



2025 DUBLIN SUSTAINABILITY PLAN

October 2025

ACKNOWLEDGEMENTS

Our deep thanks to the City staff members, local stakeholders, and the community who shared their perspectives and invested their time to shape this plan.

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MESSAGE FROM THE CITY MANAGER

Dear Residents,

The City of Dublin aspires to be the most sustainable, connected and resilient global city of choice. Through exemplary economic, fiscal and environmental stewardship, we provide world-class, innovative services and amenities that make Dublin the most desirable and sustainable community.

In furtherance of becoming the most sustainable global city, the City of Dublin began the process of updating its sustainability framework. The Dublin Sustainability Framework was adopted by City Council in 2018 after several months of collaboration among Council, the Community Services Advisory Committee and City staff members. The Framework allowed us to set measurable objectives and identify action steps to meet our sustainability goals. We have invested heavily in sustainability through the installation of LED lighting, the purchase of electric and CNG vehicles, a robust landfill diversion program and numerous other initiatives. The Dublin Sustainability Framework has served us well for the last several years in establishing a foundation for the future of sustainability in Dublin.

In 2022, we began the effort to update the Framework. The EcoDublin team was assembled to assess the status of current goals, identify ongoing sustainability efforts and establish goals for the future. The EcoDublin team engaged a third-party consultant to craft a world-class sustainability plan, informed by international best practices and standards. This Plan addresses key action areas, giving the City measurable goals related to modeling sustainable leadership, designing sustainable communities, supporting the natural environment and achieving zero waste.

I would like to thank City Council, the Community Services Advisory Committee, the stakeholders involved in developing the Plan and our residents for their passionate support of sustainability efforts. The City is committed to doing what it takes to implement this vision and ensure an even greener Dublin for the future.

Thank you,

Megan O'Callaghan
City Manager

INTRODUCTION

The City of Dublin is the most resilient, connected, and sustainable global city of choice.

Beginning with an initiative to introduce native plant alternatives at new park development projects in 2000, the Dublin Sustainability Plan builds upon 20+ years of the City's commitment to sustainability. As the City looks ahead to support the future vision, this plan provides updated goals and identifies a series of impactful strategies for action from community-based recommendations to municipal opportunities. The plan is intended to serve as a framework for collective action for a sustainable Dublin that is as inclusive and equitable as it is impactful.

Core Message

Being the most sustainable community means being a hub for diverse businesses to grow and thrive, while also promoting sustainable community design that is zero waste, carbon neutral and supportive of its natural environment. This Sustainability Plan identifies four critical areas for action:

Model Sustainable Leadership

The City of Dublin has a history of successful partnerships and collaborations that drive sustainable innovations. Dublin can leverage these to establish a constellation of diverse sustainable partners to mobilize support for sustainable actions.

Design Sustainable Communities

Sustainability practices can have the greatest impact on development and the future of the built environment by improving multi-modal mobility, resiliency, efficiency, and renewable energy. Strategies include increasing access to transportation options, enhancing community resiliency, improving energy and water efficiency, and increasing access, generation, and use of renewable energy.

Support the Natural Environment

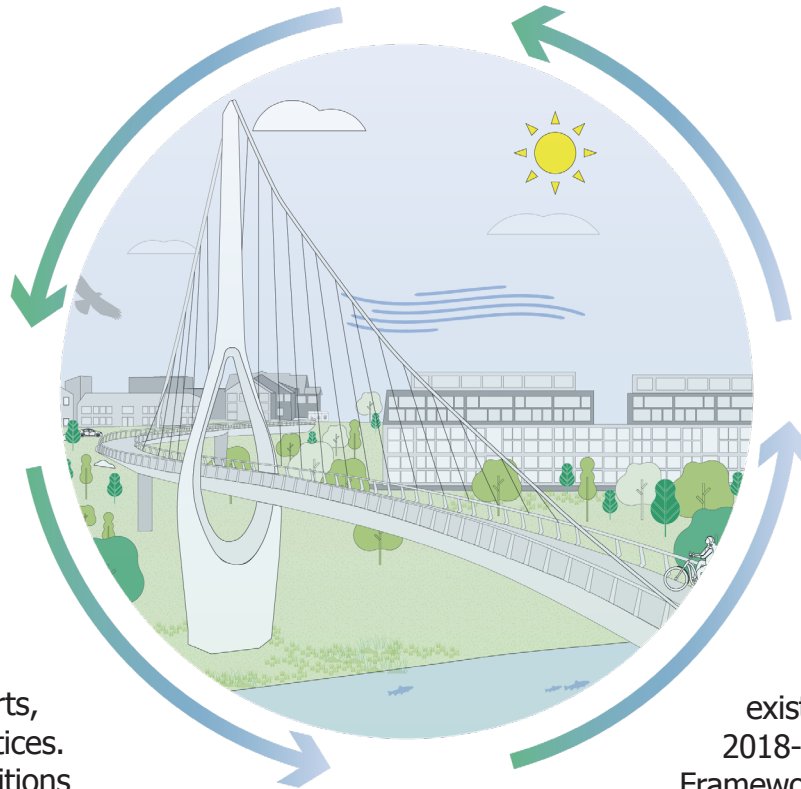
Target action in water, ecology, and air. The City of Dublin aims to establish a community that is ecologically sound for both people and wildlife through the conservation of parks, open areas, rights-of-way, watersheds, streams, and rivers.

Get to Zero Waste

Move towards a zero waste city that supports a circular economy and is a leader in waste management and diversion through recycling, reuse, food donating, and food waste composting.

How to Read this Plan

This report is the culmination of the Dublin Sustainability Plan process to understand the existing conditions, engage our community, envision solutions, and collectively impact Dublin's future. The Plan is informed by several aspects of Dublin's ongoing



sustainability efforts, policies, and practices. The existing conditions assessment included a site visit, review of recent and ongoing planning efforts, a benchmark analysis, and the development of the City's first greenhouse gas emissions inventory that included community-wide and municipal emissions data.

Understanding the City's sustainability ecosystem also involved public outreach and engagement. To this end, the Sustainability Plan engagement effort invited EcoDublin team members, stakeholders, and the broader community to share input and ideas that have shaped the planning process. The engagement process included a series of stakeholder interviews, community workshop, and a community survey.

Building off the "Understand" phase, the "Envision" phase included updating the

existing goals of the 2018-2022 Sustainability Framework and identifying four themes to advance action and implementation. Summaries of the updates to the nine (9) original goals include recent advancements, related planning efforts, input from the public survey and workshop, and gaps identified in the benchmark analysis. The benchmark analysis included the review of four sustainability plans for municipalities of similar size and climate. The recommendations are built around four themes: Model Sustainable Leadership, Design Sustainable Communities, Support the Natural Environment and Achieve Zero Waste.

The framework for collective action is laid out in the final section of this reports. It includes measurable objectives, priority level, impact level, and key actors to implement Sustainable Dublin.

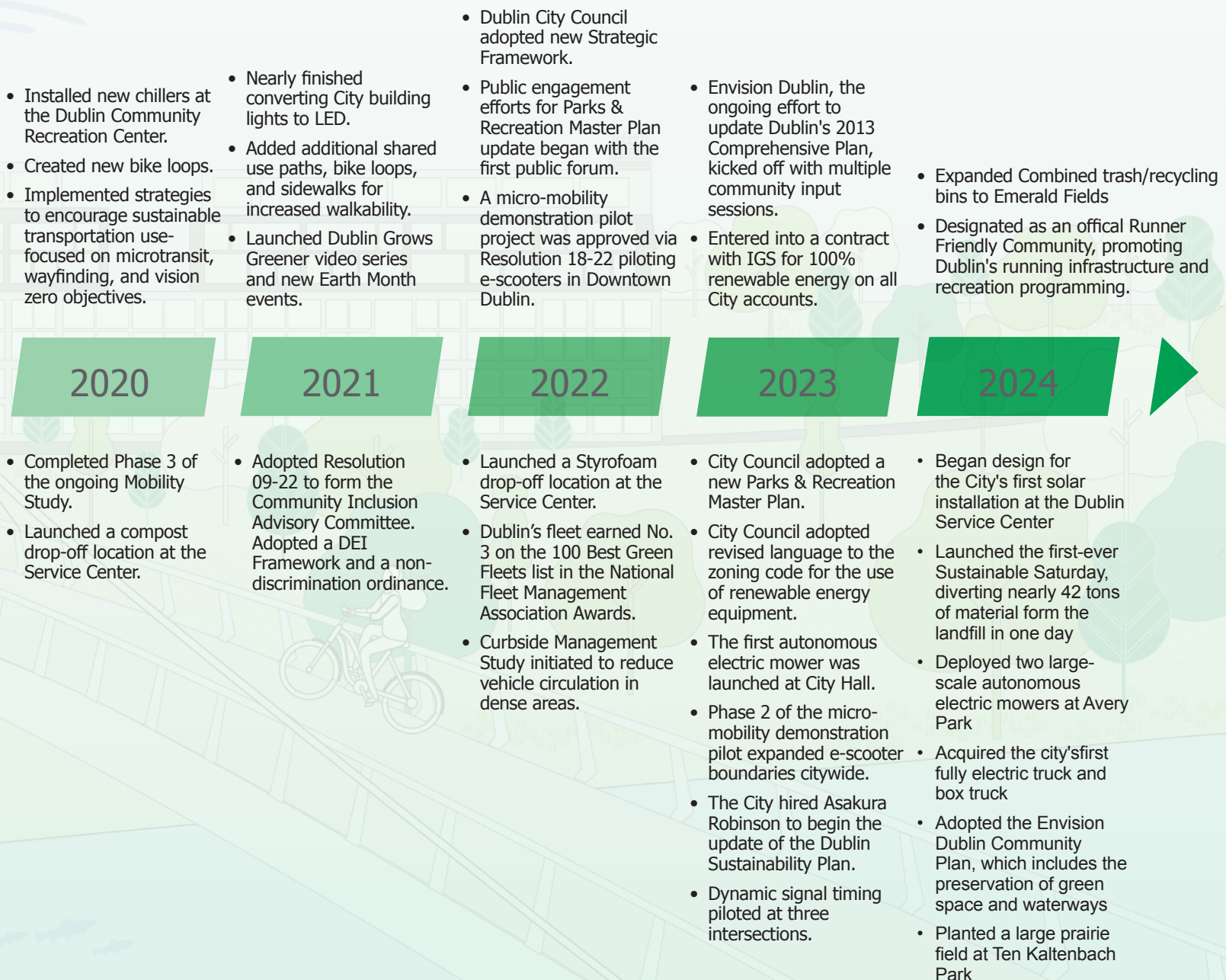
Please go to [DublinOhioUSA.gov](https://dublinohiousa.gov) to find more ways to get involved.

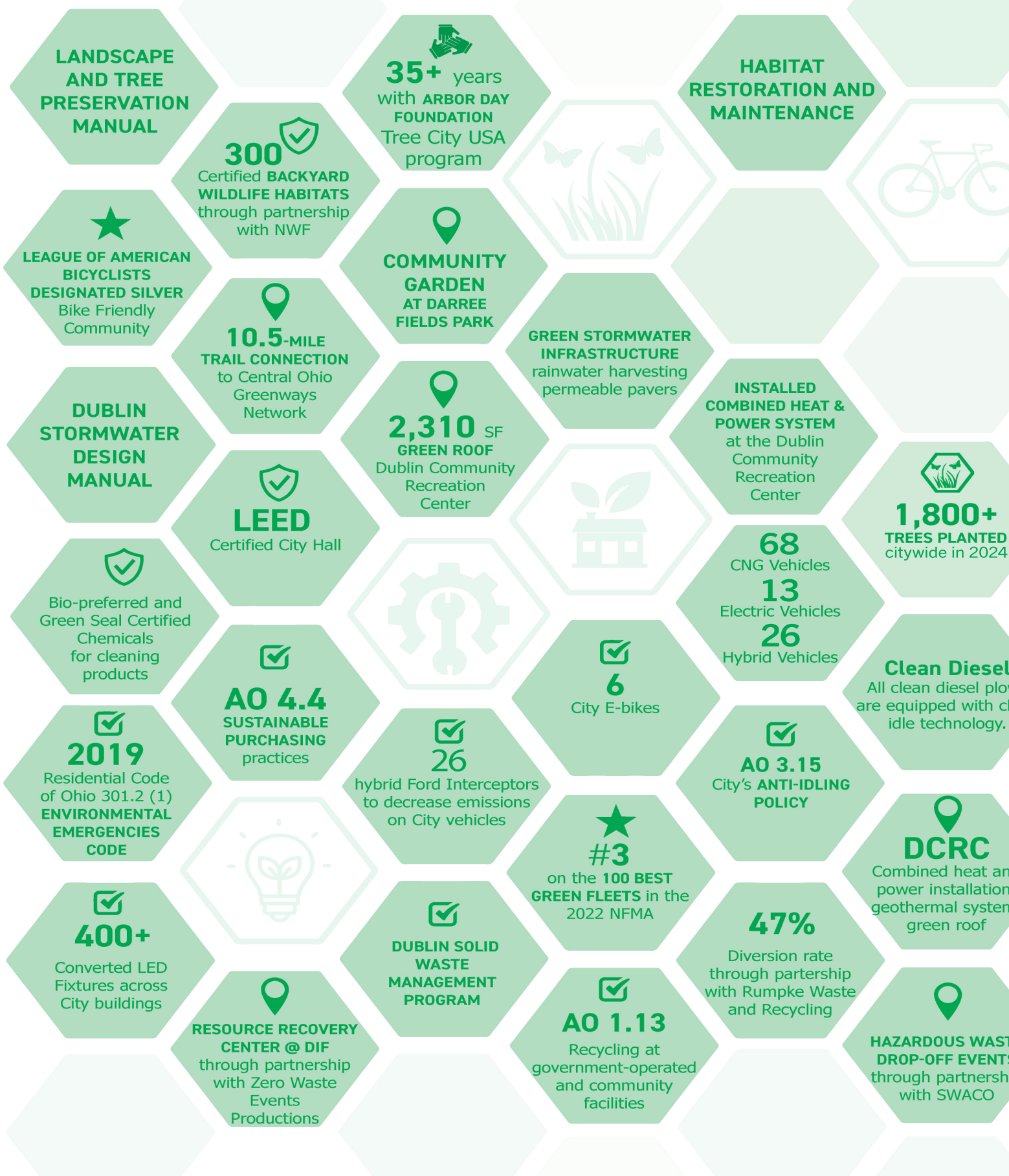
INTRODUCTION

THE PATH TO SUSTAINABILITY

Beginning with an initiative to introduce native plant alternatives at new park development projects in 2000, the City's commitment to sustainability spans 20 years. With the establishment of the EcoDublin team in 2016, the City has had several milestones achievements.

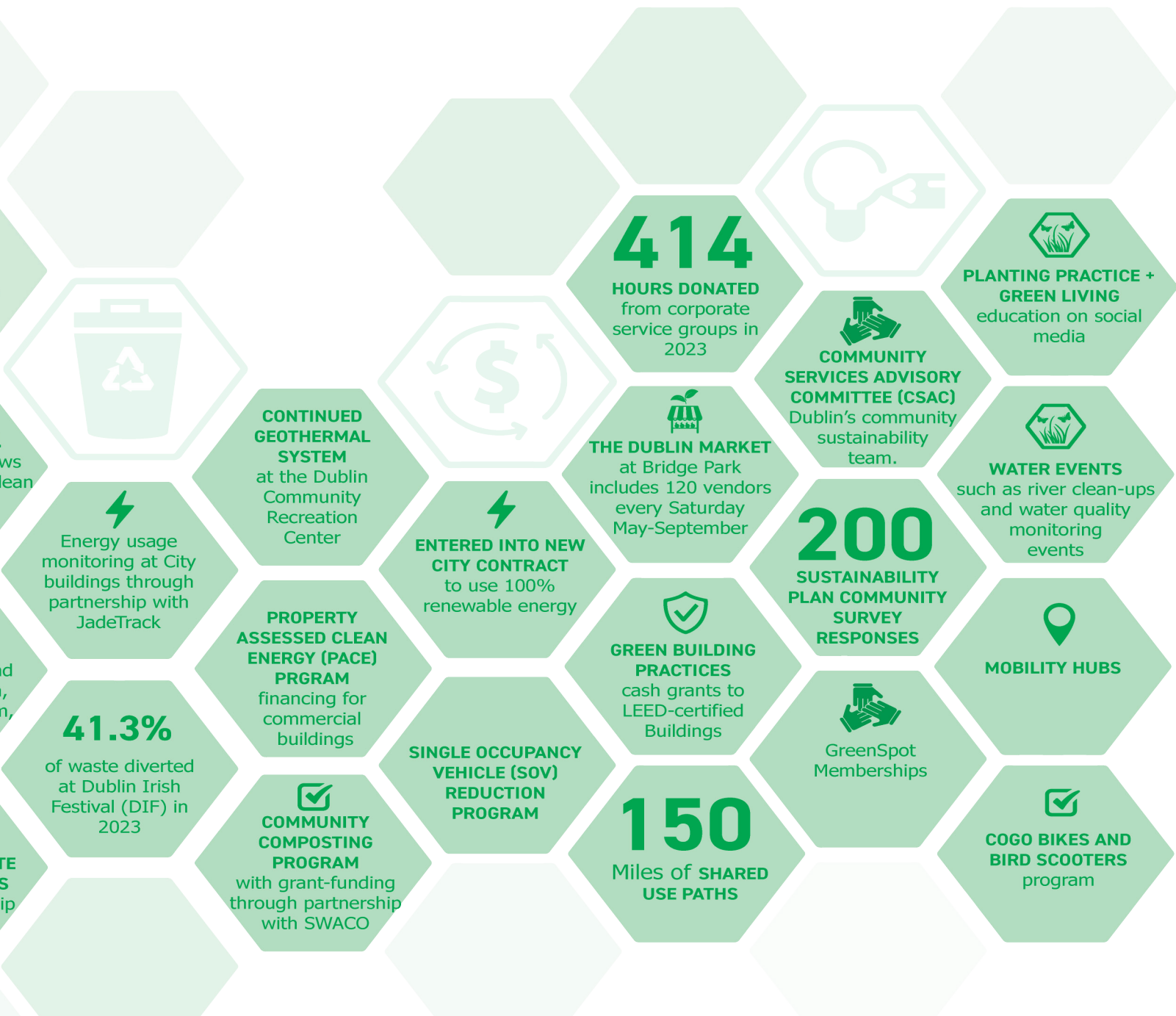






A Green Dublin

By the Numbers



INTRODUCTION

A CITY-WIDE EFFORT

The EcoDublin Team

Established in 2016, the EcoDublin team is comprised of staff members across all municipal departments.

Mitch Ament, Office of the City Manager
Brian Ashford, Facilities & Fleet Management
Kendel Blake, Office of the City Manager
Tyler Brooks, Recreation Services
Brad Conway, Building Standards
Doug Cordill, Community Events
Michael Darling, Public Service
Kirby Dearth, Economic Development
Eric Dickinson, Information Technology
Emily Goliver, Office of the City Manager
Michael Hendershot, Utilities & Stormwater
John Hyatt, Facilities & Fleet Management
Shawn Krawetzki, Parks & Recreation
Madi Kregel, Communications & Marketing
Greg Lattanzi, Police
Taylor Mullinax, Zoning
Meghan Murray, Finance Operations
Barbara Ray, Outreach & Engagement
J.M. Rayburn, Transportation & Mobility
Langdon Sanders, Innovation & Analytics
Cara Sheets, Innovation & Analytics
Ron Whittington, Human Resources





UNDERSTAND

An aerial photograph of a city, likely Dublin, showing a mix of urban development and green spaces. A large, semi-transparent green overlay covers the entire image. In the bottom right corner, a large white number '1' is prominently displayed.

1

UNDERSTAND SUSTAINABILITY IN DUBLIN TODAY

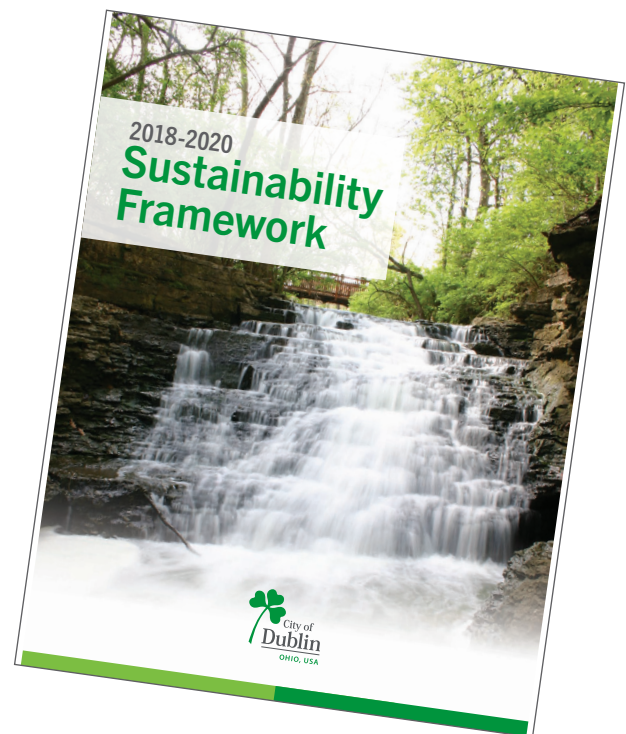
SUSTAINABILITY FRAMEWORK

In 2017, the City of Dublin committed to the Mid-Ohio Regional Planning Commission's Sustainable2050 plan to support sustainability in the Central Ohio region. At the recommendation of the Community Services Advisory Commission, the City began working on its first Sustainability Framework, which was developed by Staff and approved by City Council in September 2018. The Dublin Sustainability Framework was originally set to run through 2020, but was extended to 2021 due to the COVID-19 pandemic.

2018

Dublin Sustainability Framework

Dublin's Sustainability Framework provides effective and actionable guidance on how to achieve a sustainable future. The framework is a three-tiered structure, with overarching goals supported by clear vision statements, which are further broken into more specific, actionable goals. The goals are designed to be achievable, such as adopting a Complete Streets Policy or increasing pollinator-friendly areas. These goals are then translated into more granular measures, such as adding a minimum of five native plant areas annually to open space and right-of-ways. Further strategies are then listed under each measure to outline the specific steps that need to be taken to accomplish the task.



Framework Goals



Framework Progress

Dublin's Sustainability Framework has been updated every year since its adoption. The following pages summarize Dublin's progress on achieving its sustainability goals as of 2022.



SUSTAINABLE NEIGHBORHOODS & THE BUILT ENVIRONMENT

The City has adopted a Complete Streets and Smart Streets program into its larger Vision Zero efforts and has increased its miles of shared-use paths by 1% since 2018. The City is in the process of updating its zoning code to encourage sustainable development and seeking to implement energy conservation practices. Recently, City Council adopted revised language to the zoning code for the use of renewable energy equipment.

- ✓ Complete streets policy.
- ✓ Shared use path miles.
- ★ American League of Bicyclists Silver Designation, 2022.
- ✓ Updated zoning code to encourage sustainable development practice.

Benchmark Analysis

Oak Park, IL

MOBILITY

- Complete streets establishment.

ENERGY EFFICIENCY AND CONSERVATION

- Establish energy goals and preserving the embodied energy and heritage.
- For new buildings or major renovations, Oak Park is establishing energy efficiency reach codes.
- Establish programs to support building decarbonization and to expand community purchasing of renewable energy.

Carmel, IN

ENERGY EFFICIENCY

- Municipal energy efficiency evaluation to identify barriers to existing energy efficiency programs.
- Establish grant programs for energy efficiency.
- Green Building Policy and Best Practices Education for commercial and municipal construction.
- Benchmarking and disclosure program for both municipal energy and commercial energy.
- SolSmart Designation with solar education and program establishment.

Bloomington, IN

MOBILITY

- Bike mobility infrastructure to achieve the League of American Bicyclists Platinum Rating.

ENERGY EFFICIENCY

- Building efficiency for both residential and commercial through certifications, incentive programs, and low-interest loans.

Lakewood, OH

ENERGY EFFICIENCY

- Particular focus on retrofits and net zero-centric objectives:
 - Incentives-based net zero building code.
 - Community coalition to support net zero efforts.
 - Incentives for efficient building performance.
- Significant retrofit assistance for all buildings with a "deep retrofit" program.
- City-led neighborhood retrofit demonstration pilot for efficiency retrofits.



NATURAL RESOURCES

The City has annually added five native plant species to its open spaces and streets, offers water monitoring evaluations, and increased its overall wildlife education. Some goals that are still in progress include wildlife management and increasing resident participation in community gardens.

- ✓ Increase "pollinator-friendly areas" with five new pollinator gardens added.
- ✓ Management plans for deer, coyote, and skunk.
- ✓ Three annual major water monitoring evaluations were completed since 2018.
- ✓ 2023 Parks Master Plan Landscape and Tree Preservation Manual.

Benchmark Analysis

Oak Park, IL

HABITAT QUALITY & CONSERVATION

- Prioritize the use of native plants.
- Increase plant & tree cover throughout the City to protect and enhance biodiversity.

GREEN SPACE CONNECTIVITY

- Increase connectivity and access to parks and green space.

Carmel, IN

HABITAT QUALITY & CONSERVATION

- Native & drought tolerant plants for landscaping.
- Increase in annual tree planting.
- Rain garden installations.
- Support environmental quality through pursuing a no gasoline-powered mowing policy.

Bloomington, IN

HABITAT QUALITY & CONSERVATION

- Conserve and enhance 100 acres of green space or habitat by 2023.
- Remove 100 acres of invasive plants on public lands by 2023.
- Remove 100 acres of invasive plants on private lands by 2023.

Lakewood, OH

HABITAT QUALITY & CONSERVATION

- Riparian Areas:
 - Provide more dedicated wetland and riparian forest management.
 - New shoreline stabilization efforts.
- Protect and expand the City's forest canopy.
- Establish new tree planting initiatives.
- Explore zoning strategies to protect natural spaces.
- Green infrastructure the City standard.



MOBILITY

Dublin has fulfilled most of its initial sustainability goals for mobility. Along with the launch of the City's Mobility Plan, the City has focused on expanding multi modal, micro-transit systems. The City of Dublin launched an e-scooter program as part of the mobility study. The City continues to improve walkability and bikeability throughout Dublin and is actively pursuing expanded transit options through the West Dublin Passenger Rail Study and LinkUs. Through the Envision Dublin Community Plan, the City is updating the multimodal thoroughfare plan and mobility plan.

- ✓ Creating a mobility plan for workforce development and the business community.
- ✓ Piloting multiple alternative transportation projects (bike loops, mobility hub, bike share and Bird scooter programs).
- ✓ Implementation of 5 transportation options from mobility study objectives.
- ✓ Establishment of a continuous program for promoting equitable access to mobility.

Benchmark Analysis

Oak Park, IL

EMISSIONS & ACCESS

- Shift from personal vehicles to active transportation and transit.
- Pursue strategies to advance equity in transportation.
- Launch vehicle decarbonization programs.
- Establish emissions reduction goals for transportation systems.

Carmel, IN

EMISSIONS & TRANSIT OPTIONS

- Pursuing commuter line feasibility study.
- Encourage multi modal transportation & walkability programs.
- Promote EV leasing/ purchasing, and promote bicycles as alternative modes of transportation.
- Establish a municipal bikeshare program.

Bloomington, IN

- Reduce commuting in single occupancy vehicles (SOV).
- Increase the use of Bloomington's transit system by 5% by 2023.
- Walk Friendly Communities Platinum level designation by 2022 and achieve the League of American Bicyclists Platinum rating by 2022.
- Achieve bicycle and pedestrian fatality rates of zero by 2023.

Lakewood, OH

- Improve public transit.
- Expand walking & cycling infrastructure.
- Car-free or car-light zones.
- E-scooter & e-bike rental programs & incentives.
- New partnership with Northeast Ohio Areawide Coordinating Agency.
- New parking strategy.
- Fleet transformation coalition.
- EV charging infrastructure.
- Educational outreach.



COMMUNITY ENGAGEMENT

Community engagement on sustainability initiatives in Dublin have increased in overall exposure through the creation of an external advisory group and sustainability web page and have steadily increased memberships for GreenSpot since 2018.

- ✓ Increased GreenSpot membership by 50%.
- ✓ Increased exposure of Dublin on sustainability.
- ✓ Created an external advisory group.
- ✓ Created a sustainability web page.

Benchmark Analysis

Oak Park, IL

- Oak Park did not have any specific community engagement strategies in their climate action plan.

Carmel, IN

- Public education programming about the impacts of climate change.
- Sustainable business certification program.
- City of Carmel sustainability committee.

Bloomington, IN

- Bloomington did not have any specific community engagement strategies in their climate action plan.

Lakewood, OH

- Formation of a zero-emissions building coalition.
- Community climate advisory committee.





ECONOMIC DEVELOPMENT

The City has continuously increased its green encouragement programs since the 2018 Sustainability Framework. Efforts to encourage green businesses in the City are ongoing.

- ✓ Increased green encouragement programs.
- ✓ Engaged with green companies to increase awareness and created a green business roundtable.

Benchmark Analysis

Oak Park, IL

- Align community resource to further sustainable economic development.
- Promote sustainable businesses and business practices.

Carmel, IN

- Sustainable business certification program.
- Public education on green building best practices for commercial and municipal construction.
- Green building policy for commercial and municipal construction.

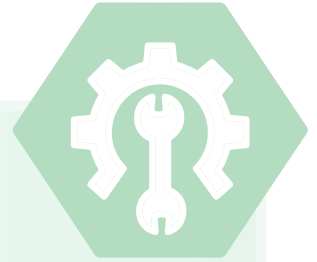
Bloomington, IN

- Business-centric programming and incentives for green business practices aimed at lowering GHG emissions.
- Reducing building energy use.
- Increase the percentage of residential and commercial buildings using sustainable building certification programs and incentives.
- Reduce commercial waste.

Lakewood, OH

- Lakewood does not have any economic development specific programming in their climate action plan.





CITY OPERATIONS

The City has reevaluated and enacted its policy on mitigating idling by City vehicles. The City has also reviewed policy regarding City procurement of recycled materials and is in the process of having a more paperless operation.

- ✓ Administrative Order (AO) 1.13, Dublin emphasizes recycling throughout its government-operated and community facilities.
- ✓ All products used for facility management are bio-preferred and Green Seal Certified Chemicals.
- ✓ The City practices sustainable purchasing through AO 4.4
- ✓ Ordinance 50-95 encourages City Staff to purchase recycled products.
- ✓ Nearly all City buildings have been converted to LED lighting.
- ✓ Through AO 3.15, the City established an anti-idling policy
- The strategies that are currently in progress are to transition boards, commissions, and City Council to become paperless, as well as efforts to educate Staff on City procurement and purchasing policy regarding reference for products derived from recycled materials.

Benchmark Analysis

Oak Park, IL

- Procurement of sustainable materials. Reviewing and revising the City Hall Sustainable Purchasing Policy.
- Expanding to other facilities with additional compliance tracking mechanisms in 2021.

Carmel, IN

- Implement a no-idling policy supported by technical assistance.

Bloomington, IN

- Develop an employee education plan to facilitate implementation.
- Reducing municipal GHG emissions.
- Non-renewable energy use in City-owned facilities.
- Reducing non-renewable fuel use by the City fleet & transit system.
- Sustainable building and green infrastructure practice into City facilities.

Lakewood, OH

- Developing an annual carbon budget.
- Developing equity and climate lenses for expenditures and policies.
- Annual GHG and energy use reporting.
- Transitioning to a zero-emissions fleet.
- Make sustainability someone's job.



RECYCLING & DIVERSION

As of 2023, the City's diversion rate from the Dublin Irish Festival has increased to 47%. The City is also steadily addressing its overall diversion rates within the community and throughout its City agencies and has a current diversion rate that exceeds state and national averages.

- ✓ City has successfully increased the Dublin Irish Festival diversion rate from 23% to 47%.
- ✓ Administrative Order (AO) 1.13, Dublin emphasizes recycling throughout its government-operated and community facilities.
- ✓ The City contracts with GoZero Services to operate a free compost drop-off location for residents.
- ✓ Through a partnership with SWACO, the City hosts drop-off collection events for household hazardous waste products. SWACO accepts several hard-to-recycle materials.
- ✓ Dublin has implemented a comprehensive solid waste management program.
- ✓ Ordinance 50-95 encourages City Staff to purchase recycled products.

Benchmark Analysis

Oak Park, IL

- Encourage zero waste practices.
- Reduce plastics & packaging waste, organic waste, hazardous materials waste, and building construction waste.

Carmel, IN

- Establish a municipal food waste composting program and food composting pilot programs.
- Backyard compost bin voucher program.
- Increasing recycling rate and reduce contamination rates.
- Establish a zero waste events policy.

Bloomington, IN

- Divert at least 40% of the volume of residential waste collected by City sanitation from being landfilled by 2023.

Lakewood, OH

- Circular economy strategy to support waste & diversion efforts.
- Municipal organics collection program.



ENERGY & AIR QUALITY

The City has actively installed electric car charging stations and will have completed 25 stations by 2024. Dublin Community Recreation Center has also undergone several improvements and retrofitting since 2018. The City is also still actively pursuing its goals to provide at least 15% of its facility electricity from solar energy, as well as achieving 20% reduction in vehicle emissions.

- ✓ Installed new chillers at the Dublin Community Recreation Center.
- ✓ Replaced interior lighting at all City buildings with LEDs (with the exception of a few lights at the Development Building).
- ✓ Providing alternative fueling choices to the public with 21 new ChargePoint locations.

Benchmark Analysis

Oak Park, IL

- Reduce vehicle emissions:
 - Foster a shift from personal vehicles to active transportation and transit.
 - Launch a vehicle decarbonization program.
 - Establish emissions reduction goals for transportation systems.
- Provide greater access to renewable energy:
 - Expand community purchasing of renewable energy.

Carmel, IN

- Municipal energy efficiency evaluation.
- Policy for City EV and hydrogen fleet purchasing and retrofits.

Bloomington, IN

- Reduce non-renewable energy use in City-owned and operated facilities by 12% by 2023.
- Reduce non-renewable City fleet vehicle fuel use by 5% by 2023.
- Reduce overall community GHG emissions by 11 percent by 2023.

Lakewood, OH

- Increase the use of rooftop and parking lot solar.
- Development of community solar gardens.
- New wind generation partnerships.
- Pilot project for offshore wind generation.
- Renewable energy cooperatives.
- Opportunities for household and neighborhood energy storage.
- Transition to a zero-emissions fleet.

PLANNING IN CONTEXT

A number of local and regional planning projects have been completed since the development of the original Sustainability Framework. Table 1 summarizes areas where recently completed and/or ongoing planning efforts align with the Framework's original goals. This alignment provides a foundation for the City to identify opportunities to leverage resources and work collaboratively and regionally to achieve its sustainability goals.

TABLE 1

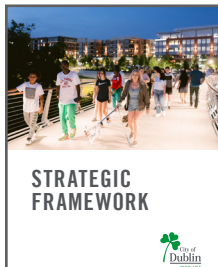
		2018 SUSTAINABILITY GOALS							
PLAN	YEAR	SUSTAINABLE NEIGHBORHOODS & BUILT ENVIRONMENT	NATURAL RESOURCES	CITY OPERATIONS	RECYCLING & DIVERSION	ENERGY & AIR QUALITY	MOBILITY	COMMUNITY ENGAGEMENT	ECONOMICS
									
MID-OHIO REGIONAL PLANNING COMMISSION Regional Sustainability Agenda	2021	●	●	○	●	●	●	○	●
CITY OF DUBLIN Strategic Framework	2022	●	●	●	●	●	●	●	●
CITY OF DUBLIN DEI Framework	2021	●	○	●	○	○	●	●	●
CITY OF DUBLIN Envision Dublin	2024	●	●	●	●	○	●	●	●
CITY OF DUBLIN Dublin Community Plan	2013	●	●	●	●	○	●	○	●
CITY OF DUBLIN Corporate Area Special Area Plan	2018	●	●	○	○	○	●	○	●
CITY OF DUBLIN West Innovation District Special Area Plan	2017	●	○	○	○	○	●	○	●
CITY OF DUBLIN Parks & Recreation Master Plan	2023	●	●	●	○	○	●	●	●

MORPC Regional Sustainability Agenda (2021)



The MORPC Regional Sustainability Agenda (RSA) provides high-level regional guidance for a collective effort toward a sustainable mid-Ohio region. The RSA is intended to both inform MORPC's sustainability efforts and align cities throughout the region in pursuit of shared objectives. It's further worth noting that the RSA is intended to directly connect with MORPC's Sustainability2050, which offers technical assistance to cities in the region as they pursue their own sustainability programming. Aligning City efforts with RSA goals then allows for easier access to valuable support from MORPC.

City of Dublin Strategic Framework (2022)



In 2020, Dublin City Council established a goal to develop a Dublin 2035 Visionary Framework. After an extensive planning and public engagement effort, Dublin City Council adopted a new Strategic Framework July 25, 2022. The values we hold most dear and the guiding principles we adhere to make it possible for Dublin to be bold in its vision.

City of Dublin DEI Framework (2021)



Dublin's DEI Framework, completed in 2021, represents the culmination of policy efforts undertaken by the City since 2015 to establish a municipal-level foundation to ensure Dublin is a City open and welcome to all. The DEI Framework is a key document for shaping an equity-based approach to sustainability in Dublin, offering valuable insight into the City's community demographics and how the City approaches fostering a more diverse, equitable, and inclusive Dublin. In the context of sustainability, the DEI framework is integral to shape an equitable approach to sustainability that is tailored to Dublin's existing communities while fostering greater accessibility and inclusivity for a growingly diverse population over time.

City of Dublin Comprehensive Plan (2013)



Adopted in 2013, the current Dublin Community Plan contains a substantial narrative component grounded in well-articulated guidance and recommendations for fostering/managing future growth. The City is currently in the process of updating the Community Plan, with the public kick-off taking place in spring of 2023. The Plan contains key planning components for guiding the City's development, including future land use, specific area plans, and thoroughfare plan, which provide critical context of how the City has previously envisioned the future of Dublin from a spatial lens.

Envision Dublin (2024)

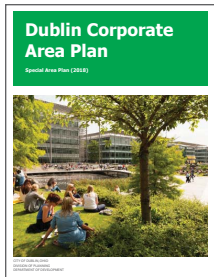


Envision Dublin is the City of Dublin's ongoing effort to update the Community Plan. The plan will address the topics of housing and neighborhoods, economic development, commercial and industrial areas, transportation, infrastructure and utilities, parks, open space, and environmental sustainability. The plan will also establish special area plans for numerous areas in Dublin. With input from the community and stakeholders, Envision Dublin is expected to be substantially complete by March 2024.



Robb McCormick Photography

City of Dublin Corporate Area Special Area Plan (2018)



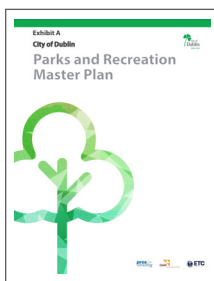
The Dublin Corporate Area Plan (DCAP), approved by City Council in 2018 and amended in 2022, is a comprehensive plan to revitalize nearly 1,000 acres of traditional corporate office parks along I-270. These developments were largely built in the 1970s, but contemporary preferences for office space have shifted significantly since then. Demand has moved away from more traditional, car-centric office park models and toward more walkable, mixed-use developments that are accessible by multiple modes of transportation. In response, the City of Dublin conducted a thorough analysis of the area to plan for the revitalization of these legacy office parks to make them more attractive to both current and potential future users. The DCAP provides insight into how the City structures its more traditional planning efforts, as well as how it approaches redevelopment and challenges related to suburban sprawl.

City of Dublin West Innovation District (2017)



The West Innovation District Community Special Area Plan (WID) is a plan to develop a cutting-edge research and innovation district on the western edge of Dublin. It is similar to the Corporate Area Plan in format and content, but differs in that it focuses on new development in the WID area, rather than redevelopment in the Corporate Area. The WID is intended to be a driver of economic growth and competitiveness for Dublin and the surrounding region. The public amenities and sustainability action items are particularly relevant to sustainability efforts, as they include a focus on sustainable building elements, renewable energy generation, and public art.

Parks and Recreation Master Plan (2023)



The City of Dublin Parks and Recreation Master Plan is a document that provides an inclusive framework for planning, acquisition, development, and administration of the parks and recreation resources, programs and facilities throughout Dublin. The plan aims to prioritize the maintenance of existing facilities and amenity needs as high priority. Other factors that were prioritized in the plan include community aspirations, economic impact, sustainability, cost of development and operations, and potential partnership opportunities.

