

ORLANDO AND THE SUSTAINABLE DEVELOPMENT GOALS

A Voluntary Local Review of Progress





LETTER FROM THE MAYOR

In 2007, we embarked on a journey to transform Orlando into a model city of the future; one of the most environmentally friendly, socially equitable and inclusive, and economically vibrant cities in America. As a city on the world stage attracting more than 75 million visitors annually, we felt it was imperative that we align our local priorities with the framework of the Sustainable Development Goals (SDGs) adopted by every nation on Earth, and leverage these unifying goals to empower our community to end poverty, eliminate inequalities, and protect ourselves from the threats of environmental and climate catastrophes.

This report, our first voluntary local review (VLR) of our progress toward advancing the SDGs in the City of Orlando, is an opportunity to share what initiatives are working, and seek help for the areas that we can improve. While the SDGs offer a shared lens through which we can all view our work in cities and countries around the world, the Global Goals also help us measure the prosperity of our workers, the growth of our businesses, and the legacy we leave for the next generation.

Real climate action doesn't happen with one city working alone. This is why we are excited to share our voluntary local review and join cities and counties worldwide to better assess our collective progress toward preserving our planet for generations to come.

Thank you to our partners at ICLEI USA who supported us in navigating this first VLR and creating a model for other cities to replicate and report how they are working to advance the Global Goals.

With our strong culture of collaboration and partnership in Orlando, I'm confident we will achieve a future that is healthy, equitable, and sustainable for all.

Buddy Dyer
Mayor
City of Orlando

CONTENTS

- [3 VLR Declaration](#)
- [4 Acknowledgments](#)
- [6 Introduction: From Agenda to Action](#)
- [8 Methodology: How Orlando Tracks Progress on the SDGs](#)
- [11 Enabling Environment: Creating a People-Centered Approach](#)
 - [Progress on the Goals](#)
 - [13 SDG 2: Zero Hunger](#)
 - [16 SDG 3: Good Health and Well-being](#)
 - [19 SDG 6: Clean Water and Sanitation](#)
 - [21 SDG 7: Affordable and Clean Energy](#)
 - [24 SDG 10: Reduced Inequalities](#)
 - [29 SDG 12: Responsible Consumption and Production](#)
 - [32 SDG 13: Climate Action](#)
 - [35 SDG 15: Life on Land](#)
 - [37 SDG 17: Partnerships for the Goals](#)
- [42 The SDGs as a Framework for Orlando's Green Recovery](#)
- [43 Recommendations for Future Action](#)





NEW YORK CITY
Mayor's Office for International Affairs

Declaration

Voluntary Local Review

WE, THE REPRESENTATIVES OF LOCAL AND REGIONAL GOVERNMENTS, EXPRESS OUR COMMITMENT TO ADVANCING THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT, A SET OF 17 SUSTAINABLE DEVELOPMENT GOALS (SDGS) WITH 169 ASSOCIATED TARGETS UNANIMOUSLY ADOPTED BY UNITED NATIONS MEMBER STATES AT THE UNITED NATIONS SUSTAINABLE DEVELOPMENT SUMMIT ON 25 SEPTEMBER 2015.

WE PLEDGE TO USE THE FRAMEWORK OF THE SDGS TO DO OUR PART TO HELP END EXTREME POVERTY, FIGHT INEQUALITY AND INJUSTICE, AND WORK TO PREVENT THE HARMFUL EFFECTS OF CLIMATE CHANGE BY 2030.

WE APPRECIATE THE 2030 AGENDA'S RECOGNITION OF THE CRITICAL ROLE OF LOCAL AUTHORITIES, NOTING THAT WE ARE ON THE FRONT LINES OF ACHIEVING THE SUSTAINABLE DEVELOPMENT GOALS, AND IN THIS EFFORT WE HAVE A UNIQUE ABILITY TO ESTABLISH COOPERATION WITH KEY SECTORS OF SOCIETIES AND PEOPLE WORKING TOWARD THE ESTABLISHMENT OF A NEW AND EQUITABLE GLOBAL PARTNERSHIP THAT CAN MORE EFFICIENTLY ADVANCE THE 2030 AGENDA.

WE LOOK FORWARD TO LOCAL AND REGIONAL GOVERNMENTS JOINING THE CITY OF NEW YORK IN SUBMITTING DIRECTLY TO THE UNITED NATIONS A VOLUNTARY LOCAL REVIEW OF LOCAL PROGRESS IN ACHIEVING THE SUSTAINABLE DEVELOPMENT GOALS.

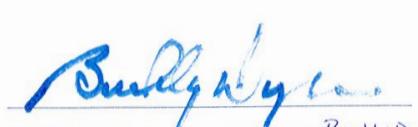
BY SIGNING THE VOLUNTARY LOCAL REVIEW DECLARATION, WE AGREE TO THE FOLLOWING NONBINDING COMMITMENTS, ACKNOWLEDGING THAT EACH SIGNATORY WILL TAKE INTO CONSIDERATION THEIR INDIVIDUAL STRUCTURE, DATA MANAGEMENT PROCEDURES, AND OTHER LOCAL DYNAMICS IN ORDER TO USE THE SUSTAINABLE DEVELOPMENT GOALS AS A COMMON LANGUAGE TO DISCUSS OUR PRIORITIES IN CONCRETE TERMS, AND IDENTIFY AREAS WHERE WE CAN SHARE AND ACQUIRE KNOWLEDGE:

COMMITMENT 1 TO IDENTIFY HOW EXISTING STRATEGIES, PROGRAMS, DATA, AND TARGETS ALIGN WITH THE SUSTAINABLE DEVELOPMENT GOALS

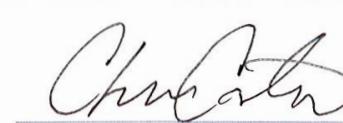
COMMITMENT 2 TO PROVIDE AT LEAST ONE FORUM WHERE STAKEHOLDERS CAN COME TOGETHER TO SHARE EXPERIENCES, LESSONS LEARNED, AND INFORMATION GATHERED USING THE FRAMEWORK OF THE SUSTAINABLE DEVELOPMENT GOALS

COMMITMENT 3 TO SUBMIT A VOLUNTARY LOCAL REVIEW TO THE UNITED NATIONS DURING THE UNITED NATIONS HIGH-LEVEL POLITICAL FORUM

WE PLEDGE TO COOPERATE IN GOOD FAITH AND IN A SPIRIT OF PARTNERSHIP TO WORK TOWARD THE FULFILMENT OF THE PRINCIPLES EMBODIED IN THIS DECLARATION.



SIGNED BY: Orlando mayor Buddy Dyer



SIGNED BY: Chris Castro
Director, Office of Sustainability & Resilience

ACKNOWLEDGMENTS

PUBLISHERS:

City of Orlando Office of Sustainability and Resilience
ICLEI-Local Governments for Sustainability USA

AUTHORS:

Christopher Castro, Director of Sustainability and Resilience, City of Orlando
Kale Roberts, Senior Program Officer, ICLEI-Local Governments for Sustainability USA
Dr. Brittany Sellers, Assistant Director, Sustainability & Resilience, City of Orlando
Ashley Van Stone, Sustainability Project Manager, City of Orlando

CONTRIBUTORS:

James Bacchus, Distinguished University Professor of Global Affairs and Director of the Center for Global Economic and Environmental Opportunity at the University of Central Florida
Karyn Barber, Communications Manager, City of Orlando
Casey Brabbs, Graphic Designer, City of Orlando
Lisa Early, Director of Families Parks & Recreation, City of Orlando
Dr. Joseph England, Sustainability Project Manager, City of Orlando
Linda Ferrone, Chief Customer Officer, Orlando Utilities Commission
Daniel Friedline, Sustainability Project Manager, City of Orlando
Sean Hipps, Keep Orlando Beautiful
Sushunova Kupke, Facilities Project Coordinator, City of Orlando
Ian Lahiff, Energy Manager, City of Orlando
Felipe Sousa Matos Rodriguez, Inclusion Diversity & Equity Senior Specialist, City of Orlando
Brittany McPeak, Sustainability Coordinator, City of Orlando
April Michael, Director of Communications and Neighborhood Relations, City of Orlando
Commissioner Sean Parks, Lake County
Lisa Portelli, Senior Advisor for Homelessness and Social Services, City of Orlando
Jenifer Rupert, Resilience Director, East Central Florida Regional Planning Council
Mark Sees, Wetlands Manager, City of Orlando
Maddison Shropshire, ICLEI-Local Governments for Sustainability USA
Ben Stacey, Climate Advisor, City of Orlando
Bret Thomas, Graphics Supervisor, City of Orlando
Sandi Vidal, Vice President of Community Strategies and Initiatives, Central Florida Foundation

All images courtesy City of Orlando

COPYRIGHT

(c) 2021 ICLEI - Local Governments for Sustainability USA e.V. All rights reserved. ICLEI jointly holds the rights to this publication with the City of Orlando, including text, analyses, logos and layout designs. Requests to reproduce or to quote material in part or in full should be sent to iclei-usa@iclei.org. ICLEI encourages use and dissemination of this report, and permission to reproduce this material without modification will usually be permitted without charge for noncommercial use.

INTRODUCTION

FROM AGENDA TO ACTION. When Mayor Buddy Dyer announced the Green Works Orlando plan in 2007, he vowed to move the city to become one of the most environmentally friendly and economically and socially vibrant in the world. Orlando was ahead of its time: the Green Works update in 2018 took the opportunity to align more directly with the United Nations' Sustainable Development Goals (SDGs), connecting local efforts to a global framework and engaging nearly 100 partners in the process.

Between those key moments in Orlando's history of sustainability action, the United Nations unveiled the SDGs in 2015 as part of the 2030 Agenda for Sustainable Development. The SDGs provide a 15-year roadmap whereby countries can tackle the interlinked challenges of poverty and economic development, inequality, biodiversity loss, climate change and more in a shared vision for comprehensive action. Nations show their contributions by submitting regular Voluntary National Reviews, or VNRs, to the UN and track their progress in support of the Global Goals over time. And while cities have no formal mechanism to do the same, the importance of local governments to achieving the goals is undeniable. When the City of Orlando decided to align Green Works with the SDGs, it entered the city into a global conversation. Orlando joined the SDG Leadership Cities in 2018, a group of international communities convened by the Brookings Institution that are committed to taking bold steps on the Global Goals at home. The following year, Orlando attended the UN High-Level Political Forum in New York, the annual gathering for taking stock of progress on the SDGs, as a co-delegate with a local consortium of SDG actors and ICLEI-Local Governments for Sustainability (ICLEI) representatives.

Announced ahead of the UN High-Level Political Forum 2020, the City of Orlando partnered with ICLEI to complete an SDG mapping process to bring Green Works Orlando's global contributions into greater focus. Orlando's Voluntary Local Review, or VLR, draws on lessons from its peers among the SDG Leadership Cities while offering innovations of its own. First, Orlando's VLR builds on previous SDG work completed as part of Green Works Orlando, effectively translating its robust sustainability plan to the Local2030 framework. The VLR is useful for discovering data gaps and highlighting sectors not previously captured and is helping to institute new data-tracking systems among city departments and community partners.

Second, this VLR is one of the first developed by a medium-sized city in the United States. In this way, Orlando paves a path for cities, towns and counties of all sizes to contribute to the Global Goals. Third, the Orlando VLR is being developed explicitly as both an internal analysis tool and an external teaching tool. SDG 17 – partnerships for the goals – is showcased in this collaborative effort. By partnering with ICLEI, Orlando's lessons will inform the efforts of a network of hundreds of local governments throughout the United States. The partnership was initiated with this intent from the outset and demonstrates Orlando's commitment to act as both leader and learner within a network of local governments advancing together.

Finally, cities and regions have been first responders to the COVID-19 crisis. The Orlando VLR is an exploration for systemic recovery, acting as a catalyst to involve all stakeholders in a way that creates ownership and cultivates incentives to advance our shared vision for social, economic and environmental prosperity. The city's first VLR prioritizes SDGs 2 (Zero Hunger), 3 (Good Health and Well-Being), 6 (Clean Water and Sanitation), 7 (Affordable and Clean Energy), 10 (Reduced Inequalities), 12 (Responsible Consumption and Production), 13 (Climate Action), 15 (Life on Land), and 17 (Partnership for the Goals). These goals sit at the core of a just and sustainable recovery.

With the release of this review of the Global Goals, we offer a moment to reflect on which programs are working, what data remains to be collected to inform additional solutions, and why it's important for Orlando to contribute to a global community of practice. More than a report, we see the Voluntary Local Review as our opportunity to forge deeper cooperation across city government, in regional collaborations, with the State of Florida and U.S. Federal Government, and through global networks.



6

"In absence of national leadership on sustainability, cities have filled that void. As a global city and the most visited destination in America, Orlando is well positioned to be a showcase for the future of cities and ways to advance urban sustainability."



James Bacchus

Distinguished University Professor of Global Affairs and Director of the Center for Global Economic and Environmental Opportunity at the University of Central Florida



METHODOLOGY

HOW ORLANDO TRACKS PROGRESS ON THE SDGS. When New York City, along with Japanese cities Toyama, Shimokawa and Kitakyushu, released the world's first Voluntary Local Reviews (VLRs) in 2018, they demonstrated the visionary leadership to connect cities to the 2030 Agenda. VLRs are the local answer to the Voluntary National Reviews that countries submit to the United Nations semi-annually, designed to localize the 17 SDGs and 169 targets to the city scale. Still a nascent tool, a Voluntary Local Review of the SDGs does not have a defined structure. By working through the SDG Leadership Cities alliance, city networks and UN channels, Orlando is helping to define a set of elements that any review can include.

As a starting point, the Orlando VLR adapts the UN indicators used by national governments to track progress on the Sustainable Development Goals. These indicators span metrics related to health, economic prospects, environment, equality and more, and are useful for setting a baseline — “where are we now” — and informing a process for tracking progress — “where we want to go.”

CO-DEFINING A VLR STRUCTURE. Throughout 2020, Orlando representatives participated in the United Nations Department of Economic and Social Affairs' VLR Workshop series, where the city contributed to a uniform structure of the VLR. This report adopts that structure, including to outline the methods for data collection and reporting that are both data-driven and people-centered.

DATA-DRIVEN

INDICATOR SELECTION. For Orlando's first VLR, nine SDGs were selected for reporting by the Office of Sustainability & Resilience to ensure the process remains manageable in its first iteration while making room for additional SDG reporting in future years. This approach is in keeping with global cities' VLRs published to date. The choice of SDGs for reporting — SDG 2 (Zero Hunger), 3 (Good Health and Well Being), 6 (Clean Water and Sanitation), 7 (Affordable and Clean Energy), 10 (Reduced Inequalities), 12 (Responsible Consumption and Production), 13 (Climate Action), 15 (Life on Land), and 17 (Partnerships for the Goals) — reflects three inputs for decision making:

1. Alignment with the priorities established in the Green Works Orlando Community Action Plan,

2. The subset of SDGs considered under annual review as part of the United Nations' High-Level Political Forum for years 2020 and 2021, and
3. The need to address health and resilience better than ever before to guide post-COVID-19 recovery efforts.

