit?*
4. *How could we minimize burdens and maximize benefits?*
5. *What did we learn through this process about ways to improve City and other policies and practices to promote health and racial equity?*



For more information about the resources we reviewed to develop our conceptual framework, see our Literature Review (Appendix B).

POTENTIAL IMPACTS

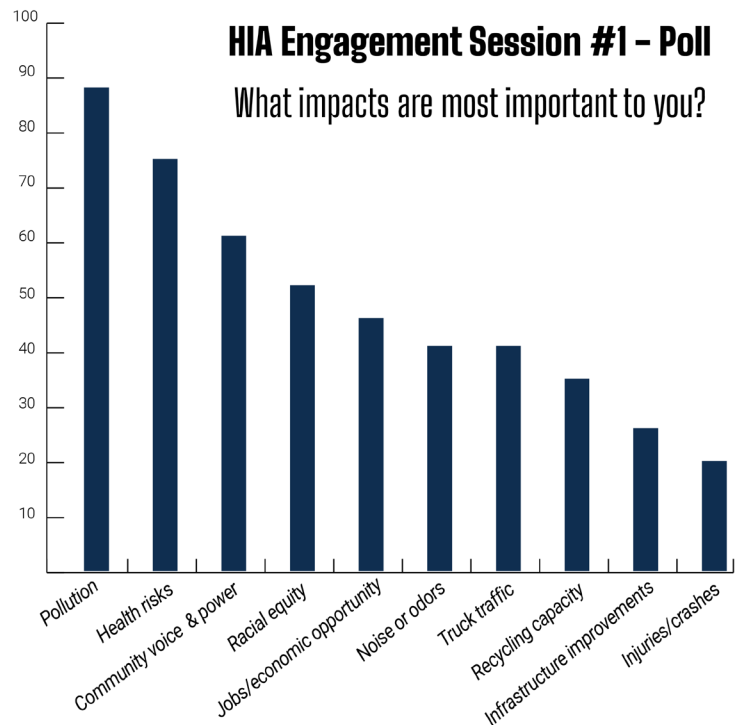
Within this framework, we examined issues and indicators that were of greatest interest to the community, as identified from public comments and direct input during the HIA process. Community town hall meetings were held in July and December 2020 and HIA engagement sessions were held in November and December 2021. There were also open public comment opportunities on both the Rules for Large Recycling Facilities and the RMG/Southside Recycling permit application. CDPH received over **4,000 written comments** on the permit application. Some of these engagement opportunities preceded the start of the HIA process, but nonetheless yielded invaluable input on community concerns.

“As a business owner myself in the 10th Ward, I would question why a city that is losing revenue and population daily would not be supporting a local business that has been in this community for over 29 years, they provide a living wage that feeds and supports local families and children.”



CDPH reviewed the extensive comments on the permit application submitted in writing and through town hall meetings. The themes of potential benefits and burdens that were raised by stakeholders during the permitting process were:

- racial equity (focusing on the relocation from a predominantly white, high-income community to a predominantly Latinx, lower income community)
- safety
- air and water pollution – and mitigation of environmental impacts
- infrastructure changes
- truck traffic
- quality of life (e.g., noise, odors)
- job creation
- recycling capacity



CDPH used these inputs to draft an initial pathway diagram, which we presented during the first HIA public engagement session held on November 4, 2021. At that time, CDPH polled participants about the impacts they were most concerned about. The choices were drawn from the benefits and burdens already identified through comments. Participants could select all that applied. By far the most selected responses were air pollution and health impacts with 75% and 65% of respondents selecting those options, respectively. The other top responses were racial equity (53%), community voice and power (45%) and jobs and economic opportunity (40%).

HIA Engagement Session #2 – Small Group Discussion Notes

Benefits?

“Recycling keeps consumers’ scrap out of the landfill, supports other companies and vendors.”

“Employed hundreds of people over the years. Around 80% minority. Operation has been compliant. Good paying jobs with benefits.”

“Potential benefit by not having abandoned property, which attracts fly dumpers.”

Burdens?

“The facility is one mile from high school and elementary school, exposing students and teachers, who deserve to breathe clean air and not fumes.”

“Having the facility here takes away the opportunity to use this land for natural space.”

“We do not want to experience the clouds of metal dust.”

“Cumulative impact of all industries should be considered. On top of fumes from vehicles and other industry, City should look at cumulative impact on air.”

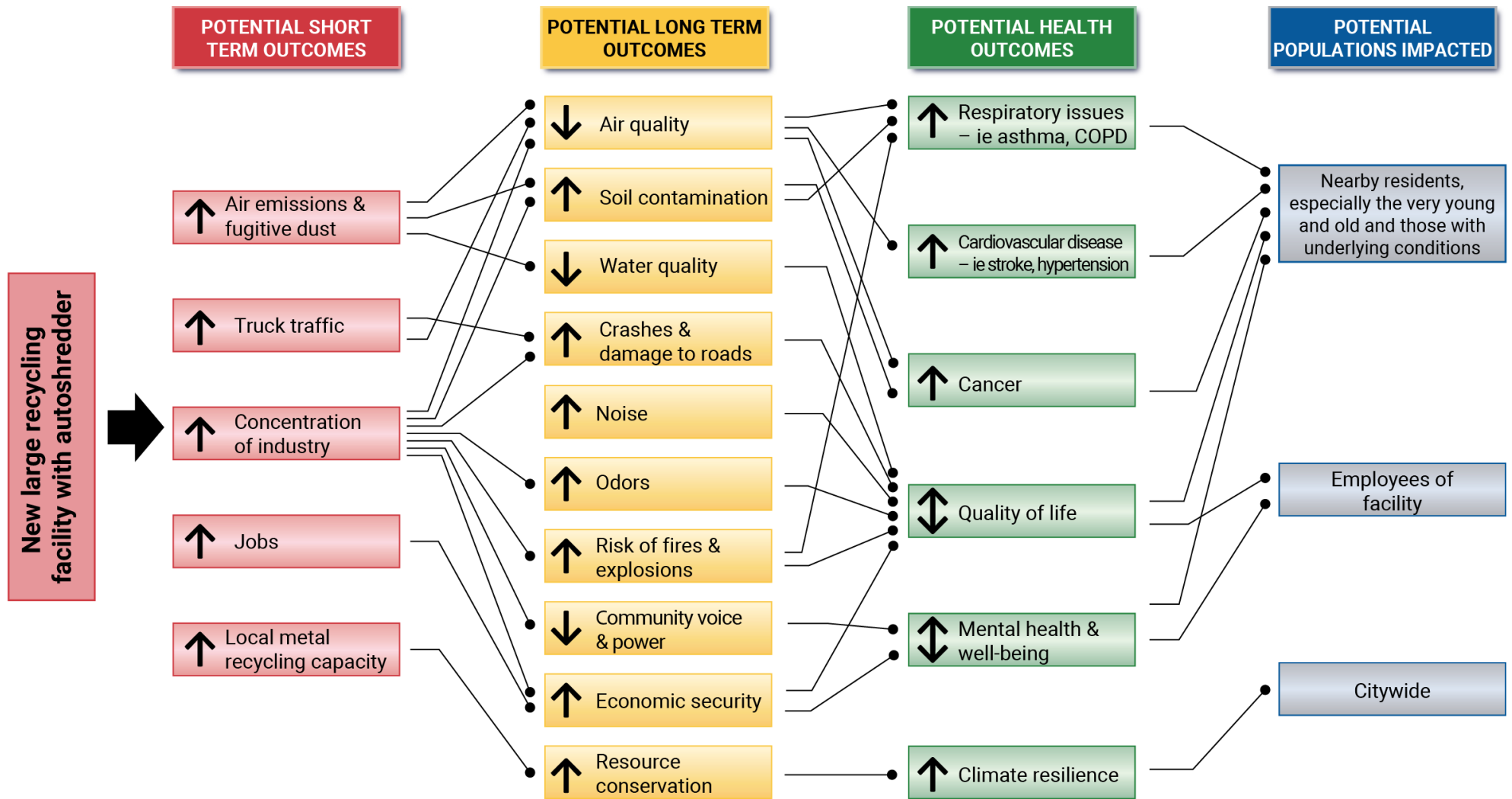
Lived Experience?

“This is a community that has suffered too much from burdens of pollution, lack of investment, lack of representation. This is going to further harm people.”

“We need to move in a new direction. The SE side does not have to continue to be home to dirty industry.”

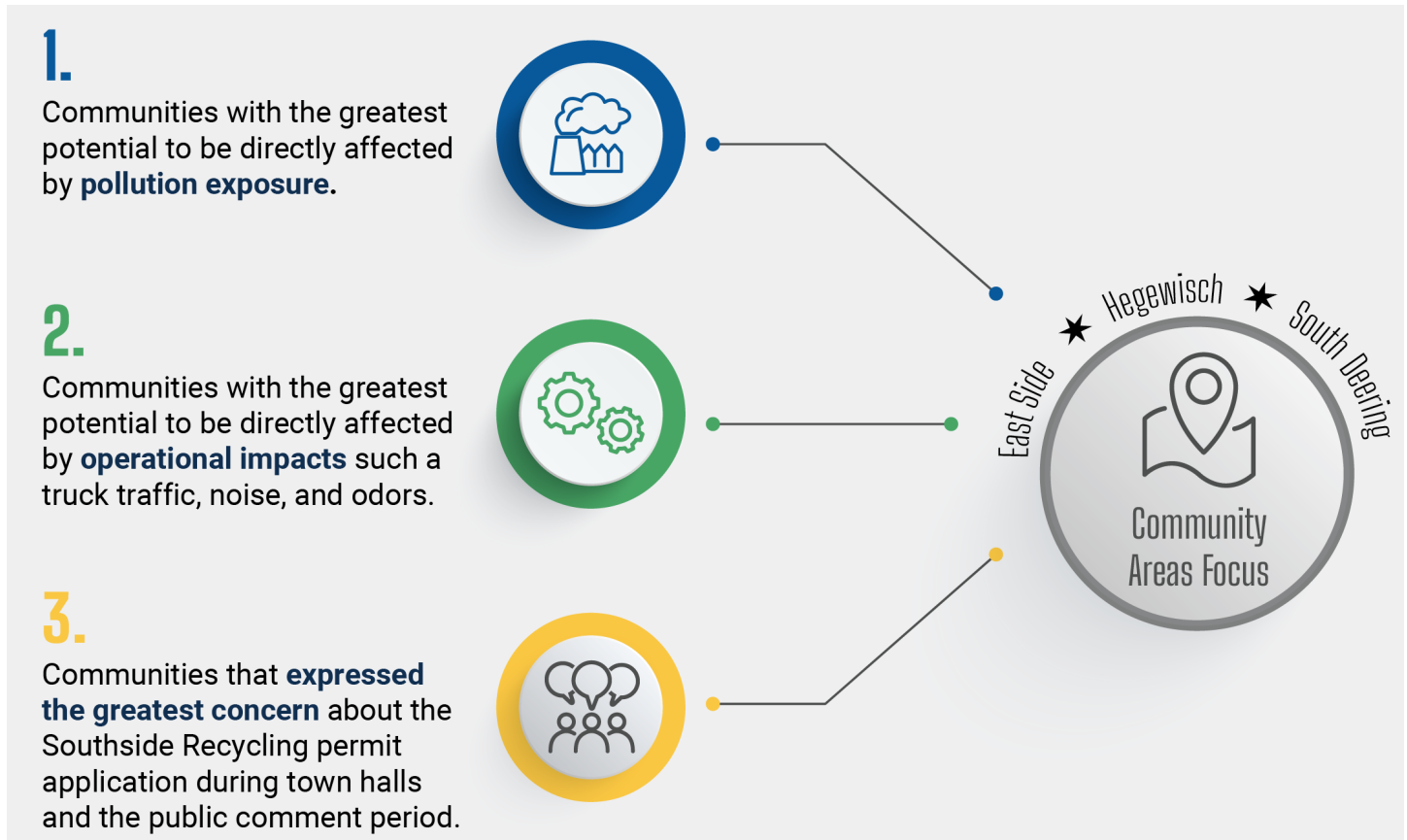
“RMG purchased the old Republic Steel property 20+ years ago and employed over 200 people. Everything is starting to get developed and we are poised for a great comeback.”

Following the meeting, CDPH finalized the Pathway Diagram, as shown below.



CDPH then used the Pathway Diagram to consider which communities would be most affected by the impacts to be assessed with this HIA. CDPH considered three factors to define a geographic scope.

Geographic Scope Factors



Ultimately, we determined to focus our HIA on the community areas of **East Side, Hegewisch, and South Deering**, which are geographically proximate to the Southside Recycling location. Within that area, we were attentive to populations that are most vulnerable to pollution exposure, including the young and old as well as people with underlying health conditions like heart and lung disease.

! For a full discussion of how CDPH used community input to inform the HIA scope, see our Community Input Summary (Appendix C).

The work of Healthy Chicago 2025 requires a new approach, both to the process for how we make change and the values that guide our actions. This is how we'll ensure across all our priority areas that Chicagoans – especially Black and Latinx – have voice and choice in decisions that affect them and that disinvested communities receive equitable funding and support.

ASSESSMENT

METHODOLOGY

Based on this framework, CDPH applied a mixed-methods assessment approach to evaluate the current conditions and potential impacts – both positive and negative – of the proposed RMG/Southside Recycling facility. Data sources for this Assessment included the following:

● Permit Application

The [Southside Recycling permit application](#) (as resubmitted to CDPH on January 13, 2021, following CDPH's deficiency letter) and information provided to CDPH in response to our subsequent [information request](#). This includes modeling, mitigation plans, a traffic study, and the original zoning application, among other materials.

● Community Input Summary

CDPH analyzed community input provided through two town halls, [4,000+ public comments](#), daily mainstream and social media monitoring, and facilitated small group discussions and surveys conducted during HIA public engagement sessions. See Appendix C. This input was used for both Scoping (as described above) and in the Assessment.

● Existing Conditions Summary

To characterize current conditions on the Southeast side, CDPH analyzed quantitative data from various public health data sources, including but not limited to the American Community Survey (US Census Bureau); EJSCREEN (US EPA); PLACES (CDC); Illinois State Cancer Registry, Hospital Discharge Data, Birth Certificate Data, Death Certificate Data (IDPH); Healthy Chicago Survey (CDPH); and Land Use Inventory (CMAP). These data are presented in Appendix D. CDPH also referenced data provided in the U.S. EPA's [Southeast Chicago Ambient Air Quality Analysis](#), the [Air Quality and Health Report](#), and [ATSDR Health Consultation](#) to characterize current conditions on the Southeast side.

● Environmental and Health Risk Assessment

CDPH and its environmental consultant, with direction from EPA, prepared a comprehensive inventory of emission sources, calculated potential emissions, modeled air dispersion and deposition of contaminants, and conducted on-site soil sampling, then used this information as inputs for a risk model. These data allowed us to characterize existing site conditions and predict how the proposed Southside Recycling operations – together with current RMG business operations on the property – would affect community health risks. See Appendix E.

● Literature Review

CDPH reviewed relevant literature to help us analyze the environmental, health, and quality of life impacts of industrial facilities. A bibliography of our sources is included as Appendix B.



All supporting documents for our assessments are included in the appendices. These documents provide detail about each assessment's methods, indicators, data sources, and limitations.

FINDINGS

Key findings from our assessment are summarized here by HIA research question.

1

What are the current community and health conditions on the Southeast Side?

For much of the 19th and 20th centuries, the Southeast side of Chicago was an industrial and economic hub for the city of Chicago – driven in part by the steel industry boom during and after World War II. When demand for steel declined and international competition increased in the 1970s and 1980s, steel mills closed and layoffs left the neighborhood more economically depressed. Today, residents of Southeast Chicago remain proud of the community’s industrial and working-class heritage; however, they continue to grapple with a legacy of pollution and social issues that affect neighborhood conditions and resident health.

! For the Existing Conditions Summary, CDPH characterized community conditions on the Southeast side as compared to other areas in the city. We summarize our key findings here, and the full assessment is included as Appendix D.

“ The Calumet Industrial Corridor includes at least 80 heavy manufacturing sites – chemical factories, plastics manufacturers, paint companies, landfills, recycling and waste management plants, railways. **”**
Washington Post, Oct. 22, 2021.

Community Demographics

According to the 2019 5-year American Community Survey estimates, Southeast side residents are predominantly people of color: South Deering – 96%, East Side – 86%, and Hegewisch – 65%. Between 5 and 15 percent of households (South Deering – 10.7%, East Side - 15.2%, Hegewisch – 5.0%) are linguistically isolated, meaning no household members 14 years and older speak English “very well,” compared to the city overall at 8.4%. All three community areas rank as having moderate (Hegewisch – 62%) to high (South Deering – 94%; East Side – 85%) economic hardship, which takes into account factors such as unemployment, age dependency, education, per capita income, crowded housing, and poverty.

Within ½-mile from RMG:

- 1,799 people live in residential areas located downwind
- Population is 71% Hispanic or Latino
- Up to 37% of people speak primarily Spanish
- Sensitive populations include:
 - ▶ Students at Washington High School and Washington Elementary.
 - ▶ Daycare and Head Start Program that cares for infants as young as 6 weeks

(ATSDR, Health Consultation)

Children and older adults are at increased risk of pollution-related health effects. Twenty-seven percent (13,179) of the total population in these community areas is less than 18 years old, while 14% (6,763) are 65 years and older. For comparison, Chicago’s population is 21% under 18 years old and 12% 65 years and older. Southeast side community areas have lost 4% (1,721) of their total population since 2010, according to the 2020 US Census; Chicago had a two percent increase in population during this same time period.

Environmental Conditions

Community conditions on the Southeast side are affected by past and current presence of industry. In 2020, one-third of all air toxic releases in the city of Chicago, more than 300,000 pounds, were released from eight facilities located on the Southeast side, as reported to the US EPA Toxic Release Inventory Program. As of 2015, industrial land use on the Southeast side is 40 to 66% higher than in Chicago overall (CMAP Land Use Inventory). South Deering, East Side and Hegewisch are the top three community areas in 2020 most proximate to Superfund (toxic waste) sites among all Chicago community areas (US EPA EJSCREEN). Median home values on the Southeast side are at least one hundred thousand dollars less than the median home value in Chicago overall (2019 5-year American Community Survey).

'The city of Chicago has long used the Southeast Side and other lower-income communities of color ... as dumping grounds for heavy and dirty industries,' said Nancy Loeb, director of Northwestern University's Environmental Advocacy Center.

Washington Post, Oct. 22, 2021.

The U.S. EPA provided an analysis of ambient air quality for Southeast Chicago. Their study found that, with the exception of ozone, the entire Chicago area is in attainment with the National Ambient Air Quality Standards (NAAQS). Over the past 10 years, concentrations of all pollutants measured at the Washington High School site on the Southeast side have either decreased or remained flat; however, concentrations of coarse particulate matter (PM10) have increased over the past three years. Annual averages of all metals measured at the Washington High School site have also been below relevant standards for the past 10 years. When compared to similar data collected across the Chicago area, Southeast Chicago:

- ranks 6 of 12 for an annual PM2.5 design value;
- is tied for the highest daily PM2.5 design value;
- ranks 2 of 3 for the highest annual average PM10;
- ranks 4 of 10 for annual ozone design value; and
- has a lead design value equivalent to the only other lead site in the Chicago area.

These data generally show that policies and enforcement efforts are improving air quality for the Southeast side, although more work is needed to address pollution – especially particulate matter.

Importantly, the report notes that the EPA recently announced that it is considering whether to strengthen the PM NAAQS.

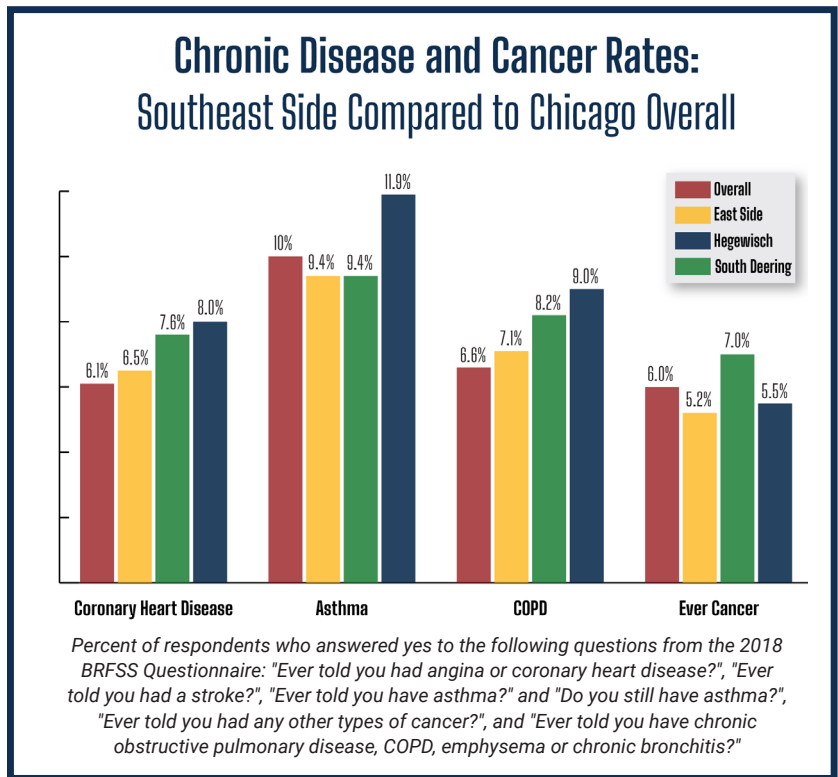
“...[A]vailable scientific evidence and technical information indicate that the current standards may not be adequate to protect public health and welfare. The strong body of scientific evidence shows that long- and short-term exposures to PM2.5 can harm people’s health, leading to heart attacks, asthma attacks, and premature death. Large segments of the U.S. population, including children, people with heart or lung conditions, and people of color, are at risk of health effects from PM2.5.”

Health Conditions & Access to Care

Air pollution contributes to increased risk of chronic disease, which is the leading driver of Chicago’s nine-year life expectancy gap between Black and White residents and decreases in life expectancy in the Latinx population. In 2019, life expectancy for the Southeast side neighborhoods is 74.0 years in South Deering, 77.2 years in Hegewisch and 78.3 years in East Side. Chicago’s overall life expectancy is 77.3 (IDPH Death Certificate Data). All three Southeast side community areas rank in the bottom half of all Chicago’s community areas for life expectancy.

As of 2018, the population on the Southeast side had higher rates of chronic conditions such as coronary heart disease (CHD) and chronic obstructive pulmonary disorder (COPD) in adults than the Chicago average. The Southeast side neighborhoods have higher rates of asthma, COPD and CHD than more than half of all Chicago community areas (CDC PLACES). These findings may underrepresent actual disease prevalence on the Southeast side, as these conditions are self-reported and people may be less commonly diagnosed due to a comparative lack of access to care.

An important measure of quality of life is how people feel about their own physical and mental health. The percentage of adults with poor self-reported physical health in 2018 was 17.8% in South Deering, 14.6% in East Side, and 14.2% in Hegewisch. Furthermore, the percentage of adults with poor self-reported mental health in 2018 was 16.4% in South Deering, 14.3% in East Side, and 13.1% in Hegewisch (CDC PLACES). For both poor physical and mental health, the three Southeast side community areas are above the citywide average.

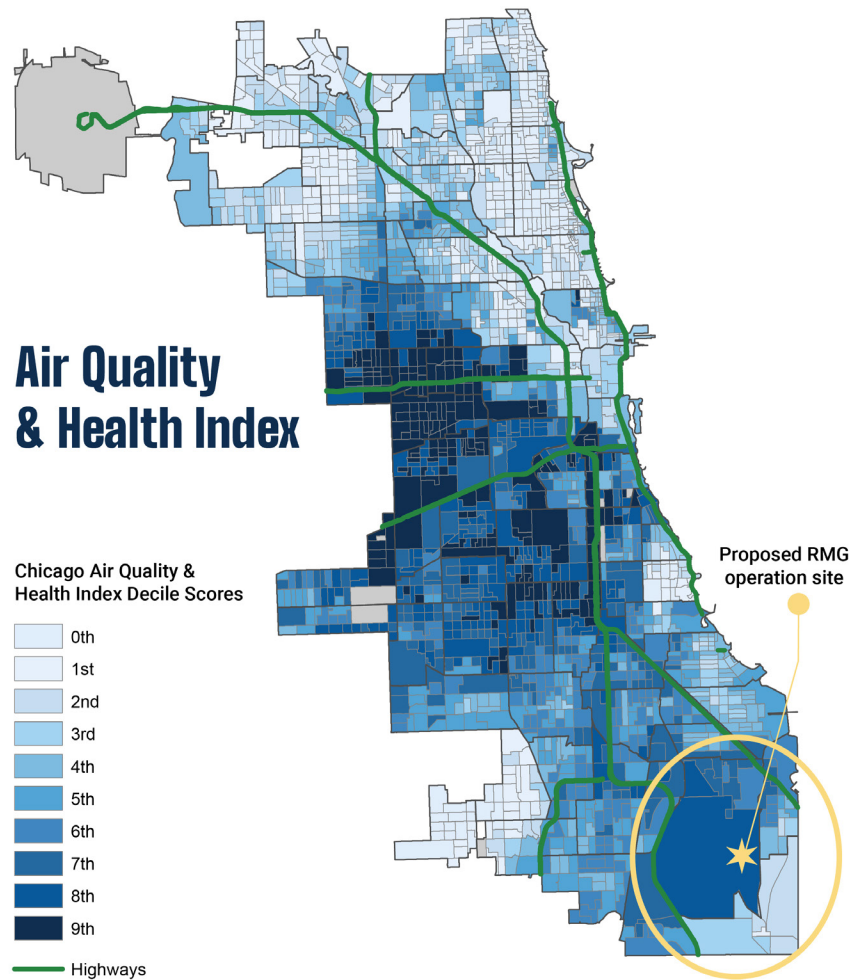


Socioeconomic inequities and insurance status often determine how available health services are and how much they are utilized in a community. Uninsured rates range from 8.1% to 10.4% in neighborhoods on the Southeast side, compared to Chicago’s overall uninsured rate of 9.7%. South Deering, East Side and Hegewisch have higher uninsured rates than more than half of all Chicago community areas (2019 5-year American Community Survey). For 2016-2018, the percentage of Chicago adults who have a primary care provider in the Southeast side was 67.3% in East Side, 69.2% in South Deering, and 78.8% in Hegewisch. For comparison, Chicago overall is 80.5%. Correspondingly, the Southeast side is a designated Health Professional Shortage Area with only two community health centers (2022 US HRSA).

“Community members living with environmental contamination may experience chronic stress, which can be compounded by feeling dismissed, powerless, unheard, or unsupported. In a community like southeast Chicago, stress is a normal reaction to environmental contamination; however, chronic stress can pose physiological health risks on top of the health risks associated with exposure to contaminants.” (ATSDR, Health Consultation).

Overall Community Vulnerability

CDPH sought to understand, overall, how vulnerable Southeast side community members are to negative health effects from pollution exposure, particularly relative to other areas of Chicago, based on underlying health and social conditions. This is a critical part of an environmental justice and racial equity analysis. Based on the [Air Quality and Health index](#), certain Census block groups in East Side and Hegewisch rank among the highest in Chicago for vulnerability to air pollution.

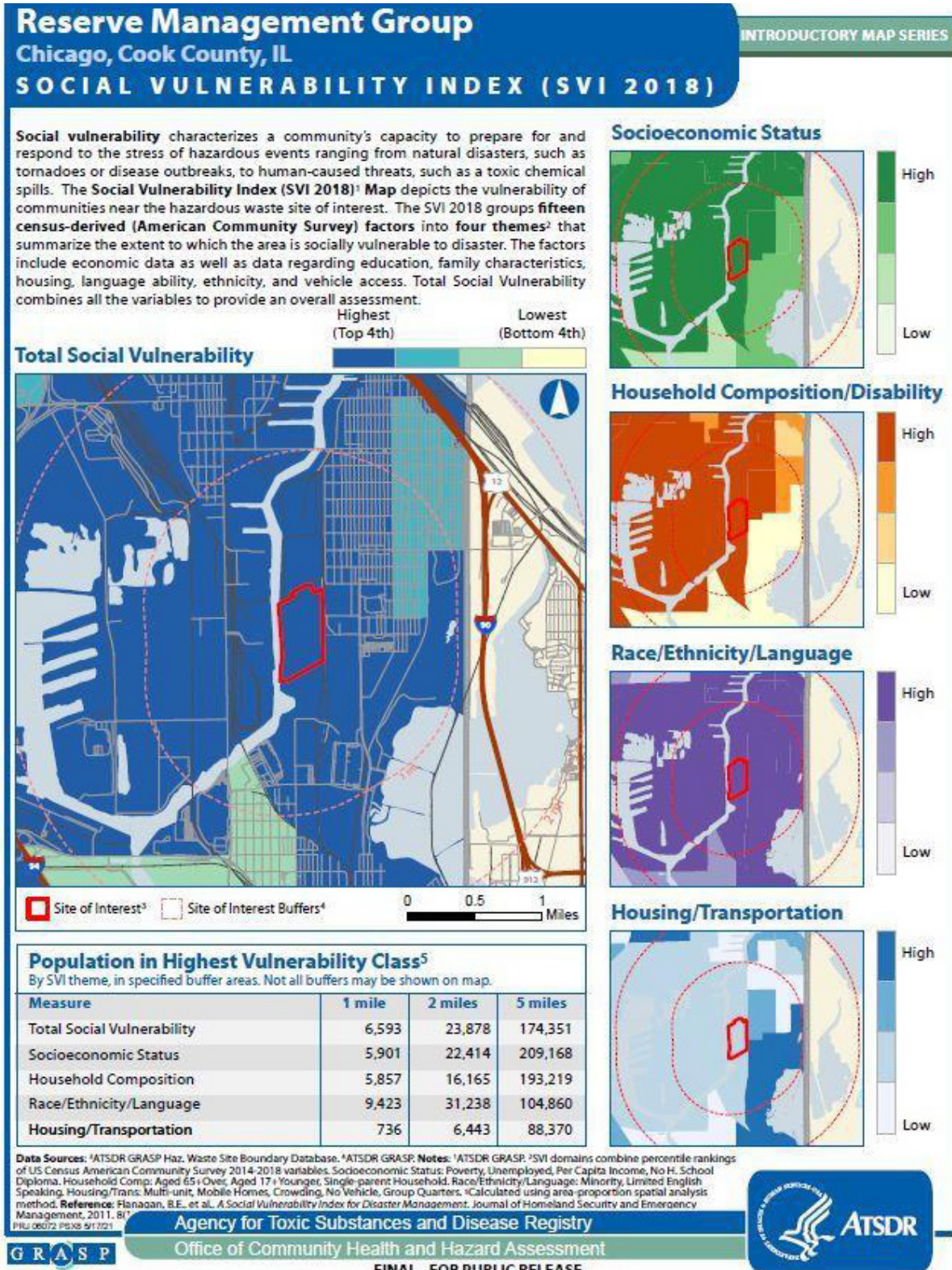


The U.S. EPA reached a similar conclusion about community vulnerability based on their EJSCREEN, a tool that provides a nationally consistent dataset and approach for combining environmental and demographic indicators.

The EJ Index for all eleven EJSCREEN indicators in the three-mile area around the proposed RMG site exceeds the 80th percentile in the State of Illinois, including indices for PM2.5, ozone, diesel PM, air toxics cancer risk, respiratory hazard, lead paint, and Superfund proximity. The population of the people who live in the area around the proposed RMG plant is disproportionately low income, people of color, and includes persons with limited English proficiency and less than high school education. The proposed RMG site is in an area that is already heavily populated by industrial facilities and is in close proximity to residential housing and community centers. (Southeast Chicago Ambient Air Quality Analysis)

Additionally, the Agency for Toxic Substances and Disease Registry (ATSDR), which is a federal public health agency overseen by the director of the U.S. Centers for Disease Control and Prevention (CDC), conducted a Health Consultation to analyze possible environmental exposures from past and current recycling activities at RMG and other industrial sources within one mile of the site.

ATSDR created social vulnerability index (SVI) maps to characterize the community. The SVI indicates that the community adjacent to RMG is in the top quartile for vulnerability.



Source: ATSDR, Health Consultation

ATSDR also reached the following conclusions about the health impacts of particulate matter and metals in the air on the Southeast side⁸:

Conclusion 1: Based on recent air monitoring data (2016-2020), *breathing PM10 and PM2.5 could be harmful for highly sensitive people*, especially if they live downwind from RMG and other industrial and commercial sites. Highly sensitive populations are people who have pre-existing heart and lung conditions like asthma, heart disease, or chronic obstructive pulmonary disease (COPD). Highly sensitive individuals exposed to PM over short periods of time (24-hours) and long periods of time (several months) are susceptible to respiratory symptoms and an exacerbation of lung and heart disease. ATSDR does not expect people without these pre-existing conditions living near RMG to develop health problems from breathing PM in the air.

Conclusion 2: Based on recent air monitoring (2015-2020) and historic data (1982-2015), people living downwind of RMG (now or in the past) *are not likely to develop health problems from breathing metals in the air*. The metals we looked at include arsenic, cadmium, chromium, lead, manganese, and nickel. It is not likely that people will experience an increased risk of cancer or other health problems from breathing the metals.

This report did not address any potential health effects of soil pollution outside of the RMG property, as sampling has not previously been conducted in the community.

2

What are the potential impacts of the proposed Southside Recycling operations for Southeast side residents?

To answer this question, CDPH focused on the impacts of greatest interest to community members. As described in the Scoping section, we identified themes through a qualitative analysis of public comments elicited during the permitting process as well as polling and small group discussion during the HIA engagement sessions, and ultimately developed a Pathway Diagram to represent the substantive issues that were most frequently mentioned. We then categorized impacts from the Pathway Diagram into three domains: Quality of Life, Environment, and Health.









For each potential impact, we reviewed existing data sources and determined whether additional information was needed to assess how the proposed operation of Southside Recycling would affect community members. We analyzed the magnitude of each impact and rated its direction, sorting these into categories: negative impact, potential negative impact, maintain status quo, potential positive impact, or positive impact. We then identified who would experience the impacts (i.e. who benefits or is burdened). **We note that, in an already overburdened community, even to maintain the status quo is to perpetuate existing health and racial inequities.**

“ I am a Social Science teacher at Washington H.S., which is located less than HALF a mile from the proposed facility. I worry about the detrimental effects on my students due to the increased level of particulate matter that would be released into the air, not to mention increased diesel truck traffic and noise. ”

- Donald Z. Davis











Our findings are summarized below, with additional detail provided in the relevant appendices.

Quality of Life Impacts

	Assessment Findings	Impact Rating	Who is Impacted	Data Sources
 Traffic & street conditions	<p>During weekday morning peak hours, there would be 70 new trips (personal vehicles and trucks); at weekday evening peak hours, there would be 30 new trips. The traffic study shows that this would maintain an adequate level of service at nearby intersections.</p>		Southeast side residents	<ul style="list-style-type: none"> Permit Application
 Economic development & job opportunity	<p>Southside Recycling would employ in excess of 100 people (35 jobs currently unfilled). The company will prioritize hiring from the community and continue to support small recyclers, many of which are led by people of color.</p>		Company & employees	<ul style="list-style-type: none"> Permit Application Company self-report
 Noise	<p>Modeling indicates that the operations will not cause noise above standards outside of the manufacturing district boundary but did not account for noise from any potential explosions.</p>		Southeast side residents	<ul style="list-style-type: none"> Permit Application
 Concentration of industry	<p>Southside Recycling would bring a new metal recycling facility to the area. This would continue a trend of industrial development rather than shift to a different type of land use as proposed by some community members.</p>		Southeast side residents	<ul style="list-style-type: none"> Community Input Summary (Appendix D)














Environmental Impacts

	Assessment Findings	Impact Rating	Who is Impacted	Data Sources
 Recycling Capacity	Under its current proposal, Southside Recycling has the capacity to process up to 500 tons per hour of obsolete metal products.		Citywide	<ul style="list-style-type: none"> Permit Application
 Explosions/Fires	Explosions/fires are an inherent risk for any metal shredding operation. The permit application includes a Feedstock Management Plan and the RTO system is equipped with controls to prevent explosions. But the risk cannot be reduced to zero.		Southeast side residents	<ul style="list-style-type: none"> Permit Application
 Water Pollution	Industrial facilities on the riverfront pose a risk for pollution. Application includes a Stormwater Pollution Prevention Plan to reduce potential stormwater contamination. Facility treats water before it drains to the City sewers.		Southeast side residents	<ul style="list-style-type: none"> Permit Application Environmental & Health Risk Assessment (Appendix E)
 Soil Pollution	On-site soil sampling identified lead concentrations on the RMG property that exceed the industrial Removal Management Level. This presents a risk to workers as well as the potential for particles to be blown or tracked off the site.		Southeast side residents	<ul style="list-style-type: none"> Environmental & Health Risk Assessment (Appendix E)
 Air Pollution	Emission sources at the site include the stockpiling, loading, and unloading of materials; onsite operations such as the crushing, shredding, screening, cutting scrap metal; and mobile equipment and vehicles. Emissions consist primarily of particulates, volatile organic compounds (VOCs), and other gases such as nitrogen oxides (i.e., NOx). Emissions from the shredder will be treated using various pollution control devices, including an RTO, roll-media filter, and scrubber. Dust controls include watering materials and cleaning pavements with a street-sweeper, dust cannons to suppress airborne dust as well as covered conveyors and dust collection and treatment systems. Even with controls in place, emissions are not entirely prevented.		Southeast side residents	<ul style="list-style-type: none"> Environmental & Health Risk Assessment (Appendix E)

 Positive impact
 Potential Positive impact
 Maintain status quo
 Potential negative impact
 Negative impact

Health Impacts

	Assessment Findings	Impact Rating	Who is Impacted	Data Sources
 Carcinogenic Risks (Cancer)	Human health risk assessment modeling does not indicate an increased risk of cancer due to Southside Recycling and other RMG businesses on the property. South Deering and Hegewisch are in the top half of all Chicago neighborhoods for cancer rates.		Southeast side residents	<ul style="list-style-type: none"> Environmental & Health Risk Assessment (Appendix E)
 Acute & Chronic Risks (Non-cancer)	Human health risk assessment modeling does not indicate an increased risk of adverse health effects (non-cancer acute and chronic risks) due to Southside Recycling and other RMG businesses on the property. The Southeast side community areas are in the top half of all Chicago neighborhoods for current rates of chronic disease (COPD, asthma, heart disease).		Southeast side residents	<ul style="list-style-type: none"> Environmental & Health Risk Assessment (Appendix E)
 Mental Health & Wellbeing	Living near industrial activity negatively impacts mental health. This impact is both direct and mediated by individuals' perceptions of neighborhood disorder and personal powerlessness, and the impact is greater for minorities and the poor than it is for whites and wealthier individuals.		Southeast side residents	<ul style="list-style-type: none"> Community Input Summary (Appendix C) Literature Review (Appendix B)

Positive impact	Potential Positive impact	Maintain status quo	Potential negative impact	Negative impact
				

3

Who would benefit and who would be burdened by a decision to grant the permit?

CDPH asked stakeholders to help answer this question in small group break-out sessions during the second HIA engagement session on December 9, 2021 (Community Input Summary, Appendix C).

When we analyze impact by who experiences benefits or burdens, we find that overwhelmingly, burdens would accrue to residents of the Southeast side community. As described in the existing conditions section, the Southeast side of Chicago is already an overburdened community ranking high for vulnerability to pollution, based on current health, environmental, quality of life and socioeconomic factors.

Conversely, the company and its employees would enjoy the benefits of the increased economic and job opportunity (with a potential for benefits to accrue to residents only if the company hires from within the Southeast side community), while the city overall would benefit from increased metal recycling capacity and reduced waste.

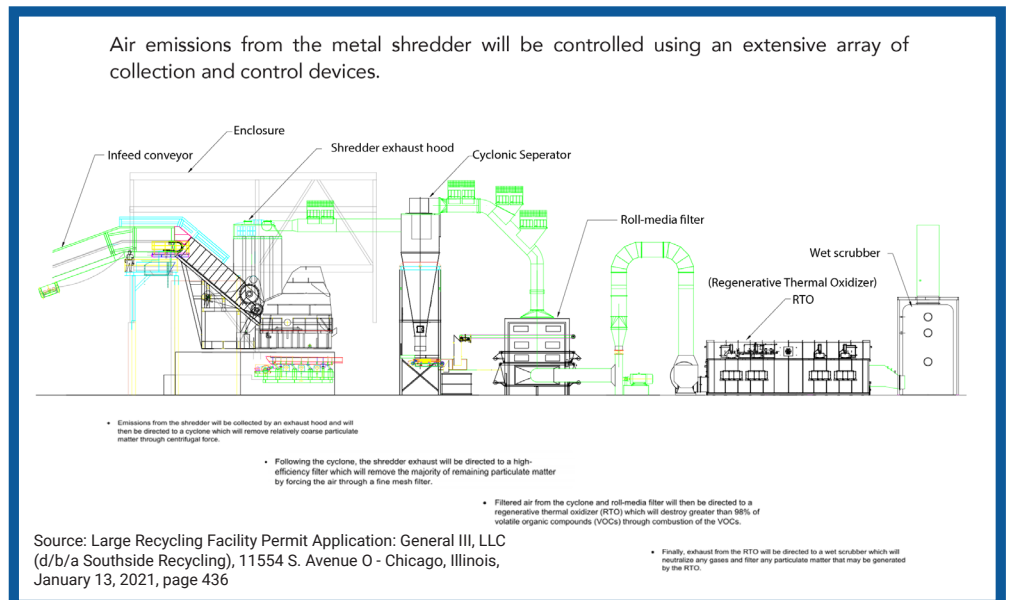
CDPH’s commitment to promoting health and racial equity means that CDPH must carefully consider this analysis of disproportionate burden being placed on an already overburdened community.

