

# Strategic Plan, Goals, Objectives & Performance Metrics

**FY 2024-2025**

**Collier Mosquito Control District**



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# INTRODUCTION

Chapter 189.0695 Florida Statutes (FS), required performance reviews of independent mosquito control districts. In 2023, The Balmoral Group was selected by the Office of Program Policy Analysis and Government Accountability to conduct these reviews. The Balmoral Group concluded that the Collier Mosquito Control District (the District) adheres to industry standards for integrated mosquito management, offers a comprehensive range of mosquito control services in line with the District's charter and statute, and found that no local governments within Collier County provide similar services. Moreover, they noted that the District manages its resources efficiently and effectively to achieve its goals and objectives. Although these goals and objectives are clearly defined and measurable, the District lacks performance standards to assess how well it meets them.

In compliance with Chapter 189.0694 FS, all special districts are required to establish goals and objectives for each program, along with performance measures, and post them on their websites by October 1, 2024. This law took effect in July 2024.

Consistent with previous fiscal years, the District revised its 5-Year Strategic Plan and adopted goals and objectives for FY 2024-2025 in February 2024. To meet Chapter 189.0694 FS requirements, the District revised its 5-Year Strategic Plan and FY 2024-2025 Goals, and developed performance measures. This ensures the District's operations remain efficient and effective through measurable outcomes. The District will continue to formalize and refine goals, objectives, and performance measures in the future.

In the following document, general goals for the District are outlined in the 2024-2029 Strategic Plan, objectives are specified in its FY 2024-2025 Goals and Objectives, and for the first time, formalized performance standards and measures are included at the end of the document.



# BOARD OF COMMISSIONERS

As an independent special district, the District is Governed by a five-member, at-large Board of Commissioners. These individuals represent community interests, set the millage rate, approve the budget, ensure the Executive Director and staff are fulfilling the District's mission, and oversee the expenditure of taxpayers' funds.

During FY 2023-2024, the District's Board of Commissioners supported and approved the updated 5 Year Strategic Plan (2024-2029), FY 2024-2025 Goals and Objectives, and FY 2024-2025 Performance Standards and Measures outlined in this document.



**John Johnson, Chair**

Seat 1  
2023-2027



**Sandra Lee Buxton**

Seat 2  
2023-2027



**Ed Brandt**

Seat 3  
2023-2027



**Bruce Buchanan**

Seat 4  
2021-2025



**Russel Burland**

Seat 5  
2021-2025

# MISSION AND VISION

## About the District

The health and welfare of district residents is the primary responsibility and concern of the Collier Mosquito Control District (the District). The District was created in 1950 for the special purpose of controlling mosquitoes and is governed by Chapter 388, Florida Statutes and 5E-13 Florida Administrative Code.

In 1950, the district was 6 square miles in size and over the years has expanded to its current size of 730 square miles. It is an independent special district of the state of Florida and as such, has a Board of five Commissioners who are elected for non-partisan seats to serve four-year terms. Monthly public meetings are conducted by the Board of Commissioners at the District headquarters located at 600 North Road, on the west side of the Naples airport.

## Mission

The mission of the District is to provide valuable service to the community through suppression of both disease carrying and nuisance mosquito populations by and through the safest and most economical means available. The District utilizes a variety of methods (Integrated Mosquito Management) in a manner consistent with the highest level of safety and minimal adverse impact on humans, wildlife, the environment, and non-target organisms.

## Vision

Contributing to a healthy, high quality of life in southwest Florida and beyond by upholding public trust, applying sound science, utilizing best practices in mosquito control, economic responsibility, and an enduring search for solutions.

