



The Center for Urban Responses to Environmental Stressors Announces a Special Request for Pilot Project Proposals

What is CURES?

The Center for Urban Responses to Environmental Stressors (CURES) is a National Institute of Environmental Health Sciences (NIEHS)-funded P30 Core Center whose mission is to provide leadership and programs that, in collaboration with the community and environmental policy makers, identify, evaluate, and mitigate environmental health concerns. CURES is an active partner in the collective goal of creating a healthier Detroit.

CURES is focused on understanding how chemical and non-chemical stressors in the urban environment affect the health and well-being of Detroiters, especially vulnerable populations. Detroit is encumbered with an overabundance of industrial and post-industrial environmental toxicants, socioeconomic strains, physical and emotional stressors, and housing decay. Identifying hazards and enhancing our understanding of how they impact our health is key to devising effective prevention and remediation efforts. CURES is strategically designed to facilitate translational transdisciplinary team research focused on: (1) exposure to chemical and non-chemical stressors that are prevalent in the urban industrialized environment, (2) the experiences of people who are particularly vulnerable to adverse effects of such exposures (e.g., children, older adults, ethnic and racial minorities, immigrants and refugees), and (3) linking such environmental exposures to public health in our Detroit community.

The overall goals of CURES are to (1) develop and strengthen partnerships between CURES and the Detroit community; (2) collaborate with these partners to identify key environmental threats to Detroit's vulnerable populations; (3) conduct highly integrated mechanistic, epidemiological, and community-engaged research addressing the impact of urban environmental exposures on health; (4) build CURES' capacity to accomplish these goals by providing facility cores that meet the needs of CURES investigators and "seed funds" for pilot projects to explore new areas of study; and (5) enhance the impact of CURES on the field of environmental health science by mentoring new and mid-career investigators, supporting their professional goals, and preparing them for leadership in environmental health research.

What is the purpose of this RFA?

This RFA seeks applications for focused research projects that address themes of relevance to CURES. Please read this RFA carefully, as this program differs from those offered in previous years. **We plan to fund three pilot projects, each at \$25,000 for ~eight months.**

Timeline

June 20, 10:00 AM	Informational Meetings by Zoom: Potential applicants are invited to attend this meeting to learn more about the CURES Pilot Project Program. The meeting will be recorded. To join this meeting via Zoom: https://wayne-edu.zoom.us/j/97134935318?pwd=Ylk3TkdQMW1DKy80REY4ZzRUUzhpUT09 Meeting ID: 971 3493 5318 Passcode: 663852
July 18	Applications due by midnight
August 1	Announcement of awards; funding will begin as soon as possible

Submission of Information

Submit application as a single PDF file as an e-mail attachment to:

Marsha Moore
Administrative Assistant III
Institute of Environmental Health Sciences (IEHS)
Center for Urban Response to Environmental Stressors (CURES)
Phone: (313) 577-6590
marshamoore@wayne.edu

Questions

If you have questions about CURES and this RFA, please contact:

Dr. Thomas A. Kocarek
Leader, CURES Pilot Project Program
Phone (313) 577-6580
t.kocarek@wayne.edu

What is the theme of this RFA?

- This RFA invites pilot project applications that address any environmental health sciences topic of relevance to the CURES urban environmental health mission. Examples of previous Pilot Project Program themes include (1) air pollution and health; (2) water quality and health; (3) combined effects of chemical and non-chemical stressors on health; and (4) determinants of environmental health disparities. Applications addressing any of these themes would be appropriate. In addition, applications addressing other topics are welcomed, as long as a compelling justification is provided for the chosen topic, both in terms of importance of the urban environmental health problem and the likelihood of it leading to NIEHS extramural funding.
- All types of research activity are welcomed (e.g., basic mechanistic, epidemiological, social science, community-engaged).
- CURES is committed to performing research relevant to the community. Proposals that include partnerships with community members are always encouraged.
- Projects that involve interdisciplinary collaborations and team science are always encouraged.
- A list of previously funded CURES pilot projects can be found at the following link:
<http://cures.wayne.edu/research/pilot-projects.php>

What are the terms of this RFA?