4





How could we minimize burdens and maximize benefits?

Southside Recycling’s permit application includes commitments to pollution control equipment and design features that are intended to prevent harmful emissions from the facility and to preserve quality of life for residents. The shredder is located approximately 2,500 feet from the nearest public right of way. The facility would operate with a regenerative thermal oxidizer (RTO), wet scrubber, roll-media filter, and other equipment that capture emissions and prevent combustion. The shredder is enclosed to contain noises and dust, and a wall of shipping containers and more than 200 newly planted trees provide additional buffers for the community.

RMG has paved large sections of its property to reduce dust from on-site vehicle travel and proposed a traffic management plan that will keep trucks from queuing on public roads.



In addition to the measures proposed by RMG, CDPH could impose new requirements in the form of permit conditions to address community burdens. Potential mitigations could include, for example:

			
Pollution	Traffic/Street Conditions	Noise	Explosion/Fires
Potential Mitigations / Permit Conditions			
<ul style="list-style-type: none"> • Conduct daily patrols for auto shredder residue and litter; clean in surrounding community areas • Prohibit torch cutting of metals and accepting any waste, including hazardous waste • Conduct continuous sampling for pollutants • Install, operate, and maintain weather station and particulate matter monitors; notify CDPH of any exceedances within 15 minutes • Treat all discharges to City's sewer system • Prohibit use of detention pond water for dust control 	<ul style="list-style-type: none"> • Improve and make public Burley Avenue between 106th street and 122nd Street to redirect truck traffic from residential and sensitive populations along Avenue O. 	<ul style="list-style-type: none"> • Install, operate, and maintain a noise monitor • Notify CDPH of any and all shredder explosions, including raw sound pressure levels and minimum one-band octaves of the explosion 	<ul style="list-style-type: none"> • Require thermal cameras to monitor material stockpiles for hotspot • Conduct air monitoring and sampling for fires lasting more than one hour • Fire Department dispatch to flag RMG address and ensure prompt response by hazmat team with appropriate air monitoring equipment

These steps could help to offset the most significant environmental, health, and quality of life impacts. However, permit conditions are only effective to the extent that they are implemented as required by RMG – and mitigations would not address community concerns related to the continued concentration of industry in their neighborhoods.

5

What did we learn through this process about ways to improve City and other policies and practices to promote health and racial equity?

As part of the HIA public engagement process, CDPH heard from many stakeholders about the need to improve processes and policies to advance racial and health equity and environmental justice and to better include community voices. Our recommendations incorporate this feedback, and fall into three areas:

1. Increase monitoring, enforcement, and environmental protections for the Southeast side.
2. Embed cumulative impact principles in zoning, permitting, and enforcement and engage the community in decision-making.
3. Expand and enhance use of health and racial equity impact assessments to inform decision-making.

See **RECOMMENDATIONS FOR OTHER POLICY OR PROCESS CHANGE** for more information.

ADDITIONAL ASSESSMENT FINDINGS: COMPLIANCE ISSUES

During the course of this HIA, CDPH collected additional materials – including maps, reports of material receipts and shipments, and site samples – to help us better understand the proposed Southside Recycling facility as it relates to businesses currently operating on the campus. Our review brought to light compliance issues and apparent violations with the potential to adversely affect the environment, health, and quality of life on the Southeast side, including:

COMPLIANCE ISSUE	DESCRIPTION
<p>Exceedances of permitted capacity.</p>	<p>Based on information provided in response to CDPH’s request, it appears that Reserve Marine Terminal (RMT) received more recycling material than was allowed under its permit on multiple occasions between 2018 and 2020. CDPH places caps on material volume both to reduce potential emissions from the recycling process as well as truck traffic to and from the site on a daily basis – which is itself another source of pollution. By exceeding its permitted capacity, the company is effectively circumventing these controls.</p>
<p>Failure to obtain appropriate permits for foundry sand operation.</p>	<p>RMG installed and began operating regulated equipment and regulated areas before applying for or receiving any air pollution control permits for a foundry sand operation. The company also repeatedly represented to CDPH that the operation was conducted indoors; however, CDPH observed that storage of foundry sand and at least one piece of equipment is clearly outdoors. In subsequent investigation, CDPH and the U.S. EPA determined that these foundry sand piles are located in the same area where a recent increase in coarse particulate matter (PM10) has been observed on the Southeast side over the last three years. Beyond this direct impact on local environment, this finding indicates that RMG is not following the rules regarding proper materials storage, which will be an essential component of the Southside Recycling operation.</p>
<p>Failure to control dust.</p>	<p>On June 27, 2019, a CDPH inspector issued a notice of violation to RMT for failure to control dust during barge loading and unloading activities at the site. RMT pled liable to the permit violation at Administrative Hearings on September 5, 2019. Proper dust suppression - including watering, sheltering dust-emitting activities, and enclosing materials that are susceptible to becoming wind-borne - is an essential aspect of pollution control for the proposed Southside Recycling permit.</p>
<p>Failure to notify CDPH of IEPA Notices of Violation.</p>	<p>On December 20, 2019, the Illinois Environmental Protection Agency (IEPA), Bureau of Air, issued South Chicago Property Management, Ltd a Notice of Violation (NOV) for several violations, including RMG’s failure to apply for required permits, failure to pay fees, and failure to submit annual emissions reports to IEPA. RMG did not notify CDPH about these violations as required by its permits.</p>

COMPLIANCE ISSUE	DESCRIPTION
<p>Additional site concerns and lack of cooperation.</p>	<p>RMG has not taken necessary steps to immediately identify, report, and address unsafe site conditions that could affect the environment or health of its workers and the surrounding neighborhood. Further, CDPH has great concerns regarding the company’s behavior and lack of responsiveness throughout the permit review process.</p> <ul style="list-style-type: none"> <p>Soil sampling results. CDPH and its environmental consultant conducted soil sampling to inform the HIA, as well as two other pending permit applications from RMG. Company personnel disrupted the sampling team as they performed their duties with frequent verbal interruptions and harassment. Laboratory analysis of the sample subsequently revealed lead levels that exceeded the Removal Management Level (RML) for industrial soil. These high levels present a risk to workers at the site, as well as to the community due to track out from trucks or from particles that become wind-borne.</p> <p>Building collapse. A large warehouse collapsed on the RMG property in April 2021. RMG did not notify the City until July 2021, at which point CDPH conducted an inspection and confirmed the presence of asbestos-containing material (ACM). CDPH issued RMG a ticket (currently pending at the Department of Administrative Hearings) for failing to properly maintain ACM.</p> <p>Unpermitted recycling activities. In December 2021, CDPH observed recyclable materials consisting of small iron fragments and fines on an unpermitted area of the property. RMG admitted that this material was generated from the breaking and screening of large pieces of scrap metal (iron) at the RMT operation on the northern part of the site and then trucked to the southern part of the property for further processing. However, this activity was not included in any of RMG or RMT’s permit materials.</p> <p>Lack of responsiveness. Throughout the permitting process, RMG delayed or failed to provide requested information, such as emissions calculations and process flow diagrams.</p>

CDPH’s regulations require that we consider a company’s compliance history as part of our review of any recycling facility permit application. RMG’s track record in operating similar facilities within this campus gives CDPH reason to consider the unpredictable risks and hazards associated with large metal recycling more heavily in assessing the likelihood of adverse outcomes for this already overburdened community.

SUMMARY OF KEY FINDINGS

In this section, we provide a summary of overall findings. Our HIA findings indicate that:

- ▶ The Southeast side includes certain areas that are made more vulnerable to pollution than Chicago overall due to underlying health conditions and social factors, which often reflect structural racism and institutional inequities.
- ▶ Current pollution levels may be causing negative health effects for highly sensitive populations.
- ▶ Large metal recycling processes such as those proposed at Southside Recycling pose certain intrinsic uncertainties and unique risks to the environment, health, and quality of life.
- ▶ These risks can only be adequately mitigated by operating in accordance with strict permit conditions, including but not limited to thru-put caps, proper material storage practices, site access for inspections, and timely reporting and management of unsafe conditions.
- ▶ The history of RMG's operation of the site, which has been problematic, does not provide CDPH with confidence that the company will run the site in strict compliance with permit conditions, which CDPH considers essential for avoiding negative impacts on the environment, health, and quality of life for residents of the Southeast side.

Therefore, issuance of the RMG/Southside Recycling permit would exacerbate health inequity.

RECOMMENDATIONS

This HIA has two sets of recommendations; one related to the RMG/Southside Recycling permit decision (the focus of our HIA) and the other related to broader policy and process changes needed to advance health equity outcomes.

- ! The following recommendations are based on HIA findings, including the Community Input Summary (see Appendix C).

RECOMMENDATION FOR THE RMG/SOUTHSIDE RECYCLING PERMIT DECISION

CDPH reviewed the U.S. EPA's environmental justice practice standards, civil rights law, racial equity impact assessment models, and relevant City regulations to identify several factors to aid our recommendation on the RMG recycling permit decision:

Extent of current community burden and vulnerability

As compared to Chicago overall, many Southeast side residents are made more vulnerable to the health effects of pollution based on their health and social status. Recent research shows increased health risks from exposure to even low levels of particulate matter in the air. Prior to the proposed operation of Southside Recycling, ATSDR finds that highly sensitive groups may be harmed by the particulate matter pollution currently caused by RMG and other local industries. Even incremental additional emissions would exacerbate this harm.

Extent of potential benefits to people who live on the Southeast side

The assessment findings indicate that there are two primary benefits of Southside Recycling: the expansion of scrap metal recycling capacity in the city of Chicago as well as continued economic development on the Southeast side. The City of Chicago's [Waste Strategy](#) includes a commitment to reducing residential as well as industrial, commercial, and institutional waste. The presence of Southside Recycling as part of the city's recycling ecosystem would contribute to that goal, thereby benefiting all Chicagoans.

Continued economic development on the Southeast side would contribute to an expanded tax base, additional patronage for area businesses, and job opportunities for up to 35 new employees with the potential to earn head-of-household wages. These benefits accrue to Chicago overall, but also to certain Southeast side community members. RMG has further made or planned site improvements and community investments that benefit its neighbors including an on-site food pantry, trees, and street paving. While the Southside Recycling proposal has received support from certain individuals – including current RMG employees, as well as area businesses – based on the economic opportunity Southside Recycling could represent, other community members objected to a false choice between jobs, economic development, and a healthy neighborhood environment.

Extent of potential negative impacts on environment, health, and quality of life that cannot be adequately addressed through mitigations

Day-to-day environmental, health, and quality of life burdens would be felt most acutely by people of color and those with underlying conditions who live on the Southeast side. Community members would experience the direct impacts of increased pollution exposure, traffic, and associated health effects.

With strong permit conditions in place, our assessment indicates that the magnitude of Southside Recycling's impacts could be reduced in some cases. However, mitigations cannot eliminate certain

inherent risks of large metal recycling processes – for example, explosions due to undetected chemical compounds – that carry potentially severe consequences. They also do not ameliorate the negative effects on mental health and well-being reported by affected community members and borne out by research. Additionally, when the proposed Southside Recycling operation is considered as contributing to the cumulative burden experienced by the surrounding neighborhoods, it has the potential to exacerbate pre-existing environmental, health, and quality of life impacts associated with industrial development on the Southeast side. This is particularly true if RMG continues its pattern of failure to rigorously adhere to permit conditions. Many community members and their allies have protested the operation of Southside Recycling in their neighborhood on this basis.

Actions of the company, including compliance history

During the HIA process, CDPH directly observed or became aware of several instances of RMG’s failure to comply with City regulations and existing permit requirements to the detriment of the surrounding community. Given the additional environmental, health, and quality of life burdens that a large recycling facility could present for the Southeast side, CDPH should only grant a permit if it is confident that RMG would operate Southside Recycling in accordance with strict permit conditions that address these issues. The history of non-compliance exhibited here – even when the company was aware that it was under scrutiny for the HIA – indicates that the company is not currently acting in the best interest of the community and CDPH is not confident that it will do so with respect to Southside Recycling.

PERMIT RECOMMENDATION

As HIA findings indicate that the RMG/Southside Recycling permit would exacerbate health inequity, CDPH concludes that it ***should not grant*** the RMG/Southside Recycling permit.

RECOMMENDATIONS FOR OTHER POLICY OR PROCESS CHANGE

As part of the HIA, CDPH reviewed best and promising practices from around the country and also sought input from stakeholders on policy or process reforms that would advance racial and health equity and environmental justice.

! In our HIA engagement sessions, participants prioritized three areas for action to ensure progress beyond this immediate permitting decision (see Community Input Summary, Appendix C).

1 Increase monitoring, enforcement, and environmental protections for the Southeast side.

Increased monitoring

Community residents and environmental organizations called for improved access to reliable local air quality data. In response, CDPH has already allocated federal recovery funding to expand local air monitoring capabilities across the city - with an emphasis on overburdened communities - over the next two years. Once installed and baselined, data from the monitors will be made publicly available and incorporated into our public health and environmental surveillance and reporting.

Improved enforcement

Since 2014, the U.S. EPA – in cooperation with Illinois EPA and CDPH - has investigated over 75 companies to determine if they are in compliance with the Clean Air Act. Stringent regulation and targeted enforcement have already led several Southeast side facilities to make improvements or cease operations entirely; for instance, KCBX Terminals halted operations at its North Terminal, S.H. Bell implemented facility improvements, and Watco Terminal and Port Services no longer receive manganese in bulk handling operations (U.S. EPA Southeast side Ambient Air Quality Analysis). Our agencies will continue to collaborate on enforcement efforts at facilities on the Southeast side and throughout the city to ensure they are in compliance and to protect the community from adverse impacts.

CDPH has also already begun making internal process changes to focus more enforcement efforts on higher risk air pollution-related activities, with a goal of ensuring our own limited inspection and enforcement resources are focused where they are most needed. This work ranges from assessing the appropriate inspection frequency of permitted facilities to using community vulnerability data to prioritize inspection activities. We are working now, for example, on updating our inspector procedures and training to include additional guidance on prioritizing inspections, issuing warnings, recording complaint inspections and following up on violations.

Enhanced environmental protections.

CDPH intends to publish new, strong rules for facilities that process demolition and construction debris (known as “rock crushers”), air permit facilities, and general recycling facilities to ensure that facilities with the potential to impact surrounding communities are subject to monitoring, reporting and control requirements.

CDPH will continue to work with agencies such as IEPA, US EPA and ATSDR on strengthening environmental protections and ensuring that industries are held accountable, potentially including additional monitoring and sampling throughout the community.

2 Embed cumulative impact principles in zoning, permitting, and enforcement and engage the community in decision-making.

Zoning and land use policies, including recent reforms to update the Industrial Corridor system and trends in deindustrialization, play a role in the concentration of industry in parts of the city. The City's Air Quality Zoning ordinance takes a step in the right direction to ensure that public health is considered early in the zoning process. However, feedback from community engagement suggested that additional reforms to permitting and zoning processes are needed to explicitly include considerations of cumulative impact, improve transparency, and involve the community in decision-making.

Addressing cumulative impacts requires an understanding of the multiple sources of pollution in a community, their combined health risks, and the underlying health and social vulnerabilities of area residents. CDPH has dedicated federal recovery funding to conduct a foundational cumulative impact assessment and refine it with new data over the next two to three years. As CDPH and partners develop best practices around cumulative impact, these findings can be used to develop a policy, in collaboration with other City departments and community stakeholders, that formally incorporates consideration of cumulative impacts into decision-making and ensures community voice in the process. The Mayor has already directed the City's Chief Sustainability Officer and CDPH to propose a new cumulative impact ordinance for consideration by the City Council.

In this effort, CDPH will look to national examples of cumulative impact policies affecting land use and permitting. Newark, New Jersey, in particular, provides a template for consideration of cumulative impacts in the zoning process. Newark's Environmental Justice and Cumulative Impacts Ordinance, passed in 2016, requires applicants for zoning approval of commercial or industrial uses to complete an environmental checklist with details about potential impacts to air, water, truck traffic, nuisances and more. Applicants must also include information about existing environmental and social conditions where they propose to locate based on the Environmental Resources Inventory - a detailed, citywide baseline assessment developed by sustainability and planning staff. The information about current conditions and added burden is then provided to the Zoning or Planning Board for consideration in their final decision on land use approval.

Cumulative impact policies generally share features of robust community engagement through public notification, public meetings and extended public comment periods. Also, their development involves community voice from the outset. Based on feedback gleaned through this HIA, any proposed framework for considering cumulative impacts in the zoning process should be developed with stakeholders and incorporate similar engagement elements. We look forward to working with community and environmental groups and other City departments on our local approach, and with the Illinois and U.S. EPA as those agencies develop new policies.

Black, Latino and American Indian communities across the country continue to feel targeted and expected to carry a heavier burden no matter the consequences. In North Charleston, S.C., hundreds of people in a mostly Black community could lose their homes if a freeway interchange is expanded. In Dallas, a mountain of toxic waste rose illegally on the edge of a Black neighborhood and took extraordinary pressure to get removed.

Washington Post, Oct. 22, 2021.

3 Expand and enhance use of health and racial equity impact assessments to inform decision-making.

During public engagement sessions and in written comments, stakeholders provided valuable input on ways to conduct HIAs in alignment with Healthy Chicago 2025's guiding principles. In particular, we heard feedback about the need to co-develop the HIA scope, methods, and process in close collaboration with the people who are most affected by the decision under consideration.

- While the approach applied to this RMG/Southside recycling HIA met the minimum elements required for HIAs outlined in the [Minimum Elements and Practice Standards](#), we reflect on opportunities for improvement within our process evaluation to inform future efforts (see HIA Process Evaluation, Appendix A).

CDPH and the City of Chicago are committed to institutionalizing the use of assessment tools like health impact assessments and race equity impact assessments (REIA) as part of everyday practice. In 2016, Chicago, with CDPH support, adopted a Health in All Policies resolution that called upon all City departments and sister agencies to consider ways to improve health through their work – including by conducting health impact assessments. We have taken steps in that direction by incorporating health and race equity impact assessment (HREIA) approaches into the We Will Chicago citywide planning process, Equitable Transit-Oriented Development (ETOD) policy plan implementation, and racial equity assessment of the City's Qualified Allocation Plan. CDPH recently established a new Office of Health Equity in All Policies, which will provide tools and technical assistance to support CDPH and other City departments in leading HREIAs on high-impact policies and projects.

MONITORING

CDPH's intention is that this HIA will be used to guide action both on the RMG/Southside Recycling permit, as well as on broader policy and process change to promote health and racial equity. As such, we have developed a monitoring plan that includes indicators, actions, and responsible parties to implement the recommendations proposed in the HIA, as well as health effects and outcomes of these proposals (see HIA Monitoring Plan, Appendix F). CDPH also conducted a process evaluation (see HIA Process Evaluation, Appendix A) to inform future assessment efforts.

CONCLUSION

The findings from our HIA indicate that CDPH should deny the RMG/Southside Recycling permit application to operate a large recycling facility on Chicago's Southeast side. We reached this conclusion based on a combination of factors, including: concerns for health, environment, and quality of life in an already over-burdened community; the inherent risks of recycling operations; as well as concerns about the company's operating history, including apparent violations of existing permit requirements.

For many community members, environmental justice advocates, and public health practitioners, the issues raised by the RMG/Southside Recycling permitting process represented broader, more systemic concerns about how policies balance economic development interests with public health protections for vulnerable community areas. Recent steps such as the [Air Quality Zoning ordinance](#), which was passed after the RMG/Southside Recycling zoning approval, begin to address these issues for new developments.

This HIA is the most rigorous and comprehensive study of a proposed industrial facility in Chicago to date. However, more work is necessary to fully understand how the cumulative impacts of industrial development affect health, and how this should be considered in the context of zoning and permitting decisions. Through the HIA process, CDPH developed a conceptual framework as well as methods for characterizing existing community conditions and analyzing potential environmental, health, and quality of life impacts of industrial development. This represents a starting place to build from, together with community and industry stakeholders.

Certain aspects of this assessment and its resulting recommendations were specific to RMG/Southside Recycling, informed by the inherent risks of large recycling facilities and the company's compliance history. An HIA was necessary in this case because public health considerations raised during the permitting process were not fully addressed during zoning. Although a similar process would not be required for existing businesses, we will continue to strengthen regulations to protect the public from the adverse impacts of industrial operations.

Change must come not just from CDPH, but through a 'whole of government' approach that includes other environmental regulators and City departments tasked with making decisions that impact the environment and health of all Chicago communities.

Endnotes

- 1 Bhatia R, Farhang L, Heller J, Lee M, Orenstein M, Richardson M and Wernham A. *Minimum Elements and Practice Standards for Health Impact Assessment*, Version 3. September, 2014
- 2 Bhatia R, Farhang L, Heller J, Lee M, Orenstein M, Richardson M and Wernham A. *Minimum Elements and Practice Standards for Health Impact Assessment*, Version 3. September, 201
- 3 EPA. *Environmental Justice Research Roadmap*. December 2016. (EPA 601/R-16/006 | December 2016 | www.epa.gov/research)
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- 7 "Governmental Use of Racial Equity Tools to Address Systemic Racism and the Social Determinants of Health," Institute for Healing Justice & Equity and the Center for Health Law Studies, November 2021.
- 8 U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry, Office of Community Health Hazard Assessment. Health Consultation: Analysis of Outdoor Air Contaminants Reserve Management Group, Chicago, IL. February, 2022. <https://www.atsdr.cdc.gov/hac/pha/ReserveManagementGroup/RMG-Analysis-Outdoor-Air-HC-508.pdf>



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Appendix A:

HIA Process Evaluation

CDPH utilized a process evaluation to determine whether our RMG/Southside Recycling Health Impact Assessment (HIA) included all of the minimum elements of HIA included in Version 3 of the Minimum Elements and Practice Standards for Health Impact Assessment.¹ The following table describes how our process met each of the minimum elements.

Minimum Elements of HIA	RMG/Southside Recycling HIA
<p>Was the HIA conducted to assess the potential health consequences of a proposed program, policy, project, or plan under consideration by decision-makers, and was it conducted in advance of the decision in question?</p>	<p>YES. The HIA was conducted to assess the potential health consequences of the RMG/Southside Recycling permit application to operate a large recycling facility on the Southeast side of Chicago. At the suggestion of the U.S. EPA, and with their guidance, CDPH conducted the HIA in advance of making a decision on whether to issue the permit. </p>
<p>Did the HIA involve and engage stakeholders affected by the proposal, particularly vulnerable populations?</p>	<p>YES. CDPH hosted three HIA public engagement sessions from November through February 2022. These sessions were open to the public, with a special focus on residents of the Southeast side. CDPH used input provided during the engagement sessions to establish the HIA scope and identify recommendations for policy and process changes to promote health and racial equity. This input built upon a public engagement process CDPH conducted prior to the HIA, which included two public town halls, an extended public comment period, and daily media monitoring. Overall, CDPH received insight from thousands of community members, local organizations, environmental advocacy groups, and public health professionals during this permitting process. </p> <p>Although the minimum element was satisfied here, CDPH acknowledges this as an area where we can and must do more to practice our Healthy Chicago 2025 value of ensuring that our processes are community-led. We take seriously the critique provided by Southeast side residents and public health colleagues that our HIA did not incorporate best practices in community engagement and promoting equity throughout the HIA process.</p> <p>Stakeholder participation in this HIA, as understood by the Ladders of Citizen participation, was limited to information and consultation. Stakeholder input shaped the HIA, but the process fell short of community ownership and delegated power as the highest practice standard for stakeholder participation in HIA.²</p>

¹ Bhatia R., Farhang L., Heller J., Lee M., Orenstein M., Richardson M., and Wernham A. Minimum Elements and Practice Standards for Health Impact Assessment, Version 3. September, 2014.

² Human Impact Partners. A Health Impact Assessment Toolkit: A Handbook to Conducting HIA, 3rd Edition. Oakland, CA: Human Impact Partners. February 2011.

Minimum Elements of HIA

Did the HIA systematically consider the full range of potential impacts of the proposal on health determinants, health status, and health equity?

RMG/Southside Recycling HIA

YES. During the scoping process, CDPH engaged stakeholders to identify the potential impacts of the proposed Southside Recycling facility on the surrounding neighborhoods. Based on this input, we identified potential impacts in three broad domains Environment (air pollution, water pollution, soil pollution, explosions/fire, recycling capacity), Health (acute and chronic risks, cancer risks, mental health and well-being), and Quality of Life (traffic and street conditions, economic development and job opportunity, noise, and concentration of industry). CDPH developed a pathway diagram to characterize the relationship among these impacts.



In the absence of existing practice standards for applying cumulative impact assessment, CDPH was compelled to use the best available evidence, supplementing it with theory and promising practices to consider a broader range of potential impacts on health determinants, health status, and health equity. The practice of assessing how the structural and social determinants of health contribute to disproportionate risk and health inequities in overburdened communities must continue to expand for cumulative impact assessment to drive informed and effective decision-making

Did the HIA provide a profile of existing conditions for the populations affected by the proposal, including their health outcomes, health determinants, and vulnerable sub-groups within the population, relevant to the health issues examined in the HIA?

YES. The HIA includes an extensive Existing Conditions Summary (Appendix D) that compares health outcomes, social factors that contribute to health, and environmental conditions in East Side, Hegewisch, and South Deering to Chicago overall. Our assessment gives special consideration to sub-groups such as people with underlying conditions who are made more vulnerable to negative health effects due to pollution exposure.



Did the HIA characterize the proposal's impacts on health, health determinants, and health equity, while documenting data sources and analytic methods, quality of evidence used, methodological assumptions, and limitations?

YES. For each of the impacts included in the HIA scope, CDPH identified and existing data source or conducted additional analysis to characterize potential effects on the environment, health, and quality of life for Southeast side residents. CDPH documented data sources, methods, quality of evidence, assumptions and limitations in the Existing Conditions Summary (Appendix D) and Environmental & Health Risk Assessment (Appendix E).



Real-world constraints result in diversity of HIA practice³ CDPH applied the analytical methods that were feasible with data sources available within the decision-making context and constraints. If additional assessment were feasible, particularly more robust qualitative input, it would only increase our understanding of the cumulative impacts of environmental injustice on health inequity.

3 Bhatia R., Farhang L., Heller J., Lee M., Orenstein M., Richardson M., and Wernham A. Minimum Elements and Practice Standards for Health Impact Assessment, Version 3. September, 2014.

Minimum Elements of HIA

Did the HIA provide recommendations, as needed, on feasible and effective actions to promote the positive health impacts and mitigate the negative health impacts of the decision, identifying, where appropriate, alternatives or modifications to the proposal?

Did the HIA produce a publicly accessible report that includes, at minimum, documentation of the HIA's purpose, findings, and recommendations, and either documentation of the processes and methods involved, or reference to an external source of documentation for these processes and methods? Was the report shared with decision-makers and other stakeholders?

Did the HIA propose indicators, actions, and responsible parties, where indicated, for a plan to monitor the implementation of recommendations, as well as health effects and outcomes of the proposal?

RMG/Southside Recycling HIA

YES. The HIA includes a discussion of environmental and quality of life mitigations proposed (or already put in place) by RMG, as well as additional mitigations that CDPH could impose as special conditions for a permit. These mitigations were developed with input from our environmental consultant, based on a review of industry standards and best practices. In addition to permit mitigations, the HIA includes recommendations on other policy and process changes that would promote health and racial equity for residents of the Southeast side. These recommendations were provided and prioritized by participants in the HIA public engagement sessions.

YES. CDPH produced a public document that includes the HIA's purpose, findings, recommendations, and methods for the process. The report will be shared with our commissioner, the mayor, relevant City departments, as well as the U.S. EPA. The report will also be disseminated to individuals who participated in public engagement sessions and made publicly available on our [website](#).

YES. CDPH developed an HIA Monitoring Plan (Appendix F) to track the implementation of recommendations. Monitoring the long-term health effects of our recommendations is beyond the scope of this HIA; however, CDPH does make a broad range of community health indicators publicly available on the [Chicago Health Atlas](#).



Appendix B:

Literature Review

Bibliography of Environmental Justice, Cumulative Impacts and Racial Equity Analysis Methods and Conceptual Frameworks

In the absence of clear or definitive standards or guidelines for our analysis, we reviewed peer reviewed journal articles and agency reports to develop our own framework to inform our HIA process. To develop our framework, we reviewed the following sources:

1. Alvarez, C. H., & Evans, C. R. (2021). Intersectional environmental justice and population health inequalities: A novel approach. *Social science & medicine* (1982), 269, 113559. <https://doi.org/10.1016/j.socscimed.2020.113559>.
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11. Schulz, A. J., Mentz, G. B., Sampson, N., Ward, M., Anderson, R., de Majo, R., Israel, B. A., Lewis, T. C., & Wilkins, D. (2016). Race And The Distribution Of Social And Physical Environmental Risk: A Case Example from the Detroit Metropolitan Area. *Du Bois review : social science research on race*, 13(2), 285–304. <https://doi.org/10.1017/S1742058X16000163>
12. U.S. Environmental Protection Agency. (December, 2016). *Environmental Justice Research Roadmap*. Retrieved from https://www.epa.gov/sites/default/files/2017-01/documents/researchroadmap_environmentaljustice_508_compliant.pdf.
13. U.S. Environmental Protection Agency. (2016). Technical Guidance for Assessing Environmental Justice in Regulatory Analysis. Retrieved from https://www.epa.gov/sites/default/files/2016-06/documents/ejtg_5_6_16_v5.1.pdf.
14. U.S. Environmental Protection Agency. (2019). EJSCREEN Technical Documentation. Retrieved from https://www.epa.gov/sites/default/files/2021-04/documents/ejscreen_technical_document.pdf.

We also reviewed the following sources to inform our understanding of the impacts of industrial activity on mental health and well-being:

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Appendix C:

Community Input Summary

CDPH solicited broad input on the RMG/Southside Recycling permit. Through public town halls, an extended public comment period, daily media monitoring, surveys and facilitated small group discussions, we received insight from thousands of community members, local organizations, environmental advocacy groups, public health professionals, and other stakeholders to help us understand the impacts – both positive and negative – of greatest interest, how to assess these impacts, and ideas for future action.

As described in this Community Input Summary, CDPH used feedback on impacts across steps of the HIA process, including Scoping, Assessment, and Recommendations for policy and process change.

I. COMMUNITY INPUT FOR SCOPING STEP

The purpose of the Scoping step is to determine which health impacts to evaluate, methods for analysis, and priority populations to focus on. To inform the Scoping step, CDPH considered community input from several sources. First, review and summary of public comments received during the permit review process highlighted a number of specific impacts of concern and several potential benefits. Those impacts were included in a draft pathways diagram that was presented at the first public engagement session. During that session, participants were polled on what impacts they were most interested in focusing on to help CDPH hone its assessment plans. Then, during the second public engagement session, attendees participated in small group discussions which included questions about potential burdens, potential benefits, and lived experience. Those answers further informed the Scoping step.

Summary of Public Comments on Large Recycling Facility Permit Application from General III, LLC (d/b/a Southside Recycling)

Background

Given the high level of public interest in the RMG permit application, CDPH created new *Guidelines Regarding the Permitting Process for Consequential Large Recycling Facilities* (“[Guidelines](#)”). Pursuant to the Guidelines, the public is afforded at least two opportunities to participate in the permitting process: 1) by providing written comments on the permit application and 2) by providing written comments on a draft permit, should one be issued. In addition, where there is significant public interest in the application, CDPH will hold a community meeting to hear local concerns and comments. The Guidelines were applied retroactively to the RMG application.

The RMG application was posted on the City’s website on November 17, 2020. Following issuance of the Guidelines on November 30th, CDPH opened a 30-day public comment period, scheduled to close on December 30, 2020. CDPH also held a virtual community meeting on December 10, 2020. Simultaneous Spanish translation was available for participants. A video recording of the meeting, slides in English and Spanish, and written responses to questions posed during the meeting were posted to the City’s website. (In addition, CDPH previously participated in a Community Town Hall on July 25, 2020, to share information about the anticipated application. Slides from the meeting and meeting notes, which included public comments and questions and answers from the meeting, were posted to the website in English and Spanish.)

Upon request of the public, given the December holiday season, CDPH granted a 15-day extension, lengthening the initial comment period to forty-five (45) days in total. The new deadline was January 14, 2021. Following the close of the comment period, CDPH reviewed all written comments and proceeded with its review of the application. A complete compendium of all written comments is available on the City’s website at www.chicago.gov/city/en/sites/rmg-expansion/home/public-comments.html.

Summary of Comments

CDPH received and considered public comments at two public meetings and during the twice-extended written comment period.

From November 30, 2020 through April 12, 2021, CDPH received more than one thousand emails in response to its request for written comments on the RMG application. The vast majority of the emails were in the nature of form letters, many expressing opposition to the application and some in support. In addition, CDPH received several emails with more detailed, substantive comments, some from individuals and many from environmental and/or community-based organizations.

The comment summaries below, together with the City's responses, are arranged generally by theme or subject matter. In cases where CDPH received multiple comments expressing the same or similar sentiment, the comments have been consolidated and paraphrased, with occasional representative excerpts. Comments that are more specific or complex are quoted more extensively.

General Comments in Support

Summary of Comments: General comments in support of the application included emails from individuals, business representatives (including the East Side Chamber of Commerce), RMG employees, business owners who have worked with RMG, vendors, and peddlers. Some of these emails stated generally that metal recycling is good for the environment and that the proposed facility would be "the most modern recycling facility in the entire Midwest." These comments highlighted the fact that new pollution controls installed at the facility will be more advanced and protective than at the other facilities which would end up taking the recycling stream if the RMG facility is not permitted. Comments in support also noted that RMG has been in business at this location for more than thirty years and that the property has been zoned for industrial use for even longer than that. They further stated that RMG has been a good neighbor, "proud to support the Southeast Side of Chicago Food Pantry, which operates on their property." Many of these commenters further stated that the newly expanded facility will create jobs.

General Comments in Opposition

Summary of Comments: General comments in opposition to the permit application included emails from residents who live near the RMG site, as well as concerned citizens who live elsewhere in Chicago or outside of the city. Many were from members of environmental organizations. Other emails were from teachers, high school students, medical students, church leaders, and community activists. Some of these comments mentioned specific concerns, such as regarding traffic or safety, while others expressed more general concerns about pollution. Residents of the 10th Ward noted concerns about "the pollution that will be emitted in our already polluted air."

In addition, many of the general opposition comments referenced "General Iron," a recycling facility formerly operating on the City's North Side at 1909 North Clifton Avenue. As indicated in publicly available records, RMG purchased General Iron's assets in 2019 with the intention of closing the Northside facility and expanding its existing recycling operations on the southeast side. Many commenters raised environmental justice concerns, stating that, "Moving an industrial facility's operations from a gentrified, mostly white neighborhood to a community with majority Black, Brown, Immigrant, and working-class residents already overburdened with polluting industry is a prime example of environmental racism." Other commenters stated that the permit application should be denied

because General Iron has “proved time and again that they are not a good neighbor with fires and explosions, City shut-downs, coating the neighborhood in toxic “fluff” and federal EPA citations.” They stated further that “there is no reason to believe moving to a new neighborhood will put an end to these harmful practices.”

Relatedly, the NRDC and others raised concerns about the cumulative impacts/burden of multiple industrial facilities, including four existing facilities on RMG’s property, operating in close proximity in a single community. NRDC stated: “CDPH should request full descriptions of the other RMG operations at 11600 S Burley, including whether/how their operations relate to each other. This is necessary to determine whether they are a single recycling facility (and General III an expansion), and also necessary to determine the overall impact/cumulative burden. (They were treated as one facility by IEPA and Zoning and appear to be linked.) CDPH must conduct broad compliance review as stated in existing rules, including compliance history of all entities under the RMG umbrella.” Further, NRDC and others expressed that the CDPH March 17th Letter requesting additional information from RMG fell short in determining whether the four existing RMG South Burley operations constitute a single recycling facility. In addition, they stated that CDPH’s letter failed to contain sufficient specificity on the level of detail of information expected from the Applicant, was largely historic and not “future-looking,” and the information requested was insufficient to make a broad determination of the overall impacts of the combined operations, let alone their cumulative impacts. They also commented that the CDPH March 17th Letter, along with the Additional Information provided by RMG, failed to address the number of shortcomings in the modeling and overall assessment of air quality impacts that NRDC and others have raised with IEPA and CDPH. Further, NRDC commented that the CDPH March 17th Letter did not address deficiencies such as the lack of environmental justice review, hazardous waste management, history of non-compliance, diesel truck impacts, threats to daily/short-term air quality, and odor nuisances.

In earlier comments, NRDC and others also referred several times to CDPH’s “mandatory compliance review,” as set forth in Rule 4.0 of CDPH’s 2014 Rules for Recycling Facility Permits (“[General Recycling Facility Rules](#)”). This rule provides that CDPH will conduct an evaluation of the applicant’s prior experience in operating recycling and related types of facilities. It then provides that CDPH may deny a permit if it finds that the applicant has violated any laws, regulations, or standards in such operation over the past three years. Based on the broad language of this rule, the commenters stated that CDPH must require the Applicant to submit more information about its compliance history and must also determine whether the Applicant has violated any federal, state, or local laws, including zoning ordinances.

Substantive Comments

I. SAFETY

Summary of Comments: Some commenters mentioned fires and explosions at the former General Iron facility. One commenter, Mr. Robert Stoodt, stated that CDPH “should ask General III to conduct a HAZOP (hazards and operability study). This would provide a detailed rigorous examination of the design of each processing step, especially studying what happens when the plant is started up, shut down, or experiences an upset such as an explosion or a sudden loss of power. A HAZOP is generally accepted as a good practice in engineering design... to protect workers and the community.”

The Southeast Environmental Task Force (SETF) stated that the application lacked a “plan to address explosions, fires and related off-site releases during catastrophic events arising from other facility operations. Therefore, “CDPH should require the permit applicant to develop a proactive, comprehensive emergency response plan, including coordinating efforts with first responders, CDOT and nearby public school and park facilities.”

2. TRAFFIC AND DIESEL EMISSIONS

Summary of Comments: Some commenters expressed concern about an increase in truck traffic as a result of the new facility. One commenter (Indiga Blu) questioned whether there has been “an impact report on what an additional 400+ trucks (and whatever lbs. of load they will be carrying) will do to the houses on Torrence,” noting that “houses are already shaking and falling apart due to the weight and vibrations.” Similarly, Mr. Stoodt stated: “The truck stacking plan mentions an estimated peak traffic of 40 trucks per hour. Table 4 in the traffic study indicates 70 car plus truck trips per hour. This is all on a crumbling stretch of 116th St. west of Avenue O. It was noted in the traffic report that there is no posted speed limit on 116th St, so trucks can go at whatever speed they like exiting the facility towards an intersection that includes a public park. This does not sound safe. The traffic report is focused on capacity and there is not a single mention of safety.” He further noted that: “The traffic study does not mention how accessible the facility would be for the fire department in case of a large fire. It would be very likely that the road in could be jammed with trucks with no room to pull over.”

NRDC commented that the February 2019 traffic study submitted as part of the zoning process and previously provided to CDPH is nearly two years old and so, is too dated for present purposes given significant developments in this area in the past two years (including new truck-intensive land uses and physical/legal road modifications). The applicant must provide an updated traffic study that takes into account the adjacent/nearby Northpoint facilities and any other new and/or proposed developments served by trucks in the area, and that clearly describes the adjacent roads that trucks serving the facility will use, including their current legal status as public or private roads and any proposed or planned changes in legal status.

Besides truck traffic, one commenter, Mr. Mark Velez, suggested that the permit “should include caps on boat, train, and truck traffic. There needs to be a limit to how many boat and trains can pass every day and how many trucks are allowed to drive through the East Side. Further, the companies that use these means of transportation and the City of Chicago need to invest to create overpasses for all the railroad crossings in the neighborhood.”

Many commenters were concerned about diesel emissions. For example, Pastor Matt Zemanick expressed concern about “the compounding effects of particulate matter emissions by the facility and truck traffic going in and out of it, with no limits on $PM_{2.5}$. PM_{10} is already a problem in the 10th Ward, with background concentrations at 77 ug/L-- above the 50ug/L set by the European Union Environmental Protection Agency and the WHO to protect human health. By RMG/GII’s own estimation, their PM_{10} emissions could create an environment where the background PM_{10} in and around GWHS is as high as 106ug/L.”

Similarly, the Alliance of the Southeast (ASE) stated: “CDPH should assess the air quality impacts of emissions from trucks idling (and how long they are idling in front of and around the facility) and new truck traffic that will move through local communities to access the General III facility.” And the Environmental Law and Policy Center (ELPC) stated: “General Iron should have to model for $PM_{2.5}$, NOx, VOCs, and other pollutants that derive from diesel pollution.”

NRDC stated that, to address diesel truck pollution, “the applicant must provide a hot spot air quality modeling analysis, employing the onsite monitoring data... and taking into account other truck-intensive developments in the area. This analysis must include both onsite diesel vehicles... and those that move on and off the site.”

Finally, with regard to vehicles and equipment used on site, ELPC noted that they “all likely are fueled by diesel. To ensure that operations if permitted are protective of air quality, CDPH should require that General III utilize electric vehicles or vehicles are of the most protective class. For instance, General III should be required to use electric forklifts or at least Tier 4/ Tier 4 Final forklifts if the forklifts must be powered by diesel fuel.”

3. AIR POLLUTION CONCERNS

A. AIR POLLUTION GENERALLY

Summary of Comments: Many commenters expressed concern about air pollution. Friends of the Park (FOTP) noted that: “George Washington High School conducted a study that found winds from RMG’s location to blow Southwest to Northeast. With the wind pattern present, wind will carry pollutants directly to the learning environment of students and towards community members using Rowan Park.”