LOCALIZING THE DATA. Because the SDG indicators were originally envisioned for use by countries, they needed to be adjusted in order to be locally relevant. The Orlando VLR adopts the City of Los Angeles' 5-step process to bring the goals into local focus:

That process determined a set of 47 indicators for the nine priority SDGs looked at for this VLR that are both locally relevant and for which data is currently available, 37 indicators that are applicable to Orlando but for which data is not currently available, and only 13 indicators that were deemed not applicable.

OUR APPROACH

Step 1: Sort

Consider whether the target as written is applicable for the City or not.

Step 2: “The Golden Rule”

For those not applicable, determine which targets may be applicable with revision to the language or context, taking into consideration the original intent and vision.

Step 3: Revise or Replace

Alter the target language as appropriate, revising the measure or language to reflect our local values and context.

Step 4: New Targets

Develop new targets to ensure we leave no one behind.

Step 4: Validation

Validate the revised targets by ensuring alignment with existing City commitments and by coordinating with policy owners and community stakeholders.

PEOPLE-CENTERED

COMMUNITY-FOCUSED. The selected indicators aim to inform a coherent policy for long-term sustainable development. Each SDG can be used both by city operations and by the community to galvanize additional action, while placing Orlando at the center of an international conversation. We recognize that indicators are only one way of telling a sustainability story — and that not all information can be quantified.

The voices from both community leaders and city staff captured throughout this review give character to the data and confirm that people are at the heart of the Global Goals. Future work will further refine data-tracking to be increasingly useful to a wide range of community groups and city departments.

GOVERNMENT STRUCTURE. Data-tracking began in 2012 when creating the first baseline at the start of the Green Works Orlando planning process. Data is collected annually and a new plan is published every five years. To complement this plan, in early 2020 ICLEI — recognizing the intersectional nature of the goals — created a shared data-tracking sheet with 50 indicators corresponding to the nine selected SDGs. To avoid duplicative work and to build upon the international community's efforts, this tracking method modeled its structure and inspiration from prior work by leadership in the region of Flanders in Belgium who took steps to localize the SDG indicators to a regional context.

CREATING OWNERSHIP. Cross-departmental coordination strengthened as a result of the Green Works Orlando Community Action Plan. City-wide, staff and partners approach work on SDGs in ways unique to their departments and organizations; even still, stakeholders are urged to view the Global Goals not as an additional burden, but as an interconnected interpretation of the excellent work they are already doing and as a chance to refine processes to work toward more whole-of-government coordination.

LEAVING NO ONE BEHIND. Meaningful stakeholder engagement is essential to Orlando's success. The SDG framework highlights the importance of consultation and inclusivity within planning and decision-making processes. Led by Mayor Buddy Dyer and Director of Sustainability and Resilience, Chris Castro, the city took this aspect of the framework to heart in the 2018 Green Works Orlando Community Action Plan update through an intensive community engagement effort. Mayor Dyer appointed community leaders to a Green Works Orlando Task Force. The city held roundtables on technical topics to identify new strategies and key partnerships. This community engagement strategy became a fundamental aspect of both that update and this VLR. The community engagement process, combined with efforts to align the plan to the SDGs, resulted in substantive changes to the Green Works Orlando Community Action Plan, including

incorporation of standardized data metrics developed by the World Council on City Data and integration of new guiding themes: social equity, resiliency, and smart technology and innovation. These themes “serve as guiding considerations for the development of recommendations” and are designed to be integrated into new Green Works Orlando initiatives.

We recognize that one-time consultation can build frustration and mistrust. Orlando's VLR is not a catalog of every SDG action — it is an ongoing process and data review, and a tool for keeping the conversation moving forward.

STATE AND REGIONAL COLLABORATION. Orlando prides itself on multi-level governance for sustainability and puts an emphasis on collaboration between the city and Orange County foremost. The city hosts monthly “Green Eggs and Ham” lunches to gather sustainability coordinators across the county. The Regional Resilience Collaborative, composed of five Florida counties and their cities, is driving regional climate resilience. The City of Orlando sits on the Collaborative's Steering Committee and co-chairs the Technical Advisory Committee. The Central Florida Regional Planning Council became an ICLEI Affiliate, bringing climate tools and technical assistance to each participating

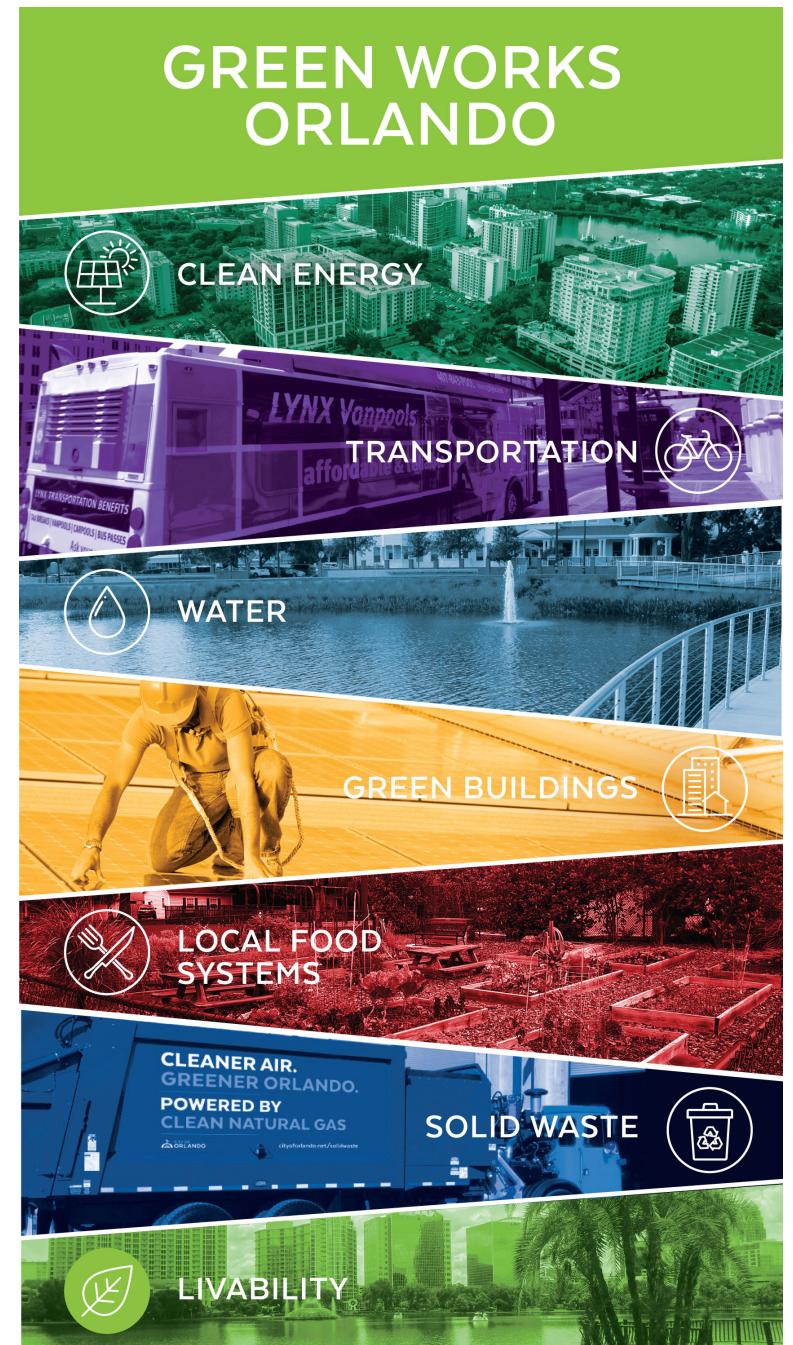


community. At the state level, City of Orlando staff serve as chair of the Florida Solar Energy Center, a legislative body operating since the mid-1970s to address energy security. The city also participates in Drive Electric Florida, an initiative coordinated by nonprofit organizations throughout the state that work on electric vehicle adoption, infrastructure and planning.

ENGAGING IN NATIONAL AND GLOBAL CONVERSATIONS. Engaging in multi-level action on the SDGs is particularly challenging for U.S. communities. There remains less familiarity with the Global Goals locally, especially in recent years where there was less support nationally. However, mayors across the country are showing leadership and solidarity around the SDGs in a myriad of venues.

At the U.S. Conference of Mayors in January 2018, Mayor Buddy Dyer joined mayors from New York City, Baltimore, and San Jose in reiterating his commitment to advancing the SDGs in Orlando. The first opportunity to do so was through the 2018 Green Works Orlando Community Action Plan, in which all identified goals and strategies—existing and new—were modified for closer alignment with the goals and objectives of the 17 SDGs.

A second opportunity comes now, with the release of Orlando's Voluntary Local Review in collaboration with ICLEI-Local Governments for Sustainability, to bring the SDGs into sharper focus as a framework for action and an avenue for global discourse. In 2019, Orlando attended the UN's High-Level Political Forum in New York – the annual gathering to assess progress on the SDGs – as co-delegate with ICLEI and a local consortium of partners. Orlando's involvement with the Brookings Institution's SDG Leadership Cities initiative has contributed to the emerging trends in local SDG action and will remain an important platform for ongoing conversation.



ENABLING ENVIRONMENT

CREATING A PEOPLE-CENTERED APPROACH. Community engagement was central to the 2018 Green Works Orlando Community Action Plan process and laid the groundwork for Orlando's VLR. Over three years, community members and business representatives were brought together to participate on the Mayor's Green Works Orlando Task Force or focus area roundtables. The city also hosted public workshops and solicited input through two online community-wide surveys.

GREEN WORKS TASK FORCE. For the 2018 Green Works Orlando Community Action Plan, Mayor Dyer appointed 25 community leaders and representatives from Orlando businesses, institutions and nonprofits to form a Community Task Force. The group was chaired by Orlando Utilities Commission's Chief Customer Officer, Linda Ferrone, and Ken LaRoe, the CEO of Climate First Bank, the world's first climate-focused bank. The Task Force came together quarterly between August 2017 to June 2018 to review goals and strategies for each focus area—including transit, air travel, collaboration with academia, and more—and to identify additional best practices and provide input for new recommendations. The Task Force continues to play a role in the implementation of the recommended strategies.

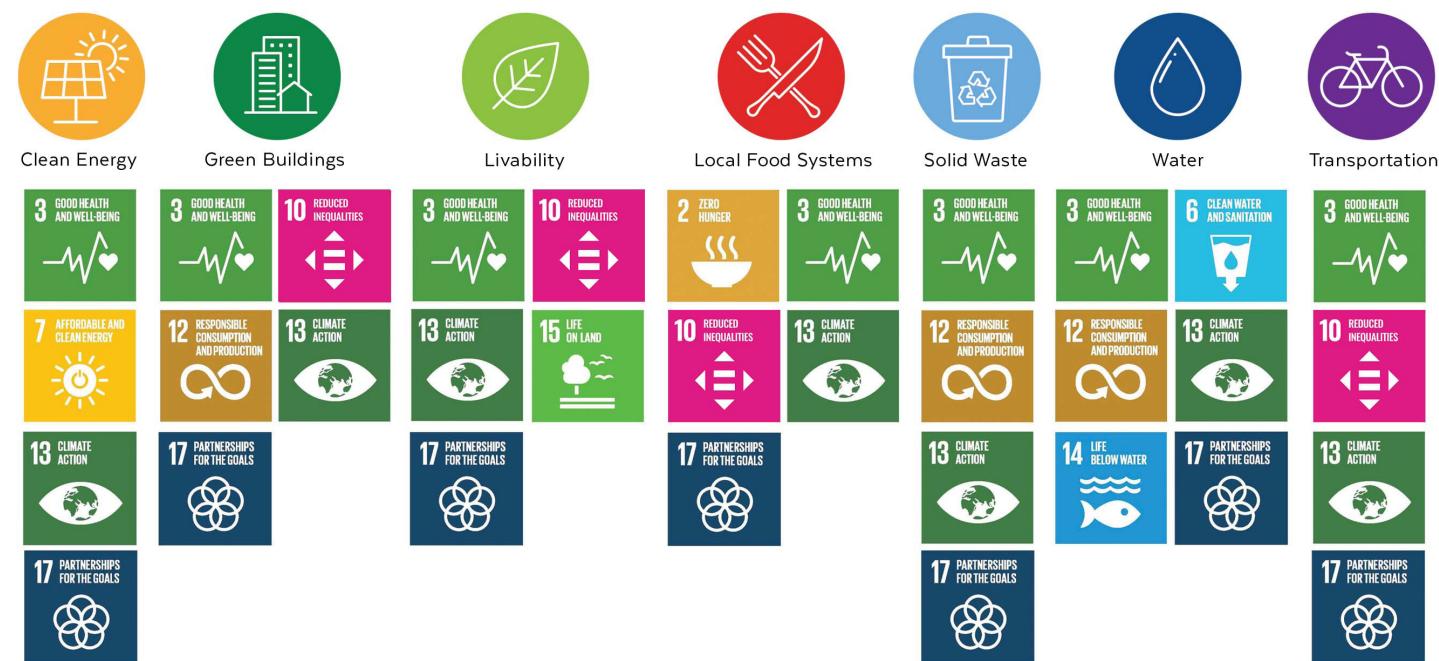
FOCUS AREA ROUNDTABLES. In spring 2018, Green Works Orlando convened thematic roundtables for each of its seven focus areas that brought 136 people together across 14 community forums in order to ask questions and give feedback on the progress of the Plan's goals, strategies and initiatives implemented to date. The

roundtables' recommendations are considered within this VLR and will form the basis for an updated Green Works Orlando Community Action Plan.

COMMUNITY INVOLVEMENT ROUNDTABLES. Orlando residents with subject matter expertise and experience across SDG action areas contributed to a series of roundtables that identified short- and medium-term strategies centered around seven focus areas to prioritize actions for the Community Action Plan. Community members were able to "upvote" their favored proposed actions or add additional strategies as part of the 14 community forums.

PUBLIC WORKSHOPS AND SURVEYS. Two public workshops were held in September 2017 and January 2018, accompanied by two public surveys, with the format of each aimed at broader community input to inform the updated plan. The first public workshop was held at the new Orlando Police Department Headquarters - a LEED Gold-certified building in the Parramore community. The second public workshop was held at East End Market in the Audubon Park Garden District.

Both workshops were set up in an open-house format, with workstations for each of the seven Green Works Orlando focus areas. An information board listing key strategies asked participants to vote for their priorities. The two public online surveys were administered using SurveyMonkey and disseminated across social media platforms, including NextDoor and Facebook. The city received more than 1,000 responses to the first survey and 877 responses to the second survey.



PROGRESS ON THE GOALS



2 ZERO HUNGER



SDG 2:

END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

The 2030 Agenda calls on governments to help end hunger globally over the next 10 years. To achieve this momentous aim, the City of Orlando will need to ensure access to affordable, healthy food options within a half-mile of every resident, increase local food assets—food hubs, community gardens, and distribution facilities—and adapt local food systems to be more resilient in the face of climate change and extreme weather. Orlando can build from unique assets, including Central Florida’s mild climate, a cultural heritage of agriculture, and passionate residents and business owners positioning the city as a local food destination.

