

CleanAirNow Environmental Justice Recommendations:



Comments on the
Armourdale General Plan

May 2021

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Gunnar Hand
Director of Planning
Unified Government of Wyandotte County
Kansas City KS

RE: Recommendations and Comments on the Armourdale General Plan

Thank you for the opportunity to provide comment on the Armourdale General Plan. CleanAirNow is an environmental justice organization focused on air pollution in the Kansas City area. We work closely with fence-line communities to address concerns about noise, odors, toxic releases and other environmental exposures from the many and varied industrial facilities in and around Kansas City.

We would like to raise concerns and provide our expertise on the environmental exposures experienced by residents of the Armourdale Community in relation to the Armourdale General Plan.

In general, CleanAirNow would like to emphasize the following concerns with more detailed recommendations to be found in the attached document:

1. CleanAirNow considers Armourdale an environmental justice community. The history and disproportionate impacts of pollution on brown, indigenous, people of color (BIPOC) and low income communities living in Armourdale needs to be considered in Armourdale's General Plan.
2. Public participation is key to democracy as well as the achievement of environmental justice. A formal public participation process should be established and implemented for the Armourdale General Plan.
3. The cumulative impacts of the various pollutants and environmental exposures experienced in the Armourdale community must be considered in the Armourdale General Plan.
4. Through the Armourdale General Plan, Armourdale must establish goals of reducing pollution, reforming land use, and addressing the impacts of heavy truck traffic to advance environmental justice.
5. In every aspect of the Armourdale General Plan, health, climate change and the climate vulnerability of residents must be considered.

The Armourdale General Plan will be insufficient and incomplete without the input of community organizations and without considering the myriad, cumulative exposures experienced by the Armourdale community. Please see below for our full comment on the Armourdale General Plan and what needs to be considered for the future wellbeing of the community and the city. We have also attached relevant and pertinent literature for your review.

Sincerely



Beto Lugo Martinez
CleanAirNow

cc: Kimberly Portillo

Acknowledgements

Armourdale General Plan Recommendation: While we conducted the research for and writing of this report, we took a collaborative approach that included community members voices and organization partners in the design and draft review, to the completion of the report. The following are experts who provided and contributed to this report:

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H.E.A.T Report of the Community Health Council, Elaine Geissel
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Special Thanks to Armourdale Community Air Monitor Hosts

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Photo Credit

**Armourdale Resident Sarah
Google Image with Resident Consent
Beto/CleanAirNow**

Infographic Outreach Material

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Disclaimer

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This Report is Available in Spanish.

INTRODUCTION

As the Armourdale General Plan steering committee works to develop a plan for the future of the neighborhood, CleanAirNow seeks to inform the plan with additional context related to our work.

About CleanAirNow

CleanAirNow is a grassroots environmental justice organization in Kansas City, and was initiated by community concerns around chemical industrial pollution, diesel emissions, hazardous toxic waste and environmental health inequities at the fenceline. From the start, CleanAirNow has sought to disrupt and dismantle the environmental racism that impacts communities in Kansas City and the surrounding region. We focus on building community power through environmental health education, equitable community-based research projects, and people-driven solutions in public policy. These fenceline communities are neighborhoods located near pollution sources in the form of noise, odors, chemical and toxin releases, legacy contaminants, or other forms of man-made pollution.

We have been conducting air monitoring studies in Kansas City, Kansas (KCK) since 2013. Originally, we focused on rail yards in KCK and Gardner/Edgerton. We monitored diesel emissions and alerted residents, the EPA, and BNSF to levels that exceeded health thresholds. Our monitoring in 2013 detected high levels of diesel emissions surrounding the BNSF railyard in Argentine. In 2015, the EPA awarded us an Environmental Justice Small Grant to continue our air pollution monitoring and begin conducting public health training and advocacy. Under this program, we developed a 25-page training guide and trained over 300 community members.

This work prompted the EPA to conduct their own study called the Kansas City Transportation and Local-Scale Air Quality Study [1]. For this study, several stationary monitoring sites were placed throughout KCK, including one at the Bill Clem Park in Armourdale. While the EPA conducted their study we continued to deploy our air monitors in several locations throughout KCK. Both studies identified several occurrences of localized emissions that exceeded health thresholds [2] that have been linked to cardiovascular disease, respiratory disease, and premature death. One of our sites with exceeding levels was in the residential area of Armourdale [3], while another was at the St. Margaret's Apartments just north of Armourdale. This is likely a result of the high levels of industrial pollution from facilities in Armourdale.

We are continuing to conduct air monitoring studies throughout Kansas City, and have plans to expand our community-owned air monitoring network into Armourdale this year. This network provides us with the ability to continuously monitor particulate matter at the neighborhood level with permanent monitors. This work has allowed us to build and advance environmental justice in KCK.

ENVIRONMENTAL JUSTICE CONCERNS

Fenceline communities of color, indigenous peoples and tribal nations, and immigrant communities throughout the U.S., have disproportionately experienced some of the greatest environmental burdens and their related health problems. This inequity is the result of many factors: inappropriate zoning and negligent land use planning, intersecting structural inequalities, failure to enforce proper zoning or regular inspections, deed restrictions and other discriminatory housing and lending practices, limited political and economic power among certain demographics, the prioritization of business interests over public health, development patterns that tend to concentrate pollution and environmental hazards in certain communities. Combined with a lack of economic resources and unjust policy making, these

fenceline communities, or environmental justice communities as described by EJ organizations, continue to face significant barriers to their overall health, livelihood, and sustainability.

Fenceline communities are the communities that are experiencing the most intense impacts from man-made environmental pollution. They are often situated next to industrial sources of pollution and are disproportionately inhabited by people of color and the working poor [4][5][6]. It is common for many members of fenceline communities to be employed by the same industries that are poisoning their families. Community members are put in a precarious situation, where they are forced to choose between economic survival and the health of their families. Additionally, residents in fenceline communities are often unable to relocate. This is because the property value of homes in fenceline communities is often dramatically lower due to their proximity to such intense sources of industrial pollutants. This makes it nearly impossible to sell their homes at a price that will enable them to purchase property elsewhere.

In the fight against such threats, communities across the United States have confronted environmental racism and injustice through coordinated campaigns that amplify their voice in the decisions that affect their lives. These efforts have resulted in significant benefits, such as the removal of stationary or mobile sources of pollution; the creation of restrictions or prohibitions on new polluting sources; and investments such as parks, affordable public transportation, and affordable housing. These localized assets highlight another important aspect of environmental justice: while it is important to identify the problems and areas that are unfairly impacted by cumulative burdens, EJ is also about gaining equitable access to environmental benefits, investments, and other resources for low-income communities and communities of color. Such benefits can address the uneven distribution of amenities along race and class lines that reflect long legacies of racism and discrimination in land use planning and development.

As a result of these local EJ campaigns, which have contributed to the larger movement for environmental justice over time, the United States Environmental Protection Agency (US EPA) Agency adopted definitions for environmental justice to guide their EJ-focused policymaking: The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies [7]. By looking at the history of Armourdale, it becomes clear it is an environmental justice community. [*SB 1000 Toolkit: Planning for Healthy Communities Section 1.4 pg.4](#)

HISTORY OF ARMOURDALE

The Armourdale neighborhood in Kansas City, Kansas, is nestled between the Missouri and Kansas Rivers. The region was originally home to Indigenous peoples, abolitionists, and immigrants among many others, producing a diverse neighborhood that has undoubtedly contributed to its rich history [8].

In 2010, Armourdale had a population of 5,488 [9]. The overwhelming majority of the region's inhabitants (76%) identify as people of color. With respect to the type of residence, there are 1,623 homes in the region. On the contrary, there are 1,915 housing units in the region [9]. Further, the median household income for this neighborhood is \$31,600 [10]. In comparison, neighboring regions such as Turner, Muncie, Shawnee Heights, Strawberry Hill, Argentine, and Rosedale all ranked above the median household income of Armourdale.

Armourdale, a densely populated region, is home to many different types of industries, namely, the administrative industry. The administrative industry is comprised of “administrative, support, and waste management services” such as recycling facilities [10]. A recent estimate indicates that 11.6% of the Armourdale population is employed by the administrative industry. On one hand, the presence of the administrative industry equates to employment opportunities for Armourdale residents. On the other hand, this is troubling because waste management services are notorious polluters [11]. Workers employed by the administrative industry and those who reside in Armourdale are at increased risk of developing diseases caused by air pollution [12].

