

# ENVIRONMENTAL PROTECTION DIVISION YEARBOOK

2024







**Jerry L. Demings**  
Orange County Mayor



**Nicole H. Wilson**  
Commissioner,  
District 1



**Christine Moore**  
Commissioner,  
District 2



**Mayra Uribe**  
Commissioner,  
District 3



**Maribel Gomez Cordero**  
Commissioner,  
District 4



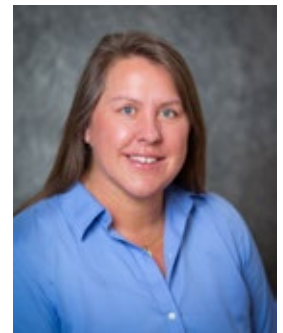
**Emily Bonilla**  
Commissioner,  
District 5



**Michael "Mike" Scott**  
Commissioner,  
District 6

## Service Is More Than a Mission

At the Orange County Environmental Protection Division (EPD), our stated mission is clear: serving our community by conserving, protecting, and enhancing the environment for current and future generations. This statement guides our efforts and demonstrates our dedication to a healthy quality of life.



For many of us, however, service is more than just fulfilling this mission. It is a starting point — a foundation that drives us to go beyond the scope of our daily responsibilities. Whether addressing environmental challenges, engaging with our community or volunteering to support local causes, we embrace service as an opportunity to make a meaningful impact.

As you explore this 2024 Yearbook, you will see our commitment to service in action for healthy air, water bodies and natural lands. It is a reflection of the values we hold and the future we strive to create — a resilient, sustainable and thriving Orange County.

Renée Parker  
Manager, Orange County  
Environmental Protection Division



# Compliance & Waste Management (C&WM) Section



- Compliance Support & Strategic Engagement Program
  - Environmental Volunteer and Internship Program (eVIP)
- National Pollutant Discharge Elimination System (NPDES) Program
- Pollution Prevention & Control Program
- Solid Waste Permitting & Compliance Program





# Compliance Support & Strategic Engagement Program

**STAFF**  
**3 2 1**  
FULL-TIME ON-CALL INTERN

This program, also known as CSSE, supports EPD's regulatory and conservation program efforts to improve compliance and encourage positive environmental stewardship. CSSE uses social marketing principles and methods to pursue this goal, including content creation and distribution via print materials, internet, videos, social media, public spaces and the news media.

## Trending on Social Media



CSSE found new ways to expand engagement on social media, linking trends to high-profile topics such as elections to promote recycling.

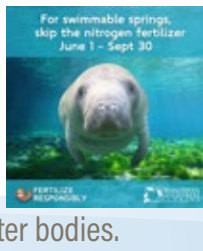
## Reporting Results

The program compiles annual EPD and environmental quality data to produce a yearbook, year in review video and Green PLACE Annual Report.



## Fertilizer Education

CSSE shared fertilizer rules and alternative practices in order to prevent nutrient pollution in our water bodies.



## Earth Day Spotlight



An Earth Day ribbon-cutting event at Johns Lake Conservation Area highlighted the County's newest bird blind.



Bird watchers will use this amenity to observe a variety of wetland bird species.



## New Webpages

CSSE developed three new webpages to engage with the public and invite input regarding new lakeshore protection efforts, septic pollution prevention and updates to the County's noise ordinance.



## eVIP Volunteers in Action



Our volunteers and interns made a big difference in 2024 with 289 "eVIP" volunteers contributing 2,973 hours to EPD, valued at \$87,436.

## Clean Air Campaign



CSSE used social media, internet, public spaces and more to remind everyone that clean air is vital to our health and quality of life.

## Engaging With Our Community



In 2024, EPD brought fun, interactive activities to 20 community events attended by over 11,000 people.

# National Pollutant Discharge Elimination System Program

**STAFF**

**7 1**

FULL-TIME INTERN

Also known as NPDES, this program prevents stormwater pollution and protects water quality in Orange County by monitoring and enforcing NPDES requirements under the County's Municipal Separate Storm Sewer System (MS4) permit.

## Training Updates

The program updated Florida Department of Environmental Protection (FDEP) training materials required under the County MS4 permit training, covering topics like Erosion & Sedimentation Control, Spill Prevention and Illicit Discharge Detection. These enhanced presentations are available internally and on the University of South Florida-hosted Orange County Water Atlas webpage. Staff also reached key professional milestones, achieving certifications in both Stormwater Operations and Florida Association of Code Enforcement training.



