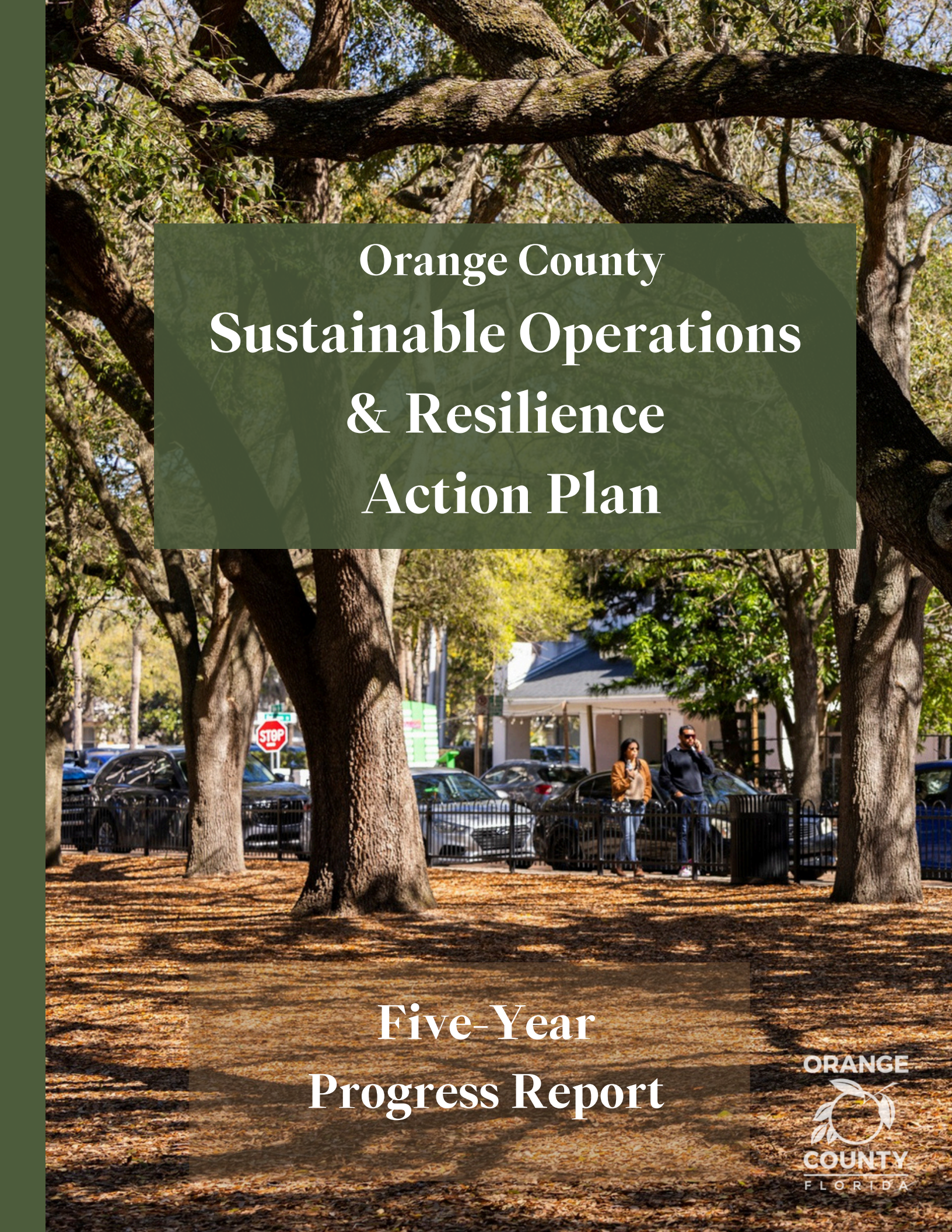




Orange County Sustainable Operations & Resilience Action Plan

Five-Year Progress Report

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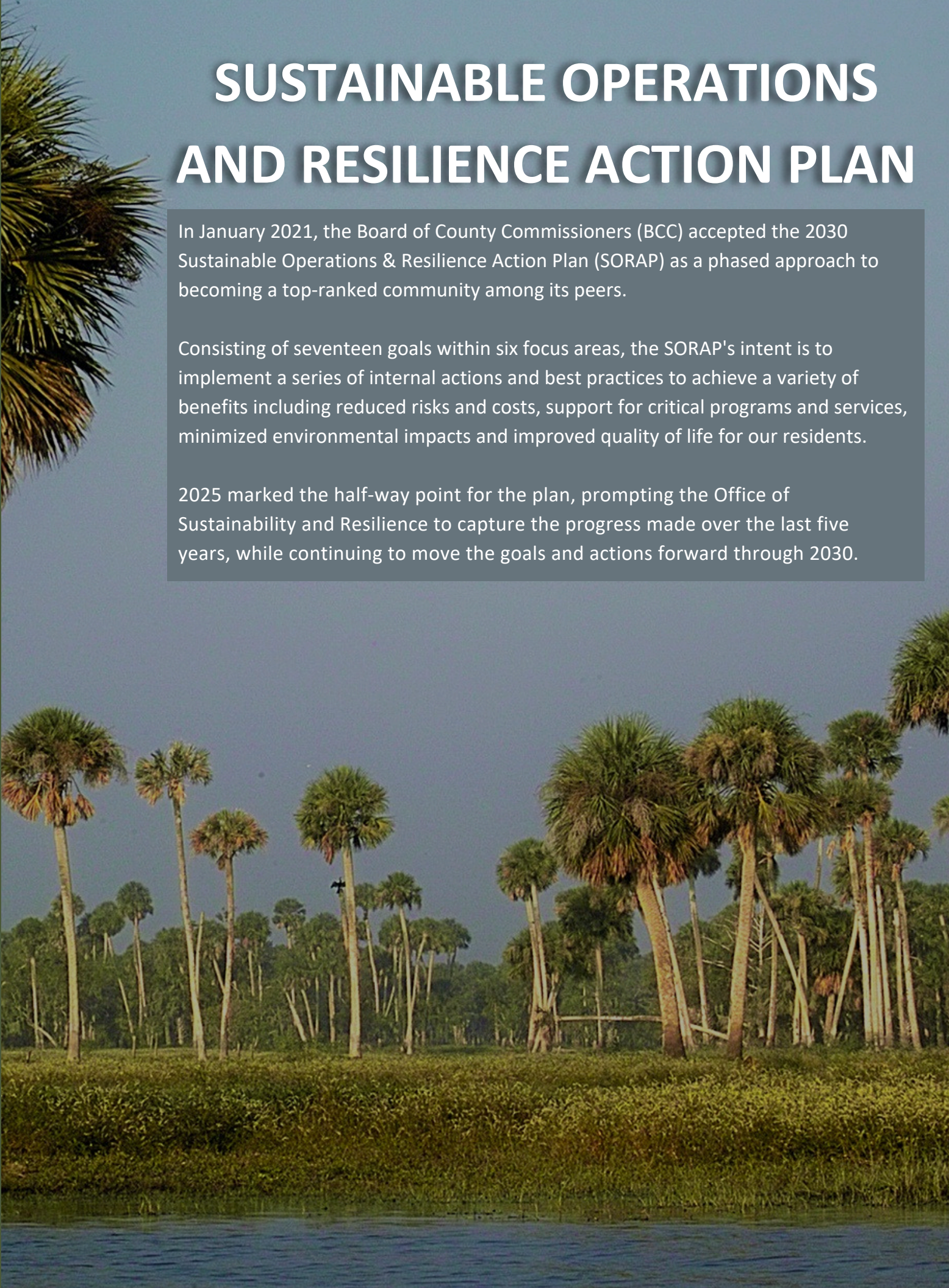
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SUSTAINABLE OPERATIONS AND RESILIENCE ACTION PLAN

In January 2021, the Board of County Commissioners (BCC) accepted the 2030 Sustainable Operations & Resilience Action Plan (SORAP) as a phased approach to becoming a top-ranked community among its peers.