1. **Number of awards:** CURES plans to fund three pilot projects.
2. **Funding time and amount:** Each pilot project will be funded for ~eight months at up to \$25,000 in direct costs. No funds will be allocated for administrative and facility costs (indirect costs). **Awarded funds must be expended by March 31, 2024. There is no possibility for no-cost extension or “carry-over.”**
3. **Eligibility:** Eligible applicants include all current CURES members as well as non-CURES members at Wayne State University and Henry Ford Health who declare their willingness to join CURES and abide by its policies. Each pilot project must have a PI with an appointment that would allow submission of an extramural research grant application as a PI. Additional participants (e.g., MPIs [multiple principal investigators], co-investigators, collaborators, consultants) who will strengthen the project are encouraged and need not hold an appointment that would allow submission of an extramural research grant application as a PI. A community member may serve as an MPI (together with another investigator who meets the above-described criteria for PI), co- investigator, or collaborator on a project. **A list of current CURES members can be found on the CURES website:**
<https://cures.wayne.edu/>.
4. **Requirements and Desirable Characteristics:**
 - 1) Proposed studies must be research projects with high potential to yield peer-reviewed publications in high-impact journals and high likelihood of being developed into larger, longer-term projects that are supported by NIEHS grant funding. Pilot project recipients will be expected to publish their findings (citing CURES in the publications) and submit research grant applications to NIEHS based on their projects.
 - 2) Because of the relatively short funding duration of this year’s program, proposed

projects should be highly focused.

- 3) While not required, inclusion of a “new investigator” or “early stage investigator” (as defined by [NIH](#)) on the application is encouraged, as this will facilitate the career enhancement mission of CURES. An NIH-defined “new investigator” is a researcher who has not yet been PI on a major NIH research grant, such as an R01. An “early stage investigator” is a new investigator who completed his/her/their terminal research degree or medical residency, whichever date is later, within the past ten years.
- 4) Another desirable characteristic of an application will be the planned **use of one or both CURES facility cores**: (1) the **Translational Research Support Core (TRSC)** and (2) the **Exposure Signatures Facility Core (ESFC)**. The ESFC has funds available on a competitive basis to facilitate access to its services, which can supplement funds received through the Pilot Project Program. These two facility cores are described later in the RFA. Applicants contemplating using the facility cores are encouraged to contact the facility core leaders early in the process of developing a project.

What may funds be used for?

Funds **may** be used as follows:

- 1) To purchase supplies and reagents. Computers costing less than \$5,000 and software fees are allowed.
- 2) For technical support salaries
- 3) For incentives for community partners and community research participants

Funds **may not** be used as follows:

- 1) For salary support of faculty
- 2) To purchase equipment
- 3) For travel, except local travel (e.g., mileage for staff collecting data, environmental samples)

How do I apply?

- **Download and complete the cover page** (available at <https://cures.wayne.edu/research/pilot-projects>). This is a fillable PDF file that requests basic information about the project.
- **Prepare a research proposal of no more than five pages that contains the following sections:**
 - **Significance and Innovation:** Briefly introduce the proposed project and explain clearly why it is significant, innovative, and likely to lead to NIEHS research grant funding.
 - **Community Relevance:** In one paragraph, explain clearly why this project addresses an environmental health science problem that is of concern to the Detroit community. This paragraph should be written in plain language understandable by a general, lay audience.
 - **Hypothesis and Specific Aims:** State the project’s overarching hypothesis and specific aims.

- **Research Design:** Explain the approaches to be used to conduct the proposed project and provide any preliminary data that you want to present.
- **Timeline:** Provide an estimated timeline for the project that includes any need to obtain regulatory approvals (e.g., animal and/or human subjects) as well as the estimated time to perform the study. This will facilitate assessment of the feasibility of performing the study within the ~eight month time frame. As approval of a new IACUC or IRB protocol can take some time, if possible, it is recommended that proposed projects involving animal or human subjects be designed to only require amendment of an existing protocol.
- **Plans for submission of research grant applications to NIEHS:** Applicants should check the Funding Opportunity Announcements (FOAs) on the NIEHS website (<https://www.niehs.nih.gov/funding/grants/announcements/index.cfm>) for information about research areas currently being emphasized by NIEHS. Applications that are related to current FOAs will be rated as stronger.
- **References Cited:** Any scientific journal format is acceptable.
- **In addition, provide an itemized budget (up to \$25,000) and justification for use of the funds.**
- **Assemble all pages (cover page, research proposal, and budget/budget justification) into one pdf file for submission.**

