



AGENDA
BIRMINGHAM AD HOC ENVIRONMENTAL SUSTAINABILITY COMMITTEE
WEDNESDAY MAY 29th, 2024
BIRMINGHAM CITY HALL, 151 MARTIN ST, COMMISSION ROOM, BIRMINGHAM MI *
******* 6:00 PM*******

- 1) **Call to Order**
- 2) **Roll Call**
- 3) **Review of the Agenda**
- 4) **Approval of the AHESC Minutes of [April 29th, 2024](#)**
- 5) **Study Session**
 - A. **[SCAP Draft](#)**
 - B. **[GHGI, Community Comparison, SEMCOG GHGI, Forecasts](#)**
- 6) **Open to the Public for Items Not on the Agenda**
- 7) **Miscellaneous Communications**
 - A. **[Updated Project Schedule](#)**
 - B. **[Recycling Survey Results](#)**
 - C. **[Public Engagement Phase 2 Update](#)**
- 8) **Draft Agenda – [June 17th, 2024](#)**
- 9) **Adjournment**

Future Meeting Dates:

June 17th, 2024

July 29th, 2024

*Please note that board meetings will be conducted in person once again. Members of the public can attend in person at Birmingham City Hall, 151 Martin St., or may attend virtually at:

Link to Access Virtual Meeting: <https://bhamgov-org.zoom.us/j/87587439403>

Telephone Meeting Access: 877 853 5247 US Toll-free

Meeting ID Code: 875 8743 9403

Notice: Individuals requiring accommodations, such as interpreter services for effective participation in this meeting should contact the City Clerk's Office at [\(248\) 530-5115](tel:2485305115) at least on day in advance of the public meeting.

Las personas que requieren alojamiento, tales como servicios de interpretación, la participación efectiva en esta reunión deben ponerse en contacto con la Oficina del Secretario Municipal al [\(248\) 530-5115](tel:2485305115) por lo menos el día antes de la reunión pública. (Title VI of the Civil Rights Act of 1964).

A PERSON DESIGNATED WITH THE AUTHORITY TO MAKE DECISIONS MUST BE PRESENT AT THE MEETING.

City Of Birmingham
Regular Meeting Of The Ad Hoc Environmental Sustainability Committee
April 29, 2024

City Commission Room
151 Martin Street, Birmingham, Michigan

Minutes of the regular meeting of the City of Birmingham Ad Hoc Environmental Sustainability Committee held on April 29, 2024. The meeting was convened at 6:00 p.m.

1) Roll Call

Present: Harvey Bell, Lois DeBacker (left 8:05 p.m.), Lara Edwards, Rachna Gulati, Debra Horner, Joe Mercurio, Jess Newman, Danielle Todd, Dani Torcolacci; Student Representatives Josie Carroll, Will Clemans

Absent: None

Staff: City Planner Blizinski; Planning Director Dupuis

2) Review of the Agenda

3) Approval of the AHESC Minutes of March 7, 2024

Motion by Mr. Bell

Seconded by Ms. Edwards to approve the minutes of the regular Ad Hoc Environmental Sustainability Committee meeting of March 7, 2024.

Motion carried, 9-0

VOICE VOTE

Yeas: Bell, Horner, Edwards, Newman, Gulati, DeBacker, Mercurio, Todd, Torcolacci

Nays: None

4) Study Session

A. GHGI Report

CP Blizinski presented the item. Staff answered informational questions from the AHESC.

During AHESC discussion, AHESC member comments were as follows:

- It was surprising that City emissions represented less than 2% of overall emissions. It suggests that the focus should be on encouraging residents and businesses to reduce their emissions.
- It would be helpful to note that the communitywide solid waste data did not include information from apartment buildings or businesses. It would also be helpful to note that the compost data largely included yard waste and little else.
- If there are only two industrial uses emitting the noted amount of greenhouse gasses, it might be appropriate to see if the City could discuss those emissions levels with those users.

- The AHESC will need to consider how to address the reduction of solid waste with businesses given that the GHGI does not provide data on that item.
- It would be helpful to compare some of this data to other Michigan communities in order to clarify any unique challenges Birmingham might be facing.
- It will be important to strategically make use of the data.

B. SCAP Draft Goals

PD Dupuis presented the item. Staff answered informational questions from the AHESC.

During AHESC discussion, AHESC member comments were as follows:

- The county's goal for reducing total landfilled solid waste may be 45% rather than 25%. The City's goal should be brought into alignment with the county's goal.
- Studies show that education alone does not change behavior, and so communicating that sustainability is 'cool' and providing occasional incentives will be beneficial.
- Reducing the barriers to sustainability is a priority. The inclusion of ordinance changes in the SCAP goals will assist in that process.
- Since the GHGI indicates the need to reduce residential energy consumption, that should be more clearly integrated into the SCAP goals.
- The tone should be set that achieving the plan will require shared ownership from the municipal, residential, and commercial sectors.
- The water and stormwater actions should prioritize mitigating residential flooding.
- Depending on potential upcoming state legislative actions, it might be appropriate to heavily promote community solar in the future.
- Resident education should emphasize that water and stormwater management can result in reductions of residents' stormwater bills.
- It would be beneficial to clarify:
 - The sources of the data and how figures were calculated,
 - High-, medium-, and low-impact goals,
 - How accomplishment of the goals will be measured,
 - The climate benefits of increasing native and naturalized areas, and,
 - The specific carbon reduction goals for the municipal, residential, and commercial sectors.
- Goals could be added regarding:
 - Increasing certain habitats' quality, like the area in Martha Baldwin Park,
 - Incentivising or requiring homes being sold to receive and list their Home Energy Rating System (HERS) score,
 - Adopting greener building codes,
 - Collaborating on sustainability goals with other local partners,
 - Increasing recycling in the community,
 - Maximizing participation in energy efficiency and conservation incentive programs,
 - Working with or encouraging the school system to adopt sustainable practices,
 - Encouraging the use of heat pumps,
 - A marketing campaign to publicize sustainable changes in the community in order to generate interest, enthusiasm, and further adoption, and,
 - Changing modes of transportation in order to decrease emissions.

- Creating community spirit and competitions around these efforts in order to promote engagement would be useful.
- The image on the emissions page should be something indicating lowered emissions, instead of a classic car.
- It would be useful to see whether a backflow valve incentive program still exists and could be included in the actions.

C. Survey Draft

PD Dupuis presented the item. Staff answered informational questions from the AHESC.

The AHESC discussed updates to the draft survey. At the AHESC's request, Ms. Horner volunteered to work with staff regarding changes to the survey wording.

The following topics were briefly discussed:

- Including the draft goals within the introduction to the survey,
- Ways of further involving the business community, and,
- Ways of determining how cost considerations might factor into survey respondents' answers.

5) Open to the Public for Items Not on the Agenda

6) Miscellaneous Communications

A. Updated Project Schedule

7) Draft Agenda

8) Adjournment

No further business being evident, the meeting was adjourned at 8:25 p.m.

Leah Blizinski, City Planner



Laura Eichenhorn, City Transcriptionist

BIRMINGHAM

HEALTHY CLIMATE PLAN

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Acknowledgments

City of Birmingham Sustainability and Climate Action Plan

The City of Birmingham would like to acknowledge the people that have contributed their time and expertise to creating the Birmingham Green: Healthy Climate Plan. Their continued dedication to sustainability and climate action are a valuable public service and the community of collaboration that has been built over this time will serve Birmingham for many years to come.

The Birmingham Community

To all of the members of the Birmingham community that have responded to surveys, participated in events, had important conversations, and supported this idea from the very beginning.

Birmingham Planning Department

Nicholas Dupuis, AICP, Planning Director
Leah Blizinski, AICP, City Planner
Summer Aldred, City Planning Intern

Birmingham Ad Hoc Environmental Sustainability Committee

Jessica Newman, Chairperson
Debra Horner, Vice Chairperson
Harvey Bell
Lois Debacher
Lara Edwards
Rachna Gulati
Joseph Mercurio
Danielle Todd
Daniella Torcolacci
Josie Carroll, Student Representative
Will Clemans, Student Representative

Birmingham City Commission

Elaine McLain, Mayor
Katie Shaffer, Mayor Pro Tem
Clinton Baller
Brad Host
Andrew Haig
Therese Longe
Anthony Long

Birmingham City Staff

City Manager's Office

Jana Ecker, City Manager
Melissa Fairbairn, Assistant City Manager

Community Development

Melissa Coatta, City Engineer
Bruce Johnson, Building Official
Jeff Zielke, Assistant Building Official
John Galik, Superintendent of Building Facilities

Department of Public Services

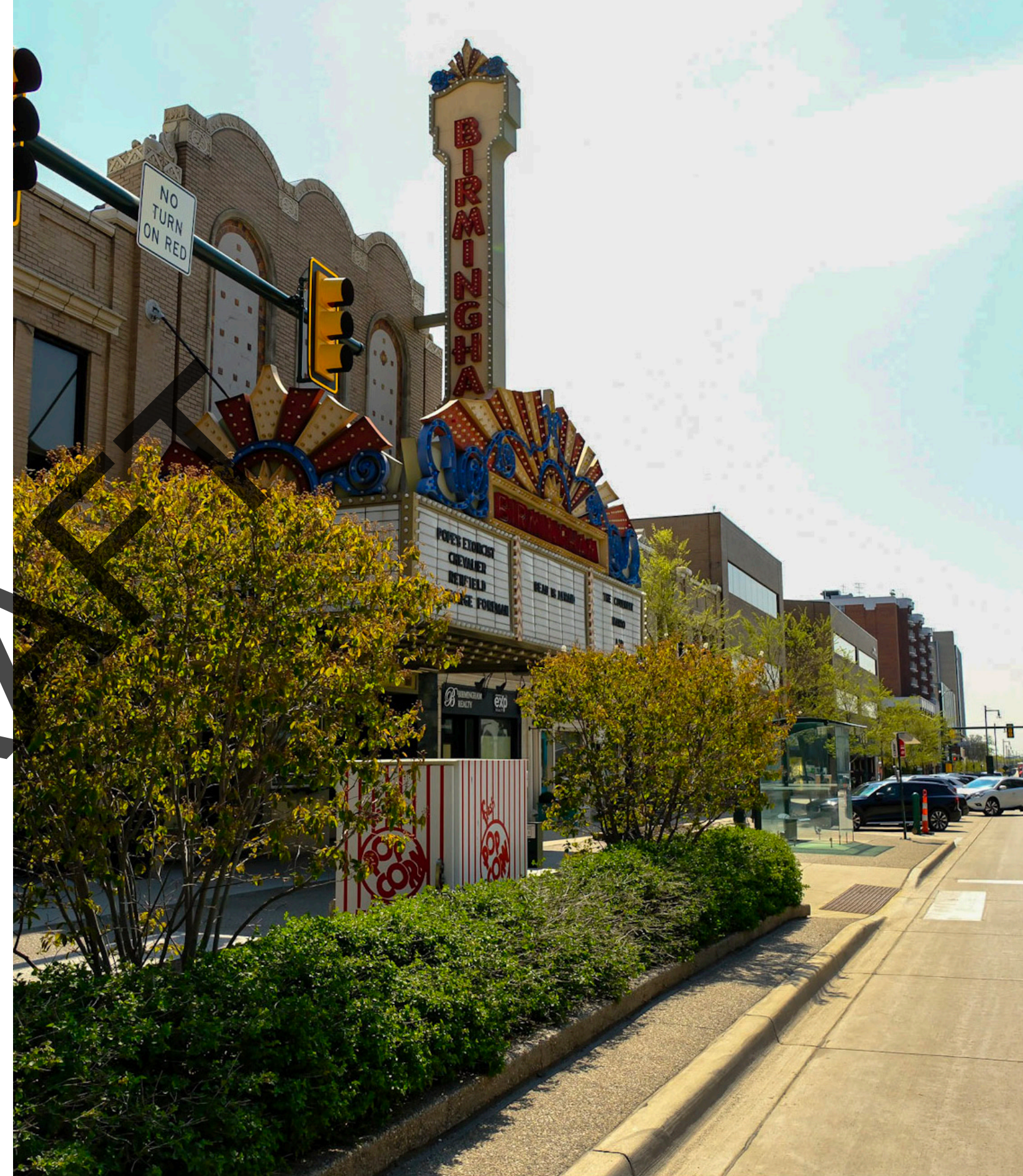
Scott Zielinski, Director of Public Services
Brendan McGaughey, Parks and Forestry Foreman
Brad McNab, Parks and Forestry Assistant Foreman

Public Safety

Scott Grewe, Police Chief
Paul Wells, Fire Chief

Photography

Chris Cook



Welcome Letter

To the Birmingham Community,

These days, we are thinking green – Birmingham Green to be exact. In fact, the City has been thinking green since 1929 when the General Village Plan was adopted in part to study a growing population and ensure the preservation and protection of the natural beauty of Birmingham.

Fast forward nearly 100 years to 2024. The scientific consensus is clear that climate change is here, and that it could pose one of the greatest challenges of our time. The City Commission has taken quick and decisive action to begin a rigorous planning effort to draw back greenhouse gas emissions in the City while also building resiliency through more sustainable operations, deliberate improvements to public space, and collaboration across the board.

Recognizing that Birmingham is in an excellent position to become a leader in sustainability and climate action, we can start by building on our strengths. Birmingham has been a Tree City USA community for over 45 years. Protecting and expanding our tree canopy has always been important to our community and will continue to be so. Additionally, parks, trails and green space cover more than 10% of the City's total acreage alone. Included in this is a jewel, the Rouge River corridor, which provides not only recreational opportunities for people, but also a habitat for thousands of species of flora and fauna.

With that, we are proud to introduce the Birmingham Green: Healthy Climate Plan. This plan combines broad sustainability and climate action concepts into an actionable, equitable and far-reaching effort to ultimately achieve carbon neutrality in 2050. Birmingham Green challenges us to shed our dependence on fossil fuels, build resilience against extreme weather, cultivate flourishing biodiversity, and maintain our thriving urban tree canopy.

We invite you to engage with this plan and use it to become our partner in creating a stronger, more sustainable and resilient Birmingham.

Sincerely,

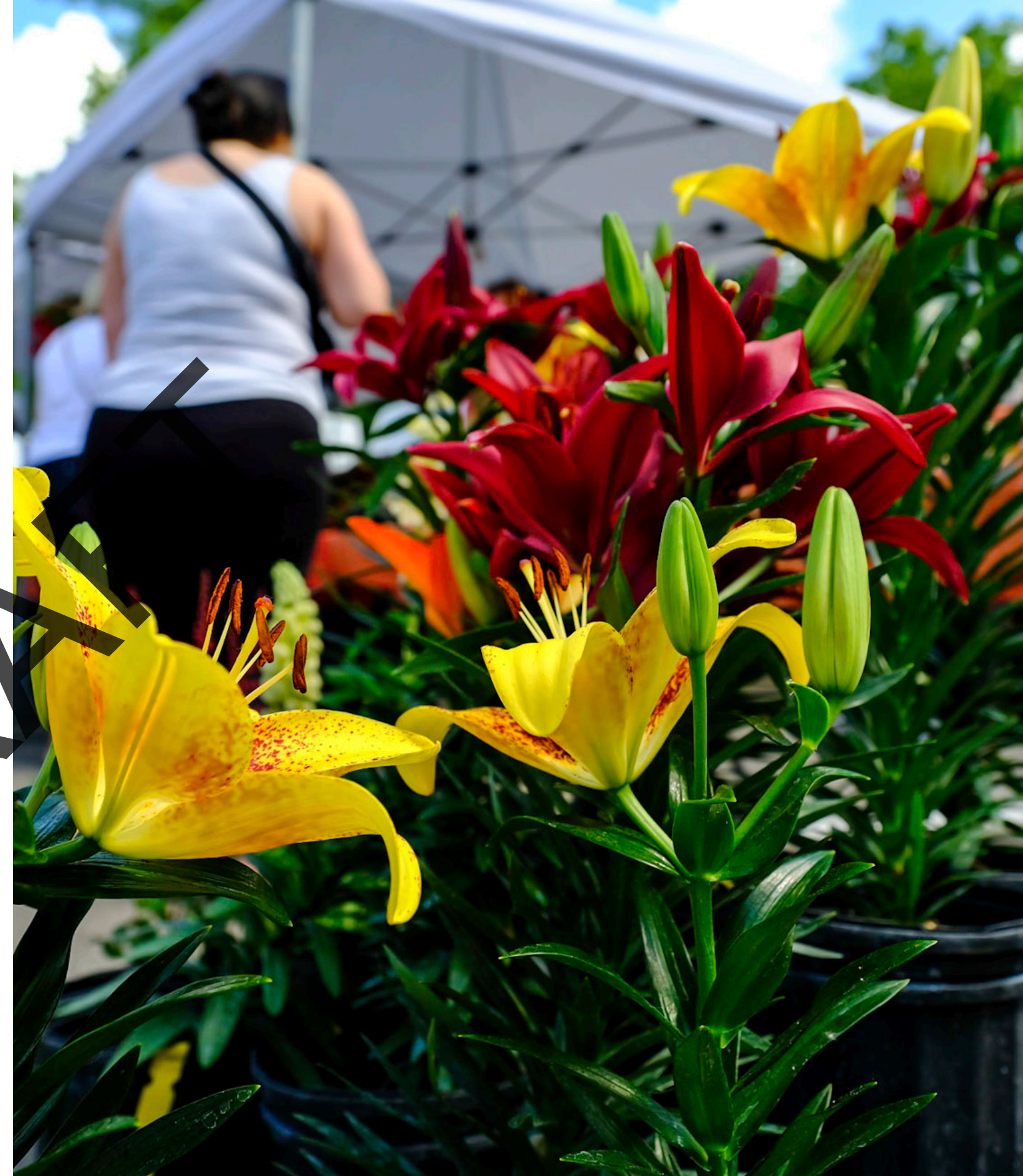


Table of Contents

EXECUTIVE SUMMARY

Welcome.....	1
Vision	2
Plan Overview	#
Summary of Key Actions	#

INTRODUCTION

Land Statement.....	#
Sustainability and Climate Action.....	#
Birmingham Context	#

PLAN DEVELOPMENT

Administration	#
Community Partnerships and Programming	#
Annual Budget and Funding Sources	#

CLIMATE RISKS AND VULNERABILITIES

U.S. Climate Vulnerability Index.....	#
Exposure.....	#
Sensitivity and Adaptive Capacity.....	#
Key Findings	#

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ACTION PLAN

Water & Stormwater	#
Waste	#
Buildings & Facilities	#
Natural Resources	#
Municipal Operations.....	#
Quality of Life	#

EMISSIONS

Community-Wide Greenhouse Gas Inventory (GHGI)	#
LGO GHGI.....	#
Forecasts.....	#

CONCLUSION

Summary of Actions.....	#
.....	#

GLOSSARY

APPENDICES

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EXECUTIVE SUMMARY



Birmingham Green Healthy Climate Plan Vision Statement

*The Birmingham community will be a **regional leader in sustainability and climate action** by instituting policies and practices that enhance the natural & built environment, improve quality of life, and foster equity & resiliency towards a vibrant future.*



Birmingham Green Healthy Climate Plan Objectives

Facilitate transition to renewable energy and decarbonization



Integrate equity and address environmental injustices



Restore natural areas and increase native biodiversity



Promote nature-based solutions as standard practice



Increase materials management and reduce waste



Mitigate extreme weather impacts on the community



Prioritize sustainable practices in all municipal and private projects





Plan Overview

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Summary of Key Actions

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REDUCE CARBON EMISSIONS BY

25%

BY 2030

CARBON NEUTRAL BY

2050

**INCREASE PERVIOUS SURFACE
AREA BY**

20%

BY 2030

PERVIOUS SURFACE TOTAL

65%

BY 2050

Summary of Key Actions

	Initial Cost	Potential Partners	GHG Reduction
Water & Stormwater			
Infiltrate or capture an additional 100,000 gallons of stormwater by 2035			
Adopt a subsidized residential rain garden program			
Reduce barriers to local stormwater rebate programs			
Develop a tracking system for green stormwater infrastructure			
Form new alliances and improve existing alliances with municipalities and organizations that address stormwater runoff to the Rouge River			
Require green infrastructure installations in every public infrastructure and development project			
Incentivize green stormwater infrastructure installations on commercial properties			
Reduce indoor & outdoor potable water usage			
Require stormwater retention or infiltration on all new single-family construction			
Adopt Oakland County stormwater standards for all developments city-wide .5 acre or more			
*Based on about 25% of 7,216 improved single family residential properties doing at least 50 gallons.			

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	Initial Cost	Potential Partners	GHG Reduction
Waste			
Reduce total landfilled solid waste by 2,390 tons (25%) by 2035			
Develop a city-wide food waste composting program			
Increase and improve quality of recyclables in curbside carts through direct education campaigns and audits			
Invest in new local facilities and services for recycling food waste, electronics, textiles, hazardous materials and other specialty recycling			
Create a deconstruction ordinance to encourage the reuse and repurposing of building material during construction projects			
Lobby Southeastern Oakland County Resource Recovery Authority to improve data collection for its member communities			
Expand recycling opportunities in all new commercial and multifamily development projects			
Develop bi-annual recycling events for hard to recycle materials			
Pilot a zero-waste policy for City-managed events			
Buildings & Facilities			
Reduce greenhouse gas emissions from buildings and facilities by 57,500 metric tons (50%) by 2035			
Revise and expand ordinances related to solar photovoltaics and other alternative energy sources			
Remove any barriers to the use of geothermal energy strategies in the City			
Increase EV charging network city-wide			
Produce feasibility studies for solar photovoltaics on all city buildings and/or sites			
Expand the City's historic preservation program to protect existing buildings and character.			
Develop a process for comprehensively monitoring energy usage for all city buildings			

Summary of Key Actions

	Initial Cost	Potential Partners	GHG Reduction
Natural Resources			
Increase native and naturalized areas in the City by as much as 450 acres by 2035*			
Protect and expand the tree canopy in each census tract of the City to at least 40%			
Promote the transition of private gardens and landscapes to native species and remove any barriers to such			
Study the issue of clear-cutting of lots in the City with special attention tree removal during construction projects			
Transition 100% of municipal plantings to native plantings			
Revisit streetscape standards to include better environments for street trees and plantings			
Prioritize the health of the Rouge River corridor and follow the recommendations of the Birmingham Plan 2040 related to the Rouge River			
*1,084 impervious acres, goal is 768 impervious acres, which is 25% of the City.			

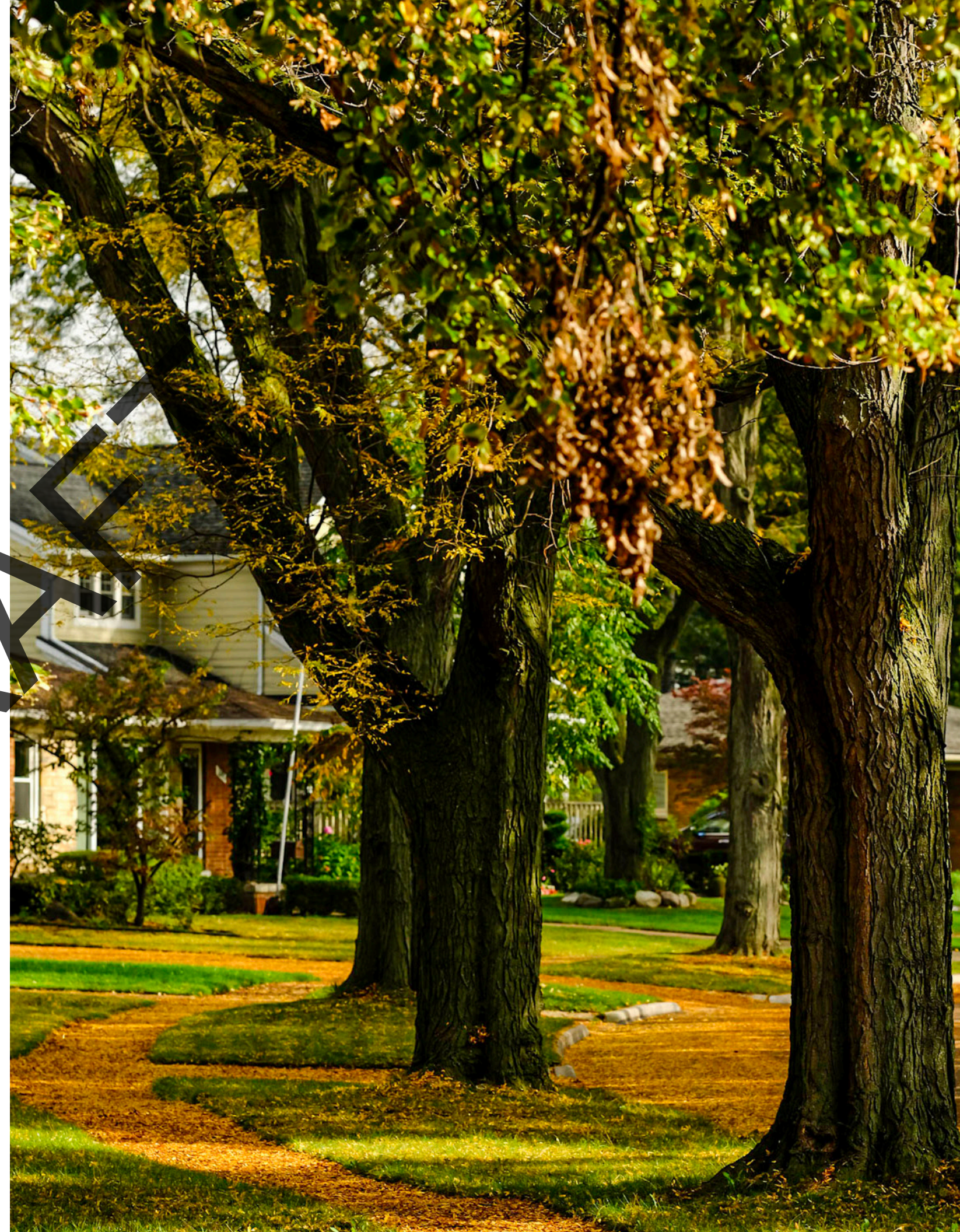
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	Initial Cost	Potential Partners	GHG Reduction
Municipal Operations			
Institutionalize carbon reduction and climate resilience in City government by 2035			
Transition all administrative and light-duty municipal internal combustion engine vehicles and equipment to alternative fuel			
Hire a full-time sustainability staff person			
Create a sustainability fund for use by multiple City Departments			
Establish a sustainable purchasing program and an internal administrative regulation			
Decrease vehicle miles traveled by municipal staff by XXX miles through incentive programs			
Adopt an anti-idling policy for all non-emergency City vehicles			
Identify and maintain a database of new and recurring grant opportunities geared towards sustainability and climate action.			
Create, by ordinance, an Environmental Sustainability Committee to oversee and make recommendations on a variety of issues related to sustainability and climate action.			
Provide recycling opportunities in all public parks and other public spaces.			
Phase out the use of all chemical pesticides and fertilizers on city property and in park maintenance operations			
Increase or require specialized training for all workers who manage natural spaces			
Create a sustainability web page to act as a landing page for all city sustainability initiatives as well as to inform and educate residents on sustainable topics, best practices and relevant state and regional programs			

