

# FROM AIR POLLUTION TO SOLUTIONS

## Collaborative Planning for Clean Air In Detroit & Wayne County



### STEERING COMMITTEE:



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## COLLABORATIVE PLANNING FOR CLEAN AIR IN DETROIT & WAYNE COUNTY

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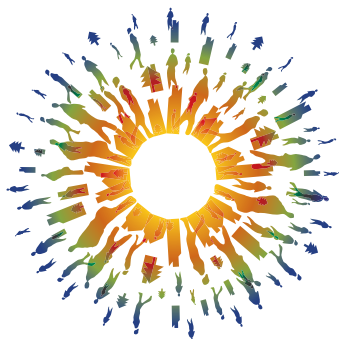
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Fred A. and Barbara M.  
Erb Family Foundation



BUILDERS INITIATIVE

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## EXECUTIVE SUMMARY

The Collaborative Planning for Clean Air in Detroit & Wayne County project is rooted in the vision that breathing clean air is a basic human right, protected by regional policy. In 2022, project coordinators and participants engaged in a year-long inclusive planning process to develop a cohesive plan for clean air and environmental justice advocacy in Detroit and Wayne County.

Breathing polluted air is linked to increased rates of asthma and asthma hospitalization, low-birth weight and other poor birth outcomes, cardiovascular disease, and premature deaths. Detroit and other Wayne County municipalities have the highest rates of asthma in the State, earning Detroit an “F” rating by the American Lung Association in their 2022 “State of the Air” report.

This is a critical moment to advance work for clean air in Detroit. The COVID-19 pandemic and the climate crisis both highlight the urgency to act now. COVID-19, a respiratory disease, hit hardest in communities already burdened with the health impacts of air pollution. As well, the same pollutants that harm human health also behave as greenhouse gasses in the atmosphere, exacerbating the effects of climate change. The need is great. Fortunately, the time is also ripe with opportunity: low cost air monitors are now widely available, a strong foundation for collaborative efforts

has been built, and Michigan voters have recently elected a majority of state-level decision-makers supportive of environmental justice.

Outlined in this report:

1. **Shared policy priorities** that would support clean air and protect public health. These include:
  - Statewide cumulative impact policies that protect communities already experiencing disparate burdens of air pollution and other forms of environmental degradation,
  - Health in All Policies and Health Impact Assessments,
  - Strengthened air quality enforcement, and policies that would allow or require funds from fines to directly benefit affected communities,
  - Greater regulation of diesel truck traffic, by local ordinances and/or state regulations.
2. **Plans to establish and maintain a community-based, air monitoring network** to democratize information about air quality, and provide data to address community needs and concerns.
3. **Communications strategies** to help raise public awareness about the public health and economic effects of air pollution in Detroit, and to build support for policies that recognize the fundamental human right to breathe clean air.