GREENHOUSE GAS INVENTORY

MEASURING DUBLIN'S EXISTING EMISSIONS

To better capture Dublin's baseline performance from the lens of greenhouse gas emissions production within the City of Dublin, the Sustainability Plan process included the City's first greenhouse gas inventory. By tracking greenhouse gas emissions, the City can identify relevant strategies to reduce or mitigate its relative contributions to the greenhouse effect and climate change. The City's greenhouse gas contributions constitute its **carbon footprint**.

Methods, Scales, and Protocols

The greenhouse gas inventory reviewed 2022 data and utilized ICLEI's ClearPath tool to calculate emissions for two tracks: **government operations** and the overall **community scale**. The government track captures emissions created by local government operations such as buildings and facilities, vehicle and transit fleets, and utilities. The community scale includes all emissions produced within the locality's jurisdiction, including energy consumed by residential and non-residential buildings, transportation, and water and wastewater treatment processes.

The development of the inventories was guided to be compliant with established protocols, including the Local Government Operations Protocol (LGOP) (2010) and U.S. Community Protocol (USCP).

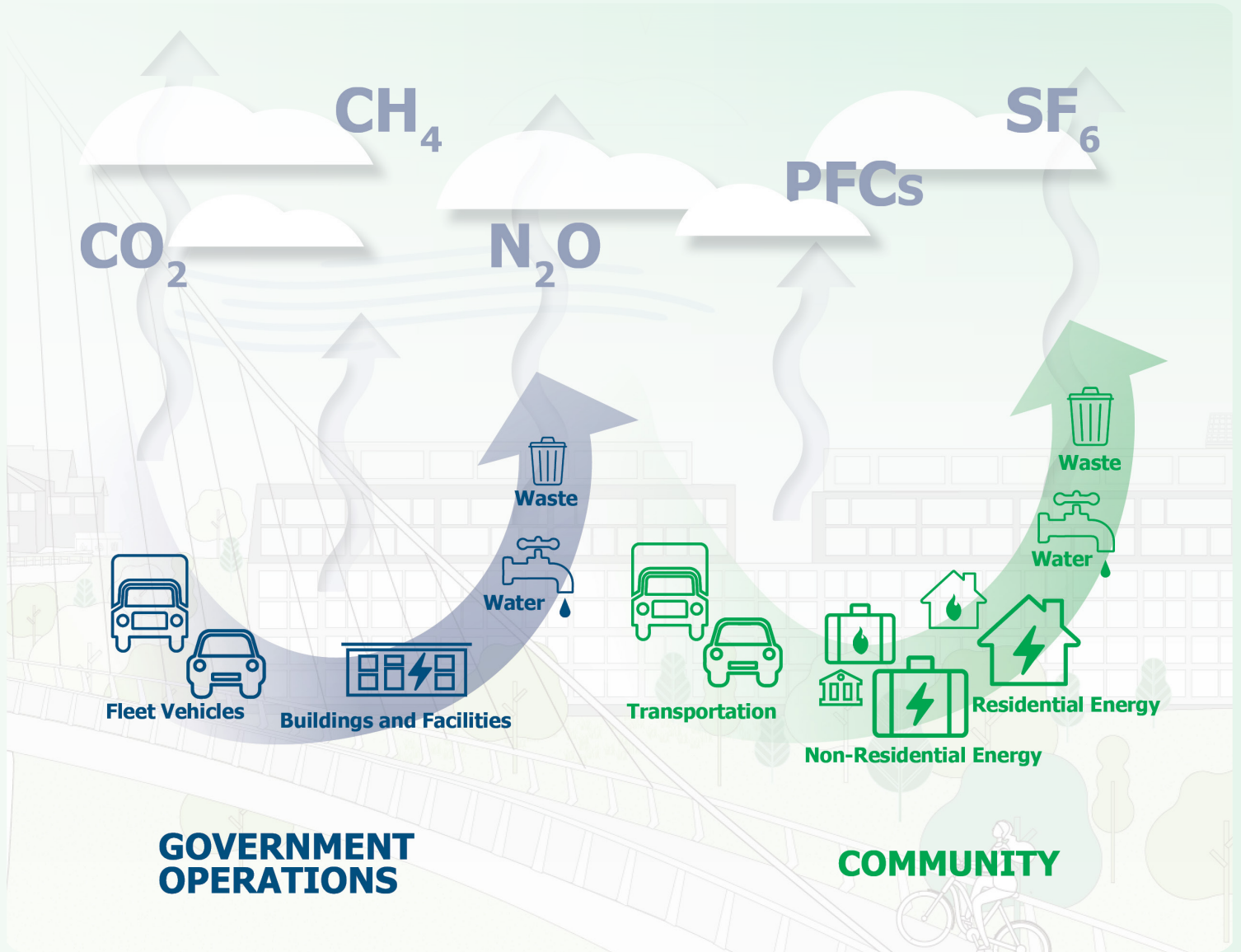
Please note that as this greenhouse gas inventory was performed using 2022 data, it does not reflect the 100% renewable energy contract currently in effect.

Direct and Indirect Scopes

Inventories can be further categorized into direct and indirect scopes.

Scope 1 emissions include those directly produced by local actions controlled or owned at the relevant scale (produced by the local government or by residents within the locality), such as fuel combustion from natural gas heating systems or gasoline vehicles. Indirect emissions are included as **Scope 2 emissions** for purchased energy sources such as electricity which are emitted elsewhere but consumed within the local jurisdiction, and **Scope 3 emissions** occur upstream or downstream through other purchased materials or services such as water and wastewater treatment or end-of-life handling for solid waste.

Because energy sources produce different mixes of the six internationally recognized greenhouse gases which directly impact the climate (Carbon dioxide ([CO₂]); Methane ([CH₄]); Nitrous oxide ([N₂O]); Hydrofluorocarbons ([HFCs]); Perfluorocarbons ([PFCs]); and Sulfur hexafluoride ([SF₆)]), overall emissions are summarized as **metric tons of carbon dioxide equivalents (MT CO₂e)**.



GOVERNMENT OPERATIONS

Dublin's primary greenhouse gas emissions are produced by its buildings, facilities, and fleet vehicles. Comparing performance to other localities is difficult due to differences in levels of service and operational scope. For example, Dublin does not operate a transit fleet, own an electric utility, or maintain its own water or wastewater treatment or solid waste facilities.

The results of the government operations inventory should be regarded as a tool to identify opportunities to improve efficiency rather than an exact accounting of Dublin's impact due to potential double-counting issues, as electric and compressed natural gas (CNG) fleet vehicle fueling is not metered separately from facility meters.

Buildings and Facilities

Facilities Management Staff provided data on electricity and natural gas usage for City Hall, the Development Building, the Community Recreation Center, the Service Center, the Justice Center, and the Fleet Management facility. The Dublin Community Recreation Center also includes a combined heat and power (CHP) system that produces electricity for the building as well as thermal energy for heating the building and its pool.

In 2022, Dublin's buildings consumed an estimated 4,653 MWh of electricity and 27,275 MMBtu of natural gas, producing an estimated 2,222 MT CO₂e from purchased electricity generation outside the locality and 1,451 MT CO₂e from natural gas combustion within the locality for a total of 3,672 MT CO₂e. The largest individual contributor is the Dublin Community Recreation Center, which produced an estimated 1,752 MT CO₂e while heating, cooling, and providing electricity for the building's over 113,000+ square feet of space and pools.

Additionally, an estimated 1,275.5 MWh of electricity was also consumed by Dublin's 2,176 streetlights, which contributed to an estimated 608.94 MT CO₂e.



Fleet Vehicles

Dublin's vehicle fleet of over 200 vehicles utilizes unleaded gasoline, diesel, and compressed natural gas (CNG) fuels as well as electricity. Fleet Management Staff provided fuel usage reports for individual assets, which permitted calculation of greenhouse gas emissions based on the amount of fuel consumed. While electric vehicle charging stations are metered separately, they are billed with the building's electricity consumption figures in all buildings but the Community Recreation Center. Thus, the overall building's use was analyzed for this assessment. Similarly, natural gas used in the CNG compression system at the Fleet Management facility is not metered separately.

The 131 gasoline vehicles consumed an estimated 72,189 gallons of unleaded gasoline, traveling 806,624 miles and producing an estimated 636 MT CO₂e. Thirty-two diesel vehicles consumed 12,138 gallons of diesel fuel and produced an estimated 124 MT CO₂e, and 58 CNG vehicles consumed 25,701 gallons gasoline equivalent (GGE) of compressed natural gas and produced an estimated 162 MT CO₂e.

About 80% of diesel fuel and about 25% of CNG fuel consumed powered heavy trucks such as dump trucks and snowplows. While fuel consumption varies by vehicle type, one GGE of CNG produced an estimated 0.0059 MT CO₂e, lower than 0.0088 MT CO₂e per gallon of gasoline or 0.0102 MT CO₂e per gallon of diesel.



Estimated Government Building Emissions

3,672 metric tons of carbon dioxide equivalent (MT CO₂e)



Estimated Fleet Emissions

922 metric tons of carbon dioxide equivalent (MT CO₂e)



COMMUNITY-SCALE EMISSIONS

What drives Dublin's emissions?

Transportation

Transportation emissions were estimated using a vehicle miles traveled (VMT) method and inputs from the Mid-Ohio Regional Planning Commission's regional transportation modeling program. Modeled estimates of daily vehicle miles traveled were provided for passenger vehicles and freight and service trucks using 2021 data, which is the most recently available. Assumptions for the mix of fuel type and vehicle type (e.g., light-duty gasoline vehicle, heavy-duty diesel truck) were derived from the EPA's State Inventory Tool's Mobile Combustion module's assumptions for the state of Ohio. Trips included in the model were integrated trips originating within the community and with the destination within the community, including both residents and workers in Dublin.

Annually, passenger vehicles transporting Dublin residents and workers drive an estimated 605,886,495 miles; roughly 12,286 miles per resident. Freight vehicles are responsible for an estimated 27,131,545 miles during the same period. Together, transportation in Dublin is responsible for an estimated 274,094 MT CO₂e, the largest single sector in the inventory.

Non-Residential Energy

Data provided by AEP Ohio and Columbia Gas was used to estimate energy consumption by both residential and non-residential customers. The data considers multifamily apartments as commercial and therefore, non-residential energy. Commercial and public electricity customers in Dublin consumed 366,836 MWh of electricity in 2022, resulting in an estimated 175,125 MT CO₂e. Additionally, natural gas customers consumed about 1,289,172 MMBtu, producing an estimated 68,567 MT CO₂e.

The combined non-residential estimate of 243,692 MT CO₂e, the second-largest sector in the community inventory, highlights the important role of the business sector in Dublin's energy consumption patterns. Dublin's strong office market and corporate presence means there is lots of space to heat, cool, and light proportionate to Dublin's residential population. There are about 180 square feet of office space per Dublin resident, compared to 24 square feet for Greater Columbus as a whole.

Residential Energy

Residential customers in Dublin consumed 169,348 MWh of electricity and 2,300,597 MMBtu of natural gas in 2022, resulting in emissions of 80,845 MT CO₂e and 122,361 MT CO₂e, respectively. Natural gas played a more significant role in the residential energy sector and was responsible for about 60% of residential emissions, likely due to its use as a heating fuel.

Solid Waste, Water, and Wastewater

While these activities occur outside of Dublin, landfilling solid waste and treating water and wastewater produces greenhouse gases. Solid waste emissions were estimated using Rumpke tonnage data, and water and wastewater emissions were estimated by prorating City of Columbus data based on Dublin's share of plant capacity usage.

How does Dublin compare to other communities?

Comparing Dublin's community footprint on a per capita basis allows for comparison across cities of different sizes. Carmel, Indiana, and Columbus, Ohio, were selected as comparison communities.

Why were these communities chosen?

These two cities were selected due to their available inventory data, geographic, and climate similarities. Carmel is located within a major Midwestern metropolitan area near Indianapolis' Interstate 465 loop, similar to Dublin's location on Interstate 270, and was reviewed during the planning process. The City has average of 185 sunny days per year compared to Dublin's an average of 176 sunny days. While Columbus is significantly more urbanized than Dublin, the methods and data sources for the two cities are nearly identical, providing a comparison of local consumption patterns. Columbus is also located in the same climate as Dublin but has an average of 178 sunny days per year.

What were the major differences?

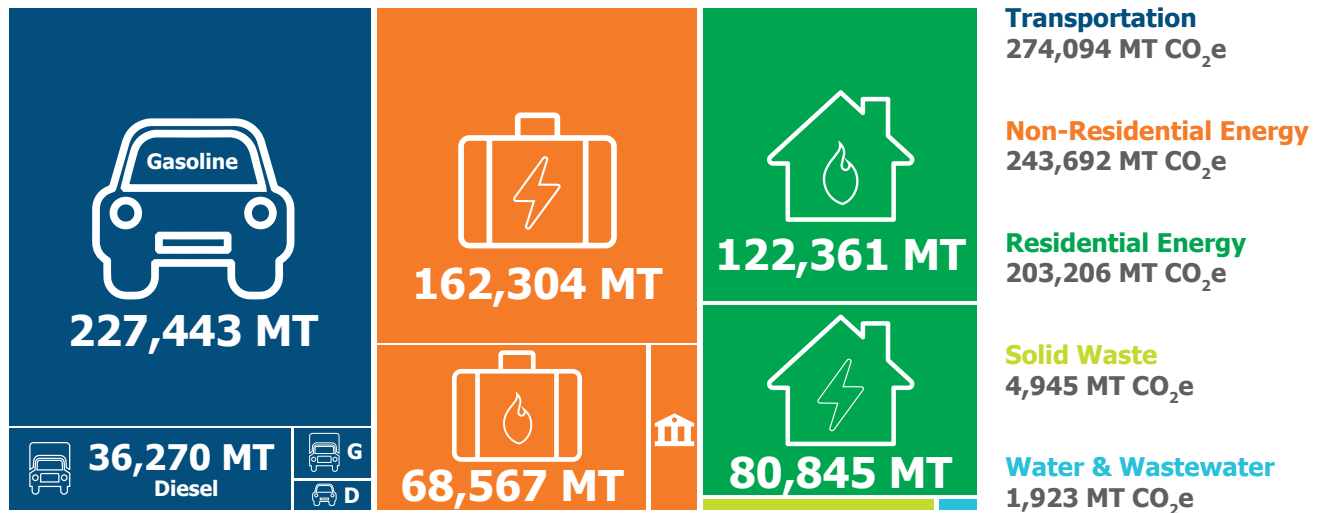
Dublin's estimated greenhouse gas emissions were higher, on average than these two cities. Generally, Dublin residents drive more than the peer communities, with Columbus' estimated per capita passenger VMT of 8,067 miles representing ~34% fewer vehicle miles than Dublin. While Dublin residents used less electricity than Carmel residents, they used more natural gas, likely reflecting differences in home heating fuel choices between the two areas. Dublin

residents typically used more residential energy than Columbus residents, with a higher volume of natural gas consumption being one of the primary drivers. Across both peer communities, Dublin's non-residential

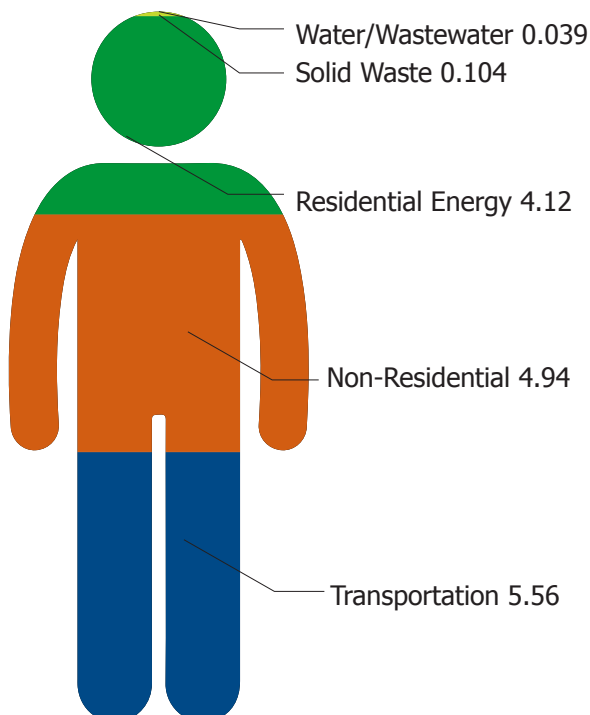
energy usage was significantly higher, likely reflecting the outsized role of office and corporate campuses in Dublin's built environment.

Estimated 2022 Greenhouse Gas Emissions (Community Scale):

727,860 metric tons of carbon dioxide equivalent (MT CO₂e)

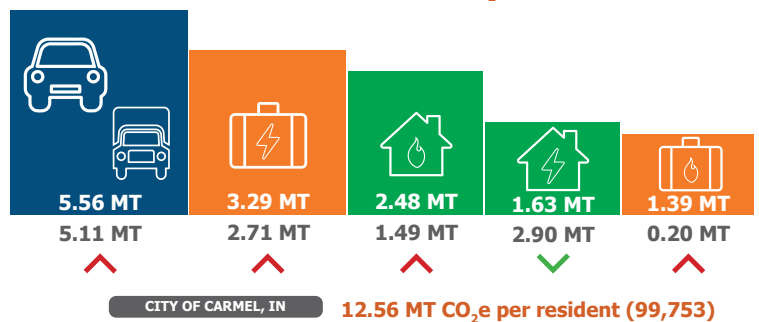


Per Capita Emissions (MT CO₂e)



How does Dublin compare to other communities?

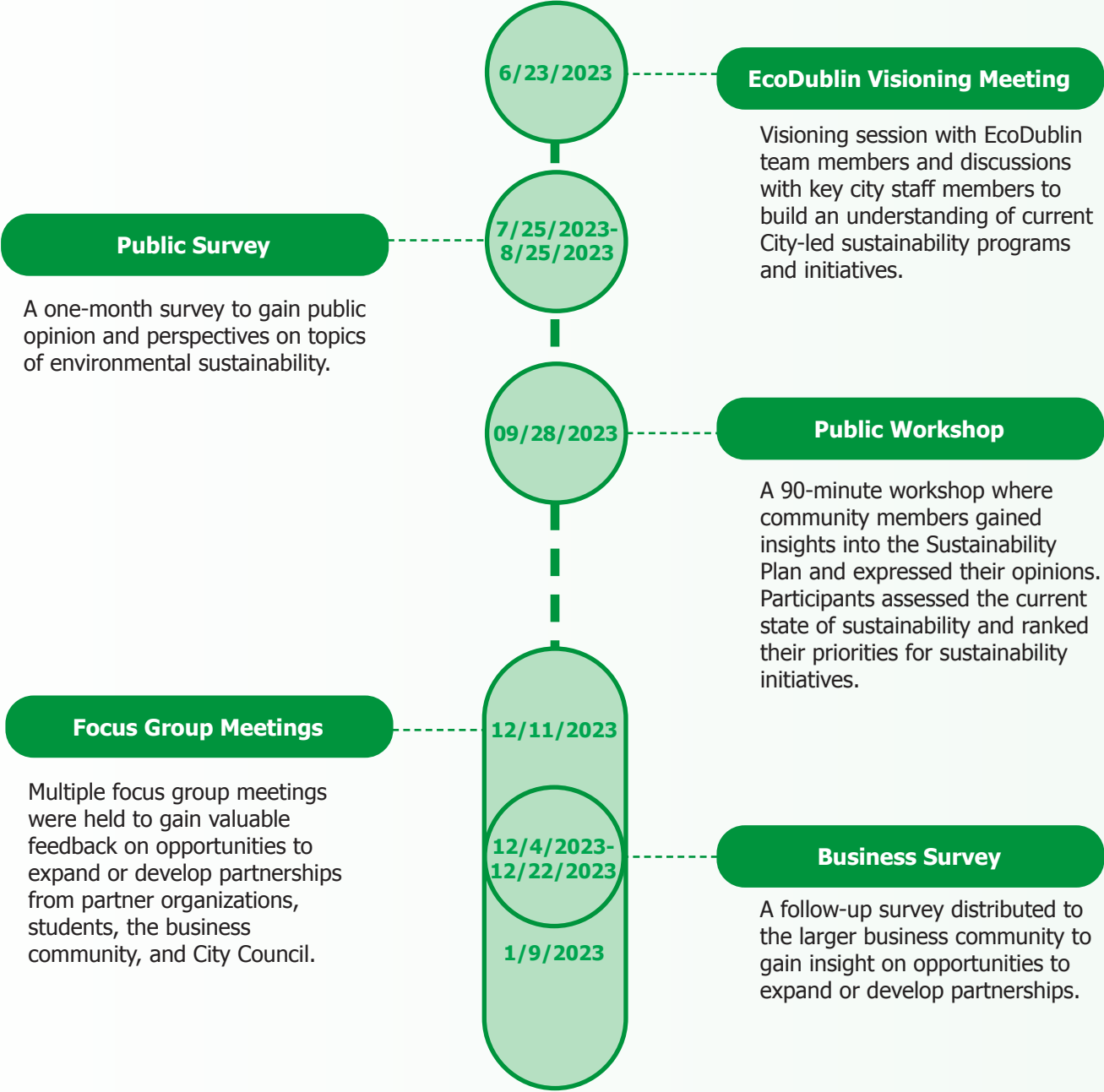
Dublin's Per Capita Emissions: 14.76 MT CO₂e per resident (49,314)



ENGAGEMENT

OVERVIEW

The Sustainability Plan engagement effort invited EcoDublin team members, stakeholders, and the broader community to share input and ideas that have shaped the planning process. This section details the engagement process, which included stakeholder interviews, an EcoDublin visioning workshop, community survey, and community workshop.



ECODUBLIN VISIONING MEETINGS

The stakeholder interviews involved a series of dialogues with various City agencies, such as City Engineering, Fleet Management, and Parks & Recreation. The intent of the interviews was to get a grasp on the state of sustainability initiatives that are currently being undertaken by the City. The discussions also asked team members to provide their insights on strengths, weaknesses, opportunities, and threats to City programs.

WHAT WE HEARD

City Utilities

Stormwater management follows EPA guidelines and conducts water quality sampling throughout the City. The Waterways Maintenance Program is an effort to restore City-owned waterways with:

- Bank Stabilization
- Log Jams
- Riparian habitats
- Invasive species removal pilot projects

In the Bridge Street District, Dublin is experimenting with innovative stormwater management methods including bioretentions, rain gardens, permeable pavers, and underground storage.

Transportation Mobility

Micromobility is growing in Dublin, with opportunities to implement CoGo, a bikeshare program offered in Columbus, as well as supporting an increase of e-scooters. The City currently has one park and ride station with planning efforts to connect to future Northwest Corridor bus rapid transit lines. The West Dublin Passenger Rail Study is exploring a potential location to bring passenger rail to the West Innovation District

Fleet Management

The City has a total of 242 vehicles, including plow trucks and standard vehicles and an award-winning green fleet comprised of CNG vehicles, electric vehicles and hybrid vehicles. Part of the fleet services was expanded through a \$2.5 million grant from 2009 for

Guiding Questions

1. How can we continue to build upon the momentum of the Sustainability Framework? What is currently missing?
2. How can a Sustainability Plan both inform and support on-going and future planning efforts?
3. What are the most important aspects for the City's vision of being the most sustainable, connected and resilient global city of choice?

Objective 1: Evaluating the Framework



a CNG Station, which still services the City today. The City also has fleet services with the school system, as well as the Washington Township Fire Department.

Parks & Recreation

Public Service currently has 80 full-time staff and 60 part-time staff helping to upkeep 64+ parks. The Parks & Recreation Department recently updated the Parks & Recreation Master Plan, which involved heavy community engagement, and thus reflects updated community needs and demographics.

Parks maintenance techniques that have been successful include diversified plant palettes that are pollinator-friendly and the usage of fewer chemical treatments in various management practices. Some issues the public service crews have encountered in recent years include inconsistency in rainfall and warmer winters.

Asset Management and Quality Assurance

City of Dublin residents utilize the GoDublin App to request City services. City departments have done assessments of City assets and sidewalks, and identify areas where maintenance is needed and areas of priority, such as high traffic rights-of-way and school areas. Next steps for the City's infrastructure monitoring system include reviewing data and identifying frequency of updating City services and/or infrastructure.

SURVEY FINDINGS

From July 25 to August 25, 2023, Dublin residents received a 22-question survey, distributed via social media, inquiring about their demographics and perspectives on topics of environmental sustainability. The survey received a total of 165 responses. The following section highlights some of the responses to questions asked in the Community Survey. On top of the survey responses, some of the open-response comments highlighted residents' concerns regarding the trade-off between development and greenspace preservation, as well as a need for continuous engagement throughout the planning process.

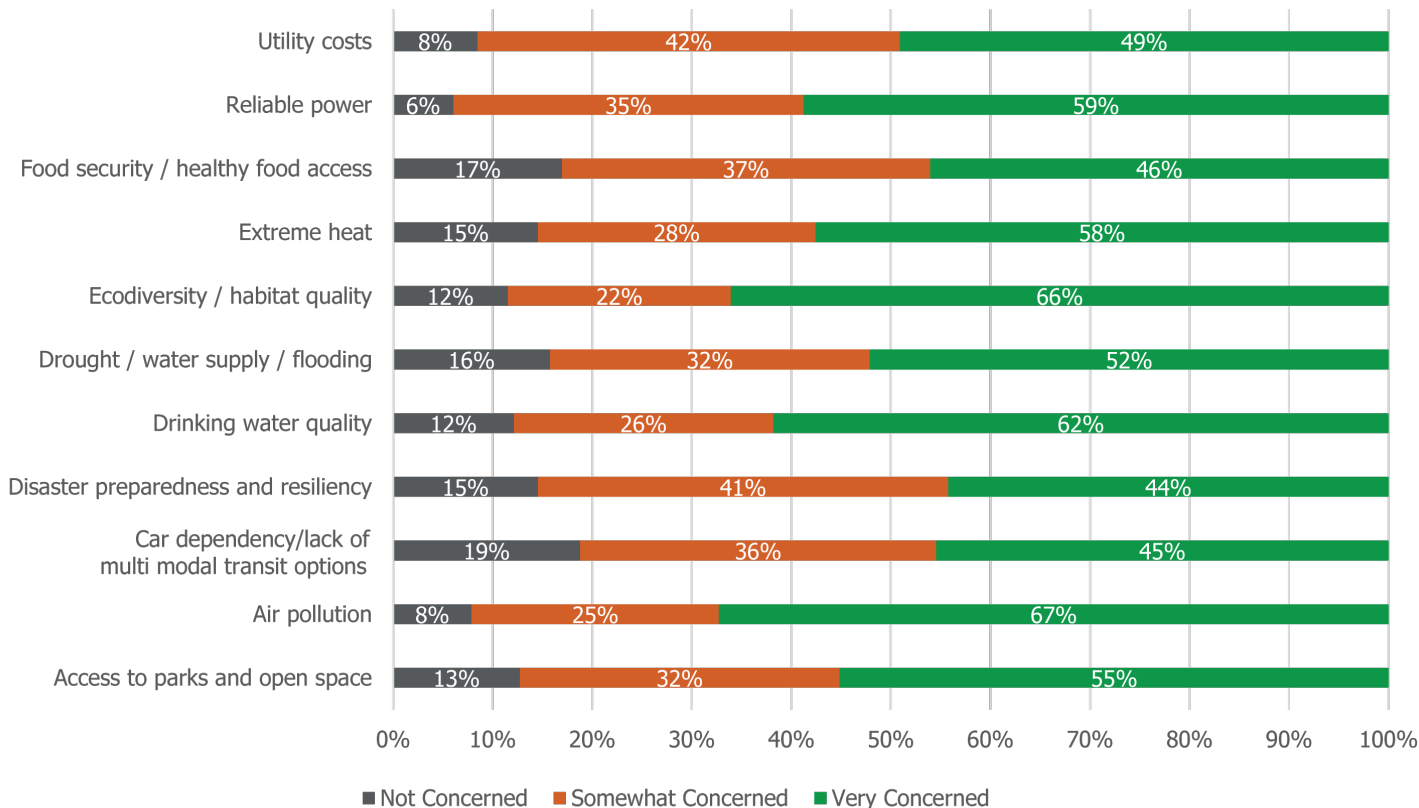
Sustainability Concerns

Nearly all respondents hold some concerns about having reliable power (94%), utility costs (91%), and air pollution (91%).

The top four concerns for sustainability that people identified as "Very Concerned" were:

- Air Pollution (67%)
- Ecodiversity/habitat quality (66%)
- Drinking Water Quality (62%)
- Reliable Power (59%)

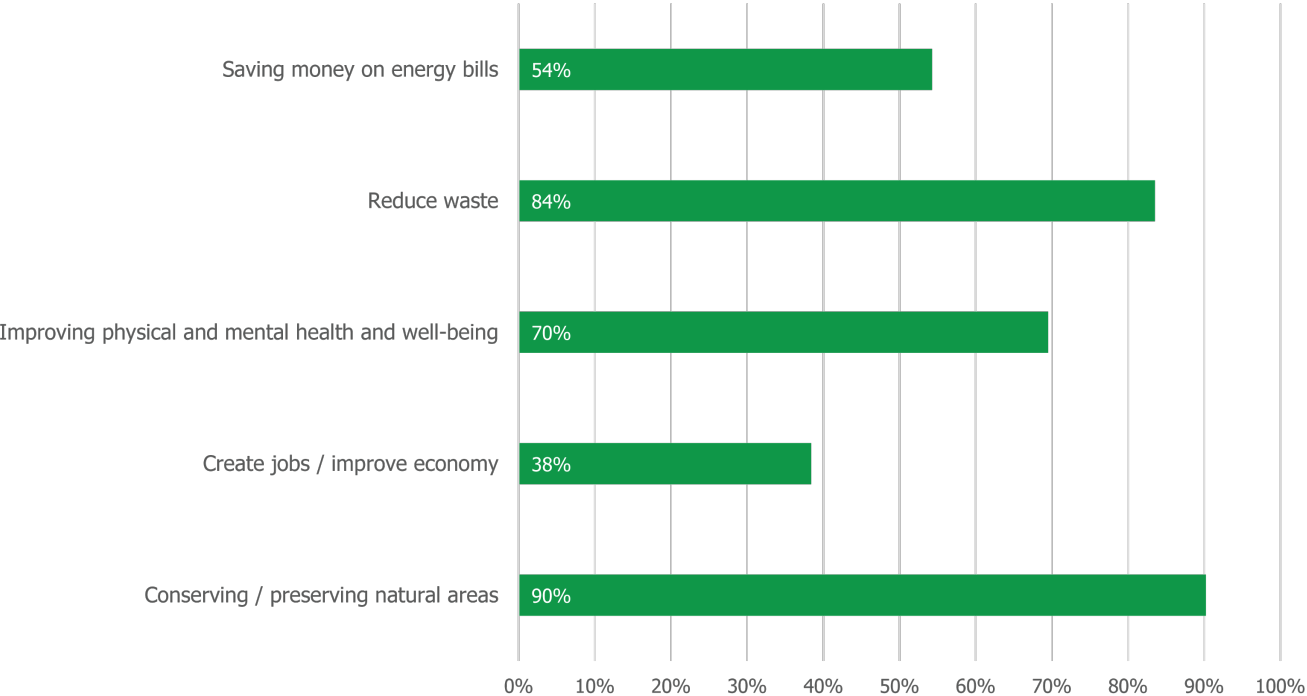
How concerned are you about the following:



Sustainability Benefits

Nearly all respondents identified conserving/ preserving natural areas and the reduction of waste as sustainability benefits that were most important to their households.

Sustainable cities offer a variety of benefits. What benefits are the most important to your household? Please check all that apply.



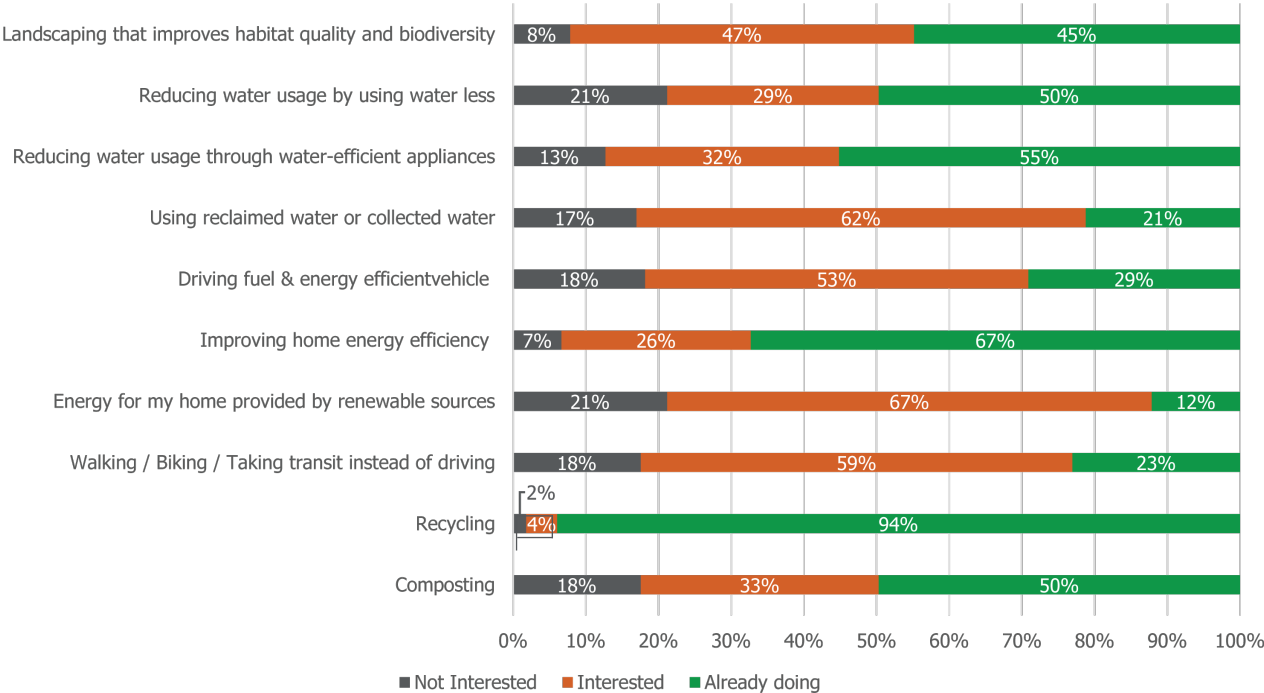
Sustainability Measures

Nearly all respondents were interested in and/or already taking measures for recycling (98%), improving their home energy efficiency (93%), and having high-quality landscaping that improves habitat quality and biodiversity (92%).

The top sustainability measures people responded as "Already Doing" were:

- Recycling (94%)
- Improving home energy efficiency (67%)
- Reducing water usage through low-flow and water-efficient fixtures (55%)

What types of sustainability measures is your household interested in or is currently undertaking?



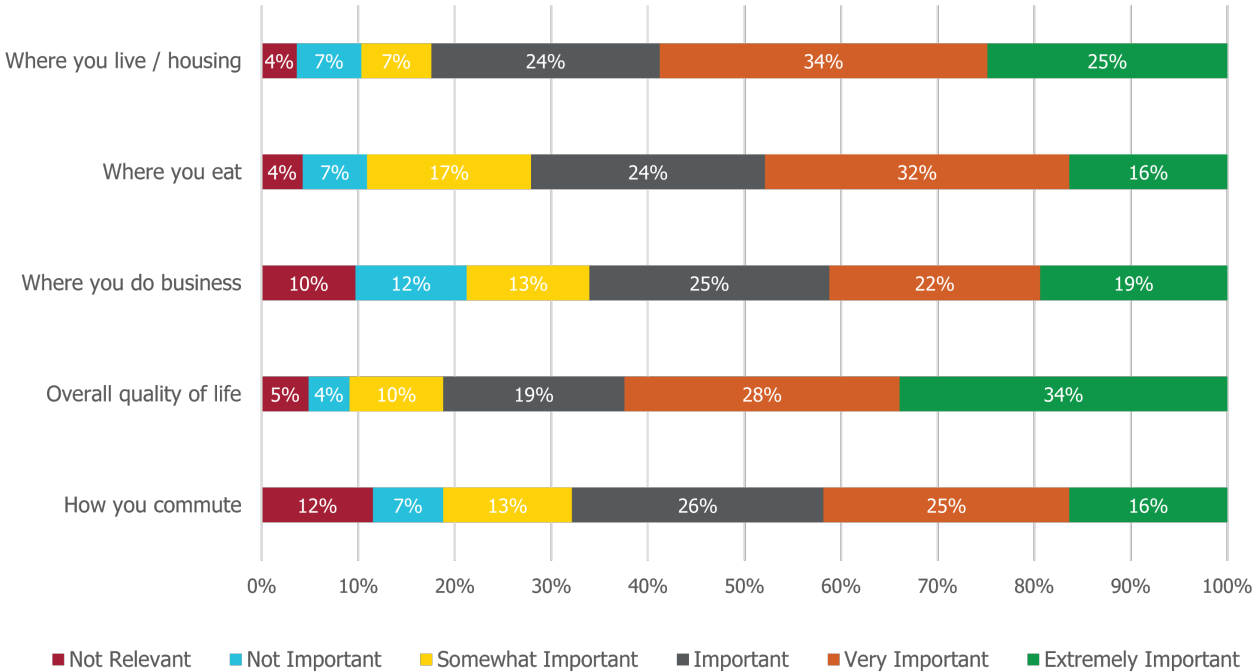
Sustainable Services

Survey respondents identified sustainable services and sustainability options that have some level of importance in deciding their overall quality of life (91%), housing/ where you live (89%), and where you eat (89%).

Sustainable services and sustainability options were ranked "Extremely" and "Very" important in the following:

- Overall quality of life (62%)
- Where you live/housing (59%)
- Where you eat (48%)

How important are sustainable services and sustainability options in deciding the following:



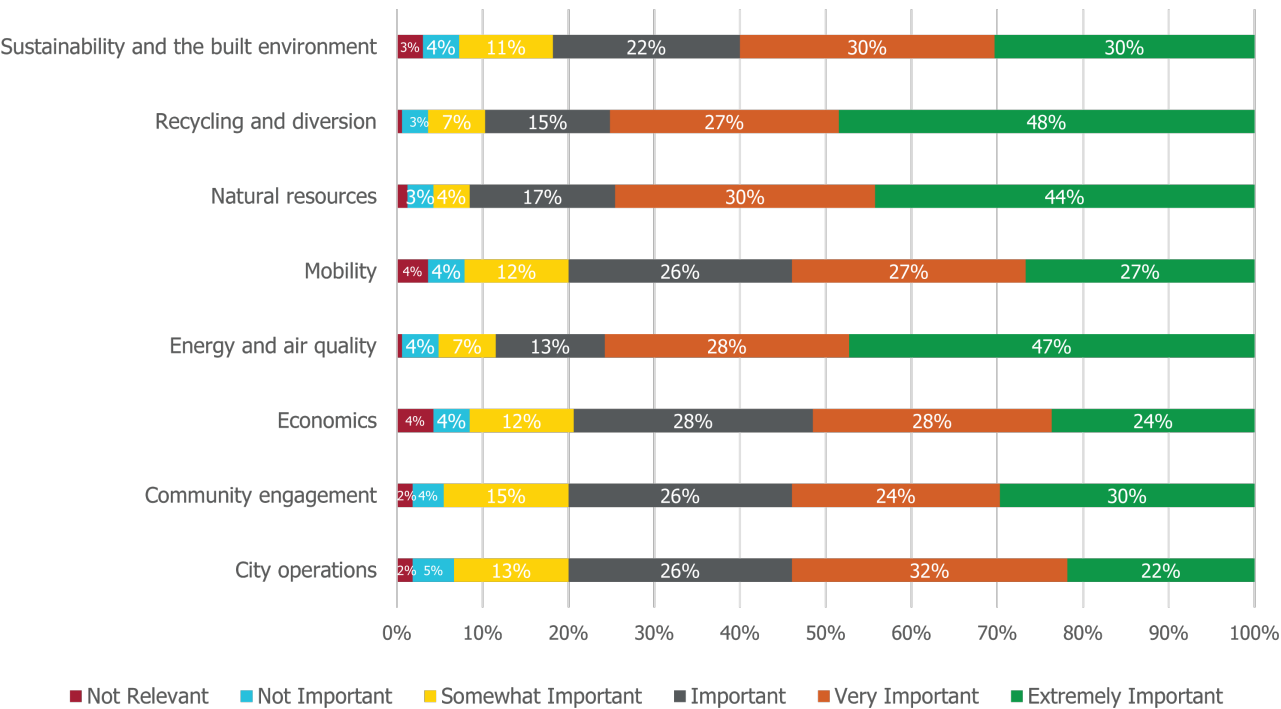
Sustainability Goals

According to survey responses, the City of Dublin's sustainability goals that garnered the most level of importance were recycling and diversion (97%) and sustainability and the built environment (96%). There was also high overall rankings for natural resources, energy and air quality, and community engagement (95% for each goal).