## Outreach & Public Education

The NPDES program had a busy and productive year in outreach and public education.

**Presentations:**

- METRA
- Central Florida Code Enforcement Association
- Maitland Leadership
- Mayor's Citizen Academy

**Participation:**

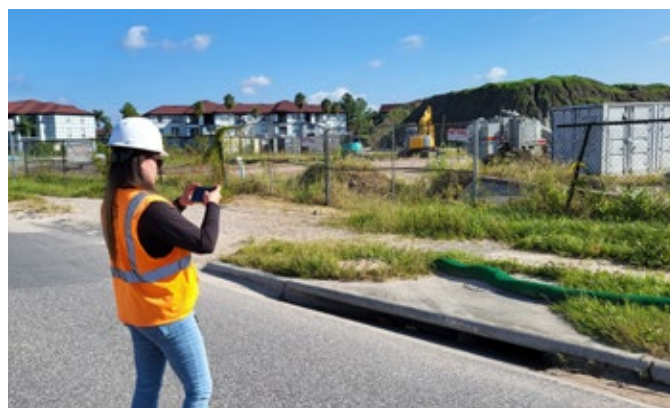
- Green School Expo
- Spring Into Conservation at Unity Park
- Orange County Earthfest
- Hurricane Expo

## Inspections

- Total Inspections — 1,368
- Construction Inspections — 1,031
- Stormwater Inspections — 24
- Industrial/Commercial Inspections — 29
- Citizen Inquiry/Complaints — 284



**NPDES Stormwater Webpage**



280 Active Construction Site Inspections

## BCC Presentations



On June 4, 2024, the NPDES team provided environmental feedback and program updates to the Board of County Commissioners (BCC) in support of the Public Works presentation on Stormwater Management for Future Resiliency.





# Pollution Prevention & Control Program

**STAFF**  
**101**  
FULL-TIME ON-CALL

Also known as P2C, this program implements Orange County's Small Quantity Generator (SQG) Verification and Assessment Program, which verifies the proper management of regulated waste generated at Orange County businesses. P2C also coordinates pollution prevention and sustainability efforts, and investigates environmental complaints lodged by the County's residents.

## Noise Ordinance Updates



P2C completed a comprehensive analysis of the Noise Pollution Control Ordinance and proposed revisions with input from District Commissioners, Orange County Sheriff's Office and stakeholders. The ordinance updates aim to more effectively handle citizens' noise complaints.

## Pollution Prevention Week



P2 Week activities this year included a trash pickup at Sandhill Preserve, a Lunch & Learn event and a DIY experiment making a sustainable household cleaner, as well as an interesting webinar on the impact that the fast fashion industry has on our planet.

## Fix It! Don't Pitch It



- 2 events
- 463 pounds of garbage diverted from the landfill
- \$71,015 saved by residents since Fix It! began in 2018

## Inspections

- 1,108 Hazardous Waste Inspections
- 1,477 Complaints
- 100 Solid Waste Inspections



Commercial Pollution Prevention Webpage



In addition to the SQG program routine inspections, P2C inspectors respond to complaints related to:

- Air • Water • Solid waste • Wetlands
- Noise • Hazardous waste

## Campaign Sign Recycling



P2C partnered with local groups to recycle election campaign signs during the 2024 primary election, collecting over 14,000 signs and diverting 1,800 pounds of waste from the landfill. Their partnership in 2022 earned second place in the 2023 Florida Recycling Champion Awards.

# Solid Waste Permitting & Compliance Program

STAFF

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FULL-TIME

The Solid Waste Permitting and Compliance program works to minimize the threats to public health and the environment by regulating the construction, operation and closure of private solid waste management facilities.

## Orange County EPD performs permitting and compliance reviews for:

- Class III Landfills
- Construction and Demolition (C&D) debris disposal facilities
- Transfer Stations
- Materials Recovery Facilities (MRF)
- Yard Trash Processing Facilities
- Waste Tire Processing Facilities



Solid Waste  
Compliance Webpage

\*Note: EPD does not regulate solid waste facilities operated by Orange County Government.



