EVERY FOUR YEARS, WE CAN ELECT LEADERS WHO TAKE ACTION FOR A CLEANER, SAFER, HEALTHIER DETROIT.

IT'S TIME TO ACT. GET INFORMED.

DETROIT ENVIRONMENTAL AGENDA

www.detroitenv.org

JULY 2013


Great Lakes
BIONEERS
Conference 2013
October 25-27
TC
D
C


Detroiters Working for
Environmental Justice


Southwest Detroit
Community Benefits Coalition


WARM
TRAINING CENTER


ZERO WASTE
DETROIT


DATA
DRIVEN
DETROIT


MICHIGAN
Environmental
Council


MTGA
Michigan
Trails &
Greenways
Alliance


sdev
Southwest Detroit Environmental Vision


RECYCLE
HERE!

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Sandra Yu, Detroiters Working for Environmental Justice
Gloria Rivera, Great Lakes Bioneers-Detroit
Sandra Turner-Handy, Michigan Environmental Council
Todd Scott, Michigan Trails & Greenways Alliance
Matthew Naimi, Recycle HERE!
Simone Sagovac, Southwest Detroit Community Benefits Coalition
Southwest Detroit Environmental Vision
Joel Heeres, WARM Training Center
Margaret Weber, Zero Waste Detroit

with technical assistance from
Morgan Robinson and Jeffrey Bross, Data Driven Detroit

We stand on the collective shoulders of Detroit's environmental and environmental justice community.
The organizations and individuals involved in this phase of creating a Detroit Environmental Agenda acknowledge that we work in collaboration with many other organizations and individuals who have a deep commitment to environmental justice and improving the environment in Detroit, and that the Environmental Summit on May 5, 2011, was the the impetus for developing a Detroit Environmental Agenda.

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Kendeda Fund

The Detroit Environmental Agenda Steering Committee would like to thank the following people and organizations for their contributions to this effort.

DEA STAKEHOLDER REVIEW
Adrienne Edmonson, Ecology Center/Cass Corridor Neighborhood Development Corporation
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Simone Lightfoot, NAACP
Theresa Landrum, 48217
Tia Lebherz, Food and Water Watch/People's Water Board
Tyrone Carter, Original United Citizens of SWD
Vincent Martin, 48217/SWD

DEA PARTNER PLANNING MEETING
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Gary Wozniak, RecoveryPark
Hannah Kelley, Resident
Irva Faber Bermudez, Detroit Central Cities Community Mental Health
Jim Pappas, Fusco, Shaffer, & Pappas Architects
Jessica Pappas, Fusco, Shaffer, & Pappas Architects
Karen Hammer, Green Acres Woodward Civic Association
Khalil Ligon, Lower Eastside Action Plan
Ritchie Harrison, Jefferson East Business Association
Rosanna Pardo, Detroit Central Cities Community Mental Health
Sarah Pavelko, Southwest Detroit Business Association
Simone Lightfoot, NAACP
Tom Woiwode, Community Foundation for Southeast Michigan

SOUTHWEST DETROIT ENVIRONMENTAL MEETING ORGANIZING PARTNERS
Bridging Communities
Community Health and Social Service Center (CHASS)
Detroit Hispanic Development Corporation
Original United Citizens of SW Detroit
State Representative Rashida Tlaib
SER Metro-Detroit
Southwest Detroit Business Association
The Greening of Detroit
United Neighborhood Initiative (UNI)
University of Michigan

COMMUNITY OUTREACH
Art Center Community Development Corporation
Central District Police Community Relations
Community Action Against Asthma (CAAA) Community Fair
Creekside CDC Annual Meeting
Friends of River Rouge Watershed
Green Acres Woodward Civic Association
Lodge Davison Linwood Oakman Association of Block Clubs
Lower Eastside Action Plan (LEAP) Annual Meeting
Neighbors Building Brightmoor
Oakman Boulevard Community Association
Original United Citizens of Southwest Detroit "Get to Know Your Neighbor"
Osborn Neighborhood Alliance Board Meeting
Restore Northeast Detroit (NED)
Rosedale Park Improvement Association
Warrendale Community Organization

INTRODUCTION

Photo: Molly Newman

Youth on the Edge of Greatness students participate in Lower Eastside Alliance "Greening the Mack" joint summer program.

DETROIT IS A CITY OF POSSIBILITY.

It is the city where the car was invented, developed, and brought to the masses. It is a city of resilient people who represent great diversity and cultural richness. It is a city with valuable natural resources worth preserving. We know how to do, to make, to improve. History has brought us to a moment where Detroit faces tremendous economic, social, and environmental challenges, compounded by the massive exodus of people and capital from the city over the last 50 years. And we continue to be a city of possibility.

The Detroit Environmental Agenda (DEA) focuses on interlinked social, environmental and economic injustices, such as low graduation rates, youth violence, the worst health rankings in the state, inadequate access to transportation, high obesity, lack of access to jobs that provide a living wage, many square miles of abandoned contaminated land depleted of its richness and beauty, toxic air, and polluted rivers and streams.

As citizens of Detroit, we must take the future into our hands. Many have engaged in small- and large-scale efforts throughout the city to educate youth, deconstruct and weatherize homes, create bountiful gardens, clean up rivers, fight air pollution, and clean up and beautify abandoned lots. To expand this important work throughout the city, we must insist that our elected leaders prioritize the interconnectedness of the environmental, social, and economic challenges that our city faces. They must create policies and programs within the city of Detroit, region, and state that benefit all residents.

We require decision-makers who take stands for enforcing the laws that: keep our city clean and safe; mandate departments to work together for smarter strategies that reduce pollution and waste while increasing the quality of service; invest in creating an environment that keeps Detroiters healthier, more productive, more informed, and more employable. We need decision-makers committed to creating city policies and systems that effectively harness the abundant energy and desire to engage that exist in our neighborhoods. By insisting our leaders adopt the right policies, we CAN have a clean environment, healthy citizens, and a strong economy.

Detroiters have crafted the Detroit Environmental Agenda to say "NO MORE" to the unacceptable conditions that exist within our community. Through an online survey and meetings over two years, Detroit residents throughout the city have identified major environmental concerns and proposed solutions in their neighborhoods. This was the start to the process and this living document. The DEA represents the voices of a diverse range of stakeholders in Detroit's environment, ranging from ordinary citizens to activists, policy wonks to on-the-ground implementers.

Principles guiding the agenda:

- Ensure environmental justice: protect and involve vulnerable populations in decisions that impact their lives
- Protect and restore Earth's resources: land, water, air
- Engage affected residents to understand community needs and potential impacts
- Leverage the connections between environmental solutions and health, safety, jobs, and education
- Build on successful models in Detroit and from elsewhere

The Detroit Environmental Agenda provides the tools for conversations that we must have with policy-makers, institutional and business leaders, not-for-profit organizations, and all citizens of the city of Detroit. As we near council by district and mayoral elections, candidates will be asked to respond to this Agenda through a questionnaire. We urge Detroit residents to push for its adoption and implementation once leaders are elected. The presence of the Emergency Manager demands that citizens use the strongest mechanisms of accountability to ensure that the acts of the EM help accomplish the goals. Similarly, the implementation of Detroit Future City requires active engagement so that the citizens and the environment of Detroit will benefit from this massive investment.

The DEA is organized so that the reader can read those sections of interest:

- In Section 1, we describe the purpose of the report, the community consultation that forms the basis of the report, and present the basic principles that undergird the overall project
- In Section 2, we provide an executive summary of our recommendations
- In Section 3, we connect priority issues such as public safety, city infrastructure, and economics to environmental factors
- In Section 4, we highlight opportunities in existing policy
- In Section 5, we describe three local policy initiatives, and highlight environmental opportunities in the revised City Charter and Detroit Future City Strategic Framework Plan.
- In Section 6, we define commonly used environmental terms in a Glossary

Photo: Kirsten Ussery

Charles Stokes of Detroiters Working for Environmental Justice describes environmental challenges and assets on a citywide Toxic Tour.

Thank you for taking the time to read and engage with the Detroit Environmental Agenda. We hope you see some of your efforts reflected in the document.

The DEA will give you information to talk with your family, your neighbors, your policy-makers and your leaders about the social, environmental, and economic well-being of Detroit. When we all work together, we create a better future.

We can do it.

PRINCIPLES

1. Ensure environmental justice: protect and involve vulnerable populations in decisions that impact their lives

2. Protect and restore Earth's resources: land, water, air

3. Engage affected residents to understand community needs and potential impacts

4. Leverage the connections between environmental solutions and health, safety, jobs, and education

5. Build on successful models in Detroit and from elsewhere

Detroit must recognize the role a healthy environment plays in creating a city where people want to live, work, and raise a family.

Brightmoor Farmway (District 1)
Photo: Sandra Yu

Detroiters Working for Environmental Justice youth monitor water quality at Belle Isle Beach (District 5)
Photo: Sandra Yu

Recycle HERE! Holden location (District 5)
Photo: Matthew Naimi

Milliken State Park at Detroit River (District 5)
Photo: AmericanForests.org

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OUTREACH & ENGAGEMENT

480 Survey Responses

503 Reached through Community-hosted Meetings

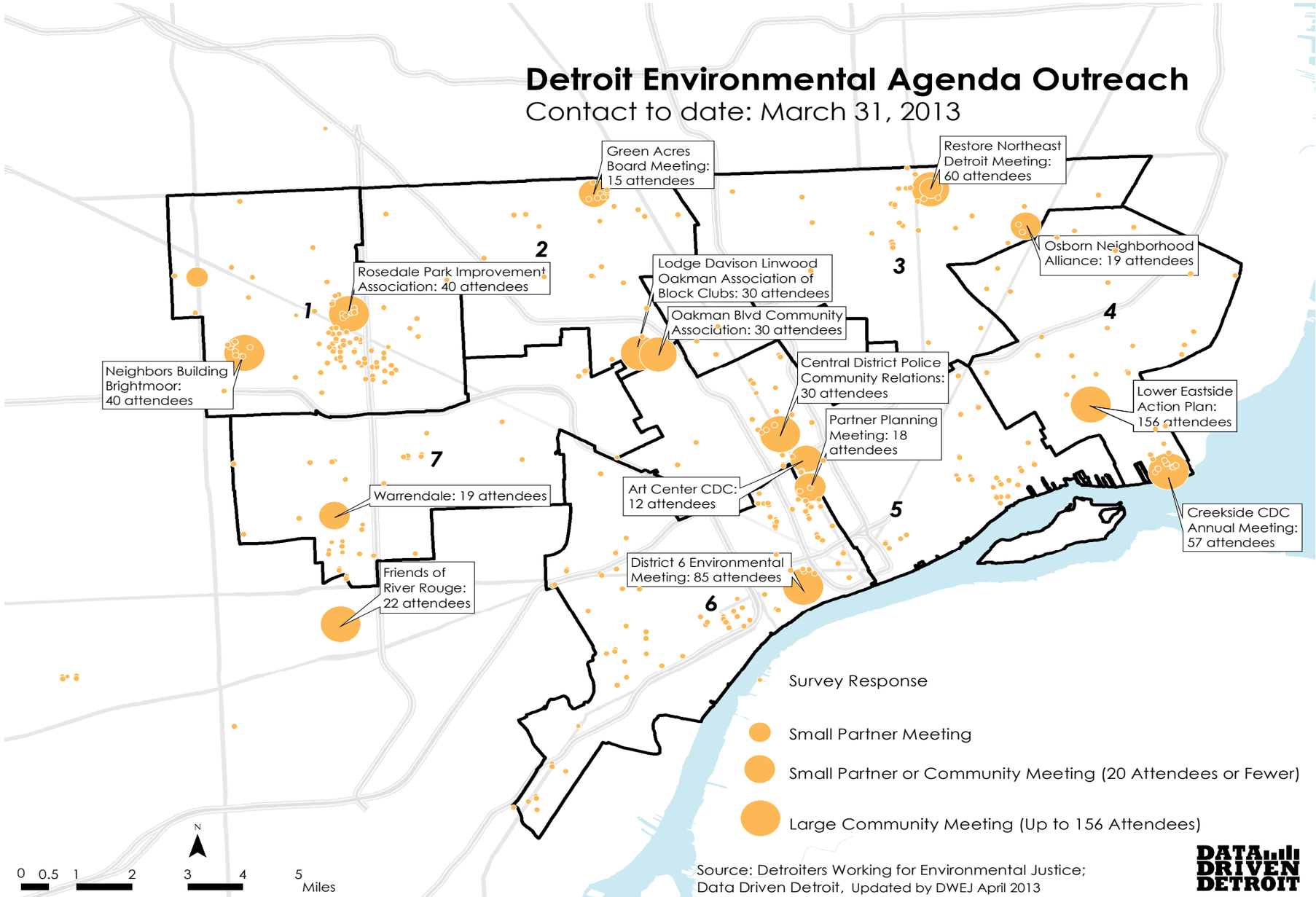
303 Reached through DEA-hosted Meetings

The Detroit Environmental Agenda project originated from the 2011 Environmental Summit held to share resident and advocate concerns and ideas about the environment with City officials and the Detroit Works Project (now Detroit Future City). Feedback from that event has helped to shape the DEA principles and recommendations.

In community meetings and interviews in 2012, residents expressed a common desire for funding and assistance to implement green solutions in their own communities, such as solar lighting for parks, a deconstruction job training program, a tire-recycling company, a green industrial park, and green infrastructure projects.

They also wanted more information and education about environmental conditions, what individual actions they could take to remedy the problem, and how to access city departments for help in resolving the issues, including the appropriate authority and contact information. With land-based issues, residents were greatly interested in recent online interactive tools such as Data Driven Detroit's tax auction map and Loveland Technologies' parcel ownership and tax status map.

While some residents were interested in the details of city policies that could alleviate neighborhood environmental challenges, many more were concerned with seeing tangible improvements in their communities.


Detroit Environmental Agenda Outreach
Contact to date: March 31, 2013
Green Acres Board Meeting: 15 attendees
Restore Northeast Detroit Meeting: 60 attendees
Osborn Neighborhood Alliance: 19 attendees
Rosedale Park Improvement Association: 40 attendees
Lodge Davison Linwood Oakman Association of Block Clubs: 30 attendees
Oakman Blvd Community Association: 30 attendees
Neighbors Building Brightmoor: 40 attendees
Central District Police Community Relations: 30 attendees
Lower Eastside Action Plan: 156 attendees
Partner Planning Meeting: 18 attendees
Art Center CDC: 12 attendees
Warrendale: 19 attendees
Creekside CDC Annual Meeting: 57 attendees
District 6 Environmental Meeting: 85 attendees
Friends of River Rouge: 22 attendees
1
2
3
4
5
6
7
Survey Response
Small Partner Meeting
Small Partner or Community Meeting (20 Attendees or Fewer)
Large Community Meeting (Up to 156 Attendees)
N
0 0.5 1 2 3 4 5 Miles
Source: Detroiters Working for Environmental Justice;
Data Driven Detroit, Updated by DWEJ April 2013
DATA DRIVEN DETROIT

SURVEY RESULTS

The Detroit Environmental Agenda distributed a public survey asking Detroit residents to rate the seriousness of various environmental challenges and solutions in their neighborhoods. Their responses were analyzed by district.

Surveys were distributed and collected in person at neighborhood and block club meetings, and online through community organizations' e-newsletters and websites. We received a total of 480 responses, including 14 from nonresidents. District 1 had the highest number of responses (155), followed by District 6 (93). The fewest number of responses came from District 2 (28).

Respondents were asked to rate 33 different environmental challenges. The possible scores were grouped into "Serious" or "Medium" problem, "Minor" or "Not a problem," or "I don't know."

The overall results were influenced by the high response rate from District 1, as well as our instructions to ask respondents to consider the various issues in their own neighborhood.

The top issues in each district were noted, and 11 issues appeared in at least 4 out of the 7 districts top 10 issues. 7 out of 7 districts rated Crime, Dangerous Structures, and Vacant Land Not Cared For as "Medium" or "Serious" problems. 6 out of 7 districts rated High Heating Bills and Litter as "Medium" or "Serious" problems. 4 out of 7 districts rated Hard to Get Places Without a Car, Illegal Dumping, Infrequent Buses, No Recycling, No Youth Activities, and Not Safe to Walk as "Medium" or "Serious" problems.

Based on the number of "I don't know" responses in the survey, respondents were least aware of water and soil pollution, as well as the extent of environmental health impacts in their neighborhoods. (Respondents were most aware of transportation challenges and waste issues such as litter and the lack of convenient recycling.) The four issues with the highest number of "I don't know" responses (out of 480 responses) were: fish contamination (154), lead poisoning (129), sewage in rivers (122), and polluted sites (101).

The diagram to the right shows the top 10 issues in each district, ranked by percentage of the district's respondents who rated the issue as a "Medium" or "Serious" problem.

TOP ISSUES OF IMPORTANCE
Frequency of ranking in a district's top 10 by percentage of "Medium" or "Serious" ratings

1. Crime (Districts 1, 2, 3, 4, 5, 6, 7)
2. Dangerous structures (1, 2, 3, 4, 5, 6, 7)
3. Vacant land not cared for (1, 2, 3, 4, 5, 6, 7)
4. High heating bills (1, 2, 3, 4, 5, 7)
5. Litter (1, 3, 4, 5, 6, 7)
6. Hard to get places without a car (1, 2, 4, 5)
7. Infrequent buses (1, 2, 5, 6)
8. Not safe to walk (1, 3, 5, 7)
9. Illegal dumping (2, 3, 4, 7)
10. No recycling (3, 5, 6, 7)
11. No youth activities (2, 3, 4, 5)

ISSUES OF LOWEST PUBLIC AWARENESS
Frequency of "I don't know" responses above 25%

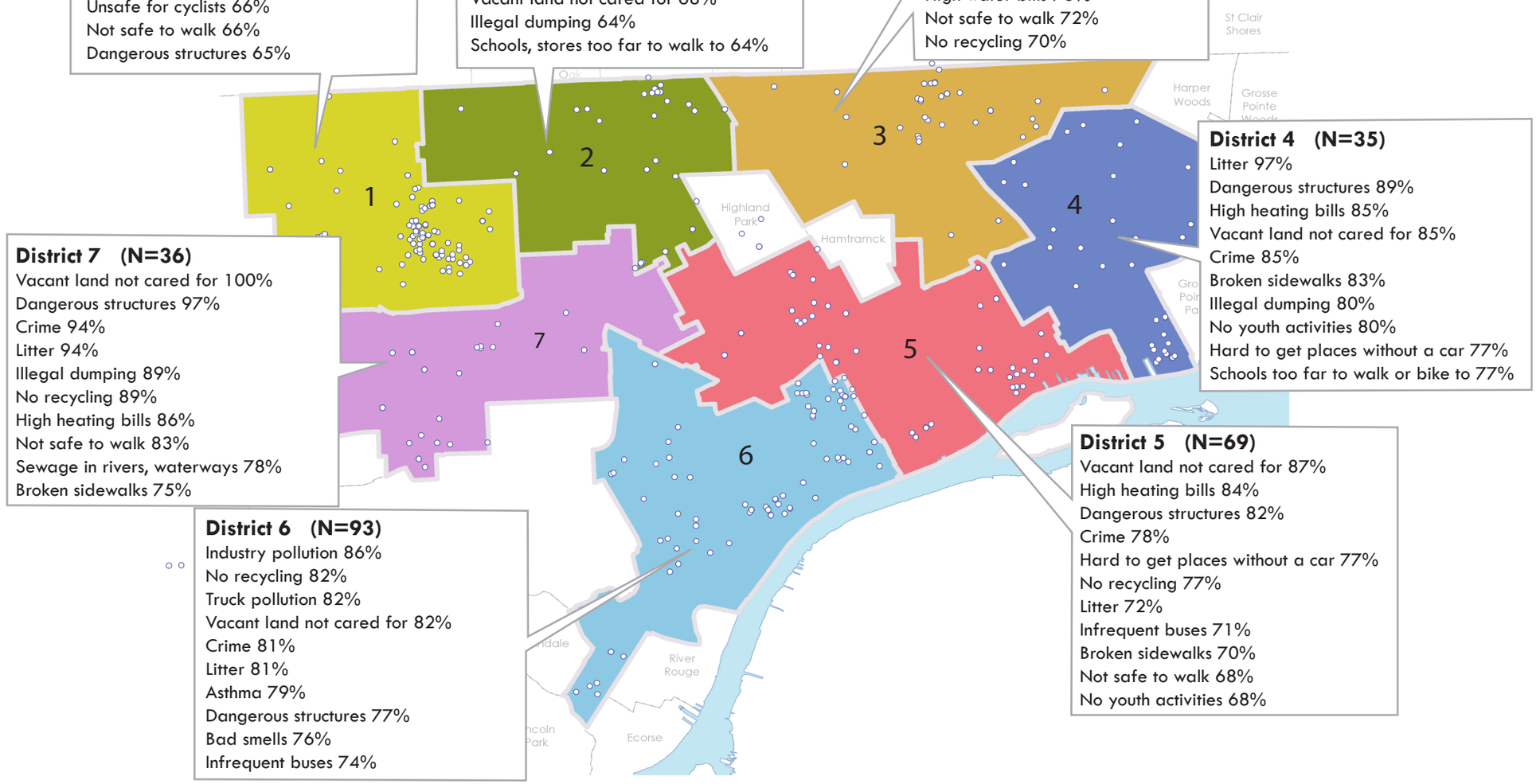
1. Lead poisoning (1, 2, 3, 4, 5, 6, 7)
2. Contaminated fish (1, 2, 3, 4, 5, 6, 7)
3. Sewage in rivers, waterways (1, 2, 3, 5, 6)
4. Asthma (1, 2, 3, 4, 5)
5. Illegal or inappropriate business operations (1, 3, 6, 7)

Top 10 Issues per District

District 1 (N=155)
Crime 90%
Vacant land not cared for 77%
Hard to get places without a car 77%
High heating bills 75%
Infrequent buses 70%
Litter 69%
High water bills 67%
Unsafe for cyclists 66%
Not safe to walk 66%
Dangerous structures 65%

District 2 (N=28)
High heating bills 89%
Crime 82%
Hard to get places without a car 82%
High water bills 75%
No youth activities 71%
Infrequent buses 68%
Unsafe for cyclists 68%
Vacant land not cared for 68%
Illegal dumping 64%
Schools, stores too far to walk to 64%

District 3 (N=50)
Dangerous structures 88%
Crime 86%
Litter 86%
Vacant land not cared for 86%
High heating bills 84%
No youth activities 82%
Illegal dumping 80%
High water bills 78%
Not safe to walk 72%
No recycling 70%



District 4 (N=35)
Litter 97%
Dangerous structures 89%
High heating bills 85%
Vacant land not cared for 85%
Crime 85%
Broken sidewalks 83%
Illegal dumping 80%
No youth activities 80%
Hard to get places without a car 77%
Schools too far to walk or bike to 77%

District 5 (N=69)
Vacant land not cared for 87%
High heating bills 84%
Dangerous structures 82%
Crime 78%
Hard to get places without a car 77%
No recycling 77%
Litter 72%
Infrequent buses 71%
Broken sidewalks 70%
Not safe to walk 68%
No youth activities 68%

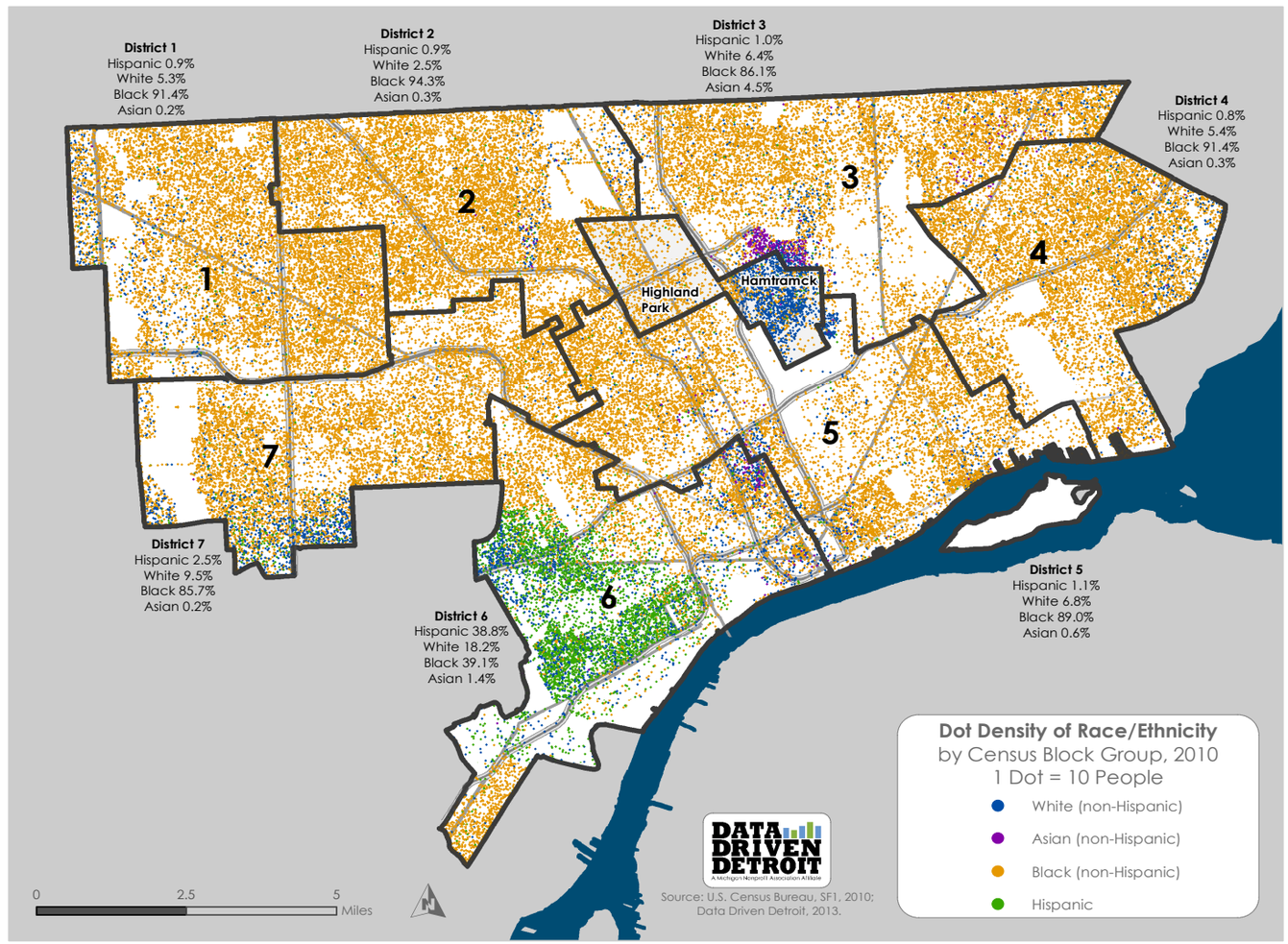
District 6 (N=93)
Industry pollution 86%
No recycling 82%
Truck pollution 82%
Vacant land not cared for 82%
Crime 81%
Litter 81%
Asthma 79%
Dangerous structures 77%
Bad smells 76%
Infrequent buses 74%

District 7 (N=36)
Vacant land not cared for 100%
Dangerous structures 97%
Crime 94%
Litter 94%
Illegal dumping 89%
No recycling 89%
High heating bills 86%
Not safe to walk 83%
Sewage in rivers, waterways 78%
Broken sidewalks 75%

EXECUTIVE SUMMARY

Why the Detroit Environmental Agenda? Why now?

