COLUMBUS MSA

Priority Climate Action Plan

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SUSTAINABLE COLUMBUS
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MID-OHIO REGIONAL PLANNING COMMISSION
MORPC

Power A Clean Future Ohio
LOCAL COMMUNITIES LEADING THE WAY

THE OHIO STATE UNIVERSITY
COLLEGE OF PUBLIC HEALTH

IMPACT Community Action
Serving Columbus and Franklin County

Acronyms and Abbreviations

Acronym or Abbreviation	Description
BCA	Benefit-Cost Analysis
BPS	Building Performance Standards
BRT	Bus rapid transit
CAP	Climate Action Plan
CCAP	Comprehensive Climate Action Plan
CDC	Centers for Disease Prevention and Control
CEJST	Climate and Economic Justice Screening Tool
CNG	Compressed natural gas
COTA	Central Ohio Transit Authority
CPT	Core Project Team
CMAQ	Congestion Mitigation Air Quality
CRGF	Columbus Region Green Fund
CPRG	Climate Pollution Reduction Grant
CSS	CPRG Strategy Subcommittee
DOE	Department of Energy
DOT	Department of Transportation
E6	Enhancing Environmental Enterprises via e-Equity, Education and Empowerment
EJI	Environmental Justice Index
EPA	Environmental Protection Agency
EV	Electric vehicle
FTA	Federal Transit Authority
GHG	Greenhouse Gas

Acronym or Abbreviation	Description
IRA	Inflation Reduction Act
KWh	Kilowatt hour
LIDAC	Low Income and Disadvantaged Communities
MaRC	Machine-Readable Co-Design
MORPC	Mid-Ohio Regional Planning Commission
MSA	Metropolitan Statistical Area
MTP	Metropolitan Transportation Plan
MT	Metric tons
MWh	Megawatt hour
OSU	The Ohio State University
PCAP	Priority Climate Action Plan
PCFO	Power a Clean Future Ohio
PERCC	Public Engagement to Re-imagine Community Co-planning
PMT	Pedestrian miles traveled
RECI	Resilient and Efficient Codes Implementation
ReCES	Regional Community Energy Strategy
SWACO	Solid Waste Authority of Central Ohio
USD	United States Dollar
UPT	Unlinked passenger trips
VMT	Vehicle miles traveled
ZEV	Zero emission vehicles

Introduction

The City of Columbus has partnered with the Mid-Ohio Regional Planning Commission (MORPC), Power a Clean Future Ohio (PCFO), IMPACT Community Action, and The Ohio State University to produce this Priority Climate Action Plan (PCAP). This PCAP will support investment in policies, practices, and technologies that reduce pollutant emissions, create high-quality jobs, spur economic growth, and enhance the quality of life in Central Ohio.

This project has been funded wholly or in part by the United States Environmental Protection Agency (EPA) under assistance agreement 00E03477 to the City of Columbus. The contents of this document do not necessarily reflect the views and policies of the EPA, nor does the EPA endorse trade names or recommend the use of commercial products mentioned in this document.

The measures contained herein should be construed as broadly available to any entity within the geographic scope of this PCAP eligible to receive funding under the EPA's Climate Pollution Reduction Grants (CPRG) Implementation Grant General Competition and other funding streams, as applicable.

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Background

The Columbus Metropolitan Statistical Area (MSA) in the State of Ohio consists of ten (10) counties and is inclusive of the City of Columbus, the 14th largest city in the United States. The counties in the Columbus MSA include: Delaware, Fairfield, Franklin, Hocking, Licking, Madison, Morrow, Perry, Pickaway and Union counties with numerous jurisdictions, incorporated municipalities, and unincorporated townships included in this geographical boundary. The Columbus MSA's population exceeded 2.1 million people in 2022. The Columbus MSA Priority Climate Action Plan (PCAP) and Comprehensive Climate Action Plan (CCAP) will encompass the entire region.

The City of Columbus published its inaugural Climate Action Plan (CAP) in December 2021, a historic achievement that incorporates both climate mitigation and adaptation targets for the Columbus community. The Columbus CAP also sets Columbus on the path of becoming a carbon neutral city by 2050. Because of this precedent, the Columbus CAP will serve as the baseline for this Columbus MSA climate planning process administered through the Climate Pollution Reduction Grant (CPRG) program.

The Columbus CAP (2021) emissions reductions targets are based on a 2013 greenhouse gas emissions inventory, which catalogues Columbus' three-highest emissions sectors as: buildings and energy use, transportation, and waste-sector emissions. Both the Columbus MSA PCAP and CCAP of the CPRG will primarily address these sources of emissions for the Central Ohio region.

Columbus' initial climate action planning process for the Columbus region was collaborative and included various stakeholders across the region: Sustainable Columbus, the city-wide sustainability office at the City of Columbus; the Mid-Ohio Regional Planning Commission (MORPC); IMPACT Community Action; Power a Clean Future Ohio (PCFO); and The Ohio State University.

These five partners now comprise the Columbus MSA CPRG Core Project Team (CPT) and will remain critical stakeholders in this first regional climate action planning effort. The CPT will oversee the major planning grant deliverables for the PCAP, CCAP, and status reporting years of the CPRG Phase I planning grant. A summary table of deliverables and responsible parties is included on page 4

Power a Clean Future Ohio supports 48 communities throughout Ohio, 7 of which are within the Columbus, MSA. These communities include: Bexley, Columbus, Granville, Lancaster, Reynoldsburg, Upper Arlington and Worthington.

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Members of the MORPC service area who have committed their municipalities to sustainability goals include:

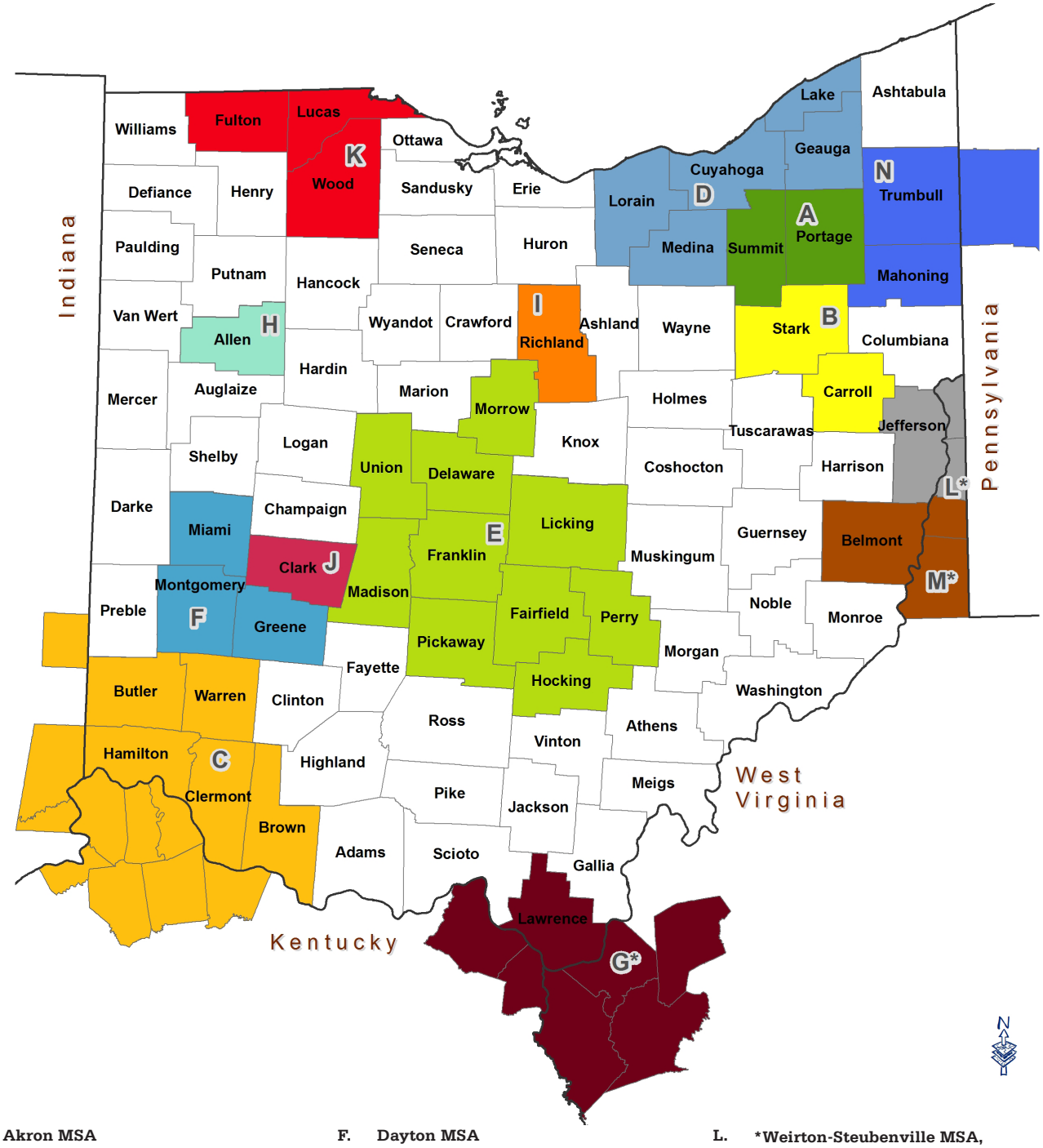
Sustainable 2050 Members (Updated: October 12, 2023)

Bexley
Blendon Township
Central Ohio Transit Authority
Clinton Township
Columbus*
Columbus Metropolitan Library
Delaware
Dublin
Franklin County Commissioners
Franklin County Engineer's Office
Franklin Soil & Water Conservation District
Gahanna
Grandview Heights
Genoa Township
Grove City
Hilliard
Lancaster
Lockbourne
Marysville
Metro Parks
Mifflin Township
MORPC
Mount Vernon
New Albany
Pataskala
Plain City
Powell
Prairie Township
Reynoldsburg
Shawnee Hills
Somerset
SWACO
Upper Arlington
Violet Township
Washington Township
Westerville
Whitehall
Worthington

The CPT is committed to ensuring environmental and climate justice for the communities of Central Ohio and advancing the goals of the Justice40 Initiative set forth in Executive Order 14008. We know that climate change is already disproportionately impacting our low-income communities and communities of color, and we have assembled community-based partners, such as IMPACT Community Action and other countywide community action agencies, as part of our core planning team to ensure that our regional efforts remain focused on this equity-based perspective.

Ohio Metropolitan Statistical Areas (MSAs)

Developed by the United States Office of Management and Budget, Metropolitan Statistical Areas are integrated geographic regions comprised of at least one city or urban area (with a population of at least 50,000) and adjacent communities. Metropolitan Statistical Areas make it possible for federal statistical agencies to utilize the same boundaries when publishing statistical data.



A. **Akron MSA**
B. **Canton-Massillon MSA**
C. **Cincinnati MSA,** including Dearborn, Ohio, and Union Counties in Indiana; Boone, Bracken, Campbell, Gallatin, Grant, Kenton, and Pendleton Counties in Kentucky
D. **Cleveland-Elyria MSA**
E. **Columbus MSA**
F. **Dayton MSA**
G. ***Huntington-Ashland MSA,** including Boyd and Greenup Counties in Kentucky; Cabell, Lincoln, Putnam, and Wayne Counties in West Virginia
H. **Lima MSA**
I. **Mansfield MSA**
J. **Springfield MSA**
K. **Toledo MSA**
L. ***Weirton-Steubenville MSA,** including Brooke and Hancock Counties in West Virginia
M. ***Wheeling MSA,** including Marshall and Ohio Counties in West Virginia
N. **Youngstown-Warren-Boardman MSA,** including Mercer County in Pennsylvania

*Data on West Virginia MSAs including Ohio counties may be viewed at http://workforcewv.org/lmi/.

Greenhouse Gas Emissions Inventory

An inventory of priority sources of GHG emissions within the Columbus MSA. This inventory was prepared using the following data resources:

- Energy consumption estimates for the residential, commercial, industrial, and transportation sectors developed by Power a Clean Future Ohio as part of their annual, census tract-level energy consumption evaluation for Ohio.
- Emissions data as reported in US EPA's Greenhouse Gas Reporting Program.
- National Land Cover Database from the US Geological Survey
- US EPA's Local Greenhouse Gas Inventory Tool

The Columbus MSA inventory includes the following sectors and gases:

Sectors
Transportation
Electricity generation and/or use
Industry
Commercial and residential buildings
Wastewater*

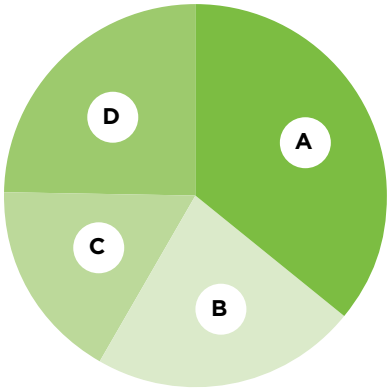
Greenhouse Gases (across all sectors)
carbon dioxide (CO_2),
methane (CH_4),
nitrous oxide (N_2O),

The PCAP includes emissions related to energy consumption for the residential, commercial, industrial, and transportation sectors. This includes energy consumption that occurs in the operation of waste and wastewater treatment facilities, but does not currently include process emissions. Energy-related emissions from waste and wastewater facilities are captured within the industrial sector.

Other emissions sources will be quantified for the CCAP.

Figure 1 details total GHG emissions in metric tons of carbon dioxide equivalent (mtCO e) for all economic sectors and emissions of specific GHGs across all sectors listed above.

FIGURE 1. COLUMBUS MSA GHG Emissions in mtCO2e by Sector and Gas



Columbus MSA GHG Emissions in MT CO2e by Sector	
Sector	**2022**
A. Transportation	11,019,361.84
B. Industrial	6,840,714.65
C. Commercial	5,175,583.52
D. Residential	7,527,988.72
Total	**30,563,648.73**

**Only factors energy use and not process emissions*

The project team chose to use the most common four GHG sectors in our regional inventory, due to the time constraints of completing the PCAP, while the Priority Measures are aligned with the US EPA's recommended sectors in order to carry those through to the CCAP.

An initial assessment of carbon sequestration from tree canopy was also completed and will be further integrated into the GHG inventory for the CCAP.

County	Total Area (KM2)	Tree Canopy Area (KM2)	Tree Canopy Percent of Total Area	Annual Sequestration (MT CO2e)
Morrow	1,055	220	21%	179,633
Pickaway	1,312	104	8%	85,385
Union	1,131	106	9%	87,075
Madison	1,209	63	5%	51,175
Fairfield	1,317	308	23%	252,035
Licking	1,781	547	31%	447,402
Hocking	1,097	771	70%	630,683
Perry	1,068	533	50%	436,011
Delaware	1,184	193	16%	157,567
Franklin	1,408	204	14%	166,824
Total	**12,562**	**3,050**	**24%**	**2,493,790**

Priority Measures

The priority measures included in this PCAP meet the following criteria:

- The measure supports near-term climate action work (2025-2029);
- The measure has existing funding or support within the existing Columbus Climate Action Plan, and/or;
- The measure advances one or more of the following regional climate priorities:
    - Increase transit use
    - Mode shift away from individual vehicles
    - Increase energy efficiency in businesses and homes
    - Increase solar + battery storage capacity in businesses and homes
    - Increase solar on industrial sites
    - Reduce landfilled organic waste
    - Preserve and develop greenspace

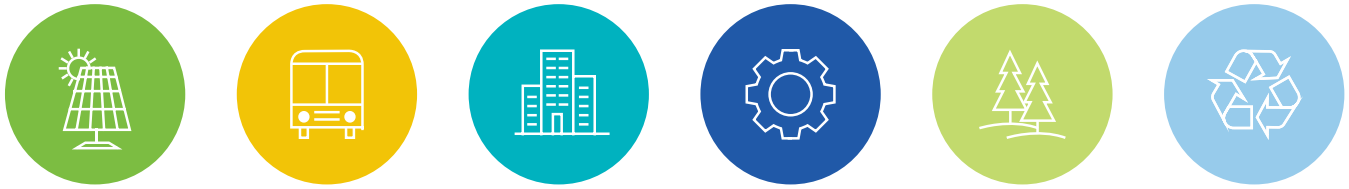
However, this list is not exhaustive of the Columbus MSA's climate action priorities.

For each of the Priority Measures, the following information is included:

- An estimate of the cumulative GHG emission reductions from 2025 through 2029;
- An estimate of the cumulative GHG emission reductions from 2025 through 2050;
- Implementation schedule and milestones;
- Geographic scope;
- Metrics for tracking progress;
- Funding sources (if relevant);
- Co-benefits; and
- Methods and assumptions.

Many of the priority measures included in this PCAP expand upon or complement existing programs. The Columbus MSA CPRG team has explored federal and non-federal funding sources to determine whether these sources could fund each priority measure and whether such funding is sufficient to implement the measure fully. A summary of findings is included with each Priority Measure discussion.

These measures fall within the key sectors outlined by EPA under the CPRG program:



Electric Power Sector | **Transportation Sector** | **Commercial & Residential Buildings Sector** | **Industrial Sector** | **Agriculture, Forestry, & Land Use Sector** | **Waste & Materials Management Sector**

Sector	Goal	Measure	Cumulative MT CO2e Reductions 2025-2029	Cumulative MT CO2e Reductions 2025-2050
Transportation	Increase (and electrify) regional transit options	Completion of LinkUS West Broad Corridor by 2028.	1,810	47,944
		Implement MORPC Metropolitan Transportation Plan (Bike+Ped Goal Attainment).	4,958	54,615
		250% increase in Central Ohio vanpools by 2029.	3,665	25,656
		Electrify 50% of COTA fleet to battery operated buses by 2030.	39,290	376,877
		Expand eBike incentive program from 2025 to 2030.	1,765	7,080
		100% municipal light duty passenger zero emission vehicles (ZEV) by 2030.	60,040	199,478
Commercial and Residential Buildings Sector	Increase energy efficiency in businesses and homes	Encourage the adoption of Building Performance Standards to achieve 35% reduction in commercial building energy use by 2035.	956,181	8,422,662
		Increase home weatherization and energy efficiency programs.	17,841	67,804
		Expand LED + Smart streetlighting program	24,599	89,244
Electric Power Sector	Increase solar + battery storage capabilities on public buildings and facilities, small businesses, nonprofits and homes	Public and Nonprofit Buildings and Spaces: Regional Community Energy Strategy (ReCES) (50 MW Solar)	80,562	644,102
		Expansion of Solar in the Residential Sector (50 MW Residential Solar)	80,562	644,102
		Expand community solar – 5 MW Community Solar	9,234	65,376
Waste and Materials Management Sector and Industrial Sector	Increase water and wastewater treatment efficiency	Community water and wastewater treatment facilities in Franklin County commit to 10% municipal water use reduction and 25% energy use reduction by 2030.	54,502	363,851
		Implement waste-to-energy projects at wastewater treatment facilities.	173,400	1,994,100
Agricultural, Forestry, and Land Use Sector	Preserve existing greenspace and tree canopy coverage	Support regional tree canopy and greenspace inventory initiatives and expand tree canopy coverage throughout the Central Ohio region.	175,624	35,991,043
		Identify and conserve 1,000 acres of greenspace across the region.	294	60,353
Waste and Materials Management Sector	Reduce landfilled organic waste	Expand curbside composting pilot program by 2025.	6,381	33,245
		Open a regional composting facility by 2028	28,274	325,772
		Establish and manage 20 food scrap drop-off sites by 2026	3,693	23,128

Goal	Increase (and electrify) regional transit options
Measure	**Completion of LinkUS West Broad Corridor by 2028**
CO2e Reductions	2025-2029: 1,810 2025-2050: 47,944
Implementing Agency	City of Columbus COTA
Implementation Schedule and Milestones	2021-2024: Project Development 2025-2026: Right of Way / Utility Relocation 2025-2027: Construction 2028: Opening / Service Begins
Geography	West Columbus
Milestones for Obtaining Legislative/Regulatory Authority	No additional authority required
Funding Sources	Federal Transit Authority, ODOT, MORPC, COTA, Columbus
Metrics for Tracking Progress	Daily/Annual Ridership (#) Vehicle Miles Traveled (VMT – Program Vehicles) Fuel Consumption (MWh – Program Vehicles) VMT Reduced (Participant) Commuter Costs (USD) Change in CO2e (MT) Change in Co-Pollutants) (MT)
Co-benefits to LIDACs	Cleaner air, safer streets, enhanced mobility

LinkUS is a collaborative initiative co-sponsored by the City of Columbus, Central Ohio Transit Authority, the Mid-Ohio Regional Planning Commission and the Franklin County Board of Commissioners focused on mobility and access in the growing Central Ohio region. With an anticipated population of 3 million people by 2050, Central Ohio needs to expand our transit options to support economic development, transit accessibility, and to mitigate environmental concerns.

The LinkUS West Broad Corridor is one project of eight planned corridors and is expected to be operational by 2028. This involves creating a dedicated transit corridor spanning 9.3 miles from Prairie Township to downtown Columbus, integrating bike lanes, sidewalks, and community amenities to enhance regional connectivity and accessibility. Situated in West Columbus, this project is poised to contribute significantly to the city's sustainability goals and ensure equitable access to transportation for all residents. The LIDAC community of Hilltop is adjacent to the West Broad Corridor work.

Central to this effort is the implementation of Bus Rapid Transit (BRT), a high-quality bus-based transit system designed for fast, efficient, and reliable service. This initiative is guided by the LinkUS Community Action Plan, which is focused on enhancing mobility, alleviating congestion, and improving quality of life for businesses and residents.

Projected to reduce CO2e emissions by 1,810 MT by 2025 and 47,944 MT by 2050, the BRT system will be managed jointly by the City of Columbus and COTA, Central Ohio's Transit Agency. Success metrics include daily and annual ridership, vehicle miles traveled, fuel consumption, and CO2e reduction, with a focus on enhancing air quality, safety, and mobility for disadvantaged communities.

Goal	Increase (and electrify) regional transit options
Measure	**Implement MORPC Metropolitan Transit Plan (Bike+Ped Goal Attainment)**
CO2e Reductions	2025-2029: 4,958 MT CO2e 2025-2050: 54,615 MT CO2e
Implementing Agency	MORPC
Implementation Schedule and Milestones	2025: Achieve 820 miles of bikeways; 45% sidewalk coverage along arterials and collectors 2050: Achieve 1,050 miles of bikeways; 85% sidewalk coverage along arterials and collectors
Geography	Central Ohio Region (including the Columbus MSA)
Milestones for Obtaining Legislative/Regulatory Authority	No additional authority required
Funding Sources	US DOT, Federal Grant Funds, Local Government
Metrics for Tracking Progress	Daily/Annual Use (#) Bikeway Miles Developed (BWM) Percent Sidewalk Coverage Along Arterials (SC%) Vehicle Miles Traveled (VMT) Change in CO2e (MT) Change in Co-Pollutants) (MT)
Co-benefits to LIDACs	Cleaner air, safer streets, enhanced mobility

MORPC's Metropolitan Transportation Plan (MTP) is a pivotal strategy in enhancing and electrifying regional transit options within Central Ohio through 2050. The MTP serves as a strategic long-term roadmap, detailing transportation priorities, policies, and projects crucial for securing federal funding and improving public transit, highways, bikeways, sidewalks, and related infrastructure, including mobility hubs and expansion of Columbus' CoGo bike-sharing stations. Funding for this extensive plan is sourced from various channels, including the US Department of Transportation, federal grants, and other local government funds.

In addressing Central Ohio's pressing need for diverse and efficient public transit options, the MTP is instrumental. With population growth and urbanization contributing to congestion and environmental concerns, the MTP aims to alleviate these challenges by enhancing public transit coverage, frequency, and reliability while promoting alternative modes of transportation such as biking and walking.

Moreover, the Columbus Bike Plus Plan, an integral part of this initiative, focuses on updating bicycle infrastructure and implementing education and encouragement campaigns to promote active transportation. By incorporating best practices in bicycle policies and legislation, the plan aims to create a safer and more accessible environment for cyclists and pedestrians.

The progress of these plans will be monitored through daily and annual usage figures, vehicle and pedestrian miles traveled, and reductions in both CO2e and co-pollutants. Furthermore, the projects are expected to deliver substantial co-benefits, including cleaner air, safer streets for pedestrians and cyclists, and enhanced mobility, directly benefiting low-income and disadvantaged communities. Through collaborative efforts and strategic investments, Central Ohio is poised to create a more sustainable and equitable transportation system for its residents.

Goal	Increase (and electrify) regional transit options
Measure	**250% increase in Central Ohio vanpools by 2029 (approx. 75 new vans, 450 participants)**
CO2e Reductions	2023: 4,850,499g GHG; 10,693.52 lbs Co2 2025-2027: Increase impact by 50% (based on 2023 reductions) 2027-2029: Increase impact by 100% (based on 2023 reductions)
Implementing Agency	MORPC, County JFS Offices, County Economic Development Agencies, other partner companies
Implementation Schedule and Milestones	Add 4 new county pilots per year & 75 new vans over the course of 5 years 2025: onboard 4 new counties into the program, approx. 20 vans 2026: onboard 4 new counties into the program, approx. 20 vans 2027: onboard 4 new counties into the program, approx. 20 vans 2028: onboard 3 new counties into the program, approx. 15 vans 2029-2050: Sustain existing vans and continue to grow county vanpool program
Geography	Central Ohio Region (including the Columbus MSA)
Milestones for Obtaining Legislative/Regulatory Authority	No additional authority required
Funding Sources	MORPC Congestion Mitigation Air Quality (CMAQ) Funds
Metrics for Tracking Progress	Daily/Annual Ridership (#) Vehicle Miles Traveled (VMT – Program Vehicles) Number of unlinked passenger trips (UPT) Change in CO2e (MT) Change in Co-Pollutants) (MT)
Co-benefits to LIDACs	Reduced barriers to transportation, cleaner air, reduced traffic congestion

The current MORPC GOhio Commute program facilitates smarter and more sustainable transportation choices, allowing users to match their trips with others, saving time, money, and reducing environmental impact. With incentives and funding from various sources, the program contributes to cost savings, health benefits, and environmental sustainability while enhancing community building and productivity.

To further advance regional transit options, the program will need to undergo expansion, targeting a 250% increase in Central Ohio vanpools by 2029. This expansion aims to introduce approximately 75 new vans and engage 450 additional participants.

Situated within the Central Ohio Region, inclusive of the Columbus MSA, the expansion requires no new legislative or regulatory authority. While funding sources are pending, MORPC's involvement suggests potential state and federal funding streams, supplemented by agency resources. Metrics such as daily/annual ridership, vehicle miles traveled, and emission reductions will monitor the program's progress.

The expansion seeks to deliver co-benefits including improved air quality, increased transit options, and enhanced accessibility, with a direct positive impact on low-income and disadvantaged communities. Through collaboration and strategic planning, the expansion of the GOhio Commute program aims to foster a more sustainable and equitable transportation landscape in Central Ohio.

Goal	Increase (and electrify) regional transit options
Measure	**Expand eBike incentive program from 2025 to 2030**
CO2e Reductions	2025-2029: 1,765 2025-2050: 7,080
Implementing Agency	Smart Columbus; City of Columbus; MORPC
Implementation Schedule and Milestones	2024: Replicate 2023 pilot program investment and outreach. 2025: Identify additional regional partners to promote eBike incentives throughout the MSA. 2030: Multiple eBike incentive programs are operating on an annual basis.
Geography	Central Ohio Region (including the Columbus MSA)
Milestones for Obtaining Legislative/Regulatory Authority	No additional authority required
Funding Sources	Local government funds; Federal grant programs; Private investments
Metrics for Tracking Progress	Daily/Annual Ridership (#) Vehicle Miles Traveled (VMT – eBikes) Fuel Consumption (MWh – eBikes) Car VMT Reduced (Participant) Participant Savings (USD) Change in CO2e (MT) Change in Co-Pollutants) (MT)
Co-benefits to LIDACs	Cleaner air, enhanced mobility and accessibility

The expansion of the Columbus area eBike incentive program aims to bolster regional transit options. E-bikes will play a pivotal role in Columbus' mode shift options, offering a sustainable and accessible alternative for short to medium-distance trips, thereby reducing traffic congestion and improving air quality. Their integration into the transportation ecosystem enhances multimodal connectivity, making public transit more attractive and reducing personal vehicle dependency.

Building on the success of the Smart Columbus 2023 eBike incentive pilot program, which rapidly distributed eBikes to qualifying Columbus residents, the expanded initiative will target broader accessibility and sustainability in urban mobility throughout the Columbus region. The pilot program, supported by Columbus City Council, received over 10 times the number of applications than available incentives, displaying significant enthusiasm and demand. This positive response underscores the community's embrace of eBikes as a viable "micromobility" solution for Columbus.

Moreover, eBikes promote physical activity and wellness while remaining accessible to a diverse range of riders, including those with physical limitations. Environmentally, they contribute to reducing greenhouse gas emissions by replacing fossil fuel-powered vehicle trips.

The goal will be to expand the availability of eBike incentives in the Columbus region with 600 eBikes annually, through a combination of program expansion at Smart Columbus in addition to other regional entities distributing their own eBike incentive programs through a coordinated effort under the CPRG program implementation.

The program's success will be measured through various metrics, including ridership data, vehicle miles traveled, fuel consumption reductions, and participant savings, alongside monitoring changes in CO2e and co-pollutants. The initiative aims to deliver co-benefits such as cleaner air, enhanced mobility, and improved accessibility, particularly benefiting low-income and disadvantaged communities. Through strategic expansion and ongoing evaluation, the eBike incentive program strives to advance sustainable transportation solutions in Columbus, Ohio.

Goal	Increase (and electrify) regional transit options
Measure	**Electrify 50% of COTA fleet to battery operated buses by 2030**
CO2e Reductions	2025-2029: 39,290 MT CO2e 2025-2050: 376,877 MT CO2e
Implementing Agency	COTA
Implementation Schedule and Milestones	2027-25% of COTA's fleet is converted to electric and/or hydrogen electric vehicles 2030-50% of COTA's fleet has been converted to electric and/or hydrogen electric vehicles
Geography	Franklin County, Ohio
Milestones for Obtaining Legislative/Regulatory Authority	No additional authority required
Funding Sources	USDOT - RAISE FTA - Capital Investment Grants; Bus and Bus Facilities Grant Program; Low or No Emission Vehicle Program; Zero emission research opportunity program (ZERO)
Metrics for Tracking Progress	Daily/Annual Ridership (#) Vehicle Miles Traveled (VMT – Program Vehicles) Fuel Consumption (MWh – Program Vehicles) Fuel savings (gasoline, diesel, CNG) VMT Reduced (Participant) Participant Savings (USD) Change in CO2e (MT) Change in Co-Pollutants) (MT)
Co-benefits to LIDACs	Cleaner air

The initiative to electrify 50% of the COTA fleet to battery-operated buses by 2030 represents a significant advancement in enhancing regional transit options in Central Ohio. Beginning with the installation of compressed natural gas (CNG) fueling stations in 2013, COTA has steadily progressed toward sustainability goals, resulting in substantial reductions in greenhouse gas (GHG) emissions and pollution emissions, alongside economic benefits exceeding $10 million throughout Franklin County.