FOOD SYSTEMS DATA. Orlando has adopted SDG 2 as its own, localizing and internalizing the sub-goals regionally as part of a food assets inventory developed in partnership with the East Central Florida Regional Planning Council. The inventory catalogs the region’s farms, comprising 12,246 acres of food-producing land in 2016, processors and distributors alongside metrics for healthy food availability, commuting distances, and air quality measures in an interactive map. The data has unlocked key insights, including that only 52 percent of residents live within a half of a mile of healthy food sources, and is now helping planners and economic development stakeholders reimagine our food system to meet future challenges. As one example, the City partnered with local organizations to deliver 12,000 pounds of food to those affected during the COVID-19 pandemic.

URBAN AGRICULTURE. The City is working toward a goal to cultivate more than 700 garden plots across Orlando, including 16 current community gardens, with a focus on expanding access in food-insecure neighborhoods. In addition, the City provides opportunities for residents to support urban agriculture by planting one of the free fruit trees available through the One Person, One Tree program, taking part in front yard farming, adopting backyard chickens, or creating apiaries, all enabled through amendments to the land development code.



Apiaries are making a big impact among youth who are enrolled in the city's Parramore Kidz Zone (PKZ), a program reducing juvenile crime and drop-out rates in the city's highest-poverty neighborhoods. Through PKZ's Black Bee Honey student entrepreneurship program, youth are training to become a generation of beekeepers by maintaining hives on city facility rooftops and selling their honey at farmers markets, local businesses, and online.

The City's market garden program fosters entrepreneurship that is on display in the "farmlettes" at East End Market, a neighborhood market and culinary food hub in the Audubon Park Garden District that brings tradespeople and chefs together in a multifaceted community space that is part test kitchen, farm, retail shop and world-class dining.

Urban farming also meets civic service at Orlando's Fire Station One, a building with a green roof that both serves as a space where crops are harvested and bee hives produce honey, as well as a rainwater collection system that has helped to mitigate stormwater runoff and reduce the station's total potable water consumption by 30 percent.

PARTNERSHIPS. Collaboration and innovation are moving Orlando toward a more robust and resilient regional food system. Good Food Central Florida, a food policy council established in 2013, brings diverse members together to create a vision for local food. Second Harvest Food Bank of Central Florida serves food-insecure residents through a network of distribution partners, running a home-delivery food box program and helping Orlando households access more than \$100 million in SNAP benefits while also playing a vital role during natural disasters. In addition, Orlando's favorable policies have fostered the rise of Fleet Farming, a nonprofit urban agriculture program started by environmental solutions incubator, IDEAS For Us, that transforms residential lawns into biodiverse, productive microfarms and permaculture gardens.



"We need to provide food while also creating a 'boots-on-the-ground' approach that teaches people how to grow food in the long-term."



Daniel Friedline
Sustainability Project Manager, Livability and Local Food, City of Orlando

FOOD INSECURITY IN CENTRAL FLORIDA*

50,890

Food insecure children in Orange County

17.2%

Child food insecurity rate

12.3%

Overall food insecurity rate

66%

Income-eligible for nutrition programs

Source: Feeding America

*Data from 2018. Food insecurity elevated in 2020 due to COVID-19



SPOTLIGHT ON ZERO HUNGER: FROM VACANT LOTS TO VIBRANT FARMS

The residents of Orlando's Parramore neighborhood do not have easy access to healthy food. In place of grocery stores or farmers markets, neighbors unable to drive miles rely on fast food or convenience stores for most of their meals. One small-scale agricultural venture is looking to shorten the distance to fresh food: Infinite Zion Farms broke ground on its third urban garden in 2019, growing on a vacant lot in the heart of Parramore. African American-owned and operated under a subscription box business model, Infinite Zion increased community support for urban agriculture, says Daniel Friedline, Sustainability Project Manager for Livability and Local Food.

"Looking past the immediate bounty, Infinite Zion Farms' biggest strength is its ability to teach," Friedline says. Infinite Zion is not the average community garden: it leverages innovative farming practices, such as greenhouses for year-round growing, and hydroponic agriculture, and puts youth education at the core of its urban farming philosophy. The model is working and has spurred additional redevelopment of vacant lots in West Orlando, including a quarter-acre lot near the Amway Center that was approved for a conditional use permit to start growing in 2016. Currently, the Four Roots Farm is being developed across 18 acres in the Packing District and will bring vocational opportunities in agriculture to the community.

Taken together, these upstarts form Orlando's burgeoning "Grow A Lot" program, which Friedline is excited to help expand. Now he's asking: can we buy plots of land to have trees on them for fruit production? If lots are paved, can we use containers to plant plum trees that residents can water and care for? The focus remains on accessibility grounded in three tenets: farming itself provides opportunity, it spurs and can be strengthened by innovation, and education is central to its purpose.



SDG 3:

ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AGES

Without a health department of its own, the City of Orlando relies on strong partnerships with Orange County, community organizations, and the Central Florida Foundation to create a city where everyone can live their healthiest life. Under the banner of Thrive Central Florida, an initiative led by the Central Florida Foundation, Orlando tracks a number of well-being indicators. Although some show promising trends — life expectancy is an average of 80 years for area residents, among the highest in the state — others are more worrisome and generally linked to areas where the state lags. Florida ranks second-to-last in residents covered by health insurance (85.2 percent are covered in Central Florida) and third-to-last in mental health funding (\$39.55 per capita).

SOCIAL-ECOLOGICAL MODEL. Facing these challenges, the Central Florida Foundation has established an Healthcare Impact Fund that is oriented on five criteria:

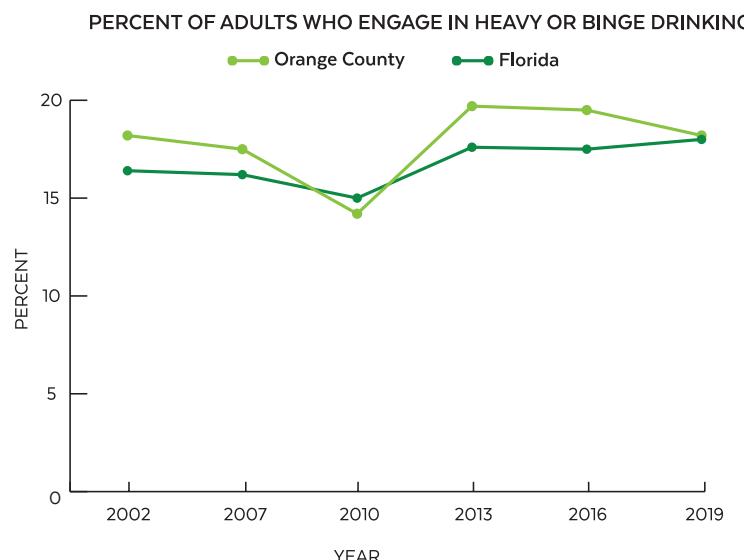
1. Focus on projects that pilot, accelerate, or scale solutions, or fill gaps within current solutions.
2. Improve delivery systems and/or access to healthcare.
3. Focus on increasing life expectancy and lowering preventable deaths.
4. Address the top 10 issues as identified by the Community Health Needs Assessment.
5. Address crisis recovery, including immediate, short-term response and long-term critical needs.

Because the City of Orlando is one of many partners to the Central Florida Foundation, and each community has a unique set of needs, SDG 3 is approached using the Social-Ecological Model. This model presents a comprehensive approach to health and urban planning that not only addresses a community's or individual's risk factors, but also the norms, beliefs, and social and economic systems that create conditions for poor health outcomes. Introduced in 2016 as part of a collaboration led by Impact Partners, LLC, this model helped to identify, communicate, and address the role of economic conditions as a primary determinant of health in Orlando and regionally, particularly around homelessness and mental health.



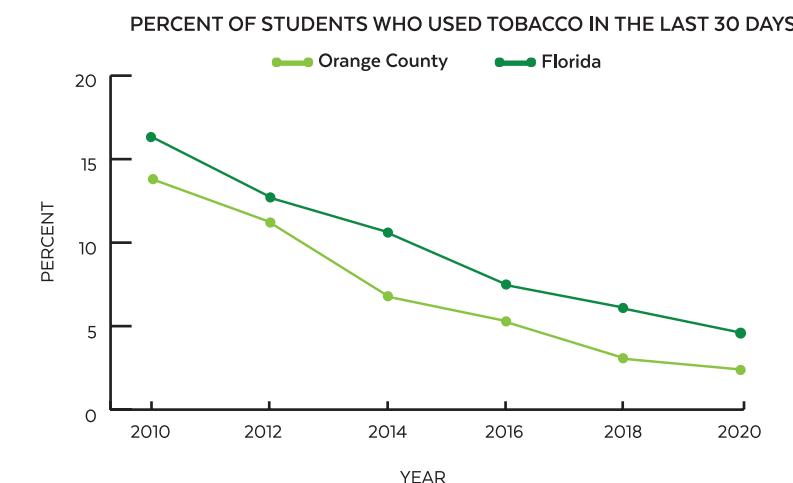
LIVABILITY. Orlando's well-being priorities center on the concept of creating a city that is built for and serves all residents. This approach is embodied in the concept of livability and articulated in "The City Beautiful" moniker. 'Livability' in Orlando is addressed at the nexus of planning and equitability. For example, SDG 3 data serves to track progress on the City's 2040 goal to reduce obesity and diabetes rates, which can be positively affected through walkability throughout the city. The city is working to develop 25 walkable villages and ensure that 95 percent of residential addresses are located within $\frac{1}{2}$ mile of a park or open space.

AIR QUALITY. While air quality is a regional issue largely driven by transportation emissions, certain areas of the city are disproportionately affected. By partnering with OUC or another vendor to install "smart poles," the city can monitor air quality. Smart poles can contain an array of communication technology, dynamic LED lighting and a variety of environmental sensors. The sensors monitor and detect changes in air quality, which would allow the city to identify specific areas of concern and develop mitigation measures to address air pollution. Although this project stalled due to COVID-19, a related project with the University of Central Florida to conduct an air quality study has moved forward. The study will track NOx, CO2, PM5 and PM10 to identify most-impacted neighborhoods, with strong community-involvement. (SDG 3.9.1)



OBESITY RATES
Percent of local population
2012: 27.8%
2018: 25%

16.7% of population is uninsured
Source: U.S. Census



DIABETES RATES
Percent of local population
2012: 9.9%
2018: 10.3%

HEALTH IN ORANGE COUNTY

The City of Orlando's targeted efforts regarding the green economy, job creation, housing and homelessness, food and transportation access, livability, and energy burden relief all demonstrate the commitment to bolstering health-related strategies that are intersectional in nature.

Beyond the discussion dedicated to these topics in the respective areas of this document, further work completed by the City is aimed at better understanding, measuring, and addressing additional facets of health and its predictors. Work to date includes data collected through community engagement, an identification of key performance indicators according to both empirical research, as well as national and international best practices, and grant-funded partnerships, including the expansion of air quality monitoring across Orange County in collaboration with the University of Central Florida.

In the City's Climate Vulnerability Assessment, completed in 2017, the relationship between hazards and risks from the changing climate, such as the impact of extreme heat on key sectors of employment in the area, including outdoor jobs in tourism, hospitality, landscaping, and public safety, as well as demographics, such as children, the ill, and the elderly, is investigated. Further exploration regarding the impact of climate migration due to both Orlando's geographic location inland in Central Florida, as well as our ethnically-diverse population, is currently being conducted as part of the development of the City's first-ever resilience plan.

SPOTLIGHT ON WELL-BEING:

THRIVE CENTRAL FLORIDA

Central Florida Foundation (CFF) is working to support a region where everyone feels at home. This mission plays out in a literal sense through the Foundation's initiatives to ready Central Florida to face a multitude of challenges, from complex changes anticipated for the housing market and the work of the Homeless Impact Fund, to the rehabilitation of homes in Parramore, and the Central Florida Regional Housing Trust. CFF also knows that it takes more than a roof and four walls to create a place where everyone is safe, secure and has the resources needed to thrive. For that reason, the Foundation created Thrive Central Florida - five focused impact funds that address Livability alongside Economic Stability, Healthcare, Education and Community & Social Connection.

"We started thinking about the Sustainable Development Goals (SDGs) in 2018," says Sandi Vidal, Vice President of Community Strategies and Initiatives at the Central Florida Foundation, "but more so in regards to measuring the impact of our initiatives in the community." Vidal spent two years analyzing the Sustainable Development Goals to determine their usefulness for informing the Foundation's giving strategy. She recognized that many area institutions, including the City of Orlando, Orange County and University of Central Florida, operate under guiding pillars that may or may not align, but all contribute to determinants of health. Vidal realized that by bringing these various frameworks into alignment with the SDGs, the partners could begin to operate using a shared language.

Thrive Central Florida mapped its five funds to the SDGs and in the process, provided a roadmap and timeline for achieving each's aims while gaining useful insights. For instance, food access was concluded to be more of a source problem than a determinant of health, and for this reason, programs related to food access were moved under Economic Stability. "We realized at first that talk about the SDGs was being interpreted by people as about the 'environment,'" Vidal recalls. "Social determinants of health were all about going to the doctor. Thrive Central Florida allows us to focus on the right things, look at what we learn from grant-making and make sure we are getting to the source of problems."

Vidal has since joined a Health Equity Task Force for the region, in part to bring a cohesive, SDG-inspired framework to the Healthcare component of Thrive. "COVID lifted the curtain on those issues that already were not going well," she says. "But it also shows us that the community has a lot of really great things going on, too. The lists of issues do not always show the assets." Thrive Central Florida is working to bring both the region's challenges and its strengths under one framework.

"Aligning with the SDGs is about measuring the impact we are making in the community — making sure our grant-making is getting to the source of the problem."



**THRIVE
CENTRAL
FLORIDA**



Sandi Vidal
Vice President of Community Strategies and Initiatives, Central Florida Foundation



SDG 6:

ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND PROVIDE SANITATION TO ALL

Universal and equitable access to safe and affordable drinking water under SDG 6 is an indicator Orlando is proud to have met. The city often makes top cities lists for clean tap water and providing sewer service to nearly 99 percent of residents. Over 10 percent of the city's land area is comprised of bodies of water, including more than 100 named lakes that often serve as the central focal point, gathering place, and namesake for many neighborhoods. Yet, despite the large areas of freshwater in Central Florida, water availability and lake water quality continue to be a concern as the city experiences climate change-related extreme weather, including severe and prolonged periods of drought and flooding.

Fortunate to have a clean source of water from the Floridan Aquifer, the city's current demand for water, coupled with a rapidly growing population, exceeds the rate at which water underground can be naturally replenished. That's why the city has established a goal to achieve a 20 percent per-capita water use reduction by 2040 and is working across several community programs to enhance water efficiency.

CITY OPERATIONS. In order to conserve water across green spaces, the city is conducting extensive water audits across its portfolio of properties, increasing the amount of native plants, and expanding mulched

areas, which reduce the amount of irrigation needed to support trees as they grow. The city's Streets and Stormwater Division has installed various structures, including baffle boxes, inlet baskets, alum treatment and a bar screen system, all of which reduce debris and nutrients entering waterways. The three City of Orlando water reclamation plants – Iron Bridge, Conserv I, and Conserv II – process about 36 million gallons of wastewater per day, with much of the effluent cleaned through natural solutions in the Orlando Wetlands Park (see Spotlight on Clean Water).