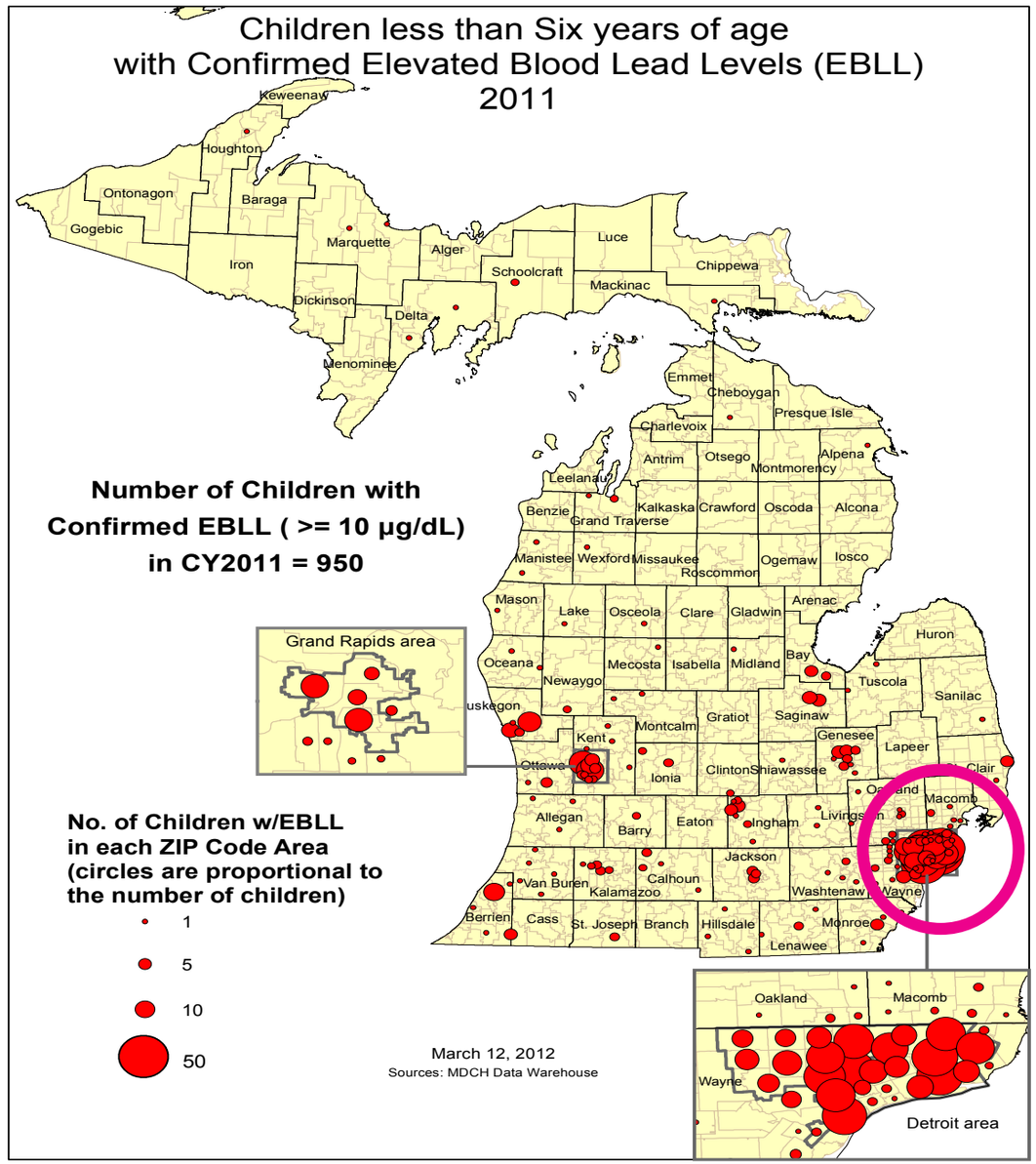
Detroit is 88% people of color, with an alarmingly high rate of unemployment and a child poverty rate twice the state average.



In 2011, over half of Michigan's children with lead poisoning lived in Detroit. The city's asthma hospitalization rate is the highest in the tri-county area.

Quality of life for the majority of Detroiters is directly linked to the environment–the air we breathe, the toxins in the soil, water, and buildings.

We need to do something about it – and we can.



EXECUTIVE SUMMARY

PATH TO HEALTHY CITY, HEALTHY PEOPLE

Improve air quality to reduce health impacts

Protect and restore our waterways

Encourage resource-efficient homes, buildings, and neighborhoods

Adopt a waste policy of Reduce, Reuse, Recycle

Repurpose vacant land and buildings

Ensure access to diverse housing options that are safe, healthy, and energy-efficient

Ensure all residents, especially our most vulnerable, can safely and reliably get to desired destinations

City and residents work together to create healthy, equitable, sustainable neighborhoods

Because it holds special authorities and duties by law, **the City has a powerful role to play in ensuring a healthy environment** where all, regardless of income, race, gender or creed, can thrive in social, economic, and environmental health.

- Use **planning and zoning** to ensure that land use, transportation, utilities, and waste management work together to create healthier, more vibrant communities
- Leverage **economic development and jobs** in cleaning up and restoring the city's environment
- Engage residents and especially youth in creating beautiful, natural **recreational areas** that we can be proud of
- Keep the **public informed and equipped** to help maintain strong, healthy neighborhoods

PATH TO HEALTHY CITY, HEALTHY PEOPLE

WE WANT OUR CITY LEADERS TO:

Take a Holistic Approach to Creating Healthy, Sustainable, Equitable Communities: Update the Master Plan and Zoning for public health, and adopt water, waste, and energy policies that reduce pollution, increase efficiencies, and improve health.

Take Responsibility for Neighborhood Quality of Life: Uphold the highest standards for air, water, soil, neighborhood, and indoor environmental quality by enforcing laws and regulations, and strengthening them where necessary.

Communitize Neighborhood Care: Support community mechanisms and tools for residents to develop neighborhood plans, care for land, help monitor and enforce laws, and address illegal dumping and code violations.

Make Forward-thinking Investments: Protect our natural assets, improve local and regional public transit, encourage complete neighborhoods, declare commitment to a clean economy, and prioritize social equity.

CLEAN AIR

CLEAN WATER

CLEAN ENERGY

ACTIVE TRANSPORTATION

ZERO WASTE

HEALTHY LAND

HEALTHY HOMES

HEALTHY NEIGHBORHOODS

HEALTHY CITY

HEALTHY PEOPLE

EXECUTIVE SUMMARY

CLEAN AIR

Detroit is home to at least 12 facilities that were out of compliance with federal regulations as of the end of 2012. A University of Michigan study found that Detroit is home to 5 of the top 25 most polluted zip codes in the state, including 48217 which has a toxic burden level 46 times the state average.

- Protect Public Health in Zoning Policies and Decisions
- Reduce Pollution from Current and New Facilities
- Reduce Pollution from Trucks and Diesel Equipment
- Create Mechanisms for Communities to Help Monitor Facilities and Trucks

CLEAN WATER

The Great Lakes account for 95% of the U.S. surface freshwater, and over 1/5 of the world's freshwater supply. In 2011, Detroit's sewer system discharged over 26 billion gallons of untreated or partially treated sewage into the Detroit and Rouge Rivers.

- Adopt a Comprehensive Water Master Plan using Detroit Water Agenda
- Optimize Available Land for Blue/Green Infrastructure
- Support Water Conservation and Stormwater Infiltration
- Reduce Industrial and Stormwater Water Pollution

CLEAN ENERGY

72 cents of every dollar Michigan residents spend on energy flows out of the state for imported oil, gas, and coal. Detroiters spend twice as much of their household income on energy bills as the rest of the state. Weatherization alone could cut annual energy costs by over $400.

- Support Policies That Create a Clean Energy Future for Detroit
- Reduce Municipal Energy Usage and Costs
- Reduce Residential and Commercial Energy Usage and Costs

ZERO WASTE

Detroit recycles 7% of its total solid waste, compared to 26% on average for other major cities. The highest-ranking large city, San Francisco, recycles over 80% of its waste.

- Implement Recycling in Every District
- Encourage Secondary Markets for Recovered Materials
- Reduce Construction and Demolition Waste
- Reduce Illegal Dumping
- Reduce Commercial and Industrial Waste

Detroit Environmental Agenda Steering & Working Committee

DATA DRIVEN DETROIT · Detroiters Working for Environmental Justice · Great Lakes BIONEERS Conference 2013 · MICHIGAN Environmental Council · MTGA Michigan Trails & Greenways Alliance · RECYCLE HERE! · Southwest Detroit Community Benefits Coalition · sdev Southwest Detroit Environmental Vision · WARM TRAINING CENTER · ZERO WASTE DETROIT

HEALTHY LAND

Nearly 30% of Detroit's population are within walking distance of a toxic release (1988–2009). Past industrial and commercial activity has also left legacy pollution, significant amounts of which remain today as brownfield sites.

- Clean Up Contaminated Land and Reduce Exposure to Health Hazards
- Communitize Care of Vacant Land and Properties
- Restore and Protect Natural Areas and Assets

HEALTHY HOUSING

In 2011, Detroit children had lead-poisoning rates twice as high as the statewide average. Lead poisoning lowers IQs, increases risk of ADHD, and increases aggression and delinquency. A Pittsburgh study found that juvenile delinquents were four times as likely to have been lead-poisoned as a child.

- Implement a Holistic Approach to Safe, Resource-efficient, Affordable Housing
- Increase Residential Energy Efficiency
- Improve Residential Indoor Air Quality
- Reduce Lead Paint Hazards in Homes

HEALTHY NEIGHBORHOODS

Heart disease, cancer, and diabetes are bigger causes of death in Detroit than they are statewide or nationally. Exposure to environmental pollution is a contributor to these types of disease, along with many other illnesses and health impacts such as low birth weights, infant mortality, respiratory disease, and obesity.

- Take Responsibility for Preserving Neighborhood Quality
- Encourage Community Leadership in Local Development
- Support Tools for Community Oversight
- Support Environmental Efforts that Improve Public Safety

ACTIVE TRANSPORTATION

According to Transit Riders United, DDOT riders working a six-day week would be late to work twice a week. Over 20% of Detroit Public School students (more than 14,000 students per day) rely on the public buses to get to school. 33% of Detroit's low-income residents and 38% of our elderly residents don't have access to a car.

- Make Equitable Transportation Decisions
- Improve Local and Regional Public Transit
- Make Non-motorized Transit a More Viable Choice

Detroit Environmental Agenda Steering Committee

EXECUTIVE SUMMARY

Many community-driven efforts and public-private partnerships are working to improve Detroit's environment. Because this report is focused on policy opportunities for the City to play a strong role in environmental justice and sustainability, we have highlighted collaborative, environmental health, or environmental justice focused initiatives with citywide policy impact.

Community Action Against Asthma
Community Development Advocates of Detroit
The Consortium of Hispanic Agencies
Detroit Black Community Food Security Network
Doing Development Differently in Detroit
Detroit Climate Action Collaborative
Detroit Digital Justice Coalition
Detroit Food & Fitness Collaborative
Detroit Food Justice Task Force
Detroit Food Policy Council
Detroit Future City
Detroit Greenways Coalition
Detroit Lead Partnership
Detroit Parks Coalition
Detroit Peoples Platform Convention
Detroit Urban Research Center
Detroit-Wayne County Green & Healthy Homes Initiative
Detroit Water Agenda
FoodLab Detroit
Friends of the Rouge Watershed
West Grand Boulevard Collaborative
Garden Resource Program
Lower Eastside Action Plan
Neighbors Building Brightmoor
NextEnergy Green Economy Initiative
North End Woodward Community Coalition
People's Water Board Coalition
RecoveryPark
Southwest Detroit Community Benefits Coalition
Transportation for Michigan
Urban Agriculture Work Group
Woodward Corridor Initiative
Zero Waste Detroit
48217 Congress of Communities

WE COMMIT TO:

1. Sharing the Detroit Environmental Agenda with mayoral and council candidates and asking them to respond to five questions
2. Sharing those responses with you so that as informed citizens, you can help elect leaders who will take action for a cleaner, safer, healthier Detroit

WE ASK YOU TO COMMIT TO:

1. Reading the Detroit Environmental Agenda and signing on as a supporter
2. Sharing the Detroit Environmental Agenda with 5 friends
3. Voting as an informed citizen

what's next?

Detroit—cleaner, leaner, greener—is. And that means all of us.

See www.detroitenv.org to find out what's happening and how you can elect and support strong leaders as we recommit to our city.

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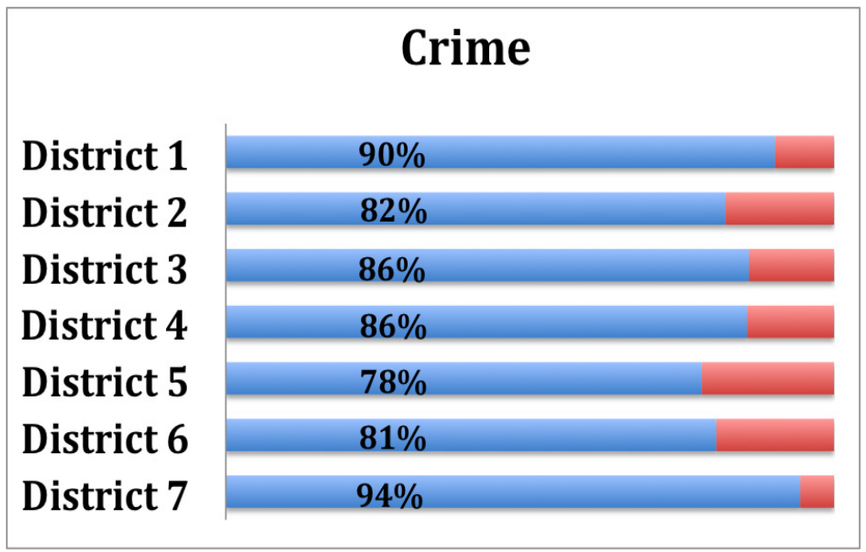
ENVIRONMENT & PUBLIC SAFETY



The Detroit Environmental Agenda survey of nearly 500 residents ranked crime as a top 10 problem in all seven districts.

A 2012 Detroit News poll found that nearly 50% of the 800 residents surveyed said crime was their biggest challenge, over education, unemployment, and lack of transportation. 40% of survey respondents said that the high crime rates would spur them to leave the city within the next five years.

Because public safety is such a high priority in Detroit, it has been included as a key issue for the Detroit Environmental Agenda. While the DEA is not intended to address all factors in crime, this report will lay out several environmental strategies that can improve public safety.

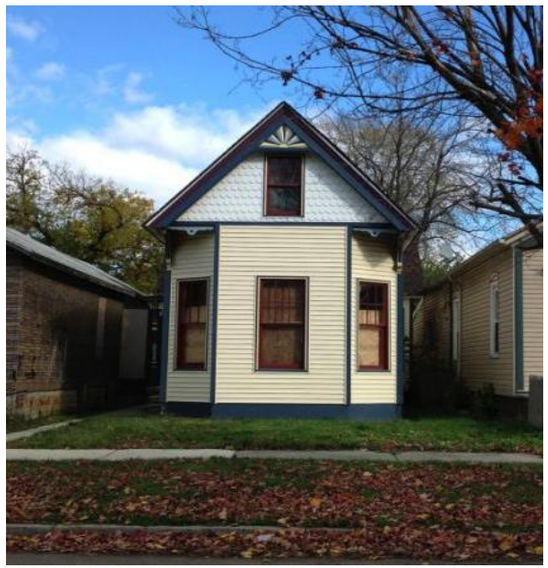
Key environmental strategies that contribute to increased public safety are strategic demolition/deconstruction, increased tree canopy, lead-poisoning prevention, and resource-efficient public lighting.

Participants throughout the Detroit Environmental Agenda's outreach process have cited adequate street lighting as a priority for public safety. Detroit's Public Lighting Department is responsible for operating and maintaining 88,000 streetlights. 40% of those lights are not functioning due to disrepair and neglect–on both DTE and PLD-powered lights. Because the obsolete grid and wiring, as well as bulbs, must be updated in order to have working streetlights, the required investment is an opportunity to install a long-lasting, resource-efficient public lighting system.

Advantages of LEDs (City of Boston LED study)

- 15 year life expectancy vs. current mercury vapor lights (5–6 years)
- LED streetlights would result in 60% decrease in energy use and carbon emissions
- More consistent distribution of light and fewer dark spots (traditional lights provide too much light directly under pole and leave streets unevenly lit. LED light can be guided with secondary optics to ensure clearer, consistent lighting)

Vacant vs. Abandoned



Source: Raleigh & Galster "Neighborhood Disinvestment, Abandonment and Crime Dynamics" WSU 2013

- 78,000 Vacant structures
- 38,000 Dangerous buildings
- 11,000–12,000 fires annually in past decade

60% of fires occur in blighted or unoccupied buildings. Vacant homes quickly become abandoned homes if unaddressed.

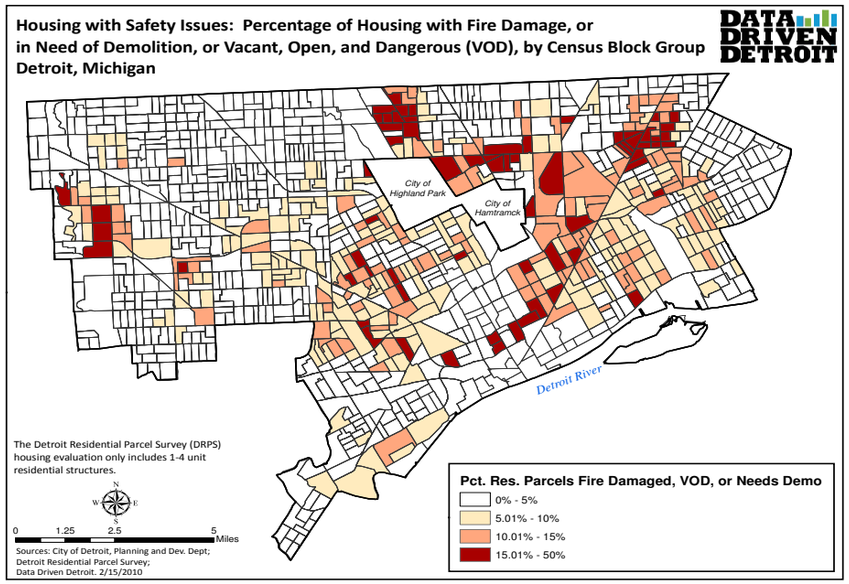
Source: 2013 EM Report to Creditors, Detroit Free Press

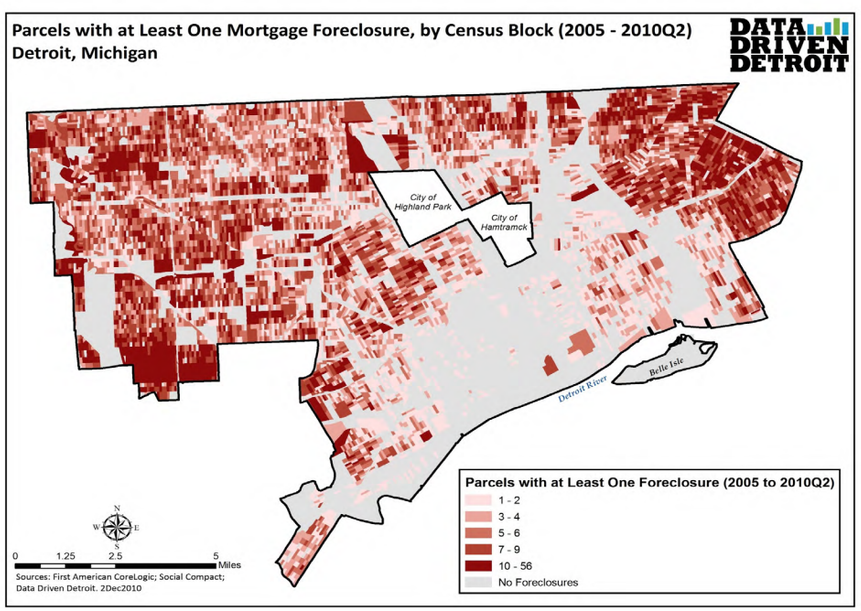
Vacant Land

A 2013 Wayne State University study found that while intact vacant houses were correlated to crime activity, abandoned structures (such as those fire damaged beyond repair) were less correlated to crime, and vacant land with no structure even less so. According to the study, recent foreclosures may be a more likely attracter of criminal activity than the fire-damaged or VOD buildings. Further study should be conducted to determine whether the following safety recommendations are viable:

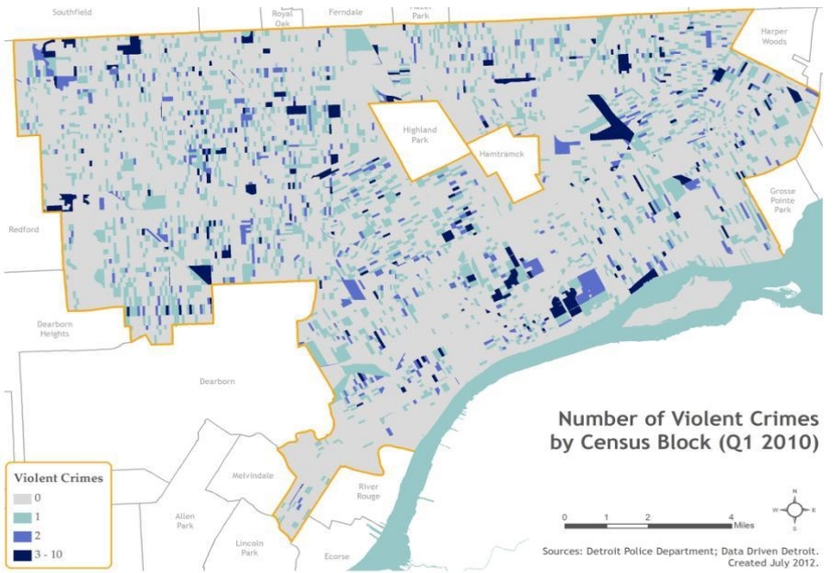
- Prioritize vacant yet intact houses for reoccupation in stable neighborhoods for public safety. Keeping homes occupied can reduce crime attracted to vacant houses.
- Prioritize for architectural salvage and deconstruction vacant yet intact houses that are isolated and in areas that the community designates for alternative use.
- Prioritize for rapid, geographically grouped, environmentally safe demolition of severely damaged properties to increase walkability, perception of safety, decrease pressure on the fire department, and preserve property values and neighborhood quality of life.

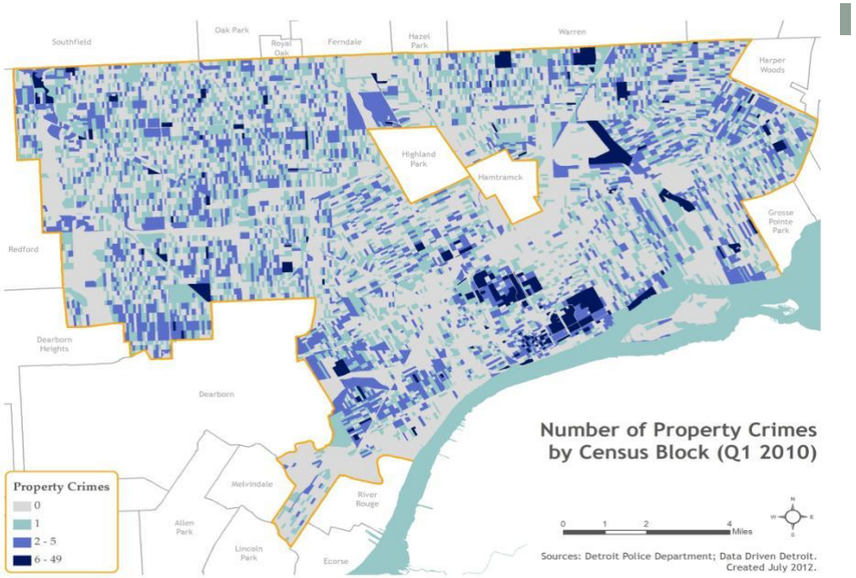
ENVIRONMENT & PUBLIC SAFETY



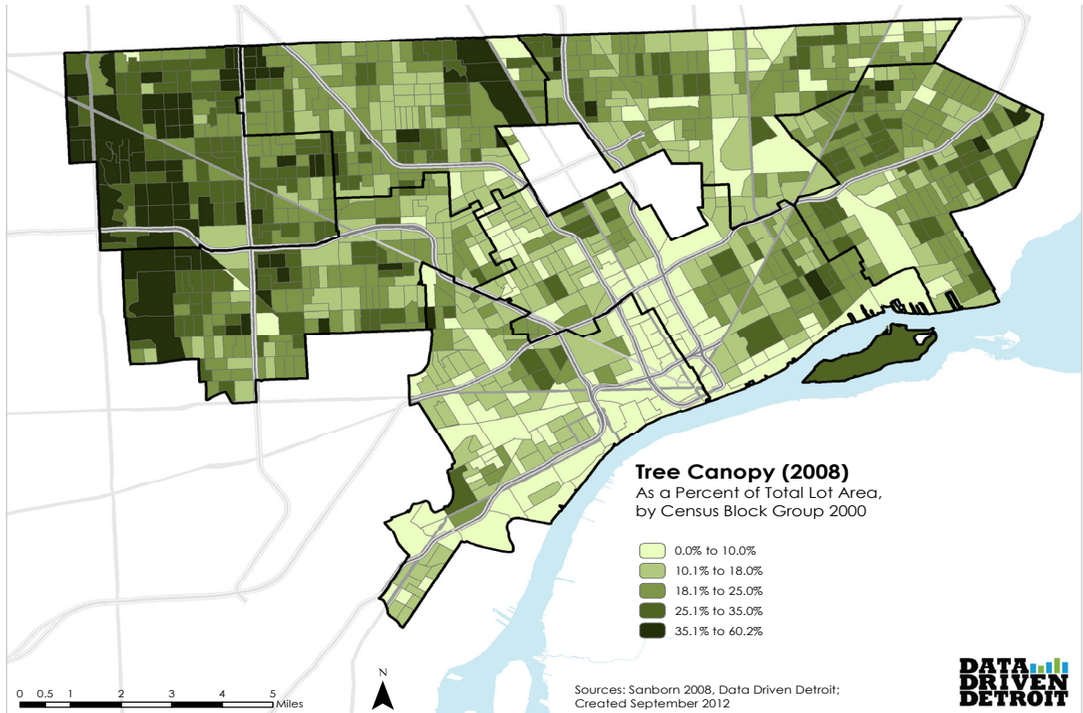


Compare locations of violent crime *(assault, robbery)* and property crime *(burglary, destruction/vandalism, drug/narcotics, larceny, motor vehicle theft)* in the first quarter of 2010 (see maps to right) to 2009 housing conditions (upper left) and 2005-2010 mortgage foreclosures (lower left). A recent WSU study currently under peer review found that crimes more frequently occurred on blocks with higher renter occupancy, more liquor licenses, lower population density, and more crime on adjacent blocks (Galster & Raleigh 2013).





More Trees, Less Crime



After nine months of data analysis on 2,813 homes in a Portland, Oregon, neighborhood that experiences a crime rate 50% higher than the national average, the U.S. Forest Service found that tree-lined streets and yards with larger trees were linked with lower property crime and violent crime rates. The study controlled for over 24 other variables such as size, age, value, condition of the house, types of barriers, and presence of a neighborhood watch, burglar alarm, dog, or bars on the windows.

A Baltimore study of the urban tree effect found that a 10% increase in neighborhood trees roughly corresponded with a 12% decrease in crime.

Because trees also help cool the city, filter air pollution, reduce stress on the sewer system, and beautify a neighborhood, increasing the urban tree canopy is a multipurpose strategy for improving public safety.

Southwest Detroit has the lowest percentage of tree canopy.

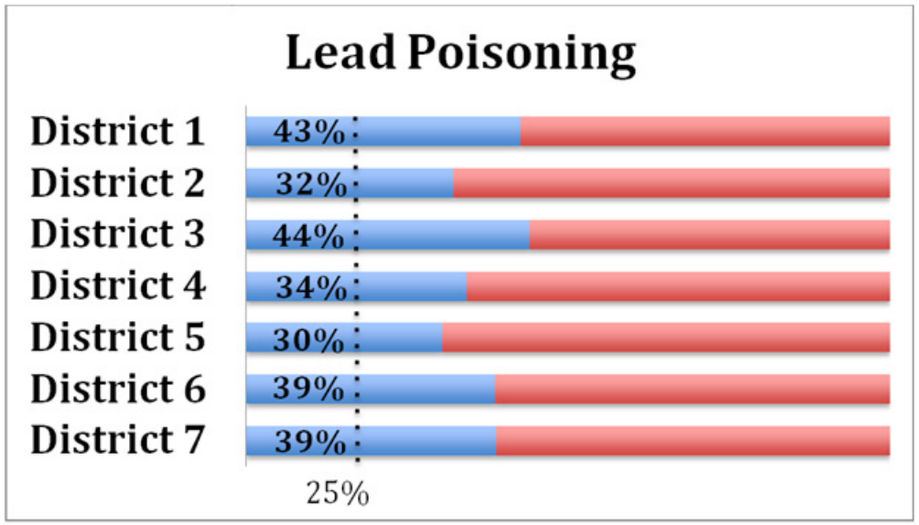
Detroit's tree canopy is only 22.5% overall, compared to a national average of 27% and Atlanta's 36% (highest of all major cities). American Forests recommends 40% tree cover for cities east of the Mississippi.

Detroit's tree canopy is lower than both the national average and the recommended percentage for cities.