Consisting of seventeen goals within six focus areas, the SORAP's intent is to implement a series of internal actions and best practices to achieve a variety of benefits including reduced risks and costs, support for critical programs and services, minimized environmental impacts and improved quality of life for our residents.

2025 marked the half-way point for the plan, prompting the Office of Sustainability and Resilience to capture the progress made over the last five years, while continuing to move the goals and actions forward through 2030.



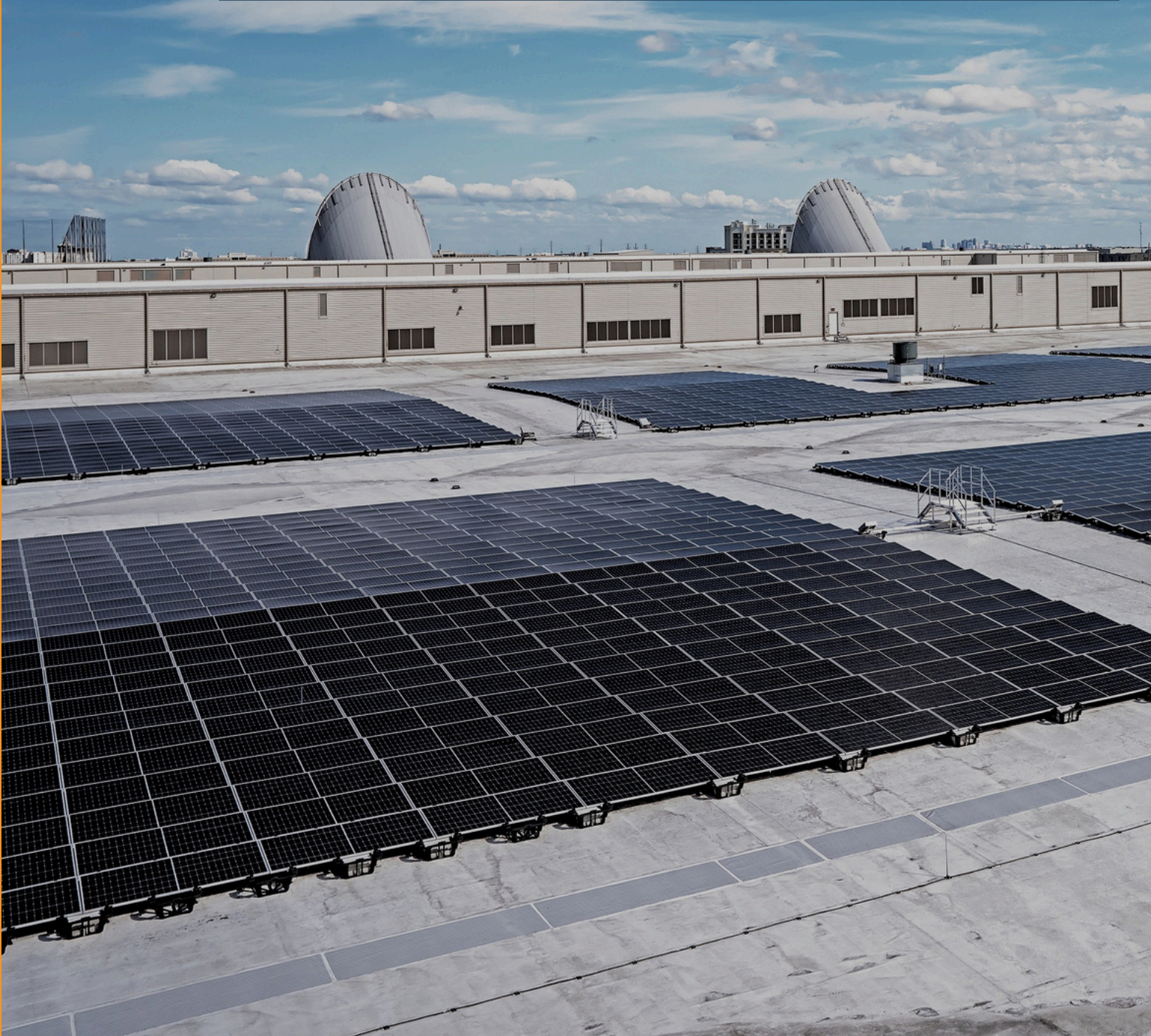


ENERGY & CLIMATE ACTION

Goals 1-3 advance County efforts to expand energy conservation and efficiency efforts, increase clean renewable energy, and help reduce energy burden.

The County has expanded solar installations across multiple facilities totaling 6.2 MW of capacity, supplying up to approximately 9.5 GWh of clean energy and saving \$1.3 million, annually, while continuing to support programs to enhance the adoption of solar throughout the community.

The County has continued its commitment to addressing energy burden for residents through new and expanded programs.





GOAL 1: REDUCE COUNTY OPERATIONS GREENHOUSE GAS EMISSIONS FROM 2015 BASELINE 30% BY 2030

Since 2005, Orange County has been tracking emissions for its own operations and across the community, launching its first official climate resolution in 2007. With almost twenty years of emissions inventories and continued growth anticipated to 2050, the County initiated a strong commitment to reduce emissions in Goal 1 of the Sustainable Operations and Resilience Action Plan.

When considering the short-term actions for Goal 1, it is important to note that the progress of this goal is dependent on actions from the other 16 goals. The aggressive nature of this goal was intended to match the commitments of other counties and cities for emissions reduction and expand upon the 2007 resolution.

Achieving Emissions Reduction

- The County continues to reduce energy usage across its large portfolio of buildings through equipment upgrades, and operational changes (see Goal 5).
- More reductions have come with the deployment of an additional 4 MW of solar installations to ensure energy from a clean, renewable source is supporting our water/wastewater facilities' operational needs and the Convention Center (see Goal 2).
- Through purchasing and protecting environmentally sensitive lands, Orange County is reducing greenhouse gas emissions in two ways: it protects green and open spaces from further development allowing for the intake of carbon dioxide by vegetation, and it also allows carbon within the soils and wetlands to remain undisturbed, preventing its release into the atmosphere (see Goal 17).



BCC Proclamation for Florida
Climate Week 2023



Savage/Christmas Creek Preserve is an example of Orange County purchasing environmentally sensitive land

- Orange County's continued landfill gas collection partnership with Orlando Utilities Commission (OUC) ensures that emissions captured are used to generate electricity for thousands of homes throughout the County.
- A remote work policy has been in place since 2020 and, when modeled through 2030, it was determined that the potential for emissions reduction was as much as 27% for total employee commuting emissions.
- Within the County's fleet, dozens of gasoline vehicles have been replaced with electric and hybrid vehicles, effectively reducing light-duty fleet vehicle emissions (see Goal 11).

Inventory and reduction

Using detailed data, the overall 2019 inventory baseline was completed. Forecasting future emissions that account only for growth but not mitigation efforts showed a slight decrease, driven by improvements to the utility grid. When the identified reduction strategies were applied, emissions dropped further, though not enough to reach the 30% reduction by 2030 target. The upcoming five-year SORAP update will re-examine planned reduction strategies and consider new ones in order to reach the intended target.