Respondents were also asked to identify their top two goals. Based on the responses, the top goals that were prioritized in their households were:

- Natural Resources (20.5%)
- Sustainability and the Built Environment (20.2%)
- Energy and Air Quality (20.2%)

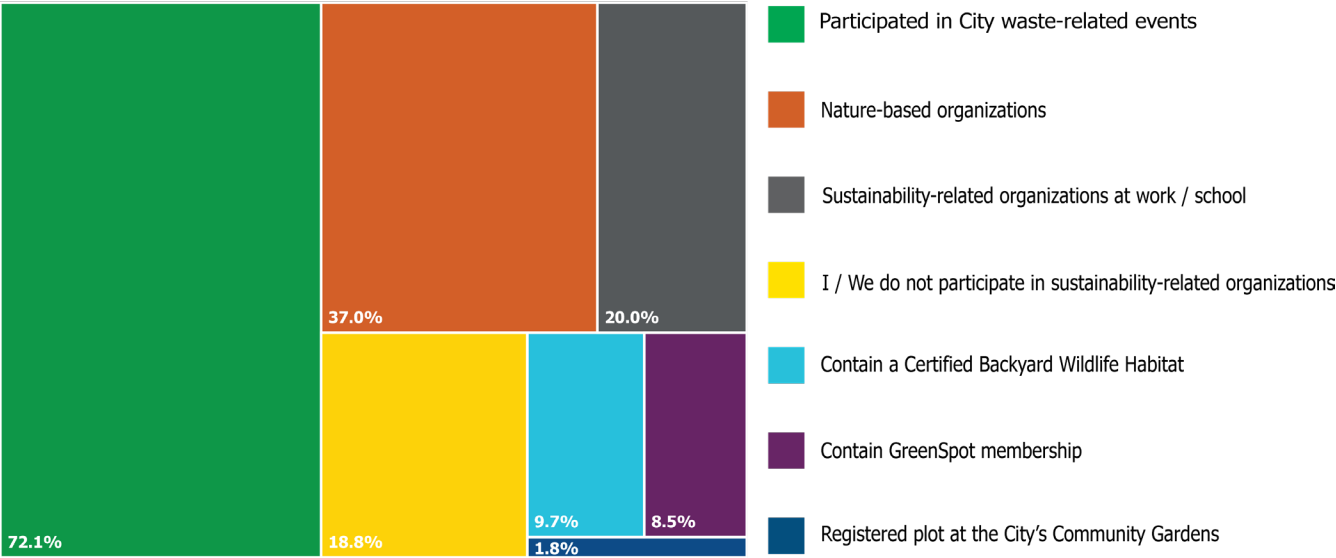
Rank the City of Dublin's seven (7) sustainability goals according to your priorities or level of importance in your household.



Sustainability-Related Programs and Organizations

A majority of respondents and/or their family members have participated in City waste-related events (72.1%). Other sustainability-related programs and/or organizations that have higher levels of participation include nature-based organizations (37%) and sustainability-related organizations at work or school (20%).

Do you or a family member participate in sustainability-related programs and/or organizations? Please check all that apply.



COMMUNITY WORKSHOP

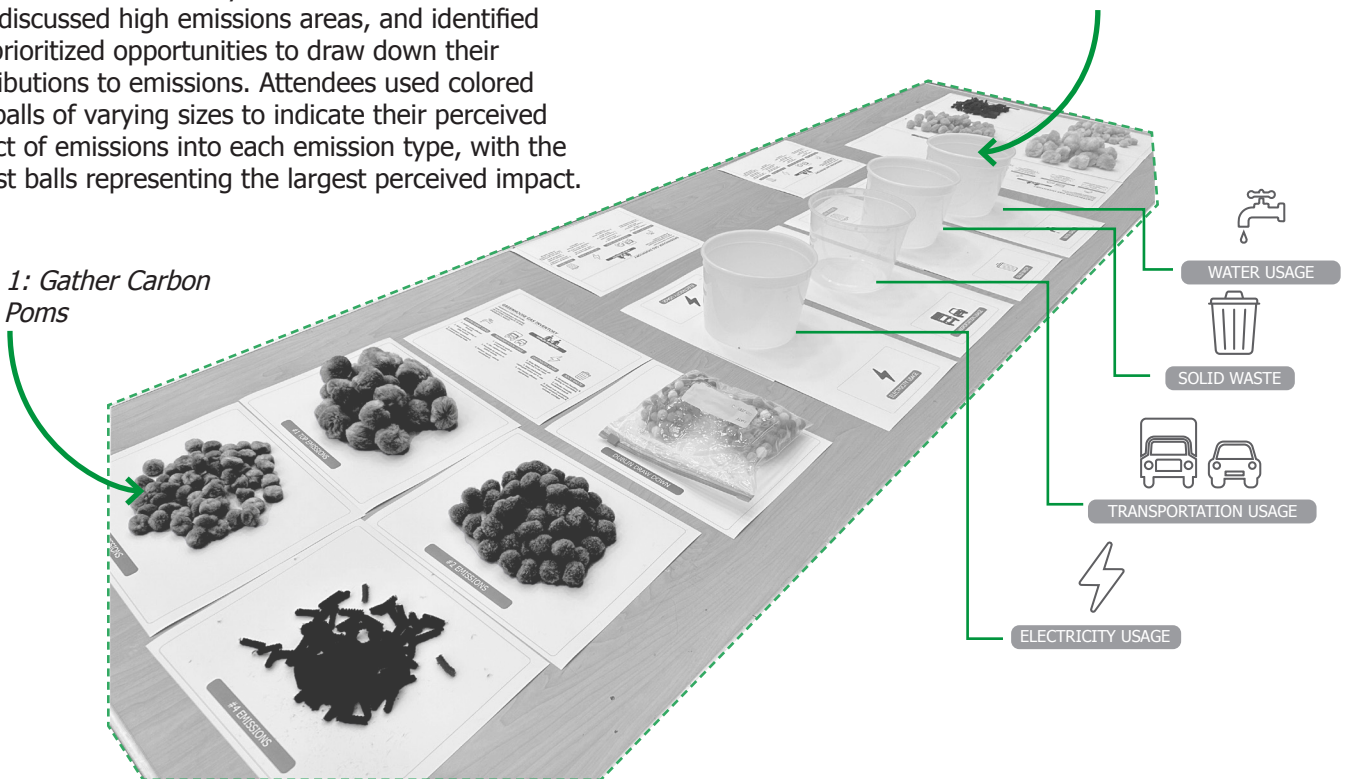
The 90-minute Community Workshop for the Dublin Sustainability Plan took place Sept. 28, 2023. Community members had an opportunity to learn more about the Sustainability Plan and partake and provide their input on the state of sustainability and their prioritization of sustainability initiatives in Dublin. The following section outlines the three activities that took place at the workshop.



Dublin Draw Down

The Dublin Draw Down activity began with a presentation of the data from the Greenhouse Gas Inventory. Emissions data included municipal emissions and community emissions. Attendees then discussed high emissions areas, and identified and prioritized opportunities to draw down their contributions to emissions. Attendees used colored puff balls of varying sizes to indicate their perceived impact of emissions into each emission type, with the largest balls representing the largest perceived impact.

Step 1: Gather Carbon Pom Poms



Step 2: Use Pom Poms to Rank Emissions

WHAT WE HEARD

- Participants indicated solid waste and water as the top categories in which they are taking action.
- The top two emission categories in Dublin, indicated by participants were electric and transport, which aligned with existing emissions data.

Resilience Mapping

A map of Dublin showing key destinations, parks, and natural assets was presented via 36"x48" boards. Participants used masking tape, pins, and sticky notes to provide feedback regarding micromobility and shared-use paths, following a series of guiding questions.

WHAT WE HEARD

- Top walking and biking destinations people marked were the Dublin Market/Bridge Park, the Dublin Plaza Shopping Center, and Coffman Park.
- Participants marked routes that were located north of U.S. Route 33, which were on or adjacent to existing trails, as well as on Dublin Road and other local streets that provide access to some of the pinned destinations.
- Glick Road from Carnoustie Drive. to Dublin Road, Memorial Drive, Avery-Muirfield Drive, and connections across Scioto River were identified as non-existent or difficult from a safety/visibility standpoint.
- The top three most desired mobility improvements were:
 - Safe crossings
 - Tree canopy/shade along paths
 - Access to regional trails



Equity in Action

This activity was an exploration of existing sustainability efforts and potential future programming within Dublin. Attendees voted on programs they would like to see expanded and/or improved, or created in the future. Participants were also encouraged to write a pledge for future participation in sustainability efforts.

WHAT WE HEARD

- The top current City programs participants would like to see improved or expanded were:
 - Restoration (12)
 - Community diversion programs (10)
 - Dublin Community Garden (5)
 - Dublin Grows Greener (5)
- The top future programs participants were most interested in seeing in the City were:
 - Native Plants, trees, & seeds (8)
 - Renewable energy (8)
 - Energy efficiency (5)



FOCUS GROUP SESSIONS

Following public input, the team identified four groups to conduct more focused presentations and to gather additional input on partnership opportunities. Focus group sessions were held virtually Dec. 11, 2023 and Jan. 4, 2023.

Business Focus Group and Survey

Participants represented businesses from healthcare, services, retail/wholesale, finance and energy. The goal of the meeting was to identify the ways in which businesses are currently practicing sustainability efforts and discuss opportunities for the City to support them. In addition to the business focus group session, a business survey was also distributed to obtain additional input from the broader business community. The combined feedback is summarized below.

WHAT WE HEARD

- The top three ways that businesses support sustainability include: improving building efficiency, reducing waste and/or implementing diversion options, and establishing sustainability goals or plans.
- Barriers to sustainability centered around a lack of financial incentive/cost of improvements and City ordinances that limit the ability for businesses to implement sustainability practices.
- Participants identified carbon emissions and energy usage as the top two categories for City partnership and support.



Partner Organizations Focus Group

The second focus group engaged regional partners including COTA, MORPC, and the Franklin Soil and Water Conservation District. The aim for the meeting was to discuss current ways in which the City collaborates with regional partners and identify other success stories or lessons learned from other partnerships. The discussions provided valuable insight about ongoing research, funding opportunities, and programs.

WHAT WE HEARD

- There are opportunities to connect with partners about ongoing research in adjacent communities, the City of Columbus, and regional partners. The Ohio EPA is currently working on a regional watershed and systems study.
- City of Columbus is currently involved in several projects that could be of interest to Dublin for knowledge/data-sharing, such as the green infrastructure cost analysis.
- MORPC is currently working with AEP on building efficiency and installing solar. There is a current effort with AEP on a case study for smart city installation of solar panels on a wastewater treatment plant.
- The City has a history of participating in programs through its partners and can continue to expand its participation (i.e. rain garden installation rebate with FSWCD).
- Aligning a sustainability vision with partners' sustainability goals and objectives (i.e. COTA sustainability plan looking to roll out annual or biannual reporting on environmental measures).

Schools Focus Group

The third focus group engaged four high school and five elementary students. The presentation provided some background about sustainability in cities and an overview of the Sustainability Plan. The discussions centered around two primary questions: How have you learned about sustainability and what sustainability-related programming would you like to see in schools.

WHAT WE HEARD

How have you learned about sustainability?

Students had varied experiences learning and practicing sustainability in different contexts. For example, one student highlighted her work with a local nature-based organization where she developed a bird feeder and window stickers for birds. Others have been practicing sustainability at home by using reusable bags, installing energy-efficient lighting, composting, thrifting, and energy-saving measures, such as lowering the thermostat. At school, students are participating in limited gardening activities such as the Indian Run Elementary School garden, engaging with a butterfly/pollinator garden, and learning about plants and sustainability in high school. Many students do not ride their bike to school due to weather conditions and living too far away from the school. Additionally, students had participated in various events, such as Earth Day, food drives, and event composting.

What opportunities are there for incorporating sustainability at school?

Students identified a number of opportunities for sustainability in the schools and the classroom.

- Provide recycling in classrooms
- Create a student advocacy group
- Establish curriculum in gardening
- Create an outdoor sustainability classroom/field trip to learn about sustainability and stewardship
- Provide composting/recycling in the lunchrooms
- Increase food systems knowledge/conduct a student-led food audit
- Implement a shared food bin

City Council

The final set of focus group meetings were small group sessions with members of City Council. The team began with a presentation outlining the planning process and findings which was followed by a discussion period for feedback in three areas summarized below.

WHAT WE HEARD

A Vision for Future Sustainability

This first set of guiding questions focused on the big picture vision for sustainability.

- Dublin can be a model for sustainability — whether locally as a self-sustaining city, regionally, or even internationally. There is a desire to live up to the green logo. One opportunity that was discussed was the Metro Center Revitalization project.
- Balancing recommendations with 3-4 high impact goals, while also making the action equitable by addressing a range of solutions from residential to policy was discussed.
- Other topics included community resilience, externalities, and zero waste.

Leading the Way as a Zero-Carbon City

The next discussion topic centered around identifying the biggest opportunities to reduce emissions.

- Members mentioned renewable energy infrastructure, awareness, and education.
- Leveraging commercial and institutional campuses to reduce energy consumption or a showcase demonstration project were other suggestions.

Timing and Impact

The final discussion topic addressed the action plan and significant partnerships with considerations for measuring impact and prioritizing action.

- The action plan should be dynamic and account for timing and impact.
- It should set benchmarks that clarify measurable objectives for success.
- It needs to align with Envision Dublin, especially as it relates to future development plans and upcoming commercial development.
- Dublin can lead the way in partnerships for sustainability action. Opportunity areas include business partnerships to attract sustainable manufacturing, improve energy efficiency and school partnerships for education and advocacy as well as demonstration projects.

The background of the page is a photograph of a park. In the foreground, there is a green lawn. In the middle ground, there are several large, leafy trees. In the background, a building with a curved roof is visible. The sky is blue with some clouds.

GOALS & THEMES



2

GOALS & THEMES

ACHIEVING THE VISION

KEY THEMES

Using the key findings from the updated goals, this Sustainability Plan will support the City's vision as the most resilient, connected and sustainable global city of choice by pursuing sustainability actions in four key themes:

1

Model Sustainable Leadership

The City of Dublin has a history of successful partnerships and collaborations that drive sustainable innovations. Dublin can leverage these to establish a constellation of diverse sustainable partners to mobilize support for sustainable actions.

2

Design Sustainable Communities

Sustainability practices can have the greatest impact on development and the future of the built environment by improving multi-modal mobility, resiliency, efficiency, and renewable energy. Strategies include increasing access to transportation options, enhancing community resiliency, improving energy and water efficiency, and increasing access, generation, and use of renewable energy.

3

Support the Natural Environment

Target action in water, ecology, and air. The City of Dublin aims to establish a community that is ecologically sound for both people and wildlife through the conservation of parks, open areas, rights-of-way, watersheds, streams, and rivers.

4

Achieve Zero waste

Move towards a zero waste city that supports a circular economy and is a leader in waste management and diversion through recycling, reuse, food donating and food waste composting.

**MITIGATE AND
RESTORE**

**REDUCE
IMPACT**

SUSTAINABILITY ACTIONS

**SUPPORT THE NATURAL
ENVIRONMENT**

**MODEL SUSTAINABLE
LEADERSHIP**

**DESIGN SUSTAINABLE
COMMUNITIES**

ACHIEVE ZERO WASTE

MODEL SUSTAINABLE LEADERSHIP

The City of Dublin has a history of successful partnerships and collaborations that drive sustainable innovations. Looking ahead, the City should leverage partnerships and collaborations towards a constellation of diverse sustainable partners to mobilize support for sustainable actions.

Key Findings

Amplifying Dublin's Sustainability Story:

Numerous open-ended survey responses indicated a desire for more robust outreach and education to ensure Dublin residents are aware of the City's sustainability programming and are well-versed in relevant processes/procedures, such as what is recyclable and what is not.



Economic Growth: 79% of survey respondents indicated that economics was significant to their sustainability goals. 38% of respondents considered creating jobs/improving the economy as one of the most important sustainability benefits to their household.



Support Greener Businesses: Further, when it comes to the importance of sustainability in where people conduct business, 66% of survey responses indicated some degree of significance. The benchmark analysis also identified opportunities to practice procurement of sustainable materials, adding compliance tracking mechanisms, establishing a sustainable business certification program, and/or creating a zero-emissions building coalition.

City Programming: Several community workshop participants were interested in seeing current community market programming expanded and expressed strong support for more rebate/incentive-based future sustainability programming and class-based or hands-on learning opportunities.

Data Democracy: The City can look to peer cities' efforts, such as the City of Lakewood which developed an annual carbon budget and annual GHG and energy use reporting.

Measuring Success

Increase number of partnerships across all target categories (by target category)

Increase number of businesses participating in sustainability programs or initiatives

Increase number of regional programs, planning efforts, or initiatives Dublin is involved with

Increase number of residents engaged through outreach & public education programming

Increase number of outreach actions taken across all relevant outreach mechanisms

Increase number of residents, volunteers, and businesses whose volunteer efforts relate to sustainability



Community Priority

OBJECTIVE 1.1

Create a Constellation of Partners

Increase local and regional collaboration and education opportunities to advance innovative, sustainable solutions.

Community Partners

1. Coordinate with the Community Services Advisory Committee (CSAC) to identify strategies to expand partnerships with the Community.
 - A. Develop a communications plan with the CSAC focused on outreach and education programming.

WHAT IS THE COMMUNITY SERVICES ADVISORY COMMISSION?

The Community Services Advisory Committee (CSAC) serves as Dublin's community sustainability team, with the EcoDublin group serving as staff's internal advisory committee. The CSAC includes 7 residents appointment by City Council and meets the second Tuesday of each month.

2. Engage with HOA leadership and residents to guide the development of more sustainability-supportive bylaws and regulations.
 - A. Provide technical support when needed to aid resident conversations about sustainability objectives and barriers to achieving them by:
 - Connect HOAs with available resources for solar-friendly guidelines.
 - Offering community engagement opportunities for approved partner organizations to provide technical support for interested residents at events.
3. Create sustainability-focused community volunteering opportunities to empower residents to be active participants in City-led sustainability processes.

- A. Establish separate sustainability volunteering section on Dublin's "Volunteer Service Opportunities" web page to offer a "one-stop-shop" for accessing City-led volunteer opportunities.
- B. Work with Dublin non-profits to populate volunteer opportunities on sustainability volunteering section to help promote involvement.
- C. Incorporate sustainability specific education and programming into volunteer recruitment efforts & events, and leverage opportunities to provide marketing and engagement for local sustainability-related businesses.
- D. Recruit Sustainability Ambassadors to oversee sustainable volunteer services for the City.

Case Study

TRAVERS LAKE NEIGHBORHOOD SOLAR

Composed of primarily single family detached housing, the Travers Lake neighborhood in Ann Arbor is managed and regulated by the Lake Travers Community Association. Residents desired the ability to install solar panels on their homes but were limited due to HOA regulations that required written approval from all neighbors within sightlines of the house intending to install solar.

To address this issue, neighbors formed a Solar Committee to identify strategies for making solar more accessible alongside engaging their community to build awareness and buy-in for more expanded solar opportunities. This resulted in adopting new HOA guidance that permits solar with no approval letters as well as creating simple standards for the building modifications necessary to accommodate solar installation. They further created an annual "Solarize Ann Arbor" event to promote community participation in expanding solar installations.

Case Study

AUSTIN COMMUNITY CLIMATE AMBASSADORS

Identified as a strategy in the Austin Climate Equity Plan and established in 2021, Austin's Community Climate Ambassador's program engages residents as advocates for sustainability in their communities. Participants receive training on environmental justice, community engagement, and how to support the Climate Equity Plan's implementation strategies. In addition to monthly meetings & training workshops, Ambassadors are responsible for engaging their communities to foster deeper relationships between neighbors, building more nuanced understandings of resident perceptions of climate issues, and develop community action projects.



Austin Climate Equity Plan

- E. Partner with existing Community Sustainability Leader volunteer programs or create a City-run program to empower residents to be educators and build engagement around the City's sustainability initiatives.
- F. Create a City-staffed sustainability booth at the Dublin Market at Bridge Park.
- G. Add a compost bin to the Giving Garden and use it as an educational opportunity for volunteers to learn more about composting.
- 4. Increase outreach through expanding and developing new outreach materials to promote City sustainability programs and incentives.
 - A. Expand outreach efforts for participation in sustainability related programming, such as the native plan and compost bin rebate program run through the Franklin Soil and Water Conservation District.
 - B. Facilitate neighborhood educational outreach sessions to build awareness and buy-in for Green Stormwater Infrastructure (GSI) at a residential scale.
 - C. Create a series of educational materials about types of "upcycling" materials and upcycling at home.
- B. Leverage the Dublin Irish Festival roadmap developed by the DIF Sustainability Committee to expand volunteer engagement focused on waste management for other signature annual City-led events.
- C. Collaborate with the Dublin Arts Council to create an art installation at a high visibility City facility, such as the Dublin Community Recreation Center, to use for education on sustainability initiatives.
- D. Hire a consultant to review the Dublin Irish Festival's current sustainability initiatives and implement recommendations on future programs, including those that will lower the carbon footprint and help it become a zero-waste event (e.g. a 90% diversion rate, per the Ohio EPA)

Institutional Partners

- 6. Leverage school partnerships to offer sustainability programs at schools. This could include the following:
 - A. Coordinate with Dublin City Schools (DCS) and other local K-12 institutions to pilot educational programs for sustainability in school.
 - Establish curriculum in gardening.
 - Create an outdoor sustainability classroom/field trip to learn about sustainability and stewardship (ie trash pick-up at natural area)
 - Increase food systems knowledge/conduct a student-led food audit.
 - B. Encourage student advocacy group and/or create parent sustainability group to explore and identify opportunities for sustainability actions or programs in school.

Signature Events

- 5. Use Dublin's signature annual events as a platform to lead by example and build awareness of City sustainability efforts.
 - A. Create a new Sustainability Fair annual (or seasonal) event that engages and educates residents on City sustainability programming alongside providing opportunities for marketing and engagement for local sustainability-related businesses.

7. Discuss increasing the diversion rate in schools.
 - A. Offer recycling and composting in classrooms and lunchrooms.
 - B. Implement a shared food bin at schools to reduce food waste.
8. Work with local higher education institutions or research-based institutions.
 - A. Continue pursuit of green education pipeline between local K-12 and higher education institutions.
 - B. Identify existing university programming aimed at primary to high school level students and promote participation by local K-12 institutions.
 - C. Begin outreach to relevant university departments and centers to build more formal relationships to leverage over time for collaborative sustainability programming.

Business/Private Sector Partners

9. Expand engagement with local businesses on their sustainability initiatives.
 - A. Establish a corporate volunteering page with the implementation of the new volunteer management system that highlights sustainable volunteer opportunities. This web page may also feature successful events (e.g. litter clean ups, invasive plant removals, native pollinator plantings) and partnerships with companies such as Veeva and Safeware.
 - B. Use the new volunteer management system to track corporate volunteering participation.
10. Create new opportunities for public private partnerships through sustainability leadership and programming.
 - A. Create an annual carbon drawdown challenge for local businesses.
 - B. Develop a formal partnership program to engage local green businesses related to solar, building efficiency, or other sustainability services around incentives, collective purchasing agreements, and other mechanisms for improving accessibility to residential energy efficiency improvements.
 - C. Continue to partner with sustainability contractors to reduce waste at community events.

Highlight

In 2023, Ohio State University launched an ambitious new initiative to integrate sustainability throughout the University's system through community engagement alongside education and research. Spurred by growing interest in sustainable workforce development and a growing call for greater emphasis on sustainability in education, the yearlong planning effort resulted in the creation of a Sustainability Education and Learning Committee tasked with overseeing key action steps identified through the planning process.

WHAT IS A CARBON DRAW DOWN?

A Carbon Drawdown Challenge would be a voluntary program that challenges businesses to reduce their emissions by a set percentage, evaluated on an annual basis. Evaluations are performed by the participating businesses and help to support more transparent conversations about the logistics and O&M challenges to reducing carbon impacts and strategies to overcome common barriers.

Non-Profit Organizations

11. Engage with local and regional non-profits to align City sustainability efforts with ongoing community programs.
 - A. Identify existing non-profit organizations working in the region related to sustainability (e.g. community gardening, restoration volunteering) to establish a Dublin-based sustainability non-profit list.
 - B. Explore opportunities to collaborate with Dublin-based non-profits to embed sustainability outreach & education into non-profit programming with a focus on youth-oriented non-profits.
 - C. Leverage non-profit capacity to expand opportunities for and access to community gardening and other food production spaces.

ACHIEVING THE VISION

Regional Organizations

12. Foster collective impact through regional collaboration.
 - A. Work to build strong partnerships with regional organizations focused on sustainability and resilience planning.

KEY PARTNERSHIPS:

Mid-Ohio Regional Planning Commission
Franklin Soil and Water Conservation District
Solid Waste Authority of Central Ohio
Central Ohio Transit Authority
U.S. Green Building Council Ohio
Ohio Sustainable Business Council
Green Columbus
Stratford Ecological Center
Rails to Trails

- B. Continue to pursue opportunities to participate in regional planning efforts related to sustainability and regional growth management.
- C. Connect with surrounding cities to identify opportunities for aligned planning efforts and City developments related to transportation, parks, trails, and natural space preservation.



OBJECTIVE 1.2

Integrate local planning contexts

Ensure local planning efforts are integrating sustainable actions.

Envision Dublin

1. Incorporate sustainable actions into the Envision Dublin implementation.
 - A. Incorporate multi-modal transportation recommendations from Envision Dublin, which will in turn reduce emissions.
 - B. Incorporate sustainability objectives and relevant actions from the Sustainability Plan into evaluation criteria for reviewing future draft planning, code, or other regulatory developments.

Parks and Recreation Master Plan

2. Incorporate sustainable actions into the Parks and Recreation Master Plan implementation.
 - A. Emphasize value of open or natural space investments and programming alongside planned recreational improvements.
 - B. Support the long-term objective of utilizing best practices for parks & open space development as they relate to sustainability community education programming.
 - C. Prioritize neighborhood-park connectivity through new park acquisitions that would create more points of access and connection to existing parks & trails.

EV Infrastructure Comprehensive Plan

3. Prioritize the implementation of planning strategies and actions that support Dublin's sustainability goals.
 - A. Adopt the EV Infrastructure Comprehensive Plan at City Council.
 - B. Implement recommendations from the EV Infrastructure Comprehensive Plan.

Future Planning

4. Incorporate sustainability into future planning efforts.
 - A. Identify opportunities for the EcoDublin team to be incorporated as a stakeholder in future planning efforts.

OBJECTIVE 1.3

Amplify Dublin's Sustainability Story

Develop clear and consistent communications regarding events, programs, and opportunities for community participation.

1. Collaborate with the Dublin Arts Council to foster art that highlights or explores sustainability topics.
 - A. Pursue grant opportunities for the funding of an artist residency program that aims to increase public participation levels.
2. Improve outreach outcomes by incorporating new engagement tools, increasing outreach frequency, and streamlining outreach material creation processes.
 - A. Perform annual engagement methods review and survey peer cities for new practices or strategies that could improve outreach efficacy.
 - B. Continue promotion across all social media platforms and explore additional opportunities for increased promotion.
 - C. Develop a media toolkit that will include templates and branding for sustainability communications on digital and print platforms to maximize outreach methods.

Highlight

While renters may not be in a position to influence major building improvements, there are many types of programs that could benefit renters alongside homeowners. Programs such as rebates that incentivize the use of energy efficient appliances or replacing weatherstripping can improve access to more energy efficient options for both renters and homeowners.

Dublin can also increase its program impact on renters by creating outreach materials that focus on the ways landlords can benefit from sustainability investments, such as energy efficiency improvement measures. Having more comfortable units with lower utility costs for renters can make for better marketing and tenant retention. Replacing inefficient fixtures in common areas that property owners maintain can improve renter experiences while reducing long-term costs and yielding direct savings for landlords.

OBJECTIVE 1.4

Embed Equity into Sustainability Leadership

Incorporate an equity lens into sustainability efforts to maximize access and participation by all Dublin residents.

Equitable Evaluation

1. Establish a process to measure participation levels in City programs that captures diversity-related metrics.
 - A. Analyze PACE Program participation annually to understand diversity of impacts and participation gaps to inform more targeted outreach.
 - B. Incorporate a sustainability section in the annual community survey to establish and track participation in environmental programs (i.e. Community Gardens) and waste management programs (i.e. compost drop-off).

Equitable Access

2. Ensure new City incentive programs related to sustainability are easily accessible and make sustainability actions more affordable for all residents.
 - A. Explore implications and opportunities rental property owners when designing residential-oriented programming.
 - B. Diversify outreach methods to mitigate potential access barriers, such as limited internet access or English language fluency, by using a combination of digital, print, and other mechanisms, alongside strategic translations.
 - C. Align sustainability outreach efforts with ongoing DEI initiatives and objectives to ensure that sustainability is approachable for all.

KEY DEI OBJECTIVES INCLUDE:

- Support leadership development
 - Facilitate education and awareness
 - Monitor service delivery
 - Increase workforce diversity
 - Support diversity among Dublin businesses
 - Provide affordable transportation
-

ACHIEVING THE VISION

OBJECTIVE 1.5

Champion Green Business

Create an ecosystem that encourages and supports the growth of environmentally friendly businesses, buildings, markets, and technology.

Green Business Development

1. Build off the City's practice of sustainable purchasing outlined in administrative orders.
 - A. Pursue a revised AO to expand sustainable purchasing preference that emphasizes circular products, such as those that employ take-back mechanisms or material re-use.
 - B. Perform annual exploratory reviews of the region's existing businesses that could provide products or services that satisfy sustainable procurement policies.
 - C. Develop a sustainability clause for City engineering/construction contracts that require or incentivize more sustainable services, such as a requirement for building material recycling during building demolition.
2. Develop new programs to recognize, reward, and promote green business practices.
 - A. Establish a Green Business Leadership Roundtable comprised of leaders from local businesses, institutions, DCS, and City officials to identify, engage, and promote leaders in sustainable businesses from within Dublin's local business community.
 - B. Create City-provided green business certifications for local businesses to acknowledge and reward sustainability improvements.
 - Trade businesses that offer efficiency services.
 - Retail businesses engaged in recycling, local/sustainable procurement, energy efficiency measures, and other sustainable practices.
 - Hospitality businesses engaged in recycling, local procurement, reducing food waste, energy efficiency measures, and other sustainable practices.
 - Incorporate a green building recognition component to highlight local best practitioners and create an inventory of green buildings to track progress.
 - Incorporate criteria to certify energy efficient rental housing options.

- C. Develop a green service provider directory on the city website drawing from certified local businesses.

Green Workforce Development

3. Recruit, train, and retain a skilled local government workforce to implement municipal sustainability actions.
 - A. Identify existing positions that will be responsible for implementing new sustainable practices and programs across City Departments.
 - B. Engage with Human Resources to evaluate current hiring criteria and desired qualifications for new hires in sustainability related positions to reflect skill or capacity needs for Sustainability Plan implementation.
 - C. Evaluate current Staff skills and knowledge to identify capacity gaps that could be addressed through trainings and targeted professional development.

Case Study

CITY OF AUSTIN GREEN BUSINESS CERTIFICATION PROGRAM

Cities throughout the US have developed their own Green Business Certification programs to reward local businesses for engaging in sustainable business practices. The City of Austin has offered a Green Business Certification for over 10 years, drawing a wide range of participating businesses from local restaurants to national or multi-national corporations like Dell and Samsung.

This voluntary program evaluates businesses through a scorecard that covers 7 categories, including water, energy, and community stewardship. After submitting a scorecard, City staff visit the business to review their green business practices and evaluate the scorecard, after which the business can be awarded with one of 3 recognition levels – Silver, Gold, and Platinum – depending on their scorecard results. The City also offers guidance to help businesses interested in Green Business Certification navigate the process.

4. Explore feasibility of a green business incubator in collaboration with the existing business community and local educational institutions.
 - A. Pursue adaptive-reuse approach to aging business parks to diversify uses and create more dynamic, attractive business environments.
 - B. Leverage the ongoing Metro Center revisioning process to explore feasibility of guiding Metro Center Revitalization towards Just Communities (formerly EcoDistrict) qualifications.

Highlight

WHAT DOES A SUSTAINABLE WORKFORCE LOOK LIKE? HERE ARE SOME EXAMPLES:

EV MAINTENANCE: Keeping a fleet of vehicles in good condition requires a significant amount of coordination and skill, made more complicated by electric vehicles that require new, specialized knowledge. Ensuring that Dublin's Fleet Management team are well trained in maintaining EVs will ensure the City's fleet continues to be reliable and effective while creating more capable, knowledgeable staff.

PARK MAINTENANCE: Creating more sustainable, ecologically regenerative natural spaces requires new strategies and skills to maintain a high quality of parks and open space. Training existing park management and maintenance staff to be more effective stewards of natural features can help ensure Dublin's green spaces are vibrant, healthy, and beautiful while providing deeper ecological and resilience-building functions.

Case Study

SEAHOLM ECODISTRICT

The EcoDistrict certification is well suited for the revitalization of underutilized commercial or industrial areas, exemplified by the Seaholm EcoDistrict in Austin, Texas. Formerly host to the City's Seaholm power plant and most of the City's power and water infrastructure, the 85-acre brownfield site has been redeveloped into a multi-purpose mixed-use district anchored by the decommissioned Seaholm building.

While redevelopment efforts had been underway since 2001, in 2014 the City joined the EcoDistricts' Target Cities program to guide and strengthen Seaholm redevelopment efforts. With guidance and training from the EcoDistrict program, the City and its Seaholm EcoDistrict Leadership Advisory team have undergone a radical transformation of the brownfield redevelopment process, resulting in a visionary new space for community and commerce.



ACHIEVING THE VISION

OBJECTIVE 1.6

Institutionalize the use of Sustainability Data

Standardize and expand the use of Sustainability Data throughout City operations to continually measure and evaluate Sustainability Plan progress.

Internal Data Management

1. Create a formal data management strategy and processes through collaboration between departmental sustainability leads and the Innovation & Technology department to support ongoing measurement and evaluation of sustainability outcomes.
 - A. Catalogue all data sources related to Sustainability Plan metrics, including department and Staff position(s) responsible, frequency of collection, output format, and any additional processing required for usability.
 - B. Establish a process for reporting of Plan metrics from respective responsible departments to Staff responsible for managing public data hub that sets clear expectations for timely reporting.
 - C. Develop a data management training series to build data-use capacity throughout the City with strategic emphasis on Departments and Staff related to key data generating operations.
 - D. Conduct a Greenhouse Gas Inventory every 2-3 years.

Transparent Impact Measurement

2. Create a public sustainability dashboard with up-to-date progress measures to help communicate sustainability actions and impact.
 - A. Identify additional sustainability-related goals, objectives, and actions in current and future plans that should be incorporated into or referenced in the dashboard.
 - B. Explore technical feasibility of linking to website pages of sustainability programs or opportunities from related plan items on the dashboard.



"Communicate actual results and/or improvements from the programs so the public can see there is a difference because of the work being done."

- Community Survey Response

DESIGN SUSTAINABLE COMMUNITIES

Dublin is a resilient community that strives to provide the best quality of life and environment for all residents. The City aims to offer a variety of living, entertainment and recreational experiences through its neighborhoods and business districts, which are connected, integrated, environmentally friendly, and attractive to all.

Key Findings

 **De-Carbonize the Built Environment:** The community ranked sustainability and the built environment in the top three most important areas to prioritize.

Maximize Energy Efficiency: Dublin has recently updated most lighting fixtures to LED and is rapidly maximizing energy efficiency across City facilities. However, Dublin has an opportunity to focus efforts on energy efficiency and conservation efforts at the community scale. Other communities are working to establish energy goals, energy efficiency certification programs for residential and commercial uses.

 **Renewable:** The City is leading efforts with 100% renewable energy at City facilities and has recently revised zoning code regulations surrounding the use of renewable energy equipment for solar, including rules regarding location, materials, and aesthetics for installation on residential and non-residential properties. Building off these efforts, the City should pursue opportunities to establish microgrids and maximize solar energy generation on commercial buildings and underutilized areas. The support for the community is already in place. 67% of survey respondents indicated that they were interested in renewable sources for home energy such as solar and wind. The City is currently working towards achieving SolSmart Designation and emphasizing education in solar and renewable energy.

Active Transportation: Dublin has made significant progress towards expanding access to micro-mobility and multi-modal transportation options with the opportunity to continue to reduce emissions from

transportation. Transportation emissions are the highest category in the community emissions at 274,094 metric tons of CO₂ from passenger and freight traffic. Looking ahead, Dublin can pilot best practices in multi-modal development that reduces barriers to active transportation.

Measuring Success

Decrease percent annual vehicle miles traveled (VMT) reduction

Increase number of residents participating in community programs

Increase number of adaptive reuse developments

Reduce energy used by residential and commercial properties by 2% annually to reach 20% reductions by 2035

Reduce water use by the City, residents, and local businesses by 2% annually to reach 20% reductions by 2035

Increase percent of fleet composed of EV or cleaner fuel vehicles by electrifying 45% of the City's light-duty fleet by 2035

Increase number of charging stations in Dublin by carrying out the recommendations in the EV Infrastructure Comprehensive Plan

Increase percent of new construction participating in green building programs



Community Priority

ACHIEVING THE VISION

OBJECTIVE 2.1

Multi-Modal City

Provide our increasingly diverse community access to a range of transportation options, connecting more people to more places.

Car Alternatives

1. Reduce Single Occupancy Vehicle Commuting.
 - A. Expand development of sustainable transportation infrastructure.
 - B. Expand the capacity of the City's municipal bikeshare program by increasing the City's fleet of e-bikes with grant funds.
 - C. Include carpooling & other alternatives to single occupancy driving into green business certification criteria.
 - D. Implement recommendations related to EV public education materials & outreach strategies from the EV Infrastructure Comprehensive Plan.

Transit

2. Enable Transit-Supportive Places.
 - A. Incorporate National Association of City Transportation Officials (NACTO) Green Transitway guidance such as the use of rain gardens and other GSI landscape features into design of future mobility hubs.
 - B. Identify priority areas for new transit supportive development to align with future route or service expansions defined in COTA planning materials.
 - C. Create opportunities to engage in public/private partnerships with developers interested in transit ready developments to shape new built environments to be ready for future transit expansion.
 - D. Encourage transit ridership by installing canopies and furniture for rider comfort and cooling, which further contributes to reducing overall heat island effects.
 - E. Identify locations for car-free or car-light zones that can be paired with high density urban development to create a high-quality and safe pedestrian environment.

COMMON ELEMENTS OF SUCCESSFUL TRANSIT SUPPORTIVE DEVELOPMENT FROM THE FEDERAL TRANSIT ADMINISTRATION:

Smaller unit and lot sizes, which increase density and shorten walking distances.

Wide and inviting sidewalks to encourage people to get out of their cars.

Local-serving retail shops that draw residents and patrons from surrounding neighborhoods.

Inclusion of a recognized public place—an area for outdoor movies, farmers' markets, community festivals, and community interaction.

A development center void of automobiles and dedicated to pedestrians and community-building activities.

Support of the local jurisdiction.

Public/private partnerships.

Complete Green Streets

3. Increase active transportation and micro-mobility.
 - A. Pursue Walk Friendly Community and Gold-level Bicycle Friendly Community designation.
 - B. Continue to perform a biennial accessibility audit of existing walking & cycling infrastructure to identify any existing accessibility barriers for redressing.
 - C. Continue to expand bike maintenance & safe storage amenities.
4. Foster the development of complete green streets.
 - A. Initiate a cool corridors program aimed to reduce heat impacts and improve walking comfort for pedestrians by prioritizing canopy additions using the Tree Equity Score and urban Heat Island Severity.
 - B. Build on existing Complete Streets efforts to further incorporate green infrastructure features to maximize co-benefits, such as improved stormwater management and reduced urban heat effects alongside social and health benefits of increased greenery.

OBJECTIVE 2.2

Adapted City

Foster greater adaptive capacity through community resilience building and adaptive or sustainable building development.