COMMUNITY OUTREACH. Education is critical to conservation. The City of Orlando's Water Reclamation division, in partnership with Streets and Stormwater, has developed a robust education center with innovative displays and interactive components to engage residents on water conservation and protection, as well as a variety of environmental topics. Since 2018, they have educated more than 14,500 people – from students and parents, to scout troops and agency peers – including a quick pivot to fully virtual programming during the pandemic. Through the Building Energy and Water Efficiency Strategy ordinance, more than 80 percent of participating large building owners have disclosed their annual water use. Additionally, reclaimed water is available by permit for urban irrigation and more than 100 rain barrels have been distributed to residents as part of the city's ongoing workshop series. The result is that, as of 2017, the average resident used 83 gallons of water per day, down from 92 gallons just 5 years earlier.

ORLANDO'S WATER BY NUMBERS

In 2017, the average Orlando resident used **83 gallons** of water per day, a decrease from the baseline of 92 gallons per day in 2012

Orlando's goal is to reduce potable water use by 50% by 2030

99% of the city's wastewater receiving tertiary treatment

10% of Orlando is made up of water

Source: City of Orlando

WATER QUALITY AND REDUCING POLLUTION.

Based on the 2019 Annual Water Quality Report, 83 out of 95 city lakes met the Good Water Quality standard (based on the Trophic State Index), demonstrating a positive increase from the 78 lakes meeting this standard in 2012. The city has eliminated chlorine from the treatment process and replaced it with an ozone-cleansing system. To reduce disposable water bottle waste, the city and OUC have installed 25 hydration stations that provide purified water to refill reusable bottles, typically near public parks. And a "Stop the Poo-lution Campaign" reminds everyone to pick up after their pet. The Orange County Water Atlas provides real-time metrics for water quality from all bodies of water in Orlando and surrounding areas, a resource few places in the U.S. have access to. (SDG 3.9.2)



SPOTLIGHT ON CLEAN WATER:

THE FIRST LARGE-SCALE WASTEWATER WETLAND

Armchair travelers the world over may know Florida as synonymous with wetlands. Visions of alligators sunbathing on grassy banks call to mind the marshy terrain that dominates much of the state's landscape beyond Florida's most famous wetland, the Everglades. Prime locations for birding and nature photography, Orlando is putting its wetlands to work for another purpose: cleaning wastewater.

The Orlando Wetlands Park is a man-made wetland designed to provide advanced treatment for reclaimed water from the City of Orlando and neighboring municipalities. Orlando needed a solution for the tons of excess nutrients that would potentially cause eutrophication of local waterways and, ultimately, severe algal blooms. Although many stormwater wetlands exist, at 1,650 acres the Orlando Wetlands Park – first envisioned in the 1980s – is perhaps the first large-scale municipal wastewater park in the United States.

"The race was on to find an alternative method," says Mark Sees, Wetlands Manager for the City of Orlando. The system designers looked at existing, small wastewater wetlands that existed around the country at the time, most no larger than 50 acres. "It was a big leap to convince the city and regulatory agencies to

"Beyond maintaining excellent water quality, we have created a remarkable wetland habitat. Now we look at biodiversity metrics alongside water quality."



Mark Sees
Wetlands Manager,
City of Orlando

construct such a large system." But Orlando made the leap, sculpting an initial 1,200 acres in 1985 and using the dirt to build dams and levees that would compartmentalize 18 cells that would hold and move wastewater as it was cleaned. There was no guarantee the plan would work long term.

But it did—and extremely well. Today, Orlando Wetlands Park discharges water with less than a quarter of the allowed 200 parts-per-billion of phosphorus. A total 2.1 milligrams per liter of nitrogen is allowed to re-enter waterways; last year, the water the park sent downstream contained only 0.66 milligrams per liter. And this level of cleanliness comes at about one-tenth the cost of conventional wastewater treatment. It also provides enormous benefit to both human and nonhuman residents of Orlando. In every square meter of the wetlands' marshes, anywhere from 1,000 to 13,000 macroinvertebrates call the park home and feed 240 species of birds that, in turn, draw between 50,000 and 60,000 human visitors a year to enjoy birding as well as mountain biking, horseback riding, and photography.

"When the land was used as a cattle ranch, biologists observed 27 species of wildlife total," Sees says. "Now the area is an educational facility for public schools because of the biodiversity. All these benefits are coming because people were willing to invest the time and money." The investment is paying off.



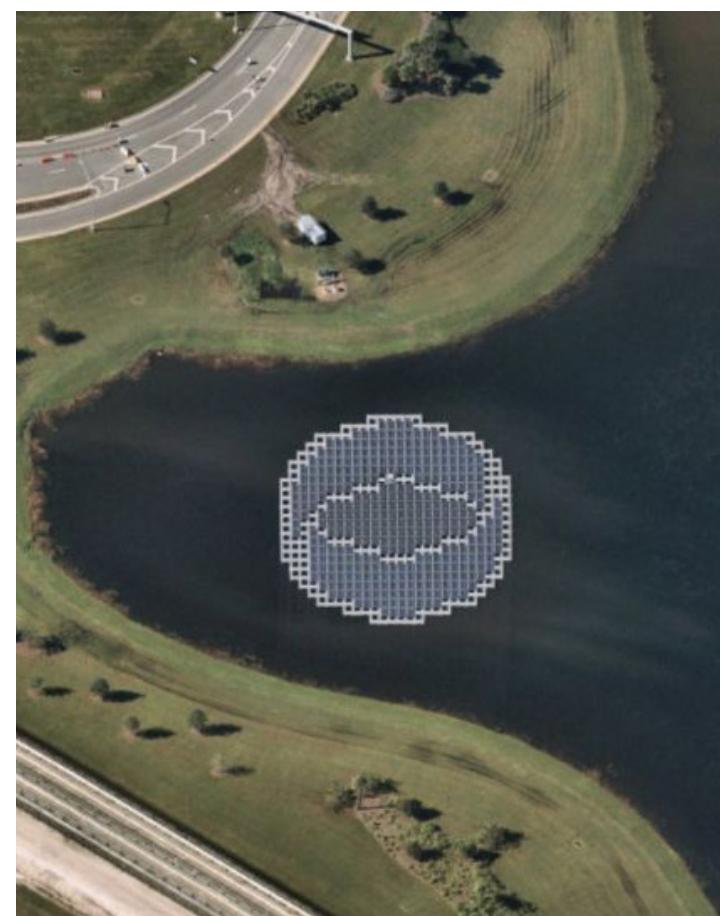
SDG 7: ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE ENERGY

Cleaning the electricity grid while improving efficiency is at the core of SDG 7—but with the intention that as energy systems transition away from fossil fuels, we need to take steps to ensure that electricity rates remain affordable for all. Orlando is making headway on each count, reaching toward a 100 percent renewable energy commitment by 2030 for government operations and citywide by 2050. In addition, the Orlando Utility Commission (OUC) released their 2020 strategic and integrated resource plan that made a bold commitment to net zero carbon by 2050, with science-based CO₂ reduction targets and early retirement of the last coal-fired power plants in Orlando no later than 2027. These goals are among the most ambitious in the United States and will need to be achieved alongside a 25 percent overall reduction in energy consumption. Given Orlando's climate and geographic location, there are tremendous economic opportunities and benefits for the city to become a leader in solar energy generation, as well as to position itself as a hub for clean technology industries and jobs.

SOLAR CAPACITY. Orlando's clean energy strategy involves both installed rooftop solar and community solar subscriptions to power city facilities. Prior to 2020, the city had installed 1 megawatt of solar on government rooftops; this will increase to 2.24 installed capacity by the end of 2021. These installations complement the city's OUCommunity solar program subscriptions that came online in 2020 to power City Hall, 17 Fire Stations, and the Orlando Police Department. In July 2021, the city subscribed an additional 33 buildings to cover the city's neighborhood centers, senior centers and main parks. Together these initiatives meet 12.7% of Orlando's energy needs through clean, solar power—almost double 2020's total of 6.4%.



Across Florida, the use of man-made stormwater retention ponds have been engineered to manage frequent rainfall and mitigate flooding. Since 2017, the City of Orlando and OUC have been experimenting with floating solar—"floatovoltaics"—on these retention ponds as an innovative applicable to advance more distributed renewable energy, bolstered in 2019 when the University of Central Florida (UCF) was awarded a grant to study the impacts and enhanced benefits of this technology. The first project was a 33 kW array at the OUC Gardenia Facility. Fast forward to today, the Orlando region has over 1 megawatt (MW) of floating solar installed, including a new array at the Orlando International Airport. In addition, with the success of an energy storage grant, Orlando and OUC are working to test the combination of floating solar and green hydrogen production for energy storage, and to explore how various clean technologies can work together to address intermittency challenges with renewables. With over 100 lakes locally, there is tremendous potential to utilize floating solar to achieve the city's 100% renewable energy commitment by 2050.

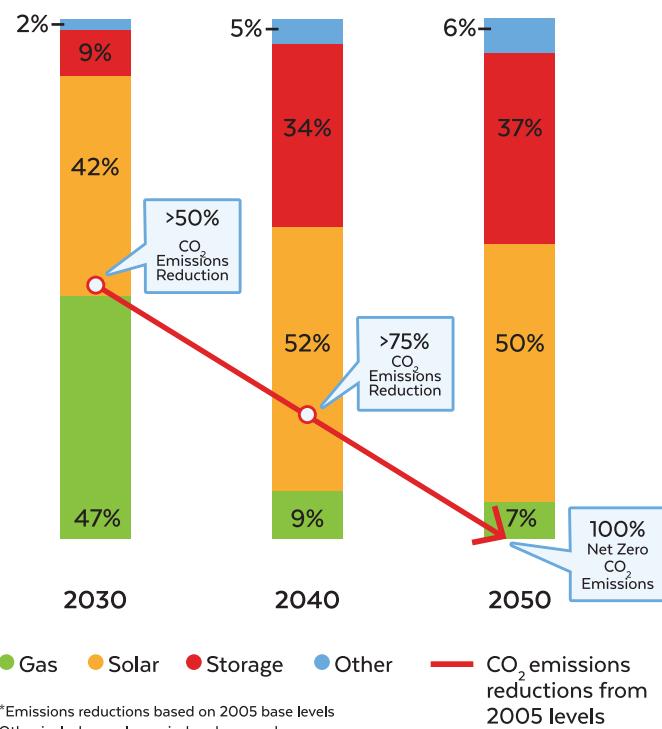


REDUCING ENERGY BURDEN. To ensure equitable access to affordable and sustainable energy, Orlando works with the local chapter of Solar United Neighbors, a nonprofit dedicated to representing solar owners' fight for their energy rights. Each solar co-operative program, facilitated in partnership with Solar United Neighbors, supports hundreds of participants who can leverage collective buying power to accelerate adoption of residential rooftop solar. To date, the city has supported 8 co-ops in partnership with Orange County, which has resulted in over 1.1MW of PV installed on homes across the county. Orlando relies on coal-fired and co-gen natural gas power plants for nonrenewable power and is investing in research and development to test whether algae can be used to capture and store carbon from the facility or to grow the next generation of plastics. And OUC will use a \$9 million grant to test how solar-powered lithium-ion batteries and hydrogen can work together for better energy storage, further reducing reliance on coal. Since 2011, the City of Orlando has also partnered with the nonprofit Solar and Energy

Loan Fund, or SELF, to provide energy assessments and favorable financing to homeowners to replace air conditioning units, weatherize their homes, repair roofs, install solar hot water heaters, and implement other efficiency upgrades.

RECOGNITION. These achievements have earned Orlando several designations, including holding the title of a U.S. Department of Energy Solar America City since 2010, earning SolSmart Gold city certification, being recognized as #32 in Environment America's national ranking of Top Shining Cities report, and becoming one of the first cities to earn a LEED for Cities Gold certification. In 2017 Mayor Dyer joined the Sierra Club's Mayors for 100% Clean Energy Initiative, a goal that the Orlando City Commission approved unanimously, and became a member of ICLEI's 100% Renewable Energy Cities & Regions Network, a group of the most daring cities who are working together to pave the way for a renewable future.

OUC MANAGEMENT CLEAN ENERGY ROADMAP RECOMMENDATION



"The 2030 goals are within reach. We are confident and excited while recognizing that a lot of technology will be required to bring change – Orlando Utilities Commission wants to be at the forefront of that."



Linda Ferrone
Chief Customer Officer,
Orlando Utilities
Commission

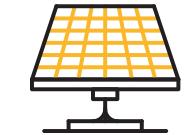
SPOTLIGHT ON AFFORDABLE AND CLEAN ENERGY:

UTILITY ENGAGEMENT FOR A CLEANER GRID

As a peninsula, Florida does not have the ability to tap into the same renewable energy sources that other parts of the country do. The wind is less powerful and there are fewer fast-moving waterways to supply hydropower. "The only thing we have is solar," says Linda Ferrone, Chief Customer Officer with Orlando Utilities Commission (OUC), a municipal utility company that is independent from the City of Orlando (although Mayor Buddy Dyer serves on the Board as one of five commissioners). However, as Ferrone notes, the region is subject to sea rains and hurricanes that cause multiple days without sunshine each year. "We are working very hard in our territory to make solar the most productive it can be—in short, using lots of batteries."

OUC's energy targets align with overall carbon reduction goals, and Ferrone wants to work toward a net zero-emissions mix by 2050 while maintaining reliability and affordability. Seeking community input, OUC engaged customers through online surveys and in person public forums. Ferrone's team convened an Advisory Council composed of a cross-section of stakeholders, including environmental organizations, low-income and fixed-income customers, and elected officials. The utility released its Electric Integrated Resource Plan in late 2020 because "we want the process to be incredibly transparent," Ferrone says.

OUC is unique in providing Orlando with more than electricity. It also provides ancillary services, such as chilled water to large buildings, outdoor lighting, and electric vehicle-charging infrastructure. OUC, in partnership with the City and LYNX, is moving the industry forward on electrified transit, setting a goal to deploy 150 EV buses across its territory by 2026. It has installed about 160 EV charging stations and is working on a subscription plan for EV owners to be able to use OUC chargers to "fill up." "We are excited to help the air quality improve in the parts of town where the buses run," Ferrone says, acknowledging the multiple benefits of electrifying fleets and the need to make strides on both transportation and renewables at the same time. "EV transportation is only green to the extent you can green up the electrons fueling it."



THE ENERGY LANDSCAPE IN ORLANDO

12.7%

of energy from
renewable sources

147

Green Buildings
in Orlando

\$18M

invested in
efficiency

\$2.5M

saved annually from
efficiency upgrades

Source: City of Orlando



10 REDUCED INEQUALITIES



SDG 10:

REDUCING INEQUALITY WITHIN THE CITY AND REGION

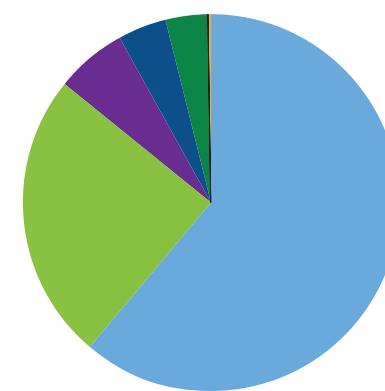
To achieve the goals of the 2030 Agenda, reducing inequality in Orlando will mean sustaining income growth for residents with incomes in the bottom 40 percent. It will mean empowering all—regardless of race, gender, sexual orientation, ability, religion or economic status—with the social and political capital they need to improve their lives. A city can adopt or support policies that protect wages of workers and prevent discriminatory practices. Orlando is using data to tell this story and act in ways that leave no one behind.