Further Commitments to Emissions Reduction

- In 2019, Mayor Demings' signed on to the East Central Florida Regional Planning Council (ECFRPC) Regional Resilience Collaborative (R2C) making a commitment to help complete a regional GHG inventory. This inventory has guided the R2C's work on a regional climate action plan.
- The regional GHG emissions inventory influenced many objectives and policies within Vision 2050, Orange County's new comprehensive land use plan. Vision 2050 lays out a blueprint for Orange County over the next 25 years and commits to smart strategies that will densify growth in already developed areas therefore working to reduce emissions and land disruption and excessive vehicle miles traveled.
- A Light-Duty Fleet Transition Study has been completed to identify opportunities to further transition the fleet to electric or hybrid in an accelerated time period.
- Orange County continues to track its emissions inventory on a regular basis ensuring third-party verification and to model possible reduction strategies using new and innovative solutions.



GOAL 2: ACHIEVE 100% OF COUNTY OPERATIONS ELECTRICITY LOAD FROM CLEAN, RENEWABLE SOURCES BY 2035

Orange County's commitment to sustainability has inspired ambitious goals, one of which is achieving 100% of County operations' electricity load from clean, renewable sources by 2035.

Design Guidelines

- To reduce energy usage and the corresponding amount of solar needed, an Energy Use Intensity (EUI) requirement was set for new County-funded buildings.

Commitment to Clean Energy

- The Landfill Gas Utilization System continues to collect and process landfill emissions, producing electricity annually for thousands of homes served by Orlando Utilities Commission (OUC).
- Orange County continues to support strong renewable energy policies through legislative priorities. Letters have been sent to the Public Service Commission to advocate for energy efficiency programs and renewable energy policies, such as net-metering.
- This commitment to clean, renewable energy was reinforced in the new Energy Section of the Vision 2050 Comprehensive Plan.



Orange County's floating solar array, located at the Southern Regional Water Supply Facility

The Push for Solar

- The largest floating solar array in the southeastern United States was unveiled in 2024 at the Southern Regional Water Supply Facility. The 2,236 panels that make up this array are projected to cut energy costs at the facility by 25%. Additionally, a large 2 MW ground-mounted solar array was installed at the Northwest Water Reclamation Facility, cutting energy costs by 60%.



Solar panels on the newly built Fire Training Facility

- The newest solar array for the County covers much of the roof of the new Fire Training Facility and is estimated to offset up to 68.5% of the facility's annual energy needs.

- In 2025, the Orange County Convention Center replaced its 1 MW rooftop solar array with a 2.194 MW array. This new array will offset close to 10% of the North/South Building's monthly energy usage, about 250,000 kWh.



Newsolar array at the Orange County Convention Center

- Our Convention Center received an award from the National Association of Counties for conducting the Great Solar Giveaway, where small businesses, community organizations, and residents could receive free solar panels from the old array. In fact, researchers from UCF's Florida Solar Energy Center (FSEC) received old panels to conduct research on their degradation to develop a standard for evaluating used panels for secondary reuse applications.

- On-site solar isn't the County's only means of investing in clean energy. In 2022, the County signed on to community solar programs provided by electricity providers Duke Energy and Orlando Utilities Commission (OUC). These programs have provided more than 266,000 kWh of electricity powered by solar, offsetting between 86-93% of usage annually at three participating facilities.



Award-Winning Great Solar Giveaway at Orange County Convention Center

- Community solar has been explored for multiple County facilities.
- In the next few years, a solar feasibility study will be conducted on each of the County's eight community centers with the eventual goal of implementing photovoltaic systems and backup energy storage, which would build community resilience to loss of power during extreme weather events.



GOAL 3: IMPLEMENT COMMUNITY-WIDE ENERGY SAVING PROGRAMS FOR ALL

Orange County has launched and supports numerous programs that assist members of our community in conserving energy, addressing energy security or burden, and transitioning to clean, renewable energy.

Energy Burden Analysis for Unincorporated Orange County

- An FDACS grant completed in 2023 enabled energy efficiency projects aligned with replacement A/C systems to be completed for low-income qualifying seniors. This project enabled capture of critical data to understand energy burden as well as additional information about home resilience.
- Orange County continues to provide services to residents for one-time electricity bill payments through the Low-Income Home Energy Assistance Program (LIHEAP) and access to home improvements through the Weatherization Assistance Program (WAP) to create opportunities for energy savings.
- Our Community Action Division works to ensure the health and safety of seniors in the County through the Senior Climate Efficiency Program (SCEP) by providing replacement HVAC systems to low-income, senior homeowners. This program has received additional support through the Federal Community Project Funding Grant provided through Representative Maxwell Frost.
- Analysis of areas within unincorporated Orange County burdened by high energy costs has been conducted through a collaboration with UCF students, the County Office of Sustainability and Resilience, and the GIS division.

Connecting with Local Stakeholders

- The utility companies in our community offer solutions for energy conservation through energy assessments, rebates, and improvement programs. Orange County regularly connects residents to the programs offered by Duke Energy and Orlando Utilities Commission (OUC).
- For several years, County staff participated in the National Association of Counties' Housing and Health Action Learning Cohort, collaborating with local stakeholders to address housing solutions which are safe, energy efficient, and affordable.
- Through the Citizen Planner classes, internal Orange County classes, proclamations, tabling, and social media, the Office of Sustainability and Resilience has educated community members and internal staff about energy efficiency strategies they can use in their jobs, homes, and communities reaching over 500 residents and staff through direct interaction alone.



Residents gather to take part in the Citizen efficiency initiatives

Investing in Utilities and Infrastructure

- For three years, the County funded the Solar Energy Loan Fund (SELF) program to set up an office aimed at providing home improvement loans for financially challenged residents who may be rebuilding their credit history. In that time, 115 Orange County families financed \$1,328,881 of sustainable home improvement projects. Additionally, 343 Orange County contractors have undergone SELF program training and can offer it to residents who don't qualify for traditional financing. This program now operates on its own and continues to support residents across Central Florida.



Homeowner who received a new roof using
SELF loan service

- Housing rehabilitation programs continue through our Housing Division using funds from federal programs such as U.S. Department of Housing and Urban Development (HUD).
- Through the County's Affordable Housing Trust Fund, key measures for energy efficiency in Affordable Housing Solutions are being requested in proposals.
- The County has made renewable energy an option for many Orange County residents through a partnership with Solar United Neighbors (SUN). Since 2015, more than 527 homes have installed 5.7 MW of solar, and the opportunity continues through the new Switch Together program.



BUILDINGS & INFRASTRUCTURE



Goals 4–6 advance County work reducing environmental impacts and improving operational efficiency through enhanced performance standards, infrastructure retrofits, and expanded risk and resilience assessments.

Since 2023, the Office of Sustainability & Resilience has been focused on implementing high performance building standards across our Capital Projects as well as supporting professional training for 27 staff members to earn LEED Green Associate accreditation. This certification builds foundational knowledge in green building principles and supports the advancement of sustainable design and operations across County projects.

Additionally, there has been a focus on operational efficiency with projects such as LED lighting retrofits, HVAC and chiller upgrades, and roof sealing, reducing operational costs and extending the useful life of existing assets.



GOAL 4: BEGINNING IN FY21, COUNTY-FUNDED BUILDINGS AND INFRASTRUCTURE WILL MEET NEW HIGH-PERFORMANCE AND GREEN BUILDING STANDARDS

The expected outcome of Goal 4 is to create and apply green building standards to all County-funded new buildings and major renovations. This will ensure that resilience and efficiency are prioritized during the design process, driving lifecycle cost savings, and reducing risks.