Pre-award responsibilities

- ❖ Successful applicants will be required to attend a pre-award meeting with the Pilot Project Program Leader and the OVPR Budget Manager, at which awardees will be advised about account establishment and monitoring, the need to expend awarded funds within the specified time period, and the requirement to acknowledge support received from CURES in any publications or presentations generated under the pilot project award.
- ❖ Human, Vertebrate Animal, and Hazardous Materials Assurances of Compliance: Investigators using animals, human subjects, or biohazardous materials in their research must obtain protocol approval from the Institutional Review Board (IRB), Institutional Animal Care and Use Committee (IACUC), and/or Institutional Biosafety Committee (IBC) as applicable before funds can be spent on activities that require such approval. Applicants should seek necessary regulatory approvals immediately after the pilot project application is made. As noted above, because of the short time frame for these pilot projects, it is recommended that proposed projects involving animal or human subjects be designed to only require amendment of an existing protocol.

Award-time responsibilities

- ❖ PIs must cite the CURES Center Grant (P30 ES020957) on all publications that result from the pilot project award.
- ❖ PIs agree to meet periodically with CURES program leaders to provide updates on their projects, as requested.
- ❖ PIs must provide written updates on their research progress when requested, for annual progress reports and meetings with CURES Advisory Boards.
- ❖ PIs must present their research findings at a CURES Center-wide research meeting.

- ❖ Pilot project recipients will also be required to present their results at a CURES Community Engagement Core-sponsored event – either a Community Advisory Board meeting or an Environmental Health Forum.

Post-award responsibilities. Upon completion of a project, PIs will be required to submit a report that contains the following information:

- ❖ A list of any publications (i.e., research articles, review articles, abstracts; submitted, in press, or published) or patents that resulted entirely or in part from the pilot project award.
- ❖ A list of any grant applications submitted (funded, pending, or non-funded) that resulted from the pilot project award in which the applicant was listed either as PI (or MPI), co-investigator, or other key personnel.
- ❖ A description of collaborations that developed as a result of the pilot project award.
- ❖ Because of CURES' need to track success of the Pilot Project Program as determined by conversion of pilot projects into extramurally funded projects, recipients will be contacted for updated information about publications and grant applications for several years beyond completion of their award.

Pilot project recipients will be expected to submit applications for NIEHS funding to continue their projects as soon as is practical. The Career Enhancement and TRSC program leaders will provide support for these applications.

Please adhere to the following formatting requirements when preparing application:

- Font: Use an Arial, Helvetica, Palatino Linotype, or Georgia typeface, a black font color, and a font size of 11 points or larger. (A Symbol font may be used to insert Greek letters or special characters; the font size requirement still applies.)
- Type density, including characters and spaces, must be no more than 15 characters per inch. Type may be no more than six lines per inch.
- Use standard paper size (8 ½" x 11).
- Use at least one-half inch margins (top, bottom, left, and right) for all pages.

CURES Facility Cores and Community Engagement Core

1. Translational Research Support Core (TRSC)

<https://cures.wayne.edu/trsc>

Leader:

Graham Parker, PhD
Assistant Professor, Pediatrics
IBio Building, 6135 Woodward Avenue
Phone: 313-577-2707; E-mail: gparker@med.wayne.edu

The purpose of the TRSC is to facilitate the design, development and ethical achievement and dissemination of the translational research goals of the CURES program. The TRSC aims to support the multidisciplinary collaborative research interest groups in their pursuit of understanding the complex role of chemical and non-chemical stressors as modifiers of human health in the urban environment. The TRSC is developing tools to allow our researchers and community in partnership to better characterize the nature and distribution of those stressors, through the ability to create spatial frameworks of the differing impacts on the populations exposed to chemical and social stressors. The centerpiece of the core is the CURES Multifactorial Integrative Design Analytic System (MIDAS), an entity providing: Geographic Information System (GIS) & data analytics; Access to public data sets and shared CURES data repositories; and Report Back capabilities including [dashboarding](#) and publicly facing website and [StoryMaps](#) support. These capabilities are customized to our uses to support our researchers' ability to identify, characterize, and improve the environmental insults that adversely affect the health of Detroit. MIDAS is the platform where our data, processes, and people are integrated to make a positive impact on the environmental health of Detroit.