ENSURING HOUSING AFFORDABILITY. The region was disproportionately affected by the 2008 financial downturn, seeing poverty rates in Orange County increase by 60 percent between 2007 and 2012. Since that time, the wealth gap for the Orlando metropolitan region has jumped 23 percent, so that by 2017, the highest-earning households have incomes more than 11.4 times higher than the lowest-earning households. Despite the differences, housing costs for the rich and the poor are relatively the same, leaving more than 155,000 homeowners allocating more than half their income to housing (the situation for renters is even more challenging). That's why the City of Orlando is making significant investments and forging new partnerships to develop and rehabilitate quality housing units for its residents. In the last five years, the city has invested or committed more than \$40 million to create or preserve housing options for residents at all income levels.

ENSURING RACIAL EQUITY. Over sixty percent of Orlando residents are nonwhite, yet Black, Latinx, and racial minority communities are disproportionately impacted by the housing and unemployment trends highlighted here. Following the death of George Floyd in 2020, the city increased its investments to address systemic racism in our community through economic development support for women and

POPULATION SNAPSHOT

White:	171,168, 61.31%
Black or African American:	68,937, 24.55%
Some Other Race:	17,387, 6.19%
Asian:	11,926, 4.25%
Two or More Races:	9,782, 3.48%
American Indian and Alaska Native:	583, 0.21%
Native Hawaiian and other Pacific Islander	49, 0.02%



- 1,500 People projected to move to the region weekly through 2030*
- More than 75 million visitors to Orlando in 2019
- 10.2% of the population is over 65

*Source: info.orlandodec.com/hubfs/2030report.pdf

**Source: Visit Orlando:globenewswire.com/news-release/2019/05/10/1821626/0/en/Orlando-Announces-Record-75-Million-Visitors-Solidifies-Ranking-as-No-1-U-S-Travel-Destination.html



Approximately 2.5 million a year in city funding is invested annually in partner programs located throughout the neighborhood, aimed at:

- Increasing the number of young children attending high quality preschool programs
- Enhancing children's physical health and wellness
- Building positive parenting skills
- Mitigating family economic instability
- Supporting academic success among elementary, middle and high school children
- Increasing the number of youth entering – and completing – post-secondary education
- Keeping older youth out of trouble and on a positive track toward social and economic success.

2020 PKZ BY THE NUMBERS

- 95** College access assistance
- 102** Youth employed via PKZ Youth Employment Program
- 110** Emergency economic assistance
- 118** STEM, Arts & Culture
- 192** Early Learning Programs
- 222** Special Events / Experiences
- 254** Health and Wellness Programs
- 270** Youth development programs
- 618** Academically enriched after school programs and/or intensive academic support from Student Advocates

In 2020, the City of Orlando allocated \$2.41 million annually to begin expanding Parramore Kidz Zone in three additional neighborhoods.

Source: City of Orlando

SPOTLIGHT ON REDUCING INEQUALITIES:

ADDRESSING HOMELESSNESS

As the most-visited travel destination in the world, Orlando depends on a strong tourism economy. Industries and entrepreneurs set up shop in the city and Central Florida region, viewing them as ideal places to build and grow their companies. Despite this growth and the city's economic prospects, many individuals and families live \$400 away from homelessness and struggle to make ends meet, an issue further exacerbated by the COVID-19 pandemic that disrupted many of the industries that Orlando's economy relies so heavily on. Lisa Portelli sees the realities of this struggle first-hand. As Senior Advisor to the Mayor for Homelessness and Social Services and a Managing Board Member for the Central Florida Commission on Homelessness, Portelli works to find out what factors lead to someone becoming homeless — and what should be done when they do.

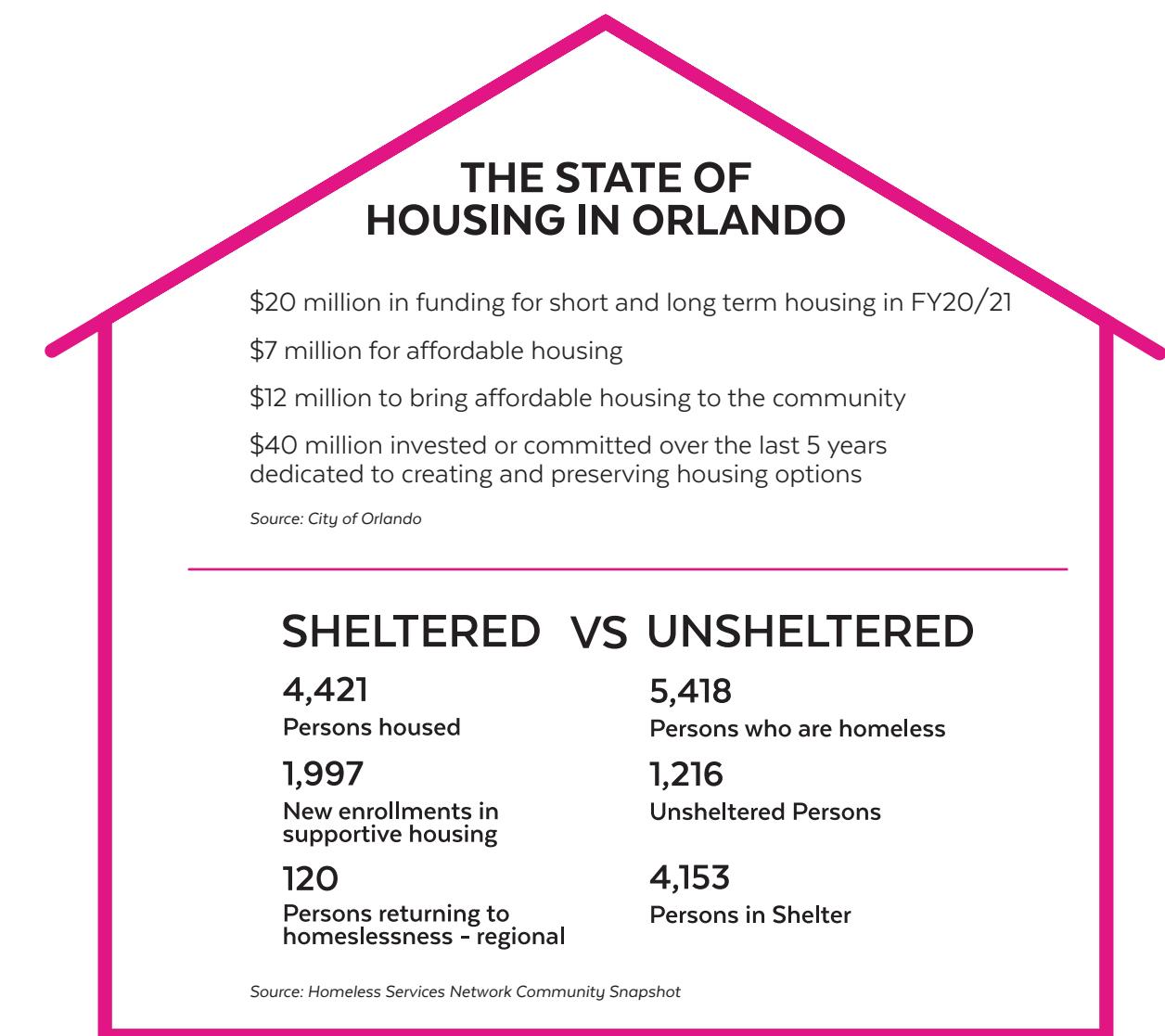
"We found that nearly half of the homeless are from the youth and LGBTQ+ communities," Portelli says. Like many community leaders in Orlando, the Pulse nightclub shooting in 2016 was an awakening for Portelli about the issues impacting LGBTQ+ residents. Following the tragedy, significant funding has been directed to addressing inequities within this community, with health and access to healthcare being a top priority. One partner organization, the HOPE team, is a diverse group of outreach specialists, veterans, licensed mental health and medical providers, and volunteers who engage and build trust with people experiencing homelessness, help assess their needs and eligibility, and connect them to services. The team works where those who are experiencing homelessness live and survive — on the streets. "Many people are ill and living on the streets, making them particularly susceptible to COVID [virus]." This is why, throughout the pandemic, the city has worked with organizations like the HOPE team to ensure our homeless community is connected to testing, quarantine, and vaccine opportunities.

Portelli credits Orlando's leadership for making homelessness a priority. Mayor Buddy Dyer is a member of the Leadership Council for the Central Florida Commission on Homelessness, which has conducted research on the societal and financial impacts of homelessness in the community. In 2014, the Commission released a groundbreaking report that found the cost of a chronically homeless individual in the community to be roughly \$31,000 per year, over three times the cost to assist them with case managers and permanent housing. These findings help to demonstrate the economic case for local government leadership, but only begin to capture the myriad social and health benefits of addressing these concerns for both the individual and society. Indeed, Orlando's "Housing First" strategy recognizes that the benefits of quickly moving chronically homeless into housing are many.

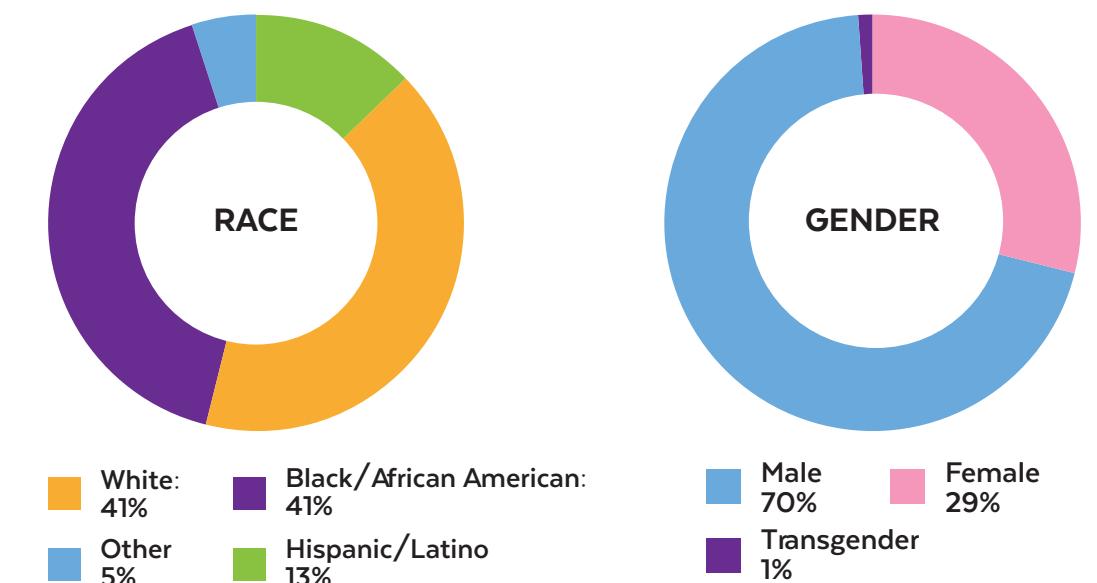
"Housing is a right for all. Our whole system has moved toward a 'housing first' strategy. The focus on equity is in the culture of City Hall."

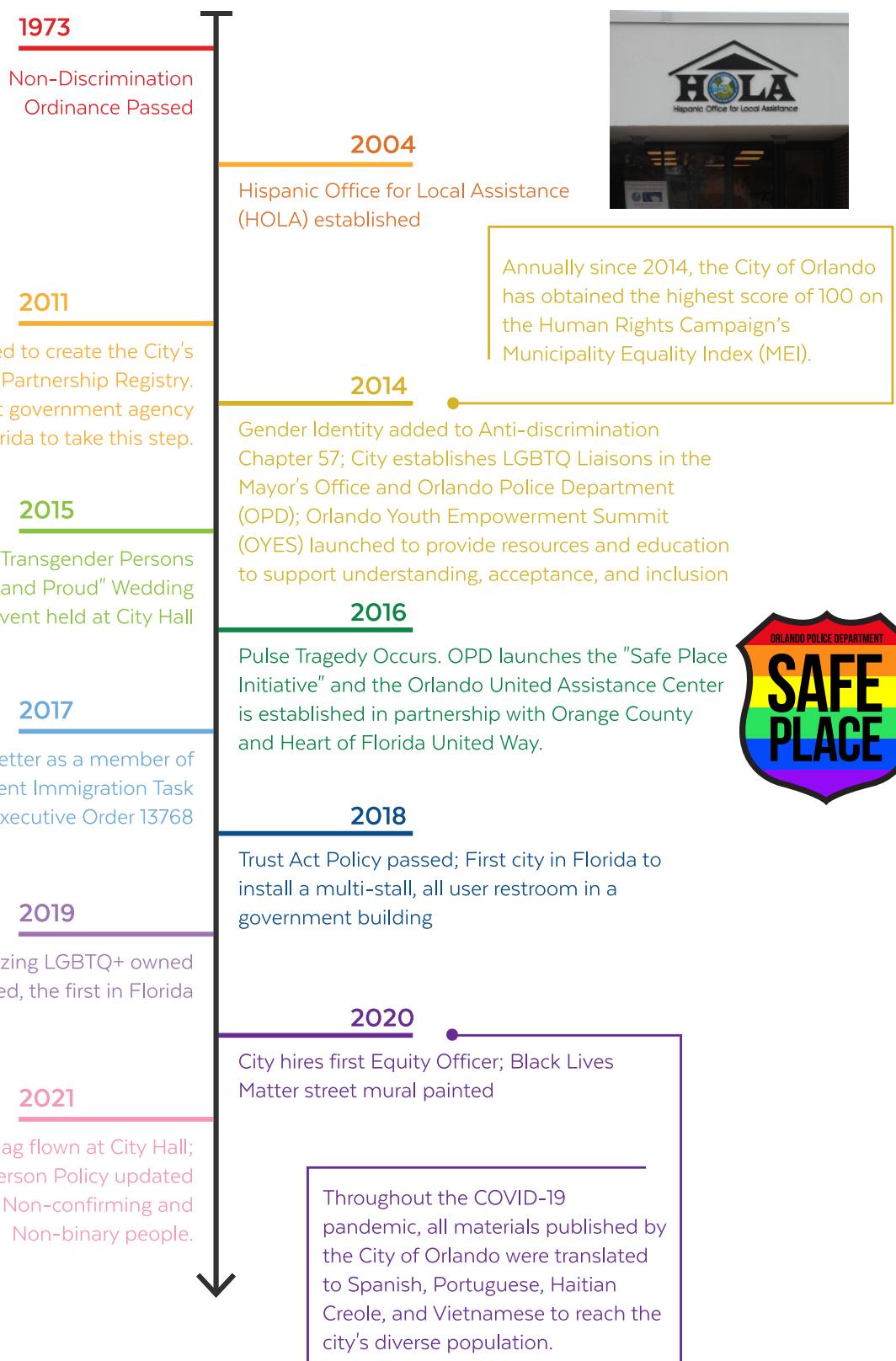


Lisa Portelli
Senior Advisor for Homelessness
and Social Services, City of Orlando



DEMOGRAPHICS ON HOMELESS INDIVIDUALS





SDG 12: ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

Maintaining the efficient use of the planet's finite resources is at the heart of SDG 12. As one of the first cities in the Southeast to mainstream recycling at public schools, Orlando has been a leader in the region. Still, work needs to be done as countywide mixed solid waste has nearly doubled since 2016 while recycling rates have remained relatively flat at 26%. Moreover, responsible consumption and production goes beyond recycling and must address food waste, consumer products, supply chain greenhouse gas emissions, pollution, public health implications and market influences helping or hindering circular resource use. With a goal to eliminate waste sent to landfills or incinerators by 2040, Orlando supports SDG 12 under its coordinated zero waste initiatives. The challenge will be to shift the mindsets of residents and businesses so that they view discarded materials as resources that can be put to productive use outside of a landfill.