Standardizing Guidelines

- 20 staff members have earned their LEED Green Associate accreditation since 2023. This allows our staff to guide internal discussions around green building practices and ensure that the County stays up to date with industry standards.
- A new sustainable buildings checklist was developed to ensure all County-funded future new construction and major renovations with multiple trades get a third-party green building certification or adhere to the U.S. Department of Energy's Guiding Principles for Sustainable Federal Buildings.
 - o Checklist examples: Created an Energy Use Intensity (EUI) requirement for new County buildings and prioritized low-impact development stormwater practices.
- Capital Projects Division utilizes the e-Builder platform for project management and continues to work with the County IT division to ensure access is available for collaboration on projects.
- The Orange County Convention Center (OCCC) employs a dedicated Sustainability team to ensure that green building standards are integrated into all facility and infrastructure projects.



Staff members celebrating their recent LEED Green Associate accreditations

Ensuring Performance

- Projects — including new construction and major renovations — for Parks, Animal Services, the Sheriff's Office, and the Medical Examiner Office are in progress and pursuing green building certifications.
- 18 County facilities have been retrofitted with LED lighting, improving lighting quality and reducing energy consumption, prioritizing energy-efficiency options in large projects in existing buildings.
- OCCC North/South Building recertified for LEED v4.1 Operations and Maintenance for Existing Buildings in 2023 and is currently in the process of recertification; demonstrating once again, the efficiency and effectiveness of its operations.



New LED lighting at fields in Orange County Parks



GOAL 5: ALIGN ENERGY MANAGEMENT STRATEGIES ACROSS COUNTY DEPARTMENTS TO REDUCE 30% OF BUILDING AND INFRASTRUCTURE ENERGY USE BY 2025

Orange County has set aggressive goals to increase energy efficiency within its building portfolio of more than 12 million square feet. The intent is to lead by example and share stories of efficiency, cost savings, and return on investments with the community.

Building Improvements

- Achieved ENERGY STAR certification for eight County buildings, signifying national recognition for superior energy performance. This certification requires maintaining a score of 75 or higher for twelve consecutive months, undergoing a rigorous verification process by a licensed professional engineer, and successful acceptance by the EPA.
- While exploring innovative ways to reduce energy consumption, we launched a building automation and intelligence program pilot in a large County office building. This will help identify opportunities to reduce energy consumption, reduce system downtime, and provide risk mitigation. If successful, it can be expanded to other locations.
- As a building's roof reaches the end of its service life, white reflective roofing systems are prioritized. This has already been installed on eight facilities, with two additional installations planned. This investment eliminates the need for near-term roof replacement and delivers energy savings due to reflectivity, resulting in a total of \$9.3 million savings over 25 years for the eight completed projects.
- At the Orange County Convention Center (OCCC), improvement projects related to the chillers and chiller water systems have resulted in \$200,000 in rebates from Orlando Utilities Commission (OUC).

LED Lighting Retrofits

- Facility teams led comprehensive lighting analyses and implemented LED conversion projects across eight County facilities. The transition to LED technology enabled a reduction in the total number of fixtures required, due to the increased efficiency and luminous output of LEDs. These improvements, along with the addition of controls and sensors, resulted in substantial energy savings, decreased maintenance expenditures, and enhanced overall lighting quality. Annual savings from the Sand Lake Station LED retrofit project have been estimated at 44,150 kWh and \$8,866, including maintenance.



The lighting at the Sand Lake SunRail station was retrofitted with new LED lights, saving money on energy and maintenance

- o Retrofitting at four more buildings is currently in progress, including two substantial buildings, one with 16,000 light fixtures. More facilities are scheduled for future retrofits, including park locations and community centers.

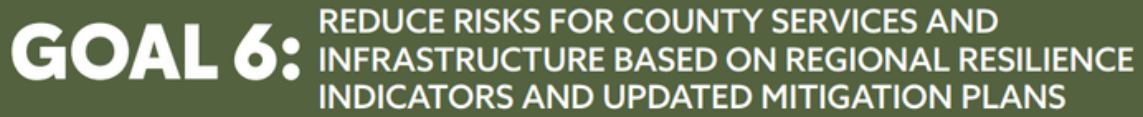
o The LED lighting conversion project in 9 exhibit halls at OCCC is projected to save approximately \$700,000 annually, with an estimated \$14 million in total savings over 25 years.

Energy Efficiency Commitment & Data

- In 2022, Mayor Demings committed to energy reduction across the County's building portfolio by signing on to the Department of Energy's Better Buildings Challenge. Staff are working to improve energy data management and analysis by moving energy data from all divisions and departments into one central platform.
- OCCC recently completed campuswide energy audits between October and November 2025 and is planning to pursue a Level II audit for the West Building to further evaluate possible energy efficiency improvements pertaining to building automation systems.
- Targeted energy audits were conducted at four buildings to identify conservation measures and capital improvements for reducing energy consumption.
 - o Results from these audits will guide energy efficiency upgrades and support data-driven decision-making to maximize operational cost-effectiveness.



An Orange County building undergoing an energy audit



Prioritizing Resilience

- ## Reducing Risks

-

The flood model measures impact of varying degree storms on critical assets

WATER USE & QUALITY

Goals 7–9 focus on protecting and improving water quality, reducing overall water consumption, and ensuring long-term access to safe and reliable water resources.

The County is implementing Advanced Metering Infrastructure (AMI) to continuously monitor water usage, detect leaks, and identify abnormal consumption patterns. This system helps reduce water loss and improve operational efficiency.

County water conservation efforts are vitally important and include 95% Florida-Friendly landscape requirements for new county properties, 100% processing and reuse of wastewater for reclaimed water purposes, and water saving devices in several county facilities.

By monitoring facilities, water bodies, and infrastructure, the County helps prevent pollution and support stormwater management. These efforts protect the quality of our surface and ground water and strengthen resilience to flooding and extreme weather events by identifying and addressing infrastructure needs.





GOAL 7: PROTECT WATER QUALITY THROUGH INNOVATIVE TECHNOLOGY AND INTEGRATED WATER MANAGEMENT AUDITS AT COUNTY FACILITIES

The County aims to ensure that our water bodies are protected from pollutants. This goal helps to align the actions across various departments that help to reduce pollutant sources from runoff and septic systems at County facilities.

Assessments of County Facilities

Multiple divisions assess County facilities for potential pollution and implementation of best practices. This improves safety for County staff and prevents pollution from entering our waterways.

- Staff conducted targeted assessments at 31 County facilities for proper hazardous waste management, disposal, and use of best practices since 2021, preventing pollution to County stormwater management systems and natural water bodies.
- 30 facilities assessed annually for fertilizer, vegetative debris and erosion best practices.
- 177 water bodies are monitored annually for multiple pollutants.
- Approximately 78,000 drainage assets and 3,700 miles of pipe/canals were inspected in 2024.

County Assets

- The Comprehensive Structural Inventory Program will be completed by June 2026. Thousands of additional structures will be included in the drainage asset inventory. This will play an important role in the management of flood risk and overall water quality in the County.

Innovative Technology

- Real-time Flood Forecasting for the Orlo Vista neighborhood and the Econlockhatchee Basins has been completed. The County will launch a countywide effort in 2026, with the assistance of a federal grant, to provide the ability to forecast potential flood events.
- The Low Impact Development Manual (LID) was completed and approved by the Board of County Commissioners (BCC) in June of 2024. The manual provides alternative treatment methods to improve infiltration and water quality in stormwater discharges. An expansion of the manual to include additional practices is currently underway.