Ms. Jean Madigan stated: “We need to be protected from more than ‘visible dust.’” She further stated she is “not comfortable with issues of ‘on-road mobile emissions sources and PM_{2.5}’ being addressed” in future rules. “RMG has acknowledged that the background PM10 measured by the IEPA Air Quality Monitors at GWHS is already at 77 micrograms/L. These levels are considered dangerous by the World Health Organization and are illegal in the European Union.”

Similarly, the Alliance of the Southeast (ASE) stated: “CDPH should consider more than ‘visible’ particulate matter, but all the pollution released by RMG’s recycling facility (and co-located facilities) including PM₁₀ and PM_{2.5} emissions.”

B. AIR MODELING

Summary of Comments: With regard to the required air study, many commenters stated that more data should be included. One commenter, Mr. Robert Garcia, stated: “There is no indication that the models account for transient dust from material being stored on unpaved roads, where metals are allowed to engrain into ground dust. Nor does it cover the more concerning PM_{2.5} impacts.” Similarly, NRDC asserted that: “Even if the use of unpaved roads will not be routine and constitute a relatively small percentage of vehicle use overall, such use must be accounted for in the air quality modeling to ensure protection of short-term air quality.”

Mr. Stoodt stated that: “The emissions from torch cutting should be included in the emissions and air dispersion studies. There is no way to see if this was the case or not.”

Referencing Rule 3.9.21.1, ELPC stated that the application should include modeling of HAPs including antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, nickel, and selenium compounds. They further stated, “Modeling should also include the impact from the shredder fluff or ASR left in open piles, as it is unclear the impact that the piles have on emissions. Also, the study should not be limited to the area that is General III, but should also account for the emissions from other operations at RMG.”

NRDC added that CDPH should require the applicant to “provide a full evaluation of total suspended particulate matter (TSP), including speciated fractions of metals and organics including diesel particulate matter, as well as the PM_{2.5} fraction of [TSP], including proposals for siting monitors and collecting and evaluating air quality data for TSP and PM_{2.5}. Given the risks of fires, explosions and equipment failures at metals facilities... the air quality impact assessment must also include an evaluation of impacts to air quality from these and other non-standard operating conditions.”

NRDC further stated that the applicant must “provide a detailed explanation of the expected composition of its feedstock at the proposed General III, for categories including appliances, passenger and other types of vehicles, construction & demolition waste metals, etc.” Where the feedstock will differ from that of General Iron, the applicant should revise its calculations “or explain in detail why the difference in feedstock will not significantly change the results.”

With regard to truck emissions, NRDC stated that the applicant should clarify whether the truck stacking areas (noted in Attachment M of the application) were included in the emission calculations and air quality modeling analysis and, if not, submit revised calculations.

Referencing the amended application, Mr. Stoodt stated, “The air dispersion modeling report at the bottom of page V-9 states that shredder emissions were estimated from emissions testing at the existing GII metal shredder on November 14, 2019. This is concerning because it is a single data point measured by the same company and not independently verified.” In addition, “No information is provided on the rates that the GII was running, the composition of the feed material, the prevailing weather conditions, etc. No methodology at all is mentioned. At minimum some extended test run period with more numerous sampling should have been used. For example, a minimum of 5-7 days of steady operation at or near design rates with a feed material composition documented as reflecting what the facility was designed for. It is also assumed that the emissions factor is a linear function that is easily scaled and applied to a new facility. This assumption is not scientifically supported and would certainly depend on the exact nature of the equipment proposed and the design of the process. This approach is overly simplistic and does not appear to reflect sound engineering practice.”

Referencing pages 13-14 of Addendum 1, Mr. Stoodt further stated: “The section discusses an error in the emission rate from Dust Collector DC-01. It is mentioned that a rate was converted from lb./min to lb./hr. and a model re-run. So the rate in the model went up by a factor of 60x from the original. In spite of this change to a rate 60 times higher, the predicted highest PM₁₀ concentration stayed essentially the same. This does not sound credible and merits closer examination. This modeling is the cornerstone of what the company is using to establish that it will be safe for the neighborhoods, yet the basis is a single data point from a potentially mechanically different operation, and it appears to be extremely insensitive to large changes in the assumed emission rates. The entire modelling approach should be reviewed.”

C. AIR MONITORING

Summary of Comments: Regarding the placement of monitors, Mr. Mark Velez stated: “Two monitors isn’t enough... We need North, South, East, and West at a minimum. Especially going towards Avenue O, Rowan Park and the residential neighborhood.”

NRDC noted, “The applicant continues to propose a single PM10 monitor on the East side of the facility, to be located a significant distance from the ‘RMG industrial campus property boundaries’ that the applicant considers to be the ambient air boundary for the air quality analysis. There is no discussion of a monitor at the ambient air boundary, in particular near the entrance of the facility, along what appear to be public access roads and adjacent industrial properties owned by other entities. ... The applicant must revise its application to include the proposed location of at least one PM10 monitor at its Eastern ambient air boundary.”

Summary of Comments: Referencing Rule 3.9.21.1 and page V-57 of the application, Mr. Stoodt stated: “The study of the HAPs, while referenced as being supplied to the IEPA, is not included in the application as it should be. This should be available to the public for review.” In addition, regarding page V-63 of the application: “The reporting procedures should be made more specific, similar to the data reported to the city and described in paragraph 2.5 on page V-59.” Mr. Stoodt also stated that there were “a lot of missing details which cast doubt on the accuracy and usefulness of this sampling.” He stated: “The application should include the name of the analytical method to be used for determining these levels and also the range and expected accuracy. Also it should be noted what levels would dictate the need to report to CDPH.” Further, “for these known hazardous metals, the frequency of sampling and analysis appears to be insufficient. (See 3.9.21.4.) The time between evaluation should be provided in estimated days. The sampling should be done during the normal hours of the facility operation. ...Is sampling at ground level? Will samples be synchronized and/or compared to the air monitoring station at George Washington High School?”

D. SHORT-TERM AIR QUALITY CONCERNS

Summary of Comments: While the federal limit on PM₁₀ is a 24-hour standard, NRDC noted that “short-term” operations should be considered “as short-term operations are highly likely to run at a higher capacity (and so higher emissions) than the simple average based on annual capacity assumed by the applicant.” Therefore, NRDC stated that the Applicant should provide more information about items that may contribute to short-term impacts, such as:

- One-hour and 24-hour/daily maximum capacity/rate information for all equipment at the whole site, in conjunction with any related/supporting activities undertaken at the other RMG facilities.
- Emissions estimates and air quality modeling to reflect short-term periods.
- Detailed engineering drawings of the shredder and enclosure that show any openings, as well as information on how the design ensures the ability to maintain negative pressure within the structure and “the engineering basis for sizing the air flow that will be evacuated to the air pollution control devices during shredding operations.”
- A list of all conveyors, identifying where they are located and which conveyors will be covered. “For each of the ‘covered’ conveyors, the applicant must provide detailed engineering drawings, including cross-section views, that clearly show the degree to which each conveyor is covered/enclosed so as to prevent material from escaping the conveyor. The applicant must also provide drop heights from one conveyor to another, as applicable, and/or drop heights from or to a conveyor from other handling elements, in appropriately scaled drawings.”
- An analysis as to whether the storage areas for auto shredder residue (ASR) are sufficient to handle short-term maximum quantities (e.g., hourly and daily amounts).

4. FACILITY INFRASTRUCTURE

A. FENCING

Summary of Comments: Commenter Robert Garcia stated that the proposed facility does not meet the requirements of Municipal Code section 11-4-2640(D), which requires recycling facilities to “be entirely surrounded by a solid fence eight feet in height.” Citing the definition of ‘Facility’ in the Municipal Code and Large Recycling Facility Rules, Mr. Garcia stated that the “borders extend to near the railroad and the river” and must all be fenced. He further stated: “The only mention of fencing however, in the application proposal is an assertion that the site will contain security fencing on the north boundary and northern part of the east boundary, fencing and a berm on the southern boundary and the river on the west.” He also noted that the current “security fencing” is a 6-foot chain link fence, which does not meet the requirement.

B. PAVING

Summary of Comments: Mr. Garcia commented that the original application did not meet the paving requirements set forth in section 11-4-2640(A) of the Municipal Code. In supplemental comments, he stated: “additional clarity is needed to ensure that the applicant will not be using non-paved land provided by its parent or any other subsidiaries of its parent to bypass the requirements of 11-4-2640 section A.” Mr. Garcia provided aerial photos which seemed to “suggest that RMG may allow its subsidiaries to use property for storage outside of bounded lease agreements. Aerial photos show material stored outside of the boundaries of South Shore Recycling’s (SSR) lease agreement with RMG that appear to be from SSR. This arrangement can potentially allow General Iron III to bypass elements of 11-4-2640 section A by allowing the applicant to store, use or process material outside of the paved leased space.”

Additionally, NRDC stated: “The applicant vaguely asserts that “concrete is not suitable” in several areas because processes conducted in those areas would destroy the concrete very quickly. The applicant’s response is inadequate/incomplete because it provides no details on or engineering analysis of the thickness of concrete relative to its durability for the processes at issue or discussion of whether addition of other surface materials on top of the concrete, like rubber, might create a more durable surface less prone to dust and soil contamination with metallic and other fines than gravel.” In its supplemental comments, NRDC further stated the applicant must evaluate whether stronger alternative paving/cover materials are available and, if so, why these materials were not selected. “Such evaluation should take into account the geological conditions at the site.”

C. OTHER INFRASTRUCTURE CONCERNS

Summary of Comments: From Robert Stoodt: “It is important to understand if there are any underground pipes for water and sewer or buried electrical that might need maintenance. Also a general maintenance plan for the facility.”

From Robert Stoodt: The response to the request for “handling capacity and detailed specs of all structures and fixed equipment” is inadequate. (See page 4-5 of 24 in Addendum 1). “The requested “One-Line” diagram, presumably similar to a process flow diagram, is not provided, instead it is an electrical load diagram lacking material handling rates. I agree with what may have been the intent of the CDPH question. Anyone evaluating the suitability of equipment to process material would naturally want to review the individual equipment specifications and ensure that no piece was improperly sized. The mismatching of capacities of individual equipment can create safety problems (which could be revealed in a HAZOP but unlike chemical plants it is apparently not used as a tool here). The general approach used here by the applicant is to simply say that everything is individually oversized, so don’t worry about it. This is not good engineering design practice. CDPH (and the public), I believe, wants to verify that the safety and pollution systems at this facility are properly sized for the maximum rates that can be achieved with this assembly of equipment. This is different than what rates are expected to be run normally. In rating of most industrial equipment, you start with the maximum rate that the equipment can achieve and then add a safety factor on top of that. It is nearly impossible here to find information to determine that the pollution and other systems will be adequate at the maximum achievable rate. It is also questionable whether or not the dispersion study reflects what would be expected at the maximum achievable rate.”

D. DUST CONTROL

Summary of Comments: Regarding the Fugitive Particulate Operating Program, NRDC raised concerns about the spatial coverage of each water cannon, i.e. “Dust Boss.” Since coverage varies depending on wind speed and direction, NRDC stated the applicant should assess the impact of wind on the expected Dust Boss efficiency and revise the emission calculations and air quality modeling accordingly. Further, “the applicant must also discuss whether and how such Dust Boss performance variation will ensure compliance with the Large Recycling Facility Rules’ opacity standards.”

NRDC also stated that the applicant’s Litter Control Plan (Attachment GG to the amended application) is inadequate and incomplete, because it does not include “measures for patrolling to ensure that material is not landing to the west in the Calumet River (a “public place” under the Large Recycling Facility Rules) or on properties further west,” nor a “plan for inspecting adjacent industrial parcels, including the other RMG recyclers ... and/or the adjacent Northpoint.” NRDC further pointed out the absence of any methods for determining “whether the facility is in compliance with its duties to prevent airborne materials from escaping the facility and/or creating a nuisance or engaging in open dumping,” as well as the absence of “an objective, enforceable duration for clean-up.” NRDC also stated “there is no objective distance for the proposed clean-up provided, so the applicant must clarify whether it is proposing to clean the default minimum of ¼ mile from the facility boundary or some other metric. The applicant should provide a map of the site clearly depicting areas within a quarter-mile of

the facility (measuring from the facility boundary) and explicitly discuss its plans for meeting the mandatory cleaning requirement within this covered area (which includes the Calumet River and various surrounding private properties). Given the proximity of the facility to Rowan Park and Washington High School, the required plan should also encompass inspection and cleaning of these public amenities.”

5. WATER ISSUES

Summary of Comments: From Robert Stoodt: “The Large Recycling Facility Rules call for a stormwater pollution prevention plan. The application states that it is not subject to pollution prevention requirements because of a connection to MWRD. This does not sound correct. They should still have a pollution prevention plan for their site for chemicals not ordinarily found in MWRD treatment facilities.”

From ELPC: The application should include the potential constituents that could be discharged from its operations and account for how General III pollutants would combine with the existing burden from the existing facilities. The effects of truck parking and loading should also be included in an assessment of water contamination.

NRDC stated that the applicant must describe the source of water to be used in all Dust Bosses, including expected total dissolved solids (“TDS”), and evaluate how water source/composition will affect operation and maintenance of Dust Bosses, including periodic testing of TDS and cleaning of nozzles. In addition, Applicant must describe detailed measures to prevent material from washing into the water from land at barge area, and remediation plans to address any material that washes into the water. (Must also provide info on barge handling at other operations as part of compliance history review.)

6. WASTE CONCERN

A. AUTO FLUFF

Summary of Comments: NRDC stated that “Besides waste characterization of fluff transported offsite, there should be full characterization of all auto shredder residue (ASR) that will be handled onsite in the open air. Current proposal would allow ASR to be staged in an open pile and transferred to open areas and bins with minimal controls. Information on the ASR should include third-party testing of representative ASR samples from the current General Iron facility & discussion of any difference in proposed feedstock. Also, need more details on controls at ASR pile when worked by vehicles and at the three-sided bins. Also, applicant should use “ASR” terminology from Large Recycling Facility Rules, instead of other terms that may cause confusion.

Similarly, Mr. Stoodt stated: “They need to more accurately describe what they are calling fluff and not say ‘nonhazardous special waste’ unless that is strictly defined as such. The Large Recycling Facility Rules refer to ‘Auto Shredder Residue’. They should use the same term so that there is no confusion over what is being discussed. 150,000 tons per year is a huge stream that is going to landfill (Indiana?) Calling that a non-hazard is surely subject to analysis and regulation.”

Regarding the waste characterization profile provided in the amended application (Attachment CC), NRDC stated that it appears to involve “a composite sample of three individual samples that were in turn taken on a single day along with seven other individual samples.” If so, “the applicant must disclose any and all sampling results obtained for the other seven samples from that day, specifically samples 1, 3, 5-8 and 10, or if any of the samples were not analyzed, why not. The applicant must then discuss whether those analyzed sample results, if such exist, are consistent with the results obtained in the composite sample. In addition, the applicant must provide a detailed explanation of the feedstock that produced the sampled General Iron ASR and explain whether or not that feedstock is representative of the range of feedstock compositions and so ASR composition expected at the proposed General III. To the extent that the single day, select-composite sample is not representative of the range

of ASR compositions expected at the proposed General III, the applicant must provide additional information and new analyses that accurately reflect/describe the expected range of ASR composition/characterization at the proposed General III.”

The Southeast Environmental Task Force (SETF) and People for Community Recovery (PCR) stated that the application “acknowledges that the facility will manage hazardous waste streams, including PCBs and mercury, yet does not include information about targeted safety and security measures related to these hazardous wastes.” They stated that, because of the large quantity of hazardous and special wastes to be handled at the facility, a separate review should be undertaken related to toxic waste streams, including “the volumes, hazardous characteristics and targeted management techniques for the waste streams,” information that was missing from the application.

Regarding Rule 2.19 “Expected Waste Generation,” Mr. Stoodt stated: “Permit should be explicit on the chemical composition of the washer solvent and... better characterize the used oil and what contaminants that oil might contain or where it is going to be treated. Are these wastes to be trucked off site as hazardous waste? If so, they should be listed as hazardous waste effluents. What sampling and analysis is done on these waste streams?”

B. OTHER WASTE:

Summary of Comments: From NRDC: In its response to the deficiency letter, “the applicant discusses only “shredder fluff” and lubricating oil generated during equipment maintenance. There is no discussion of material collected from the two baghouses that will be employed, including the baghouse on the fines processing building, which may contain significant amounts of metals. The applicant must provide information on the expected volume and composition of material collected from the baghouse (a recognized waste stream under the Large Recycling Facility Rules), as well as methods for handling and disposing of that material. The same goes for material collected from sweeping vehicles and any other similar wastes generated by the facility.”

C. OPEN DUMPING:

Summary of Comments: NRDC stated that the City has a duty to prevent open dumping and that Applicant should provide more information about how it will prevent dumping of waste. In particular, NRDC requested more detail about how material will be handled and controlled in the barge loading area without dropping material into the river. In addition, with regard to ASR storage, NRDC stated that the Applicant must explain how the three-sided structure will “prevent ASR handled near and stored in this structure from becoming windborne, including during active operations moving ASR into and out of the structure.” Further, “the applicant must explain how its proposed structures for ASR that is awaiting further processing in the non-ferrous processing system, including the three-walled bins (which appear to be the referenced bins constructed of moveable concrete blocks), will ‘minimize[] the emission of dust and ASR Fibers from becoming windborne.’”

7. NOISE CONCERNS

Summary of Comments: NRDC stated that the proposed noise monitoring plan in Attachment P of the application “proposes using a single noise meter placed near the proposed PM₁₀ monitor near the Northeast corner of the ‘campus property.’ The applicant should also include the proposed location of a second monitor closer to the processing equipment for purposes of attributing any exceptional noise events (such as from explosions) to the appropriate equipment, given the location within close proximity of several other industrial operations.”

8. OTHER CONCERNS

A. WORKER SAFETY

Summary of Comments: From Robert Stoodt: Regarding torch cutting as referenced in the amended application: “No worker safety or site environmental information is provided on this known heavy metals hazard. Studies in other cities (Houston) have shown that the amount of torch cutting correlates with the amount of heavy metals sampled at the perimeter of similar facilities. Was this activity factored into the air study?” Also, “Will employees have routine blood screenings for lead poisoning?”

Regarding the Applicant’s statement that it will conduct an air monitoring evaluation to determine if it needs to implement OSHA 29 1910.134 Respiratory Protection Program, Mr. Stoodt stated: “This should not be an ‘if.’ They should include their current plan in the application. ... See OSHA 3348-05 Guidance for the Identification and Control of Safety and Health Hazards in Metal Scrap Recycling.”

He further stated that “page W-4 references employee training but is lacking in detail. Other than identifying materials that require special handling, all employees need job safety training that will educate them on the hazards and potential chemical exposures. See OSHA 3348-05 Guidance... Where does an employee go to find MSDS sheets or report a potential exposure to harmful chemicals?”

B. FACILITY MANAGEMENT

Summary of Comments: Robert Garcia stated that the application did not include information on who will be operating or managing the facility, so that the City can determine if any of the new site’s decision makers were involved in previous violations, per the History of Compliance review required in Rule 4.0(l).

SETF stated that, because of General Iron’s history of non-compliance, “CDPH should expressly state its reservation of rights to revoke the permit based on evidence of non-compliance,” and “require the permit applicant to anticipate and have a fully realized plan to address noncompliance.”

C. PUBLIC INVOLVEMENT

Summary of Comments: Matt Rundquist: “...the public needs to be included in the planning, zoning, and permitting processes that affect them. The public comment sessions held by CDPH and the 10th ward do not constitute community involvement.”

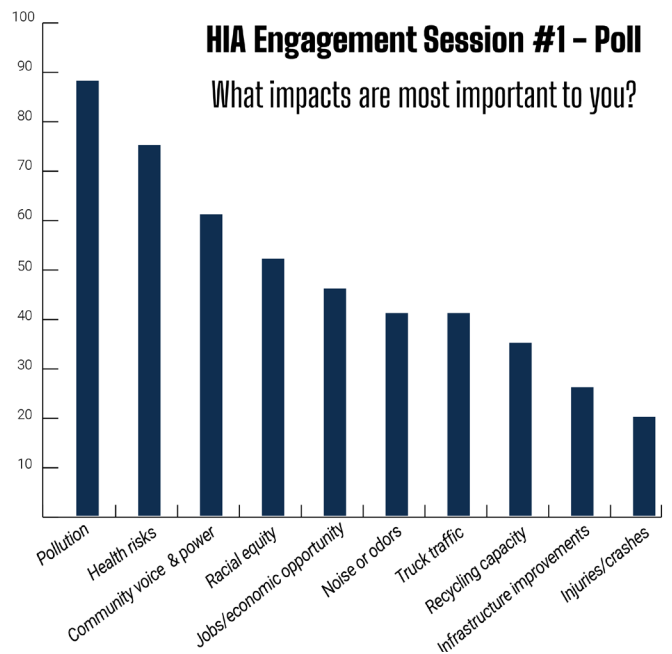
Mark Velez: “If the permit is granted, RMG must commit in writing to a community benefits agreement to enhance the lives of the East Side community... RMG should be randomly audited at least once quarterly and the reports shared with East Side residents. ...There should be clearly defined measures if violations occur, with the final measure being license revocation.”

Chicago Audubon Society: “The proposed location of the RMG facility is downriver, upriver, and next door to schools and homes, but also to places like Indian Ridge Marsh, where immense effort and funding (both private and public) has gone toward creating a safe, welcoming outdoor experience. As rare birds, residents and travelers alike flock to newly restored parks and natural areas, it is paramount that the City do everything in its power to keep these areas safe and welcoming. Harmful and noxious emissions from a notorious polluter with a foul track record for violations jeopardize this vision.”

Metropolitan Planning Council: “The City of Chicago has embarked upon a Corridor Modernization process. ...it is premature to relocate an industrial facility of this magnitude given that this Corridor’s planning process is slated to begin in 2021.” It would give this project “an outsized influence on any future planning efforts, incentivizing other businesses to similarly move to the Southeast Side... The proposal is inconsistent with Chicago’s vision for healthy, thriving rivers, as documented in Our Great Rivers.”

Summary of Community Input from HIA Public Engagement Session #1

The first HIA public engagement session was held on November 4, 2021. At that time, CDPH polled participants about the impacts they were most concerned about. The choices were drawn from the benefits and burdens already identified through public comments on the permit application. Participants could select all that applied. By far the most selected responses were air pollution and health impacts with 75% and 65% of respondents selecting those options, respectively. The other top responses were racial equity (53%), community voice and power (45%) and jobs and economic opportunity (40%).



Summary of Community Input from HIA Public Engagement Session #2

The second HIA public engagement was held on December 9, 2021. During this session, participants were assigned to breakout groups which each had a CDPH facilitator and a notetaker assigned to them. Facilitators led participants in a small group discussion to answer a series of questions to help CDPH better understand community conditions and any recommendations for future actions. There were seven groups where residents of the three Southeast side community areas were assigned and one main room group where participants not from the community were assigned. Notetakers recorded answers using Jamboard, a collaborative virtual whiteboard. All completed Jamboards are included below and breakout recordings are available [here](#) under Health Impact Assessment Public Engagement Session #2.

CDPH also provided an opportunity for people to answer the same discussion questions through an online survey. We received 14 responses, which were consistent with the feedback we heard live during the session.

CDPH reviewed the Jamboards and grouped comments into themes and subthemes, noted the frequency of comments matching those themes and totaled the themes across breakout session. The results of this review for each question are below.

BENEFITS: *Based on what you have heard thus far, please share some of the potential benefits of this proposal on you and your community. Who specifically benefits?*

A prominent theme in the benefits discussion was the impact on economic development, such as through jobs, company investments and spillover benefits to nearby small businesses. Another theme was sustainability benefits. However, when asked who specifically benefits, most answered that the benefits would not be for community members, but for those from outside the community and industry.

TOTALS:	
THEME 1: LOCAL ECONOMIC DEVELOPMENT	14
Jobs	6
RMG direct investment	2
Benefits to local businesses	3
Taxes	2
Right use of property	1
THEME 2: BUSINESS RESPONSIBILITY	6
Acting in community interest	2
Proactive environmental controls	4
THEME 3: SUSTAINABILITY	9
Recycling/waste reduction	5
Environmental mitigations	4
THEME 4: LACK OF BENEFITS	10
No benefits identified	4
Benefits only for outsiders	6
THEME 5: FOR WHOM	17
Industry/corporations	6
Not community	6
Community	5

BURDENS: *Based on what you have heard thus far, please share some of the potential burdens of this proposal on you and your community. Who specifically is burdened?*

The most discussed theme in answer to the question on burdens was quality of life impacts, including increased traffic, worsening street conditions, safety, explosions and fires. Also discussed were health, environmental and cumulative impacts on an already burdened community. Overwhelmingly, participants agreed that the burdens would be experienced by community members, especially those already vulnerable due to age or existing health conditions.

The discussion largely tracked with input received during prior engagement sessions.

TOTALS:

THEME 1: HEALTH/SOCIAL VULNERABILITY	8
Specific pops at greatest risk	1
Health inequities	6
Lack of access to care	1
THEME 2: OVERBURDEN/CUMULATIVE BURDEN	8
Concentration of polluters	6
Future industrialization	2
THEME 3: QUALITY OF LIFE	11
Traffic	5
Street conditions	2
Worker safety	1
Explosions/fires	3
THEME 4: ENVIRONMENTAL BURDENS	8
Air pollution	7
Water pollution	1
THEME 5: HEALTH AND RACIAL EQUITY VALUES	5
Lack of community power	3
Civil rights issue/relocation	2
THEME 6: CRITIQUE OF PROCESS	8
General	3
Inclusivity	1
Transparency	1
Data issues	3
THEME 7: NO COMMUNITY BENEFIT	4
Missed opportunity for better land use	3
No benefits, only burdens	1
THEME 8: COMPLIANCE	6
Company history of compliance issues	3
Proposed facility would comply with existing standards	3
THEME 9: FOR WHOM	15
Burdened community	6
SE Side neighborhoods	4
Vulnerable populations	2
Company, employees and customers	3

LIVED EXPERIENCE: *Is there anything else that you want people who are working on this proposal to know or think about based on your experience as a community member?*

In part, the discussion stemming from this question echoed the discussion of burdens. Residents talked about the impacts of industry on their quality of life and the cumulative burden of polluting industries in their community. They also spoke of having a different vision for future development in the community that promotes growth through means other than bringing in more industrial facilities. There was also significant discussion critiquing the process of permitting and the Health Impact Assessment itself, citing issues of transparency and inclusivity.

TOTALS

THEME 1: HEALTH/SOCIAL VULNERABILITY	6
Lack of access to care	1
Health inequities	5
THEME 2: QUALITY OF LIFE	9
Traffic	1
Worker safety	1
Poor air quality	4
Odors	3
THEME 3: COMMUNITY/ECONOMIC DEVELOPMENT	10
Industrial history	4
Different vision for future	2
Land use conflicts	3
Process discouraging econ development	1
THEME 4: PROPERTY CONCERNS	1
Loss of property value	1
THEME 5: Overburden/Cumulative Burden	7
Overburden/cumulative burden	7
THEME 6: LACK OF COMPANY ACCOUNTABILITY	5
History of non-compliance	3
Need for monitoring	2
THEME 7: COMPANY AS "GOOD NEIGHBOR"	8
Positive employee experiences	3
Proactive environmental controls	5
THEME 8: COMMUNITY EXPERIENCES BURDENS, NOT BENEFITS	1
Lack of jobs	1
THEME 9: STANDARDS NOT PROTECTIVE OF HEALTH	2
Standards not protective of health	2
THEME 10: CRITIQUE OF PROCESS	10
Inclusivity	4
Transparency	3
Data issues	3
THEME 11: CIVIL RIGHTS	8
Civil rights	2
Need for community power	6

II. COMMUNITY INPUT FOR ASSESSMENT STEP

The Assessment step incorporated community input by focusing on indicators identified in the Scoping step, which considered written comments on the permit application and input from public engagement sessions. In addition, plans for both the Existing Conditions Assessment and the Environmental and Health Risk Assessment were refined during the process based on input from stakeholders submitted in writing and during engagement sessions.

Existing Conditions Assessment

During the first public engagement session, CDPH presented baseline data in a number of demographic, socioeconomic, health, environmental, and quality of life indicators. Rates of these indicators in the three Southeast side community areas of interest were compared to Citywide rates and those in the Lincoln Park community (the former General Iron site). We heard from participants in the first meeting that this approach provided a limited context for understanding community conditions. In response, the final assessment instead compares East Side, Hegewisch, and South Deering to all Chicago community areas and Chicago overall.

Environmental and Health Risk Assessment

CDPH received several detailed written comments, letters and public input during HIA engagement sessions related to assessment methods and factors to consider in analyzing environmental and health risks. Many of these suggestions were incorporated into the Assessment step including, for example:

- **Diesel emissions:** In response to a request to include diesel emissions from trucks, CDPH included emissions from on-road and non-road diesel emissions associated with the property into air modeling. There was a request to conduct a new traffic study for the area that included the new Northpoint development located nearby. Although CDPH did not conduct a new traffic study, diesel truck particulate emissions from the Northpoint traffic study were incorporated into the air modeling and risk assessment.
- **Soil sampling:** In response to a request for soil sampling to reflect current and historic site uses, CDPH conducted surficial soil sampling at the property for investigation of contaminants of potential concern associated with the site's current scrap metal use and historic operation as a steel mill. Contaminants sampled included metals, semi-volatile compounds, PCBs, dioxins, and furans.
- **Cumulative risk assessment:** In response to requests for an assessment of cumulative risks and hazards from the property, CDPH conducted air dispersion, deposition, and human health risk modeling of the above listed contaminants of concern that determined the cumulative risks and hazards from the property associated with inhalation and indirect exposure such as incidental soil ingestion and consumption of locally grown produce and fish caught from Wolf Lake.
- **Meteorological data:** In response to requests to use alternate meteorological data, CDPH used meteorological data from Hammond, Indiana instead of Midway Airport data, which was used in the company's modeling.

III. COMMUNITY INPUT FOR RECOMMENDATIONS STEP

To develop recommendations for future policy and process changes, CDPH considered written comments and comments raised in public engagement sessions.

Summary of Community Input from HIA Public Engagement Session #2

As described above, participants in the second HIA public engagement session on December 9, 2021, were assigned to breakout groups. During this time, they discussed recommendations for future actions. CDPH reviewed each Jamboard and grouped comments into themes and subthemes, noted the frequency of comments matching those themes and totaled the themes across breakout session. The results of this review are below.

All completed Jamboards are included below and breakout recordings are available [here](#) under Health Impact Assessment Public Engagement Session #2.

LOOKING FORWARD: *Beyond the permit decision, what should we be aware of as we embark on other policy or process change initiatives? Do you have any specific recommendations?*

The most talked about theme in response to this discussion question was the importance of incorporating community voice into decision-making through engagement. There was also a lot of discussion of the need for strengthened enforcement, reformed zoning and permitting processes and improved land use policy and decision-making in the future..

TOTALS	
THEME 1: ENFORCEMENT	7
Increase inspection capacity	1
Strengthen oversight	2
Consistent rules for all	4
THEME 2: REFORM PROCESSES	8
Zoning	4
Permitting	4
THEME 3: IMPROVE SURVEILLANCE AND REPORTING	8
Air Monitoring	3
Timely/public data reporting	4
Link between pollution and health	1
THEME 3: STRENGTHEN STANDARDS	4
Cumulative impact ordinance	2
Green infrastructure requirements	1
Benefits for community	1
THEME 4: ADDRESS CIVIL RIGHTS	3
Civil rights	3
THEME 5: ADDRESS CLIMATE CHANGE	1
Climate Change	1
THEME 6: COMMUNITY POWER IN DECISION-MAKING	14
Engagement	5
More robust use of HIA	3
Listen to community input	4
Don't let companies influence decisions	2
THEME 7: LAND USE	8
Reduce concentration of polluting uses	3
Address conflicting uses	2
Transparent zoning process	3
THEME 8: TECHNICAL INPUT FOR DATA	2
Technical input for data	2
THEME 9: HEALTH AND RACIAL EQUITY VALUES	1
Health and racial equity values	1
THEME 10: COMMUNITY IMPROVEMENTS	3
Schools	1
Infrastructure	1
Better uses	1
THEME 11: BUSINESS RETENTION	1
Business retention	1

The following pages include the Jamboards from HIA Public Engagement Session #2 held on December 9, 2021. For complete video and audio files of the sessions, please visit: www.chicago.gov/city/en/sites/rmg-expansion/home/health-impact-assessment.html

Benefits

Please share some of the potential benefits of this proposal on you and your community. Who specifically benefits?

Company has high level of investment in community

Taxes paid

Cleaner to ship on water, eliminates pollution

RMG cares about worker health and environment

Job opportunity in manufacturing industry

Adds recycling capacity; helps the planet

Workers patronize Southeast Side businesses

Strong environmental controls

Where does the scrap metal go after shredding?

Adds pollution to already heavily polluted community area

Not seeing any benefits; negatives outweigh the positives; very few jobs for people who live/work in Ward 10

Environmental racism; does not reflect CDPH's stated equity values

Truck traffic / diesel emissions, PM

Need to note where benefits are being suggested by industry representatives

Residents' concerns about cumulative burdens

Community has health

Should this plant be in a community

Burdens

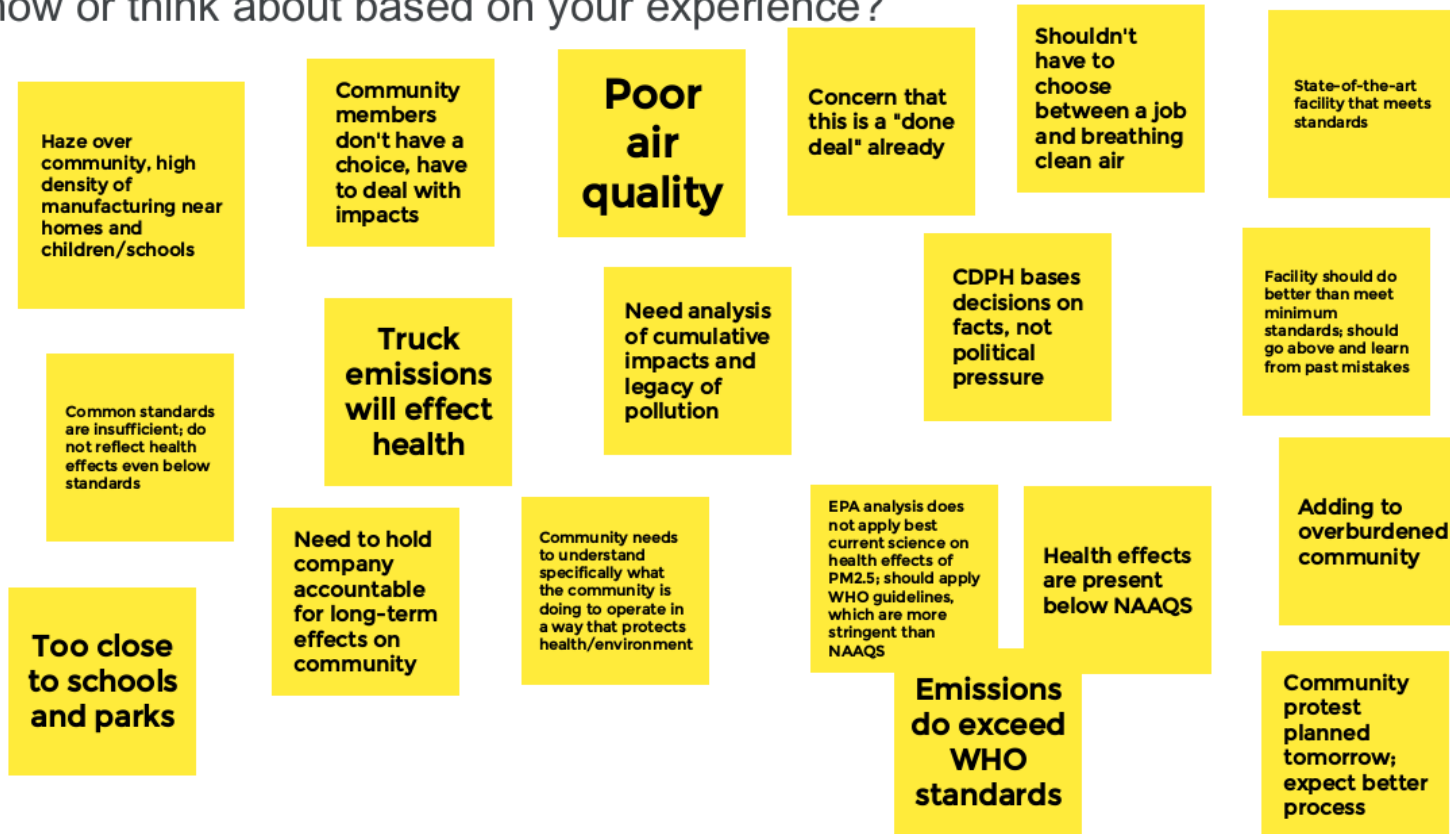
Please share some of the potential burdens of this facility on the community. Who specifically is burdened?

The image displays a collection of sticky notes, primarily yellow with some orange ones, arranged in a scattered pattern. Each note contains text representing community concerns and suggestions. The notes are as follows:

- Local residents experience health burdens, respiratory impacts**
- More dirty air in overpolluted area**
- Impacts on vulnerable population (youth and elderly)**
- Impacts on children, especially Black, Latinx, low-income people**
- Truck traffic and emissions**
- Will traffic be limited?**
- Facility will meet all standards and regulations**
- Recycling reduces CO2 missions**
- EPA report shows emissions are below NAAQS**
- Need to expand access to healthcare and services, jobs**
- People with chronic conditions**
- PM emissions from RMG operations, NO2 and other pollutants from trucks will affect residents, especially those with underlying conditions**
- Need to identify standards for industry to reduce/eliminate cumulative burden**
- Oversaturation of industry and truck traffic**
- Concern that this process is not authentic, "done deal"**
- No meaningful economic benefit, jobs for residents**
- Link between mental health and pollution exposure**
- Study of air quality around General Iron showed high concentrations of PM 2.5 in community**
- Community members bear these burdens**
- Condition of streets**
- Injury danger for workers**
- Health department must stand by**
- Racial inequity**
- Widening health nequity**
- Increased healthcare costs**
- Need for longer-term study of air/community impacts**
- Need to examine indoor air pollution (in homes), soil and water pollution**
- RMG is not General Iron; this is a different facility and should not be judged by their performance**

Lived Experience & Expertise

Is there anything else that you want people who are working on this proposal to know or think about based on your experience?



Looking Forward

Beyond the permit decision, what should we be aware of as we embark on other policy or process change initiatives? Do you have any specific recommendations?



JAMBOARDS — ROOM ONE

1. Benefits - Based on what you have heard thus far, please share some of the potential benefits of this proposal on you and your community. Who specifically benefits?

Industry - not reliable jobs, only stated that a handful of permanent jobs

RMG

Corporations are the only "Individuals/company" that will benefit.

Any community welcome sustainable jobs, but when jobs vs. clean air, love investment in SE Side (green jobs, Union jobs), facility doesn't offer those things, jobs will go to those who work at LP

Benefit is that the City has the opportunity to do the right thing to prevent this polluter from moving into this environmental justice community, City can be accountable to community (HC2025)

No positive benefits to community

Absolutely no benefit for me, my family or my community!

Not sure about job benefit because company already exists, so only a few jobs for local residents, workers already employed at LP

Not only job impact but impact on community in general (all need to be taken into account)

There is a false narrative of job-versus the environment/health that is being sell out by the Corporation as a benefit, and it is sad to see that many are buying into it.

Communities shouldnt have to choose between jobs and clean air

Record as SE Side being used as a dumping ground, hard to see benefit, is this what the area will look like if this company comes like Erin Brockovich area; want clean air, no one talking about long term

Need benefits for all citizens

Anything placed in this community should be considered, students, decreased value of roads/increased truck traffic, even if state of the art, still detriment to others in community

In addition to a cumulative Health Impact Assessment has never been done in the SES

JAMBOARDS — ROOM ONE

2. Burdens - Based on what you have heard thus far, please share some of the potential burdens of this proposal on you and your community. Who specifically is burdened?

Report from EPA was cautious, highest level of pollution, data limitations in EPA report, so many people suffering from health conditions (asthma), keep repeating ourselves about disparities and health issues

Already overburdened by environmental pollution, community faces burden

LP not comparable in terms of health and social factors to Se Side.

City needs to look at cumulative impact: SE Side has 3 of top 5 air polluting companies: #1 Fink, #2 Arcelormittal, #4 Ford

Invest in things that are sustainable, other things land could be used for.

Look at the cause of death on death certificates. Cancer is off the charts.

Study came out on cancer clusters. COVID cases and deaths are higher in SE Side.

A lot of research that shows how polluted community is. Air pollutant monitor was not used in presentation. Not measuring PM2.5 in permit.

LP chosen because that is where RMG was, and they got to say no.

Community continually has to share accurate data with City. City not recognizing SE Side as environmentally burdened.

Look at racial impact of policy that put toxic companies on SE Side

South Deering is in one of the highest air quality and health index communities. - Office of Epidemiology, Chicago Dept. of Public Health, 2020

Data that City presented limited extent of problem of pollution and health, area was okay with asthma. LP has more asthma. asthma rates on SE side are incredibly high; Data does not portray accurate picture

Meeting continually changed, changed to virtual, meeting held on same date as other City meeting, trying to exclude community, rushing process

Comparison communities, how compare LP to SE Side, use other communities to compare

South Deering and South Chicago are in top 25% for cancer mortality rates. - Chicago Health Atlas

South Deering & South Chicago are in top 25% of communities for asthma rates.- Chicago Health Atlas

The zip code 60617 was in the top 10 zip codes for weekly case counts & Covid-19 hospitalizations (as of May). It's was one of the top 2 zip codes for Covid-19 deaths (as of May).