Armourdale also contains several sites that are regulated by the EPA under various laws. Figure 1 below was generated using the EPA tool NEPAassist (<https://www.epa.gov/nepa/nepassist>). It shows all facilities that are currently regulated by laws such as the Clean Air Act (CAA), Resource Conservation and Recovery Act (RCRA), and the Clean Water Act (CWA). While there are only a few dozen markers on the map, many markers actually represent multiple facilities. Once accounted for, the map shows 194 different polluting facilities. While not all are violating environmental laws individually, the question of cumulative impacts plays a large role, considering exposure from these pollutants from stationary sources as well as pollution from unrecorded mobile sources.

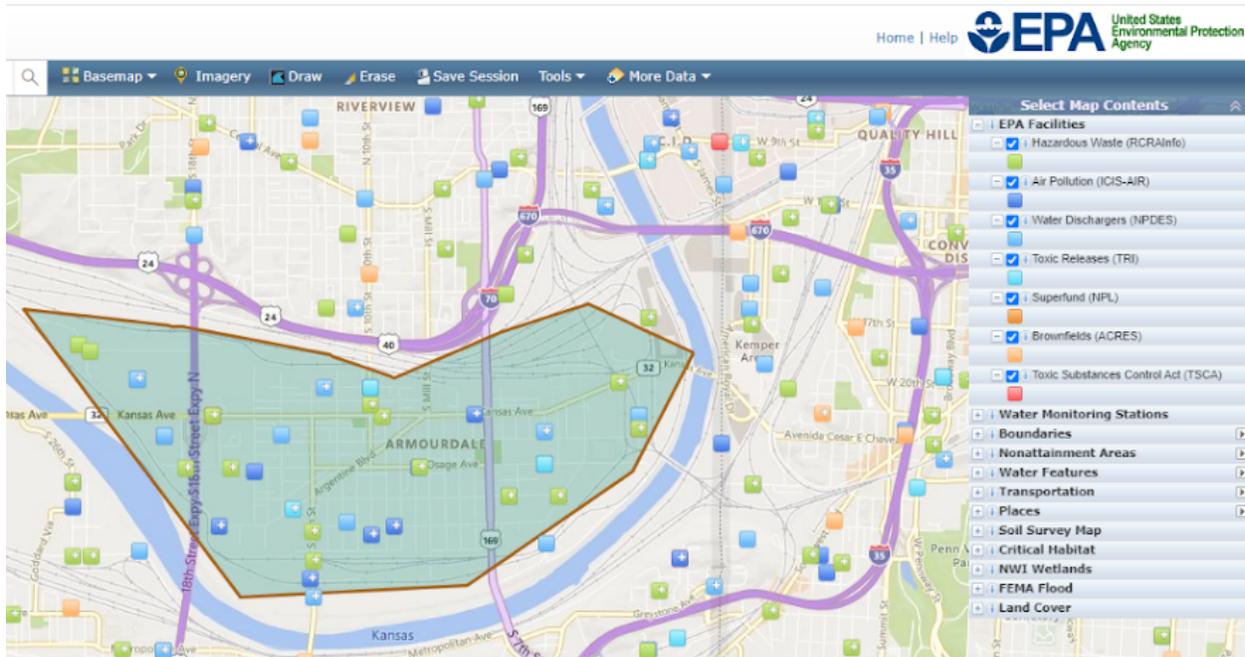


Figure 1: Polluting Facilities in Armourdale

The 2014 H.E.A.T study [13] showed a stark difference between people in Armourdale and those in other parts of Wyandotte County. Most notably, the average age at death, as seen in Figure 2, is lower in Armourdale than for residents in other parts of the county. While difficult to say why this is for sure, underlying health issues from long term exposure to pollutants may very well play a role. Residents can expect a lifespan up to 22 years shorter. It is important that we include these residents in conversations about what is going to happen in their own community.

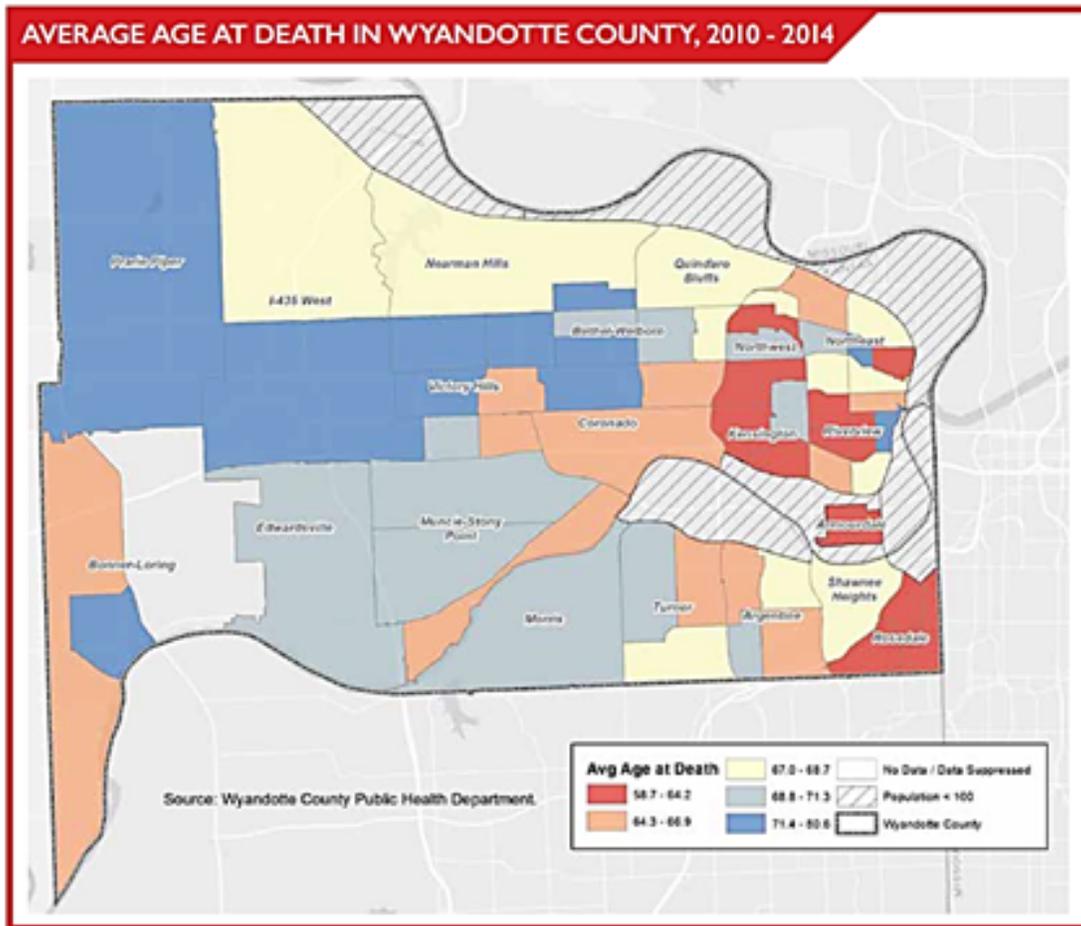


Figure 2: Average age of Death in Wyandotte County from 2014 H.E.A.T. Report

FORMAL PUBLIC PARTICIPATION AND COMMUNITY ENGAGEMENT PLAN

Formal public participation allows fence-line community members to have a say in decisions that will directly impact the health and well-being of them, their families, and their neighbors. Community engagement is a key environmental justice principle that involves communities most impacted by pollution, toxins, and other environmental problems. This engagement is important because residents bring knowledge, information, and ideas from firsthand experiences dealing with environmental issues on the ground that governing bodies may not be aware of or anticipate.

When designing a strategy, it is important to keep in mind the “spectrum” of possible engagement processes with stakeholders. The International Association of Public Participation (IAP2)© developed a Public Participation Spectrum©, which presents the possible types of engagement along a spectrum of increasing public involvement and decision-making, from simply informing to building community power. This details the types of engagement along the entire spectrum. When planning for EJ, one of the most meaningful forms of community engagement is “building community power,” where historically marginalized communities lead and have ownership over the planning process and its outcomes. Engagement at higher levels along the spectrum moves voices of community members to the forefront and is important to the general plan process because community members are holders of local knowledge and listening to their voices can lead to better and more effective planning decisions.