The TRSC aims:

- 1. To Coordinate and Facilitate Resource Access.** The TRSC will provide training and consultation on 1) translational study design; 2) data science and biostatistics; 3) data access, analysis and visualization for audiences including investigators and community stakeholders.
- 2. To Facilitate Team Science.** The TRSC will facilitate team science by: 1) developing new and stronger collaborative partnerships; 2) facilitating mechanisms that support effective team performance; 3) providing feedback that quantifies the impact of team science, and 4) working with the CEC to ensure acknowledgement and integration of the goals and values of community partners who are central to team science.
- 3. To Promote Translational Research.** The TRSC will: support publication and presentation of results using accessible language in multi-media channels; provide training, consultation and educational materials developed under a translational epidemiology framework; enable translation of results into lay language to disseminate to community stakeholders as well as local and state government via the CEC.

2. Exposure Signatures Facility Core (ESFC)

<http://cures.wayne.edu/esfc.php>

Leaders:

Douglas Ruden, PhD
Professor, Obstetrics and Gynecology and Institute of Environmental Health Sciences
Director of Epigenomics

CS Mott Center, 275 E Hancock

Phone: 313-577-6688; E-mail: douglas.ruden@gmail.com, douglasr@wayne.edu

Paul Stemmer, PhD

Associate Professor, Institute of Environmental Health Sciences

Director of Proteomics

Proteomics Laboratory, Scott Hall, Rm 2105

Phone: 313-577-6536; E-mail: pmstemmer@wayne.edu

“Exposure Signatures” include direct measurement of toxicants as well as the quantifiable responses of a biological system to an environmental stressor. The ESFC consists of six analytical resources that contribute unique capabilities for identifying and quantifying toxicants and biological responses to toxicant exposure. The ESFC provides:

1. *Genomic Services* – A full range of genome, transcriptome and epigenome analysis services are available to CURES Investigators through the Genome Science Core at WSU

(<https://genomesciencescore.wayne.edu/>).

- Sample Preparation: DNA and RNA can be isolated from cell lines, blood/dried blood spots, paraffin slices, and tissue. Quality is determined by 260nm/280nm (NanoDrop or DropSense Spectrophotometer) and the 28S/18S and RNA Integrity Number (Agilent Bioanalyzer 2100 or TapeStation).
- Targeted DNA and RNA Expression: Quantitative RT-PCR (TaqMan on the QuantStudio 12K Flex Real-Time PCR System)
- DNA Methylation: Bisulfite treatment of DNA followed by WGBS-seq RRBS or Illumina Methylation EPIC BeadChip (fixed panel, Illumina iScan)
- Next-Generation Sequencing: Illumina NovaSeq 6000 or MiSeq options include library preparation for whole genome sequencing (WGS), whole genome bisulfite sequencing (WGBS), RNA-Seq, microRNA-Seq, single-cell RNA-seq (scRNA-seq), and Exome-Seq. Sequencing quality is verified by FastQC. In the next two years, we will be providing spatial transcriptomics services using the 10X Genomics Visium™ system and data analyses using Space Ranger™ data.
- Genotyping Services include primer and probe design, assay optimization, troubleshooting, and analysis. Options for single-nucleotide polymorphisms include 5'-nuclease assays (TaqMan on the QuantStudio 12K Flex Real-Time PCR system) and Infinium assays (fixed content panels, Illumina iScan).
- Genomics Quality Control and Reporting: All data are checked for quality, then sent for bioinformatic processing and interpretation.

2. *Proteomics including Protein Adducts* – Proteomic services are provided through the Proteomics Core at WSU (<https://research.wayne.edu/proteomics>). These mass spectrometry services and technologies advance research focused on identifying exposure signatures in the proteome and adductome.