Summary of Key Actions

	Initial Cost	Potential Partners	GHG Reduction
Quality of Life			
Publish citywide and community-level quality-of-life metrics on equity and sustainability by 2030			
Develop the newly acquired YMCA building and St. James Park into a nexus of intergenerational recreation opportunities including a resilience hub that will serve as a warming and/or cooling center as needed and better connect residents to city services.			
Permit community gardens in select parks and public open space			
Include educational opportunities in sustainability and climate action projects that are accessible to everyone			
Install one air quality monitoring station in the City and connect to the EGLE network			
Consider internal air quality monitoring systems in and around all municipal buildings			
Continue to implement the City's multi-modal transportation goals			
Support and expand upon the sustainable land use decisions of the Birmingham Plan 2040			
Remove barriers to food production in residential zones and on residential properties			
Transportation			
Reduce greenhouse gas emissions from passenger vehicles by 10,000 metric tons (15%) by 2035			
Promote the use of mass transit in the City through enhanced transit stops.			
Continue to implement the City's multi-modal transportation goals			
Introduce bike sharing systems such as MoGo across the City			
Advocate for more frequent and reliable multi-modal transit service			

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INTRODUCTION

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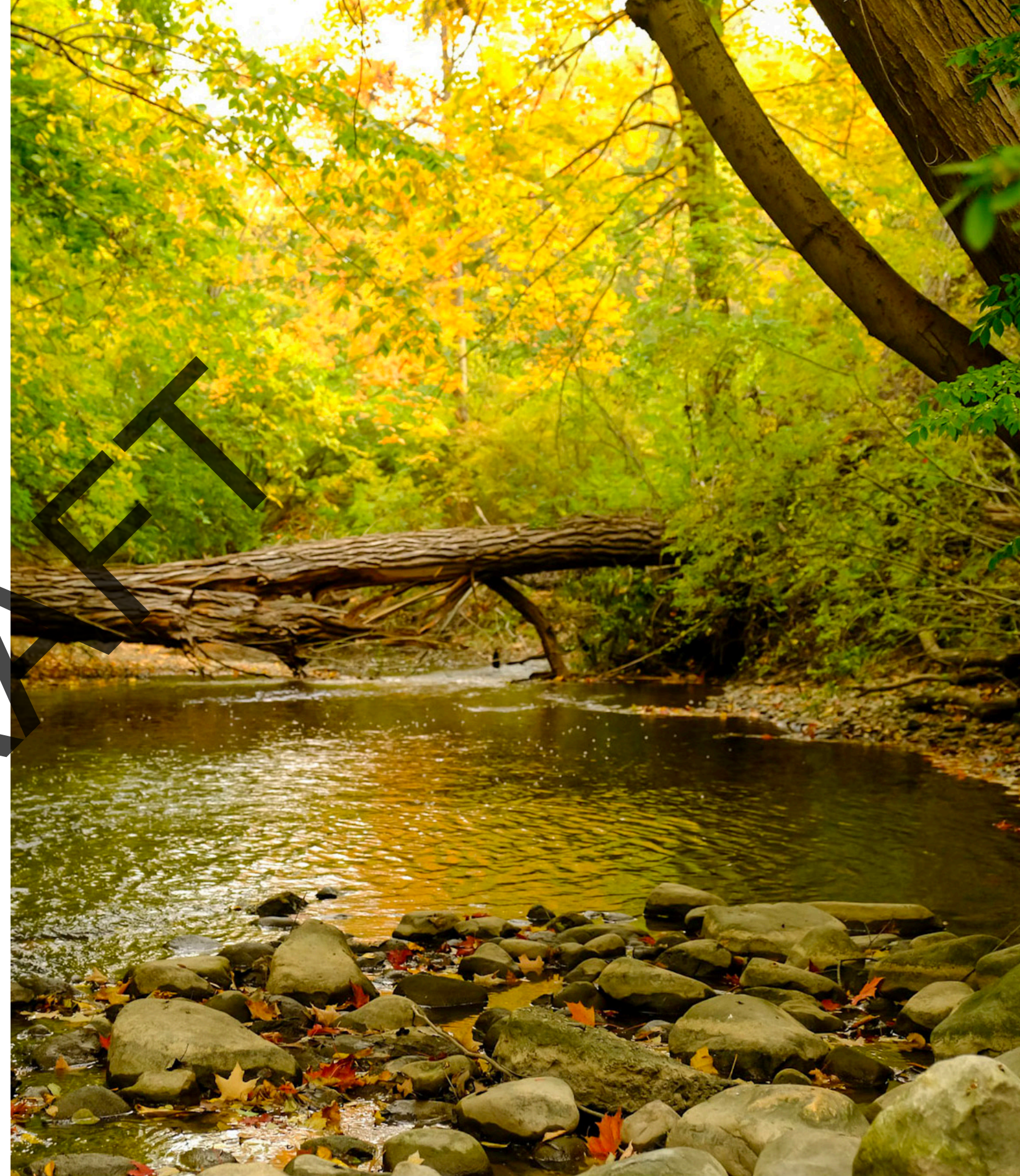
Land Statement

Birmingham, Michigan sits on land made by shallow seas and glacial formations, with the last glaciers receding about 14,000 years ago. Birmingham is situated on the traditional land of the Anishinaabek – Three Fires Confederacy, the Odawa (Ottawa), Ojibwe (Chippewa), and Bodewadmi (Potawatomi). We recognize that these lands have served as a site of gathering and exchange for Indigenous communities since time immemorial.

We acknowledge the resilience, strength, and ongoing presence of the Indigenous peoples who have stewarded this land throughout the generations. We also recognize the impacts of settler colonialism and the importance of understanding the history of this land. We are committed to learning more about the history and cultures of the Indigenous peoples of this area and to working towards a more just and inclusive future for all who call Birmingham, Michigan, home.

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Sustainability & Climate Change

Sustainability in the context of a city such as Birmingham refers to the our ability to meet the needs of our current population without compromising the ability of future generations to meet their own needs. This concept encompasses various aspects of urban life, including environmental, economic, and social sustainability.

Environmental Sustainability: Cities need to minimize their environmental impact by reducing pollution, conserving resources, and protecting natural habitats. This involves initiatives such as promoting renewable energy, implementing green building practices, and establishing efficient public transportation systems to reduce carbon emissions.

Economic Sustainability: Sustainable cities prioritize economic development that benefits all residents while also preserving resources for future generations. This may involve supporting local businesses, fostering innovation and entrepreneurship, and investing in industries that promote sustainability, such as clean technology and green infrastructure.

Social Sustainability: Social sustainability focuses on creating inclusive and equitable communities where all residents have access to essential services, opportunities for education and employment, affordable housing, and a high quality of life. This includes promoting social cohesion, addressing issues of inequality and poverty, and ensuring that urban planning and development initiatives prioritize the needs of marginalized populations.

Cultural sustainability is also an important part of community sustainability. It involves preserving and celebrating the cultural heritage and diversity of acity’s residents. This includes protecting historic landmarks, supporting cultural institutions and events, and promoting intercultural dialogue and understanding.

Achieving sustainability in all these aspects requires collaboration and coordination among various stakeholders, including government agencies, businesses, non-profit organizations, and community members. It involves long-term planning, innovation, and a commitment to balancing economic growth with environmental and social responsibility for the benefit of current and future residents of the city.



Climate Change

Naturally occurring gases dispersed in the atmosphere determine the Earth’s climate by trapping solar radiation. This phenomenon is known as the greenhouse effect. Evidence shows that human activities are increasing the concentration of greenhouse gases and changing the global climate. The most significant contributor is the burning of fossil fuels for transportation, electricity generation and other purposes, which introduces large amounts of carbon dioxide and other greenhouse gases into the atmosphere.

Collectively, these gases intensify the natural greenhouse effect, causing global average surface and lower atmospheric temperatures to rise, threatening the safety, quality of life, and economic prosperity of global communities. Although the natural greenhouse effect is needed to keep the earth warm, a human enhanced greenhouse effect with the rapid accumulation of GHG in the atmosphere leads to too much heat and radiation being trapped. The Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report confirms that human activities have caused an increase in carbon emissions. Many regions are already experiencing the consequences of global climate change, and the City of Birmingham is no exception.



Birmingham Context

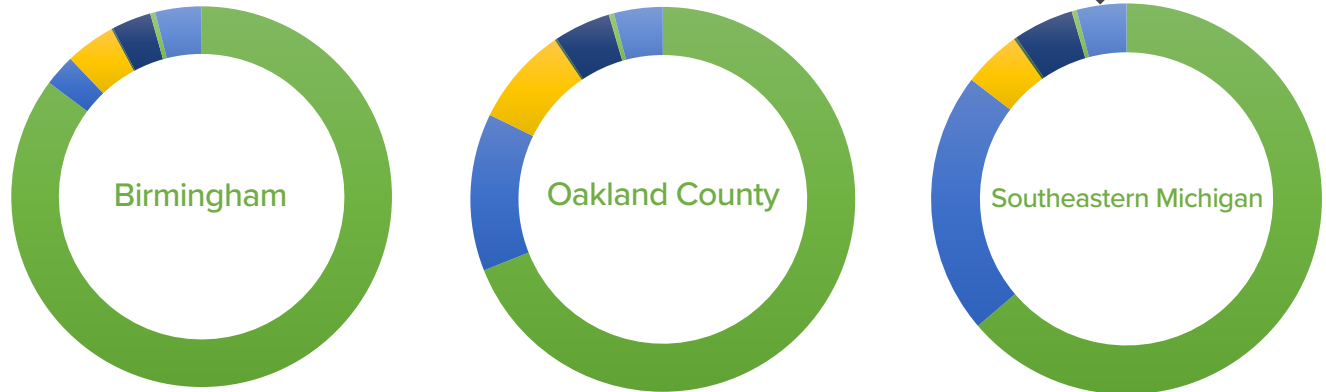
The city of Birmingham, Michigan is located in Oakland County, and is bordered by five communities: Beverly Hills, Bloomfield Hills, Bloomfield Township, Royal Oak, and Troy. Birmingham is vibrant community, with a small-town feel while still being connected to all of the cultural and recreational amenities that an urban area provides. Birmingham boasts a thriving, walkable downtown, providing retail and business opportunities for both the local community and the region. Birmingham is 4.8 square miles in size and is centrally located in Southeastern Michigan between the major cities of Detroit and Pontiac.

Demographics

Population Projection of Birmingham through 2050



Race (Percent)



Population & Age Demographics

21,738 2022 Birmingham Population	42.0 2022 Birmingham Median Age
1,272,264 Oakland County	41.1 Oakland County
4,392,041 Southeastern Michigan	40.1 Southeastern Michigan

Household Demographics

5,432 2010 Families	5,628 2021 Families	\$151,556 2022 Birmingham Median Household Income
2.91 2010 Average Family Size	3.12 2021 Average Family Size	\$90,564 Oakland County \$71,265 Southeastern Michigan
		9,383 2022 Birmingham Households
		530,638 Oakland County 1,762,104 Southeastern Michigan

Economic Demographics

5.5% 2022 Birmingham Poverty Rate	76.3% 2021 Own their home
8.1% Oakland County 13.8% Southeastern Michigan	23.7% 2021 Rent their home

- White
- Black or African American
- Asian
- American Indian and Alaska Native
- Hispanic or Latino
- Native Hawaiian and Other Pacific Islander
- Some Other Race
- Two or more races



Other Recent Planning Efforts

The **Birmingham Plan 2040** (“2040 Plan”) was adopted in May 2023. The 2040 Plan is a comprehensive master plan, which is a document and policy guide designed to help Birmingham conceive a vision of what they want to look like in the future. The City of Birmingham is required to adopt and maintain a comprehensive master plan pursuant to the Michigan Planning Enabling Act. The Birmingham Green: Healthy Climate Plan will exist under the umbrella of the 2040 Plan and will build upon the recommendations within the 2040 Plan while also considering its predecessors, other master plans and sub area plans within the City of Birmingham.

The **Birmingham Parks and Recreation Master Plan** was adopted in December of 2023. The updated plan prioritizes sustainability as one of its core guiding principles. Sustainability is defined in the plan as “a commitment to environmentally responsible practices, ensuring that our parks and recreation facilities continue to thrive for years to come.” The City of Birmingham is required to update its Parks and Recreation plan every 5 years to maintain eligibility for state and federal grants.

Southeast Michigan GREEN is an initiative, led by SEMCOG, to address some of the region’s most pressing challenges – managing floods, fostering climate resilience, improving community health, protecting our natural assets—all while creating vibrant places where people want to live and where businesses will thrive. The report focuses on implementation and provides a regional framework that demonstrates the impact of local projects, positioning them for successful

funding and partnership opportunities. An interactive GREEN Dashboard, online mapping tool, accompanies the report and is a useful tool for looking at specific implementation opportunities within each locality. The GREEN Report and GREEN Dashboard will provide the basis of some site specific implementation recommendations for Birmingham’s Sustainability and Climate Action Plan.

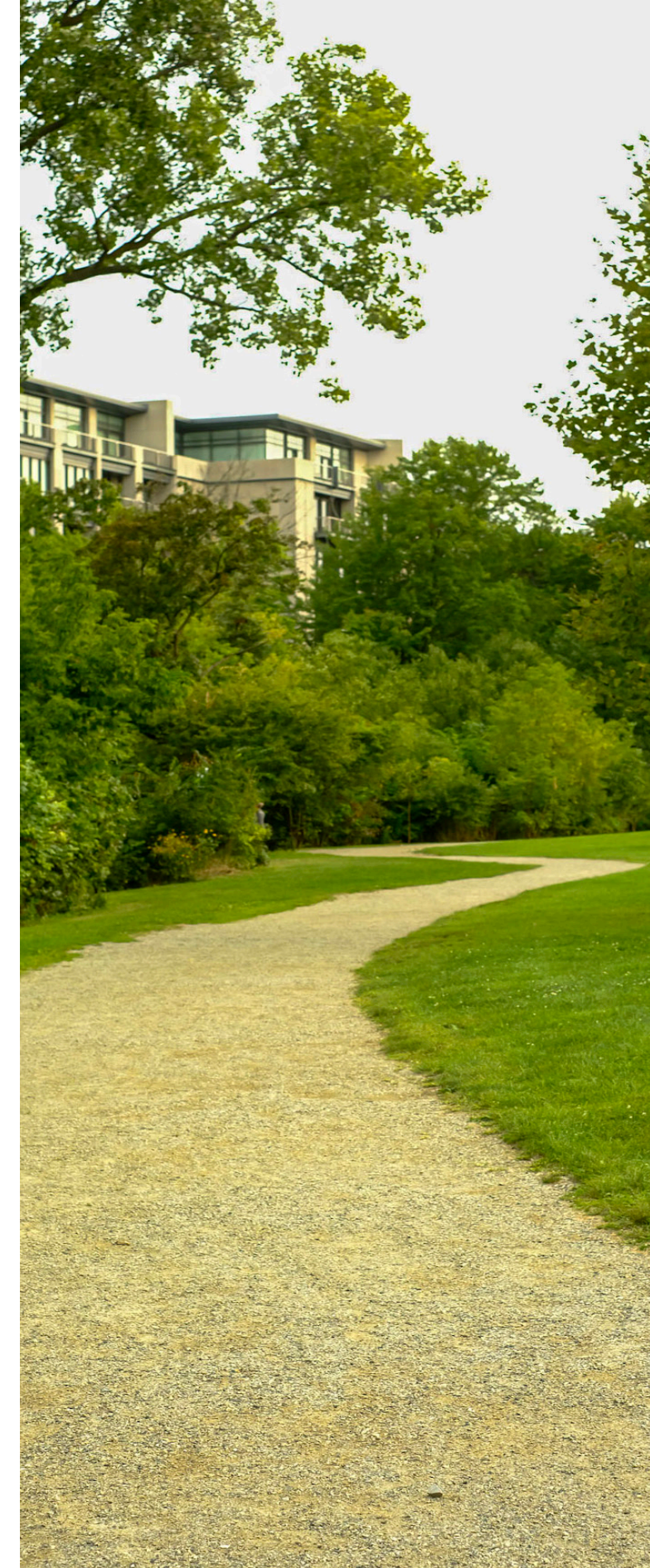
With funding from the Inflation Reduction Act through the US EPA’s Climate Pollution Reduction Grant (CPRG), SEMCOG will develop a **Healthy Climate Plan for Southeast Michigan**. This plan is intended to connect and uplift existing state, regional and local plans, while preparing communities to be competitive for \$4.6 billion in implementation grant funding for the policies and programs it identifies. The plan will cover the eight-county region of Southeast Michigan, including Wayne, Oakland, Macomb, St. Clair, Livingston, Lapeer, Washtenaw, and Monroe. As part of the CPRG, SEMCOG will develop two action plans, a distinct priority plan and comprehensive action plan to reduce carbon emissions by 2050. This plan is expected to be completed in the summer of 2025.

The **Michigan Healthy Climate Plan** is the state’s roadmap that charts a path to a prosperous, healthy, equitable, carbon-neutral Michigan by 2050. The plan, created by EGLE, was released in April 2022 and includes an interim target of 52% greenhouse gas (GHG) emissions

reductions by 2030, from baseline 2005 levels, as part of a “Roadmap to 2030” outlining intermediate actions needed to meet Michigan’s climate goals. The objectives of the plan are to:

1. Mitigate the worst impacts of climate change
2. Spur economic development and create good-paying jobs
3. Protect and improve the health of Michiganders
4. Position Michigan as a leader in climate action
5. Safeguard our natural resources and wildlife
6. Make Michigan energy independent
7. Address environmental injustice.

The City has spent a considerable amount of time and resources implementing the 2013 **Multi-Modal Transportation Plan** (MMTP), which has provided for many miles of new and improved sidewalks, bike lanes and shared use paths, as well as other infrastructure such as bike racks and repair stations. These are all valuable additions to a multi-modal network and provide necessary last-mile infrastructure and support sustainable modes of transportation. Because the City does not operate public mass transit, the MMTP focused its recommendations on improving the environment for transit through connectivity, enhanced transit stops, and safety. The Birmingham Green: Healthy Climate Plan will support the recommendations within the current and future iterations of the City’s MMTP.



PLAN DEVELOPMENT



Green Beans
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Background

The City of Birmingham, Michigan has introduced environment-friendly planning schema since the General Village Plan was adopted in 1929 to address rapid urban growth and protect the then-village's natural beauty. In response to industrial pressure and development impacts of industrial uses in Detroit and Pontiac, the General Village Plan recognized the function and importance of preserving open space and natural areas such as the Rouge River Valley, a regional park system, and the urban tree canopy, and suggested that zoning be immediately adopted to preserve them through single-family residential districts. Nine decades later, Birmingham has perpetuated environmental ideals through plans such as the Downtown 2016 Master Plan, Multi-Modal Transportation Plan, Parks and Recreation Master Plans, Triangle District Urban Design Plan, and the Birmingham Plan 2040, as well as its focus on mixed use and walkability, urban design, and other quality examples, all of which contain virtues of sustainable development and eco-friendly objectives.

The Birmingham Green: Healthy Climate Plan was developed at the direction of the Birmingham City Commission. The process started with a declaration of a climate emergency in 2023 and the creation of the Ad Hoc Environmental Sustainability Committee. The committee was tasked with drafting the plan and performing a local greenhouse gas inventory (GHGI). This decision was predicated by the adoption of City Commission's strategic goals in 2022, which elevated sustainability as one of three overall strategic goals that will guide the decision-making process at the Commission level through the year 2027.



City Commission Goals

Engaged and Connected Community - Birmingham is a community that is connected to one another and engaged in the decision making process.

- Bridge the divide that Woodward Avenue creates in the City and transform the Woodward environment
- Offer City services and amenities that enrich the lives of residents of all ages
- Encourage robust resident engagement with their government and community
- Increase Connectivity between the Rouge River trail system, downtown, and the neighborhoods

Environmental Sustainability - The City of Birmingham positions itself for a changing future by instituting policies and practices that protect the natural environment and reduce extreme weather impacts on the community.

- Create a sustainability board to review projects, investigate funding opportunities, and offer public education opportunities
- Maintain and upgrade infrastructure to prepare for future climate conditions
- Modernize City facilities for energy efficiency and sustainability

Efficient and Effective Services - Birmingham will address the needs of the community in a timely and respectful manner.

- Incorporate new technologies to improve service delivery for residents including digitization of public records and museum materials
- Build and retain an effective and professional staff who serve the community
- Create community risk reduction policies and programs that emphasize citywide increased safety and security

Public Engagement Activities

A major component of drafting the City of Birmingham SCAP was community engagement. A dedicated and comprehensive approach to community engagement provides for a plan that is collaborative, enhances communication and understanding, and fosters a sense of community and accomplishment. This section of the plan consolidates and summarizes all of the feedback we heard during the process and builds the backbone upon which this plan was created.

Public Engagement Phase 1

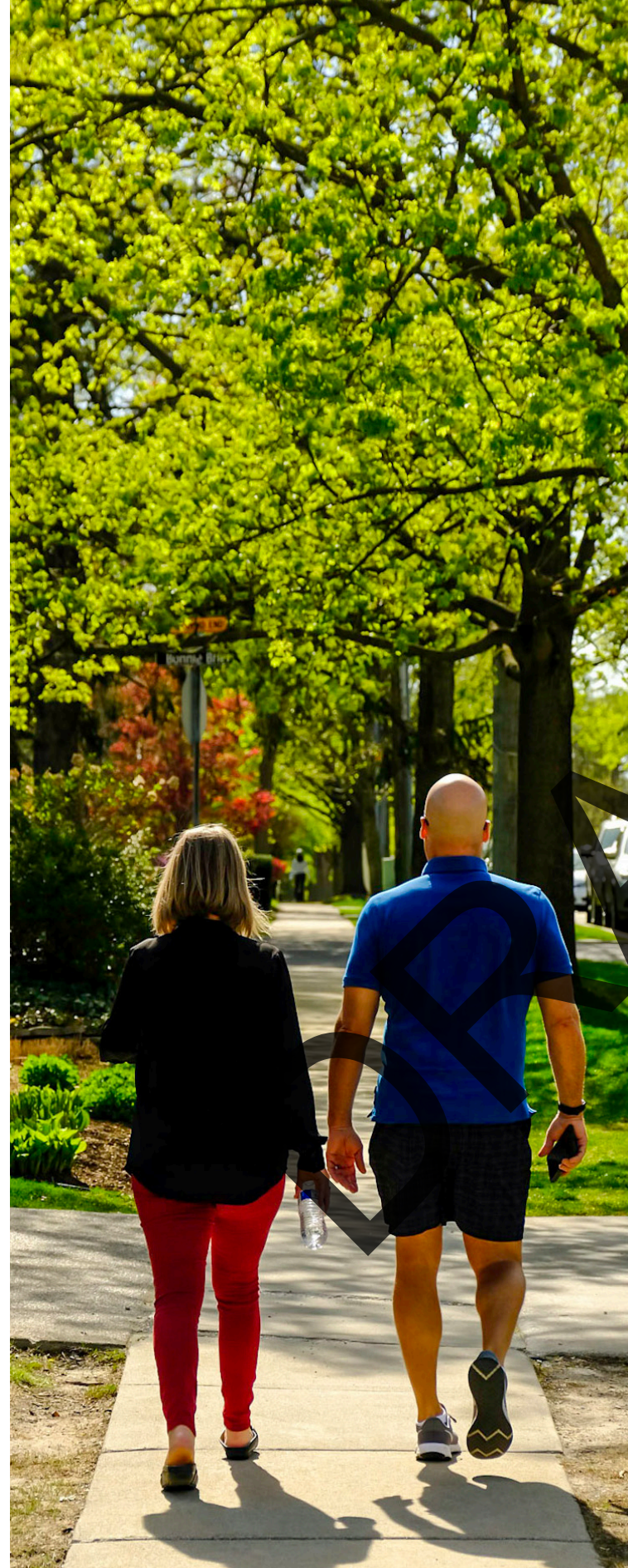
- **Day on the Town** – The Environmental Sustainability Committee hosted a table during the City’s annual Day on the Town event, which was intended to introduce people to the ESC and the SCAP, as well as advertise for the community survey. Overall, several persons engaged with staff and ESC members, and the City was able to disperse over 30 cards with a QR code to the survey.
- **Farmers Market** – In addition, a table was hosted at the Birmingham Farmers Market. Similar to the Day on the Town event, the focus was to get people engaged with the process, and advertise for the community survey. The heavy rainfall events in mid-August seemed to spur a robust engagement throughout the day, and as a result the City was able to inform many persons about the SCAP and the survey.
- **Community Survey #1** – The City of Birmingham hosted a survey on Engage Birmingham that was designed to get a preliminary look into the feelings of the community as it relates to sustainability and climate action as a whole. In addition, the survey provided space for respondents to elaborate on any additional issues that they might feel is important for the City to consider while drafting the SCAP.



- **Municipal Round Tables** – As a major stakeholder in the SCAP and the goals that will be developed within it, the municipal staff was engaged at a series of round tables to get a more in-depth look into different departments and their operations/concerns. Overall, the turnout was very encouraging, and it became very clear that the municipal staff is on-board and very aware of the challenges ahead, as well as the interconnectedness of various approaches to sustainability and climate action.
- **Community Visioning Session** – The Environmental Sustainability Committee held a community visioning session in the fall of 2023. The session was split into an introduction, an activity, and a facilitated discussion with the Chief Environmental Sustainability Officer for Oakland County. Members of the community were able to provide feedback on six elements from the City Commissions Strategic Goal #2. The facilitated discussion enabled the facilitator to clarify several points of feedback and provide an opportunity for elaboration.
- **Newsletters & Social Media** – Since the ESC was created, the Planning Division has provided regular updates in the City’s Around-Town E-Newsletters, Birmingham Beat printed newsletters, social media, and Constant Contact email services. In addition, the City has taken advantage of opportunities to speak to other media outlets such as the Birmingham-Bloomfield Eagle.