Community Resilience

1. Empower communities to engage in neighborhood planning processes focused on disaster resilience and emergency preparation at the community level.
 - A. Promote & facilitate neighborhood disaster resilience planning.
 - B. Collaborate with local nonprofits to develop City-led emergency supply program to collect donations and provide no-cost supplies to lower-income families.

Adaptive Reuse

2. Foster an adaptive reuse approach to redevelopment.
 - A. Assess current processes and identify potential opportunities to clarify the regulatory processes, provide centralized information about funding opportunities, and offer guidance on best practices.
 - B. Create new incentives for adaptive reuse that reduce permitting fees, loosen conformance requirements, or provide tax rebates/waivers.
 - C. Explore alternative building requirements for commercial buildings greater than 3 stories that offer more flexible future use potential than stick-frame methods.

New Development

3. Assess what standards could be updated to incorporate higher standards for building performance and energy conservation.
 - A. Review and identify energy efficiency standards in adopted local and statewide building codes and standards.
 - B. Engage plan review staff, local builders, and developers to understand potential standard implementation tradeoffs, including applicability to residential structures.

- C. Hire a consultant to review the code to identify any inconsistencies related to sustainable development.

Model codes or standards for consideration may include:

- International Green Construction Code (IgCC)
- ICC 700 National Green Building Standard
- ANSI/ASHRAE/USGBC/IES Standard 189.1-2017, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings
- ASHRAE Standard 55, Thermal Environmental Conditions for Human Occupancy
- ASHRAE Standard 62.1-2019, Ventilation for Acceptable Indoor Air Quality
- ASHRAE Standard 90.1-2019, Energy Standard for Buildings Except Low-Rise Residential Buildings

- D. Encourage the use of rain barrels and cisterns for water reclamation, consistent with the Stormwater Management Design Manual.
4. Create a Green Neighborhoods subcommittee of EcoDublin comprised of staff from key city divisions with influence on the development process in collaboration with CSAC.
 - A. Perform annual review of current best practices for green development regulations and construction standards for opportunities to revise existing standards such as the Neighborhood Design Standards and Conservation Design Resolution.
5. Expand and maintain programs that provide incentives and funding to encourage green development and sustainable building methods.
 - A. Increase frequency of outreach and medium (social media, print, local news) used to promote existing programs such as PACE.
 - B. Extend existing sustainability and development incentives (§ 153.041) to additional zoning districts where appropriately suited for intended density bonuses.
6. Incorporate new incentives for new construction to promote green building or development certifications, including LEED, SITES, WELL, Green Globes and Energy Star across all zoning categories.
 - A. Provide companies access to programs that encourage building “green” by incorporating additional internationally recognized programs such as Green Globes and the EPA-led Energy Star program.

Case Study

UNISON NETWORKS WINDSOR SUBSTATION SWITCHROOM, HASTINGS, NZ

Image courtesy of Unison Networks



In Hastings, New Zealand, local energy provider, Unison, faced the challenge of designing a replacement facility for their Windsor Substation Switchroom, which was soon to be decommissioned.

Repositioning this challenge as an opportunity, Unison designed a new Switchroom that would satisfy infrastructural needs while performing as a Living Building, one of the highest standards for energy efficiency and green building design. The new Switchroom offers a wide range of environmental services and efficiency measures, including native plantings that mimic the site's ecological history, rainwater harvesting, innovative green building materials such as Cross-Laminated Timber (CLT), net positive solar generation, and recycled building materials.

7. Exemplify green building methods through future municipal building design and construction.
 - A Evaluate future municipal new construction needs to identify a pilot Living Building Challenge project.

In 2022, building energy (electric and natural gas) accounted for 71% of emissions while 18% of emissions was attributed to fleet vehicles.

Dublin's current electricity contract is 100% renewably sourced.

OBJECTIVE 2.3

Efficient City

The City of Dublin can have a positive impact on reducing emissions to meet federal air quality standards by continuing to focus on conserving energy and transition to renewable and cleaner energy sources.

Improve Energy Efficiency

1. Achieve carbon neutrality by reducing energy consumption and emissions to the greatest extent possible and offsetting remaining emissions through carbon removal and mitigation strategies.
 - A. Develop annual energy use reports and greenhouse gas emissions estimates for City buildings to monitor progress towards energy and emissions reductions goals.
 - B. Hire a consultant to identify opportunities for energy efficiency improvements in municipal facilities and develop a facilities action plan that identifies, prioritizes, and estimates costs for energy efficiency improvements and retrofits.
 - C. Work with an outside partner or consultant to identify and quantify potential carbon mitigation practices and strategies for implementation within Dublin city limits, such as reforestation of city-owned or managed properties or sequestration.
 - D. Optimize City building performance by continuing to install energy efficient appliances, such as fitting all City restrooms with energy efficient hand dryers.
2. Reduce energy used by residential and commercial properties by 2% annually to reach 20% reductions by 2035.

- A. Increase energy efficiency for existing housing and rental properties through outreach and incentive programming.

Success Story

A combined heat and power generator was installed at the Dublin Community Recreation Center, which drastically increases fuel efficiency and decreases CO₂ emissions.

- Explore cost-feasibility of rebate program for energy efficient appliance purchases.
 - Develop local business inventory of suppliers for energy efficient appliances and other home goods.
- B. Increase energy efficiency for existing commercial properties through outreach and incentive programming.
 - Establish a program to recognize building owners/management that invests in building efficiency measures.
 - Expand and promote energy efficiency-related programming and incentives for commercial property in Bridge Street and ID zoning districts.
- C. Explore feasibility of establishing new finance mechanisms for energy efficiency improvements.
 - Pursue start-up grant funding for a revolving loan fund through the US DOE Energy Efficiency Revolving Loan Fund Capitalization Grant Program.
 - Establish a micro-grant program for small businesses and lower-income residents to invest in weatherization, efficient appliances/fixtures, and other home efficiency measures.

Improve Water Efficiency

- 3. Reduce water use by City buildings & facilities by 2% annually to reach 20% reductions by 2035.
 - A. Engage Facilities Management to establish a water use inventory on all City buildings & facilities to inventory activities that use water and the types of fixtures or water-related equipment used.
 - B. Retrofit all non-water efficient fixtures throughout all City buildings & facilities with water-efficient alternatives.
 - C. Explore opportunities to pilot water re-use strategies at high-visibility public facilities.

- D. Improve system efficiency over time through investments in innovative technology, with an emphasis on smart technologies that enhance monitoring capabilities.
- E. Re-evaluate maintenance processes to identify opportunities to incorporate additional quality checks on water infrastructure during routine maintenance to more efficiently find and address equipment failures.
 - Produce annual progress report to communicate issues identified and solutions implemented to identify common issues and best practices for addressing them over time.
- 4. Reduce water use by residential & commercial facilities by 2% annually to reach 20% reductions by 2035.
 - A. Establish regular data sharing protocols with the City of Columbus to monitor water use by residential and non-residential customers within Dublin city limits and track progress.
 - B. Explore feasibility of rebate program for water efficient appliance purchases.
 - C. Promote water conservation through native landscaping and turf conversion.

Case Study

WATER CONSERVATION IN GREELEY, COLORADO

The City of Greeley, Colorado fosters residential water conservation through a robust conservation program. Their initiatives encompass components such as free water audits for residents and businesses that focus on leak detection and efficient appliance use. Residents benefit from personalized recommendations and free low-flow fixtures post-audit. Greeley also calculates rates utilizing water budgets for single-family homes based on family size, landscape area, and real-time weather. Residents that stay within budget pay lower prices, incentivizing efficient use. Greeley also offers rebates for indoor water fixtures and lawn retrofits, encouraging sustainable practices. Community education plays a crucial role, with extensive outreach through media, events, and direct interactions, ensuring residents are informed and engaged in water conservation efforts.

Over 20 years, these efforts have helped to reduce water use across the City by 20%, with average gallons per capita per day for residential users dropping from 162 to 100. They maintain steady decreases in residential water use despite having experienced significant population growth.

OBJECTIVE 2.4

Renewable City

Increase the use of renewable energy by the City, residents, and local businesses.

Electric Vehicles

1. Reduce dirty diesel/standard fuel vehicles from the City's light-duty fleet.
 - A. Electrify 45% of the City's light-duty fleet by 2035.
 - B. Actualize recommendations from the EV Infrastructure Comprehensive Plan regarding replacement of light-duty fleet vehicles and potential heavy duty electric vehicles as technology advances.
 - C. Implement recommendations from the EV Infrastructure Comprehensive Plan to create public-private collaborative funding mechanisms to promote new EV charging stations in multi-family and commercial developments.
 - D. Carry out the EV Infrastructure Comprehensive Plan's recommended implementation targets to increase Level 2 and DCFC port availability 2035.

Community Aggregation

2. Revisit the potential for a community aggregation program.
 - A. Explore developing a community aggregation program supported by Ordinance 35-01 through partnership with a renewable energy provider.

Municipal Solar

3. Increase the use of renewable energy sources at City facilities.
 - A. Identify opportunities to further electrify parks and facilities maintenance equipment.
 - B. Identify infrastructure needs to increase electric vehicles and equipment within parks and facilities maintenance.
 - C. Assess existing rights-of-way along major City-maintained corridors and arterials for sites with sufficient area to support solar installations.



Image Source: Landscape Performance Series

Case Study

ANN ARBOR MUNICIPAL CENTER, ANN ARBOR, MICHIGAN

In 2010 the City of Ann Arbor was tasked with renovating its existing City Hall building. Not content to simply update the building itself, the design team set out to create a space that is “designed to raise awareness of water cycles and detain 100% of stormwater runoff on-site while serving as an engaging open space complete with public art and social gathering areas.”

The new site features extensive rain gardens interwoven with pedestrian bridges, a stormwater cistern that feeds a bronze fountain in one of the main plazas, publicly accessible green roofs, permeable pavers as parking lot surfacing, and more than 30 native plant species that support overall system function and a natural aesthetic.

- D. Explore cost and maintenance feasibility of solar surfacing materials for new or rehabilitated trails.

Residential & Commercial Solar

4. Increase renewable energy generation and storage for residents & commercial buildings.
 - A. Evaluate current regulation and explore opportunities for changes that could increase access to solar panels.
 - B. Encourage a group solar purchase program to help communities organize resources, access solar providers, and design for multi-household solar projects.

SUPPORT THE NATURAL ENVIRONMENT

The City of Dublin aims to establish a community that is ecologically sound for both people and wildlife through the preservation of parks, open areas, rights-of-way, watersheds, streams, and rivers. We work to safeguard habitats, convert open areas, parks, and city spaces to include native plants and trees, build buffer zones along our waterways, and promote biodiversity.

Key Findings

When asked how important existing sustainability plan goals are, 75% of survey participants considered Natural Resources extremely or very important.

 **Prioritize Native Species:** There is a desire for native and/or adapted planting on city facilities as well as residential and commercial properties. 45% of survey participants reported using high quality/native landscaping at their home, with an additional 47% saying they were interested in doing so.

 **Think Holistically About Water Management:** 21% of participants reported already engaging in reclaimed or collected water, while an additional 61% said they were interested in doing so.

Dublin has a Robust Tree Canopy: As a member and participant of the Arbor Day Foundation's Tree City USA program for over 35 years, the City maintains a robust forestry program. Dublin conserves a high tree equity score and has a robust inventory of tree data.



Community Priority

Measuring Success

Increase number of natural area City pilot projects implemented annually

Increase number of acres of open space that benefited from invasive removal efforts

Increase number of trees planted annually

Increase number of waterways maintenance program projects completed annually

Increase tree equity score

Increase number of participants in Community Backyards program

Increase number of acres of additional open space acquired or preserved through City actions

" Always think about Green space!"

"Improve awareness of pollinator friendly gardens vs lawns with herbicides."

"More events at parks to enjoy green space and do things to appreciate nature."

- Community Survey Responses

OBJECTIVE 3.1

Blue City

Improve the quality of municipal and natural water resources through regional collaboration and more robust water quality programs and regulations.

Water Management

1. Coordinate with regional organizations and utility providers to expand and deepen Dublin's water planning efforts & coordination.
 - A. Collaborate Dublin's water management efforts with regional water adaptation strategies and planning objectives.
 - Maintain continued engagement in regional water planning efforts, such as the Rapid 5 project and Sustaining Scioto.
 - Continue to explore adoption of regional water policies & guidance resulting from new planning efforts.
 - B. Create a One-Water Framework that unifies all City water-related planning efforts with a holistic approach to City-wide water management.
2. Incorporate water efficiency strategies such as stormwater retention and reuse into new municipal developments and redevelopment projects.
 - A. Champion a pilot project at a community park for on-site stormwater retention and reuse that explores the feasibility of installing underground storage capacity at new or redeveloped parks.
- B. Collaborate with regional colleges or universities and/or the Ohio Department of Natural Resources, with consultant support as necessary, to create pest and invasive management plans.
 - Expand existing Integrated Pest Management planning efforts to guide all municipal pest control efforts.
- C. Build on current practices related to monitoring critical waterways for illegal discharges, including field observation protocols and response measures.
- D. Add an illegal or suspicious discharge report option to the GoDublin app.
4. Reduce private contributions to stream impairment through expanded code enforcement and community outreach.
 - A. Regularly review & update erosion control requirements to reflect current best management practices.
 - B. Assess erosion and sediment control inspection processes to identify areas for strengthened oversight.
 - C. Review Section 51.02 of the Development Code for opportunities to provide more robust guidance on design and installation requirements for on-site sewage disposal.
 - D. Create new outreach materials about best practices for household sewage treatment systems maintenance and how to identify potential contamination issues.
 - E. Help connect residents to technical assistance providers related to well-water quality measuring and septic maintenance.

Water Resource Protection

3. Continue to develop capacities and procedures for maintaining and improving water quality in critical natural waterways.
 - A. Leverage ongoing water quality monitoring processes to reduce stream impairment.
 - Assess water quality monitoring data to identify the most common types of stream impairments found in Dublin streams.
 - Develop a toolkit of remediation strategies in collaboration with Ohio EPA, regional colleges and universities, and consultant support.
 - Collaborate water quality monitoring efforts with the ongoing Waterways Maintenance Program through the annual Water Quality Action Plan to inform prioritization of waterways initiatives.

Nature-Based Solutions and Green Stormwater Infrastructure (GSI)

5. Deepen City engagement with nature-based solutions (NBS).
 - A. Retrofit city-owned stormwater detention basins to pilot Green Stormwater Infrastructure (GSI) features alongside public education components such as interpretive signage to build awareness of NBS.

WHAT IS GREEN INFRASTRUCTURE?

Green Stormwater Infrastructure (GSI) refers to a number of nature-based solutions for managing stormwater by slowing, filtering, retaining, and absorbing stormwater alongside material solutions that reduce overall impervious surface area. Common GSI features include:

- Bioswales
- Green Roofs
- Constructed Wetlands
- Rainwater Capture
- Permeable Pavers
- Rain Gardens
- Infiltration Planters

While some GSI features such as bioswales are often large scale in nature, many features such as raingardens and retention planters can be easily integrated into existing municipal landscapes to enhance stormwater management while providing high-visibility examples for building public awareness and buy-in.

- B. Continue to expand the use of nature-based solutions used for the design of City building beyond GSI to incorporate passive heating/cooling strategies, such canopy shading or hedge windbreaks.
6. Establish new community-centered programs to promote and expand the use of nature-based solutions.
 - A. Expand existing Community Backyards program to include a Rain Garden Cost Share Program with Franklin Soil and Water Conservation District.
 - B. Engage with the Franklin Soil and Water Conservation District to build off existing participation in the Community Backyard program to partner on a Commercial Business Rebate for implementing NBS improvements.

- C. Identify opportunities to incorporate NBS improvements into existing incentive programs, such as the Commercial Façade Improvement Program.
7. Increase resident and neighborhood participation in City efforts to expand GSI.
 - A. Expand the existing Stormwater Grant program available to HOAs to apply to additional GSI features such as bioswale medians or raingarden curb cuts.
 - B. Collaborate with local GSI-related businesses, such as engineers or landscape designers to provide technical assistance to neighborhoods looking to incorporate GSI into their community stormwater infrastructure.

Highlight

The City of Columbus offers a Columbus Business Rebate program through the Community Backyards program in collaboration with the Franklin Soil and Water Conservation District. Businesses and non-profits can receive a reimbursement of up to \$2,500 for eligible projects such as rainwater collection systems, native plantings, permeable pavement, and other green infrastructure or stormwater retrofits.



OBJECTIVE 3.2

Regenerative City

Protect, preserve, and regenerate Dublin's environment throughout the City, leading by example through City-led projects and more ecologically-driven development processes.

Natural Areas

1. Enhance the quality of natural spaces on City-owned land through pilot projects, future planning, and coordination of maintenance and management.
 - A. Explore feasibility for pilot project opportunities at city facilities, such as new pollinator habitat plantings or graywater re-use projects.
 - Pilot wildlife habitat plantings at city facilities.
 - Pilot rainwater capture and graywater re-use projects at City facilities and parks.
 - B. Support expansion and acquisition of future natural areas through implementation of the Parks and Recreation Master Plan.
 - Support citizen led efforts outlined in the Parks and Recreation Master Plan.
 - Focus on strategic land acquisition to support expanded open space in accordance with the Parks & Recreation Master Plan.
 - C. Establish ecological criteria drawing from the UN Sustainable Development Goals and ICLEI resources to guide all future planning efforts.
 - D. Strengthen management and coordination for Standard Operating Procedures (SOPs) and maintenance of natural areas.
 - Audit current mowing SOPs & identify locations where it is feasible to minimize mowing frequency, such as non-active recreation vegetative features.
 - E. Create a centralized database of the upper-, mid-, and understory canopy vegetation.
 - Develop internal capacity to measure and evaluate carbon sequestration impacts from City-managed canopies and woodlots (see Appendix for sample methodology).
 - F. Strengthen ongoing invasives management efforts by producing an annual invasives prioritization plan.
2. Improve new development practices regarding the preservation of existing natural features.
 - A. Strengthen new or redevelopment requirements for open space to specify higher percentages of native and/or adapted plantings and to prioritize non-turf green space.
 - Promote the prioritization of native perennial and annual vegetation in addition to existing Neighborhood Design Guidelines regarding trees and hedgerows.
 - Encourage the creation of pocket prairies as an alternative to lawn requirements in both the Neighborhood Design Guidelines and other development code landscape requirements such as § 153.135.
 - B. Collaborate with local environmental groups to build capacity for a program to collect native plants during pre-construction of new greenfield developments to propagate for municipal plantings and share through community programs.
 - C. Amend soil erosion and sediment control plan requirements to recommend prioritizing the maintenance of undisturbed existing vegetation for more resilient erosion control by maintaining deeper root systems in place.
 - D. Establish requirements for new developments to reuse existing topsoil for new landscape features where possible.
 - E. Continue to promote the use of native plants when reviewing Beautify Your Neighborhood Grant applications.

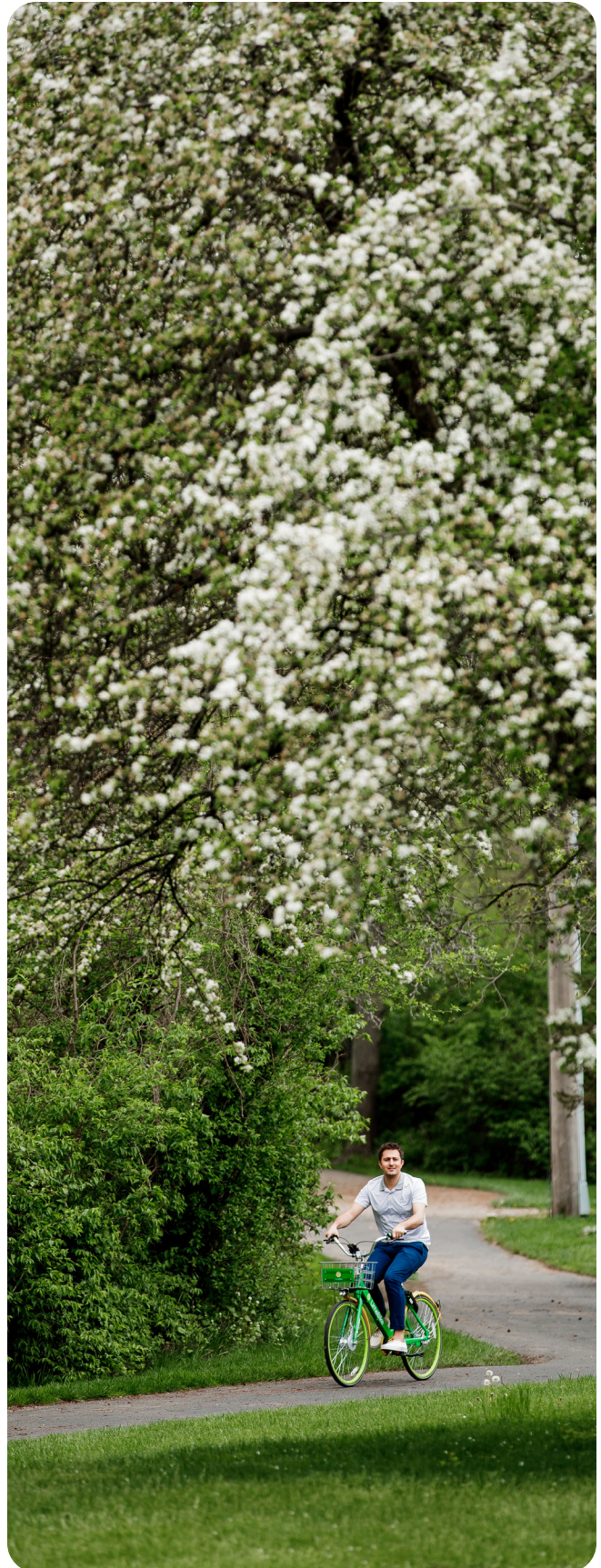


Image Source: Landscape Performance Series

3. Evaluate city restrictions on landscaping plant height, plant debris or leaves, and material aesthetic preferences to remove potential barriers to residential participation in sustainable practices
 - A. Identify landscape material requirements (§ 153.135) that could allow for native planting features. This could include:
 - Allowing for native perennial and annual plantings that do not comply with existing size requirements for shrubs and hedges.
 - Allow native annuals to exist in lawns.

Air Quality

4. Support ongoing MORPC efforts to assess air quality with a City focus on the impacts of roadway emissions.
 - A. Partner with MORPC to determine appropriate remediation steps, should the Air Quality Index indicate a high level of air pollution.



ACHIEVE ZERO WASTE

The City of Dublin has a long history of leading the way in central Ohio by providing recycling to our residents free of charge. This recycling program has evolved over the years to accommodate and encourage increased recycling and diversion of waste from our landfills. Educational efforts, re-sizing of recycling bins, community and neighborhood recycling events, and an e-waste drop-off location are a few of the ways the City has worked to improve community waste diversion.

Key Findings

 **Waste Management is a Central Component of Sustainability:** 83% of survey participants considered reducing waste as one of the most important sustainability benefits to their household.

 **Many Dublin Residents Participate in Some Form of Waste Management and Diversion:** 93% of participants reported already recycling, while 50% reported already composting alongside an additional 32% who reported they are interested in doing so.

There is Support for Expanded Waste Management and Diversion: Workshop participants enthusiastically supported expanded community diversion programs, including working to expand compost collection and creating new recycling programs.

Improving Waste Management Reduces Emissions: Solid waste emissions is the fourth largest category of emissions at the community-scale with 5,145 metric tons CO₂e from landfilling and processing.



Community Priority

Measuring Success

Increase ease of access recycling drop off locations

Establish baseline and measure quantity of materials donated (lb)(soft recyclables and craft materials)

Reuse or recycle at least 50% of demolition/deconstruction materials from commercial or multifamily redevelopment projects (tons)

Decrease municipal solid waste (tons) per capita annually

Increase diversion rate (tons) per capita to 60% in five years and 80% in ten years

Increase styrofoam diversion rate (bags/yr) by 50% every three years

Waste Recovery

In an effort to reduce the ecological footprint of the Festival, waste is being sorted to recovery recyclables from the landfill waste stream.

OBJECTIVE 4.1

Circular City

Reduce overall waste generation and foster a more sustainably-oriented economy through cyclical economics, expanded access to recycling and composting, and greater connectivity with local food-related industries.

Circular City

1. Formalize deconstruction and material reuse as standard operating procedures for redevelopment.
 - A. Establish a Deconstruction Ordinance that builds off current city practices for deconstruction in municipal building projects, extending to all residential and commercial building projects that fit any of the following criteria:
 - Involves the removal of buildings constructed before 1960 (e.g. San Antonio, TX).
 - Has an estimated project budget that exceeds \$150,000 (e.g. Oakland, CA).
 - Has a development footprint of 10,000 sqft or greater (e.g. Hawthorne, CA).
 - B. Explore feasibility of utilizing existing or new municipal building space to develop a building material reuse center.
2. Foster the development of circular industries through programming that supports the reuse of cyclical materials.
 - A. Identify and engage with organizations to establish a “Soft Recycling Program.”
 - B. Collaborate with the DAC to create a craft material recycling program that accepts donations of craft goods to repurpose for community art programs.
 - C. Establish a list of businesses that will upcycle different materials in Dublin and the surrounding area.
3. Prioritize the establishment of circular economy through food systems.
 - A. Host a roundtable session with food industry representatives to identify opportunities to facilitate more sustainable food system processes or products (such as packaging, transportation, waste management).



Image Source: San Antonio ReUse (sareuse.com)

Case Study

SAN ANTONIO MATERIAL INNOVATION CENTER

In 2022, the City of San Antonio’s Office of Historic Preservation Partnered with the Port of San Antonio to use underutilized historic building space as the site of a Material Innovation Center (MIC) alongside their existing Living Heritage Trades Academy. In complement to the traditional building skills trainings provided by the Academy, the MIC serves as a collection and distribution depot for deconstructed building materials that help provide the raw materials for both students and local contractors.

Beginning by providing accessible recycled materials and material recycling, long-term the MIC aims to foster the development of a robust circular economy through workforce training, innovative material solutions, and robust material salvage and recycling capacity across both the public and private sectors.

4. Foster behavioral changes around food waste through collaboration with local food pantries to provide food donation programming for residents and local businesses.
 - A. Collaborate with local food pantries to promote food donation collection points at key City buildings like the Dublin Community Recreation Center.
 - B. Create a food donation program to help connect food-related businesses (including grocers, restaurants, etc.) with food donation receiving organizations or businesses.

5. Mitigate the climate impacts of traditional food systems by connecting residents and Dublin businesses with local food producers.
 - A. Develop partnerships with Visit Dublin, the Chamber of Commerce, and other relevant organizations to create opportunities for agricultural producers from the broader Dublin area to connect with local food-related businesses.

Recycling & Diversion

6. Expand community recycling through continued education and improved accessibility.
 - A. Explore potential opportunities to increase commercial recycling programs to provide recycling access for multifamily residents.
 - Work with developers on identifying opportunities to provide adequate space for trash, recycling and food waste in the design of new developments.
 - B. Pilot an additional styrofoam, e-waste, and compost drop off location at a central location in Dublin.
 - C. Expand e-waste drop-off to one (1) additional City building to increase accessibility.
 - D. Continue to engage with the City's waste hauler and SWACO to increase recycling education efforts.
 - Collaborate with businesses and community organizations to display materials.
 - Leverage community events to provide public outreach on the importance of diversion.
 - E. Explore feasibility of incorporating an integration on the City's recycling webpage to allow residents to search material by name and determine the appropriate disposal method.
 - F. Offer additional recycling bins or a larger size option at the request of residents to ensure no recycling ends up in trash bins due to limited recycling bin capacity.
 - G. Develop new mechanisms for collecting "hard-to-recycle" items such as eyeglasses.
 - H. Partner with SWACO to help residents and the business community determine appropriate ways to divert hard-to-recycle materials.

7. Expand residential composting capacity through partnerships, greater access, and education.
 - A. Expand the composting program to provide another drop-off location for increased accessibility.
 - B. Develop and promote how-to materials and support programming to encourage backyard composting.
 - C. Engage with local haulers to explore the feasibility of a partnership for curbside compost pick-up. The cost would be determined as part of the feasibility study.

"Education (needs to be repetitive). How to recycle, how to support the compost program, how to support the styrofoam recycling. How do we enable restaurants, bars, etc to recycle."

- Community Survey Response







NATURE ACTION

A photograph of a lush green forest with many trees and dense foliage. In the foreground, a wooden boardwalk or path is visible, covered with fallen leaves. The image has a green tint overlay.

3

ACTION PLAN

ACTION PLAN

DECODING THE PATH TO ACTION

The Action Plan tables on the following pages outline the key strategies and actions that lay on the path to a more sustainable Dublin. Use the key below to understand how the different table categories are broken down and what key actors may be involved in each step. An overview of the implementation plan that lists the goals by implementation timeframe, rather than in chapter order, can be found on pages 96 and 97.

Legend

Impact

Direct = Results in Lower GHG Emissions

Indirect = Lowers GHG Emissions
from Related Activities

Cost

\$ = \$0 - \$49,999

\$ = \$50,000 - \$149,999

\$ = \$150,000 - \$499,999

\$ = \$500,000+

Timeframe

1 - 3 Years

3 - 7 Years

7+ Years

Leads

OCM = Office of the City Manager

C&M = Communications & Marketing

O&E = Outreach & Engagement

ED = Economic Development

CPD = Community Planning &
Development

T&M = Transportation & Mobility

P&R = Parks & Recreation

HR = Human Resources

I&T = Innovation & Technology

AMQA = Asset Management & Quality
Assurance

Strategy	Action	Impact	Cost	Timeframe	Lead
1.1. Create a constellation of partners: Increase local and regional collaboration and education opportunities to advance innovative, sustainable solutions.					
Community Partners					
1.1.1. Coordinate with the Community Services Advisory Commission (CSAC) to identify strategies to expand partnerships with the community.	1.1.1.A. Develop a communications plan with the CSAC focused on outreach and education programming.	Indirect	\$	1 - 3 Years	OCM
1.1.2. Engage with HOA leadership and residents to guide the development of more sustainability-supportive bylaws and regulations.	1.1.2.A. Provide technical support when needed to aid resident conversations about sustainability objectives and barriers to achieving them.	Indirect	\$	3 - 7 Years	OCM CPD
1.1.3 Create sustainability-focused community volunteering opportunities to empower residents to be active participants in City-led sustainability processes.	1.1.3.A. Establish separate sustainability volunteering section on Dublin's "Volunteer Service Opportunities" web page to offer a "one-stop-shop" for accessing City-led volunteer opportunities.	Indirect	\$	1 - 3 Years	O&E
	1.1.3.B. Work with Dublin non-profits to populate volunteer opportunities on sustainability volunteering section to help promote involvement.	Indirect	\$	3 - 7 Years	O&E
	1.1.3.C. Incorporate sustainability specific education and programming into volunteer recruitment efforts & events, and leverage opportunities to provide marketing and engagement for local sustainability-related businesses.	Indirect	\$	1 - 3 Years	O&E
	1.1.3.D. Recruit Sustainability Ambassadors to oversee sustainable volunteer services for the City.	Indirect	\$	7+ Years	O&E
	1.1.3.E. Partner with existing Community Sustainability Leader volunteer programs or create a City-run program to empower residents to be educators and build engagement around the City's sustainability initiatives.	Indirect	\$	7+ Years	O&E
	1.1.3.F. Create a City-staffed sustainability booth to deploy at the Dublin Market at Bridge Park.	Indirect	\$	3 - 7 Years	OCM
	1.1.3.G. Add a compost bin to the Giving Garden and use it as an educational opportunity for volunteers to learn more about composting	Indirect	\$	1 - 3 Years	O&E

ACTION PLAN

Strategy	Action	Impact	Cost	Timeframe	Lead
Signature Events					
1.1.4. Increase outreach through expanding and developing new outreach materials to promote City sustainability programs and incentives.	1.1.4.A. Expand outreach efforts for participation in sustainability related programming, such as the native plant and compost bin rebate program run through the Franklin Soil and Water Conservation District.	Indirect	\$	In Progress	C&M
	1.1.4.B. Facilitate neighborhood educational outreach sessions to build awareness and buy-in for Green Stormwater Infrastructure (GSI) at a residential scale.	Indirect	\$	3 - 7 Years	C&M
	1.1.4.C. Create a series of educational materials about types of “upcycling” materials and upcycling at home.	Indirect	\$	3 - 7 Years	C&M
1.1.5. Use Dublin's signature annual events as a platform to lead by example and build awareness of City sustainability efforts.	1.1.5.A. Create a new Sustainability Fair annual (or seasonal) event that engages and educates residents on City sustainability programming alongside providing opportunities for marketing and engagement for local sustainability-related businesses.	Indirect	\$\$	3 - 7 Years	OCM
	1.1.5.B. Leverage the Dublin Irish Festival roadmap developed by the DIF Sustainability Committee to expand volunteer engagement focused on waste management for other signature annual City-led events.	Indirect	\$	3 - 7 Years	Events
	1.1.5.C. Collaborate with the Dublin Arts Council to create an art installation at a high visibility City facility, such as the Dublin Community Recreation Center, to use for education on sustainability initiatives.	Indirect	\$	1 - 3 Years	P&R
	1.1.5.D. Hire a consultant to review the Dublin Irish Festival's current sustainability initiatives and implement recommendations on future programs, including those that will lower the carbon footprint and help it become a zero waste event (e.g. a 90% diversion rate, per the Ohio EPA)	Direct	\$\$	3 - 7 Years	Events

Strategy	Action	Impact	Cost	Timeframe	Lead
Institutional					
1.1.6 Leverage school partnerships to offer sustainability programs at schools.	1.1.6.A. Coordinate with Dublin City Schools (DCS) and other local K-12 institutions to pilot educational programs for sustainability in school.	Indirect	\$\$	7+ Years	OCM
	1.1.6.B. Encourage student advocacy group and/or create parent sustainability group to explore and identify opportunities for sustainability actions or programs in school.	Indirect	\$	3 - 7 Years	OCM
1.1.7. Discuss increasing the diversion rate in schools.	1.1.7.A. Offer recycling and composting in classrooms and lunchrooms.	Direct	\$	3 - 7 Years	OCM Public Service
	1.1.7.B. Implement a shared food bin at schools to reduce food waste.	Direct	\$	3 - 7 Years	OCM Public Service
1.1.8. Work with local higher education institutions or research-based institutions.	1.1.8.A. Continue pursuit of green education pipeline between local K-12 and higher education institutions.	Indirect	\$\$	7+ Years	OCM
	1.1.8.B. Identify existing university programming aimed at primary to high school level students and promote participation by K-12 institutions.	Indirect	\$	7+ Years	OCM
	1.1.8.C. Begin outreach to relevant university departments and centers to build more formal relationships to leverage over time for collaborative sustainability programming.	Indirect	\$	3 - 7 Years	OCM
1.1.9. Expand engagement with local businesses on their sustainability initiatives.	1.1.9.A. Establish a corporate volunteering page with the implementation of the new volunteer management system that highlights sustainable volunteer opportunities.	Indirect	\$	In Progress	O&E ED
	1.1.9.B. Use the new volunteer management system to track corporate volunteering participation.	Indirect	\$	In Progress	O&E
1.1.10. Create new opportunities for public private partnerships through sustainability leadership and programming.	1.1.10.A. Create an annual carbon drawdown challenge for local businesses.	Direct	\$	3 - 7 Years	ED
	1.1.10.B. Develop a formal partnership program to engage local green businesses related to solar, building efficiency, or other sustainability services around mechanisms for improving accessibility to residential energy efficiency improvements.	Indirect	\$	1 - 3 Years	ED
	1.1.10.C. Continue to partner with sustainability contractors to reduce waste at community events.	Direct	\$\$	7+ Years	Events

ACTION PLAN

Strategy	Action	Impact	Cost	Timeframe	Lead
Non-Profit Organizations					
1.1.11. Engage with local and regional non-profits to align City sustainability efforts with ongoing community programs.	1.1.11.A. Identify existing non-profit organizations working in the region related to sustainability (e.g. community gardening, restoration volunteering) to establish a Dublin-based sustainability non-profit list.	Indirect	\$	1 - 3 Years	O&E
	1.1.11.B. Explore opportunities to collaborate with Dublin-based non-profits to embed sustainability outreach & education into non-profit programming with a focus on youth-oriented non-profits.	Indirect	\$	7+ Years	O&E
	1.1.11.C. Leverage non-profit capacity to expand opportunities for and access to community gardening and other food production spaces.	Indirect	\$	7+ Years	O&E
Regional Organizations					
1.1.12. Foster collective impact through regional collaboration.	1.1.12.A. Work to build strong partnerships with regional organizations focused on sustainability and resilience.	Indirect	\$	7+ Years	OCM
	1.1.12.B. Continue to pursue opportunities to participate in regional planning efforts related to sustainability and regional growth management.	Indirect	\$	7+ Years	OCM
	1.1.12.C. Connect with surrounding cities to identify new opportunities for aligned planning efforts and City developments related to transportation, parks, trails, and natural space preservation.	Indirect	\$	7+ Years	OCM
1.2. Integrate in local and regional planning contexts: Ensure local planning efforts are integrating sustainable actions.					
Envision Dublin					
1.2.1. Incorporate sustainable actions into the Envision Dublin implementation.	1.2.1.A. Incorporate multi-modal transportation recommendations from Envision Dublin, which will in turn reduce emissions.	Direct	\$\$	7+ Years	CPD
	1.2.1.B. Incorporate sustainability objectives and relevant actions from the Sustainability Plan into evaluation criteria for reviewing future draft planning, code, or other regulatory developments.	Indirect	\$	3 - 7 Years	CPD

Strategy	Action	Impact	Cost	Timeframe	Lead
Parks & Recreation Master Plan					
1.2.2. Incorporate sustainable actions into the Parks and Recreation Master Plan implementation.	1.2.2.A. Emphasize value of open or natural space investments and programming alongside planned recreational improvements.	Direct	\$\$	3 - 7 Years	P&R CPD
	1.2.2.B. Support the long-term objective of utilizing best practices for parks & open space development as they relate to sustainability community education programming.	Indirect	\$\$	7+ Years	P&R
	1.2.2.C. Prioritize neighborhood-park connectivity through new park acquisitions that would create more points of access and connection to existing parks & trails.	Indirect	\$\$\$	7+ Years	P&R
EV Infrastructure Comprehensive Plan					
1.2.3. Prioritize the implementation of planning strategies and actions that support Dublin's sustainability goals.	1.2.3.A. Adopt the EV Infrastructure Comprehensive Plan at City Council.	Indirect	\$	1 - 3 Years	T&M
	1.2.3.B. Implement recommendations from the EV Infrastructure Comprehensive Plan.	Direct	\$\$\$	3 - 7 Years	T&M
Future Planning					
1.2.4. Incorporate sustainability into future planning efforts.	1.2.4.A. Identify opportunities for the EcoDublin team to be incorporated as a stakeholder in future planning efforts.	Indirect	\$	In Progress	CPD
1.3 Amplify Dublin's Sustainability Story: Develop clear and consistent communications regarding events, programs, and opportunities for community participation.					
1.3.1. Collaborate with the Dublin Arts Council to foster art that highlights or explores sustainability topics.	1.3.1.A. Pursue grant opportunities for the funding of an artist residency program that aims to increase public participation levels.	Indirect	\$	3 - 7 Years	P&R OCM
1.3.2. Improve outreach outcomes by incorporating new engagement tools, increasing outreach frequency, and streamlining outreach material creation processes.	1.3.2.A. Perform annual engagement methods review and survey peer cities for new practices or strategies that could improve outreach efficacy.	Indirect	\$	1 - 3 Years	C&M
	1.3.2.B. Continue promotion across all social media platforms and explore additional opportunities for increased promotion.	Indirect	\$	3 - 7 Years	C&M
	1.3.2.C. Develop a media toolkit that will include templates and branding for sustainability communications on digital and print platforms to maximize outreach methods.	Indirect	\$	1 - 3 Years	C&M