- Protein identification using orbitrap MS/MS with nanoflow ultra-high performance liquid chromatography.
- Proteome wide quantitation using Label Free or Isotopic Labeling strategies.
- Proteomic profiling using Multidimensional Protein Identification Technologies (MuDPIT).
- Analysis of post-translational modifications using MS/MS with fragmentation by electron transfer dissociation (ETD), higher energy collisional dissociation (HCD), or collision-induced dissociation (CID).
- Analysis of adducts on proteins using affinity selection and/or affinity depletion followed by LC-MS/MS.

- Data Dependent Analysis (DDA) using Sequest, X!tandem, MaxQuant and Peaks algorithms.
- Data Independent Analysis (DIA) using Spectronaut.
- Data compilation and secondary analysis using Scaffold and R scripts.

3. *Metals, Trace Element and Small Molecule Analysis* – The ESFC partners with the WSU Lumigen Instrument Center (LIC) (<https://research.wayne.edu/cores-facilities/lumigen>) to provide analytical services to identify and quantify elemental, metal, and small molecule exposures in studies of the environment and disease etiology.

- Metals and trace elements: Blood or plasma concentrations of trace elements and environmental concentrations of those elements are measured by ICP-MS/MS. Validated methods for the quantitation of Al, As, Ba, Cd, Co, Cr, Cu, Hg, Li, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, U, V, Hg and Zr are currently available. Isotope dilution mass spectrometry (IDMS) and synthetic matrix matching protocols are used to provide absolute quantitation of toxic metals. The Agilent 7700x ICP-MS collision/reaction cell allows detection limits in ppt. Blood and urine samples are prepared according to the request of the investigator. A new Agilent 8900 ICP-MS/MS with low volume sampling capability and ion chromatography front end minimizes matrix interferences, expands dynamic range, and allows for element speciation.
- Volatile organic chemicals (VOCs) encompass a wide range of small molecules, including solvents, fuel components and chemical intermediates. Standard VOC sample extraction methods in the LIC lab include ITEX dynamic head space, adsorptive material extraction, and solid phase micro-extraction. After the VOC is stripped from the substrate, the compound is concentrated on a sorbent trap and analyzed by GC-MS/MS.
- Organic Xenobiotics: New analytical protocols are developed as needed for both established and emerging xenobiotics. Classes of compounds that have been added to our menu of services include: 1) environmental phenolic chemicals such as bisphenol A; 2) polycyclic aromatic hydrocarbons; 3) PFAS/PFOS compounds; 4) dioxins/PCBs; and 5) emerging toxicants of interest.
- Cyanotoxins: LIC Director Dr. Westrick is an expert in analyzing cyanotoxins in environmental and biological matrices. With cyanobacterial blooms in Lake Erie and surrounding freshwater, this is a critical area for expanding our environmental monitoring capabilities. To meet this need we have developed untargeted LC-HRMS to identify novel cyanotoxins.
- DNA Adducts: Quantification of adducts on DNA utilizes UPLC-Photo Diode Array (PDA)-electrospray ionization-MS/MS. DNA is digested with nuclease P1 to release nucleotides and adducted nucleotides. Single-base nucleotides with adducts are used as external standards. Adducted nucleotides are separated from the other nucleotides by UPLC and quantified by Multiple Reaction Monitoring (MRM).

4. *Flow cytometry* – The Microscopy, Imaging, and Cytometry Resources (MICR) Core's (<https://micr.med.wayne.edu/>) flow cytometry lab provides immunophenotyping services for investigators studying how environmental exposures disrupt the immune system to cause autoimmune and other diseases.

5. *Lipidomics* – The Lipidomics Core Facility (<https://lipidomics.wayne.edu/>) uses state-of-the-art LC-MS methods for both qualitative profiling of the lipidome utilizing Information Dependent Acquisition (IDA) strategies and quantitative analysis using Multiple Reaction Monitoring (MRM). Protocols are in place for analysis of nearly all classes of lipids including fatty acyl lipids, glycerophospholipids, glycerolipids, sphingolipids and sterol lipids.