Detroit lost 500,000 trees between 1950 and 1980 to dutch elm disease, urban expansion, or neglect. A new invasive pest in 2002, emerald ash borer, decimated the city's ash trees, which had been planted to replace lost elm trees. The Greening of Detroit has teamed up with community and volunteer groups to plant 70,000 trees in Detroit since 1989.

Sources: "The Effect of Trees on Crime in Portland, Oregon." US Forest Service. 2011;
"The Relationship between Tree Canopy and Crime Rates across an Urban-rural Gradient in the Greater Baltimore Region." University of Vermont. *Landscape and Urban Planning*. 2011;
"Tree Cover % - How Does Your City Measure Up?" www.deeproot.com. Info from Watt & Gunther, New York City Department of Parks. 2010.

ENVIRONMENT & PUBLIC SAFETY

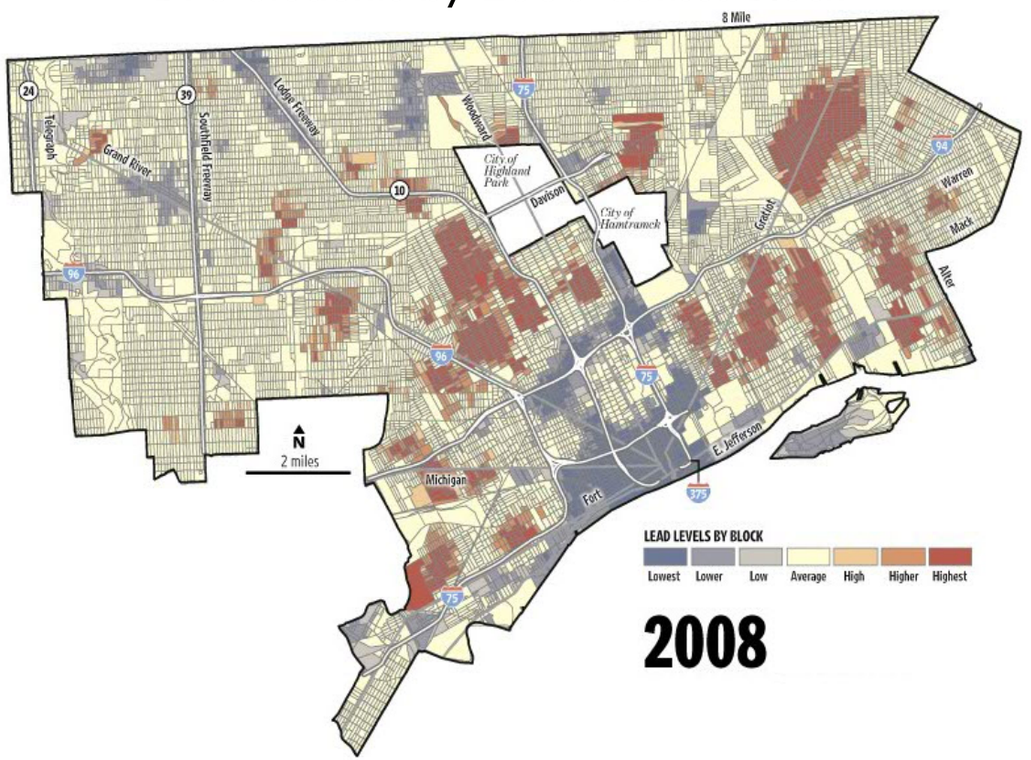


Lead poisoning has been linked with crime in multiple studies over the past several decades. A longitudinal study in Philadelphia followed 497 black males from birth to age 24, studying 150 variables that could contribute to later criminal behavior. After adjusting for other factors such as poverty, presence of a father, race, education, etc., the only variable independently linked to adult criminal behavior, juvenile criminal behavior, and school misbehavior was childhood lead poisoning.

Along with the rest of the nation, Detroit's lead poisoning rate has declined since the 1990s when the federal government began to invest in lead poisoning prevention. However, lead poisoning is indeed a serious issue in Detroit, with child lead poisoning rates several times higher than that of the state and the nation (see map to right). We have lead contamination in Detroit from several key sources–current and historic industrial activity that is the source of air deposition of lead, housing built before lead-based paint was banned in 1978 (over 90% of all low-income Detroit housing), and ground contamination from vehicle emissions running on leaded gasoline before that was phased out in the 1990s. As indicated in the image above,

Over 25% of survey respondents in all seven districts did not know if lead poisoning was a serious issue in their neighborhood. In the lead poisoning hot spot analysis below, red indicates higher hot spot scores, while blue indicates lower hot spot scores. District 3, 4, 5, and 6 have significant hot spots of children with high blood lead levels.

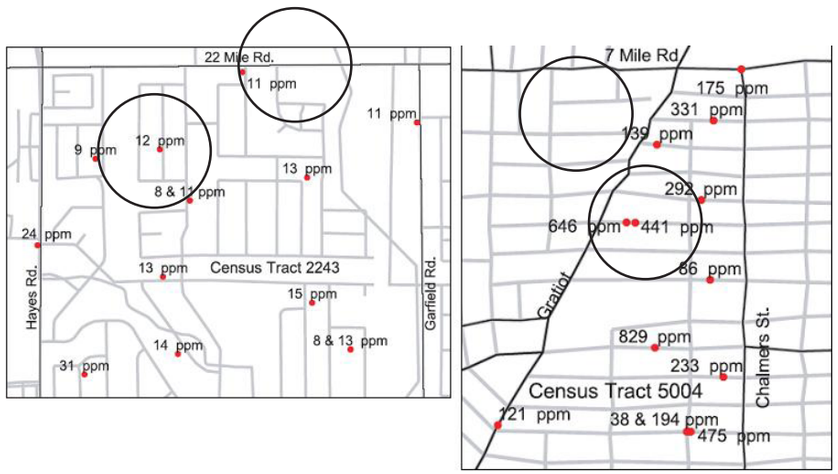
Hot Spot Analysis[1] of High Blood Lead Levels in DPS Students by 2000 Census Block



Source: Detroit Public Schools and Detroit Dept of Health and Wellness Promotion 2010

*1. Getis-Ord Gi**

Detroit Free Press Soil Samples
Shelby Township vs. Northeast Detroit

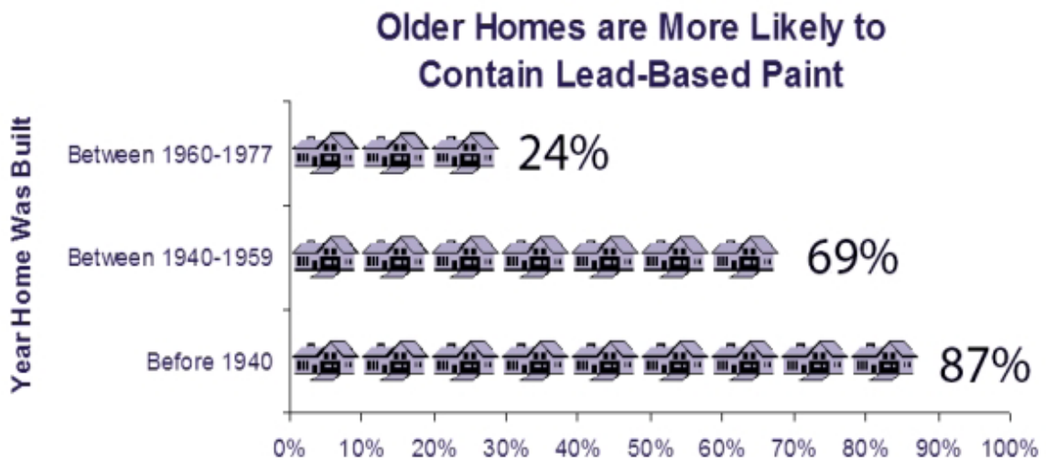


Suburban - Census Tract 2243 **Urban - Census Tract 5004**

The Detroit Free Press investigation found that soil lead contamination in northeast Detroit at Gratiot and 7 Mile was 40 or 50 times the level in Macomb County, and well above the EPA limit of 400 parts per million. Currently, a study is being conducted to determine whether residential demolition increases lead contamination in surrounding soil. The City of Baltimore has instituted lead-safe demolition standards to address the issue there.

Often a home is in need of more than one type of repair–lead abatement, roof replacement, weatherization, fire safety, mold abatement, and so on. However, because different agencies administer the various programs, low-income Detroit homeowners may not be able to receive all of the repairs they need. The Detroit-Wayne County Green and Healthy Homes Initiative is advocating for geographical concentration of comprehensive home assessment and rehabilitation through multi-sector and interagency coordination. Led by ClearCorps/Detroit, the Detroit Enforcement Work Group is identifying strategies to increase landlord compliance with the 2010 Detroit Lead Ordinance, which updated the property maintenance code to require rental property owners to have their properties assessed and addressed for lead paint hazards.

Percentage of Homes Likely to Contain Lead-based Paint determined by Age of Housing.



Over 90% of Detroit's low-income housing was built before lead paint was banned.

(American Community Survey 2011)

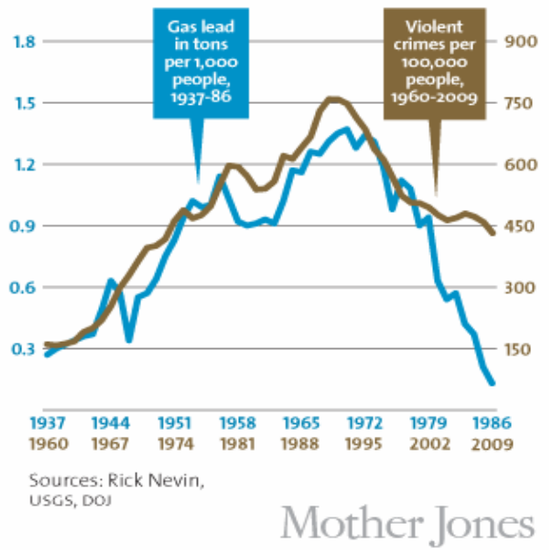
ENVIRONMENT & PUBLIC SAFETY

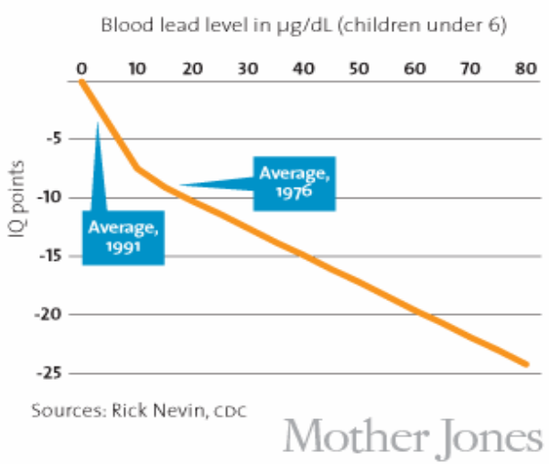
Lead Poisoning & School Rankings

SCHOOL NAME	% of student population found to be lead poisoned as a child	SCHOOL RANKING
Bates Academy (K-8)	9% (lowest)	1 (out of 113)
Campbell Elementary	54% (highest)	102 (out of 113)
Renaissance High School	3% (lowest)	1 (out of 32)
Kettering High School	31% (tied for highest)	24 (out of 32)
Trombly High School	31% (tied for highest)	29 (out of 32)

Because child lead poisoning has been linked in numerous studies to lower IQs, increased aggression, ADHD, juvenile delinquency, and adult criminal behavior, lead poisoning prevention should be one of Detroit's top priorities. Poor nutrition (calcium and iron deficiency) makes children even more susceptible to the impacts of lead poisoning, making elevated blood lead levels an even greater challenge for low-income Detroit children than others who may be exposed to lead hazards.

The US phaseout of leaded gasoline, in US cities as well as in other countries around the world, is correlated with falling rates of violent crime.



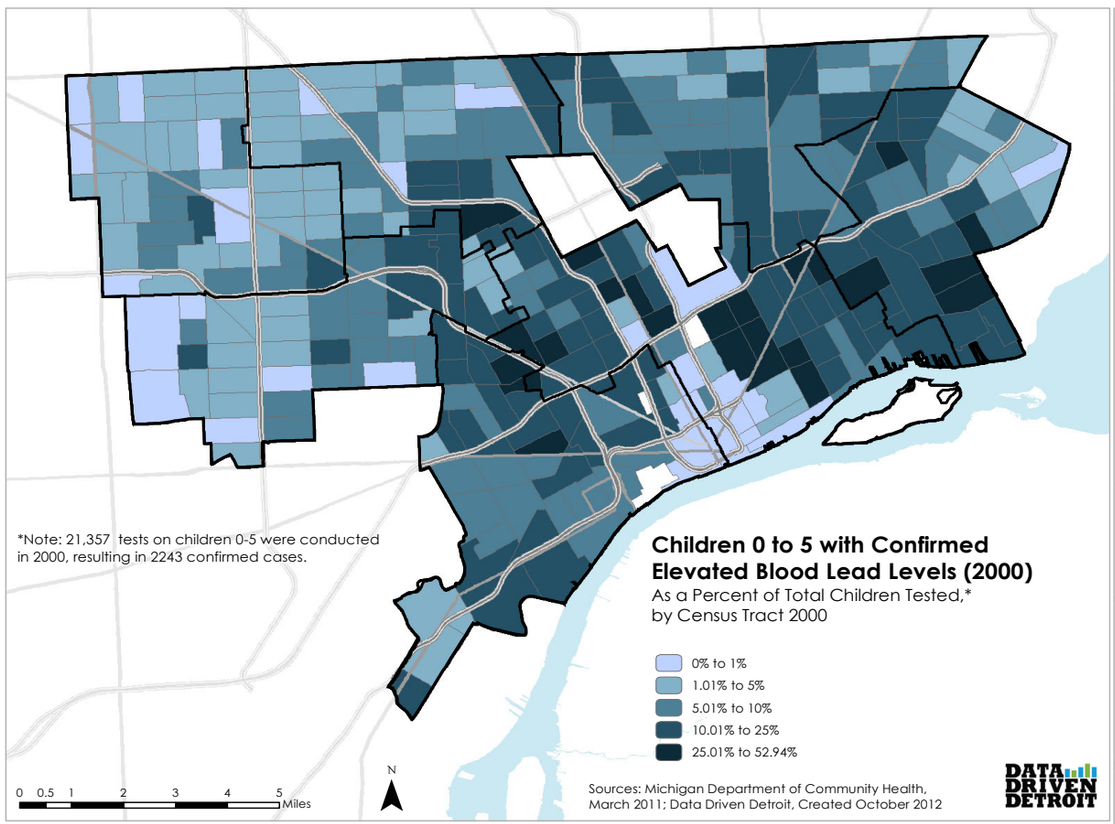


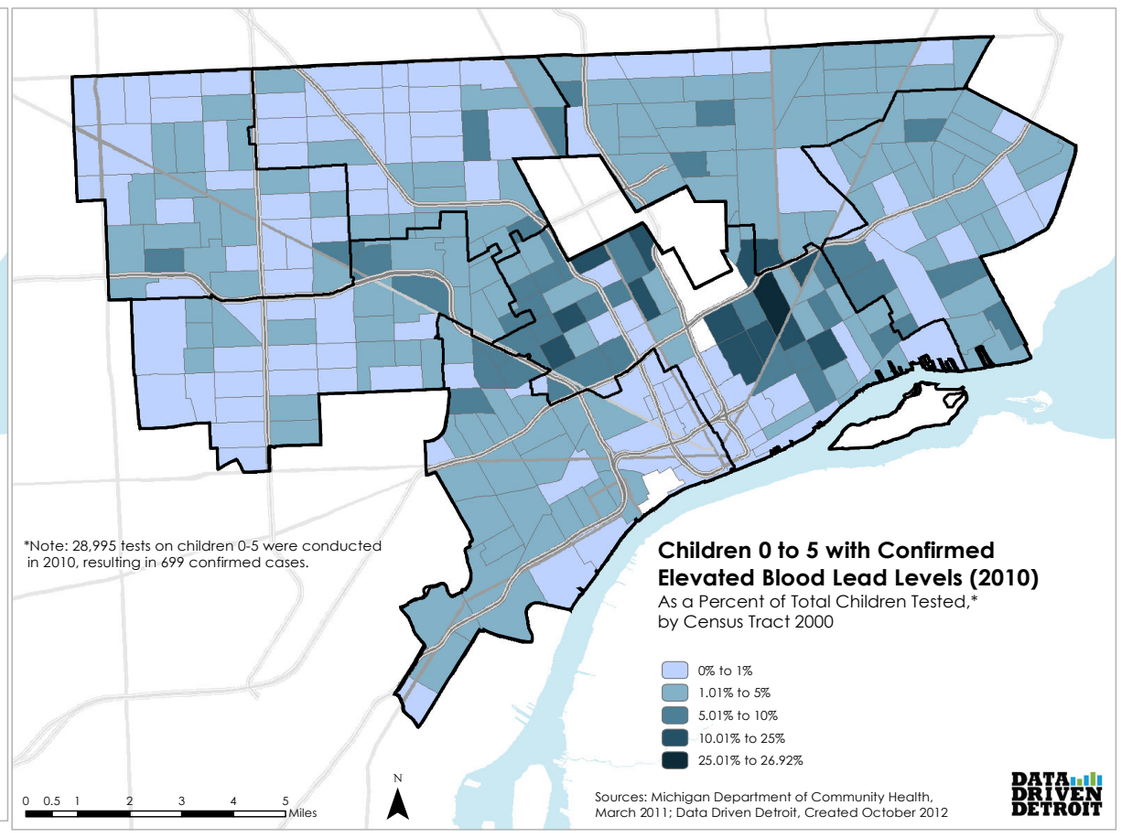
Elevated blood lead levels are correlated with drops in IQ.

Federal lead abatement programs administered through state and city government must continue to aggressively eliminate lead paint hazards and coordinate abatement with other home rehabilitation and weatherization programs, landlords must comply with the Detroit lead ordinance to address lead hazards in homes they rent to families, construction and demolition processes must be monitored for lead-safe practices, and healthy food access must be supported to help children fight the impacts of lead poisoning through proper nutrition.

Since 1998, lead poisoning rates decreased by 89% because of coordinated efforts and smart investments in rigorous testing, home lead abatement, code enforcement against negligent landlords, and treatment for lead poisoned children. However, recent state and federal cuts will reverse our progress.

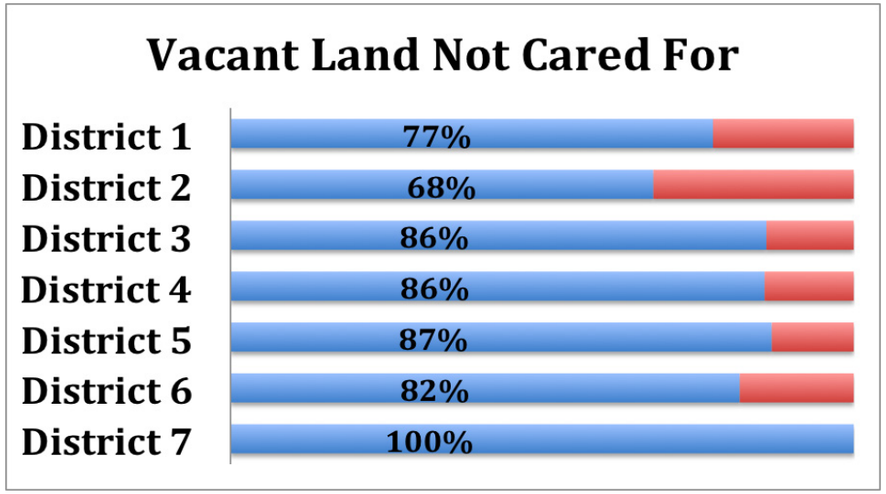
"Success must be sustained, not stopped in its tracks." - Lyke Thompson, WSU and GHHI

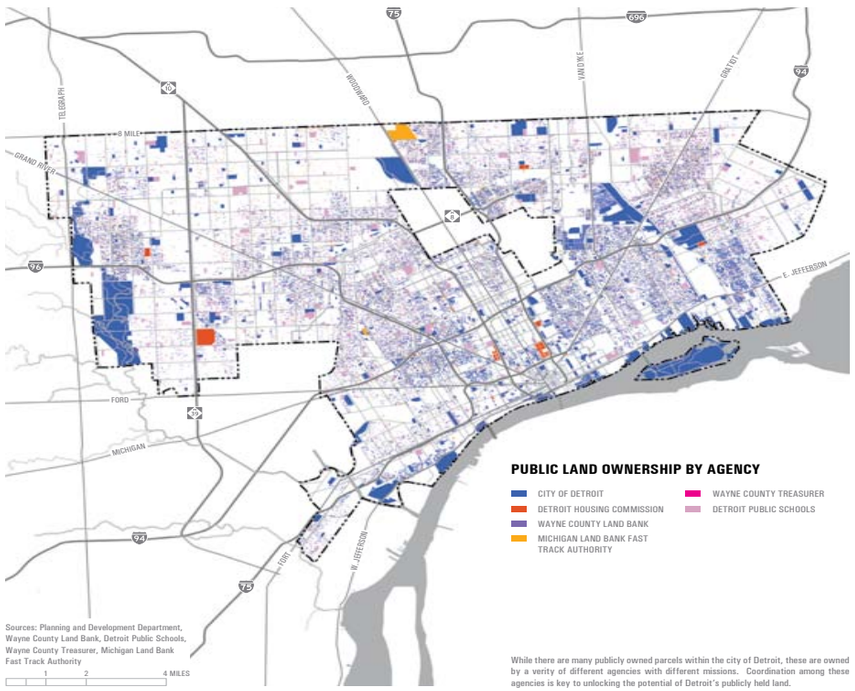


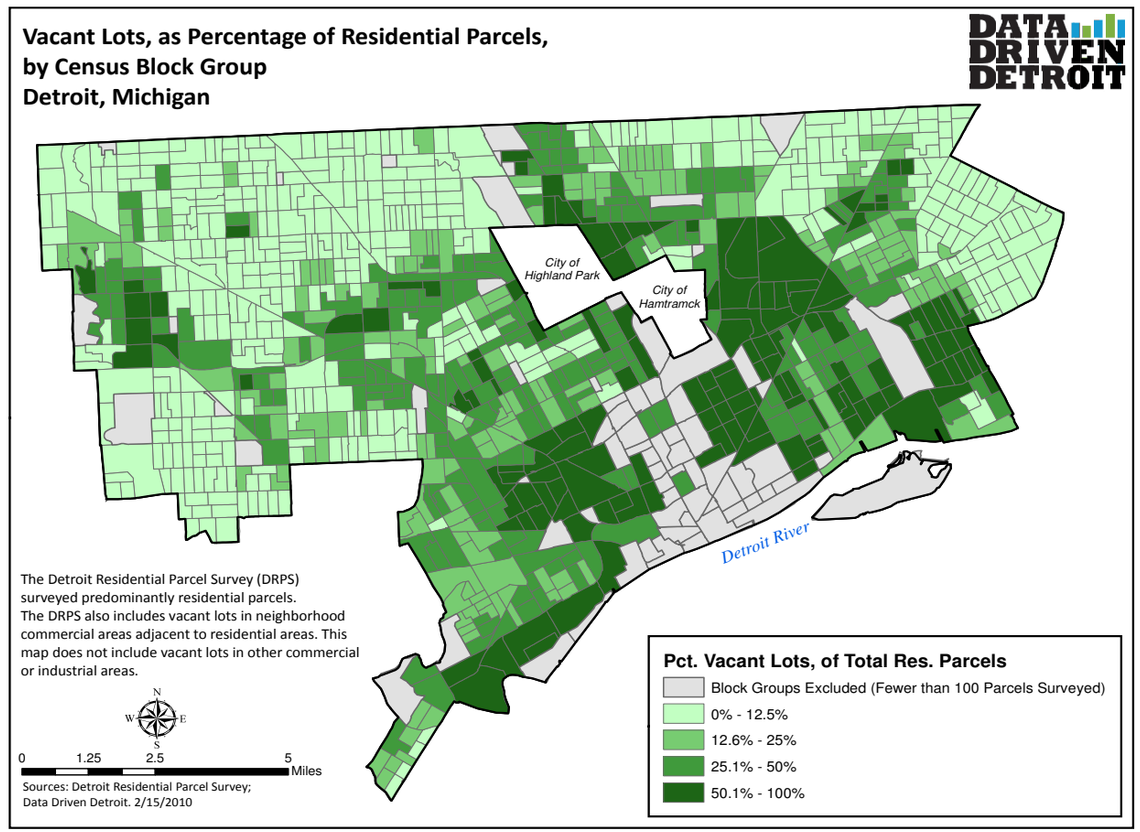


Detroit's child lead poisoning rate has declined between 2000 and 2010. However, Detroit's rate is still significantly higher than the state and national averages, and there are still areas of the city with high rates, particularly in District 5, and slightly less so in Districts 6, 3, and 4.

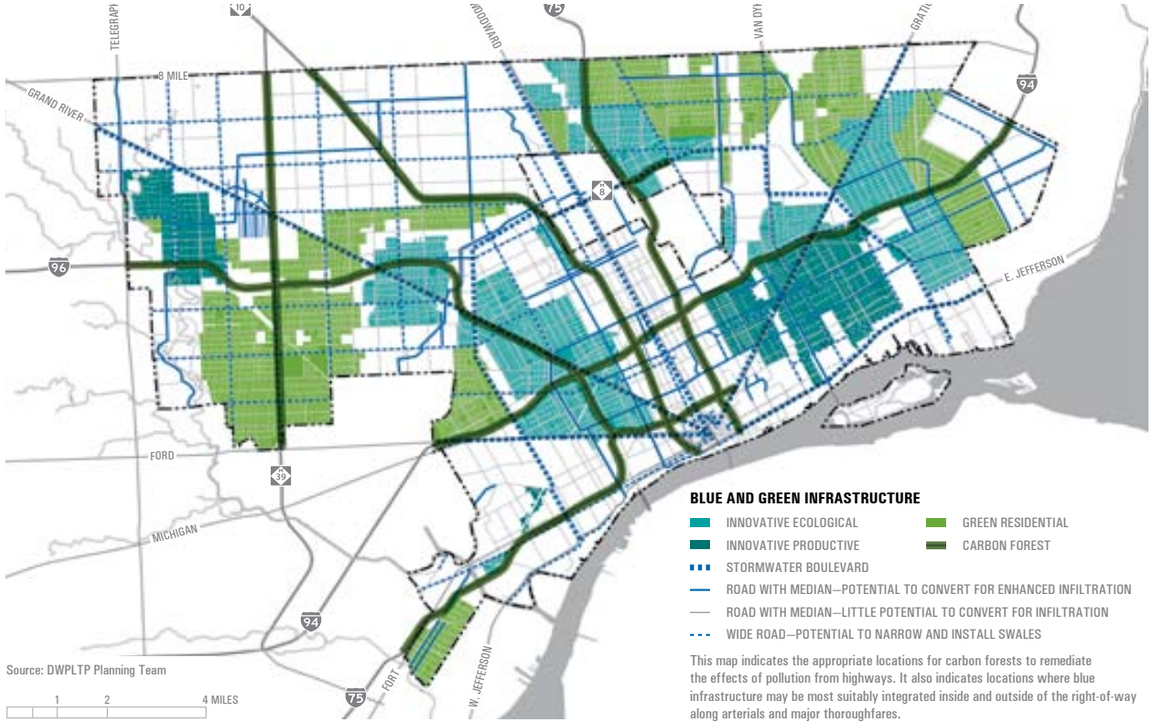
ENVIRONMENT, LAND & WATER INFRASTRUCTURE

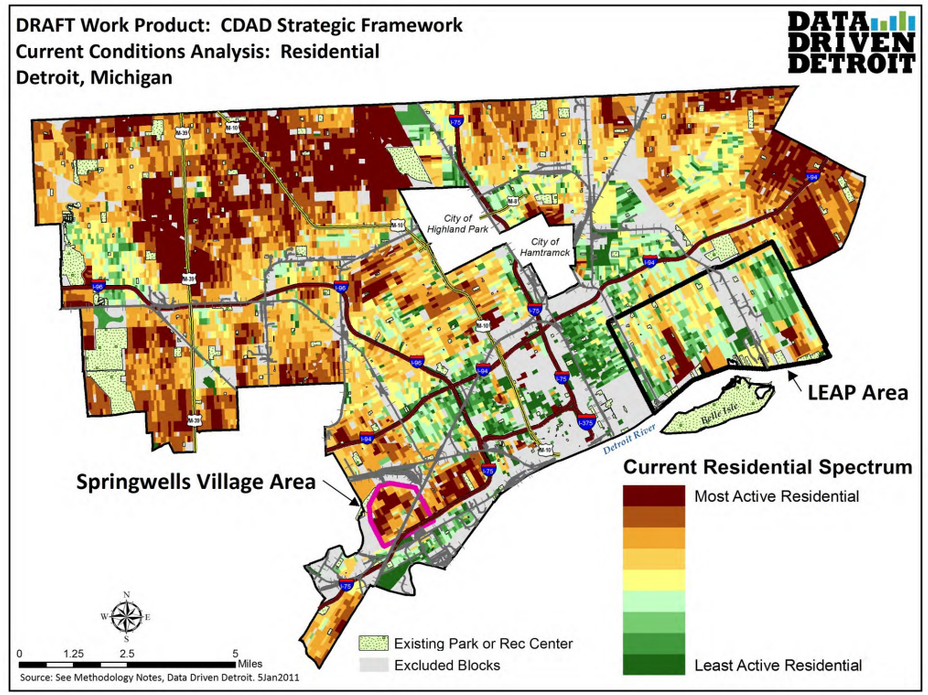






Vacant land refers to parcels with no structure present. All seven districts ranked "Vacant Land Not Cared For" in their top 10 problems. As can be seen in the green Data Driven Detroit map above, vacant residential lots are a significant issue in all of the city but most of District 2, the Grandmont Rosedale area, and the borders of the city near 8 mile west of Woodward, and the far eastside neighborhoods bordering the Pointes. District 2's unexpectedly high ranking of this issue may be due to the high number of survey responses coming from the Davison area, which borders Districts 5 and 7, and the low total number of responses from District 2.