ACTION PLAN

Strategy	Action	Impact	Cost	Timeframe	Lead
1.4. Embed Equity into Sustainability Leadership: Incorporate an equity lens into sustainability efforts to maximize access and participation by all Dublin residents.					
Equitable Evaluation					
1.4.1. Establish a process to measure participation levels in City programs that captures diversity-related metrics.	1.4.1.A. Analyze participation in the PACE Program annually to understand the diversity of impacts and identify participation gaps to inform targeted outreach.	Indirect	\$	1 - 3 Years	ED
	1.4.1.B. Incorporate a sustainability section in the annual community survey to establish and track participation in environmental programs and waste management programs.	Indirect	\$	1 - 3 Years	C&M
Equitable Access					
1.4.2. Ensure new City incentive programs related to sustainability are easily accessible and make sustainability actions more affordable for all residents.	1.4.2.A. Explore implications and opportunities for rental property owners when designing residential-oriented programming.	Indirect	\$	1 - 3 Years	OCM
	1.4.2.B. Diversify outreach methods to mitigate potential access barriers, such as limited internet access or English language fluency, by using a combination of digital, print, and other mechanisms, alongside strategic translations.	Indirect	\$	3 - 7 Years	C&M O&E DEI Committee
	1.4.2.C. Align sustainability outreach efforts with ongoing DEI initiatives and objectives to ensure that sustainability is approachable for all.	Indirect	\$	3 - 7 Years	C&M O&E DEI Committee
1.5. Champion Green Business: Create an ecosystem that encourages and supports the growth of environmentally friendly businesses, buildings, markets, and technology.					
Green Business Development					
1.5.1. Build off the City's practice of sustainable purchasing outlined in administrative orders.	1.5.1.A. Pursue a revised AO to expand sustainable purchasing preference that emphasizes circular products.	Direct	\$	3 - 7 Years	OCM Finance
	1.5.1.B. Perform annual exploratory reviews of the region's existing businesses that could provide products or services that satisfy sustainable procurement policies.	Direct	\$	3 - 7 Years	OCM ED
	1.5.1.C. Develop a sustainability clause for City engineering/construction contracts that requires or incentivizes more sustainable services, such as a requirement for building material recycling during building demolition.	Direct	\$	1 - 3 Years	OCM Finance

ACTION PLAN

Strategy	Action	Impact	Cost	Timeframe	Lead
1.5.2. Develop new programs to recognize, reward, and promote green business practices.	1.5.2.A. Establish a Green Business Leadership Roundtable comprised of leaders from local businesses, institutions, DCS, and City officials to identify, engage, and promote leaders in sustainable businesses from within Dublin's local business community.	Indirect	\$	1 - 3 Years	OCM ED
	1.5.2.B. Create City-provided green business certifications for local businesses to acknowledge and reward sustainability improvements.	Indirect	\$	3 - 7 Years	OCM
	1.5.2.C. Develop a green service provider directory on the city website drawing from certified local businesses.	Indirect	\$	3 - 7 Years	OCM
Green Workforce Development					
1.5.3. Recruit, train, and retain a skilled local government workforce to implement municipal sustainability actions.	1.5.3.A. Identify existing positions that will be responsible for implementing new sustainable practices and programs across city departments.	Indirect	\$	In Progress	HR
	1.5.3.B. Engage with Human Resources to evaluate current hiring criteria and desired qualifications for new hires in sustainability related positions to reflect skill or capacity needs for Sustainability Plan implementation.	Indirect	\$	3 - 7 Years	HR
	1.5.3.C. Evaluate current Staff skills and knowledge to identify capacity gaps that could be addressed through trainings and targeted professional development.	Indirect	\$\$\$	3 - 7 Years	HR
1.5.4. Explore feasibility of a green business incubator in collaboration with the existing business community and local educational institutions.	1.5.4.A. Pursue an adaptive-reuse approach to aging business parks to diversify uses and create more dynamic, attractive business environments.	Direct	\$\$	3 - 7 Years	CPD ED
	1.5.4.B. Leverage the ongoing Metro Center revisioning process to explore feasibility of guiding Metro Center Revitalization towards Just Communities (formerly EcoDistrict) qualifications.	Direct	\$\$\$\$	7+ Years	CPD ED

ACTION PLAN

Strategy	Action	Impact	Cost	Timeframe	Lead
1.6 Institutionalize the use of Sustainability Data: Standardize and expand the use of Sustainability Data throughout City operations to continually measure and evaluate Sustainability Plan progress.					
Internal Data Management					
1.6.1. Create a formal data management strategy and processes through collaboration between departmental sustainability leads and the Innovation & Technology department to support ongoing measurement and evaluation of sustainability outcomes.	1.6.1.A. Catalog all data sources related to Sustainability Plan metrics, including department and Staff position(s) responsible, frequency of collection, output format, and any additional processing required for usability.	Indirect	\$\$	1 - 3 Years	OCM I&T
	1.6.1.B. Establish a process for reporting of Plan metrics from respective responsible departments to Staff responsible for managing public data hub that sets clear expectations for timely reporting.	Indirect	\$	In Progress	OCM I&T
	1.6.1.C. Develop a data management training series to build data-use capacity throughout the City with strategic emphasis on Departments and Staff related to key data generating operations.	Indirect	\$\$	3 - 7 Years	OCM I&T
	1.6.1.D. Conduct a Greenhouse Gas Inventory every 2-3 years.	Indirect	\$	3 - 7 Years	OCM I&T
Transparent Impact Measurement					
1.6.2. Create a public sustainability dashboard with up-to-date progress measures to help communicate sustainability actions and impact.	1.6.2.A. Identify additional sustainability-related goals, objectives, and actions in current and future plans that should be incorporated into or referenced in the dashboard.	Indirect	\$	1 - 3 Years	OCM CPD C&M
	1.6.2.B. Explore technical feasibility of linking to website pages of sustainability programs or opportunities from related plan items on the dashboard.	Indirect	\$	1 - 3 Years	C&M

Strategy	Action	Impact	Cost	Timeframe	Lead
2.1. Multi Modal City: Provide our increasingly diverse community access to a range of transportation options. Connecting more people to more places.					
Car Alternatives					
2.1.1. Reduce Single Occupancy Vehicle Commuting.	2.1.1.A. Expand development of sustainable transportation infrastructure.	Direct	\$\$\$\$	7+ Years	T&M
	2.1.1.B. Expand the capacity of the City's municipal bikeshare program by increasing the City's fleet of e-bikes with grant funds.	Direct	\$	7+ Years	T&M
	2.1.1.C. Include carpooling & other alternatives to single occupancy driving into green business certification criteria.	Indirect	\$	3 - 7 Years	T&M
	2.1.1.D. Implement recommendations related to EV public education materials & outreach strategies from the EV Infrastructure Comprehensive Plan.	Indirect	\$	1 - 3 Years	T&M
Transit					
2.1.2. Enable Transit-Supportive Places.	2.1.2.A. Incorporate National Association of City Transportation Officials (NACTO) Green Transitway Guidance, such as the use of rain gardens and other GSI landscape features, into the design of future mobility hubs.	Direct	\$	7+ Years	T&M
	2.1.2.B. Identify priority areas for new transit supportive development to align with future route or service expansions defined in COTA planning materials.	Indirect	\$	In Progress	T&M
	2.1.2.C. Create opportunities to engage in public/private partnerships with developers interested in transit ready developments to shape new built environments to be ready for future transit expansion.	Indirect	\$	7+ Years	CPD
	2.1.2.D. Encourage transit ridership by installing canopies and furniture for rider comfort and cooling, which further contributes to reducing overall heat island effects.	Direct	\$\$\$	3 - 7 Years	T&M
	2.1.2.E. Identify locations for car-free or car-light zones that can be paired with high density urban development to create a high-quality and safe pedestrian environment.	Direct	\$	3 - 7 Years	T&M

ACTION PLAN

Strategy	Action	Impact	Cost	Timeframe	Lead
Complete Green Streets					
2.1.3. Increase active transportation and micro-mobility.	2.1.3.A. Pursue Walk Friendly Community and Runner Friendly Community designation.	Indirect	\$	3 - 7 Years	T&M
	2.1.3.B. Continue to perform a biennial accessibility audit of existing walking & cycling infrastructure to identify any existing accessibility barriers for redressing.	Indirect	\$	In Progress	AMQA
	2.1.3.C. Continue to expand bike maintenance & safe storage amenities.	Indirect	\$\$\$	3 - 7 Years	T&M
2.1.4. Foster the development of complete green streets.	2.1.4.A. Initiate a cool corridors program aimed to reduce heat impacts and improve walking comfort for pedestrians by prioritizing canopy additions using the Tree Equity Score and Urban Heat Island Severity.	Direct	\$\$\$	3 - 7 Years	T&M
	2.1.4.B. Build on existing Complete Streets efforts to further incorporate green infrastructure features to maximize co-benefits.	Direct	\$\$\$	3 - 7 Years	P&R Public Service Engineering
2.2. Adapted City: Foster greater adaptive capacity through community resilience building and adaptive or sustainable building development					
Community Resilience					
2.2.1. Empower communities to engage in neighborhood planning processes focused on disaster resilience and emergency preparation at the community level.	2.2.1.A. Promote & facilitate neighborhood disaster resilience planning.	Indirect	\$	7+ Years	Police
	2.2.1.B. Collaborate with local nonprofits to develop City-led emergency supply program to collect donations and provide no-cost supplies to lower-income families.	Indirect	\$	7+ Years	O&E Police
Adaptive Reuse					
2.2.2. Foster an adaptive reuse approach to redevelopment.	2.2.2.A. Assess current processes and identify potential opportunities to clarify the regulatory processes, provide centralized information about funding opportunities, and offer guidance on best practices.	Indirect	\$	In Progress	CPD
	2.2.2.B. Create new incentives for adaptive reuse.	Indirect	\$\$	3 - 7 Years	CPD ED
	2.2.2.C. Explore alternative building requirements for commercial buildings greater than 3 stories that offer more flexible future use potential than stick-frame methods.	Indirect	\$	1 - 3 Years	CPD

Strategy	Action	Impact	Cost	Timeframe	Lead
New Development					
2.2.3. Assess what standards could be updated to incorporate higher standards for building performance and energy conservation.	2.2.3.A. Review and identify energy efficiency standards in adopted local and statewide building codes and standards.	Indirect	\$	1 - 3 Years	CPD
	2.2.3.B. Engage plan review staff, local builders, and developers to understand potential standard implementation tradeoffs, including applicability to residential structures.	Indirect	\$	1 - 3 Years	CPD
	2.2.3.C. Hire a consultant to review the code to identify any inconsistencies related to sustainable development.	Indirect	\$\$	1 - 3 Years	CPD
	2.2.3.D. Encourage the use of rain barrels and cisterns for water reclamation, consistent with the Stormwater Management Design Manual.	Indirect	\$\$	1 - 3 Years	CPD
2.2.4. Create a Green Neighborhoods subcommittee of EcoDublin comprised of staff from key city divisions with influence on the development process in collaboration with CSAC.	2.2.4.A. Perform annual review of current best practices for green development regulations and construction standards for opportunities to revise existing standards.	Indirect	\$	1 - 3 Years	CPD
2.2.5. Expand and maintain programs that provide incentives and funding to encourage green development and sustainable building methods.	2.2.5.A. Increase frequency of outreach and medium (social media, print, local news) used to promote existing programs such as PACE.	Indirect	\$	3 - 7 Years	CPI ED
	2.2.5.B. Extend existing sustainability and development incentives (\$ 153.041) to additional zoning districts where appropriately suited for intended density bonuses.	Direct	\$\$	3 - 7 Years	CPD ED
2.2.6 Incorporate new incentives for new construction that promote green building or development certifications, including provisions for LEED, SITES, WELL, Green Globes and Energy Star across all zoning categories.	2.2.6.A. Provide companies access to programs that encourage building “green” by incorporating additional internationally recognized programs.	Direct	\$	3 - 7 Years	CPD ED
2.2.7. Exemplify green building methods through future municipal building design and construction.	2.2.7.A. Evaluate future municipal new construction needs to identify a pilot Living Building Challenge project.	Direct	\$\$\$\$	7+ Years	CPD Facilities

ACTION PLAN

Strategy	Action	Impact	Cost	Timeframe	Lead
2.3. Efficient City: Reduce overall energy and water use through investment into efficiency measures for City, residential, and commercial buildings.					
Energy Efficiency					
2.3.1. Achieve carbon neutrality by reducing energy consumption and emissions to the greatest extent possible and offsetting remaining emissions through carbon removal and mitigation strategies.	2.3.1.A. Develop annual energy use reports and greenhouse gas emissions estimates for City buildings to monitor progress towards energy and emissions reductions goals.	Indirect	\$	1 - 3 Years	Facilities I&T
	2.3.1.B. Hire a consultant to identify opportunities for energy efficiency improvements in municipal facilities and develop a facilities action plan that identifies, prioritizes, and estimates costs for energy efficiency improvements and retrofits.	Direct	\$\$	1 - 3 Years	Facilities
	2.3.1.C. Work with an outside partner or consultant to identify and quantify potential carbon mitigation practices and strategies for implementation within Dublin city limits.	Direct	\$\$	3 - 7 Years	OCM
	2.3.1.D. Optimize City building performance by continuing to install energy efficient appliances, such as fitting all City restrooms with energy efficient hand dryers.	Direct	\$\$	3 - 7 Years	OCM
2.3.2. Reduce energy used by residential and commercial properties by 2% annually to reach 20% reductions by 2035.	2.3.2.A. Increase energy efficiency for existing housing and rental properties through outreach and incentive programming.	Direct	\$\$	3 - 7 Years	OCM
	2.3.2.B. Increase energy efficiency for existing commercial properties through outreach and incentive programming.	Direct	\$\$	3 - 7 Years	OCM ED
	2.3.2.C. Explore feasibility of establishing new finance mechanisms for energy efficiency improvements.	Direct	\$\$	3 - 7 Years	OCM ED

Strategy	Action	Impact	Cost	Timeframe	Lead
Water Efficiency					
2.3.3. Reduce water use by City buildings & facilities by 2% annually to reach 20% reductions by 2035.	2.3.3.A. Engage Facilities Management to establish a water use inventory on all City buildings & facilities to inventory activities that use water and the types of fixtures or water-related equipment used.	Indirect	\$	1 - 3 Years	Facilities
	2.3.3.B. Retrofit all non-water efficient fixtures throughout all City buildings & facilities with water-efficient alternatives.	Direct	\$\$\$	3 - 7 Years	Facilities
	2.3.3.C. Explore opportunities to pilot water re-use strategies at high-visibility public facilities.	Direct	\$\$	3 - 7 Years	Facilities
	2.3.3.D. Improve system efficiency over time through investments in innovative technology, with an emphasis on smart technologies that enhance monitoring capabilities.	Direct	\$\$\$	7+ Years	Facilities
	2.3.3.E. Re-evaluate maintenance processes to identify opportunities to incorporate additional quality checks on water infrastructure during routine maintenance to more efficiently find and address equipment failures.	Indirect	\$	1 - 3 Years	Facilities
2.3.4. Reduce water use by residential & commercial facilities by 2% annually to reach 20% reductions by 2035.	2.3.4.A. Establish regular data sharing protocols with the City of Columbus to monitor water use by residential and non-residential customers within Dublin city limits and track progress.	Indirect	\$	3 - 7 Years	Engineering
	2.3.4.B. Explore feasibility of rebate program for water efficient appliance purchases.	Indirect	\$\$	1 - 3 Years	OCM Finance
	2.3.4.C. Promote water conservation through native landscaping and turf conversion.	Direct	\$	In Progress	C&M CPD

ACTION PLAN

Strategy	Action	Impact	Cost	Timeframe	Lead
2.4 Renewable City: Increase the use of renewable energy by the City, residents, and local businesses.					
Electric Vehicles					
2.4.1. Reduce dirty diesel/standard fuel vehicles from the City's light-duty fleet.	2.4.1.A. Electrify 45% of the City's light-duty fleet by 2035.	Direct	\$\$\$\$	In Progress	Fleet
	2.4.1.B. Actualize recommendations from the EV Infrastructure Comprehensive Plan regarding replacement of light-duty fleet vehicles and potential heavy duty electric vehicles as technology advances.	Indirect	\$	1 - 3 Years	Fleet
	2.4.1.C. Implement recommendations from the EV Infrastructure Comprehensive Plan to create public-private collaborative funding mechanisms to promote new EV charging stations in multi-family and commercial developments.	Indirect	\$\$	3 - 7 Years	T&M
	2.4.1.D. Carry out the EV Infrastructure Comprehensive Plan's recommended implementation targets to increase Level 2 and DCFC port availability by 2035.	Indirect	\$\$	3 - 7 Years	T&M
Community Aggregation					
2.4.2. Revisit the potential for a community aggregation program.	2.4.1.1 Explore developing a community aggregation program supported by Ordinance 35-01 through partnership with a renewable energy provider.	Direct	\$	3 - 7 Years	OCM
Municipal Solar					
2.4.3. Increase the use of renewable energy sources at City facilities.	2.4.3.A. Identify opportunities to further electrify parks and facilities maintenance equipment.	Direct	\$\$	1 - 3 Years	P&R
	2.4.3.B. Identify infrastructure needs to increase electric vehicles and equipment within parks and facilities maintenance.	Indirect	\$\$\$	3 - 7 Years	P&R Facilities
	2.4.3.C. Assess existing rights-of-way along major City-maintained corridors and arterials for sites with sufficient area to implement solar installations.	Direct	\$\$\$	3 - 7 Years	P&R
	2.4.3.D. Explore cost and maintenance feasibility of solar surfacing materials for new or rehabilitated trails.	Direct	\$\$	7+ Years	P&R

ACTION PLAN

Strategy	Action	Impact	Cost	Timeframe	Lead
Residential & Commercial Solar					
2.4.4. Increase renewable energy generation and storage for residents & commercial buildings.	2.4.4.A. Evaluate current regulation and explore opportunities for changes that could increase access to solar panels.	Direct	\$	In Progress	CPD
	2.4.4.B. Encourage a group solar purchase program to help communities organize resources, access solar providers, and design for multi-household solar projects.	Direct	\$	3 - 7 Years	OCM CPD

Strategy	Action	Impact	Cost	Timeframe	Lead
3.1 Blue City: Improve the quality of municipal and natural water resources through regional collaboration and more robust water quality programs and regulations.					
Water Management					
3.1.1. Coordinate with regional organizations and utility providers to expand and deepen Dublin's water planning efforts & coordination.	3.1.1.A. Collaborate Dublin's water management efforts with regional water adaptation strategies and planning objectives.	Indirect	\$	3 - 7 Years	Engineering
	3.1.1.B. Create a One-Water Framework that unifies all City water-related planning efforts within a holistic approach to City-wide water management.	Indirect	\$	3 - 7 Years	Engineering
3.1.2. Incorporate water efficiency strategies such as stormwater retention and reuse into new municipal developments and redevelopment projects.	3.1.2.A. Champion a pilot project at a community park for on-site stormwater retention and reuse that explores the feasibility of installing underground storage capacity at new or redeveloped parks.	Direct	\$\$\$\$	3 - 7 Years	Engineering P&R
Water Resource Protection					
3.1.3. Continue to develop capacities and procedures for maintaining and improving water quality in critical natural waterways.	3.1.3.A. Leverage ongoing water quality monitoring processes to reduce stream impairment.	Indirect	\$\$	1 - 3 Years	O&E Engineering
	3.1.3.B. Collaborate with regional colleges or universities and/or the Ohio Department of Natural Resources, with consultant support as necessary, to create pest and invasive management plans.	Indirect	\$\$	3 - 7 Years	Public Service
	3.1.3.C. Build on current practices related to monitoring critical waterways for illegal discharges, including field observation protocols and response measures.	Indirect	\$	1 - 3 Years	Engineering Public Service
	3.1.3.D. Add an illegal or suspicious discharge report option to the GoDublin app.	Indirect	\$	1 - 3 Years	AMQA

ACTION PLAN

Strategy	Action	Impact	Cost	Timeframe	Lead
3.1.4. Reduce private contributions to stream impairment through expanded code enforcement and community outreach.	3.1.4.A. Regularly review & update erosion control requirements to reflect current best management practices.	Indirect	\$	3 - 7 Years	Engineering
	3.1.4.B. Assess erosion and sediment control inspection processes to identify areas for strengthened oversight.	Indirect	\$	1 - 3 Years	Engineering
	3.1.4.C. Review Section 51.02 of the Development Code for opportunities to provide more robust guidance on design and installation requirements for on-site sewage disposal.	Indirect	\$	1 - 3 Years	Engineering
	3.1.4.D. Create new outreach materials about best practices for household sewage treatment systems maintenance and how to identify potential contamination issues.	Indirect	\$	1 - 3 Years	C&M Engineering
	3.1.4.E. Help connect residents to technical assistance providers related to well-water quality measuring and septic maintenance.	Indirect	\$\$	3 - 7 Years	Engineering
Nature-Based Solutions (NBS) + Green Stormwater Infrastructure (GSI)					
3.1.5. Deepen City engagement with nature-based solutions (NBS).	3.1.5.A. Retrofit city-owned stormwater detention basins to pilot Green Stormwater Infrastructure (GSI) features alongside public education components such as interpretive signage to build awareness of NBS.	Direct	\$\$	3 - 7 Years	P&R Engineering
	3.1.5.B. Continue to expand the use of nature-based solutions used for the design of City building beyond GSI to incorporate passive heating/cooling strategies, such canopy shading or hedge windbreaks.	Indirect	\$\$	3 - 7 Years	Facilities Engineering
3.1.6. Establish new community-centered programs to promote and expand the use of nature-based solutions.	3.1.6.A. Expand existing Community Backyards program to include a Rain Garden Cost Share Program.	Indirect	\$	1 - 3 Years	Engineering
	3.1.6.B. Engage with the Franklin Soil and Water Conservation District to build off existing Community Backyard program to partner on a Commercial Business Rebate.	Indirect	\$	1 - 3 Years	O&E Engineering
	3.1.6.C. Identify opportunities to incorporate NBS improvements into existing incentive programs.	Indirect	\$\$	1 - 3 Years	ED

ACTION PLAN

Strategy	Action	Impact	Cost	Timeframe	Lead
3.1.7. Increase resident and neighborhood participation in City efforts to expand GSI.	3.1.7.A. Expand the existing Stormwater Grant program available to HOAs to apply to additional GSI features.	Indirect	\$	1 - 3 Years	Engineering
	3.1.7.B. Collaborate with local GSI-related businesses, such as engineers or landscape designers to provide technical assistance to neighborhoods looking to incorporate GSI into their community stormwater infrastructure.	Indirect	\$	3 - 7 Years	Engineering
3.2 Regenerative City: Protect, preserve, and regenerate Dublin's environment throughout the City, leading by example through City-led projects and more ecologically-driven development processes.					
Natural Areas					
3.2.1. Enhance the quality of natural spaces on City-owned land through pilot projects, future planning, and coordination of maintenance and management.	3.2.1.A. Explore feasibility for pilot project opportunities at city facilities, such as new pollinator habitat plantings or graywater re-use projects.	Indirect	\$\$	3 - 7 Years	Facilities Public Service
	3.2.1.B. Support expansion and acquisition of future natural areas through implementation of the Parks and Recreation Master Plan.	Direct	\$\$\$	3 - 7 Years	P&R
	3.2.1.C. Establish ecological criteria drawing from the UN Sustainable Development Goals and ICLEI resources to guide all future planning efforts.	Indirect	\$	1 - 3 Years	CPD
	3.2.1.D. Strengthen management and coordination for Standard Operating Procedures (SOPs) and maintenance of natural areas.	Direct	\$\$	1 - 3 Years	Public Service
	3.2.1.E. Create a centralized database of the upper-, mid-, and understory canopy vegetation.	Direct	\$\$\$	3 - 7 Years	Public Service I&T
	3.2.1.F. Strengthen ongoing invasives management efforts by producing an annual invasives prioritization plan.	Indirect	\$	1 - 3 Years	Public Service

Strategy	Action	Impact	Cost	Timeframe	Lead
3.2.2. Improve new development practices regarding the preservation of existing natural features.	3.2.2.A. Strengthen new or redevelopment requirements for open space to specify higher percentages of native and/or adapted plantings and to prioritize non-turf green space.	Direct	\$\$	1 - 3 Years	CPD
	3.2.2.B. Collaborate with local environmental groups to build capacity for a program to collect native plants during pre-construction of new greenfield developments to propagate for municipal plantings and share through community programs.	Indirect	\$	3 - 7 Years	O&E CPD P&R
	3.2.2.C. Amend soil erosion and sediment control plan requirements to recommend prioritizing the maintenance of undisturbed existing vegetation for more resilient erosion control by maintaining deeper root systems in place.	Direct	\$	3 - 7 Years	Engineering
	3.2.2.D. Establish requirements for new developments to reuse existing topsoil for new landscape features where possible.	Indirect	\$	1 - 3 Years	CPD
	3.2.2.E. Continue to promote the use of native plants when reviewing Beautify Your Neighborhood Grant applications.	Indirect	\$	In Progress	CPD
3.2.3. Evaluate city restrictions on landscaping plant height, plant debris or leaves, and material aesthetic preferences to remove potential barriers.	3.2.3.A. Identify landscape material requirements (§ 153.135) that could allow for more native planting features.	Direct	\$	3 - 7 Years	CPD
Air Quality					
3.2.4. Support ongoing MORPC efforts to assess air quality with a City focus on the impacts of roadway emissions.	3.2.4.A. Partner with MORPC to determine appropriate remediation steps, should the Air Quality Index indicate a high level of air pollution.	Indirect	\$\$	3 - 7 Years	T&M

Strategy	Action	Impact	Cost	Timeframe	Lead
4.1 Circular City: Reduce overall waste generation and foster a more sustainably-oriented economy through cyclical economics, expanded access to recycling and composting, and greater connectivity with local food-related industries.					
Circular Economy					
4.1.1. Formalize deconstruction and material reuse as standard operating procedures for redevelopment processes.	4.1.1.A. Establish Deconstruction Ordinance that builds off current city practices for deconstruction in municipal building projects.	Direct	\$\$	3 - 7 Years	CPD
	4.1.1.B. Explore feasibility of utilizing existing or new municipal building space to develop a building material reuse center.	Direct	\$\$\$	7+ Years	CPD Public Service
4.1.2. Foster the development of circular industries through programming that supports the reuse of cyclical materials.	4.1.2.A. Identify and engage with organizations to establish a “Soft Recycling Program.”	Direct	\$	3 - 7 Years	Public Service
	4.1.2.B. Collaborate with the DAC to create a craft material recycling program that accepts donations of craft goods to repurpose for community art programs.	Direct	\$	1 - 3 Years	Public Service OCM
	4.1.2.C. Establish a list of businesses that will upcycle different materials in Dublin and the surrounding area.	Indirect	\$	1 - 3 Years	OCM
4.1.3. Prioritize the establishment of circular economy through food systems.	4.1.3.A. Host a roundtable session with food industry representatives to identify opportunities to facilitate more sustainable food system processes or products.	Indirect	\$	3 - 7 Years	OCM ED
4.1.4. Foster behavioral changes around food waste through collaboration with local food pantries to provide food donation programming for residents and local businesses.	4.1.4.A. Collaborate with local food pantries to promote food donation collection points at key City buildings like the Dublin Community Recreation Center.	Indirect	\$	In Progress	C&M
	4.1.4.B. Create a food donation program to help connect food-related businesses (including grocers, restaurants, etc.) with food donation receiving organizations or businesses.	Indirect	\$	1 - 3 Years	O&E OCM
4.1.5. Mitigate the climate impacts of traditional food systems by connecting residents and Dublin businesses with local food producers.	4.1.5.A. Develop partnerships with Visit Dublin, the Chamber of Commerce, and other relevant organizations to create opportunities for agricultural producers from the broader Dublin area to connect with local food-related businesses.	Indirect	\$	3 - 7 Years	ED OCM

Strategy	Action	Impact	Cost	Timeframe	Lead
Recycling & Diversion					
4.1.6. Expand community recycling through continued education and improved accessibility.	4.1.6.A. Explore potential opportunities to increase commercial recycling programs to provide recycling access for multifamily residents.	Direct	\$	1 - 3 Years	OCM Public Service CPD
	4.1.6.B. Pilot an additional styrofoam, e-waste, & composting drop off location at a central location in Dublin.	Direct	\$	1 - 3 Years	Public Service
	4.1.6.C. Expand e-waste drop-off to at least one (1) additional City buildings to increase accessibility.	Direct	\$	1 - 3 Years	Public Service
	4.1.6.D. Continue to engage with the City's waste hauler and SWACO to increase recycling education efforts.	Indirect	\$	In Progress	Public Service C&M
	4.1.6.E. Explore feasibility of incorporating an integration on the City's recycling webpage to allow residents to search material by name and determine the appropriate disposal method.	Indirect	\$	1 - 3 Years	C&M Public Service
	4.1.6.F. Offer additional recycling bins or a larger size option at the request of residents.	Direct	\$\$	1 - 3 Years	Public Service
	4.1.6.G. Develop new mechanisms for collecting "hard-to-recycle" items, such as eyeglasses.	Direct	\$	1 - 3 Years	Public Service
	4.1.6.H. Partner with SWACO to help residents and the business community determine appropriate ways to divert hard-to-recycle materials.	Direct	\$\$	1 - 3 Years	Public Service
4.1.7. Expand residential composting capacity through partnerships, greater access, and education.	4.1.7.A. Expand the composting program to provide another drop-off location for increased accessibility.	Indirect	\$	1 - 3 Years	Public Service
	4.1.7.B. Develop and promote how-to materials and support programming to encourage backyard composting.	Indirect	\$	1 - 3 Years	Public Service C&M
	4.1.7.C. Engage with local haulers to explore the feasibility of a partnership for curbside compost pick-up. The cost would be determined as part of the feasibility study.	Indirect	\$	3 - 7 Years	Public Service

OVERVIEW OF IMPLEMENTATION

IN-PROGRESS

Model Sustainable Leadership

- 1.1.4 Promote City sustainability programs and incentives
- 1.1.9 Engage local businesses on sustainability initiatives
- 1.5.3 Recruit, train, and retain green workforce
- 1.6.1 Create data management strategy and processes

Design Sustainable Communities

- 2.1.2 Enable Transit-Supportive Places
- 2.1.3 Increase active transportation and micro-mobility
- 2.2.2 Foster adaptive reuse approach to redevelopment
- 2.3.4 Reduce residential and commercial water use
- 2.4.1 Reduce dirty diesel/standard fuel vehicles from the City's light-duty fleet
- 2.4.4 Increase renewable energy generation and storage for residential and commercial buildings

Support the Natural Environment

- 3.2.2 Improve new development practices in preservation of existing natural features

Achieve Zero Waste

- 4.1.4 Collaborate with local food pantries for food donation
- 4.1.6 Expand community recycling

SHORT 1-3 YEARS

Model Sustainable Leadership

- 1.1.1 Coordinate with CSAC for community partnerships
- 1.1.3 Create sustainability focused community volunteering opportunities
- 1.1.10 Create public private partnerships through leadership and programming
- 1.1.11 Engage non-profits to align efforts with ongoing programs
- 1.2.3 Prioritize implementation of planning strategies and actions to support sustainability goals
- 1.3.2 Improve outreach and engagement
- 1.4.1 Ensure equitable evaluation and participation in City programs
- 1.4.2 Ensure equitable access to incentive programs and sustainability actions.
- 1.5.1 Build off sustainable purchasing outlined in administrative orders.
- 1.5.2 Promote green business practices
- 1.6.1 Create data management strategy and processes
- 1.6.2 Create sustainability dashboard

Design Sustainable Communities

- 2.1.1 Reduce single occupancy vehicle commuting
- 2.2.3 Assess and update building performance and energy conservation standards
- 2.2.4 Create a Green Neighborhoods subcommittee of EcoDublin
- 2.3.1 Reduce energy consumptions and emissions for carbon neutrality
- 2.3.3 Reduce water use by City buildings and facilities
- 2.3.4 Reduce residential and commercial water use
- 2.4.1 Reduce dirty diesel/standard fuel vehicles from the City's light-duty fleet
- 2.4.3 Increase use of renewable energy sources at City facilities

Support the Natural Environment

- 3.1.3 Develop capacities and procedures for maintaining and improving water quality in critical natural waterways
- 3.1.4 Reduce private contributions to stream impairment
- 3.1.6 Establish community centered programs to promote nature-based solutions
- 3.1.7 Increase resident and neighborhood participation in City efforts to expand GSI
- 3.2.1 Enhance quality of natural spaces on City-owned land
- 3.2.2 Improve new development practices in preservation of existing natural features

Achieve Zero Waste

- 4.1.2 Foster development of circular industries
- 4.1.4 Collaborate with local food pantries for food donation
- 4.1.6 Expand community recycling
- 4.1.7 Expand residential composting capacity

MEDIUM 3-7 YEARS

Model Sustainable Leadership

- 1.1.2 Guide development of more sustainability-supportive bylaws and regulations
- 1.1.3 Create sustainability focused community volunteering opportunities
- 1.1.4 Promote City sustainability programs and incentives
- 1.1.5 Use signature annual events to lead by example and build awareness
- 1.1.6 Offer sustainability programs at schools
- 1.1.7 Discuss increasing the diversion rate in schools
- 1.1.8 Work with local higher education institutions
- 1.1.10 Create public private partnerships through leadership and programming

- 1.2.1 Incorporate in Envision Dublin implementation
- 1.2.2 Incorporate in PRMP implementation
- 1.2.3 Prioritize implementation of planning strategies and actions to support sustainability goals

- 1.3.1 Collaborate with DAC to foster art
- 1.3.2 Improve outreach and engagement

- 1.4.2 Ensure equitable access to incentive programs and sustainability actions

- 1.5.1 Build off sustainable purchasing outlined in administrative orders
- 1.5.2 Promote green business practices
- 1.5.3 Recruit, train, and retain green workforce
- 1.5.4 Explore feasibility of green business incubator

- 1.6.1 Create data management strategy and processes

Design Sustainable Communities

- 2.1.1 Reduce single occupancy vehicle commuting
- 2.1.2 Enable Transit-Supportive Places
- 2.1.3 Increase active transportation and micro-mobility
- 2.1.4 Foster development of complete green streets
- 2.2.2 Foster adaptive reuse approach to redevelopment
- 2.2.5 Expand and maintain green development program incentives and funding
- 2.2.6 Create new incentives for promoting green building or development certifications
- 2.3.1 Reduce energy consumptions and emissions for carbon neutrality
- 2.3.2 Reduce residential and commercial energy
- 2.3.3 Reduce water use by City buildings and facilities
- 2.3.4 Reduce residential and commercial water use
- 2.4.1 Reduce dirty diesel/standard fuel vehicles from the City's light-duty fleet
- 2.4.2 Revisit potential for community aggregation program
- 2.4.3 Increase use of renewable energy sources at City facilities
- 2.4.4 Increase renewable energy generation and storage for residential and commercial buildings

Support the Natural Environment

- 3.1.1 Expand and deepen Dublin's water planning efforts and coordination
- 3.1.2 Incorporate water efficiency strategies into new municipal developments and redevelopment projects
- 3.1.3 Develop capacities and procedures for maintaining and improving water quality in critical natural waterways
- 3.1.4 Reduce private contributions to stream impairment
- 3.1.5 Deepen City engagement with nature-based solutions
- 3.2.1 Enhance quality of natural spaces on City-owned land
- 3.2.2 Improve new development practices in preservation of existing natural features
- 3.2.3 Remove City barriers for native planting features
- 3.2.4 Support MORPC efforts to assess air quality

Achieve Zero Waste

- 4.1.1 Formalize deconstruction and material reuse for redevelopment
- 4.1.2 Foster development of circular industries
- 4.1.3 Prioritize establishment of circular economy through food systems
- 4.1.5 Connect residents and businesses with local food producers
- 4.1.7 Expand residential composting capacity

LONG 7+ YEARS

Model Sustainable Leadership

- 1.1.3 Create sustainability focused community volunteering opportunities
- 1.1.6 Offer sustainability programs at schools
- 1.1.8 Work with local higher education institutions
- 1.1.10 Create public private partnerships through leadership and programming
- 1.1.11 Engage non-profits to align efforts with ongoing programs
- 1.1.12 Work with regional organizations
- 1.2.1 Incorporate in Envision Dublin implementation
- 1.2.2 Incorporate in PRMP implementation
- 1.5.4 Explore feasibility of green business incubator

Design Sustainable Communities

- 2.1.1 Reduce single occupancy vehicle commuting
- 2.1.2 Enable Transit-Supportive Places
- 2.2.1 Pursue community level disaster resilience and emergency preparation planning
- 2.2.7 Exemplify green building methods through future municipal building design and construction
- 2.3.3 Reduce water use by City buildings and facilities
- 2.4.3 Increase use of renewable energy sources at City facilities

Achieve Zero Waste

- 4.1.1 Formalize deconstruction and material reuse for redevelopment

APPENDICES

GLOSSARY

BIOSWALES

Bioswales are shallow, vegetated channels that slow down and infiltrate storm water runoff. Bioswales use an engineered soil sub-base made of topsoil, sand and compost. The vegetation and rocks in the trench reduce the velocity of the runoff and filter suspended sediments from the water. Bioswales are best suited along roadways and parking lots and sometimes act as pre-treatment devices for other storm water management practices.

CAPITAL IMPROVEMENT PLAN (CIP)

A capital improvement plan is a dynamic community planning and fiscal management tool used to coordinate the location, timing, and financing of capital improvements over a multi-year period. It is critically important and one of the major responsibilities for a government entity.

COMMUNITY SERVICES ADVISORY COMMISSION (CSAC)

The Community Services Advisory Commission (CSAC) serves as Dublin's community sustainability team, with the EcoDublin group serving as staff's internal advisory committee. The CSAC includes 7 residents appointed by City Council and meets the second Tuesday of each month.

COMPRESSED NATURAL GAS (CNG)

Compressed natural gas is a fuel which can be used in place of gasoline, diesel fuel and propane. CNG combustion burns cleaner than the fuels mentioned above.

CREEK RESTORATION

Creek restoration is the process of uncovering and restoring natural rivers or creeks that were modified by development. Restored creek beds provide a natural path that slows runoff and removes pollutants from the water. Creek restoration uses plants and vegetation to help absorb and control the flow of runoff. Creek restoration is best suited for waterways that experience major flooding in rain events and or adjacent to large developments.

DIVERSITY, EQUITY AND INCLUSION (DEI)

Values that help create fairer, more accessible workplaces for all. By acting on DEI values, organizations can support individuals of different ethnicities, religions, abilities, races, sexual orientations, gender, political perspectives, and backgrounds, resulting in more inclusive workplaces.

Diversity – The presence of different and multiple characteristics that make up individual and collective identities, including race, gender, age, religion, sexual orientation, ethnicity, national origin, socioeconomic status, language, and physical ability.

Equity – The process of identifying and removing the barriers that create disparities in the access to resources and means, and the achievement of fair treatment and equal opportunities to thrive. See also equality.

Inclusion – Is creating environments in which any individual or group can be and feel welcomed, respected, supported and valued to participate fully.

DUBLIN ARTS COUNCIL (DAC)

DAC is a 501(c)(3) nonprofit organization, supported in part by the City of Dublin's hotel/motel tax. Their mission is to engage the community, cultivate creativity, and foster life-long learning through the arts.

DUBLIN CITY SCHOOLS (DCS)

Dublin City Schools (DCS) is the 9th largest district in the State of Ohio. The boundaries of the district encompass 47 square miles and include parts of Dublin, Columbus, Hilliard, and Upper Arlington. Dublin City Schools works to continuously improve its practices and provide students with world-class instruction and a well-rounded education.

DUBLIN COMMUNITY RECREATION CENTER (DCRC)

The Dublin Community Recreation Center is home to state-of-the-art facilities that provide value, convenience, flexibility, and professional, personalized service. It is committed to providing quality recreation programs and facilities for the Dublin community.

DUBLIN IRISH FESTIVAL (DIF)

Dublin Irish Festival is an annual music and cultural festival held in Dublin.

ELECTRIC VEHICLE (EV)

A vehicle that can be powered by an electric motor that draws electricity from a battery and is capable of being charged from an external source. An EV includes both a vehicle that can only be powered by an electric motor that draws electricity from a battery (all-electric vehicle) and a vehicle that can be powered by an electric motor that draws electricity from a battery and by an internal combustion engine (plug-in hybrid electric vehicle).

FRANKLIN SOIL AND WATER CONSERVATION DISTRICT (FSWCD)

Soil and water conservation districts are subdivisions of the state, organized under ORC 940, and conterminous with county boundaries. Franklin Soil and Water Conservation District's mission is to promote responsible land use decisions for the conservation, protection and improvement of soil and water resources by providing information and assistance through effective partnering, technical guidance and education.

GASOLINE GALLON EQUIVALENT (GGE)

Gallon of Gasoline Equivalent is the typical way CNG is sold at public fueling stations and the typical way that CNG tanks are rated.