6. *Metabolomics* - The Pharmacology and Metabolomics Core

(<https://www.karmanos.org/karmanos/pharmacology-core>) offers LC-MS/MS-based targeted metabolomics to measure predefined groups of metabolites involved in central metabolic pathways including carbohydrate, protein, and lipid metabolism. The core provides GLP-quality analytical services and regularly customize assays to meet investigators' needs. We are available for consultation regarding study design, sample collection, sample preparation, instrumental analysis and assistance with data analysis.

7. *Bioinformatics* –Data obtained with omics technologies requires several levels of analysis and interpretation. The first level of analysis is translation of the raw data into molecular identifications. The second level assigns quantitative values to the molecules that are identified. Each of these types of analysis is completed in the laboratory where the data are generated using software that is specific to the molecular species being analyzed and the instrumentation used. The third level, or the integrative bioinformatics level, incorporates statistical analyses to rank data and establish valid cut-offs for selecting data subsets for subsequent analyses. The integrative analysis is achieved using open source and proprietary software licensed through the ESFC labs. These software packages include DAVID, iPathwayGuide, Cytoscape, and R with its associated packages. These software packages are used to perform pathway, network, and key-node analyses as well as clustering, sequence motif analysis, and comparison to external datasets. These analyses identify the biological systems that are affected by the exposure and the magnitude of those perturbations. The results are typically presented to the researcher as a set of publication-quality tables and figures with associated documentation and molecular-level data. The researcher, who is the expert in the biological system, can then evaluate the candidate exposure signatures to evaluate using further targeted experimental designs.

3. Community Engagement Core (CEC)

<http://cures.wayne.edu/community-engagement.php>

Leaders:

Carrie Leach, PhD, MPA

Assistant Professor (Research), Institute of Gerontology;

Co-Leader, Community Engagement Core, CURES;

Associate Center Director, Center for Health Equity and Community Knowledge in Urban Populations (CHECK-UP), Wayne State University

E-mail: carrieleach@wayne.edu

Nick Schroeck, JD

Director of Clinical Programs & Associate Professor of Law

University of Detroit Mercy School of Law

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CURES has a strong commitment to serving, informing, and learning from the community and fostering bi-directional communication between researchers and the public. The goals of the Community Engagement Core (CEC) are to:

- Foster collaborations and co-learning experiences for environmental health researchers and advocates, stakeholders, and individuals
- Serve as a resource for environmental health information, expertise, and advocacy
- Promote environmental health science awareness
- Advance the science of community engagement with research

CURES Community Advisory Board Organizations, Research Priorities, and Environmental Concerns

The environmental health concerns that have been expressed by our Community Advisory Board members are provided below. Researchers who would be interested in developing an application addressing any of these concerns in coordination with a Community Advisory Board member should contact CURES Community Engagement Co-Leader Carrie Leach (carrieleach@wayne.edu) or CURES Community Engagement Coordinator Rochelle Chapman (rochellechapman@wayne.edu).

Organization	Description	Health & Environmental Issues and Concerns
Asthma & Allergy Foundation of America, MI Chapter	The AAFA is a nonprofit and the leading patient organization for people with asthma and allergies. The Michigan Chapter serves all Michigan residents of all ages affected by asthma and allergies. They provide resources for healthcare professionals, caregivers and childcare providers, and communities to make them better for those with allergies and asthma.	<ul style="list-style-type: none"> • Pervasive feeling of helplessness among people who live in areas where the environment is toxic and causing or exacerbating chronic diseases like asthma • Lack of attention to health first when policy is drafted and passed • How our government sets regulations and how well they are enforced
CLEARCorps Detroit	CLEARCorps/Detroit works to prevent lead poisoning and create healthy homes for children and families through programs, education and outreach, and policy work. Their four main programs are centered around asthma triggers, lead hazards in homes, outdated refrigerator replacement, and furnace tuning/repair/replacement.	<ul style="list-style-type: none"> • Lead poisoning impact on pregnant women and babies, children, and long term impact on adults • Indoor/outdoor asthma triggers
Crockett Midtown High School of Science & Medicine	CMHS educates and empowers every student in every community, every day, to build a stronger Detroit. CMHS is committed to college success by providing a college preparatory curriculum allowing students to explore college courses, work at internships, and engage in community service projects.	<ul style="list-style-type: none"> • Post-Covid effects on the community, children, etc.
Denby Neighborhood Alliance	Denby Neighborhood Alliance is a grassroots project championed by Denby High School and community interest partners with a common goal. To rehabilitate and revitalize the community in and outside of Denby High School by implementing initiatives and programs that promote the economic, social, and cultural development of the community.	<ul style="list-style-type: none"> • Air pollution