A number of companies are already under investigation that are in the SE Side.

The City needs to take into account cumulative burden of the air pollution that is already here.

CDPH needs to make decision, how make decision when a cumulative health assessment has never been done? Should take months and years to do well, and just getting permit in a few months

JAMBOARDS — ROOM ONE

3. Lived Experience - Is there anything else that you want people who are working on this proposal to know or think about based on your experience as a community member?

First permit went to ILEPA was not brought to public attention. Construction permit to build concrete walls put in place. Not transparent, sneaky about slipping permit through. Then being given opportunity to provide comment.

Hard to being able to heard halfway through process

Don't understand how City policies and reporting work.

Many people have been vocal and letters written by professional

Toxic landfills

Superfund site - lots of clean up that needs to happen

Redlining

engagement process has been lacking. Second time CDPH has presented HIA process and said community engagement is over. Disingenuous about community engagement, according to process

Concept of consent was not given. Actively voicing that don't give consent to additional burden. Best interest of community not being considered.

Whether or not the manganese in fields has been cleaned up

Don't have access to river, is it for the people or industries?

Community/people access to river. Is it for the people or for industry? It should be for the people.

Took US EPA to call them out to due HIA, that taking comments from permitting process as HIA is disingenuous. Process seems like a sham.

Puts community on defensive with putting another polluting industry in area when already burdened

Use Calumet Connect Databook - decisions should be made based on impact on community, close loopholes, require facilities to maintain landscaping, more rigorous testing, increase public access to data

Improve public access to information

JAMBOARDS — ROOM ONE

4. Looking Forward - Beyond the permit decision, what should we be aware of as we embark on other policy or process change initiatives? Do you have any specific recommendations?



JAMBOARDS — ROOM TWO

1. Benefits - Based on what you have heard thus far, please share some of the potential benefits of this proposal on you and your community. Who specifically benefits?

There's a greater priority on businesses over the community.

Mayor Lightfoot recently passed an ordinance that requires traffic and environmental review before it grants any permits. What would experts think this will do?

Based on feedback from the community, many don't see benefits

It benefits the company only.

Don't discount expert advice (UIC and Harvard) and the city is not listening.

I am not against the permit. They are meeting all EPA requirements.

forward for policies? In a recent letter to the mayor, the dean of the UIC School of Public Health, Dean Wayne Giles said, "The well documented excess burden of pollution already experienced by residents living in

Jobs have already been promised to previous company employees.

JAMBOARDS — ROOM TWO

2. Burdens - Based on what you have heard thus far, please share some of the potential burdens of this proposal on you and your community. Who specifically is burdened?

**Increased
truck
traffic**

**Particulates ,
Pollution**

**Explosions
and fires from
shredders**

**Adding health
risk to already
burdened
community**

**Not monitoring
things that are
going to affect our
health in our
community**

**City not meeting
community needs in
terms of school
improvements**

JAMBOARDS — ROOM TWO

3. Lived Experience - Is there anything else that you want people who are working on this proposal to know or think about based on your experience as a community member?

They are focused on making money

Silence meant as a disagreement to the City

Company will operate facility that meets and exceeds all EPA standards

EPA air quality report was insufficient and did not use all monitors

single-payer healthcare

Disproportionate amount of industry in the area

Mental health clinics that were closed

More cases of rare cancer

existing standards are insufficient

Many health experts like UIC and Harvard University have indicted their expert opinions about denying the permit

CDPH's comparison to Lincoln Park was unfair. CDPH should be honest and compare with similar communities

4. Looking Forward - Beyond the permit decision, what should we be aware of as we embark on other policy or process change initiatives? Do you have any specific recommendations?

CPS not making improvements to Washington HS which has increased enrollment, even though we have a lack of space and athletic facilities. We should enhance our schools and not only focus on selective enrollment schools.

Very concerned about the proposed limestone mining project ("the invert") which is against City ordinance and will have negative impacts on the neighborhood.

JAMBOARDS — ROOM FOUR

1. Benefits - Based on what you have heard thus far, please share some of the potential benefits of this proposal on you and your community. Who specifically benefits?

1. Continued sorely needed investment in the area. Sustains tax base. 2. Creates and retains jobs

Job creation and retention mitigates gang activity, and other social ills. Adds to self worth . Provides opportunities for employment for those who dont attend school or trades.

owner of facility would benefit from taxes. Jobs? Hard to say who'd get those jobs. Would like to see jobs go to minority communities.

essential . its the first step in providing a feedstock to the steel industry. As we enter a new era of infrastructure improvements the steel needed for it should come from a new circular economy . The infrastructure of the SE Side is perfect

sacrifice our health for jobs. The Calumet River is completely dominated by industry why are we adding to our overburdened community? We cannot continue to sacrifice our health where the company

only benefits would be to the company themselves and their execs.

economic development in economically depressed area of city. must be considerate of environmental and people's health.

economic development sorely needed on SE Side. Attributes of area fits very well with industrial investment. Cos have gone from here to Ind. and Mich.

Can bring employees to live there.

U.S. will have tremendous demands for steel for infrastructure. It won't come from overseas...the feedstock for that comes from municipalities - recycled products, recycled steel. If we can do it responsibly...

our bridges will be up more than ever and the health burdens outweigh the benefits

JAMBOARDS — FOUR

2. Burdens - Based on what you have heard thus far, please share some of the potential burdens of this proposal on you and your community. Who specifically is burdened?

emissions ... anytime you work with steel and recycling you have to melt it down and use chemicals ...those chemicals have to go somewhere. more truck traffic.

Increased truck traffic. we have to do something to make truck traffic less polluting - we have to have a plan to make transportation cleaner.

SE Side has been waiting 30-40 years for Burley Ave engineering...get trucks off Ave. O. Unfortunately we'll need more trucks, more warehousing.

A lot of the alley scappers burdened...they've suffered because only one company operating - Sims in Pilsen.

Residents in the south side are overburdened healthwise...great concentration of COVID cases in SE Side. How can they trust COVID messages from CDPH v. the residents health from public health standpoint.

Don't think the emissions will pose significant health burden. V Modern. Environmentally modern facility.

Burden will be minimal. For truck traffic there will be a transition phase. The new Burley Avenue will be created soon. Its currently in an engineering phase. It goes from Design, Engineering and Construction.

we won't be able to enjoy the river, like on the North Side

Also Burdened will be the scappers of which there are thousands. Many have suffered because the manipulation of the scrap steel price at a time when steel prices has increased.

The supply chain truck traffic will be a larger question. Not just attributed to South Side Recycling.

1) political leadership need to act as advocates for residents. It is dangerous to try to justify more pollution or pollution potential. The owners of the plant won't be living in the area. This isn't just an 'asset transfer'

JAMBOARDS — ROOM FOUR

3. Lived Experience - Is there anything else that you want people who are working on this proposal to know or think about based on your experience as a community member?



4. Looking Forward - Beyond the permit decision, what should we be aware of as we embark on other policy or process change initiatives? Do you have any specific recommendations?



JAMBOARDS — ROOM FIVE

1. Benefits - Based on what you have heard thus far, please share some of the potential benefits of this proposal on you and your community. Who specifically benefits?

The owners of RMG. The Labkon family.

RMG has multiple permits, but cumulatively, if they applied as a single site, may not be given the City permitting process and don't comply.

Know families that are ill (chronic illness), and the past history of the legacy pollution (steel mills), who this benefits fundamentally are shareholders and owners, pharma over medication, etc.

and need to work, but also it's where people live, and it's not the only company. Concern if the permit is given, that more companies will try to increase in size and increase the pollution affecting his family. There are other places

From what I know so far the business, its employers and other business that benefit from the material being recycled on site.

I think that it goes to the customer, we help them as they help us in the business of recycling

Know of concerns, RMG is being unfairly grouped with legacy polluters in SE side. Steel mills have a legacy, and RMG operates over that land and cleaned the site, and recycles under strict regulations.

Feels it helps the community to recycle. It also helps himself and his family as an employee.

JAMBOARDS — ROOM FIVE

2. Burdens - Based on what you have heard thus far, please share some of the potential burdens of this proposal on you and your community. Who specifically is burdened?

RMG has one. They state in the application vs the EPA sensor at GWHS, is above the WHO threshold. The reality on the SEside is no more added pollution and will exacerbate health conditions. PM is added. Understand

There is already a lot of particulate matter in the air and more is dangerous for public health. Any increase in PM10 & heavy metals like Mn, Cadmium, and lead. Has adverse health effects - there is no minimum risk for lead and cadmium.

issue is that it is cumulative and additive. Hope that the city looks at past citations. The new permit allows for new shredder, but look at past history of explosion when on northside. Applicant violation in the past,

Understand what the city has interpreted, but what has happened in the past has already demonstrated what will happen. The rules state that the city can deny the permit. It's RMG's responsibility to build a facility before permitted.

Would like the city follow the rules and think about the residents that live in the area. The limits EPA set are well below the WHO.

burden over dirty industry. I've done my research, I've seen both sides of this fight and I need the city to do its job. Show us data, explain these reports, and show us how we will begin to benefit from the industries that are already exist in our

overburdened and well-documented with petcoke, manganese, and steel mills in the past. RMG is complying with stringent rules. Why don't the existing businesses comply with these standards that created the

Equipment from northside and transferred to the southside have been tested by the EPA and approved that it works as it should. Issues in northside are acknowledged but were resolved.

I think the one thing that everyone in this group can agree on is that the City has been, at best, incompetent in their administration of this process.

JAMBOARDS — ROOM FIVE

3. Lived Experience - Is there anything else that you want people who are working on this proposal to know or think about based on your experience as a community member?

<p>In General Iron/RMG moving to SE side, feel the employees helped their family.</p>	<p>To show us the number of residents you employ, that they are in fact living wages what they are being paid, the jobs are sustainable and the effect this has had on your company.</p>	<p>Suggestion that RMG doesn't care or would want malfunction of their equipment, is not what they want. Them and the city investigated and added safeguards.</p>	<p>the city has a duty to protect public health under title vi and title viii of the civil rights act</p>						
<p>Hard to hear mothers crying over their children, and hearing from those that don't live in teh family that their air is fine. What does it say about the city that don't listen to residents and don't follow HIA community involvement.</p>	<p>Cumulative burden when residents work and their kids get ill, or when the age gap shows a scientific fact that PM2.5 lowers life expectancy.</p>	<p>They failed to do so. They failed on multiple occasions. I'm pulling up the consent decree from the EPA. You have failed on multiple occasions.</p>	<p>Data is deficient, UIC SPH and NRDC put out a memo on deficiencies over the data CDPH put out.</p>	<p>RMG have shown failures to properly protect area residents when it was GI on northside.</p>	<p>City responsibility is to the residents of the SE side and that industry is protecting families as well as benefit, not harmed healthwise, economically and not displaced and assist in living life. This development is not that.</p>	<p>There is already enough evidence to show the opening of RMG will have adverse effects on public health.</p>	<p>Was gentrified out of S. Chicago and caught in the middle between that and industry in the E. side.</p>	<p>City needs to do additional work that safeguards are in place. Biden admin is due to revise of PM2.5 levels mid-next year, and should wait for fed assessment before moving forward.</p>	
<p>Unfair to do this during holidays.</p>	<p>This process has been frustrating and hard to perceive as having been in good-faith.</p>								

JAMBOARDS — ROOM FIVE

4. Looking Forward - Beyond the permit decision, what should we be aware of as we embark on other policy or process change initiatives? Do you have any specific recommendations?

City needs to reevaluate the permit process. If city allows this permit, allows other companies to outsource pollution to other companies they manage.

Like Ford, they can increase their allowable pollution by creating a small subsidiary to outsource more pollution.

City has some avenue of community dialogue, but needs to show that they are taking seriously the community dialogue.

Deny the permit, regardless what was already decided and need to listen to teh communities, for public health, for the community.

I think the city has to do a lot more leg work and really invest time in the communities. 10th ward is the largest ward in the city and has 50,000 residents. More public outreach needs to be done.

Fair housing and civil rights act and not perpetuate segregation.

City has laws and regs, and are ignoring their own laws.

JAMBOARDS —ROOM SIX

1. Benefits - Based on what you have heard thus far, please share some of the potential benefits of this proposal on you and your community. Who specifically benefits?

15 yrs; works in area; who benefits and burdens are important; hopes voice as resident and employee is heard; kids go to school in the community; as long as the company follows the guidelines, and is monitored...Lives are

Everyone can benefit from the company--company, employees, area businesses

How benefit: growth, job opportunities; businesses bring other businesses to the community

(cont'd)...as long as the company follows the guidelines, and is monitored...Lives are at stake

2. Burdens - Based on what you have heard thus far, please share some of the potential burdens of this proposal on you and your community. Who specifically is burdened?

Who is burdened by the proposal: employees, company--if proposal got shot down. Participant is an employee who would leave the area

Heavy traffic

3. Lived Experience - Is there anything else that you want people who are working on this proposal to know or think about based on your experience as a community member?

Company is making efforts on new technology--people working on this should know that, and give the company the opportunity to operate

I've worked for General Iron for 38 years and have fortunately not experienced any respiratory issues.

JAMBOARDS —ROOM SIX

4. Looking Forward - Beyond the permit decision, what should we be aware of as we embark on other policy or process change initiatives? Do you have any specific recommendations?

There should be a time limit--timeframe. It's taken too long to decide. Give the company an opportunity to monitor the situation. This is a different company than on the North Side.

It shouldn't take over a year to monitor, but it has. There are a lot of safety measures--the employee feels safe there compared to at other recycling facilities. Employees aren't fired for putting safety first.

The community should know that it's a safe environment. They give safety training on a weekly basis, reiterate it to keep points fresh. Company does air monitoring hourly, documents are available. Anyone can visit.

**(cont'd)
Anyone
can visit.**

JAMBOARDS — ROOM SEVEN

1. Benefits - Based on what you have heard thus far, please share some of the potential benefits of this proposal on you and your community. Who specifically benefits?

RECYCLING is great for the environment. Keeping metal out of the landfill benefits all.

This industry benefits wealthy people at the cost of local residents.

This process benefits the City in how it is framed. The graphs and tables, the trends. The way that the data has been presented has been to benefit the City. It has been called out by health officials as unethical.

RECYCLING is a benefit

2. Burdens - Based on what you have heard thus far, please share some of the potential burdens of this proposal on you and your community. Who specifically is burdened?

There will be no burdens. Recycling benefits the entire Chicagoland area. Jobs will be created which benefits residents of the 10th ward

The burdens are far greater than the benefits. Any industry that has negative impacts on resident's health is not beneficial to the community.

We are paying with our lungs and lives. There is no safe amount of pollution.

Metal recycling poisons the soil. It can also be absorbed into water. Fine particulate matter/dust is hard to contain.

The process is also a burden. The process is flawed in terms of the amount of information collected. It is not a cumulative impact report, which is what is needed.

Burden is pollution on community

Process is upholding racist systems.

JAMBOARDS — ROOM SEVEN

3. Lived Experience - Is there anything else that you want people who are working on this proposal to know or think about based on your experience as a community member?

This is a community that has suffered too much from burdens of pollution, lack of investment, lack of representation. This is going to further harm people.

This issue with General Iron - there has been a lack of engagement with the community from anyone in the City.

Enough of the dirty industry! The SE side deserves better. Is this really the only type of investment that can be offered to our neighborhood? I'm tired of seeing dirty piles of scrap when I come home into my neighborhood.

When the mills closed we suffered and still suffer mostly because business doesn't want to locate with taxes so high. RMG purchased the old Republic Steel property 20 plus years ago and employed over 200 people.

Everything is starting to get developed and we are poised for a great comeback. Again, there is a handful of people who are loud that want nothing. We always have been and always will be an industrial Ward.

It smells bad here often.

There is a cumulative impact of what we are going through, reports of dead wildlife, lead in water, there are barriers to things that should be a given from an environmental perspective.

We need to move in a new direction. The SE side does not have to continue to be home to dirty industry. My dad worked at Republic Steel.

He is amazed at how he himself is still alive when all of his co-workers have died from some form of cancer. Yes, it put a roof over our heads but look at how so many people have paid with their lives.

I live on 111th State Line. Cargill is notorious for emitting foul smells. They are in Indiana.

JAMBOARDS — ROOM SEVEN

4. Looking Forward - Beyond the permit decision, what should we be aware of as we embark on other policy or process change initiatives? Do you have any specific recommendations?

Change the way you do your meetings

Change the way we do things, air quality ordinance, legislation to move us in a different direction.

Cumulative Impact Report

Timely data and reports to community and stakeholders

The City should be aware that we live in a time where people have no values. No matter what is proposed, what you think, you have a group of people who will oppose you on anything.

Reduce pollution overall as part of bigger conversation related to climate change

Q: Why are we being compared to Lincoln Park?

Q: Will you discuss 10 Yr. Air Quality Report?

Q: Why have we not gone to a Cumulative Impact Report?

Q: Does anyone have any data on life expectancies for people living in "cleaner" areas of Chicago compared to people living on the SE side?

Q: What kind of pollutants do we expect from the shredding of these cars? Shift discussion to those potential dangers.

Appendix D:

Existing Conditions Summary

INTRODUCTION

This HIA utilized a cumulative impact framework. As such, we relied heavily on CDPH's [Air Quality & Health Index](#) which evaluates community-level vulnerability to pollution across neighborhoods. The Air Quality & Health Index combines community-level data on air pollution, health, and social factors to identify the areas in Chicago that are most vulnerable to the effects of air pollution. By considering the multiple components of the Index, and additional related indicators, that contribute to cumulative impact in South Deering, East Side and Hegewisch, this assessment describes the totality of the risks in these communities as related to environmental, health and socioeconomic factors. The Air Quality & Health Index includes two components representing pollution burden – air pollution exposures and polluting sites, and two components representing population characteristics – health factors and social factors. The existing conditions in South Deering, East Side and Hegewisch were assessed using more than 140 indicators representing each of these four components.

METHODOLOGY

For the purposes of this HIA, we chose to look at existing conditions within the three community areas most affected by potential operations at the RMG site. The three community areas are South Deering (51), East Side (52) and Hegewisch (55); when community area data was not available, we used 60617 and 60633 ZIP Codes to represent these Southeast Side neighborhoods. Almost one hundred percent (99.8%) of East Side, 55.6% of South Deering and 8.1% of Hegewisch are in 60617, while 91.9% of Hegewisch and 44.3% of South Deering are in 60633.

At the end of this summary, each of the 143 indicators we evaluated has a graphical display by community area or ZIP Code, an indicator definition, listing of data sources and who performed the analysis, and technical notes which provide additional information on the specific calculation and data limitations. More than 80% of the indicators (118) were directly downloaded from the [Chicago Health Atlas](#), [Metopio](#), [Chicago Metropolitan Agency for Planning](#) (CMAP), and [University of Illinois at Chicago School of Public Health](#) (UIC SPH) based on data collected and disseminated from the Chicago Department of Public Health (CDPH), Chicago Police Department, CMAP, IDPH, US Bureau of Labor Statistics, US Census Bureau, US Centers for Disease Control & Prevention (CDC), and US Environmental Protection Agency (EPA). The remaining 25 indicators were analyzed by CDPH staff utilizing hospital discharge data from IDPH, CDPH Environmental Permitting & Inspection Program data, toxic release data from US EPA, cancer incidence data from the Illinois State Cancer Registry, population data from the American Community Survey, and community health center data from CDPH, US Health Resources & Services Administration (HRSA), and the Illinois Primary Health Care Association (IPHCA). Details on data collection and calculation methods are available for each indicator at the end of the summary.

In order to compare the Southeast Side community areas (or ZIP Codes) with other Chicago community areas (or ZIP Codes), each indicator was ranked and divided into four groups, called quartiles, from low to high: first quartile = 0-25%, second quartile = 25-50%, third quartile = 50-75%, fourth quartile = 75-100%. The following indicators did not undergo quartile analysis because they were relative indices that did not need further analysis to compare community areas: social vulnerability index, child opportunity index, economic hardship index, and the vulnerable demographic index.

When margins of error were able and appropriate to be calculated, we used these measures to make statements regarding whether the difference between Southeast Side community areas/ZIP Codes and Chicago overall was statistically significant.

For some indicators, we present maps in the following narrative section that were directly downloaded from the Chicago Health Atlas, Metopio or UIC SPH. Two indicators – percentage of non-White and/or Hispanic/Latino and industrial land use – were mapped by CDPH staff using ESRI ArcGIS. The Air Quality & Health Index map, including the Southeast Side spotlight map, and its four component maps were created using the [Air Quality & Health data](#) prepared by the CDPH Office of Epidemiology as part of the Air Quality & Health Report.

Because so many types of data collection and analysis methods were used for the different indicators in the Existing Conditions Summary, the specific limitations for each indicator are described in the portion of the assessment following the narrative. (*Note: Data limitations for the Air Quality & Health Index are detailed in the [report](#).*) Overarching data limitations of this assessment include the time lag between 2022 and when the data were collected (some data dates from 2014), errors related to self-report, sampling and response for survey data such as the American Community Survey, Healthy Chicago Survey and the Behavioral Risk Factor Surveillance System, and errors related to modeling for environmental indicators from US EPA's EJSCREEN and health data from CDC's PLACES. To address these limitations, we used the best and most current data available from only the most reliable and reputable sources, margins of error or confidence intervals to express the variation from the true population estimate, and utilized or ensured that accepted practices for sampling, modeling and estimating rates were performed.

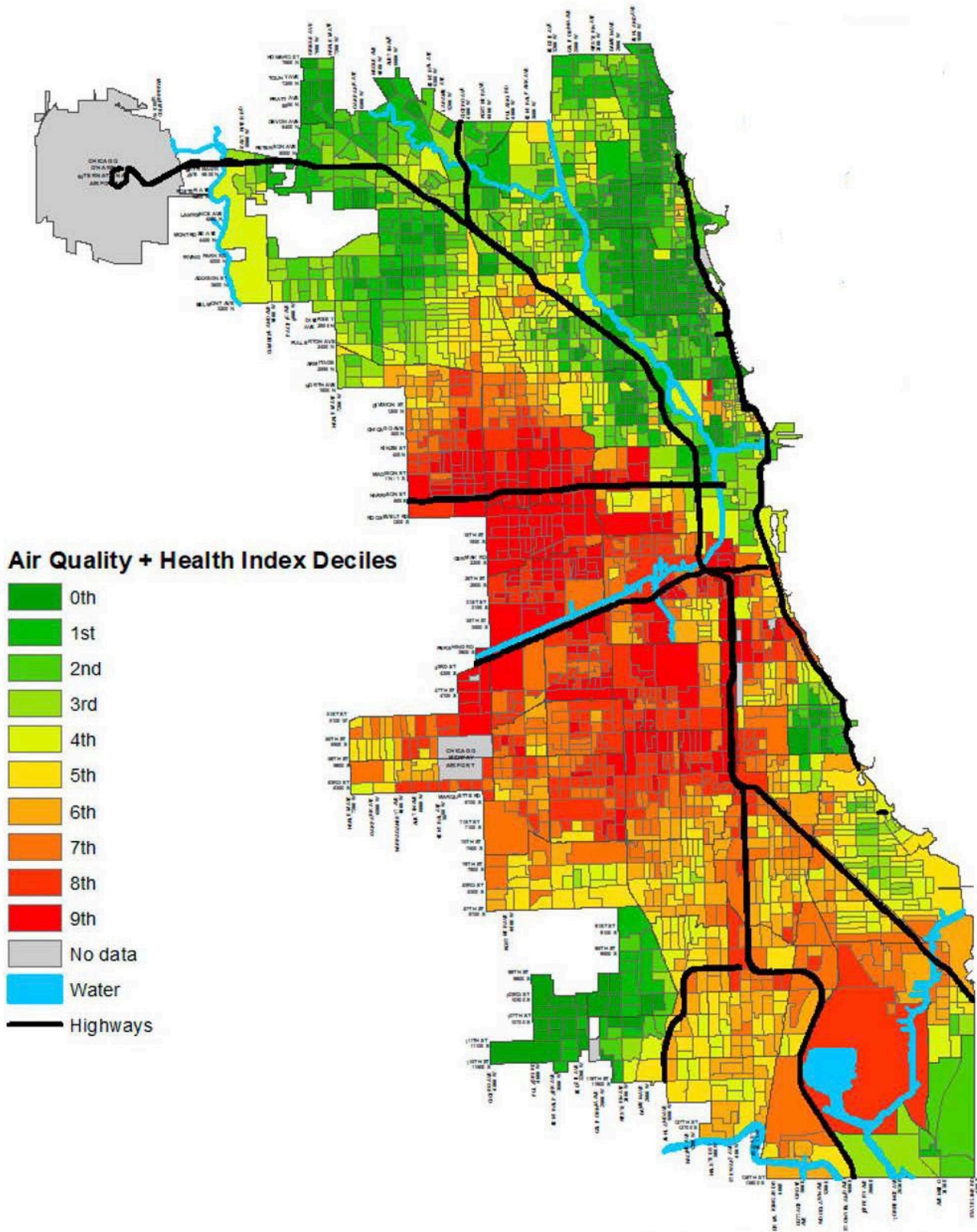
OVERVIEW OF EXISTING CONDITIONS

For Chicago's Air Quality & Health Index map (Figure 1), census block groups in green are less vulnerable, while block groups in red are more vulnerable. The areas of greatest concern are primarily located on the South and West Sides of the city. In particular, parts of the city bisected by major highways with high concentrations of industry are over-burdened, experiencing high levels of both pollution and vulnerability. Figures 2a and 2b provides a closer look at the Air Quality & Health Index deciles for the Southeast Side. Of the three community areas under study, South Deering is the most vulnerable to the effects of air pollution as evidenced by its census blocks scoring in the sixth up to the eighth decile. The northern part of East Side scores slightly below South Deering, while the southern part of East Side and all of Hegewisch score in the lower half of deciles.

When thinking about the population affected, we looked at total population and population density of community areas. The 2015-2019 total population in the Southeast Side ranges from 23,449 in East Side, 15,488 in South Deering and 9,003 in Hegewisch (D2). Hegewisch and South Deering are in the first quartile for all Chicago community areas, and East Side is in the second quartile. The estimated number of Chicago residents living in Southeast Side community areas with Air Quality & Health Index deciles exceeding the fifth decile is 26,263. The population change between 2010 and 2020 in the southeast side ranges from -6.6% (-997) in South Deering, -5.4% (-1,237) in East Side and 5.9% (553) in Hegewisch. For comparison, the population change in Chicago overall was 1.9% (47,557). South Deering and East Side are in the first quartile among all community areas for population growth, and Hegewisch is in the fourth quartile. (D3). The population density (Figure 3, D4) in the Southeast Side ranges from 8,082 persons/mi² in East Side, 1,939, persons/mi² in Hegewisch and 1,518 persons/mi² in South Deering. For comparison, Chicago overall is 11,918 persons/mi². South Deering, Hegewisch and East Side are in the first quartile of all community areas for population density.

We'll be exploring each of the Air Quality & Health Index components and related data in the sections that follow.

Figure 1. Air Quality & Health Index¹, Chicago, 2020



1 https://www.chicago.gov/city/en/depts/cdph/provdrs/healthy_communities/svcs/air-quality-and-health.html

Figure 2a. Air Quality & Health Index percentiles East Side, Hegewisch and South Deering by census block², 2020

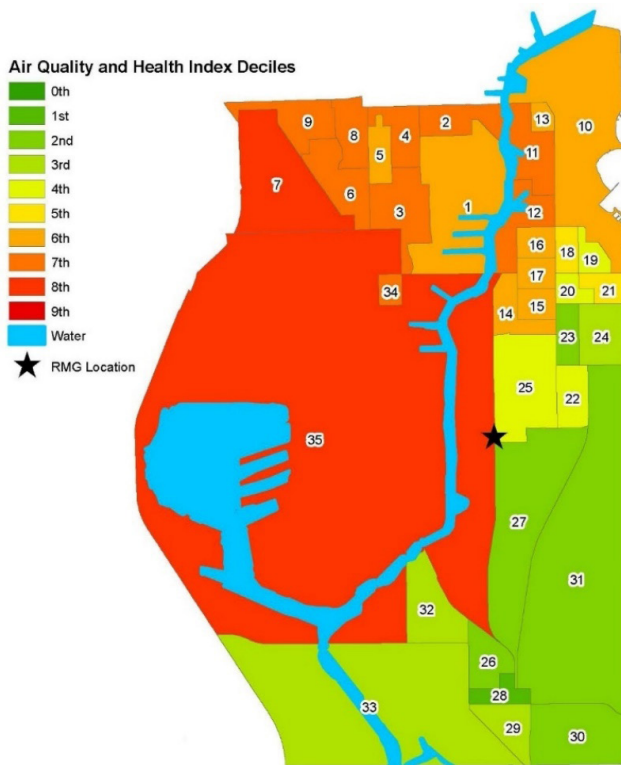


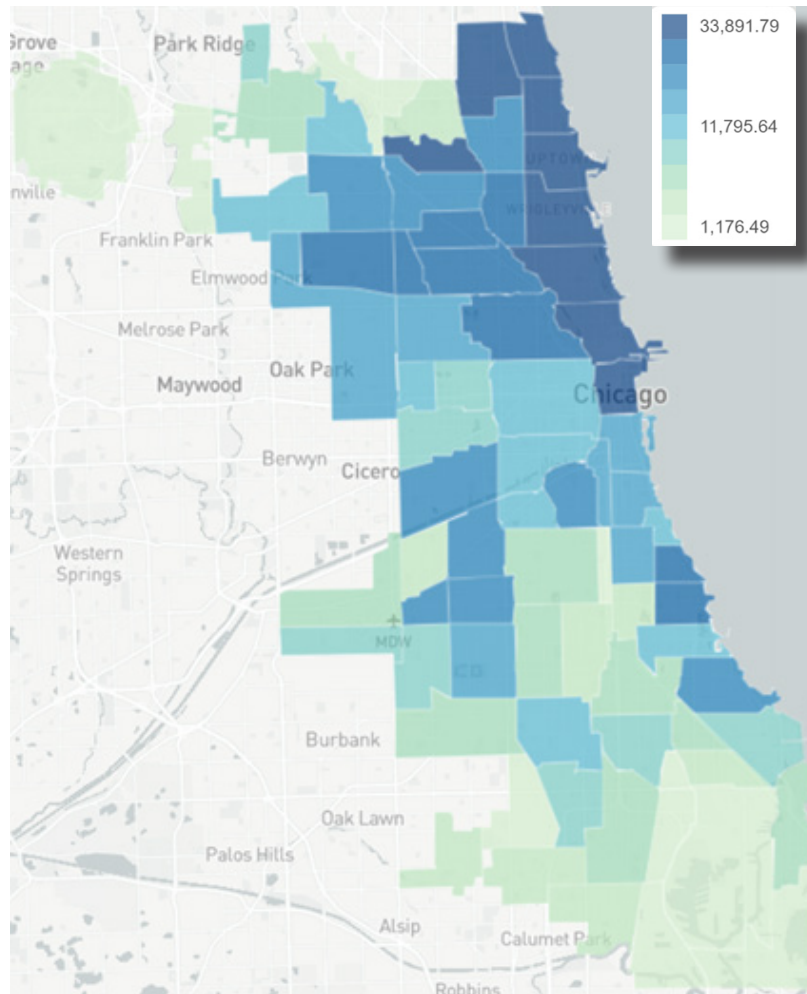
Figure 2b. Air Quality & Health Index deciles and population for East Side, Hegewisch and South Deering by census block³, 2020

Map Label	Census Block Group	Decile	Population
SOUTH DEERING			
1	170315101002	61	1599
2	170315101001	75	1428
3	170315102003	78	1053
4	170315102001	74	1004
5	170315102002	67	744
6	170315103004	79	2008
7	170315103003	82	741
8	170315103001	75	1290
9	170315103002	75	1221
34	170318388001	77	978
35	170318388002	84	2548
EAST SIDE			
10	170315201001	68	2019
11	170315202003	72	1810
12	170315202002	79	923
13	170315202001	60	839
14	170315203004	64	1707
15	170315203003	62	1525
16	170315203001	64	1459
17	170315203002	67	1367
18	170315204004	51	1036
19	170315204001	46	857
20	170315204003	47	1156
21	170315204002	58	1137
22	170315205003	40	1710
23	170315205001	27	686
24	170315205002	33	2716
25	170315206001	48	2824
HEGEWISCH			
26	170315501006	23	1772
27	170315501005	23	396
28	170315501004	11	601
29	170315501003	35	2239
30	170315501002	24	674
31	170315501001	25	841
32	170315502001	35	2083
33	170315502002	38	778

² https://www.chicago.gov/city/en/depts/cdph/provdrs/healthy_communities/svcs/air-quality-and-health.html

³ https://www.chicago.gov/city/en/depts/cdph/provdrs/healthy_communities/svcs/air-quality-and-health.html

Figure 3. Population density (residents/mile²) for Chicago by community area⁴, 2015-2019

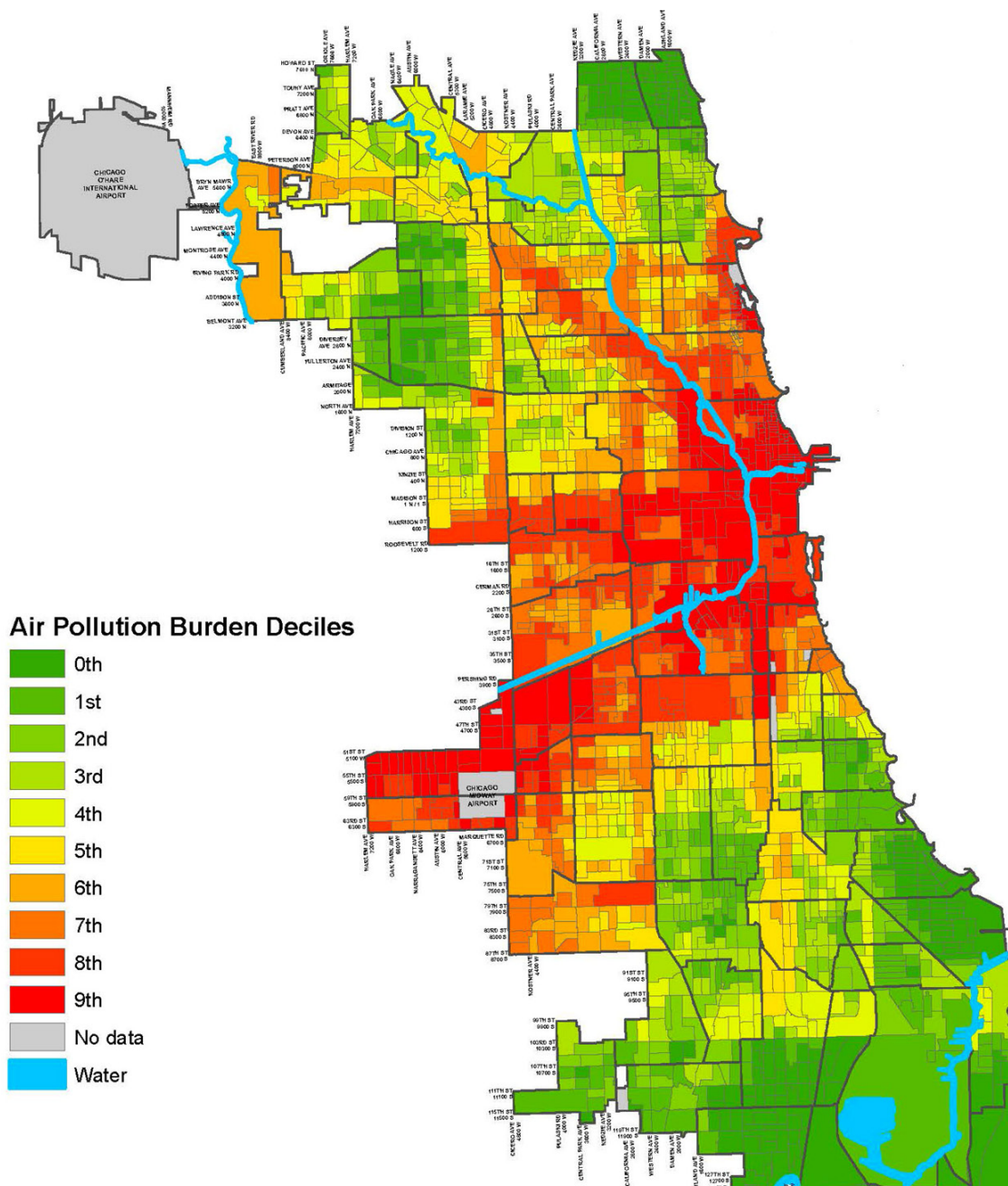


4 U.S. Census Bureau Gazetteer Files (2015 files); Data curated by Metopio.

OVERVIEW OF AIR POLLUTION EXPOSURES

The Air Quality & Health Index – Air Pollution Exposures component includes estimated air concentrations of particulate matter (PM2.5), ozone and diesel particulate matter, cancer and respiratory risk from air toxics, traffic volume and proximity, and proximity to potential chemical accidents. Figure 4 displays the combined effect of these measures as an indicator of potential human exposure to pollutants. The southern and northern neighborhoods of Chicago score lower in terms of air pollution exposures deciles than western and central neighborhoods, in general.

Figure 4. Air Pollution Exposures Component, Air Quality & Health Index⁵ Chicago, 2020



Estimated average annual PM_{2.5} concentrations in 2017 on the Southeast Side range from 9.34 µg/m³ in South Deering, 9.32 µg/m³ in Hegewisch and 9.25 µg/m³ in East Side. For comparison, Chicago overall is 9.42 µg/m³. South Deering, Hegewisch and East Side are in the first quartile of estimated PM_{2.5} concentrations among all community areas (D5).

US EPA has calculated an [Environmental Justice \(EJ\) Index](#) for each of the environmental indicators included in [EJSCREEN](#), which are also included in this HIA existing conditions assessment. Each environmental indicator is weighted by the census block's proportion of low-income and minority residents and is reported as a percentile. The EJ Index is higher in areas with larger numbers of mainly low-income and/or minority residents, giving rise to higher environmental indicator values than when the EJ Index is not applied. In the case of estimated PM_{2.5} concentrations, when the EJ Index is applied, the weighted index of vulnerability to PM_{2.5} on the Southeast Side ranges from 90.6% in South Deering, 88.4% in East Side, and 72.1% in Hegewisch. For comparison, Chicago overall is 70.3%. Among all community areas, South Deering and East Side are in the fourth quartile, and Hegewisch is in the second quartile (D6).

Estimated ozone concentrations in 2017 on the Southeast Side range from 47.70 parts per billion (ppb) in East Side, 47.58 ppb in South Deering, and 47.26 ppb in Hegewisch. For comparison, Chicago overall is 46.86 ppb. East Side and South Deering are in the fourth quartile among all community areas for ozone concentrations, and Hegewisch is in the third quartile (D7). When the EJ Index is applied to this indicator, the weighted index of vulnerability to ozone on the Southeast Side ranges from 91.4% in South Deering, 89.6% in East Side, and 72.6% in Hegewisch. For comparison, Chicago overall is 71.0%. Among all community areas, South Deering and East Side are in the fourth quartile, and Hegewisch is in the second quartile (D8).

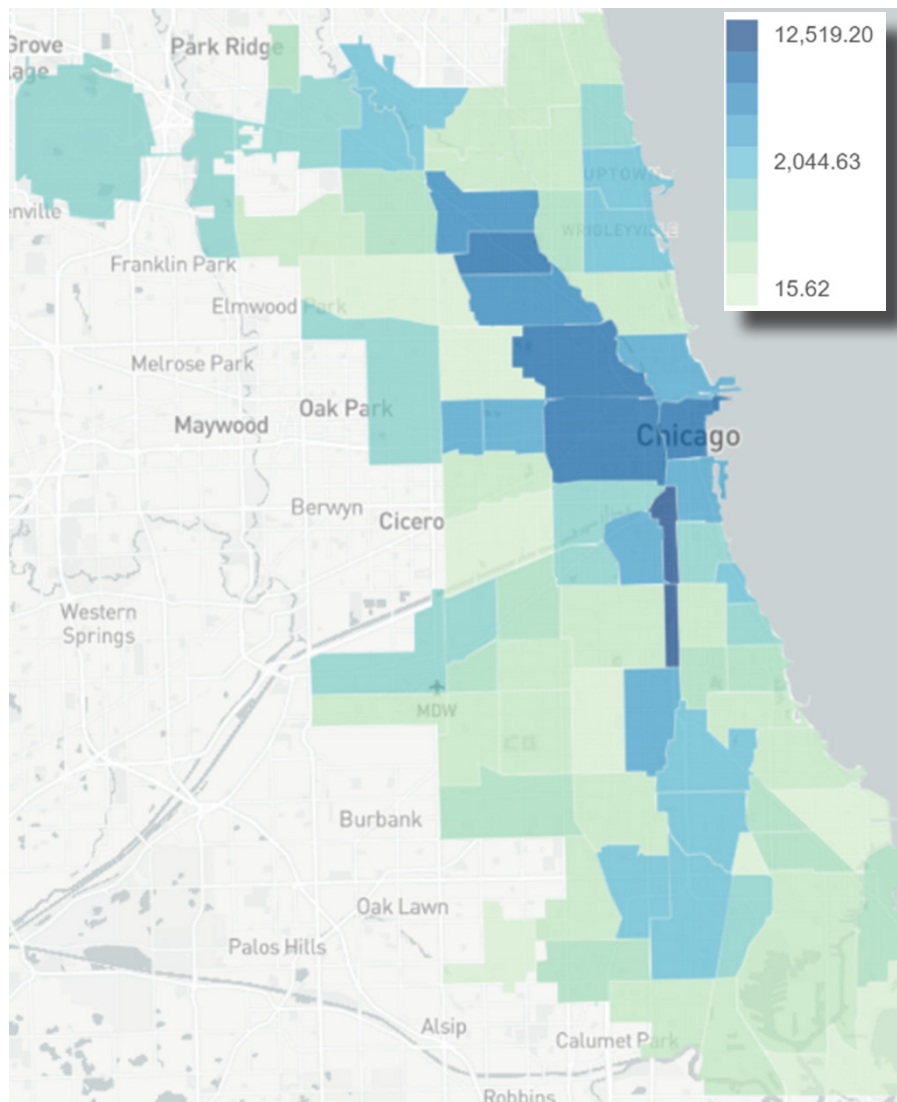
Estimated particulate matter concentrations from diesel engines in 2014 on the Southeast Side range from 1.12 µg/m³ in East Side, 1.11 µg/m³ in South Deering, and 0.80 µg/m³ in Hegewisch. For comparison, Chicago overall is 1.14 µg/m³. East Side and South Deering are in the third quartile among all community areas for diesel particulate matter concentrations, and Hegewisch is in the first quartile (D9). When the EJ Index is applied to this indicator, the weighted index of vulnerability to diesel particulate matter on the Southeast Side ranges from 95.0% in South Deering, 94.4% in East Side, and 76.8% in Hegewisch. For comparison, Chicago overall is 70.5%. Among all community areas, South Deering and East Side are in the fourth quartile, and Hegewisch is in the second quartile (D10).