Inspections are performed monthly or quarterly and total over 90 inspections each year.

## Permit Review & Inspections for:

- 4 Private Landfills
- 5 Transfer Station/MRF Facilities
- 5 Yard Trash Processing Facilities



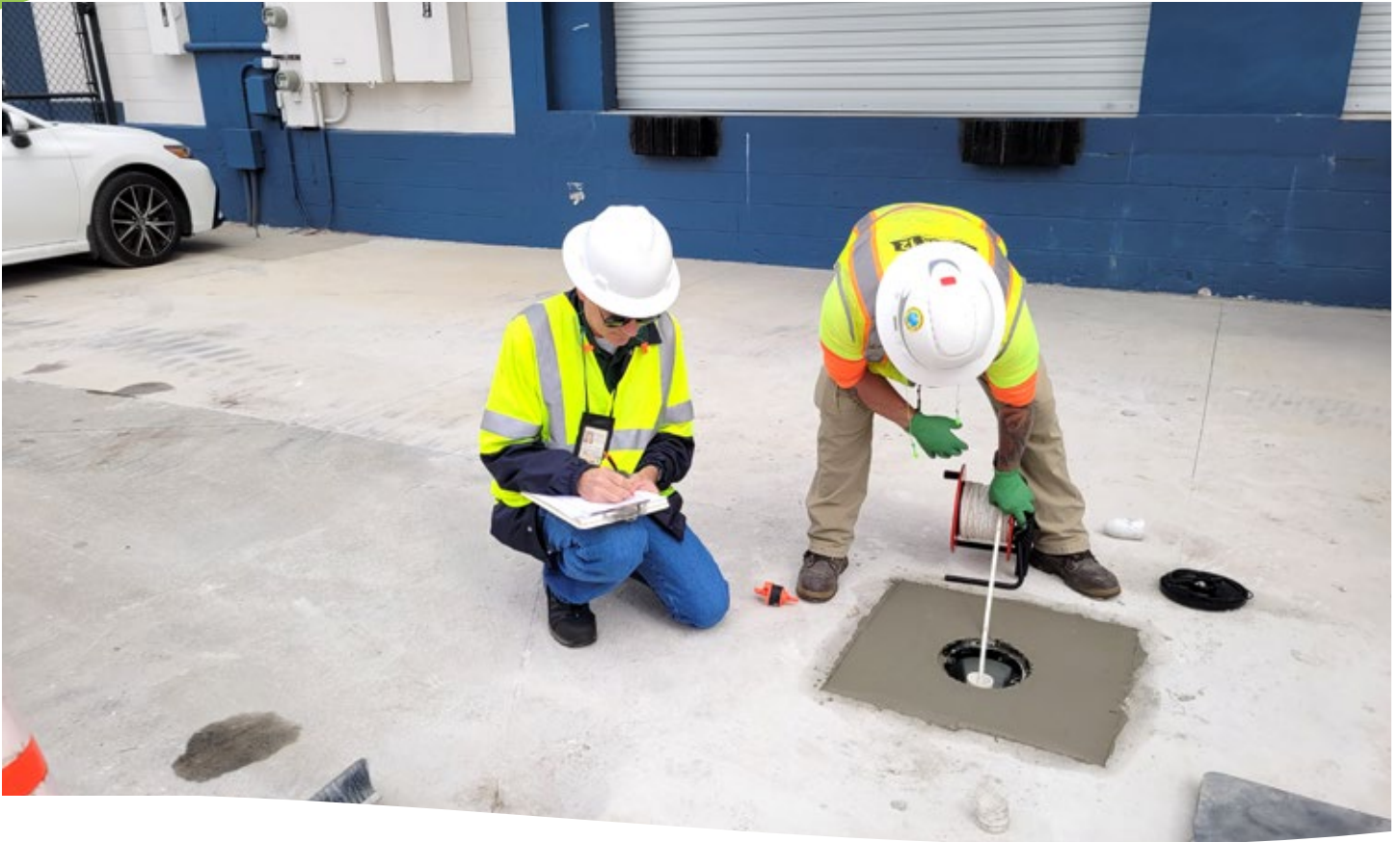
## Recent Accomplishments

- Conducted reviews related to redevelopment of former landfills
- Reviewed the construction of a 20-acre lined Class III cell and a 10-acre construction debris cell
- Provided input to draft Orange Code related to solid waste management facilities





# Petroleum, Air, Sustainability & Energy Section



- Air Quality Management Program
- Petroleum Restoration Program & Brownfields Program
- Petroleum Storage Tank Compliance Program



# Air Quality Management Program

**STAFF**

**15**

FULL-TIME

Also known as AQM, this program's goal is to protect and monitor Orange County's air quality. We ensure compliance by administering permits, inspecting facilities and monitoring ambient air quality.