Detroit Food Policy Council	The DFPC is an education, advocacy and policy organization led by Detroiters committed to creating a sustainable, local food system that promotes food security, food justice and food sovereignty in the city of Detroit.	<ul style="list-style-type: none"> • Health & food system equity • Food waste • Pesticide exposure through food, • Benefits of organic food on individual health and the environment
Detroit Health Department	The Detroit Health Department's mission is to improve the health and quality of life of Detroiters through innovative public health policy, programs and partnerships. They provide a variety of programs and services, to include WIC, immunizations, food safety and restaurant inspection, public health initiatives, and Detroit Animal Care and Control.	<ul style="list-style-type: none"> • Healthy food access • Food policy challenges/opportunities; nutrition • Asthma • SOx/NOx/PM emissions • Lead and water • Mobility (walkability, bikeability, reliable public transportation) • Green workforce development • Environmental stressors and violence prevention/mental health • Improving recreational opportunities to improve chronic disease
Detroiters Working for Environmental Justice	DWEJ is a nonprofit organization whose mission is to create clean, healthy and thriving communities in Michigan by tackling environmental problems close to home. Their programs are centered around policy, education and workforce development.	<ul style="list-style-type: none"> • Asthma • Lead exposure and poisoning • Cardiovascular disease • Environmental impact on health including threats in the home to health, overall health in context and environment • Policy activation opportunities related to above health concerns
Ecology Center	The Ecology Center was organized to develop innovative solutions for healthy people and a healthy planet. They educate consumers and families, push corporations to use clean energy make safe products and provide healthy food, and work with policymakers to establish laws that protect communities and the environment.	<ul style="list-style-type: none"> • Measuring air quality and pollutants in area around the incinerator. • Health effects of the incinerator • Environmental contamination in water due to US Ecology [hazardous waste processing facility] • Soil remediation for kitchen/vegetable gardens • Air pollution in Southwest Detroit and downriver • Rising rates of elevated blood lead levels in various zip codes in Detroit/Wayne County. Research needed on what is contributing: Demolition? Further deterioration of housing stock? and/or what is the impact of additional testing.

Great Lakes Environmental Law Center	The Great Lakes Environmental Law Center is a Detroit-based nonprofit that offers community education, policy support, and various legal services to address environmental, resource, and energy issues affecting communities in and around Detroit, all over Michigan, and throughout the Great Lakes region.	<ul style="list-style-type: none"> • Currently, health-based standards for criteria air pollutants are set on a pollutant-by-pollutant basis even though they often cause similar health effects. I'd be interested in research analyzing whether the cumulative exposure to 2 or more criteria air pollutants increase health risks in the general population, and in vulnerable subpopulations. • Analyze the relationship between asthma attacks and criteria air pollutant concentrations measures in Detroit.
Greening of Detroit	The Greening of Detroit's focus is to enhance the quality of life for Detroiters by repurposing the land to create beautiful and productive green spaces. They involve Detroiters in the process through community engagement, education and jobs.	Climate change: because of a legacy of past industrial uses, current pollution releases and lead contamination, water, air, and soil qualities in Detroit are poor. Climate change models suggest the problems will likely grow. More research around native tree species and other green infrastructure that are most resilient to climate change. How trees mitigate climate change and air pollution.
Hope Village Revitalization	Hope Village Revitalization is a community-controlled organization committed to improving the quality of life in the Hope Village neighborhood. Their goals are rooted in the goals and objectives of the Hope Village community. They envision a sustainable, equitable, healthy neighborhood with a high quality of life for all, where neighbors have access to fresh and local food, and affordable, quality housing with energy solutions that reduce utility costs and build resilience against climate change.	<ul style="list-style-type: none"> • Urban water pollution, healthy or not, COVID in water system
Kids' Health Connection	A nonprofit organization that works with physicians, Medicaid Health Plans, parents and other community agencies committed to improving the healthcare outcome of Wayne County and Detroit's children. They provide health education to families, help doctors improve the quality of their care, and act as a voice for issues affecting children's health.	<ul style="list-style-type: none"> • Poor housing impact including lead poisoning, asthma (via mold, roaches, dust), emotional distress secondary to rats and mice • Obesity • Unsafe neighborhoods • Impact of PBB contamination on urban minoritized population (Is the earlier menarche in Black girls due to PBB contamination that made it into commodities handed out in foods resource programs in the past?)