The lifetime inhalation cancer risk is the probability of developing cancer over the course of a lifetime, assuming exposure to hazardous air pollutants 24 hours a day for 70 years. The National Emission Standard for Hazardous Pollutants rule sets an upper limit of acceptable risk at about 1 in 10,000 or 100 in one million⁶. Neither Chicago nor any of its community areas exceed this standard. Lifetime cancer risk from inhalation of air toxics in the Southeast Side in 2014 range from 33.5 per million in South Deering, 33.1 per million in Hegewisch and 32.8 per million in East Side. For comparison, Chicago overall is 38.3 per million. South Deering, East Side and Hegewisch are in the first quartile among all community areas (D11). When the EJ Index is applied to this indicator, the weighted index of vulnerability to lifetime inhalation cancer risk on the Southeast Side ranges from 89.8% in South Deering, 87.1% in East Side, and 71.2% in Hegewisch. For comparison, Chicago overall is 69.5%. Among all community areas, South Deering and East Side are in the fourth quartile, and Hegewisch is in the second quartile (D12).

6 United States Environmental Protection Agency, Residual Risk Report to Congress, March 1999, EPA-453/R-99-001. Available at https://www.epa.gov/sites/default/files/2013-08/documents/risk_rep.pdf

The Respiratory Hazard Index tells us the risk of adverse respiratory health effects from breathing in air toxics over a lifetime or 70 years. No adverse health effects are expected if the measure is less than one⁷. None of the community areas or Chicago exceed one, meaning air toxics are unlikely to cause adverse respiratory health effects over a lifetime of exposure. The Hazard Index for respiratory effects in the Southeast Side in 2014 range from 0.49 in South Deering, 0.47 in East Side and 0.43 in Hegewisch. For comparison, Chicago overall is 0.54. South Deering is in the second quartile, and East Side and Hegewisch are in the first quartile among all community areas (D13). When the EJ Index is applied to this indicator, the weighted index of vulnerability to respiratory hazards on the Southeast Side ranges from 89.9% in South Deering, 87.2% in East Side, and 70.7% in Hegewisch. For comparison, Chicago overall is 69.0%. Among all community areas, South Deering and East Side are in the fourth quartile, and Hegewisch is in the second quartile (D14).

Figure 5. Proximity to vehicle traffic (distance-weighted vehicles) by community area⁸, Chicago, 2017



7 United States Environmental Protection Agency, Residual Risk Report to Congress, March 1999, EPA-453/R-99-001. Available at https://www.epa.gov/sites/default/files/2013-08/documents/risk_rep.pdf

8 Environmental Protection Agency (EPA) (EJSCREEN and the Department of Transportation); Data curated by Metopio using data downloaded from EJSCREEN

An increase in traffic was one of the concerns raised by Southeast Side community members. Traffic intensity in 2017 on the Southeast Side ranges from 805 distance-weighted vehicles (count of vehicles at major roads within 500 meters, divided by distance in meters) in East Side, 430 distance-weighted vehicles in South Deering, and 183 distance-weighted vehicles in Hegewisch (Figure 5). For comparison, Chicago overall is 1,458 distance-weighted vehicles. East Side is in the second quartile of all community areas for traffic intensity, and South Deering and Hegewisch are in the first quartile (D15). When the EJ Index is applied to this indicator, the weighted index of vulnerability to nearby traffic on the Southeast Side ranges from 86.4% in East Side, 85.6% in South Deering, and 68.2% in Hegewisch. For comparison, Chicago overall is 65.1%. Among all community areas, South Deering and East Side are in the fourth quartile, and Hegewisch is in the second quartile (D16). Traffic crashes in the Southeast Side community areas are in the first and second quartiles of all community areas, accounting for 1.8% (1,661) of all traffic crashes in Chicago in 2020 (D17).

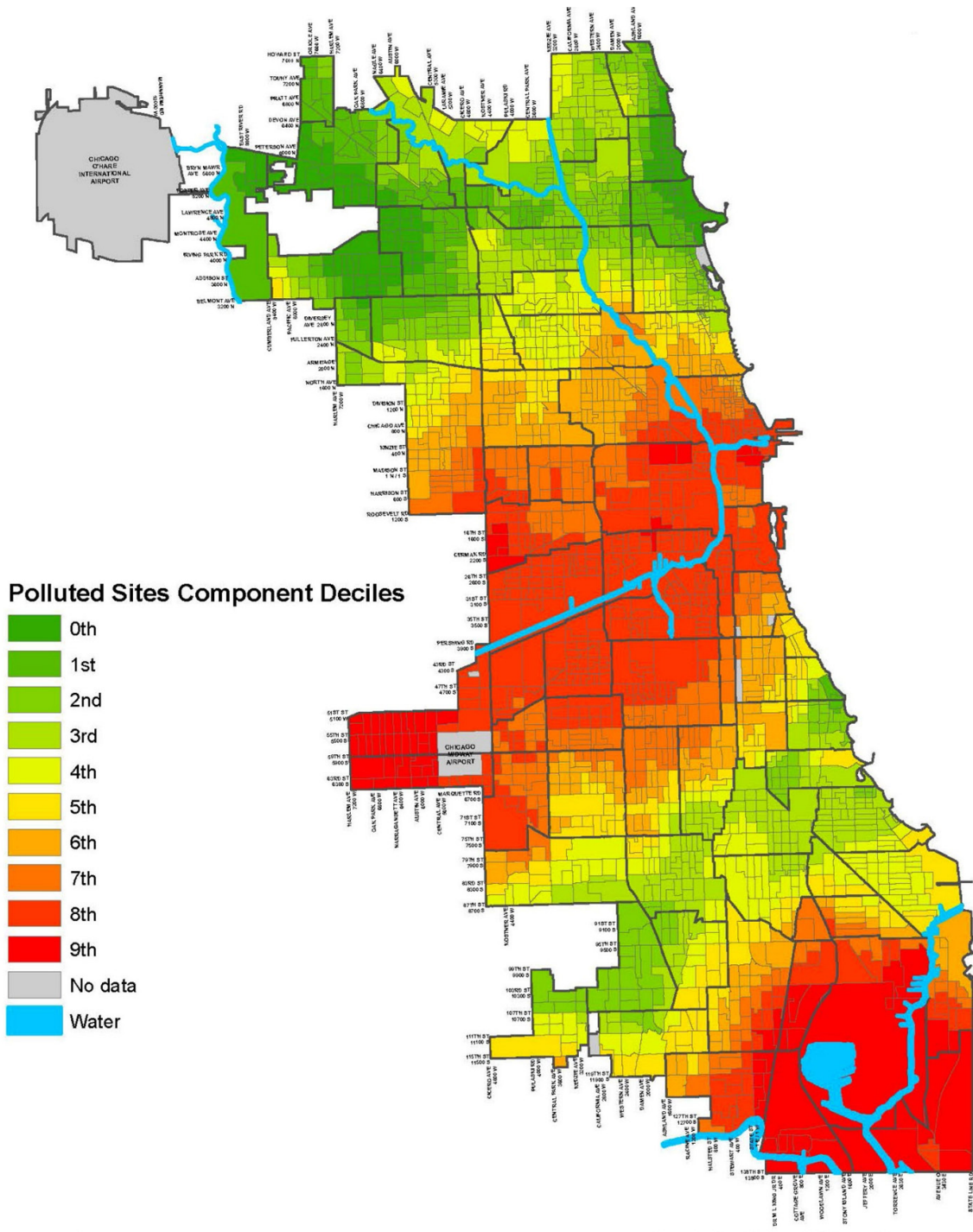
Proximity to potential chemical accidents in 2020 ranges from 3.3 distance-weighted sites (count of [Risk Management Plan](#) facilities within 5 kilometers, divided by distance in kilometers) in Hegewisch, 3.1 distance-weighted sites in South Deering, and 2.1 distance-weighted sites in Hegewisch. For comparison, Chicago overall is 2.2 distance-weighted sites. Hegewisch is in the fourth quartile among all community areas for proximity to potential chemical accidents, and South Deering and East Side are in the third quartile (D18). When the EJ Index is applied to this indicator, the weighted index of vulnerability to potential chemical accidents on the Southeast Side ranges from 96.7% in South Deering, 94.1% in East Side, and 86.5% in Hegewisch. For comparison, Chicago overall is 71.3%. Among all community areas, South Deering and East Side are in the fourth quartile, and Hegewisch is in the second quartile (D19).

In 2020, 84 facilities located in Chicago reported to the [Toxic Release Inventory \(TRI\) Program](#), which tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. Eight of these facilities were in Southeast Chicago (60617 and 60633), putting these Southeast ZIP Codes in the fourth quartile among all Chicago ZIP Codes (D20). A total of 962,073 pounds of toxic chemicals were reported as being released into the air by Chicago industrial facilities in 2020. One-third of all releases or 331,161 pounds were released from the eight facilities located on the Southeast side (60617 and 60633). Again, making the 60633 and 60617 ZIP Codes in the fourth quartile among all Chicago ZIP Codes (D21).

OVERVIEW OF POLLUTED SITES

The Air Quality & Health Index – Polluted Sites component includes proximity to hazardous waste treatment, storage and disposal facilities and Superfund Program sites. Figure 6 displays the combined effect of these measures as an indicator of adverse environmental conditions caused by pollutants such as existing or potential contamination. The central, western, and southern neighborhoods in Chicago are in the highest of deciles compared to other parts of the city.

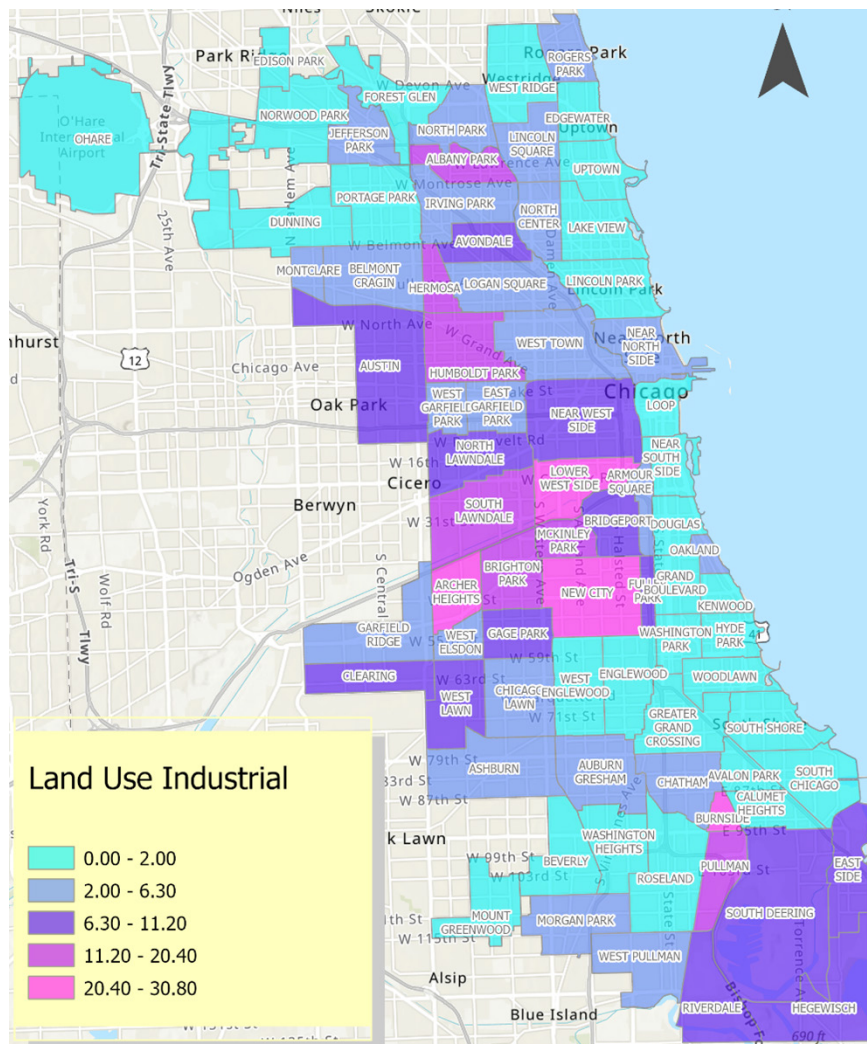
Figure 6. Polluted Sites Component, Air Quality & Health Index⁹, Chicago, 2020



Proximity to hazardous waste management sites in 2020 ranges from 5.5 distance-weighted sites (count of hazardous waste facilities within 5 kilometers, divided by distance in kilometers) in Hegewisch, 4.8 distance-weighted sites in in South Deering, and 2.5 distance-weighted sites in East Side. For comparison, Chicago overall is 8.7 distance-weighted sites. Hegewisch is in the second quartile among all community areas, and South Deering and East Side are in the first quartile (D22). When the EJ Index is applied to this indicator, the weighted index of vulnerability to hazardous waste treatment sites on the Southeast Side ranges from 92.3% in South Deering, 86.5% in East Side, and 81.3% in Hegewisch. For comparison, Chicago overall is 69.1%. Among all community areas, South Deering is in the fourth quartile, East Side is in the third quartile, and Hegewisch is in the second quartile (D23).

Proximity to Superfund sites in 2020 ranges from 1.6 distance-weighted sites (count of proposed or listed [National Priorities List sites](#) within 5 kilometers, divided by distance in kilometers) in Hegewisch, 0.5 distance-weighted sites in in South Deering, and 0.4 distance-weighted sites in East Side. For comparison, Chicago overall is 0.1 distance-weighted sites. All three Southeast Side community areas are in the fourth quartile among all community areas (D24). When the EJ Index is applied to this indicator, the weighted index of vulnerability to Superfund sites on the Southeast Side ranges from 97.2% in South Deering, 95.9% in East Side, and 93.1% in Hegewisch. For comparison, Chicago overall is 70.9%. Among all community areas, South Deering, East Side and Hegewisch are in the fourth quartile (D25).

Figure 7. Industrial land use in Chicago by community area¹⁰, 2015



¹⁰ Chicago Metropolitan Agency for Planning (CMAP) analysis of the 2015 [Land Use Inventory](#). Data was extracted from the [Community Data Snapshot, Chicago Community Area Series, August 2021 Release](#) by the Chicago Department of Public Health.

As of 2015, industrial land use in the Southeast Side ranged from 9.3% in South Deering, 9.0% in Hegewisch and 7.8% in East Side. For comparison, Chicago overall is 5.6% (Figure 7). East Side and South Deering are in the third quartile for industrial land use among all Chicago community areas, while Hegewisch is in the fourth quartile (D26). In 2018, manufacturing, transportation and warehousing jobs accounted for 31% to 47% of all workplaces in South Deering, East Side and Hegewisch. Chicago overall is 18%. All three Southeast side community areas are in the fourth quartile for manufacturing, transportation and warehousing jobs among all community areas (D27, D28).

Proximity to water polluting sites in 2020 is less than one distance-weighted sites ([Risk-Screening Environmental Indicators](#) modeled toxic concentrations at stream segments within 500 meters, divided by distance in kilometers) for all three Southeast Side community areas. For comparison, Chicago overall is 12.1 distance-weighted sites. All three Southeast Side community areas are in the second quartile among all community areas (D29). When the EJ Index is applied to this indicator, the weighted index of vulnerability to water polluting sites on the Southeast Side ranges from 79.2% in East Side, 79.0% in South Deering, and 75.6% in Hegewisch. For comparison, Chicago overall is 66.4%. Among all community areas, East Side is in the fourth quartile, and South Deering and Hegewisch are in the third quartile (D30).

US EPA uses the percentage of housing units built pre-1960 as an indicator of potential lead paint exposure. Percentage of pre-1960 housing units for 2014-2018 ranges from 88.3% in South Deering, 88.2% in East Side and 55.1% in Hegewisch. For comparison, Chicago overall is 68.0%. South Deering and East Side are in the fourth quartile among all community areas, and Hegewisch is in the first quartile (D31). When the EJ Index is applied to this indicator, the weighted index of vulnerability to lead paint exposure on the Southeast Side ranges from 97.5% in South Deering, 97.4% in East Side, and 81.9% in Hegewisch. For comparison, Chicago overall is 73.0%. Among all community areas, East Side and South Deering are in the fourth quartile, and Hegewisch is in the second quartile (D32). The percentage of children ages 1-5 years old with a blood lead level (BLL) at or above 5 µg/dL in 2020 ranges from 2.3% in East Side, 1.4% in South Deering and 0% in Hegewisch. For comparison, Chicago overall is 2.0%. South Deering and East Side are in the third quartile among all community areas, and Hegewisch is in the first quartile (D33).

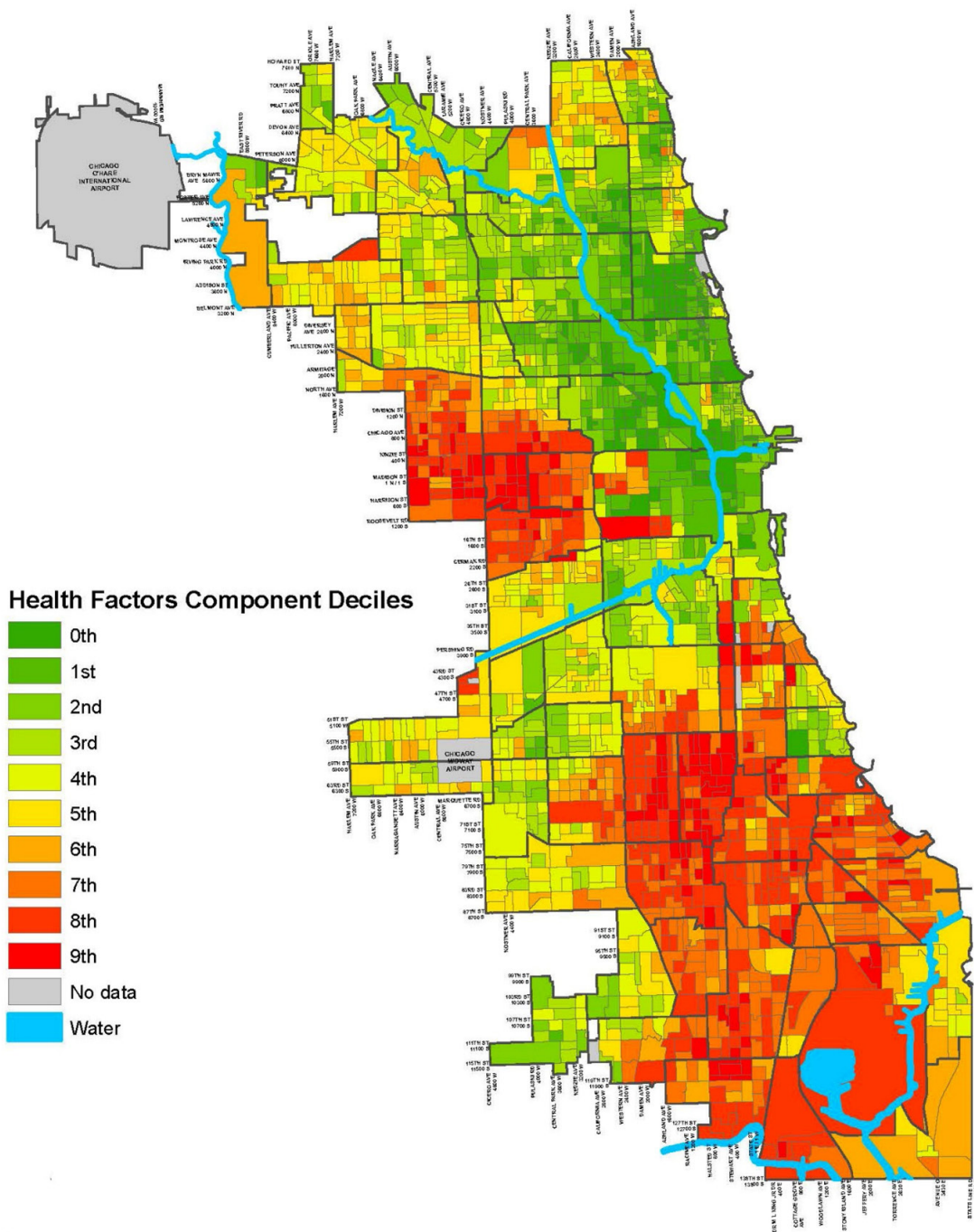
As of November 2021, there were a total of 94 facilities in Chicago with a current air pollution control permit and certificate of operation (COO) for A1 and A2 class types, facilities for which potential and/or actual emissions are 100 tons or more per year. Facilities on the Southeast Side range from 7 in South Deering, 2 in East Side and 1 in Hegewisch. Among all community areas, South Deering is the fourth quartile and East Side and Hegewisch are in the third quartile (D34).

Between October 2018 and January 2021, CDPH environmental inspectors issued 794 Municipal and State code violation notices that have (1) completed the administrative hearing process, (2) are considered closed, (3) the disposition was either default or liable plea, and (4) a fine was assessed. Violations issued to facilities on the Southeast Side range from 10 in South Deering, 3 in East Side and 0 in Hegewisch. Among all community areas, South Deering is the third quartile, East Side is in the second quartile, and Hegewisch is in the first quartile (D35).

OVERVIEW OF HEALTH FACTORS

The Air Quality & Health Index – Health Factors component includes prevalence of asthma, chronic obstructive pulmonary disease (COPD), and coronary heart disease as well as low birth weight, young age (less than 5 years) and old age (65 years and older). Figure 8 displays the combined effect of these measures as an indicator of biological and physical characteristics that make people more likely to experience adverse health impacts from exposure to air pollution. The western and southern neighborhoods in Chicago are in the highest of deciles compared to other parts of the city. Specifically, South Deering, East Side and Hegewisch score in the higher deciles of vulnerability.

Figure 8. Health Factors Component, Air Quality & Health Index¹¹, Chicago, 2020



11 https://www.chicago.gov/city/en/depts/cdph/provdrs/healthy_communities/svcs/air-quality-and-health.html

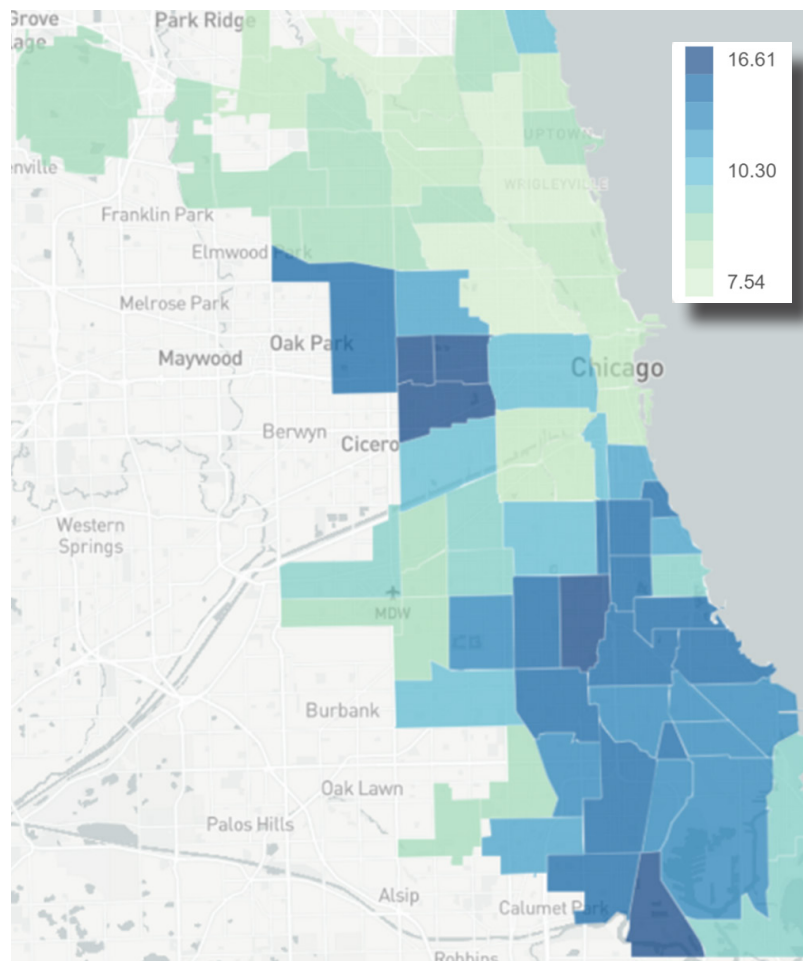
Respiratory Disease

Asthma prevalence among adults in 2018 residing in the Southeast Side is 11.9% in South Deering, and 9.4% in East Side and Hegewisch (Figure 9). For comparison, Chicago overall is 10.0%. The Southeast Side community areas are in the third quartile of asthma rates among all community areas. Asthma prevalence is significantly higher in South Deering, and significantly lower in East Side and Hegewisch, compared to Chicago overall (D36).

Based on findings from the 2018-2019 Health Chicago Survey Junior¹² conducted by CDPH and Lurie Children's Hospital, 16% of Chicago families had a child or children with asthma and rates did not differ significantly by parent race, age or education level. However, other research has shown that in Chicago asthma prevalence varies substantially by race-ethnicity, neighborhood and household income¹³. Based on these prevalence estimates for both children and adults, the estimated number of highly sensitive persons due to asthma in South Deering, East Side and Hegewisch is 5,623 persons. *(Note: The estimate of children with asthma may be an underestimate based on the demographic and socioeconomic populations living in the Southeast Side, asthma rates for Southeast Side children may be higher than the Chicago estimate.)*

The 60617 ZIP Code rates in 2017 for emergency department (ED) visits and hospitalizations due to asthma are higher than Chicago overall; and in the fourth and third quartiles, respectively, compared to all other Chicago ZIP Codes. The 60633 ZIP Code is in the first quartile compared to all other Chicago ZIP Codes, and lower than Chicago overall (D37, D38)

Figure 9. Current asthma (%) among Chicago adults by community area¹⁴, 2018



12 Davis MM, Heffernan ME, Smith TL, Bendelow A, Bharti PK, Prachand NG, Weaver KN, Laflamme EM. Childhood Asthma in Chicago. Voices of Child Health in Chicago Report. Vol 2, Number 6. July 2020. Available at luriechildrens.org/ChildhoodAsthma2020.

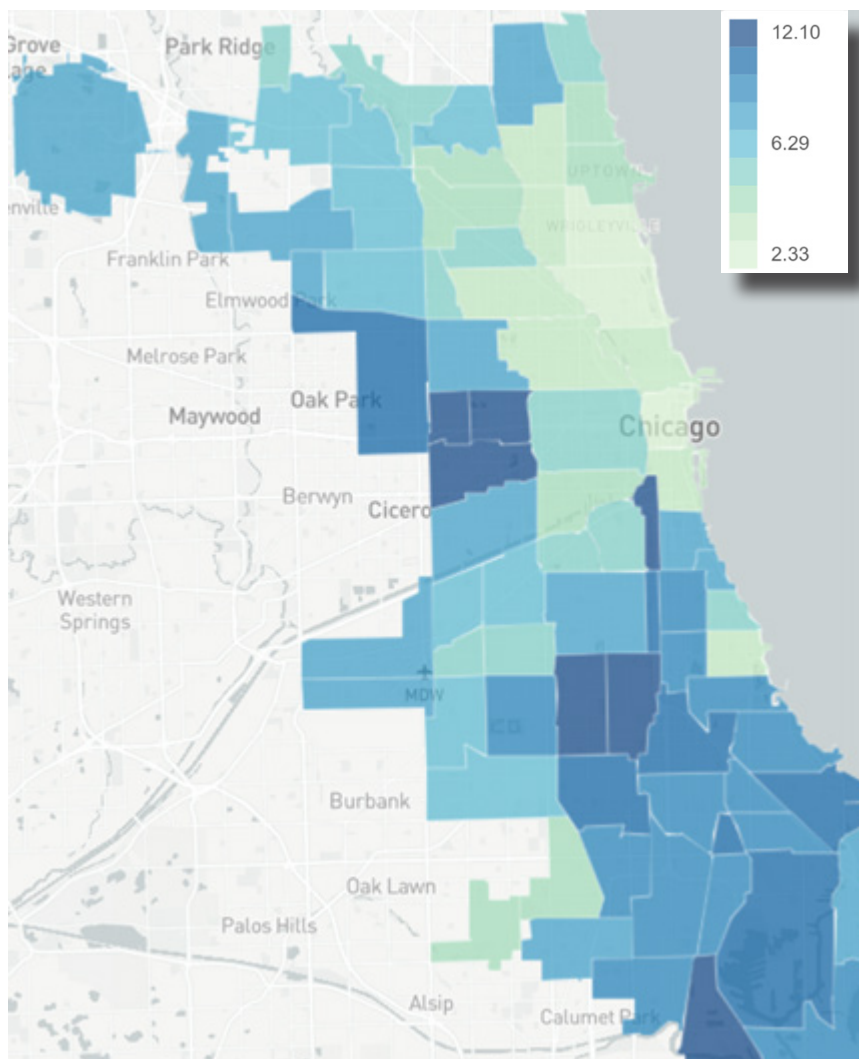
13 Gupta RS et al. Geographic variability in childhood asthma prevalence in Chicago. J Allergy Clin Immunol. 2008; 121(3): 639-645.

14 PLACES; Behavioral Risk Factor Surveillance System (BRFSS). Data curated by Metopio using data downloaded from PLACES.

COPD prevalence among adults in 2018 residing in the Southeast Side ranges from 9.0% in South Deering, 8.2% in Hegewisch, and 7.1% in East Side (Figure 10). For comparison, Chicago overall is 6.6%. Among all community areas, South Deering is the fourth quartile for COPD prevalence, and Hegewisch and East Side are in the third quartile. COPD prevalence is significantly higher in South Deering, East Side and Hegewisch compared to Chicago overall (D39). Based on these prevalence estimates for adults, the estimated number of highly sensitive persons due to COPD in South Deering, East Side and Hegewisch is 2,706 persons.

The 60617 ZIP Code rates in 2017 for ED visits and hospitalizations due to COPD are in fourth quartile of all Chicago ZIP Codes and significantly higher than Chicago overall. The 60633 ZIP Code is in the first quartile of all Chicago ZIP Codes, and lower than Chicago overall (D40, D41). The annual average chronic lower respiratory disease (CLRD) mortality rates for 2015-2019 are in the fourth quartile for Hegewisch, third quartile for South Deering and second quartile for East Side. There is no significant difference between CLRD mortality rates between the Southeast Side community areas and Chicago (D42). The 60617 ZIP Code rates in 2017 for ED visits and hospitalizations due to COPD are in fourth quartile of all Chicago ZIP Codes and significantly higher than Chicago overall. The 60633 ZIP Code is in the first quartile of all Chicago ZIP Codes, and lower than Chicago overall (D40, D41). The annual average chronic lower respiratory disease (CLRD) mortality rates for 2015-2019 are in the fourth quartile for Hegewisch, third quartile for South Deering and second quartile for East Side. There is no significant difference between CLRD mortality rates between the Southeast Side community areas and Chicago (D42).

Figure 10. Chronic obstructive pulmonary disease (%) among Chicago adults by community area¹⁵, 2018

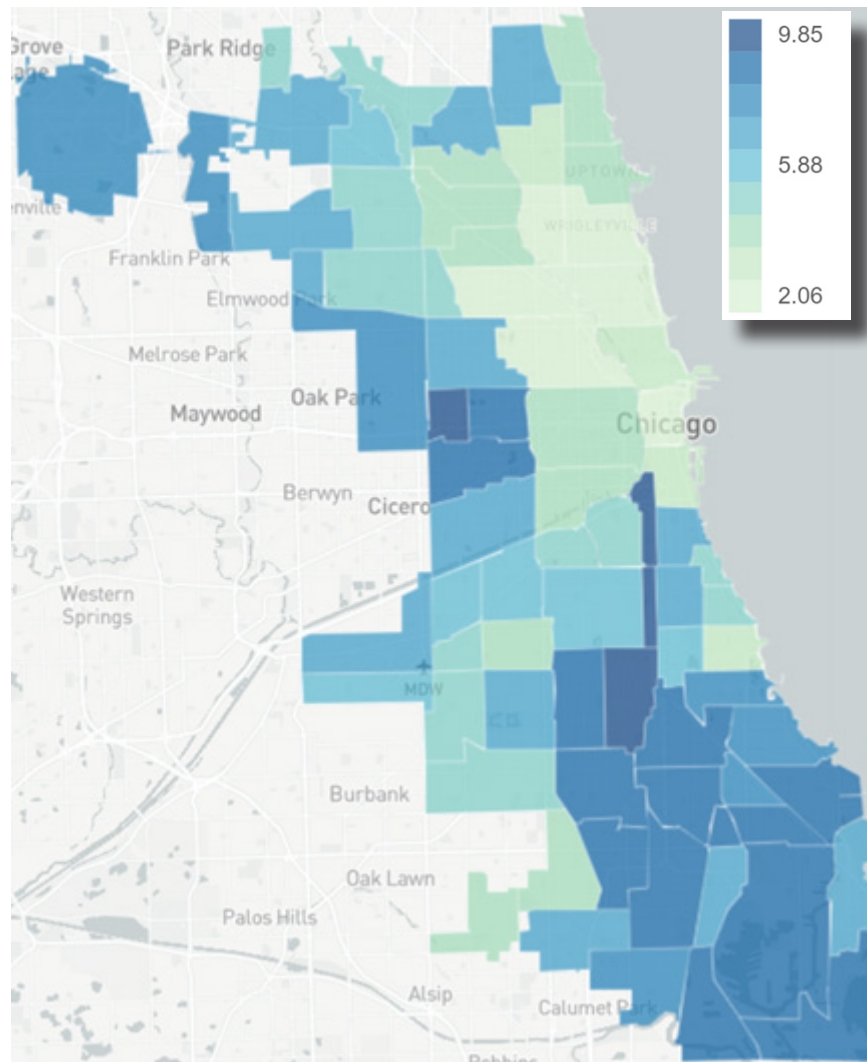


¹⁵ PLACES; Behavioral Risk Factor Surveillance System (BRFSS). Data curated by [Metopio](#) using data downloaded from [PLACES](#).

Cardiovascular Disease

Coronary heart disease (CHD) prevalence among adults in 2018 residing in the Southeast Side ranges from 8.0% in South Deering, 7.6% in Hegewisch and 6.5% in East Side, (Figure 11). For comparison, Chicago overall is 6.1%. South Deering and Hegewisch are in the fourth quartile of CHD rates among all other community areas, and East Side is in the third quartile. CHD prevalence is significantly higher in South Deering and Hegewisch compared to Chicago overall (D43). Based on these prevalence estimates for adults, the estimated number of highly sensitive persons due to CHD in South Deering, East Side and Hegewisch is 2,445 persons.

Figure 11. Coronary heart disease (%) among Chicago adults by community area¹⁶, 2018



16 PLACES; Behavioral Risk Factor Surveillance System (BRFSS). Data curated by [Metopio](#) using data downloaded from [PLACES](#).

The 60617 ZIP Code rate for hospitalizations in 2017 due to heart attacks (17.8 per 10,000) is in the third quartile of all Chicago ZIP Codes, and higher than Chicago overall (16.1 per 100,000). The 60633 ZIP Code is in the first quartile (<5 hospitalizations and the rate is suppressed), and lower than Chicago overall (D44). The annual average CHD mortality rate for 2015-2019 in the Southeast Side ranges from 99.6 per 100,000 in East Side, 89.6 per 100,000 in South Deering, and 71.6 per 100,000 in Hegewisch. For comparison, Chicago overall is 100.4 per 100,000. Among all community areas, East Side and South Deering are in the second quartile, and East Side is in the first quartile. There is no significant difference between mortality rates between the Southeast Side community areas and Chicago overall (D45).

The percentage of ever being diagnosed with a stroke among adults in 2018 residing in the Southeast Side ranges from 5.3% in South Deering, 3.8% in Hegewisch and 3.4% in East Side. For comparison, Chicago overall is 3.8%. South Deering, Hegewisch and East Side are in the third quartile for stroke among all community areas. Stroke is significantly higher in South Deering compared to Chicago overall (D46).

The 60617 ZIP Code rate in 2017 for ED visits due to stroke (8.4 per 10,000) is in the fourth quartile of all Chicago ZIP Codes, and significantly higher than Chicago overall (5.2 per 100,000). The 60633 ZIP Code is in the first quartile (< 5 hospitalizations and the rate is suppressed), and lower than Chicago overall (D47). The 60617 ZIP Code rate in 2017 for hospitalizations due to stroke (42.2 per 10,000) is in the fourth quartile of all Chicago ZIP Codes, and significantly higher than Chicago overall (30.8 per 100,000). The 60633 ZIP Code is in the first quartile (16.2 per 10,000), and significantly lower than Chicago overall (D48). The annual average stroke mortality rate for 2015-2019 in the Southeast Side ranges from 63.2 per 100,000 in South Deering, 35.1 per 100,000 in Hegewisch, and 32.8 per 100,000 in East Side. For comparison, Chicago overall is 100.449.5 per 100,000. Among all community areas, South Deering is in the fourth quartile, and Hegewisch and East Side are in the first quartile. There is no significant difference between mortality rates between the Southeast Side community areas and Chicago overall (D49).

Hypertension is associated with both CHD and stroke. Hypertension in 2018 in the Southeast Side ranges from 40.9% in South Deering, 32.3% in Hegewisch and 30.2% in East Side. For comparison, Chicago overall is 32.8%. Hegewisch and South Deering are the third quartile among all community areas, and East Side is in the second quartile. Hypertension is significantly higher in South Deering compared to Chicago, and significantly lower in East Side compared to Chicago (D50).

Cancer

Southeast Side adults who report ever having cancer in 2018 ranges from 7.0% in Hegewisch, 5.5% in South Deering, and 5.2% in East Side (Figure 12). For comparison, Chicago overall is 6.0%. Hegewisch is in fourth quartile among all community areas, South Deering is in the third quartile, and East Side is in the second quartile. Ever having cancer is significantly higher in South Deering, and significantly lower in East Side and Hegewisch compared to Chicago (D51).

For this HIA, we analyzed incidence (or diagnosis rate) between 2014-2018 for all cancers, late-stage cancers, invasive breast cancer, in situ breast cancer, oral cancer, colorectal cancer, lung cancer, cervical cancer, prostate cancer, urinary system cancers, central nervous system cancers, leukemia and lymphomas and all other cancers (includes esophageal, stomach, liver, pancreatic, bone, melanoma, uterine, ovarian, testicular, myeloma and all other sites). For the 60633 ZIP Code, cancer incidence rates were in the third or fourth quartiles for all cancer types except for in situ breast cancer, leukemia and lymphomas and all other cancers where 60633 was in the first or second quartiles. For the 60617 ZIP Code, cancer incidence rates were in the second or third quartiles for all cancer types except for central nervous system cancers, where 60617 was in the first quartile. The 60617

Diabetes

People with diabetes are at risk from pollution-related health effects. As such, for this HIA, we looked at adults with diabetes. Percentages of adults with diabetes in the Southeast Side ranges from 17.5% in South Deering, 12.5% in East Side and 12.1% in Hegewisch. For comparison, Chicago overall is 12.1%. South Deering is in the fourth quartile among community areas, and East Side and Hegewisch are in the third quartile. Adults with diabetes are significantly higher in South Deering compared to Chicago overall (D71). The estimated number of adults with diabetes in South Deering, East Side and Hegewisch is 4,875 persons.

The annual average diabetes mortality rate for 2015-2019 in the Southeast Side ranges from 34.9 per 100,000 in East Side, 31.5 per 100,000 in South Deering, and 22.9 per 100,000 in Hegewisch. For comparison, Chicago overall is 25.9 per 100,000. Among all community areas, East Side is in the fourth quartile, South Deering is the third quartile, and East Side is in the second quartile. There is no significant difference between mortality rates between the Southeast Side community areas and Chicago overall for diabetes (D72).

Morbidity

Other morbidities we considered for this HIA include high cholesterol, kidney disease and obesity. Percentages of adults ever diagnosed with high cholesterol in 2017 in the Southeast Side ranges from 33.8% in South Deering, 33.6% in Hegewisch and 31.4% in East Side. For comparison, Chicago overall is 28.4%. South Deering and Hegewisch are in the fourth quartile among all community areas, and East Side is in the third quartile. Rates of high cholesterol are significantly higher in South Deering, Hegewisch and East Side compared to Chicago overall (D73). Percentages of adults ever diagnosed with kidney disease in 2018 in the Southeast Side ranges from 4.5% in South Deering, and 3.4% in Hegewisch and East Side. For comparison, Chicago overall is 3.3%. South Deering is in the fourth quartile among all community areas, and East Side and Hegewisch are in the third quartile. Rates of kidney disease are significantly higher in South Deering compared to Chicago overall (D74).