FOSTERING CIRCULARITY. In 2017, Orlando partnered on the U.S. Chamber of Commerce Foundation's pilot project called Beyond 34: Recycling and Recovery for A New Economy, which aims to boost recycling rates in the city beyond the national average of 34 percent. By participating as a pilot city, Orlando helped the foundation determine that shifting to a circular economy could unlock an estimated \$4.5 trillion in additional economic growth by 2030.



To reduce single use plastic waste, the City of Orlando passed a policy prohibiting city-owned properties, venues, parks and/or affiliated events from distributing plastic bags, plastic straws, or expanded polystyrene (EPS) foam food service products. The policy took effect on October 1, 2019.

UNDERSTANDING OUR WASTE

RESIDENTIAL RECYCLING RATE:

14% Single stream and Municipal solid waste

26% Yard waste

LBS OF WASTE PER HOUSEHOLD:

167 LBS MONTH / 6 LBS DAY

100% Percent of population with regular waste services

TOTAL RESIDENTIAL MUNICIPAL SOLID WASTE AVG PER YEAR

53,000 tons solid waste
8,600 tons recycling
+ 10,000 tons yard waste
= 71,600 tons / 1.4 mil lbs

6,779 HOMES provided with free backyard composters

15,085 GALLONS of oil/grease recycled

15K POUNDS of food diverted through donation

Source: City of Orlando



DIFFICULT-TO-RECYCLE PRODUCTS. Orlando is working with TerraCycle to shift difficult-to-recycle products away from the landfill. Five city departments, including Public Works, regularly host electronic waste and textile-recycling drives for residents and businesses. The City has also hosted “Don’t Pitch It, Fix It” events, bringing together local fixers to repair goods instead of them getting discarded. In addition, a grease-recycling program providing free containers to residents has diverted more than 15,000 gallons of used cooking oil from being flushed down drains—oil which is later turned into biodiesel to be used by city fleet vehicles.

FOOD WASTE. In 2015, the City launched the first Commercial Food Waste Collection service of any city in Florida. The program offers separate carts to restaurants, conference hubs, and other food service facilities to divert their food waste, and convert it into compost through a commercial composting facility. In August 2019, the city introduced food waste programs at three community centers, diverting nearly 700 pounds per week. In 2020, the program expanded and added a food recovery component. The city is currently working to partner with local pantries in the area to accept the packaged foods to redistribute to those facing food insecurity. The Natural Resources Defense Council selected Orlando to participate in its Food Matters Regional Initiative. Orlando will work with four peer cities in the Southeast to tackle food waste and determine its food rescue potential. The city also facilitates a backyard composter distribution program where city residents can request a free unit. To date, more than 6,779 composters have been distributed to residents through the city’s backyard composting initiative.

SUSTAINABLE PUBLIC PROCUREMENT. The City of Orlando’s Sustainable Procurement Policy (SPP) institutionalizes environmentally preferable decision-making into the city’s procurement process, allowing the city to leverage its substantial buying power to benefit local and global communities, while advancing sustainability and resiliency goals. The SPP incorporates sustainability specification guidance, provides training, resources and consulting services, drives vendor outreach, and tracks progress toward sustainable spend goals—already accounting for 22 percent of purchasing in 2019.



On April 1, 2019, the city passed changes to its Solid Waste code requiring all commercial and multifamily properties provide the opportunity for recycling. These requirements are to be phased in over the following four years, starting with the largest properties and each year incorporating all others.



Joseph England,
Sustainability Project Manager,
Solid Waste, City of Orlando

“You don’t need to understand the nuances of the solid waste industry to be a good recycler.”

POLICY. The City of Orlando has a mandatory recycling ordinance for commercial and multifamily properties across the city and has also banned single-use bags, plastic straws, and expanded polystyrene products in public parks and venues. Looking ahead, the city will continue to collaborate and partner with Orange County, who operates both the landfill and the materials recycling facility, on its zero waste initiatives, including expanding the use of anaerobic digestion for food and organic waste.

SPOTLIGHT ON RESPONSIBLE CONSUMPTION AND PRODUCTION: MOVING TOWARD ZERO WASTE

“You don’t need to understand the nuances of the solid waste industry to be a good recycler,” says Joseph England, Sustainability Project manager for the City of Orlando. In fact, if England succeeds at his job to ensure Orlando meets its zero waste goals by 2040, the average person will not need to give proper disposal — from fabrics to food, batteries to beer cans — a second thought. The systems to keep all types of materials out of the landfill will be pervasive throughout the city.

In the meantime, England works to educate people on how they can reduce their waste. Orlando is nearly one year into its educational campaign, Rethink Your Waste. The initiative – built from the broader Florida Recycles campaign – leverages both Orlando’s leadership in the zero waste space as well as its physical location in the center of the state to share a consistent message with those traveling between Orlando and other parts of the region. Rethink Your Waste also doubles as a useful internal organizing framework. “Backyard composting, our commercial food waste program, the home kitchen waste information — all are moved under one banner,” England says.

The coordinated messaging and relative ease of tracking has allowed Orlando to push beyond the typical recyclables to experiment with difficult products and markets. For instance, multifamily residences with no option for composting onsite often leave residents with little choice for what to do with their food waste. Meanwhile, people are consistently telling England that they want a different option than landfilling this waste. “Their hands are tied,” he says, explaining that with enough interest, the city has been able to explore a series of food waste drop off sites with pickups that operate like a commercial route. A pilot drop-off station at farmers markets demonstrated considerable success, leading England to look for expansion opportunities, such as static drop-off sites on city properties. However, his top priority is to continue to expand these options in tandem with food recovery efforts, making sure food never makes it to the waste stage to begin with. “It’s ultimately better to not pick up waste on the back end. Let’s instead make sure everyone in our community is fed first.”



13 CLIMATE ACTION



SDG 13:

TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS

To avoid the worst impacts from climate change, global average temperature rise will need to remain well below 1.5 degrees Fahrenheit while communities also prepare for present and future climate hazards. Green Works Orlando has a Paris Agreement-aligned greenhouse gas reduction goal to reduce emissions 90 percent below 2007 levels by 2040, as well as ambitiously committing to become a carbon neutral city by 2050. In 2019, the city contracted Siemens to determine the pathway to decarbonization and assess feasibility. The steep emissions reductions required will not be easy, but can be achieved by targeting a few key sectors, including energy, buildings, and transportation. The study also found that by tackling climate change with these advanced measures, we can create 103,000 local jobs while improving air quality.

ENERGY DECARBONIZATION. To achieve the 2050 target, the fuel mix portfolio will need to consist solely of solar and storage and will require capacity increases of 10,315 MW and 7,880 MW of these two technologies respectively. Rapid acceleration of renewable energy will also need to occur alongside efficiency gains across residential and commercial spaces alike, as well as electrification to prepare for a transition away from oil, gas and coal. In 2021, Florida was third in the nation for solar capacity, and the top state in the Southeast, but making this commitment a reality will require continued collaboration with the Orlando Utilities Commission (OUC) and numerous local partners.

BETTER BUILDINGS. Since 2007, the city has committed to meeting LEED (Leadership in Energy and Environmental Design) standards for all newly constructed city buildings. As part of the U.S. Department of Energy's Better Buildings Challenge, the city undertook \$17.5 million in energy efficiency upgrades at 55 buildings, saving up to \$2.5 million per year—dollars that were freed up to pay for a new police headquarters and make investments in parks, public safety services and youth programs. In 2016, the City of Orlando implemented real-time building monitoring using Lucid BuildingOS software to measure the energy and water consumed by all city buildings. This allows the city to invest in upgrades where they are needed most. Municipal buildings in Orlando are using 23.4 percent

less energy as compared to 2012. The city also now has 147 certified green buildings, a figure nearly 50% higher than the total just five years prior.

TRANSPORTATION. Currently, Orlandoans travel an average of 34 miles per person per day and more than 89 percent of these miles are from single occupancy vehicle travel. Freight also represents a significant source of emissions. Orlando's goals focus on both a modality shift from personal vehicles to active modes and public transit, as well as emissions reductions across the larger transportation system. With infrastructure as a central component of this shift, the city has adopted a complete streets policy and is expanding public transit infrastructure to include 45 miles of off-street trails, over 50 miles of signed routes, and over 250 miles of bicycle lanes, as well as offering both bike share and scooter share programs.

The City of Orlando has also converted 93% of its on-road municipal fleet to an alternative fuel source since 2012. Through a partnership with Lynx and OUC, the



city unveiled the first electric LYMMO bus – Orlando's fare-free downtown circulator – in 2020. That number will swell to 14 buses by the end of 2021, moving the city closer toward the shared goal of a 100% zero-emissions fleet by 2025.

COLLABORATIONS FOR RESILIENCE. Climate change presents local challenges stemming from a global problem. Orlando meets that challenge through partnerships at all levels: locally with OUC and energy partners, regionally as a member of the East Central Florida Regional Resilience Collaborative (ECFR2C), and internationally through membership in organizations such as ICLEI-Local Governments for Sustainability. More work needs to be done to address climate adaptation in Orlando and partnerships will be central to meeting this need. Starting In June 2021, the City began to develop its first Resilience Strategy, with a focus on equitable climate resilience.



“We are working to create a city that is more resilient to the impacts of climate change – and we do this by keeping green jobs at the center.”

Ben Stacey
Climate Advisor,
City of Orlando

ORLANDO AND THE CLIMATE

- ↓ Reduce greenhouse gas emissions by 90% from 2007 levels by 2040
- ↑ Obtain 100% of electricity from clean, renewable sources city wide by 2050
- Net-zero carbon by 2050

ORLANDO'S TOP VULNERABILITIES



Disease
Vector, Air
and Waterborne



Drought



Extreme Heat



Inland Flooding



Lightning and
Severe Storms



Sinkholes



Tornadoes



Tropical Storms
and Hurricanes



Wildfires



SPOTLIGHT ON CLIMATE ACTION: AMERICAN CITIES CLIMATE CHALLENGE

"We're the boots on the ground for climate action," explains Ben Stacey about his role as Climate Advisor to the City of Orlando, a role created within the Office of Sustainability and Resilience as part of the Bloomberg Philanthropies American Cities Climate Challenge. When Bloomberg Philanthropies put out a call in 2018 challenging cities to apply to become showcase examples for local action to implement the Paris Agreement, Mayor Buddy Dyer answered the call and won a spot alongside 24 other cities to be part of a two-year acceleration program. Stacey was hired to assist the city in delivering on Orlando's ambitious climate strategy.

"We are working to create a city that is more resilient to the impacts of climate change, like extended heat waves," says Stacey, "and we can achieve this while creating green jobs and improving housing affordability." Nearly 30 partners bring the Climate Challenge to life, many of them local and focused on ensuring climate action happens through a just transition approach. For instance, EVHybridNoire engages communities of color on vehicle electrification and Solar and Energy Loan Fund provides low, fixed-rate loans for home improvements, like energy efficiency upgrades. Most recently, Poder Latinx has stepped up to engage the community in strategies to improve the performance of existing building stock – a major opportunity to improve the lives of residents while decreasing utility bills and emissions.

Much of Orlando's Climate Challenge strategy focuses on electric vehicles. The city is wrapping up six months of strategic planning with their Orlando E-Mobility Task Force – composed of City, County, Metro, utilities, transit and electric transportation experts – and finalizing a Roadmap for short and longer-term efforts. The Roadmap will identify Orlando's main goals and strategies to advance an overarching vision for mobility in the city. "We also secured funding for fourteen electric buses and the first few have already been deployed in the free downtown circulator," Stacey says, describing how Orlando residents now see these quiet buses cruising the downtown streets while producing zero tailpipe emissions. The City has expanded public access to EV charging with an additional 99 public EV ports located around the city. A direct-current fast charger hub is also in development downtown. The hub will charge an electric car in about 30 minutes, and will support the transition to all electric ride hail services like Lyft and Uber. As part of the Climate Challenge, the Orlando Utilities Commission (OUC) and Electrification Coalition have partnered with the city and launched an Electrified Dealership program to ensure dealers are educated on selling EVs, and residents have access to a variety of models when in the market for a new car. "Transforming the local EV market is a big job," says Stacey. "We are focused on stakeholder outreach to make sure it's done right."



SDG 15: PROTECT, RESTORE AND PROMOTE SUSTAINABLE HEALTHY ECOSYSTEMS

A livable city is one where people thrive through connections with nature, art and culture. Synonymous with a great quality of life, a livable community relies on a healthy environment, rich with biodiversity. Globally, more than 31,000 species are threatened with extinction, while the 2020 Living Planet Report from the World Wildlife Fund revealed a 68 percent decline in bird, mammal, fish and reptile populations over the last 50 years. These losses are tied to billions of acres of degraded land around our planet, and the COVID-19 pandemic points to wildlife trafficking as a source of deadly disease. Orlando is committed to integrating biodiversity considerations into its planning to make the city a home for human and non-human residents alike.

BIODIVERSITY-BOOSTING TARGETS. The City of Orlando's strategies for livability focus on creating a series of unique, vibrant, pedestrian-friendly villages that enjoy ample tree canopy. Orlando's goal is to increase the tree canopy from 25 percent in 2010 to 40 percent by 2040. The Energy Saving Trees program, also known as One Person, One Tree, (see Spotlight on Life on Land) has planted more than 10,000 trees on residential private property. Now entering its fifth year in partnership with the Orlando Utilities Commission and the Arbor Day Foundation, the program aims to continue providing 1,100 free trees to residents each spring and fall.

The Green Up Orlando volunteer corps has supported planting efforts since 1985. These efforts, combined with the nearly 1,800 street trees planted by the city since 2010, have increased the canopy to 27 percent in 2018. In 2020, Mayor Buddy Dyer signed the Mayor's Monarch Pledge and joined its leadership circle by taking 10 actions to provide native monarch butterflies with increased habitat and protections throughout the city.

Additionally, in 2019, the City of Orlando was certified as an Official Community Wildlife Habitat by the National Wildlife Federation. This certification is given to communities focusing on supporting and fostering wildlife within their jurisdictions through responsible gardening and landscaping practices: supporting urban and suburban habitat corridors; incorporating climate resiliency, community resiliency, urban forestry, water conservation, and beautification into the management of natural lands; and integrating wildlife-friendly practices into park master plans and sustainability plans.

PARTNERSHIPS TO SUPPORT LIFE ON LAND.

In 2019, the City of Orlando became a Pioneer City for CitiesWithNature, a platform endorsed by the United Nations Convention on Biological Diversity as the space for local action in support of nature. As a CitiesWithNature Pioneer, Orlando joins the global community of practice in advocating for local-to-global processes that strengthen protections for nature. Locally, the city founded Keep Orlando Beautiful, Inc., in 1987 as a nonprofit affiliate of Keep America Beautiful, Inc. The program is administered by the Streets and Stormwater Division of the Public Works Department and facilitates an Adopt-a-City-Street anti-litter campaign as well as education programs at schools.