## AQM Stats

- 52 Enforcement Actions
- 204 Asbestos Inspections
- 381 Facility Activities/Inspections



## Ambient Air Monitoring Station Restored



The ambient air monitoring station along I-4 in an environmental justice area, has resumed operation. The station monitors vehicle emissions, including nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO) and particulate matter (PM).

## Inspiring Future Generations



In partnership with Orange County Public Schools, EPD held a student slogan contest. Evans High sophomore Myron Divers won with: "Breathe life into our future! Act now for cleaner air!"



## 190 Permitted Facilities

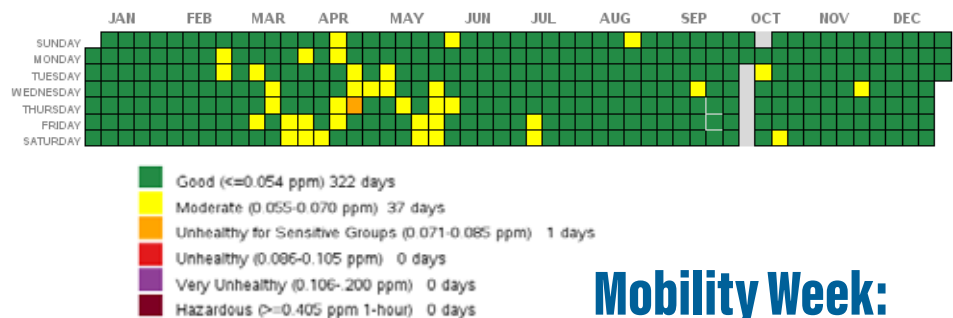
- Concrete Plants
- Dry Cleaners
- Surface Coating Operations
- Hospitals
- Crematories

## Clean Air Month: Indoor Air Quality



On May 22, the AQM Program held a Lunch & Learn on indoor air quality. Attendees learned about pollution sources, testing, and tips for cleaner air, with guest speaker from IFAS sharing insights on using plants.

## Air Quality Index



## Open Burning Rules Campaign

WHERE THERE'S  
**SMOKE**  
THERE'S **AIR**  
**POLLUTION**



The AQM Program's "Where There's Smoke, There's Air Pollution" campaign raised awareness about the County's open burning rules.

## Mobility Week: EV Experience

In honor of Mobility Week, AQM staff shared their Chevy Bolt with Corrections, giving 22 staff members the chance to experience driving an electric vehicle.



# Petroleum Restoration & Brownfields Programs

**STAFF**  
**13 1**  
FULL-TIME ON-CALL

The goal of the Petroleum Restoration Program (PRP) is to identify and remove petroleum contamination from soil and groundwater.

The Brownfields Redevelopment Program's goal is to restore abandoned or underused industrial and commercial properties whose redevelopment may be complicated by real or perceived environmental contamination.



Our PRP team ensured more than \$8.5 million in state funds were administered to identify, assess and clean up petroleum contaminated sites.

## Did you know?



Orange County EPD manages a Brownfields Redevelopment Program that helps incentivize redevelopment.

## Monitoring Cleanups

The PRP staff, also known as site managers, conducted 465 site visits and 88 operation and maintenance inspections.



Site managers reviewed over 1,100 site assessments, remedial action plans and monitoring reports.



## Protecting Groundwater

The PRP team closed 29 cleanup sites during the 2023/2024 fiscal year.

The PRP team managed 498 petroleum-contaminated sites across three counties under contract with the Florida Department of Environmental Protection.



**Petroleum Management  
Webpage**



# Petroleum Storage Tank Compliance Program

**STAFF**

**8**

FULL-TIME

The program safeguards Orange County's groundwater resources by inspecting underground storage tank (UST) and aboveground storage tank (AST) systems for compliance with technical regulations, as contracted by the Florida Department of Environmental Protection and required under Orange County's ordinance.