Two key requirements for implementing such a strategy are to: 1) The allocation of sufficient time and opportunities for engagement. To avoid rushing the process and tokenizing community participation, this approach promotes capacity building so that community stakeholders can provide meaningful feedback and decisions; and 2) The prioritization of a sufficient budget. Maintaining an adequate budget for meaningful community engagement is important for promoting equitable access and achieving high-quality public participation. [*SB 1000 Toolkit: Planning for Healthy Communities Section 4.1pg.36](#)

The steering committee leading the Armourdale Master Plan has created an ecosystem of engagement for the public leading up to the development of the plan. The first round designed to inform the plan consists of an online survey and the second is an open-ended voicemail box where members of the community can leave messages that will be transcribed. PORT has also hired four community members to assist with direct community outreach, soliciting input from their neighbors and posting flyers in small businesses. These initial outreach activities described in a March 19, 2021 steering committee meeting seem designed to solicit positive feedback about community experiences and we are concerned that the survey may not fully capture the scope of the Armourdale community's concerns, resulting in a plan (and future development projects) that will not adequately benefit the residents who are bearing the burden of economic, social, and environmental inequities, including disparate pollution exposure.

The failure to create decision making structures that incorporate meaningful participation in environmental justice communities is a longstanding problem. To create a more transparent and meaningful form of public participation, we recommend the following:

RECOMMENDATIONS

1. The survey design method, questions, responses, and information on respondents is documented prominently on the General Plan's website. The transcribed, anonymized messages on the voicemail box should also be made public.
2. A formal process for submitting public comments should be made available on the General Plan's website. This should be open as the plan is developed and comments should be actively solicited at every stage of development. The team may also consider including responses to each comment in the final report.
3. Positive stories solicited on the Armourdale Strong website can be incorporated in the plan but must be balanced by the inclusion of specific concerns of community members.
4. The creation of a General Plan should not be the end of community input on these issues. The Unified Government in partnership with the Mid-America Regional Council should charter an Environmental Justice committee that can advise the Kansas City government regularly on actions that can be taken to address inequities in the community.

AIR POLLUTION

Addressing air pollution concerns is a fundamental part of achieving environmental justice. Fenceline communities like Armourdale often experience air pollution from multiple sources, making community members more susceptible to the associated health risks. Air pollution can cause many serious health risks such as, cardiovascular disease [15], cancer [16], as well as neurological and reproductive disorders. The identification of sources, types, and quantities of pollution is important and necessary to determine appropriate solutions. Although air quality is just one type of pollution exposure, improving air quality through the reduction of specific contaminants is critical to the health and well-being of all people and the environment.

While the EPA requires states to regulate several criteria air pollutants under the Clean Air Act, there are still thousands of unregulated pollutants with severe health implications to frontline communities. One of the biggest contributors to these unregulated pollutants in KCK is diesel exhaust from the transportation sector.

Two markers for diesel exhaust include elemental carbon (EC) and black carbon (BC). By sampling for these pollutants, we can assess whether or not there are localized occurrences of high levels of diesel exhaust that may cause chronic illnesses, hospitalizations, and premature deaths. Several studies have taken place in Armourdale that have identified levels of BC and EC that exceeded health thresholds.

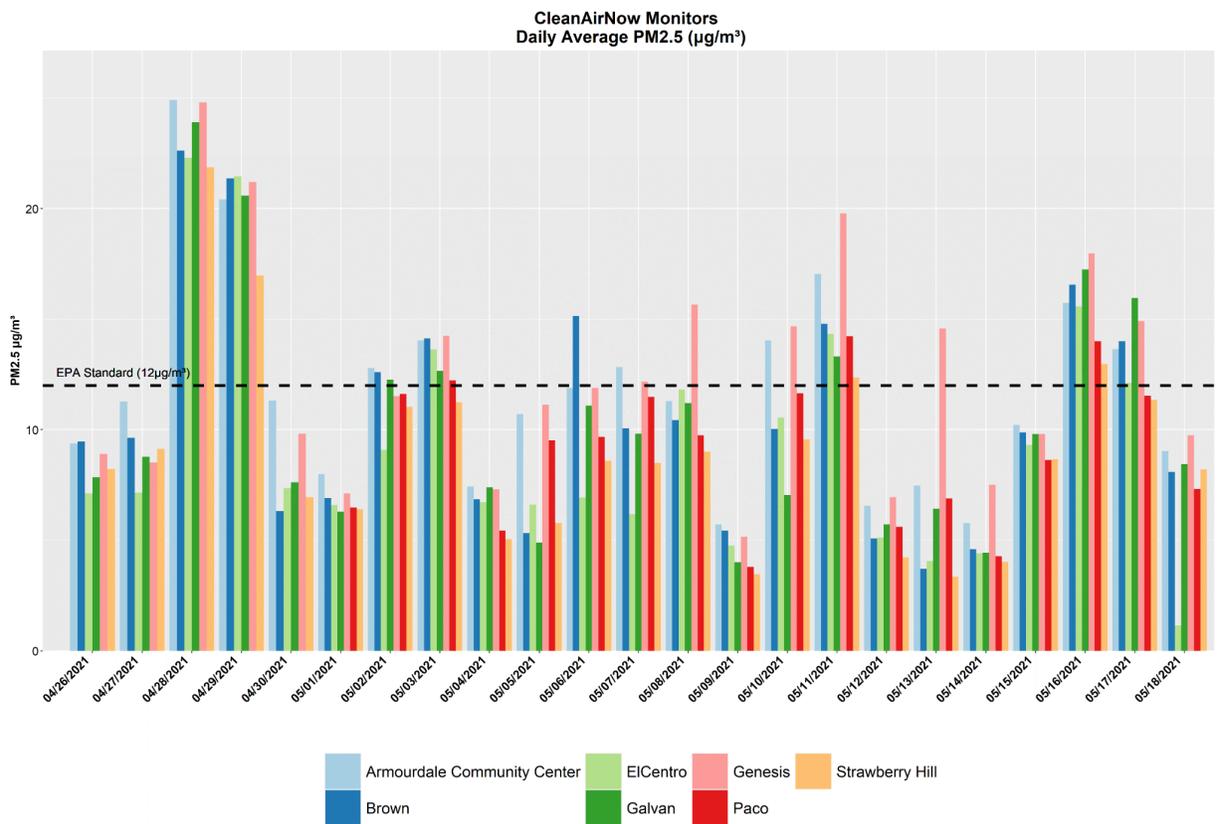


Figure 3: PM_{2.5} levels in KCK as recorded by community air monitors - Armourdale Genesis Monitor

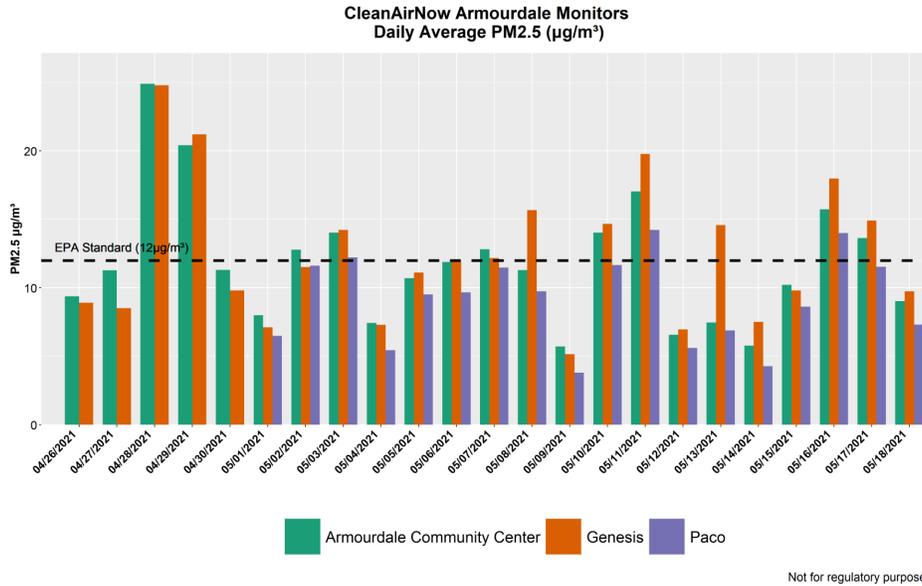


Figure 4: PM_{2.5} levels at Armourdale Community Center, Genesis, and Paco sites as recorded by community air monitors - Armourdale Genesis Monitor

Between 2015 and 2017, CleanAirNow sampled for EC on five different occasions and found one of them to be dangerously high. In the same study, the nearby St. Margaret’s Apartments exceeded the health threshold four out of eight times. CleanAirNow organized and at our request the EPA conducted its own study after analyzing the results from our study. It too found exceedances at their Bill Clem stationary site in both BC and EC, 12% and 7% of the time they sampled, respectively. These localized occurrences are often compounded due to the current meteorological conditions and are more likely to occur in colder months.