In alignment with national and regional climate action plans, such as the City of Columbus Climate Action Plan, COTA prioritizes emissions reduction as a key strategy in mitigating climate change. Collaborating with various stakeholders, including equity, diversity, and inclusion (EDI) principles, ensures that sustainability initiatives benefit all communities.

Transitioning to net-zero emission operations and expanding services are essential steps toward achieving regional emission reduction goals. Electrifying the COTA fleet not only reduces emissions but also contributes to improved air quality around the city, enhancing the overall experience for passengers. With measurable sustainability goals, COTA aims to lead by example in environmental stewardship and community engagement.

This measure is expected to substantially reduce CO2e emissions, with targets set at 39,290 metric tons by 2029 and 376,877 metric tons by 2050. Funding from various sources, including USDOT-RAISE grants and FTA Capital Investment Grants, supports the electrification effort. Success will be measured through metrics such as ridership, vehicle miles traveled, fuel consumption, and savings, alongside reductions in CO2e and co-pollutants.

Electrifying the fleet anticipates yielding cleaner air, offering significant co-benefits to the local community and environment, and reinforcing COTA's commitment to sustainable transit solutions. The COTA team is also exploring the option for introducing hydrogen / electric vehicles to its fleet; the Columbus MSA CPRG project team will continue to monitor and update the projections for this target through the CCAP stage and beyond.

Goal	Increase (and electrify) regional transit options
Measure	**100% municipal light duty passenger zero emission vehicles (ZEV) by 2030**
CO2e Reductions	2025-2029: 60,040 MT CO2e 2025-2050: 199,478 MT CO2e
Implementing Agency	City of Columbus, MORPC
Implementation Schedule and Milestones	2027: 60% Columbus vehicles electrified 2029: 90% Columbus vehicles electrified 2030-2050: Scale to other counties across Columbus MSA
Geography	Columbus MSA
Milestones for Obtaining Legislative/Regulatory Authority	No additional authority required
Funding Sources	City of Columbus, IRA direct pay
Metrics for Tracking Progress	Quantity of Vehicles Converted to EV (#) Percent of Fleet Converted to EV (%) Vehicle Miles Traveled (VMT – Program Vehicles) Fuel Consumption (MWh – Program Vehicles) Fuel savings (gasoline, diesel, CNG) VMT Reduced (Participant) Participant Savings (USD) Change in CO2e (MT) Change in Co-Pollutants) (MT)
Co-benefits to LIDACs	Cleaner air

The City of Columbus, in collaboration with MORPC, has set an ambitious target: transitioning to 100% municipal light-duty passenger ZEV by 2030. Building upon the progress outlined in the 2019-2021 Green Fleet Action Plan, Columbus has made significant strides in electrifying its fleet, aligning with its commitment to the Sustainable Columbus initiative spearheaded by Mayor Andrew J. Ginther. The city's green fleet action plan serves as a strategic roadmap to reduce its carbon footprint, aiming to decrease overall fleet emissions and aligning with the goal of reducing greenhouse gas emissions by 40% from municipal operations by 2030.

Columbus employs various strategies to achieve emission reductions, including increasing the procurement of green vehicles, such as electric and plug-in hybrid vehicles. Notably, 76% of light-duty vehicle purchases in 2021 were green, resulting in significant fuel and emissions savings. Additionally, the city implements anti-idling technology and explores green off-road options, further contributing to its sustainability objectives.

Furthermore, the Smart Columbus Fleet Electric Vehicle Adoption initiative has been instrumental in facilitating the adoption of EVs in both public and private sector fleets. With 158 EVs already purchased in the public sector and 220 commitments made in the private sector, Columbus made substantial progress by deploying 755 EVs by 2020.

Transitioning to 100% municipal light-duty passenger zero-emission vehicles (ZEV) by 2030 is a crucial step towards reducing the region's carbon footprint, improving air quality, and advancing sustainability goals. Scheduled milestones ensure a gradual transition, with the project designed to proceed without the need for additional legislative or regulatory authority.

Funded by the City of Columbus, this initiative will be tracked through various metrics to measure progress, including vehicle conversions, fuel consumption, and emissions reductions. Ultimately, this transition will deliver cleaner air and numerous co-benefits, positively impacting the local community and serving as a model for the region's sustainable transportation systems.

Goal	Increase energy efficiency in businesses and homes
Measure	**Encourage the adoption of Building Performance Standards (BPS) to achieve 35% reduction in commercial building energy use by 2035**
CO2e Reductions	2025-2029: 956,181 MT CO2e 2025-2050: 8,422,662 MT CO2e
Implementing Agency	Columbus, MORPC, Local Governments
Implementation Schedule and Milestones	2025: Develop BPS standard, Stakeholder engagement 2026: Ordinance adoption for participating cities 2030: 25% energy reduction target 2035: 35% energy reduction target
Geography	Columbus MSA
Milestones for Obtaining Legislative/Regulatory Authority	Cities must pass legislation to authorize municipal building performance standards
Funding Sources	US DOE; Resilient and Efficient Codes Implementation (RECI); C-Pace, federal and state grants, private investment
Metrics for Tracking Progress	BPS Ordinances Passed (#) Percent of Commercial Square Footage Covered (Percent of County) Fuel and Fuel Consumption Reduced (MMBTU) Participant Savings (USD) Change in CO2e (MT) Change in Co-Pollutants) (MT)
Co-benefits to LIDACs	Reduce energy costs

Columbus, in collaboration with MORPC and local governments, is leading efforts to encourage the adoption of building performance standard policies with the goal of achieving a 35% reduction in commercial building energy use by 2035. As a member of the National Building Performance Standards Coalition, Columbus is committed to advancing equitable building energy and climate policy to address emissions reduction, energy efficiency, and equity in its building stock.

Columbus is collaborating with other major Ohio cities in the Resilient and Efficient Codes Implementation (RECI) grant awarded by the US Department of Energy. This initiative aims to develop BPS standards, engage stakeholders, and encourage the adoption of a 35% energy reduction by 2035 within the Columbus MSA.

Overall, Columbus's leadership, collaboration, and commitment to climate goals position it as a model/example for cities throughout the region seeking to replicate similar BPS policies. By sharing best practices, offering technical assistance, and navigating legal considerations, Columbus can empower neighboring cities to accelerate their efforts in combating climate change and creating more sustainable communities.

Goal	Increase energy efficiency in businesses and homes
Measure	**Increase home weatherization and energy efficiency programs**
CO2e Reductions	2025-2029: 17,841 MT CO2e 2025-2050: 67,804 MT CO2e
Implementing Agency	MORPC
Implementation Schedule and Milestones	2025: Weatherize and improve energy efficiency in 320 units 2026: Weatherize and improve energy efficiency in 400 units 2027: Weatherize and improve energy efficiency in 490 units 2028: Weatherize and improve energy efficiency in 465 units 2029: Weatherize and improve energy efficiency in 465 units 2030-2050: Weatherize additional units as funding is available
Geography	Columbus MSA
Milestones for Obtaining Legislative/Regulatory Authority	No additional authority required
Funding Sources	MORPC, Columbia Gas of Ohio, Ohio Department of Development, AEP Ohio, ENERGY STAR, Federal Grant Funding, City of Columbus
Metrics for Tracking Progress	Participants (#) Measures Installed by Type (#) Fuel and Fuel Consumption Reduced (MMBTU) Participant Savings (USD) Change in CO2e (MT) Change in Co-Pollutants) (MT)
Co-benefits to LIDACs	Reduce energy costs, increase resilience, improve indoor air quality

Columbus is intensifying efforts to expand home weatherization and energy efficiency programs, aiming to enhance energy efficiency in homes across the Columbus MSA. The city has a proven track record in this area, including initiatives like IMPACT Community Action's Home Weatherization Assistance Program (HWAP). HWAP offers year-round assistance to Franklin County residents with incomes at or below 200% of the Federal Poverty Level (FPL), providing services such as insulation, efficiency tests, and heating unit maintenance. Additionally, MORPC's Home Energy Efficiency Services, funded by WarmChoice and the Ohio Development Services Agency, offers free home energy efficiency and safety services to income-eligible residents. The City of Columbus also partners with IMPACT Community Action to perform expanded weatherization services for homeowners who would otherwise be disqualified from traditional weatherization services due to prescriptive income eligibility requirements.

Weatherization is essential for reducing energy bills, especially for low-income and disadvantaged communities. By improving energy efficiency and reducing costs, weatherization initiatives alleviate financial strain and enhance the comfortability of residents' homes. Lower energy bills mean families can allocate more resources to essentials like food and healthcare. Furthermore, weatherization contributes to environmental sustainability by reducing energy consumption and associated greenhouse gas emissions.

The initiative targets a CO2e reduction of 17,841 metric tons by 2029, with a further aim of 67,804 metric tons by 2050. Funding for these upgrades comes from various sources, including MORPC, Columbia Gas of Ohio, and federal grants. Progress will be tracked through participant numbers, measure installations, fuel consumption reductions, and savings.

Regional coordination with other community action agencies, as part of the CPRG process, will bolster future efforts. This collaboration sets a precedent for energy efficiency advancement and underscores Columbus's commitment to addressing energy poverty and improving housing conditions for all residents, regardless of income level. Overall, expanding weatherization and energy efficiency programs will create healthier, more resilient communities while advancing environmental and social equity goals.

Goal	Increase energy efficiency in businesses and homes
Measure	**Expand LED + Smart streetlighting program**
CO2e Reductions	2025-2029: 24,599 MT CO2e 2025-2050: 89,244 MT CO2e
Implementing Agency	Columbus/MORPC
Implementation Schedule and Milestones	2025: Finance and complete 25% LED streetlight upgrades. 2030: 100% LED streetlight conversion complete. 2030-2050: Scale across Columbus MSA by initiating a joint purchasing consortium for interested municipalities; curate an inventory of lighting needs; install LEDs and smart streetlights on a rolling basis
Geography	Columbus MSA
Milestones for Obtaining Legislative/Regulatory Authority	No additional authority required for municipal-owned utilities. PUCO authority required for investor-owned utilities
Funding Sources	Local government funds federal and state grants.
Metrics for Tracking Progress	Streetlights Replaced by Type (Quantity) Energy Consumption Reduced (MWh) Savings (USD) Change in CO2e (MT) Change in Co-Pollutants (MT)
Co-benefits to LIDACs	Increase safety

Columbus is embarking on an expansion of its LED and Smart streetlighting program to improve energy efficiency across the city. This initiative aligns with the Columbus Climate Action Plan, emphasizing LED streetlights as a crucial strategy to reduce greenhouse gas emissions and enhance energy efficiency. With a target of achieving 100% LED streetlights by 2030, Columbus anticipates significant environmental, social, and financial benefits, including reduced energy consumption and longer lamp life. The Power Circuit 237 Project exemplifies this effort by replacing outdated street lighting infrastructure with LED technology and implementing a 3-wire operation to enhance efficiency and lighting quality.

Moreover, Columbus's Citywide Smart Street Lighting Strategic Deployment Plan underscores the city's commitment to upgrading its lighting infrastructure. Facilitated by the Columbus Division of Power, the city's municipal utility provider who owns and operates the city's streetlights, this plan aims to replace the existing high-pressure sodium luminaires with energy-efficient LED lighting and integrate them into a central control system. By enhancing energy efficiency, reducing greenhouse gas emissions, and improving safety and visibility, Columbus sets an example for other municipalities to follow suit.

By leveraging available funding sources and prioritizing energy-efficient technologies, Columbus maximizes the benefits of its lighting upgrades while ensuring cost-effectiveness and community support. Through efforts like the CPRG planning process, Columbus could assist other municipalities in the MSA with their LED and smart streetlighting programs. This initiative would rely on local government funds and measures progress based on streetlights replaced, energy consumption reduction, financial savings, and associated reductions in CO2 emissions and co-pollutants.

Overall, Columbus serves as a model/example for other municipalities by showcasing best practices in planning, collaboration, innovation, sustainability, community engagement, and fiscal responsibility. By adopting similar approaches, municipalities can upgrade their lighting infrastructure, foster safer, more energy-efficient communities, and contribute to regional climate action efforts.

Goal	Increase solar + battery storage capabilities on public buildings and facilities, small businesses, nonprofits and homes
Measure	**Public and Nonprofit Buildings and Spaces: Regional Community Energy Strategy (ReCES) (50 MW Solar)**
CO2e Reductions	2025-2029: 80,562 MT CO2e 2025-2050: 644,102 MT CO2e
Implementing Agency	MORPC, Columbus Region Green Fund
Implementation Schedule and Milestones	2025: Install 2.5 MW solar 2026: Install 5 MW solar 2027: Install 10 MW solar 2028: Install 15 MW solar 2029: Install 17.5 MW solar 2030-2050: Additional solar installations through Power Purchase Agreements
Geography	Columbus MSA
Milestones for Obtaining Legislative/Regulatory Authority	No additional authority required to initiate program
Funding Sources	Columbus Region Green Fund, US EPA Solar For All; other state and federal grants; local government dollars; IRA direct pay
Metrics for Tracking Progress	Installations (Quantity) Capacity Installed (MW) Electricity Generation (KWh/MWh) Savings (USD) Change in CO2e (MT) Change in Co-Pollutants (MT)
Co-benefits to LIDACs	Improve energy efficiency, Energy-resilient infrastructure

The Regional Community Energy Strategy (ReCES) is a comprehensive effort aimed at significantly enhancing solar and battery storage capabilities across the Columbus (MSA). Led by MORPC, the City of Columbus, and the Columbus Region Green Fund (CRGF), this initiative entails the installation of solar arrays on various public structures including schools, libraries, and local government facilities. Estimated to require an investment ranging from $37.6 million to $77.2 million, ReCES is poised to deliver substantial benefits to the region.

Key aspects of the ReCES project include the establishment of power purchase agreements (PPAs) to minimize solar installation costs, leveraging private sector investments to support deployment, and executing the initiative over a 5-year period with options for 8MW, 25MW, or 50MW installations. Moreover, the project prioritizes Justice40 census tracts and school districts within the Columbus MSA, with the overarching goal of mitigating greenhouse gas emissions and pollution.

The initiative has garnered significant community support, demonstrated through regional surveys, financial commitments from the City of Columbus and Franklin County, and robust engagement sessions. Anticipated benefits encompass cost savings on energy, improved air quality, educational opportunities for students, workforce development, and heightened public awareness.

Positioned as an ideal fit for the Columbus MSA, ReCES aligns closely with regional sustainability objectives and enjoys widespread community backing. It dovetails with targets outlined in the MORPC Regional Sustainability Agenda and the Columbus Climate Action Plan. However, additional funding, particularly from the CRGF, is essential to make solar installations financially viable for educational institutions and public buildings, thereby facilitating regional scalability.

MORPC and the Columbus Region Green Fund are at the forefront of this initiative, which aims to achieve a reduction of CO2e emissions by 80,562 metric tons by 2025, escalating to 644,102 metric tons by 2050. The implementation strategy includes a phased approach to solar power deployment, starting with 2.5 MW in 2025 and reaching 17.5 MW by 2029, with further expansions facilitated through Power Purchase Agreements from 2030 to 2050.

Collaborative efforts with local jurisdictions and public property owners serve as the foundation for achieving legislative and regulatory milestones. Financing for this strategy is sourced from the Columbus Region Green Fund and the Solar For All program. Key performance indicators include the number of installations, installed capacity, electricity generation, cost savings, and reductions in CO2e and co-pollutants.

Ultimately, the ReCES initiative not only advances energy efficiency but also establishes a sustainable blueprint for the Columbus region, contributing to its long-term resilience and prosperity.

Goal	Increase solar + battery storage capabilities on public buildings and facilities, small businesses, nonprofits and homes
Measure	**Expansion of Solar in the Residential Sector (50 MW Residential Solar)**
CO2e Reductions	2025-2029: 80,562 MT CO2e 2025-2050: 644,102 MT CO2e
Implementing Agency	MORPC, Columbus Region Green Fund
Implementation Schedule and Milestones	2025: Solar on 75 single family (SF) Homes 2026: Solar on 125 SF Homes 2027: Solar on 125 SF Homes 2028: Solar on 125 SF Homes 2029: Solar on 125 SF 2030-2050: Additional 2029: Solar on 125 SF homes participating through Solar Power Purchase Agreement (PPA)
Geography	Columbus MSA
Milestones for Obtaining Legislative/Regulatory Authority	No additional authority required
Funding Sources	US EPA Community Change Grant, Power Purchase Agreements private investments; federal and state grants; IRA direct pay
Metrics for Tracking Progress	Installations (Quantity) Capacity Installed (KW) Electricity Generation (KWh) Savings (USD) Change in CO2e (MT) Change in Co-Pollutants (MT)
Co-benefits to LIDACs	Improve energy efficiency, Improve indoor air quality

Expanding solar in the Columbus MSA underscores the city's commitment to sustainability, aiming to enhance solar and battery storage capabilities in residences. Knowing that outreach and education will be most crucial element to successfully deploying solar on thousands of resident's properties, a multitude of approaches and projects will be needed to reach 50 MW of installed solar. One example of building out residential solar will be to expand on the Columbus Area Solar Co-ops. Historically, Columbus has partnered with Solar United Neighbors, the City of Columbus, MORPC, and IMPACT Community Action to promote solar adoption through a residential solar co-op program. These co-ops prioritize equity and environmental justice, offering clean energy job training and support for marginalized communities. Technical considerations are addressed through education and support, enabling members to make informed decisions about solar. Solar United Neighbors facilitates the co-ops, fostering community engagement and contributing to job creation and environmental sustainability.

The goal is to deliver additional co-ops and additional residential solar programming, complementing the efforts of the Columbus Region Green Fund (CRGF). Established through collaboration between various entities, including the Columbus Partnership, the CRGF accelerates the clean energy transition by mobilizing private investment and providing gap financing. By financing clean energy projects, the CRGF aims to reduce carbon emissions, create jobs, and improve community resilience. The project, led by MORPC and supported by the CRGF, targets significant CO2e reductions and plans for the installation of solar panels on homes over the coming years. Financial backing comes from various sources, including the US EPA Community Change Grant, and the initiative's progress will be monitored through key metrics.

This expansion not only enhances energy efficiency but also reinforces Columbus's role in building a resilient energy community, aligning with broader sustainability goals and fostering economic savings while reducing environmental impact.

Goal	Increase solar + battery storage capabilities on public buildings and facilities, small businesses nonprofits, and homes
Measure	**Expand community solar (5MW Community Solar)**
CO2e Reductions	2025-2029: 9,234 MT CO2e 2025-2050: 65,376 MT CO2e
Implementing Agency	City of Columbus
Implementation Schedule and Milestones	RFP for Southerly Solar 2024 Design 2025 Construction 2026
Geography	Columbus MSA
Milestones for Obtaining Legislative/Regulatory Authority	Division of Power net metering legislation authorizing community solar before City Council by April 2024; There is additional state legislation required to support community solar on investor-owned utilities
Funding Sources	Solar for All Grant, federal and state grants, private investment, and local government funds, IRA direct pay
Metrics for Tracking Progress	Installations (Quantity) Capacity Installed (KW) Electricity Generation (KWh) Savings (USD) Change in CO2e (MT) Change in Co-Pollutants (MT)
Co-benefits to LIDACs	Improve energy efficiency

Columbus is expanding its renewable energy efforts through the Community Solar initiative, which allows community members to buy or subscribe to a share in a solar project, even if they cannot install solar panels on their own property. Participants receive credits on their electric bills based on the size of their share in the solar project. Community solar requires utility participation and offers various incentives, including tax credits, particularly for smaller projects. The program aims to make solar energy accessible to a wider range of people while providing economic benefits, ease of participation, and community-wide advantages such as job creation and increased resilience in the energy grid.

Ohio's involvement in Community Solar signals potential policy developments, including net metering and community solar projects. These initiatives could incentivize solar investment, broaden community participation in clean energy, and bolster the state's resilience. Remaining under the 5MW utility-scale solar threshold is crucial for Ohio to qualify for incentives and support, ensuring successful project implementation and operation.

The Columbus-led initiative anticipates significant CO2 reduction, with ambitious targets ahead. Progress will be monitored based on metrics like installations and capacity, with funding sources yet to be confirmed. This project not only advances environmental goals but also enhances community energy efficiency and resilience, paving the way for a more sustainable future.

Goal	Increase water and wastewater treatment efficiency
Measure	**Community water and wastewater treatment facilities in Franklin County commit to 10% municipal water use reduction and 25% energy use reduction by 2030**
CO2e Reductions	2025-2029: 54,502 MT CO2e 2025-2050: 363,851 MT CO2e
Implementing Agency	City of Columbus
Implementation Schedule and Milestones	2023-2029: Implement the City's Environmental Management Plan, conduct additional audits, implement measures discussed prior to 2024.
Geography	Franklin County
Milestones for Obtaining Legislative/Regulatory Authority	No additional authority required
Funding Sources	Local government funds
Metrics for Tracking Progress	Water Reduction (MM Gallons) Energy Conservation Measures Installed by Type (Fuel and MMBTU) Savings (USD) Change in CO2e (MT) Change in Co-Pollutants (MT)
Co-benefits to LIDACs	Improve water quality

The City of Columbus is committed to reducing municipal water use by 10% and energy use by 25% by 2030 aligning with the Columbus Climate Action Plan (CAP). The CAP emphasizes water efficiency improvements through the adoption of high-efficiency fixtures, projected to reduce water consumption by over 20%.

To achieve these goals, Columbus has undertaken comprehensive energy audits at key facilities, including the Dublin Road Water Plant, Southerly Wastewater Treatment Plant, and 920 Dublin Road Administrative Offices in 2023. These audits provide detailed recommendations for efficiency enhancements, such as upgrading to LED lighting, implementing demand-based discharge pressure reset strategies, and installing solar at three facilities.

In 2024, the City's Department of Public Utilities plans to conduct additional audits at Parsons Water Plant and 1250 Fairwood Avenue Administrative Offices, further advancing energy efficiency and operational effectiveness.

Columbus can serve as a model in the region for achieving water efficiency and sustainability goals through several key initiatives outlined in its CAP. By implementing strategies such as comprehensive energy audits and the adoption of high-efficiency fixtures, Columbus showcases practical approaches to reduce water consumption, lower wastewater treatment demands, and enhance operational efficiency.

By tracking metrics such as water reduction, energy conservation measures installed, savings, and reductions in CO2e and co-pollutants, the initiative aims to reduce CO2e emissions by 54,502 metric tons by 2029, scaling to 363,851 metric tons by 2050.

This initiative not only enhances water quality but also demonstrates actionable steps toward sustainable water management and treatment efficiency, serving as an example for neighboring municipalities in the region.

Goal	Increase water and wastewater treatment efficiency
Measure	**Implement waste-to-energy projects at wastewater treatment facilities**
CO2e Reductions	2025-2029: 173,400 MT CO2e 2025-2050: 1,994,100 MT CO2e
Implementing Agency	Columbus Division of Sewers and Drains
Implementation Schedule and Milestones	2024 – Design and Bid Project 2029 – Construction Complete 2030 – Facility to serve as educational and replicable model for region.
Geography	City of Columbus
Milestones for Obtaining Legislative/Regulatory Authority	No additional authority required
Funding Sources	Local government funds, IRA direct pay
Metrics for Tracking Progress	Capacity Installed (KW) Electricity Generation (KWh) Fugitive Emissions Avoided (MCF) Savings (USD) Change in CO2e (MT) Change in Co-Pollutants (MT)
Co-benefits to LIDACs	Improve water quality

The City of Columbus is undertaking an initiative to increase water and wastewater treatment efficiency through pilot waste-to-energy projects at wastewater treatment facilities. Work on this has been going on in Columbus, like at the Southerly wastewater treatment Plant(SWWTP), a crucial component of the Division of Sewerage and Drainage's operations, serving Columbus and 25 contracting suburban communities. Now, the SWWTP is embarking on a significant expansion project known as the SWWTP Digestion Process Expansion Project. This project aims to address the growing demands on the digestion process due to the installation of a new Chemically Enhanced Primary Treatment (CEPT) train. By enhancing its digestion capabilities, the SWWTP ensures its continued effectiveness and sustainability in managing wastewater treatment in the region.

The SWWTP Digestion Process Expansion Project at the Southerly wastewater treatment facility represents more than just infrastructure upgrades; it's a step towards Columbus becoming a model for the region in sustainable wastewater management. By investing in projects like this, Columbus demonstrates its commitment to innovation and environmental stewardship, setting an example for neighboring communities facing similar challenges.

Led by the Columbus Division of Sewers and Drains, the measure is estimated to achieve a CO2e reduction of 173,400 metric tons by 2029, and a considerable 1,994,100 metric tons by 2050. The implementation phase is currently being refined, with details such as the Columbus Water milestones to be determined.

Situated within the city limits, this project will be propelled without the need for additional legislative or regulatory authority. While funding sources are being identified, the tracking of progress will involve metrics like the capacity installed, electricity generated, fugitive emissions avoided, and the associated cost savings, along with changes in CO2e and co-pollutants.

This project aims to not only improve water quality but also to serve as a model for similar initiatives in the region.

Goal	Preserve existing greenspace and tree canopy coverage
Measure	**Support regional tree canopy and greenspace inventory initiatives and expand tree canopy coverage throughout the Central Ohio region**
CO2e Reductions	2025-2029: 175,624 2025-2050: 35,991,043
Implementing Agency	City of Columbus, MORPC
Implementation Schedule and Milestones	2025-2030: Conduct a tree canopy inventory; Expand municipal tree canopy coverage to 40% minimum coverage
Geography	Columbus MSA
Milestones for Obtaining Legislative/Regulatory Authority	Public Tree Code – 2023 Private Tree Code – 2024
Funding Sources	Local Government Funds, Federal Grant Funds
Metrics for Tracking Progress	Tree Canopy Coverage (%) Trees Planted (Acres) Tree Canopy Conserved (Acres) Change in CO2e (MT) Change in Co-Pollutants (MT)
Co-benefits to LIDACs	Cleaner air, reduce heat islands

Columbus is dedicated to supporting regional tree canopy and greenspace inventory initiatives, with the goal to expand tree canopy coverage throughout the Central Ohio region. This effort, steered by the City of Columbus and MORPC, aims to increase tree canopy coverage to a minimum of 40%, in line with the Columbus Urban Forestry Master Plan.

To ensure equitable distribution of canopy coverage throughout the region and target areas that could benefit the most from increased greenspaces and mitigation of urban heat island effects, Columbus will utilize data from comprehensive tree canopy inventories. These inventories will provide crucial insights into existing canopy coverage and will identify areas with the greatest need for additional tree cover. Based on this data, the initiative will strategically plan the expansion of municipal tree canopy coverage to address disparities in canopy distribution across the Central Ohio region through partnerships and collaboration.

The City of Columbus and MORPC will work closely with community stakeholders to develop outreach programs and engagement initiatives aimed at raising awareness and soliciting input from residents in target areas. This community-driven approach will ensure that the distribution of canopy coverage reflects the needs and preferences of local residents, particularly in historically marginalized communities.

Furthermore, funding for the program will be sourced from a combination of local government and federal grants, allowing for flexibility in resource allocation to prioritize areas with the greatest need. Tracking the success of the initiative will involve monitoring metrics such as the percentage of tree canopy coverage, the number of trees planted, and the amount of tree canopy conserved. These metrics will help assess progress towards the goal of increasing canopy coverage to a minimum of 40% and measure the corresponding reductions in CO2e emissions and co-pollutants.

By adopting a data-driven, community-engaged approach and leveraging diverse funding sources, Columbus aims to ensure that its efforts to expand tree canopy coverage are equitable and effectively target areas with the most significant urban heat island connections. Through this initiative, the city seeks to deliver co-benefits such as cleaner air and improved quality of life for residents while advancing its climate action goals.

Goal	Preserve existing greenspace and tree canopy coverage
Measure	**Identify and conserve 1,000 acres of greenspace across the region**
CO2e Reductions	2025-2029: 294 2025-2050: 60,353
Implementing Agency	City of Columbus, MORPC, Columbus & Franklin County Metro Parks
Implementation Schedule and Milestones	2024: Engage with Columbus & Franklin County Metro Parks on long-term purchase strategy refinement. 2025: Open and greenspaces in the MSA have been accurately mapped and inventoried. 2030: Regional stakeholders have been assembled to identify viable conservation strategies to attain MSA conservation goals. 2050: 1,000 acres have been conserved throughout the MSA.
Geography	Columbus MSA
Milestones for Obtaining Legislative/Regulatory Authority	No additional authority required
Funding Sources	Local governments + Federal grant programs
Metrics for Tracking Progress	Tree Canopy Coverage (%) Trees Planted (Acres) Tree Canopy Conserved (Acres) Change in CO2e (MT) Change in Co-Pollutants (MT)
Co-benefits to LIDACs	Cleaner air, reduce heat islands

Columbus, in partnership with MORPC, will work toward fostering partnerships and commitments that encourage preservation of existing greenspaces for recreation and ecosystem services that provide benefits for public health, biological diversity, and quality of life. Further, MORPC conducted a region-wide Leaders Listen survey on the topic of sustainability at the end of 2023. More than 2,000 residents provided their input, and across demographics and geographic areas, there is a collective call for more investment in greenspaces and water conservation activities which would enhance regional air and water quality.

This planning team outlines a goal of preserving 1,000 acres throughout the Central Ohio region for such recreation. No specific areas have been identified, and the goal is to preserve greenspaces that are already existing. The first step to pursuing this goal would be to conduct an open/greenspaces inventory of lands throughout the Columbus MSA. This would require municipal partnerships and collaboration from entities all across Central Ohio.

Land preservation efforts would be expected to bring about cleaner air and contribute to the reduction of heat islands, enhancing the quality of life for nearby communities. The actions taken to inventory regional land use will serve as a practical blueprint for future sustainable development, emphasizing the importance of green spaces in urban areas. This approach will also be an integral part of the narrative showcasing Columbus's commitment to ecological stewardship and the value of conservation in regional planning.

Goal	Reduce landfilled organic waste
Measure	Expand curbside composting pilot program by 2025 Establish and manage 20 food scrap drop-off sites by 2026 Open a regional composting facility by 2028
CO2e Reductions	2025-2029: 38,348 MT CO2e 2025-2050: 382,145 MT CO2e
Implementing Agency	SWACO
Implementation Schedule and Milestones	July 2025: Curbside Composting Pilot January 2025: Food Rescue Cold Storage January 2026: 20 Additional Food Scrap Drop-Off Locations January 2028: Regional Compost Facility
Geography	Franklin County
Milestones for Obtaining Legislative/Regulatory Authority	No additional authority required local government funds
Funding Sources	Federal grant programs
Metrics for Tracking Progress	Food Waste Diverted (Tons) Change in CO2e (MT) Change in Co-Pollutants (MT)
Co-benefits to LIDACs	Increase food access

The Central Ohio Food Rescue and Waste Reduction initiative, led by the City of Columbus, Columbus Public Health, and SWACO, aims to significantly reduce greenhouse gas emissions by expanding composting efforts across the region. This involves expanding the curbside composting pilot program by 2025, the establishment of 20 food scrap drop-off sites by 2026, and the opening of a regional composting facility by 2028. The project anticipates diverting 60,000,000 pounds of food waste annually, resulting in a reduction of 38,348 metric tons of CO2e by 2029 and 382,145 metric tons by 2050.