Public Engagement Phase 2

- **Community Survey #2** – The City of Birmingham hosted a second survey on Engage Birmingham that provided a deeper dive into the goals of the plan as they were developed at the time. This survey provided the opportunity for people to comment on measurable goals and how they may or may not affect different parts of the community.
- **Board and Commission Reports** – As partners in furthering the goals of the SCAP, the Environmental Sustainability Committee provided regular communications to different boards and commissions in the City to solicit feedback, but also to build bridges and ensure that the vast network of collaboration between decision makers in the City started strong and remained strong.
- **Department of Public Services** – The Environmental Sustainability Committee hosted a table at the popular DPS Open House event in the spring of 2024. At this point, the SCAP was more developed, which provided an opportunity to hear about preferences related to certain goals and objectives of the SCAP, as well as any other content that visitors found interesting.
- **Stakeholder Engagement** – In addition to soliciting feedback from the general public, the Environmental Sustainability Committee also reached out to several key stakeholder groups such as NEXT, the Birmingham Public Schools, and the business community. These groups represent people that may be particularly vulnerable to climate change and those that will play a major role in the implementation of the SCAP.



Public Engagement Summary

In summary, it is very clear that stakeholders feel that sustainability and climate action is important and should be a very high priority in the City of Birmingham. Overall, 82.3% of respondents felt as though the City of Birmingham should be a regional leader or increase community commitment to sustainability and 77.1% of respondents are very or somewhat concerned about addressing sustainability and climate action issues.

Quotes

“We have the money and education in this town to take major action. We need to work fast and think boldly about addressing climate issues.”

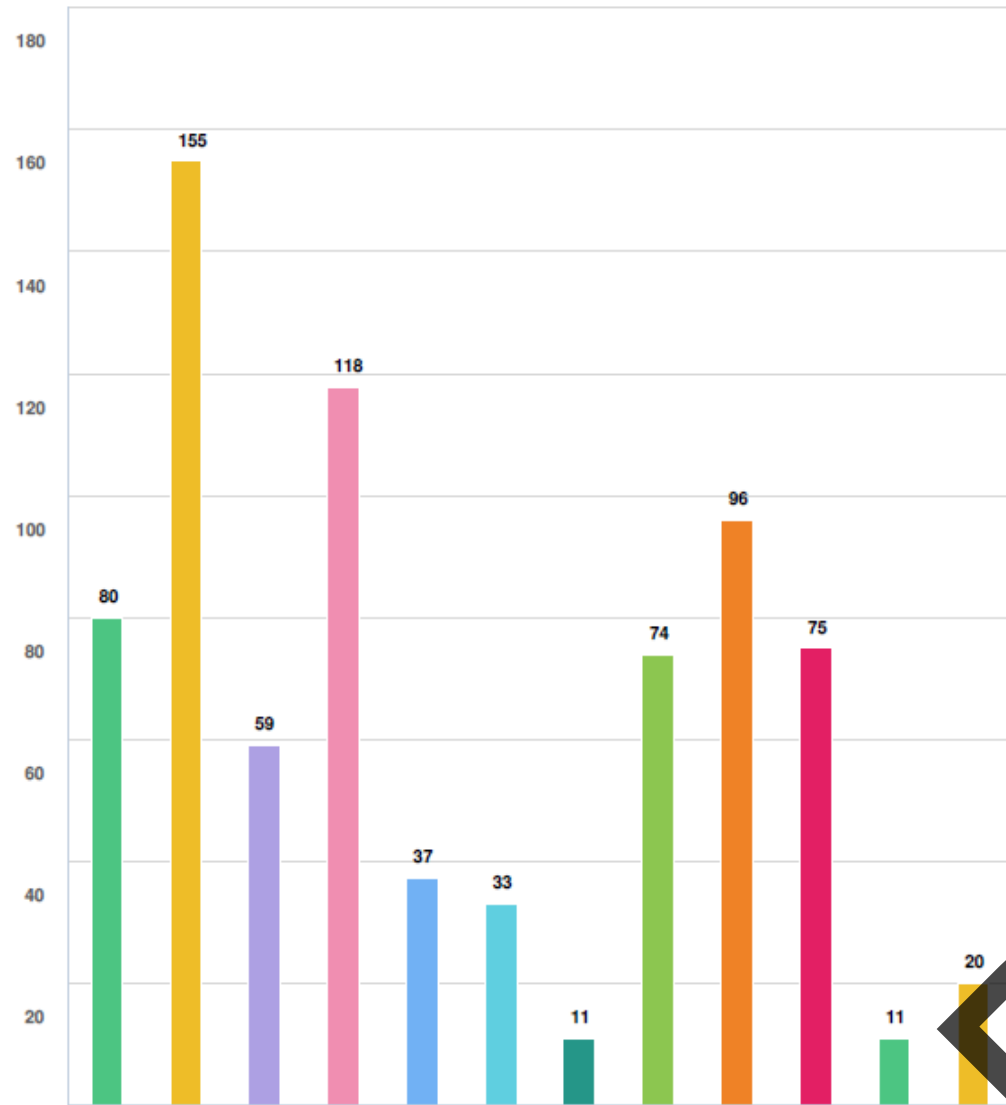
“I would like to see the city of Birmingham’s commitment to sustainability and climate action extend into surrounding areas and other municipalities. Many of these changes need to be implemented on a regional and statewide level to be most effective. How can we use our resources to model sustainability and make it possible for nearby communities as well?”

“We should be approaching sustainability and climate action in an order that makes sense.”

“I think it is important for Birmingham to set an example as a leader on this issue. It matters to our community, to voters, and to future generations.”

Public Engagement Summary (IN PROGRESS)

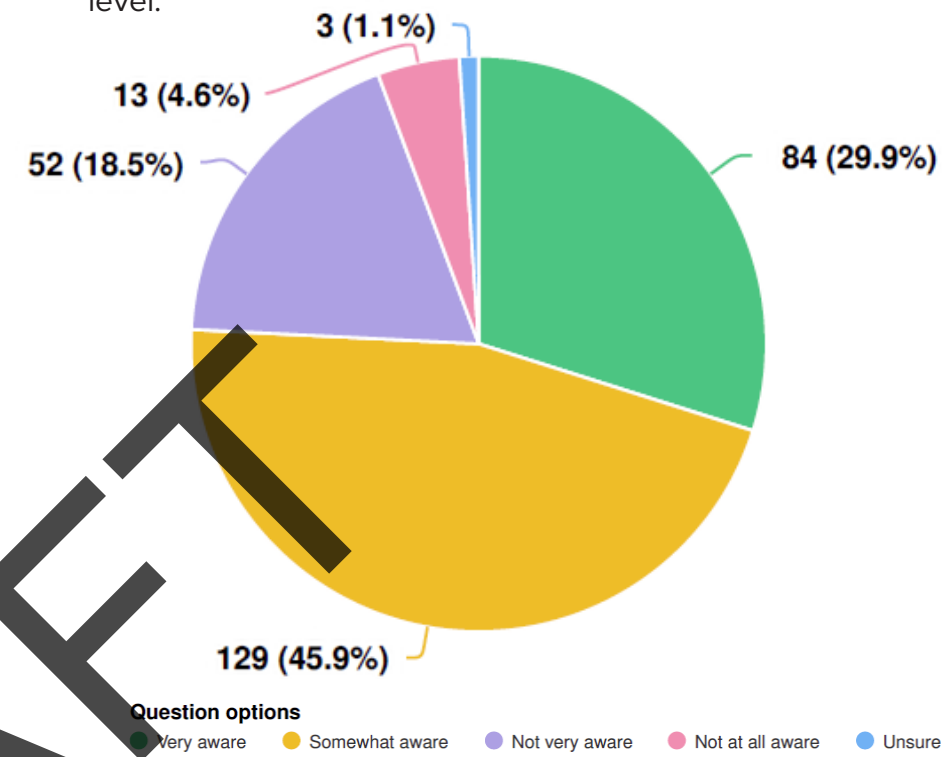
Responses to primary concerns related to sustainability and climate action in Birmingham (select up to 3)



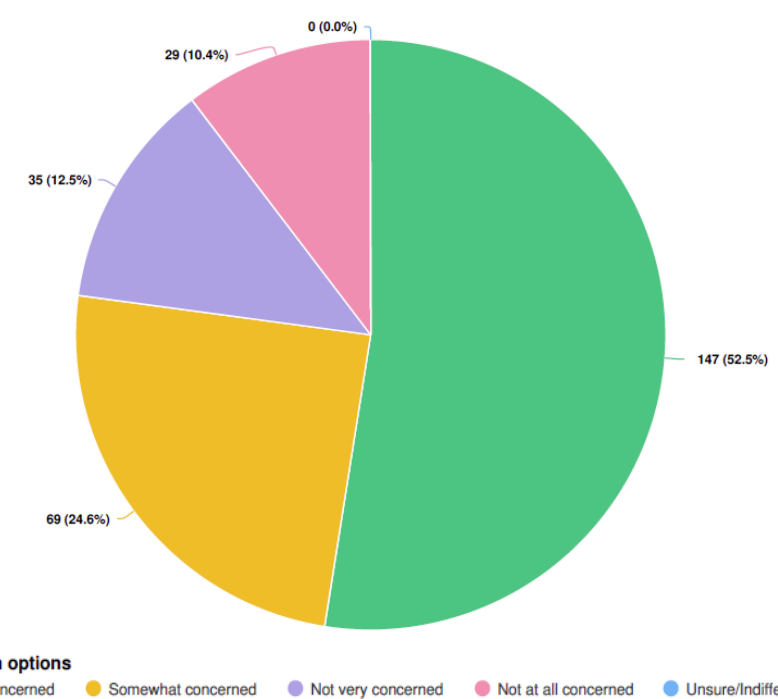
Question options
 Energy Water Quality Solid Waste Natural Environment Transportation Buildings
 Food Access Quality of Life Air Quality Extreme Weather Environmental Justice
 Other (please specify)

Optional question (279 response(s), 3 skipped)
 Question type: Checkbox Question

Responses to describe awareness of sustainability and climate action, particularly at the local or community level.



Responses to how would you describe your overall level of concern about addressing sustainability and climate action issues?



Question options
 Very concerned Somewhat concerned Not very concerned Not at all concerned Unsure/Indifferent

Other Data

Air Quality

Air quality is one of the more prevalent and visible problems stemming from climate change. The 2023 Canadian wildfires sparked many conversations about air quality, and concerns about air quality have prompted 32 Clean Air Action Days in the Detroit region over the last 4 years. In general, Oakland County has ranked moderate to good on the EPA's AirNow Air Quality Index over the same span. As major air quality events happen, and as ozone and particulate matter continues to be an issue in this region, municipalities have an opportunity to decrease the emissions in their community, which are shared amongst its neighbors and general region.

Solar Readiness

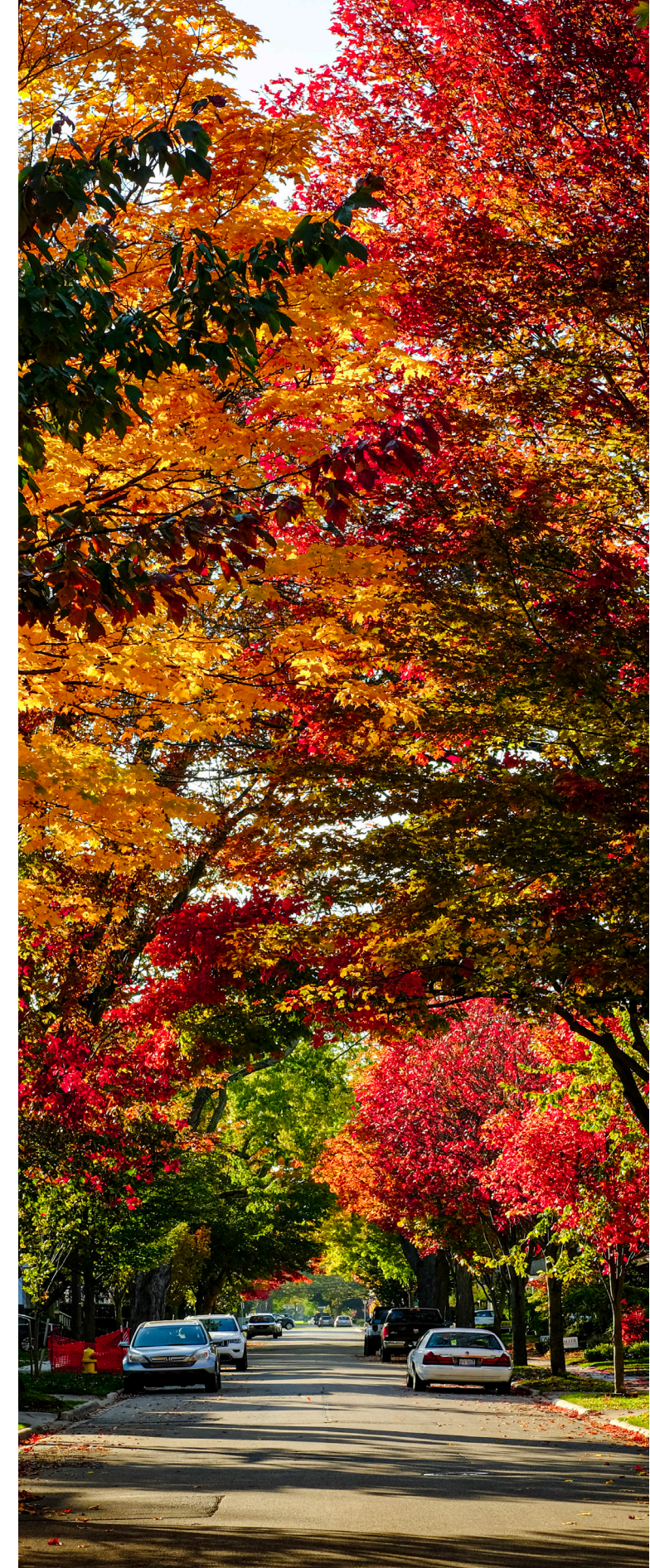
To date Birmingham has issued only 17 permits for solar arrays on rooftops in the City in the last 10 years. With nearly 8,000 principal buildings in the City, our solar energy potential is much higher. Meanwhile, the State of Michigan is continuing to push solar and increase access through various programs, and DTE has planned a portfolio of 11 million solar panels by 2040.

Heat Indexes

According to the National Weather Service, the heat index, also known as the apparent temperature, is what the temperature feels like to the human body when relative humidity is combined with the air temperature. Birmingham is home to nearly 4,000 older adults (65+) who are particularly susceptible to extreme heat. In Michigan, a heat advisory is issued when heat index values are forecast to meet locally defined advisory criteria for 1 to 2 days. Extreme heat warnings are issued when heat index values are forecast to meet or exceed locally defined warning criteria for at least 2 days.

Tree Canopy

Preservation of and planting of new trees is an important part of climate adaptation. Trees provide a plethora of benefits to humans and the environment and for these reasons, monitoring and promoting a healthy urban tree canopy has become an increasingly common standard practice within local governments. Birmingham currently sustains a robust tree inventory and maintenance program with room for improvement. The city contracts a company to conduct a complete inventory of the city's public trees every four years on an ongoing basis (one quadrant of the city is completed per year). The city's arborist also updates tree inventory on a real-time basis as trees are removed and planted throughout the year. For this reason, the City of Birmingham has one of the healthiest and most abundant canopies in the region. SEMCOG's Green Report (released July 2023) includes a target metric for increasing regional tree canopy area in all urban census tracts (not including agricultural land) to 40% from the current 38%. The City of Birmingham overall, is in line with the current regional tree canopy coverage, having 38% tree canopy coverage within the city as a whole.



Other Data

Water Quality

According to the latest (2022) Consumer's Annual Report on Water Quality for Birmingham, Michigan, Birmingham's drinking water surpassed water quality standards as mandated by the Environmental Protection Agency (EPA) and the Michigan Department of Environment, Great Lakes, and Energy (EGLE). Birmingham's drinking water is sourced from the Detroit River and is treated by the Great Lakes Water Authority, who distributes it to SOCWA (South Oakland Water Authority) which then distributes water to its member communities, which include Birmingham.

SEMCOG, the designated water quality management agency for Southeast Michigan, is responsible for planning for the region's integrated water resources management. This includes advancing the 'blue economy,' natural resource protection and enhancement, and water infrastructure systems. In 2018, SEMCOG released its Water Resources Plan for Southeast Michigan, which sets the framework for 28 regional policies and provides 101 recommended actions. In 2023, SEMCOG released the updated Water Infrastructure Policies and Actions along with a Water Infrastructure guide as an addendum to the 2018 plan.

Average Annual Rainfall

According to the most recent weather data (2022), Birmingham, Michigan experiences on average 32.4 inches of rainfall annually. The average annual rainfall in the United States is 38.1 inches.

Impervious Surface

Impervious surfaces are defined as areas that prevent or hinder the entry of water into the soil mantle and/or cause water to run off the surface in greater quantities or an increased rate of flow that under natural conditions. Buildings, roads, driveways, and parking lots are all examples of impervious surfaces. As of 2020, Birmingham, Michigan's land cover is 47.8% impervious. Oakland County as a whole is 19.2% impervious.



CLIMATE RISKS AND VULNERABILITIES

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Climate Risks & Vulnerabilities

According to the U.S. Climate Vulnerability Index, understanding climate risks and vulnerabilities (“CRV’s”) is an imperative part of defining future adaptation strategies at any scale. Assessing CRV’s in Birmingham will be a major determinant in resource allocation, action planning and advocacy. This will include identifying populations within our community that may be particularly susceptible to the hazards involved with climate change as well as a high level understanding of the physical development of the City while also attempting to address climate hazards and a community’s potential approach to coping with such.

This section provides an analysis of vulnerability and risk through the lens of exposure, sensitivity and adaptive capacity.

Definitions

Vulnerability: The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements, including sensitivity or susceptibility to harm and lack of capacity to cope and adapt.

Exposure: The presence of people; livelihoods; species or ecosystems; environmental functions, services, and resources; infrastructure; or economic, social, or cultural assets in places and settings that could be adversely affected.

Hazard: The potential occurrence of a natural or human-induced physical event or trend that may cause loss of life, injury or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources. See also Impacts and Risk.

Risk: The potential for adverse consequences for human or ecological systems, recognizing the diversity of values and objectives associated with such systems. In the context of climate change, risks can arise from potential impacts of climate change as well as human responses to climate change. Relevant adverse consequences include those on lives, livelihoods, health and well-being, economic, social and cultural assets and investments, infrastructure, services (including ecosystem services), ecosystems and species.

Climate Risks (EPA)

Acute: Acute physical risks refer to those that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, heat or cold waves, or floods.

Chronic: Chronic physical risks refer to longer-term shifts in climate patterns (e.g., sustained higher temperatures, sea level rise, changing precipitation patterns) that may cause sea level rise or chronic heat waves.

Adaptive Capacity: The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities or to respond to consequences (MA, 2005).

Sensitivity: The degree to which a system or species is affected, either adversely or beneficially, by climate variability or change. The effect may be direct (e.g., a change in crop yield in response to a change in the mean, range, or variability of temperature) or indirect (e.g., damages caused by an increase in the frequency of coastal flooding due to sea level rise).



Exposure

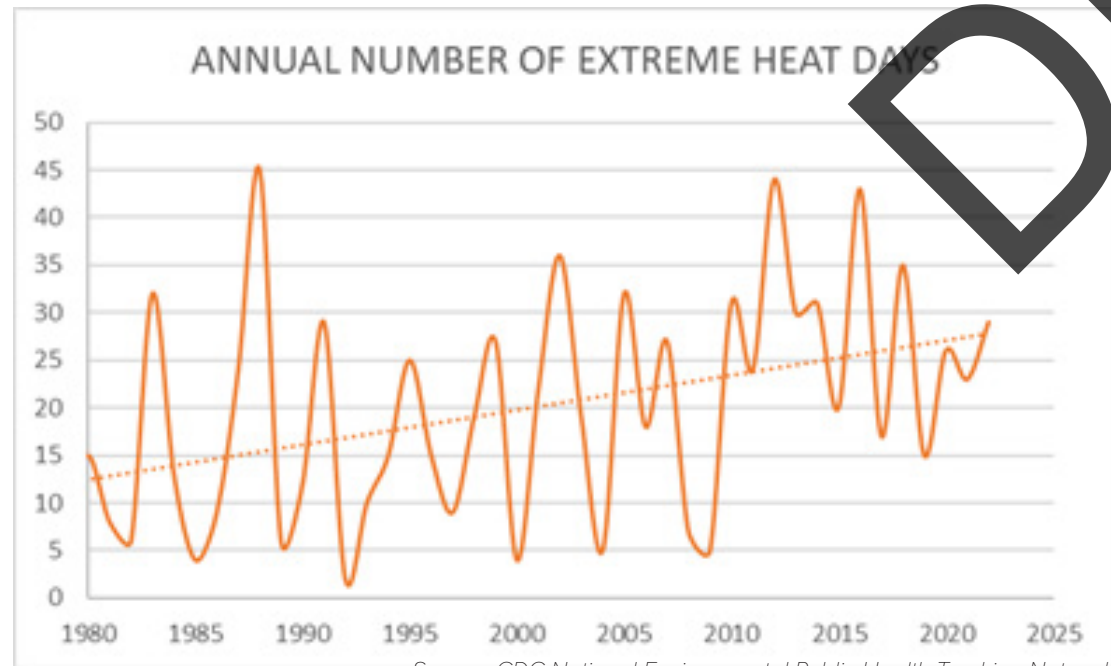
The City of Birmingham is 4.8 square miles in area. Comparatively, Birmingham's area is similar to that of Orchard Lake Village, Beverly Hills, and Bloomfield Hills, but is significantly smaller than its neighbors of Royal Oak (11.8 sq. mi.), Troy (33.6 sq. mi.), and Bloomfield (25.9 sq. mi.). Overall, Birmingham is 0.52% of the total area of Oakland County (927.6 sq. mi.). However, Birmingham's population density is the 8th largest in Oakland County, which may leave Birmingham with a higher exposure, but also a higher payback on a per capita basis for any adaptation strategies that are adopted. Overall, Birmingham is expected to experience similar climate hazards to that of southeast Michigan such as extreme heat and increased precipitation, which based on current trends, are expected to increase all the same.

Extreme Heat

As one of the more perceivable effects of climate change, extreme heat hazards can present themselves in a number of ways. There is a major public health component to extreme heat, particularly with vulnerable populations such as the elderly, children, and people working outside. For people in an urban area like Birmingham, the urban heat island effect poses a greater risk from the effects of a prolonged heat wave than are people living in rural areas. In addition to health risks, extreme heat can take out power

grids, decrease air quality, and damage water quality according to the Environmental Protection Agency (EPA).

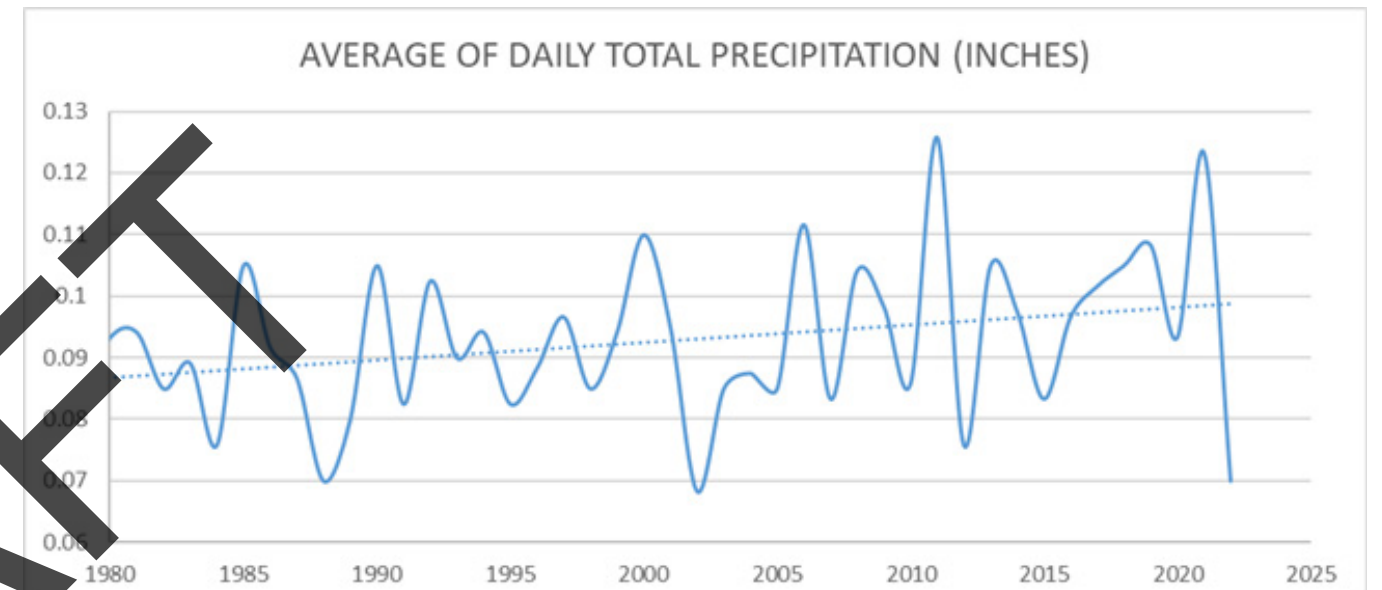
Heat Island: Heat islands are urbanized areas that experience higher temperatures than outlying areas. Structures such as buildings, roads, and other infrastructure absorb and re-emit the sun's heat more than natural landscapes such as forests and water bodies. Urban areas, where these structures are highly concentrated and greenery is limited, become "islands" of higher temperatures relative to outlying areas.



Source: CDC National Environmental Public Health Tracking Network

Precipitation

Similarly, changes in the frequency and intensity of rainfall are keenly felt by those affected. These unpredictable and often unyielding storm events put pressure on systems that were not designed at the capacity that is being demanded. This can cause significant damage to public property and infrastructure. In addition, water quality can be severely afflicted in areas where combined sewer system outflows discharge into water bodies like the Rouge River.