The Clean Air Act requires monitoring of six Criteria Air Pollutants: ground-level ozone, particulate matter, carbon monoxide, lead, sulfur dioxide, and nitrogen dioxide [17]. There are currently 5 EPA monitors in the Kansas City Area monitoring criteria air pollutants and 2 monitoring hazardous air pollutants [18]. However these monitoring networks have been shown to be insufficient for measuring local and short-term spikes in air pollution [19]. The sampling done by CleanAirNow that detected the health threshold exceedances were not reported by the EPA monitors in Kansas City.

RECOMMENDATIONS

1. Do not permit the building of new, or expansion of existing, industrial facilities that are emitting air pollutants in Armourdale.
2. Enforce federal and state air pollution standards at existing facilities.
3. Create a notification system for the public to inform them when air pollution is particularly bad in Armourdale. This should be based on weather patterns that may exacerbate the community’s exposure to harmful air pollutants.
4. Immediately begin transitioning warehouses and facilities to zero emissions and set a goal for when this should be accomplished; CleanAirNow can help in setting those goals.

TRANSPORTATION

Living and working closely to major traffic ways and other sources of transportation and mobile source pollution has shown to have adverse health effects on individuals such as cardiovascular disease [20], respiratory disease [21], and premature death [22]. A study done in 2014 found mobile source pollutants such as black carbon and nitrogen oxides may not return to background levels until approximately between 200 - 300m from their emission source [23]. Armourdale has increased amounts of truck and locomotive traffic due to its proximity to major traffic corridors, railyards, and industrial facilities.

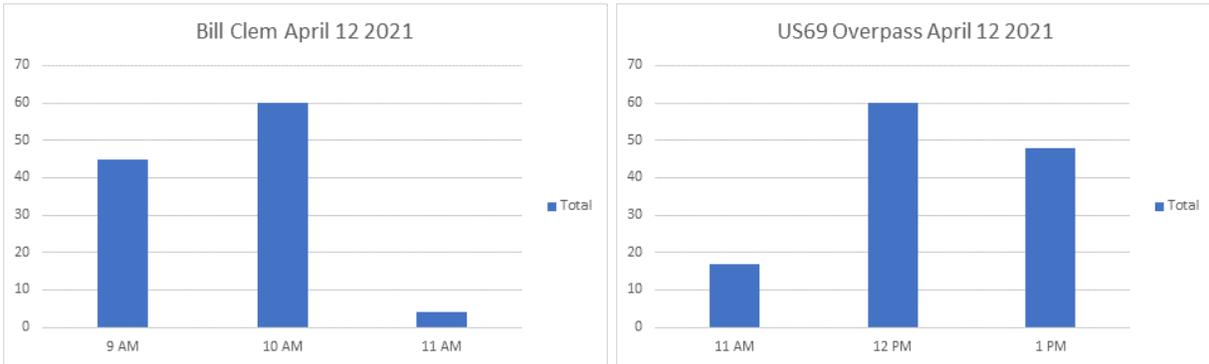


Figure 5, 6: Fossil Fuel Truck Counts on Kansas Ave
(refer to Appendix A for Black Carbon Monitoring April 12, 2021)

On April 12, 2021 CleanAirNow conducted a truck count in Armourdale, shown in Figures 5 and 6. We counted at two different locations for two hours each. The first location was at Bill Clem Park and we counted trucks that passed the intersection of Kansas Avenue and 10th St. (both streets with residential houses on them). We counted 149 trucks for an average of 1.24 trucks per minute between 9am – 11am. The second location we counted at was the area around US69 and Kansas Avenue. Between 11:45am – 1:45pm we counted 415 trucks for an average of 3.46 trucks a minute.

As noted in the “Air Pollution” section of this document, high levels of air pollutants related to the transportation sector have been detected in Armourdale over the course of several studies and several years. Mobile source pollution in the area is a great risk to the health of residents in Armourdale. Because of this, CleanAirNow makes the following recommendations for the transportation sector in Armourdale.

RECOMMENDATIONS

1. Create specific truck routes that avoid residential areas. Create new trafficways in needed areas so that trucks can easily avoid passing through streets that have families living on them.
2. Require zero emissions trucks, especially those that are only used locally. Priority should be given to environmental justice communities. During our truck count there were several trucks that made multiple passes by us. This leads us to assume they are only driving in and around Armourdale.
3. Prohibit trucks from idling.
4. Begin working now towards zero emissions facilities in Armourdale. Facilities operating in Armourdale should be required to produce no new emissions and pollutants.

5. The General Plan should prioritize zero emission fleet vehicles, medium & heavy duty trucks, equipment and supporting infrastructure at goods movement hubs, warehouses and along freight corridors.
6. Electrify new and existing warehouses to operate zero emission yard trucks, forklifts etc.

SCRAP METAL RECYCLING FACILITIES

Scrap metal originates from end-of-life-products, structures, construction and demolition debris, or out-of-specification metal products that are recycled to recover their metal content. Scrap metal recycling facilities include feeder yards, dismantlers, and facilities with a metal crusher, baler, or shredder. Scrap metal can be sourced from discarded appliances, vehicles, electronic waste (e-waste), metal pieces generated from machining operations, and other metal-containing wastes. Regardless of whether it is being recycled, scrap metal should be managed in a way that does not cause a release of its hazardous constituents to air, soil, or water.

Armourdale has over 15 combined auto dismantlers, junk yards, and metal recycling facilities, many which are fence-line to residential dwellings. Of these, Advantage Metal Recycling is the only recycling facility currently reporting to the EPA [24]. Most recycling facilities in Armourdale are unregulated, unregistered with EPA, KDHE, UG or any agency tasked to monitor such facilities. This leads to ineffective inspections, enforcement, and non-compliance.



Image 1: Advantage Metals Recycling Facility in Armourdale (Google Earth)

A community member noted:

“I am not comfortable eating food from my own garden because my plants and garden have yellow fine particulate on them.” This yellow particulate can be associated with metal crushing. Community members having no one to provide a complaint to makes it a challenge to the already poisoned community.

Other community voices:

When we report flooding and illegal dumping to the UG, their response has been “What do you expect, you live in Armourdale, there is nothing we can do.”

Examples:

Advantage Recycling has two facilities in the area, which are of air and water pollution concerns from community voices mentioned above. The following images were taken in February and dust and other particles can be seen rising above the scrap yard.



Image 2, 3, 4: Images of yellow/orange particulate in Armourdale, Episodic Event on February 1, 2021

Another environmental justice concern are auto dismantlers facilities that have a history of polluting the environment: Auto Dismantler Kansas City CleanWaterAct [25].

No crushing, smashing, baling or reduction of metal shall be conducted on the premises unless it is conducted without producing substantial amounts of air pollution. Noise emanating therefrom, as measured from any point on adjacent property, shall be no more audible than the noise emanating from ordinary street traffic and from other commercial or industrial uses measured at the same point on the said adjacent property. Any property used for automobile dismantling yards, junk yards, scrap metal processing yards or open air storage of used materials, used equipment and used machinery shall not cause a release of its hazardous constituents to air, soil, or surface water and ensure that their treatment of the waste from these facilities is adequately protective of human health and the environment.

RECOMMENDATIONS

1. Recommend reviewing or updating Kansas Junkyard and Salvage Control Act[26] for compliance and land use designations, prior to the completion of the General Plan.
2. Enact new legislation: New law to regulate scrap metal dealers [27].
3. Identify facilities which are not registered or in compliance to any regulatory agency, not operating on expired permits, conditional use permits, etc.
4. Make it a priority to enclose such facilities or add protective barriers, fenceline to residences and a land use zoning consideration and clean up with a distance more than 2500 feet from a residential dwelling.
5. No new recycling facilities allowed to operate in Armourdale city limits.
6. Air monitoring at the fenceline.