Operational within Franklin County, the initiative does not require additional legislative or regulatory authorization. Funding sources, including MORPC, state, and federal contributions, are being identified. Key metrics, such as tons of food waste diverted from landfills and changes in CO2e and co-pollutants, will measure program effectiveness.

This project responds to the pressing need for sustainable waste management, with over a million pounds of food sent to landfills each day in Central Ohio. By supporting community organizations and promoting a circular economy, it ensures reliable access to food year-round while enabling food recovery and distribution.

Furthermore, this initiative aligns with broader environmental goals and showcases the potential for significant environmental impact. By engaging community participation and implementing innovative solutions, it serves as a model for sustainable waste management practices in the Columbus MSA.

Low-Income and Disadvantaged Community Analysis

Implementing the measures included in this PCAP will significantly benefit low-income and disadvantaged communities (LIDACs) within the 10-county Columbus MSA. This section identifies each LIDAC within the jurisdiction covered by this PCAP, how the Columbus MSA Core Project Team meaningfully engaged with LIDACs in developing this PCAP, and how these LIDAC communities will continue to be engaged into the future.

Identification of and Engagement with LIDACs

1. Identification of High Priority LIDAC Regions and their Burdens.

The Ohio State University, in partnership with the City of Columbus, identified LIDACs using a combination of the EPA's Climate and Economic Justice Screening Tool (CEJST) and CDC's Environmental Justice Index (EJI) to identify high priority LIDAC census tracts in the Columbus MSA from Delaware, Fairfield, Franklin, Hocking, Licking, Madison, Morrow, Perry, Pickaway, and Union counties. In this region, 29% of the MSA population from 137 census tracts [110 in urban (Franklin) and 27 in suburban/rural (remaining) counties] are considered LIDACs according to CEJST (Appendix C).

To further prioritize PCAP meaningful engagement efforts, the CDC's EJI data was overlaid onto CEJST data to identify areas most severely burdened. EJI is a composite index of the environmental burden index, social vulnerability index, EJ screen and health burden data with additional indicators including housing tenure, lack of health insurance, lack of broadband access, housing type, built environment, transportation infrastructure, and poor mental health.

High priority LIDAC census tracts were defined as areas both: 1) categorized as disadvantaged by CEJST, -AND- 2) having EJI ≥ 96th percentile (Figure 2). These high priority census tracts are listed by region in Table A and further described in Table B. Note, these regions are high for: a) environmental burdens including PM 2.5, air toxics cancer risk and respiratory HI, toxic releases to air, traffic proximity, superfund proximity, RMP facility proximity, hazardous waste proximity, underground storage tanks, and wastewater discharge, and b) health burdens including life expectancy, cardio-pulmonary diseases, and persons with disabilities.

To summarize, for this PCAP report a total of 5 regions (Franklin County- Hilltop, Near East / South Side, and Linden; Licking County- Newark; Pickaway County- Circleville) were identified as high priority for meaningful engagement as these areas have the most severe environmental and health burdens in the 10-county Columbus MSA.

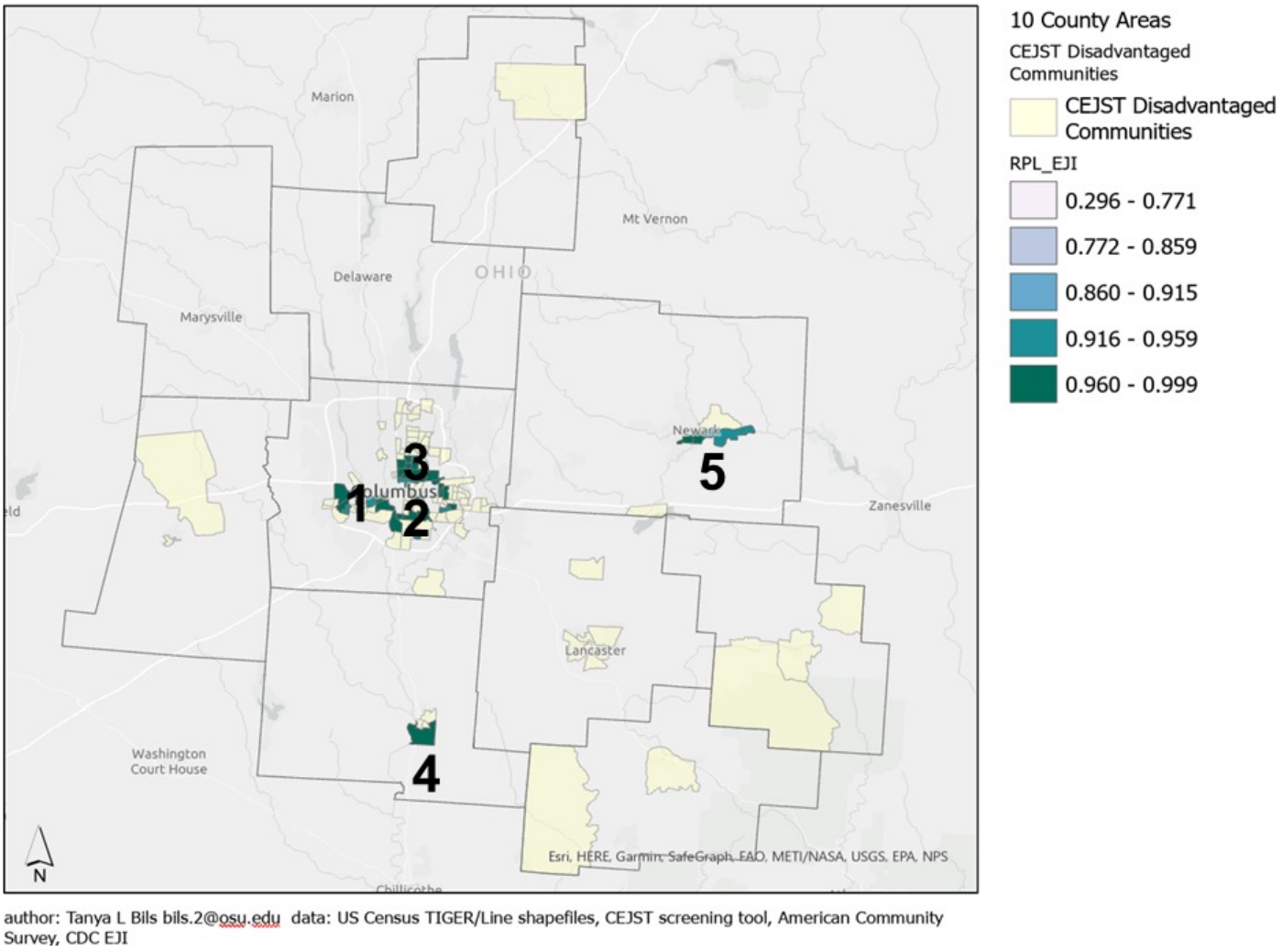


Figure 2. Identification of High Priority LIDACs for PCAP. *The CDC's Environmental Justice Index (EJI) was overlaid onto the EPA's EJScreen mapping tool to identify LIDAC regions that have the most severe environmental and health burdens in the 10-county Columbus MSA. Five regions were identified and included: 1) Hilltop, 2) Near East / South Side, and 3) Linden in Franklin County, 4) Circleville in Pickaway County, and 5) Newark in Licking County. Meaningful engagement was carried out in these high priority regions.*

TABLE A. LIST OF HIGH PRIORITY LIDAC CENSUS TRACTS BY REGION

County	Region	Census Tract(s)
Franklin	**Hilltop**	39049004500, 39049004620, 39049004700, 39049004820, 39049004900, 39049005001, 39049005002, 39049005100, 39049008210, 39049008230, 39049008241, 39049008311, 39049008312, 39049008321, 39049008322, 39049008330, 39049008340, 39049008350
	Near East / South Side	39049002520, 39049002800, 39049002900, 39049003600, 39049003700, 39049003800, 39049005300, 39049005410, 39049005420, 39049005500, 39049005610, 39049005620, 39049005900, 39049006000, 39049006100, 39049008710, 39049008720, 39049008730
	Linden	39049000310, 39049000330, 39049000710, 39049000720, 39049000730, 39049000810, 39049000820, 39049000910, 39049000920, 39049001400, 39049001500, 39049007511, 39049007710, 39049007722
Licking	**Newark**	39089759000, 39089750700
Pickaway	**Circleville**	39129020400

**The Non-LIDAC Region was defined as those census tracts in Franklin County that did not meet LIDAC definition according to EPAs CEJST data. This Non-LIDAC group was used as a comparator for the five high priority LIDAC regions.*

TABLE B. ENVIRONMENTAL, HEALTH, AND CLIMATE BURDENS IN HIGH PRIORITY COLUMBUS-MSA LIDACS

Burdens	Non-LIDAC	Hilltop	Near East / South Side	Linden	Newark	Census Tract(s)
A. EJ Indices						
Particulate Matter 2.5	7.95	19.05	16.84	20.14	8.72	5.97
Air Toxics Cancer Risk	0.27	0.00	0.00	0.00	3.09	0.00
Air Toxics Respiratory HI	4.94	12.27	10.53	12.03	8.82	9.56
Toxic Releases to Air	5.52	15.72	20.38	20.12	3.41	1.79
Traffic Proximity	7.18	18.14	16.61	19.77	16.74	11.62
Superfund Proximity	6.95	15.32	17.28	19.66	7.70	5.13
RMP Facility Proximity	5.42	21.33	16.22	9.75	9.83	11.38
Hazardous Waste Proximity	5.83	17.02	17.53	18.91	10.33	8.55
Underground Storage Tanks	5.76	16.37	16.28	18.14	13.74	15.79
Wastewater Discharge	3.56	8.33	4.56	4.87	13.25	14.09
B. Health Outcomes						
Life Expectancy (difference from mean of region), yrs	3.53	-6.73	-4.53	-4.97	-3.3	-2.3
Heart Disease	5%	8%	8%	8%	8%	9%
Asthma	10%	12%	13%	13%	12%	12%
Chronic Obstructive Pulmonary Disease	6%	12%	11%	12%	13%	13%
Cancer	6%	6%	6%	6%	6%	8%
Persons with Disabilities	24%	40%	40%	41%	38%	39%
Stroke	3%	4%	5%	5%	4%	4%
High Blood Pressure	27%	36%	42%	41%	38%	40%

Environmental data presented as EPA EJScreen supplemental index values, while Health outcomes data presented as CDC PLACES prevalence averaged over census tracts in each region.

2. Meaningful Engagement in LIDACs

The City of Columbus created an engagement plan for seeking feedback on community priorities during the development of this PCAP for both the Columbus-MSA region and high priority LIDAC specific regions (Hilltop, Near East/South Side, Linden, Newark, and Circleville). See Appendix A for the complete Communications & Engagement Strategy, and the Outreach and Coordination section of this PCAP for a record of outreach activities and a summary of input received during the engagement process.

Strategies for community engagement included:

- Online resources:
    - CPRG web page: https://www.morpc.org/us-epa-climate-pollution-reduction-grant/
    - Email list;
    - Social media;
- Community meetings across the MSA with options for in-person, livestream, and video conference participation;
- Targeted outreach to known community-based organizations;
- Incorporation of trusted navigators and connectors embedded in their communities to obtain deep input;
- Push cards and flyers; and
- Attendance at known community events to disseminate information about how to provide input.

Additional Community Engagement Efforts Specific to LIDAC Regions: In addition to the above list, phased efforts were carried out to receive continuous feedback from high priority LIDAC regions (Figure 3). To do this, OSU's Public Engagement frameworks and tools were utilized to enable multi-lateral communication for inclusive co-planning with LIDAC residents by both planned meetings and door-to-door outreach [Lochotzki et al, 2022].

CPRG Phase 1 community engagement involved multi-lateral communication across the leadership of the CPRG program and the OSU group utilizing its Public Engagement to Reimagine Community Co-Planning (PERCC) technology platform to drive two key processes that were critical to inclusive co-planning:

(1) better, more engaging community conversations of climate pollution reduction plans to a broad cross section of community members and stakeholders, across the identified 5-county LIDAC region, and

(2) reduction of impediments to community residents' participation to expand their voice and role in every step of the community planning process particularly as it related to the LIDAC benefits cost analysis.

Therefore, the results presented in this report represent the product of multiple co-envisioning sessions with community members, local, city, and regional authorities from the Hilltop, Near Eastside and Southside Side, Linden, Newark and Circleville communities of the Columbus MSA. These sessions revealed a shared conviction among the attendees that public participation in community planning as it relates to climate pollution reduction should be at a higher level and as the program gains momentum and moves into the Comprehensive Climate Action Plan (CCAP) phase. It is anticipated that increased participation will translate into better community-based plans and better community outcomes, as a polycentric, collaborative perspective on decision-making has been shown to positively contribute to community sustainability and resilience [Gingerich et al., 2017].

Conducting a LIDAC benefits cost analysis as mandated by the Justice 40 initiative component of this USEPA grant program represents the City of Columbus' first iteration of utilizing the PERCC framework. For decades, these communities have been negatively affected by numerous local and national policy decisions, including the construction of Interstates 70 and 71 directly through the Near East Side, Southside and Linden LIDACs. [Jiao et al., 2016; et Vandiver et al., 2022 al., 2022] This has led to community distrust in local and city authorities, in addition to a general disconnect in priorities and general understanding between the community and those local policy makers, and a steady diminution in community participation in civic activities. [Gingerich et al., 2017]. Despite these sentiments of distrust, community outreach activities led by OSU and city partnerships over the past 7-8 years have been able to galvanize residents from these communities using transformative community engagement frameworks resulting in heightening the general interests of residents from these environmental justice communities. Communities with these dynamics can gain the most from PERCC and similar frameworks such as the E6= Enhancing Environmental Enterprises via e-Equity, Education and Empowerment. [Lochotzki et al., 2022]

In implementing PERCC and E6 in the Phase 1 process, we evaluated the ability to increase multi-lateral communication between residents and policy decision-makers, to better understand the relationships between the level of communication and the level of other more effortful acts of participation, and how these jointly are associated with multiple quality indicators of the overall planning process.

- The goal of CPRG Round 1 LIDAC engagement efforts was to identify perceptions and concerns relative to environmental contaminants as sources of greenhouse gases and/or pollution and initiatives that were the most important to LIDAC community members to help guide and inform decision-making on priority measures, potential mitigation and implementation strategies. **The major key finding from CPRG Round 1 engagement is that LIDAC residents viewed air quality / smog, water quality, waste / landfill, and toxic waste as their top concerns,** followed by health burdens (breathing issues and cancer), specific issues (city, traffic congestion, factories / plants), and sensitivity to costs (energy bills). Notably these concerns and perceptions are largely in line with the burdens shown previously in Table B. All information collected and analyzed was presented to the Core Project team to assist and inform their decision-making toward; 1) narrowing priority measures that have high environmental justice impact, 2) identifying near-term and high GHG reductions, and 3) identifying reduction measures that are implementation ready and scalable.
- The goals of CPRG Round 2 LIDAC engagement were to: 1) perform community education about climate pollution, 2) update LIDAC members on findings and selection of priority measures, and 3) to identify potential impacts of PCAP implementation in high priority LIDAC regions that may be translated to other LIDAC regions in the CCAP. This included gaining feedback on potential uptake, benefits, and disbenefits of selected priority measures in their communities. This feedback is reported in the anticipated benefits and disbenefits of priority measures section below.

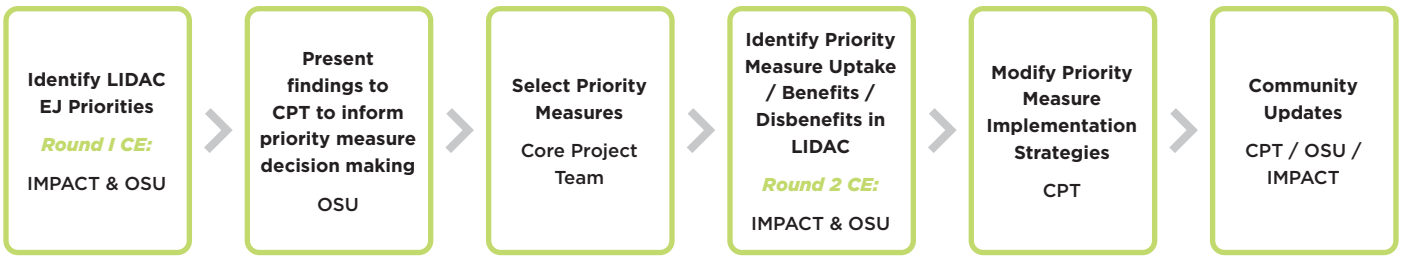


Figure 3. LIDAC Meaningful Community Engagement Strategy. *Flow chart depicts the process utilized for continuous LIDAC community engagement and feedback to help narrow pollution reduction priority measures and identify potential uptake, benefits, and disbenefits.*

Once the PCAP is finalized, members of the Core Project Team will be revisiting the Communications & Engagement Strategy document prepared at the outset of the CPRG planning process to expand and enhance the engagement efforts, including the LIDAC engagement strategy and outreach methods for the Comprehensive Climate Action Plan (CCAP) process. Specifically, the Core Project Team will consider how to better understand LIDAC community needs, how to implement the proposed measures to ensure equitable impact, and outline additional ways benefits and disbenefits will be tracked.

Impact of PCAP Implementation on LIDACs

To first examine potential impacts, the Core Project Team discussed anticipated reach of each PCAP priority measure in LIDACs (Table C). Note that the majority of measures are projected to impact each LIDAC region and if not will serve as a pilot for future expansion to those regions. Although the specific LinkUS project is currently limited to Hilltop, there is high LIDAC support for introducing and expanding zero emission bus rapid transit and increasing connections between and among other regional transit options.

Additional impacts were examined based on Round 2 of LIDAC community engagement to gain feedback regarding uptake, benefits, and disbenefits of the Priority Measures. Feedback was collected via a survey (https://survey123.arcgis.com/share/7fde98b3eaf645a99712e93a697f4177) developed through ArcGIS software so that LIDAC and non-LIDAC responses could be compared. Surveys were administered in-person at public meetings in each of the LIDAC neighborhoods, through door-to-door outreach, or across digital platforms. Further LIDAC benefits-costs analysis (BCA) was performed for home weatherization, solar, and electrification.* Results of both the survey and BCA are shown in the Anticipated Benefits and Disbenefits section below.

**Note: LIDAC BCAs were not performed for the other identified options due to issues with data and model availability available within time and budget constraints. For the greenspace and tree canopy, there is substantial uncertainty around where future development that would occur, how much development would occur, and how that development would impact the tree canopy – making any projection of impact highly circumspect. For the organic waste diversion policy, there is limited publicly available data at useful spatial-resolutions on the biodegradable fraction of household wastes and the fact that current practices for compositing is highly community-specific (e.g., anecdotal evidence indicates that immigrants from predominantly agricultural areas compost at substantially higher rates than the general population) and doing so would necessitate that level of data. Policies aiming to reduce fugitive emissions also require facility-specific details to appropriately size and provide order-of-magnitude cost estimates for emission controls technologies – which while doable, however, would be a challenge within the scope of the Phase I activities.*

TABLE C. ANTICIPATED REACH OF PRIORITY MEASURES IN LIDACS

Goal	Priority Measure	Hilltop	Near East / South Side	Linden	Newark	Circleville
 Increase (and electrify) regional transit options	Completion of LinkUS West Broad Corridor by 2028*	✓	-	-	-	-
	Implement MORPC MTP (Bike+Ped Goal Attainment)	✓	✓	✓	✓	✓
	Expand GOhio commute program	✓	✓	✓	✓	✓
	Electrify 50% of COTA fleet to battery operated buses by 2030	✓	✓	✓	*	*
	100% municipal light duty passenger zero emission vehicles (ZEV) by 2030	✓	✓	✓	✓	✓
 Increase energy efficiency in businesses and homes	Encourage the adoption of Building Performance Standards to achieve 35% reduction in commercial building energy use by 2035	✓	✓	✓	✓	✓
	Increase home weatherization and energy efficiency programs	✓	✓	✓	✓	✓
	Municipal: Expand LED + Smart streetlighting program	✓	✓	✓	✓	✓
 Increase solar + battery storage capabilities on public buildings and facilities, small businesses, and homes	Public and Nonprofit Buildings and Spaces: Regional Community Energy Strategy (ReCES) (50 MW Solar)	✓	✓	✓	✓	✓
	Expansion of Solar in the Residential Sector (50 MW Residential Solar)	✓	✓	✓	✓	✓
	5 MW of community solar installed by 2030.	✓	✓	✓	✓	✓
 Increase water and wastewater treatment efficiency	Community water and wastewater treatment facilities Franklin County commit to 10% municipal water use reduction and 25% energy use reduction by 2030	✓	✓	✓	✓	✓
	Implement waste-to-energy projects at wastewater treatment facilities	✓	✓	✓	*	*
 Preserve existing greenspace and tree canopy coverage	Support regional tree canopy and greenspace inventory initiatives.	✓	✓	✓	✓	✓
	Identify and conserve 1,000 acres of greenspace across the region.	✓	✓	✓	✓	✓
 Reduce landfilled organic waste	Expand curbside composting pilot program by 2025.	✓	✓	✓	*	*
	Open a regional composting facility by 2028.	✓	✓	✓	*	*
	Establish and manage 20 food scrap drop-off sites by 2026.	✓	✓	✓	*	*

*Each priority measure was qualitatively evaluated for potential impact and reach with "✓" indicating both reach and immediate impact, * representing future regional expansion as feasible, and – representing no projected immediate impact or reach.*

Anticipated Benefits and Disbenefits of Priority Measures

To examine potential LIDAC uptake, benefits, and disbenefits of priority measures survey data and benefits cost-analyses were performed.

A) LIDAC Feedback from Survey Data (Uptake, Benefits, Disbenefits)

Based off of the previously mentioned survey data (https://survey123.arcgis.com/share/7fde98b3eaf645a99712e93a697f4177), priority measures were examined for potential benefits and disbenefits. To gauge potential uptake, community members were asked to rate their level of interest for each priority with –5 indicating that they "hate" the option and has low benefit to their community, 0 being neutral or no opinion, and 5 indicating they "love" the option with high benefit to their community. Text feedback was also recorded for specific benefits and concerns or disbenefits to their community. Potential uptake was grouped by four overarching themes as consistent with the survey instrument: 1) Improvements to Regional Transit, 2) Improving Energy Efficiency, 3) Protect and Expand Tree Canopy and Greenspace, and 4) Water Treatment and Waste Management Programs (Table D). Overall, the aggregate average scores for priority measures were: a) greater than 0 and b) higher in LIDAC regions (vs non-LIDAC regions), indicating generally positive community support. Those with higher scores indicate stronger community support and potential uptake. For example, improving safe walking / biking options, solar projects, and tree canopy were the most highly rated indicating strongest support for these priorities. Qualitative thematic analysis was also performed on direct community feedback of the survey response textboxes to identify potential benefits and disbenefits of proposed strategies Table E. Note, those in bold text represent broader project types consistent with survey design (transportation, energy efficiency, tree canopy/greenspace, and water treatment/waste management projects). **Major concerns across potential pollution reduction projects centered around burdens and costs on LIDAC residents including disproportionate impacts on their communities, increased bills/unaffordability, lack of access/availability, ineffectiveness, safety, and maintenance.** Also notable was that there were common misperceptions due to lacking resident education and awareness of pollution reduction concepts and processes. This finding also aligns with community feedback heard from Round 1 wherein residents expressed desire for more education/awareness in communities and schools.

Potential Implications: High priority LIDAC community engagement allowed for direct feedback in those with the highest vulnerability, while also examining favorability, and potential benefits/disbenefits in these communities. The above responses indicate an opportunity to refine priority measures heading into implementation to maximize benefits while reducing disbenefits to LIDACs. It is perhaps unsurprising to find that utility- or municipal-focused measures would be assessed with limited or low favorability scores among residents surveyed, including residents of LIDACs. These solutions, while important for maximizing the efficiency of tax-payer dollars and publicly funded utilities, are often happening in the "background" and are actions that are largely absent in community members' daily lives.

Additionally, several of the Priority Measures put forth in this plan, such as encouraging the adoption of solar panels and electric vehicles, may be viewed with some skepticism across Central Ohio communities, including LIDACs. This uncertainty could be due to the higher upfront costs often associated with new clean energy technologies and a lack of familiarity and education with products such as heat pumps and rooftop solar panels. Therefore, in any programmatic design that results from this Priority Climate Action Plan should include community education and outreach components and assume that any intended benefit of said program would need explained and addressed at the resident level.

TABLE D. FAVORABILITY OF POTENTIAL CLIMATE POLLUTION REDUCTION STRATEGIES IN LIDACS

Priority Measure	Aggregate (N = 68)	Non-LIDAC (N = 34)	LIDAC (N = 34)
1. Improvements to Regional Transit			
Introduce and expand zero emission Bus Rapid Transit	3.9 (0, 5)	3.7 (0, 5)	4.1 (0, 5)
Electrify COTA fleet	3.2 (-5, 5)	3.0 (-5, 5)	3.4 (-1, 5)
Improve safe walking / biking options	4.3 (-2, 5)	4.1 (-2, 5)	4.5 (0, 5)
Expand bike share service options	2.5 (-5, 5)	2.1 (-5, 5)	2.9 (-3, 5)
Expand E-bike incentive program	2.7 (-5, 5)	2.1 (-5, 5)	3.2 (-2, 5)
Expand shuttle services and car-pooling options	2.4 (-5, 5)	2.0 (-5, 5)	2.8 (-2, 5)
Increase connections between regional transit options	3.3 (-5, 5)	3.0 (-5, 5)	3.7 (-4, 5)
Expand electric vehicle adoption	1.8 (-5, 5)	1.5 (-5, 5)	2.1 (-5, 5)
2. Improving Energy Efficiency			
Adopt building standards for energy use reductions in businesses	3.6 (-5, 5)	3.4 (-5, 5)	3.8 (-1, 5)
Adopt home weatherization program to decrease energy usage and costs	3.7 (-5, 5)	3.3 (-5, 5)	4.0 (0, 5)
Incentivize use of energy efficient appliances and electric yard equipment	3.3 (-5, 5)	2.8 (-5, 5)	3.9 (2, 5)
Install solar power on public buildings nonprofits and schools to improve energy efficiency and reduce energy costs	4.2 (-5, 5)	3.7 (-5, 5)	4.6 (3, 5)
Expansion of Solar in the Residential Sector	3.9 (-5, 5)	3.3 (-5, 5)	4.5 (2, 5)
3. Protect and expand tree canopy and greenspace			
Develop tree canopy ordinance to protect and preserve existing trees	4.1 (-5, 5)	3.9 (-5, 5)	4.4 (0, 5)
Identify and conserve 1,000 acres of greenspace across the region.	3.8 (-5, 5)	3.6 (-5, 5)	4.0 (0, 5)
Develop community tree planting initiatives	3.9 (-5, 5)	3.6 (-5, 5)	4.2 (0, 5)
4. Water treatment and waste management programs			
Commitment in Franklin County to reduce water use by 10% and energy use by 25% at water treatment facilities	0.6 (-1, 5)	0.1 (-1, 5)	1.1 (0, 5)
Implement waste-to-energy program	0.6 (0, 5)	0.2 (0, 5)	1.1 (0, 5)
Develop curbside composting program	0.8 (0, 5)	0.3 (0, 5)	1.2 (0, 5)
Open regional composting facility and establish food scrap drop off sites	0.5 (-2, 5)	0.1 (-2, 5)	1.0 (0, 5)

Data presented as Average (min, max). Scores ranged from –5 (highly unfavorable) to 5 (highly favorable).

TABLE E. SUMMARY OF POTENTIAL DIRECT AND INDIRECT BENEFITS / DISBENEFITS OF PRIORITY MEASURES AS DETERMINED BY LIDAC COMMUNITY FEEDBACK

Overarching Theme	Priority Measure	Potential Benefits	Potential Disbenefits
Transportation Projects	Improvements to Regional Transit Priority Measures in General	- Low Emissions - Greater mobility - Improves safety - Less traffic - Improves public transit accessibility - Robust public transit infrastructure - Improved neighborhood walkability	- Availability / Accessibility - Costs (of transit mode and resident displacement) - Unsafe (lanes, speed limits, traffic etc.) - Concern for Imminent Domain - Inefficient - Unreliable - Lacking accommodations for those without vehicles - Limited multilingual options - Uninformed residents
Biking/ Pedestrian	Improve safe walking / biking options, Expand bike share service options, and Expand E-bike incentive program	Improves safety	- Safety in high traffic conditions - Lacking bike lanes and walkways - Unprotected bike lanes or unsafe designs - Biking technology unreliable / unsafe
Buses	Introduce and expand zero emission Bus Rapid Transit, Electrify COTA fleet, Increase connections between regional transit options	Improves employment access	- Routes not frequent - Not quick - Not enough routes
EV	Expand electric vehicle adoption	- None stated	- Does not help LIDAC (many cannot afford cars and rely on bus or bike) - Incentivizing automobile use pollution (plastic pollution, danger to pedestrians, traffic, etc.) - Unsafe areas to plug in
Energy Efficiency Projects	Improving energy efficiency priority measures in general	- Improved quality of life - Environmentally conscious - Reduce dependence on fossil fuels and gas vehicles - Reduced pollution - Lower energy bills/costs - Improve overall efficiency - Decrease reliance/dependency on electric companies - Rebates - Replace old streetlights with high efficiency LED lighting to brighten neighborhoods at night and help discourage crime	- Disproportionate energy burden - Increased bills with electrification and solar energy (equitable distribution of costs that consider income level) - Current incentives do not improve access - Substantial costs to convert to electric - Converting to electric is not as effective for older homes - New technology failures - Mining of raw materials required for electric battery production - Landlords would be responsible for implementing energy efficiency programs (renters do not have the liberty to autonomously implement such programs without approval and/or funding by landlord)

Overarching Theme	Priority Measure	Potential Benefits	Potential Disbenefits
Solar Power	Install solar power on public buildings and schools to improve energy efficiency and reduce energy costs, Expand solar co-op programs for residences nonprofits and small businesses	- Improvement of access to and education of solar panels (ie. Solar panel models at libraries to heighten visibility) - Mitigate climate change - Improve neighborhood and residential energy efficiency - Solar co-op to decrease utility bills at community level (as home solar panels are unaffordable) - Neighborhood level solar - More solar options may encourage home solar implementation - Roof solar panel requirement on large multiunit housing and flat roof commercial projects	- Costs for homeowners / landlords (maintenance, raising rents, repairs, code violations) - Aging trees (maintenance, pruning, burden on homeowners) - Misperceptions/misinformation due to lack of resident education - Property damages (roots near homes or sidewalks) - Power outages - Contributes to blight - Trees dying due to street salt and litter - Limits mixed use neighborhoods / walkability
Tree Canopy and Greenspace Projects	Protect and expand tree canopy and greenspace priority measures in general	- Reduce extreme heat / urban heat islands - Reduce runoff / flooding - Increase wildlife / biodiversity - Clean air - Reduced crime - Limits development in already small communities - Reduced electric needs in summer - Decrease asthma	- Availability - Mining of raw materials required for solar panel production - Misperceptions/misinformation due to lack of resident education - Concerns of costs make residential solar panels feel out of reach - Solar programs are still unaffordable - Restrictions and code requirements for home solar implementation - Mistrust with solar companies/salespeople - Landlords would be responsible for implementing solar panel programs (renters do not have the liberty to autonomously implement such programs without approval and/or funding by landlord)
Water treatment and waste management projects	Water treatment and waste management program priority measures in general	Space/land for water and waste treatment used more efficiently	See specifics below
Reduce landfilled organic waste	Develop curbside composting program, Open regional composting facility and establish food scrap drop off sites	Expand neighborhood-wide food scrap drop station programs to encourage collective effort	- Curbside pickup burden (recycling, yard waste, trash) - Misperceptions/misinformation due to lack of resident education - Decreased quality of life (animal infestation, smells) - Will not work for apartments with limited yard space - Costs
Waste to energy pilot	Implement waste-to-energy program	None stated	Dangerous to public (explosions, toxic emissions)
Wastewater treatment	Commitment in Franklin County to reduce water use by 10% and energy use by 25% at water treatment facilities	Improve water quality	Safety

B) LIDAC Benefits Costs Analysis (BCA) Exemplars

Further LIDAC benefits-costs analysis (BCA) was performed for home weatherization, solar and electrification priority measures. The Ohio State University Environmental Health Sciences team presents the results of the low-income disadvantaged community, benefits cost analyses below (LIDAC BCA, Tables F-H).