## EPD's state-delegated program covers five counties:



## Leak Prevention

Storage tanks and systems are regulated by laws intended to prevent discharges to the environment. Our compliance inspections help identify faulty components, maintenance gaps or poor operating conditions before leaks can occur.



Petroleum  
Management  
Webpage



## Inspecting Tank Systems

- 5 Complaint Site Inspections
- 8 Discharge Site Inspections
- 26 Component Closure Inspections
- 26 Component Installations
- 46 Compliance Assistance Inspections
- 74 Closure Site Inspections
- 110 Installation Site Inspections
- 873 Routine Compliance Inspections



## Did you know?

Our team brings over 65 years of combined experience in tank inspections!

## Monitoring Compliance

EPD regulates over 6,600 tanks residing on more than 3,500 facilities across five counties.  
\*In the 2023-2024 contract year.

Staff successfully sent three enforcement cases to the Special Magistrate and closed 13 cases through consent orders.



# Natural Resources Permitting & Development Review Section



- Development Review Program
- Natural Resources Compliance & Enforcement Program
- Natural Resources Permitting Program



# Development Review Program

**STAFF**

**6**

FULL-TIME

This program protects Orange County's natural resources by reviewing industrial, commercial, office and residential development, and ensuring that they comply with environmental regulations.

## One-Stop Service

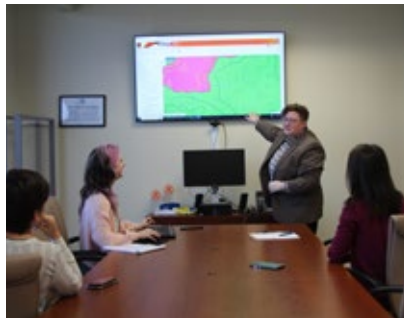


Development Services  
**TEAM 400**

The program has one full-time staff member located at the County Administration Building to serve One-Stop Service Center customers.

## Commercial Building Permits

About 7,500 commercial building permits are reviewed each year.



## Development & Technical Reviews



Approximately 1,200 plan reviews are conducted annually in the Development Review Committee/ Technical Review Group process.

## Connecting People and Planning



EPD's Development Review Program is an integral part of Team 400 that collaborates regularly with other County divisions and EPD programs during many typical plan reviews. They are also in frequent communication with residents, developers and landowners.

## Plan Review Tools & Activities



The program considers the effects of past and proposed future development on all environmental media including:

- Surface Waters/Wetlands
- Protected Habitats
- Erosion/Sedimentation
- Air Quality and Noise Pollution
- Soil/Groundwater Contamination
- Stormwater

## Did you know?



EPD's expertise is sought during the following land development processes:

- Board of County Commissioners
- Planning and Zoning Commission/ Local Planning Agency
- Board of Zoning Adjustment
- Development Review Committee
- One-Stop Service Center

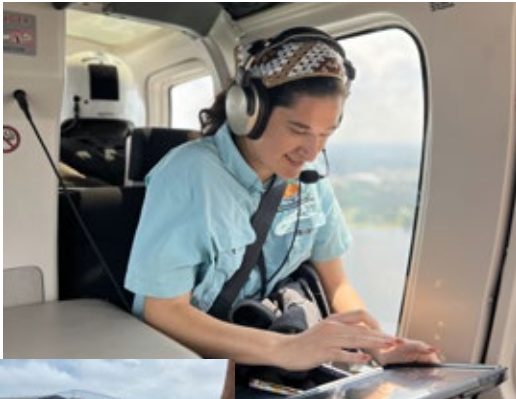


# Natural Resources Compliance & Enforcement Program

**STAFF**  
**3 2**  
FULL-TIME ON-CALL

Also known as NRCE, this program's goal is to protect and conserve Orange County's natural resources by achieving compliance through standardized procedures and educational efforts committed to fairness, professionalism and excellent customer service.

## Compliance and Enforcement



- 277 cases reported during fiscal year 2023-2024
- Responded to an average of 23 new cases per month
- An average of 1 case per month taken to the Special Magistrate

## Lakeshore Protection

The NRCE team oversees the Lakeshore Protection Code (Ch. 15, Art. VII) and updated the Board of County Commissioners in July 2024 on permits, enforcement efforts and thriving lakeshore projects.