LAND USE

Among the proposed actions from the 1979 Armourdale Land Use Plan was that the city not approve any non-residential zoning and development which could be hazardous to human health or safety, result in the loss of habitable housing units, emit excessive noise, odor or other nuisances, or present a visually detrimental impact to the residential areas [28]. Despite this recommendation made over forty years ago, the Armourdale community continues to face these realities and the area is still dominated by industrial use.

Historically, residential segregation has played a major role in the development of the Kansas City Metropolitan Area. On the Kansas side, this contrast is apparent today in comparing Johnson County suburbs (which rank among the most desirable in the nation) with the residential areas of Wyandotte County, which are interspersed among the industrial areas. This distribution perpetuates urban inequality, with low-income communities suffering from pollution and heat island effects, which contribute to higher health adversity outcomes.

Urban Greening can promote physical activity through the beautification of existing surface infrastructure and through new infrastructure, such as community gardens. Separate from traditional recreational facilities, urban green spaces allow areas for informal and formal recreation. Urban greening also has environmental benefits: it can help reduce impacts of climate change by mitigating heat waves, has storm water management benefits, and can also reduce exposure to air contaminants.

General Plan policies to support urban greening can include Identifying specific green infrastructure projects located in Armourdale, promoting collaboration with community-based organizations in developing and maintaining programming, encouraging the planting of street trees and other landscaping, and identifying vacant lots and underutilized public land that can be turned into neighborhood-run community gardens.

While we support creating more green space it **is important that it complements more serious actions to address community needs. It should also not be used as the primary means of creating change through an environmental justice lens.** Many of the public spaces in Armourdale are coupled with industrial and mobile source pollution. For example, the community center often has trucks idling outside, and as we saw with our truck count, Bill Clem Park is consistently passed by diesel emitting trucks. Bill Clem was also the site of the EPA stationary monitoring during the KC-TRAQS Study that recorded several occurrences of high levels of air pollutants [1].

CLIMATE CHANGE

It is imperative that the impacts of climate change be evaluated for the Armourdale community as authors prepare the General Plan and consider a future for residents and businesses. Local governments and planners can measure climate vulnerability for local communities, including Vulnerable or EJ Communities, through a process called a vulnerability assessment. By doing this it can determine the climate-related hazards in the community (under both current and future conditions), and how these hazards may change over time. Federal resources, such as the [U.S. Climate Resilience Toolkit \[29\]](#) , can help with this process. There may also be local and regional resources available. Identify populations. A vulnerability assessment can help to select the specific populations present in the community that may be harmed by these hazards, including different populations that are considered vulnerable populations. It considers age, physical and mental health, employment, citizenship status, and other socioeconomic factors. Finally, this assessment should lead to an analysis of potential impacts. Using scientific research,

relevant reports and studies, and discussions with community members, it should assess how severe each climate change effect will be for different demographics of the population.

*[SB 1000 Toolkit: Planning for Healthy Communities](#)

ARMOURDALE PLAN FOR CHEMICAL AND CLIMATE DISASTERS

Due to the location of the industrial corridor in the West Bottoms along the Kansas River, residents of the Armourdale area are at greater risk of exposure to chemical emergencies, from railcars, tanker trucks on the highways and fixed chemical manufacturing, mixing and storage facilities. Prevailing westerly winds and the topography of the valley can push chemical releases from the Argentine district into Armourdale.

Emergency planning, including education of at-risk communities, is critical to reduce the public health impacts of a chemical emergency. Preparedness must include both evacuation and shelter-in-place plans for communities that might be impacted.

There are a number of "Tier 2" facilities in this industrial corridor which report a list of their hazardous materials to EPA and the Local Emergency Planning Committee(LEPC) of MARC. Emergency Planning and Community Right-to-Know (EPCRA) gives communities the "right to know" the chemical hazards, that includes port facilities and operations, chemical trains, bomb trains, hazardous material liquified natural gas by rail that might impact their homes, schools and workplaces. The community members can best identify high-risk locations, such as work sites, schools, nursing homes, hospitals, day care centers, etc.

Risk Management Plan/Chemical Disasters

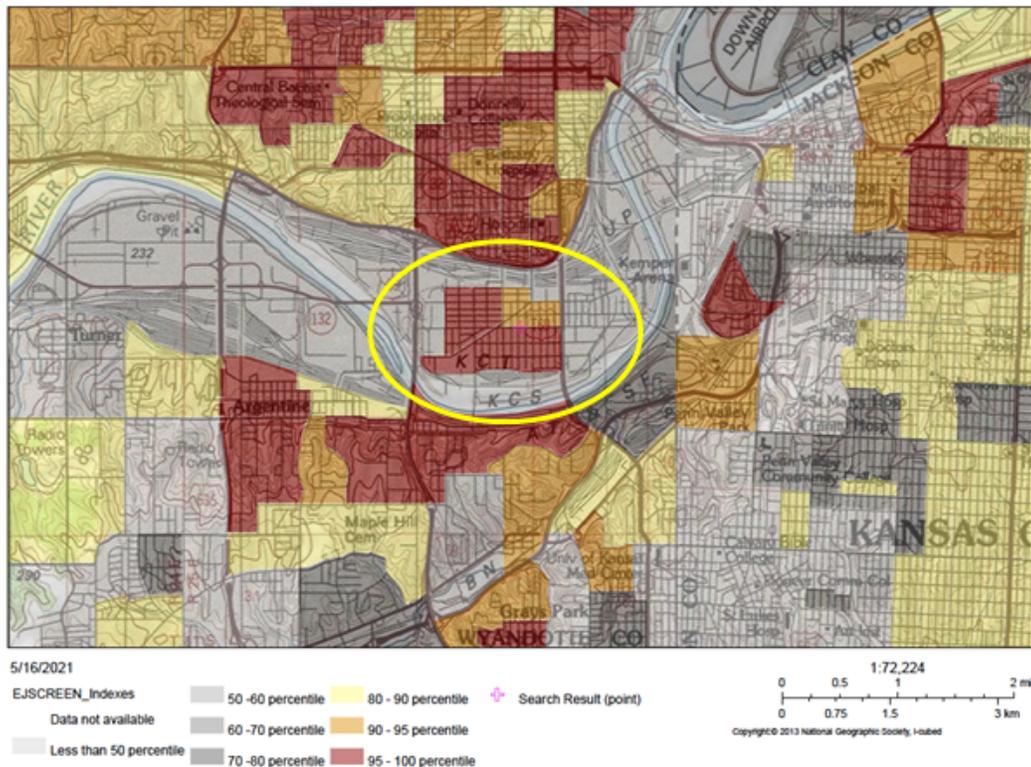


Figure 7: Environmental Justice (EJ) Screening Index Map, showing the high index of EJ needs in central Armourdale due to chemical disaster risk.

Example:

A table-top drill was implemented by the LEPC at Harcros Chemicals several years ago. As a result of the drill, community education and creation of an industrial awareness group were proposed, primarily led by the Health Department of the Unified Government of Wyandotte Co. Little, if anything, has been done to date.[30]

RECOMMENDATIONS

1. Stakeholders in the Armourdale area should have an opportunity to meet with U.G. Dept. of Health officials and the LEPC to help develop a comprehensive plan for chemical emergencies in the West Bottoms.
2. Community education should focus on awareness, communication, and reaction strategies, in English and in Spanish, using "trusted" spokespersons (teachers, religious leaders, medical officials, promotoras, community organizers, etc.)
3. Funding for these efforts could be obtained from the industrial partners in the West Bottoms and/or from LEPC grants from the Kansas Division of Emergency Management [Kansas Adjutant General's Department - Hazardous Materials Preparedness Grant \(HMEP\)](#) (kansastag.gov)[31]

CONCLUSION

With the Armourdale General Plan, the Kansas City government has an opportunity to follow through on decades-old recommendations of improving quality of life for Armourdale residents and to trigger actions and policy changes that can help advance environmental justice. To do this, the Unified Government and steering committee members must first ensure that the community is given opportunities to meaningfully inform the plan and institute other pathways for participation in the decision making processes moving forward. The plan must also consider the legacy of industrial development and air pollution from stationary and mobile sources in the Armourdale community and include recommendations for improving air quality and associated health outcomes and being more proactively transparent with residents. It must also incorporate the realities of climate change vulnerability in any planning scenarios, ensuring that those who stand to be most affected by the impacts of climate change, communities of color and low-income communities, are protected. Armourdale residents deserve nothing less than to have equitable access to investments that will benefit them economically and improve their quality of life and that of future generations.