GREEN ROOFS

A green roof is covered in vegetation that helps reduce the amount of storm water runoff from the top of a building or structure. Green roofs generally consist of multiple layers, including a waterproof membrane, an insulation layer, growing media and vegetation. The layers retain storm water, which eventually evaporates from the plants or growing media or it gradually trickles down, reducing the demand on storm drainage during rain events. Green roofs are best suited for areas where open space or other BMPs are not suitable.

GREEN STORMWATER INFRASTRUCTURE (GSI)

Green Stormwater Infrastructure (GSI) is a suite of "systems and practices that restore and maintain natural hydrologic processes in order to reduce the volume and water quality impacts of stormwater runoff." Riparian buffers, green roofs, bioswales, cisterns, permeable pavements and constructed wetlands are all examples of GSI

HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)

The main parts of an HVAC system are a heating, a ventilation, and an air-conditioning unit(s). Furthermore, modern systems include an air filtration and cleaning element as well.

ICLEI LOCAL GOVERNMENTS FOR SUSTAINABILITY

ICLEI is a global network of local and regional governments committed to sustainable urban development that influences sustainability policy and drives local action for low emissions, nature-based, equitable, resilient and circular development.

MID-OHIO REGIONAL PLANNING COMMISSION (MORPC)

MORPC is an association of cities, villages, townships, counties and regional organizations serving Central Ohio. The organization brings communities of all sizes and interests together to collaborate on best practices and plan for the future growth of Central Ohio. MORPC does this through a variety of programs, services, projects and initiatives – all with the goal of improving the lives of residents and making Central Ohio stand out on the world stage.

MID STORY CANOPY

Intermediate canopy layer, including trees below the overstory and above the understory layer.

NATURE BASED SOLUTION

Nature-based Solutions are actions to protect, conserve, restore, and sustainably use and manage ecosystems. These solutions addresses social, economic and environmental challenges in a way that simultaneously benefits human well-being and biodiversity. In other words, they are interventions that use nature and the natural functions of healthy ecosystems to tackle major challenges like climate change, disaster risk reduction, food and water security, biodiversity loss, and human health.

OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA)

The Ohio EPA protects the environment and public health by ensuring compliance with environmental laws and encouraging environmental stewardship.

ONE WATER FRAMEWORK

A transformative way of viewing, valuing, and managing water. The One Water approach manages all water—whether from the tap, a stream, a storm, an aquifer, or a sewer—in a collaborative, integrated, inclusive, and holistic manner.

OPEN SPACE

Open space is an area of land set aside during the development process for public or private use, or as open space and may include forests, stream buffers, floodplains and wetlands. Little maintenance is required and the spaces provide storm water management benefits. These spaces reduce the amount of impervious surface in developments which helps retain runoff and lower the amount of pollutants entering the waterways. Open space is best suited in or around areas with dense development.

PERMEABLE PAVEMENTS

Alternatives to concrete and asphalt, permeable pavements allow rainfall to pass through and infiltrate into the ground below. Permeable pavement includes pervious concrete, porous asphalt, interlocking concrete pavers and grid pavers. Storm water moves through the surface of the pavement into a storage layer below and then slowly seeps into the soil. This technique is best suited for pavement areas with low speeds like parking lots and sidewalks. Planter boxes are rectangular, enclosed spaces generally implemented below the line of pavement. Openings in the vertical walls allow storm water to gradually run from the impervious surface into the planter box. Storm water temporarily pools in the box and slowly infiltrates through layers of vegetation, soil and gravel into the ground. Planter boxes are suited to urban areas where space is limited.

PROPERTY ASSESSED GREEN ENERGY (PACE)

PACE is an innovative financing structure for improving buildings through energy efficiency and alternative energy projects. Established in Ohio in 2009 as a form of energy special improvement districts (ESID) for energy projects under Ohio Revised Code (ORC) 1710. The Columbus-Franklin County Finance Authority administers PACE financing for Central Ohio businesses, non-profits and local governments.

RAIN GARDENS

Rain gardens are vegetated depressions that collect and treat storm water. The runoff flows downhill into the basin, where it collects into a pool. Over time, the runoff seeps into the soil where some of it is used by the plants. The vegetation in rain gardens is generally native to the area to encourage infiltration and biofiltration. Rain gardens are best suited for small areas of land, like a residential yard or a parking lot barrier.

RETENTION PONDS

Retention ponds hold water from storm events for extended periods of time, controlling the amount of storm water runoff. These ponds hold permanent bodies of water, which slows runoff and allows sediments and pollutants to settle to the bottom. Underground pipes connect storm drains to retention ponds where small amounts of water are released gradually. Retention ponds are best suited for large areas where water can be diverted and recharge ground water as needed.

SOLID WASTE AUTHORITY OF CENTRAL OHIO (SWACO)

The Solid Waste Authority of Central Ohio (SWACO) serves Franklin County and neighboring areas with solutions for solid waste.

STREET TREES

Common in urban areas, street trees reduce runoff by collecting rainfall from streets, sidewalks and parking areas. Storm water runoff is captured and stored in the roots and leaves and then released to the atmosphere through evapotranspiration. Tree roots and fallen leaves also improve runoff infiltration in the soil. Street trees slow and store runoff which decreases flooding and erosion. Additional benefits of street trees are shade for pedestrians and aesthetics. Street trees are best suited along roadways, sidewalks, or parking areas.

UNDERGROUND STORAGE

Underground storage holds storm water runoff during peak flows. Rain water runs into an underground storage chamber. Once the chamber is filled, the runoff is either slowly discharged into an underdrain or directly into the groundwater. Underground storage slows the runoff and reduces the demand placed on storm water drains during large rain events. The chambers also reduce the chance of flooding and combined sewer overflow. Underground storage is best suited for areas that cannot accommodate water retention facilities.

UNDERSTORY

Lowermost canopy layer including seedlings, saplings and other small trees.

URBAN SUSTAINABILITY DIRECTOR'S NETWORK (USDN)

The USDN is a peer-to-peer network of local government professionals from cities across the United States and Canada dedicated to creating a healthier environment.

URBAN TREE CANOPY

The layer of tree leaves, branches, and stems from all publicly and privately owned deciduous and coniferous trees, forests, and understory within urban settlement areas, which provide measurable coverage of the ground.

GHG INVENTORY METHODS

OVERVIEW

This Greenhouse Gas Inventory attempts to measure greenhouse gas (GHG) emissions created by City of Dublin operations and residents and workers within Dublin. By tracking greenhouse gas emissions, the City can identify strategy relevant strategies to reduce or mitigate its relative contributions to the greenhouse effect and climate change. The City's greenhouse gas contributions constitute its carbon footprint.

The greenhouse gas inventory reviewed 2022 data and utilized ICLEI – Local Governments for Sustainability's ClearPath tool to calculate emissions for two tracks: government operations and the overall community scale. The government operations track captures emissions created by local government operations such as buildings and facilities, vehicle and transit fleets, and utilities. The community scale includes all emissions produced within the locality's jurisdiction, including energy consumed by residential and non-residential buildings, transportation, and water and wastewater treatment processes.

The development of the inventories was guided to be compliant with established protocols, including the Local Government Operations Protocol (LGOP) (2010) and US Community Protocol (USCP).

Because energy sources produce different mixes of the six internationally recognized greenhouse gases which directly impact the climate (Carbon dioxide (CO₂); Methane (CH₄); Nitrous oxide (N₂O); Hydrofluorocarbons (HFCs); Perfluorocarbons (PFCs); and Sulfur hexafluoride (SF₆)), overall emissions are summarized as metric tons of carbon dioxide equivalents (MT CO₂e).

ASSUMPTIONS

EPA eGRID 2021 emissions factors for the RFC West (RFCW) subregion loaded into ClearPath were used to estimate emissions from grid electricity consumption.

ClearPath-provided national default emissions factors were used for natural gas combustion, vehicle fuel economy, and landfilling.

2022 data was used for all modeled/measured variables within the City of Dublin. 2021 data was only used as a basis for factors and assumptions.

GOVERNMENT OPERATIONS

The two sectors included in the Government Operations inventory are Buildings and Facilities and Fleet Vehicles.

Buildings and Facilities

City staff provided electricity and natural gas billing records for six buildings: City Hall, the Development Building / Old City Hall, the Fleet Management facility, the Justice Center, the Recreation Center, and the Service Center. Square footages and general operating hours were provided for context and assessing building performance. Information on grid electricity and natural gas consumption by City buildings and facilities is provided in Table GHG-1 and GHG-2.

Fleet Vehicles

City staff provided a detailed summary of annual mileage and fuel usage for each vehicle within the city's fleet. These vehicles were grouped by their respective fuel and type (passenger vehicle, light truck, heavy truck) for input into ClearPath. Fleet vehicle mileage breakouts are provided in Table GHG-3. Electric vehicle fueling is captured in grid electricity at buildings and facilities.

COMMUNITY SCALE

Sectors evaluated included Residential Energy, Commercial Energy, Transportation & Mobile Sources, Solid Waste, and Water & Wastewater. Industrial Energy is included in Commercial Energy, as industrial customers were not distinguished from commercial customers in data provided.

Residential Energy and Commercial Energy

Grid electricity consumption data provided by AEP Ohio and natural gas consumption data provided by Columbia Gas were used to estimate residential energy consumption. While other providers may be present within Dublin, these two providers are assumed to be the primary providers of residential energy in Dublin.

Commercial grid electricity information from AEP Ohio includes both commercial and public customers. Industrial customers were not provided separately and are assumed to be included in commercial customers.

Information on grid electricity and natural gas consumption by residential customers is provided in Table GHG-4, and commercial customer usage is provided in Table GHG-5.

Transportation & Mobile Sources

Modeled VMT for 2022 was provided by MORPC staff for Passenger Vehicles and Freight and Service Trucks and all integrated trips originating within the community and all integrated trips with the destination within the community. To reduce potential double-counting, values were divided by 2 to bring them more in line with regional estimates.

Next, passenger and freight vehicles were broken out into gasoline and diesel vehicles. Mileage was allocated to vehicle types based on statewide VMT by vehicle type from 2019 and 2020 that were derived from the EPA's State Inventory Tool's Mobile Combustion Module, version 2023.2.

Estimates are provided in Table GHG-6.

Solid Waste

Tonnage estimates for a variety of waste types were provided by City staff. Only landfilled trash tonnage (municipal solid waste) was included in this calculation, as other waste types (e.g. leaves, yard waste, recycling) included in the estimates are diverted from landfills. Process emissions assuming diesel vehicles were also generated based on the tonnage of landfilled waste. Estimates are provided in Table GHG-7 and Table GHG-8.

Water & Wastewater

Dublin does not provide water or wastewater treatment services: these services are provided for most Dublin residents by the City of Columbus Department of Public Utilities (Columbus DPU). It is not possible to estimate Dublin's use of individual treatment facilities due to interconnections in the water and wastewater systems and a lack of metering for wastewater flows. In order to ensure consistency across regional greenhouse gas inventories and minimize potential error with treatment plant calculations, the City of Columbus' 2021 Greenhouse Gas Inventory prepared by MORPC was used as the basis for these estimates.

Annualized finished drinking water consumption data for customers in Dublin was provided by Columbus DPU, and a 2022 engineering estimate for the "average daily contributory flow" from Dublin's contracted wastewater service area as used as the basis for estimating wastewater use. These records were annualized and converted to MGY (millions of gallons per year) for comparability. These estimates of Dublin's water and wastewater use were divided by the total treatment volumes published in Columbus DPU's 2022 Annual Report to approximate the percentage of emissions incurred by Columbus DPU facilities that could be attributed to Dublin residents.

Estimates are provided in Table GHG-9.

TABLE GHG-1. GRID ELECTRICITY CONSUMPTION IN CITY BUILDINGS AND FACILITIES

BUILDING	INPUT	UNIT	SQUARE FOOTAGE	OPERATING HOURS	MT CO ₂ E
City Hall	644,640	kWh	31,675	9	308
Development / Old City Hall	301,680	kWh	22,770	9	144
Fleet Management	332,960	kWh	32,600	9	159
Justice Building	895,200	kWh	78,380	24	427
Recreation Center	1,654,200	kWh	113,113	15	790
Service Center	824,880	kWh	68,139	9	394

TABLE GHG-2. NATURAL GAS CONSUMPTION IN CITY BUILDINGS AND FACILITIES

BUILDING	INPUT	UNIT	SQUARE FOOTAGE	OPERATING HOURS	MT CO ₂ E
City Hall	361	MMBtu	31,675	9	19
Fleet Management	3,794	MMBtu	32,600	9	202
Justice Building	2,960	MMBtu	78,380	24	157
Recreation Center	1,824	MMBtu	113,113	15	970
Service Center	1,917	MMBtu	68,139	9	102

TABLE GHG-3. FUEL CONSUMPTION AND MILEAGE FOR FLEET VEHICLES

VEHICLE TYPE	INPUT	UNIT	PERCENT BIOFUEL	ANNUAL MILES TRAVELED (VMT)	% MILES PASSENGER VEHICLE	% MILES LIGHT TRUCK	% MILES HEAVY TRUCK	MT CO ₂ E
CNG	25,701	gallons gasoline equivalent	10%	245,922	1.80%	88.80%	9.30%	161.75
Diesel	12,138	gallons	10%	75,112	0%	37.50%	62.50%	124
Unleaded	72,189	gallons	N/A	806,204	11.90%	83.40%	4.60%	636.46

TABLE GHG-4. ENERGY CONSUMPTION BY RESIDENTIAL CUSTOMERS

CATEGORY	INPUT	UNIT	MT CO ₂ E	SOURCE
Residential Grid Electricity Use	169,347,817	kWh	80,845	AEP Ohio
Residential Natural Gas Use	2,300,597	MMBtu	122,361	Columbia Gas

TABLE GHG-5. ENERGY CONSUMPTION BY NON-RESIDENTIAL CUSTOMERS

CATEGORY	INPUT	UNIT	MT CO ₂ E	SOURCE
Commercial Customer Grid Electricity Use	339,979,875	kWh	162,304	AEP Ohio
Public Grid Electricity Use	26,856,660	kWh	12,821	AEP Ohio
Non-Residential Natural Gas Use	1,289,172	MMBtu	68,567	Columbia Gas

TABLE GHG-6. VEHICLE MILES TRAVELED

CATEGORY	INPUT	UNIT	% MOTORCYCLES	% PASSENGER VEHICLES	% LIGHT TRUCKS	% HEAVY TRUCKS	MT CO ₂ E
Passenger - Gasoline	598,080,691	miles	0.7	75.6	23.7	0	227,443
Passenger - Diesel	7,805,804	miles	0	27.57	72.43	0	4,043
Freight - Gasoline	3,843,374	miles	0	0	0	100	6,338
Freight - Diesel	23,288,171	miles	0	0	0	100	36,270

TABLE GHG-7. LANDFILLED WASTE

WASTE TYPE	INPUT	UNIT	METHANE COLLECTION SCENARIO	LANDFILL MOISTURE CONTENT	MT CO ₂ E
Mixed Municipal Solid Waste	11,648	tons	typical	national average	4,945

TABLE GHG-8. LANDFILLING PROCESS EMISSIONS

WASTE TYPE	INPUT	UNIT	FUEL TYPE	MT CO ₂ E
Annual mass of solid waste processed	11,648	tons	diesel	4,945

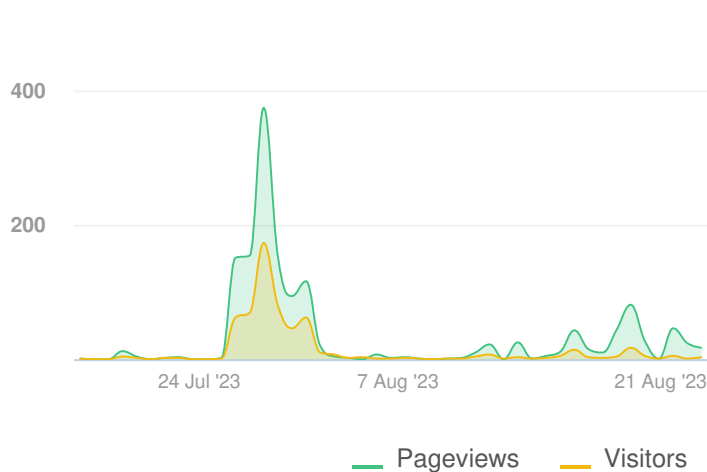
TABLE GHG-9. WATER AND WASTEWATER CONSUMPTION/EMISSIONS

CATEGORY	INPUT	UNIT	SOURCE
DUBLIN 2022 WATER/WASTEWATER USAGE			
Dublin Drinking Water Consumption	1,557	MGY	Columbus DPU
Dublin Estimated Wastewater Production	1,254	MGY	Columbus DPU / 2022 General Engineering Report Table 2-1 (Black and Veatch)
COLUMBUS 2022 WATER/WASTEWATER PRODUCTION			
Columbus DPU Finished Drinking Water Production	53,000	MGY	Columbus DPU 2022 Annual Report
Columbus DPU Wastewater Treated	70,000	MGY	Columbus DPU 2022 Annual Report
CITY OF DUBLIN ESTIMATED PERCENT USE OF COLUMBUS PRODUCTION CAPACITY			
Use of Columbus Water	2.94%	%	calculated
Use of Columbus Wastewater	1.79%	%	calculated
Average	2.36%	%	calculated
ESTIMATED WATER/WASTEWATER EMISSIONS			
Columbus Water/Wastewater Sector Emissions	81,300	MT CO ₂ e	City of Columbus 2021 Greenhouse Gas Inventory
Estimated Dublin Emissions in 2022	1,923	MT CO ₂ e	calculated

ENGAGEMENT FEEDBACK

SURVEY DATA

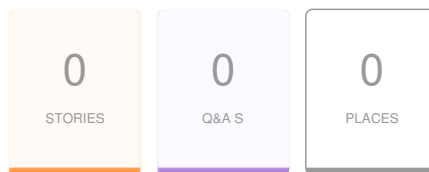
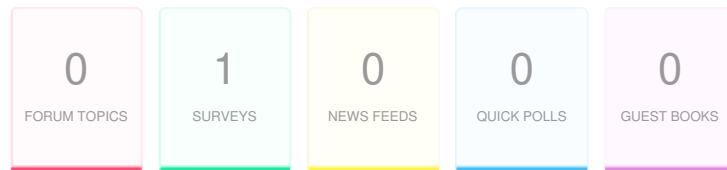
Visitors Summary



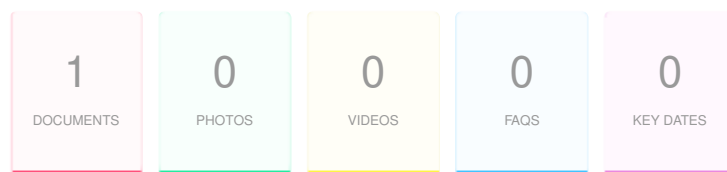
Highlights

TOTAL VISITS	MAX VISITORS PER DAY	
651	173	
NEW REGISTRATIONS		
12		
ENGAGED VISITORS	INFORMED VISITORS	AWARE VISITORS
164	344	559

Aware Participants	559	Engaged Participants	164		
Aware Actions Performed	Participants	Engaged Actions Performed	Registered	Unverified	Anonymous
Visited a Project or Tool Page	559				
Informed Participants	344	Contributed on Forums	0	0	0
Informed Actions Performed	Participants	Participated in Surveys	10	0	154
Viewed a video	0	Contributed to Newsfeeds	0	0	0
Viewed a photo	0	Participated in Quick Polls	0	0	0
Downloaded a document	36	Posted on Guestbooks	0	0	0
Visited the Key Dates page	0	Contributed to Stories	0	0	0
Visited an FAQ list Page	0	Asked Questions	0	0	0
Visited Instagram Page	0	Placed Pins on Places	0	0	0
Visited Multiple Project Pages	179	Contributed to Ideas	0	0	0
Contributed to a tool (engaged)	164				



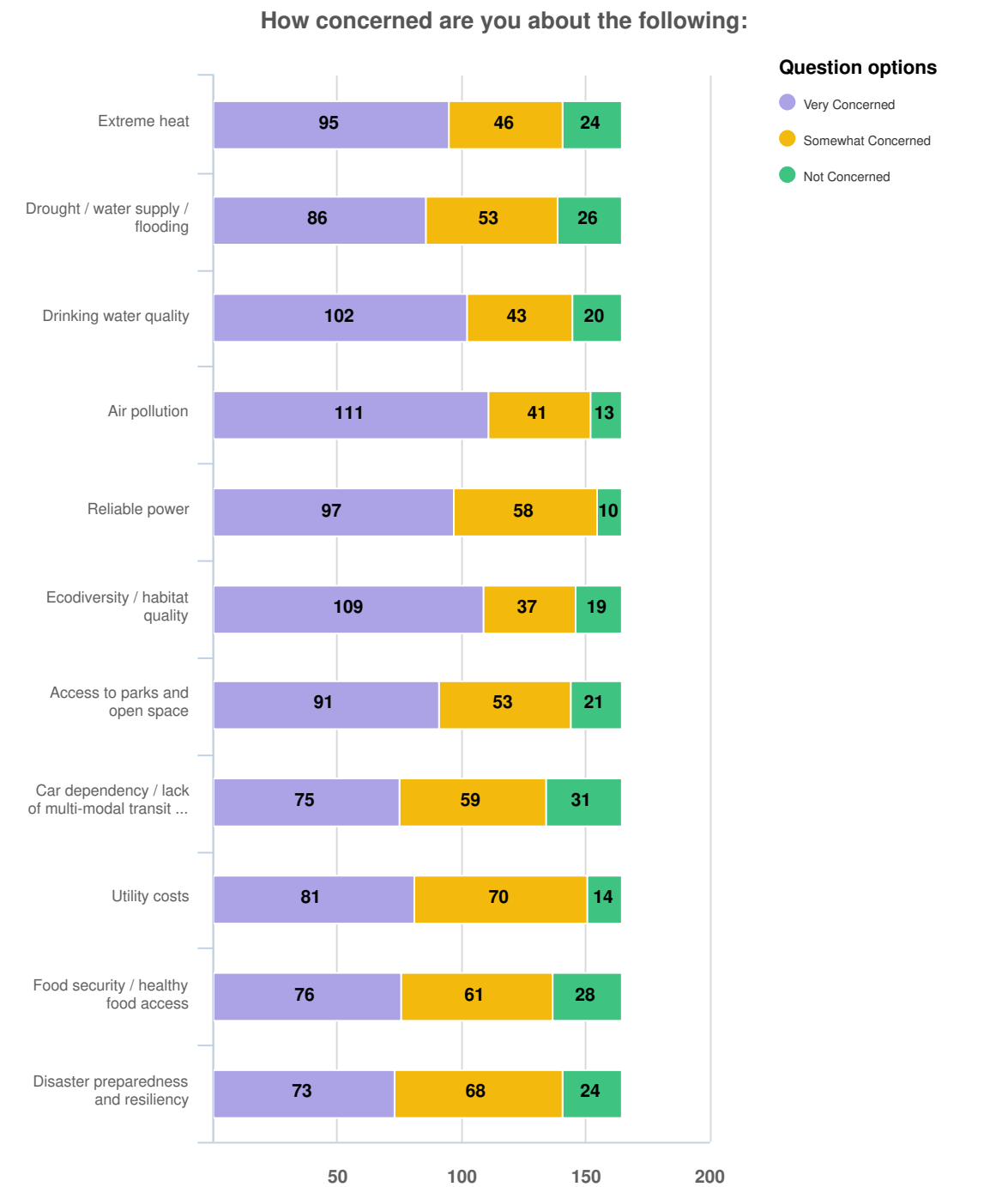
Tool Type	Engagement Tool Name	Tool Status	Visitors	Contributors		
				Registered	Unverified	Anonymous
Survey Tool	Dublin Sustainability Plan Survey	Published	330	10	0	154



Widget Type	Engagement Tool Name	Visitors	Views/Downloads
Document	Dublin Sustainability Framework Update: May 2, 2023	36	40

Dublin Sustainability Plan Survey

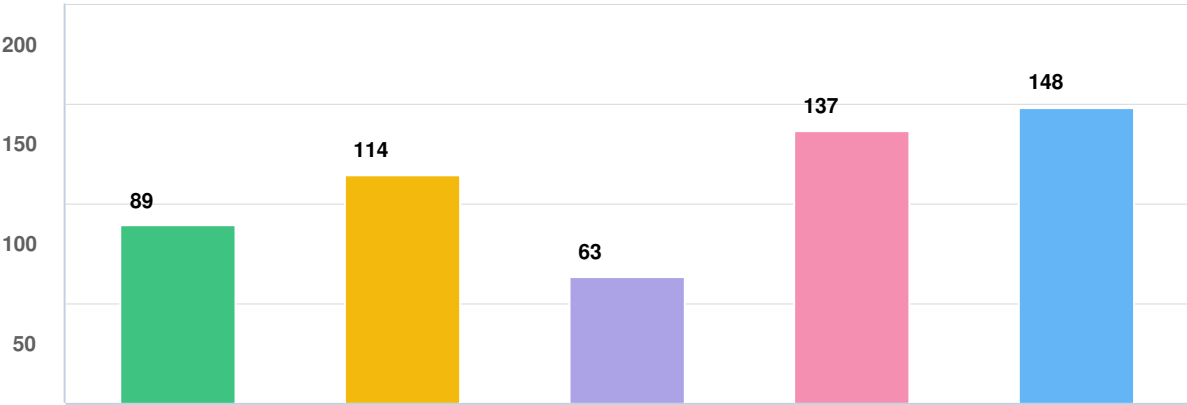
Visitors 330	Contributors 164	CONTRIBUTIONS 165
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Mandatory Question (165 response(s))

Question type: Likert Question

Sustainable cities offer a variety of benefits. What benefits are the most important to your household? Please check all th...



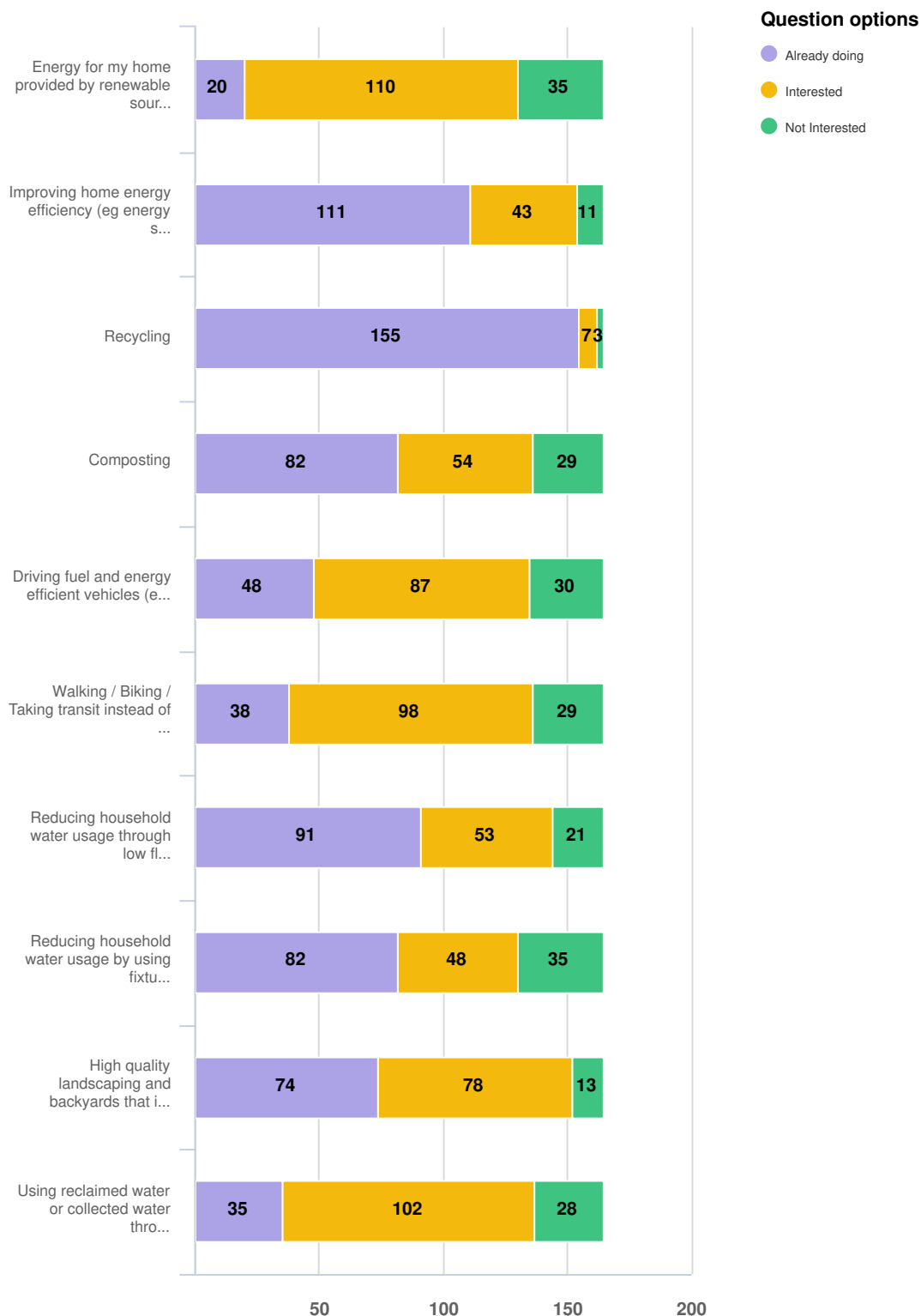
Question options

- Conserving / preserving natural areas
- Reduce waste
- Create jobs / improve economy
- Improving physical and mental health and well-being
- Saving money on energy bills

Mandatory Question (165 response(s))

Question type: Checkbox Question

There are several ways to practice sustainability in the household. What types of measures is your household interested in ...



Mandatory Question (165 response(s))

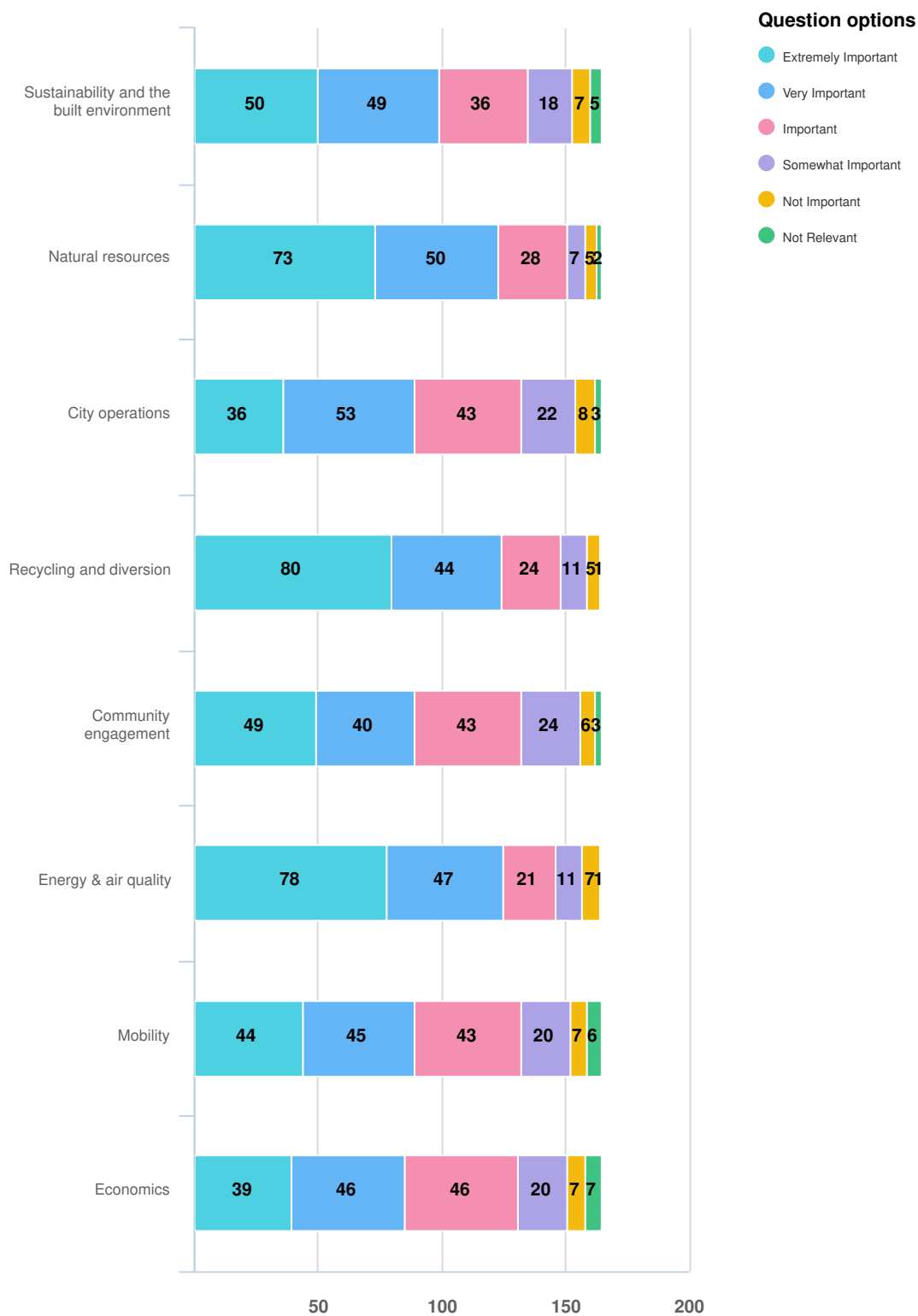
Question type: Likert Question

How important are sustainable services and sustainability options in deciding the following:



Mandatory Question (165 response(s))
Question type: Likert Question

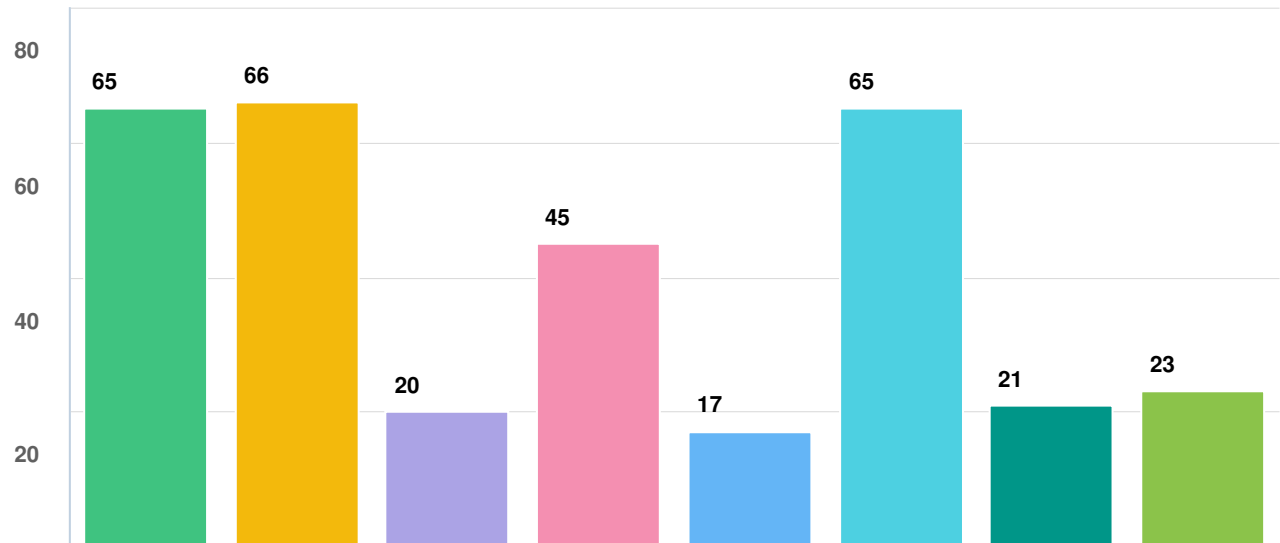
In 2018, the City of Dublin initiated a Sustainability Framework establishing seven (7) goals for improving sustainability ...



Mandatory Question (165 response(s))

Question type: Likert Question

Of these goals, what are the two most important areas to prioritize?



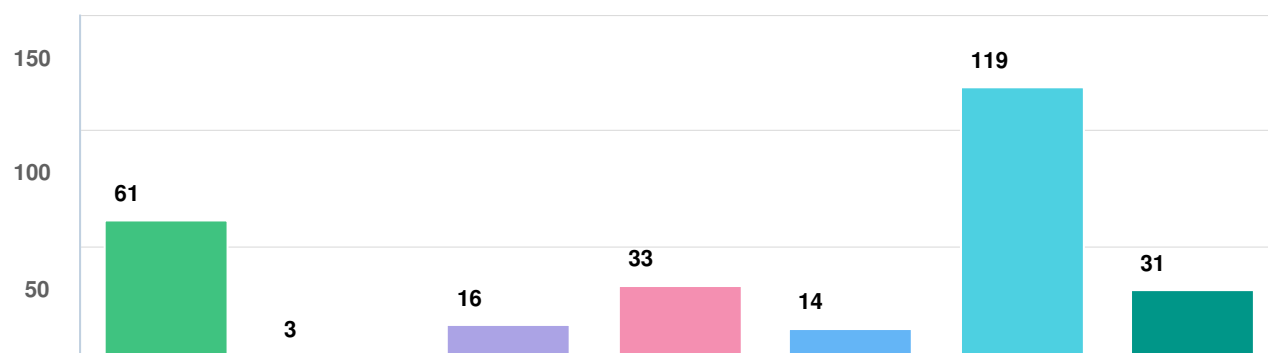
Question options

- ☐ Economics ☐ Mobility ☐ Energy & air quality ☐ Community engagement ☐ Recycling and diversion
☐ City operations ☐ Natural resources ☐ Sustainability and the built environment

Mandatory Question (165 response(s))

Question type: Checkbox Question

Community Engagement is an essential part of the City's sustainability plan. Do you or a family member participate in susta...



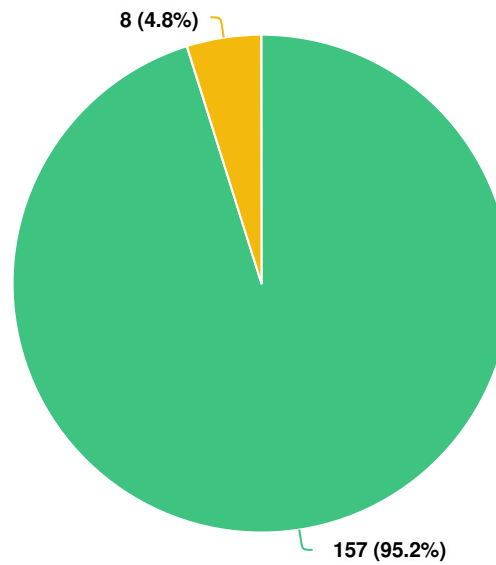
Question options

- I / We do not participate in sustainability-related organizations
- Participated in household hazardous waste, document destruction, drug takeback or Styrofoam collection events hosted by the City of Dublin
- Contain GreenSpot membership
- Sustainability-related organizations at work / school
- Contain a Certified Backyard Wildlife Habitat
- Registered plot at the City's Community Gardens at Darree Fields Park and / or outside of the City's Development building at Coffman Park
- Nature-based organizations

Mandatory Question (165 response(s))

Question type: Checkbox Question

Do you live in Dublin?