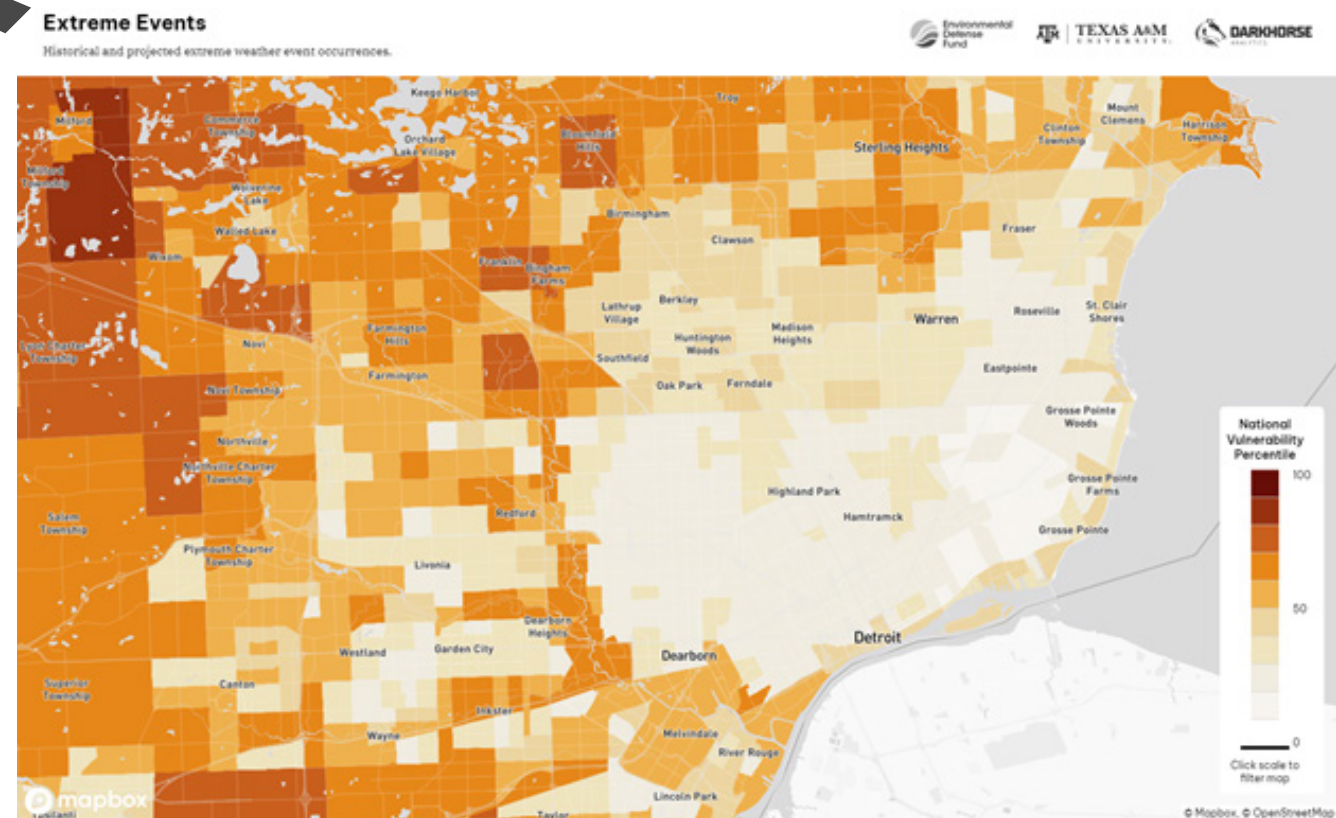
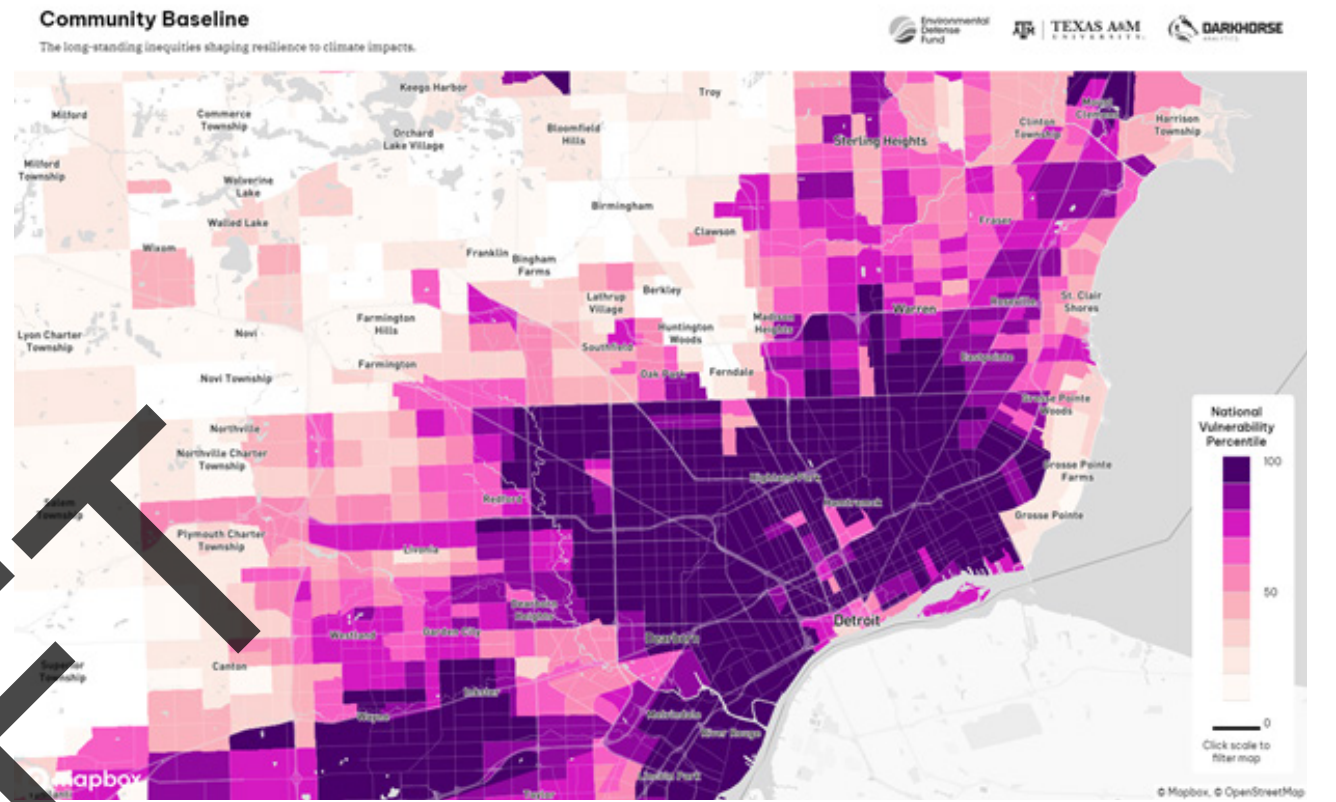
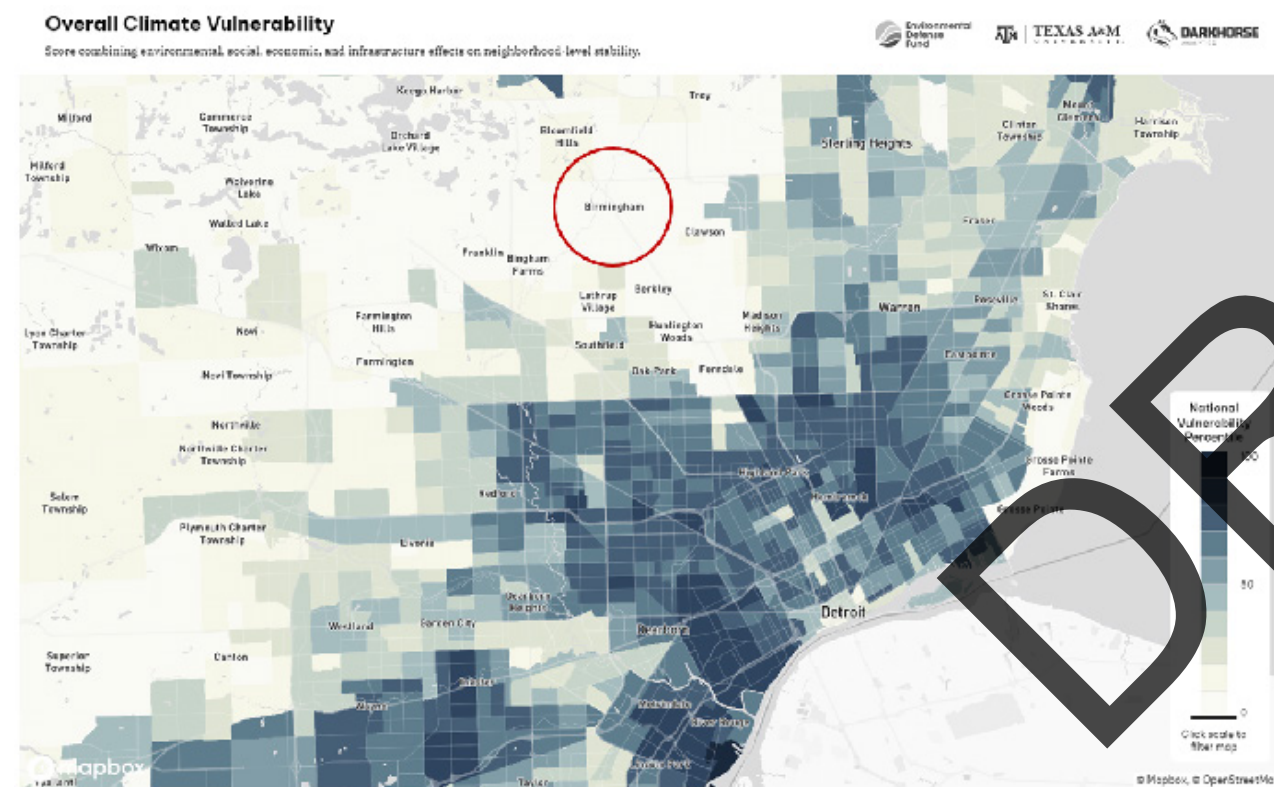
Source: CDC National Environmental Public Health Tracking Network



U.S. Climate Vulnerability Index

The U.S. Climate Vulnerability Index (CVI) visualizes how drivers of cumulative vulnerability disadvantage communities across the United States. Better understanding of the intersections between growing climate risks and pre-existing, long-term health, social, environmental, and economic conditions is critical to effectively building climate resilience for everyone and deploying targeted adaptation efforts.

Overall, Birmingham general ranks in the 1st and 2nd percentile for overall climate vulnerability, meaning that the majority of communities nationally are more vulnerable than Birmingham. Overall vulnerability factors together baseline vulnerabilities that reduce community resilience and climate change risks that directly or indirectly impact communities. However, Birmingham does rank more mid-range when it comes to more specific indicators such as extreme events (temperature, precipitation, storms, etc.) and the overall environment (land use, pollution sources, transportation, etc.).



Sensitivity and Adaptive Capacity

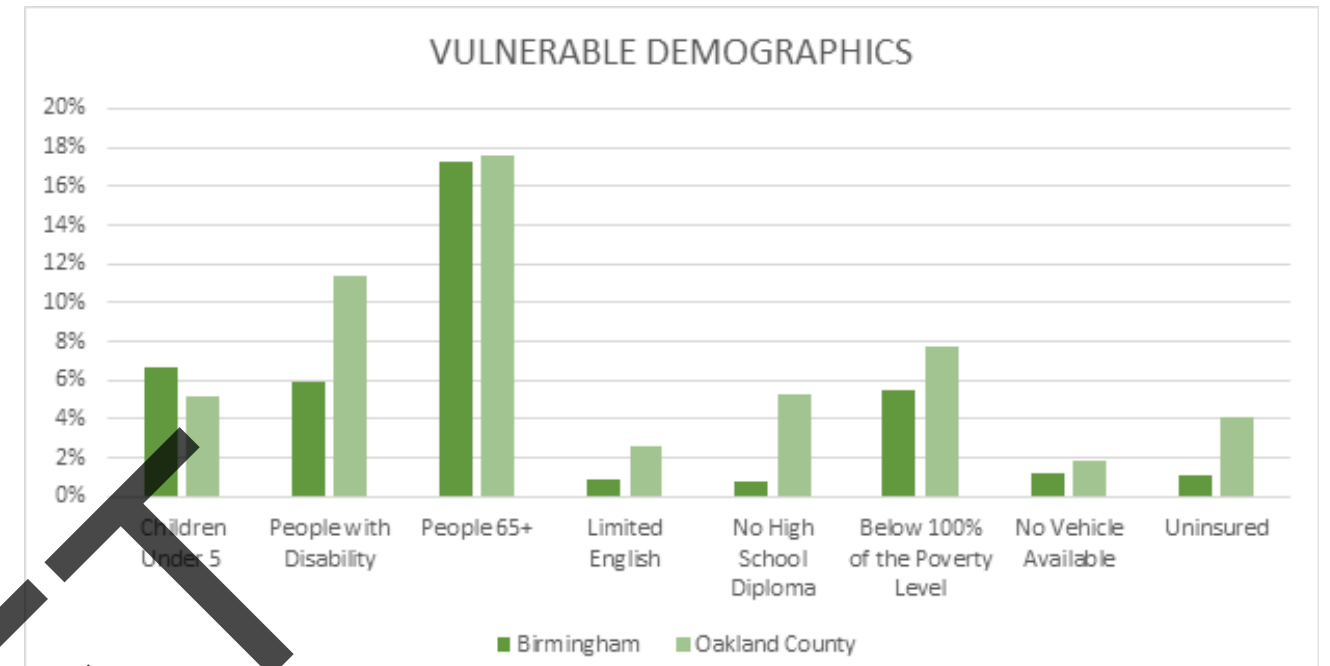
As alluded to above, the effects of climate change can have different impacts on different populations. Sensitivity and adaptive capacity are often inversely correlated, meaning more sensitive populations are less likely to have the ability to adapt in the event of acute or chronic hazards. This section will analyze Birmingham's high-risk populations and other determinates of sensitivity.

High Risk Populations

According to the U.S. Department of Health and Human Services, examples of at-risk populations may include but are not limited to children, pregnant women, older adults, people with disabilities, people from diverse cultures, people with limited English proficiency, people with limited access to transportation, people with limited access to financial resources, people experiencing homelessness, people who have chronic health conditions, and people who have pharmacological

dependency. In Birmingham, we have proportionally high numbers of children and elderly persons. These populations are highest in the southeast portion of Birmingham.

Birmingham has some mechanisms to support the adaptive capacity of these populations. For example, NEXT provides services to the 50+ community such as transportation and a vast referral network to support various needs.



Source: 2022 American Community Survey (ACS): 5-Year Estimates

Community Assets

Along with people, a community's physical assets such as structures and infrastructure can also be susceptible to climate hazards. These assets can include public facilities, schools, religious institutions, roads, and other essential infrastructure that provide some level of service to a community and can contribute to its emergency preparedness. In addition, other structures that draw on these critical infrastructure elements can play a role in the community. Often times it is older structures that require more energy to heat and cool, while also having aging sewer connections that may not meet current standards. Birmingham has 5,842 structures that were built before 1975.

Key Findings

1. Birmingham is less vulnerable to the effects of climate hazards than other areas in southeast Michigan.
2. The climate hazards that are experienced by Birmingham will continue to increase in frequency and intensity.
3. Birmingham will need to target actions toward increasing the adaptive capacities of vulnerable populations in the City.
4. Buildings will have a large role to play in adaptive capacity in Birmingham.

EMISSIONS



Greenhouse Gas Emissions Inventory

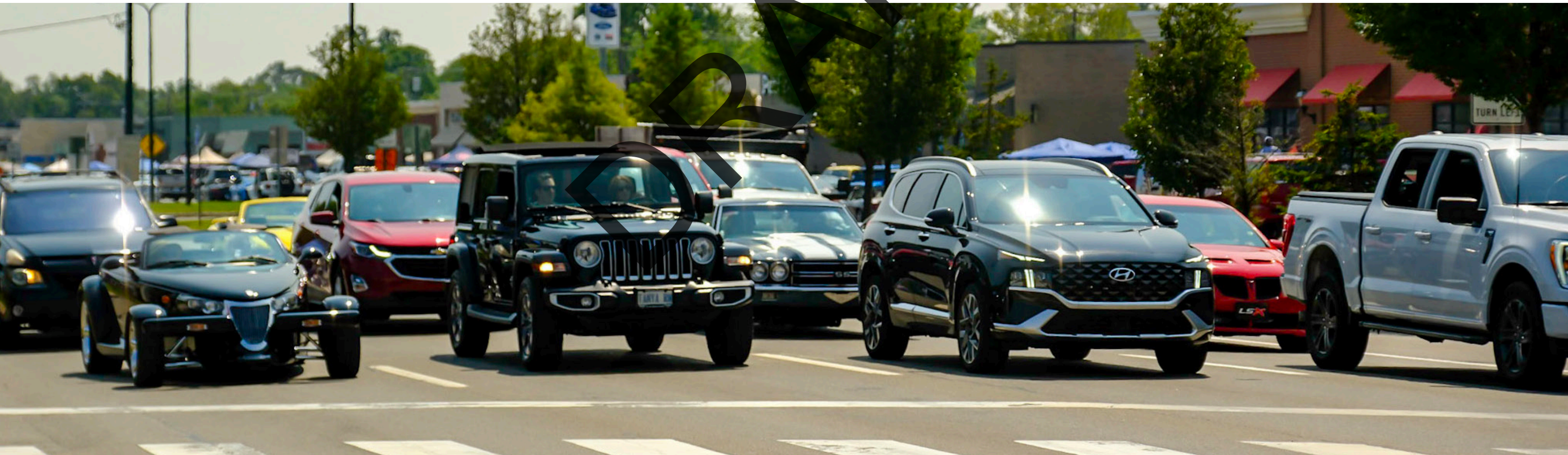
In 2023, two greenhouse gas (GHG) emissions inventories were compiled for the 2021 baseline year; one for the Birmingham community as a whole and the other for municipal operations only. Data was obtained for these inventories from the local utilities (DTE, Consumer's Energy), South Oakland County Resources Recovery Authority (SOCRRA), South Oakland Communities Water Authority (SOCWA), Oakland County Water Resources Commissioner's office (OCWRC), Great Lakes Water Authority (GLWA), Southeast Michigan Council of Governments (SEMCOG), and the City of Birmingham. The data was then entered into software developed by ICLEI – Local Governments for Sustainability. The GHG inventory produced a baseline from which to measure the city's current emissions and future emissions reduction progress.

Three greenhouse gases are included in this inventory: Carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O). The standard unit for measuring GHG emissions is metric tons of carbon dioxide equivalents (MTCO₂e). Therefore, methane and nitrous oxide emissions are converted to MTCO₂e to make comparison between emissions of the three gases possible. A full report explaining the importance, methodology and data gaps and assumptions for both GHG inventories is available on the Sustainability page of the city's website (publish & link).¹

Key Findings

The City of Birmingham's total 2021 community-wide GHG emissions were 279,996 MTCO₂e and the municipal operations (city government) GHG emissions were 3,592 MTCO₂e. The breakdown of Birmingham's community-wide GHG emissions for 2021 are shown in Figure x. The residential natural gas sector was the single largest contributor to community emissions (20.9%) followed by the residential electricity sector as a close second (19.6%). Residential energy, which includes both natural gas and electricity was the highest category contributor (40.5%).

As shown in Figure X, emissions from municipal operations only account for 1.3% of the total community-wide emissions. It's clear for Birmingham to meet its GHG reduction goals, the community will need to participate in strategies for reducing emissions. City government will lead by example and is actively engaged in energy waste reduction initiatives within municipal operations.



1. See Appendix 1 for more detail.

Next Steps

The inventory should be used to focus and prioritize actions to reduce emissions. Based on the inventory results, the following areas have the greatest potential for emissions reduction:

- Residential Energy
- Transportation & Mobile Sources
- Commercial Energy

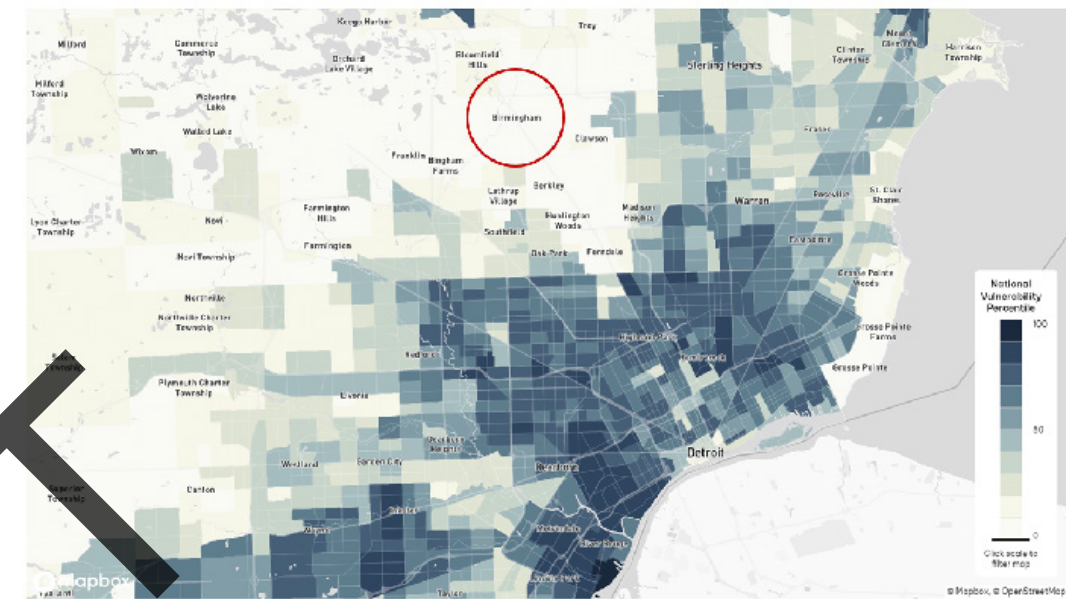
Completion of another GHG inventory in five years is recommended in order to assess progress resulting from any actions implemented.

Community-Wide Greenhouse Gas Emissions Inventory

Category	Fuel or Source	MTCO ₂ e	Percent
Residential	Natural Gas	58,381	20.9%
Residential	Electricity	54,910	19.6%
Transportation	Gasoline	47,470	17.0%
Commercial	Electricity	38,023	13.6%
Commercial	Natural Gas	22,402	8.0%
Industrial	Electricity	18,443	6.6%
Transportation	Diesel	17,685	6.3%
Landfilling of Solid Waste		16,616	5.9%
Wastewater Treatment		5,321	1.9%
Composting of Organic Waste		715	0.3%
Potable Water Supply		30	0.01%
	Total	279,996	100.0%

Overall Climate Vulnerability

Solve combining environmental, social, economic, and infrastructure effects on neighborhood level stability.



The local government operations emissions inventory points to a need to focus and prioritize actions to reduce emissions. Based on the inventory results, the following areas have the greatest potential for emissions reduction:

- Buildings & Facilities
- Employee Commute
- Vehicle Fleet

Completion of another GHG inventory in five years is recommended in order to assess progress resulting from any actions implemented



Forecasting

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DRAFT

ACTION PLAN

DRAFT

Municipal Building

151

Overview

Hold for Goals Overview

Key

Hold for key.

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Water & Stormwater

Infiltrate or capture an additional 100,000 gallons of stormwater by 2035.

Infiltrate or capture an additional 100,000 gallons of stormwater by 2035.

The City splits across two watersheds – the Rouge River watershed and the Clinton River watershed. Any and all activities that involve the water system in Birmingham, including both natural hydrologic cycles and man-made infrastructure processes, affects these watersheds and the essential potable water we use every day, stormwater runoff, sewage disposal, natural environments and public health. Like many things sustainability, many of the burdens, nuisance and negative

externalities of water treatment are borne in other areas of our region. Overall, there are no less than 10 organizations, authorities or levels of government associated with water quality and treatment in Birmingham. Through the following actions, the City intends to build more resilient water systems and provide opportunities for everyone to have access to sufficient, safe, acceptable, physically accessible, and affordable water.

- o Adopt a subsidized residential rain garden program.
- o Reduce barriers to local stormwater rebate programs.
- o Develop a tracking system for green stormwater infrastructure.
- o Form new alliances and improve existing alliances with municipalities and organizations that address stormwater runoff to the Rouge River.
- o Require green infrastructure installations in every public infrastructure and development project.
- o Incentivize green stormwater infrastructure installations on commercial properties.
- o Reduce indoor & outdoor potable water usage.
- o Require stormwater retention or infiltration on all new single-family construction.
- o Adopt Oakland County stormwater standards for all developments city-wide 0.5 acre or more.



Waste

Reduce total landfill solid waste by 2,390 tons (25%) by 2035.

Reduce total landfill solid by 2,390 tons (25%) by 2035.

PLACE HOLDER TEXT The **Birmingham Plan 2040** (“2040 Plan”) was adopted in May 2023. The 2040 Plan is a comprehensive master plan, which is a document and policy guide designed to help Birmingham conceive a vision of what they want to look

like in the future. The City of Birmingham is required to adopt and maintain a comprehensive master plan pursuant to funding and partnership opportunities. An interactive GREEN Dashboard, onlin

- o Develop a city-wide food waste composting program.
- o Increase and improve quality of recyclables in curbside carts through direct education campaigns and audits.
- o Invest in new local facilities and services for recycling food waste, electronics, textiles, hazardous materials and other specialty recycling.
- o Create a deconstruction ordinance to encourage the reuse and repurposing of building material during construction projects.
- o Lobby Southeastern Oakland County Resource Recovery Authority to improve data collection for its member communities.
- o Expand recycling opportunities in all new commercial and multifamily development projects.
- o Develop bi-annual recycling events for hard to recycle materials.
- o Pilot a zero-waste policy for City-managed events



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Buildings & Facilities

Reduce greenhouse gas emissions from buildings and facilities by 57,500 metric tons (50%) by 2035.

Reduce greenhouse gas emissions from buildings and facilities by 57,500 metric tons (50%) by 2035.

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- o Promote green development in large commercial districts in Birmingham through improved Zoning Ordinance standards.
- o Revise and expand ordinances related to solar photovoltaics and other alternative energy sources.
- o Remove any barriers to the use of geothermal energy strategies in the City.
- o Increase EV charging network city-wide.
- o Produce feasibility studies for solar photovoltaics on all city buildings and/or sites.
- o Expand the City’s historic preservation program to protect existing buildings and character.
- o Develop a process for comprehensively monitoring energy usage for all city buildings.



Natural Resources

Increase native and naturalized areas in the City by as much as 450 acres by 2035.