ACCESS TO NATURE

12,334	Acres of Conservation Land
3.25	Acres of green space per 1,000 residents
64%	Residents who live within a half mile of a park*
45	Miles of off street trails
50	Miles of signed routes
250	Miles of bicycle lanes

Source: City of Orlando * TPL.org/city/orlando-florida

“We call it an Energy-Saving Tree program, but for me, it’s about increasing biodiversity, reducing urban heat island effect, and improving the environment throughout the City of Orlando using a user-friendly, human-factors-driven approach.”



Dr. Brittany Sellers
Assistant Director,
Sustainability & Resilience,
City of Orlando

SPOTLIGHT ON LIFE ON LAND:

ENERGY-SAVING TREES

“We call it the One Person, One Tree program,” says Dr. Brittany Sellers, Assistant Director of Sustainability & Resilience with the City of Orlando, about the city’s Energy-Saving Trees program. Any homeowner in Orlando is eligible to receive a tree. Residents submit a request online, and trees are delivered to the home with instructions on planting and care and information on the benefits, such as cooling homes and neighborhoods, capturing and filtering stormwater runoff, providing shelter and a food source to birds and wildlife, and adding beauty to a property.

The Arbor Day Foundation hosts a user-friendly, interactive online map system that allows homeowners to select the exact location on their property where the tree(s) are likely to yield maximum benefit. The GIS system buffers around power lines and other obstacles to avoid problems in the future. This additional canopy, alongside city-planted trees along streets, waterways, and other locations, will not only help improve air quality but will also provide critical shade in the years to come as increasing temperatures due to climate change become a greater public health threat.

17 PARTNERSHIPS FOR THE GOALS



SDG 17: STRENGTHEN THE PARTNERSHIPS FOR SUSTAINABLE DEVELOPMENT

“We call ourselves ‘The Partnership City’ because everything we do is focused on collaboration,” says Chris Castro, Director of the Office of Sustainability and Resilience for the City of Orlando. The 2018 Community Action Plan first introduced Orlando’s planning alignment with the SDGs and highlighted 91 partnerships across its seven focus areas, spanning local to global. Each partner represents a project or program—and an instance of collective commitment to bring effective solutions to Orlando no matter where they originate.

LOCAL. Local partnerships drive action across the Global Goals, and the City of Orlando’s ability to effectively increase access to fresh, local, and healthy food has been made possible through collaborations that are rooted in the community. One of the City’s partners, Hebni Nutrition, an Orlando-based non profit, provides high-risk, culturally-diverse populations of residents with cooking and nutrition programs that are designed to educate and empower in the prevention of diet-related diseases.

When the COVID-19 pandemic began in 2020 and the shortage of access to fresh food widened, the City of Orlando expanded its local partnerships to address food resiliency. Through food recovery and redistribution efforts, such as gleaning, over 15,000 pounds of food was provided to residents of Orlando over the last year.

In 2021, the City of Orlando unveiled the “Tiny Green Home” exhibit, in partnership with OUC and the Orlando Science Center (OSC), as a strategy of the American Cities Climate Challenge. This compact demonstration space integrates a multitude of technologies and solutions to conserve energy and water, reduce and manage waste, and contribute to overall livability. An unprecedented educational resource for the community, the TGH resides at OSC, but also has the ability to pop-up at community events as they resume following the COVID-19 pandemic. To ensure programming and policy remains centered on equity and meeting the most pressing needs of residents, the city recently launched a new project working with the Institute for Market Transformation and a local Community.

REGIONAL. Utility engagement with Orlando Utilities Commission is working to power city facilities and operations on 100 percent renewable energy by 2040 and meet a 2050 carbon-neutrality goal by expanding opportunities for residents and businesses to improve energy efficiency and install or subscribe to solar, while

maintaining affordable energy rates (SDG 7, SDG 13). Orlando serves as a chair for the East Central Florida Regional Climate Resilience Collaborative (SDG 13) and Office of Sustainability staff participate in multiple workgroups facilitated by the Southeast Sustainability Directors Network (SSDN). The COVID-19 pandemic highlighted the need for even stronger collaboration between the City and Orange County (SDG 3, SDG 10), and in 2021, the city joined other cities in the state to commit to and launch the “Florida Race to Zero” initiative.

NATIONAL. Orlando is also committed to the U.S. national advocacy agenda, having participated in 2020 with the U.S. House of Representatives Select Committee on the Climate Crisis. Engagement with Representative of Florida Kathy Castor led to a number of Orlando’s recommendations supporting city-level climate adaptation informing the Select Committee’s Solving the Climate Crisis Report. Further advocacy continues through association with Climate Mayors, and the America is All In campaign, as well as through national programs including ACEEE Scorecard, the U.S. Better Buildings Challenge, and EPA Green Power Partnership.

INTERNATIONAL. Through association with ICLEI, the Under2 Coalition, and various United Nations initiatives, Orlando asserts its role as an internationally recognized city with local lessons that could be applied throughout the world. In November 2020, Orlando passed a Climate Emergency Declaration, thereby joining a list of the most ambitious climate leaders. The city has also signed on as a Pioneer of Climate Ambition and enrolled as part of the UN Framework Convention on Climate Change’s Race to Zero campaign toward a climate-neutral future.



In 2020, Mayor Buddy Dyer signed the National Wildlife Federation’s “Mayor’s Monarch Pledge” committing the city to protect and expand butterfly and pollinator habitats throughout Orlando.



COMMUNITY PARTNERS AND COMMITMENTS

Non-profits, academia, governments and corporations who have worked to advance Orlando's sustainability initiatives through partnerships and collaborations.

- Advent Health
- American Cities Climate Challenge
- American Council for an Energy-Efficient Economy
- American Society of Landscape Architects (ASLA)
- Apartment Association of Greater Orlando
- Arbor Day Foundation
- ASHRAE Central Florida Chapter
- Audubon Florida
- U.S. EPA Battle of the Buildings
- BEEP
- Barrels by the Bay
- Better Buildings, U.S. Department of Energy
- Beyond 34
- Bloomberg Philanthropies
- BOMA Orlando
- CDP
- Central Florida Foundation
- Central Florida Hotel & Lodging Association (CFHLA)
- Chopra Foundation
- City Energy Project
- City of Winter Park
- Citizens' Climate Lobby
- Clean Cities Central Florida
- Clean the World
- CLEO Institute
- Climate Mayors
- The Climate Reality Project
- The Climate Group
- Coca Cola
- Drive Electric Florida
- Drive Electric Orlando
- Duke Energy

- East Central Florida Regional Resilience Collaborative
- East End Market
- Edible Education Experience
- Electrification Coalition
- Energy Foundation
- Energy Secure Cities
- Environmental Defense Fund
- Environment Florida
- EVNoire / EVHybridNoire
- 4Roots Foundation
- First 50 Coalition
- Fleet Farming
- Florida Department of Agriculture and Consumer Services
- Florida Department of Transportation
- Florida Department of Economic Opportunity
- Florida Fish and Wildlife Conservation Commission
- Florida Forest Service
- Florida Polytechnic
- Florida Solar Energy Center
- Florida Sustainability Directors Network
- Florida Urban Forestry Council
- Florida Wildflower Foundation
- Global Covenant of Mayors for Climate and Energy
- Greater Orlando Aviation Authority
- Greater Orlando Builders Association (GOBA)
- Green Builder Media
- Hebni Nutrition
- The Hive Orlando
- IDEAS For Us
- Infinite Zion Farms
- Institute for Market Transformation
- ICLEI USA - Local Governments for Sustainability
- JACOBS
- Keep Orlando Beautiful
- League of Women Voters Orange County
- LYNX
- NWF Mayors' Monarch Pledge
- Metro Plan Orlando
- NAACP Orange County
- NAIOP Central Florida
- National Renewable Energy Laboratory
- National Wildlife Federation
- The Nature Conservancy
- NRDC
- One Orlando Alliance
- Orange County Government
- Orange County Public Schools
- Orange County Health Dept.
- Organize Florida
- Orlando City Foundation
- Orlando Economic Partnership
- Orlando Health
- Orlando Science Center
- Orlando Land Trust
- Orlando Utilities Commission
- Race to Zero
- Ready for 100%
- Recycle Across America
- Regional Resilience Collaborative (R2C)
- reThink your commute
- Rocky Mountain Institute

- Rollins College
- Second Harvest Food Bank
- Seed 2 Source
- Siemens
- Sierra Club
- Smart Cities Council
- Solar America City
- Solar and Energy Loan Fund (SELF)
- Solar United Neighbors (SUN)
- SolSmart
- Southeast Sustainability Directors Network
- Sustainable Development Goals
- Sustainable Florida
- TECO
- UCF Urban Resilience Initiative
- Under2 Coalition
- The United States Conference of Mayors
- University of Central Florida
- UCF GEEO (Global Economic and Environmental Opportunity)
- Urban Land Institute
- United Nations
- United Nations Foundation
- University of Central Florida
- University of Florida IFAS Extension
- Urban Sustainability Directors Network
- U.S. Chamber of Commerce Foundation
- U.S. Department of Agriculture
- U.S. Department of Energy
- U.S. Environmental Protection Agency
- U.S. Green Building Council
- Valencia College
- VHB
- Volo Foundation
- We Are Still In

SPOTLIGHT ON PARTNERSHIPS FOR THE GOALS:

COLLABORATING FOR REGIONAL CLIMATE RESILIENCE

Jenifer Rupert thinks in terms of shocks and stresses. As Regional Resilience Officer for the East Central Florida Regional Planning Council (ECFRPC), one of Rupert's jobs is to direct the region's Resilience Collaborative: a group of five counties, 22 municipalities and nine partners (and growing) working to address resilience to both short-term shocks and long-term stressors like climate change.

"We needed to frame any collaboration in a way that we can grab hold of what the science says for our region and be able to step forward together," says Rupert. Although the Collaborative officially kicked off in 2019, the Regional Planning Council has been working on the concept for years. As far back as 2005, the ECFRPC studied sea level rise and began to anticipate what the impact could be to local economies. Over the next 15 years, state funding became available for this type of work, mostly providing grants so that coastal communities could assess their vulnerability to increased flooding from hurricanes and sea level rise and the resulting impacts of those events.

Today, the Collaborative's resilience work focuses on the three pillars of People, Places and Prosperity. Rupert worked with the elected officials involved to ensure that considerations for carbon-reduction and sustainability were part of addressing each pillar. "We say that the SDGs are baked in and climate is not the sole purpose," she says. The partners are launching into a greenhouse gas inventory for the region, collaborating with ICLEI-Local Governments for Sustainability, Audubon Florida, the Environmental Defense Fund and The Nature Conservancy to collect data on emissions sources. The idea is to use baseline data from 2015 to prioritize a region-wide action plan.

Rupert sees the SDGs as useful for creating a shared language, particularly when talking to foundation partners, and views partnerships with collaborators at all levels as the key to success. By looking at solutions coming out of regions around the world, East Central Florida can borrow and amplify the best ideas. "Let's start to think about how to bounce forward instead of bouncing back to where we were before disaster struck."



“Resilience as we are defining it, is the ability to bounce forward—absorb, recover and get better in the face of short-term shocks, such as hurricane and infrastructure failures, as well as long-term stressors, including affordable housing, aging infrastructure, shifting economic trends, and climate change, that every local government, no matter the size of the budget, is forced to consider. It is the common ground we stand on in this region. Planning regionally within the framework pillars of this partnership will yield greater resilience as each jurisdiction acts locally.”



Commissioner Sean Parks
Lake County, Florida
Chair, East Central Florida Regional Planning Council



THE SDGS AS A FRAMEWORK FOR ORLANDO'S GREEN RECOVERY

LETTER FROM ORLANDO DIRECTOR OF SUSTAINABILITY AND RESILIENCE



In 2021, we find ourselves dealing with some of the most challenging issues in history — a global pandemic, civil and racial injustice, unprecedented economic hardship, and the existential threat of the climate crisis that is already causing billions of dollars in damage and the loss of thousands of lives every year.

Now more than ever, we have an opportunity to collaborate and work together to advance shared goals and priorities, starting in our own backyard. The SDGs offer us all the “Rosetta Stone” for a better world: this unifying framework guides our communities, states, and countries towards a more inclusive, green recovery from the pandemic, where everyone has the opportunity to realize their potential and the worst of future climate disasters are avoided.

In Orlando, this has not just been an idea; it has been our practice. Since the start of Green Works Orlando in 2007, we have been actively working toward advancing these SDGs, even before they were established. Our focus on sustainability has genuinely centered the triple-bottom-line in a holistic way and as we have worked to co-create our strategy with the Orlando community. In addition, we recently sharpened our focus on social sustainability, racism and environmental justice to begin to address

the current and looming disparities BIPOC and LGBTQ+ communities experience. The city hired its first chief equity official, Merchon Green, tasked with making transformational changes to our government policies and protocols, and strengthening the trust and collaboration between elected leaders and the residents they serve. Only then can we truly thrive as a city.

In this moment of reflection, let us draw wisdom and inspiration from nature. The more biologically diverse an ecosystem is, the healthier and more resilient it is. A city is its own kind of ecosystem, and it's critical that we create symbiotic pathways of collaboration among peer-governments, academic institutions, businesses, community and faith-based organizations, and most importantly, the residents that we serve. Goal 17 of the SDGs is a reminder that none of the prior 16 goals can be achieved in isolation. In that spirit, we look forward to continuing to work alongside our fellow city leaders to advance a healthier, more resilient, and more sustainable future for all.

Christopher Castro
Director of Sustainability and Resilience
City of Orlando



RECOMMENDATIONS

ACCELERATING IN THE DECADE OF ACTION

The 2030 Agenda is far-reaching and fit for the purpose of national-level action for sustainable development. Naturally, there will be gaps in data and unaddressed indicators in any city's initial review of the SDGs. Orlando's first VLR is intended to be just that: a first-round attempt to review the goals for prioritization, address the relevant data needs by localizing indicators, adapting those that are not a good fit for local review, and mapping Orlando's contribution to the Global Goals. In the process, the city gained important insights about what data remains to be collected, the communication channels that will need to be opened, and the partnerships required to continue advancing progress toward the Global Goals. A few recommendations for future action:

ADDRESS INDICATORS FOR WHICH NO DATA IS CURRENTLY AVAILABLE. The VLR found 37 indicators among the nine priority SDGs that are relevant to Green Works Orlando, but for which data is not currently available. The city can build from its many strong partnerships that enjoy relatively rich quantities of data to fill in these gaps.

ADDRESS REMAINING SDGS IN FOLLOW-UP VLR. Future iterations of the report can bring No Poverty (SDG 1), Quality Education (SDG 4), Gender Equality (SDG 5), Decent Work (SDG 8), Industry and Infrastructure (SDG 9), Sustainable Cities (SDG 11), Life Below Water (SDG 14), and Peace and Justice (SDG 16) into focus to expand upon this systematic review of the city's strategy, progress tracking, and opportunities for improvement and expansion going forward.