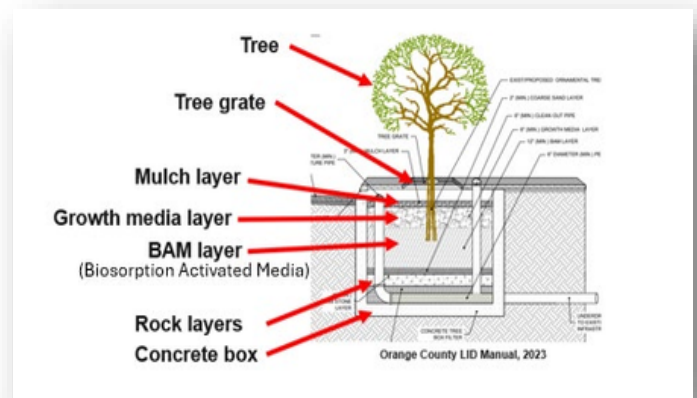


Diagram of a tree box from the recently approved Low Impact Development Manual

Resiliency in Action: Stormwater Improvements

Orange County is moving toward long-term resilience with significant stormwater projects and policy updates that help protect our neighborhoods from climate change and flooding. Key initiatives are listed below.

- The Orlo Vista Flood Mitigation Project is operational and on track to be completed by April 2026. Stormwater pond capacity was tripled and prevented flooding during Hurricane Milton in 2024.
- **Six water-quality improvement projects** have been constructed on County infrastructure since 2021.
- **Rainfall Intensity Studies** – An evaluation of rainfall data within Orange County to determine its impacts on design storm criteria was completed in 2025.
- **Basin Master Plans** – Each major drainage basin will be modeled to update FEMA floodplain data and guide future infrastructure investments. This multi-year effort will be completed in 2029.



An aerial view of the Orlo Vista Flood Mitigation Project

Ongoing & Future Projects

Orange County continues to lead in resilience planning with a variety of projects:

- Since 2021, 17 County facilities have been connected to central sewer.
- Evaluation of a **Stormwater Utility Fee** to support long-term drainage infrastructure funding.
 - o **Phase 1** – Completed in 2025 and summarized current level of service for the County's stormwater program, future needs for an improved level of service, and a proposed method for a rate structure.
 - o **Phase 2** – Started in 2025 and will continue the process of evaluating impervious area to develop a final rate structure and gather community input on the project.
- **Drainage Manual** – Creating an efficient system where drainage design criteria are compiled for ease of use (started in 2024).
- **Updated ordinances** to improve natural stormwater management:
 - o [Wetland Code \(2023\)](#)
 - o [Tree Protection Code \(2023\)](#)



Tree Boxes from Orange County LID Manual, 2023



GOAL 8: REDUCE WATER USE 25% ACROSS COUNTY FACILITIES BY 2030 THROUGH WATER REUSE AND EQUIPMENT EFFICIENCIES

92% of Florida's population depends on groundwater for drinking water. By prioritizing water efficiency, Orange County will reduce operational expenses and lead by example, ensuring access to this valuable resource for future generations.

Optimizing Water Usage

- I-Con Water-Saving Devices were implemented at County corrections facilities. These devices have the potential to reduce water use by 65–75% per plumbing fixture through technicians that rely on real-time monitoring and diagnostics.
- Orange County Parks as well as the Orange County Convention Center (OCCC) have been working on improving irrigation efficiency utilizing technology to support water conservation.
- Orange County Utilities continues to be committed to 100% wastewater reuse through 2030.
- OCCC reduced its landscaping irrigation area by 7.25 acres. This reduction is estimated to save over 40,000 gallons of water.
- OCCC recently completed a campuswide water audit in November 2025. Results from this audit will guide water efficiency upgrades and support data-driven decision-making to maximize operational cost-effectiveness.
- OCCC installed seven chilled water shutoff systems and automatic chilled water valves which help to maintain energy efficiency and extend equipment life by controlling flow and preventing water leaks.

Design & Landscaping Standards

- Design guidelines are updated to formally require all new County facilities and major renovations to use EPA Water Sense-labeled products (toilets, faucets, irrigation systems).
- Landscaping Requirements for new facilities and major renovations:
 - o At least 95% Florida-Friendly/drought-tolerant plants (by area or plant count).
 - o Weather- or soil-based irrigation controllers specified for all new or replacement systems.



An example of Florida-Friendly Landscaping practices



Certified butterfly garden at Orange County Convention Center

- OCCC utilizes reclaimed water to irrigate its entire campus and is currently in the process of acquiring a smart irrigation system to manage irrigation demands in an efficient way. This upgrade is expected to provide a 30% water reduction.
- OCCC maintains a nationally registered Monarch Waystation certified butterfly garden. The garden, spanning more than 1,000 square feet, contains a wide assortment of Florida-Friendly plants.



GOAL 9: DEVELOP CLEAN AND SAFE ACCESS TO ALTERNATE WATER SUPPLY TO MEET FUTURE DEMAND

Advanced Metering Infrastructure (AMI)

- Completed a three-year pilot study on options for remote water meter reading
- Advantages include:
 - Continuous monitoring of water usage for instant access to data without the need for manual readings
 - Early identification of leaks and abnormal usage patterns to take proactive measures and reduce water loss
 - Detailed insights into water usage for customers
 - Increased accuracy through ultrasonic meters
 - Additional tools to promote water conservation
- First target is new developments, including the EverBe Community with 4,500 home sites and Bithlo Ranches with 325 homes converting to County water connections
- The second target is to convert 900 large commercial meters within one year across the service area



An example of the in-ground residential ultrasonic water meter

Alternative Water Supply

- Continue to evaluate and plan for alternative water supply options to meet future needs
- Design phase for Cypress Lake Wellfield and Water Supply Facility
 - Utilize brackish lower Floridan Aquifer groundwater as the supply source
 - Regional partnership between Orange County, Toho Water Authority, Polk County, and St. Cloud
- Permitting phase for Taylor Creek Alliance Project
 - Store excess river water in the reservoir for future treatment
 - Regional partnership between Orange County, Orlando Utilities Commission, Toho Water Authority, City of Cocoa, East Central Florida Services, and Farmland Reserve, Inc.
- Permitting phase for Orlo Vista Integrated Water Resource Project
 - Pump excess stormwater from the Orlo Vista neighborhood stormwater management system into Shingle Creek, then retrieve it via intake pumps for treatment at the South Water Reclamation Facility (SWRF)
 - Flow treated at SWRF meets reclaimed water standards and is used for irrigation and aquifer recharge
 - Reduces nutrient load to enhance water quality within Shingle Creek
 - Provides for additional flood attenuation volume within the neighborhood stormwater management system