The Detroit Future City map of publicly owned land (below far left) indicates that a large portion of the land in the high vacancy areas is owned by public entities, most significantly the City of Detroit. Further analysis should be conducted to identify areas where high concentrations of vacant land with no structure are owned by the City of Detroit, the Wayne County Treasurer, and other public land holding agencies.

The map above to the left describes areas considered suitable for blue and green infrastructure by the Detroit Future City Strategic Framework Plan. The map above to the right indicates a spectrum of suitability for residential land use and alternative green land uses based on a variety of factors, including population density, population change, ownership, housing conditions, and more. The map to the immediate right demonstrates Combined Sewer Overflow pilot areas for the Detroit Water Sewerage Department.

In the abundance of vacant land lies opportunity for large-scale green infrastructure to significantly reduce combined sewage overflows to the rivers while addressing vacant land, a top priority of Detroit residents. This will require effective coordination with other public property owners, partnership with community land use visioning efforts, guided by the regional Green Infrastructure Vision led by SEMCOG, and suitability analyses conducted by various entities, including Detroit Future City, the Community Development Advocates of Detroit (CDAD) Strategic Framework Plan, and forthcoming research from Liquid Planning Detroit (University of Michigan).

SEMCOG DWSD Green Infrastructure Program Progress Report
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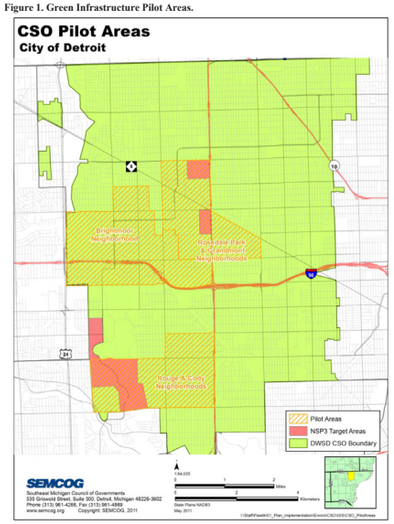
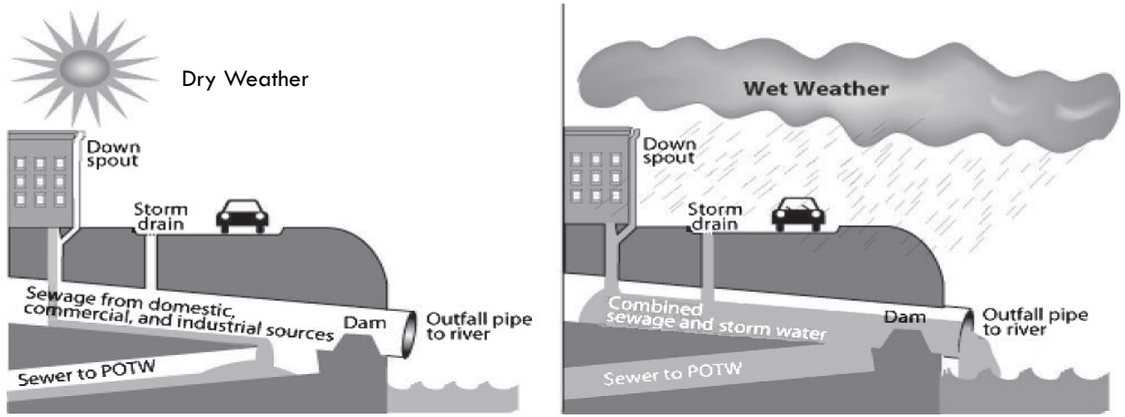
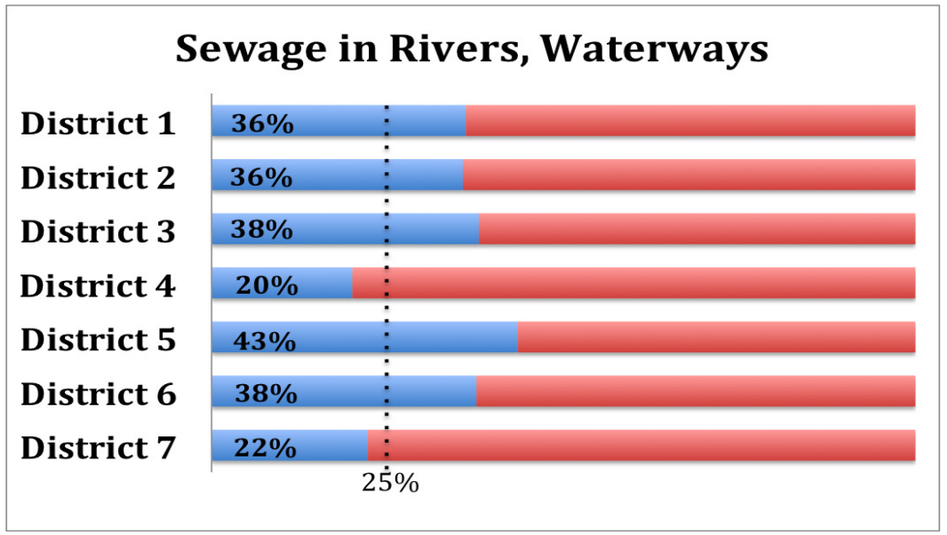
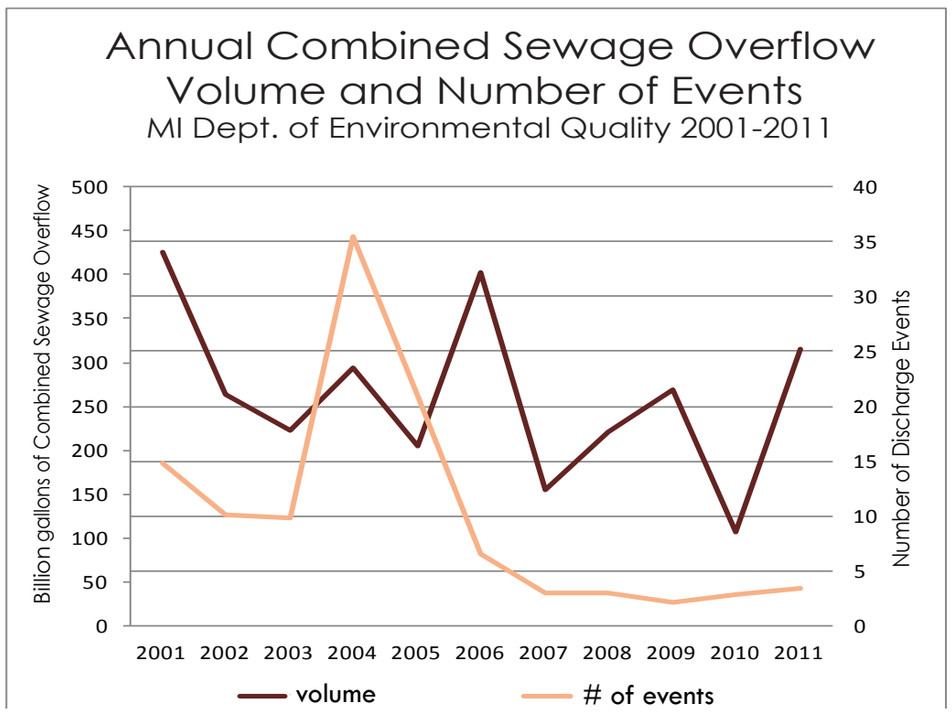
Figure 1. Green Infrastructure Pilot Areas.



ENVIRONMENT, LAND & WATER INFRASTRUCTURE



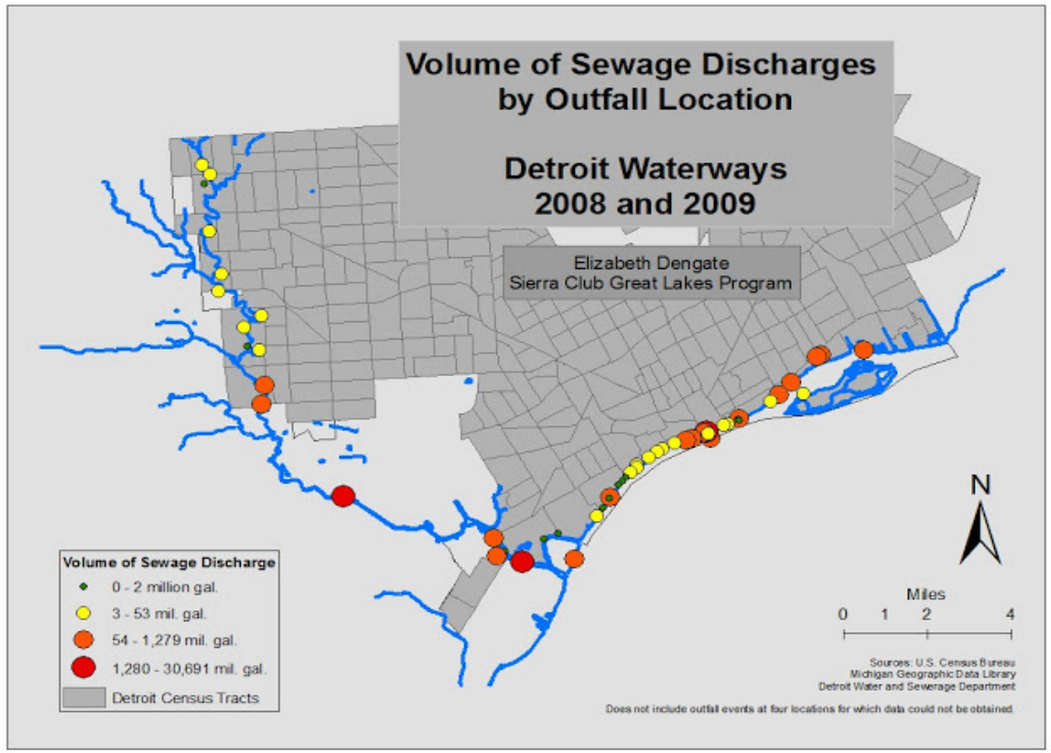


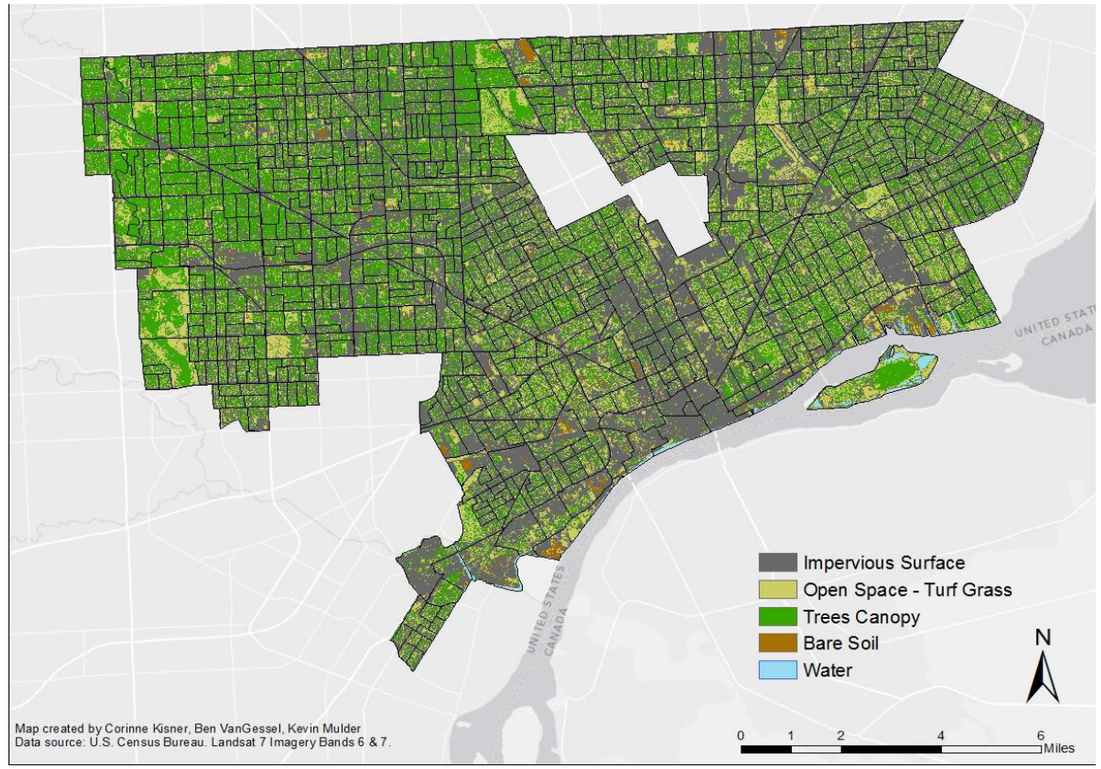


The DEA survey results indicated that over a quarter of respondents in most of the council districts did not know the seriousness of sewage discharges to the rivers.

Detroit's sewer infrastructure, like that of other older cities, carries both stormwater and household/industrial wastewater. During heavy rain events, the infrastructure–even with new holding facilities–cannot hold and treat all of the wastewater. (See the EPA's diagram of Combined Sewer Overflow to the left. "POTW" in the diagram can be replaced with the Detroit Wastewater Treatment Plant.)

This results in billions of gallons of untreated or partially treated sewage water being released into the Detroit and Rouge Rivers. Although new holding facilities such as the Conner Creek CSO Facility along the far east riverfront have reduced outflows, they have been very costly ($201.4 million for Conner Creek) and CSO discharges into the rivers continue. The Michigan Department of Environmental Quality's annual reports on combined sewage overflows indicate that although the number of discharge events have dropped to less than 50 per year from a peak of over 400 in 2004, the actual volume of raw and partially treated sewage continues to fluctuate, reaching a 5-year high in 2011 at 28 billion gallons of overflow (this figure includes 6.15 bg untreated overflow and 21.6 bg partially treated discharge).





Both the Detroit Water Agenda (published through the City Council Green Task Force in 2012) and the Detroit Future City Strategic Framework Plan emphasize the need for green infrastructure to alleviate the combined sewer overflow issue. With Detroit's abundance of vacant land in need of cleanup and maintenance, this provides an opportunity to hit multiple birds with one stone. The Detroit Water and Sewerage Department, in partnership with the Southeast Michigan Council of Governments (SEMCOG) and The Greening of Detroit, is pursuing green infrastructure as an alternative to extremely costly conventional sewer infrastructure, beginning with pilot projects in Rouge Park and Brightmoor.

SEMCOG is developing a regional green infrastructure vision with other Detroit stakeholders. Given the impact of regional wastewater on Detroit's sewer infrastructure, elected leadership in Detroit should take an enthusiastic role in the process. Several other large cities (notably New York and Chicago) have launched major green infrastructure initiatives to address their stormwater challenges through grant programs, water bill credits, zoning amendments, and development standards to encourage a variety of strategies, including green roofs, green alleys, rain gardens, permeable parking lots, and more.

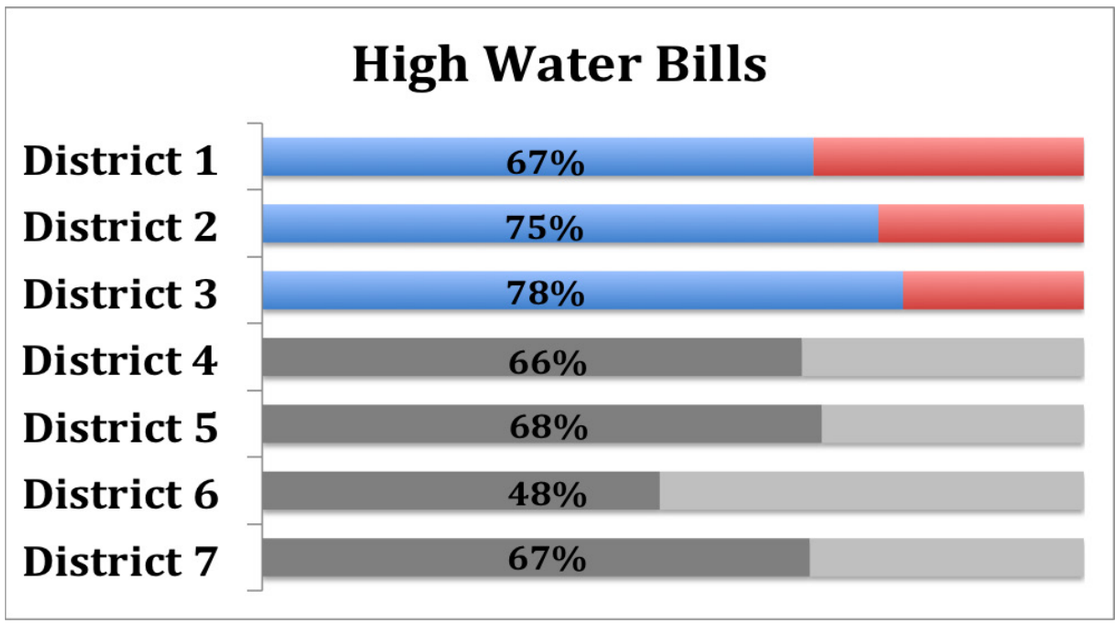
City Council District	Percent Impervious
1	40.11%
2	47.35%
3	47.89%
4	46.60%
5	47.06%
6	50.97%
7	42.63%

Sources: Sanborn (2008); Data Driven Detroit 2012

*This calculation does not include roads, which would increase the numbers.

46.18%* of Detroit's land is impervious, meaning that water cannot filter naturally into the ground.

ENVIRONMENT, LAND & WATER INFRASTRUCTURE



Survey respondents in 3 out of 7 districts (indicated in blue and red) ranked high water bills in their top 10 environmental problems. Water bills go to pay for Detroit Water and Sewerage Department (DWSD) infrastructure debt as well as operating the water and sewer systems. A 2012 DWSD brochure explains that declining water sales due to factory cutbacks, population decline, and increased water conservation and reduced water usage have resulted in higher rates.

The department acknowledges that it must change to respond to a future with less water consumption. The last Water Master Plan was published in 2003 and projected 2% annual growth for 50 years; "the reality has been 3% contraction for the last 4 years!" (DWSD "Putting Rate Increases into Perspective")

The Detroit Emergency Manager's June 2013 proposal for creditors suggests spinning off the water department into an independent New Metropolitan Area Water and Sewer Authority to be overseen by a regional board of directors. The system would be owned by the city and managed by the board.

Because the original plan to upgrade Detroit's sewer infastructure was too expensive, DWSD shifted its approach to include green infrastructure strategies to harness the environment for natural water filtration. Even so, green infrastructure investment only accounts for 6% of the overall combined sewer overflow budget.

Whatever authority ultimately manages the Detroit Water and Sewerage Department must find a way to encourage water conservation and on-site stormwater management. It must not rely on increased water consumption to pay infrastructure debt.

The Great Lakes account for 95% of U.S. surface freshwater, and over 20% of the world's freshwater supply. Much of the coastlines are polluted from historic and current industry and combined sewage overflows. How will we steward our biggest natural asset?

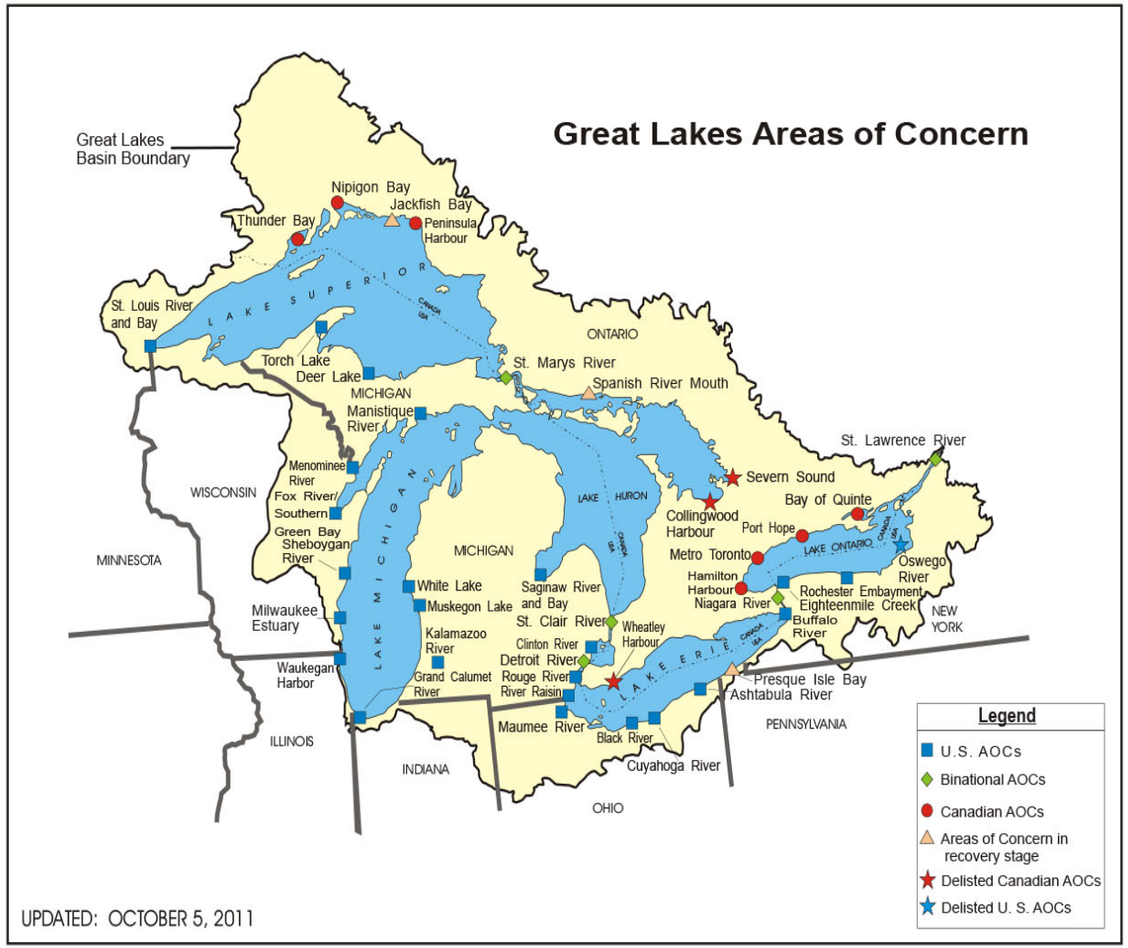
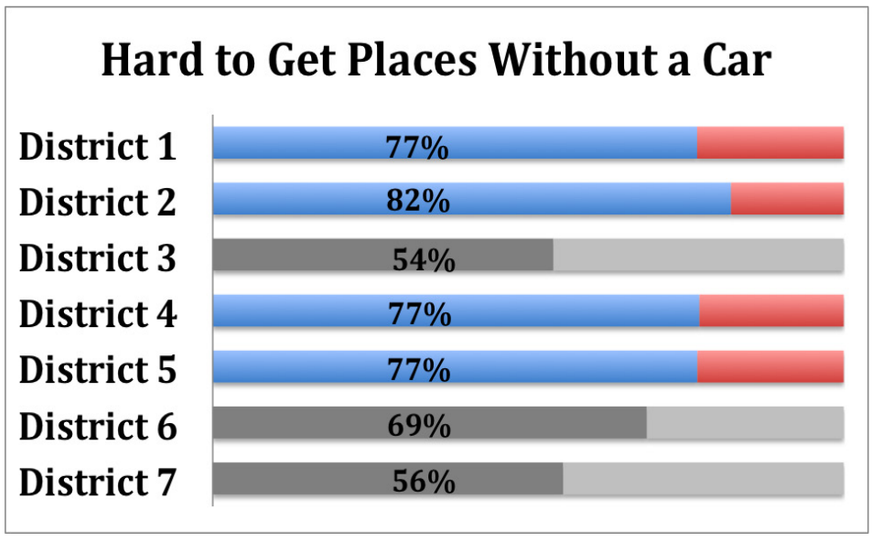
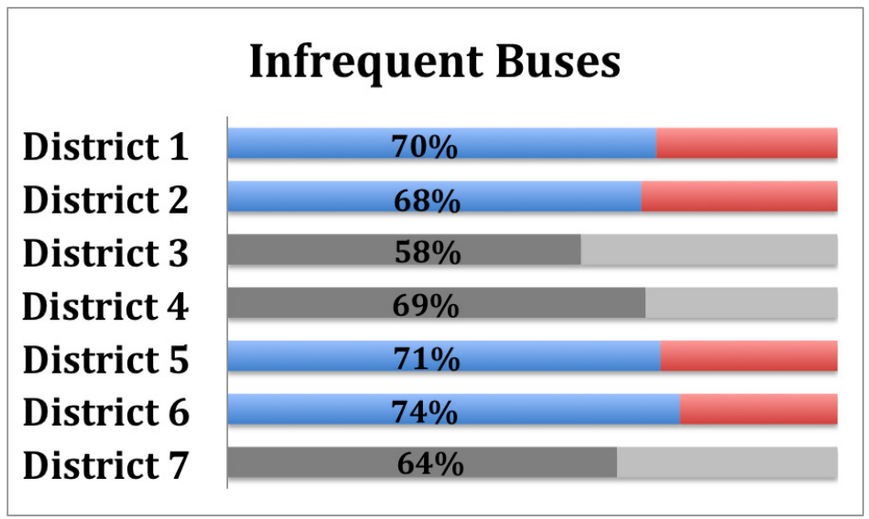


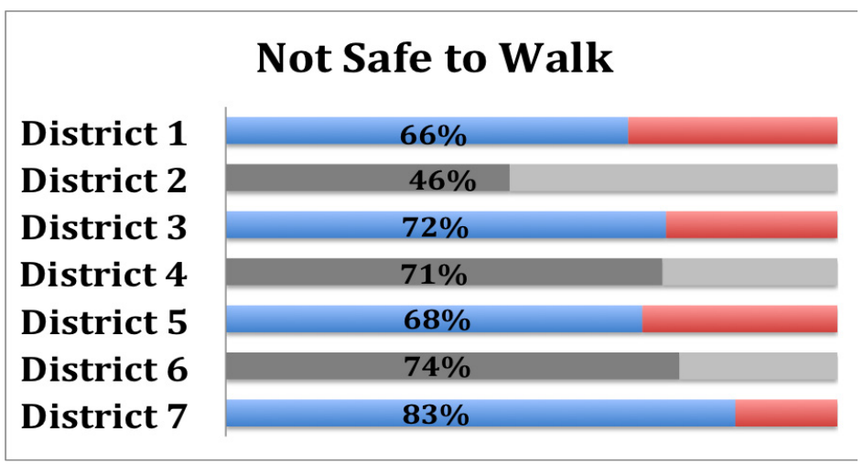
Photo: Sandra Yu

Belle Isle Beach

ENVIRONMENT & MOBILITY







Detroiters need to be able to conveniently and reliably get to work, school, church, stores, and parks.

Several surveyed challenges related to lack of mobility ranked in the top 10 problems in at least 4 out of 7 districts. As indicated by the DEA survey results and numerous other forms of civic engagement, mobility and transportation are priority issues in Detroit.