USE THE VLR TO DEEPEN ENGAGEMENT AT ALL LEVELS. Orlando's peers, from New York City and Los Angeles in the United States to Buenos Aires, Bristol and Bonn abroad, have built their Voluntary Local Reviews into a vehicle for enhanced engagement locally, nationally and internationally. Orlando commits to be a partner in data sharing and in action to its many local NGOs, agencies and utility champions. Nationally, the city will support ICLEI's SDG Cities Challenge, a cohort of U.S. and international cities that will follow in the footsteps of Orlando, Pittsburgh and New York City to begin the process of VLR development. Moreover, the Biden-Harris Administration can open doors to great involvement in the UN 2030 Agenda, allowing Orlando to continue its work as national advocate for sustainability. Internationally, Orlando should present its findings and lessons learned at venues including the United Nations' annual High-Level Political Forum and ICLEI's Daring Cities conference. With this pioneering effort to issue one of the first VLRs in the U.S., only the second medium-sized community and the first for the Southeast region, Orlando cements itself as a leader for other cities across the country and world to drive sustainable development at home and abroad.

APPENDIX

ZERO
HUNGER

Orlando and the Sustainable Development Goals

A Voluntary Local Review of Progress



RELATED GOALS AND TARGETS

- Increase local food assets 10x
- Ensure access to healthy food within 1/2 mile of every resident

RELATED STRATEGIES

- Created "Good Food CFL" Food Policy Council
- Passed an Urban Chicken Policy
- Supported several farmers markets within city limits
- Piloted an urban garden program on public land with Growing Orlando
- Implemented the West Orlando Food Project in 2017
- Passed an Urban Agriculture ordinance
- Pursuing ordinance restricting use of fertilizers, herbicides and pesticides
- Conducted Food Asset Inventory with East Central Florida Regional Planning Council
- Launched Black Bee Honey Student Entrepreneurship Program
- Initiated Market Garden Program to foster innovation and entrepreneurship
- Partnership with Infinite Zion Farms through "Grow-A-Lot" Initiative
- Collected and redistributed 15,000 lbs of food during Covid-19 pandemic
- Support of Cottage Food Law and Fleet Farming for front lawn edible landscapes

STRATEGY METRICS

- 12,246 acres of food producing land
- 16 community gardens
- 700 garden plots
- 21,900 square feet of community garden space
- 8 apiaries installed on city facilities to support youth education and entrepreneurship, plus pollinator habitat
- 50,890 food insecure children in Orange County (2018)
- 17.2% - Child food insecurity rate
- 12.3% - Overall food insecurity rate
- 66% of residents are income-eligible for nutrition programs

GOOD HEALTH AND WELL-BEING



RELATED GOALS AND TARGETS

- Ensure 95% of residents within 1/2 mile of a park or open space
- Reduce obesity and diabetes rates
- Increase tree canopy to 40%
- Ensure access to healthy food within 1/2 mile of every resident
- Increase miles of safe, sustainable transportation infrastructure (bike lanes/paths, transit lines, sidewalks)
- Double street miles within the city that meet "complete streets" criteria
- Eliminate pedestrian and bike fatalities
- Attain a "good" rating on the AQI

RELATED STRATEGIES

- Built new multi-use urban trails (Bumby and Westmoreland) and Colonial Pedestrian Bridge
- Implemented urban heat island reduction through urban tree canopy, green space and cool roofs/pavement
- Expanded bicycle connectivity and infrastructure throughout Orlando neighborhoods
- Developed a Vision Zero Plan
- Collaborated with the Central Florida Foundation on a Social-Ecological Assessment of Community Health Needs
- Conducted an Energy Burden Assessment
- Conducted a Climate Vulnerability Assessment
- Supported development of the city's first Future Ready Master Plan
- Initiated Stakeholder Roundtables for Resiliency Planning
- Partnering with UCF on an air quality study across Orange County

STRATEGY METRICS

- Diabetes Rates: 2012 (9.9%) / 2018 (10.3%)
- Obesity Rates: 2012 (27.8%) / 2018 (25%)
- 16.7% of population is uninsured
- Percent of Adults who engage in heavy or binge drinking (18+): 18.2% (Orange County, 2019)
- Percent of students who used tobacco in the last 30 days: 10.7% (Orange County, 2020)
- More than 25 miles of sidewalk added since 2015

CLEAN WATER AND SANITATION**RELATED GOALS AND TARGETS**

- Reduce municipal water use by 50% by 2030
- 20% potable water reduction city wide
- Increase number of lakes meeting good water quality standards
- Ensure Orlando has sufficient storage for water during extreme events

RELATED STRATEGIES

- Established a rain barrel and storm water management program
- Develop education center with a focus on water conservation through partnership with Water Reclamation
- Researching possible green affordable housing standards
- Exploring demonstration green stormwater management infrastructure project
- Passed the Building Energy and Water Efficiency Strategy benchmarking policy
- Adopted ozone-cleansing system
- Conducted water audits of municipal facilities
- Installed various stormwater management structures, and increasing use of natives plants and mulched areas to reduce irrigation needs
- Launched “Stop the Poo-lution” and yard waste bagging campaigns
- Installed 25 hydrations city in public spaces
- Pursuing ordinance restricting use of fertilizers, herbicides and pesticides

STRATEGY METRICS

- Average resident used 83 gallons of water per day in 2017, down from 92 in 2012
- 99% of the city’s wastewater receives tertiary treatment
- 10% of Orlando is made up of water
- 100+ rain barrels distributed through annual workshop series
- 83 out of 95 city lakes met Good Water Quality standard in 2019, up from 75 in 2021
- Since 2018, Water Reclamation has educated roughly 14,663 individuals on environmental topics and action

AFFORDABLE AND CLEAN ENERGY**RELATED GOALS AND TARGETS**

- Reduce emissions by 90% from 2007 levels by 2040
- 100% renewable energy commitment for municipal operations by 2040, citywide by 2050
- Increase the use of EVs and CNG vehicles
- Reduce the dependence of the local economy on energy

RELATED STRATEGIES

- Established partnership with the Solar and Energy Loan Fund (SELF) and Solar United Neighbors
- Recognized as a “Solar America City” and received “SolSmart” designation
- Built a 13MW Community Solar Farm in Fall 2017
- Devised a Clean Energy for Low-Income Communities Accelerator (CELICA) plan
- Enabled PACE financing in 2016
- Conducted an Energy Burden Assessment
- Developed the “Orlando Renewable and Resilient Roadmap” in partnership with OUC, Greenlink Analytics, and the Florida Solar Energy Center as part of the Solar Energy Innovation Network
- Joined the Mayors for 100% Clean Energy Initiative and ICLEI’s 100% Renewable Energy Cities & Regions Network
- Established the Green Building Incentive Program
- Solar plus storage project in design and development phase
- Initiated development of resilience hubs at three community centers, to be completed in 2022

STRATEGY METRICS

- 12.7% of city’s energy needs met with renewables, up from 6.4% in 2020
- Increased on-site rooftop capacity increased from 1 MW in 2020 to 2.24 in 2021
- Added 33 buildings to community solar subscriptions in 2021
- Over 1 MW of Floating Solar Installed
- Partnered on 8 solar co-ops with Solar United Neighbors, engaging hundreds of residents
- 147 green buildings in Orlando
- \$18 million invested in energy efficiency
- \$2.5 million saved annually from efficiency upgrades
- Upgraded 100% of streetlights to LEDs
- Achieved LEED for Cities Gold Designation
- Ranked 32nd in Environment America’s Top Shining Cities

REDUCED INEQUALITIES

10 REDUCED INEQUALITIES



RELATED GOALS AND TARGETS

- To increase city contracts with Minority and Women Owned Enterprises to at least 18% and 6% respectively.
- To improve the lives of immigrants and refugees through targeted outreach, policy and program analysis and recommendations through the Office of Multicultural Affairs and the Multicultural Affairs Board.
- Through outreach and programming, achieve the following through Kidz Zones:
 - Increasing the number of young children attending high quality preschool programs
 - Building positive parenting skills
 - Mitigating family economic instability
 - Enhancing children's physical health and wellness
 - Supporting academic success among elementary, middle and high school children
 - Increasing the number of youth entering – and completing – post-secondary education
 - Keeping older youth out of trouble and on a positive track toward social and economic success.
- Through the Hispanic Office for Local Assistance (HOLA), provide new residents to the city with enhanced services that will assist them in a resourceful and proficient manner.

RELATED STRATEGIES

- Increased investment in economic development programs for women and minority owned businesses
- Third party consultant hired to conduct evaluation and provide recommendations for police reform
- "Housing First" strategy for addressing homelessness
- City staff participated in the Urban Sustainability Director Network's "Foundations for Equity" training program
- City hired first Chief Equity Official in 2021
- Launched the Parramore Kidz Zone program to improve the well-being of children in Orlando's highest poverty neighborhood
- Various policies and programs institutionalized to support minority, immigrant and LGBTQ+ communities

STRATEGY METRICS

- Poverty rate increased 60% between 2007 and 2012
- Wealth Gap - 11.4% between highest and lowest earning households (2017)
- \$40 million invested annually to create and preserve housing options across income levels
- \$2.5 million allocated annually to support PKZ to improve education and wellness outcomes among youth, with expansions to three more neighborhoods forthcoming
- Since 2014, the city has obtained a 100 score on the Human Rights Campaign's Municipality Equality Index (MEI)

RESPONSIBLE CONSUMPTION AND PRODUCTION

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



RELATED GOALS AND TARGETS

- 20% reduction in energy use
- No waste to landfills or incinerators
- Reduce the dependence of the local economy on energy
- Increase local food assets

RELATED STRATEGIES

- Expanded recycling in Downtown Orlando through installation of Big Belly Solar Trash Compactors
- Launched city-branded textile and battery recycling pilot programs
- Passed single use plastic product ban for city-owned facilities and venues
- Updated Solid Waste code to require all commercial and multifamily properties to provide recycling
- Established a Sustainable Procurement Policy (SPP)
- Member of "Beyond 34: Recycling and Recovery for a New Economy"
- Hosted "Don't Pitch It, Fix It" Events
- Launched commercial food waste program in 2015 and established drop-off locations for residential organic waste collection
- Working with various vendors to divert difficult to recycle consumer products, like textiles and others
- Member of NRDC's Food Matters Regional Initiative
- Launched Rethink Your Waste campaign in partnership with Florida Recycles
- Developed green event planning guide

STRATEGY METRICS

- Single stream recycling rate: 14%
- Recycling rate with yard waste: 26%
- 100% of population receives regular waste services
- Average waste per household per day: 167 lbs
- 6,779 composters distributed since 2015
- 15,085 gallons of oil/grease recycled
- 15,000 lbs of food diverted through donation
- Commercial food waste collection service that has diverted over 3 million pounds of food waste to date
- 22% of spend in 2019 aligned with SPP
- 21,089 lbs of textiles collected for recycling since 2016
- 309,976 lbs of electronic waste since 2012

CLIMATE ACTION**RELATED GOALS AND TARGETS**

- Reduce emissions by 90% from 2007 levels by 2040
- 100% renewable energy commitment for municipal operations by 2040, citywide by 2050
- Ensure 100% of new and existing buildings meet green building standards
- Increase miles of safe, sustainable transportation infrastructure (bike lanes and paths, transit lines and sidewalks)
- Double street miles within the city that meet “complete streets” criteria
- Increase the use of electric vehicles/alternative fuel vehicles throughout the city
- Increase to majority of trips by foot, bike, carpooling, or transit
- No waste to landfills or incinerators

13 CLIMATE ACTION**RELATED STRATEGIES**

- Developed 100% Renewable Energy roadmap with OUC and UCF
- Devised a Clean Energy for Low-Income Communities Accelerator (CELICA) plan
- One of 24 winning cities accepted for the Bloomberg Foundation’s American Cities Climate Challenge
- LEED Silver minimum standard for any new municipal buildings
- DC Fast-Charging Hub in design phase for Downtown
- Launched electric bicycle and electric scooter share pilot programs
- Debuted the first all-electric bus in the city’s downtown circulator fleet, LYMMO, with 100% of that fleet to be converted by 2022
- Introduced an EV Ready Policy
- Convened an E-Mobility Task Force to develop a Roadmap, to be published fall 2025
- City has adopted a “Complete Streets” policy
- Launched Electrified Dealer program with OUC
- Exploring equitable approaches to energy and transit, including working with EVHybridNoire to engage BIPOC communities on vehicle electrification and transportation, and multiple community based organizations on building performance needs and strategies
- Refer also to other Goals, particularly 3, 7 and 12

STRATEGY METRICS

- Municipal facilities use 23.4% less energy today compared to 2021
- 50% increase in the number of green buildings over the last five years
- Florida 3rd in the nation for solar capacity, and the top state in the Southeast (2020)
- 94% of on-road city fleet converted to an alternative fuel source
- 99 publicly accessible EV charging ports installed by the city in 2021, and a total of 128 city installed ports when counting those installed for city fleet
- Average miles traveled per day is 34 miles per person, 89% of which is SOV travel

LIFE ON LAND**RELATED GOALS AND TARGETS**

- 40% tree canopy coverage
- Enhance Orlando’s reputation as “The City Beautiful” by promoting sustainable landscaping practices
- Mayor signed NWF’s “Mayor’s Monarch Pledge” in 2020
- Keep Orlando Beautiful programming to educate and empower residents to clean up and reduce litter
- Launched the CitiesWithNature platform partnership in 2019
- Recognized as an Official Community Wildlife Habitat by NWF in 2019
- Green Up Orlando Volunteer Corps supporting beautification efforts since 1985
- Pursuing ordinance restricting use of fertilizers, herbicides and pesticides

15 LIFE ON LAND**RELATED STRATEGIES**

- Planted nearly 1,800 streets trees since 2010
- More than 10,000 trees distributed through the One Person, One Tree program since 2015
- Increased tree canopy to 27% in 2018

STRATEGY METRICS**PARTNERSHIPS FOR THE GOALS****RELATED GOALS AND TARGETS**

- Cities are critical partners in reaching global goals.
- Our most impactful efforts and enduring successes are identified and realized when working as a vast network of stakeholders and partners. The Green Works Orlando philosophy is to approach our shared challenges collaboratively, and to evaluate, innovate and create solutions together.

17 PARTNERSHIPS FOR THE GOALS**RELATED STRATEGIES**

- The City of Orlando partners with local, regional, national and global organizations and engages in diverse networks. Some include:
 - Signatory and member of the Mayors for 100% Clean Energy Initiative
 - Member of ICLEI’s 100% Renewable Energy Cities & Regions Network
 - Member of “Beyond 34: Recycling and Recovery for a New Economy”
 - Member of NRDC’s Food Matters Regional Initiative
 - Member of USDN
 - Member of East Central Florida Regional Resilience Collaborative
 - Committed to the Race to Zero, and co-founded Florida Race to Zero

STRATEGY METRICS

- Numerous partner programs with local and regional nonprofits, government agencies and private organizations
- Launched the Tiny Green Home in 2021 in partnership with OUC and the Orlando Science Center
- Passed a Climate Emergency Declaration in November 2020
- Participated on the U.S. House of Representatives Select Committee on the Climate Crisis
- Participation in the America is All In campaign
- Participation in ACEEE Scorecard program, Better Buildings Challenge and the EPA Green Power Partnership



CITY OF
ORLANDO

ICLEI
Local Governments
for Sustainability