Increase native and naturalized areas in the City by as much as 450 acres in 2035.

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- o Protect and expand the tree canopy in each census tract of the City to at least 40%.
- o Promote the transition of private gardens and landscapes to native species and remove any barriers to such.
- o Study the issue of clear-cutting of lots in the City with special attention tree removal during construction projects.
- o Transition 100% of municipal plantings to native plantings.
- o Revisit streetscape standards to include better environments for street trees and plantings.
- o Prioritize the health of the Rouge River corridor and follow the recommendations of the Birmingham Plan 2040 related to the Rouge River.



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Municipal Operations

Institutionalize carbon reduction and climate resilience in City government by 2035.

Institutionalize carbon reduction and climate resilience in City Government by 2035.

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- o Transition all administrative and light-duty municipal internal combustion engine vehicles and equipment to alternative fuels.
- o Hire a full-time sustainability staff person.
- o Create a sustainability fund for use by multiple City Departments.
- o Establish a sustainable purchasing program and an internal administrative regulation.
- o Decrease vehicle miles traveled by municipal staff by XXX miles through incentive programs.
- o Adopt an anti-idling policy for all non-emergency City vehicles.
- o Identify and maintain a database of new and recurring grant opportunities geared towards sustainability and climate action.
- o Create, by ordinance, an Environmental Sustainability Committee to oversee and make recommendations on a variety of issues related to sustainability and climate action.
- o Provide recycling opportunities in all public parks and other public spaces.
- o Phase out the use of all chemical pesticides and fertilizers on city property and in park maintenance operations.
- o Increase or require specialized training for all workers who manage natural spaces.
- o Create a sustainability web page to act as a landing page for all city sustainability initiatives as well as to inform and educate residents on sustainable topics, best practices and relevant state and regional programs.



Quality of Life



Institutionalize carbon reduction and climate resilience in City Government by 2035.

Institutionalize carbon reduction and climate resilience in City Government by 2035.

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like in the future. The City of Birmingham is required to adopt and maintain a comprehensive master plan pursuant to funding and partnership opportunities. An interactive GREEN Dashboard, onlin

- o Develop the newly acquired YMCA building and St. James Park into a nexus of intergenerational recreation opportunities including a resilience hub that will serve as a warming and/or cooling center as needed and better connect residents to city services.
- o Permit community gardens in select parks and public open space.
- o Include educational opportunities in sustainability and climate action projects that are accessible to everyone.
- o Install one air quality monitoring station in the City and connect to the EGLE network.
- o Consider internal air quality monitoring systems in and around all municipal buildings.
- o Continue to implement the City’s multi-modal transportation goals.
- o Support and expand upon the sustainable land use decisions of the Birmingham Plan 2040.
- o Remove barriers to food production in residential zones and on residential properties.



Transportation

Reduce greenhouse gas emissions from passenger vehicles by 10,000 metric tons (15%) by 2035.

Reduce greenhouse gas emissions from passenger vehicles by 10,000 metric tons (15%) by 2035.

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like in the future. The City of Birmingham is required to adopt and maintain a comprehensive master plan pursuant to funding and partnership opportunities. An interactive GREEN Dashboard, online

- o Promote the use of mass transit in the City through enhanced transit stops.
- o Continue to implement the City’s multi-modal transportation goals.
- o Introduce bike sharing systems such as MoGo across the City.
- o Advocate for more frequent and reliable multi-modal transit service. Birmingham Plan 2040.
- o Remove barriers to food production in residential zones and on residential properties.



APPENDIX

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DEFINITIONS

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MEMORANDUM

Planning Department

DATE: May 29th, 2024

TO: Environmental Sustainability Committee

FROM: Leah Blizinski, City Planner

SUBJECT: GHGI, Community Comparison, SEMCOG GHGI, Forecasts

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2. Surrounding Communities GHGI Comparison
3. SEMCOG Oakland County GHGI Summary
4. Business As Usual (BAU) Forecasts for 2030

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Water and wastewater	Water Tower Energy Usage	13,228	kWh	7
Water and wastewater total				7
Total government emissions				4,622

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Total	4,917		12,478		4,615	

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Solid Waste	6,592	2%	18,730	2%	17,331	6%
Water	4,581	2%	6,060	1%	5,351	2%
Other (Process & Fugitive)	3,059	1%	27,353	3%	2,805	1%
Total	268,545		915,242		282,801	

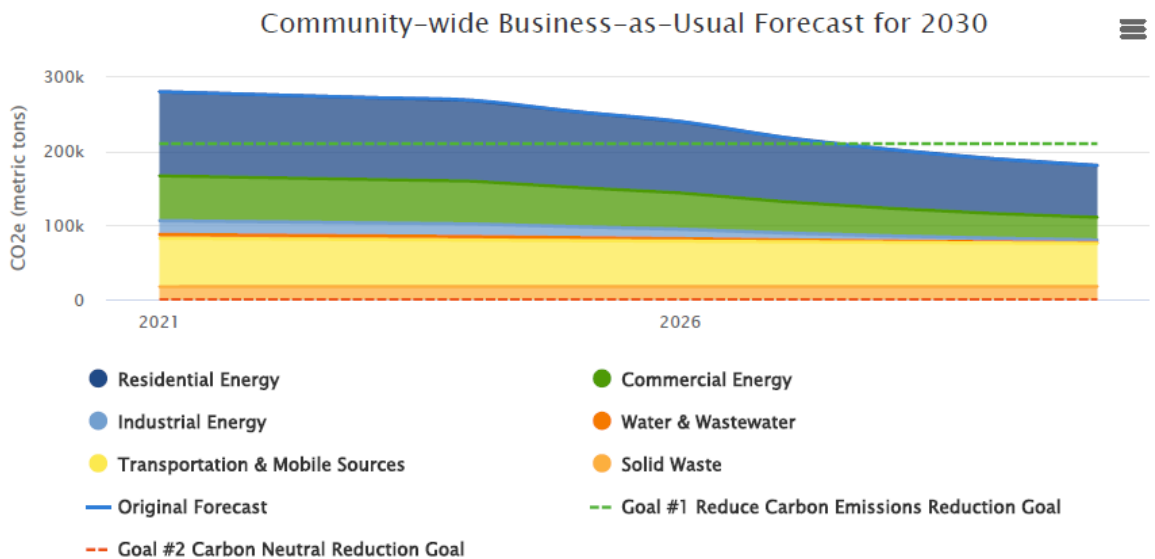
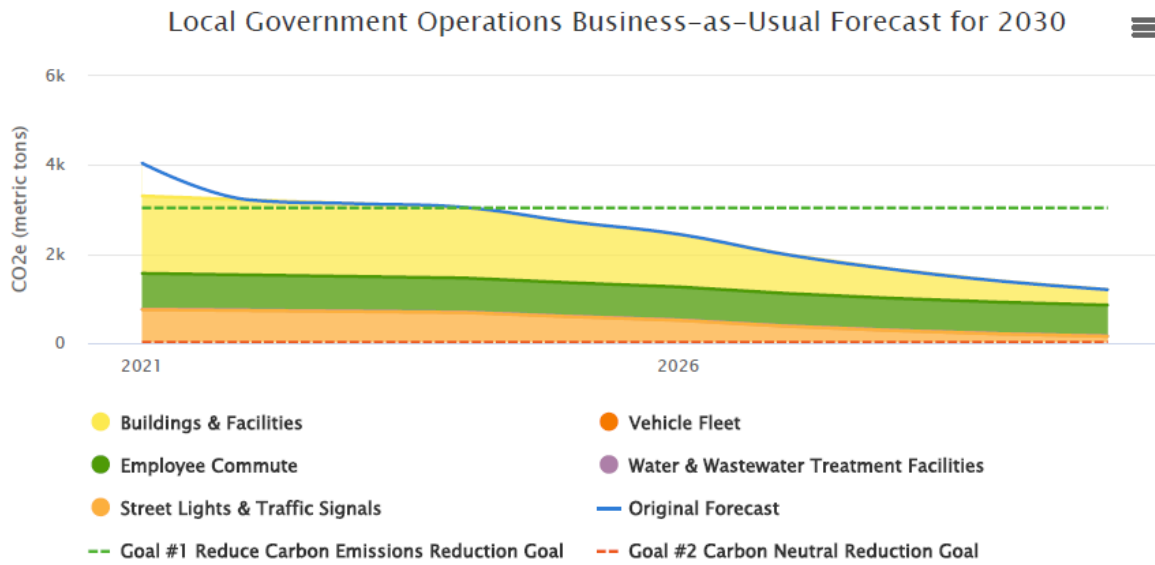
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The following Oakland County Summary from SEMCOG's recently completed GHGI is also attached for your review:

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4. BAU Forecasts for 2030

The below forecasts show estimates in Greenhouse Gas Emissions for a 'business-as-usual' (BAU) scenario. The BAU scenario takes into account population and employment growth rates for the city of Birmingham, grid emissions intensity mandates at the state level, and federal Corporate Average Fuel Economy (CAFÉ) standards under the Clean Air Act. These are considered 'business-as-usual' because they are already underway. As we develop additional sector specific goals, the tool can be used to add in specific 'Planning Scenarios' related to specific goals to estimate impacts on emissions.



Oakland County

2019 County Emissions Summary

This county emissions summary was developed as part of the 2019 Regional Greenhouse Gas Emissions Inventory (GHGI) for the Southeast Michigan Council of Governments (SEMCOG). It is intended to help decision makers understand key greenhouse gas (GHG) emissions sources in Oakland County and provide communities with information needed to begin developing GHG emissions reduction strategies. More details on the methods and data sources used to produce this summary will be available in the full report on SEMCOG’s website.

Community Characteristics

Population*	1,257,584
Jobs (full- and part-time)**	1,023,765
Median household income*	\$81,190
Share of owner-occupied housing units*	71.7%
Land area (acres)**	580,583.2
Tree coverage (percentage of land area)**	40.0%
Impervious surfaces (percentage of land area)**	19.2%

Data sources: *2019 American Community Survey One-year Estimates; **SEMCOG Community Profiles

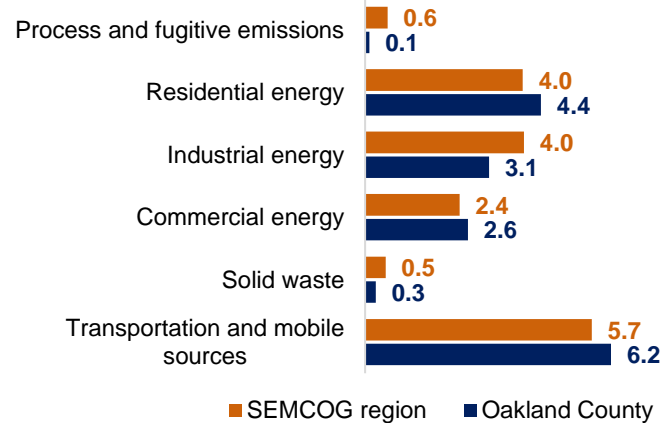
Emissions Summary

2019 Emissions Summary (MTCO_{2e})

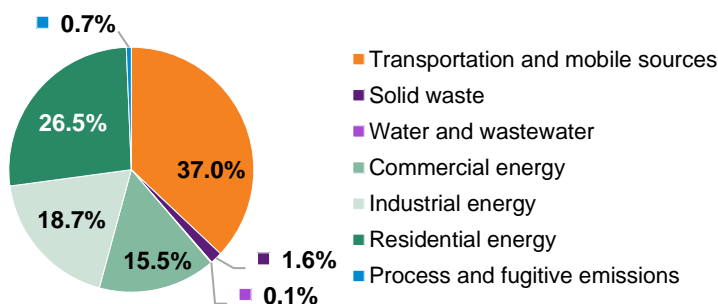
Transportation and mobile sources	7,783,151
Solid waste	336,306
Water and wastewater	22,612
AFOLU	1,492
Commercial energy	3,255,014
Industrial energy	3,921,878
Residential energy	5,566,615
Process and fugitive emissions	137,364

AFOLU = agriculture, forestry, and other land uses
MTCO_{2e} = metric tons of carbon dioxide equivalent

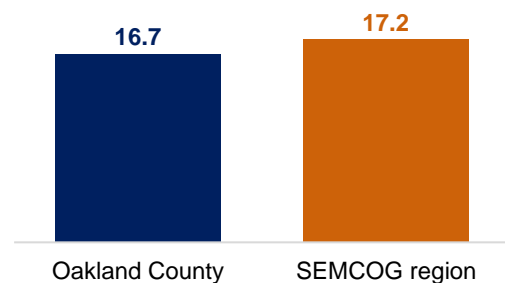
2019 Per-capita Emissions (MTCO_{2e}/Person)



2019 Regional Emissions by Sector (MTCO_{2e})

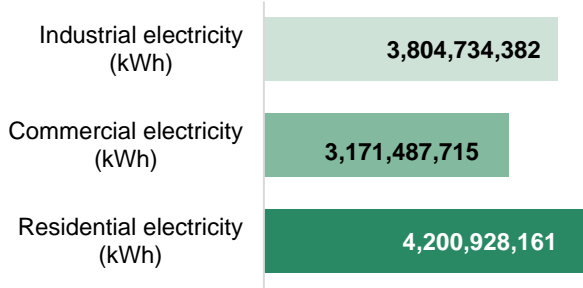


2019 Overall Per-capita Emissions (MTCO_{2e}/Person)



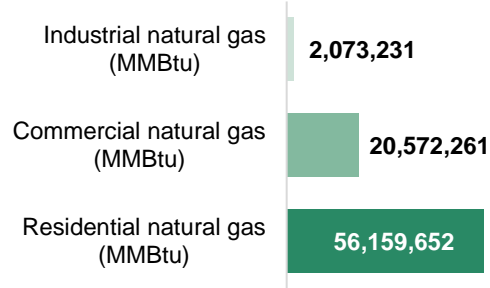
Energy Characteristics

2019 Electricity Energy Consumption



kWh = kilowatt hours

2019 Natural Gas Consumption



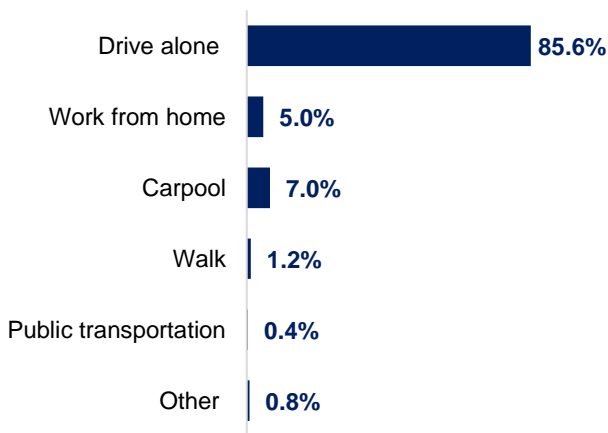
MMBtu = million British thermal units

2019 Per-capita Energy Consumption

	Oakland County	SEMCOG Region
Residential electricity (kWh/person)	3,340	3,110
Commercial electricity (kWh/person)	2,522	2,236
Industrial electricity (kWh/person)	3,025	4,065
Residential natural gas (MMBtu/person)	45	38
Commercial natural gas (MMBtu/person)	16	17
Industrial natural gas (MMBtu/person)	2	11

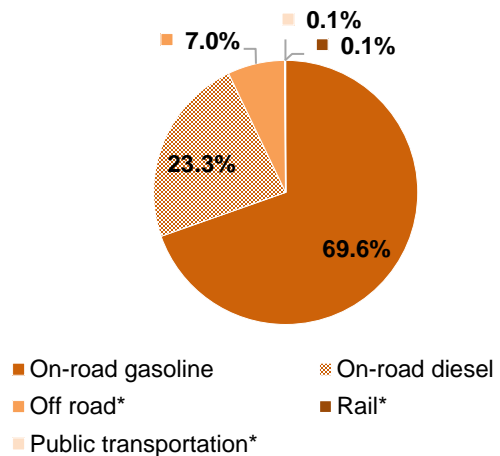
Transportation Characteristics

Mode of Travel to Work



Note: Totals may not sum due to rounding
 Data source: 2019 American Community Survey Five-year Estimates

2019 Transportation Fuel Emissions



*Mixed fuel sources
 Data source: PSC Analysis of ICLEI (Local Governments for Sustainability) data



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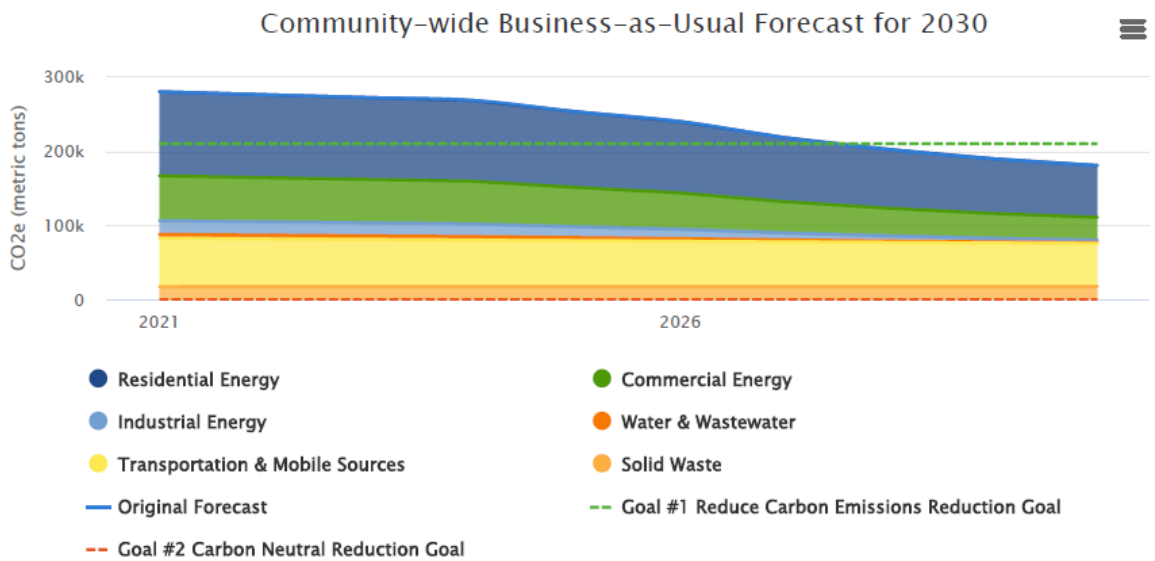
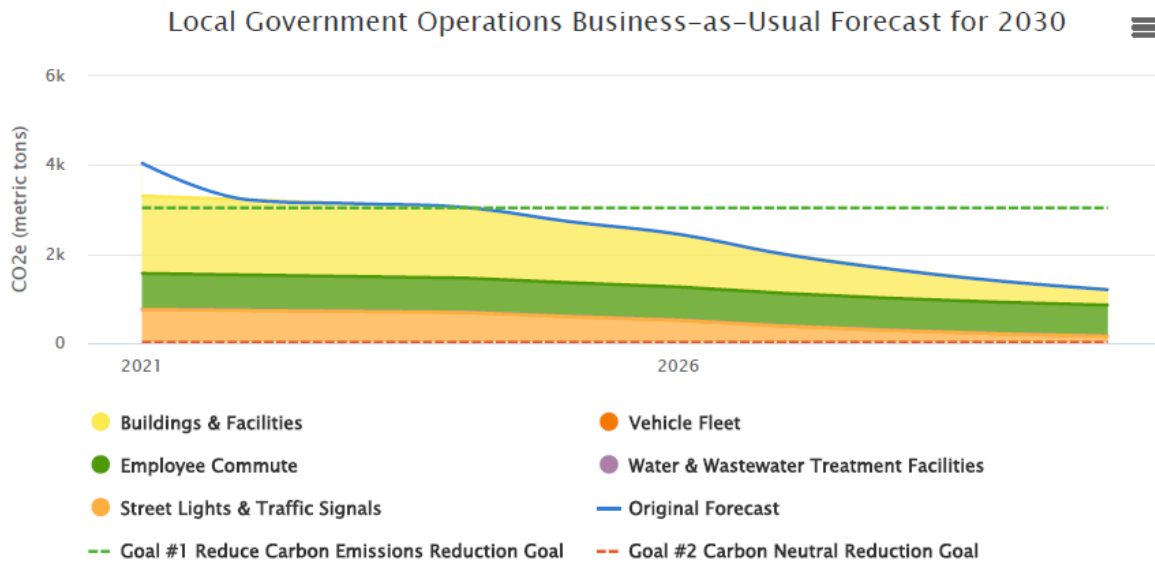
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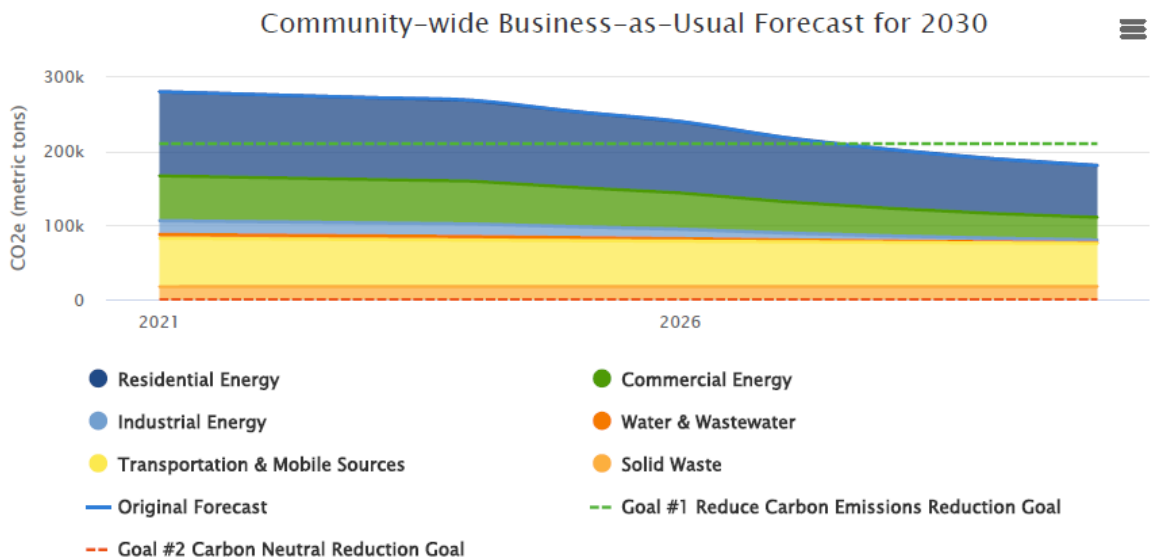
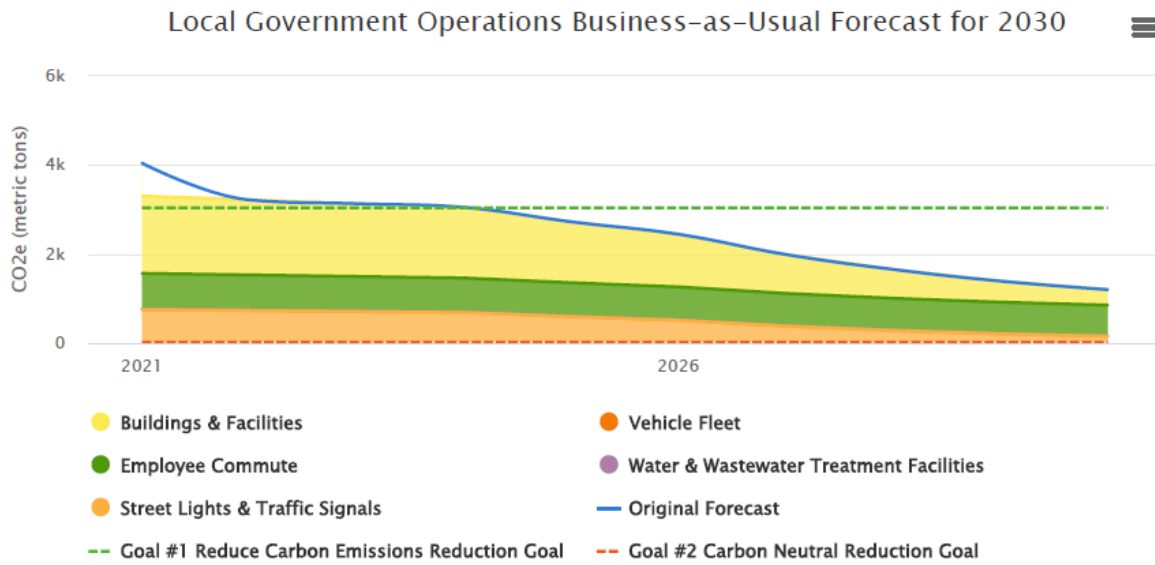
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Project Schedule

DRAFT: 5/24/2024

	2023							
Meeting/Event	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
June 12th, ESC		✓						
GHGI Data Requests		✓						
Community Survey Open (Late June)		✓						
Public Engagement Event #1 (Day on the Town, July 29 th 9am-5pm)			✓					
August 21st, ESC				✓				
Public Engagement Event #2 (Farmer’s Market, August)				✓				
Public Engagement Event #3 (Municipal Roundtable, Sept/Oct)					✓	✓		
Community Survey Closes (Late Sept.)					✓			
October 30th, ESC @ BPL Community Visioning Session						✓		
Nov 20th, ESC Public Engagement Summary Review Draft Vision and Objectives							✓	
	2024							
Meeting/Event	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
January, ESC Finalize SCAP Vision & Objectives	✓							
Present Project Overview to City Boards and new board student reps MMTB, P&R, PB, HDC, DRB, BSD		✓	✓	✓	X			
March, ESC SCAP Draft Intro and Outline Review			✓					
April, ESC GHGI Final Report, Goal Drafting, Survey review				✓				
Community Survey #2 Open					✓			



	2024							
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
Public Engagement Event #4 DPS Open House, May 11 th , 2024					✓			
May, ESC SCAP 50% Draft Review					✓			
GHGI Final Report Published to City Website						X		
June, ESC						X		
July, ESC SCAP 100% Draft Review							X	
Final Draft Published on City Website 30-Day Public Comment Period							X	
August, ESC								X
City Commission Public Hearing / Adoption								X
Publish Final SCAP on City Website								X

Acronyms Decoded

- ESC – Ad Hoc Environmental Sustainability Committee
- GHGI – Greenhouse Gas Emissions Inventory
- SCAP – Sustainability and Climate Action Plan
- MMTB – Multi-Modal Transportation Board
- P&R – Parks and Recreation Advisory Board
- PB – Planning Board
- HDC – Historic District Committee
- DRB – Design Review Board
- BPL – Baldwin Public Library