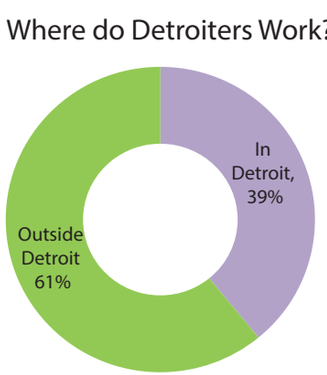
Therefore, we need to ensure reliable public transportation, "complete streets" safe for all users including pedestrians and cyclists, and mixed use neighborhoods with amenities.

As retail, grocery stores, factories, and jobs have moved out of the city, residents are left with long, unreliable bus commutes or limited choices within the city.

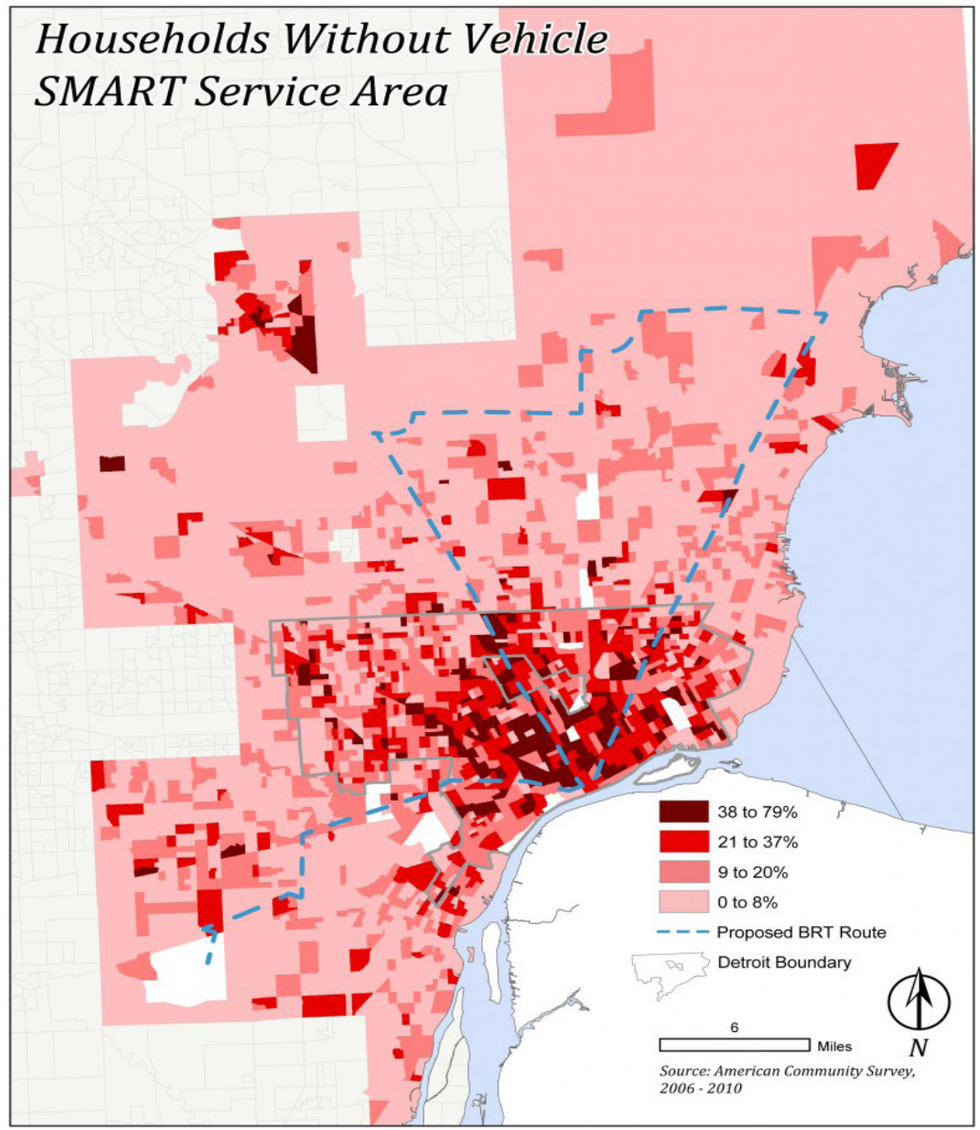
According to the U.S. Census Longitudinal Employer-Household Dynamics, 70% of all jobs located in Detroit are occupied by people who don't live in or pay taxes to the city. Of the residents who are employed, 60% of them travel outside of the city to their jobs. In addition, as of May 2012, 20.46% of Detroit Public School students rely on DDOT buses to get to school (MISchoolData.org, Data Driven Detroit July 2013). 1 in 4 Detroit households do not have access to a vehicle (American Community Survey 2011), leaving over 100,000 Detroiters dependent on rides, public transportation, walking, biking, or other means of travel.

There are significant challenges to car ownership in Detroit–high insurance rates, cost of owning a car, cost of fuel. Also, Detroiters suffer from high rates of asthma and other illnesses that are exacerbated by motor vehicle emissions.

However, according to the 2011 American Community Survey, Detroiters who rely on public transportation are more than 5 times as likely to have to commute for an hour or more than those who drive, bike, or walk. After comparing published schedules to actual arrival times of buses along eight major routes during the week of October 17–21, 2012, Transit Riders United gave the DDOT bus system a D for on-time performance, up from a D- grade given that spring.



Source: Detroit Future City, US Census 2010 LODES



ENVIRONMENT & MOBILITY

It's been a busy couple of years for metro Detroit transportation.

REGIONAL TRANSIT AUTHORITY
After 23 failed attempts since the 1970s, a Regional Transit Authority was finally established by the Michigan Legislature and signed by the Governor in 2012 to coordinate, oversee, and improve transit for Macomb, Oakland, Washtenaw, and Wayne Counties, including Detroit. The RTA board is tasked with developing a regional master transit plan for the four represented counties including Detroit, coordinating existing transit providers, and raisimg federal and state funding to implement the plan. A key component of preliminary plans is to establish a bus rapid transit service from Detroit to Pontiac along Woodward Avenue.

BUS RAPID TRANSIT
After months of study, Bus Rapid Transit emerged as the leading option for the 27-mile corridor along Woodward Avenue from Detroit to Pontiac. According to Carmine Palombo, director of transportation planning for the Southeast Michigan Council of Governments, the project aims to "'provide high level, fast transit service that would compete with the automobile' from Pontiac to Detroit's riverfront and vice versa." (*Crain's Detroit Business* April 2013) Michigan will spent a $25 million federal TIGER grant on this first phase. A 110-mile regional BRT system is believed to be cheaper to build than the canceled $528 million 9.3-mile light rail system would have cost.

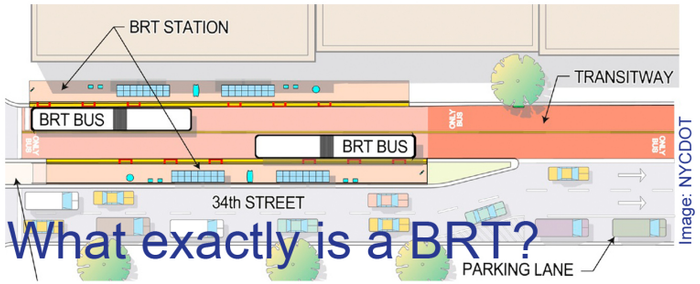
M1 RAIL
Light rail along Woodward Avenue is finally funded to begin construction this summer downtown, south of Adams Street. The $137–40 million private-public project will extend 3.3 miles up Woodward Avenue (also known as M1) from Detroit's Hart Plaza to New Center, and cost an estimated $5.1 million per year to operate. M1 will run an 11-stop, mostly curbside, fixed-rail streetcar circulator system, commingled with traffic. At its north and south ends, the streetcars will run in the median. There is a future 12th stop proposed.

TEXTMYBUS
As part of efforts to improve rider experience on local buses, the Detroit Department of Transportation partnered with Code for America Fellows to develop a mobile text service called TextMyBus and smartphone app called Stop313 that uses GPS systems on the buses to tell bus riders exactly when the next three buses for a requested stop will arrive.

I-94 EXPANSION APPROVED
Despite strong public opposition, SEMCOG approved the $1.8 billion 7-mile expansion of I-94 from 6 lanes to 10, from I-96 through Midtown eastward to Conner Avenue.

Source: M1 Artist renderings

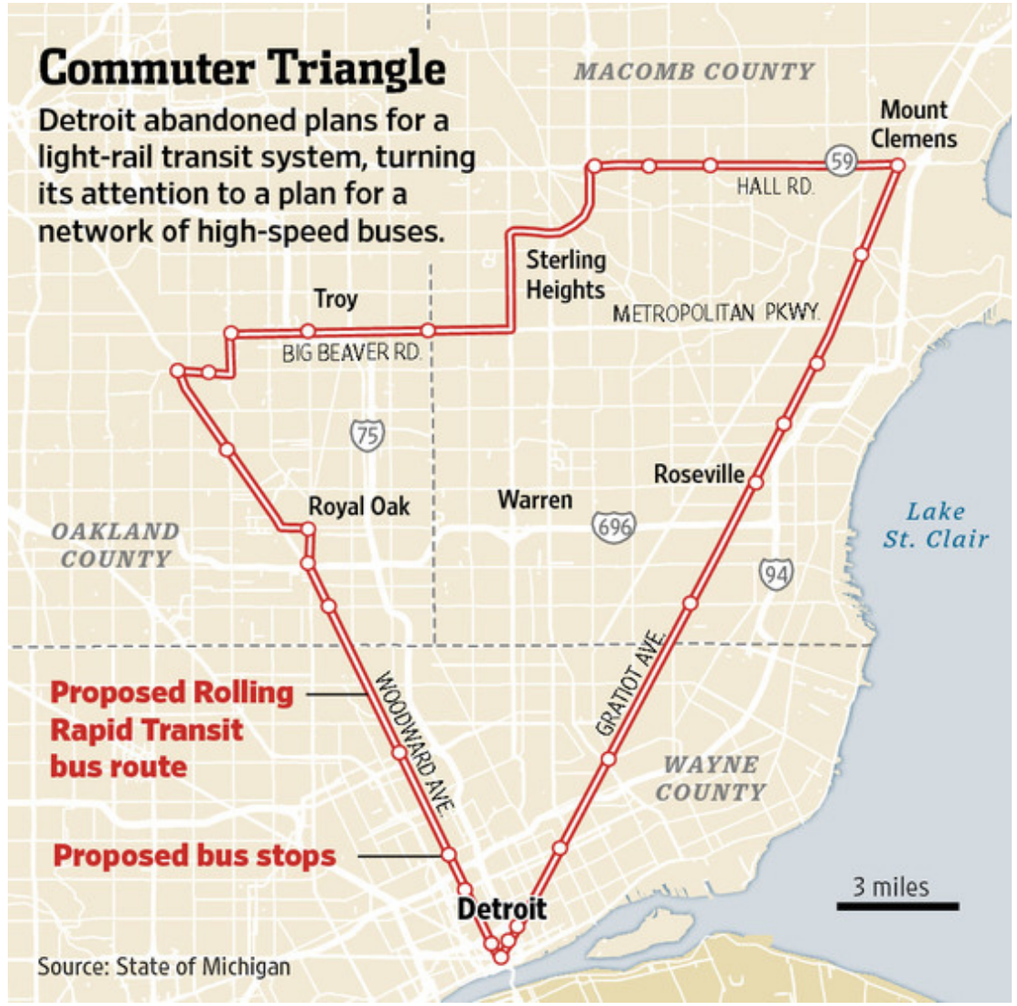
BRT: A Rapid Overview



What exactly is a BRT?

A BRT is comprised of seven elements [1] These are:

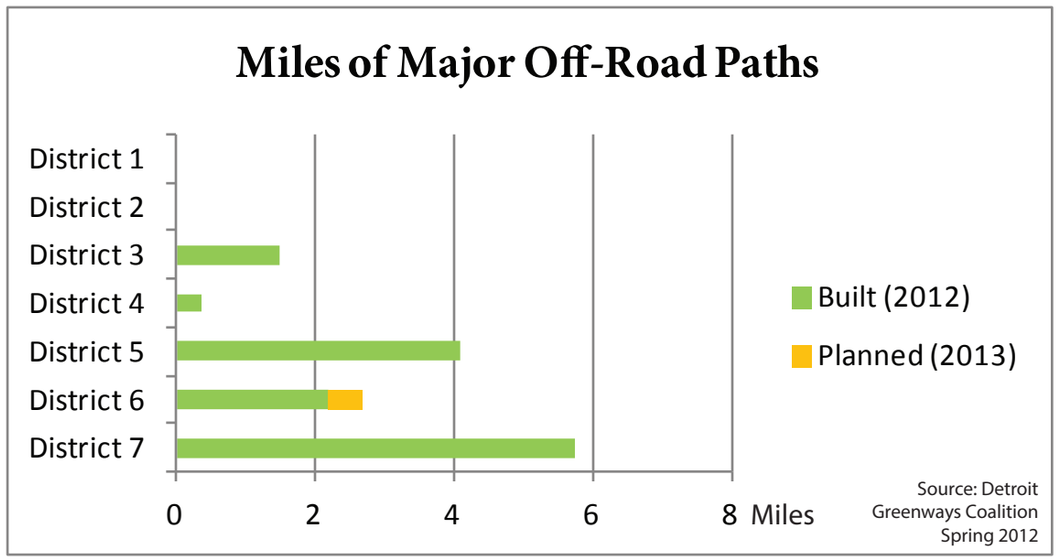
- *Running Ways:* On a scale from most-to-least rapid, these range from dedicated, grade-separated lanes that are used exclusively for transit use, to general traffic lanes that accommodate both cars and buses.
- *Stations:* BRT stations tend to be a step-up from the standard lonely-sign-between-street-and-sidewalk bus stop. They usually feature covered waiting areas and can be fully enclosed and climate-controlled.
- *Vehicles:* These are often higher capacity than normal buses, and they can be coordinated with station platforms to provide seamless, on-grade boarding.
- *Services:* Typically higher-frequency, more reliable service than a conventional bus system.
- *Route Structure:* Major routes feature fewer stops than conventional bus systems, and serve as a spine that connects riders to local routes.
- *Fare Collection:* Buses typically feature multiple door boarding and streamlined fare collection through card readers and prepayment systems.
- *Intelligent Transportation Systems (ITS):* ITS allow users to monitor buses online, check arrival times, and prepay, among other things.



TextMyBus uses DDOT's real-time bus tracking to tell bus riders when the next bus will arrive.

1. Text your nearest intersection to 50464
2. You will receive a list of nearby bus routes
3. Text back your desired route
4. You will get a message back indicating the closest bus stop and next three bus arrival times

ENVIRONMENT & MOBILITY

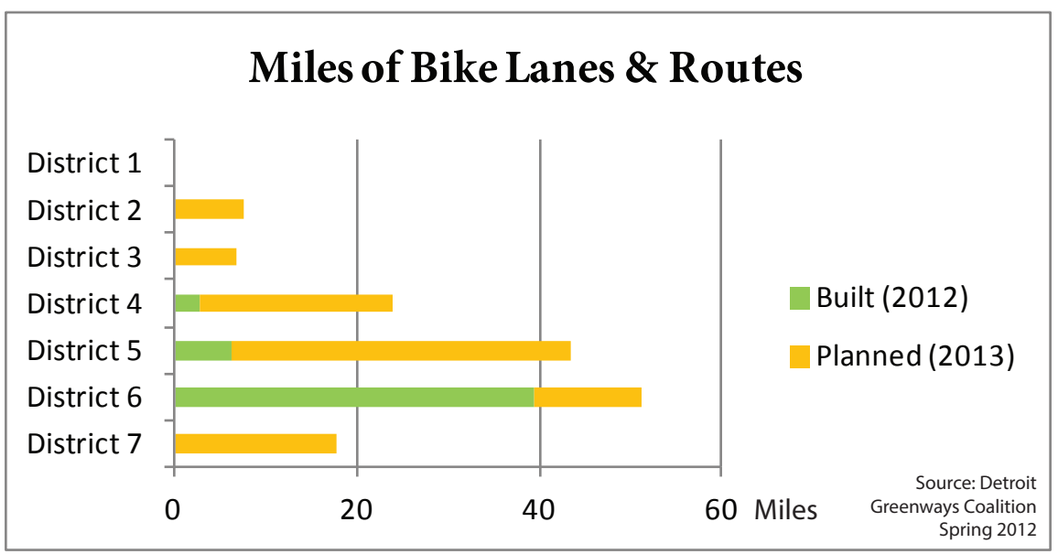


Source: Greenways Coalition

Off-road path (Dequindre Cut)

Source: Greenways Coalition

Detroit bike lane



Non-motorized transportation expands healthy options

In a city where 33% of our low-income residents and 38% of our elderly residents don't have access to a car and the local bus system is given a D grade, many residents walk, bike, and ride scooters on the roadways to get where they need to go. Even residents who have cars want to be able to walk or bike to amenities. Detroit's Non-motorized Transportation Master Plan, adopted in 2006, is guiding the creation of biking and walking infrastructure and facilities in the city.

Source: National Complete Streets Coalition

A Charlotte, N.C. complete street

Complete Streets make roadways safe

for all users, including pedestrians, cyclists, seniors on scooters, parents with strollers, and children–not just automobiles. The Detroit Complete Streets Coalition is advocating for a local complete streets policy, currently under review at the Law Department.

Photo: Nicole Rupersburg, Eat It Detroit

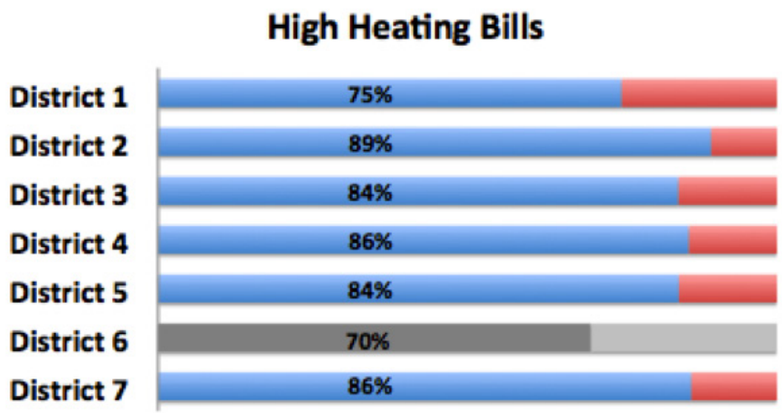
Jefferson East Business Association sponsored June on Jefferson, a summer collection of popup businesses (temporary restaurant and retail establishments) at Jefferson and Chalmers to demonstrate what a walkable, mixed-use community there could look like.

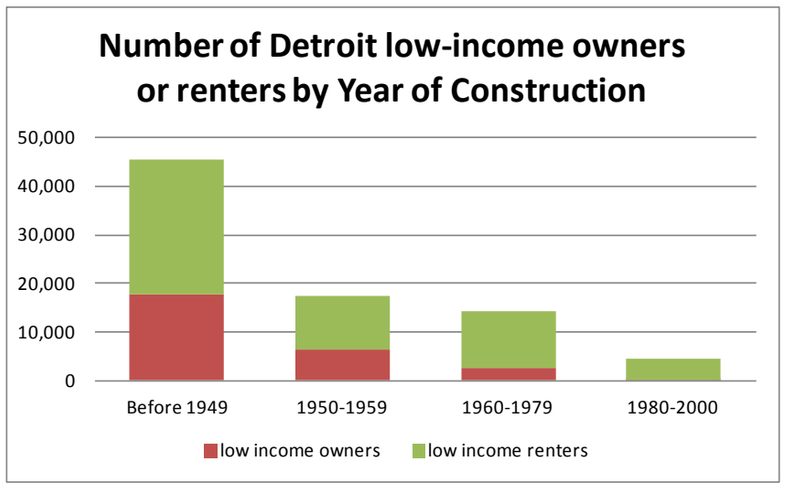
Walkable communities improve quality of life

because a mix of goods and services are within an easy and safe walk from home. Pedestrian activity increases transportation options and makes communities safer through greater social interaction and more eyes on the street. The Clark Park neighborhood in Southwest Detroit is highly walkable, with parks, schools, grocery stores, homes, and shops all within close proximity. More of Detroit should have walkable communities.

In 2012, a joint workgroup of the City Planning Commission and the Planning Department updated the zoning code to create two mixed-use zoning designations. In addition to making communities more walkable, mixed-use areas can help support local business development.

ENVIRONMENT & ECONOMICS





Homes built before 1949 have the highest annual average energy bills of all houses built in any year. (U.S. Energy Information Administration)

Chart Source: U.S. Census 2000

Survey respondents in 6 out of 7 districts ranked high heating bills in their top 10 problems. Houses that are old, large, or in disrepair are likely to be more expensive to heat and cool.

In 2008, Michigan enacted a Renewables Portfolio Standard that mandated utilities generate 10% of their retail electricity sales from renewable energy resources by 2015.

It also allowed utilities to use energy optimization (energy efficiency) and advanced cleaner energy systems to meet part of the requirement. The state's two largest investor-owned utilities (DTE and Consumers) have additional obligations. The 2008 RPS led to DTE's and Consumer's energy optimization and renewable energy programs, which have helped homeowners and businesses to conduct free or low-cost energy audits and implement energy-saving measures.

Average Detroit Household Energy Cost	$2,159/year
Average Household Savings from Weatherization	$437/year

Detroiters spend 2x as much of their annual household income on energy bills as the rest of the state. Weatherization could cut annual costs by 20%.

72 cents of every dollar spent on energy by Michigan's citizens and businesses flows out of the state.

Burning coal costs the U. S. $500 billion in health and environmental costs every year.

	Total com-bustion net generation (MWh)	CO2 e (metric tons)	CO (tons)	VOC (tons)	NOx (tons)	SO2 (tons)	PM10 (tons)	PM2.5 (tons)	Lead (lbs)	Mercury (lbs)	NH3 (lbs)
DETROIT EDISON TRENTON CHANNEL	3,899,370	3,084,450	513	62	5,323	27,622	1,172	750	275	168	1156
DETROIT EDISON RIVER ROUGE	3,564,049	2,819,207	454	53	5,438	14,491	43	14	229	114	1310
DETROIT RENEWABLE POWER, LLC	286,778	226,845	263	4	1,730	200	15	13	71	17	1
DETROIT PUBLIC LIGHTING DEPARTMENT	114,149	90,293	35	3	139	1	35	35	0	0	0
DETROIT EDISON CONNERS CREEK	74,281	58,757	37	2	56	0	3	3	0	0	0
DETROIT EDISON/ DELRAY POWER PLANT	31,745	25,111	1	0	2	0	0	0	0	0	0
TOTAL	7,970,372	6,304,689	1,303	124	12,688	42,314	1,269	815	575	300	2,467

Total Emissions, DTE Energy Electrical Generators, Wayne County, 2008, EPA National Emissions Inventory

Photo: Grace Doss

The Green Garage in Midtown cut energy demand by 90% with a solar thermal water heater, and passive design strategies, including a white roof, natural lighting, triple-glazed windows and extra-thick insulation, and high-efficiency mechanical systems.

DTE Energy, the major provider of electricity in Detroit, generated 7,537,732 MWh of electricity from the facilities that it directly owns and operates in Wayne County, resulting in emissions of over 6 million metric tons of CO2 of greenhouse gases, and hundreds of thousands of tons of other Criteria Air Pollutants that harm human health.

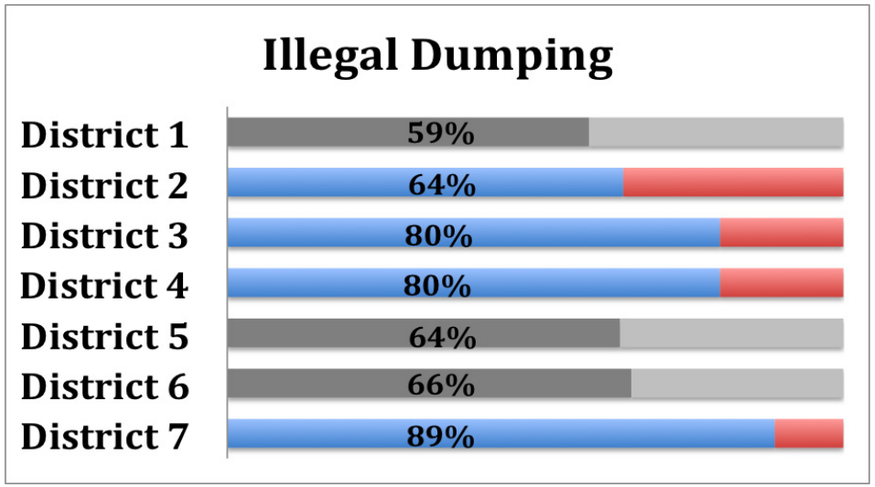
22% of DTE's "renewable energy" comes from the Detroit incinerator (renamed "Detroit Renewable Power, LLC and indicated in yellow on the chart), which is the third largest source of electricity plant-generated carbon emissions in Wayne County.

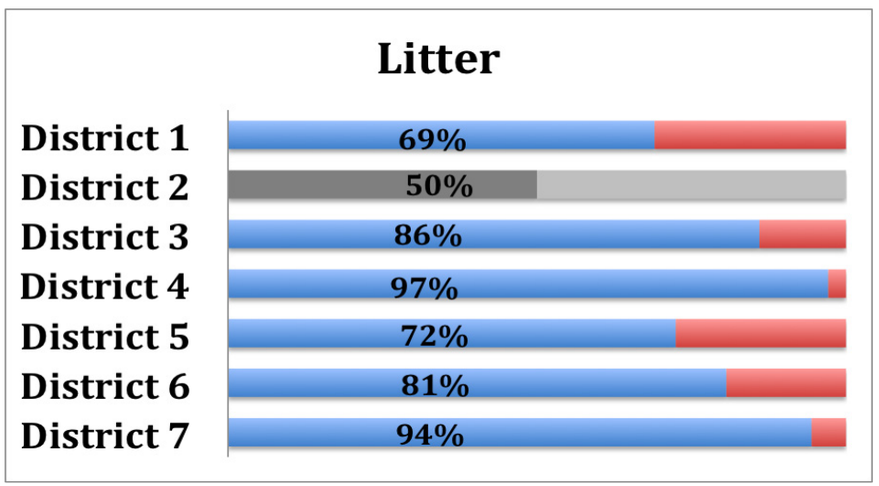
In addition to improving air quality and helping electricity users save, energy efficiency and clean energy can help Michigan's economy. After the RPS was passed, Michigan increased its capacity to generate renewable energy by nearly 7,000%, and 94% of it was from new local wind power (MI Manufacturers Association, MI Public Service Commision 2013). Michigan imports 97% of its petroleum needs, 82% of its natural gas, and 100% of coal and nuclear fuel from other states and nations. ("Michigan Energy Overview," Michigan Public Service Commission October 2011).

Ann Arbor's Energy Office has saved city taxpayers more than $5 million in energy expenditures over the last decade. It has also obtained and managed over $2 million in grants and rebates from federal, state, and corporate sources.

While renewable energy is often held to a high standard for cost competitiveness with fossil fuels, over a century of subsidies has led to cheaper prices of fossil fuels. A 2011 report from the International Energy Agency stated that fossil fuels currently receive subsidies through some 250 mechanisms. In addition, a Harvard Medical School study found that the extra health and environmental costs of burning coal in the United States amount to $500 billion per year.

ENVIRONMENT & URBAN CLEANLINESS





Survey respondents ranked Litter, No Recycling, and Illegal Dumping high on their list of serious environmental problems.

Detroiters want to live in a beautiful, clean environment. We want to breathe clean air, drink and swim in clean water, garden in clean soil, and play in clean parks.

However, past and current industrial pollution, truck and freeway traffic, sewage overflows, litter, illegal dumping, the municipal waste incinerator, the sewage sludge incinerators, substandard demolition practices, leaded gasoline, lead-based paint and asbestos, and toxic household cleaning products all degrade our environment and put our health at risk.