## Enforcement Cases



Major environmental violations can lead to Special Magistrate hearings, where legal action ensures compliance and restores the environment. This process aligns with Orange County's Code Compliance approach.

## Living Lakeshores Campaign



Orange County's new "Healthy Lakes Need Living Lakeshores" campaign promotes shoreline compliance to protect our lakes. Follow the rules and keep our waters healthy. Learn more at [www.ocfl.net/LivingLakeshores](http://www.ocfl.net/LivingLakeshores).





# Natural Resources Permitting Program

STAFF

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FULL-TIME

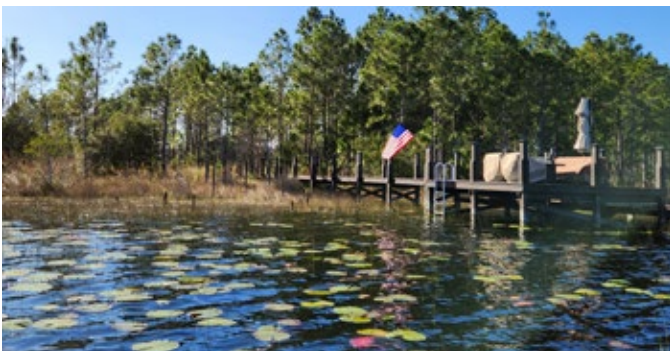
Also known as NRP, this program's goal is to protect and conserve Orange County's natural resources by implementing the County's environmental ordinance and balancing environmental protection of natural resources with sustainable development.

## Permit Inspections



360 inspections were completed to determine compliance with permit conditions and address non-compliance issues with permittees.

## Permit Applications



The NRP team reviewed more than 5,500 building permits during the fiscal year 2023-2024. In addition, over 500 permit applications specifically checked for compliance with Chapters 15 and 33 of the Orange County Code. These reviews include:

- Boat Dock Construction Permits
- Boat Ramp Facility Construction Permits
- Conservation Area Authorizations
- Conservation Area Determinations
- Conservation Area Impact Permits
- Lakeshore Protection Permits
- Shoreline Alteration Dredge and Fill Permits

## Updated Wetland Code Training



Staff attended seven Wetland and Surface Water Protection Code training sessions. A website is dedicated to the Wetland Code, including educational materials.

## Living Lakeshores Campaign



Together with the Natural Resource Compliance & Enforcement Program, Orange County has launched the "Healthy Lakes Need Living Lakeshores" campaign! Learn when a shoreline permit is needed to protect our lakes. Check if you need a permit at [www.ocfl.net/LivingLakeshores](http://www.ocfl.net/LivingLakeshores).



# Water & Land Resources Management Section



- Green PLACE Program
- Lake Management Program
- Water Sciences Program



# Green PLACE Program

STAFF

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FULL-TIME

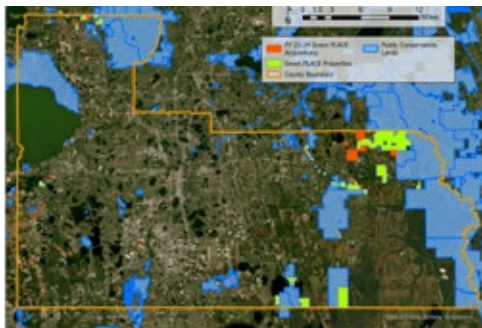
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ON-CALL

Green PLACE (Park Land Acquisition for Conservation and Environmental Protection) enhances habitats through the preservation of environmentally sensitive lands and land management activities. This program protects natural and water resources in Orange County and provides nature-based recreational opportunities.

## Land Acquisition

Since 2021, the Green PLACE Program has evaluated 1,523 parcels and appraised 129. The Board of County Commissioners approved 43 contracts, preserving 1,760.52 acres of environmentally sensitive land.



## 14 Properties Open to the Public



- 30 miles of trails for hiking and horseback riding
- Amenities for picnicking, fishing, kayaking, birdwatching and wildlife observation
- Installed Savage/Christmas Creek Preserve historical 1-mile trail

- 3 new selfie stations



## New Bird Blind

At the 2024 Earth Day event at Johns Lake Conservation Area, Mayor Jerry L. Demings, District 1 Commissioner Nicole Wilson, EPD staff and community partners unveiled Orange County's first bird blind.