Obesity is a known risk factor for cardiovascular and respiratory disease, cancer and diabetes. Obesity rates in 2018 among adults in the Southeast Side range from 41.4% in South Deering, 34.8% in East Side and 32.8% in Hegewisch. For comparison, Chicago overall is 32.7%. South Deering is in the fourth quartile among all community areas, East Side is in the third quartile, and Hegewisch is in the second quartile. Obesity is significantly higher in South Deering and East Side compared to Chicago overall (D75).

Health Risk Behaviors

Health outcomes reflect health behaviors such as physical activity, smoking, and eating habits. These health behaviors are themselves affected by socio-economic factors, the physical environment, and other underlying inequities. For instance, people are less physically active in neighborhoods that are less walkable or where safety is a concern. Some industries and companies have been shown more heavily market unhealthy foods and cigarettes in communities with higher Black and Latinx populations. While people have agency in individual choice and action, they must exercise their agency within the boundaries of their context and setting.¹⁸

We considered health risk behaviors for this assessment, including binge drinking, smoking, fruit and vegetable consumption, physical activity or exercise and sweetened beverage consumption. The percentage of adults who reported binge drinking in 2016-2018 in East Side was 23.4%, and 15.9% in South Deering. For comparison, Chicago overall is 34.5%. East Side is in the second quartile among all community areas, and South Deering is in the first quartile. The binge drinking rates for Hegewisch and seven other community areas were suppressed because the relative standard rate exceeded 50%, indicating an imprecise and unreliable estimate. Binge drinking is significantly lower in South Deering compared to Chicago overall (D76).

18 Short SE, Mollborn S. Social Determinants and Health Behaviors: Conceptual Frames and Empirical Advances. *Curr Opin Psychol.* 2015; 5:78-84. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4511598/pdf/nihms697415.pdf>.

Smoking is a major risk factor for cardiovascular and respiratory disease, and cancer. Cigarette smoking among adults in the Southeast Side ranges from 29.2% in South Deering, 27.2% in Hegewisch and 18.3% in East Side. For comparison, Chicago overall is 13.0%. South Deering is in the fourth quartile among all community areas, Hegewisch is in the third quartile, and East Side is in the second quartile. Six community areas were suppressed because the relative standard error exceeded 50%, indicating an imprecise and unreliable estimate. Smoking is significantly higher in South Deering compared to Chicago overall (D77).

The percentage of adults who reported eating five or more servings of fruits and vegetables daily in 2016-2018 in the Southeast Side ranges from 27.9% in East Side, 27.1% in Hegewisch and 20.0% in South Deering. For comparison, Chicago overall is 34.3%. East Side and Hegewisch are in the third quartile among all community areas, and South Deering is in the second quartile. Five community areas were suppressed because the relative standard rate exceeded 50%, indicating an imprecise and unreliable estimate. Fruit and vegetable consumption is significantly lower in South Deering compared to Chicago overall (D78).

The percentage of adults who reported they did not participate in any physical activity or exercise in the past month in 2016-2018 in the Southeast Side ranges from 34.9% in South Deering, 33.1% in Hegewisch and 29.6% in East Side. For comparison, Chicago overall is 25.6%. South Deering is in the fourth quartile, and East Side and Hegewisch are in the third quartile among all community areas. One community area was suppressed because the relative standard rate exceeded 50%, indicating an imprecise and unreliable estimate. Physical inactivity is not significantly different in the Southeast Side community areas compared to Chicago overall (D79).

The percentage of adults who reported drinking at least one soda, pop or other sweetened beverage daily in 2016-2018 in the Southeast Side ranges from 49.4% in East Side, 38.8% in Hegewisch and 36.4% in South Deering. For comparison, Chicago overall is 18.2%. East Side and Hegewisch are in the fourth quartile among all community areas, and South Deering is in the third quartile. Three community areas were suppressed because the relative standard rate exceeded 50%, indicating an imprecise and unreliable estimate. Sweetened beverage consumption is significantly higher in the Southeast Side community areas compared to Chicago overall (D80).

The differences in the aforementioned risk factors and behaviors between the Southeast Side and other community areas and Chicago may contribute to the differences seen in CHD, asthma, COPD, cancer and diabetes.

Mortality

We also reviewed causes of mortality as part of the existing conditions assessment to see if there were any notable differences between the Southeast Side and other community areas in Chicago in addition to those related to cardiovascular and respiratory disease, cancer, and diabetes.

Annual average Alzheimer's disease mortality rates for 2015-2019 in the Southeast Side range from 30.2 per 100,000 in East Side, 28.3 per 100,000 in Hegewisch, and 25.1 per 100,000 in South Deering. For comparison, Chicago overall is 23.9 per 100,000. Among all community areas, East Side and Hegewisch are in the fourth quartile, and South Deering is in the third quartile. There is no significant difference between mortality rates between the Southeast Side community areas and Chicago overall (D81).

Annual average chronic liver disease and cirrhosis mortality rates for 2015-2019 in the Southeast Side range from 20.0 per 100,000 in Hegewisch, 17.7 per 100,000 in South Deering, and 9.9 per 100,000 in East Side. For comparison, Chicago overall is 10.4 per 100,000. Among all community areas, Hegewisch and South Deering are in the fourth quartile, and East Side is in the second quartile. There is no significant difference between mortality rates between the Southeast Side community areas and Chicago overall (D82).

Annual average influenza and pneumonia mortality rates for 2015-2019 in the Southeast Side range from 20.4 per 100,000 in South Deering, 19.0 per 100,000 in East Side, and 4.4 per 100,000 in Hegewisch. For comparison, Chicago overall is 18.6 per 100,000. Among all community areas, South Deering and East Side are in the third quartile, and Hegewisch is in the first quartile. There is no significant difference between mortality rates between the Southeast Side community areas and Chicago overall (D83).

Annual average kidney disease mortality rates for 2015-2019 in the Southeast Side range from 22.2 per 100,000 in South Deering, 21.8 per 100,000 in East Side, and 18.0 per 100,000 in Hegewisch. For comparison, Chicago overall is 20.3 per 100,000. Among all community areas, South Deering and East Side are in the third quartile, and Hegewisch is in the second quartile. There is no significant difference between mortality rates between the Southeast Side community areas and Chicago overall (D84).

Annual average accident mortality rates for 2015-2019 in the Southeast Side range from 50.7 per 100,000 in Hegewisch, 42.3 per 100,000 in South Deering, and 39.3 per 100,000 in East Side. For comparison, Chicago overall is 44.4 per 100,000. Among all community areas, Hegewisch and South Deering are in the third quartile, and East Side is in the second quartile. There is no significant difference between mortality rates between the Southeast Side community areas and Chicago overall (D85).

Annual average drug overdose mortality rates for 2015-2019 in the Southeast Side range from 26.2 per 100,000 in Hegewisch, 25.0 per 100,000 in South Deering, and 17.0 per 100,000 in East Side. For comparison, Chicago overall is 26.1 per 100,000. Among all community areas, Hegewisch and South Deering are in the third quartile, and East Side is in the second quartile. There is no significant difference between mortality rates between the Southeast Side community areas and Chicago overall (D86).

Annual average homicide rates for 2015-2019 in the Southeast Side range from 29.9 per 100,000 in South Deering, 16.8 per 100,000 in Hegewisch, and 13.6 per 100,000 in East Side. For comparison, Chicago overall is 18.5 per 100,000. Among all community areas, South Deering, Hegewisch and East Side are in the third quartile. There is no significant difference between mortality rates between the Southeast Side community areas and Chicago overall (D87).

Annual average suicide rates for 2015-2019 in the Southeast Side range from 15.5 per 100,000 in Hegewisch, 5.7 per 100,000 in East Side, and 2.8 per 100,000 in South Deering. For comparison, Chicago overall is 7.4 per 100,000. Among all community areas, Hegewisch is in the fourth quartile, East Side is in the second quartile, and South Deering is in the first quartile. There is no significant difference between mortality rates between the Southeast Side community areas and Chicago (D88).

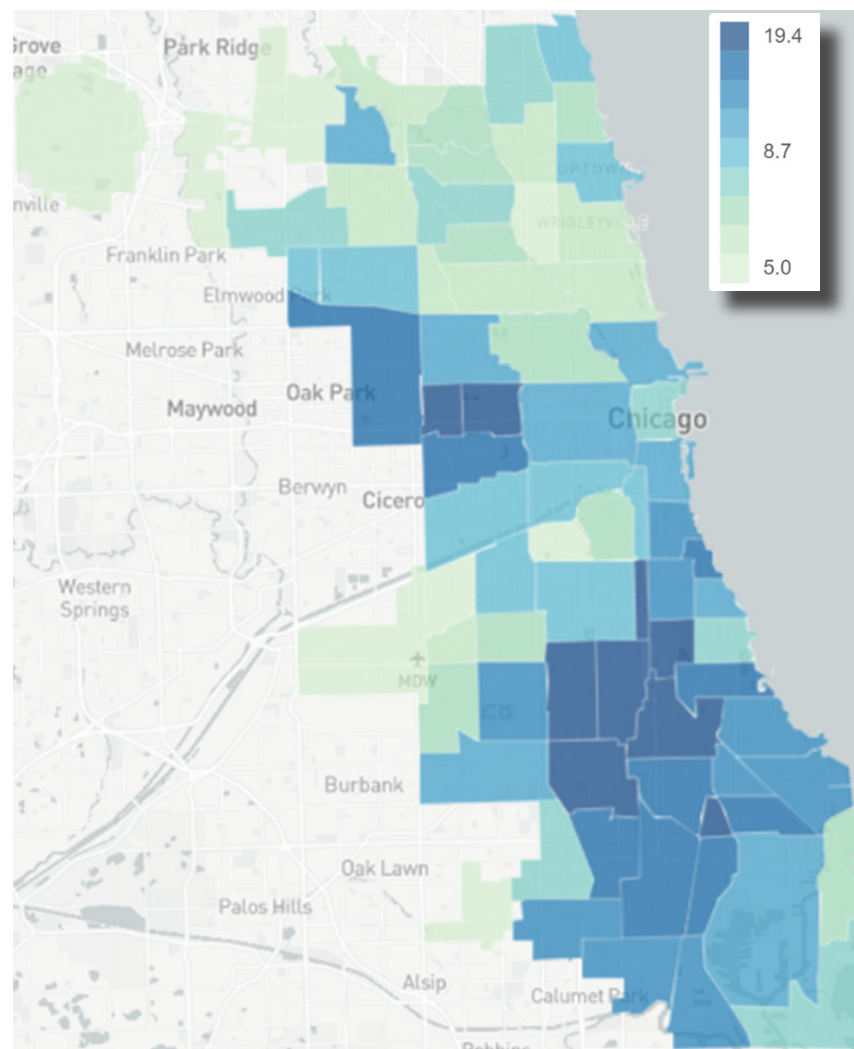
COVID-19

COVID-19 has unequally affected people of color, putting them at higher risk of COVID-19 infection as well as severe illness (e.g., hospitalizations) and death. Discrimination, healthcare access and use, occupation, education, income and wealth gaps, and housing are some the social determinants of health that put people of color at increased risk of COVID-19. Cumulative COVID case rates (3/1/2020 – 1/1/2022) in the Southeast Side are 15,989 per 100,000 in 60633 and 15,256 per 100,000 in 60617. For comparison, Chicago overall is 16,021 per 100,000. The 60633 ZIP Code is in the third quartile among all Chicago ZIP Codes, and 60617 is in the second quartile (D89). COVID-19 hospitalization rates in 2020 in the Southeast Side ranged from 1,099 per 100,000 in South Deering, 691 per 100,000 in East Side and 506 per 100,000 in Hegewisch. For comparison, Chicago overall is 833 per 100,000. South Deering is in the fourth quartile among all community areas, East Side is in the second quartile and Hegewisch is in the first quartile (D90). Cumulative COVID mortality rates (3/1/2020 – 1/1/2022) in the Southeast Side are 241 per 100,000 in 60617 and 171 per 100,000 in 60633. For comparison, Chicago overall is 238 per 100,000. The 60617 ZIP Code is in the third quartile among all Chicago ZIP Codes, and 60633 is in the second quartile (D91). The cumulative percentage of Chicago residents five years and older who have completed the COVID vaccine series (12/15/2020 – 1/10/2022) in the Southeast Side are 43% in 60633 and 51% in 60617. For comparison, Chicago overall is 65%. The 60633 and 60617 ZIP Codes are in the first quartile among all Chicago ZIP Codes (D92).

Infant Health

Another indicator in the Air Quality & Health Index – Health Factors component is low birth weight, less than 2500 grams. Low birth weight rates for 2013-2017 in the Southeast Side range from 10.7% in South Deering, 8.1% in Hegewisch and 7.5% in East Side (Figure 13). For comparison, Chicago overall is 9.4%. South Deering is in the third quartile among all community areas, while East Side and Hegewisch are in the second quartile. East Side's low birthweight rate is significantly lower than Chicago overall (D93). Very low birth weight (less than 1500 grams) rates for 2013-2017 in the Southeast Side range from 2.3% in South Deering, 1.3% in Hegewisch and 1.2% in East Side. For comparison, Chicago overall is 1.8%. South Deering is in the third quartile among all community areas, East Side and Hegewisch are in the first quartile. East Side's very low birth weight rate is significantly lower than Chicago overall (D94)

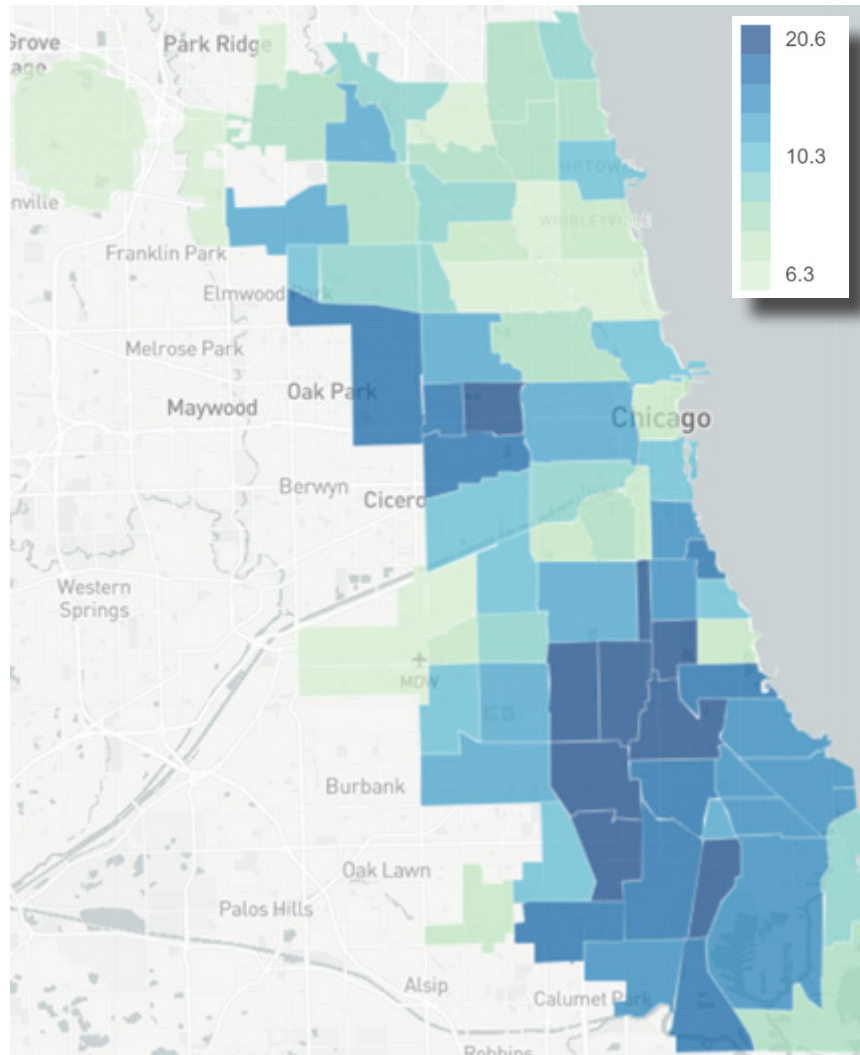
Figure 13. Low birth weight (%; < 2500 grams) in Chicago resident births by community area¹⁹, 2013-2017.



¹⁹ Illinois Department of Public Health, Birth Certificate Data Files; Data was extracted from the [Chicago Health Atlas](#) which has been analyzed and interpreted by the Chicago Department of Public Health Office of Epidemiology.

Many low birthweight births are due to being born prematurely. Preterm births, or when the gestational age is less than 37 weeks, in the Southeast Side range from 12.5% in South Deering, 9.4% in East Side and 9.0% in Hegewisch (Figure 14) in 2013-2017. For comparison, Chicago overall is 10.5%. Similarly to low and very low birthweight, South Deering is in the third quartile among all community areas, East Side and Hegewisch are in the second quartile. There is no significant difference in very low birthweight between the Southeast Side community areas and Chicago (D95).

Figure 14. Prematurity (%; < 37 gestational weeks) in Chicago resident births by community area²⁰, 2013-2017



Infant mortality rates for 2013-2017 in the Southeast Side range from 9.2 per 1,000 in Hegewisch, 8.4 per 1,000 in South Deering, and 3.1 per 1,000 in East Side. For comparison, Chicago overall is 6.6 per 1,000. Hegewisch and South Deering are in the third quartile among all community areas, and East Side is in the first quartile. East Side's infant mortality rate is significantly lower than Chicago overall (D96).

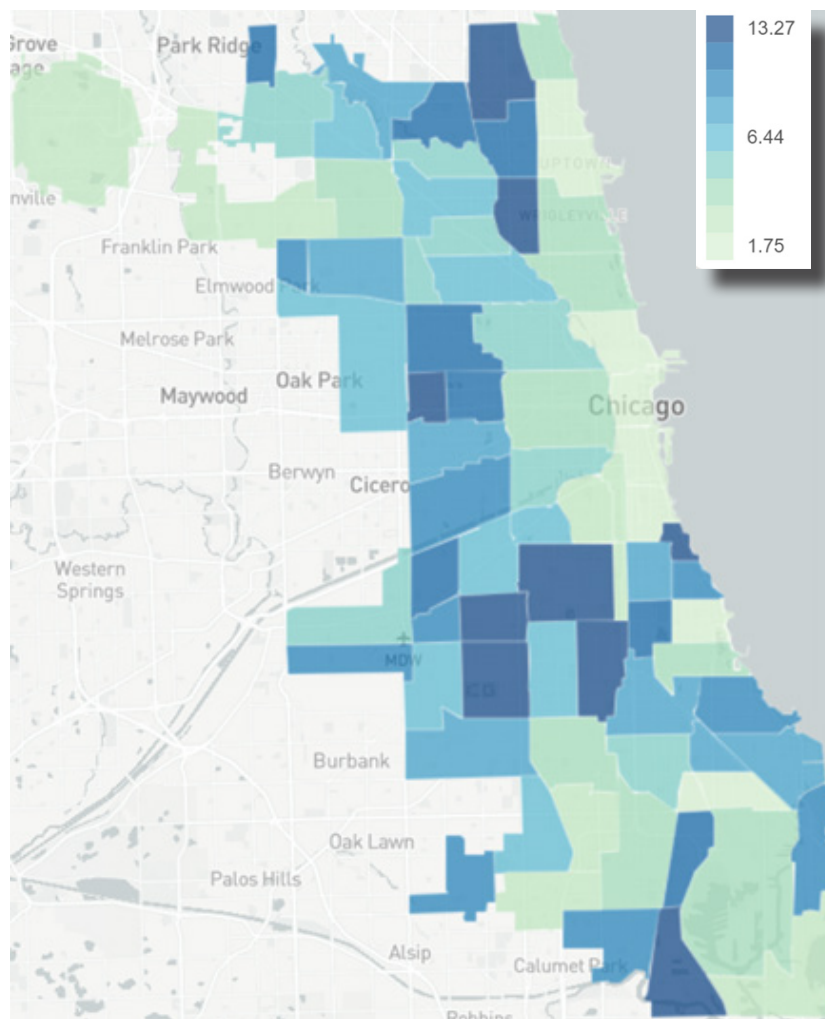
²⁰ Illinois Department of Public Health, Birth Certificate Data Files; Data was extracted from the [Chicago Health Atlas](#) which has been analyzed and interpreted by the Chicago Department of Public Health Office of Epidemiology.

Age

Children and older adults are at increased risk of pollution-related health effects, and are included as indicators in the Air Quality & Health Index – Health Factors component. As such, for this HIA, we considered percentages of children less than 5 and 18 and adults 65 years and older for our existing conditions assessment.

Percentages of the total population less than five years old for 2015-2019 in the Southeast Side range from 7.0% in East Side, 5.3% in South Deering, and 4.9% in Hegewisch (Figure 15). For comparison, Chicago overall is 6.3%. East Side is in the third quartile among all community areas, and South Deering and Hegewisch are in the first quartile. There is no significant difference in children less than 5 years between the Southeast Side community areas and Chicago overall (D97). The estimated number of children less than 5 years old in South Deering, East Side and Hegewisch is 2,903 persons.

Figure 15. Chicago residents less than 5 years old (%) by community area²¹, 2015-2019

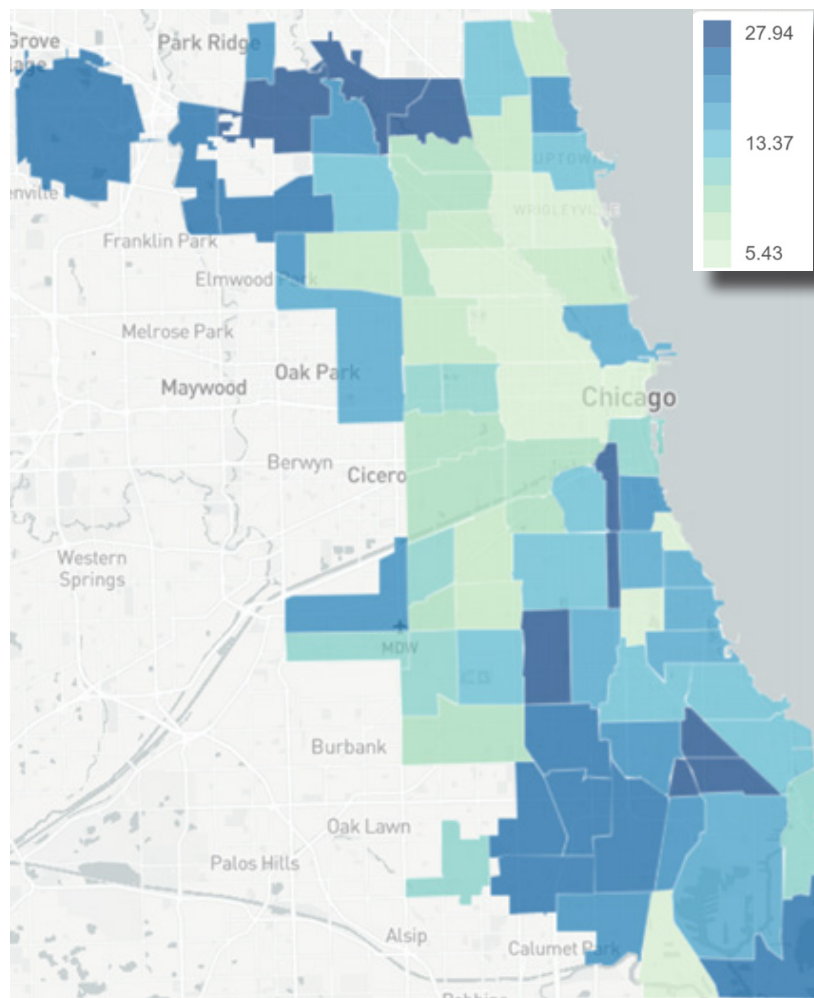


21 United States Census Bureau, American Community Survey (ACS: Table B01001); Data was extracted from the [Chicago Health Atlas](#) which has been analyzed and interpreted by the Chicago Department of Public Health Office of Epidemiology.

Percentages of the total population less than 18 years old for 2015-2019 in the Southeast Side range from 31.8% in South Deering, 29.8% in East Side and 20.6% in Hegewisch. For comparison, Chicago overall is 20.9%. East Side and South Deering are in the fourth quartile among all community areas, and Hegewisch is in the second quartile. Percentages of children less than 18 years old are significantly higher in South Deering and East Side compared to Chicago overall (D98). The estimated number of children less than 18 years old in South Deering, East Side and Hegewisch is 13,179 persons.

Percentages of the total population 65 years and older for 2015-2019 in the Southeast Side range from 18.6% in Hegewisch, 15.4% in South Deering, and 11.6% in East Side (Figure 16). For comparison, Chicago overall is 12.4%. Hegewisch is in the fourth quartile among all community areas, South Deering is in the third quartile, and East Side is in the second quartile. Percentages of adults 65 years and older are significantly higher South Deering compared to Chicago overall (D99). The estimated number of adults 65 years and older in South Deering, East Side and Hegewisch is 6,720 persons.

Figure 16. Chicago residents 65 years and older (%) by community area²², 2015-2019



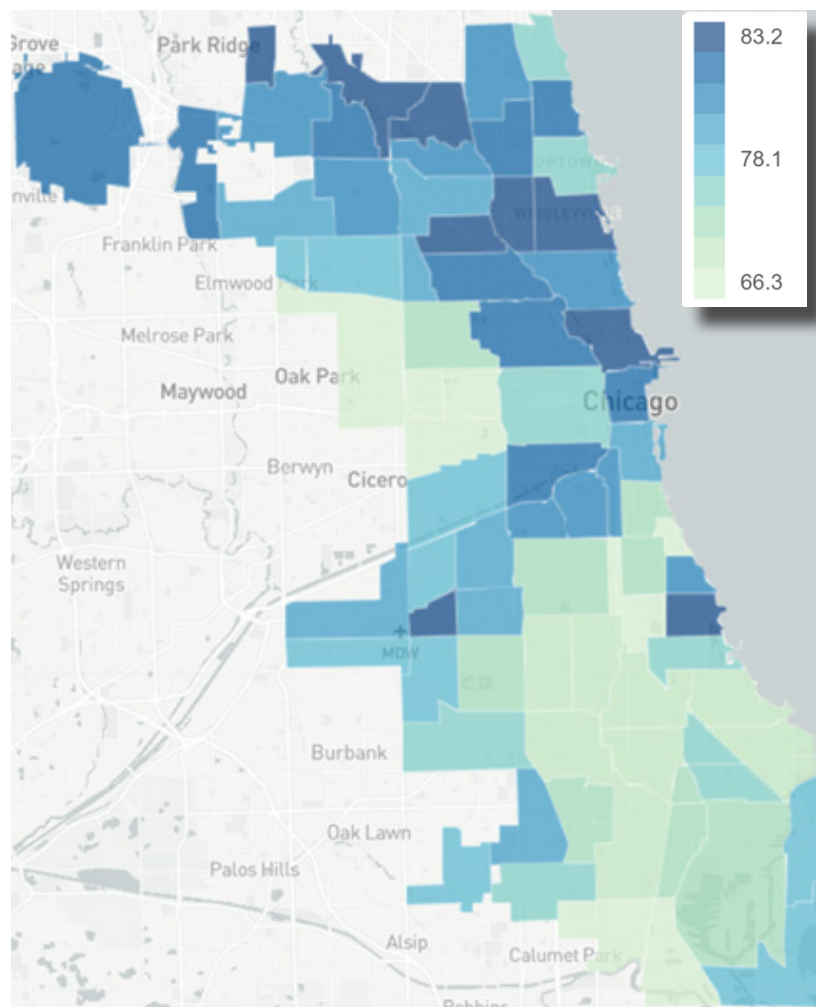
²² United States Census Bureau, American Community Survey (ACS: Table B01001); Data was extracted from the [Chicago Health Atlas](#) which has been analyzed and interpreted by the Chicago Department of Public Health Office of Epidemiology.

Health-related Quality of Life

Health-related quality of life is defined by CDC as “an individual’s or group’s perceived physical and mental health over time.”²³ We selected life expectancy, years potential life lost (YPLL) and self-reported measures of overall health, and poor physical and mental health to serve as indicators of quality of life for this HIA.

Air pollution contributes to increased risk of chronic disease, which is the leading driver of Chicago’s nine-year life expectancy gap between Black and white residents and decreases in life expectancy in the Latinx population. As seen in Figure 17, life expectancy in 2019 for the Southeast Side community areas ranges from 74.0 years in South Deering, 77.2 years in Hegewisch, and 78.3 years in East Side. Chicago’s overall life expectancy is 77.3 years. All three Southeast Side community areas are in the second quartile (D100).

Figure 17. Life expectancy in Chicago by community area²⁴, 2019



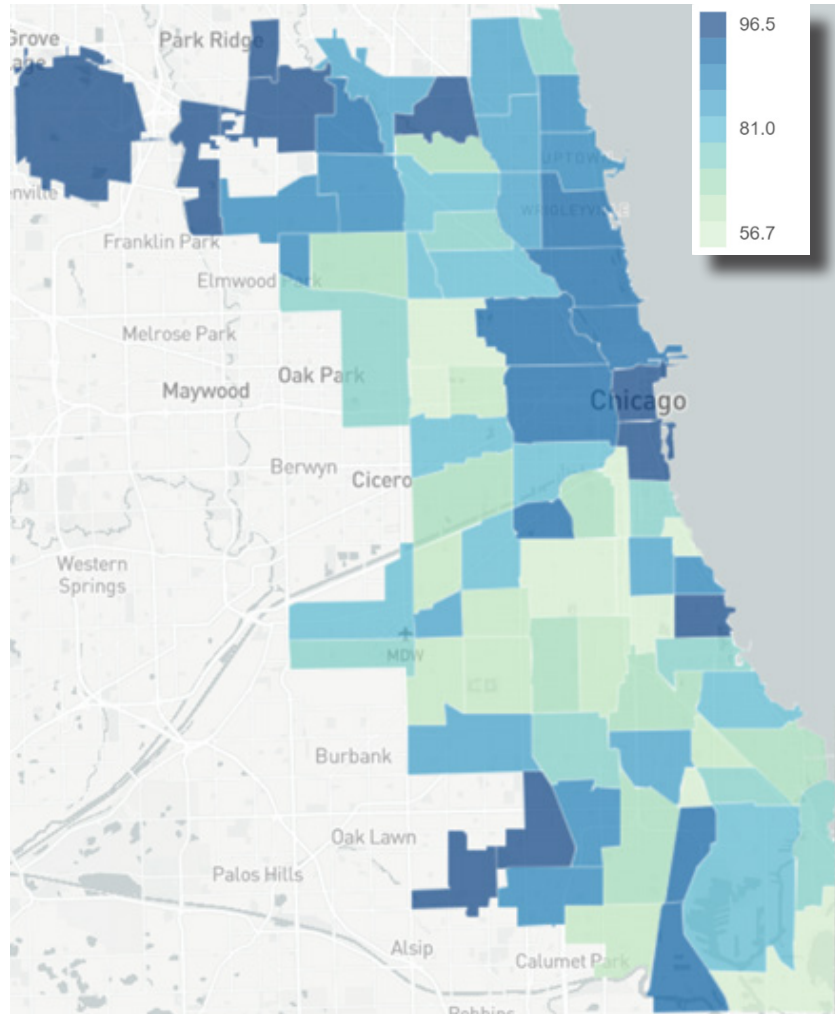
Premature death is related to life expectancy and is measured by YPLL. YPLL rates for 2013-2017 in the Southeast Side range from 11,285 per 100,000 in South Deering, 7,982 per 100,000 in Hegewisch, and 5,684 per 100,000 in East Side. For comparison, Chicago overall is 8,131 per 100,000. South Deering and Hegewisch are in the third quartile among all community areas, and East Side is in the second quartile. YPLL is significantly higher in South Deering compared to Chicago overall, and significantly lower in East Side (D101).

²³ <https://www.cdc.gov/hrqol/index.htm>

²⁴ Illinois Department of Public Health, Death Certificate Data Files; United States Census Bureau, American Community Survey, 2019 5-Year Estimates; Data was extracted from the [Chicago Health Atlas](#), which has been analyzed and interpreted by the Chicago Department of Public Health Office of Epidemiology.

The percentage of Chicago adults whose self-reported overall health is excellent, very good or good for 2016-2018 in the Southeast Side ranges from and 82.5% in South Deering, 78.3% in East Side, and 57.5% in Hegewisch (Figure 18). For comparison, Chicago overall is 87.1%. Hegewisch is in the first quartile among all community areas, East Side is in the second quartile, and South Deering is in the third quartile. Excellent, very good or good overall health is significantly lower in Hegewisch compared to Chicago overall (D102).

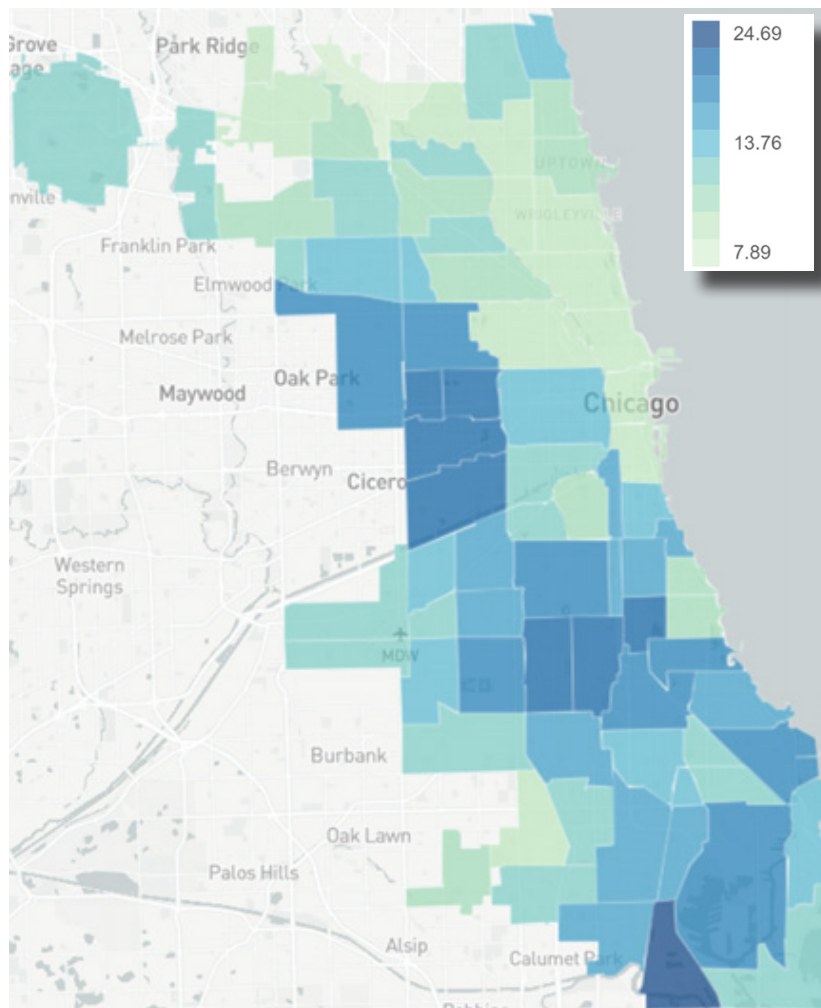
Figure 18. Chicago adults with excellent, very good or good overall health (%) by community area²⁵, 2016-2018



²⁵ Chicago Department of Public Health, Healthy Chicago Survey; Data was extracted from the [Chicago Health Atlas](#) which has been analyzed and interpreted by the Chicago Department of Public Health Office of Epidemiology.

The percentage of Chicago adults with poor self-reported mental health in 2018 in the Southeast Side ranges from 16.4% in South Deering, 14.3% in East Side, and 13.1% in Hegewisch (Figure 19). For comparison, Chicago overall is 12.7%. South Deering is in the fourth quartile among all community areas, and East Side and Hegewisch are in the third quartile. Poor mental health is significantly higher in South Deering and East Side compared to Chicago overall (D103).

Figure 19. Chicago adults with poor self-reported mental health (%) by community area²⁶, 2018



The percentage of Chicago adults with poor self-reported physical health in 2018 in the Southeast Side ranges from 17.8% in South Deering, 14.6% in East Side, and 14.2% in Hegewisch. For comparison, Chicago overall is 12.6%. South Deering is in the fourth quartile among all community areas, and East Side and Hegewisch are in the third quartile. Poor physical health is significantly higher in South Deering, East Side and Hegewisch compared to Chicago overall (D104).

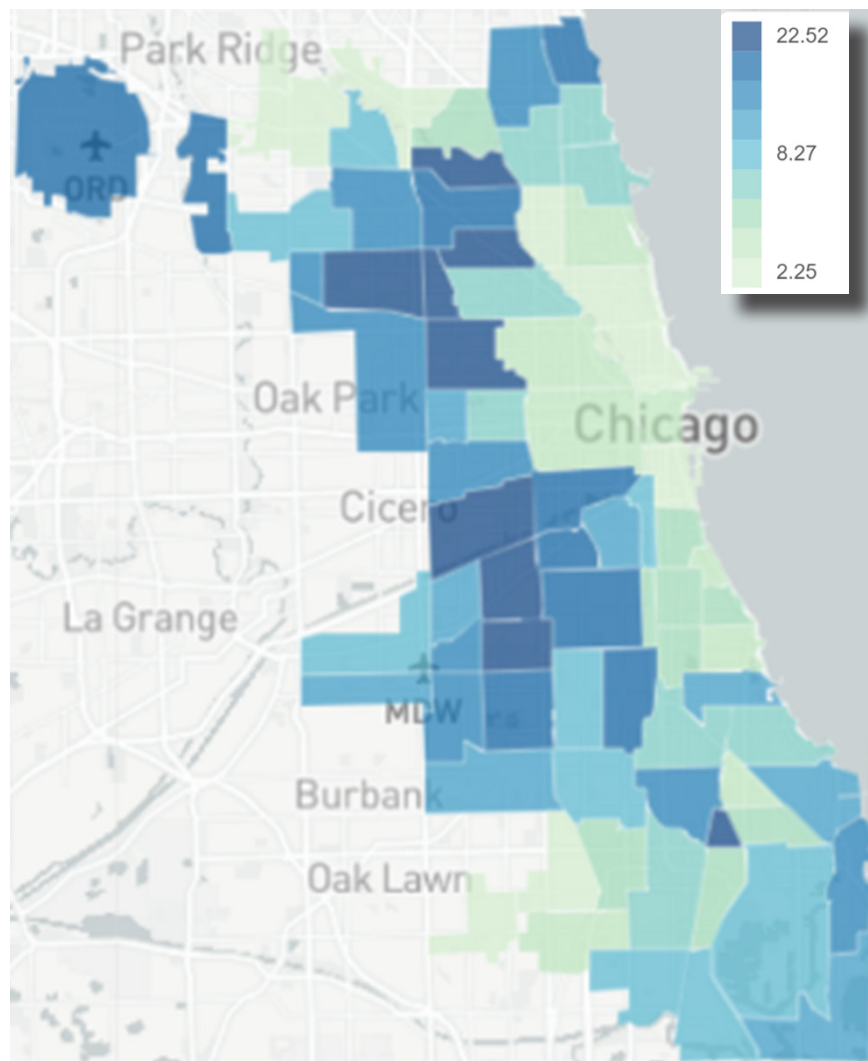
²⁶ PLACES; Behavioral Risk Factor Surveillance System (BRFSS). Data curated by [Metopio](#) using data downloaded from [PLACES](#).

Health Care Utilization and Access

Communities may be more susceptible to a given level of exposure to environmental pollutants when they have reduced access to care, lack resources or language skills or education that would help them avoid exposures or obtain treatment. As such we considered measures of health care access and utilization for this HIA.

Uninsured rates for 2015-2019 in the Southeast Side range from 10.4% in East Side, 9.8% in Hegewisch, and 8.1% in South Deering (Figure 20). For comparison, Chicago overall is 9.7%. East Side, Hegewisch and South Deering are in the third quartile among all community areas. Uninsured rates are not significantly different between the Southeast Side community areas and Chicago overall (D105).

Figure 20. Uninsured (%) Chicago residents by community area²⁷, 2015-2019



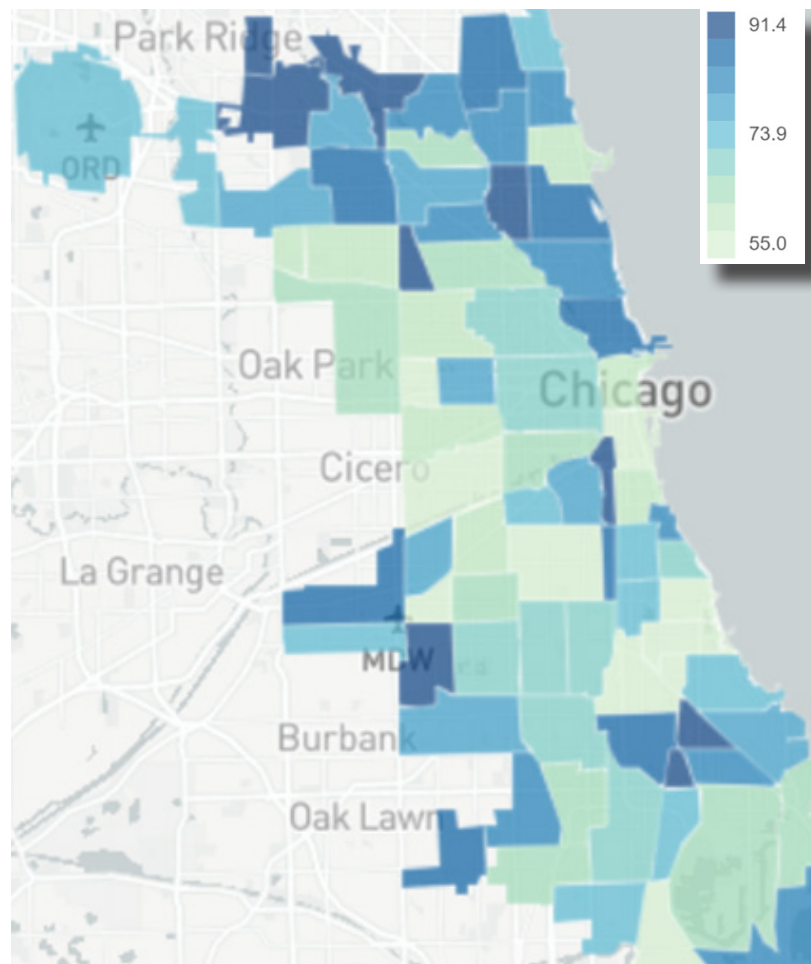
The percentage of Chicago adults in 2016-2018 who reported that it is “usually” or “always” easy to get the care, tests or treatment they needed through their health plan in the Southeast Side range from 84.3% in Hegewisch, 80.7% in South Deering, and 78.2% in East Side. For comparison, Chicago overall is 75.3%. East Side is in the first quartile among all community areas, South Deering in the second quartile, and Hegewisch in the third quartile. Receipt of needed care is not significantly different between South Deering, East Side, and Hegewisch and Chicago overall (D106).