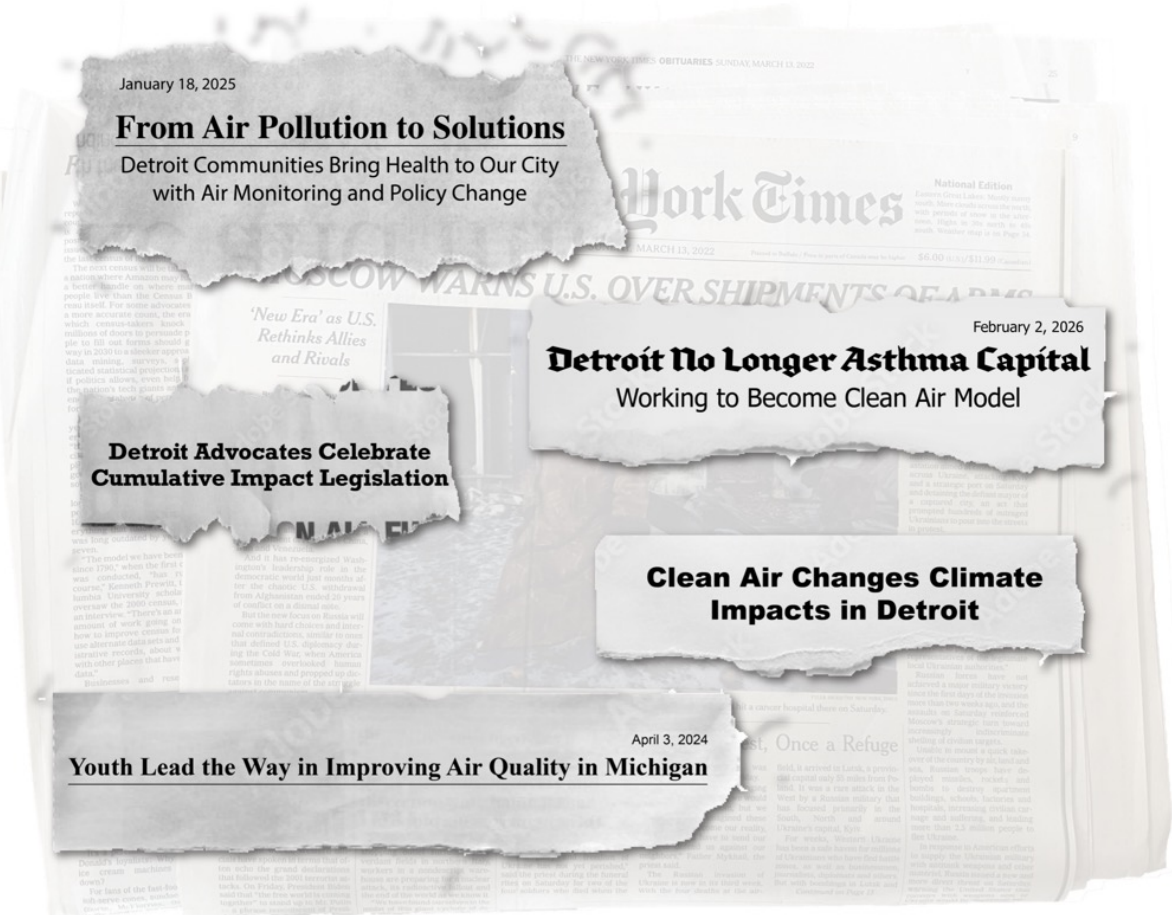
## VISION

This project, based in the Detroit area, aims to support community members, many of whom have been working for years, to effectively regulate or eliminate air polluting sources and realize their human right to breathe clean air. We work to make the right to breathe clean a fundamental part of regional policy, to shift the paradigm to valuing human health more than profit. The residents in the communities we work in are African American, Arab American, Indigenous, Latinx and white and overwhelmingly working class. Thus, principles of

environmental justice are key to the effort, including taking a holistic view of how air pollution affects people's lives and ensuring that we have an equitable process where residents know they are heard and that their needs drive the process.

Our vision is represented by an exercise in which planning partners were asked to imagine the news headlines in the future describing what we will have accomplished in the next three years.

*Members of the collaborative planning project envisioned media headlines we might see as the result of our work. The illustration below shows five headlines that best represent our vision.*



## STATEMENT OF NEED

Detroit and other Wayne County municipalities suffer more from poor air quality and higher rates of asthma than other Michigan communities. Wayne County residents are exposed to elevated levels of pollutants from a variety of sources, including a wide range of industrial facilities and vehicular traffic. **According to the American Lung Associations' 2022 "State of the Air" report, Detroit rated an 'F' for poor air quality.**

What does poor air quality mean for Detroiters? **The University of Michigan estimates there are 721 premature deaths annually in Detroit from exposure to pollution**, and that the majority of these (571) can be attributed to particulate matter (PM2.5) pollution, with the remainder due to ozone from VOCs and NO2.

Air pollution contributes to 1,500 hospitalizations, over 200,000 days with respiratory symptoms among children with asthma. Detroiters' exposures to air pollution are also linked to low-birth weight, other poor birth outcomes, and cardiovascular disease.

The burden to Detroiters is not just to their health: air pollution in Detroit leads to 500,000 missed days of work, and 990,000 days of missed school. **The economic cost is significant: the annual monetized value of the health burden from air pollution is \$7.3 billion.**

Many of the same activities that contribute to air pollution – energy generation, transportation and industrial operations – are also the source of greenhouse gas emission that contribute to climate change. **Reducing air pollution will therefore not only reduce the health impacts to heavily burdened communities, but will also offset climate change.**

As with other environmental hazards, air pollution is not equitably distributed across populations. Historic practices of racial discrimination, such as redlining,

result in present-day disparities in exposure to higher levels of air pollution (and resulting health impacts), reduced protection from tree cover, and greater climate impacts such as heat waves and flooding.