Appendix A: Community support for recommendation

I. List of Armourdale community members involved in drafting of this recommendation:

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Magali Zarate	Magali Zarate	5/5/21
Monica Cruz	Monica Cruz	5/5/21
Luis Alvarado	Luis Alvarado	5/5/21
Jesus Gutierrez	Jesus Gutierrez	05-05-21
Cesar Ramos	Cesar Ramos	05-05-21
Karin Navas	Karin Navas	5-7-21
Vanessa Ibarra	Vanessa Ibarra	05-18-21

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Maria Lucero	Faviola Villa	Cesar Ramos
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II. The undersigned residents of Kansas City, Kansas metropolitan area support these comments:

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Jon Wood
66207

Helen Yeomans
66212

Ronald Yeomans, M.D.
Gynecology
66212

III. The undersigned residents of Kansas City, Missouri metropolitan area support these comments:

Sami Aaron
64114

Robin Zeplin
64114

Martha Childers
64112

Janice Dannhouser
64154

Billy Davies, J.D.
64108

Jesse DeMartino
64111

Dana Lentz
64151

Casey O'Malley
64114

Dawson Sims
64081

Elizabeth Smith
64138

Jennifer Withee
64152

Amrita Burdick, M.A.
Health Science Librarian
64111

Additional comment: Living only three blocks from State Line Rd. on the Missouri side of the state line, I have an interest in reducing pollution on the Kansas side and firmly support

IV. Local organizations in support of these comments:

El Centro, Inc.

Appendix B: Supplementary Data

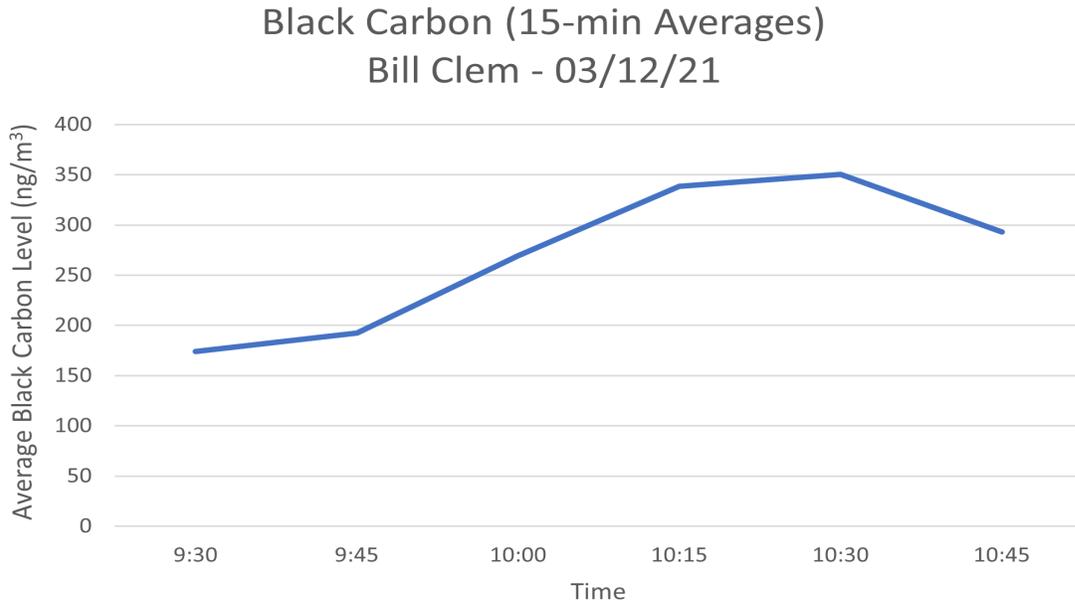


Figure 8: Bill Clem Black Carbon 15-minute averages during Fossil Fuel Truck Count 3/12/21 Kansas Ave.

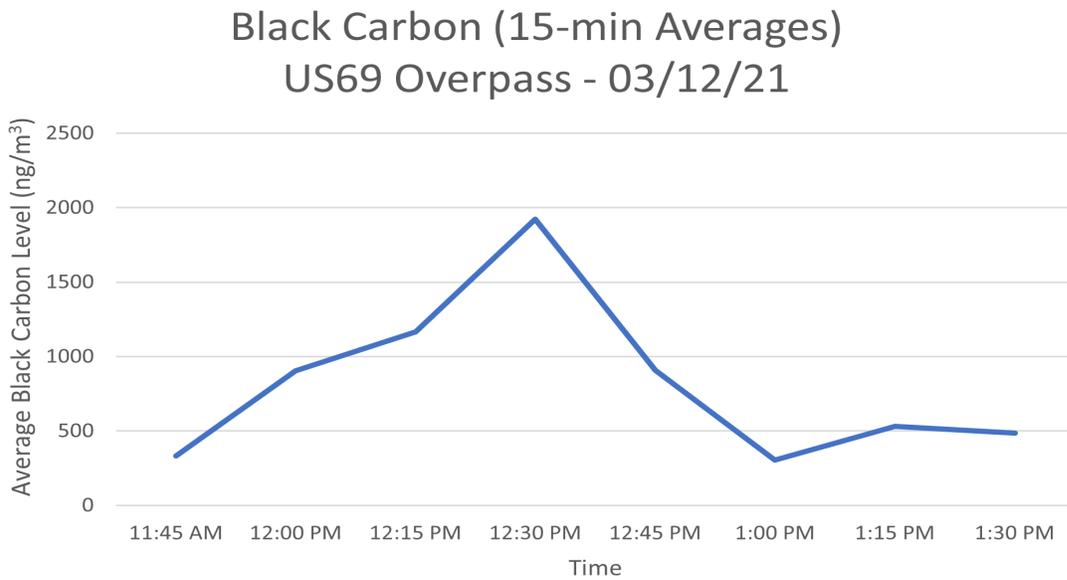


Figure 9: US 69 Overpass Black Carbon 15-minute averages during Fossil Fuel Truck Count 3/12/21 Kansas Ave.

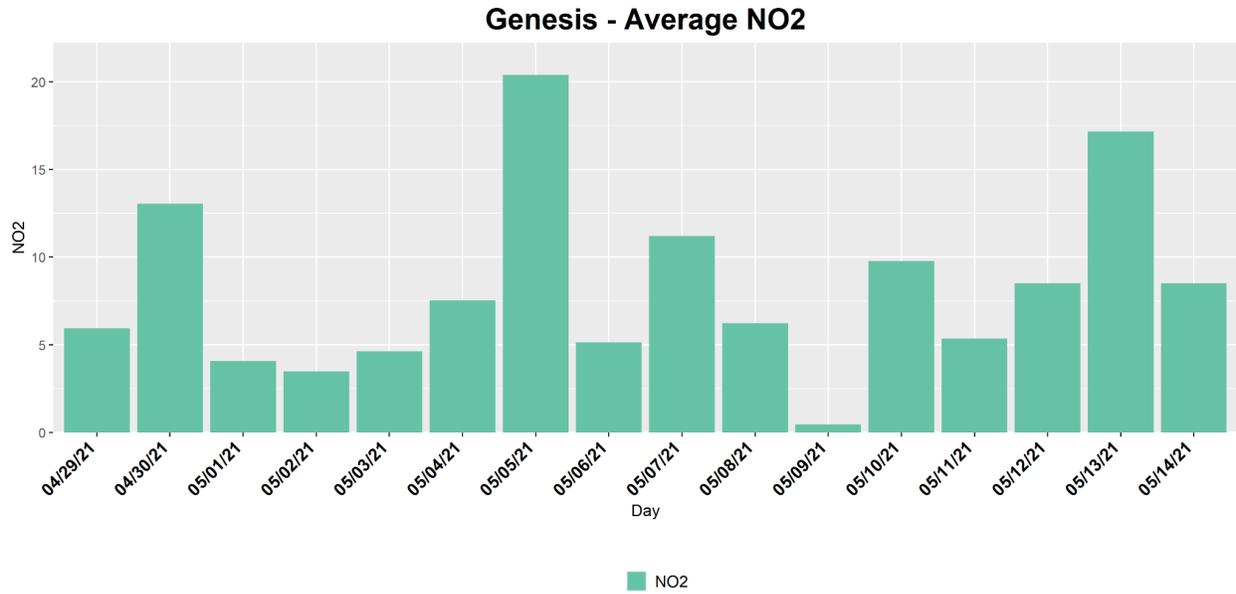


Figure 10: Armourdale Nitrogen Dioxide (NO₂) averages over two weeks. 4/29/21 - 05/14/21