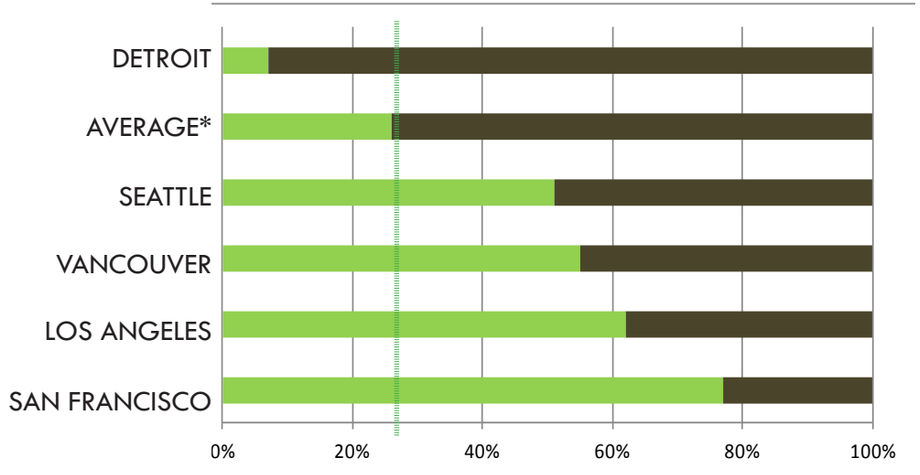
A 2009 study prepared for Keep America Beautiful found that the number and convenience of trash receptacles strongly influence litter, older people are less likely to litter, and that existing litter attracts more litter. It also found a near unanimous belief that littering is wrong, but that positive motivational campaigns and convenient opportunities to not litter are key to stopping littering behavior. In Detroit, public parks have trash receptacles, but are often overflowing. Detroit parks are often used for social gatherings involving food. Receptacles must be quickly emptied; otherwise there is no place to dispose of the trash and litter will accumulate, no matter someone's best intentions.

Illegal dumping is when trash and other debris are discarded in areas not designated for waste. It can catch fire in the sun, injure people, become home to disease-carrying flies, mosquitoes, and rodents, and contaminate groundwater and soil, as well as contaminate water bodies when it rains. Illegal dumping occurs for convenience, to avoid disposal costs, low fines or lack of enforcement, and lack of public awareness of its threats to environmental and human health.

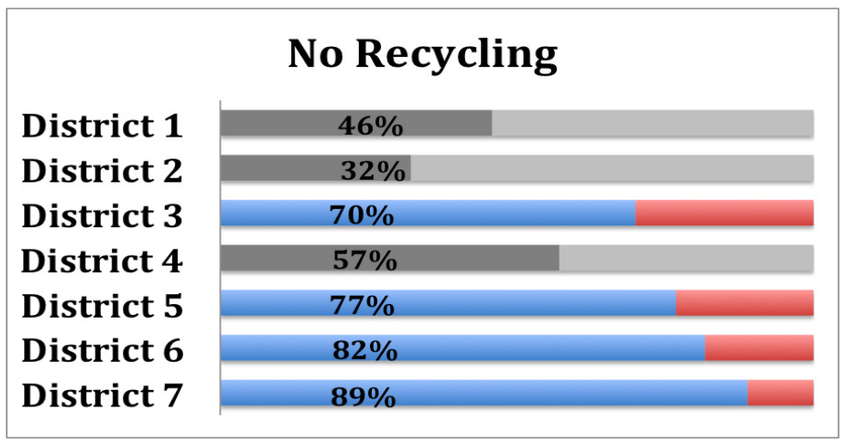
Although there are quarterly bulk pickups by the City and five drop-off locations (see "DPW drop-off locations" on map on facing page), illegal dumping persists, especially in areas of high vacancy. Dumping will often occur at a vacant or abandoned property to avoid fines on an occupied property. Residents and the City must work together to enforce illegal dumping laws against violators. Residents are asked to provide information about dumpers, but the City should develop a public tracking system to help keep pressure on enforcement.

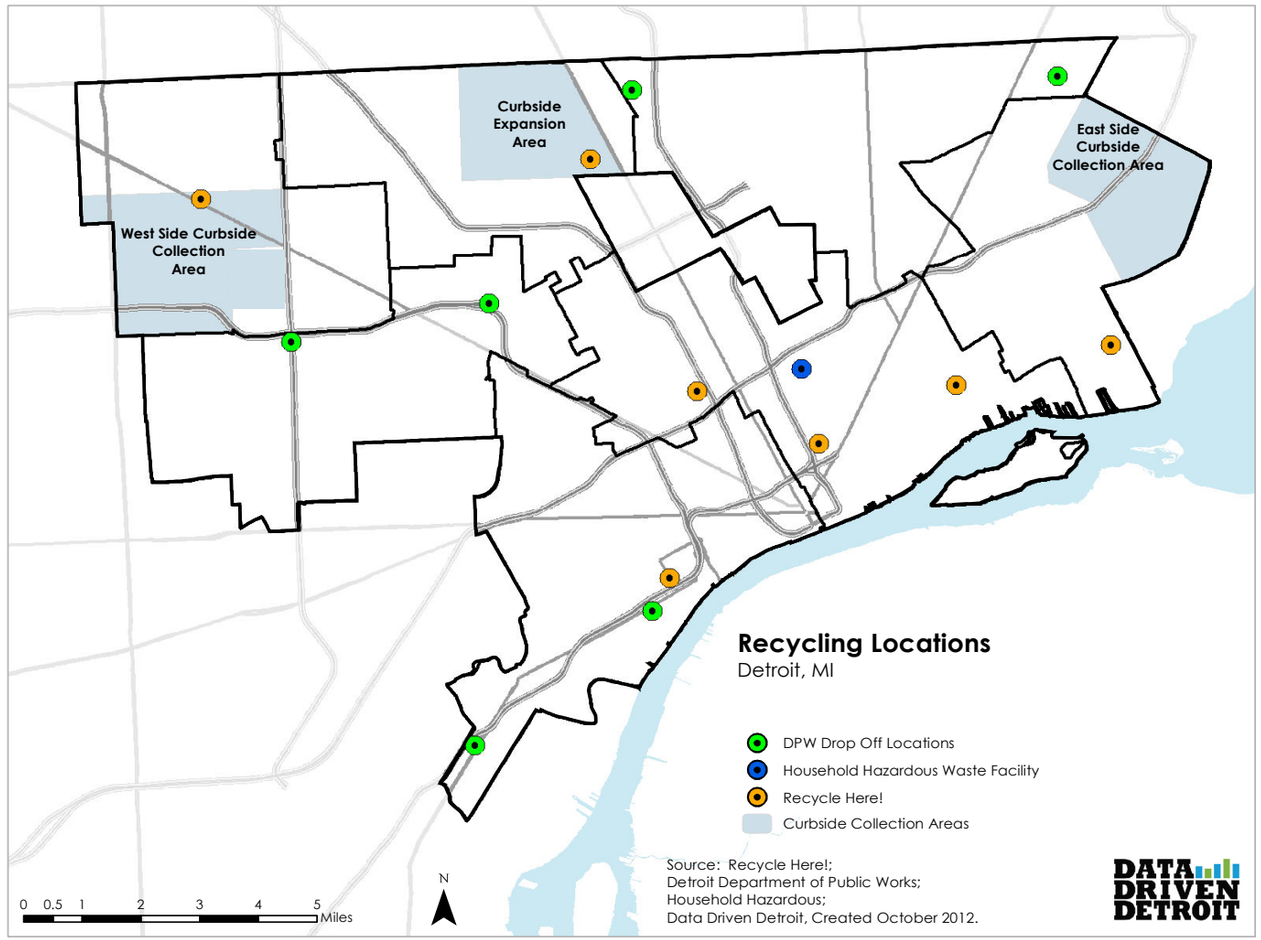
Detroit ranked last out of 27 North American cities in the Siemens Sustainability Index (2011) for waste.

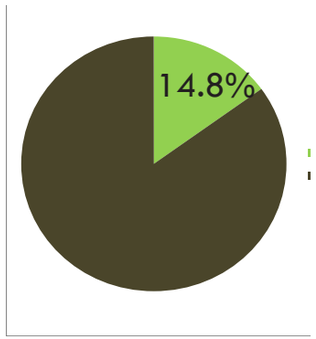
After growing recycling options and piloting curbside recycling, Detroit's 2012 recycling rate (7%) is a great increase from its 2006 recycling rate of 0.1%; however, it is still well below the average (26%). San Francisco, which ranked highest in the 2011 index, now recycles over 80% of its waste.



*Average recycling rate (26%) of Siemens Index Cities





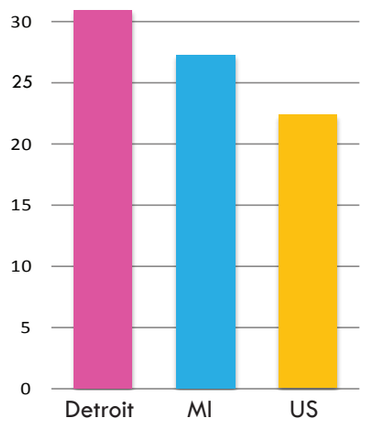


14.8% of Detroit Households Have Access to Curbside Recycling

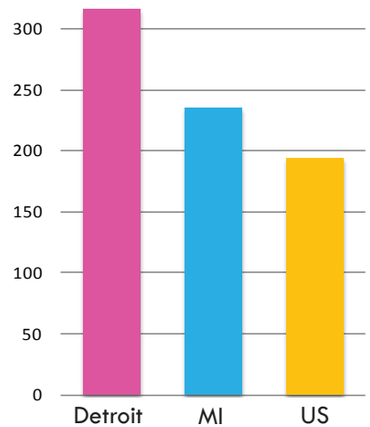
Source: Detroit Department of Public Works, Zero Waste Detroit

ENVIRONMENT & PUBLIC HEALTH

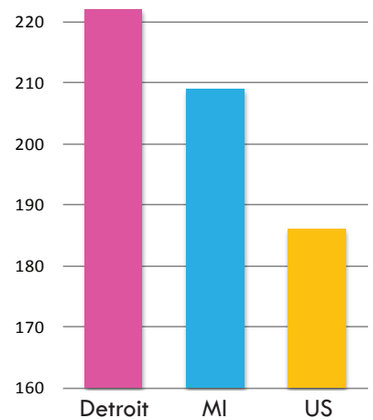
DIABETES
cause of death per 10,000



HEART DISEASE
cause of death per 10,000



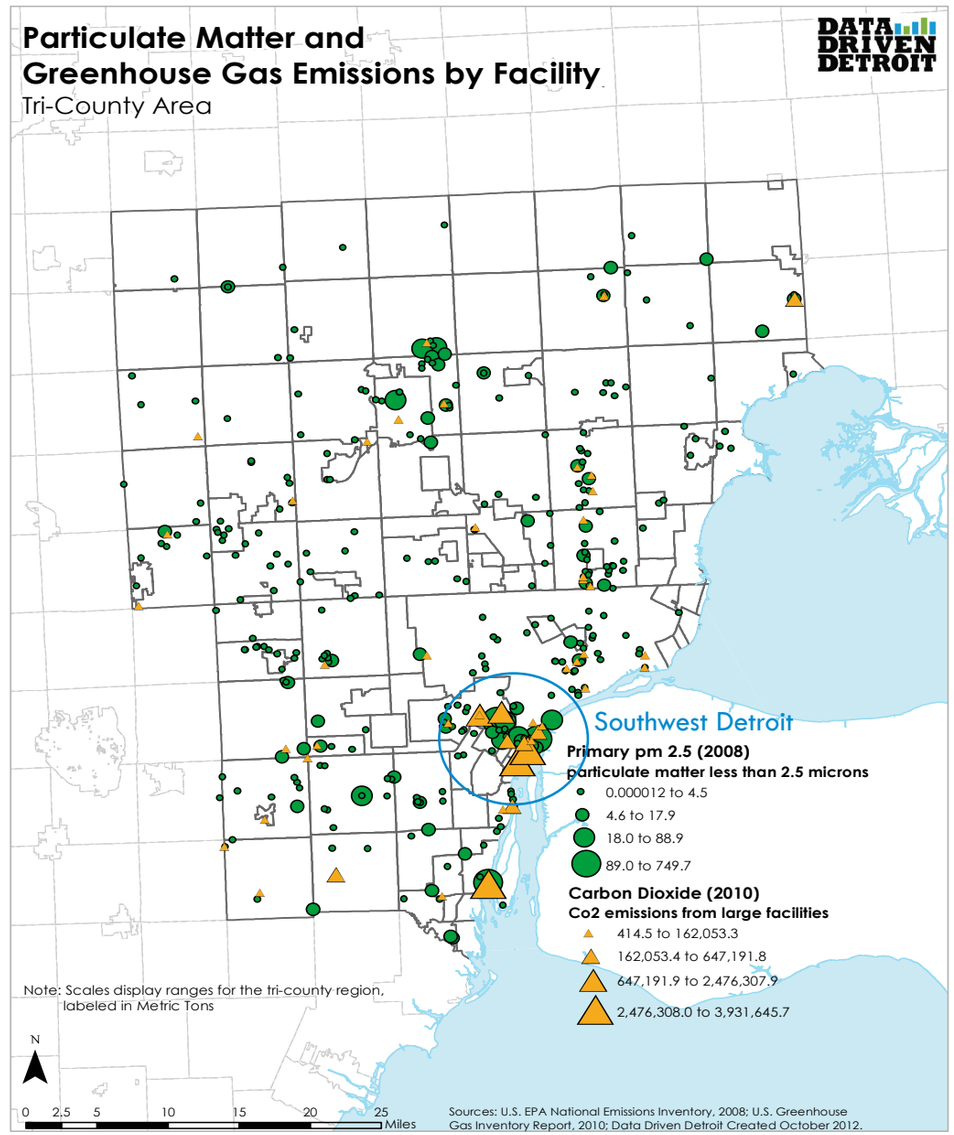
CANCER
cause of death per 10,000



Heart disease, cancer and diabetes are bigger causes of death in Detroit than they are statewide or nationally.

Source: Center for Disease Control, 2010

Health starts where we live, learn, work, and play. We know that race and income contribute to health disparities, but it works the other way, too. Poor health can impair educational attainment and job opportunities. While gender, genetics, and access to health care play a contributing role in a person's health, socioeconomic status and environmental conditions are key factors. For example, Detroit's child asthma and lead poisoning rates are several times higher than the state or national rates. Asthma is a leading chronic cause of missed days for students and workers. Even low levels of lead poisoning in children have been shown in multiple studies to lower IQs, increase aggression and ADHD, and are linked to juvenile delinquency. Air pollution called PM2.5 (which comes from vehicles, power plants, and other combustion activity) has been linked with mortality and heart problems. While we can take individual actions to reduce these health risks, it is our policy-makers' responsibility to make and enforce regulations that protect air, water, and land quality.



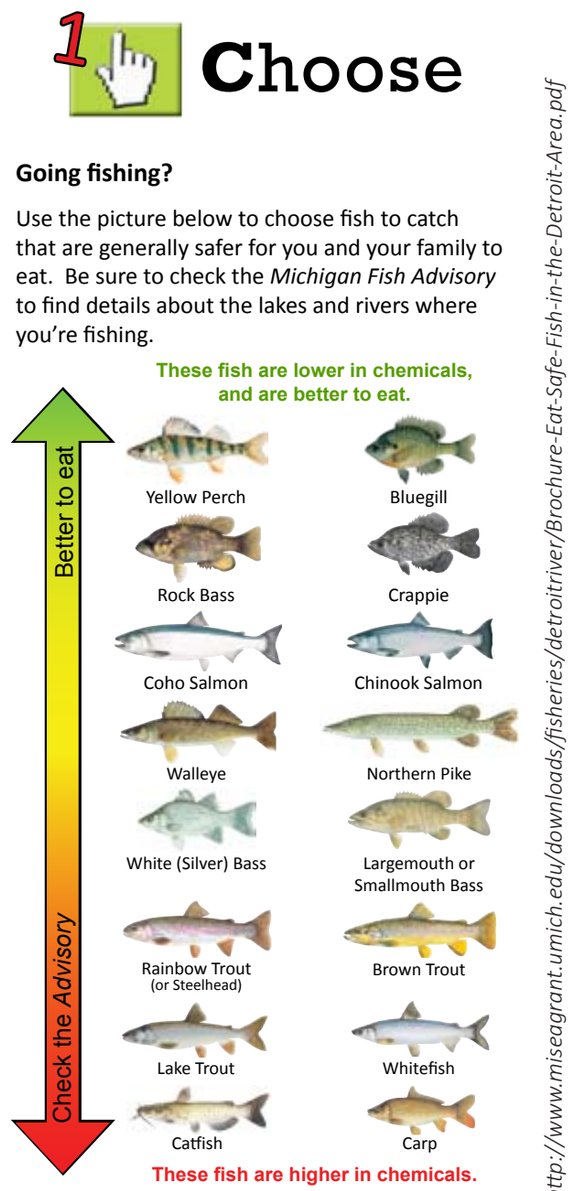
Before you eat that fish...

The Detroit River, along with 42 other waterways in the Great Lakes, is considered an "Area of Concern." Industrial pollutants such as mercury, PCBs, and dioxins land in our waterways and are absorbed by fish. When people eat the fish, they absorb the toxins in the fish; therefore, we now have restrictions on fish and wildlife consumption.

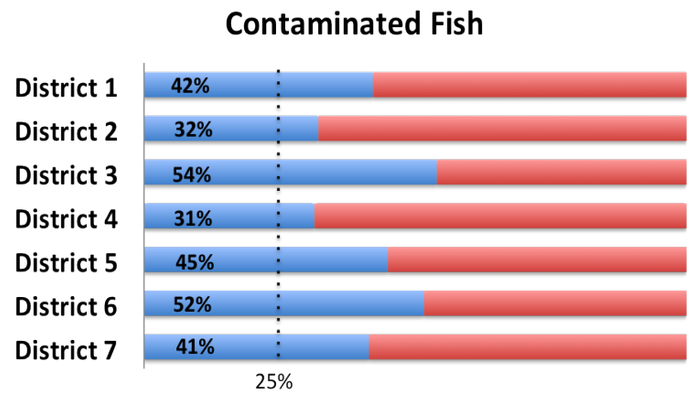
Mercury, which comes from coal-burning power plants and other industrial processes, damages the brain and nerves, especially in a fetus or a young child. Pregnant women, nursing mothers, young children, and women who may become pregnant should avoid eating fish high in mercury. PCBs are now banned in the U.S. for their toxicity, but remain in our environment, and cancer-causing dioxins come from diesel combustion and incineration.

Yellow perch and bluegill are the lowest in chemicals and safest to eat. Catfish and carp, which feed off the bottom where most of the chemicals are found, have more chemicals in their bodies than any other fish in the Detroit River–those fish, and whitefish larger than 22 inches, are not safe to eat.

After surveying 115 and interviewing 78 anglers along the Detroit River, a 2008 UM master's project found that only 53% were aware of correct fish advisory content (see graphic right); 48.7% reported awareness but had incorrect or no information about the advisory. It also found that older Detroiters perceived the River to be of higher water quality and were more likely to take home fish to eat. (Source: Kalkirtz, Martinez, & Teague. "Environmental Justice and Fish Consumption Advisories on the Detroit River Area of Concern." UM School of Natural Resources and Environment 2008)



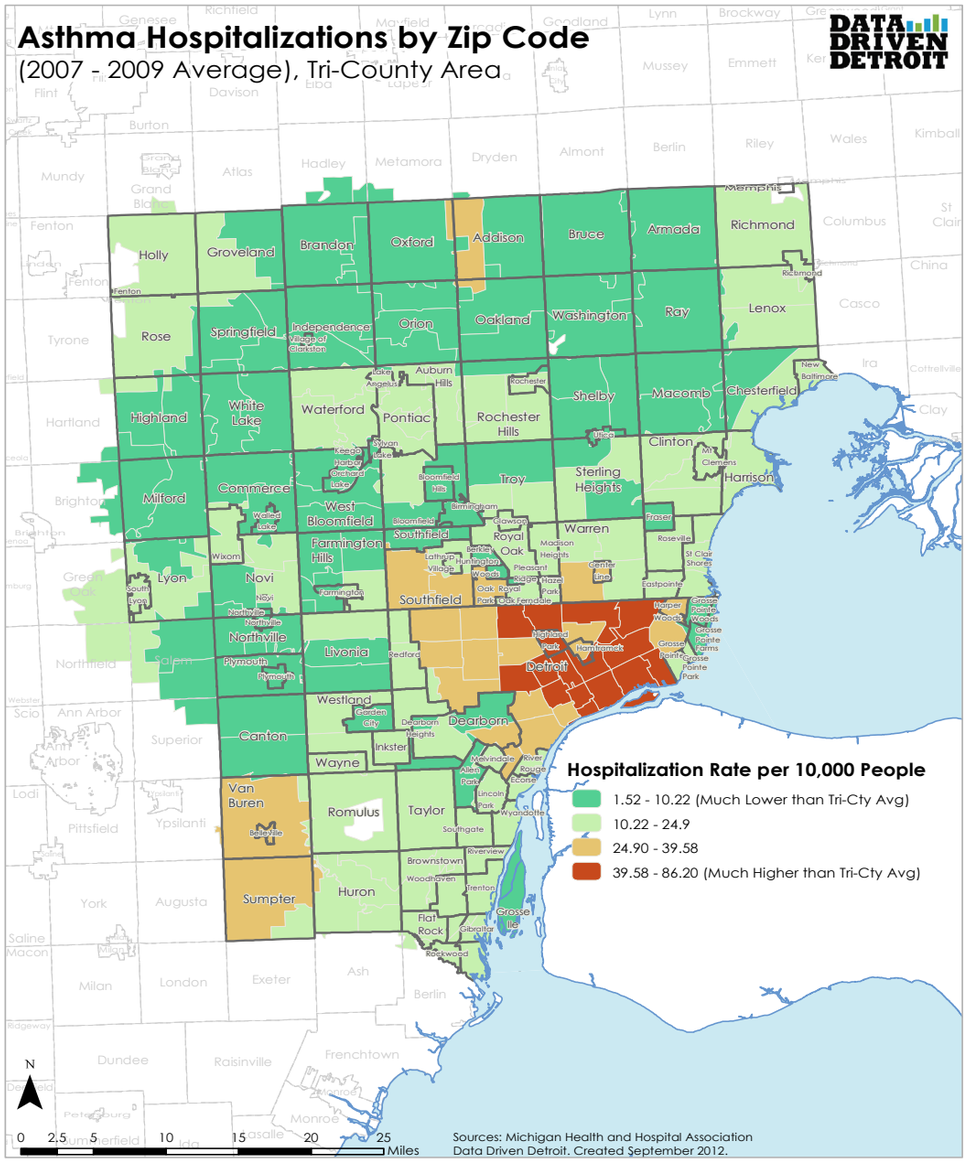
http://www.miseagrant.umich.edu/downloads/fisheries/detroitriver/Brochure-Eat-Safe-Fish-in-the-Detroit-Area.pdf

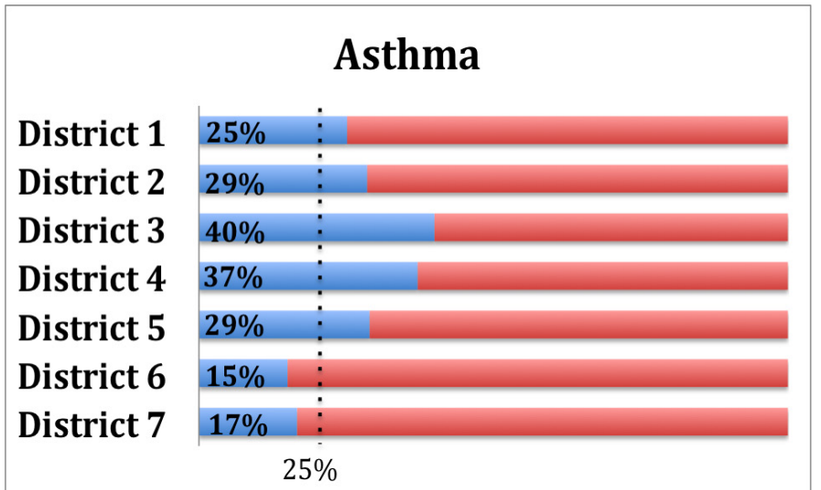


Although lack of clarity in the question may have contributed to the survey's highest percentage of "I don't know" responses (32% overall), over 1/4 of survey respondents in all 7 districts were unsure of the seriousness of contaminated fish.

For more information about fish safety, request a free copy of the Eat Safe Fish Guide from the Michigan Department of Community Health (800-648-6942).

ENVIRONMENT & PUBLIC HEALTH





In every district but District 6 and District 7, which identified asthma as a top 10 environmental problem, more than a quarter of survey respondents did not know the seriousness of asthma in their neighborhood.

The tri-county Asthma Hospitalizations by Zip Code map to the left shows that asthma rates are significantly higher in Detroit compared to the rest of the region, and the areas of highest rates cover nearly all of Districts 3 and 5. District 6 may not show up as high in hospitalizations if the population there does not go to the hospital for asthma attacks.

2011 Michigan Behavior Risk Factor Survey data below show that Detroit's adult asthma rates are much higher than the state rate. The Michigan Department of Community Health is currently in the process of updating the 2010 report on "Detroit, the Epicenter of the Asthma Burden," which will include child asthma prevalence.

Adults who were ever told they had asthma		Adults who currently have asthma	
City of Detroit:	22%	City of Detroit:	17%
Michigan:	15%	Michigan:	10%

AIR POLLUTION FROM FACILITIES

Detroit is home to 55 facilities that have to get special state permission to operate because of their air emissions (2008 National Emissions Inventory). Two of them are considered "high priority violators," including Marathon Oil Refinery, which was approved for a 20-year $176 million tax exemption and $10 million in brownfield tax credits by our local elected officials.

Exposure to these air toxins affect developmental, cardiovascular, respiratory, and neurological health, contributing to Detroit's high rates of cancer, asthma, and heart disease.

A University of Michigan study analyzed all reported chemical air emissions for their toxicity to human health and nearby exposures to those chemicals. Their study found that Detroit is home to five of the top 25 most polluted zip codes in the state, including 48217 at #1.

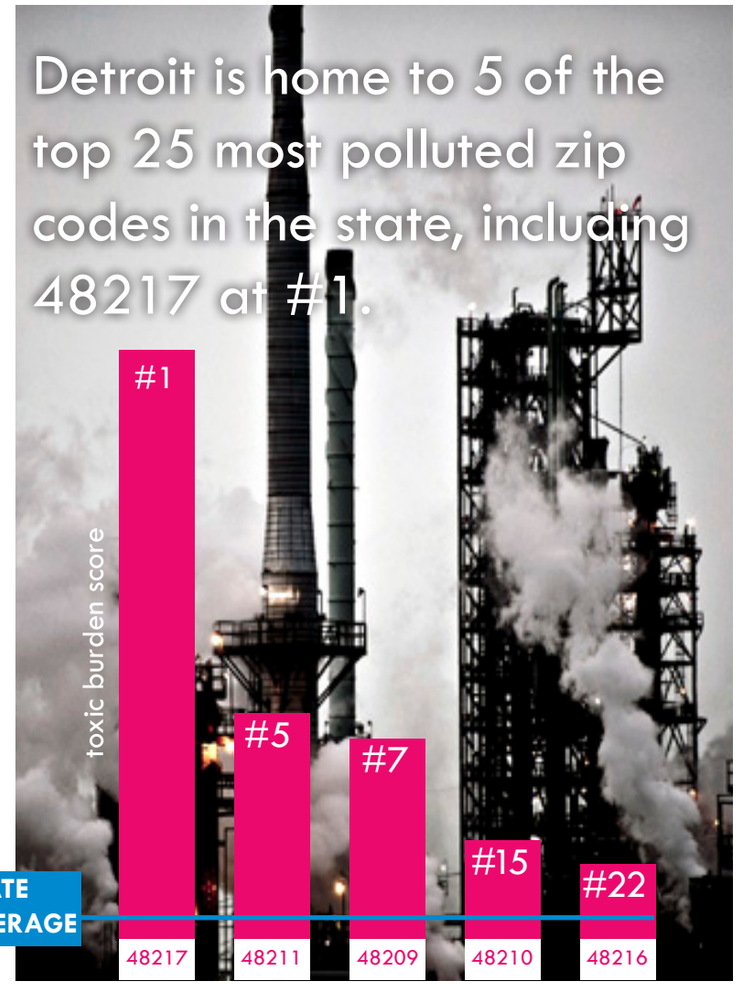
48217 had a toxic burden score of 2576, which is 46x the state average.

While State and Federal authorities have jurisdiction over air permits, the City can play a role in improving air quality by thinking about land use and zoning. We can decide how much land to dedicate towards land uses that involve heavy air (and other) pollution, and what kinds of mitigation measures such as minimum distances and visual, noise, and pollution buffers will be required in order to protect nearby residential areas.

According to EJView, the Environmental Protection Agency's interactive, online mapping tool, Detroit is in "nonattainment areas" for ozone and fine particulate matter. That means Detroit's air quality does not meet EPA standards for those two pollutants.

AIR POLLUTION FROM TRUCKS

Diesel emissions are a likely carcinogenic, worsen asthma attacks, exacerbate allergies, and contribute to ground-level ozone. Because of Detroit's importance as an international port, we have tens of thousands of trucks daily on our major corridors, with 70–90,000 trucks daily on I-75, I-94, I-96, 7 Mile, and M39. Michigan only regulates truck routes to protect pavement, not public health. Detroit does not have a local ordinance designating truck routes, but does have a local ordinance that prohibits trucks from driving through areas with posted signs. New diesel vehicles (post-2007 EPA standards) are 90% cleaner than older models.