I) Priority Measure: Home Weatherization: We performed an analysis for weatherization as an exemplar in a LIDAC census tract in Newark, OH (CT 7507). Early engagement efforts with community members identified high energy bills and respiratory illnesses as problems facing the community (step 1) and community members prioritized home weatherization as a policy solution (step 2). As part of our preliminary work to understand the benefits and costs of weatherizing houses, we have identified three relevant perspectives (step 3). These perspectives are: (1) an individual homeowner (who experiences benefits in the form of reduced energy costs), (2) the public (assumed to fully subsidize the costs of weatherization for this analysis and will receive benefits of avoided air pollution from reduced energy consumption), and (3) a social planner (that represents the sum of both public and private benefits and costs). In the absence of weatherization, a single-family house in this census tract uses roughly 11.6 MWh of electricity and 75.7 MMBtu of natural gas annually (roughly in line with trends in the East North-Central Midwest). These consumption estimates represent our status quo baseline (Step 4). Retrospective analyses of home weatherization projects as part of the Department of Energy's Weatherization Assistance Program have found that weatherizing a single-family house cost $4,050 (after adjusting for inflation) and reduces annual natural gas consumption by 19% and electricity consumption by 7.5% in cold climates (step 5). Given current average costs for electricity and natural gas, criteria air pollutants (i.e., CO2, NOx, and SO2) emissions from electricity generation and natural gas combustion in home heaters, and the Interagency Working Group's interim social cost of carbon, the benefits and costs are reported in Table F. As can be seen in the table, there is a total of $220/yr. in costs (Step 6a), $207/yr. in benefits from lowered energy bills and avoided CO2 emissions (Step 6b), and a net cost of $13/yr. (Step 7). This analysis assumes that the weatherization costs are amortized over 20 years at a discount rate of 0.8%/yr., consistent with past work. The payback periods for this investment (at a discount rate of 0.8%/yr) are 21 years. Table 1 also shows the net benefits accruing to the different perspectives used in this analysis (Step 8).

TABLE F. PRELIMINARY LIDAC BCA FOR HOME WEATHERIZATION IN CENSUS TRACT 7507 (NEWARK, OHIO).

		Annual Monetized Values for Different Perspectives		
Category	**Annual Change from Status Quo**	**Private Homeowner**	**Public**	**Social Planner**
Weatherization Costs	-$220a		-$220	-$220
Electricity Consumption	870 kWh	$64		$64
Natural Gas Consumption	140 ccf	$83		$83
CO_2 Emissions	2400 lbs.		$60	$60
NO_x Emissions	1.6 lbs		b	b
SO_2 Emissions	0.39 lbs.		b	b
Net Annual Benefits [$/yr.]		**$147**	**-$160**	**-$13**
		Discounted Payback Periods [yr.]		21

a Amortized over 20-years at an interest rate of 0.8%, consistent with previous studies.
b Not monetized for preliminary analyses.

II) Priority Measure: Increasing solar energy on public buildings and facilities, small businesses, and homes. The results for the entire BCA analysis across the census tracts comprising the low income, disadvantaged communities are shown in the appendix and demonstrate that building 50MW rooftop solar on **small businesses and houses** has a higher net benefit than building 50 MW of rooftop solar on **public** buildings. The analysis reveals that installing solar on either public building roofs or private building roofs have relatively the same installation and annual maintenance costs. Both types also displace roughly the same amount of associated emissions from the electricity grid. The largest difference is that smaller businesses and homes are less likely to have access to the bulk rate pricing for electricity. This difference amounts to $7-8M/year of additional benefits in the small businesses and private residential houses strategy.

Equally important, in terms of the distribution of benefits for the solar **public** installation option, these benefits would unlikely differ from household-to-household or person-to-person simply because benefits and costs are all public and is probably on the order of less than $1 per person per year. The costs of installation and the benefits of avoided electricity purchases will be distributed relatively evenly over the taxpayer base. The benefits of avoided air pollution and climate damages are distributed even more broadly across much of the Eastern Seaboard (for health benefits from criteria air pollutants) and the entire United States (for climate).

For the **private** installation option, see the table below where we break this scenario down into two perspectives, 1) that of the social planner (which represents the whole of society and reflects everyone's benefits and costs) and for 2) the owners of the **homes** or **businesses** where these 50 MW are installed. For this analysis, the assumption is that the government pays for installation, but the home/business owner is charged with paying for their maintenance. In this scenario, **the home/business owner accrues substantial benefits in terms of avoided electricity payments** – on the order of nearly $10M/year. They also accrue some small climate and air pollution benefits, but these are orders of magnitude smaller than the benefits for avoided electricity. Non-home/business owners in LIDAC communities also accrue these climate/health benefits, but they don't benefit from avoided electricity purchases. Such other LIDAC community members have their benefits accounted for in the Social Planner Perspective.

Priority measure: Increasing solar energy on public buildings and facilities, small businesses, and homes

Distribution of Benfits-Cost			
Category	**Government**	**Society (at large, including LIDACS)**	**LIDAC Residents**
Costs (Installation)	-$7,864,238		
Costs (O&M)			-$1,439,000
Benefits (Climate)	140 ccf	$ 1,992,772.98	
Benefits (Health)		$ 1,729,877.72	
Benefits (Avoided Electricity Purchases)			$11,322,300
Total Costs	$ (7,864,238)		$ (1,439,000)
Total Benefits	$ -	$ 3,722,650.70	$ 11,322,300

		Social Planner Perspective	**LIDAC Residents**
B-C		$ 5,741,712.91	$ 9,883,300
B/C		$ 1.62	$ 7.87

III) Priority Measure: Electrifying transit options for COTA. The results of the LIDAC BCA for increasing and electrifying transit options for **all** COTA buses (Figure X below) versus **diesel only** (Figure Y below) across vulnerable census tracts in Franklin County reveal an overwhelming pragmatic B/C ratio for diesel only. As is evident, the total annual benefit from converting the COTA fleet to diesel be would approximately $7,229,943, with costs coming in at $6,916,814 which translates to a **B/C of 1.05**. This is juxtaposed to the scenario of electrification of the full fleet of COTA buses with an annual benefit of approximately $19,284,159, where the annual costs would approximate $26,898,723 to give a **B/C ratio of 0.72**.

A clear disbenefit in this instance as identified by attendees of the North Linden Area Commission on February 15, 2024 is the potential placement of COTA charging stations at transportation hubs coupled with Columbia Gas small buildings along the CMAX route on Cleveland Ave from downtown all the way out to I-270 approaching Westerville. This scenario presents the potential for the likely disruption of the continuity of the One-Linden community [see minutes of North Linden Area Commission meeting on 2/15/2024].

TABLE G. LOW-INCOME, DISADVANTAGED COMMUNITIES, BENEFITS COST ANALYSES FOR INCREASING AND ELECTRIFYING TRANSIT OPTIONS – ELECTRIFY COTA (ALL)

COTA Fleet Status (for 2022)							
Diesel Bus Gallons	3,888,451.00	gge		3.33229799	L/gge	12,957,477.46	L-diesel
CNG Bus Gallons	2,151,660.00	gge		2.56421677	kg-CNG/gge	5,517,322.64	kg-CNG
Converstion for Electricity							
1 gge =	33.56		kWh				
Electricity Consumed by Electrifying COTA Fleets							
Total GGEs for FF Vehicles	6,040,111.00		gge				
Equivalent Electricity	202,706.13		MWh				
Benefits - Emissions							
	Current Fleet		**Electric Fleet**				
CO2 Emissions	53,936.81		82,197.33	tons			
SO2 Emissions	0.59		44.60	tons			
NOx Emissions	423.47		33.45	tons			
PM2.5 Emissions	17.50		18.24	tons			
CO2 Damages	2,750,777.33		$ 4,192,064.02	/yr			
SO2 Emissions	30,257.60		$ 1,200,908.11	/yr			
NOx Emissions	6,256,581.51		$ 193,554.96	/yr			
PM2.5 Emissions	2,341,696.33		$ 1,018,117.87	/yr			
Difference in Damages	CO2		$ (1,441,286.69)	/yr			
	SO2		$ (1,170,650.51)	/yr			
	NOx		$ 6,063,026.55	/yr			
	PM2.5		$ 1,323,578.46	/yr			
	Total		$ 4,774,667.81	/yr			
Benefits - Avoided Fuel Purchase Costs							
	Current Fleet		Electric Fleet				
Diesel Cost	$4.52			/gal			
CNG Cost	$2.85			/gge			
Electricity Cost			$0.04	/kWh			
Fleet Fuel Cost	$ 21,604,206.44		$ 7,094,714.38				
Difference Fleet Fuel Cost			$ 14,509,492.06				
Costs - Purchases							
Purchase Cost - New BEB	$850,000		/bus				
Diesel Busses	81		busses				
CNG&Hybrid Busses	234		busses				
Busses to Replace	315		busses				
Cost to Replace Busses	$267,750,000						
Annual Equivalent	$26,898,723.39						
Benefit-Cost Analysis							
Total Annual Benefits	$ 19,284,159.87						
Total Annual Costs	$26,898,723.39						
B-C	$ (7,614,563.52)						
B/C	0.72						

Energy Systems Data			
CO2 (lbs/MWh - PJM Average)	811	lbs/MWh	
SO2 (lbs/MWh - PJM Average)	0.44	lbs/MWh	
Nox (lbs/MWh - PJM Average)	0.33	lbs/MWh	
PM2.5(g/kWh - OH Average)	0.18	g/kWh	
CO2 Damages	$ 51.00	/ton	
SO2 Damages	$ 26,929	/ton	
Nox Damages	$ 5,787	/ton	
PM2.5 Damages	$ 55,807	/ton	
Diesel Bus Data			
	per p-km	per L	
Fuel Consumed	3.41E-02		
CO2	8.84E-02	5.71E+00	lbs
SO2	1.40E-06	9.07E-05	lbs
NOx	8.55E-04	5.53E-02	lbs
PM2.5	4.15E-05	2.68E-03	lbs
CNG Bus Data			
	per p-km	per kg	
Fuel Consumed	2.51E-02		
CO2	6.98E-02	6.13E+00	lbs
NOx	2.69E-04	2.36E-02	lbs
PM2.5	5.89E-07	5.17E-05	lbs
Ground-Level Emissions Damages			
CO2	$ 51.00	/ton	
SO2	$ 51,488.06	/ton	
NOx	$ 14,774.58	/ton	
PM2.5	$ 133,777.58	/ton	

TABLE H. LOW-INCOME, DISADVANTAGED COMMUNITIES, BENEFITS COST ANALYSES FOR INCREASING AND ELECTRIFYING TRANSIT OPTIONS – ELECTRIFY COTA (DIESEL)

COTA Fleet Status (for 2022)								Energy Systems Data			
Diesel Bus Gallons	1,736,791.00	gge	3.33229799	L/gge	5,787,505.16	L-diesel		**CO2 (lbs/MWh - PJM Average)**	811	lbs/MWh	
CNG Bus Gallons	-	gge	2.56421677	kg-CNG/gge	-	kg-CNG		**SO2 (lbs/MWh - PJM Average)**	0.44	lbs/MWh	
								Nox (lbs/MWh - PJM Average)	0.33	lbs/MWh	
Converstion for Electricity								**PM2.5(g/kWh - OH Average)**	0.18	g/kWh	
1 gge =	33.56	kWh						**CO2 Damages**	$ 51.00	/ton	
								SO2 Damages	$ 26,929	/ton	
Electricity Consumed by Electrifying COTA Fleets								**Nox Damages**	$ 5,787	/ton	
Total GGEs for FF Vehicles	1,736,791.00	gge						**PM2.5 Damages**	$ 55,807	/ton	
Equivalent Electricity	58,286.71	MWh									
								Diesel Bus Data			
Benefits - Emissions									per p-km	per L	
	Current Fleet	**Electric Fleet**						**Fuel Consumed**	3.41E-02		
CO2 Emissions	16,532.60	23,635.26	tons					**CO2**	8.84E-02	5.71E+00	lbs
SO2 Emissions	0.26	12.82	tons					**SO2**	1.40E-06	9.07E-05	lbs
NOx Emissions	160.03	9.62	tons					**NOx**	8.55E-04	5.53E-02	lbs
PM2.5 Emissions	7.75	5.25	tons					**PM2.5**	4.15E-05	2.68E-03	lbs
CO2 Damages	843,162.71	$ 1,205,398.22	/yr								
SO2 Emissions	13,514.67	$ 345,312.60	/yr					**CNG Bus Data**			
NOx Emissions	2,364,397.73	$ 55,655.35	/yr						per p-km	per kg	
PM2.5 Emissions	1,037,406.92	$ 292,752.56	/yr					**Fuel Consumed**	2.51E-02		
Difference in Damages	CO2	$ (362,235.51)	/yr					**CO2**	6.98E-02	6.13E+00	lbs
	SO2	$ (331,797.92)	/yr								
	NOx	$ 2,308,742.37	/yr					**NOx**	2.69E-04	2.36E-02	lbs
	PM2.5	$ 744,654.36	/yr					**PM2.5**	5.89E-07	5.17E-05	lbs
	Total	$ 2,359,363.30	/yr								
								Ground-Level Emissions Damages			
Benefits - Avoided Fuel Purchase Costs								**CO2**	$ 51.00	/ton	
	Current Fleet	**Electric Fleet**						**SO2**	$ 51,488.06	/ton	
Diesel Cost	$4.52		/gal					**NOx**	$ 14,774.58	/ton	
CNG Cost	$2.85		/gge					**PM2.5**	$ 133,777.58	/ton	
Electricity Cost		$0.04	/kWh								
Fleet Fuel Cost	$ 6,910,614.97	$ 2,040,034.71									
Difference Fleet Fuel Cost		$ 4,870,580.26									
Costs - Purchases											
Purchase Cost - New BEB	$850,000	/bus									
Diesel Busses	81	busses									
CNG&Hybrid Busses	0	busses									
Busses to Replace	81	busses									
Cost to Replace Busses	$68,850,000										
Annual Equivalent	$6,916,814.58										
Benefit-Cost Analysis											
Total Annual Benefits	$ 7,229,943.56										
Total Annual Costs	$6,916,814.58										
B-C	$ 313,128.98										
B/C	1.05										

To summarize the LIDAC BCA, meaningful engagement feedback along with qualitative and quantitative analyses of direct and indirect benefits and costs have been shown above. This information has been input into a decision tree flowchart to guide policymakers based on LIDAC needs. This overall analysis is an exemplar of needs in High Priority LIDACs which will be expanded to the CCAP. It evaluates a suite of interventions in the residential, industrial, commercial, and transportation sectors. There are also other non-quantifiable drivers that will be brought to the forefront during the remaining phases of the CPRG.

As has been stated historically in the environmental justice literature, [Bullard, Robert; Dumping in Dixie] we must be very intentional, but cautious when addressing pollution control issues. The overarching disbenefit that is often discussed in this regard is that there is almost always a point of diminishing returns. That is to say that the benefits will outweigh the expenses up to a certain level of pollution reduction. For example, reducing greenhouse gasses in the Columbus MSA by 90% might very well be doable, inexpensive, technologically simple and painless. However, the effort, expense and inconvenience to reduce or eliminate the remaining 10% might likely be an exponential effort, requiring huge resources, some of which would likely be harmful to society. This might include job loss, reduced product sales, increased taxes, greater dependence on imports, increases in pollution and waste in other areas to result in an overall social burden. [Cai and Lontzek, 2019] To get to this last 10% of pollution reduction would ultimately be classified as a disbenefit.

Therefore, this speaks to the importance of utilizing novel co-planning engagement frameworks that are coupled to benefits cost analyses in environmental justice communities to reconcile the importance of pollution reduction strategies as the residents see it, in these vulnerable communities [Stingone et al., 2023]. This speaks to why it's extremely important that lawmakers (politicians,) environmental public health scientists and other stakeholders such as local businesses, area commissioners, work very closely together with residents of environmental justice communities to draft and implement reasonable and workable solutions to climate pollution reduction concerns. Doing so, utilizing frameworks such as those implemented here will avoid the uncompromising approaches that can cause great harm to local business, government and society in as a whole, to instead move in favor of more reasonable and balanced reduction goals.

C) Discussion of LIDAC Benefits Analyses

Potential Benefits: It is certainly not the intention of any entities completing this planning process to put undue burdens – of cost, or time, or trust – on residents in the Columbus MSA, especially LIDAC communities, who already have a history of disinvestment and distrust from wayward policy decisions. In fact, if programmatic design is initiated with social equity and environmental justice as critical lenses throughout the implementation of this work, the outcomes of these programs and policies can have a multitude of benefits throughout the whole region, including in low-income and disadvantaged communities.

By expanding efforts and resources with home weatherization, residents with high home energy costs can benefit from reduced utility bills and better home insulation throughout both extreme heat in the summer and unexpected winter weather events, while using less energy sourced from "dirty" grids. By increasing fast, reliable, and zero-emission transportation options, like the introduction of electric-powered buses and bus rapid transit systems throughout the Columbus region, lower-income residents can have expanded access to more jobs and more amenities in areas that would have otherwise required a private automobile and potential parking fees. By concentrating tree canopy coverage in more urban areas already experiencing the effects of urban heat island, we can more equally spread the public health benefits of trees while reducing the severity of extreme heat and its associated health impacts in urbanized areas.

All of these efforts listed above have the added benefit of generating less particulate matter pollutants

and associated greenhouse gas emissions from combustion by relying on either electrification or increased energy efficiency, which in turn has long-term health benefits for all communities (including LIDACs) within the MSA.

Potential Disbenefits: However, as previously stated, the initial upfront costs and lack of education or information on the initiation of climate action programs, such as residential solar deployment and the adoption of electric vehicles, may be disparately adopted and "leave behind" lower-income and/or more rural communities in counties surrounding Franklin County. Initial community surveys prepared for this Priority Climate Action Plan showed skepticism and reservations around solar, particularly in the more rural communities in the MSA, and resistance to electric vehicle adoption. This reported resistance to electric vehicles is why we focused the Priority Measure in this plan on municipal fleet conversion at the onset. The hope with targeting this Measure with municipalities is it becomes a focus for municipal operations and budgets only, while allowing communities to observe "EV's in action" and not having to adopt the relatively new technologies at the household level.

Similarly, the emphasis on installing solar on public buildings, such as libraries, schools, and municipal buildings, prioritizes the reduction of greenhouse gas emissions from trusted public entities in the surrounding community first without relying on the adoption of emission reduction behaviors at the household level.

Although the West Broad Corridor in the regional LinkUS project is currently limited to the Hilltop region of Columbus, there is high LIDAC support for introducing and expanding zero emission bus rapid transit and increasing connections between and among other regional transit options.

Additionally, community members have expressed concerns about displacement and the inability to afford maintenance costs with new efficiency technologies proposed in this plan, like solar panels and heat pumps for residential homeowners. While efforts will be made to mitigate these concerns, members of the Core Project Team also acknowledge the need for outreach and education about any planned efforts for PCAP implementation to be considered a success in communities, especially among LIDACs.

Continuous and meaningful engagement will be performed in high priority LIDAC regions and also expanded into remaining LIDAC regions in the Columbus MSA to gain additional feedback. The goal is to update LIDACs, educate residents about climate pollution and reduction strategies, and co-plan implementation strategies throughout the CCAP phase, as outlined in the Communications & Engagement Strategy.

Coordination and Outreach

The Columbus MSA Core Project Team conducted extensive intergovernmental coordination and outreach over approximately 6 months in developing this PCAP. This section describes the framework the City of Columbus and its partners used to support robust and meaningful engagement strategies to ensure comprehensive stakeholder representation was achieved.

Identification of Stakeholders

The Columbus MSA Core Project Team identified stakeholders representative of the entities, groups, and individuals who may be impacted by the implementation of this PCAP and the CCAP. Stakeholders include, without limitation:

- State agencies,
- Metropolitan planning organizations,
- Economic development organizations,
- Environmental advocates,
- Industrial associations,
- Utilities,
- Agricultural associations,
- Waste management organizations,
- Industrial organizations,
- Consumer advocates,
- Local elected officials,
- Community-based organizations,
- Chambers of commerce,
- Other interested organizations, and
- Residents of the Columbus MSA.

To identify stakeholders, the Columbus MSA Core Project Team contacted local elected officials, community organizations, and advocacy organizations known to be interested in clean energy infrastructure and practices. Sustainable Columbus collaborated with the CPT to map stakeholders in July 2023. Using a graph, stakeholders were categorized based on their support for climate planning and their power to influence outcome. Stakeholders support was evaluated based on their alignment with sustainable practices, collaborative potential, and historical track record. Additionally, their relative power and influence were assessed by considering their relationships, resources, and decision-making positions. The City of Columbus will update this list of stakeholders as needed.

Interagency and Intergovernmental Coordination

The City of Columbus has provided project management for the Columbus MSA CPRG. Each Coordinating Entity listed under the Core Project Team (CPT) has been given a designated role in the development of the PCAP. This is listed on page 7 of this document.

The City of Columbus held weekly coordination meetings with the CPT at the PCAP stage to stay apprised of planning progress, identify obstacles and ways to reduce planning challenges. In addition to the CPT, the City of Columbus coordinated with the Ohio EPA and the other three Ohio MSA CPRG project teams to provide updates and align efforts across the state. Representatives of the Columbus MSA CPRG project team attended monthly Technical Assistance Forums, provided by the US EPA, as well as a monthly Urban Sustainability Director's Network technical assistance network to stay apprised of new and emerging guidance from the US EPA on all things CPRG.

Regional CPRG progress was shared through report-outs at MORPC Commission meetings, MORPC's Sustainability Advisory Committee, MORPC's Sustainable2050 convening, MORPC's Energy & Air Quality Working Group, and MORPC Sustaining Scioto meetings. MORPC created a CPRG Strategy Subcommittee to the Sustainability Advisory Committee, co-chaired by Sustainable Columbus and a Sustainability Advisory Committee member from a surrounding jurisdiction to represent MORPC members and regional stakeholders. The CSS subcommittee met monthly from November through February to vet the work of the coordinating entities and to provide feedback on plan recommendations.

CSS Representatives

- MORPC
- Bexley, Ohio
- Bridges Community Action Partnership
- Buckeye Hills Regional Council
- Delaware Public Health District
- Fairfield County, Ohio
- Franklin County, Ohio
- Franklin County Public Health
- Hocking Athens Perry Community Action
- Impact Community Action
- Lancaster Fairfield Community Action Agency
- Lancaster, Ohio
- LEADS Community Action Agency
- Licking County Health Department
- Licking County, Ohio
- LUC Regional Planning Commission - Logan County, Union County, Champaign County
- Madison County, Ohio
- Ohio Heartland Community Action
- Pickaway County Community Action Agency
- Pickaway Progress Partnership
- Plain City, Ohio
- Sustainable Columbus/City of Columbus
- Union County Health Department | Marysville, Ohio
- Village of Ashville, Ohio

Additionally, partners, environmental stakeholders, and other interested organizations participating in the Sustainable Columbus Committee and the five existing Columbus Climate Action Plan Work Groups were kept apprised of PCAP developments at bi-monthly and monthly meetings, respectively.

Communications & Engagement Strategy

The Communications & Engagement Strategy was developed by incorporating established frameworks and industry best practices recommended by the EPA, as well as feedback from various sources including our MSA's EPA-approved Workplan, EPA's CPRG Program Guidance Document, pre-engagement survey responses, and CPT workshop notes. The strategy follows a four-step process: goal identification and stakeholder assessment, "pre-engagement" engagement with stakeholder and affected parties, plan development referencing community input, and maintaining ongoing engagement

throughout the planning process, with a focus on equity and inclusivity (Appendix A). Community input on engagement methods that suit their preferences was collected via a virtual survey and previous community engagement initiatives. The results from this survey, and the pervious initiatives, were referenced during the creation, and later included in, the Communications and Engagement Strategy. The draft strategy underwent an internal review process within the CPT and may be updated as needed to ensure effectiveness. Sustainable Columbus plans to contract with an Engagement Specialist to help facilitate public engagement for the CCAP.

Outreach and Communication Methods

The Columbus MSA CPT utilized a variety of methods to effectively engage the community and stakeholders. Strategies included leveraging social media platforms such as Twitter, Instagram, Facebook, and TikTok, where we shared tailored graphics to capture attention and encourage participation. Additionally, we maintained dedicated project web pages on Sustainable Columbus and MORPC websites, ensuring easy and convenient access to project information. Our communication approach extended to e-newsletters, through which we disseminated CPRG updates and opportunities for engagement. We conducted both in-person and virtual meetings, allowing for broader participation. Furthermore, we offered online surveys to gather feedback, ensuring representation from various populations.

County Champions

Identifying and utilizing county champions strengthened our networks and amplified our calls for engagement. We identified parties committed to pollution reduction efforts through existing and new networks of intergovernmental cooperation (I.e. MORPC's Sustainability Advisory Committee). By engaging with these champions, we were able to garner their support and leverage their influence within their individual communities. This approach not only expanded our networks but also facilitated greater outreach and collaboration throughout the PCAP planning process.

Stakeholder Meetings and Workshops

Stakeholder meetings and workshops served as pivotal platforms for engaging key stakeholders from local governments and regional organizations. Through the formation of committees, we established channels for ongoing communication and collaboration. Leveraging existing regional events and committees further enhanced our engagement efforts, allowing us to reach a wider spectrum of stakeholders. For example, at the annual MORPC Summit on Sustainability we hosted a breakout session with community leaders from across the MSA to provide an overview of the CPRG. Subsequently, we held an interactive activity where attendees voted on their top three pollution reduction measures from each sector: industrial, residential, commercial, and transportation—the highest GHG emitting sectors in the MSA. This event was used to provide education on the CPRG and determine regional priority measures.

Public Meetings and Workshops

Our approach to public engagement in the PCAP planning process was designed to gather detailed community feedback. We conducted two hybrid public informational sessions in January 2024, which allowed community members to contribute their perspectives to the work of the PCAP to date and the list of regional climate action planning priorities.

LIDAC Engagement

Incorporating emerging community engagement tools, such as the Public Engagement to Re-imagine Community Co-planning (PERCC) framework, which was developed by The Ohio State University,

integrates AI and human expertise for interactive community planning. It enhances communication among stakeholders, aims to disseminate plans effectively, and reduces barriers to community participation in the planning process. Utilized along with this, is the Machine-Readable Co-Design (MaRC) toolkit, which gathers meaning feedback and stories from the community about how community members have been impacted by pollution and what initiatives are most important. The use of these two frameworks enabled us to facilitate interactive co-planning processes with LIDACs. By gathering environmental justice concerns and community feedback, we ensured that our policies and initiatives would be responsive to community needs. Maintaining communication throughout the planning process fostered ongoing dialogue and collaboration. See Page 16 of this document for more information about the LIDAC engagement process.

Strategies to Overcome Linguistic, Cultural, Institutional, Geographic, and Other Barriers to Participation

To address barriers to participation, including linguistic, cultural, institutional, geographic, and others, we implemented several strategies. First, we utilized the Hemmingway Editor App to ensure that all our communication materials, such as social media posts, webpages, emails, and newsletters, are readable at or around a 9th-grade level, enhancing accessibility. Additionally, we adopted a hybrid meeting format to accommodate residents and stakeholders, making participation more convenient and accessible. Furthermore, these meetings are recorded and posted online afterward, allowing individuals to view them at any time, further increasing engagement opportunities.

Outreach and Coordination Documentation

Table 10 provides a log of interagency and intergovernmental coordination and stakeholder and public engagement efforts associated with developing this PCAP. Meeting and outreach materials and resources are available here.