**Lack of enforcement of existing laws and regulations/ unequal application of laws and policies also contributes to the inequities in environmental exposures, including air pollution and inequities in health outcomes for Detroiters.**

While progress has been made in the direction of cleaner air—we are inspired by the successful community campaign, Breathe Free Detroit, that led to the 2019 closing of the Detroit municipal waste incinerator – many threats to air quality and health remain. Air quality in Detroit still does not meet clean air standards.

Air pollution does not exist in a silo; it is interconnected with other environmental hazards and concerns in the community. **We need to collaborate and build power within and beyond the clean air movement.** The clean air movement needs to work alongside other environmental, climate, and social justice movements.





### A MOMENT OF OPPORTUNITY

At this particular moment, four factors contribute to increased interest in reducing the disproportionate levels of air pollution in Detroit and Wayne County. These factors coalesce as an opportunity for success:

#### LOW-COST AIR SENSORS

**The increased availability of low-cost air quality sensor technology has revolutionized the field of air quality monitoring in recent years, leading to the democratization of research and air quality data,** enabling active community-driven science on air quality, and changing the power and policy-making dynamics in the community. Several Detroit organizations and researchers have been piloting the use of low-cost sensors in the community, and have started the work of creating a city-wide network of community-based monitors across Detroit and Wayne County. Along the path, we have collectively developed expertise in using low-cost sensors as a tool to support efforts for clean air and environmental justice, raising awareness about air pollution and engaging community members in building their capacity to advocate for clean air.

#### GROWING COLLABORATION

In the past few years, a diversity of air monitors and low-cost sensors have been used by a wide range of academic institutions, government agencies, and nonprofit organizations for purposes that include regulatory enforcement, research, and community education and advocacy for clean air and better air pollution policies. Since 2020, Ecology Center has convened the Air Quality Sensor Learning Collaborative, building expertise, engagement and collaboration



among this diverse group of partners. **The Collaborative Planning for Clean Air in Detroit and Wayne County project builds on the foundation and partnerships established through the Air Quality Sensor Learning Collaborative.**

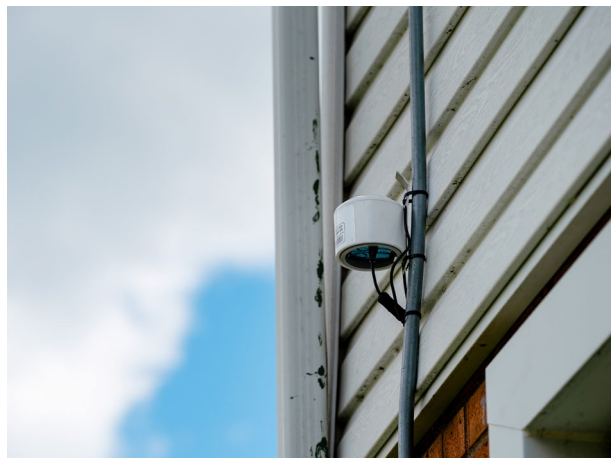
#### POLITICAL CONTEXT

**The recent changes in the Michigan government – the re-election of Governor Gretchen Whitmer and Attorney General Dana Nessel, who have shown support for environmental justice in the past, and the newly elected State House and Senate leadership and members, many of whom have expressed commitments to environmental justice – offer new opportunities to be more proactive and push for stronger policies in support of clean air and environmental justice.**

At the federal level, **the Biden Administration's initiatives have also created new opportunities for our work.** The American Rescue Plan included significant funds from the U.S. Environmental Protection Agency for community-based air monitoring. Several grants were awarded for air monitoring in Detroit, including to the City of Detroit and the Green Door Initiative. The Inflation Reduction Act, and the Justice40 Initiative also offer opportunities to support our efforts.

#### SENSE OF URGENCY

**The health impacts of air pollution are made worse by the harmful health effects caused by the climate crisis and COVID-19.** Individuals breathing polluted air are more vulnerable to harm from heat waves, respiratory infections, and other health threats. This adds a sense of urgency for Detroiters to address the interconnected problems of climate change and air pollution.