Matrix Human Services	Matrix advocates for and serves the most vulnerable in the metropolitan Detroit community and empowers individuals and families to enhance the quality of their lives and achieve self-sufficiency. Their larger programs include their network of head start facilities and comprehensive community center on the east side of Detroit.	<ul style="list-style-type: none"> • Asthma – biggest growing issue among our Early and Head Start children; old/young people, long-term effects • Lead effects on old/young people, long-term effects • Recreation – lack of green space for children to exercise and play in city areas
Michigan Environmental Council	The MI Environmental Council is a coalition of more than 70 organizations created to lead Michigan’s environmental movement in achieving positive change. through the political process. MEC combines deep environmental policy expertise with close connections to key state and federal decision makers. They promote public policies to ensure Michigan families will enjoy clear waters, clean beaches, beautiful landscapes and healthy communities for years to come.	<ul style="list-style-type: none"> • Health impact of climate change • How to evaluate environmental justice • Cumulative impacts in environmental permitting – e.g., how could DEQ have added in other area emission sources when OK’ing steel plant’s permit to increase emissions instead of approval in isolation? • Does healthy food access improve outcomes in lead impacted kids? By what mechanism? • Lead’s impact on older adults • Drinking water. Is our water safe? What are we exposed to in our drinking water, including by-products of disinfectants and what are the risks? Do filters help or do they expose us to increased chance of bacteria?
Office of State Senator Stephanie Chang	Stephanie Chang (D) serves Michigan Senate District 1, representing parts of Detroit, Ecorse, Gibraltar, Grosse Ile Township, River Rouge, Riverview, Trenton, Woodhaven, Wyandotte, and Brownstown Township.	Local stressors and conditions
Office of US Senator Debbie Stabenow	Debbie Stabenow (D) is US Senator representing the State of Michigan.	Statewide
Southwest Detroit Environmental Vision	SDEV is a nonprofit organization dedicated to improving the environment and strengthening the economy of Southwest Detroit. They work with residents, community organizations, government agencies, schools, businesses and industry to combat environmental issues, including indoor/outdoor air quality, blight, illegal dumping, and incompatible land use.	<ul style="list-style-type: none"> • Air quality/cumulative impacts in SW Detroit • Environmental justice • Make available local impacts, more data, perhaps on one website where media and community can easily access
Transformation Life Center	Transitions Life Center is a non-profit organization whose sole purpose is to provide a safe, caring, and enriching community for adults with intellectual and developmental disabilities.	<ul style="list-style-type: none"> • Pollution and risk to Detroit youth; impact of common household products

Urban Development Corp	<p>The mission of UDC is to improve the quality of life and bring about positive life-style changing experiences of low-to- moderate income families who live in urban communities. In carrying out our mission, UDC serves as a catalyst in the revitalization of communities through the development of activities and programs which promote safe, drug-free, healthy, clean, beautiful, and enjoyable environments.</p>	<ul style="list-style-type: none"> • Use of vacant lots by Detroit residents for urban farming which may unknowingly be contaminated with heavy metals and VOC's • Potential health effects associated with the use of recreational marijuana. • Environmental justice • Health effects associated with urban blight • Industrial air pollution and its link to respiratory diseases
Village of Oakman Manor	<p>The Village of Oakman Manor is a senior living community in north- central Detroit. They are a part of the Presbyterian Villages of Michigan network.</p>	<ul style="list-style-type: none"> • Environmental influence on violence • Neighborhood and built environment • Social and community context; economic stability