Project Report

29 April 2021 - 19 May 2024

Engage Birmingham

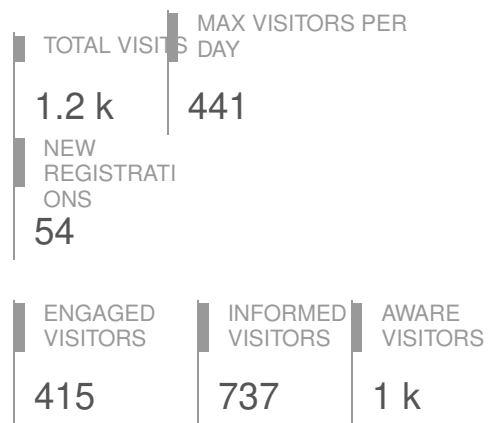
Local Recycling Needs in Birmingham



Visitors Summary

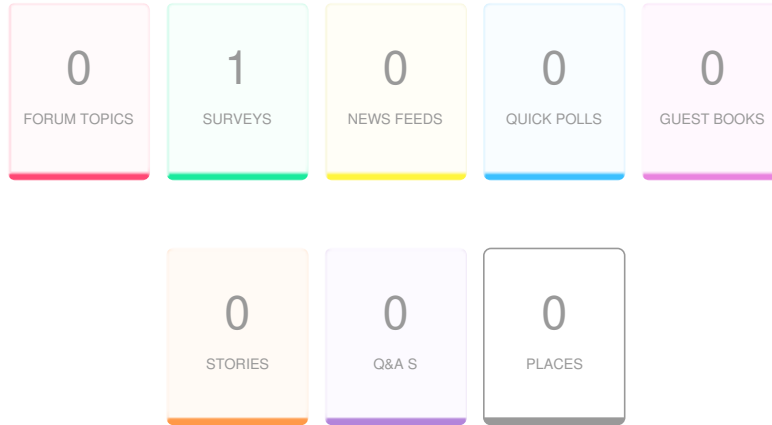


Highlights



Aware Participants		Engaged Participants			
1,043		415			
Aware Actions Performed		Engaged Actions Performed			
Participants		Registered	Unverified	Anonymous	
Visited a Project or Tool Page	1,043				
Informed Participants		Contributed on Forums			
737		0	0	0	
Informed Actions Performed		Participated in Surveys			
Participants		415	0	0	
Viewed a video	0	Contributed to Newsfeeds			
Viewed a photo	0	0	0	0	
Downloaded a document	0	Participated in Quick Polls			
Visited the Key Dates page	0	0	0	0	
Visited an FAQ list Page	0	Posted on Guestbooks			
Visited Instagram Page	0	0	0	0	
Visited Multiple Project Pages	330	Contributed to Stories			
Contributed to a tool (engaged)	415	0	0	0	
		Asked Questions			
		0	0	0	
		Placed Pins on Places			
		0	0	0	
		Contributed to Ideas			
		0	0	0	

ENGAGEMENT TOOLS SUMMARY



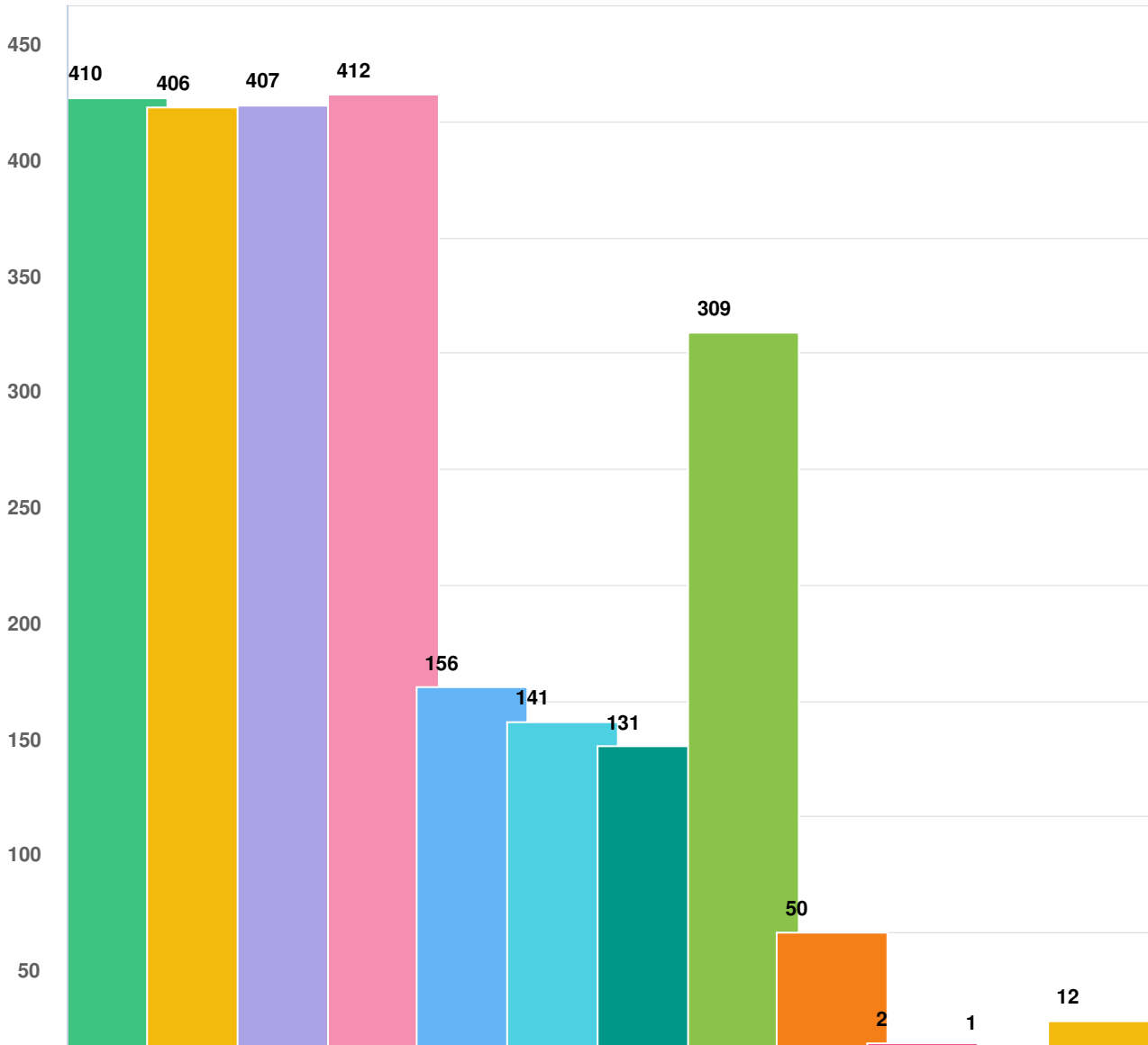
Tool Type	Engagement Tool Name	Tool Status	Visitors	Contributors		
				Registered	Unverified	Anonymous
Survey Tool	Local Recycling Needs in Birmingham	Published	916	415	0	0

ENGAGEMENT TOOL: SURVEY TOOL

Local Recycling Needs in Birmingham

Visitors 916	Contributors 415	CONTRIBUTIONS 415
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As far as you know, what types of objects or materials can be recycled through services offered in Birmingham? (check all t...



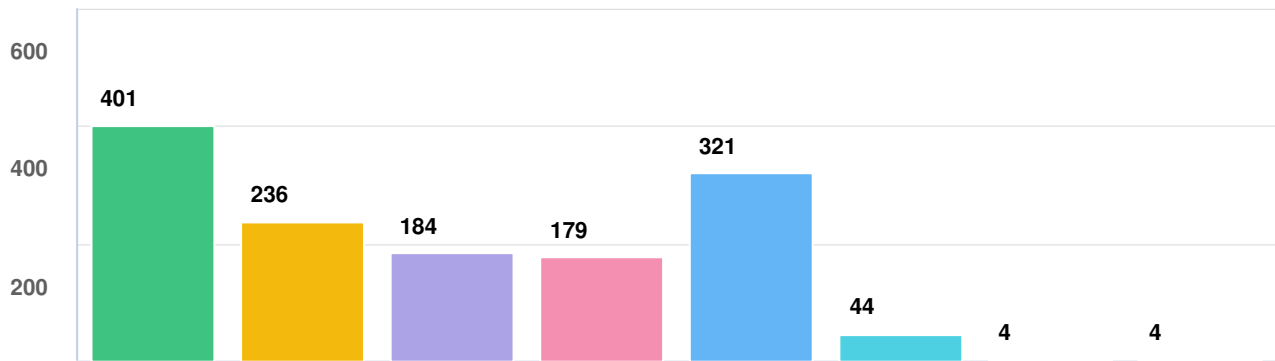
Question options

- Paper
- Metal cans
- Plastic containers
- Cardboard
- Household electronic equipment
- Household hazardous waste
- Styrofoam
- Residential yard waste
- Residential food waste
- No recycling available in my community
- Don't know
- Other (please describe)

Optional question (414 response(s), 1 skipped)

Question type: Checkbox Question

Which of the following recycling services have you used in the past 12 months? (check all that apply)



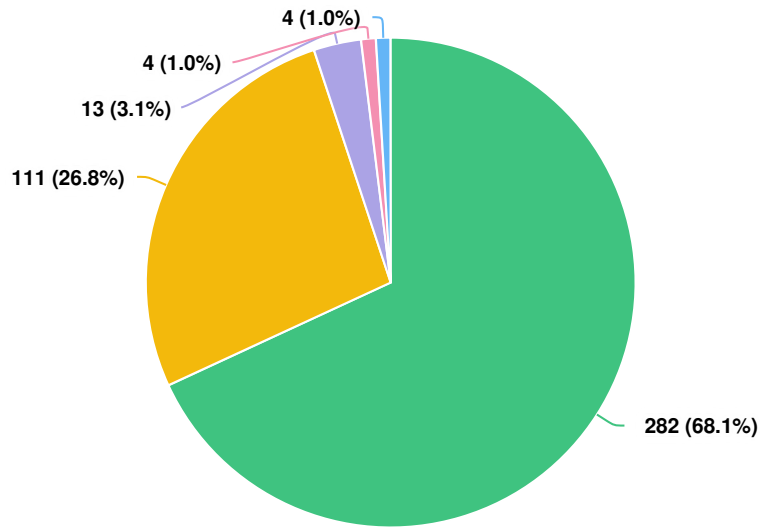
Question options

- Curbside recycling collection
- A drop-off recycling site (either free or for a fee)
- Household hazardous waste recycling (e.g., household chemicals, paint, batteries, medicine)
- Household electronic equipment recycling (e.g., computers, televisions, phones, tablets)
- Collection of residential yard waste
- Collection of residential food waste
- None of the above
- Other (please specify)

Optional question (414 response(s), 1 skipped)

Question type: Checkbox Question

Not counting deposit-return bottles or cans, how would you describe your participation in the recycling programs available ...



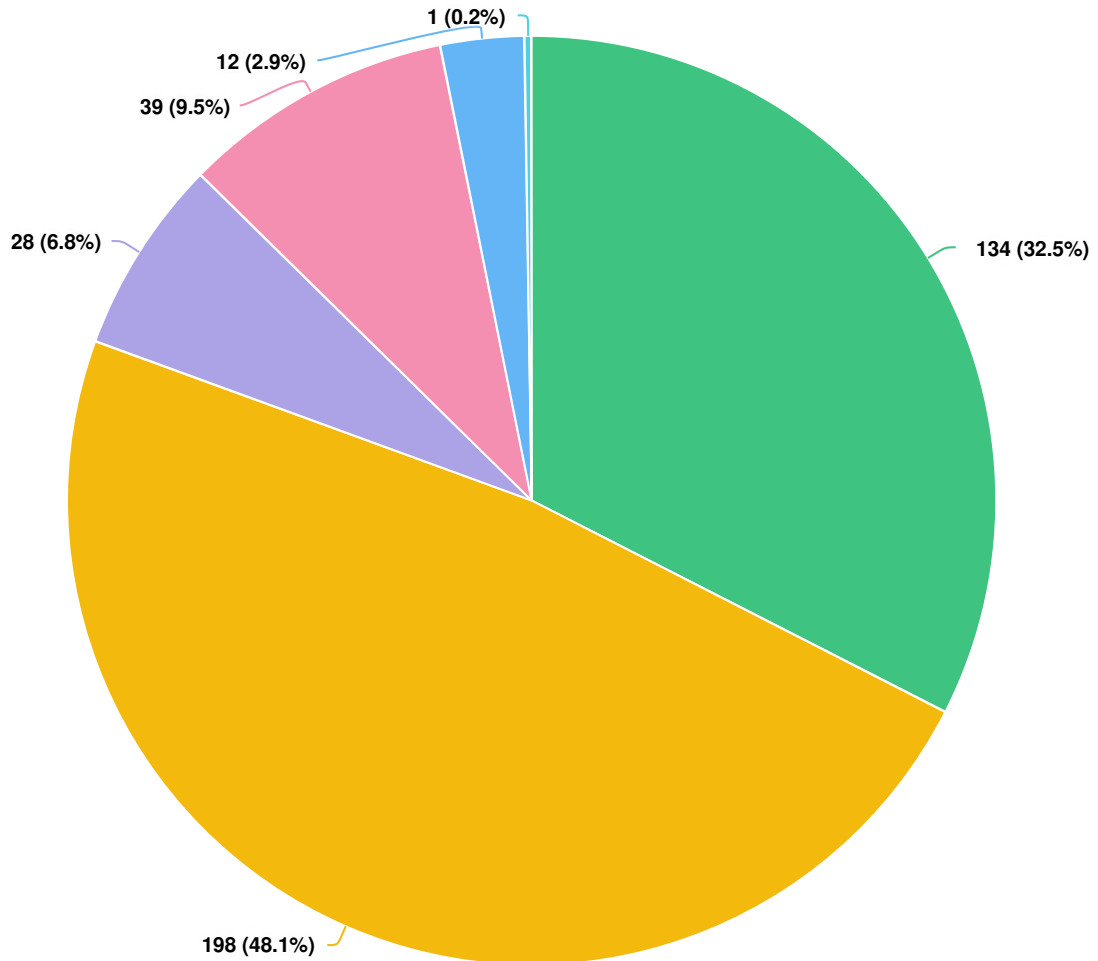
Question options

- All of the time
- Most of the time
- Some of the time
- Rarely
- Never

Optional question (414 response(s), 1 skipped)

Question type: Radio Button Question

Overall, how satisfied are you with your current access —or lack thereof—to recycling?



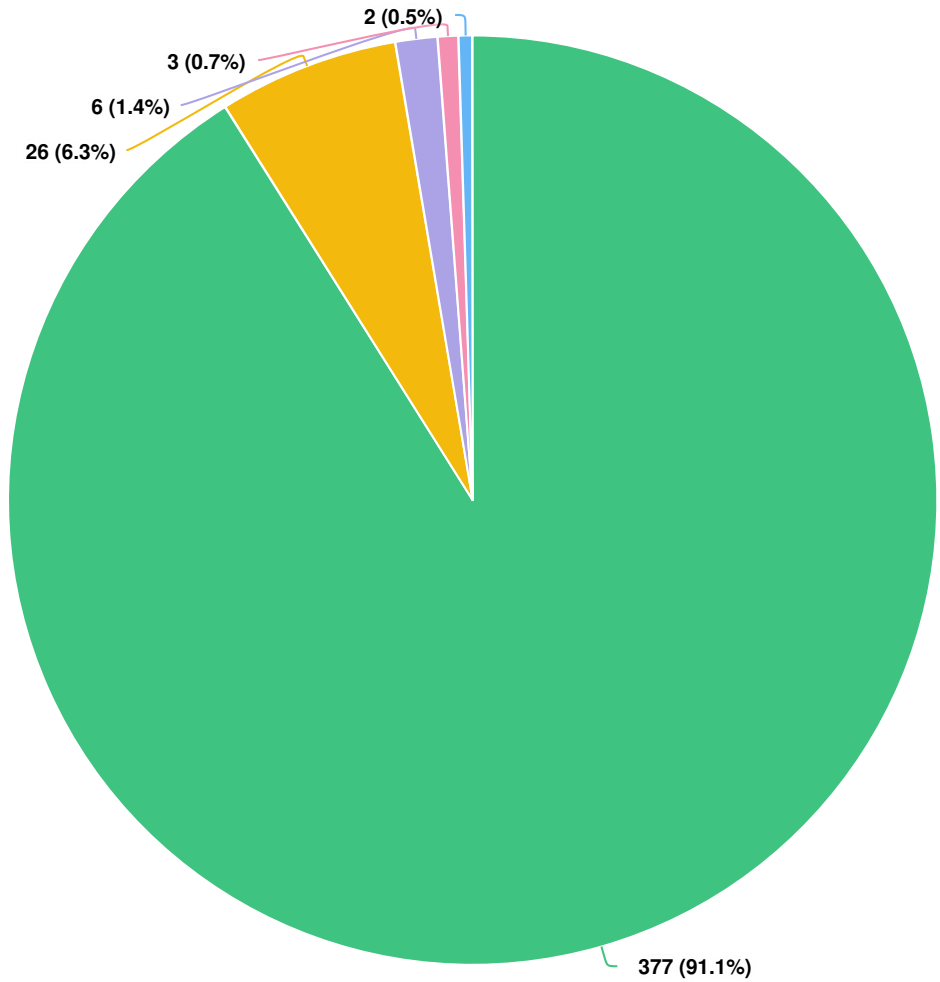
Question options

- Very satisfied
- Somewhat satisfied
- Neither satisfied nor dissatisfied
- Somewhat dissatisfied
- Very dissatisfied
- Don't know

Optional question (412 response(s), 3 skipped)

Question type: Radio Button Question

How much do you support access or increased access to recycling in Birmingham?



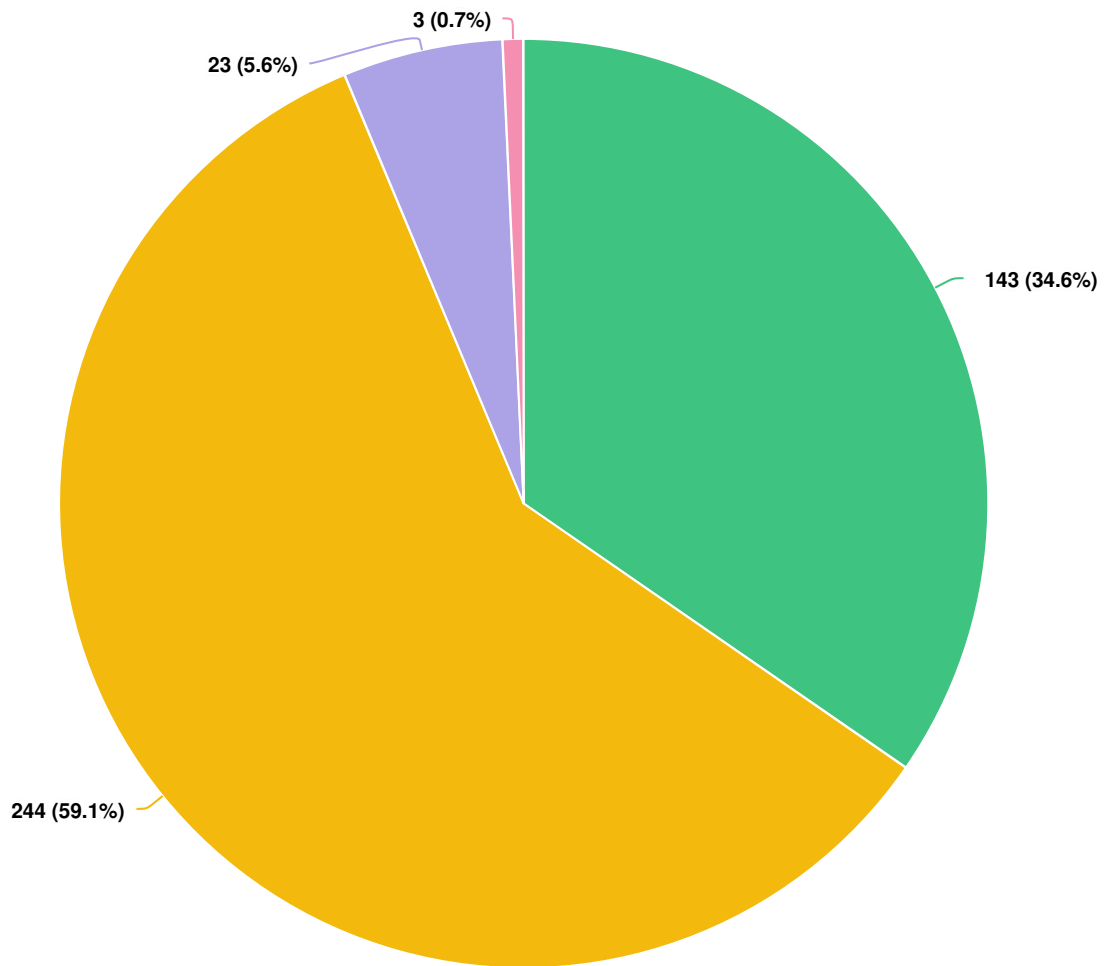
Question options

- Strongly support
- Somewhat support
- Little support
- Do not support at all
- Don't know

Optional question (414 response(s), 1 skipped)

Question type: Radio Button Question

Do you feel you have the knowledge and information you need about local recycling programs to recycle effectively?



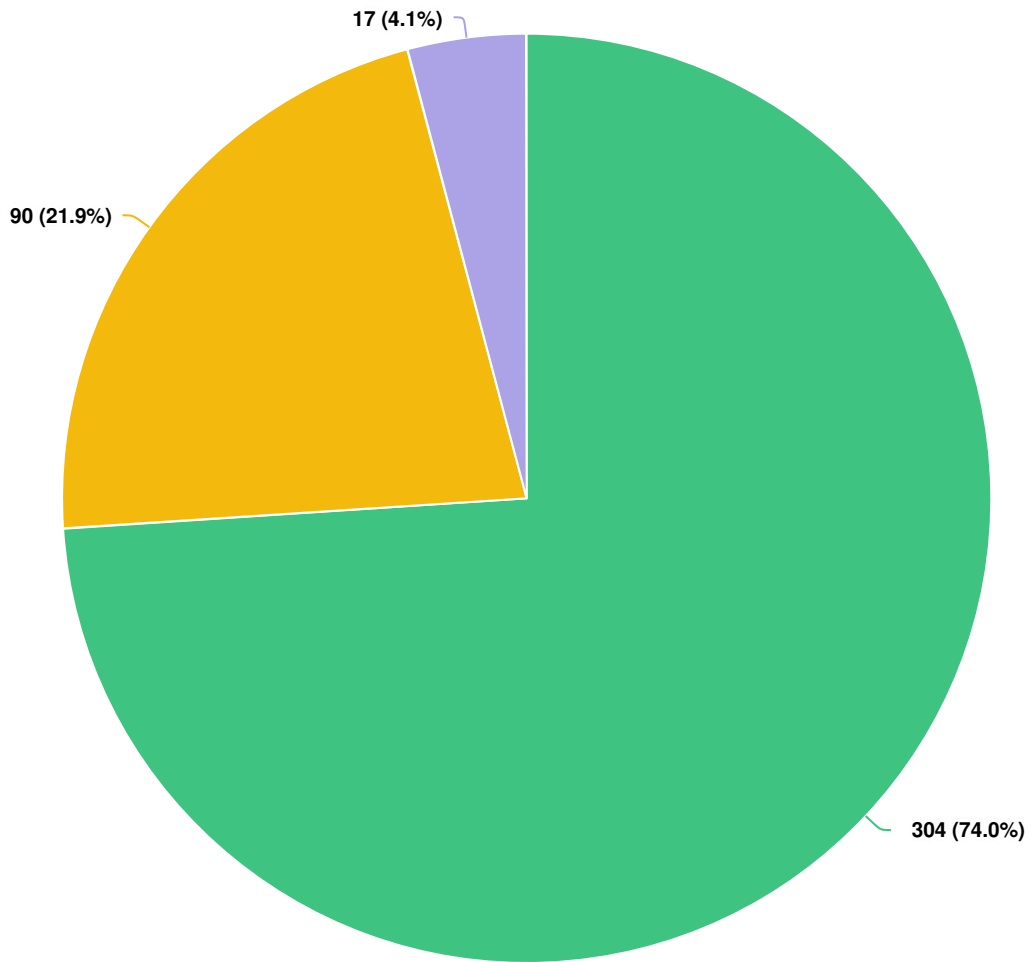
Question options

- Very much
- Somewhat
- Not at all
- Don't know

Optional question (413 response(s), 2 skipped)

Question type: Radio Button Question

Most of the time, if you are unsure if something is recyclable, do you put it in the trash or the recycle bin?