TABLE I. OUTREACH AND COORDINATION LOG

Date	Topic	Organizations Involved	Coordination/ Outreach Method	Location	Outcome(s) and Next Steps	Notes/ Links
8/2023 - 9/2023	Pre-engagement Survey	Sustainable Columbus, OSU, MORPC, PCFO, IMPACT	Virtual survey (Google Forms), email, webpage updates, QR code	Virtual	Outcomes: Received input on engagement methods that work for Columbus MSA residents. Next Steps: Reference results during development of Engagement Plan.	https://drive.google.com/drive/
8/23/2023	Sustaining Scioto Board Meeting: CPRG Update	MORPC	MORPC membership emails	Virtual	Outcomes: Provided Columbus MSA CPRG overview to board members. Next Steps: Followed up with an email to link to the survey	N/A
09/06/2023	CPRG Managers' Meeting	CPRG Phase I project representatives from: the Columbus MSA, the Dayton MSA, the Cleveland MSA, the Cincinnati MSA, and the State of Ohio.	Virtual (Zoom), email	Virtual	Outcomes: Received updates on the Solar for All competition. Open discussion about approaches for developing the Quality Assurance Project Plan.	N/A
10/02/2023	CPRG Managers' Meeting	CPRG Phase I project representatives from: the Columbus MSA, the Dayton MSA, the Cleveland MSA, the Cincinnati MSA, and the State of Ohio.	Virtual (Zoom), email	Virtual	Outcomes: Discussed CPRG Implementation Grants NOFO, opportunities for multi-MSA or Statewide projects, QAPP development, and project updates from each grantee.	N/A
10/12/2023	LIDAC Round-1 Engagement	OSU	In-person / one-on-one discussions via PERCC Bullseye Activity	Rhoads Ave, neighborhood community event	Outcomes: Identified LIDAC climate pollution concerns and initiative priorities in Near East / South Side LIDACs to narrow PCAP pollution reduction measures	https://drive.google.com/file/
10/26/2023	MORPC Summit on Sustainability	Sustainable Columbus, MORPC, OSU, PCFO, IMPACT, Ohio EPA	In-person, social media, website updates, newsletters, email	401 N High St, Columbus, OH 43215	Outcomes: Hosted a breakout session where a large-scale activity was conducted for attendants to vote on their top 3 climate priorities per top 4 GHG emitting sector. 474 votes, 41 comments from Columbus MSA residents. Representation primarily from Franklin County with attendants being primarily community leaders and college students. Next Steps: Determine most supported measures from this event in order to identify regional climate priorities.	https://drive.google.com/drive/

Date	Topic	Organizations Involved	Coordination/ Outreach Method	Location	Outcome(s) and Next Steps	Notes/ Links
11/01/2023	CSS I	Sustainable Columbus, MORPC	Hybrid (Microsoft Teams), email	Hybrid, 111 Liberty St, Unit 100, Columbus, OH 43215	Outcomes: Establishment of CSS to get reginal perspective, Inform and assist in regional outreach among stakeholders, provide input on the deliverables of the planning grant, collaborate and provide input on implementation funding. Overview of Columbus MSA CPRG and engagement plan. Conducted small group activity and large group discussion regarding attendants top 3 pollution reduction priorities per sector.	https://drive.google.com/drive/
11/03/2023	LIDAC Round-1 Engagement	OSU	In-person booth at Pickaway Senior Center health fair/ one-on-one discussions via PERCC Bullseye	Pickaway County Fairgrounds 415 Lancaster Pike, Circleville, OH 43113	Outcomes: Identified LIDAC climate pollution concerns and initiative priorities in Circleville LIDACs to narrow PCAP pollution reduction measures	Discussion with multiple community members gaining perspectives, few had time for PERCC activity
11/09/2023	CPRG Managers' Meeting	CPRG Phase I project representatives from: the Columbus MSA, the Dayton MSA, the Cleveland MSA, the Cincinnati MSA, and the State of Ohio.	Virtual (Zoom), email	Virtual	Outcomes: Discussed QAPP progress and PCAP project/ program development, ways to go about soliciting/developing projects to include in the PCAP.	N/A
11/13/2023	LIDAC Round-1 Engagement	OSU	Flyers, email, social media / Community meeting- In person one-on-one in person conversations PERCC Bullseye Activity and Rankings at Community center	Pickaway County Senior Center, 2105 Chickasaw Dr, Circleville, OH	Outcomes: Identified LIDAC pollution concerns and initiative priorities in Circleville LIDACs to narrow PCAP pollution reduction measures	Circleville residents, Low Attendance re-engage https://drive.google.com/file/
11/15/2023	LIDAC Round-1 Engagement	OSU	Flyers, email, social media / Community meeting- In person one-on-one in person conversations PERCC Bullseye Activity and Rankings	Licking County Library / Downtown Newark Branch	Outcomes: Identified LIDAC climate pollution concerns and initiative priorities in Newark LIDACs to narrow PCAP pollution reduction measures	Newark Residents, high interest stakeholders https://docs.google.com/

Date	Topic	Organizations Involved	Coordination/ Outreach Method	Location	Outcome(s) and Next Steps	Notes/ Links
11/15/2023	LIDAC Round-1 Engagement	OSU	Flyers, email, social media / Community meeting- In person one-on-one in person conversations PERCC Bullseye Activity and Rankings	905 Mt Vernon Ave Columbus, OH 43203	Outcomes: Identified LIDAC climate pollution concerns and initiative priorities in Near East / South Side LIDACs to narrow PCAP pollution reduction measures	https://docs.google.com/
11/27/2023	CPRG Managers' Meeting	CPRG Phase I project representatives from: the Columbus MSA, the Dayton MSA, the Cleveland MSA, the Cincinnati MSA, and the State of Ohio.	Virtual (Zoom), email	Virtual	Outcomes: Discussed approaches for developing any multi-region or statewide programs for eventual application for CPRG Implementation funding.	N/A
11/28/2023	LIDAC Round-1 Engagement	OSU	Flyers, email, social media / Community meeting- In person one-on-one in person conversations PERCC Bullseye Activity and Rankings	Licking County Library / Downtown Newark	Outcomes: Identified LIDAC climate pollution concerns and initiative priorities in Newark LIDACs to narrow PCAP pollution reduction measures	Newark residents, high turnout
12/2023	MORPC Regional Survey	MORPC	Virtual survey (Microsoft Forms)	Virtual	Outcomes: Results of survey showed pollution reduction priorities, focused on regional residents outside of Franklin County. Next steps: Reference the results to determine the regional priorities to consider while developing the PCAP.	https://docs.google.com/
12/2023 - 2/2024	LIDAC Round-1 Engagement	IMPACT	Door-to-door outreach / PERCC Bullseye Activity	Near East / South Side	Outcomes: Identified LIDAC climate pollution concerns and initiative priorities in Near East / South Side LIDACs to narrow PCAP pollution reduction measures	https://docs.google.com/
12/2023 - 2/2024	LIDAC Round-1 Engagement	IMPACT	Door-to-door outreach / PERCC Bullseye Activity	Linden	Outcomes: Identified LIDAC climate pollution concerns and initiative priorities in Near East / South Side LIDACs to narrow PCAP pollution reduction measures	
12/2023 - 2/2024	LIDAC Round-1 Engagement	IMPACT	Door-to-door outreach / PERCC Bullseye Activity	Hilltop	Outcomes: Identified LIDAC climate pollution concerns and initiative priorities in Near East / South Side LIDACs to narrow PCAP pollution reduction measures	

Date	Topic	Organizations Involved	Coordination/ Outreach Method	Location	Outcome(s) and Next Steps	Notes/ Links
12/06/2023	LIDAC Round-1 Engagement	OSU	Flyers, email, social media / In person one-on-one in person conversations PERCC Bullseye Activity and Rankings	905 Mt Vernon Ave, Columbus, OH 43203	Outcomes: Identified LIDAC climate pollution concerns and initiative priorities in Near East / South Side LIDACs to narrow PCAP pollution reduction measures	https://drive.google.com/file/d/1ey5E9o-
12/07/2023	CSS II	Sustainable Columbus, MORPC	Hybrid (Microsoft Teams), email	111 Liberty St, Unit 100, Columbus, OH 43216	Outcomes: Conducted a small group discussion to refine pollution reduction methods, shared together in large group discussion, reviewed MORPCs Regional Engagement Survey. Next Steps: Finalize our regional priorities for reduction measures, how to better our engagement throughout this process	https://drive.google.com/file/
12/8/2023	LIDAC Round-1 Engagement	OSU	Flyers, email, social media / In person one-on-one in person conversations PERCC Bullseye Activity and Rankings	Pickaway County Library, 1160 N Court St, Circleville, OH 43113	Outcomes: Identified LIDAC climate pollution concerns and initiative priorities in Circleville LIDACs to narrow PCAP pollution reduction measures	https://drive.google.com/file/
12/8/2023	LIDAC Round-1 Engagement	OSU	Flyers, email, social media / In person one-on-one in person conversations PERCC Bullseye Activity and Rankings	Pickaway Senior Center, 2105 Chickasaw Dr	Outcomes: Identified LIDAC climate pollution concerns and initiative priorities in Circleville LIDACs to narrow PCAP pollution reduction measures	https://drive.google.com/file/
12/11/2023	CPRG Managers' Meeting	CPRG Phase I project representatives from: the Columbus MSA, the Dayton MSA, the Cleveland MSA, the Cincinnati MSA, and the State of Ohio.	Hybrid (Zoom), email	Virtual	Outcomes: Discussed potential synergies between CPRG Implementation Projects and the Clean Energy 4 All program being managed by OAQDA.	N/A
1/17/2024	CSS III	Sustainable Columbus, MORPC	Hybrid (Microsoft Teams), email	111 Liberty St, Unit 100, Columbus, OH 43217	Outcomes: Overview of draft PCAP, regional survey results and preview Phase II Pitch Session. Next Steps: Attend Pitch Session, promote upcoming Public Update Meetings, Determine needs for February CSS meeting.	https://drive.google.com/drive/

Date	Topic	Organizations Involved	Coordination/ Outreach Method	Location	Outcome(s) and Next Steps	Notes/ Links
1/25/2024	Public Update Meeting #1	MORPC, Sustainable Columbus	Hybrid (Microsoft Teams), social media, website updates, newsletters, flyers, email	1360 Lancaster Pike, Circleville, OH 43113	Outcomes: Overview of CPRG to public audience, conducted in Circleville for regional perspective.	https://drive.google.com/drive/
1/31/2024	Public Update Meeting #2	Sustainable Columbus, MORPC	Hybrid (Microsoft Teams), social media, website updates, newsletters, flyers, email	511 S Hague Ave, Columbus, OH 43204	Outcomes: Overview of CPRG to public audience, conducted in Franklin County for central area of large population perspective. Next Steps: Determine regional priorities and draft PCAP	https://drive.google.com/drive/
2/06/2024	LIDAC Engagement Round 2: Circleville	OSU	Social media, website updates, newsletters, email / Community meeting- in person one-on-one conversations, brochures, QR survey	1160 N Court St, Circleville, OH 43113	Outcomes: Meaningfully engage with LIDACs, provide updates on possible reduction measures to determine LIDAC specific benefits and disbenefits.	https://drive.google.com/drive/
2/07/2024	LIDAC Engagement Round 2: Near East / South Side	OSU	Social media, website updates, newsletters, email / Community meeting- in person one-on-one conversations, brochures, QR survey	1113 Parsons Ave, Columbus, OH 43206	Outcomes: Meaningfully engage with LIDACs, provide updates on possible reduction measures to determine LIDAC specific benefits and disbenefits. Next Steps: Draft PCAP while referencing this data.	https://drive.google.com/drive/
2/08/2024	LIDAC Engagement Round 2: Linden	OSU	Social media, website updates, newsletters, email / Community meeting- in person one-on-one conversations, brochures, QR survey	2223 Cleveland Ave, Columbus, OH 43211	Outcomes: Meaningfully engage with LIDACs, provide updates on possible reduction measures to determine LIDAC specific benefits and disbenefits. Next Steps: Draft PCAP while referencing this data.	https://drive.google.com/drive/
2/12/2024	LIDAC Engagement Round 2: Newark	OSU, Sustainable Columbus	Social media, website updates, newsletters, email / Community meeting- in person one-on-one conversations, brochures, QR survey	101 West Main Street, Newark, OH 43055	Outcomes: Meaningfully engage with LIDACs, provide updates on possible reduction measures to determine LIDAC specific benefits and disbenefits. Next Steps: Draft PCAP while referencing this data.	https://drive.google.com/drive/
2/13/2024	LIDAC Engagement Round 2: Newark	OSU	Social media, website updates, newsletters, email / Community meeting- in person one-on-one conversations, brochures, QR survey	511 S Hague Ave, Columbus, OH 43204	Outcomes: Meaningfully engage with LIDACs, provide updates on possible reduction measures to determine LIDAC specific benefits and disbenefits. Next Steps: Draft PCAP while referencing this data.	https://drive.google.com/drive/

Date	Topic	Organizations Involved	Coordination/ Outreach Method	Location	Outcome(s) and Next Steps	Notes/ Links
2/15/2024	LIDAC Engagement Round 2: Linden	OSU	Social media, website updates, newsletters, email / Community meeting- in person one-on-one conversations, brochures, QR survey	1350 Briarwood Ave Columbus, OH 43211	Outcomes: Meaningfully engage with LIDACs, provide updates on possible reduction measures to determine LIDAC specific benefits and disbenefits. Next Steps: Draft PCAP while referencing this data.	https://drive.google.com/file/d/1R6D_
2/2024	LIDAC Engagement Round 2: Newark	IMPACT	Door-to-door / Brochures, QR survey	Newark	Outcomes: Meaningfully engage with LIDACs, provide updates on possible reduction measures to determine LIDAC specific benefits and disbenefits. Next Steps: Draft PCAP while referencing this data.	https://drive.google.com/drive/
2/2024	LIDAC Engagement Round 2: Circleville	IMPACT	Door-to-door / Brochures, QR survey	Circleville	Outcomes: Meaningfully engage with LIDACs, provide updates on possible reduction measures to determine LIDAC specific benefits and disbenefits. Next Steps: Draft PCAP while referencing this data.	https://drive.google.com/drive/
2/2024	LIDAC Engagement Round 2: Near East / South Side	IMPACT	Door-to-door / Brochures, QR survey	Near East / South Side	Outcomes: Meaningfully engage with LIDACs, provide updates on possible reduction measures to determine LIDAC specific benefits and disbenefits. Next Steps: Draft PCAP while referencing this data.	https://drive.google.com/drive/
2/2024	LIDAC Engagement Round 2: Linden	IMPACT	Door-to-door / Brochures, QR survey	Linden	Outcomes: Meaningfully engage with LIDACs, provide updates on possible reduction measures to determine LIDAC specific benefits and disbenefits. Next Steps: Draft PCAP while referencing this data.	https://drive.google.com/drive/
2/2024	LIDAC Engagement Round 2: Hilltop	IMPACT / OSU	Door-to-door / Brochures, QR survey	Hilltop	Outcomes: Meaningfully engage with LIDACs, provide updates on possible reduction measures to determine LIDAC specific benefits and disbenefits. Next Steps: Draft PCAP while referencing this data.	https://drive.google.com/drive/

Conclusion

This PCAP is the first major deliverable under the CPRG planning grant awarded to the City of Columbus. The City and its partners will continue planning, engagement, and action to reduce emissions; invest in sustainable infrastructure, technologies, and practices; build our economy; and enhance the quality of life in the Central Ohio region.

In 2025, the City of Columbus will publish a comprehensive climate action plan (CCAP) that establishes equitable and sustainable economic development strategies that reduce emissions across all sectors. The CCAP will include near- and long-term emissions projections, a suite of emission reduction measures, a robust analysis of measure benefits, plans to leverage federal funding, and a workforce planning analysis. In 2027, the City of Columbus will publish a status report that details implementation progress for measures included in the PCAP and CCAP, any relevant updates to PCAP and CCAP analyses, and next steps and future budget and staffing needs to continue implementation of CCAP measures.

If you have questions about this PCAP or suggestions for the upcoming CCAP and status report, contact Roberto Burga at RWBurga@Columbus.gov.

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Appendix A: Communications & Engagement Strategy

Communications & Engagement Strategy for the Columbus MSA-Climate Pollution Reduction Grant

Prepared by:

Sustainable Columbus

Mid-Ohio Regional Planning Commission

Power A Clean Future Ohio

The Ohio State University, College of Public Health

IMPACT Community Action

Submitted:

September 29, 2023

Introduction

A. Purpose of the Communications & Engagement Strategy

Our Communications & Engagement Plan embodies our commitment to the environment and the people who call Central Ohio home. Tackling climate change isn't a solo journey – it's a collaborative effort that involves everyone, from community members to business partners to local government agencies. This plan exists to ensure that community voices are heard, respected, and actively shape our climate initiative – and works to ensure that no one is left behind. We're striving to right environmental wrongs and create a future where sustainability means fairness and opportunity for everyone. This plan isn't just a one-time effort; it's a roadmap to keep our community engaged, informed, and adapting together, as we complete the requirements of the EPA Climate Pollution Reduction Grant (CPRG) program.

B. Project Background

The Climate Pollution Reduction Grant (CPRG) is an Environmental Protection Agency program that supports communities tackling climate change and air pollution. This planning grant offers funds to create strategies for reducing greenhouse gasses and other identified pollutants. Sustainable Columbus, in partnership with the Mid-Ohio Regional Planning Commission (MORPC), Power A Clean Future Ohio (PCFO), IMPACT Community Action, and The Ohio State University, has received $1 million to support these efforts in the 10 county Columbus MSA. Our focus is on regional climate action, with a special emphasis on benefiting low-income and disadvantaged communities, in line with federal Justice40 goals.

The CPRG program has two phases. The first planning phase requires both a Priority Climate Action Plan, due March 1, 2024, and a Comprehensive Climate Action Plan, due two years after the planning grant award, in July 2025. The work for the grant’s Comprehensive Climate Action Plan will support the 2025 update of the Columbus Climate Action Plan (2021). A second phase of implementation grants through the CPRG will be available on a competitive basis for all entities who completed a Priority Climate Action Plan, with a total of $4.6 billion allocated nationwide for climate action implementation programs.

I. Development of the Communications & Engagement Strategy

A. Establishment of a Core Project Team

Upon the outset of the Climate Pollution Reduction Grant (CPRG) program, Sustainable Columbus (Grantee Organization) established an interagency work group of coordinating entities called the Core Project Team (CPT). This group shaped the CPRG Workplan and refined project goals. This team consists of *Mid-Ohio Regional Planning Commission (MORPC), IMPACT Community Action, The Ohio State University's College of Public Health, Power a Clean Future Ohio.*

The City of Columbus (Sustainable Columbus) provides project management for the Columbus-MSA CPRG. Each Coordinating Entity listed under the Core Project Team (CPT) has been given a designated role in the development of all CPRG deliverables. Weekly coordination meetings and workshops, as necessary, will occur with the CPT throughout the duration of the planning grant period. Sustainable Columbus will also coordinate with the Ohio Environmental Protection Agency (EPA) and the Ohio Air Quality Development Authority to provide updates and align efforts with state climate planning work.

1. Partner Feedback Channels

We plan to conduct weekly coordination meetings with the CPT through the PCAP submission and transition to bi-weekly meetings through the remainder of the four-year planning grant. These coordination meetings provide the opportunity for members to discuss updates, concerns, and feedback regarding the CPRG deliverables. These meetings serve as a forum for open dialogue, enabling participants to share insights, seek support, and stay informed about the grant's progress.

To support this interaction and feedback collection, we established the Columbus-MSA CPRG Core Project Team Bi-weekly Updates spreadsheet. This resource is a dynamic tool that facilitates real-time updates and fosters transparency within the CPT. The spreadsheet encompasses two primary charts to address deliverables within both the PCAP and CCAP

timelines, respectively. These charts delineate deliverable subtasks, responsible organizations, expected completion dates, status updates, and comments on progress.

2. Roles and Responsibilities

Sustainable Columbus

Sustainable Columbus serves as the Columbus-MSA CPRG Grantee and administers project management for the grant. Sustainable Columbus will contract with a sub-consultant to help facilitate engagement opportunities throughout the City of Columbus for the CPRG, as well as collaborate with MORPC to help facilitate regional public involvement. A Sustainable Columbus representative will co-chair the CPRG Strategy Subcommittee (CSS) alongside a member from MORPC's Sustainability Advisory Committee (SAC). Sustainable Columbus is responsible for delivering the ***Engagement Plan*****,** as specified in the grant requirements.

Mid-Ohio Regional Planning Commission (MORPC)

MORPC will serve as the lead convener and connector for regional engagement within the project, facilitating collaboration among regional governments and stakeholders. A MORPC member will co-chair the CSS. MORPC is responsible for coordinating public involvement efforts on a regional scale, ensuring that a diverse range of stakeholders participate in this planning process and that all MSA communities who would like to participate have the opportunity to do so.

Power a Clean Future Ohio (PCFO)

PCFO will support CPRG engagement efforts, as a Core Project Team entity, and share engagement opportunities with their networks, when applicable.

The Ohio State University (OSU) – College of Public Health

OSU will be responsible for identifying LIDAC communities within the Columbus MSA and facilitate engagement with these communities throughout the project. OSU will help conduct meaningful engagement with each LIDAC community, leveraging the GHG data collected to align their efforts with the project's objectives. OSU is tasked with delivering the ***benefits analysis*** and ***LIDAC benefits analysis***.

IMPACT Community Action

IMPACT will assist OSU with low income and disadvantaged community (LIDAC) engagement and community outreach efforts through the utilization of existing service networks and connections in Franklin County. IMPACT will additionally provide connections to Community Action Agencies in the additional counties involved in the planning efforts. Additionally, IMPACT will contribute to the ***workforce development analysis*** deliverable.

B. Drafting of the Communications & Engagement Strategy

Our Communications & Engagement Strategy was developed by drawing upon established frameworks and industry best practices recommended by the EPA, as provided in the webinar, "Interagency and Intergovernmental Coordination and Meaningful Engagement with Communities" held on July 12, 2023, and “Meaningful Engagement: Update and Technical Resources” held on August 30, 2023.

Additional inputs that informed this Communications & Engagement Strategy include:

- Our MSA’s EPA-approved Workplan
- EPA CPRG Program Guidance Document
- Pre-Engagement Survey Responses
- CPT Workshop Notes

Our Strategy involves a four-step process that starts with the identification of goals and interested parties, followed by engagement with stakeholders and community members, drafting the strategy with this feedback incorporated, and finally maintaining ongoing engagement, which will be present throughout the CPRG planning process.

This framework was chosen for its effectiveness in ensuring public involvement is a key component of the planning process. It also provides robust mechanisms for receiving continuous feedback, allowing us to maintain an open and continual dialogue with the community, promoting transparency and responsiveness throughout the climate planning process.

Step 1. Goal Identification and Stakeholder Assessment

We began this process by identifying our overarching goals, key interested parties, and their respective interests. During the initial phase, the CPT drafted a comprehensive list of goals to guide the creation and implementation of our Communications & Engagement Strategy. These goals are as follows:

- **Identification of Community Needs**: Engage with the community early and purposefully through various methods to identify specific goals, challenges, and potential solutions throughout the climate planning process.
- **Create Education, Awareness, Opportunities, and Feedback**: Engagement should focus on education and awareness of climate change and action, anticipated opportunities for implementation, and the prioritization of specific climate actions and strategies.
- **Continuous Input**: Utilize approaches that facilitate ongoing input from the community, this will reduce participation barriers and broaden community involvement in the planning process.
- **Conclusions Based on Data:** The engagement methodology should be rooted in using community data to come to logical conclusions, and done in such a way that we can measure our progress, receive substantive inputs from the community that can be collected and analyzed, so that we can later put them into the plan.
- **Inclusivity and Meaningful Engagement**: We are dedicated to conducting meaningful engagement with communities, especially low-income and disadvantaged communities, to incorporate their perspectives into the planning process effectively.
- **EPA Compliance**: Our strategy should adhere to all EPA requirements, ensuring compliance with their timelines and guidelines.

Step 2. “Pre-Engagement” Engagement with Stakeholders and Affected Parties

Following EPA’s recommended practice for meaningful engagement, we knew we needed community input on the *creation* of this Communications & Engagement Strategy in order to effectively engage with all interested members of the Central Ohio region in this planning process.

Our primary method of collecting this “pre-engagement engagement” feedback was through the use of: A) a virtual survey, and B) previous community engagement history in communities

within Franklin County (Appendix 1F), including LIDAC regions in the Columbus MSA. The virtual survey was selected due to its accessibility, allowing participation from anyone with internet access and enabling outreach to diverse populations across county lines. Its flexibility made it easy to share at in-person events, distribute via email, and promote through our websites and social media platforms.

Pre-Engagement Survey

Description of Pre-Engagement Survey Methods

The purpose of the survey (included in Appendix 2A) was multifaceted. It aimed to both identify and engage a wide range of community partners to ensure a diversity of perspectives in the creation of our engagement strategies. It also provided people with an opportunity to weigh in about preferred methods of communications, and helped identify community needs, goals, and concerns.

The survey was made available for public input between August 21, 2023 through September 15, 2023, and was promoted at various community and stakeholder events. Two webpages – on Sustainable Columbus and MORPC websites – advertised the survey opportunity, linking back to both project partners and the Environmental Protection Agency's CPRG informational web page. The survey creation process involved Sustainable Columbus initially drafting questions that aligned with our project goals. CPT members then provided feedback to shape the final draft. Our survey was administered using Google Forms and did not require the use of a Google Account to complete.

The survey begins with a clear description of its purpose, lists our CPT partners, describes the grant, outlines the timeline, and clarifies the survey's goal. To ensure the greatest readability, this description was evaluated using the Hemingway Editor tool, resulting in a 9th-grade reading level. The survey encompassed various question types, including short answer and extended response questions. Multiple-choice questions addressed topics such as preferred engagement methods (such as virtual group discussions/webinars, in person focus groups/presentations, and online surveys), optimal times for participation, potential barriers, strategies to ensure diverse voices were heard, and preferred communication methods (such as social media, website updates, emails, and texts). Extended response questions encouraged participants to provide suggestions for specific groups to include in the climate action planning process and

offer general feedback. Feedback directly influenced the strategies outlined in this Communications & Engagement Strategy.

We aimed to ensure equity and inclusivity in our approach. Contact information questions, such as whether participants wanted to stay updated on the climate planning process and their preferred contact method (phone or email), were crucial for maintaining ongoing community input. Demographic information, including race/ethnicity, gender, age, and more, were included. Additionally, this demographic data would be compared to the broader Columbus MSA demographic profile to gauge the survey's representativeness. Participants were also asked to provide their zip code to verify their location within the Columbus MSA.

Upon the close of the four-week survey period, we created a dedicated spreadsheet for analysis of the pre-engagement survey results (see Appendix 2B). The responses were then organized with questions occupying columns and individual submissions recorded in rows.

For multiple choice questions where participants provided their own answers through the “Other” option, we consolidated similar answers, combining common themes into a new option. In another column, we calculated the percentage of individuals who voted for each specific response. This method allowed us to precisely measure the level of support for various options.

We received a diverse range of responses to the open-ended questions. To efficiently analyze these responses, we assigned two-word descriptions to encapsulate the key themes of each submission. We recorded a list of keywords that captured the most common topics. We also went through each respondent's answers and isolated specific mentions of groups or organizations from their sentences to create a consolidated list of additional Interested Parties. For any group receiving multiple mentions, we recorded the frequency to measure the level of community interest.

Pre-Engagement Survey Demographic Results

Gender	Percent of Respond-ents	Race/Eth-nicity	Percent of Respond-ents	Age	Percent of Respond-ents	Annual Household Income	Percent of Respond-ents
Women	59.2%	White	89.70%	≥ 60	28.8%	≥ $120,000	38.0%
Men	43.3%	Black/African-American	6.0%%	30-39	27.5%	$80,000 – $99,999	16.0%
Non-binary or other	6.9%	Asian	3.0%%	40-49	16.3%	$60,000 – $79,999	14.6%
Prefer not to say	3.9%	Hispanic/Latino	2.6%%	50-59	14.2%	$100,000 – $119,000	12.7%
		Native American	1.3%	21-29	12.0%	$40,000 – $59,999	10.8%
		Other	2.2%	18-20	0.9%	$20,000 – $39,999	5.2%
				≤17	0.4%	$0 – $19,999	2.8%

The survey reached 233 individuals, with demographic gender breakdowns indicating there were ***~16.%*** more women respondents than male, which could be due to the Columbus MSA having a slightly larger population of women than men. We also provided respondents with the option to write their own gender identity.

The demographic race and ethnicity breakdowns indicate that only ***10.3%*** of survey respondents are a race or ethnicity other than white; this is a key area for outreach refinement. The survey was taken primarily by people 30 years and older, with ***13.3%*** of respondents being 29 years and younger; engaging a younger audience will be an important factor moving forward.

The majority of respondents (***50.7%***) have a yearly household income of $100,000 or more. Engaging with moderate to low income community members will be necessary when developing our plans.This will be a key focus during our Inclusive and Equitable Engagement efforts (refer to section IV. A. 1.).

Step 3. Plan Development with Community Input

We drafted our Strategy referencing the results from our pre-engagement survey and previous efforts in communities within Franklin County, including LIDAC. This approach ensured that the plan was informed by community perspectives and designed to address their specific concerns and needs while also meeting the Justice40 criteria.

The draft of this Engagement Strategy then underwent an internal review process within the CPT. Their feedback and input helped refine and enhance the Strategy, ensuring that it effectively addresses the community's needs and expectations for engagement.

Step 4: Maintaining Ongoing Engagement

Maintaining ongoing engagement is necessary because it ensures the long-term effectiveness of our community interactions. This will keep the lines of communication open, build trust, and sustain a dynamic relationship that allows us to address evolving needs and challenges effectively (reference section IV. C.).

It is expected that Sustainable Columbus will contract with an Engagement Specialist to help perform the work of public engagement for both the PCAP and the CCAP in the Columbus MSA.

II. Stakeholder Identification and Analysis

A. Identification of Key Stakeholders

Stakeholder engagement is important and equally as necessary as community engagement. By communicating with all Interested Parties, including LIDACs, and having specific methods and strategies to do so, we will achieve inclusive and representative results in our planning process.

1. Stakeholder Mapping

Sustainable Columbus collaborated with the members of the CPT to undertake a preliminary stakeholder mapping process in July 2023. CPT members were tasked with identifying and describing the "Interested Parties" that could play a role in this engagement process. An "Interested Party" in this context represents a stakeholder entity with an interest in our CPRG efforts.

The stakeholder mapping process involved the utilization of a graph, with the x-axis measuring the "Level of support for climate planning" and the y-axis measuring each party's "Power to influence outcome." The area on the graph was divided into five sections, Lower Priority, Skeptics, Moveable Middle, Supporters, and Champions. This map enabled the categorization of each stakeholder based on their position within this framework and served to recognize and prioritize the diverse stakeholders.

To evaluate the placement of our identified Interested Parties, we considered the stakeholder's level of support for climate planning. This methodology helped us gauge the alignment of organizations' interests and aspirations with our own, and assess their potential to support our climate planning initiatives effectively.

The evaluation process of each Interested Party consisted of 3 considerations:

- *Alignment of Interests* - Whether they would likely agree with sustainable practices and our climate planning objectives.
- *Collaborative Potential* - We looked to leverage existing stakeholder relationships. Noting groups that we have worked with in the past allowed us to see who is likely to work with us again. We also looked to create new stakeholder relationships by looking at factors such as their history of supporting sustainable efforts.

- *Historical Track Record* - Prior actions and commitments to climate action served as indicators of their potential to support our climate planning process and demonstrated their level of commitment to sustainability goals.

To evaluate the placement of our identified Interested Parties, we considered the stakeholder's relative power and influence. This methodology helped us assess stakeholders' sway and standing, to promote our climate planning initiatives effectively.

The evaluation process encompassed 3 considerations:

- *Stakeholder Relationships* - After identifying possible stakeholders, we looked at the various groups and stakeholders that they are affiliated with. Noting the relationships and connections among various stakeholders helps show which groups have great influence and connections.
- *Resource Assessment* - We assessed the possible stakeholders resources, such as their financial, technical, and human resources. How many members an organization is, and their access to EPA tools and resources were taken into consideration.
- *Position in Decision-Making* - We identified stakeholders who sit on decision-making boards, committees, or have direct access to policymakers. Stakeholders with such positions often wield more influence in shaping outcomes.