## Land Management

Activities include controlled burning, forest management, invasive species management and more.



## Award-Winning Program

Green PLACE won the Executive Award of Regional Significance from the East Central Florida Regional Planning Council for its commitment to land conservation.



## Advisory Board



The seven-member Green PLACE Advisory Board advises Orange County on issues involving Orange County's natural resources and efforts on public engagement. Recent progress included a mission statement and brand plan.



# Lake Management Program

**STAFF**  
**9 1**  
FULL-TIME ON-CALL

This program's mission is to manage 38 lake taxing districts (MTSU/MSBU) and 15 advisory boards. We work to address local lake concerns such as aquatic plant management, water quality improvement, general lake maintenance, navigation and off-duty lake patrols.



The Lakes program manages over 16,000 acres of surface water by controlling invasive plants, promoting native biodiversity, and enhancing safety and recreation.



## Best Management Practices

- 2 alum stormwater treatment facilities
- 8 lakes stocked with 962 triploid grass carp for biological control on 2,325 acres
- 488 acres of exotic and invasive aquatic plants treated via herbicide control
- 4,353 miles of roads swept
- 780,900 pounds of debris prevented from entering lakes using 900 stormwater filtration devices

## Project Highlights: Lake Roberts

The Lake Roberts community saw the planting of 1,030 new aquatic plants to restore their lakeshore and prevent erosion.



*Before*



*After*

## Lake Killarney

Lake Killarney benefited from the removal of a sandbar that had accumulated at the outfall off Blue Heron Drive.



*Before*



*After*

## Chapter 8 Boats & Water Safety Ordinance



The Lakes program continues updating its Boats and Water Safety Code to improve safety for boaters and protect the natural resources of Orange County's waterways.



Revisions include adding new boating safety zones, ensuring the code aligns with Florida's Uniform Waterway Marker Permit requirements and removing outdated language. These revisions are in collaboration with the Florida Fish & Wildlife Conservation Commission and Orange County Sheriff's Office.



[Boating & Water Safety Webpage](#)





# Water Sciences Program

**STAFF**  
**14**  
**4**  
**FULL-TIME** **INTERNS**

This program helps preserve and restore the quality of freshwater resources in Orange County through water sampling, laboratory analyses and data-driven solutions aimed at identifying, capturing and removing pollutants.

## Water Quality Monitoring



Sampled 648 sites for the Water Quality Trend Network Program. Sampled 63 sites related to special projects for Orange County Fire Rescue, hurricane recovery, etc.

## Biological Monitoring



The Water Sciences program conducted 15 Lake Vegetation Index (LVI) and 13 Stream Condition Index (SCI) Assessments. An LVI assesses the health of a lake by observing the diversity of the plant community. An SCI assesses the health of a stream through collection, identification and analysis of the benthic macroinvertebrate community. Our lab has been audited by FDEP and is certified to submit SCI data to them for water body assessment purposes.

## Groundwater Vulnerability Assessment (GVA)

Phase I completed: Identified Orange County Priority Vulnerability Areas (PVAs) in need of additional protection from septic nutrient pollution. The Board of County Commissioners approved changes to Chapter 37 Wastewater Code in November 2024. Additional protections within these Orange County PVAs will become effective March 1, 2025.



*Installation of an advanced-treatment septic system*



**Groundwater Webpage**

## Microbial Source Tracking (MST)



In partnership with the University of Central Florida, select water samples undergo genetic microbial testing to determine the biological source of certain excess nutrients. MST aids in preventing water impairment.

## Lab Activity



The Orange County EPD Laboratory is certified by the Department of Health/National Environmental Laboratory Accreditation Program (DOH/NELAP) to verify compliance with the Florida Administrative Code. This ensures the lab meets the specific standards and generates high-quality and reliable data for environmental testing/monitoring. EPD's lab is certified for E. coli, color, turbidity and Chlorophyll a.

## Lab Audit



The Orange County EPD Laboratory is audited every two years required by DOH/NELAP to verify compliance with the Florida Administrative Code. Once again, in 2024, the lab passed the external audit.





**Knowledgeable**

**Integrity**

**Passionate**

**Teamwork**

**Dedication**

**Professional**

**Community-Focused**



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