²⁷ United States Census Bureau, American Community Survey, 2019 5-Year Estimates (Tables B27001/C27001); Data was extracted from the [Chicago Health Atlas](#) which has been analyzed and interpreted by the Chicago Department of Public Health Office of Epidemiology.

The percentage of Chicago adults in 2016-2018 who reported that they were very satisfied with the health care they received in the past in the Southeast Side range from 65.3% in South Deering, 54.2% in Hegewisch and 44.8% in East Side. For comparison, Chicago overall is 58.3%. East Side and Hegewisch are in the first quartile among all community areas, and South Deering is in the second quartile. Health care satisfaction is not significantly different between South Deering, East Side, and Hegewisch and Chicago overall (D107).

The percentage of Chicago adults in 2016-2018 who have a primary care provider in the Southeast Side range from 78.8% in Hegewisch, 69.2% in South Deering, and 67.3% in East Side (Figure 21). For comparison, Chicago overall is 80.5%. East Side is in the first quartile among all community areas, South Deering is in the second quartile, and Hegewisch is in the fourth quartile. Having a primary care provider is not significantly different between South Deering, East Side, Hegewisch and Chicago overall (D108).

Figure 21. Chicago adults with a primary care provider (%) by community area²⁸, 2016-2018



As of 2021, 34 community areas in Chicago have been designated by the US Health Resources and Services Administration (HRSA) as Health Professional Shortage Areas (HPSA) for primary care, dental and mental health. South Deering, East Side and Hegewisch are all designated as HPSAs.

Community health centers include federally qualified health centers and other similar health centers as well as free clinics, and provide child, adult and senior medical care, OB/GYN prenatal care, behavioral health care, substance use disorder treatment, oral health care, vision care and pharmacy services. Community health centers serve everyone, with or without insurance. As of January 2022, Chicago has a total of 185 community health centers. South Deering has zero community health centers and is in the first quartile among all community areas. East Side and Hegewisch each have one and are in the second quartile (D110).

²⁸ Chicago Department of Public Health, Healthy Chicago Survey; Data was extracted from the [Chicago Health Atlas](#) which has been analyzed and interpreted by the Chicago Department of Public Health Office of Epidemiology.

The percentage of Chicago adults in 2016-2018 who visited a doctor or health care provider for a routine checkup in the past year in the Southeast Side range from 89.5% in South Deering, 82.3% in Hegewisch, and 68.5% in East Side. For comparison, Chicago overall is 67.6%. East Side is in the first quartile among all community areas, Hegewisch is in the third quartile, and South Deering is in the fourth quartile. Having an annual routine checkup is significantly higher in South Deering compared to Chicago overall (D111). This difference could be related to persons in South Deering being less healthy and thus seeking out care more.

Cancer screenings are another indicator of health care access and utilization. The percentage of Chicago females aged 50-74 in 2018 who reported having a mammogram in the past two years in the Southeast Side range from 80.6% in South Deering, 76.4% in East Side, and 76.1% in Hegewisch. For comparison, Chicago overall is 75.9%. East Side and Hegewisch are in the first quartile among all community areas, and South Deering is in the third quartile. Breast cancer screening is significantly higher in South Deering compared to Chicago overall (D112). The percentage of Chicago adults aged 50-75 in 2018 who reported having a fecal occult blood test (FOBT) within the past year, a sigmoidoscopy within the past three years or a colonoscopy with the past 10 years in the Southeast Side range from 57.5% in Hegewisch, 51.8% in South Deering, and 50.8% in East Side. For comparison, Chicago overall is 60.1%. East Side and South Deering are in the first quartile among all community areas, and Hegewisch is in the second quartile. Colorectal cancer screening is significantly lower in East Side and South Deering compared to Chicago overall (D113). The percentage of Chicago females aged 21-65 in 2016 who reported having a Pap smear within the past 3 years in the Southeast Side range from 85.9% in South Deering, 85.2% in Hegewisch, and 84.7% in East Side. For comparison, Chicago overall is 80.8%. East Side, Hegewisch and South Deering are in the second quartile among all community areas. Cervical cancer screening is significantly higher in all three Southeast Side community areas compared to Chicago overall (D114).

The percentage of Chicago adults aged 65 and older in 2018 who reported being up to date on a core set of clinical preventive services (influenza and pneumococcal vaccination, breast cancer screening – females only, and colorectal cancer screening) in the Southeast Side range from 24.0% in Hegewisch, 22.3% in East Side, and 20.2% in South Deering. For comparison, Chicago overall is 25.0%. South Deering is in the first quartile among all community areas, East Side is in the second quartile, and Hegewisch is in the third quartile. Seniors up to date with core clinical preventive services is significantly lower in South Deering and East Side compared to Chicago overall (D115).

The percentage of births where the mother received adequate prenatal care in the Southeast Side range from 63.4% in Hegewisch, 62.9% in East Side, and 56.9% in South Deering. For comparison, Chicago overall is 65.3%. South Deering is in the first quartile among all community areas, and East Side and Hegewisch are in the second quartile. Adequate prenatal care is significantly lower in South Deering compared to Chicago overall (D116).

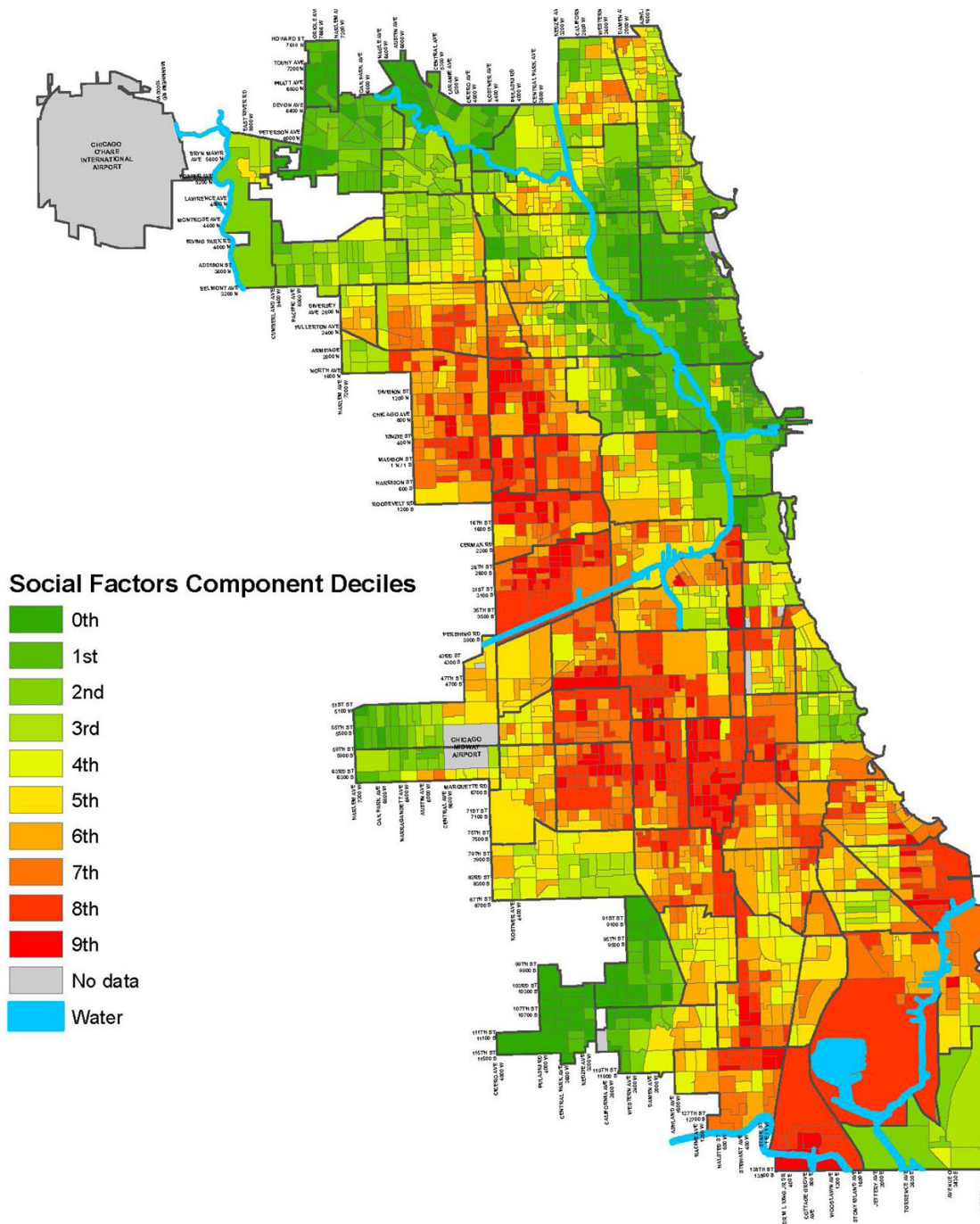
Low rates of avoidable emergency department (ED) visits are indicative of early access to good quality outpatient health care. Avoidable ED visits, non-urgent or primary care treatable, in 2017 in the Southeast Side are 786 per 10,000 in 60617 and 446 per 10,000 in 60633. For comparison, Chicago overall is 543 per 10,000. The Southeast Side ZIP Codes, 60617 and 60633, are in the third quartile among all Chicago ZIP Codes with ED visit rates that were not suppressed due to small counts. Avoidable ED visits are significantly higher in 60617 compared to Chicago overall, and 60633 is significantly lower (D117).

Preventable hospitalizations are admissions to a hospital for certain acute illnesses (e.g., dehydration) or worsening chronic conditions (e.g., diabetes) that would not have required hospitalization had these conditions been managed successfully by primary care providers in an outpatient setting. Preventable hospitalization rates are related to access to primary care, care-seeking behaviors, and the quality of care available. The preventable hospitalization rate in 2017 in the 60617 ZIP Code was 189.9 per 10,000 and 198.6 per 10,000 in Chicago overall. The rate for 60633 was suppressed because the number of hospitalizations was less than ten. The 60617 ZIP Code is in the third quartile among all ZIP Codes whose hospitalization rate was not suppressed due to small counts (54). Preventable hospitalizations are not significantly different in 60617 and Chicago overall (D118).

OVERVIEW OF SOCIAL FACTORS

The Air Quality & Health Index – Social Factors component includes race-ethnicity, language, poverty, education, unemployment and housing cost burden. Figure 22 displays the combined effect of these demographic and socioeconomic characteristics that result in increased vulnerability of some populations to air pollution. The northern neighborhoods of Chicago score lower in terms of social factor deciles than western and southern neighborhoods.

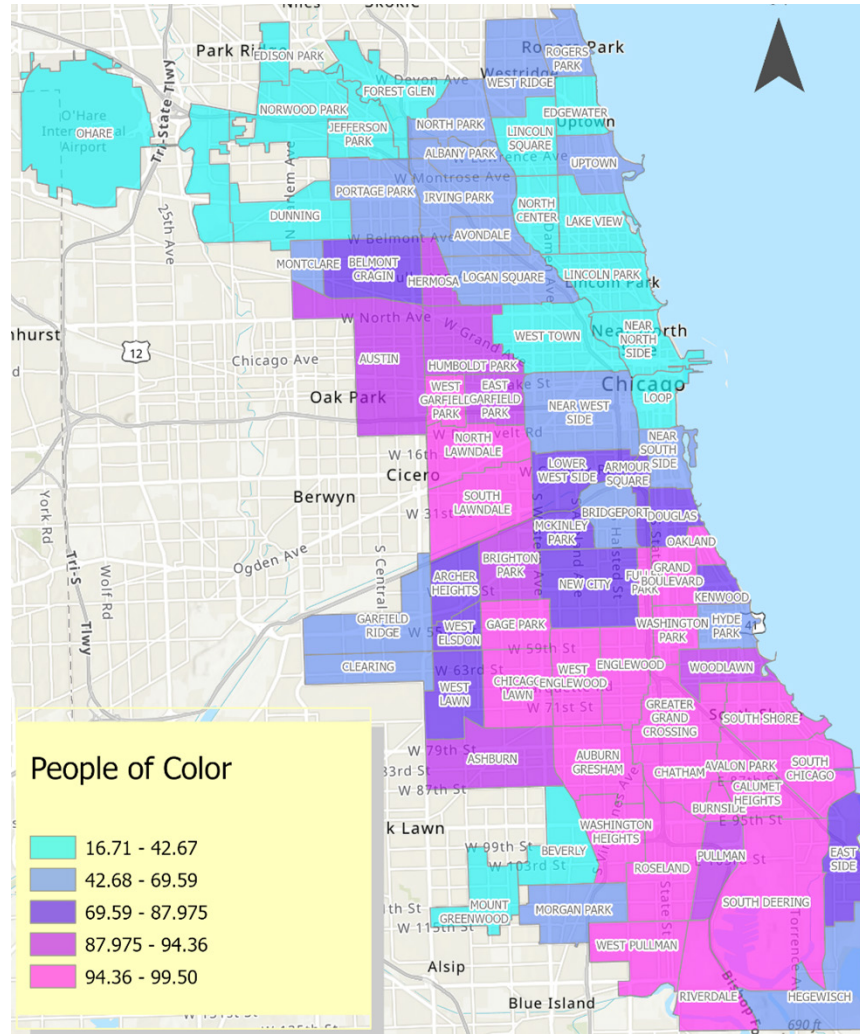
Figure 22. Social Factors Component, Air Quality & Health Index²⁹, Chicago, 2020



29 https://www.chicago.gov/city/en/depts/cdph/provdrs/healthy_communities/svcs/air-quality-and-health.html

The percentage of Chicago residents identifying as a person of color (non-White and/or Latinx) in 2015-2019 in the Southeast Side range from 96.1% in South Deering, 86.2% in East Side, and 65.0% in Hegewisch (Figure 23). For comparison, Chicago overall is 66.7%. South Deering and East Side are in the third quartile among all community areas, and Hegewisch is in the second quartile (D119).

Figure 23. Chicago residents who identify as non-White and/or Latinx (%) by community area³⁰, 2015-2019

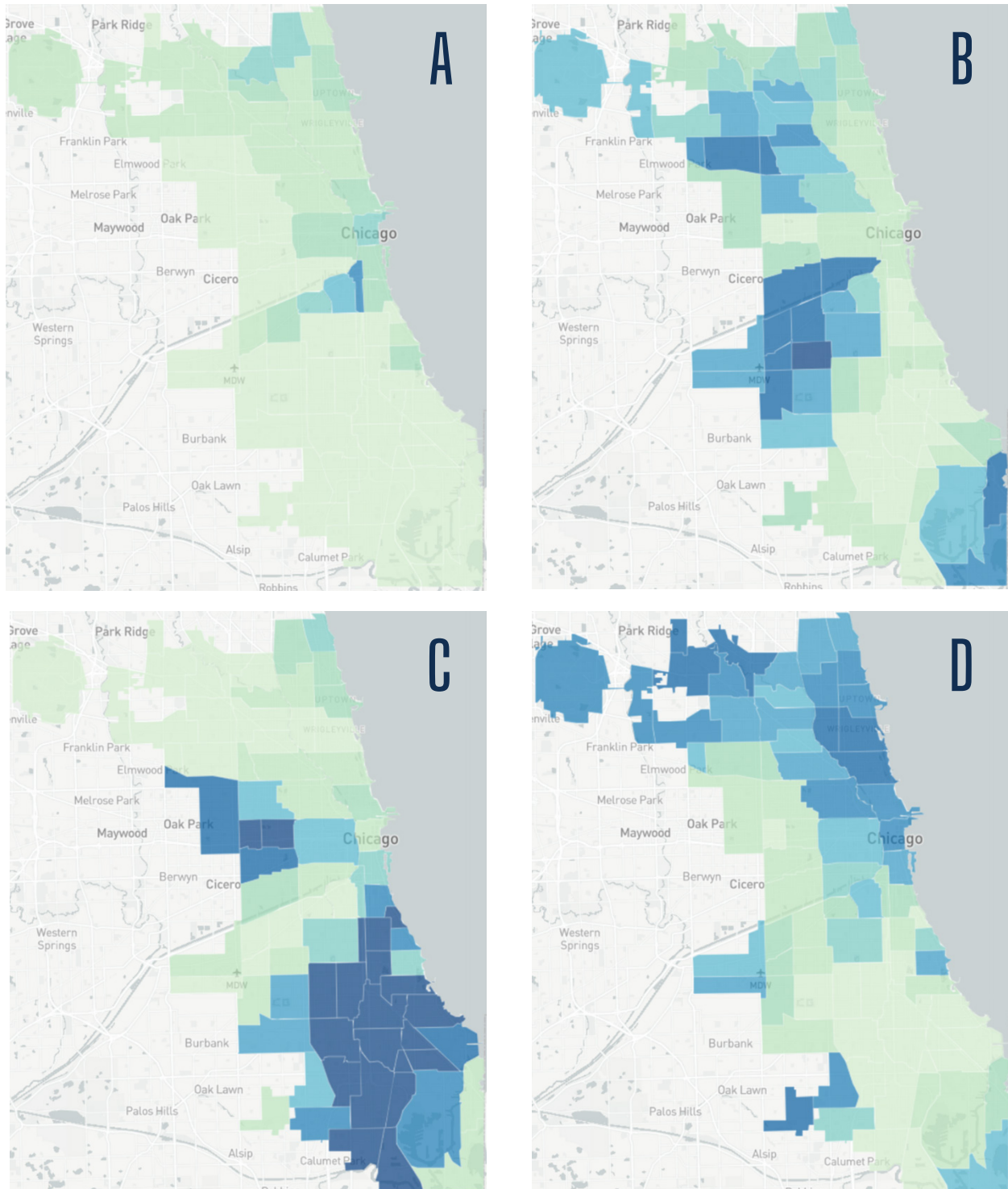


As demonstrated in Figures 24.A-D, Chicago is extremely segregated by race-ethnicity. The Race-Ethnicity Diversity Index measures the probability that any two residents of an area, randomly chosen, will belong to different racial and ethnic backgrounds. A score of 0 represents a perfectly homogenous area; the higher the score, the more diverse the area. (Note: the highest possible score is 0.875). Race-Ethnicity Diversity Index scores for 2015-2019 in the Southeast Side range from 0.29 in East Side, 0.46 in South Deering, and 0.51 in Hegewisch. East Side is in the second quartile among all community areas, South Deering and Hegewisch are in the third quartile (D120).

³⁰ United States Census Bureau, American Community Survey (ACS: Table B01001); Data was extracted from the [Chicago Health Atlas](#) which has been analyzed and interpreted by the Chicago Department of Public Health.

The percentage of Chicago residents identifying as Asian or Pacific Islander in 2015-2019 in the Southeast Side range is 0.4% in South Deering, 0.001% in Hegewisch and 0.0004% in East Side (Figure 24A). For comparison, Chicago overall is 6.6%. South Deering, East Side and Hegewisch are in the first quartile among all community areas. Chicago overall has a significantly larger proportion of Asian and Pacific Islander residents than South Deering, East Side and Hegewisch (D121).

Figure 24. Chicago residents who identify as (A) Asian or Pacific Islander, (B) Hispanic or Latino, (C) non-Hispanic Black, or (D) non-Hispanic White (%) by community area³¹, 2015-2019



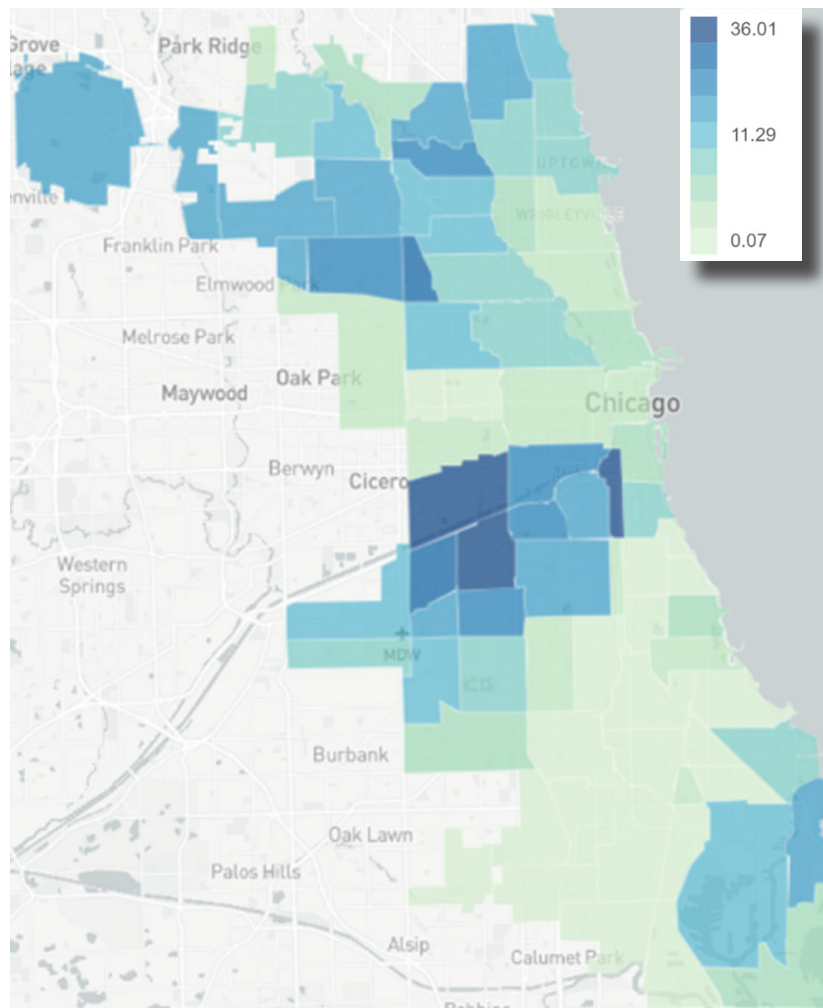
31 United States Census Bureau, American Community Survey (ACS: Table B01001); Data was extracted from the [Chicago Health Atlas](#) which has been analyzed and interpreted by the Chicago Department of Public Health Office of Epidemiology.

The percentage of Chicago residents identifying as Hispanic or Latino in 2015-2019 in the Southeast Side range is 82.7% in East Side, 60.5% in Hegewisch and 39.8% in South Deering (Figure 24B). For comparison, Chicago overall is 28.8%. East Side and Hegewisch are in the fourth quartile among all community areas, and South Deering is in the third quartile. South Deering, East Side and Hegewisch have significantly larger proportions of Hispanic or Latino residents than Chicago overall (D122).

The percentage of Chicago residents identifying as non-Hispanic Black in 2015-2019 in the Southeast Side range from 55.1% in South Deering, 4.5% in East Side and 4.4% in Hegewisch (Figure 24C). For comparison, Chicago overall is 29.2%. South Deering is in the third quartile among all community areas, and Hegewisch and East Side are in the second quartile. South Deering has a significantly larger proportion of non-Hispanic Black residents than Chicago overall, while East Side and Hegewisch have a significantly smaller proportion (D123).

The percentage of Chicago residents identifying as non-Hispanic White in the Southeast Side range is 34.9% in Hegewisch, 12.3% in East Side, and 4.8% in South Deering (Figure 24D). For comparison, Chicago overall is 33.3%. Hegewisch is in the third quartile among all community areas, and South Deering and East Side are in the second quartile. Chicago overall has significantly larger proportion of non-Hispanic White residents than South Deering and East Side (D124).

Figure 25. Linguistically isolated households (%) by community area³², 2015-2019



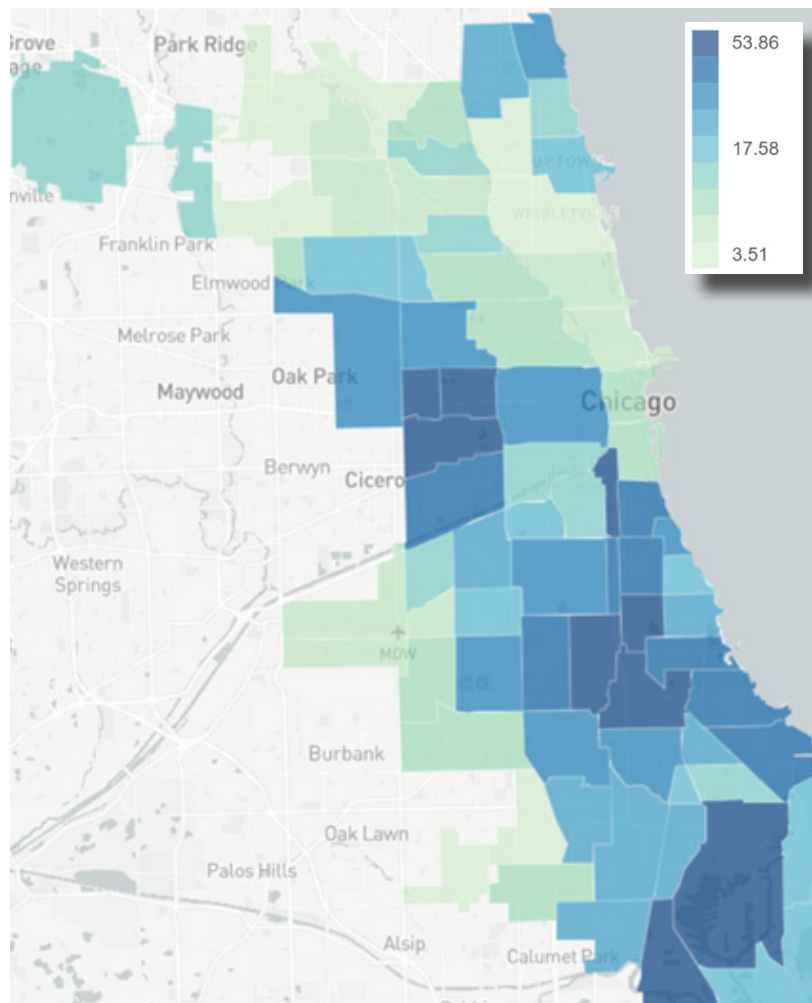
32 United States Census Bureau, American Community Survey (ACS: Table B16002); Data curated by [Metopio](#).

Linguistic isolation, or households where no member 14 years or older speaks English very well, in 2015-2019 in the Southeast Side ranges from 15.2% in East Side, 10.7% in South Deering and 5.0% in Hegewisch (Figure 25). For comparison, Chicago overall is 8.4%. East Side is in the fourth quartile among all community areas, South Deering is in the third quartile, and Hegewisch is in the second quartile. Linguistic isolation is significantly higher in East Side compared to Chicago overall (D125).

A closely related indicator to linguistic isolation is limited English proficiency, which focuses on individual residents as opposed to households. The percentage of Chicago residents aged five years and older who do not speak English very well in 2015-2019 in the Southeast Side range from 13.8% in East Side, 7.2% in Hegewisch and 6.5% in South Deering. For comparison, Chicago overall is 7.6%. East Side is in the fourth quartile among all community areas, and Hegewisch and South Deering are in the third quartile. Limited English proficiency is significantly higher in East Side compared to Chicago overall (D126).

The percentage of residents who are foreign-born in 2015-2019 in the Southeast Side range from 26.9% in East Side, 18.3% in Hegewisch, and 14.6% in South Deering. For comparison, Chicago overall is 20.6%. East Side and Hegewisch are in the third quartile among all community areas, South Deering is in the second quartile. East Side has significantly higher proportion of foreign-born residents than Chicago overall, and South Deering has a significantly lower proportion (D127).

Figure 26. Chicago residents in families living in poverty (%) by community area³³, 2015-2019



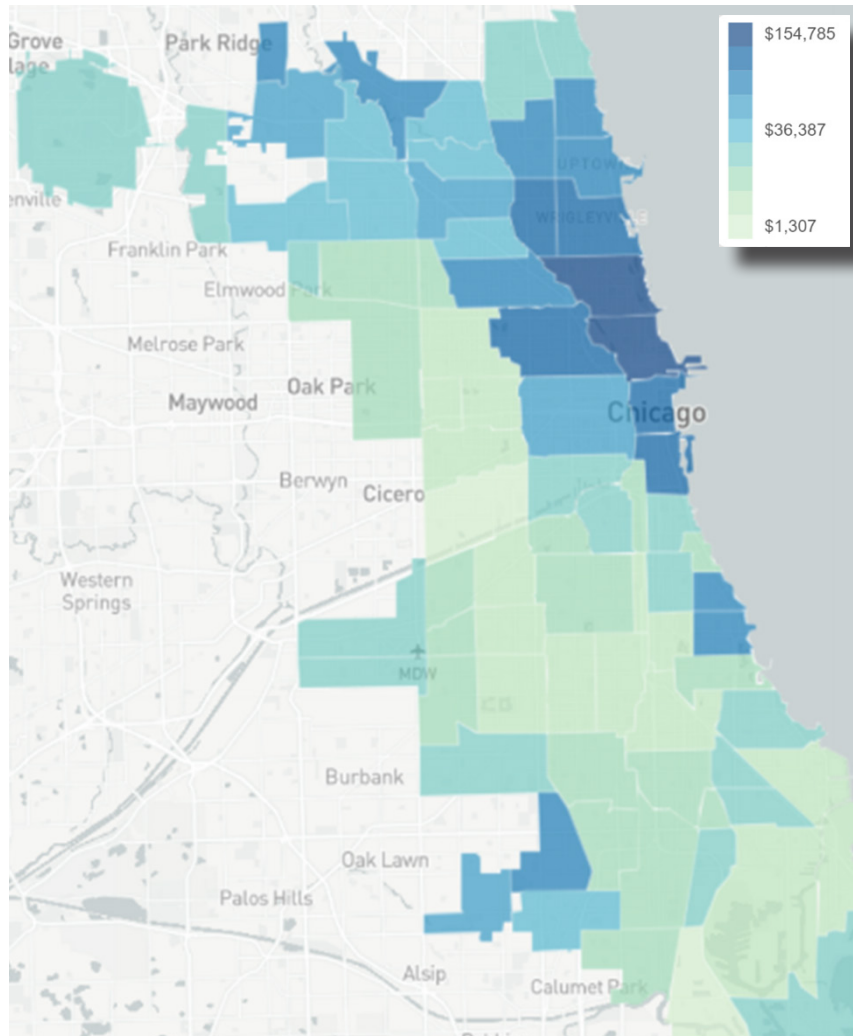
33 United States Census Bureau, American Community Survey (ACS: Table B17001); Data was extracted from the [Chicago Health Atlas](#) which has been analyzed and interpreted by the Chicago Department of Public Health Office of Epidemiology.

The percentage of residents in families living in poverty in 2015-2019 in the Southeast Side range from 38.3% in South Deering, 17.9% in East Side, and 16.8% in Hegewisch (Figure 26). For comparison, Chicago overall is 18.4%. South Deering is in the fourth quartile among all community areas, East Side is in the third quartile, and Hegewisch is in the second quartile. South Deering is significantly poorer than Chicago overall (D128).

Income is closely related to poverty and can be measured by per capita income and median household income. Per capita income is total personal income divided by the total population, or the average income earned per person. Median household income is the income of the “middle” household. When the household income distribution is arranged in order from lowest to highest, half of all incomes are below, and half are above the median.

Per capita income for 2015-2019 in the Southeast Side ranges from \$28,677 in Hegewisch, \$19,676 in East Side and \$19,130 in South Deering (Figure 27). For comparison, Chicago overall is \$39,356. South Deering and East Side are in the first quartile among all community areas, and Hegewisch is in the second quartile. The per capita income in Chicago overall is significantly higher than in South Deering, East Side and Hegewisch (D129).

Figure 27. Per capita income (\$) in Chicago by community area³⁴, 2015-2019



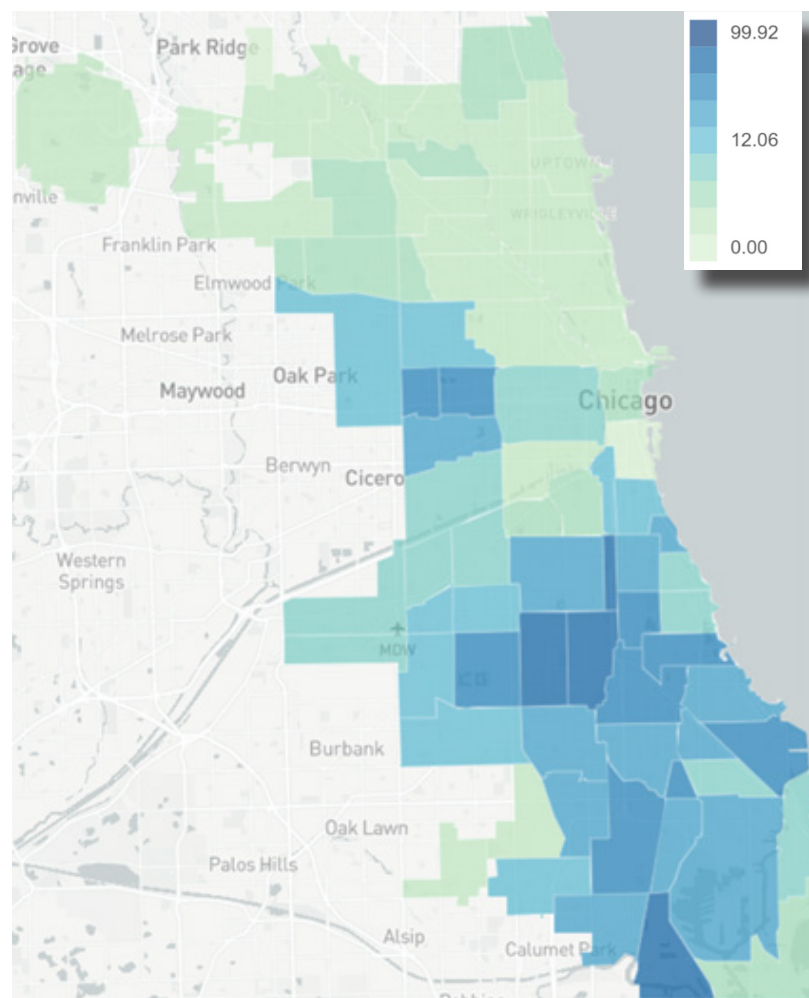
34 United States Census Bureau, American Community Survey (ACS: Table B19013); Data was extracted from the [Chicago Health Atlas](#) which has been analyzed and interpreted by the Chicago Department of Public Health Office of Epidemiology.

Median household income for 2015-2019 in the Southeast Side ranges from \$58,218 in Hegewisch, \$53,703 in East Side and \$31,576 in South Deering. For comparison, Chicago overall is \$61,784. South Deering is in the first quartile among all community areas, East Side is in the second quartile, and Hegewisch is in the third quartile. The median household income in Chicago overall is significantly higher than in South Deering and East Side (D130).

The Gini Index of Income Inequality measures income distribution across a population. A score of zero represents perfect equality or where all individuals have the same income; a score of 100 represents perfect inequality or where one individual has all the income and others have none. Gini Index scores for 2015-2019 in the Southeast Side range from 55.1 in South Deering, 43.4 in Hegewisch, and 39.7 in East Side. East Side is in the first quartile among all community areas, Hegewisch is in the second quartile and South Deering is in the fourth quartile (D131).

The percentage of residents 16 years and older in the civilian labor force who are actively seeking employment in 2015-2019 in the Southeast Side range from 16.1% in South Deering, 10.0% in East Side and 6.1% in Hegewisch (Figure 28). For comparison, Chicago overall is 8.1%. South Deering is in the fourth quartile among all community areas, East Side is in the third quartile, and Hegewisch is in the second quartile. Unemployment in South Deering is significantly higher than in Chicago overall (D132).

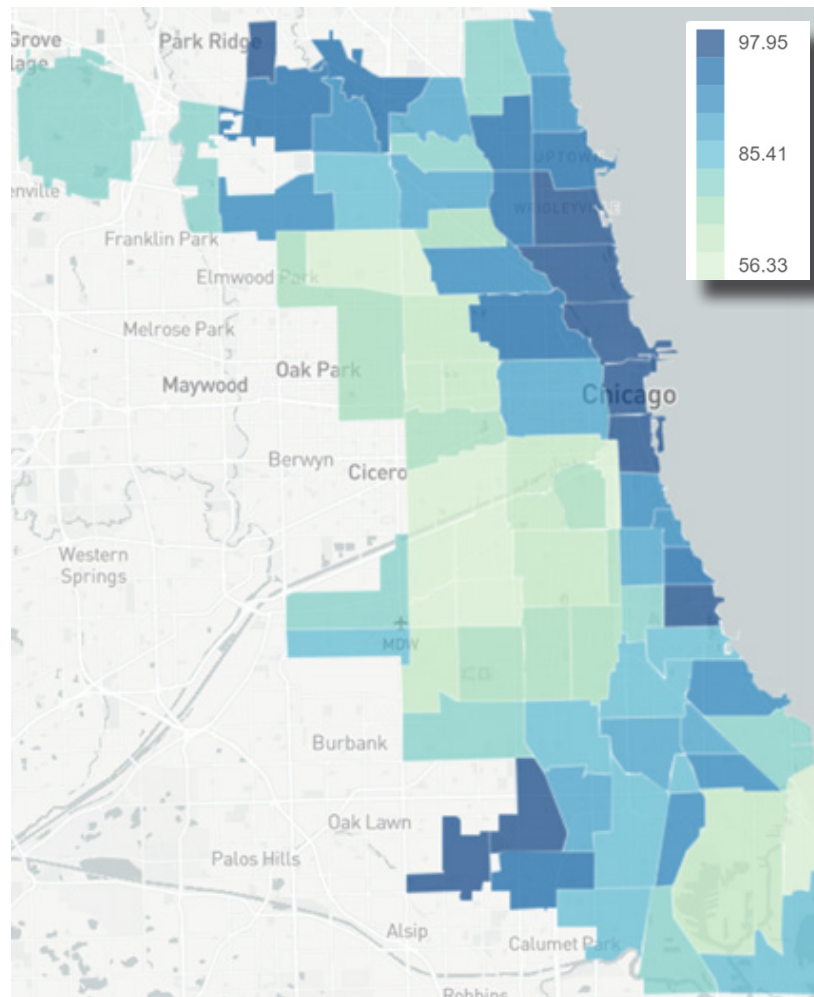
Figure 28. Unemployment (%) in Chicago by community area³⁵, 2015-2019



³⁵ United States Census Bureau, American Community Survey (ACS: Tables B23025, B23001, and C23002); Data was extracted from the [Chicago Health Atlas](#) which has been analyzed and interpreted by the Chicago Department of Public Health Office of Epidemiology.

The percentage of residents 25 years and older with at least a high school degree (including a GED and any higher education) in 2015-2019 in the Southeast Side range from 84.5% in Hegewisch, 75.2% in South Deering, and 68.0% in East Side (Figure 29). For comparison, Chicago overall is 85.1%. East Side and South Deering are in the first quartile among all community areas, and Hegewisch is in the second quartile. The high school graduation rate in Chicago overall is significantly higher than in South Deering and East Side (D133).

Figure 29. Chicago residents 25 years and older with at least a high school degree (%) by community area³⁶, 2015-2019



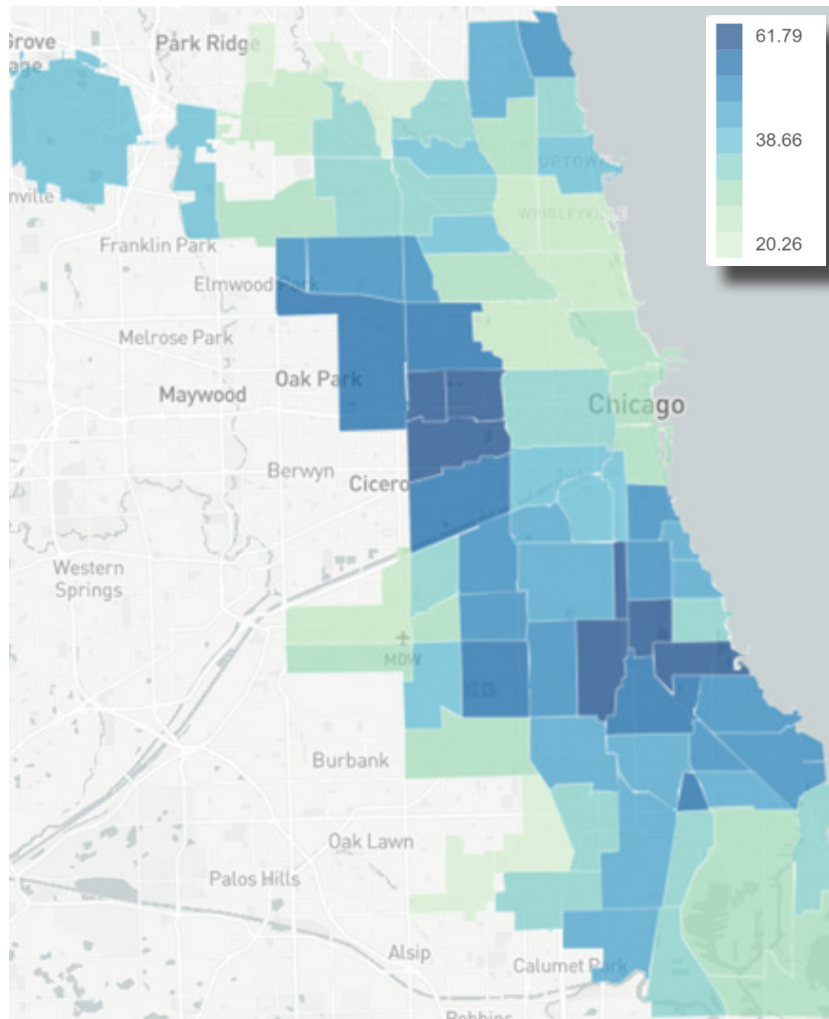
The percentage of residents 25 years and older with 4-year college degree or higher in 2015-2019 in the Southeast Side range from 16.5% in Hegewisch, 12.7% in South Deering, and 11.6% in East Side. For comparison, Chicago overall is 41.3%. East Side and South Deering are in the first quartile among all community areas, and Hegewisch is in the second quartile. The college graduation rate in Chicago overall is significantly higher than in South Deering, East Side and Hegewisch (D134).