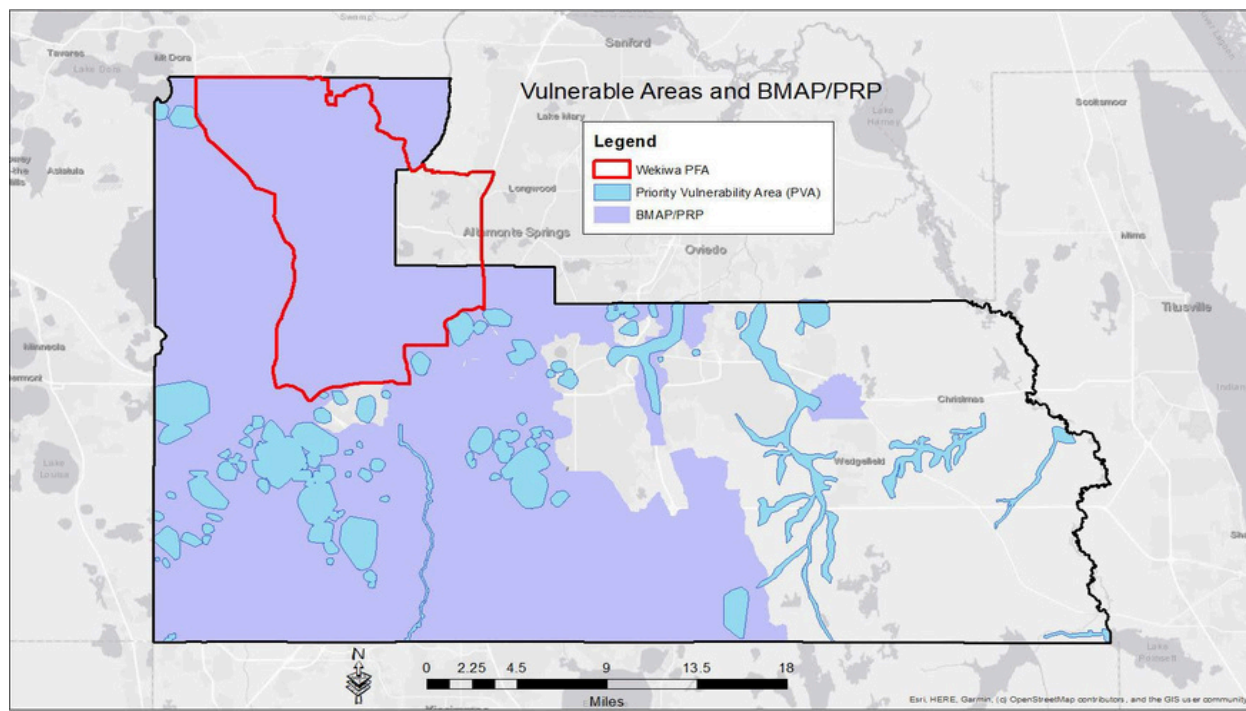
A concept diagram of the Cypress Lake Water Treatment Plant



An aerial view of Taylor Creek Preserve

Groundwater Vulnerability Assessment

- In 2023, Orange County's Environmental Protection Division completed a Groundwater Vulnerability Assessment with the intent to rank areas of the County where water quality is threatened by excessive nutrient loading from septic systems. Priority Vulnerability Areas (PVAs) were ranked based on the types, quantity, and distance of septic systems to either an already impaired water body or one that needs to be protected. Several workgroups were formed to consider opportunities for improvements in those 65 identified PVAs.



Water and Wastewater Ordinance Updates

- In response to the Groundwater Vulnerability Assessment completed by EPD in 2023, the Utilities Engineering Team worked on changes to Orange County code to protect the identified Priority Vulnerability Areas (PVAs). In November 2024, new standards were approved for Orange County Code Chapter 37 to address where sewer connections are required for new development throughout the County, where enhanced on-site sewage disposal systems would be accepted, and where conventional systems could be used. Extensive stakeholder engagement took place in preparation for these code changes including review at the County's Sustainability Advisory Board.



MOBILITY & FLEET



Goals 10–12 focus on transitioning the County fleet to electric and alternative fuel vehicles while improving transportation infrastructure to enhance safety, efficiency, and connectivity.

Currently, 8% of the County's 1,405 light-duty fleet vehicles are electric or hybrid, with the number of electric vehicles increasing from 1 to 19 electric vehicles and hybrids from 15 to 94.

EV charging infrastructure has also been installed at multiple County locations accessible to the public.

In addition, transportation system improvements have included the retrofit of 300 intersections. These upgrades enhance traffic efficiency, safety, and infrastructure resilience while integrating modern transportation technologies.



*** GOAL 10:** OPTIMIZE VEHICLE FLEET PERFORMANCE THROUGH ONBOARD TECHNOLOGY AND A 50% REDUCTION OF PETROLEUM-BASED FUEL BY 2030

*** GOAL 11:** DEPLOY EV-READY INFRASTRUCTURE AND CONVERT 100% OF LIGHT-DUTY COUNTY FLEET TO ELECTRIC OR ALTERNATIVE BY 2030
SUB GOAL: DEPLOY ELECTRIC VEHICLE CHARGING INFRASTRUCTURE AT 25 COUNTY FACILITIES BY 2025

Orange County has a light-duty fleet of more than 1,400 vehicles. These goals seek to improve vehicle efficiency and transition vehicles to alternative fuels in order to reduce carbon pollution, while also reducing operating costs. These goals also help address electric vehicle (EV) infrastructure needs for our fleet and community.

New Light-Duty Fleet Transition Plan includes:

- Existing Fleet Conditions Assessment – Collected data on light-duty fleet composition, operational practices, and usage patterns. Mapped current fleet parking, fueling locations, and EV charging infrastructure.
- Future Conditions Report – Created EV rollout scenarios with associated budget estimates and evaluated charging needs across multiple sites.

Fleet Electrification Progress:

- Increased the number of EVs in the light-duty fleet from 1 to 19, with continued growth underway.
- Increased the number of hybrids in the light-duty fleet from 15 to 94, with additional acquisitions planned.
- Currently, 8% of the 1,405 light-duty fleet consists of EVs or hybrids.
- Currently 18 Level 2 chargers and 2 DC Fast Chargers for County fleet.

Engagement & Education:

- Hosted and participated in several EV ride-and-drive events for employees to test drive EVs and learn about vehicle efficiencies, reduced maintenance, and total cost of ownership.
- Brought County leaders and staff to local/state meetings and events to engage with government agencies and utilities, test drive vehicles, and discuss operational needs.
- Selected to participate in the U.S. Department of Energy's Clean Energy to Communities peer-learning cohort administered by the National Renewable Energy Laboratory focusing on fleet electrification.
- Promoted alternatives to single-occupant vehicles for work commutes, partnered with ReThink Your Commute to educate employees about incentives and highlight transit and micromobility options.



Electric vehicles on display at an EV ride-and-drive event for Orange County employees

Mobility Hub Planning & Implementation:

- Conducted a feasibility study, including coordination with local/regional agencies and utilities, to identify and evaluate potential sites for future Mobility/EV hubs on County and community sites.
- Secured a federal grant to implement mobility hubs at two sites: LYNX Pine Hills Transfer Center and Orange Technical College.

EV Charging Infrastructure Expansion:

- Expanded charging infrastructure at County facilities through partnerships:
 - o Orange County Convention Center (OCCC) is the site for an Orlando Utilities Commission (OUC) Recharge Hub (DC Fast Charging)
 - o Provided publicly accessible Level 2 chargers at multiple County locations
 - o Collaborated with Duke Energy to install DC Fast Chargers at the Multicultural Center and East Orange Community Center, an outcome of the feasibility study.
- Installations in progress:
 - o County-owned Level 2 chargers at Magnolia Park (publicly accessible)
 - o Chargers at the Fire Training Facility
 - o The OCCC is in the process of removing 12 non-functioning Level 2 charging stations to replace them with state-of-the-art systems.