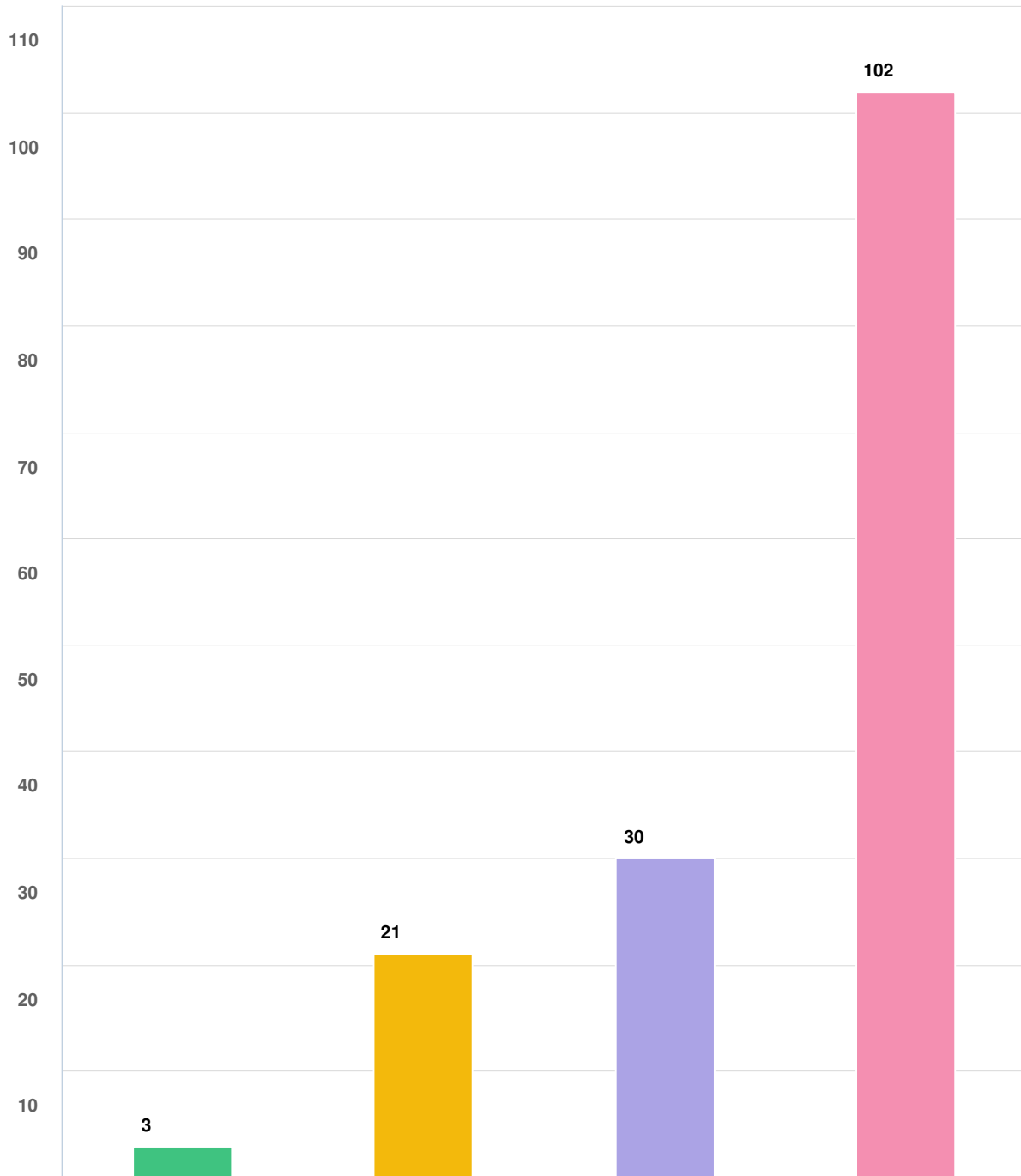
Question options

● No ● Yes

Mandatory Question (165 response(s))

Question type: Dropdown Question

How many years have you lived in Dublin?



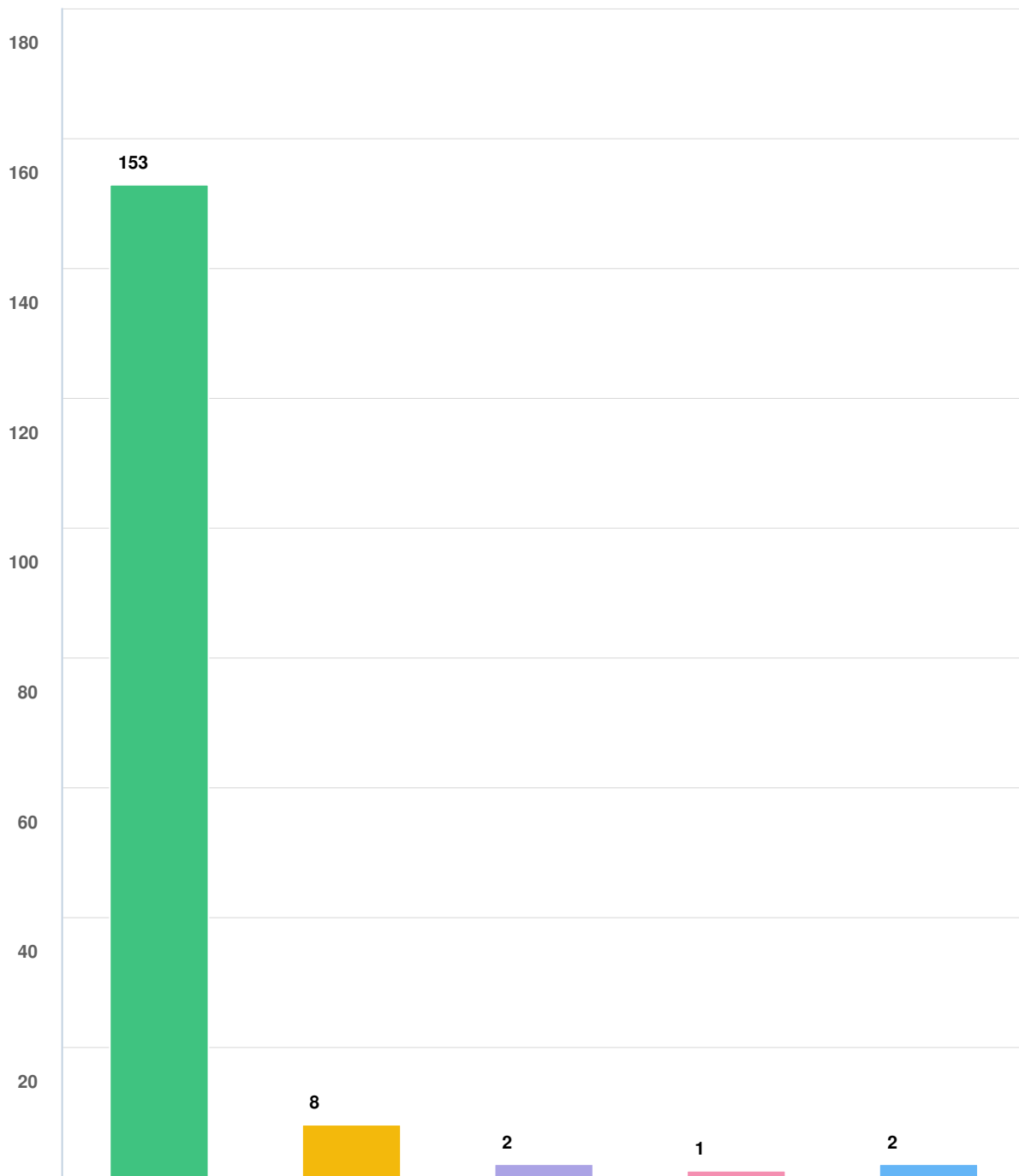
Question options

Over 10 years 5 to 10 years 1 to 5 years Less than 1 year

Optional question (155 response(s), 10 skipped)

Question type: Checkbox Question

What is your housing status?



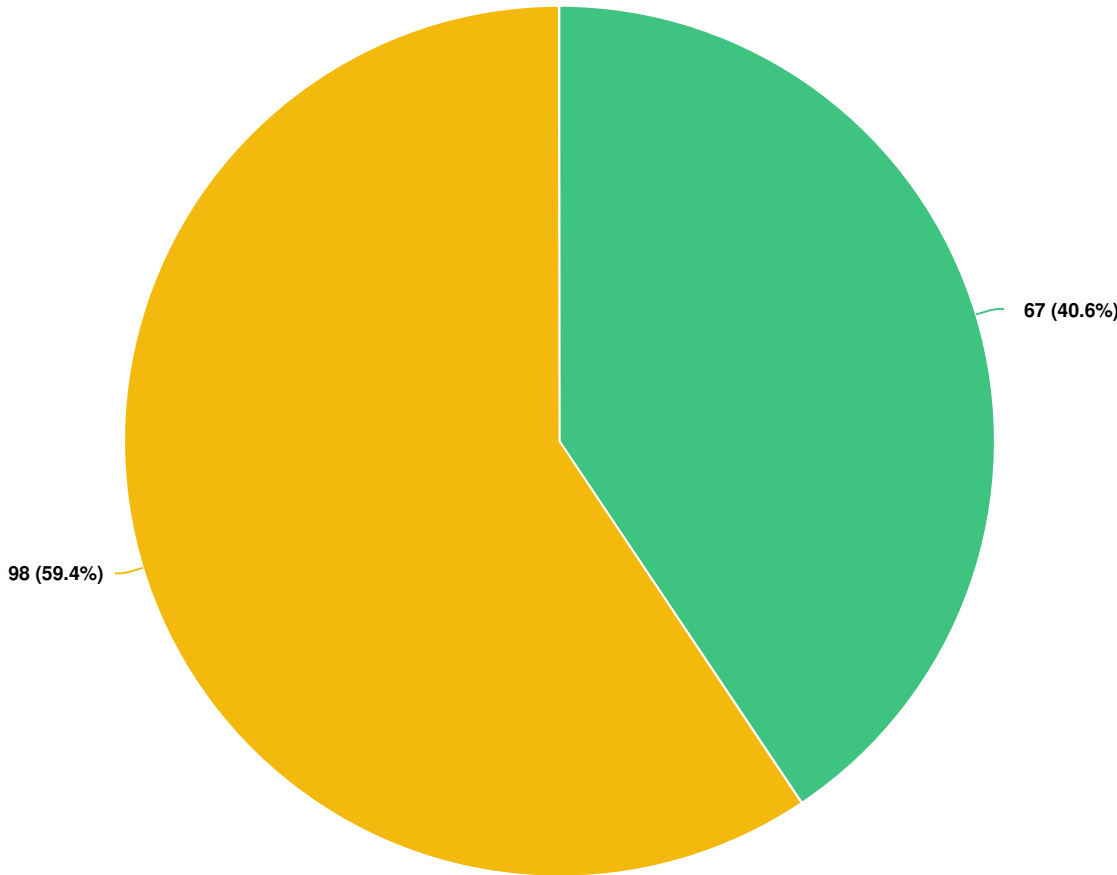
Question options

Other (please specify) Houseless Living with family or friends Leaseholder / renter Homeowner

Optional question (165 response(s), 0 skipped)

Question type: Checkbox Question

Do you work in Dublin?

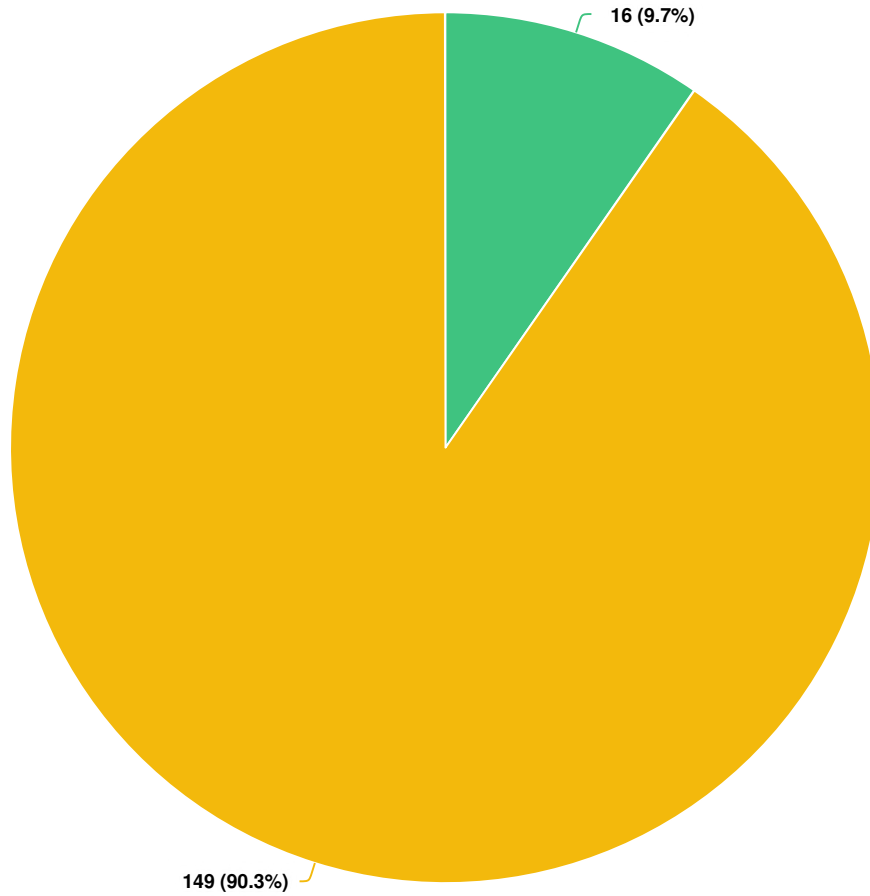


Question options

- No
- Yes

Mandatory Question (165 response(s))
Question type: Dropdown Question

Do you own a business in Dublin?



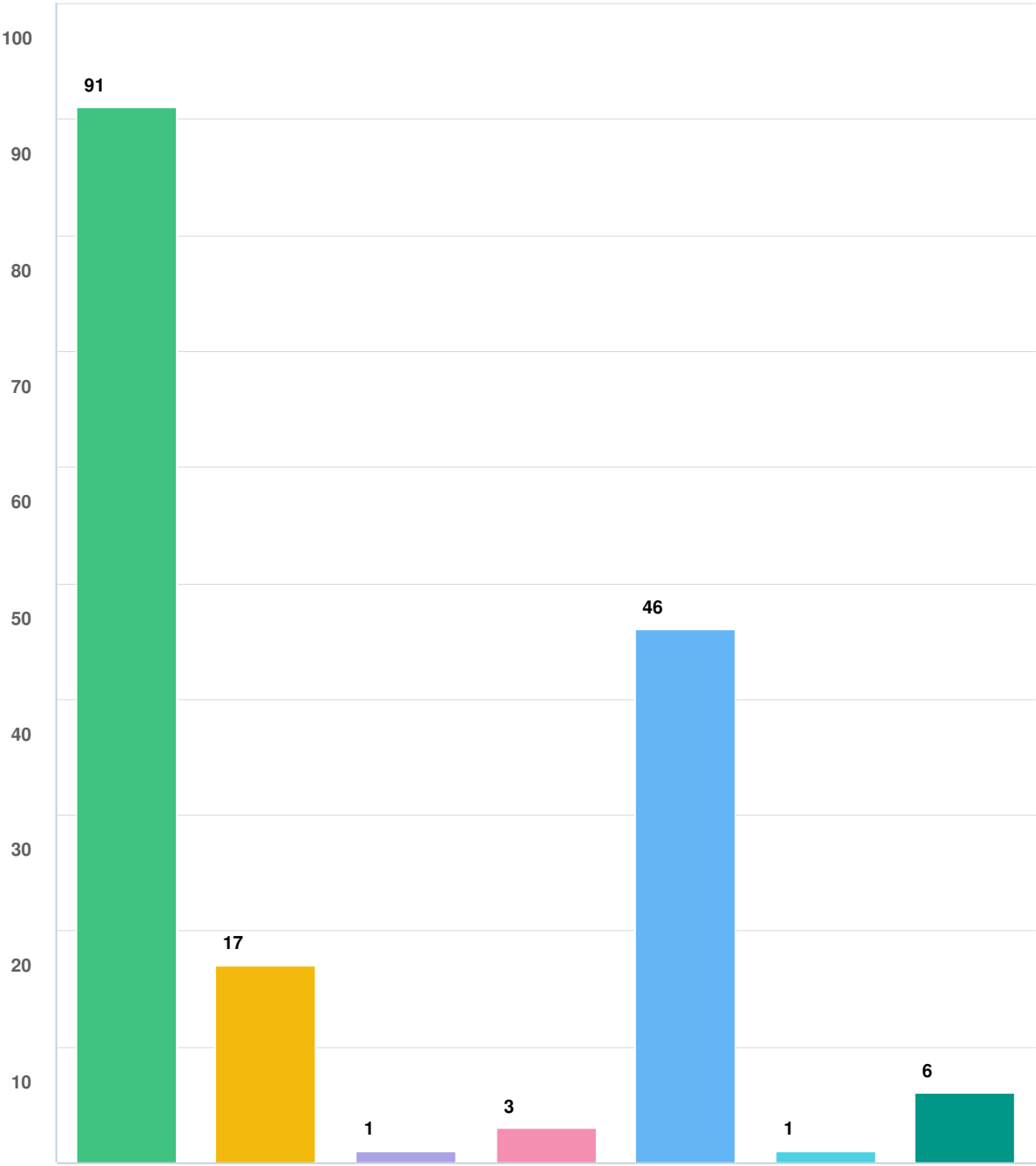
Question options

● No ● Yes

Mandatory Question (165 response(s))

Question type: Dropdown Question

What is your employment status?

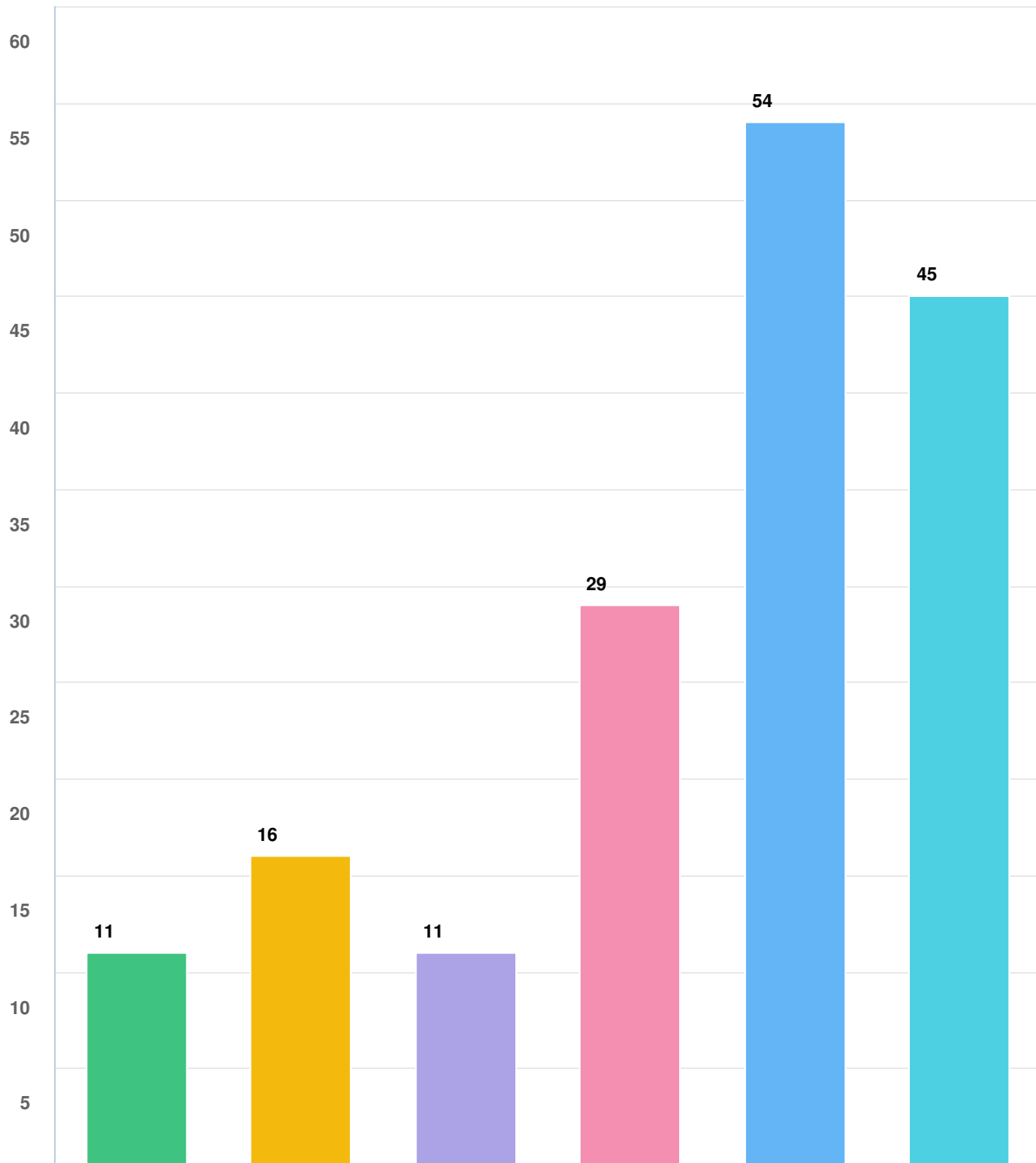


Question options

- Other (please specify)
- Student
- Retired
- Disabled
- Unemployed
- Employed Part Time
- Employed Full Time

Mandatory Question (165 response(s))
Question type: Checkbox Question

What is your income?



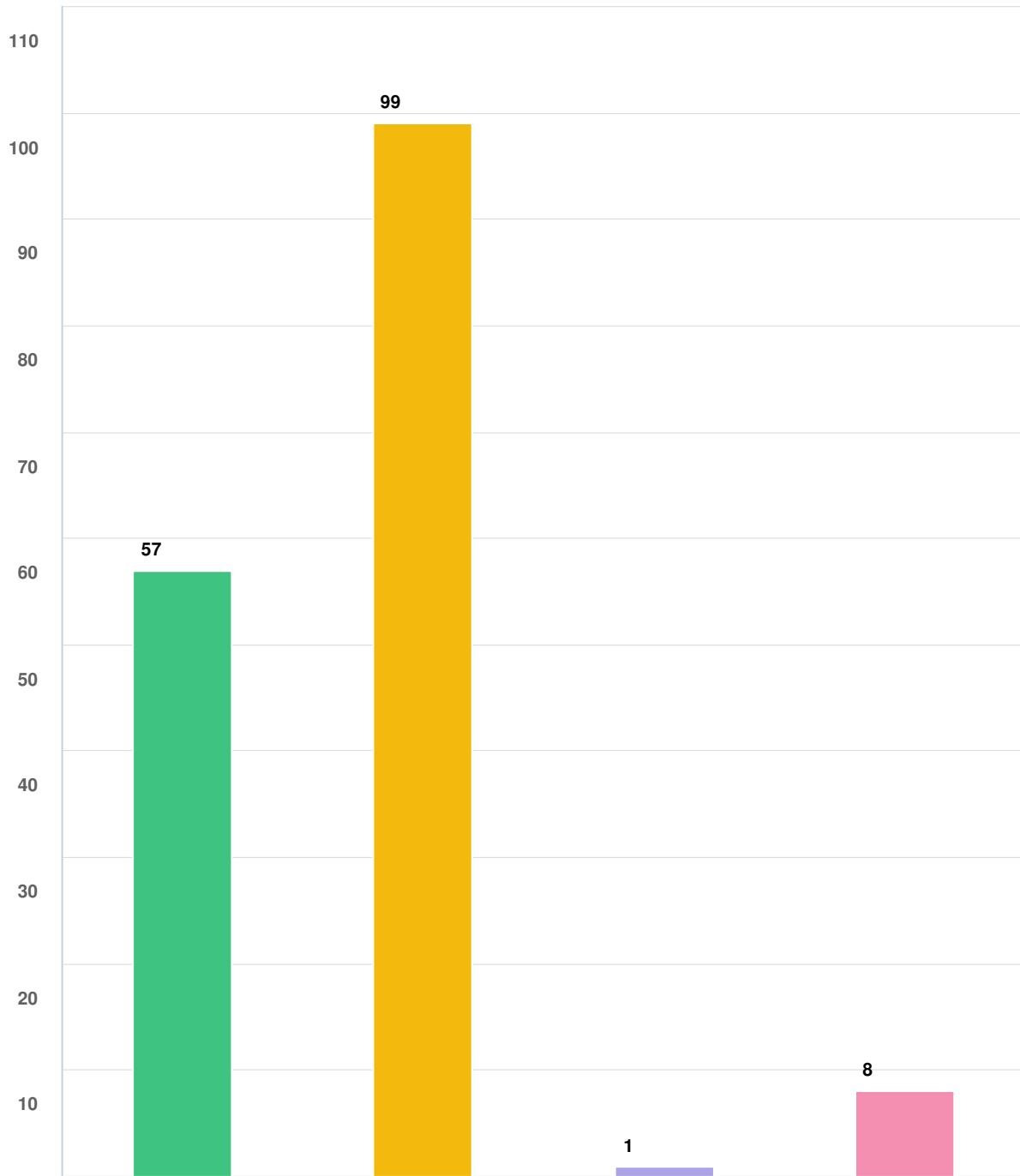
Question options

- Prefer not to answer
- \$150,000 or more
- \$100,000 - \$124,999
- \$75,000 - \$99,999
- \$50,000 - \$74,999
- Under \$50,000

Mandatory Question (165 response(s))

Question type: Checkbox Question

What is your gender?



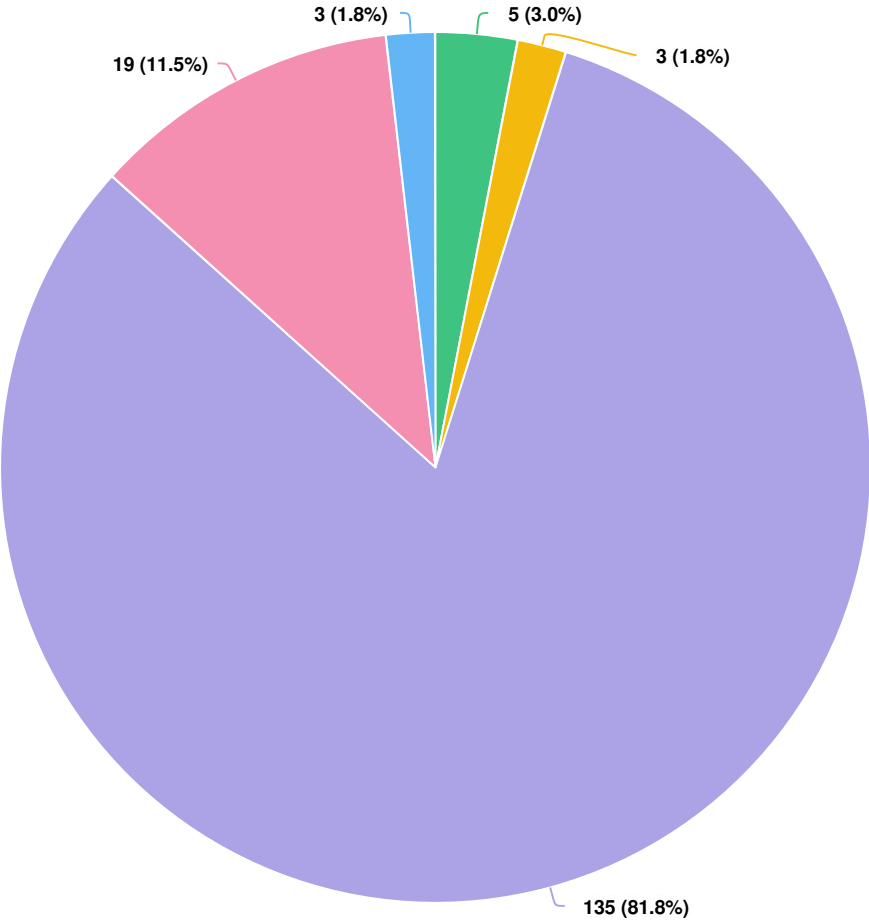
Question options

Prefer not to answer Non-binary Female Male

Mandatory Question (165 response(s))

Question type: Checkbox Question

What is your race / ethnicity? (Check all that apply)



Question options

- Other (please specify)
- Prefer not to answer
- White
- Black or African American
- Asian or Asian Indian

Mandatory Question (165 response(s))
Question type: Radio Button Question

ENGAGEMENT FEEDBACK

FOCUS GROUP FEEDBACK - BUSINESS PARTNERS



AGENDA

Scan to join us
at Menti.com

- 11:00-11:05** Welcome
- 11:06-11:25** Overview of Project
- 11:26-11:54** Partnership Discussion
- 11:55-12:00** Next Steps + Thank you

12/11/23 // SLIDE 2

WHAT IS SUSTAINABLE DUBLIN?

VISION

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12/11/23 // SLIDE 3

A Green Dublin 2023 By the Numbers



12/11/23 // SLIDE 4

WHAT WE'VE HEARD

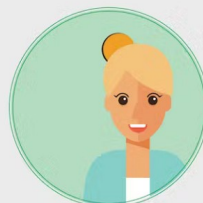


The Dublin community is interested in economic opportunities involving:

GREEN BUSINESSES

COMMUNITY MARKETS

WORKFORCE TRAINING



51%

Of respondents considered economics as very or extremely important to sustainability

Survey Comments:

"Incentivize corporations and new builds to encourage sustainability (solar, recycling, rainwater reuse)"

"[Create] some kind of merit-based program for restaurants who join in on recycling, composting, lessened food waste - maybe tax-credits or grants for participating."

"Advertise sustainability programs at local businesses"

66%

Of respondents considered sustainability important to where they do business

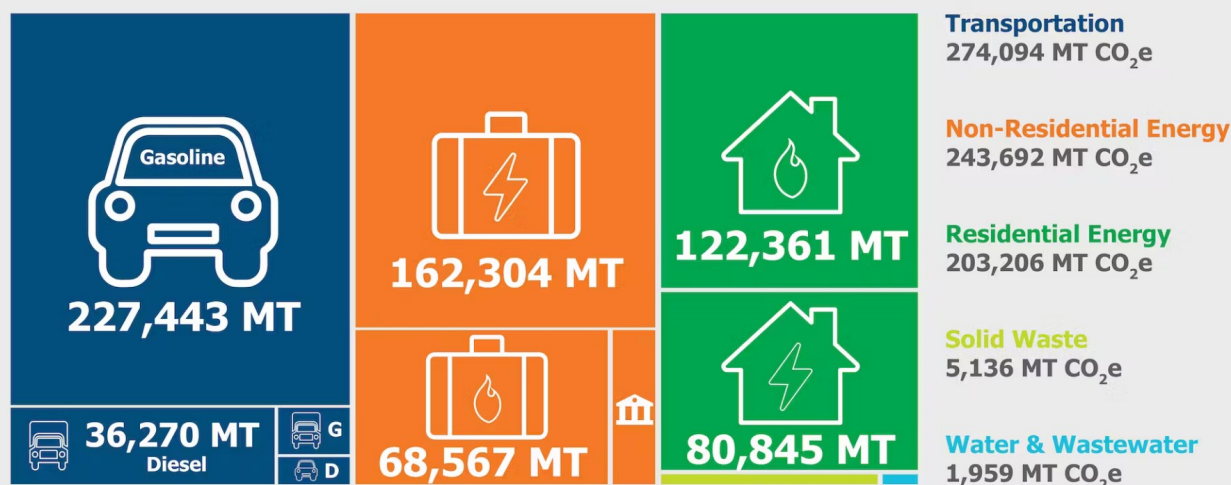
12/11/23 // SLIDE 5

GREENHOUSE GAS INVENTORY



Estimated 2022 Greenhouse Gas Emissions (Community Scale):

728,087 metric tons of carbon dioxide equivalent (MT CO₂e)

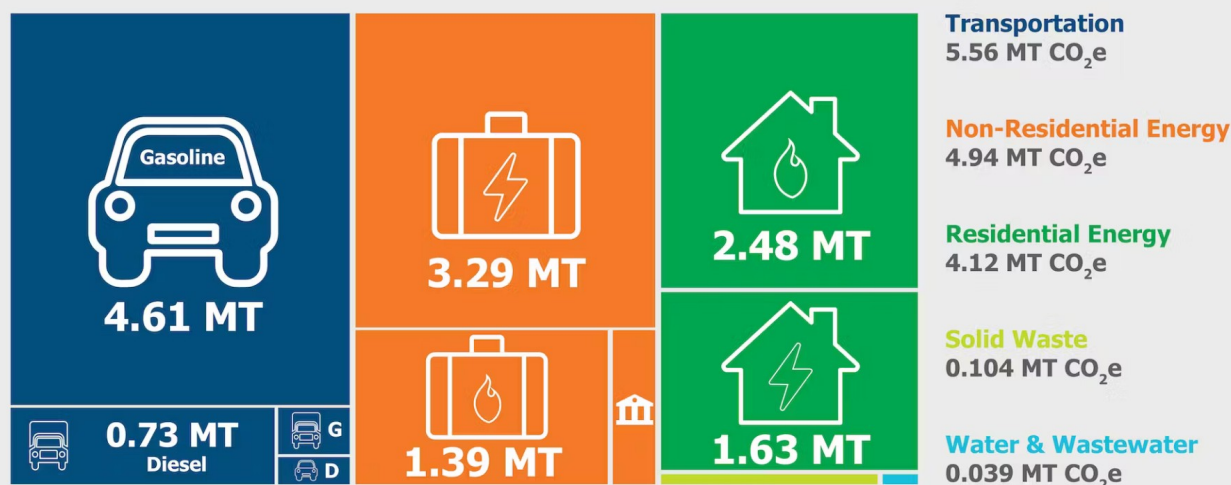


12/11/23 // SLIDE 10

GREENHOUSE GAS INVENTORY



Estimated 2022 Greenhouse Gas Emissions (Community Scale), per capita:
14.76 MT CO₂e per resident (49,314)



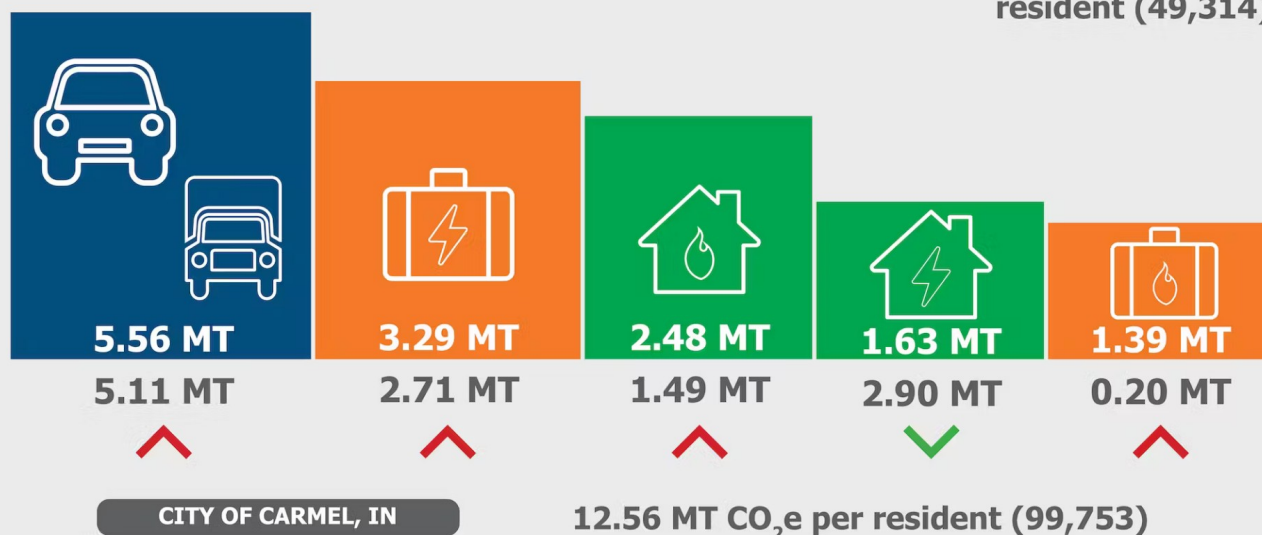
12/11/23 // SLIDE 11

GREENHOUSE GAS INVENTORY



How does Dublin compare to other communities?

14.76 MT CO₂e per resident (49,314)



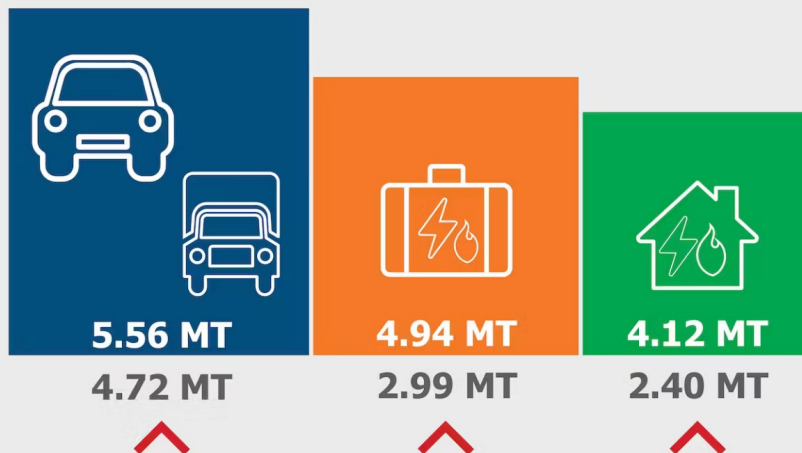
12/11/23 // SLIDE 12

GREENHOUSE GAS INVENTORY



How does Dublin compare to other communities?

14.76 MT CO₂e per resident (49,314)



CITY OF COLUMBUS, OH

10.54 MT CO₂e per resident (905,839)

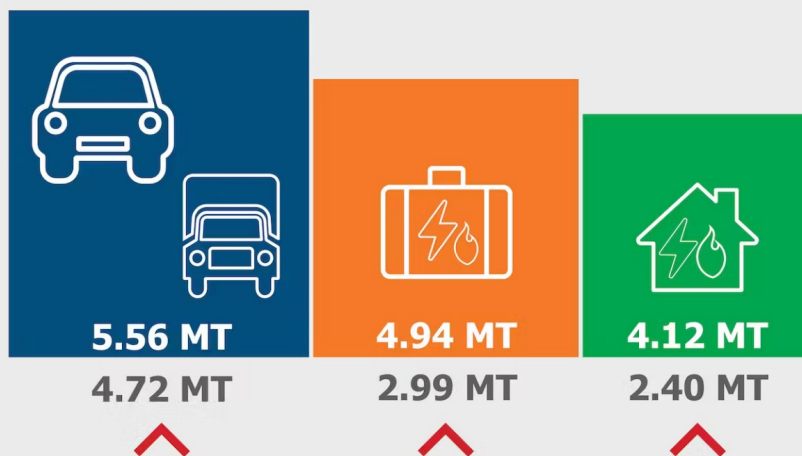
12/11/23 // SLIDE 13

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How does Dublin compare to other communities?

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~34% fewer vehicle miles than Dublin

Significantly lower natural gas usage

12/11/23 // SLIDE 14

GREENHOUSE GAS INVENTORY



What drives Dublin's emissions?

Transportation

Dublin residents drive a lot: approx. 12,286 miles per resident.

Non-Residential Energy

Dublin's strong office market means there is lots of space to heat and cool: about 180 square feet of office space per resident, compared to 24 square feet for Greater Columbus as a whole.

Residential Energy

Dublin's housing primarily consists of larger single-family homes.

12/11/23 // SLIDE 15

WHERE DO WE GO FROM HERE?



THE SUSTAINABILITY
PLAN IS GUIDED BY
EIGHT (8) GOALS:

-  Sustainable Neighborhoods & Built Environment
-  Natural Resources
-  Mobility
-  Economics
-  Recycling & Diversion
-  Energy & Air Quality
-  Community Engagement
-  City Operations

12/11/23 // SLIDE 12



LARGER PLANNING CONTEXT

This plan will build upon existing plans, policies, and initiatives as well as inform other work that benefits our community both locally and regionally.

NETWORK OF PARTNERSHIPS

The plan aims to develop and expand diverse and strategic partnerships that will support environmental, social, and economic sustainability.



12/11/23 // SLIDE 13



SUSTAINABLE DUBLIN PARTNERSHIPS



FINANCIAL SUPPORT

PROGRAMMING

STEWARDSHIP EFFORTS

LOCAL BUSINESSES

MAINTENANCE

City Partnerships

Arbor Day Foundation
Dublin Schools
GoZero Services
JadeTrack
League of American Bicyclists
National Wildlife Federation
Rumpke
SWACO
Zero Waste Event Productions
Local businesses through Pop Up Dublin, The Dublin Market at Bridge Park

Community Identified Partnerships

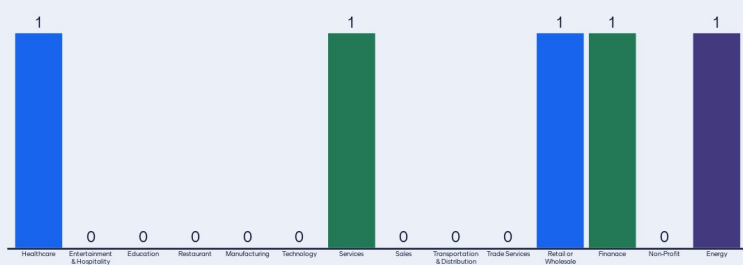
Johnson Controls
Columbus Zoo
Franklin Park Conservatory
Simply Living
SUN Solar United Neighbors
Stratford Ecological Center
Ducks Unlimited
Pheasants Forever
Nature Conservancy
Sheir-Rings
Food Rescue US

Ecofestival
Ohio Association of Garden Clubs
Franklin County Master Gardener Volunteers
Ohio wildlife
Smart Columbus' Digital Equity Coalition
OSU
Appalachian Ohio Alliance
The Compost Exchange
Engineers for a Sustainable World @ The Ohio State University (student organization)
Rails to Trails

Solar United Neighbors
Big Trees Ohio

12/11/23 // SLIDE 14

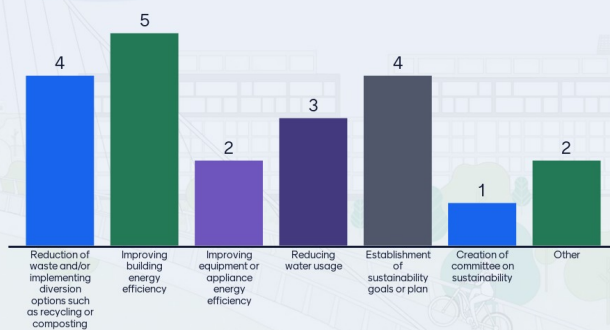
What type of partner organization do you represent?