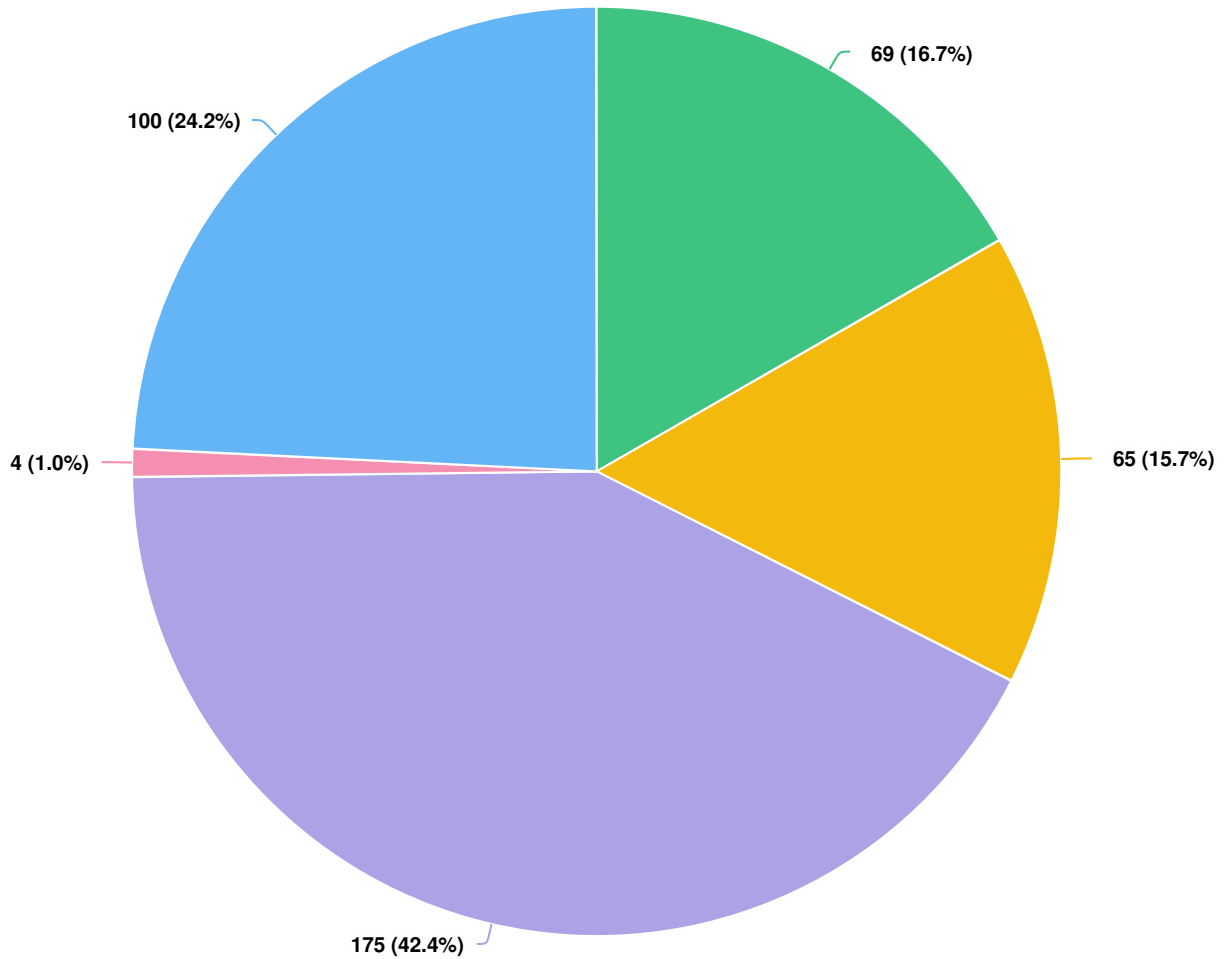
Question options

- Trash
- Recycle bin
- Don't know

Optional question (411 response(s), 4 skipped)

Question type: Radio Button Question

Who, if anyone, should have primary responsibility for providing recycling services in Birmingham?



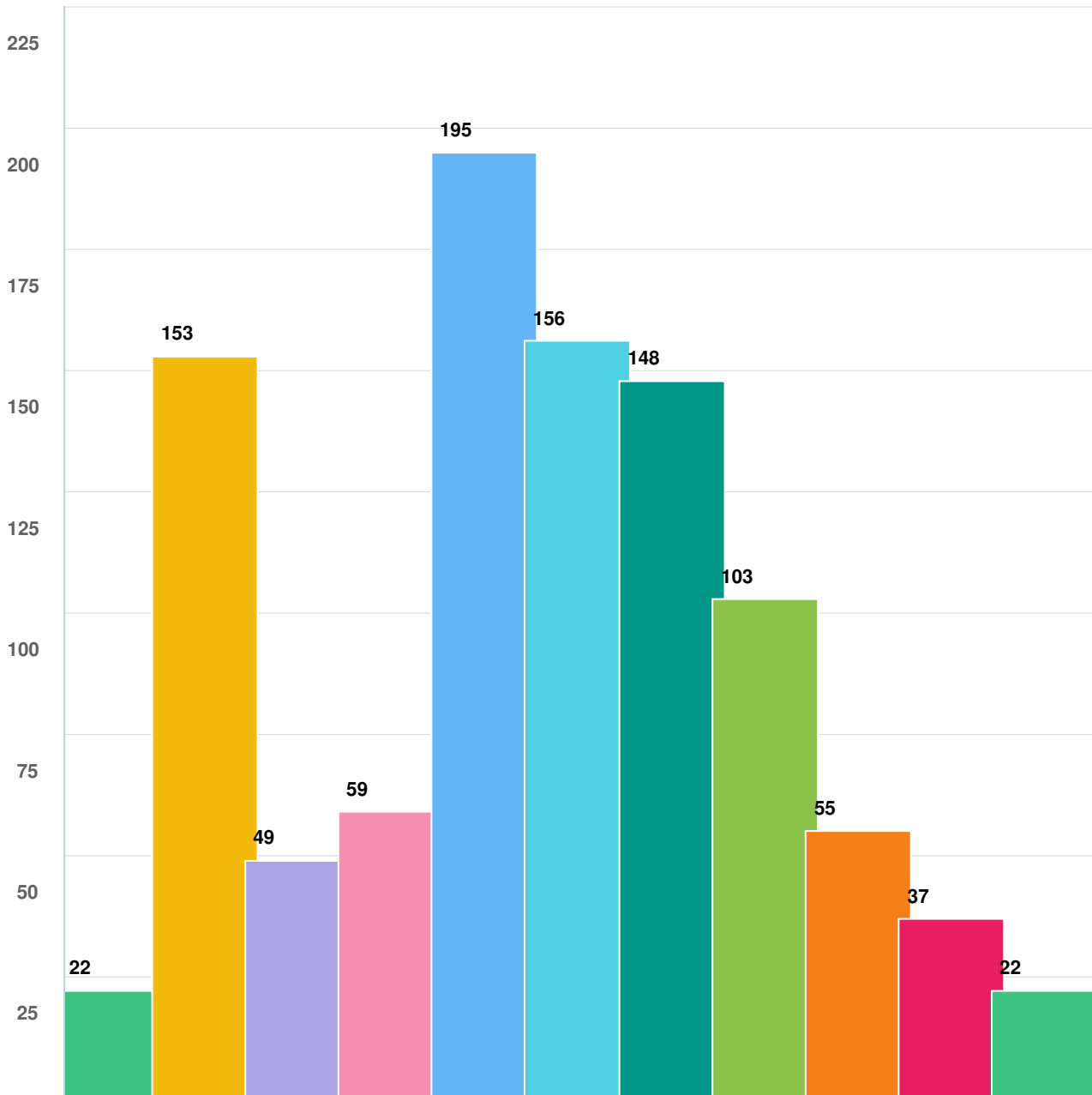
Question options

- Recycling should be provided by Birmingham's government itself.
- Birmingham should contract with a private contractor or hauler.
- Birmingham should provide recycling jointly with other local governments or regional arrangements.
- Residents should contract directly with private contractors or haulers if they want recycling.
- Don't know

Optional question (413 response(s), 2 skipped)

Question type: Radio Button Question

Are there any recycling services that may not be currently available to you that you would like to have access to? (check all that apply)



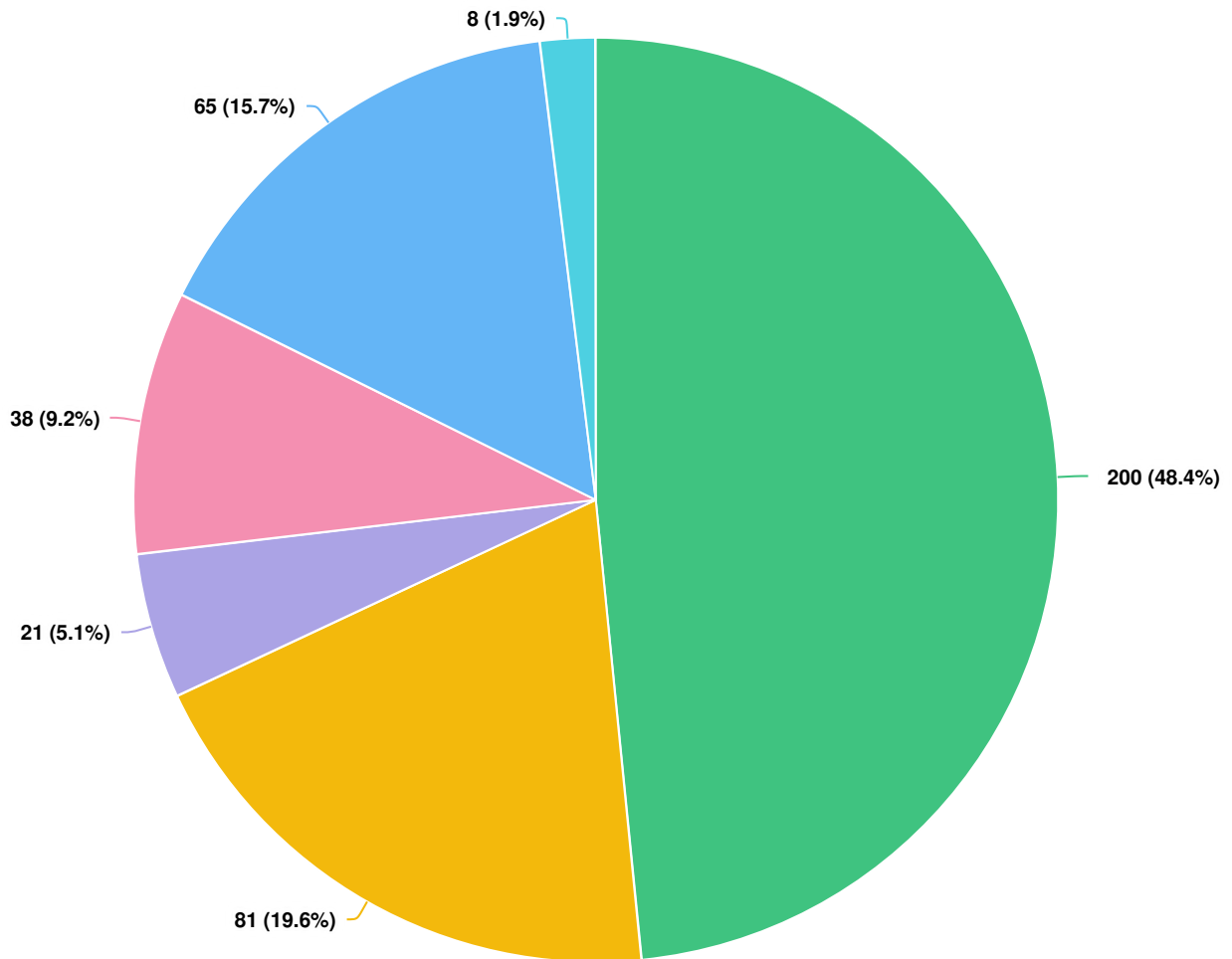
Question options

- Curbside recycling collection ● Food waste collection ● Access to a drop-off recycling facility
- Access to food waste drop-off facility
- Programs for hard to recycle or bulky items such as mattresses, appliances, textiles, foam, bikes, etc.
- Household hazardous waste collection opportunities ● Household electronic equipment collection opportunities (i.e., e-waste)
- Paper shredding opportunities ● Collection of yard waste material for composting ● Don't know
- Other (please specify)

Optional question (370 response(s), 45 skipped)

Question type: Checkbox Question

Birmingham currently does not have a food waste recycling or food composting program but wants to gauge residents' interests in participating in one. This program would divert basic food scraps from landfills to a processing facility that will conv...



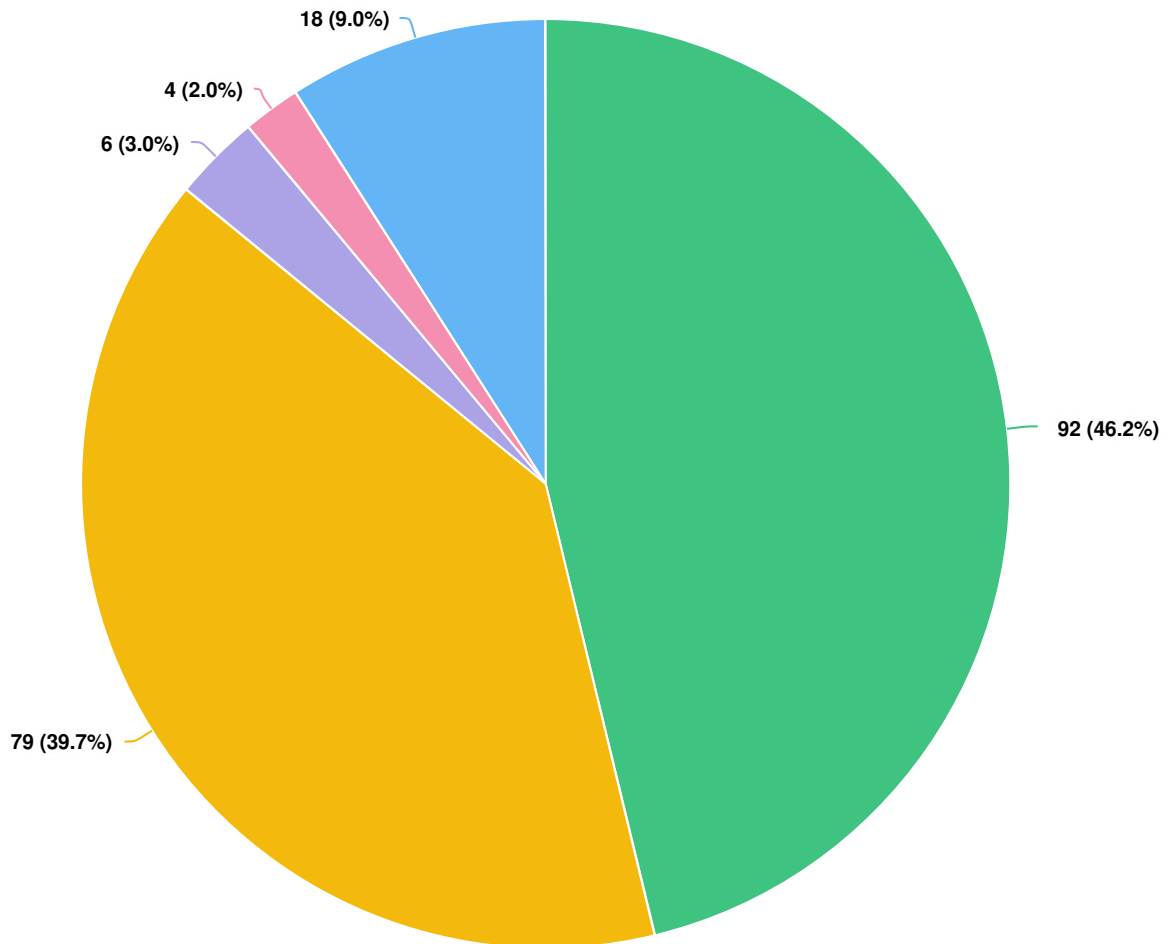
Question options

- Very likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Very unlikely
- Don't know

Optional question (413 response(s), 2 skipped)

Question type: Radio Button Question

What type(s) of food waste recycling or food composting programs would you participate in?



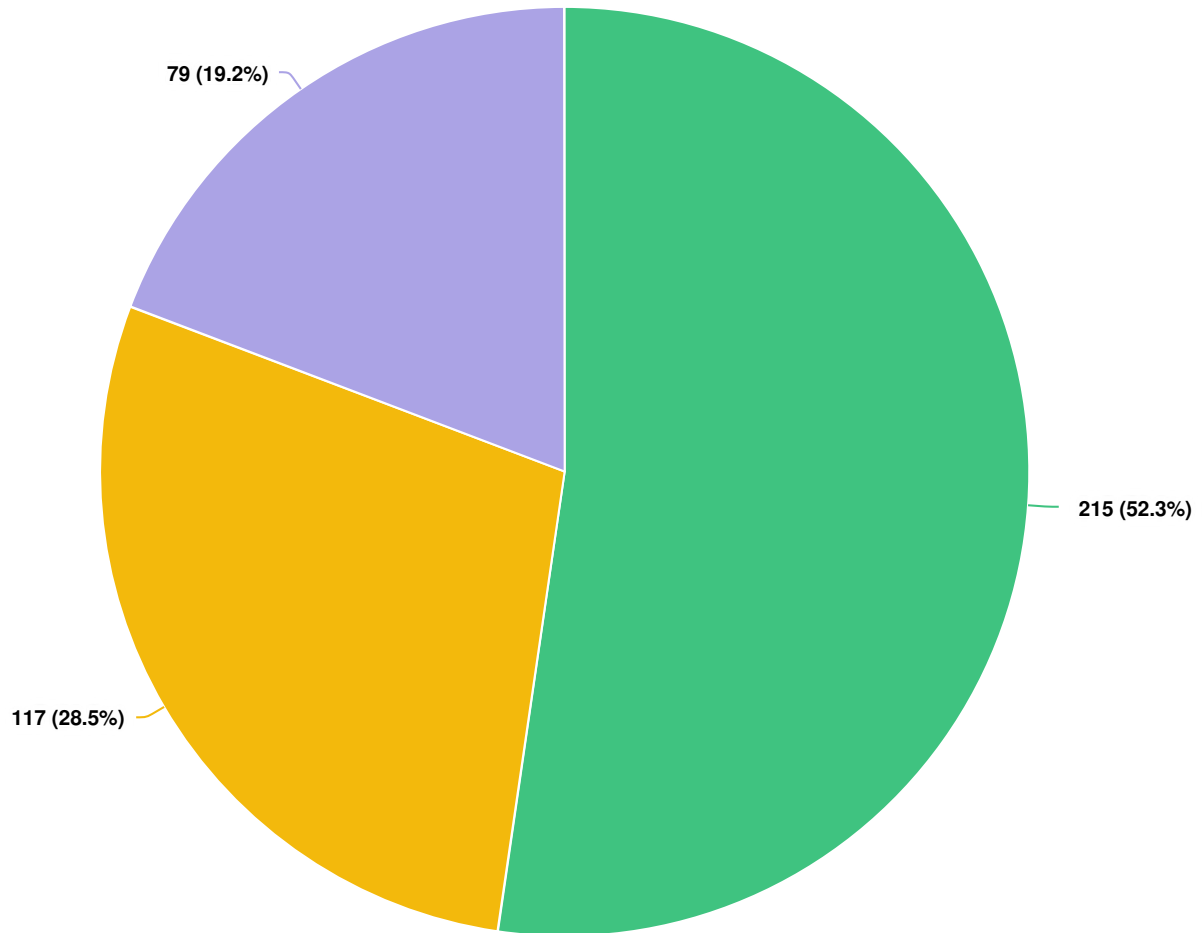
Question options

- Curbside bag pick-up
- Curbside cart pick-up
- Taking my recycling to a drop-off center
- Don't know
- Other (please specify)

Optional question (199 response(s), 216 skipped)

Question type: Radio Button Question

If Birmingham were to consider adding new types of, or increased services for recycling food waste, electronics, hazardous waste, or other unique materials, would you be willing to pay a nominal fee to help offset costs of offering these new servic...



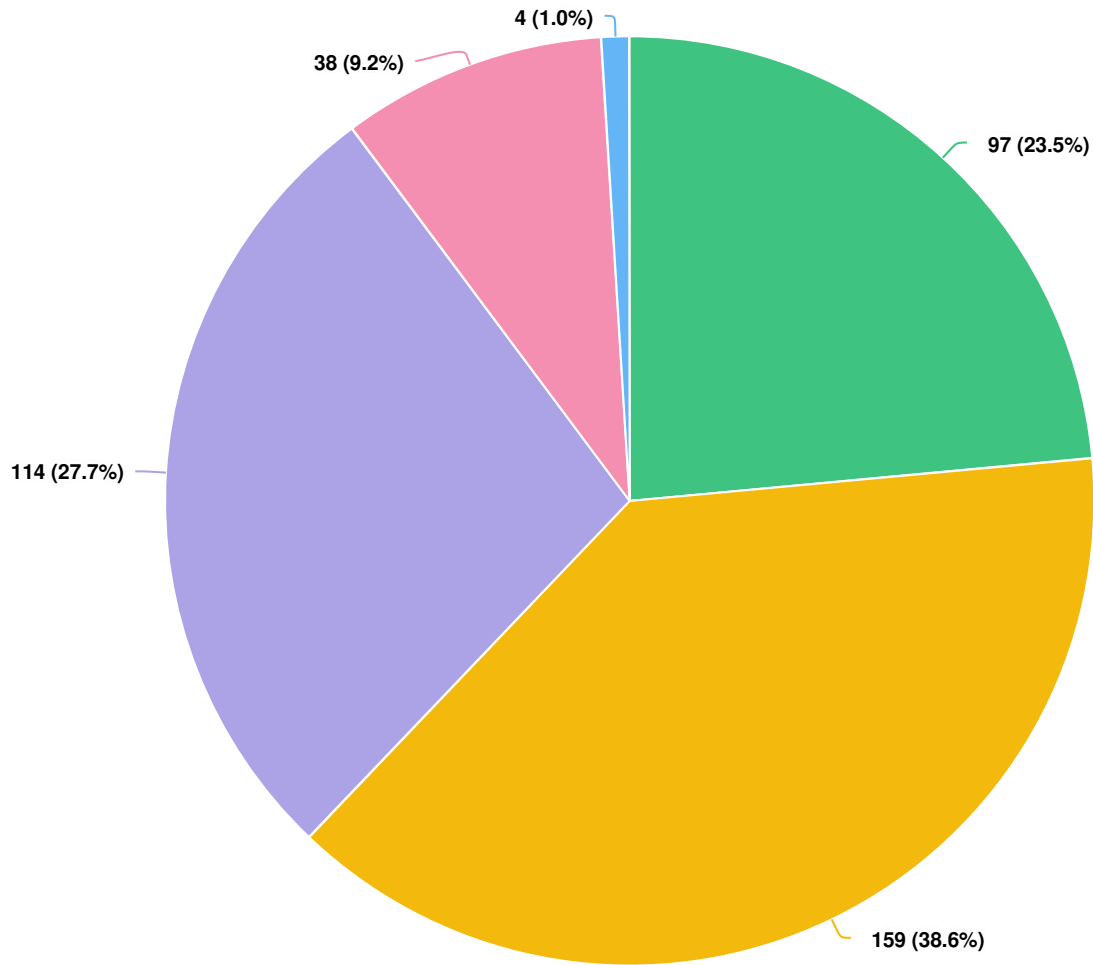
Question options

- Yes
- No
- Don't know

Optional question (411 response(s), 4 skipped)

Question type: Radio Button Question

How high of a priority is it to you that Birmingham adopt new or improved recycling programs for unique materials like food waste, electronics, hazardous materials, etc.?



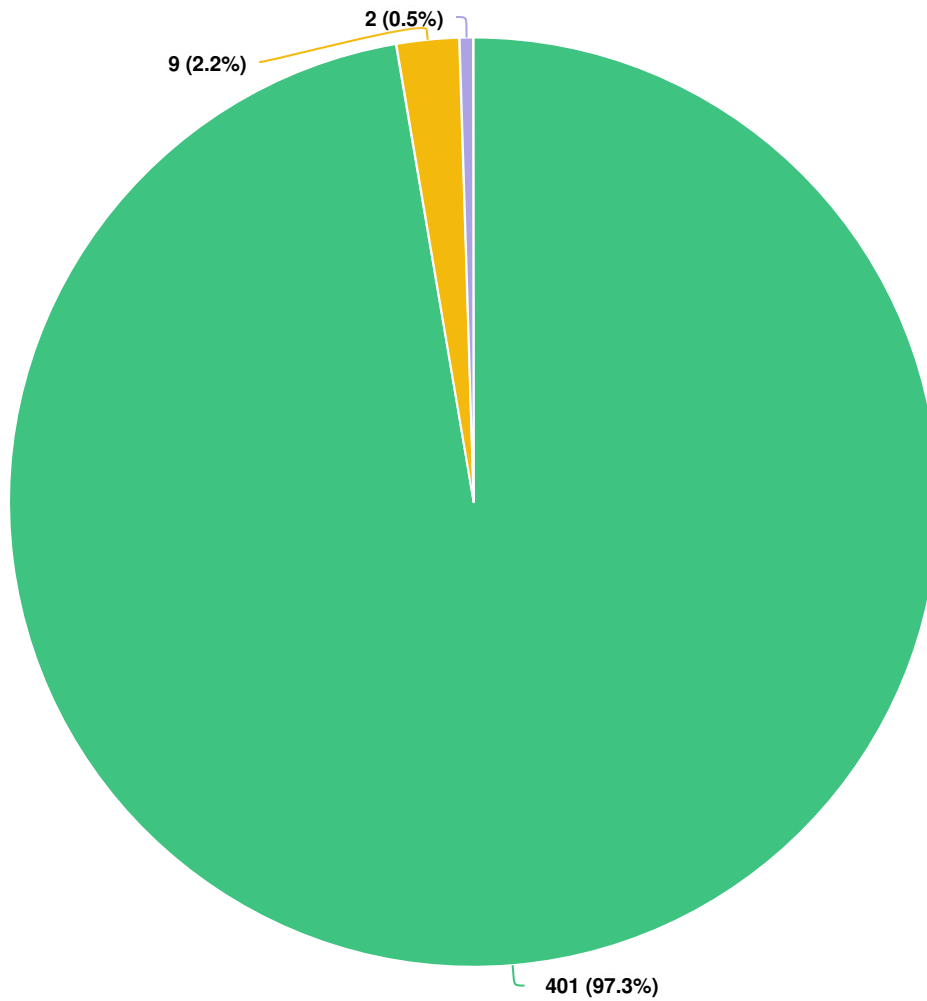
Question options

- A top priority
- A high priority
- Not a high priority
- Not a priority at all
- Don't know

Optional question (412 response(s), 3 skipped)

Question type: Radio Button Question

Are you a resident of Birmingham or do you live outside of Birmingham's boundaries?