DC Fast-Chargers at East Orange Community Center

Policy and Operational Support:

- Served on the City of Orlando's E-Mobility Task Force and related working groups to promote best practices and infrastructure development.
- Provided technical comments for scoping and participated in regional meetings for the MetroPlan Orlando EV Transition Plan.
- Provided technical comments and attended public hearings for Florida Department of Agriculture and Consumer Services (FDACS) rulemaking for electric vehicle charger installation.
- Collaborated with the Cities of Orlando and Winter Park on local regulations before state pre-emption, including several industry outreach events.
- Developed and implemented an EV charger user fee for County-owned, publicly accessible chargers.
- Incorporated EV-ready requirements into new construction and major renovation capital projects standards.
- Employee remote work policy approved by Board of County Commissioners (BCC), helping to reduce scope 3 emissions of employee commutes.
- Updated Vehicle Requirement Utilization Committee (VRUC) materials to support the shift toward electric and hybrid vehicle adoption.
- Conducted pilot study on 38 fleet units utilizing onboard technology designed to reduce fuel consumption through idle speed reduction. The results revealed negligible gains and insufficient return on investment (ROI), leading to the decision to terminate this project.
- OCCC administered a survey to determine the number of employees who currently drive electric vehicles, to help inform EV infrastructure planning.

* These goals are currently being updated given recent state legislation.



GOAL 12: IMPROVE VEHICLE, BICYCLE, AND PEDESTRIAN ROADWAY SAFETY, RESILIENCE, AND INTEROPERABILITY THROUGH TRAFFIC TECHNOLOGY RETROFITS AT 300 INTERSECTIONS BY 2025

Orange County plans to modernize key intersections with technology upgrades to improve traffic flow, reduce vehicle idling, and improve safety. These upgrades included UPS battery backups, advanced traffic controllers, ADA improvements, and enhanced pedestrian safety features, all of which also serve to improve resilience and connectivity, reduce maintenance costs, and expand real-time monitoring and diagnostic capabilities.

In 2022, Goal 12 has been tracked as complete as the retrofitting of 300 intersections was accomplished.

Actions implemented to achieve that target included those listed below.

- All signalized intersections (600+) throughout the County have received upgrades, including a conversion to LED lighting, updated controllers that communicate directly with Traffic Management Operations Center, and the installation of Roadside Units that increase communication to vehicles and cell phones.
- The Orange County Public Works Traffic Engineering Division has:
 - o upgraded 14 Span Wire signalized intersections to Mast Arms, reducing future maintenance costs,
 - o installed 28 new signalized intersections with Mast Arms and seven new signalized intersections with Span Wire Signals,
 - o implemented Accessible Pedestrian Systems at 17 other signalized intersections to meet the needs of those with visual impairments, and
 - o upgraded 1,100 intersections to meet current ADA standards through the ADA Curb Ramp Program.
- Internal staff from the Public Works Traffic Engineering Division were identified to serve on the County's internal SORAP team for implementation of this goal.

Several initiatives have been started to create a more sustainable, efficient, and resilient transportation system that addresses safety and technology innovation. These initiatives capture the intended actions of this goal and should have the resources necessary for implementing specific projects as appropriate.

These include:

- o ADA Transition Plan (2016)
- o ADA Transition Plan Phase 2 (2024)
- o Accelerated Transportation Safety Program (ATSP) (2023)
- o Vision Zero Plan (2024)
- o Vision 2050 (2025)

These initiatives included community outreach, interdepartmental collaboration, and mechanisms for reporting progress to the Board of County Commissioners.



New pedestrian signage at County intersections



SUPPLY CHAIN & MATERIALS MANAGEMENT



Goals 13–15 focus on reducing solid waste generation across County operations and promoting more sustainable consumption practices internally and with our Solid Waste collection customers.

The County executed an administrative regulation aimed at reducing single-use products which included training for 184 staff members on compliance and implementation.

To further support waste reduction and recycling, 240 side-by-side landfill and recycling stations were installed across County facilities to improve proper waste sorting and increase recycling participation.

To reduce resource consumption, several paper reduction initiatives across multiple departments have resulted in significant savings. For the BCC agenda, this digital workflow has saved approximately 300 cases of paper and \$11,500 annually.



GOAL 13: IMPLEMENT A SUSTAINABLE PROCUREMENT PROGRAM WITH SUPPLIER METRICS BY 2023

GOAL 14: INCREASE WASTE DIVERSION RATES TO 70% BY 2030 AT COUNTY FACILITIES

SUB GOAL: INCREASE WASTE DIVERSION RATES TO 30% BY 2025 AT COUNTY FACILITIES

As the County strives to reduce waste through better procurement practices, it also aims to divert more materials. These two goals work together with actions that help to assess products and services as well as educate employees about reducing recycling contamination.

Internal Regulations

- An administrative regulation 9.01.03 Single Use Products has been created regarding single-use items that have negative environmental impacts. Extensive training was conducted for staff regarding this regulation and a procurement clause has been successfully integrated into several contracts.
- All County operations have switched to an e-procurement system. Procurement is now accepting e-proposals, ensuring the option for a paperless procurement process.
- A digital signature administrative regulation was approved in 2023, further extending paperless opportunities across all departments.
- County staff participated in a Sustainable Procurement Cohort, through ICLEI Local Governments for Sustainability, to gain insights on creating sustainable procurement policies.



A campaign sign collection event to reduce waste and promote reuse

Waste Reduction

- 240 side-by-side bins were deployed with associated signage to indicate the correct bin for different types of waste and ultimately increase recycling rates at County facilities.
- Paperless initiatives have been implemented in numerous County divisions and departments including Public Works Department and Building Safety Division, as well as for the Board of County Commissioners (BCC) agenda, which saves more than 300 cases of paper annually.



Landfill and Mixed Recycling bins



Out Environmental Protection Division collects corks for recycling

- 184 staff completed training for the County's single-use product policy. Compliance was confirmed in contract areas and some operational areas, but further review is needed for some of the areas with exceptions. Some voluntary compliance has been documented as well.
- A composting pilot program was started at Great Oaks Village. More than 4,000 pounds have been collected annually over the past four years. An initial assessment was completed for a composting program at the Corrections Facility.
- Both the Regional History Center and the Orange County Convention Center offer contracted event composting.

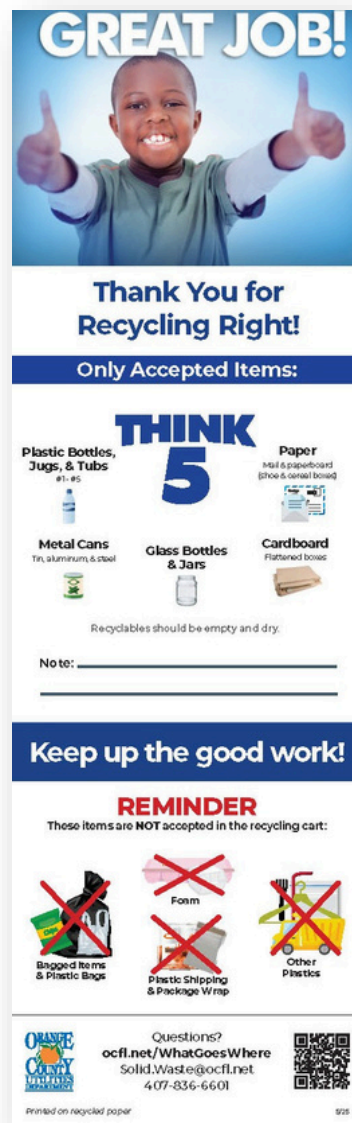


GOAL 15: DECREASE THE PER CUSTOMER LANDFILL DISPOSAL TONNAGE 15% BY 2025

The Solid Waste Division is responsible for the County's 1,500-acre landfill and regularly communicates the themes of reduce, reuse, and recycle to County residents. The intent of this goal is to extend the life of the landfill through improved waste-management practices. The actions within this goal aim to enhance public participation in material recovery and investigate innovative technologies.