## PLANNING PROCESS

### PROJECT PROCESS SUMMARY

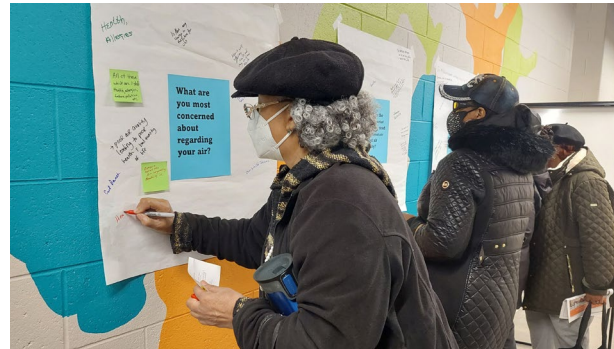
The Collaborative Planning for Clean Air in Detroit and Wayne County project was designed to engage diverse community partners and stakeholders from Detroit and across Wayne County in an inclusive and facilitated planning process. The project contracted the services of a professional facilitator, Doers Edge LLC, to work with project staff and the Steering Committee and help design and manage the planning process.

The project engaged those working on policy advocacy, air quality monitoring, and communications. The project's aims were to 1) create stronger, more effective collaboration and 2) develop a plan for a community-based air monitoring network in Detroit that includes a shared policy agenda and a communication strategy.

The planning process included meetings with:

- The project team: Two leaders from the Ecology Center, a facilitator, and an evaluator managed the project and supported participant engagement.
- Steering Committee: A seven-member committee of community leaders served as project advisors and met monthly with the project team and work group co-chairs. The steering committee informed the planning process and designed ways to engage other participants.
- Air Quality Sensor Learning Collaborative members (newcomers and long standing members alike).
- Three work groups: Policy, Air Monitoring, and Communications. Work groups were chaired by advocates from nonprofit organizations and included environmental activist residents.
- Residents and community leaders who provided valuable insight into local environmental challenges and envisioned goals for the future.

The integrated meeting structure and schedule helped to sustain stakeholder engagement over the entire duration of the project. The project team and work group co-chairs listened attentively to community



voices, tapped into the experiences and expertise of diverse participants, and worked collectively to integrate the needs and desires of the community into the collaborative plan detailed in this report.

**Important insights for the planning process came from participants in a series of three community conversations about clean air, hosted by community partners in October 2022.** Over 100 people attended the meetings either on-line or at one of three locations in the greater Detroit metro area. **A summary of the community meetings can be found [here](#).**

### GUIDING PRINCIPLES

To guide our work, we committed ourselves to:

- Equitably involve all partners in our work,
- Encourage all partners to contribute their unique expertise,
- Prioritize and be led by community needs,
- Create a space that is comfortable to ask questions, and express opinions and disagreements,
- Emphasize collaboration.

### THE RESULTS

The outcome of this planning process is an integrated plan for establishing a community-based air monitoring network in Detroit and Wayne County, a shared policy agenda, and a collaborative communication strategy. Details of the plan developed are outlined in the following section.



## COLLABORATIVE PLAN FOR CLEAN AIR

### POLICY AGENDA

#### INTRODUCTION

**Policy is a key tool for achieving clean air and environmental justice.** However, our current laws, regulations and policy are weak and don't adequately protect all communities. Due to structural racism, Black, Indigenous People of Color, and low-income communities are disproportionately burdened with bad air pollution, and the inequities in health outcomes and quality of life impacts that come from poor air quality.

Air quality permitting does not adequately address the cumulative risks that communities face, or the public health impacts that communities experience. In addition, enforcement of clean air laws and policies is lacking and often does little to fix the harm the community is experiencing. **We view policy as a means to an end – to protect health and achieve justice for communities that are experiencing harm from air pollution.**

For many years the political context in Michigan has not been conducive to our policy goals. The current political landscape, however, offers important opportunities to be more proactive, rather than reactive. A shared policy agenda among community organizations will allow greater success in collectively advancing policies for clean air and environmental justice at the local, state and federal level.

#### PRIORITIES FOR COLLABORATIVE POLICY ACTION

During the past year, policy work group participants explored air quality, cumulative impact, and model health policies. We gathered information about legislation and ordinances from other states and cities to learn about policies that could be implemented in Detroit and Michigan.