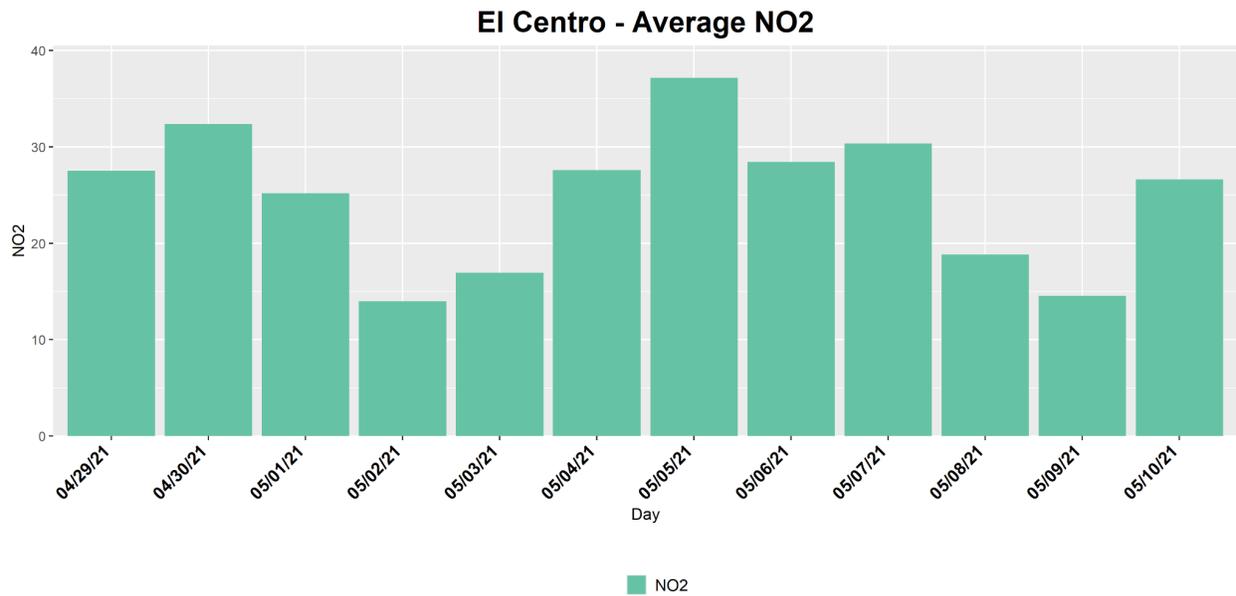


Figure 11: Minnesota & 7th Street Trfy. Nitrogen Dioxide (NO₂) averages over two weeks. 4/29/21 - 5/10/21

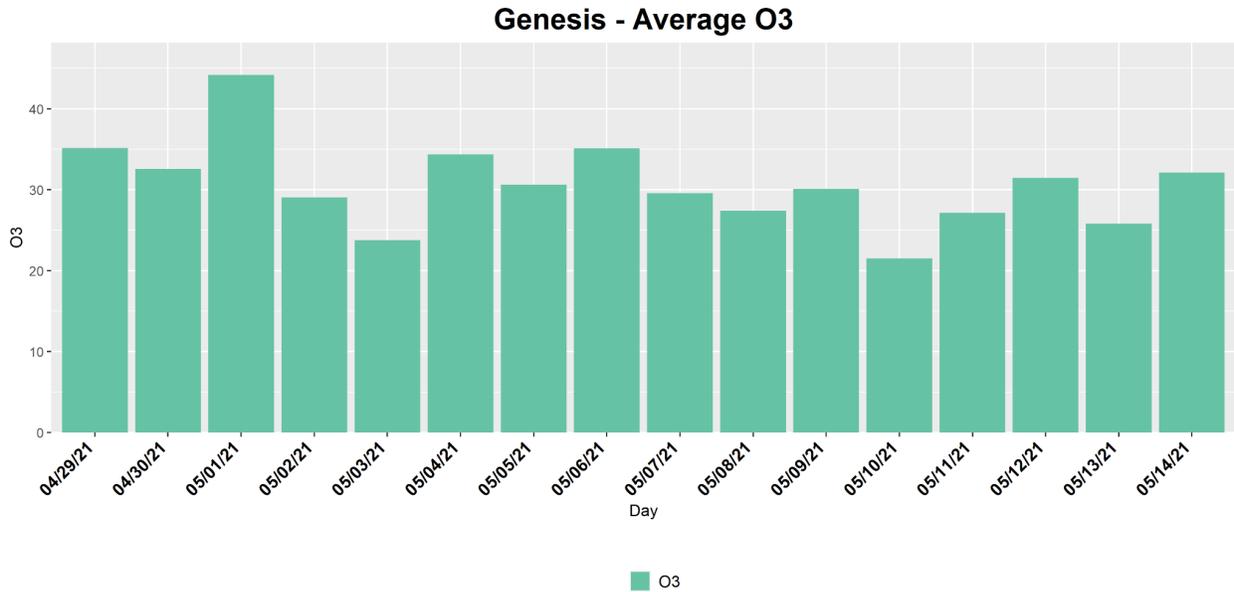


Figure 12: Armourdale Ozone (O₃) averages over two weeks. 4/29/21 - 5/14/21

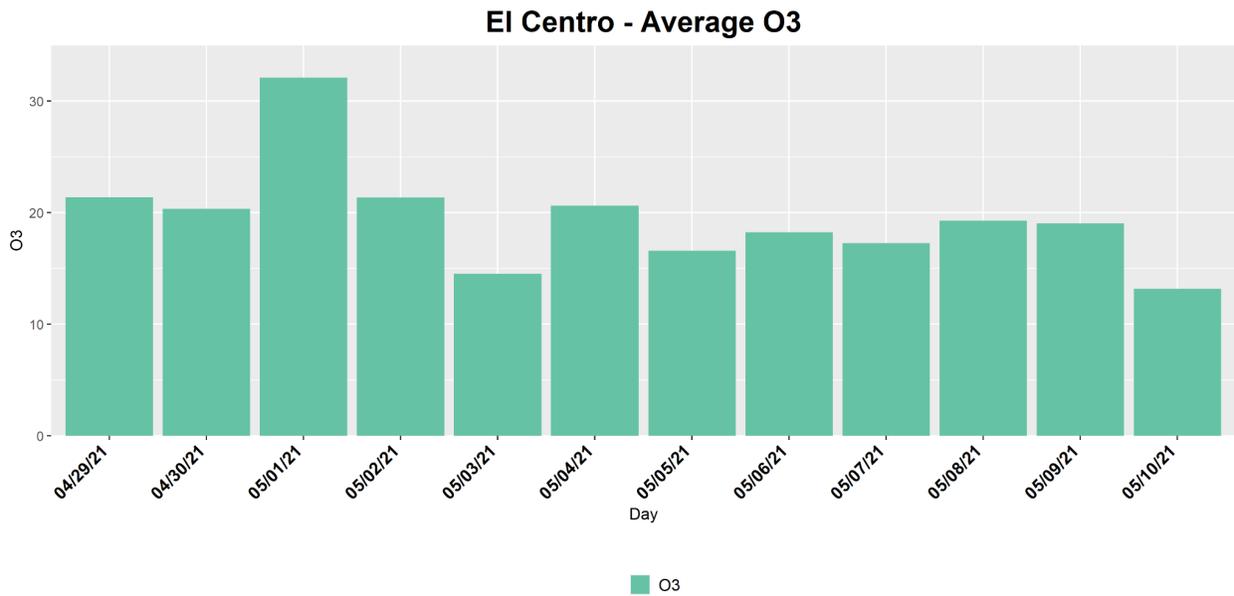


Figure 13: Minnesota Ave & 7th Street Trfy. Ozone (O₃) averages over two weeks. 4/29/21 - 5/10/21