Recycling Improvement Projects

- To enhance recycling, the County was planning a public, private partnership (P3) with a leading international recycling company to build a state-of-the-art Materials Recovery Facility (MRF) on County landfill property. With a necessary change in direction, a new solicitation for a recycling contract with a commercial company to process recyclables is underway.
- Through the Recycling Quality Improvement Program (RQIP), all 235,000 County residential recycling collection households have received a four-week cycle of cart tagging to provide direct at-the-curb feedback on how to recycle correctly. This level of outreach is one of the largest programs in the country.
- RQIP worked with the University of Central Florida (UCF) to conduct targeted research that has resulted in extensive understanding of customer recycling behaviors. UCF's research was funded by the Hinkley Center and includes a report called *Encouraging Better Residential Curbside Recycling Behavior and Improvement of the Cart-Tagging Programs*.
- RQIP has been recognized with the following awards: 2023 Solid Waste Association of North America (SWANA) Communication, Education, and Marketing Technical Division Award for Outstanding Awareness Campaign; 2019 Florida Counties Foundation's County



Example of a cart tag when there is minimal or no contamination



Example of a cart tag when there is obvious contamination

Government Best Practices Award; and in 2019 communications and public relations campaign awards from the Public Relations Society of America Sunshine District, Florida Public Relations Association and Florida Public Relations Association (Orlando Chapter).

- Solid Waste Management Division staff worked on contract changes with the current recycling processing contractor to ensure more loads are accepted and recycled.
- As a result of these combined efforts, in 2025, the percentage of recycling tonnage collected and processed as accepted recyclables has increased to 95 percent.

Waste Management Strategies Development

- Continuing to develop a Sustainable Materials Management Plan is key to improved waste-management practices. The Solid Waste Management Division has included a new Project Manager leadership position in the FY 25-26 budget to move this project forward.
- Both the Office of Sustainability & Resilience and the Solid Waste Division collaborated with local partners and a Denmark-based company on a potential anaerobic digester system aimed at addressing food waste throughout the Central Florida region.
- For FY 26, a composting pilot program is in development to serve Orange County Solid Waste customers. The program will investigate the use of different options for food waste capture and evaluate the effectiveness considering varying lifestyle and housing options.



TREES & LAND

Goals 16–17 focus on protecting environmentally sensitive lands and enhancing tree canopy coverage to support ecological health, climate resilience, and quality of life in Orange County. As development continues, the County prioritizes the preservation of natural areas, protection of wetlands and wildlife habitats, and the expansion of urban tree canopy. These efforts contribute to stormwater management, improved air quality, and urban cooling through increased shade and green space.

- In FY22, \$100 million was allocated to purchase environmentally sensitive lands, resulting in 3,400+ acres.
- A Low-Impact Development manual was implemented to support green infrastructure technology.
- Tree City USA recognition for the 19th consecutive year reflects the long-term commitment to urban forestry and environmental stewardship.

The County has also developed a list of Florida-Friendly and native tree species to guide appropriate planting practices. Since FY20, the County has planted more than 14,600 Florida-Friendly trees.





GOAL 16: PRESERVE AN ADDITIONAL 23,000 ACRES OF ENVIRONMENTALLY SENSITIVE LANDS AND INCREASE COUNTY NATURAL LAND ASSETS BY 2030

This goal demonstrates the commitment of Mayor Demings and the Board of County Commissioners (BCC) to preserving critical lands throughout the County. Preparing for future growth within Orange County requires a strong commitment to preserving green spaces, protecting our natural resources, sustaining native species and wildlife habitats, and ensuring that residents and visitors continue to enjoy access to nature.

Administrative Efforts

- Administrative Regulation 11.07.01 for Environmentally Sensitive Lands Acquisition was revised to include criteria for land evaluation and selection.
- EPD partnered with the South Florida Water Management District and St. Johns River Water Management District to purchase critical wetlands.



Greeneyes Wildlife Preserve in Apopka, Florida

Green PLACE and Land Protection

On July 7, 2025, the Back to Nature Wildlife Refuge was officially reopened with improved facilities designed to support the rehabilitation and release of native Florida wildlife and expand nature-based education and recreation.

- \$100 million in funding for the acquisition of environmentally sensitive lands was approved in the FY22 budget.
 - o As of January 2026, more than 3,417 acres of land with significant environmental benefits have been purchased.
- The Green PLACE Advisory Board was created in 2021 to provide guidance for the Green PLACE program as it evaluates and prioritizes potential land parcels for conservation.
- \$3,102,496 of planned Capital Improvement Projects (CIP) for the enhancement of amenities at Green PLACE properties in FY26.



District 4 Commissioner Maribel Gomez Cordero speaking at the Back to Nature Wildlife Refuge reopening ceremony



GOAL 17: PROTECT AND ENHANCE TREE CANOPY AND WILDLIFE HABITATS ON COUNTY PROPERTIES

This goal is intended to preserve the tree canopy on County-owned properties, which will aid in stormwater management, landscaping measures, and providing shade. It is essential that Orange County leads by example as we strive to expand community programs and policy regarding tree canopy.

Maintaining a Cross-Departmental Tree Team

- Recognized by the Arbor Day Foundation as a Tree City USA community for 19 consecutive years, ensuring that Orange County is a prominent leader in continued environmental conservation.
- Three more arborists and a Chief Planner joined the Zoning Division as a result of the County's updated tree preservation ordinance, effective in March 2024, and they collaborated with staff countywide to provide a comprehensive update to landscape regulations within Vision 2050 and Orange Code.
- Zoning staff trained Capital Projects, Utilities, and Facilities Management staff on tree preservation goals and regulations to ensure trees are protected and preserved on County properties.

Standardizing Tree Selection and Design Guidelines Throughout County Projects

- To ensure consistency throughout County operations, a comprehensive list of Florida-Friendly and native trees was created. This list ensures the right trees are planted in the right places therefore aiding in stormwater management and carbon reduction.
- This tree list has also been integrated into Orange County's project management system to ensure that County operations follow the updated tree protection guidelines.
- Development projects now require a tree inventory during project planning.
- A Low-Impact Development (LID) manual was created and approved by the Board of County Commissioners (BCC) describing available green infrastructure technologies, as well as identifying the top four practices for use during development projects.



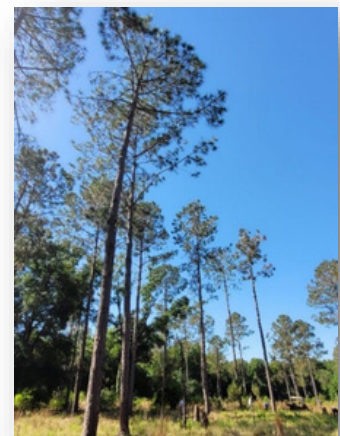
Environmental Protection Division (EPD) staff dressed up as the Lorax to promote conservation

Planting Florida-Friendly Trees

The bullets below indicate the number of trees planted across the County each year surpassing the goal of 10,000 Florida-Friendly trees planted by FY2023.

- FY2019-2020: 3,682
- FY2020-2021: 3,670
- FY2021-2022: 2,598
- FY2022-2023: *2,884
- FY2023-2024: 1,804
- **Total trees: 14,638**

*Goal met in FY23 with 12,834 trees



Pine trees located in one of Orange County's Natural Spaces



**ORANGE
COUNTY**
FLORIDA