The following areas were identified as priorities for collaborative policy action, based on their broad impact on environmental health: 1) human health, 2) cumulative impact of environmental risks, and 3) equity. These three priorities should be considered in environmental decision-making generally, and air quality decisions specifically.

#### CUMULATIVE IMPACT & RACIAL DISPARITY IN AIR QUALITY PERMITTING

**Our top policy priority is requiring EGLE's air quality permitting decisions to incorporate a cumulative impact analysis and racial disparity analysis.** We support cumulative impact analyses for other environmental permitting as well, including water quality, solid waste, and hazardous waste permitting.



Cumulative impact policies aim to protect overburdened communities by requiring denial of state air quality permits, or additional permit conditions if the permit would allow the facility to either create a disproportionate impact or contribute to disparate impact. Disparate impact is determined by comparing a wide range of environmental and public health stressors within the host community to state or county averages. Racial disparity analysis would address the fact that communities of color are disproportionately burdened with environmental harm.

### HEALTH IN ALL POLICIES & HEALTH IMPACT ASSESSMENTS

Health in All Policies is an approach to improve the health of all people. This approach aims to eliminate health disparities by incorporating health considerations in decision-making across sectors and policy arenas. This approach recognizes that social, economic and environmental factors are determinants of health. Health in All Policies approaches can be implemented at the state or local level.

Health impact assessments (HIA) are a tool for examining the likely health impacts of a proposed policy, program, or plan. By assessing those likely impacts before the policy program or plan is implemented, recommendations can be made and adopted to reduce adverse health impacts and promote positive health impacts and health equity.



Partners in this planning project have experience using HIAs to make recommendations to reduce the negative health impacts of diesel particulates from the Gordie Howe International Bridge and of DTE Energy's Integrated Resource Plan for energy in Southeast Michigan.

### STRENGTHENED AIR QUALITY ENFORCEMENT & COMMUNITY BENEFITS

Strengthened enforcement of existing air quality regulations is a community priority. In addition, there is strong support in affected communities for policies that would allow (or require) fines from EGLE's air quality enforcement actions to go to a fund that directly benefits the community such as the City of Detroit's Public Health Fund, or an Air Quality Community Impact grant program.

### REGULATION OF MOBILE SOURCE POLLUTION

The impact of mobile sources of air pollution in Detroit and SE Michigan is significant. There is strong interest in enacting local ordinances regarding idling and routing of trucks. Some of this work is already underway by organizations in Detroit, and collective action in support could help advance these efforts.



## COMMUNICATIONS STRATEGY

### INTRODUCTION

Overall, this project aims to recognize the right to breathe clean air through policy generated by the communities most affected. **We will put data from air monitors into the hands of community members as a tool to help achieve cleaner, healthier air. But data alone is not enough; we will work with community advocates to develop strong narratives to support our efforts to move decision-makers to action and effect change.** The communications work group supports and provides internal and external communications to effect those goals and changes; and outlines a strategy for implementation.

The goals established by the communications work group to support the air quality planning initiative include:

- Educate the community on potential policies, air quality issues, and health impacts;
- Support the Policy Work Group to develop a campaign plan;
- Elevate the impact of data with storytelling and narrative development;
- Help visualize the data collected through the air monitors,
- Determine the communications infrastructure needed,

- Facilitate community's, healthcare's, and lawmakers' interactions with – and understanding of – the data, and
- Promote media interaction to amplify the goals of the air quality collaborative.

### COMMUNICATIONS PLAN COMPONENTS:

The following communications components were identified as needed by the communications work group. In order of priority, these include:

**Media and Communications Training:** Provide training for air quality planning collaborative members who will serve as spokespeople for the project with specific tactics for communicating with media and elected officials.

**Community Education Planning:** Identify preferred tactics for engaging with and educating the community on air quality issues, including target audiences such as youth. Help people understand how to interpret/what to do with the data from the air monitoring networks—what does it mean for them, their personal health, and the health of their community, and how to use it to advocate for change.

**Air Quality Policy Campaign Planning:** Develop campaign plans to support the policy agenda, including policymaker education, media support, etc., with specific targets identified and outline of resources needed. The objective of the plan will be to achieve the policy agenda on both local and state level.