2. Summary of Key Stakeholders

A list of key stakeholder groups are identified below, and discussed in greater detail following:

- Government Agencies (Local, Regional, and State officials)
- Environmental Organizations
- Representatives from the Business Community
- Educational Institutions
- Community and Neighborhood Associations
- Civic and Nonprofit Organizations
- Low-Income Disadvantaged Communities

Government Agencies

Government agencies have a stake in representing the interests and needs of the community. Agencies from all 10 counties throughout the MSA will be involved to encourage a fair and

representative planning process. In the PCAP phase, we will seek their involvement in public engagement efforts, to ensure that they will play a role in conveying climate action goals to the broader public and garner community support. The involvement of government agencies in the CCAP phase will focus on the refinement of our climate action planning strategies outlined in the PCAP, and work towards effective implementation.

Environmental Organizations

We will leverage existing relationships with environmental organizations, as well as fostering partnerships with new ones. These partnerships will not only help us promote our sustainable efforts but also tap into the expertise and support that members and representatives of these organizations can offer. Our goal is to include their insights in shaping the PCAP effectively. Examples of such organizations include Green Columbus and Clean Fuels Ohio.

Representatives from the Business Community

Engaging the business community, comprising both large corporations and small businesses, is a vital element of our climate action planning efforts. Collaboration with these entities not only fosters economic growth but also bolsters our sustainability efforts. Large corporations have a lot of resources and influence and many have sustainability departments. Small businesses are important because we are already partnered with many through our Sustainable Columbus GreenSpot program.

Educational Institutions

When engaging with educational institutions, we will look to engage with local schools, colleges, and universities within the Columbus MSA, in order to spread environmental education and awareness. Efforts such as curriculum integration on sustainability, and educational workshops will engage the youth.

Community and Neighborhood Associations

Involving Community and Neighborhood Associations is a key component of our engagement plan. These associations are great representatives of local communities and often serve as platforms for residents to voice their concerns. By involving them in our CPRG efforts, we will gain insights into the specific challenges each community faces and spread sustainable initiatives into residential areas, including LIDAC regions.

Civic and Nonprofit Organizations

Civic and Nonprofit Organizations bring resources, knowledge, and a network of volunteers, which will greatly support our sustainability initiatives. By partnering with these groups, we can strengthen pre-existing community-driven initiatives as well as create new ones to support our CPRG efforts. Collaborating with such organizations will likely help bridge gaps in outreach and implementation, ensuring that our efforts are inclusive, equitable, and sustainable.

Low-Income Disadvantaged Communities

The 10-county Columbus MSA includes Delaware, Fairfield, Franklin, Hocking, Licking, Madison, Morrow, Perry, Pickaway, and Union counties with a population size of 2.16 million persons representing 18.3% of the total population in Ohio (Appendix 1D). LIDAC communities within the Columbus MSA were first identified using data from the EPA's Climate and Economic Justice Screening Tool (CEJST, v.1.0) (Appendix Figure 1A). To summarize, 29% of the population over 137 census tracts [110 census tracts in urban (Franklin County) and 27 census tracts in suburban/rural (remaining counties) regions] were identified as LIDAC regions (Appendix 1). To further prioritize community engagement efforts and identify key LIDAC stakeholders, the Centers for Disease Control Environmental Justice Index (EJI) data was overlaid onto the LIDAC identified census tracts (Appendix Figure 1B). The EJI provides further information on environmental burdens to assist with meaningful engagement toward improving health outcomes and health equity using datasets from the U.S. Census Bureau, EPA, and CDC (Appendix 1E.) As such, the EJI is a composite index of the environmental burden index, social vulnerability index, EJScreen, and health burden data with additional indicators including housing tenure, lack of health insurance, lack of broadband access, housing type, built environment, transportation infrastructure, and poor mental health. Therefore, high priority LIDAC census tracts included those identified as both disadvantaged according to CEJS and EJI ≥ 96th percentile as these have the most to gain from environmental justice efforts (Appendix Figure 1C, Table 1).

III. Engagement Strategies and Tactics

A. Outreach and Communication Methods

1. Digital Media: Social Media, Websites, and Newsletters

Social Media

The CPT will utilize social media as one of the primary means of community engagement throughout the CPRG. We will create engaging graphics specifically tailored for this project, designing social media material for Twitter, Instagram, Facebook, and TikTok platforms. We will utilize interactive opportunities, where possible, through the use of comments, reposts, and direct messaging. Results from the pre-engagement survey show that 45.9% of respondents prefer social media as their platform of choice for receiving project updates.

Websites

Dedicated project web pages will be updated on both the Sustainable Columbus and MORPC websites throughout the duration of the CPRG. We will carefully design all web content to be inclusive and easily understandable for a broad audience.

As a project team, we will go through periodic website updates to ensure residents and Interested Parties receive up-to-date information. We will continue collaborating with our partners and align our digital efforts so we have a unified brand. Anything posted to our web pages will undergo readability tests through the Hemingway Editor. If program resources allow, we will offer a translation so the websites can be read in regionally appropriate languages.

Newsletters

The Core Project Team will utilize existing e-newsletters to disseminate information about the CPRG and opportunities for engagement.

2. Public Meetings and Informational Sessions

Survey respondents indicated an interest in both virtual meetings/workshops and in-person opportunities throughout the course of the project. For every meeting that takes place in

Franklin County, the most populous county in the MSA, there will be at least one additional meeting located in a different county, chosen strategically to ensure maximum engagement throughout the Central Ohio region. The CPT will offer both in-person and virtual meeting options throughout the CPRG planning process.

In-Person Meeting Approach

In-person meetings will be conducted to ensure the CPT addresses both the geographical reach of the 10-county MSA and timeliness for all deliverables. General public meetings will be held to both inform and gather valuable feedback leading up to each of the grant's major deliverables. For the PCAP, we plan on holding meetings in mid- to-late November 2023 and, again, in mid-to-late January 2024.

Virtual Meeting Approach

A majority of survey participants expressed their preference towards virtual meetings for engagement, including both virtual webinars and virtual group discussions. In alignment with this preference, we are strategically planning and will host virtual meetings and webinars for community feedback. Beyond convenience, virtual meetings mean greater accessibility for individuals with mobility challenges, disabilities, or limited transportation options, ensuring that a broader spectrum of the community can actively participate in shaping the climate planning process.

3. Surveys

Online surveys were a popular preferred method of engagement indicated by respondents of the pre-engagement survey, earning 62.7% support. We will make an active effort to ensure the survey reaches LIDAC populations, and every part of the Columbus MSA so the feedback is truly representative of the population.

4. Identifying and Utilizing County Champions

We will identify and utilize "county champions" to strengthen our networks and channel distribution for our CPRG objectives. These champions will be individuals or entities within the MSA with a strong commitment to our pollution reduction planning efforts and a significant influence within the community.

- **Identification**: Our first step will involve a comprehensive stakeholder analysis, where we assess individuals, organizations, and businesses to determine their level of support for climate change initiatives and their potential influence (see section II. A.).
- **Engagement**: Once identified, our strategy will be to proactively engage with these champions. We will establish direct lines of communication, leveraging their support and influence to support our carbon or pollution reduction messaging and initiatives. This will include personalized outreach and collaboration opportunities.
- **Network Expansion**: The aim of this approach is to utilize the county champions as advocates and to expand our network through their connections and affiliations. We will encourage them to share our pollution reduction planning efforts within their areas of influence, which will spread our plans to new audiences.
- **Channel Distribution**: Recognizing the diverse communication channels available, we will work closely with the county champions to strategically distribute content (such as traditional media, social media, community events, and other relevant platforms), which will spread pollution reduction knowledge and awareness throughout the MSA.

By identifying and utilizing these county champions, we anticipate a significant increase in our network's reach and public knowledge of the CPRG and our climate-planning efforts.

B. Stakeholder Meetings and Workshops

1. Stakeholder and Advisory Meetings

Key stakeholders from throughout the Columbus MSA help inform the CPT's discussion of priority emissions reductions actions and the formation of both the PCAP and CCAP. A number of local government and regional stakeholder supporters were identified early on in the process with the grant submission back in May 2023. The CPT informed communities and garnered 14 letters of support through the initial communication and outreach process.

The Sustainable Columbus Steering Committee and the new CPRG Strategy Subcommittee (CSS), forming from MORPC's existing Sustainability Advisory Committee, will serve as critical venues for stakeholders to provide feedback from both a local partner and regional perspective, as well as the opportunity for CPT to provide regular CPRG project updates. Below provides further details regarding stakeholder engagement throughout the MSA.

MORPC CPRG Strategy Subcommittee (CSS) Goals:

- Goal 1: Have representation from each county to ensure every county is able to provide their voice and input to the Columbus MSA PCAP and CCAP;
- Goal 2: Establish communication infrastructure to both disseminate information and gather feedback from each community in each county;
- Goal 3: Help facilitate regional collaboration; and
- Goal 4: Provide the MSA with an informative and implementable GHG emissions reduction strategy and reduction measures.

Scheduled Convenings

MORPC Stakeholder Groups and Regularly Scheduled Convenings (include, but not limited to): MORPC Commission, Sustainability Advisory Committee, Sustainable2050, Central Ohio Greenways Board, Sustaining Scioto Board, CORPO Committee and subcommittees, Energy & Air Quality Working Group and subcommittees, Transportation Advisory Committee, Community Advisory Committee, rural forums, and MORPC member visits.

City of Columbus Stakeholder Groups and Regularly Scheduled Convenings (include, but are not limited to); five existing Columbus Climate Action Plan Work Groups (Buildings, Sustainable Neighborhoods, Transportation, Waste, and The Columbus Way), bi-monthly Sustainable Columbus Committee meetings

The Core Project Team will also utilize existing regional convenings, such as the annual MORPC Summit on Sustainability, to further engage regional stakeholders in the CPRG planning process.

2. Workshops

With the help of our contracted engagement facilitator, in-person and virtual workshops will be designed to elicit community reactions, responses, and identified priorities for strategies throughout the grant process. Workshops will be offered at multiple times throughout the grant process. We will host meetings and workshops within the community, including LIDAC, to build on existing community knowledge and prioritize needs and concerns (reference section IV. A 2.).

3. Focus Groups

Focus groups will provide an additional level of specificity to the feedback received during this planning process. Focus groups will likely center around specific sectors of climate action strategies (i.e. transportation, buildings, etc.) or concern community priorities for effective plan implementation.

C. Use of Emerging Community Engagement Tools

The Public Engagement to Re-imagine Community Co-planning (PERCC) framework and the Machine-Readable Co-Design (MaRC) toolkit

The PERCC framework is an innovative approach to community engagement developed by The Ohio State University that leverages advances in AI and machine learning technologies with human expertise and local knowledge to enable interactive co-planning. The PERCC allows for a multilateral and iterative communication program that enables (1) better, and more engaging dissemination of plans and plans-in-progress to a wider range of community members and stakeholders, and (2) reduction of barriers to community member participation to expand their role in every step of the community planning process. This work has already been piloted in the Near East Side communities in Columbus, Ohio. Listening sessions revealed a shared conviction among stakeholders that public participation in community planning is not at desired levels, and that increased participation will translate into better plans and better community outcomes, including plans concerning climate action and sustainability.

This process will begin with gathering environmental justice concerns and priorities from community members, as well as feedback on current initiatives/policies. These findings will be communicated to the CPT for consideration in CAP priorities and planning. Once the policy options are identified by the CPT, these proposed policy options are relayed back to the community for input regarding potential benefits/disbenefits. These results are then relayed back to the CPT and community outreach is performed to relay final results and upcoming next steps.

IV. Inclusive and Equitable Engagement

A. Ensure Representation of Diverse Voices

The representation of diverse perspectives is critical in any planning effort, and especially the work of the CPRG. LIDAC are especially important voices in this planning process; obtaining meaningful engagement with LIDAC community members will be critical to uphold the Sustainable Columbus mission of imparting equity and environmental justice in our climate work.

In an effort to coordinate efforts, particularly outside of the City of Columbus, MORPC will efficiently utilize its committees, convenings, and key partners to connect with OSU's team to streamline communications and engagement efforts around effectively conducting its LIDAC Cost Benefits Analysis.

1. Engage Minority and Underserved Communities (LIDAC)

Engagement of LIDAC communities will follow the previously published E6 framework (Enhancing Environmental Endeavors via e-Equity, Education, and Empowerment) (Appendix 1) to educate and improve the quality of life for residents living in environmental justice communities while fostering citizen science. This model is taken a step further of not only gathering community sentiments, but also allows for the co-design of policies by using the previously described community engagement tools (PERCC framework and MaRC toolkit). This LIDAC engagement will follow a four phase approach for both the PCAP and CCAP. A summary is included below.

Phase I: Public Education Efforts

The first phase will focus on educating the community about the CPRG and its goals, climate change and climate action, environmental justice, and previous climate action planning efforts. This will also be an opportunity to share additional engagement events and to receive community feedback. This phase will utilize brochures, websites, social media, and numerous public meetings, along with the MaRC toolkit.

Phase II: Identifying the Problems and Possible Policy Options

While utilizing the PERCC framework, OSU will collect community data by engaging with LIDAC communities through interactive activities hosted in libraries and various public meeting spaces. Data collected during this period will be analyzed, and referenced for the creation of a sentiment analysis, by OSU and relayed back to the CPT to identify potential policy options for the CPRG.

Phase III: Analyzing Policy Option Benefits and Disbenefits

Utilizing public meetings, which will differ depending on the LIDAC area, engagement will focus on the CPRG overview, proposed policy options, and estimated benefits for the community. Interactive audience activities to discern direct benefits or disbenefits, including costs of policy concerns, will be discussed and data again collected using PERCC methods.These results will be incorporated into the LIDAC benefits analysis and relayed back to the CPT for modification of policy implementation strategies.

Phase IV: Updates and Next Steps

The LIDAC communities will remain updated on next steps of co-planned pollution reduction measures through communication methods specified in Section III.

2. Facilitate Inclusive Meetings and Workshops

We will host informative and inclusive meetings and workshops to build on existing community knowledge and prioritize needs and concerns. Part of this work includes sufficient time to listen and validate feedback from diverse stakeholders and community leaders. Our primary strategies for achieving this includes:

- Hosting engagement activities and events with partners at accessible, local sites to help people feel comfortable and welcomed, focusing on locations in underrepresented areas.
- Offering meetings at various times throughout the day and the week to ensure representation and accessibility.
- When possible, diverting engagement funds for compensation for community meeting attendance, childcare, and/or food/refreshments at public meeting opportunities.
- Working with other stakeholders to iterate on our engagement strategies and allow for adaptations as we learn.

- Coordinating with other engagement partners community-based organizations to achieve collective impact and alignment.

B. Accessibility and Accommodations

We aim to offer accessible meeting opportunities to attract diverse voices and representation. We will incorporate best practices for accessible engagement, where feasible:

- Providing materials in multiple languages.
- Inviting leaders representing different subpopulations to join in discussions and events.
- Recording events and meetings for people to access content virtually.
- Respect and integrate cultural norms and values.
- Host meetings in accessible venues and online platforms.
- Accommodate individuals with disabilities through various audio/visual considerations.

C. Continuous Input

Providing opportunities for continuous input is important to foster a robust feedback ecosystem and ensure that questions and concerns from both the community and our partners are addressed effectively. By establishing comprehensive feedback mechanisms for both the community and our partners, we aim to cultivate a dynamic, responsive, and inclusive engagement process that empowers stakeholders to actively shape and participate in our metropolitan area's climate planning initiatives.

Notably, ***90%*** of survey respondents expressed their desire to stay informed about the climate action planning process and voluntarily provided their email or phone numbers. We will communicate with these individuals, using the contact information provided, with project updates. This approach creates a direct line of communication and gives community members the opportunity to respond with their feedback, thus fostering an ongoing dialogue.

It is also important to note that the results from the above LIDAC strategies will help us also develop the LIDAC Benefits Cost Analysis with pragmatic continuous community feedback for each of the 8 steps below (Figure 2). In turn, the LIDAC Benefits Cost Analysis will assist the CPT with development of potential implementation strategies for pollution reduction.

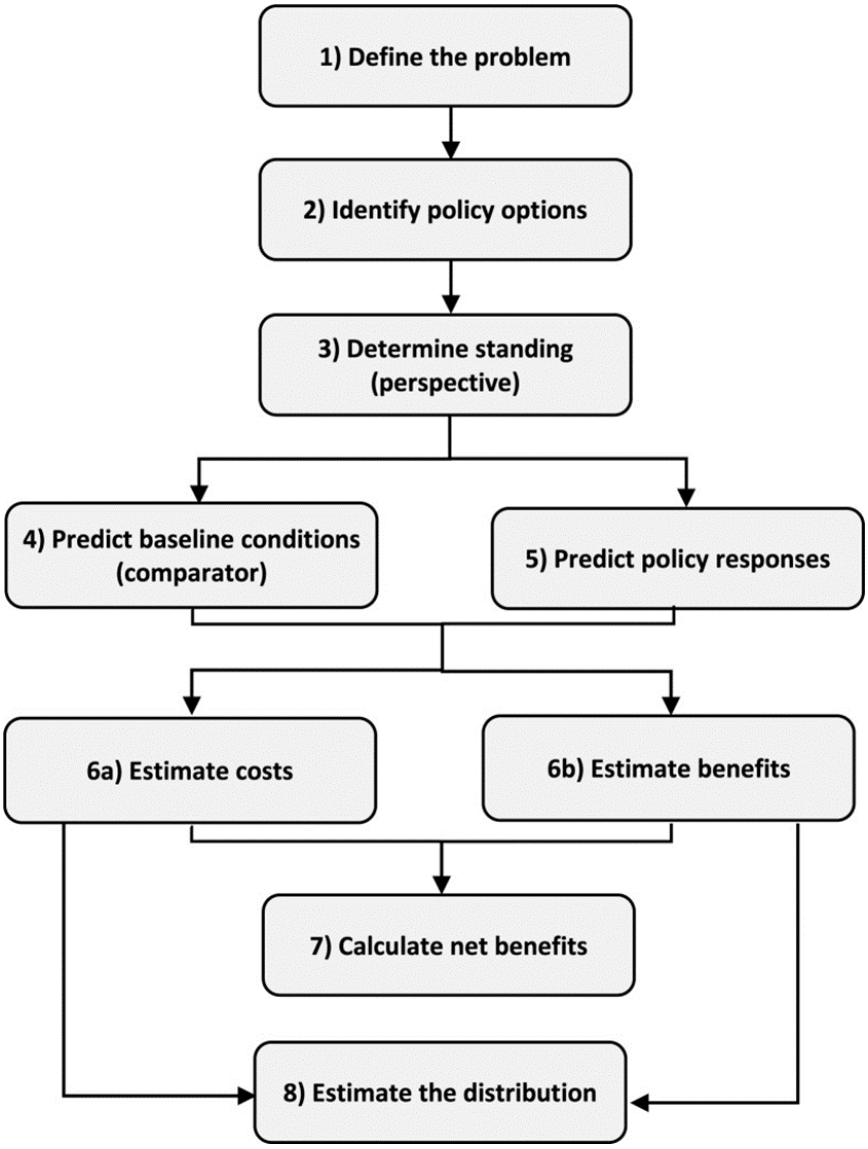


Figure 2. LIDAC Benefits Cost Analysis (BCA) Approach. LIDAC BCA will be performed with continuous community inputs following an 8 step strategy. These steps are incorporated into the four LIDAC community engagement phases listed above (section IV.A.1).

V. Conclusion: Emphasizing the Importance of Collaboration in Climate Action Planning

As we move forward with our Communications & Engagement Strategy, we understand the importance of meaningful and continuous involvement of our Interested Parties and affected constituents. To summarize our collective engagement efforts:

- We will strive to elicit stakeholder and community feedback from a diverse range of voices and perspectives. We will gather this data through surveys, public meetings, focus groups, and any other relevant communication channels identified in this Strategy.
- We will continue to use effective tools to track and organize stakeholder feedback efficiently. We will clearly mark each piece of feedback with information such as the source (individual or organization), date of submission, and the specific issue or concern raised.
- Where resources are available, we will utilize data visualization techniques like charts and graphs to identify trends and patterns in feedback. This analysis will include both qualitative and quantitative characteristics. After analyzing the feedback, we will prioritize the most critical issues and concerns raised by respondents.
- We will maintain an open, transparent line of communication with stakeholders and community members throughout this process. We will share summaries of the feedback received and communicate how it influenced the development of PCAP and CCAP plans.
- We will share draft versions of plans with stakeholders and community members, and incorporate constructive feedback and suggestions to the final plan. We will address concerns, as we are able, and obtain the buy-in key partners, including support from our LIDAC regions.
- We will present the final plans to key decision-makers and stakeholders identified in this planning process, and advocate for the plan's support and ultimate implementation.
- In the final two years of the planning grant, we will identify responsible entities and timelines, while monitoring and evaluating the progress of our planned efforts. We will set milestones and performance indicators, concurrent with our EPA obligations, and establish reporting mechanisms for ultimate accountability.

Appendix

Appendix 1. CDC EJI Characteristics of 137 Identified LIDAC Census Tract Regions in Columbus MSA

I. CURRENT COMMUNITY ENGAGEMENT EFFORTS WITH NEAR EASTSIDE NEIGHBORHOODS

Introduction. Although Columbus, Ohio is considered to be one of the more prosperous, well-educated and progressive communities in the United States, it has the second worst life-expectancy at birth (27-years) and wealth gap by census tracts, as well as one of the higher infant mortality rates in the country.[1] These data suggest that there are likely several high-risk neighborhoods in Columbus, Ohio that suffer from historic structural inequities that undergird the observed significantly protracted life expectancy at birth by census tract, and disparate health outcomes. Over the past eight years, research foci of faculty in the Division of Environmental Health Sciences, College of Public Health have used a blended version of the USEPAs community-based research model and an enhanced stakeholder-based community engagement model. These researchers sought to identify chemical and non-chemical stressors exposures from the built, natural, physical, and social environment that contribute to and exacerbate the persistent negative health outcomes of residents from environmental justice communities in Columbus, OH.[1] Over that time frame, the researchers continually refined their transformative engagement model to utilize stakeholder coalitions and novel social ecological life-course paradigms coupled with Big Data to Knowledge (BD2K) analytics to interrogate hypotheses surrounding disparate health outcomes in these neighborhoods.[2-4]

Significance. In contemporary America, the literature is quite compelling and supports the contention that growing up in a disadvantaged neighborhood influences one's opportunities and ultimate health outcomes.[5] This body of literature has also clarified that the effect of concentrated neighborhood poverty is quite distinct from personal poverty. Illustrative of this fact are studies that have examined the social processes and mechanisms through which neighborhood contexts are thought to matter including exposures to; violence, social control and cohesion, incarceration, toxic environmental contaminants, and hazards such as those

represented by the climate change related chemical and non-chemical stressors that have moved to the forefront in the past 3-years.

Working in partnership with our stakeholders comprised of a federally qualified health center (Primary One Health), health science colleges at The Ohio State University Public Health and Nursing), local non-profit community-based organizations, state Medicaid provider (CareSource of Ohio), early learning centers (Columbus Early Learning Centers), statewide health coalitions (Northeast Black Health), mental health provider (St. Vincent Family Center) to effectively design and implement projects in the zip codes 43203 and 43205. The hub of community based participatory research activity in these census tracts is the African American and African Studies Community Extension Center (AAAS-CEC) located at 905 Mt. Vernon Ave. Recently, College of Public Health researchers introduced the Columbus community to E^6 = Enriching Environmental Endeavors via e-Equity, Education and Empowerment. E^6 is the refined community engagement approach that we developed to educate, advocate for, and empower residents in these high-risk census tracts.[6] To conduct our work we utilized a framework where interdisciplinary scientists interfaced with residents and the aforementioned stakeholders in the neighborhoods to form a functional community-based stakeholder team to address the disparate health outcomes in their census tracts. Specifically, we have been working in the Mt. Vernon neighborhood located in zip code 43203 over the past 3-years (prior to and during the syndemic) for the purpose of interrogating hypotheses pertaining to disparities in developmental learning in reading and math, housing, and disparate health outcomes using our novel *Public Health Exposome* framework with Big Data to Knowledge (BD2K) analytics. The selection of Dr. Darryl B. Hood as the Autumn 2019 African American African Studies Community Extension Center Engaged Scholar Fellow facilitated this work that resulted in the design of a demonstration study after three community meetings that took place between August 2018 through February 2020 when the COVID-19 syndemic came upon us.

What was the purpose and goal of the E^6 community meetings? The purpose and goal of these meetings was to bring about awareness and educate residents in these vulnerable census tracts to the E^6 framework. This was accomplished by having open forum discussions with residents of the King-Lincoln district and Mt. Vernon community. Since disparate health outcomes were extremely high in these neighborhoods, these researchers felt a genuine responsibility to this community to attempt to improve the health and well-being of these residents. In particular, an extended discussion that surveyed the potential environmental

hazards in close proximity to where these residents live, work, play and pray occurred. Awareness and educational literacy around this issue was brought about by creating and then enhancing partnerships between stakeholders such as the CareSource, Primary One Health, Columbus Early Learning Centers, Pitzer Center for Children, Youth and Women, and the College of Public Health over the 3-year period representing pre-pandemic 2019 through 2022.

What were the expected outcomes of the community meetings? The expected outcome of these meetings was creation of a blueprint of concerns from the residents that could be designed as a hazard identification assessment addressing disparate health outcomes in the King-Lincoln District in consideration of chemical and non-chemical stressor exposures from the built, natural, physical, and social environment. After the first meeting, this led to (over the next six months) an additional two community meetings to draft in a collaborative manner a demonstration project that serves as the basis for a grant that has been funded by the USEPA STAR program.

Coordination of these activities by our engaged stakeholder group resulted in enhanced project effectiveness towards a greater positive impact to address the needs and concerns of the underserved communities in Columbus, OH and served as a proof of principle study. The premise of our overall community engagement framework began with application of our *Public Health Exposome* (PHE) that enables us to query as to how chemical and non-chemical stressor exposures from the built, natural, physical, and social environment are linked to disparate health outcomes at an individual, community and population level. The ability to tease out environmental and socio-demographic variables that are at the core of historic structural inequalities is seminal to our efforts. We have utilized this framework in the high risk and vulnerable communities on the South side and Near East side of Columbus, OH and we have reported on this in the literature.[1-4, 6,7] To our *Public Health Exposome* social ecological, life-course framework, we propose to superimpose our novel engagement model known as E^6= Enriching Environmental Endeavors via e-Equity, Education and Empowerment. This innovative engagement model educates, advocates, and empowers residents of high-risk communities that are located in vulnerable census tracts in Columbus, OH.

The ability to bring comprehensive primary care and health care services to where vulnerable people live, work, play and pray is not necessarily a new health care delivery model. However, the ability to bring a functional, interdisciplinary, community-based research stakeholder team in

true partnership with residents from vulnerable environmental justice communities is transformative[4] and will positively impact individual, community and population health leading to: 1) improved community member experience; 2) improved health of the vulnerable and high-risk population; 3) lower total cost of care and lead to improved provider experience; and 4) identification and characterization of latent factors and variables associated with climate change related chemical and nonchemical stressor exposure links to disparate health outcomes in environmental justice communities in Ohio. The results from this project can be scaled and disseminated to like communities around the U.S.

Innovation and Sustainability. Our hypotheses were informed by the nexus at the intersection of our E^6 engagement model with the accountable community of health model for sustainable health care delivery. From this nexus, we have been able to extract contemporary solutions that will positively impact the health of residents living in vulnerable census tracts. We will do so with a functional, multidisciplinary, community-based research stakeholder team that will enable, oversee, and monitor the impact of climate change related chemical and non-chemical stressor exposures (from the built, natural, physical, and social environment) on the health outcomes of residents from our vulnerable communities. Our functional research stakeholder partnership will produce more effective and efficient care that will enable residents to be more resilient against the threat of chemical and non-chemical stressor exposures. This is consistent with the goal of sustainability, derived from the US National Environmental Policy Act of 1969 to “create and maintain conditions under which humans and nature can exist in productive harmony, so as to permit fulfilling the social, economic and other requirements of present and future generations.” Monthly meetings at the AAAS-CEC on Mt. Vernon Ave will continue to feature the “Voices from the Community” segment where residents interact and have an active and ongoing voice in planning and evaluating the ongoing studies throughout the award period. At least five residents from vulnerable Columbus communities are members along with Dr. Hood on a Community Advisory Board where they will continue to engage in open dialogue and participate in robust discussions and implementation of the objectives on the project.
Additional roles for the residents from vulnerable Columbus communities will be to:

- Bring the voices of underrepresented communities, especially communities of color, to help guide, tailor, and implement the OSU Wexner Medical Center and Health Sciences Colleges Community Engagement Anti-Racism Action Plans.
- Respond to specific requests from Action Groups to provide guidance, feedback, and community response.

- Advise the Steering Committee on crucial initiatives, such as proposing topics or invitees to its Roundtables on Actions Against Racism (ROAAR).
- Advise the Policy and Advocacy Action Group on prioritizing and addressing problems in the research, care, and education of minority populations.
- Partner with the Education and Training Action Group in pursuing their work to develop pathway/mentoring programs that enhance diversity among educational units across The Ohio State Wexner Medical Center and its Health Science Colleges.

Innovations in the multiple USEPA STAR awards running in parallel with the CPRG will allow the use of our *Public Health Exposome* (*PHE*) framework that supports the application of systems theory in considering the effects of multiple exposures on both health outcomes and racial/ethnic health disparities over time and space and across the lifespan. Our *PHE* framework offers a new approach for predicting cumulative risk trajectories that can be used to inform, develop, target, and evaluate current and past public health programs and policies.

Methodological Innovation. The work described here will be conducted in parallel with the CPRG and will apply novel graph theoretical algorithms that will drive the development of an enhanced exposure science paradigm to transform high volume, disparate heterogeneous data.

Conceptual Innovation. Another innovation is the ultimate use of the *Public Heath Exposome* framework that will enable us to evaluate potential associations between exposures from the natural, built, physical, and social environments to identify potential associations of health outcomes with chemical stressors in close proximity to sources of pollution. Non-chemical stressors include substandard housing, violence, neighborhood deprivation, low SES, discrimination, and land use. Based on data that we have obtained and analyzed thus far, residents living in high-risk populations are at risk for exacerbation of place based disparate health outcomes as a result of the COVID-19 pandemic. Our review of the available data obtained thus far on pre-COVID-19 health outcomes, residents of vulnerable communities in Columbus, OH versus Franklin County continue to reveal rampant adverse health impacts on the African American community (Table above). It is well documented that the African Americans residents in the vulnerable, high risk census tracts of Columbus, OH are dis-proportionately impacted by chronic illnesses such as heart disease, cancer, stroke, diabetes, chronic lower respiratory disease, and asthma. Simply put, disparate health outcomes

impact African American lives in the vulnerable census tracts of Columbus more often than other ethnic groups.

[1] 2010 Census

[2] 2014 American Community Survey. Sampling estimations have (±95%MOE)

[an] Inflation adjusted 2014 dollars

[b] According to income in the last 12 months

[3] Franklin County HealthMap 2016

[4] Columbus Public Health – CPH Epi Program - * values must be interpreted carefully.