Income, race-ethnicity, education, language and age make up US EPA's Vulnerable Demographic Index which is utilized as part of the screening tool EJSCREEN and is reported as percentile rank nationally. This index serves as an indicator of potential susceptibility to environmental pollution. For 2013-2017, South Deering scored in the 80th percentile of vulnerability, East Side and Hegewisch were in the 70th percentile (D135). The higher the percentile the higher proportion of vulnerable residents in a geographic area.

³⁶ United States Census Bureau, American Community Survey (ACS: Table B15002); Data was extracted from the [Chicago Health Atlas](#) which has been analyzed and interpreted by the Chicago Department of Public Health Office of Epidemiology.

Housing cost burden is one of the indicators that comprises the Air Quality & Health Index – Social Factors component. The percentage of occupied housing units spending more than 30% of income on housing for 2015-2019 in the Southeast Side range from 35.4% in East Side, 33.1% in South Deering, and 30.6% in Hegewisch (Figure 30). For comparison, Chicago overall is 39.0%. East Side is in the second quartile among all community areas, South Deering and Hegewisch are in the first quartile. Housing cost burden is not significantly different between South Deering, East Side, Hegewisch and Chicago overall (D136).

Figure 30. Chicago households considered housing cost-burdened by community area³⁷, 2015-2019

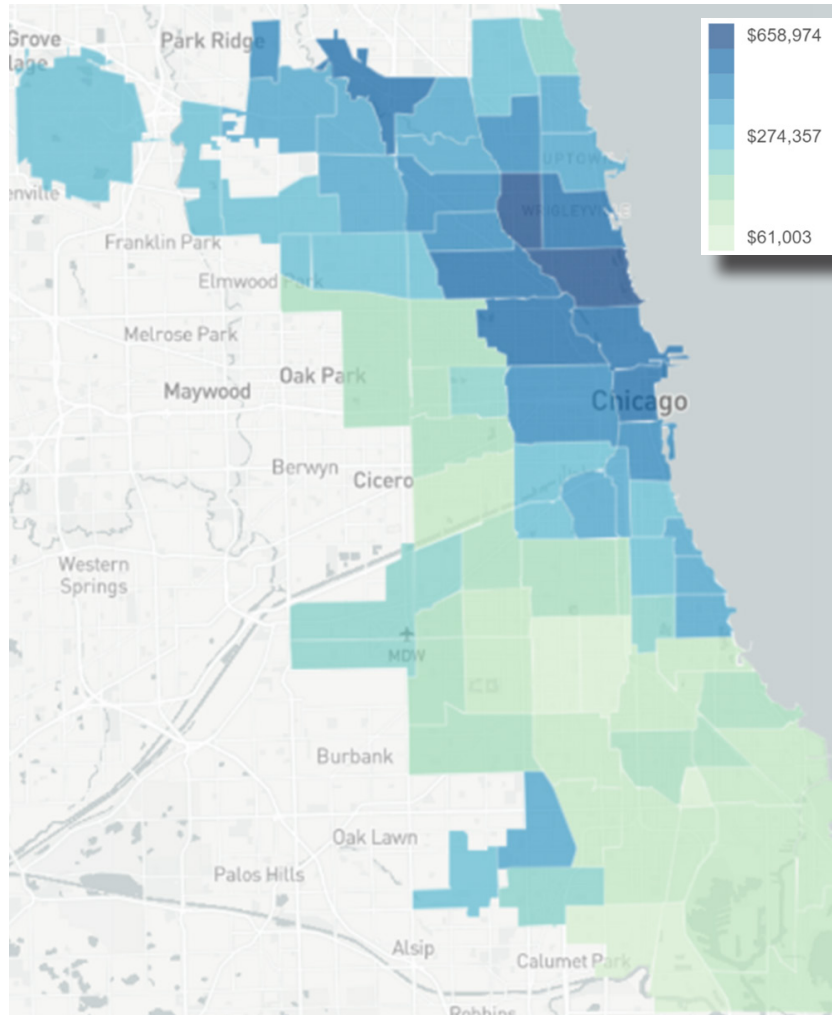


Another related measure is crowded housing, or the percentage of occupied housing units with more than one occupant per room (e.g., 3 occupants in a one-bedroom apartment). Crowded housing rates for 2015-2019 in the Southeast Side range from 4.0% in East Side, 3.5% in South Deering and 2.3% in Hegewisch. For comparison, Chicago overall is 3.6%. East Side and South Deering are in the third quartile among all community areas, and Hegewisch is the second quartile. Crowded housing is not significantly different between South Deering, East Side, and Hegewisch and Chicago overall (D137).

³⁷ United States Census Bureau, American Community Survey (ACS: Tables B25070/B25091); Data curated by [Metopio](#).

Median home values in 2015-2019 in the Southeast Side range from \$160,117 in Hegewisch, \$136,403 in South Deering and \$134,997 in East Side (Figure 31). For comparison, Chicago overall is \$273,665. South Deering, East Side and Hegewisch are in the first quartile among all community areas. Median home values are significantly lower in South Deering, East Side and Hegewisch compared to Chicago overall (D138).

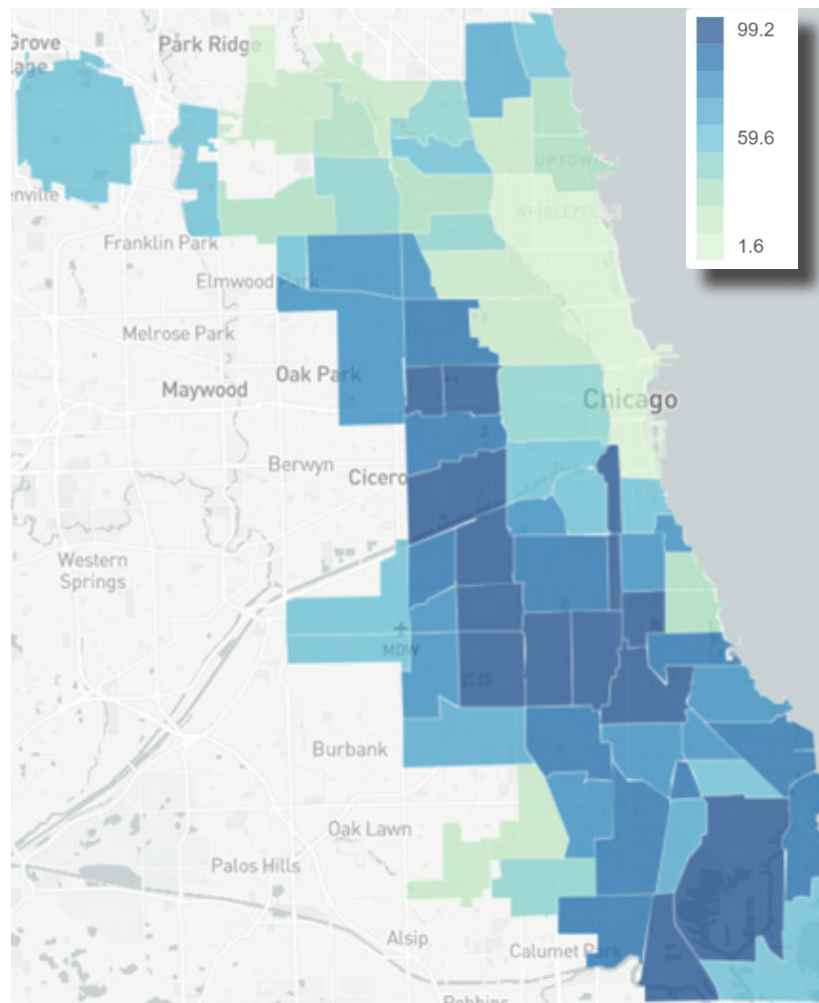
Figure 31. Median home value (\$) in Chicago by community area³⁸, 2015-2019



38 United States Census Bureau, American Community Survey (ACS: Table B25077); Data curated by [Metopio](#).

The Hardship Index is a composite score reflecting economic hardship in the community (higher values indicate greater hardship). It incorporates unemployment, age dependency, education, per capita income, crowded housing, and poverty into a single score allowing for comparison between geographic areas. It is highly correlated with other measures of economic hardship and with poorer health outcomes. Among all community areas, South Deering scores in the 90th percentile (94.3%) of hardship, East Side is in the 80th percentile (84.8%), and Hegewisch is in the 60th percentile (61.7%). (Figure 32, D139).

Figure 32. Hardship Index in Chicago by community area³⁹, 2015-2019



³⁹ United States Census Bureau, American Community Survey (ACS: Table B17001); Data was extracted from the [Chicago Health Atlas](#) which has been analyzed and interpreted by the Chicago Department of Public Health Office of Epidemiology.

The conditions of places where people spend their lives – like homes, workplaces, schools, neighborhoods, parks, places of worship, etc. - have an impact on health and well-being. We considered indicators of place for this HIA, including walkability, child opportunity and food access.

Overall, Chicago is a highly walkable city, 94.6% is designated as being in the high walkability category as assessed by the Chicago Metropolitan Planning Agency (CMAP) in 2015. However, the walkability of community areas on the Southeast Side are in the first quartile of all community areas. CMAP's assessment was based on infrastructure conditions and access to destinations, and included the principles of usefulness, safety, comfort and interest. South Deering is 18.5% highly walkable, Hegewisch is 26.8%, and East Side is 71.8% (D140).

The Child Opportunity Index measures neighborhood resources and conditions that are important for a child's healthy development. Chicago community areas are divided up into quintiles, where the fifth quintile means very low child opportunity and the first quintile means very high child opportunity. In 2015, among all community areas, South Deering is in the fifth quintile with very low opportunities, East Side is in the third quintile with moderate child opportunities, and Hegewisch is in the second quintile with high child opportunities (D141).

The percentage of residents who have low access to food, meaning that it is more than a half-mile to the nearest supermarket, in 2019 in the Southeast Side ranges from 70.8% in South Deering, 30.9% in Hegewisch, and 23.5% in East Side. For comparison, Chicago overall is 21.9%. South Deering is in the fourth quartile among all community areas, and Hegewisch and East Side are in the third quartile (D142).

As part of this HIA, and specifically in the Social Factors section, we considered the populations specifically mentioned in US EPA's definition of environmental justice⁴⁰ as well as people with disabilities, who have advocated for inclusion⁴¹ based on research demonstrating increased risk for persons with disabilities⁴². For 2015-2019, the percentage of Chicago residents with a disability in the Southeast Side ranges from 11.9% in South Deering, 11.3% in East Side and 6.6% in Hegewisch. For comparison, Chicago overall is 10.5%. South Deering and East Side are in the third quartile among all community areas, and Hegewisch is in the first quartile. The proportion of the population with a disability is significantly lower in Hegewisch compared to Chicago overall (D143).

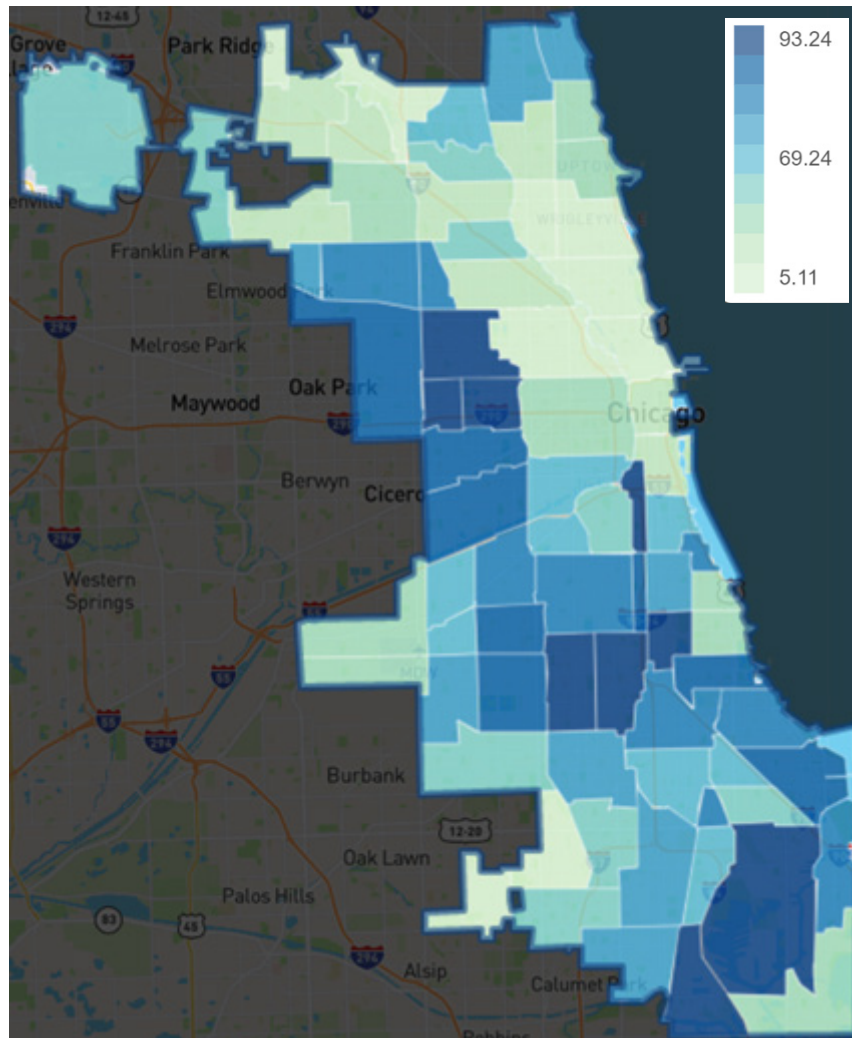
40 <https://www.epa.gov/environmentaljustice>

41 https://ssir.org/articles/entry/climate_change_environmental_activism_and_disability

42 <https://www.sciencedirect.com/science/article/abs/pii/S193665741830147X?via%3Dihub>

Social Vulnerability refers to the resilience of communities when confronted by external stresses on human health, either natural or manmade. The Social Vulnerability index includes measures of socioeconomic status, household composition and disability, minority status and language, housing type and transportation. In 2014-2018, among all community areas, South Deering scored in the 90th percentile (90.8%) of social vulnerability, East Side is in the 70th percentile (79.2%), and Hegewisch is in the 50th percentile (54.0%) (Figure 33, D144).

Figure 33. Social Vulnerability Index in Chicago by community area⁴³, 2014-2018



The following pages include summary tables of all the data described above (Figures 34-35), a reference map of Chicago community areas and ZIP Codes (D1) and graphs and information on each of the 143 indicators described previously (D2-D143).

⁴³ Centers for Disease Control and Prevention (CDC) (Agency for Toxic Substances and Disease Registry / Geospatial Research, Analysis, and Services Program); Data extracted from [UIC School of Public Health](#) via [Metopio](#).

Figure 34. Summary Table of Existing Conditions Indicators by Community Area

INDICATOR	SOUTH DEERING			EAST SIDE		HEGEWISCH	
	CHICAGO	VALUE	QUARTILE	VALUE	QUARTILE	VALUE	QUARTILE
POPULATION							
Population (#)	2,709,534	15,488	1	23,449	2	9,003	1
Population Change (%)	1.9	-6.6	1	-5.4	1	5.9	4
Population Density (persons/mile ²)	11,918	1,518	1	8,082	1	1,939	1
AIR POLLUTION EXPOSURES							
PM2.5 (µg/m ³)	9.43	9.34	1	9.25	1	9.32	1
PM2.5 – EJ Index (%)	70.3	90.6	4	88.4	4	72.1	2
Ozone (parts per billion)	46.86	47.58	4	47.70	4	47.26	3
Ozone – EJ Index (%)	71.0	91.4	4	89.6	4	72.6	2
Diesel PM (µg/m ³)	1.14	1.11	3	1.12	3	0.80	1
Diesel PM – EJ Index (%)	70.5	95.0w	4	94.4	4	76.8	2
Lifetime Inhalation Cancer Risk (per million)	38.3	33.5	1	32.8	1	33.1	1
Inhalation Cancer Risk – EJ Index (%)	69.5	89.8	4	87.1	4	71.2	2
Respiratory Hazard Index	0.54	0.49	2	0.47	1	0.43	1
Respiratory Hazard Index – EJ Index (%)	69.0	89.9	4	87.2	4	70.7	2
Traffic Intensity (distance-weight vehicles)	1,458	430	1	805	2	183	1
Traffic Intensity – EJ Index	65.1	85.6	4	86.4	4	68.2	2
Traffic Crashes (#)	91,426	855	2	508	1	298	1
Potential Chemical Accident Proximity (distance-weighted sites)	2.23	3.13	3	2.14	3	3.31	4
Potential Chemical Accident Proximity – EJ Index (%)	71.3	96.7	4	94.1	4	86.5	3
POLLUTED SITES							
Hazardous Waste Management Site Proximity (distance-weighted sites)	8.72	4.79	1	2.47	1	5.46	2
Hazardous Waste Treatment and Disposal Site Proximity – EJ Index (%)	69.1	92.3	4	86.5	3	81.3	2
Superfund Site Proximity (distance-weighted sites)	0.13	0.49	4	0.38	4	1.62	4
Superfund Site Proximity – EJ Index (%)	70.9	97.2	4	95.9	4	93.1	4
Industrial Land Use (%)	5.6	9.3	4	7.8	3	9.0	3

INDICATOR	SOUTH DEERING			EAST SIDE		HEGEWISCH	
	CHICAGO	VALUE	QUARTILE	VALUE	QUARTILE	VALUE	QUARTILE
POLLUTED SITES CONTINUED							
Manufacturing Jobs (%)	10.0	32.8	4	2.8	2	37.8	4
Transportation and Warehousing Jobs (%)	7.5	14.3	4	28.1	4	5.2	4
Water Polluting Site Proximity (distance-weighted sites)	12.1	< 0.01	2	<0.01	2	< 0.01	2
Proximity to Water Polluting Sites – EJ Index (%)	66.4	79.0	3	79.2	4	75.6	3
Housing Units Built Pre-1960 (%)	68.0	88.3	4	88.2	4	55.1	1
Lead Paint Exposure – EJ Index (%)	73.0	97.5	4	97.4	4	81.9	2
Childhood Lead Poisoning (%)	2.0	1.4	3	2.3	3	0.0	1
Permitted Air Facilities (#)	94	7	4	2	3	1	3
Environmental Code Violations (#)	794	10	3	3	2	0	1
HEALTH FACTORS – RESPIRATORY DISEASE							
Current Asthma (%)	10.0	11.9	3	9.4	3	9.4	3
Ever COPD (%)	6.6	9.0	4	7.1	3	8.2	3
Chronic Lower Respiratory Disease Mortality Rate (per 100,000)	28.0	31.4	3	22.9	2	42.3	4
HEALTH FACTORS – CARDIOVASCULAR DISEASE							
Ever Coronary Heart Disease (%)	6.1	8.0	4	6.5	3	7.6	4
Coronary Heart Disease Mortality Rate (per 100,000)	100.4	89.6	2	99.6	2	71.6	1
Ever Stroke (%)	3.8	5.3	3	3.4	3	3.8	3
Stroke Mortality Rate (per 100,000)	49.5	63.2	4	32.8	1	35.1	1
Ever Hypertension (%)	32.8	40.9	3	30.2	2	32.3	3
HEALTH FACTORS – CANCER							
Ever Cancer (%)	6.0	5.5	3	5.2	2	7.0	4
Cancer Mortality Rate (per 100,000)	180.9	213.1	4	186.0	3	170.3	2
Breast Cancer Mortality Rate (per 100,000)	25.6	33.8	4	14.5	1	11.9	1
Colorectal Cancer Mortality Rate (per 100,000)	18.7	25.6	4	14.8	2	20.5	3
Lung and Bronchus Cancer Mortality Rate (per 100,000)	40.4	55.7	4	43.1	3	52.4	4
Cervical Cancer Mortality Rate (per 100,000)	3.2	6.2	4	9.6	4	4.3	3
Prostate Cancer Mortality Rate (per 100,000)	27.7	21.0	2	35.3	3	4.4	1

INDICATOR	SOUTH DEERING			EAST SIDE		HEGEWISCH	
	CHICAGO	VALUE	QUARTILE	VALUE	QUARTILE	VALUE	QUARTILE
HEALTH FACTORS – DIABETES							
Ever Diabetes (%)	12.1	17.5	4	12.5	3	12.1	3
Diabetes Mortality Rate (per 100,000)	25.9	31.5	3	34.9	4	22.9	2
Health Factors - Morbidity							
Ever High Cholesterol (%)	28.4	33.8	4	31.4	3	33.6	4
Ever Kidney Disease (%)	3.3	4.5	4	3.4	3	3.5	3
Current Obesity (%)	32.7	41.4	4	34.8	3	32.8	2
HEALTH FACTORS – HEALTH RISK BEHAVIORS							
Binge Drinking (%)	34.5	15.9	1	23.4	2	--	NA
Smoking (%)	13.0	29.2	4	18.3	2	27.2	3
Fruit & Vegetable Consumption (%)	34.3	20.0	1	27.9	3	27.1	3
Physical Inactivity (%)	25.6	34.9	4	29.6	3	33.1	3
Soda Consumption (%)	18.2	36.4	3	49.4	4	38.8	4
Health Factors - Mortality							
Alzheimer's Disease Mortality Rate (per 100,000)	23.9	25.1	3	30.2	4	28.3	4
Chronic Liver Disease and Cirrhosis Mortality Rate (per 100,000)	10.4	17.7	4	9.9	2	20.0	4
Influenza or Pneumonia Mortality Rate (per 100,000)	18.6	20.4	3	19.0	3	4.4	1
Kidney Disease Mortality Rate (per 100,000)	20.3	22.2	3	21.8	3	18.0	2
Accident Mortality Rate (per 100,000)	44.4	42.3	3	39.3	2	50.7	3
Drug Overdose Mortality Rate (per 100,000)	26.1	25.0	3	17.0	2	26.2	3
Homicide Rate (per 100,000)	18.5	29.9	3	13.6	3	16.8	3
Suicide Rate (per 100,000)	7.4	2.8	1	5.7	2	15.5	4
HEALTH FACTORS – COVID-19							
COVID Hospitalization Rate (per 100,000)	832.8	1,908.5	4	691.3	2	506.1	1

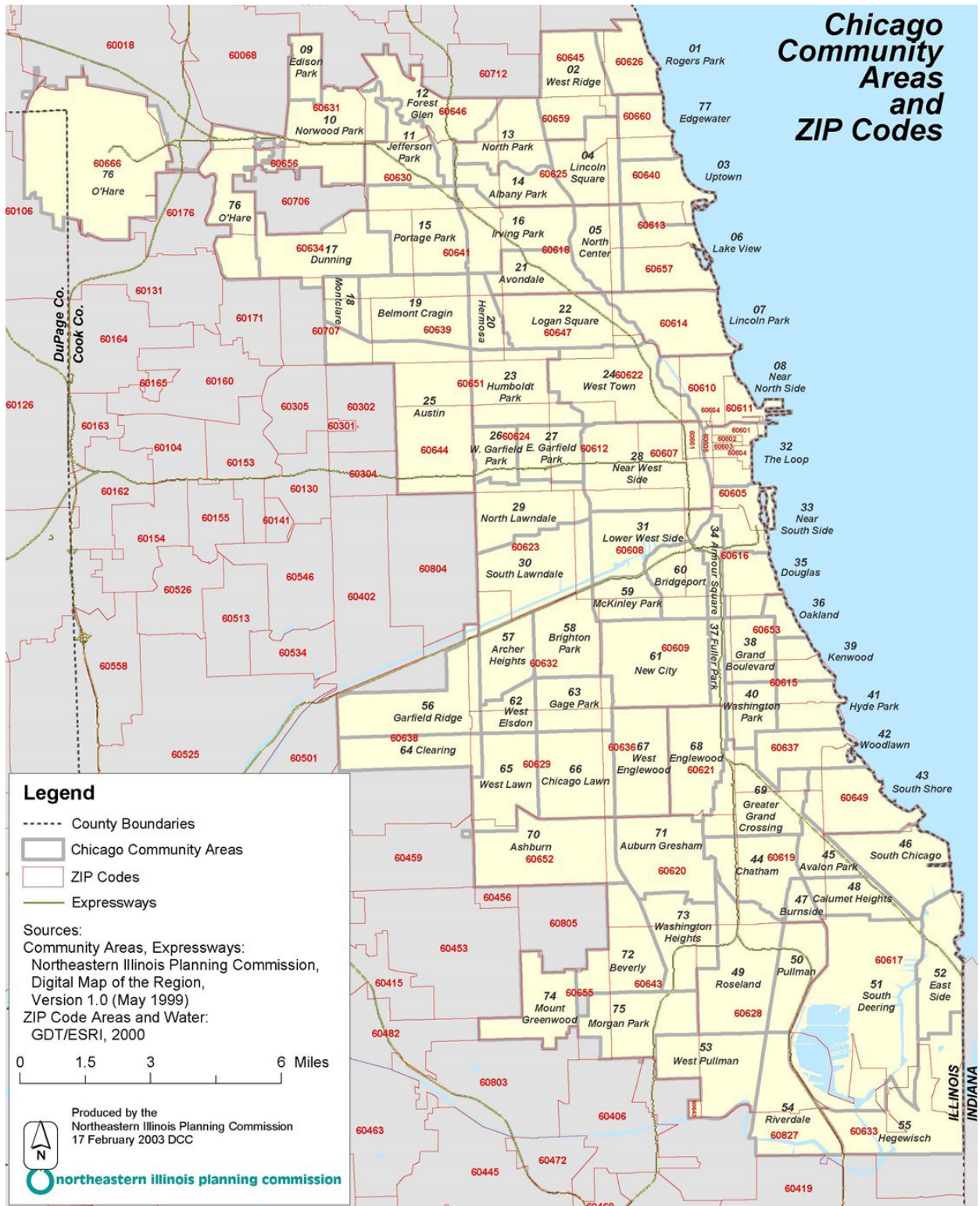
INDICATOR	SOUTH DEERING			EAST SIDE		HEGEWISCH	
	CHICAGO	VALUE	QUARTILE	VALUE	QUARTILE	VALUE	QUARTILE
HEALTH FACTORS – INFANT HEALTH							
Low Birth Weight (%)	9.4	10.7	3	7.5	2	8.1	2
Very Low Birth Weight (%)	1.8	2.3	3	1.2	1	1.3	1
Preterm Births (%)	10.5	12.5	3	9.4	2	9.0	2
Infant Mortality Rate (per 1,000 births)	6.6	8.4	3	3.1	1	9.2	3
HEALTH FACTORS – AGE							
Infants and Young Children, less than 5 years (%)	6.3	5.3	1	7.0	3	4.9	1
Children, less than 18 years (%)	20.9	31.8	4	29.8	4	20.6	2
Seniors, 65 years and older (%)	12.4	15.4	3	11.6	2	18.6	4
HEALTH FACTORS – QUALITY OF LIFE							
Life Expectancy (years)	77.3	74.0	2	78.3	2	77.2	2
Years of Potential Life Lost (per 100,000)	8,131	11,285	3	5,684	2	7,982	3
Excellent, Very Good or Good Overall Health (%)	87.1	82.5	3	78.3	2	57.5	1
Poor Mental Health (%)	12.7	16.4	4	14.3	3	13.1	2
Poor Physical Health (%)	12.6	17.8	4	14.6	3	14.2	3
HEALTH FACTORS – HEALTH CARE UTILIZATION AND ACCESS							
Uninsured (%)	9.7	8.1	3	10.4	3	9.8	3
Received Needed Care (%)	75.3	80.7	2	78.2	1	84.3	3
Health Care Satisfaction (%)	58.3	65.3	2	44.8	1	54.2	1
Primary Care Provider (%)	80.5	69.2	2	67.3	1	78.8	3
Health Professional Shortage Area Score (#)	NA	15	2	15	2	15	2
Community Health Centers (#)	185	0	1	1	2	1	2
Routine Checkup (%)	67.6	89.5	4	68.5	1	82.3	3
Breast Cancer Screening (%)	75.9	80.6	3	76.4	1	76.1	1
Colorectal Cancer Screening (%)	60.1	51.8	1	50.8	1	57.5	2
Cervical Cancer Screening (%)	80.8	85.9	2	84.7	2	85.2	2
Seniors Up to Date on Core Preventive Services (%)	25.0	20.2	1	22.3	2	24.0	3
Early and Adequate Prenatal Care (%)	65.3	56.9	1	62.9	2	63.4	2
SOCIAL FACTORS							
People of Color (%)	66.7	96.1	3	86.2	3	65.0	2

INDICATOR	SOUTH DEERING			EAST SIDE		HEGEWISCH	
	CHICAGO	VALUE	QUARTILE	VALUE	QUARTILE	VALUE	QUARTILE
Race-Ethnicity Diversity Index (#)	NA	0.46	NA	0.29	NA	0.51	NA
Asian or Pacific Islander (%)	6.6	< 0.01	1	0.4	1	< 0.01	1
Hispanic or Latino (%)	28.8	39.8	3	82.7	4	60.5	4
Non-Hispanic Black or African-American (%)	29.2	55.1	3	4.5	2	4.4	2
Non-Hispanic White (%)	33.3	4.8	2	12.3	2	34.9	3
Linguistic Isolation (%)	8.4	10.7	3	15.2	4	5.0	2
Limited English Proficiency (%)	7.6	6.5	3	13.8	4	7.2	3
Foreign-Born (%)	20.6	14.6	2	26.9	3	18.3	3
Poverty (%)	18.4	38.3	4	17.9	3	16.8	2
Per Capita Income (\$)	39,356	19,130	1	19,676	1	28,677	2
Median Household Income (\$)	61,784	31,576	1	53,703	2	58,218	3
Gini Index of Income Inequality (#)	53.1	55.1	4	39.7	1	43.4	2
Unemployment (%)	8.1	16.1	4	10.0	3	6.1	2
High School Graduation (%)	85.1	75.2	1	68.0	1	84.5	2
College Graduation (%)	41.3	12.7	1	11.6	1	16.5	2
Vulnerable Demographic Index (%)	NA	80	NA	70	NA	50	NA
Housing Cost Burden (%)	39.0	33.1	1	35.4	2	30.6	1
Crowded Housing (%)	3.6	3.5	3	4.0	3	2.3	2
Median Home Value (\$)	273,665	136,403	1	134,997	1	160,117	1
Hardship Index (#)	NA	94.3	NA	84.8	NA	61.7	NA
High Walkability (%)	94.6	18.5	1	71.8	1	26.8	1
Child Opportunity Index (#)	NA	5	NA	3	NA	2	NA
Low Food Access (%)	21.9	70.8	4	23.5	3	30.9	3
Disability (%)	10.5	11.9	3	11.3	3	6.6	1
Social Vulnerability Index (%)	NA	90.8	NA	79.2	NA	54.0	NA

Figure 35. Summary Table of Existing Conditions Indicators by ZIP Code

INDICATOR	60617			60633	
	CHICAGO	VALUE	QUARTILE	VALUE	QUARTILE
AIR POLLUTION EXPOSURES					
Toxic Release Inventory Program Facilities (#)	84	3	4	5	4
Air Releases (pounds)	962,073	7,051	4	324,110	4
HEALTH FACTORS – RESPIRATORY DISEASE					
Asthma ED Visit Rate (per 10,000)	84.7	128.3	4	24.8	1
Asthma Hospitalization Rate (per 10,000)	11.0	12.6	3	0.0	1
COPD ED Visit Rate (per 10,000)	32.5	55.3	4	10.1	1
COPD Hospitalization Rate (per 10,000)	23.3	29.0	4	8.5	1
HEALTH FACTORS – CARDIOVASCULAR DISEASE					
Heart Attack Hospitalization Rate (per 10,000)	16.1	17.8	3	0.0	1
Stroke ED Visit Rate (per 10,000)	5.2	8.4	4	0.0	1
Stroke Hospitalization Rate (per 10,000)	30.8	42.2	4	16.2	1
HEALTH FACTORS – CANCER					
Cancer Incidence (per 100,000)	451.2	453.8	2	496.5	3
Late-Stage Cancer Incidence (per 100,000)	112.6	126.0	3	141.5	4
Invasive Breast Cancer Incidence (per 100,000)	124.4	117.2	2	141.5	3
Non-invasive Breast Cancer Incidence (per 100,000)	30.3	26.9	2	22.8	1
Oral Cancer Incidence (per 100,000)	11.5	10.5	2	16.0	4
Colorectal Cancer Incidence (per 100,000)	42.6	41.6	3	42.3	3
Lung Cancer Incidence (per 100,000)	56.8	64.6	3	88.3	4
Cervical Cancer Incidence (per 100,000)	9.4	9.0	2	13.1	4
Prostate Cancer Incidence (per 100,000)	117.6	135.6	3	135.1	3
Urinary System Cancer Incidence (per 100,000)	30.2	29.1	2	46.5	4
Central Nervous System Cancer Incidence (per 100,000)	5.2	2.7	1	7.3	4
Leukemia & Lymphoma Incidence (per 100,000)	30.5	28.4	2	29.3	2
All Other Cancer Incidence (per 100,000)	133.5	132.8	2	114.3	1
HEALTH FACTORS – COVID-19					
Cumulative COVID Case Rate (per 100,000)	16,021	15,256	2	15,989	3
Cumulative COVID Mortality Rate (per 100,000)	237.5	241.1	3	170.9	2
Completed COVID Vaccine Series (%)	65.3	51.4	1	42.8	1
HEALTH FACTORS – HEALTH CARE UTILIZATION AND ACCESS					
Avoidable ED Visit Rate (per 10,000)	542.7	785.9	3	445.6	3
Preventable Hospitalization Rate (per 10,000)	198.6	189.9	3	--	NA

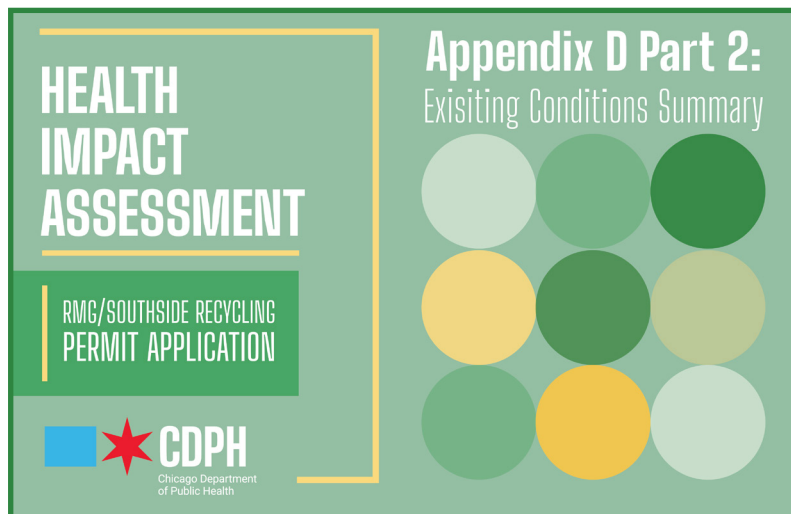
D1. Chicago community areas and ZIP Codes⁴⁴



44 Available at <https://www.chicago.gov/content/dam/city/sites/covid/reports/2020-04-24/ChicagoCommunityAreaandZipcodeMap.pdf>

Appendix D Part 2

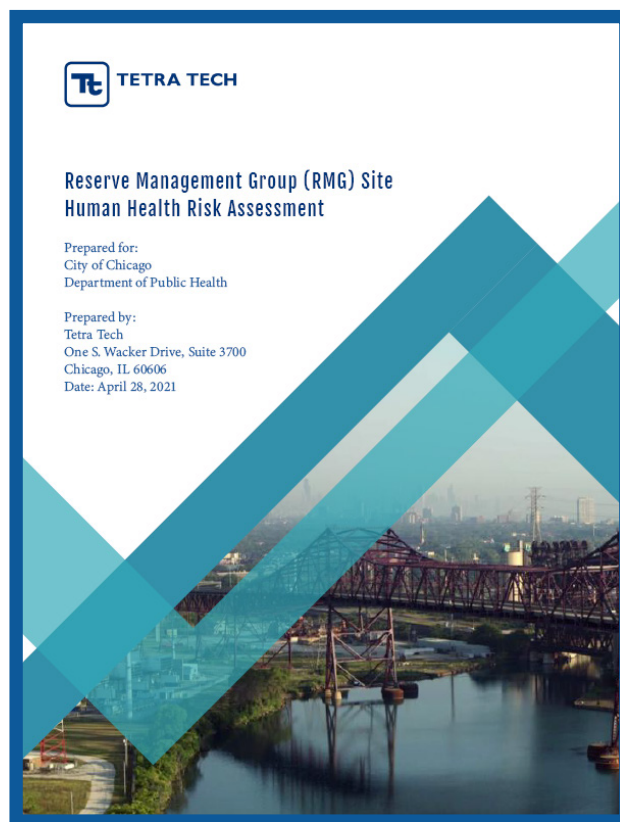
To characterize current conditions on the Southeast side, CDPH analyzed quantitative data from various public health data sources, including but not limited to the American Community Survey (US Census Bureau); EJSCREEN (US EPA); PLACES (CDC); Illinois State Cancer Registry, Hospital Discharge Data, Birth Certificate Data, Death Certificate Data (IDPH); Healthy Chicago Survey (CDPH); and Land Use Inventory (CMAP). The Existing Conditions Summary is available at bit.ly/RMG_HIA_APPXD



Appendix E:

Environmental & Health Risk Assessment

CDPH and its environmental consultant, Tetra Tech, with direction from EPA, prepared a comprehensive inventory of emission sources, calculated potential emissions, modeled air dispersion and deposition of contaminants, and conducted on-site soil sampling, then used this information as inputs for a risk model. These data allowed us to characterize existing site conditions and predict how the proposed Southside Recycling operations – together with current RMG business operations on the property – would affect community health risks. The resulting 509-page report can be viewed at: bit.ly/RMG_HHRA



Appendix F:

HIA Monitoring Plan

Proposed Indicators for Monitoring Adoption of HIA Recommendations

CDPH developed recommendations based on the HIA findings. This includes community input from the permit process and HIA public engagement sessions (see Community Input Summary, Appendix C) and a review of best and promising practices from around the country. CDPH is committed to being held accountable for and taking action on these recommendations. Detailed below are the actions proposed, the responsible agencies and an estimated time frame for when we expect to implement each of these actions.

Recommendation	Responsible Agency	Timing*
Make and announce permit decision in accordance with the recommendation of the summary report.	CDPH	Short term
Purchase and installation of federally equivalent air monitors to ensure increased air monitoring	CDPH	Medium term
Collaboration on improved enforcement of air facilities on the Southeast side and citywide	CDPH, IEPA, US EPA	Short term and ongoing
Updating procedures, protocols and training and implementing updates to ensure appropriate inspection frequency, using community vulnerability data to prioritize inspections, clear policies on issuing warnings, recording complaint inspections and following up on violations.	CDPH	Short term and ongoing
Promulgate new, strong rules for facilities that process demolition and construction debris to ensure businesses with potential to impact surrounding communities are subject to monitoring, reporting and control requirements.	CDPH, Law	Short term
Promulgate new, strong rules for air permit facilities to ensure businesses with potential to impact surrounding communities are subject to monitoring, reporting and control requirements.	CDPH, Law	Medium term
Promulgate new, strong rules for general recycling facilities to ensure businesses with potential to impact surrounding communities are subject to monitoring, reporting and control requirements.	CDPH, Law	Medium term
Conduct cumulative impact assessment to get baseline data on environmental, health and social conditions citywide.	CDPH	Medium term
Develop cumulative impact ordinance	CDPH, Mayor's Office, DPD, Law	Medium term
Institutionalize use of Health Impact Assessment (HIA) and Racial Equity Impact Assessment (REIA).	CDPH, other City departments as appropriate	Short term and ongoing

* **SHORT TERM** = Up to 1 year **MEDIUM TERM** = 1 to 2 years

The recommendations of this HIA will take several years to implement and certainly longer to realize results. Therefore, a detailed monitoring plan for all health effects and outcomes related to these recommendations is out of scope for this HIA. However, CDPH is committed to continuing to provide access to data on health, environment and quality of life indicators such as those presented in our Existing Conditions Summary (see Appendix D). This data is made available to the public through the Chicago Health Atlas and updated regularly. CDPH will also continue to update the [Air Quality and Health Index](#) as new data becomes available.