- ☐ Healthcare
- ☐ Entertainment & Hospitality
- ☐ Education
- ☐ Restaurant
- ☐ Manufacturing
- ☐ Technology
- ☐ Services
- ☐ Sales
- ☐ Transportation and Distribution
- ☐ Construction/Development
- ☐ Trade Services
- ☐ Retail or Wholesale
- ☐ Finance
- ☐ Non-profit
- ☐ Energy

12/11/23 // SLIDE

What are some ways you are supporting sustainability in the communities you serve? (Select all that apply)





How do you think about sustainability at your business?

Sustainability is seen as our "footprint" pillar of our corporate social responsibility strategy.



What barriers do you perceive as greatest to building buy-in for more sustainable practices?



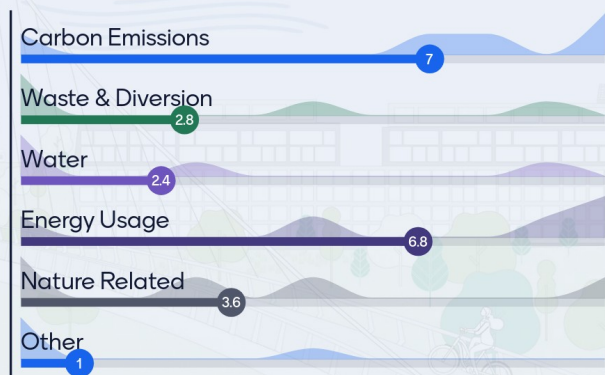


How can the City help existing businesses make more sustainable choices?

Demand future electricity from utility-scale wind and solar generation. Be among the first cities to wholly promote transition to EV transportation. Stop focusing on end user "carbon footprint".

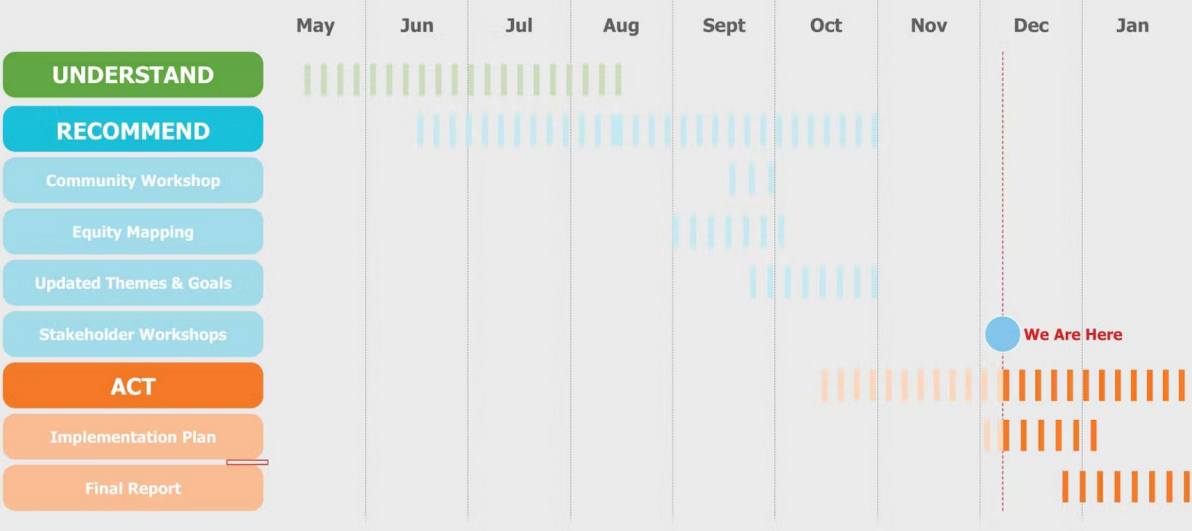


Please indicate how likely you are to partner with us on specific areas of sustainability.



LOOKING AHEAD

PROJECT TIMELINE



12/11/23 // SLIDE 25

ENGAGEMENT FEEDBACK

FOCUS GROUP FEEDBACK - ORGANIZATION PARTNERS



Dublin Sustainability Plan

FOCUS GROUPS
DECEMBER 11, 2023

ASAKURA ROBINSON

12/11/23 // SLIDE 1

The banner features a green and white color scheme with a stylized four-leaf clover logo in the center. The clover leaves are decorated with icons representing sustainability: a leaf, a water drop, a globe, and a solar panel. The text 'Dublin Sustainability Plan' is written in a large, bold, green font, and 'FOCUS GROUPS DECEMBER 11, 2023' is in a smaller, bold, green font. The Asakura Robinson logo is in the bottom left corner, and a small bar chart icon is in the top right corner.

AGENDA

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3:00-3:05 Welcome

3:06-3:25 Overview of Project

3:26-3:54 Partnership Discussion

3:55-4:00 Next Steps + Thank you

12/11/23 // SLIDE 2

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12/11/23 // SLIDE 3

A Green Dublin 2023 By the Numbers



12/11/23 // SLIDE 4

WHAT WE'VE HEARD



Workshop participants expressed interest in expanding the following current program areas:

RESTORATION

COMMUNITY DIVERSION

COMMUNITY GARDENS

And were interested in new programs involving:

NATIVE PLANTS & SEEDS

RENEWABLE ENERGY

ENERGY EFFICIENCY



Survey Comments:

"Partner with local organizations to host a green community event?"

"Engage with local organizations- such as youth groups or garden club"

"Maybe the city could highlight different nature based organizations in the Dublin emails that get sent out"



75%

Of respondents considered natural resources to be very or extremely important

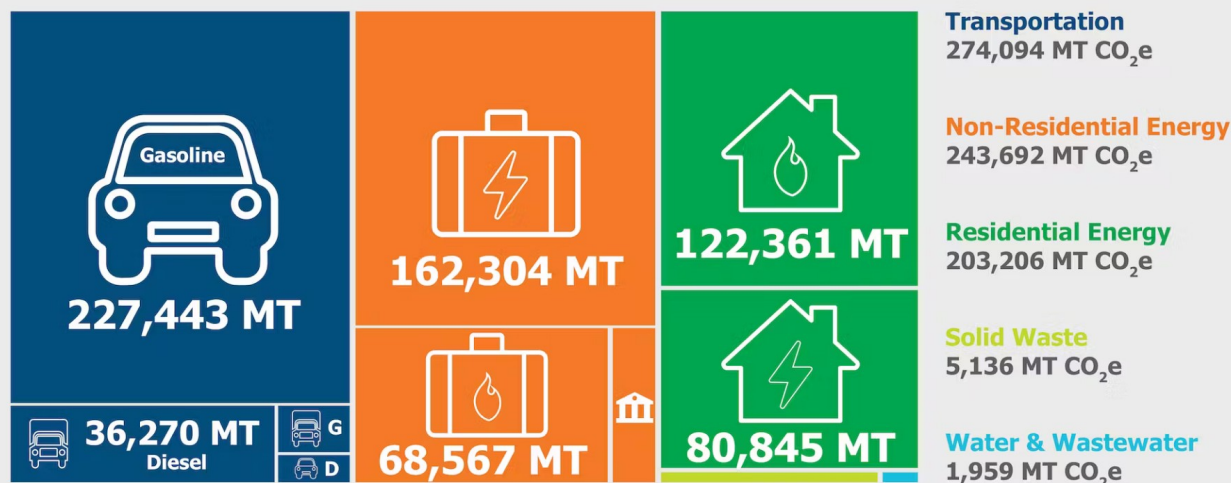
12/11/23 // SLIDE 5

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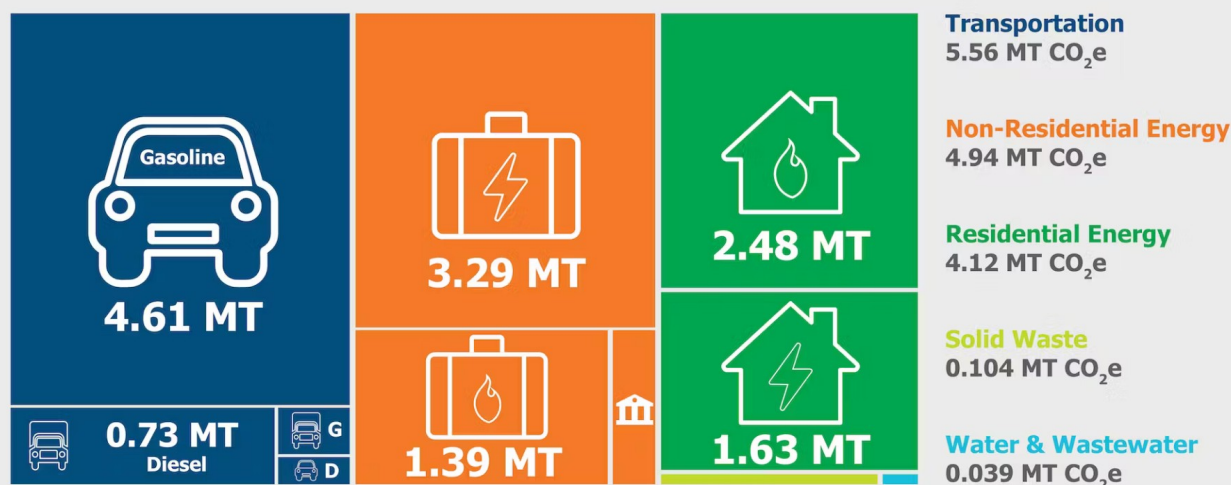


12/11/23 // SLIDE 6

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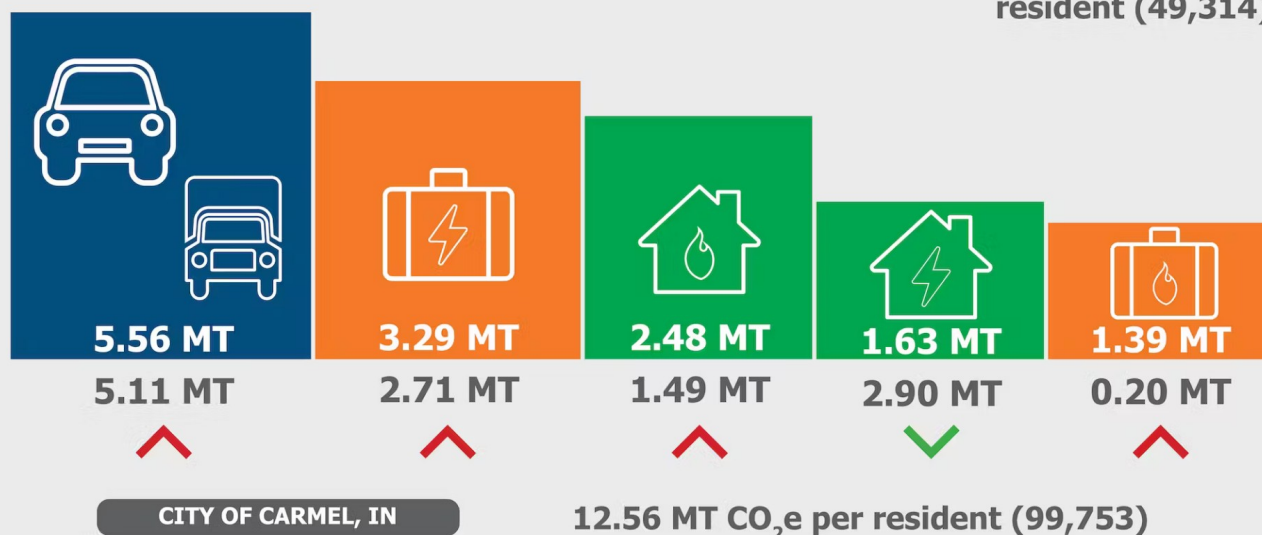
12/11/23 // SLIDE 7

GREENHOUSE GAS INVENTORY



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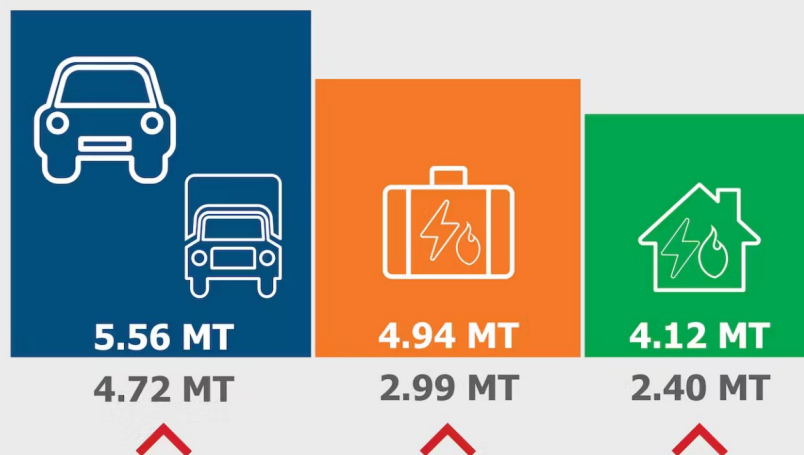
12/11/23 // SLIDE 8

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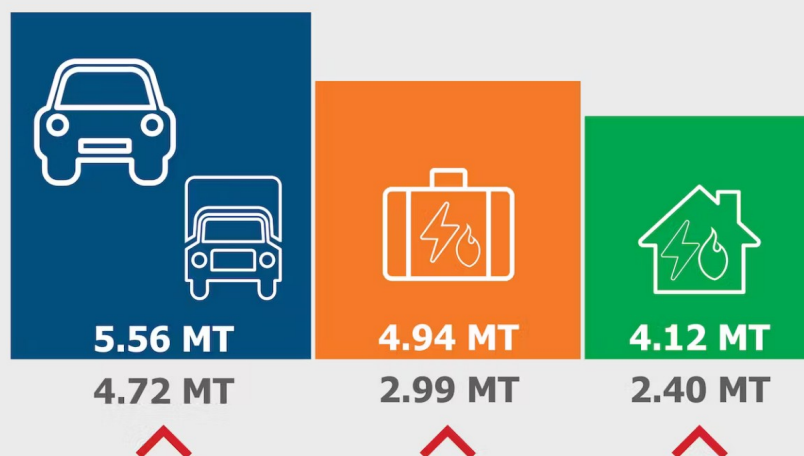
12/11/23 // SLIDE 9

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12/11/23 // SLIDE 10

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12/11/23 // SLIDE 11

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-  Recycling & Diversion
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-  Community Engagement
-  City Operations

12/11/23 // SLIDE 12



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12/11/23 // SLIDE 13

SUSTAINABLE DUBLIN PARTNERSHIPS



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PROGRAMMING

STEWARDSHIP EFFORTS

LOCAL BUSINESSES

MAINTENANCE

City Partnerships

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Dublin Schools
GoZero Services
JadeTrack
League of American Bicyclists
National Wildlife Federation
Rumpke
SWACO
Zero Waste Event Productions
Local businesses through Pop Up Dublin, The Dublin Market at Bridge Park

Community Identified Partnerships

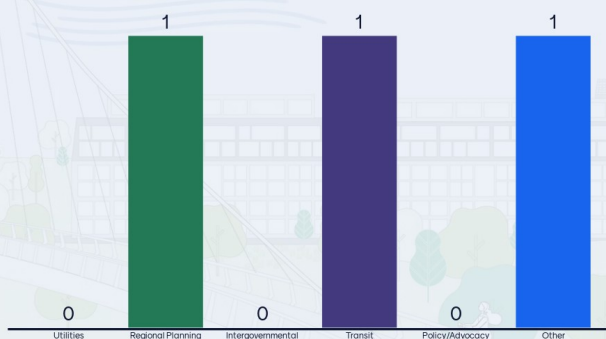
Johnson Controls
Columbus Zoo
Franklin Park Conservatory
Simply Living
SUN Solar United Neighbors
Stratford Ecological Center
Ducks Unlimited
Pheasants Forever
Nature Conservancy
Sheir-Rings
Food Rescue US

Ecofestival
Ohio Association of Garden Clubs
Franklin County Master Gardener Volunteers
Ohio wildlife
Smart Columbus' Digital Equity Coalition
OSU
Appalachian Ohio Alliance
The Compost Exchange
Engineers for a Sustainable World @ The Ohio State University (student organization)
Rails to Trails

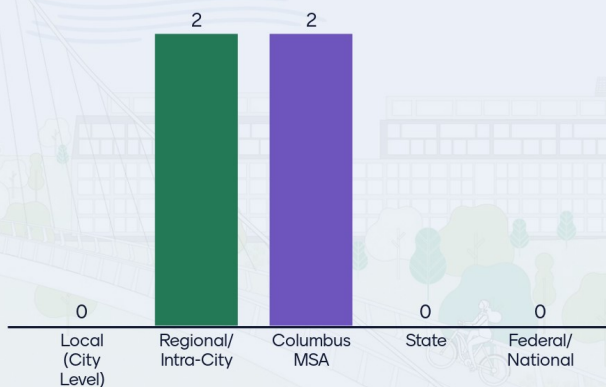
Solar United Neighbors
Big Trees Ohio

12/11/23 // SLIDE 14

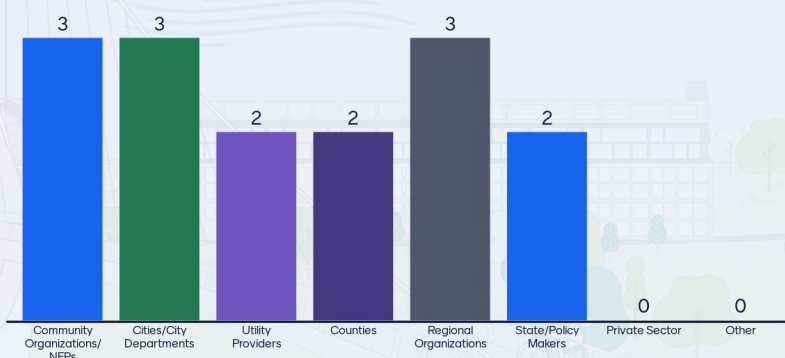
What type of partner organization do you represent?



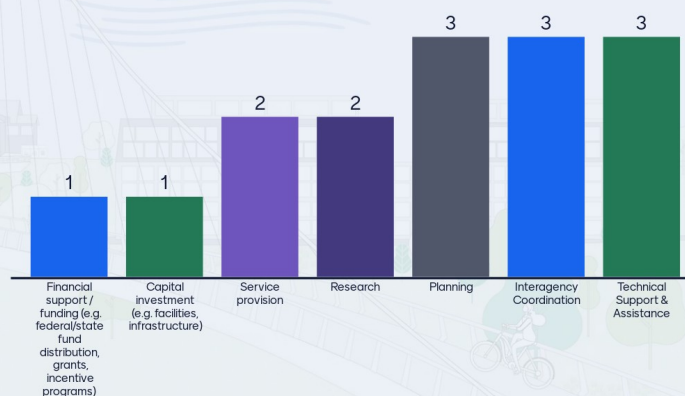
What scale does your organization generally focus on?



What types of organizations or governments do you most often work with? (Select all that apply)

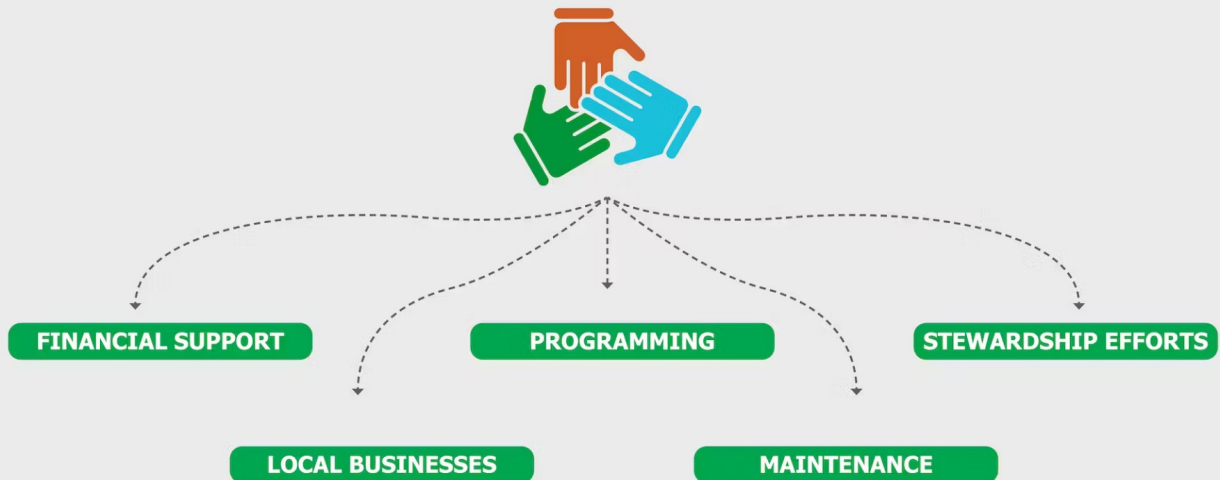


How do you work with local governments and organizations?





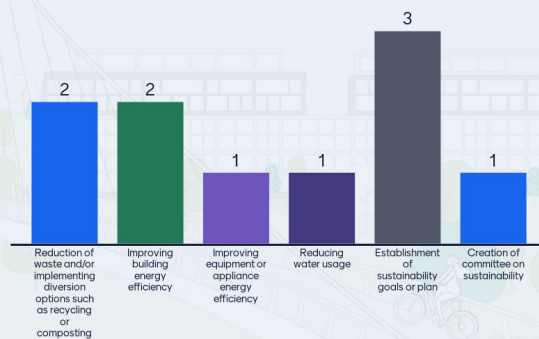
SUSTAINABLE DUBLIN PARTNERSHIPS



12/11/23 // SLIDE 20



What are some ways you are supporting sustainability in the communities you serve? (Select all that apply)

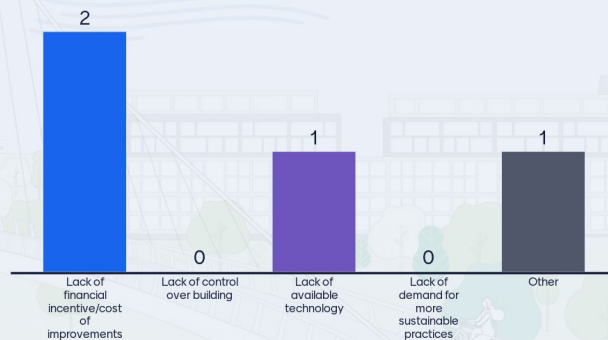


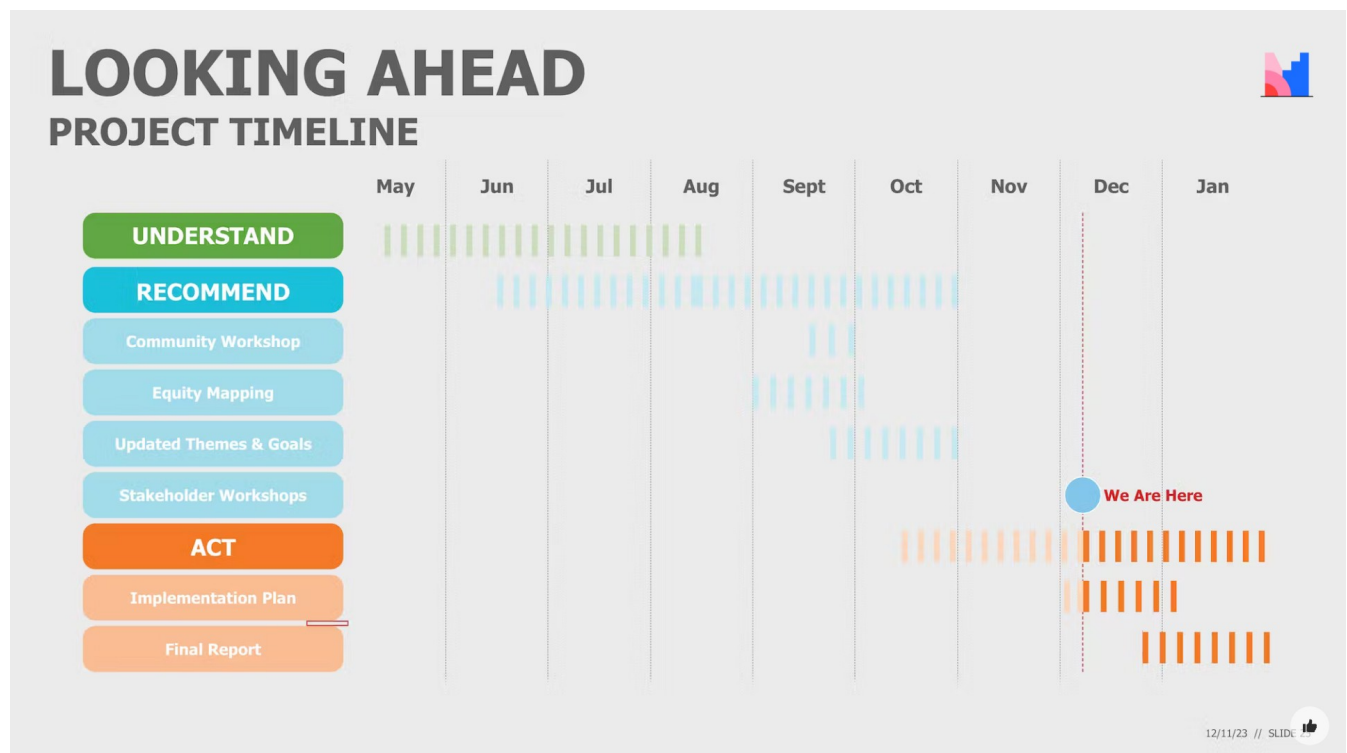
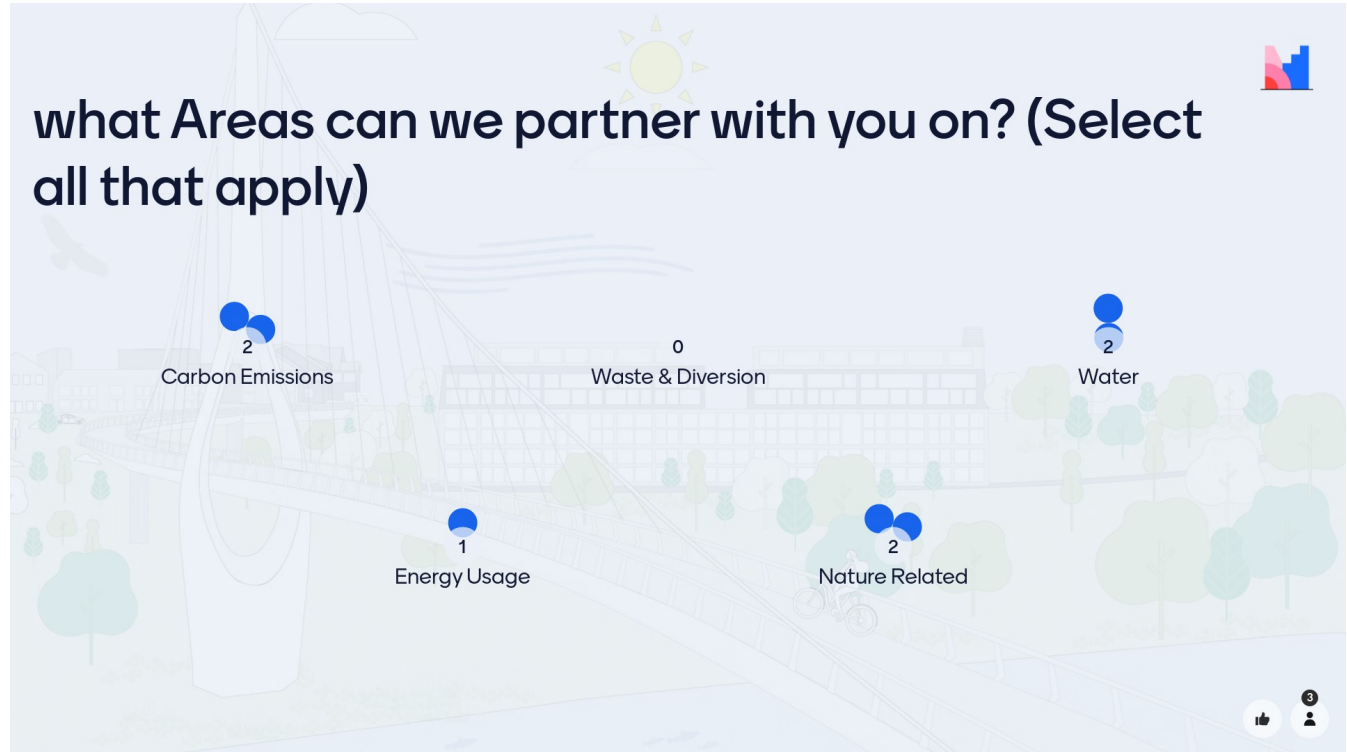


How do you measure the success of these efforts?



What barriers do you perceive as greatest to building buy-in for more sustainable practices?





ENGAGEMENT FEEDBACK

COMMUNITY WORKSHOP

Summary of Community Workshop

On September 28th, 2023, the Dublin Sustainability Plan consultant team invited community members to the Community Recreation Center for a Community Workshop. The 90-minute workshop, hosted from 6:00pm – 7:30pm, included an introductory presentation and three (3) activities designed to invoke reflections on sustainability and collect feedback on sustainability-related community priorities. Thirteen (13) community members were in attendance.

The workshop's activity session gave community members an opportunity for hands-on learning, capturing their input on Dublin's existing sustainability conditions and its possible future through three activities:

- **Dublin Draw Down** – Presentation of Dublin Greenhouse Gas Inventory data to build an understanding of Dublin's greenhouse gas emissions, including a comparison to nearby Columbus for reference. Attendees then discussed high emissions areas and identified and prioritized opportunities to draw down their contributions to emissions. Attendees used colored puff balls of varying sizes to indicate their perceived impact of emission into each emission type, with the largest ball representing the largest perceived impact.
 - Activity Results:
 - The largest ball was worth 4 points, the medium sized ball was worth 3 points, the small ball was worth 2 points.
 - Colored balls indicated individual efforts to reduce emissions. Results suggest that Solid Waste and Water are the top categories where participants are taking action to reduce carbon emissions.
 - The top two emissions categories indicated by participants were Electric and Transport, which aligned with existing data.
 - The table below shows the counts of the gray puff balls and the colored puff balls.

Category	Ranked Score	Gray Puff Ball Count	Ranked Individual Emission Efforts	Colored Puff Ball Count
Electric	55	• 8 large balls • 7 medium balls • 1 small ball	3	20 colored puff balls
Transport	46	• 5 large balls • 6 medium balls • 4 small balls	4	15 colored puff balls
Solid Waste	34	• 3 large balls • 4 medium balls • 5 small balls	1	22 colored puff balls
Water	13	• 0 large balls • 1 medium ball • 5 small balls	2	21 extra small balls

- **Resilience Mapping** – Maps of various climate and environmental conditions throughout Dublin presented via 36’x48’ boards, allowing participants to provide feedback regarding micromobility and shared-use paths following a series of guiding questions.
 - **Activity Results:**
 - Top walking and biking destinations were Dublin Market, the Dublin Plaza Shopping Center, and Coffman Park.
 - Participants added green tape on routes located north of US Route 33. The marked routes were on or adjacent to existing trails, as well as on Dublin Road and other local streets that provide access to some of the pinned destinations.
 - Some areas that were taped in red as areas without current access include Glick Road, Memorial Drive, Muirfield Drive, and connections across Scioto River.
 - The table below shows participants’ votes for the three most important things to improve for shared-use paths by number of votes.
 - Other write-in comments expressed interest in safe access to paths during winter months, use of native plants, short-cuts to places of interest, mixed-use development, bike parking, and other suggestions to the City.

Improvement Type	Vote Count
Safe Crossings	11 (7 Votes indicating 1 st Priority)
Tree Canopy/Shade Along Paths	7 (4 Votes indicating 1 st Priority)
Access to Regional Trails	6
Comfort Amenities	5 (1 Vote indicating 1 st Priority)
Wider Paths	3
Lighting	2
Access to Regional Transt (COTA)	2
Public Art Installations	1
Fitness/Recreation Equipment	0
Themed Routes	0

- **Equity in Action** – An exploration of existing sustainability efforts and potential future programming through poster boards enabling attendees to vote on programs they would like to see expanded or created. Participants were also encouraged to write a pledge for future participation in sustainability efforts.

- Activity Results:

- Current City Programs – The table below shows the count of votes for improving or expanding each current sustainability-related program offered by the city.

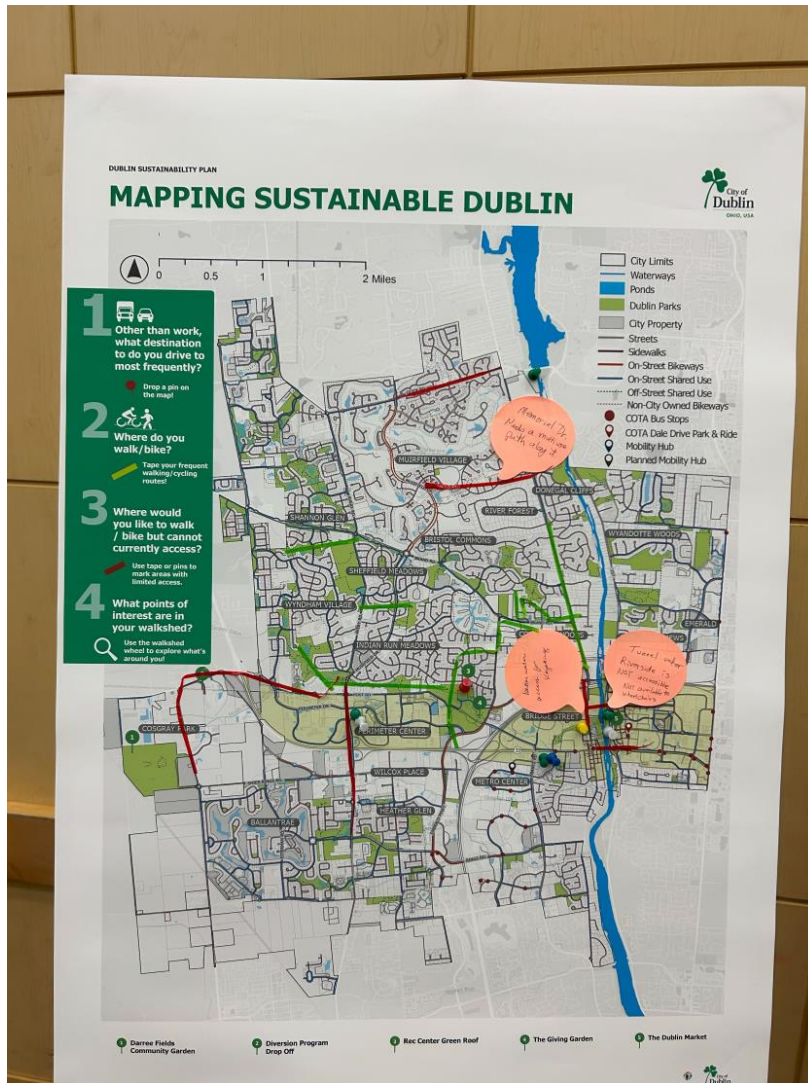
Current City Program	Vote Counts
Restoration	12
Community Diversion Programs	10
Dublin Community Garden	5
Dublin Grows Greener	5
Community Markets	4
Micromobility	2
Greenspot	0

- Other current programs or activities that participants have participated in include Election sign recycling and volunteer programs.
- Suggestions added to this board include encouraging more meadows and edible planting, improving Styrofoam recycling, and meat-free Mondays.
- Future City Programs – The table below shows the count of votes for programs participants were most interested in seeing in the City.

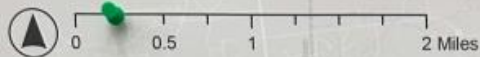
Program	Vote Counts	Additional Comments
Native Plants, Trees, & Seeds	8	Codify the meaning and use of preserve and reserve; Training citizens to replace grass with native plants between street and sidewalks
Renewable Energy	8	
Energy Efficiency	5	Adding solar panels on city buildings, heat pumps for new constructions, no more gas lamps in the Historic District
Community Programs	3	
Green Business	3	
Water Reuse	1	Ensure City code requires only non-invasive plantings for new builds.

- Participants indicated that classes/hands-on learning (6 votes) would be the most beneficial to them, followed by rebates/financial incentives (5 votes) and at-home consultations (3 votes).

Images



MAPPING SUSTAINABLE DUBLIN



- 1** **Other than work, what destination to do you drive to most frequently?**
Drop a pin on the map!
- 2** **Where do you walk/bike?**
Tape your frequent walking/cycling routes!
- 3** **Where would you like to walk / bike but cannot currently access?**
Use tape or pins to mark areas with limited access.
- 4** **What points of interest are in your watershed?**
Use the watershed wheel to explore what's around you!

- City Limits
- Waterways
- Ponds
- Dublin Parks
- City Property
- Streets
- Sidewalks
- On-Street Bikeways
- On-Street Shared Use
- Off-Street Shared Use
- Non-City Owned Bikeways
- COTA Bus Stops
- COTA Dale Drive Park & Ride
- Mobility Hub
- Planned Mobility Hub



1 Darree Fields Community Garden

2 Diversion Program Drop Off

3 Rec Center Green Roof

4 The Giving Garden

5 The Dublin Market



DUBLIN SUSTAINABILITY PLAN

MAPPING SUSTAINABLE DUBLIN

What are the three most important things to improve your use of the shared-use paths?
Use the colored dots to indicate your choices below.

1st 2nd 3rd

Comfort Amenities	Lighting
Tree Canopy / Shade Along Paths	Access to Regional Transit (COTA)
Safe Crossings	Access to Regional Trails
Public Art Installations	Wider Paths
Fitness/Recreation Equipment	Themed Routes

Other (Specify)

Wider Paths

Fitness/Recreation Equipment

Themed Routes

Other (Specify)

CURRENT CITY PROGRAMS

Below are a range of sustainability-related programs offered by the City of Dublin to help residents engage in more sustainable home and community practices. Use your dots to rank your top 3 choices you would like to see expanded or improved.

COMMUNITY DIVERSION PROGRAMS



VOLUNTEER CLEAN-UPS



RESTORATION



DUBLIN GROWS GREENER



DUBLIN COMMUNITY GARDEN



MICROMOBILITY



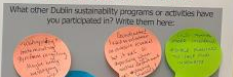
GREENSPOT



COMMUNITY MARKETS



DID WE MISS ANYTHING?

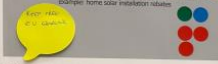


FUTURE PROGRAMS

Below are a range of sustainability-related programs Dublin could offer in the future. Use your dots to rank what types of programs you would prefer and the top 3 categories you would be most likely to participate in.

WHAT TYPES OF PROGRAMS WOULD BE MOST BENEFICIAL TO YOU?

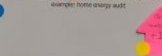
REBATES/FINANCIAL INCENTIVES



CLASSES/HANDS-ON LEARNING



AT-HOME CONSULTATIONS



WHAT CATEGORIES OF PROGRAMS OF YOU MOST INTERESTED IN?

NATIVE PLANTS, TREES, & SEEDS



ENERGY EFFICIENCY



COMMUNITY PROGRAMS



WATER REUSE



RENEWABLE ENERGY



GREEN BUSINESS



SUSTAINABLE DUBLIN PLEDGE