[5] Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Survey Data, Atlanta, GA. 2015-2019. Analysis by Office of Epidemiology, Columbus Public Health. Data were provided by the Ohio Department of Health. The department specifically disclaims responsibility for any analyses, interpretations, or conclusions. Due to changes made to BRFSS weighting structure data for 2011 and after CANNOT be compared to previous data

[6] Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Survey Data, Atlanta, GA. 2019. Analysis by Office of Epidemiology, Columbus Public Health. Data were provided by the Ohio Department of Health. The department specifically disclaims responsibility for any analyses, interpretations, or conclusions. Due to changes made to BRFSS weighting structure data for 2011 and after CANNOT be compared to previous data

[7] Ohio Department of Health Vital Statistics, Analysis by Office of Epidemiology, Columbus Public Health (2016-2020)

[8] Ohio Department of Health Vital Statistics (2016-2020)

[9] Ohio Department of Health Vital Statistics, Analysis by Office of Epidemiology, Columbus Public Health (2015-2017)

[10] Ohio Department of Health Vital Statistics (2019)

****Data not available at the preparation this table**

Census tract ID	County Name	Num Threshold Criteria Exceeded	Num Categories Exceeded	Percent neighbors disadvantaged	Pct individuals below 200% poverty	Is low income?	EJI State Percentile
39049001400	Franklin	14	5	70	0.98	TRUE	0.9946
39049002300	Franklin	13	7	77	0.9	TRUE	0.9591
39049006100	Franklin	13	4	80	0.97	TRUE	0.9783
39049005000	Franklin	12	6	80	0.97	TRUE	0.9715
39049000720	Franklin	12	5	50	0.94	TRUE	0.9777
39049001500	Franklin	12	6	100	0.99	TRUE	0.9864
39049004200	Franklin	11	5	28	0.97	TRUE	0.876
39049005410	Franklin	11	5	57	0.96	TRUE	0.9602
39049002900	Franklin	11	5	75	0.99	TRUE	0.977
39049000730	Franklin	11	5	100	0.98	TRUE	0.9928
39049002600	Franklin	11	5	50	0.98	TRUE	0.9986
39049005500	Franklin	10	4	100	0.95	TRUE	0.9332
39049008730	Franklin	10	5	63	0.99	TRUE	0.9731
39049000710	Franklin	9	3	62	0.94	TRUE	0.91
39049009331	Franklin	9	4	100	0.97	TRUE	0.9211
39049006000	Franklin	9	4	66	0.96	TRUE	0.935
39049005610	Franklin	9	6	66	0.94	TRUE	0.9356
39049002800	Franklin	9	3	100	0.93	TRUE	0.946
39049005900	Franklin	9	3	100	0.98	TRUE	0.9467
39049005300	Franklin	8	5	75	0.83	TRUE	0.9115
39049004700	Franklin	8	4	80	0.97	TRUE	0.9291
39049005420	Franklin	8	4	100	0.85	TRUE	0.952
39049000920	Franklin	8	4	100	0.88	TRUE	0.9547

39049005100	Franklin	8	4	62	0.99	TRUE	0.9666
39049007511	Franklin	8	3	100	0.94	TRUE	0.976
39089759000	Licking	8	3	57	0.97	TRUE	0.977
39049007534	Franklin	7	3	75	0.84	TRUE	0.8727
39049008230	Franklin	7	6	83	0.94	TRUE	0.8856
39049008312	Franklin	7	3	60	0.95	TRUE	0.9574
39049002750	Franklin	7	4	83	0.97	TRUE	0.9674
39049004620	Franklin	7	4	50	0.99	TRUE	0.9718
39049006933	Franklin	6	3	33	0.94	TRUE	0.8294
39049007721	Franklin	6	3	42	0.93	TRUE	0.8303
39049002770	Franklin	6	4	71	0.92	TRUE	0.8862
39129020200	Pickaway	6	3	100	0.91	TRUE	0.9077
39049000330	Franklin	6	3	75	0.94	TRUE	0.9117
39049008811	Franklin	6	3	87	0.93	TRUE	0.9444
39049005620	Franklin	6	4	66	0.84	TRUE	0.9458
39089752500	Licking	6	3	40	0.96	TRUE	0.9535
39049008813	Franklin	6	3	66	0.87	TRUE	0.9576
39049008821	Franklin	6	3	57	0.87	TRUE	0.9718
39049000910	Franklin	6	3	100	0.95	TRUE	0.9734
39089750700	Licking	6	3	33	0.94	TRUE	0.9779
39049009220	Franklin	6	3	100	0.9	TRUE	0.9805
39049002730	Franklin	6	4	83	0.89	TRUE	0.9858
39049008210	Franklin	6	3	55	0.94	TRUE	0.995
39045032000	Fairfield	5	4	100	0.9	TRUE	0.8179
39049001600	Franklin	5	4	60	0.7	TRUE	0.8191
39049009326	Franklin	5	4	40	0.96	TRUE	0.871
39049007520	Franklin	5	3	83	0.96	TRUE	0.8884

39127966000	Perry	5	5	50	0.9	TRUE	0.909
39049004500	Franklin	5	4	75	0.95	TRUE	0.9166
39049008822	Franklin	5	2	50	0.87	TRUE	0.9316
39049004820	Franklin	5	3	75	0.89	TRUE	0.9384
39049009325	Franklin	5	2	57	0.82	TRUE	0.9421
39049007512	Franklin	5	2	75	0.85	TRUE	0.9486
39049004900	Franklin	5	3	87	0.93	TRUE	0.9524
39049002710	Franklin	5	4	60	0.95	TRUE	0.9713
39049008330	Franklin	4	3	100	0.84	TRUE	0.8656
39049000820	Franklin	4	3	100	0.84	TRUE	0.8914
39049007533	Franklin	4	2	80	0.85	TRUE	0.8919
39049002520	Franklin	4	2	83	0.83	TRUE	0.915
39049009321	Franklin	4	2	83	0.84	TRUE	0.9161
39049008311	Franklin	4	2	80	0.89	TRUE	0.9598
39049009323	Franklin	4	2	80	0.93	TRUE	0.9687
39129020400	Pickaway	4	2	50	0.88	TRUE	0.9755
39117965100	Morrow	3	3	0	0.68	TRUE	0.3302
39049007820	Franklin	3	1	0	0.36	FALSE	0.6086
39049009250	Franklin	3	2	83	0.78	TRUE	0.6648
39097040202	Madison	3	3	0	0.73	TRUE	0.7436
39049007531	Franklin	3	2	77	0.93	TRUE	0.7754
39049010300	Franklin	3	2	0	0.9	TRUE	0.7877
39097040700	Madison	3	2	0	0.65	TRUE	0.8172
39049009371	Franklin	3	2	42	0.77	TRUE	0.8374
39049008340	Franklin	3	2	50	0.66	TRUE	0.8413
39049009240	Franklin	3	3	100	0.76	TRUE	0.9053
39049009337	Franklin	3	2	60	0.94	TRUE	0.9085

39049008710	Franklin	3	2	100	0.83	TRUE	0.9208
39049009333	Franklin	3	1	75	0.77	TRUE	0.9281
39049008120	Franklin	3	2	66	0.86	TRUE	0.9408
39049002510	Franklin	3	1	88	0.87	TRUE	0.9936
39049009336	Franklin	2	2	60	0.66	TRUE	0.4083
39073965000	Hocking	2	2	14	0.81	TRUE	0.4683
39049006943	Franklin	2	1	62	0.72	TRUE	0.6499
39127966300	Perry	2	2	28	0.85	TRUE	0.6522
39049001700	Franklin	2	1	16	0.49	FALSE	0.6629
39045031500	Fairfield	2	2	80	0.67	TRUE	0.6715
39073965200	Hocking	2	2	0	0.68	TRUE	0.69
39049009900	Franklin	2	2	28	0.88	TRUE	0.7248
39049003700	Franklin	2	2	71	0.83	TRUE	0.7255
39049006931	Franklin	2	2	33	0.71	TRUE	0.7437
39089758300	Licking	2	1	0	0.75	TRUE	0.7601
39045031700	Fairfield	2	2	100	0.85	TRUE	0.7764
39049003600	Franklin	2	1	75	0.76	TRUE	0.7786
39049000810	Franklin	2	2	83	0.92	TRUE	0.7875
39049007722	Franklin	2	2	60	0.89	TRUE	0.793
39049008163	Franklin	2	1	60	0.93	TRUE	0.7953
39049006942	Franklin	2	2	33	0.87	TRUE	0.7975
39049009420	Franklin	2	2	20	0.84	TRUE	0.8041
39049007551	Franklin	2	2	60	0.9	TRUE	0.8056
39049000310	Franklin	2	2	22	0.69	TRUE	0.8093
39049009340	Franklin	2	1	80	0.75	TRUE	0.8151
39049007710	Franklin	2	1	83	0.88	TRUE	0.8231
39049009311	Franklin	2	2	60	0.85	TRUE	0.8442

39049009312	Franklin	2	2	33	0.74	TRUE	0.8612
39049008322	Franklin	2	2	71	0.82	TRUE	0.8652
39127966200	Perry	2	2	33	0.83	TRUE	0.8743
39049008241	Franklin	2	2	40	0.73	TRUE	0.8829
39129020100	Pickaway	2	2	50	0.81	TRUE	0.883
39049009230	Franklin	2	2	100	0.86	TRUE	0.9134
39049008350	Franklin	2	2	50	0.8	TRUE	0.9311
39049009334	Franklin	2	1	83	0.84	TRUE	0.9523
39049008720	Franklin	2	2	100	0.86	TRUE	0.9856
39049007114	Franklin	1	1	12	0.67	TRUE	0.2956
39049007424	Franklin	1	1	14	0.65	TRUE	0.4859
39045030300	Fairfield	1	1	0	0.69	TRUE	0.5107
39049009386	Franklin	1	1	33	0.74	TRUE	0.5526
39049002760	Franklin	1	1	42	0.65	TRUE	0.5609
39049006945	Franklin	1	1	50	0.83	TRUE	0.6354
39045032100	Fairfield	1	1	75	0.75	TRUE	0.6433
39049006921	Franklin	1	1	18	0.73	TRUE	0.6483
39049003800	Franklin	1	1	66	0.62	FALSE	0.6788
39089751000	Licking	1	1	33	0.89	TRUE	0.6994
39049008825	Franklin	1	1	50	0.69	TRUE	0.7417
39049008321	Franklin	1	1	40	0.65	TRUE	0.7705
39049009383	Franklin	1	1	40	0.61	FALSE	0.7707
39049007532	Franklin	1	1	40	0.86	TRUE	0.7716
39045031400	Fairfield	1	1	50	0.67	TRUE	0.7909
39045032200	Fairfield	1	1	60	0.83	TRUE	0.7913
39049006821	Franklin	1	1	0	0.7	TRUE	0.7985
39045032300	Fairfield	1	1	66	0.74	TRUE	0.8323

39129020310	Pickaway	1	1	60	0.69	TRUE	0.8346
39089752200	Licking	1	1	33	0.73	TRUE	0.8593
39049009350	Franklin	1	1	83	0.69	TRUE	0.8664
39049008812	Franklin	1	1	62	0.62	FALSE	0.8886
39049009210	Franklin	1	1	61	0.74	TRUE	0.8977
39045031600	Fairfield	1	1	66	0.82	TRUE	0.9143

II. LIDAC Community Stakeholders

Figure 1. LIDAC Community Stakeholders

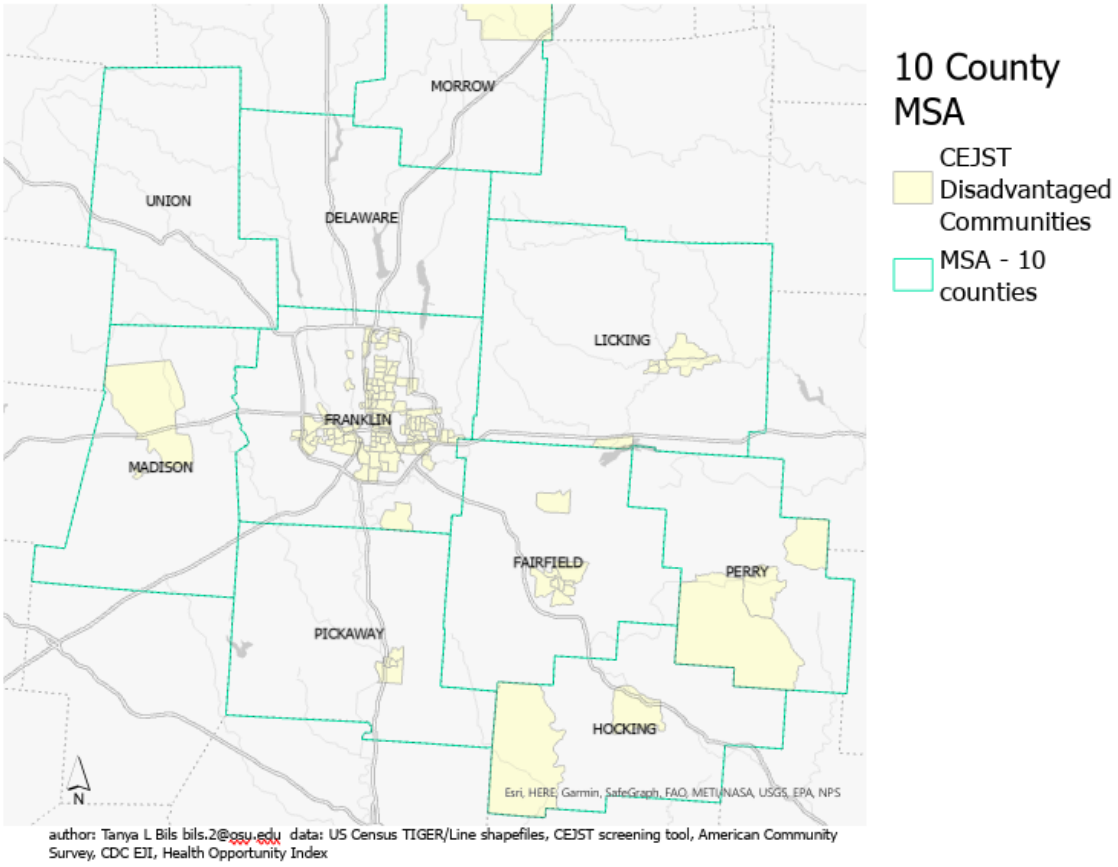


Figure 1A**.** EPA CEJST Identified LIDAC Communities. Note that 8 out of the 10 counties in the Columbus Metropolitan Statistical Area (MSA) denoted by cyan color boundaries have communities identified as disadvantaged (yellow shading). Key stakeholders will include community members from these regions for the CCAP phase.

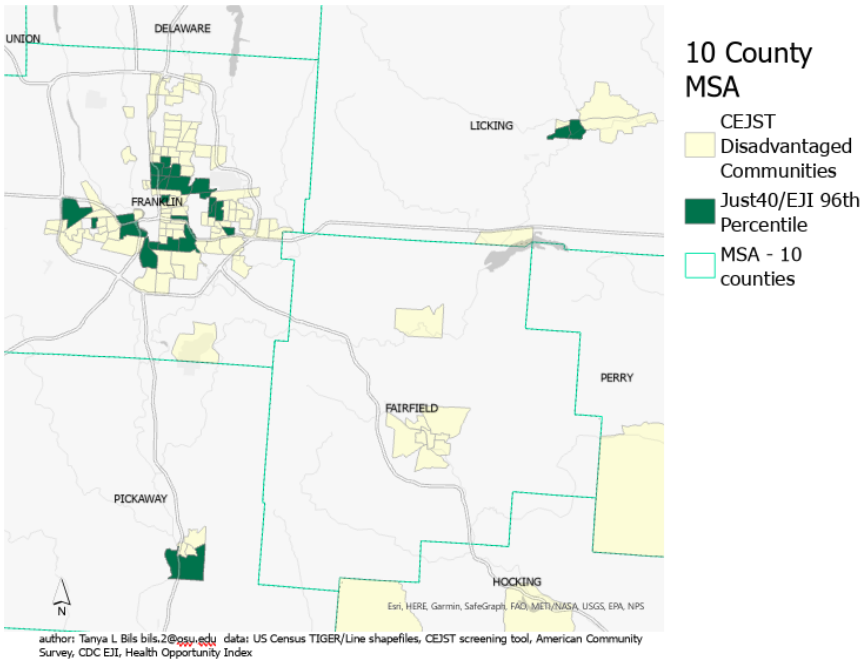


Figure 1B. CDC Environmental Justice Index (EJI) for all CEJST identified Disadvantaged Census Tracts. Note that 6 out of 10 counties have an EJI above the 77th percentile for Ohio. Also note that 3 counties (Franklin, Pickaway, and Licking) have an EJI percentile ≥96th percentile which will be the focus for the PCAP phase as an exemplar. A zoomed in region is shown in Figure 1C.

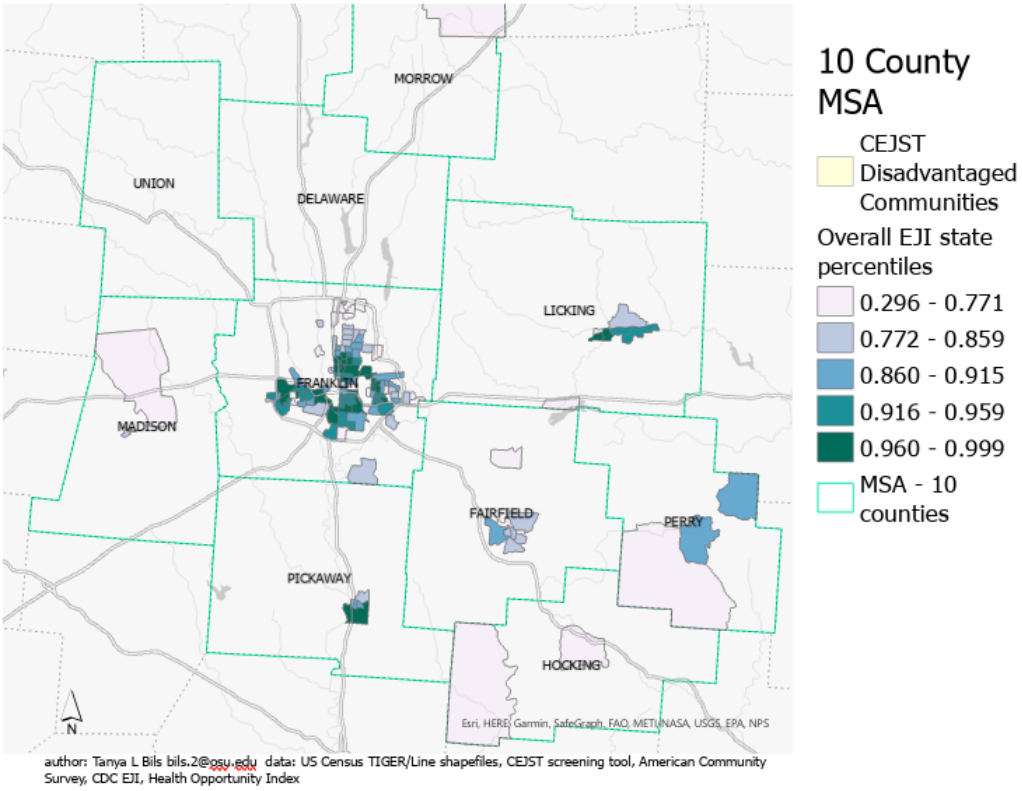


Figure 1C. Priority LIDAC regions for PCAP. Zoomed in Columbus MSA region highlighting only those counties identified as LIDAC and EJI ≥96th percentile. Key stakeholders for the PCAP phase include community members from the cities of Columbus (Franklin county), Circleville (Pickaway county), and Newark (Licking county).

III. List of Priority LIDAC Census Tracts with EJI ≥ 96th percentile

Table 1.

Census Tract	County	EJI percentile	EJScreen Supp. Dem. Index	Pct POC	Pct Low Income	Pct < High School	# EJScreen supplemental Indices > 80th percentile
39049005410	Franklin	0.9602	0.27	0.87	0.72	0.25	10
39049005100	Franklin	0.9666	0.30	0.64	0.72	0.27	10
39049002750	Franklin	0.9674	0.28	0.78	0.78	0.15	10
39049009323	Franklin	0.9687	0.22	0.87	0.56	0.20	6
39049002710	Franklin	0.9713	0.22	0.84	0.69	0.10	7
39049004620	Franklin	0.9718	0.29	0.51	0.77	0.28	10
39049008821	Franklin	0.9718	0.21	0.15	0.44	0.24	10
39049008730	Franklin	0.9731	0.27	0.76	0.71	0.16	10
39049000910	Franklin	0.9734	0.22	0.77	0.56	0.20	9
39129020400	Pickaway	0.9755	0.19	0.04	0.53	0.15	3
39049007511	Franklin	0.976	0.25	0.92	0.59	0.25	9
39049002900	Franklin	0.977	0.32	0.94	0.86	0.19	10
39089759000	Licking	0.977	0.27	0.17	0.65	0.25	9
39049000720	Franklin	0.9777	0.27	0.76	0.67	0.25	10
39089750700	Licking	0.9779	0.19	0.12	0.43	0.15	4
39049006100	Franklin	0.9783	0.25	0.39	0.59	0.22	10
39049009220	Franklin	0.9805	0.23	0.51	0.51	0.17	8
39049008720	Franklin	0.9856	0.16	0.77	0.42	0.17	6
39049002730	Franklin	0.9858	0.23	0.84	0.61	0.13	9
39049001500	Franklin	0.9864	0.29	0.92	0.74	0.17	11
39049000730	Franklin	0.9928	0.30	0.80	0.83	0.23	11
39049002510	Franklin	0.9936	0.23	0.89	0.56	0.18	9
39049001400	Franklin	0.9946	0.28	0.85	0.70	0.21	10

39049008210	Franklin	0.995	0.22	0.27	0.44	0.17	10
39049002600	Franklin	0.9986	0.27	0.72	0.69	0.20	11
39049005000	Franklin	1	0.30	0.35	0.68	0.34	10

1D. Reference: U.S. Census Bureau PD. Annual Estimates of the Resident Population for Counties in Ohio: April 1, 2020 to July 1, 2022 (CO-EST2022-POP-39).

1E. Reference: Centers for Disease Control and Prevention and Agency for Toxic Substances Disease Registry. 2022 Environmental Justice Index.
https://www.atsdr.cdc.gov/placeandhealth/eji/index.html

1F. Lochotzki H, Williams KP, Colen CG, et al. A Framework for Interfacing and Partnering with Environmental Justice Communities as a Prelude to Human Health and Hazard Identification in the Vulnerable Census Tracts of Columbus, Ohio. Int J Environ Res Public Health. 2022;19(21).

Appendix 2. Pre-Engagement Survey and Survey Results

Central Ohio Climate Action Planning Engagement Survey (August-September 2023)

Sustainable Columbus and our partners the Mid-Ohio Regional Planning Commission (MORPC), Power A Clean Future Ohio (PCFO), IMPACT Community Action, and The Ohio State University received a federal grant to support climate action planning across Central Ohio. This 10-county planning process includes identifying a priority list of actions by Spring 2024 and the completion of a regional climate action plan by Summer 2025.

As we begin this effort, we want your feedback on how best to engage with you as community members throughout the project. The following survey will help inform our communications efforts over the next 2 years.

* Indicates required question

1. How would you prefer to be engaged throughout upcoming regional climate planning efforts? Please select all that apply. *

Check all that apply.

- [ ] Virtual meetings, group discussion
- [ ] Virtual meetings, webinars
- [ ] In-person opportunities, small group/focus group discussions
- [ ] In-person opportunities, presentations or workshops
- [ ] Social media platforms
- [ ] Online surveys
- [ ] Other: _____

2. What time of the day generally works best for you to engage? Please select all that apply. *

Check all that apply.

- [ ] Mornings
- [ ] Lunchtime (12-1 pm)
- [ ] Afternoons
- [ ] Evenings
- [ ] Other: _____

3. Are there any barriers that could limit your ability to participate? Please select all that apply. *

Check all that apply.

- [ ] Time constraints/scheduling
- [ ] Lack of childcare
- [ ] Limited access to technology
- [ ] Language barriers
- [ ] Limited access to transportation
- [ ] Skepticism about the impact of participation
- [ ] Accessibility concerns (space constraints, audio/visual needs, space design, etc.)
- [ ] Other: _____

4. Do you have suggestions for particular groups, such as local community organizations or committees, who should be included in this climate action planning process?

_____

5. What methods of communication do you prefer for updates? Please select all that apply. *

Check all that apply.

- [ ] Social media (Facebook, Twitter, Instagram, TikTok)
- [ ] Email
- [ ] Text messages
- [ ] Community newsletters
- [ ] Website updates
- [ ] Other: _____

6. How can we ensure that diverse voices and perspectives are included in the decision-making process? *

Check all that apply.

- [ ] Providing language interpretation services
- [ ] Partnering with diverse community organizations for outreach
- [ ] Conducting outreach to underrepresented communities
- [ ] Holding meetings at various times and locations
- [ ] Other: _____

7. Do you want to receive updates on this climate action planning process and ways to stay involved? (If yes, please provide your preferred email address and/or phone number below.)

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Other: _____

8. Do you have any other suggestions or feedback that you would like to share?

Demographics Questions

9. Do you attend or belong to any of the following organizations?

Check all that apply.

- [ ] Columbus Area Commissions (includes local Area Commissions and County Commissions)
- [ ] Non-profit organizations engaged in sustainability efforts in the Central Ohio region
- [ ] Other non-profit organizations
- [ ] Private businesses
- [ ] Places of worship
- [ ] Volunteer groups
- [ ] Other: _____

10. Name

11. Preferred Email Address

12. Preferred Phone Number

13. Zip Code *

_____

14. Race: Which race or ethnicity best describes you? Please select all that apply. *

Check all that apply.

- [ ] White
- [ ] Black or African-American
- [ ] American Indian or Alaskan Native
- [ ] Asian
- [ ] Native Hawaiian or other Pacific islander
- [ ] Hispanic
- [ ] Latino/a
- [ ] Other: _____

15. Gender: How do you identify? *

Mark only one oval.

- ◯ Man
- ◯ Woman
- ◯ Non-binary
- ◯ Prefer not to say
- ◯ Prefer to self-describe, below

16. Gender Identify (Self-Describe, Optional)

_____

17. Age: Which category below includes your age? *

Mark only one oval.

- 17 or younger
- 18-20
- 21-29
- 30-39
- 40-49
- 50-59
- 60 or older

18. Household Income: How much total combined money did all members of your household earn in 2022?

Mark only one oval.

- $0 – $19,999
- $20,000 – $39,999
- $40,000 – $59,999
- $60,000 – $79,999
- $80,000 – $99,999
- $100,000 -- $119,000
- $120,000 or more

How would you prefer to be engaged throughout upcoming regional climate planning efforts?	#	%	What time of the day generally works best for you to engage?	#	%	Are there any barriers that could limit your ability to participate?	#	%	What methods of communication do you prefer for updates?	#	%
Virtual meetings, webinars	146	62.7%	Evenings	149	63.9%	Time constraints/scheduling	191	82.0%	Email	207	88.8%
Online surveys	146	62.7%	Afternoons	99	42.5%	Skepticism about the impact of participat	86	36.9%	Social media	107	45.9%
Virtual meetings, group discussion	134	57.5%	Lunchtime	95	40.8%	Lack of childcare	21	9.0%	Community newsletters	94	40.3%
In-person opportunities, small group/focus group discussion	123	52.8%	Mornings	83	35.6%	Limited access to transportation	19	8.2%	Website updates	76	32.6%
In-person opportunities, presentations or workshops	112	48.1%	Additional comments:			Limited access to technology	7	3.0%	Text messages	59	25.3%
Social media	96	41.2%	Weekends	8	3.4%	Accessibility concerns	7	3.0%	Aditional comments		
Additional comments:			Other	2	0.9%	Language barriers	4	1.7%	Other	2	0.9%
In person events with virtual attendance options	2	0.9%				Additional comments:					
Other	6	2.6%				COVID	3	1.3%			
						None	2	0.9%			
						Particpation events in distant locations	2	0.9%			
						Other	1	0.4%			
Total votes: 233			Total votes: 233			Total votes: 233			Total votes: 233		

How can we ensure that diverse voices and perspectives are included in the decision-making process?	#	%
Partnering with diverse community organizations for outreach	194	83.3%
Holding meetings at various times and locations	167	71.7%
Conducting outreach to underrepresented communities	165	70.8%
Providing language interpretation services	111	47.6%
Additional comments:		
Partnering with local groups and leader	8	3.4%
Compensation for participation	5	2.1%
At home opportunities	5	2.1%
Prioritize meaningful engagement and actively listening	3	1.3%
Updates to city functions	3	1.3%
Other	3	1.3%
Total votes:	233	

Do you want to receive updates on this climate action planning process and ways to stay involved?	#	%
Yes	198	89.6%
No	21	9.5%
Undicided	2	0.9%
Total votes:	221	

	Do you have any other suggestions or feedback that you would like to share?	Theme (1)	Theme (2)
1	It would be nice to see city streets have pollinator gardens or drought resistant native grasses, encourage homeowner associations to allow homeowners to have future gardens instead of being required to have green lawns, invasive honeysuckle needs removed in city parks, metro parks, along streams and rivers as the urban tree plan does not account for them. It would be nice to have electric trains or other modes of green energy mass transportation.	Transportation	Environment
2	Don't be over zealous with numerous texts/notifications	Engagement	
3	I've wanted to attend many of the MORPC events but they've been too expensive.	Engagement	Accessibility
4	I've been very frustrated trying to find environmental friendly/ responsible and cost effective ways of disposing of old electronics and appliances. Even sent email to Ohio EPA for assistance and never received response	Environment	Accessibility
5	The city needs to get its own house in order first. Stop cutting down trees in neighborhoods unless there's a plan to replace the trees stop allowing city departments to remove trees for new overhead power lines to feed new development. The city needs to act cohesively in support of climate action and not allow city electric and city traffic engineering to run rampant.	Skepticism	Planning
6	Are you ever actually going to do something? Because at this point, it's just a whole lot of surveys and meetings. We know steps we can take - solid public transport, solar energy, green spaces, bike lanes, pedestrian streets - and we could take them right now. It looks a lot like the city just doesn't want to.	Skepticism	Implementation
7	Do involve the Sustainability Group at Columbus State Community College. Jennifer McCord is the Faculty Director.	Collaboration	
8	Please make it as community-engaging as possible. Don't make us sit through one-hour presentations. Zone In Columbus held a breakout group conversation event at the whetstone library that went really well. However, if there were stenographers there recording our conversation, Zone In would've gotten a lot more information than what we were able to write down towards the end.	Engagement	Accessibility
9	I hope residential solar panel programs in low-income neighborhoods to offset energy consumption and greenhouse gases are included in the discussions.	Equity	
10	I don't think Columbus or other cities should be discouraging work from home and flexible options. Alternate commuting times and fewer commutes overall help disabled workers, caregivers, and the environment. As more people come here, the freeway backup, pollution and accidents will get worse. Flexibility is needed, even in person.	Transportation	Accessibility
11	stop all this bullshit	Skepticism	
12	Concerned about local jobs and wage cuts for those affected by changes, has happened in the past, it will happen again.	Equity	
13	Under the communications question, the social media option checkbox was grayed out, not selectable. The current issue of Architecture Magazine has an article on Rewilding projects.	Environment	
14	BE SURE TO INCLUDE VARIOUS AGE GROUPS INCLIDING SENIOR CITIZENS	Accessibility	Engagement
15	Thank you for tackling this terrible problem that is making our citizens sick!	Planning	
16	Light rail; retrofit city buildings for solar panels; expand residential solar; free parking for EVs and Hybrids	Transportation	
17	Improving public transportation will improve the climate	Transportation	
18	All suburbs need to be included in this effort	Collaboration	
19	Some measurement efforts (GHG inventories) are only okay/meh. I've done quite a few GHG inventories myself! Possibly interesting data, but often merely a lagging indicator with few surprises. Emission factors sometimes make comparisons difficult and sometimes the data is generalized anyway, ie statewide data just allocated by population or something. Pursuing the very best/most meaningful actual mitigation or adaptation projects now is far more important. ACT while planning. I've written climate action plans that sat on a shelf, and I hope this one is different! Don't forget the word action in climate action plan!	Planning	Implementation
20	I'm interested in seeing historical records related to weather. There are so many passionate opinions out there.	Planning	

21	161 Task Force oversees beautification of 161, the service roads and the two miles of median. I'd love to do a pollinator-friendly planting in the median to eliminate mowing and support the environment, but we don't know where to start, what are the right plants, is there funding for planting them in public areas, do we have to ask ODOT, etc....	Collaboration	Environement
22	Happy to input. Please read the 2014 WH Climate Preparedness and Resilience Task Force Report	Planning	
23	Gas powered lawn equipment is a huge source of greenhouse gasses, human powered or electric alternatives or even encouraging different landscaping is an obvious step forward. Education and programs for adults and even school aged children would be a good idea.	Enirvoment	Engagement
24	do better at communicating than Zone In Columbus is doing	Engagement	
25	Get the city to stop wasting money on pointless consulting and do what we already know will solve our problems	Skepticism	Implementation
26	Business interests should NOT outweigh health and environmental concern. Also, work faster. Make things happen. Stop doing endless studies.	Skepticism	Implementation
27	Potentially creating a List of Comments and Response to Comment vs other groups that have compiled comments under Vague Themes and including residents in meetings where decisions are made and the rationale explained (so that all agree).	Collaboration	Engagement
28	just to provide some more info on the "skepticism about the impact of participation", it is hard to have in faith in the success of this due to the lack of political will shown in anything transit or micro-mobility infrastructure related. no one is taking much action to radically reduce car usage in the region, or to fix zoning codes to get rid of single family housing zoning, and it doesn't seem like there are any local politicians who have the political will to make those changes. from my years of experience with the area politics, it seems like every organization just does an endless number of studies, but no actual action. i would like to be surprised though.	Skepticism	Implementation
29	We need clean, inviting public transportation. COTA is outdated and should be replaced	Transportation	
30	Please seriously study airport noise and pollution. Require Intel to recycle ALL water used from day 1, not years later after water is polluted and water tables overused. Support the City Tree Canopy project--especially by stopping area contractors from unnecessary clearing of mature trees.	Planning	Implementation
31	Connect or become a signatory (plannin2050) - info@planningcommitment.org	Collaboration	
32	Invest some time in learning from the non-profit STRONG TOWNS. Lets not reinvent the wheel, a lot of good studies have been done and we have some low hanging fruit, lets do this.	Collaboration	Planning
33	I am afraid that the companies that are the polluters will fight this effort, as they already have been.	Environment	
34	We need to include a significant discussion on the impact of transportation and the need for more and better public transit and intercity passenger rail.	Transportation	Engagement
35	Checking to make sure that the money is being used as proposed.	Equity	Skepticism
36	The best way Columbus is going to get climate action where it needs to be is to fund the groups doing the work opposed to consolidating all the power with the city.	Collaboration	Equity

Theme - # Count
Engagement - 8
Collaboration - 7
Skepticism - 7
Planning - 7
Transportation - 6
Implementation - 6
Accessibility - 5
Environment - 5
Equity - 4

Engagement - The involvement of community members or stakeholders in climate planning process.