Database: Detroit Free Press "Toxic ZIP code rankings."
Data source: University of Michigan professors Paul Mohai, Byoung-Suk Kweon, Sangyun Lee, Kerry Ard; Environmental Protection Agency

RECOMMENDATIONS: CLEAN AIR

Improve indoor and outdoor air quality to reduce harmful effects to health.

Courtesy: Langelle/Global Justice Ecology Project

Sandra Turner-Handy (MEC) at U.S. Social Forum Detroit Incinerator Protest

PROTECT PUBLIC HEALTH IN ZONING POLICIES AND DECISIONS

- Ensure distance and pollution buffers along highway and industrial zones, particularly near residential area
- Ensure that the zoning ordinance accounts for cumulative air impacts from concentration of pollution sources

REDUCE POLLUTION FROM FACILITIES

- Work with companies to implement "Best Available Control Technologies" to prevent pollution at its source
- Work with state and federal regulators to address cumulative air impacts when reviewing permit applications
- Be an advocate for local air quality and work with regulators to enforce air permits and address violators

REDUCE POLLUTION FROM TRUCKS AND DIESEL EQUIPMENT

- Enforce the 2010 anti-idling ordinance, a city law that prohibits trucks from idling for more than five minutes
- Designate and enforce truck routes in the city, and clearly publicize the information so that residents know where trucks can and can't go
- Pursue federal Clean Diesel Initiative funding to upgrade diesel equipment for cleaner emissions

CREATE MECHANISMS FOR COMMUNITIES TO HELP MONITOR FACILITIES AND TRUCKS

- Develop a phone hotline, online tracking system, and/or mobile app for residents to report and track the status of violations (e.g., Code for America has developed an online blight violations tracker for New Orleans: http://blightstatus.nola.gov/; Code for America Chicago has established an online 311 service tracker system: http://servicetracker.cityofchicago.org/requests/13-00332586)
- Update City website to properly inform residents how to report violations to the appropriate authority, and include phone numbers

RECOMMENDATIONS: CLEAN WATER

Adopt a comprehensive water master plan for Detroit using the Detroit Water Agenda as guidance

Protect and restore our waterways by reducing pollution from industries and stormwater runoff, including fertilizers and pesticides.

Photo: Marvin Shaouni

Green Garage Green Alley

OPTIMIZE AVAILABLE LAND FOR BLUE AND GREEN INFRASTRUCTURE

- Coordinate stormwater management with open space development and outdoor recreation in master plan and zoning updates
- Support and expand the Detroit Water and Sewerage Department's efforts for green infrastructure in coordination with regional efforts (visit http://greenvalues.cnt.org/national/calculator.php to calculate the performance, costs, and benefits of green infrastructure compared to conventional stormwater management)
- Take a leadership role in the regional green infrastructure planning efforts, recognizing the impact of regional water consumption and wastewater on Detroit's water and sewage system

SUPPORT WATER CONSERVATION AND STORMWATER INFILTRATION

- Reconfigure the water bill to create incentives for water customers to help reduce pressure on water infrastructure (e.g., stormwater user fees, water conservation discounts, discounts for urban gardens that do not use the sewer system. See the EPA's online municipal handbook for green infrastructure incentives.)
- Incentivize low–impact development (e.g., fast track site plan review for low–impact designs)
- Ensure that zoning and building-inspection standards support low-impact development and other creative solutions for water conservation and natural drainage (visit SEMCOG's guide to Integrating LID at the Community Level, including examples of LID-friendly regulations.)
- Act on ready opportunities for natural drainage (e.g., backfilling demolition sites with water permeable soil)
- Educate water users regarding the use of grey water

REDUCE WATER POLLUTION

- Continue expanding non-motorized transportation options that reduce stormwater runoff
- Encourage pollution prevention in industrial facilities
- Limit industrial land uses and the expansion of existing ones near waterways and in disadvantaged communities already burdened, such as 48217 and 48209
- Upgrade DWSD facilities and infrastructure for improved efficiencies and better water quality
- Institute land use policies and zoning to protect against impact of land uses near waterways
- Emphasize healthy fish consumption education to vulnerable populations (pregnant/nursing women, children)

RECOMMENDATIONS: CLEAN ENERGY

Use or generate clean energy, and encourage resource-efficient buildings, homes, and neighborhoods.

Photo and Info Source: Chris Detjen, NextEnergy

Since 2011, Detroit has installed about 1800 LED lights in seven locations through a combination of public and private funds. Highly efficient, LED lights can pay for themselves in six years.

SUPPORT POLICIES THAT CREATE A CLEAN ENERGY FUTURE FOR DETROIT

- Support development of Climate Action Plan for Detroit (Detroit Climate Action Collaborative)
- Support increasing the State Renewable Portfolio Standard, with the exclusion of waste-to-energy as a renewable energy source
- Increase public transit options (see mobility section) to reduce reliance on dirty fuels
- Encourage renewable energy innovation in the reuse of vacant property
- Learn from the U.S. Conference of Mayors Best Practices Guide in Energy and Environment (http://www.usmayors.org/uscm/best_practices/EandEBP07.pdf)

REDUCE MUNICIPAL ENERGY USAGE AND COSTS

- Maintain the municipal building inventory to prioritize cost-saving energy efficiency upgrades
- Upgrade city vehicle fleet for fuel efficiency and pollution reduction (visit www.fueleconomy.gov for the Department of Energy's green vehicle guide)
- Upgrade public lighting infrastructure for energy efficiency, durability, and public safety
- Increase energy efficiency in City operations, especially the Detroit Water and Sewerage Dept.

REDUCE RESIDENTIAL AND COMMERCIAL ENERGY USAGE AND COSTS

- Work with Wayne County to coordinate weatherization efforts with other home repair programs to stabilize neighborhoods
- Incentivize and/or set high performance green building standards for new development and major rehabilitation projects
- Allow and encourage energy efficiency and renewable energy projects to create energy-secure neighborhoods
- Create incentives for businesses, institutions, and industry to reduce their energy consumption

RECOMMENDATIONS: ZERO WASTE

Adopt a city waste management policy that prioritizes reduce, reuse, and recycle—including diversion of food and construction/demolition waste.

Courtesy: Zero Waste Detroit

Detroiters rally for single-stream curbside recycling.

IMPLEMENT RECYCLING IN EVERY DISTRICT

- Enact an ordinance implementing the 2010 Charter mandate for recycling; include business and multifamily dwellings

ENCOURAGE MARKETS FOR RECOVERED MATERIALS

- Implement the 2010 Green Purchasing Ordinance
- Establish policies that require a percentage of recycled materials to be used in public infrastructure
- Attract manufacturers that reuse or recycle tires, food waste, furniture, e-scrap, plastic, glass, and other recoverable materials
- Develop a program to locally capture the value of compostables (e.g., sell fertilizer created from collected yard and food waste; establish composting program at Eastern Market)

REDUCE CONSTRUCTION AND DEMOLITION WASTE

- Require waste diversion plans for construction and demolition permits
- Establish procedures for architectural salvage (skimming for valuable materials) prior to a scheduled demolition
- Set aside a percentage of abandoned structures for full deconstruction
- Establish demolition backfill standards that adequately prepare land for future use (e.g., use uncontaminated, permeable soils for natural drainage)

REDUCE ILLEGAL DUMPING

- Promote Keep Detroit Beautiful for year-round coordination and support of public, private, and neighborhood cleanup efforts
- Develop a transparent tracking system for addressing illegal dumping reports

REDUCE COMMERCIAL AND INDUSTRIAL WASTE

- Establish a policy that encourages reduction of waste production and/or promotes efficient and waste-free "cradle to cradle" philosophy
- Limit hazardous waste treatment, storage, and disposal facilities in Detroit
- Hold accountable owners of brownfields

RECOMMENDATIONS: HEALTHY LAND

Repurpose vacant land and structures to protect human and natural health.

Photo: kaityfresh.blogspot.com

Brightmoor Farmway House Board

CLEAN UP CONTAMINATED LAND AND REDUCE EXPOSURE TO HEALTH HAZARDS

- Identify and prioritize communities bearing disproportionate environmental burden
- Pursue negligent property owners to take responsibility for cleanup
- Properly assess lead and other soil contamination to make informed land use decisions such as school and residential siting
- Institute soil testing and best practices for urban gardens and urban farms

COMMUNITIZE CARE OF VACANT LAND

- Expedite side-lot disposition and adopt-a-lot programs: make it quicker, easier, and cheaper for residents to purchase adjacent vacant city lots
- Implement the 2013 Urban Agriculture Ordinance
- Support community-based land management efforts (e.g., land trusts, community land banks, public/neighborhood service agreements)

RESTORE AND PROTECT NATURAL AREAS AND ASSETS

- Develop an open space plan that creates a long-term community vision for connected, accessible green space
- Work with regional land conservancies and local/regional/state/federal agencies to restore environmentally sensitive areas and create blue/green infrastructure in Detroit
- Restore neighborhood trees and maintain standards for equitable tree cover in each district
- Support community efforts that can help address ownership and maintenance barriers to implementing blue/green infrastructure; learn from traditional land conservancies in the region

RECOMMENDATIONS: HEALTHY HOUSING

Ensure that residents have access to safe, lead-free, healthy, energy-efficient housing options.

Photo: Better Buildings Program, Regional Energy Office

Better Buildings Program Residential energy audit underway (see red blower door at work).

IMPLEMENT A HOLISTIC APPROACH TO HOUSING

- Continue to increase interagency and public/private coordination for rehabilitating housing (e.g., Green and Healthy Homes Initiative's efforts to coordinate lead abatement, weatherization, minor home repair, indoor air quality)
- Reconfigure the Community Development Block Grant system to be more effective and distribute resources directly and efficiently into the community
- Adopt a comprehensive home assessment for rehabilitating affordable housing such as the one recommended by the Green and Healthy Homes Initiative

INCREASE RESIDENTIAL ENERGY EFFICIENCY

- Train City inspectors on current energy standards: 2009 IECC energy code (residential) or ASHRAE Standard 90.1-2007 with Amendments (commercial)
- Create incentives for energy-efficient, healthy housing development (e.g., a voluntary Green and Healthy label)
- Require an energy audit or disclosure of energy bills upon lease signing or purchase agreement so that renters and buyers have full energy information

IMPROVE RESIDENTIAL INDOOR AIR QUALITY

- Use citizen contact opportunities to educate around personal practices that impact indoor air quality such as smoking, use of air fresheners, use of certain cleaning products and pesticides, installation/use of products that off-gas and/or contain VOCs
- Include in affordable home programs elimination of conditions that cause mold

REDUCE LEAD PAINT HAZARDS

- Enforce the 2010 Detroit Lead Ordinance in the Property Maintenance Code to protect children from lead paint exposure in rental properties
- Work with the County Prosecutor to enforce 2004 State Lead Abatement Act
- Restore funding for Elevated Blood Lead Level (EBLL) investigations to determine and eliminate the source of lead poisoning; coordinate investigations with enforcement of Detroit Lead Ordinance
- Vigorously pursue federal and state funding for lead abatement in houses where children reside

RECOMMENDATIONS: HEALTHY NEIGHBORHOODS

Establish policies that encourage City and community to work together to design and implement healthy, active, sustainable neighborhoods.

Courtesy: LEAP

Community Development Advocates of Detroit (CDAD) Neighborhood Revitalization Strategic Framework Plan pilot project Lower Eastside Action Plan (LEAP) Stakeholder Advisory Group

TAKE RESPONSIBILITY FOR PRESERVING NEIGHBORHOOD QUALITY

- Enforce Property Maintenance Code, including properly resourcing the Department of Administrative Hearings for code enforcement
- Designate and enforce local truck routes to protect neighborhood health
- Aggressively pursue illegal dumpers
- Upgrade and maintain sufficient public lighting for public safety

ENCOURAGE COMMUNITY LEADERSHIP IN LOCAL DEVELOPMENT

- Adopt predictable, transparent process to support community-driven neighborhood planning and development
- Prioritize health, sustainability, equity, and civic participation in master plan and zoning updates
- Work with Detroit Public Schools to ensure school-siting decisions enhance healthy neighborhoods and reduce pollution exposure to children
- Update the Recreation Master Plan with community inclusion, ensuring equitable access to open space network
- Support local efforts for alternative community-building housing models such as intentional communities, co-housing, eco-blocks
- Support efforts to increase healthy, affordable food access through farmers markets, urban agriculture, local food production, and so on through zoning and regulatory reform

SUPPORT TOOLS FOR COMMUNITY OVERSIGHT

- Designate City champions for establishing community-driven Community Benefit Agreements, Good Neighbor Agreements, and conducting Health Impact Assessments
- Facilitate early public participation in state water and air permitting processes
- Implement a transparent tracking system for illegal dumping and other citizen reports

SUPPORT ENVIRONMENTAL EFFORTS THAT IMPROVE PUBLIC SAFETY

- Increase tree canopy, which studies show correlates with reduced crime rates
- Prioritize child lead poisoning prevention to combat its IQ-lowering and aggression-increasing effects
- Upgrade public lighting to a durable, resource-efficient system for safer streets and neighborhoods
- Implement Crime Prevention Through Environmental Design and neighborhood walkability

RECOMMENDATIONS: ACTIVE TRANSPORTATION

Ensure that all residents, especially our most vulnerable, can safely and reliably get to desired destinations.

Photo: Sandra Yu

Kids biking Lincoln Street

MAKE EQUITABLE TRANSPORTATION DECISIONS

- Ensure that transit-dependent populations benefit from transportation investments
- Ensure an equitable level of service for all residents in Detroit (e.g., frequency, access, etc.)
- Reevaluate the need for highway expansions in Detroit (e.g., I-94 expansion)
- Advocate for improved public health outcomes in SEMCOG transportation planning

IMPROVE LOCAL AND REGIONAL PUBLIC TRANSIT

- Improve transit efficiency by aligning local and regional service, and ensuring convenient connections between different modes of transportation
- Assess and improve local transit service (DDOT, paratransit)
- Advocate for Regional Transit Authority to have dedicated funding
- Support regional Bus Rapid Transit efforts
- Support transit-oriented development through planning, zoning, and incentives

MAKE NON-MOTORIZED TRANSIT A MORE VIABLE CHOICE

- Continue implementation of the 2006 Non-Motorized (NM) Plan to expand routes and facilities for walking and biking
- Adopt a Complete Streets Ordinance that aligns with the NM plan
- Implement mixed-use zoning designations (SD1, SD2) to create walkable neighborhoods
- Support Safe Routes to School and other public safety initiatives that increase walkability
- Support a bike-share system that would increase bike use and access

RECOMMENDATIONS: COMMUNITY BENEFITS

Ensure that public investments benefit youth development, increase job access, and improve community well-being.

Photo: Kevin Hamilton, SCA

High schoolers employed in the Student Conservation Association (SCA) cut trails in Rouge Park.

IMPROVE PUBLIC AND ENVIRONMENTAL HEALTH IN PLANNING AND ZONING

- Ensure that the planning and zoning revision process makes a special effort to include health, transportation, natural resources, energy, and waste considerations

LEVERAGE ENVIRONMENTAL CLEANUP AND RESTORATION FOR ECONOMIC DEVELOPMENT

- Charter-mandated Green Initiatives and Sustainable Technologies Plan should research how to support businesses that address key challenges such as municipal waste, illegal dumping, fossil fuel dependence, and vacant buildings and land
- Detroit Employment Solutions Corporation should work closely with community-based trainers, organized labor, the Purchasing Department, and all agencies that let contracts to maintain a skilled workforce and increase local hiring in public projects
- City agencies and the Detroit Economic Growth Corporation should actively support “buy local” initiatives and the cleanup/repurposing of vacant properties to encourage the local urban agriculture economy

ENGAGE YOUTH AND RESIDENTS IN CREATING NATURAL OPEN SPACE AND RECREATIONAL AREAS

- Support community-driven efforts to develop an open space network of parks, trails, and greenways to increase recreational opportunities
- Involve residents and youth in environmental initiatives and the design, construction, and maintenance of natural areas to create ownership, jobs, and community pride. (Local examples include the Detroit Youth Energy Squad and Green Schools [WARM Training Center], Student Conservation Corps [The Greening of Detroit], Greening the Mack [Lower Eastside Alliance])

EQUIP COMMUNITY MEMBERS TO BE PART OF THE SOLUTION

- Public officials have the responsibility to inform the community of city processes and policies, as well as their environmental impacts and benefits, so that citizens are better equipped to help keep our communities safe, healthy, and well-maintained

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GREEN HIGHLIGHTS IN 2012 REVISED DETROIT CHARTER

THREE SECTIONS IN THE CURRENT CITY CHARTER HAVE SPECIFIC IMPLICATIONS FOR ENVIRONMENTAL HEALTH.

In our charter, we have the tools of publicly voted mandate to establish citywide recycling, a city-led comprehensive environmental policy, and a Green Initiatives and Sustainable Technologies plan.

The city's financial challenges and the presence of an Emergency Manager who has the authority to bypass the voter-approved charter present barriers to implementation.

However, where recycling, coordinated environmental policy, and support for green initiatives and sustainable technologies can help build financial and ecological sustainability for City operations, spur economic development, and improve resident well-being, these activities should be pursued.

Charter of the City of Detroit

January 1, 2012

(Adopted by Vote of the People on November 8, 2011)

Source: City of Detroit Charter

SECTIONS 6-501 AND 6-502 instruct the Buildings, Safety, Engineering and Environment Department (BSEED) to develop and implement a comprehensive and coordinated environmental policy to conserve and protect the city's natural resources for the health, safety, and welfare of the people of Detroit.

SECTION 6-509 instructs BSEED to develop a "Green Initiatives and Sustainable Technologies" plan to establish and support green initiatives, technologies, and businesses.

SECTION 7-403 instructs the Department of Public Works to prepare, implement, and update as necessary a comprehensive citywide Recycling Plan for the City of Detroit that provides for the capture of the city's waste stream prior to disposal.

SECTIONS 9-101 TO 9-103 describe the purpose, composition, and responsibilities of Community Advisory Councils (CAC), which are meant to improve citizen access to City government. District-based CACs are established by ordinance by petition of city residents to City Council.

DETROIT GREEN POLICY CASE STUDIES

EXAMPLES OF GREEN ORDINANCES

City Council has passed several recent ordinances and resolutions that are intended to make Detroit a healthier and greener city. They are marked by great public/nonprofit/philanthropic/interagency collaboration, and ongoing monitoring and troubleshooting. Following are three examples.

ANTI-IDLING ORDINANCE (2008)

Issue: Diesel truck emissions are harmful to human health. Unnecessary idling causes even dirtier emissions because the catalytic converter cannot work properly. In addition to air pollution, idling wastes fuel, elevates noise levels, and shortens the life of the engine. Reducing idling would conserve fuel, save companies money, and protect neighborhood health, as well as the health of the driver.

Solution: Adopted an anti-idling ordinance that allows Detroit Police Department (DPD) traffic enforcement to ticket commercial trucks idling for longer than five minutes in a 60-minute period. Fines are $150 for the driver and up to $500 for the owner. Up to three tickets can be issued in an hour.

CHALLENGES BEING ADDRESSED IN ANTI-IDLING WORK GROUP

- DPD was targeting commercial delivery trucks in Eastern Market instead of focusing on unnecessary idling near residential areas, which was the intent
- There is no specific number for residents to call to report a violation
- There needs to be an efficient system for identifying hot spots for idling violations
- Companies did not know about the ordinance and were upset

DETROIT LEAD ORDINANCE (2010)

Issue: Landlords are required to disclose known lead hazards to renters, but not required to find out if there are lead hazards in rental properties. Lead inspections were only triggered when a child was found to have already been lead-poisoned.

Solution: Adopted a Detroit lead ordinance as part of the property maintenance code, which requires landlords to conduct annual lead inspection/risk assessment and address lead hazards in order to obtain certificate of occupancy.

CHALLENGES BEING ADDRESSED IN LEAD ENFORCEMENT WORK GROUP

- Good landlords felt punished because the City is behind on enforcement
- State list of lead inspectors/risk assessors distributed by the City included companies that were not providing proper inspection reports, which were rejected by the City, and landlords had no way of getting their money back
- There is supposed to be a second clearance inspection after lead abatement, which has been very difficult to do because inspectors cannot get back into the house
- Some landlords (such as elderly) cannot afford lead abatement, which can cost tens of thousands of dollars

URBAN AGRICULTURE ORDINANCE (2013)

Issue: Urban gardens and small farms—and possibly even large farms—have been growing in popularity as ways to productively use vacant land and grow healthy food. However, the City did not have legislation to make it a legal activity or to regulate it properly.

Solution: Adopted an Urban Agriculture Ordinance that allowed agricultural activities such as gardens, hoop houses, farms, and farm stands as conditional or by-right land uses in various zoning designations.

CHALLENGES BEING ADDRESSED

- Resolve whether allowing agricultural uses in existing zoning designations adequately allows the City and neighborhoods to use planning and zoning to create a long-term vision for urban agriculture in Detroit.

Other ordinances not described in detail here include the Green Purchasing Ordinance (2011), Vacant Property Ordinance (2010), Food Security Policy (2008), New Business Model for Solid Waste Management (2008), Non-Motorized Plan (2006). Two additional ordinances under review at the Law Department are the Good Food Ordinance and Complete Streets Ordinance. In Detroit's strong mayor form of government, the impact of council resolutions and ordinances would benefit from equal support by the administrative branch.

SUGGESTIONS FOR DETROIT FUTURE CITY

Detroit Future City has developed a thoroughly researched guide for reform and investment in making our city more efficient, green, and livable. The Detroit Environmental Agenda suggests five priorities that must happen to ensure that DFC is implemented in a manner that upholds environmental justice and sustainability.

1. Establish a clear, transparent structure for coordinating neighborhood planning processes, the City's 2009 Master Plan, and the Detroit zoning ordinance and map with Detroit Future City recommendations.

The Detroit Future City's 50-year land use vision and framework analysis map provide citywide guidelines within which neighborhood planning efforts must determine local priorities, especially in moderate or high-vacancy residential areas that are envisioned for radically different uses. Significant steps have been taken by the Detroit Planning and Development Department (PDD) to partner with CDAD Neighborhood Revitalization Strategic Framework Pilot areas and LISC Sustainable Communities pilots to develop a process for officially adopting community-driven neighborhood plans into the City's master plan. PDD has also convened a small stakeholder working group to develop a guide to community planning. The City of Detroit has an important, publicly accountable role to play in leading these efforts, and should be supported by Detroit Future City.

- See page 106 of DFC: Framework Zones Map
- See page 119 of DFC: 50-Year Land Use Scenario Map
- See page 145 of DFC: Blue and Green Infrastructure Map
- See page 149 of DFC: Neighborhood Planning Reform

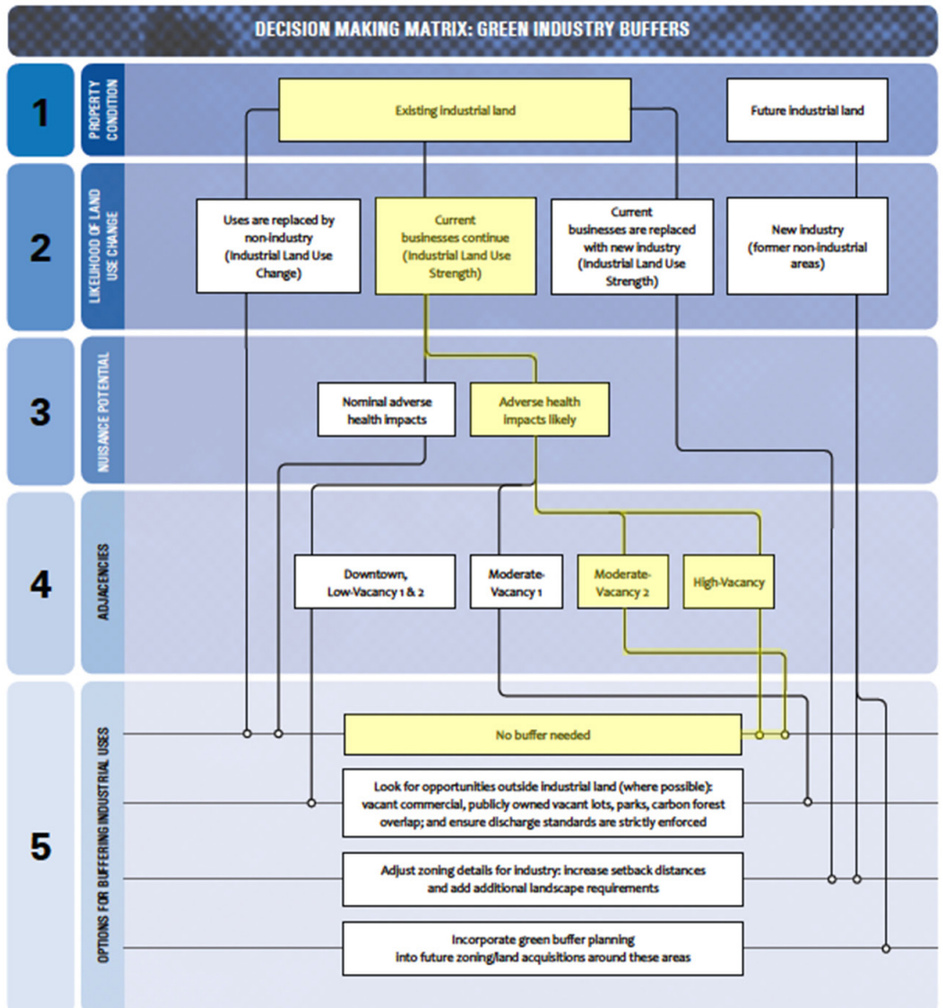
2. Partner with environmentally distressed neighborhoods near heavy industry to develop a plan to protect residents while encouraging economic growth.

There are several residential neighborhoods adjacent to land zoned for heavy industry; these areas are often high vacancy, but with a large percentage of homes owned free and clear by occupants. The Detroit Future City framework recommends taking advantage of the existing infrastructure and logistical assets of industrial zones to expand industrially zoned land for economic growth.

- See page 48 of DFC: Primary Employment Districts (Southwest-Industrial) Map

Later in the document, it also outlines a decision-making matrix for locating industrial-pollution buffers. The matrix states that industrial buffers are not needed for highly vacant residential areas near existing industry. This recommendation should be further assessed with the participation of affected communities.

- See page 303 of DFC: Decision Making Matrix: Green Industry Buffers (shown on right)



3. Relatedly, there are strong recommendations to streamline the City's regulatory framework, such as permitting processes, to encourage more investment in Detroit.

There is no question that we need more efficient and business-friendly policies. However, decision-makers must make special effort to protect natural resources and public health in making these reforms; improved efficiency should not mean lax regulation. This is important, because behind-the-times zoning has left communities like Delray and 48217 in polluted limbo adjacent to deeply vested heavy industry, and unclear liability has delayed the completion of the east RiverWalk at the former Uniroyal site, which was left heavily contaminated for decades.

- See page 30 of DFC: 21st Century Regulations
- See page 147 of DFC: Enact Innovative Regulatory Reform
- See Data Driven Detroit's TRI Air Emissions and Housing Condition Map (shown on right)

4. Green up solid waste management. Through recycling, composting, and reducing waste in general, we have the opportunity to reduce service costs and improve our city infrastructure systems.