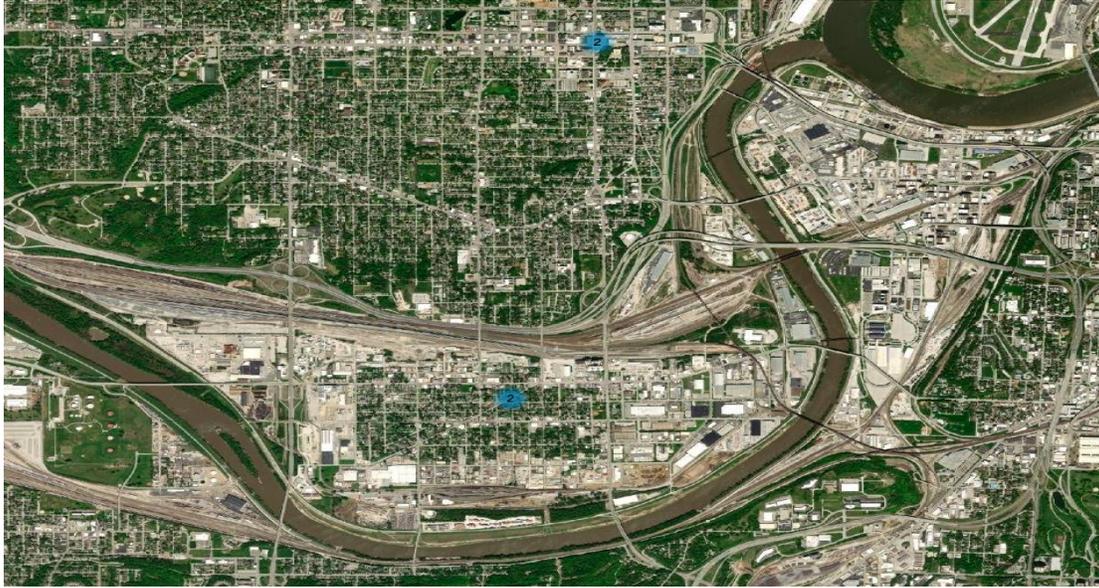


Figure 14: CleanAirNow Community Based Air Monitoring Network - NO2 and Ozone

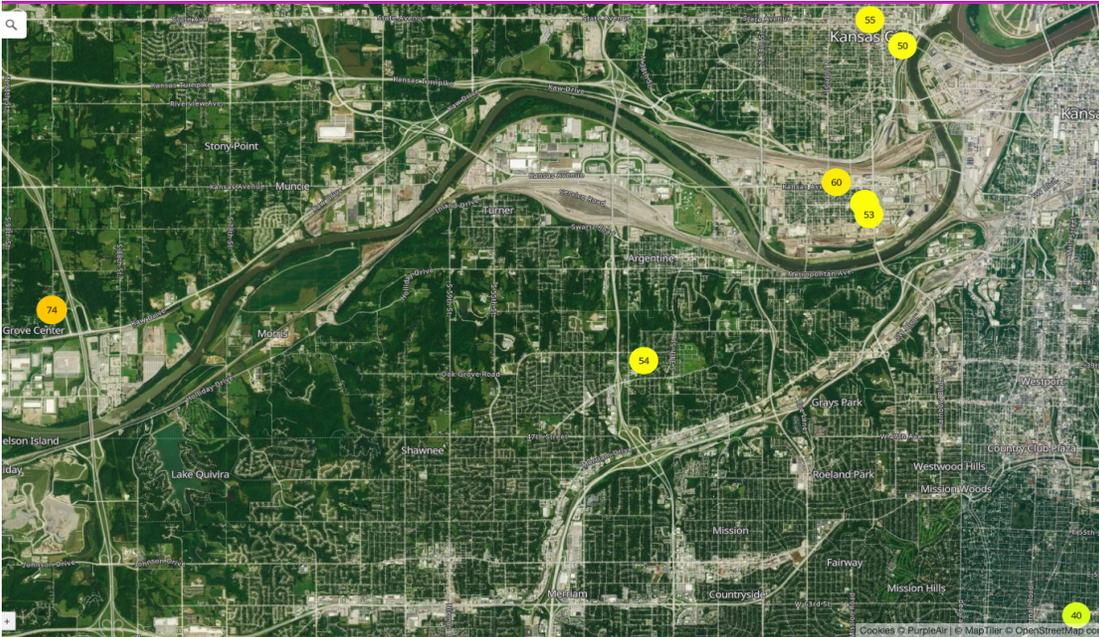


Figure 15: CleanAirNowCommunity Based Air Monitoring Network - PM2.5

¿POR QUÉ PARTICIPAR EN EL PROCESO DE PLANIFICACIÓN?



Participe por la salud de sus hijos



Participa para el bienestar de sus vecinos



Participe por la seguridad y protección de su familia



Participa por el futuro de su comunidad



Figure 16: Spanish Infographic "Why Participate in the General Plan" Page 1

La Organización de justicia ambiental [CleanAirNow](http://CleanAirNow.org) gustaría invitarlos para una plática sobre el plan general de Armourdale.

Un **plan general** es una guía de planificación amplia para los objetivos de desarrollo futuros de una ciudad o condado y proporciona declaraciones de política para lograr esos objetivos de desarrollo. Cada ciudad y condado adopta y actualiza su Plan General para guiar el crecimiento y el desarrollo territorial de su comunidad, tanto para el período actual como para el largo plazo. El Plan General es la base para establecer metas, propósitos, zonificación y actividades permitidas en cada parcela de tierra para brindar compatibilidad y continuidad a toda la región, así como a cada individuo en el vecindario. Ha sido uno de los instrumentos más importantes en la planificación urbana y regional desde principios del siglo XX.

Plan General (también conocido como plan integral en otros estados) es un documento que proporciona un plan a largo plazo para el desarrollo físico de una ciudad.] Las jurisdicciones locales tienen libertad en cuanto a lo que incluyen sus planes generales, sin embargo, existen ciertos requisitos bajo la ley que cada plan general debe cumplir; no hacerlo podría resultar en la suspensión del desarrollo futuro. Cada plan general debe incluir la visión, metas y objetivos de la ciudad o condado en términos de planificación y desarrollo dentro de ocho "elementos" diferentes definidos por el estado como: uso del suelo, vivienda, circulación, conservación, ruido, seguridad, espacio abierto y justicia ambiental es uno de los elementos por lo que nuestra organización CleanAirNow aboga.

Participar promueve una discusión sobre temas críticos entre Ud., otros miembros del público, y los tomadores de decisiones. Las decisiones entonces reflejarán mejor nuestra comunidad en este condado, lo que promueve una mejor calidad de vida. Las personas que viven y son de Armourdale son los expertos en cuanto a su comunidad.

Involucrarse en asuntos cívicos y asuntos mejora su conocimiento sobre quienes hacen decisiones por nosotros sin consultar o realmente crear una verdadera comunicación con la comunidad.

El participar en este plan podrá mejorar Armourdale traer recursos que realmente beneficien a los residentes y también nos da un sentido de orgullo y compasión para este lugar que llamamos nuestro hogar. Y últimamente mejorar la salud de la comunidad.

Que es Justicia Ambiental: Justicia Ambiental" (EJ) está basado del principio que todas las personas deben ser protegidas de la contaminación ambiental y tienen el derecho a un medio ambiente limpio y sano. Justicia ambiental quiere decir la protección de la salud de la gente de y su medio ambiente, la igualdad en la administración de los programas ambientales del estado y la estipulación de que existen oportunidades adecuadas para que todas las personas participen en el desarrollo, la ejecución y el cumplimiento de las leyes ambientales, las regulaciones y las políticas. Así, se sostiene que la distribución equitativa de las cargas y beneficios ambientales y la participación significativa, son los elementos esenciales de este principio que sirve de orientación para la adopción de decisiones ambientales.

La **justicia ambiental** continúa siendo un componente esencial en la lucha por mejorar y conservar un medio ambiente limpio, sano y saludable, especialmente para aquellos a quienes tradicionalmente les ha tocado vivir, trabajar y jugar en las áreas más cercanas a fuentes de contaminación.

Salud **ambiental**, según la Organización Mundial de la Salud (OMS), es "aquella disciplina que comprende los aspectos de la salud humana, incluida la calidad de vida y el bienestar social, que son determinados por factores **ambientales** físicos; químicos, biológicos, sociales y psico-sociales".

<http://cankc.org/> | betomtz.lugo@cankc.org

Figure 17: Spanish Infographic "Why Participate in the General Plan" Page 2

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