**Community Engagement Planning:** Develop an outreach plan to encourage community participation in air quality advocacy; co-develop alongside organizing strategy.

**Rapid Response Plan:** Develop a strategy for the air quality collaborative to engage in rapid response to current events and developments within a specific time frame in order to facilitate easy information sharing and messaging for community groups, technical experts, and other stakeholders.

**Community Media & Communications Training:** Provide training workshops for community members who will serve as spokespeople for the project with specific tactics for communicating with media and elected officials.



## AIR MONITORING STRATEGY

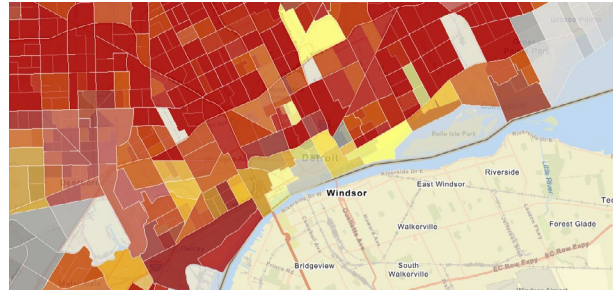
### INTRODUCTION

The availability of air quality data can help generate regulatory and policy actions. It also can empower residents and policymakers to design new policies and systems that move beyond mitigating existing emissions, and proactively prevent harm to human and environmental health.

Our community-based air quality monitoring work will be built on the following principles:

- Democratize research and air quality data
- Expand awareness of air pollution and health impacts
- Catalyze community action

An air sensor is simply a set of integrated hardware and software that measures one or more pollutants. The availability of low-cost sensors (less than \$1,000) has enabled a paradigm shift in the field of air quality monitoring. Regulatory sensors can cost tens of thousands of dollars, resulting in limited regulatory monitoring of ambient air. Low-cost sensors are generally easy to use and can be deployed to identify spatial and temporal differences in air quality.



### PLAN & OPPORTUNITIES

The Air Monitoring Work Group created a planning guide to establish a comprehensive, sustainable, community-based air quality network. The planning guide outlines the actions needed to achieve a successful objective-driven air quality monitoring program in Wayne County, with a focus on three areas: planning, network deployment and execution, and maintenance and reporting. The guide is designed to support a range of community priorities for air monitoring and support the policy agenda of the collaborative.

Some specific uses of monitors the work group identified as priorities include:

- Characterizing a pollutant concentration over a specific geographic area, neighborhood, and/or time;
- Analyzing differences and/or similarities in air pollution characteristics against a threshold value or between different locations, time periods, etc; and
- Characterizing changes in pollutant concentrations over a long time.

The priorities identified for pollutants to be monitored and other data collection included:

- Prioritize low cost sensor measurement of the following pollutants: particulate matter (PM), NO<sub>2</sub>, SO<sub>2</sub>, VOC, black carbon;
- Support both stationary and mobile sensor based monitoring;
- Develop an application to capture self-reported data on odors and other measures of lived experience; and
- Ongoing evaluation of opportunities to support community-based monitoring of air toxics.

Integrating air quality monitoring with communications and organizing will be critical to achieving the desired changes to public health policy.

## LESSONS LEARNED

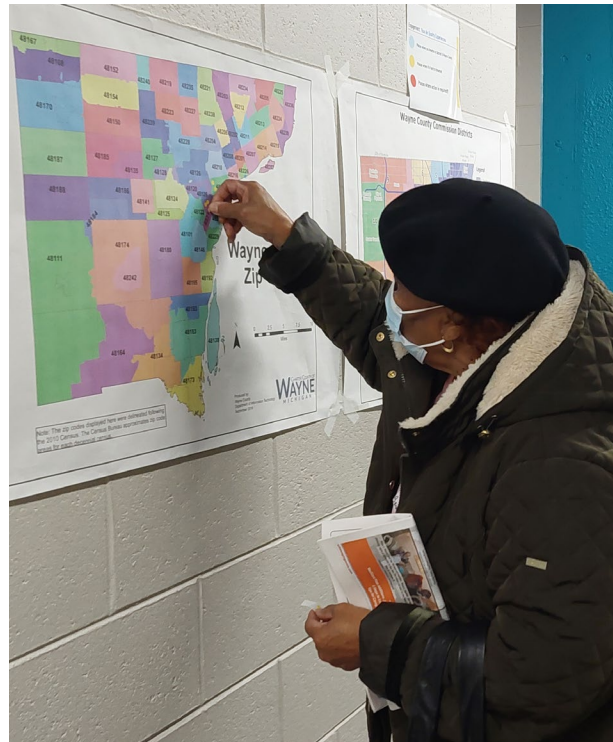
This project contracted the services of an external program evaluator, JVasi Consulting LLC, to observe the steering committee process as well as to help us solicit anonymous feedback from Steering Committee and Work Group participants. Below are some of the key findings:

**#1. There is strong community support for, and willingness to engage in, collaborative air quality monitoring processes for Detroit and Wayne County.**

- Steering Committee and Work Group engagement and feedback from community meetings demonstrated strong interest and support for ongoing air quality coordination and action related to air quality monitoring, public education, and policy reform.

**#2. Participants feel the planning process is a good use of time and important progress is taking place.**

- 100% of Steering Committee members agreed that “we have moved forward with planning and collaboration in a way that makes us stronger as a movement.”
- Steering Committee and Work Group members found the three community meetings to be particularly valuable. They appreciated hearing directly from residents and their input on air pollution issues in their neighborhoods.



**#3. Work Groups are an effective way to foster learning, collaboration, and action. Participants reported the following accomplishments:**

- Overall: Bringing together a group of people with wide ranging interests and commitments
- Communications: Developed a draft communications plan that identified various methods for reaching the public, laid out basic parameters of media infrastructure, identified personnel needs
- Policy: Learning about current laws in Michigan and around the country, understanding best practices and gaps in local and state policy, developing a policy agenda and identifying priorities
- Air Quality Monitoring: Establishing the relational and technical foundations of a plan to move forward, understanding which pollutants to measure



**#4. Challenges for the process include:**

- Insufficient resources for staffing and support of the process. The Ecology Center donated significant amounts of staff time to make this process run smoothly. While some stipends were offered, they did not fully account for the time committed by Steering Committee members. Community meetings were particularly heavy.
- The one-year time for the planning process felt rushed. A longer timeline would have been helpful for onboarding steering committee members, helping build relationships across participants, and helping all participants understand the relation between policy goals, data from the monitors and how we need to use media and information to support residents as they work toward the policy goals.

**#5. Participants identified the following steps to improve the planning process:**

- Continuing the planning process
  - Be more specific on goals, timelines, and workflow;
  - Take time to build internal relationships and connections between Steering Committee and Work Group participants;
  - Be sure to properly onboard new participants so they understand the context, history, structure, and overview of air quality needs in Detroit.
- Recruiting more members that represent Detroit
  - Pay particular attention to recruitment from the Anishinabek and Wyandot communities, youth, and healthcare professionals
- Increasing community engagement and outreach
  - Share our plans and methods to identify gaps with the collaborative
  - Continue to look for ways to engage more Detroit residents, including having hybrid meetings so folks can join in person as well as virtually





## NEXT STEPS

This collaborative planning effort created a process that allowed a diverse group of community, non-profit, academic and agency partners to come together to explore opportunities to strengthen our work for clean air in Detroit, and to begin to map out a plan for collective goals and action. As we move toward implementation, we have identified the following next steps:

1. **Continue planning with a focus on governance and decision-making among partners, and expanded outreach as we move toward implementation.** Clarify roles and responsibilities among partners and project team. Determine whether a new coalition or network structure is needed, and how decision making will take place.
2. **Campaign planning to advance our policy priorities, starting with advancing cumulative impact policies.** Develop a cohesive policy framework we can share with policy makers. Develop an organizing strategy to build power in support of our clean air goals in alignment with other environmental and social justice movements.
3. **Implement communications strategies to raise broad awareness about air pollution and support our policy agenda.** Develop tools for interaction with the media, training for collaborative partners and community members to be spokespersons, getting youth involved in external communications work.
4. **Continue to establish a community-based air monitoring network in Detroit and Wayne County,** evaluating what funding is available to invest in air monitoring, and aligning and streamlining all air monitoring efforts to ensure that we are working toward a common end. Develop an air monitoring portal or dashboard to make monitoring data easily accessible for community members.