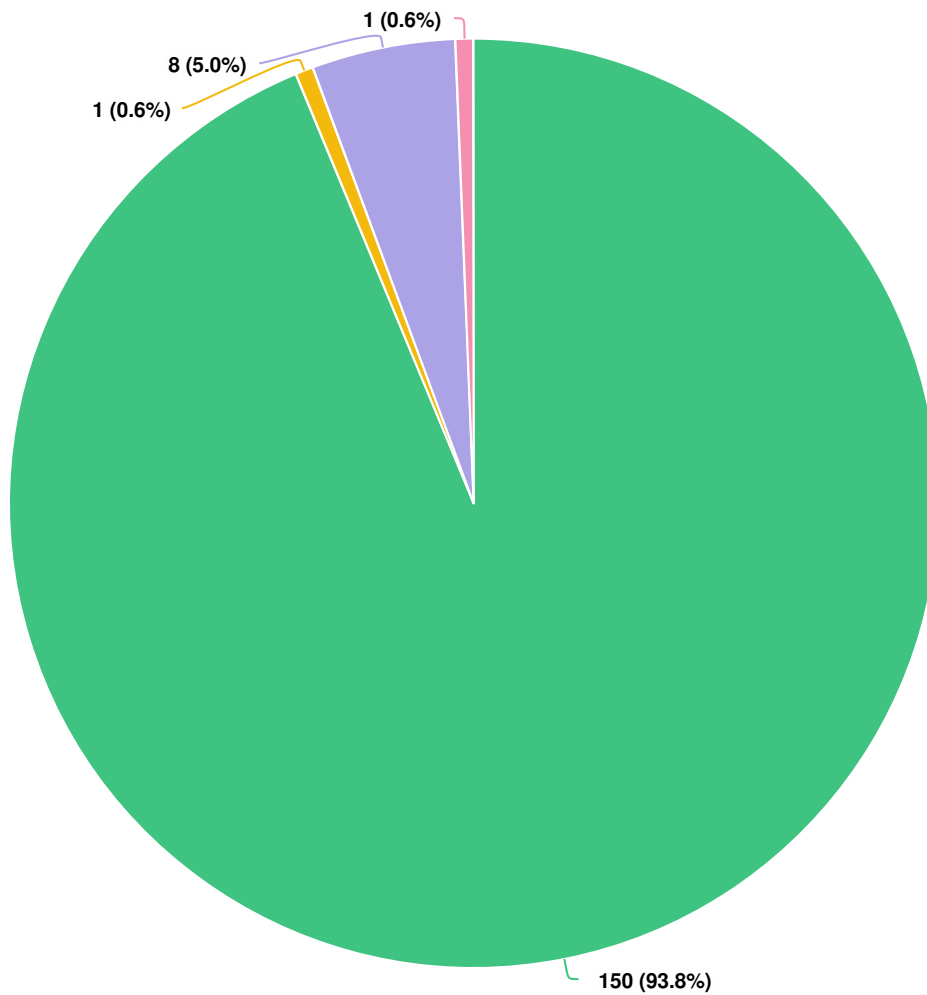
Question options

- I am a resident of Birmingham
- I am not a resident of Birmingham
- Prefer not to answer

Optional question (412 response(s), 3 skipped)

Question type: Radio Button Question

What type of housing is your residence in Birmingham?



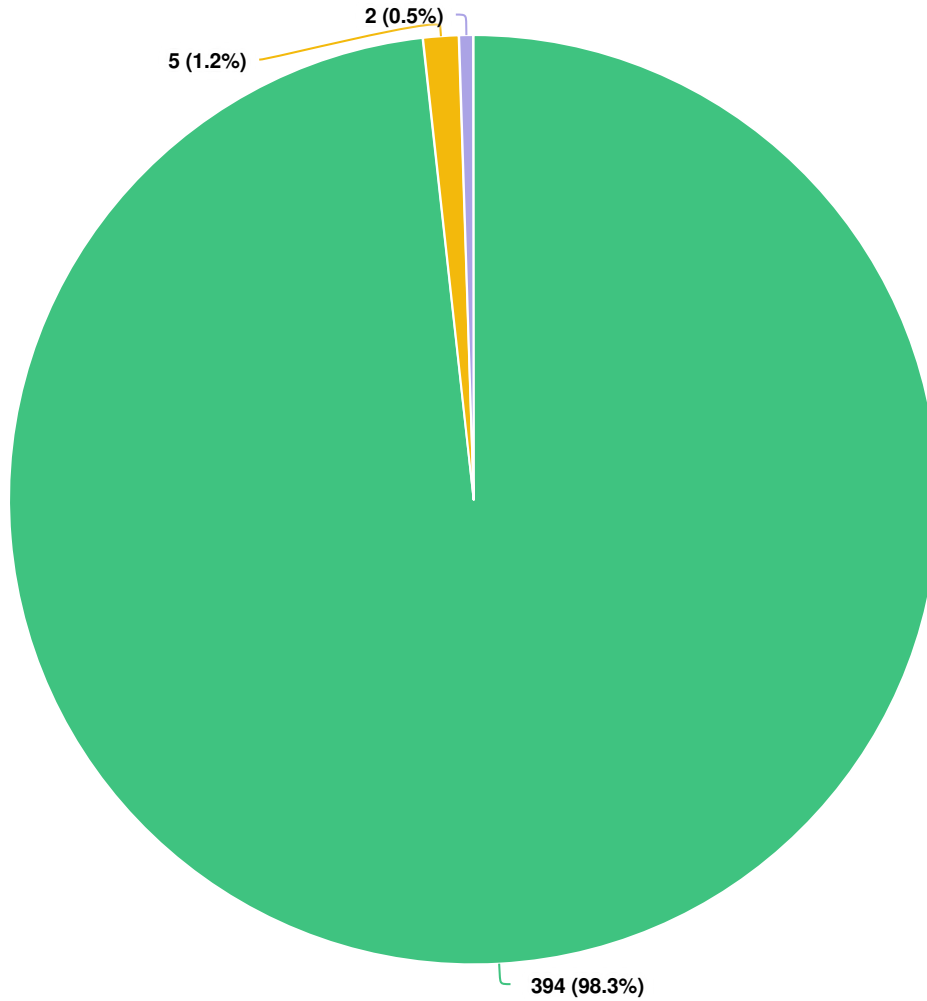
Question options

- A single-family home
- A townhome or duplex
- An apartment building or condominium
- Other (please specify)

Optional question (160 response(s), 255 skipped)

Question type: Radio Button Question

Is your residence in Birmingham your primary residence or a secondary/seasonal residence?



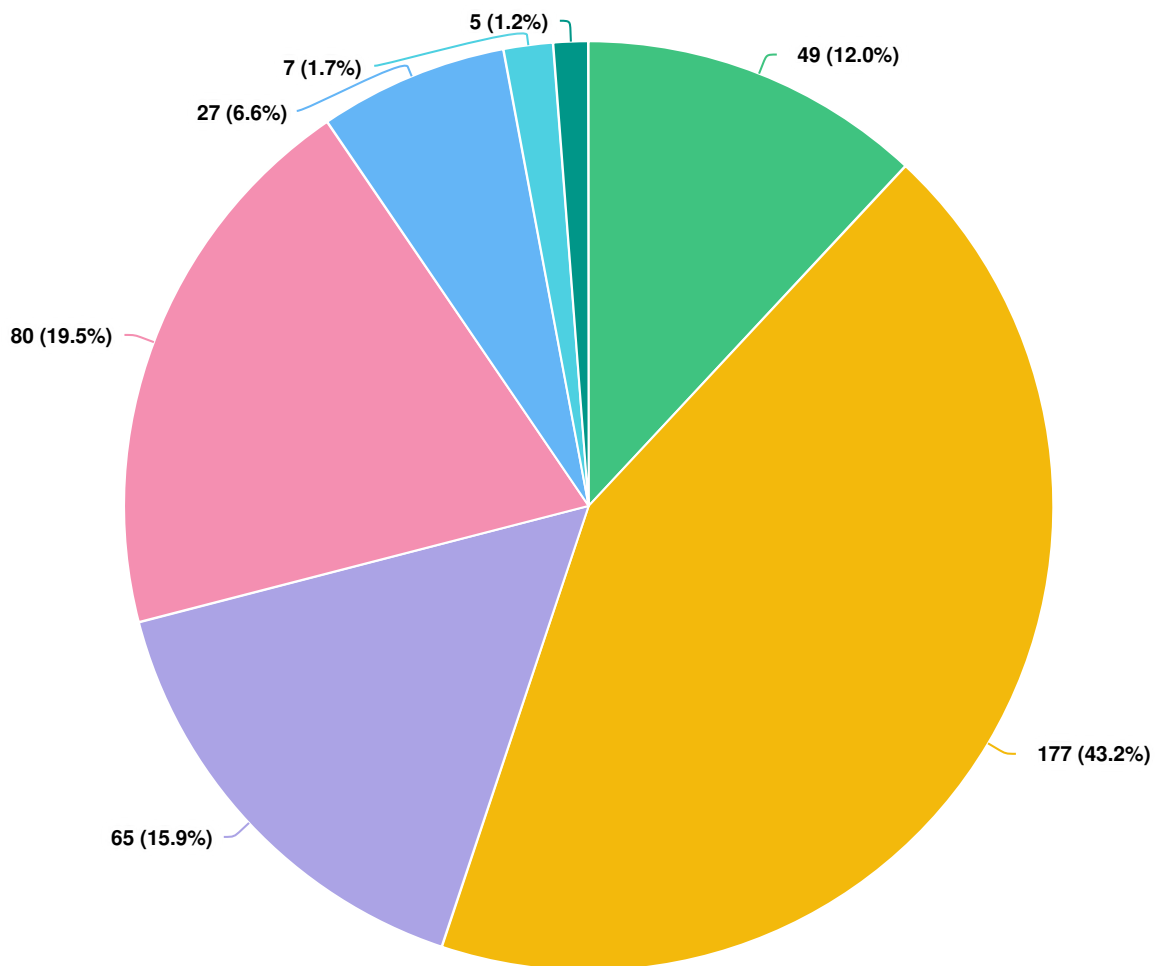
Question options

- Primary residence
- Seasonal residence
- Prefer not to answer

Optional question (401 response(s), 14 skipped)

Question type: Radio Button Question

How many people, including yourself, live in your household?



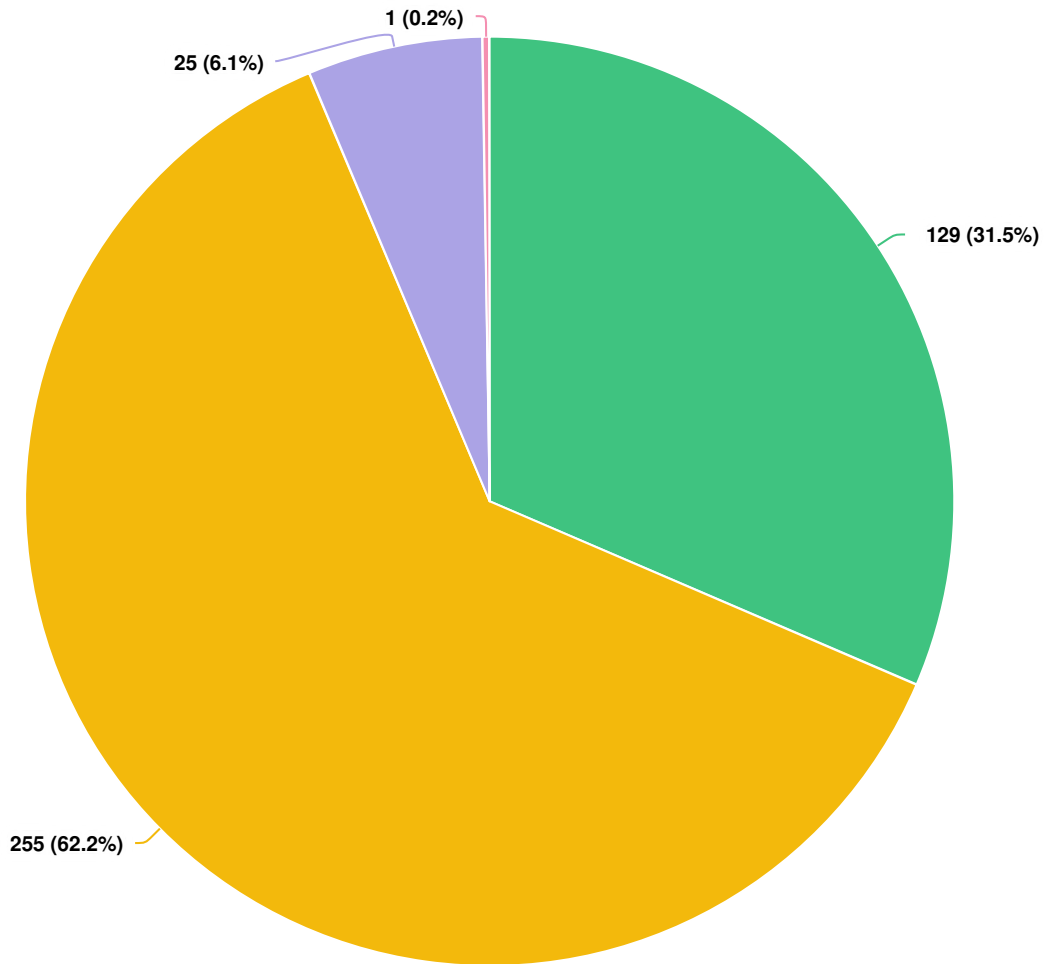
Question options

- 1
- 2
- 3
- 4
- 5
- 6 or more
- Prefer not to answer

Optional question (410 response(s), 5 skipped)

Question type: Radio Button Question

Respondent gender



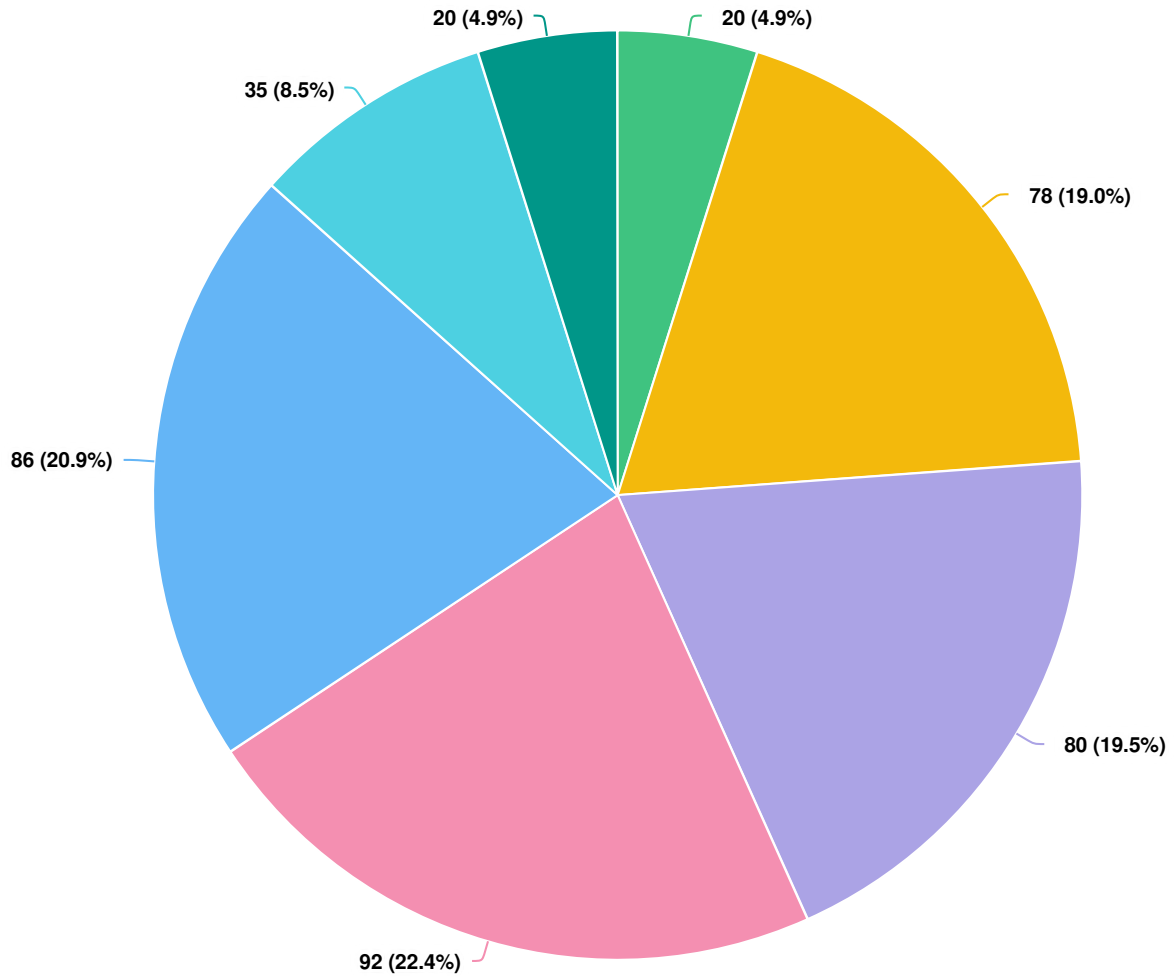
Question options

- Male
- Female
- Prefer not to answer
- Prefer to self describe

Optional question (410 response(s), 5 skipped)

Question type: Radio Button Question

What is your age?



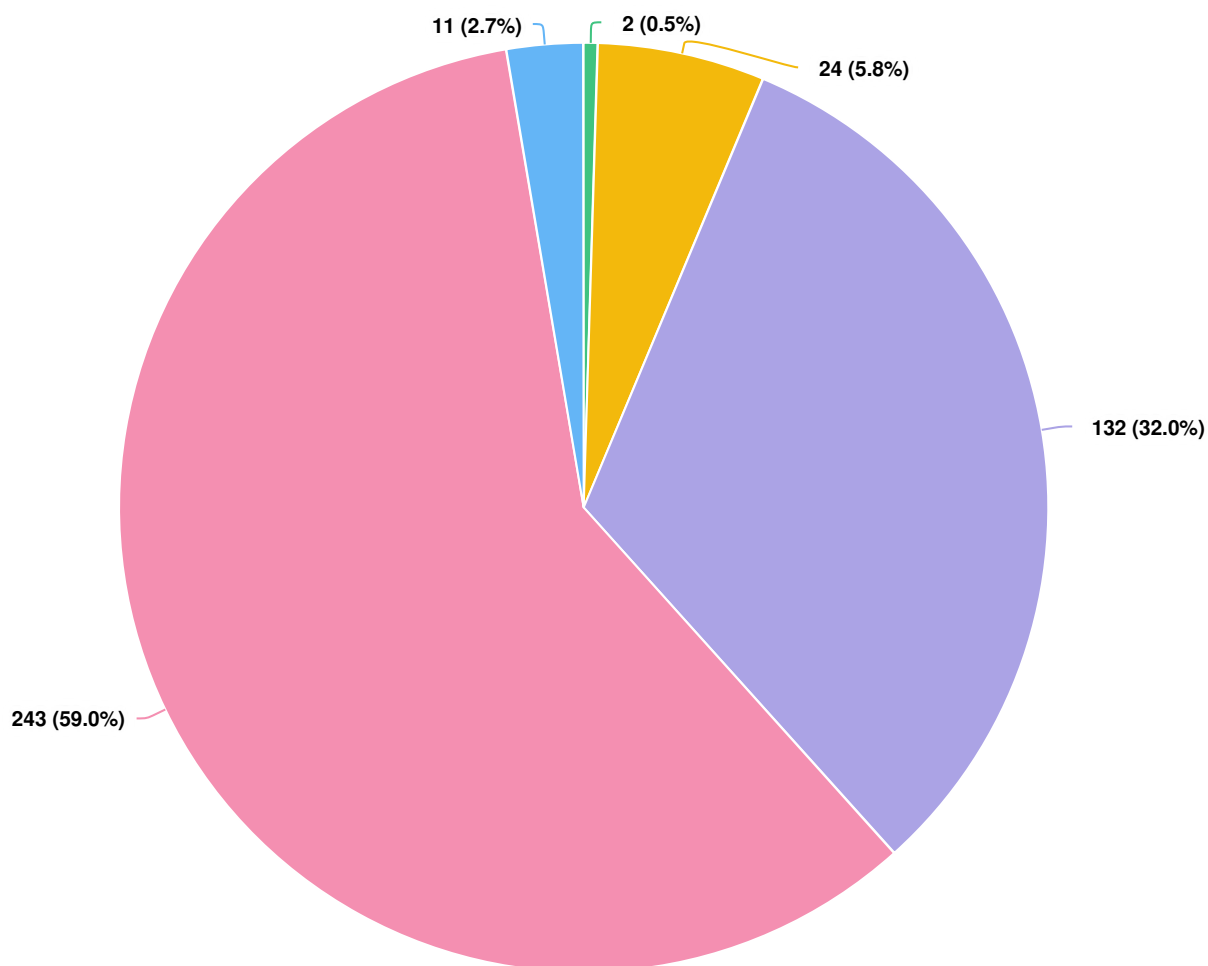
Question options

- 25-34
- 35-44
- 45-54
- 55-64
- 65-75
- 75 or older
- Prefer not to answer

Optional question (411 response(s), 4 skipped)

Question type: Radio Button Question

What is the highest level of education you have completed?



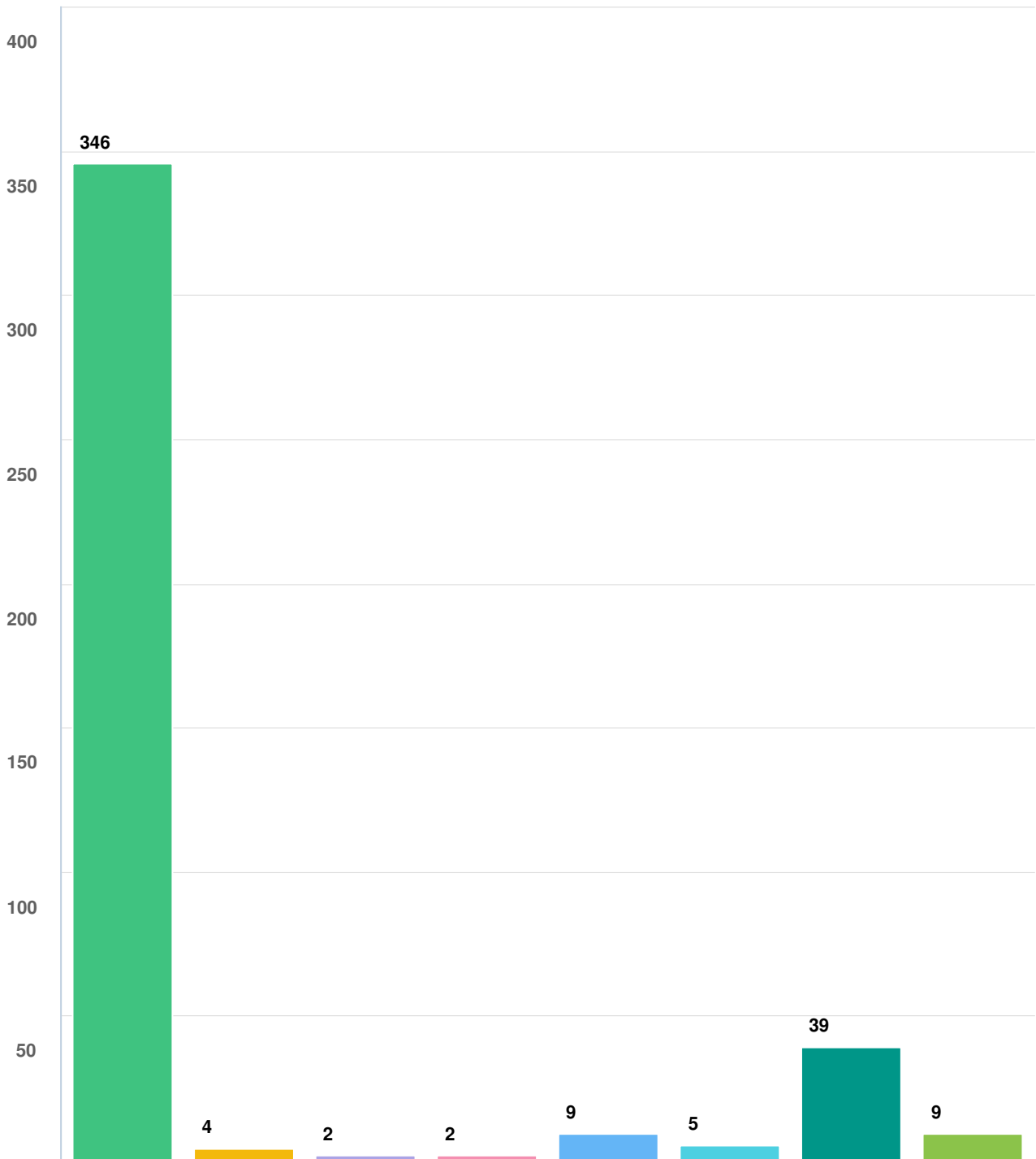
Question options

- High school graduate or GED
- Some college/Associate's degree
- Bachelor's degree
- Master's/Professional/Doctorate degree
- Prefer not to answer

Optional question (412 response(s), 3 skipped)

Question type: Radio Button Question

Please check one or more categories below to indicate what race(s) you consider yourself to be. (check all that apply)



Question options

- White
- Black or African American
- American Indian or Alaskan Native
- Native Hawaiian or other Pacific Islander
- Asian
- Multiracial
- Prefer not to answer
- Other (please specify)

Optional question (407 response(s), 8 skipped)

Question type: Checkbox Question



AGENDA
BIRMINGHAM AD HOC ENVIRONMENTAL SUSTAINABILITY COMMITTEE
MONDAY JUNE 17th, 2024
BIRMINGHAM CITY HALL, 151 MARTIN ST, COMMISSION ROOM, BIRMINGHAM MI *
******* 6:00 PM*******

- 1) **Call to Order**
- 2) **Roll Call**
- 3) **Review of the Agenda**
- 4) **Approval of the AHESC Minutes of [May 29th, 2024](#)**
- 5) **Study Session**
 - A. **[SCAP Draft](#)**
- 6) **Open to the Public for Items Not on the Agenda**
- 7) **Miscellaneous Communications**
 - A. **[Updated Project Schedule](#)**
- 8) **Draft Agenda – [July 29th, 2024](#)**
- 9) **Adjournment**

Future Meeting Dates:
July 29th, 2024

*Please note that board meetings will be conducted in person once again. Members of the public can attend in person at Birmingham City Hall, 151 Martin St., or may attend virtually at:

Link to Access Virtual Meeting: <https://bhamgov-org.zoom.us/j/87587439403>

Telephone Meeting Access: 877 853 5247 US Toll-free

Meeting ID Code: 875 8743 9403

Notice: Individuals requiring accommodations, such as interpreter services for effective participation in this meeting should contact the City Clerk's Office at [\(248\) 530-5115](tel:2485305115) at least on day in advance of the public meeting.

Las personas que requieren alojamiento, tales como servicios de interpretación, la participación efectiva en esta reunión deben ponerse en contacto con la Oficina del Secretario Municipal al [\(248\) 530-5115](tel:2485305115) por lo menos el día antes de la reunión pública. (Title VI of the Civil Rights Act of 1964).

A PERSON DESIGNATED WITH THE AUTHORITY TO MAKE DECISIONS MUST BE PRESENT AT THE MEETING.