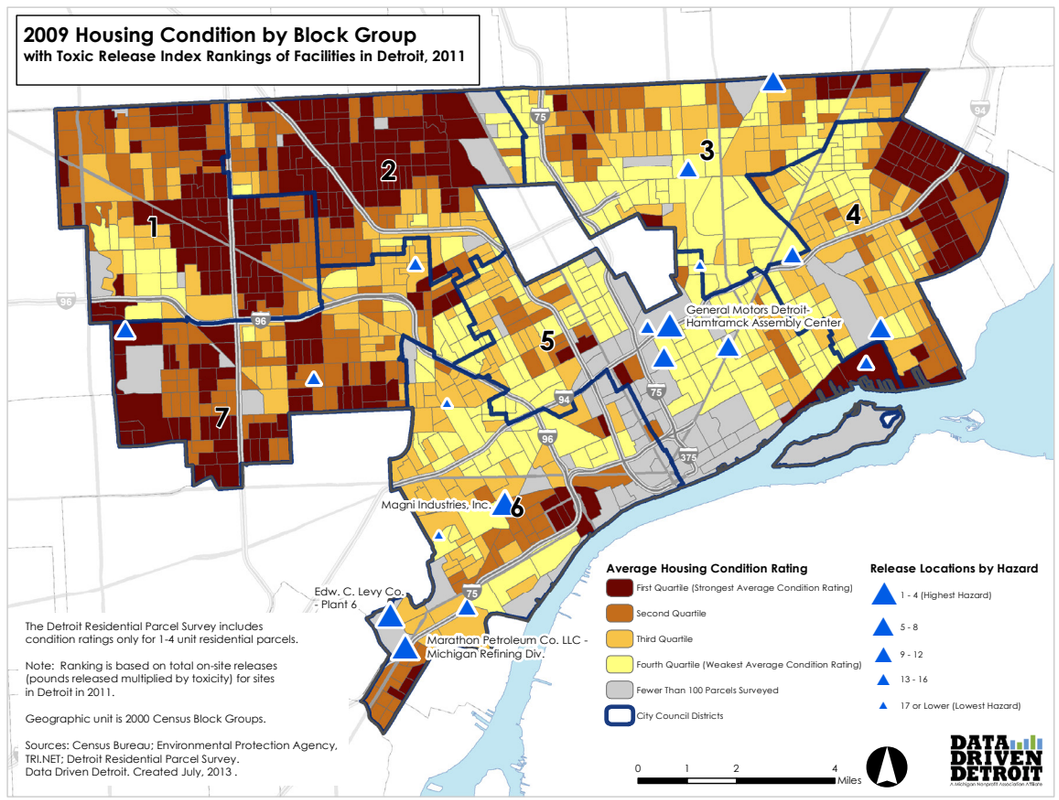
The Detroit Future City plan errs by assuming that the City bears responsibility for the continuing operation of the incinerator at I-94 and I-75. DFC and the City should prioritize alleviating the environmental justice burden the surrounding community bears in hosting the incinerator.

- See page 198 of DFC: Reduce Waste and Increase Recycling-Incinerator Recommendation

5. Minimize demolition waste by aggressively supporting deconstruction.

Detroit Future City implementation will require unprecedented levels of demolition; much of it will be city-owned buildings. Detroit Future City must ensure that the much-needed takedown of dangerous abandoned buildings maximizes waste diversion through salvage, reuse, and recycling. Currently, 60% to 80% of Detroit's waste is from demolition, most of which goes to the landfill. We can reuse or recycle C&D waste; for example, San Francisco recycles over 80% of all construction and demolition waste.

- See pages 244–45 of DFC: Urban Green Neighborhoods Today/in 50 years
- See page 269 of DFC: Public Land Ownership by Vacancy



The icons on this map represent Detroit's on-site emissions ranked by hazard level (lbs x toxicity).

The top 4 in hazardous emissions are Edw. C. Levy Co. (produces steel furnace slag), Marathon Petroleum Co. Oil Refinery, and Magni Industries in District 6, and the GM Detroit-Hamtramck Assembly Center in District 5.

GLOSSARY

ENVIRONMENTAL TERMS AND RESOURCES

BIKE LANES
Dedicated space on the road for cyclists.

Courtesy: Greenways Coalition

BIKE ROUTES
Shared space on the road for cyclists marked with signs or shared arrow ("sharrow") pavement markings.

Courtesy: Greenways Coalition

BROWNFIELDS
Brownfields are real properties where expansion, redevelopment, or reuse may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Examples include former gas stations, dry cleaners, auto repair shops, and industrial factories. These uses leave behind pollution that causes contamination of the soil and groundwater. To be redeveloped, brownfield properties require testing and cleanup to make sure that the pollution doesn't harm the next user. Because Detroit has devoted a lot of its land to industrial facilities, gas stations, dry cleaners, and auto shops that now lie vacant, we have thousands of small and large brownfields.

CITY RULES AND RESPONSIBILITIES
Visit the Planning and Development Department's webpage at www.detroitmi.gov for the City of Detroit Planning and Development Department's Community Planning Guidebook.

COMBINED SEWER SYSTEM
Detroit has a combined sewer system where stormwater runoff, sanitary sewage, and industrial waste all go into the same pipes. Because so much of the city is paved over or covered in buildings (66%) we also don't have enough permeable open space where rain can filter naturally into the ground and become clean again through natural processes. (This assumes the soil is not contaminated.) During heavy rain, our sewer system can't handle all the combined sewage and discharges them untreated into the river.

COMMUNITY BENEFITS AGREEMENT
A legally binding contract negotiated by the developer and a coalition representing a broad spectrum of community groups impacted by the development. The contract is intended to ensure that the developer provides concrete benefits to the host community in return for their support of the project.

Examples of well-regarded CBAs:
-Pittsburgh One Hill Coalition CBA with Pittsburgh Penguins stadium development
-Los Angeles Alliance for a New Economy (LAANE) CBA with LAX Airport development

COMMUNITIZE
A term the Detroit Environmental Agenda uses in the spirit of "deputize"–i.e., to empower residents and community stakeholders to manage and care for public land.

COMPLETE STREETS
According to Michigan Public Act (PA) 135 of 2010, a Complete Street provides "appropriate access to all legal users in a manner that promotes safe and efficient movement of people and goods whether by car, truck, transit, assistive device, foot, or bicycle." (http://www.michigan.gov/documents/mdot/CS_FAQ_6-22-11_356262_7.pdf)

See Detroit's proposed complete street ordinance: http://www.michigantrails.org/detroitcompletestreets/.

GLOSSARY

CRADLE TO CRADLE

An approach to environmental protection that seeks for materials and products to be conceived from the very start with intelligent design and the intention that they would eventually be recycled as valuable materials or products beyond their original use. This contrasts with the conventional "cradle-to-grave" approach, which sees materials or products as discarded at the end of original use. (http://business-ethics.com/2011/03/11/1414-opinion-the-cradle-to-cradle-approach-to-environmental-protection/)

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

Crime Prevention Through Environmental Design (CPTED) theories contend that law enforcement officers, architects, city planners, landscape and interior designers, and resident volunteers can create a climate of safety in a community through designing a physical environment that positively influences human behavior. The theory is based on four principles: natural access control, natural surveillance, territoriality, and maintenance. (http://www.ncpc.org/training/training-topics/crime-prevention-through-environmental-design-cpted-)

CRITERIA AIR POLLUTANTS

These commonly found air pollutants are found all over the United States. They are particle pollution (often referred to as particulate matter), ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead. These pollutants can harm your health and the environment, and cause property damage. Of the six pollutants, particle pollution and ground-level ozone are the most widespread health threats. EPA calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health is called primary standards. Secondary standards prevent environmental and property damage. (http://www.epa.gov/airquality/urbanair/)

CUMULATIVE IMPACTS

The impact on the environment which results from the incremental impact of an action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. For example, the decision to approve an air permit for a polluting facility layers on top of decades of previous similar decisions and adds to the concentration of polluting facilities in areas like Southwest Detroit. Not only does a new facility add to the concentration, but the mixing of emissions creates new pollutants, the impacts of which we don't yet fully understand. Even though cumulative impacts are acknowledged as significant for public health, they are not adequately addressed by federal law because they are complicated to measure.

DETROIT STATE OF THE ENVIRONMENT REPORT (2007)

In 2007, the Detroit Department of Environmental Affairs issued a State of the Environment Report. The 24-page report describes the purpose and goals of the department, now merged into the Buildings, Safety, Engineering and Environment Department (BSEED); outlines a 3-point environmental agenda; and explains priority issues, projects, and next steps. The 2007 agenda was to ensure environmentally sustainable operations of City departments, ensure that residential land and structures were free of heavy metals, and promote brownfield redevelopment. (http://www.detroitmi.gov/Portals/0/docs/frontpage/DEA%20Book.pdf)

ECOSYSTEM SERVICES

The benefits people receive from ecosystems, including nutrients and products; detoxification of air, water, and soil; recreation; and cultural inspiration. Examples include trees that filter air pollution and reduce crime, natural areas that help clean and filter polluted water (blue or green infrastructure), pollination of crops by bees, and the Detroit riverfront or Great Lakes beaches as a tourist attraction. See example at "The Effect of Trees on Crime in Portland, Oregon." US Forest Service. 2011 http://eab.sagepub.com/content/early/2010/09/16/0013916510383238.abstract.

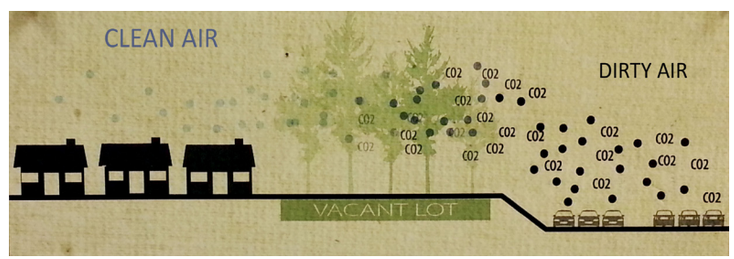


Illustration: Trees filtering particulate matter and carbon emissions from vehicle traffic. (Detroit Future City)

EJVIEW

EJView is an interactive online mapping tool provided by the EPA to help communities learn about local environmental conditions based on federal standards for air and water quality, as well as toxic releases. To see 48217 as an example, visit http://epamap14.epa.gov/ejmap/ejmap.aspx?wherestr=48217.

GLOSSARY

ENVIRONMENTAL JUSTICE (EJ)

The United States Environmental Protection Agency defines environmental justice as "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. EPA has this goal for all communities and persons across this Nation. It will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work."

For more information, view "Almost Everything You Need to Know about Environmental Justice," a publication of the United Church of Christ, which helped birth the EJ movement in 1987 when it commissioned the seminal report "Toxic Waste and Race." (http://www.ucc.org/justice/advocacy_resources/pdfs/environmental-justice/almost-everything-you-need-to-know-about-environmental-justice-english-version.pdf)

ENVIRONMENTAL JUSTICE, LAND USE AND EQUITY

Environmental justice goes to the core of traditional land use decisions.

- Geographic equity: choosing sites for undesirable land uses, such as heavily polluting facilities
- Procedural equity: process for deciding where to site these undesirable uses, including location and timing of public hearings
- Social equity: sociodemographic factors that shape which groups hold the political power in land use decisions

ENVIRONMENTAL PROTECTION AGENCY (EPA)

The EPA is a federal agency with the authority to enforce several congressional acts that protect air quality, water quality, hazardous waste management, and more. In addition to regulating pollution facilities and operations, the EPA makes grants to states, local government, and community organizations to help improve the environment. The EPA also leads the federal interagency environmental justice initiative to ensure that federal projects and policies protect the environmental health of low-income and minority populations. For annual grant opportunities, visit http://www2.epa.gov/home/grants-and-other-funding-opportunities.

Grants that may be most relevant to community groups are the annual Environmental Justice Small grants, Brownfields Job Training grants, and Urban Waters grants.

FULL COST ACCOUNTING (FCA)

Analysis of all the costs and advantages of all alternatives, including social and environmental costs and benefits to anyone impacted by the decision. FCA helps avoid negative side effects on public health or quality of life.

An example from "Toward a Sustainable Community: A Toolkit for Local Government" (University of Wisconsin-Madison):

"Using FCA on a community's solid waste operations."
In this case, the community would need to go beyond a simple analysis of the capital and operating costs of a facility. FCA would include front-end costs of engineering and site planning; back-end costs such as closing a facility at the end of its useful life, post-closure care, and monitoring; as well as direct and indirect daily operating costs including

- Direct: costs of specific services, salaries, parts, interest on debt
- Indirect: costs of support from general government services such as purchasing, administration, legal, fleet maintenance

HAZARDOUS WASTE

Hazardous wastes are liquids, solids, gases, or sludges that are dangerous or potentially harmful to human or environmental health. They can be by-products of manufacturing processes or discarded commercial products such as cleaning fluids or pesticides. (EPA)

Detroit hosts several hazardous waste facilities, including facilities that transfer, hold, and dispose of the liquids, solids, gases, or sludges that are dangerous or potentially harmful to human or environmental health.

Marathon Petroleum Co. (48217, District 6) is the #13 largest hazardous waste generator in Michigan, out of 467 facilities. EQ Detroit (Midtown, District 5) is #19, and Ajax Metal Processing Inc. (Gratiot and E. Forest, District 5) is #20. Ford Motor Company and Severstal Dearborn at the border of Dearborn and 48217 (District 6) are #21 and #23.

EQ Detroit is the #2 hazardous waste management facility in Michigan, with Dynecol Inc. (parent company is PVS Chemicals; SE of Hamtramck, District 5) at #5, and Petro-Chem Processing of Nortru LLC (South of Jefferson near St. Jean, District 5) at #7.

Petro-Chem Processing of Nortru LLC is the #2 hazardous waste shipping facility in Michigan, with EQ Detroit (Midtown,

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District 5) at #4, Dynecol Inc. at # 7, Marathon Petroleum Co. at #15, Ajax Metals Processing at #21, and Honeywell International at #26.

EQ Detroit is the #2 largest hazardous waste receiver in Michigan, with Dynecol Inc. at #4, Petro-Chem at #5, and Detrex Corp at #9.

Source: National Biennial RCRA Hazardous Waste Report (2011 Data) http://www.epa.gov/osw/inforesources/data/br11/state11.pdf

EQ Detroit is a hazardous waste facility located at 1923 Frederick St. at St. Aubin and Ferry St. just east of Poletown. It is the state of Michigan's #2 hazardous waste management facility, #2 waste receiver, #4 hazardous waste shipper, and #19 (out of 467) hazardous waste generator. It employs 45 people and has $5.4 million in estimated annual revenue. There are 5,706 people living within a 3-mile radius of the site, 83% of whom are people of color. It is in compliance with its air permit, but has been in noncompliance with its hazardous waste permit every quarter over the past three years. The last EPA inspection took place April 9, 2013, and the facility is currently in violation of its hazardous waste permit. (http://epa-sites.findthedata.org/l/293978/Eq-Detroit-Inc)

Marathon Petroleum Company is the nation's #4 petroleum refinery, located on South Fort St. in 48217. It employs approximately 500 people and 150 contract workers; first quarter earnings in 2013 amounted to $725 million. Marathon is considered by the EPA to be a high priority violator (HPV) of its air permit. It has been in noncompliance with its air permit for 12 out of the the last 12 quarters. The last EPA air inspection took place in May 2013.

To look up more specific information about these facilities and others that may be in your area, please visit the EPA's Enforcement and Compliance History Online (ECHO) website, http://www.epa-echo.gov/echo/index.html.

INDOOR AIR/ ENVIRONMENTAL QUALITY

Indoor environmental quality (IEQ) refers to the quality of a building's environment in relation to the health and well-being of those who occupy space within it. IEQ is determined by many factors, including lighting, air quality, and damp conditions. Indoor environments are highly complex, and building occupants may be exposed to a variety of contaminants (in the form of gases and particles) from office machines, cleaning products, construction activities, carpets and furnishings, perfumes, cigarette smoke, water-damaged building materials, microbial growth (fungal, mold, and bacterial), insects, and outdoor pollutants. Other factors such as indoor temperatures, relative humidity, and ventilation levels can also affect how individuals respond to the indoor environment.

Understanding the sources of indoor environmental contaminants and controlling them can often help prevent or resolve building-related worker symptoms. (http://www.cdc.gov/niosh/topics/indoorenv/)

INTEGRATED WASTE MANAGEMENT HIERARCHY

Designed to show the most environmentally preferable options for waste management, the hierarchy places emphasis on reducing, reusing, and recycling the majority of wastes. Reducing municipal solid waste (MSW) generation is the most effective way to address waste management costs and prevent the use of virgin materials. Reusing materials generated is the second-best method. Capturing the material value of MSW through recycling should be considered next. Source-separated yard waste can be composted aerobically to produce a soil conditioner product or it can be used in landfills, in place of soil, as alternative daily cover. Source-separated mixed food and yard wastes can be anaerobically digested to generate methane for energy generation and a compost product that can provide soil amendment value. Combustion or gasification with energy recovery, or waste-to-energy (WTE), is the environmentally preferable route for mixed solid wastes that are neither recyclable nor compostable. From an environmental standpoint, landfilling MSW is the least preferred option.

EPA's Hierarchy of Waste Management

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LAND CONSERVANCY

Land conservancies are nonprofit organizations dedicated to protecting land by acquiring (through donations, agreements with property owners called conservation easements, partnerships with government, or purchase), restoring, and maintaining natural areas. In 2003, the Urban Land Conservancy was established in metro Denver, Colorado, to acquire, develop, and preserve community real estate assets in urban areas for community benefit. (http://www.urbanlandc.org/)

LEGACY EXPOSURE

Exposure to a chemical after it has gone out of use but has not been properly disposed of or detoxified. These chemicals can cause health problems from respiratory irritation to neurological impairment to cancer.

LIFE CYCLE COST

Life cycle costing is a method of economic analysis for all costs related to building, operating, and maintaining a project over a defined period of time. Assumed escalation rates are used to account for increases in utility costs over time. Future costs are expressed in present day dollars by applying a discount rate. All costs and savings can then be directly compared, and fully-informed decisions can be made. (http://www.green.harvard.edu/theresource/newconstruction/life-cycle-costing)

Example:
"Full cost accounting for the life cycle of coal" Annals of the New York Academy of Sciences. http://solar.gwu.edu/index_files/Resources_files/epstein_full%20cost%20of%20coal.pdf

LOW IMPACT DEVELOPMENT TECHNOLOGIES

Low Impact Development uses the basic principle that is modeled after nature: manage rainwater where it lands.

Example 1: Green roofs are a conventional roof with a thin layer of vegetation, usually consisting of sedum species, to capture stormwater and reduce energy usage.

Source: Lawrence Tech University

Green roof with sedum, Lawrence Technological University

Example 2: Native vegetation uses local plants for landscaping, converting areas away from turfgrass, and establishing buffers along water bodies. Native plants are more tolerant of drought, insects, disease, and can infiltrate stormwater better than turfgrass or ornamental plants.

Source: Wayne County Dept of Public Services

Ford Road-Outer Drive Grow Zone

Example 3: Rain gardens, bioswales, planter boxes include the use of native plants to manage stormwater and allow it to infiltrate the soil. Rain gardens are typically smaller in size, while bioswales are linear and provide both infiltration and movement of water.

Source: Huron Pines

Typical Grayling Rain Garden

Source: SE Michigan Council of Governments (SEMCOG)

MULTI-AGENCY ENVIRONMENTAL CRIME TASK FORCE

"Special Agents within EPA's Criminal Investigation Division coordinate with other law enforcement officials and environmental agencies by serving on Environmental Crime Task Force Teams. These task forces work together to strategize how to better support the enforcement of environmental crime and to deter crime before it happens. Task Force members share information and provide knowledge and support to each other." (EPA)

Local Group: Multi-Agency Environmental Crimes Task Force
Geographic Area: Southeast Michigan
Telephone Number: 734-692-7650
Frequency of Meetings: Quarterly
Participants: U.S. Attorney's Office, Michigan Attorney

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General's Office, Macomb County Prosecutors Office, U.S. Fish and Wildlife Service, Federal Bureau of Investigation, Michigan Department of Environmental Quality, Wayne County Prosecutor's Office, Army Criminal Investigation Division, U.S. Coast Guard, Ontario Ministry of the Environment, Environment Canada, Department of Homeland Security-Immigration and Customs Enforcement

NON-ATTAINMENT AREA

An area where air pollution persistently exceeds levels set by the EPA. Such a designation only takes place after the pollution levels have exceeded the federal standards for several consecutive years.

NON-MOTORIZED TRANSPORTATION

Also known as "Active Transportation" or "Human-Powered Transportation," non-motorized transportation includes walking and bicycling, as well as small-wheeled transport (skates, skateboards, push scooters) and wheel chairs.

NON-POINT SOURCE POLLUTION

Air or water pollution that does not have one specific source, and results from the cumulative effect of everyday activities. For example, fertilizer, motor oil, litter, or pesticides can be washed by stormwater into our combined stormwater and sanitary sewers. When the system is overwhelmed, sewage can go straight to the rivers without treatment.

OFF-ROAD PATHS

Shared between cyclists and pedestrians, not on a road.

Courtesy: Greenways Coalition

Dequindre Cut at RiverWalk entrance

PCBS

PCBs (Polychlorinated Biphenyl) belong to a broad family of man-made organic chemicals known as chlorinated hydrocarbons. PCBs were domestically manufactured from 1929 until their manufacture was banned in 1979. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. Due to their nonflammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications, including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and many other industrial applications.

Once in the environment, PCBs do not readily break down and therefore may remain for long periods of time cycling between air, water, and soil.

PCBs can accumulate in the leaves and above-ground parts of plants and food crops. They are also taken up into the bodies of small organisms and fish. As a result, people who ingest fish may be exposed to PCBs that have bioaccumulated in the fish they are ingesting. PCBs have been demonstrated to cause cancer, as well as a variety of other adverse health effects on the immune system, reproductive system, nervous system, and endocrine system. (http://www.epa.gov/epawaste/hazard/tsd/pcbs/about.htm)

PERMIT

There are many different types of permits, including: air, awning, building, construction, demolition, electrical, mechanical, sidewalk, and sign permits. A permit is "an authoritative or official certificate of permission; license." (http://dictionary.reference.com/browse/permit?s=t)

Air permit: An air permit is a legal document that lists what your business must do in order to comply with the state and federal air pollution laws. Air permits may contain emission limitations, work practice standards, record-keeping requirements, equipment-monitoring requirements, and reporting obligations. Failure to follow the requirements listed in your air permit could result in violations of state and federal laws. (http://dnr.wi.gov/topic/CompAssist/Primer/AirMgmt/Definitions.html)

Building permit: A building permit gives you legal permission to start construction of a building project in accordance with approved drawings and specifications. (http://www.lassencounty.org/govt/dept/com_dev/building_division/building_permits.asp#b)

Access the City of Detroit Permit Application Procedure at http://www.detroitmi.gov/DepartmentsandAgencies/

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BuildingsSafetyEngineeringEnvironmental/Divisions/LicensesPermits/Permits/PermitApplicationProcedure.aspx

POINT-SOURCE POLLUTION

Air or water pollution that comes from a single source, such as an oil refinery, a power plant, or a leaking underground storage tank. This type of pollution is regulated by federal laws such as the Clean Water Act and Clean Air Act.

POLLUTION PREVENTION

Reducing or eliminating pollutants by changing production processes, using non- or less-toxic substances, and reusing materials rather than putting them into the waste stream, as well as protecting natural resources. Pollution prevention reduces hazards to public health and the environment related to the release of pollution or contaminants.

PRECAUTIONARY PRINCIPLE

When a policy or action has the potential to harm human or environmental health and there is no scientific consensus on its effects, it is the responsibility of the advocate of the policy or action to prove that it will not be harmful. In other words, "better safe than sorry."

REGIONAL TRANSIT AUTHORITY (RTA)

The RTA was established by the Michigan Legislature and signed by the Governor in 2012 to coordinate, oversee, and improve transit for Macomb, Oakland, Washtenaw, and Wayne Counties, including Detroit. The RTA board is tasked with developing a regional master transit plan for the represented area, coordinating existing transit providers, and raising federal and state funding to implement the plan.

RTA Board of Directors

Governor's Appointee
- Paul Hillegonds, Senior Vice President for Corporate Affairs at DTE Energy, former president of Detroit Renaissance, Republican co-Speaker of Michigan House of Representatives 1993-94 (Chair, non-voting)

Detroit Appointee
- Lisa Franklin, President/Founder of Warriors on Wheels of Metropolitan Detroit and advocate for the disabled

Macomb County Appointees
- Roy Rose, CEO, Anderson, Eckstein and Westrick civil engineering firm
- Julie Gatti, President of Macomb County Bar Association

Oakland County Appointees
- Matthew Wirgau, former deputy administrator and special assistant to U.S. Secretary of Transportation in Reagan Administration and 1994-2008 Chairman of Suburban Mobility Authority of Regional Transportation (SMART)
- Steven Potter, President and Partner of Potter, DeAgostino, O'Dea & Patterson law firm, which represents Oakland County Road Commission

Washtenaw County Appointees
- Elizabeth Gerber, Jack Walker Jr. Professor of Public Policy at UM Ford School of Public Policy, former director of the school's Center for Local, State and Urban Policy (Vice Chair)
- Richard Murphy, Michigan Suburbs Alliance and former Ypsilanti city planner

Wayne County Appointees
- Mark Gaffney, Teamsters Local Union #214 and former President of Michigan AFL-CIO (Secretary)
- Dr. Curtis Ivery, Chancellor of Wayne County Community College District (Treasurer)

Legal Representation: Miller Canfield law firm
RTA Citizen Advisory Committee is to be established in 2013.

RENEWABLE PORTFOLIO STANDARD

A Renewable Portfolio Standard (RPS) provides states with a mechanism to increase renewable energy generation using a cost-effective, market-based approach that is administratively efficient. An RPS requires electric utilities and other retail electric providers to supply a specified minimum amount of customer load with electricity from eligible renewable energy sources. The goal of an RPS is to stimulate market and technology development so that, ultimately, renewable energy will be economically competitive with conventional forms of electric power. Currently, Michigan's RPS requires Michigan electric providers to achieve a retail supply portfolio that includes at least 10% renewable energy by 2015, and Waste-to-Energy (incineration with energy recapture) qualifies as renewable energy.

SCHOOL SITING AND ENVIRONMENT

Detroit has acres of land that is contaminated by old industrial activity, and land that is exposed to contamination from current industrial activity. There are standards and laws intended to protect residential areas from industrial and highway pollution, but not for schools—schools can be sited anywhere. Two studies that have researched the health and

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educational impact of air pollution on schools are finding that school location matters—for both children's physical health and their brain development. Many factors contribute to poor educational outcomes, and the health impact of environmental pollution cannot be ignored.

SUSCEPTIBLE POPULATIONS

Certain groups of people may respond more severely to pollution exposure. For example, a young child whose detoxification processes are not yet fully developed may be more susceptible to pollution exposure. An individual with asthma may also be more susceptible to pollution exposure, which could trigger an asthma attack.

TRANSIT ORIENTED DESIGN

Typically, TOD occurs within 1/4 to 1/2 mile, or within a 5 to 10 minute walk, of a transit station. TOD is characterized by: a mix of uses, moderate to high density development, pedestrian orientation/connectivity, transportation choices, including walking, biking, and the use of transit, and urban design and landscape features that integrate surrounding uses and streets. (http://www.nhhsrail.com/pdfs/TODcasestudydraft_100311.pdf)

VULNERABLE POPULATIONS

Certain groups of people are more likely to be exposed to pollution, often due to variations in the hazards themselves. Vulnerable populations may live near industrial zones or heavily trafficked roads.

A child with asthma living near a freeway or industrial area would be both vulnerable and susceptible. Because Detroit has high rates of asthma, child poverty, and land/air contamination, many local communities are both vulnerable and susceptible to environmental hazards.

WASTE-TO-ENERGY

Waste-to-energy (WtE) is the process of generating energy in the form of electricity and/or heat from the incineration of waste. WtE is a form of energy recovery.

ZONING CLASSIFICATION

A designation that is applied to a parcel of land reflecting permitted uses and dimensional requirements. Some common zoning classifications include residential, commercial, industrial, and recreational. (http://zoningmatters.org)

The Detroit Zoning Ordinance regulates land use throughout the city. Zoning identifies and describes what is and is not allowed in a particular area. For example, home-based businesses, when located in an area zoned "R3" (Low Density Residential), are permitted to post exterior signs and hire nonresident employees. However, in an area zoned "R2" (Two Family Residential), they are prohibited from doing so. Each zoning classification has its own unique requirements, and community plans can utilize these classifications to encourage (or discourage) the types of activity that are desired within a particular neighborhood.

In addition to land use, zoning may also regulate the form and layout of individual buildings. In many cases, the zoning ordinance will define requirements for building height, orientation, open space, parking, and other design elements. Sometimes, the zoning of a particular area may be inconsistent with the long-term vision of community stakeholders. When this happens, communities may wish to propose a change to the zoning ordinance, using the process outlined in the City of Detroit Community Planning Guidebook.

Detroit's zoning maps and the complete Zoning Ordinance are available for download at http://www.detroitmi.gov/CityCouncil/CouncilDivisions/CityPlanningCommission/ZoningandLandUse/ZoningMapIndex.aspx

Source:
City of Detroit Community Planning Guidebook (page 44)
Detroit, Michigan Zoning Map index
(http://www.detroitmi.gov/Default.aspx?tabid=3093)

The DEA is a tool for all of us to use in our homes, our neighborhoods, and our great city of Detroit.

Hold our policy-makers and leaders accountable.

Vision is just a step from reality.

Find us at www.detroitenv.org