Collaboration - To actively work together with a group.

Transportation - Dealing with vehicles.

Skepticism - An attitude of doubt or a disposition.

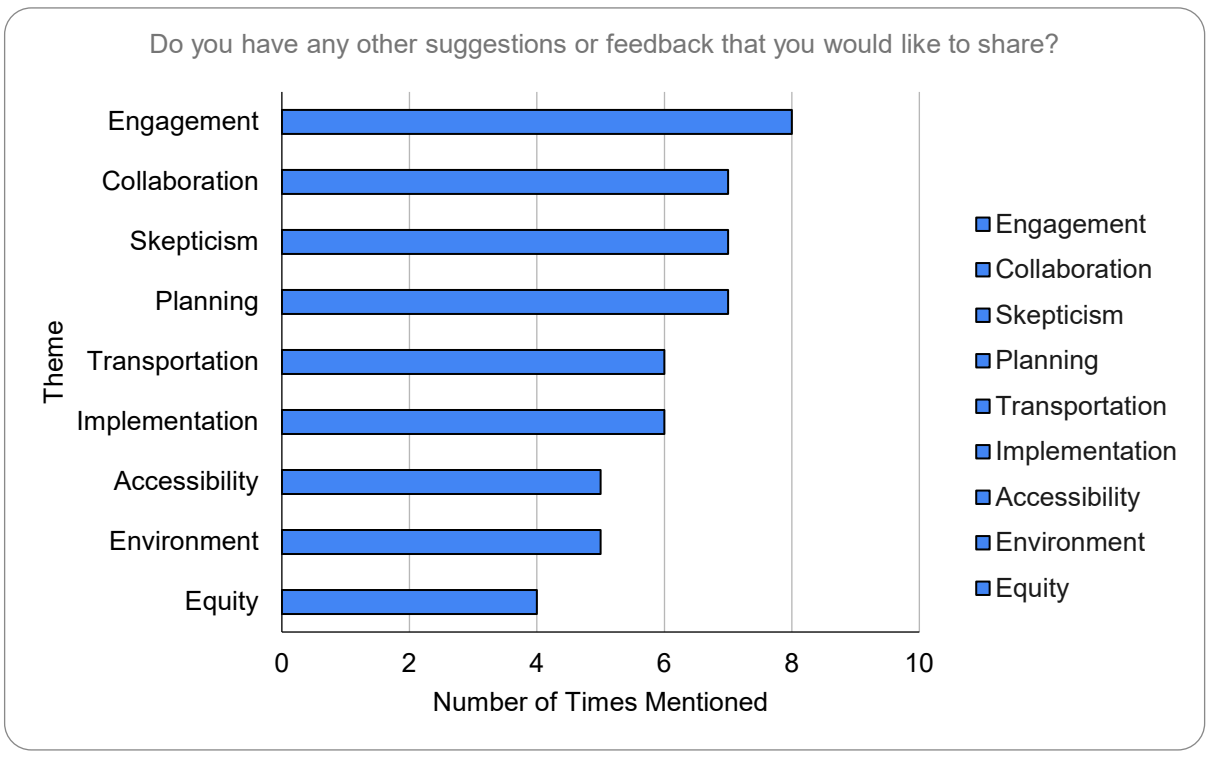
Planning - The process of creating climate plans.

Implementation - The process of carrying out climate plans.

Equity - The fair and just distribution of resources, benefits, and burdens.

Accessibility - To be usable and available to as many people as possible.

Environment - Relating to environmental aspects, impacts, or uses.



Do you have suggestions for particular groups, such as local community organizations or committees, who should be included in this climate action planning process?	
Specific	
Group	Votes
FLOW	7
Sierra Club	7
OSU	6
Metro Parks	6
Sunrise	5
NAACP	4
COTA	4
Ohio Environmental Council	3
Simply Living	3
The Nature Conservancy	3
AEP	2
All Aboard Ohio	2
Area Commissions	2
Chamber of Commerce	2
Columbus Zoo	2
city parks and rec dept	2
Clean Fuels Ohio	2
Drive Electric Columbus	2
DSA	2
FACT	2
Green Columbus	2
Human Service Chamber	2
MORPC	2
ODOT	2
Ohio Youth for Climate Justice	2
Yay Bikes	2
Transit Columbus	2
161 Task Force	1
Abbott Nutrition	1
Age-Friendly Columbus and Franklin County	1
All in for Ohio	1
Anheuser Busch	1
Audubon	1
Battelle	1
Bikes for All People	1
Bronzeville Grower's Market	1
Buckeye Environmental Network	1
Budweiser	1

Byrd Polar	1
Cardinal Health	1
cathy Cowan Becker	1
Chase	1
Citizens Climate Lobby	1
City of Columbus Department of Public Service	1
City of Dublin	1
Climate Research Center	1
Climate Sub Committee	1
CoGo Bike Share	1
Columbia Gas Ohio	1
Columbus Citizen Climate Lobby	1
Columbus city schools	1
Columbus Crew	1
Columbus DSA	1
Columbus Metro Club	1
Columbus Public Health	1
Columbus State CC Sustainability Group	1
Columbus Urban League	1
Compost Clubhouse	1
COSI	1
COW Council	1
Department of Neighborhoods	1
Dept. of Development	1
Disability Rights Ohio	1
Fairfield County	1
Foodshed participants	1
Franklinton Cycle Works	1
FSWCD	1
Gladden Community House	1
Governor's Office	1
Green Scope Consulting	1
Highland Youth Gardens	1
Hilliard Sustainability Commission	1
Home For Families Foundation	1
JobsOhio	1
legislators	1
Liberty Township	1
Local chapters of AIA	1
Local chapters of ULI	1
Local chapters of USGBC	1
Lung Association	1
MKSK Climate Action and Diversity Labs	1

Moms clean air force	1
Motherful	1
National Association of Social Workers Ohio Chapter	1
Nature Conservancy	1
OCASLA Climate Action Committee	1
ODNR	1
Ohio Chapter of Landscape Architects	1
Ohio EPA	1
Power a Clean Future Ohio	1
Project Sunshine	1
PUCO	1
rapid5	1
Rocky Fork Blacklick Accord Panel	1
Short North Civic Association	1
Smart Columbus	1
Solar United Neighbors	1
state parks	1
Sustainable Business Chamber	1
Sustainable Grandview	1
The Compost Exchange	1
The Worthington Partnership Green Team	1
Third Hand Bike Coop	1
TNC	1
Weinland Park Community Civic Association - email treasurer@weinlandpark.org	1
WildOnes	1
WRISE	1
Zora's House	1

Do you have suggestions for particular groups, such as local community organizations or committees, who should be included in this climate action planning process?

General		
Category	**Group**	**Votes**
Health	Any health officials healthcare some medical folks	3
Transit Advocacy Groups	bike and transit advocacy groups local transit advocacy orgs	2
Schools	colleges like CSCC local HS and college student groups whose missions are climate related Schools local schools	4
Scientific Groups	Friends of the Lower Olentangy Watershed Science Comm Scientific weather related expertise Those in the helping field should be well represented due to responding to residents concerns around exterme heat and air quality alerts.	3
Hard to Reach / Underserved Populations	Groups working with unhoused community Homeless advocates Community development for all people hard to reach populations / historically underserved communities poor people that live in Franklinton, linden, east side, the hilltop Neighborhoods that sit on the oldest part of the electric grid and frequently experience planned outages during summer	7

	Those disproportionally burdened by climate injustice (LGBTQIA+ communities, BIPOC communities, Low income neighborhoods, immigrant/refugee communities, returned residents, disabled communities - among others)	
Average Community Members	Regular people Kids old people	3
Community Groups / Representatives	Residential-based community groups local community groups Local HOA rep local civic associations local community organizations that represent the interest of the community Local sustainability groups Local non profit agencies youth groups Neighborhood Commission meetings Church groups youth organizations Youth leaders should be represented as the voice of the future. Columbus Representatives Economic development leaders Animal welfare groups community groups	17
Local Government	Township Trustee's township trustees local government sustainability committees/boards. Zoning revision meetings Chairs of zoning boards for every municipality in central Ohio Local government planning commissions Planning and Zoning Commissions	7
	Community gardens	8

Other	large companies that may have a large climate impact libraries libraries professional athletic teams Include the ones already doing the work and don’t recreate. big companies	

Do you attend or belong to any of the following organizations?	#	%
Non-profit organizations engaged in sustainability efforts in the Central Ohio region	82	45.8%
Other non-profit organizations	75	41.9%
Volunteer groups	67	37.4%
Private businesses	42	23.5%
Places of worship	34	19.0%
Columbus Area Commissions	30	16.8%
Additional comments:		
No	2	1.1%
Government	2	1.1%
Political virtual town hall meetings	1	0.6%
City of Columbus	1	0.6%
Priscilla R Tyson Cultural Arts Center	1	0.6%
OEC Emerging Leaders Council	1	0.6%
Professional organizations	1	0.6%
DSA	1	0.6%
Board of Supervisors for Franklin CL SWCD, Upper Arlington Tree Commission	1	0.6%
Ohio State University	1	0.6%
Education	1	0.6%
Total votes: 179		

Zip code		#	%
43202	Franklin	21	9.0%
43214	Franklin	20	8.6%
43206	Franklin	18	7.7%
43215	Franklin	13	5.6%
43201	Franklin	12	5.2%
43224	Franklin	9	3.9%
43204	Franklin	8	3.4%
43221	Franklin	8	3.4%
43229	Franklin	8	3.4%
43235	Franklin	8	3.4%
43085	Franklin	7	3.0%
43123	Franklin	7	3.0%
43212	Franklin	7	3.0%
43081	Franklin	6	2.6%
43205	Franklin	6	2.6%
43209	Franklin	6	2.6%
43220	Franklin	6	2.6%
43016	Franklin	5	2.1%
43026	Franklin	4	1.7%
43082	Delaware	4	1.7%
43211	Franklin	4	1.7%
43230	Franklin	4	1.7%
43017	Franklin	3	1.3%
43203	Franklin	3	1.3%
43228	Franklin	3	1.3%
43054	Franklin	2	0.9%
43105	Fairfield	2	0.9%
43119	Franklin	2	0.9%
43207	Franklin	2	0.9%
43223	Franklin	2	0.9%
43227	Franklin	2	0.9%
43004	Franklin	1	0.4%
43015	Delaware	1	0.4%
43035	Delaware	1	0.4%
43040	Union	1	0.4%
43062	Licking	1	0.4%
43064	Madison	1	0.4%

Gender	#	%
Woman	138	59.2%
Man	101	43.3%
Prefer not to say	9	3.9%
Non-binary	7	3.0%
Self describe	3	1.3%
Additional comments:		
Cisgender	2	0.9%
Trans man	1	0.4%
Other	3	1.3%
Total votes: 233		

Race	#	%
White	209	89.7%
Black or African-American	14	6.0%
Asian	7	3.0%
Hispanic or Latino	6	2.6%
American Indian or Alaskan Native	3	1.3%
Native Hawaiian or other Pacific islanc	0	0.0%
Additional comments:		
Eurasian	2	0.9%
Arab	1	0.4%
Other	2	0.9%
Total votes: 233		

43065	Delaware	1	0.4%
43074	Delaware	1	0.4%
43110	Franklin	1	0.4%
43125	Franklin	1	0.4%
43147	Fairfield	1	0.4%
43213	Franklin	1	0.4%
43222	Franklin	1	0.4%
43231	Franklin	1	0.4%
43232	Franklin	1	0.4%
43240	Delaware	1	0.4%
43724	Noble	1	0.4%
45459	Montgomery	1	0.4%
78750	Travis	1	0.4%
43123-8172		1	0.4%

Total votes: 233

Age	#	%	Household Income	#	%
≥ 60	67	28.8%	≥ $120,000	81	38.0%
30-39	64	27.5%	$80,000 – $99,999	34	16.0%
40-49	38	16.3%	$60,000 – $79,999	31	14.6%
50-59	33	14.2%	$100,000 – $119,000	27	12.7%
21-29	28	12.0%	$40,000 – $59,999	23	10.8%
18-20	2	0.9%	$20,000 – $39,999	11	5.2%
≤17	1	0.4%	$0 – $19,999	6	2.8%

Total votes: 233

Total votes: 213

Appendix B: Engagement Planning Exercise

Engagement Goals

Meet all EPA requirements in a timely manner.

Develop timelines with various communities to "meet EPA requirements in a timely manner"

Education and awareness of climate change and climate action.

Curate messaging to certain stakeholders and partners. For example, talk up the ED / Workforce value in this for rural partners.

Publicly address feedback that has been received, and inform how the feedback was incorporated into the program.

Conduct meaningful engagement with communities in order to create a plan that includes their perspectives.

Make as much information public--webpage resource center--to help guide folks whether they're able to attend meetings

ensure that engagement activities are accessible to priority populations

Ensure community engagement data is collected for integration into the benefits analysis

Discuss outcomes of the program and how it will impact residents

continuously adapt engagement strategies to meet priority population needs

Strategies

Virtual engagement.

Record and share engagement activities/events when possible

Coordinate outreach with other orgs/stakeholders, especially CBOs and other trusted community orgs

Food should be incorporated into in person events.

Have a comprehensive outreach plan with all/most climate initiatives that doesn't over burden the target communities

Utilizing community advocates and community leaders

Outreach to be conducted at in-person events.

Be prepared to hold different types of substantive meetings for the various target audiences

Compensate BIPOC & Justice 40 residents for their time

Be transparent

Use/incorporate technology and digital platforms

Plan for feedback loop - how do we share results of input and steps taken because of input

Using equity strategies to LIDAC community members (transportation, food, differing hours weekends and nights, communications media, etc)

Hold meetings on different days and at different times to accommodate different schedules

Presence at existing community events

Tactics

Public meetings.

Public kiosks where people can fill out short surveys. Ex - have something at a bus stop where people can answer questions

Get kids and families involved

use a human-centered approach to facilitate discussions

use creativity and make engagement fun!

Online surveys.

Stakeholder meetings.

provide child care during engagement events

Flyers for high traffic areas for further reach

Door to Door Leave Behinds (Lit Piece/Hot Card)

Hold customized meetings for various communities based on their needs and desired outcomes; could even bring different communities together based on similarities

Booths at existing event where people can put things on a chart or a digital chart. Love sticky note planning :)

Good graphic design to engage people

Social media engagement.

don't be patronizing; lead with listening

QR codes on communications

Paid Social

Kroger & Gas Gift Cards

Meet ppl where they are and not expect them to join us or come to us

Engage county staff (train the trainer)

Incentives for participating: drawings for larger prizes if you fill out survey.

Advertise on local media: Columbus Underground, Dispatch, Columbus Monthly

Frequent updates to progress

Paid social media and digital ads for better survey reach and analytics.

Websites, various social media platforms, Google, etc.

Appendix C: LIDAC Census Tracts in the Columbus MSA

Census tract ID	County Name	Number Threshold Criteria Exceeded	Number Categories Exceeded	Pct neighbors disadvantaged	Pct individuals below 200% poverty	Low income	EJI State Percentile
39045030300	Fairfield	1	1	0	0.69	TRUE	0.5107
39045031400	Fairfield	1	1	50	0.67	TRUE	0.7909
39045031500	Fairfield	2	2	80	0.67	TRUE	0.6715
39045031600	Fairfield	1	1	66	0.82	TRUE	0.9143
39045031700	Fairfield	2	2	100	0.85	TRUE	0.7764
39045032000	Fairfield	5	4	100	0.9	TRUE	0.8179
39045032100	Fairfield	1	1	75	0.75	TRUE	0.6433
39045032200	Fairfield	1	1	60	0.83	TRUE	0.7913
39045032300	Fairfield	1	1	66	0.74	TRUE	0.8323
39049000310	Franklin	2	2	22	0.69	TRUE	0.8093
39049000330	Franklin	6	3	75	0.94	TRUE	0.9117
39049000710	Franklin	9	3	62	0.94	TRUE	0.91
39049000720	Franklin	12	5	50	0.94	TRUE	0.9777
39049000730	Franklin	11	5	100	0.98	TRUE	0.9928
39049000810	Franklin	2	2	83	0.92	TRUE	0.7875
39049000820	Franklin	4	3	100	0.84	TRUE	0.8914
39049000910	Franklin	6	3	100	0.95	TRUE	0.9734
39049000920	Franklin	8	4	100	0.88	TRUE	0.9547
39049001400	Franklin	14	5	70	0.98	TRUE	0.9946
39049001500	Franklin	12	6	100	0.99	TRUE	0.9864
39049001600	Franklin	5	4	60	0.7	TRUE	0.8191
39049001700	Franklin	2	1	16	0.49	FALSE	0.6629
39049002300	Franklin	13	7	77	0.9	TRUE	0.9591
39049002510	Franklin	3	1	88	0.87	TRUE	0.9936
39049002520	Franklin	4	2	83	0.83	TRUE	0.915
39049002600	Franklin	11	5	50	0.98	TRUE	0.9986
39049002710	Franklin	5	4	60	0.95	TRUE	0.9713
39049002730	Franklin	6	4	83	0.89	TRUE	0.9858
39049002750	Franklin	7	4	83	0.97	TRUE	0.9674
39049002760	Franklin	1	1	42	0.65	TRUE	0.5609
39049002770	Franklin	6	4	71	0.92	TRUE	0.8862
39049002800	Franklin	9	3	100	0.93	TRUE	0.946
39049002900	Franklin	11	5	75	0.99	TRUE	0.977
39049003600	Franklin	2	1	75	0.76	TRUE	0.7786
39049003700	Franklin	2	2	71	0.83	TRUE	0.7255
39049003800	Franklin	1	1	66	0.62	FALSE	0.6788
39049004200	Franklin	11	5	28	0.97	TRUE	0.876
39049004500	Franklin	5	4	75	0.95	TRUE	0.9166
39049004620	Franklin	7	4	50	0.99	TRUE	0.9718
39049004700	Franklin	8	4	80	0.97	TRUE	0.9291
39049004820	Franklin	5	3	75	0.89	TRUE	0.9384
39049004900	Franklin	5	3	87	0.93	TRUE	0.9524
39049005000	Franklin	12	6	80	0.97	TRUE	0.9715
39049005100	Franklin	8	4	62	0.99	TRUE	0.9666
39049005300	Franklin	8	5	75	0.83	TRUE	0.9115

Census tract ID	County Name	Number Threshold Criteria Exceeded	Number Categories Exceeded	Pct neighbors disadvantaged	Pct individuals below 200% poverty	Low income	EJI State Percentile
39049005410	Franklin	11	5	57	0.96	TRUE	0.9602
39049005420	Franklin	8	4	100	0.85	TRUE	0.952
39049005500	Franklin	10	4	100	0.95	TRUE	0.9332
39049005610	Franklin	9	6	66	0.94	TRUE	0.9356
39049005620	Franklin	6	4	66	0.84	TRUE	0.9458
39049005900	Franklin	9	3	100	0.98	TRUE	0.9467
39049006000	Franklin	9	4	66	0.96	TRUE	0.935
39049006100	Franklin	13	4	80	0.97	TRUE	0.9783
39049006821	Franklin	1	1	0	0.7	TRUE	0.7985
39049006921	Franklin	1	1	18	0.73	TRUE	0.6483
39049006931	Franklin	2	2	33	0.71	TRUE	0.7437
39049006933	Franklin	6	3	33	0.94	TRUE	0.8294
39049006942	Franklin	2	2	33	0.87	TRUE	0.7975
39049006943	Franklin	2	1	62	0.72	TRUE	0.6499
39049006945	Franklin	1	1	50	0.83	TRUE	0.6354
39049007114	Franklin	1	1	12	0.67	TRUE	0.2956
39049007424	Franklin	1	1	14	0.65	TRUE	0.4859
39049007511	Franklin	8	3	100	0.94	TRUE	0.976
39049007512	Franklin	5	2	75	0.85	TRUE	0.9486
39049007520	Franklin	5	3	83	0.96	TRUE	0.8884
39049007531	Franklin	3	2	77	0.93	TRUE	0.7754
39049007532	Franklin	1	1	40	0.86	TRUE	0.7716
39049007533	Franklin	4	2	80	0.85	TRUE	0.8919
39049007534	Franklin	7	3	75	0.84	TRUE	0.8727
39049007551	Franklin	2	2	60	0.9	TRUE	0.8056
39049007710	Franklin	2	1	83	0.88	TRUE	0.8231
39049007721	Franklin	6	3	42	0.93	TRUE	0.8303
39049007722	Franklin	2	2	60	0.89	TRUE	0.793
39049007820	Franklin	3	1	0	0.36	FALSE	0.6086
39049008120	Franklin	3	2	66	0.86	TRUE	0.9408
39049008163	Franklin	2	1	60	0.93	TRUE	0.7953
39049008210	Franklin	6	3	55	0.94	TRUE	0.995
39049008230	Franklin	7	6	83	0.94	TRUE	0.8856
39049008241	Franklin	2	2	40	0.73	TRUE	0.8829
39049008311	Franklin	4	2	80	0.89	TRUE	0.9598
39049008312	Franklin	7	3	60	0.95	TRUE	0.9574
39049008321	Franklin	1	1	40	0.65	TRUE	0.7705
39049008322	Franklin	2	2	71	0.82	TRUE	0.8652
39049008330	Franklin	4	3	100	0.84	TRUE	0.8656
39049008340	Franklin	3	2	50	0.66	TRUE	0.8413
39049008350	Franklin	2	2	50	0.8	TRUE	0.9311
39049008710	Franklin	3	2	100	0.83	TRUE	0.9208
39049008720	Franklin	2	2	100	0.86	TRUE	0.9856
39049008730	Franklin	10	5	63	0.99	TRUE	0.9731
39049008811	Franklin	6	3	87	0.93	TRUE	0.9444
39049008812	Franklin	1	1	62	0.62	FALSE	0.8886
39049008813	Franklin	6	3	66	0.87	TRUE	0.9576

Census tract ID	County Name	Number Threshold Criteria Exceeded	Number Categories Exceeded	Pct neighbors disadvantaged	Pct individuals below 200% poverty	Low income	EJI State Percentile
39049008821	Franklin	6	3	57	0.87	TRUE	0.9718
39049008822	Franklin	5	2	50	0.87	TRUE	0.9316
39049008825	Franklin	1	1	50	0.69	TRUE	0.7417
39049009210	Franklin	1	1	61	0.74	TRUE	0.8977
39049009220	Franklin	6	3	100	0.9	TRUE	0.9805
39049009230	Franklin	2	2	100	0.86	TRUE	0.9134
39049009240	Franklin	3	3	100	0.76	TRUE	0.9053
39049009250	Franklin	3	2	83	0.78	TRUE	0.6648
39049009311	Franklin	2	2	60	0.85	TRUE	0.8442
39049009312	Franklin	2	2	33	0.74	TRUE	0.8612
39049009321	Franklin	4	2	83	0.84	TRUE	0.9161
39049009323	Franklin	4	2	80	0.93	TRUE	0.9687
39049009325	Franklin	5	2	57	0.82	TRUE	0.9421
39049009326	Franklin	5	4	40	0.96	TRUE	0.871
39049009331	Franklin	9	4	100	0.97	TRUE	0.9211
39049009333	Franklin	3	1	75	0.77	TRUE	0.9281
39049009334	Franklin	2	1	83	0.84	TRUE	0.9523
39049009336	Franklin	2	2	60	0.66	TRUE	0.4083
39049009337	Franklin	3	2	60	0.94	TRUE	0.9085
39049009340	Franklin	2	1	80	0.75	TRUE	0.8151
39049009350	Franklin	1	1	83	0.69	TRUE	0.8664
39049009371	Franklin	3	2	42	0.77	TRUE	0.8374
39049009383	Franklin	1	1	40	0.61	FALSE	0.7707
39049009386	Franklin	1	1	33	0.74	TRUE	0.5526
39049009420	Franklin	2	2	20	0.84	TRUE	0.8041
39049009900	Franklin	2	2	28	0.88	TRUE	0.7248
39049010300	Franklin	3	2	0	0.9	TRUE	0.7877
39073965000	Hocking	2	2	14	0.81	TRUE	0.4683
39073965200	Hocking	2	2	0	0.68	TRUE	0.69
39089750700	Licking	6	3	33	0.94	TRUE	0.9779
39089751000	Licking	1	1	33	0.89	TRUE	0.6994
39089752200	Licking	1	1	33	0.73	TRUE	0.8593
39089752500	Licking	6	3	40	0.96	TRUE	0.9535
39089758300	Licking	2	1	0	0.75	TRUE	0.7601
39089759000	Licking	8	3	57	0.97	TRUE	0.977
39097040202	Madison	3	3	0	0.73	TRUE	0.7436
39097040700	Madison	3	2	0	0.65	TRUE	0.8172
39117965100	Morrow	3	3	0	0.68	TRUE	0.3302
39127966000	Perry	5	5	50	0.9	TRUE	0.909
39127966200	Perry	2	2	33	0.83	TRUE	0.8743
39127966300	Perry	2	2	28	0.85	TRUE	0.6522
39129020100	Pickaway	2	2	50	0.81	TRUE	0.883
39129020200	Pickaway	6	3	100	0.91	TRUE	0.9077
39129020310	Pickaway	1	1	60	0.69	TRUE	0.8346
39129020400	Pickaway	4	2	50	0.88	TRUE	0.9755

Appendix D: CPRG Grant Deliverables Chart

Plan Element/ Deliverable	Deliverable Team Lead	Priority Climate Action Plan (PCAP)	Comprehensive Climate Action Plan (CCAP)	Status Report
GHG Inventory	MORPC	**Required**	**Required**	Update Encouraged
GHG Emissions Projections	PCFO	Not Required	**Required**	Update Encouraged
GHG Reduction Targets	PCFO	Not Required	**Required**	Not Required
Quantified GHG Reduction Measures	PCFO	**Required** (priority measures only)	Required (comprehensive)	**Status & Updates Required**
Benefits Analysis	OSU	Encouraged	**Required**	**Required**
Low Income/ Disadvantaged Communities Benefits Analysis	OSU	**Required**	**Required**	**Required**
Review of Authority to Implement	Sustainable Columbus	**Required**	**Required**	**Update Required**
Intersection with Other Funding Availability	Sustainable Columbus	Encouraged	**Required**	**Required**
Workforce Planning Analysis	Sustainable Columbus	Encouraged	**Required**	**Required**
Next Steps/Future Budget and Staffing Needs	Sustainable Columbus	Not Required	Not Required	**Required**

Prepared by:

SUSTAINABLE COLUMBUS
ANDREW J. GINTHER, MAYOR

MID-OHIO REGIONAL PLANNING COMMISSION
MORPC

Power A Clean Future Ohio
LOCAL COMMUNITIES LEADING THE WAY

THE OHIO STATE UNIVERSITY
COLLEGE OF PUBLIC HEALTH

IMPACT Community Action
Serving Columbus and Franklin County