## Our Charter

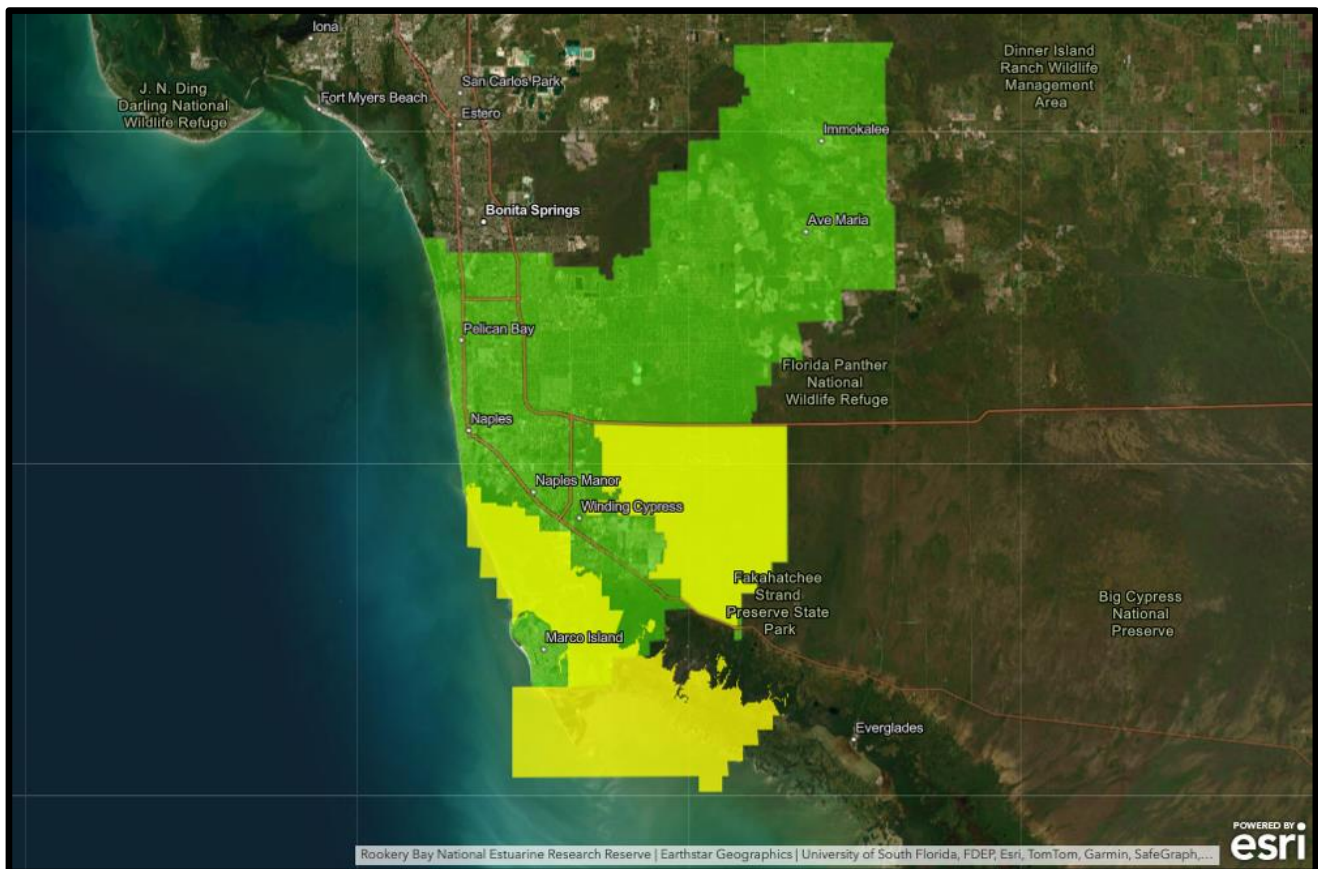
The Collier Mosquito Control District operates under the Laws of Florida Chapter 2004-425 and Chapter 2024-280.

# SERVICE AREA

In 2021, the District's leadership initiated a boundary expansion to encompass Port of the Islands, the Six L's area, and regions of Eastern Collier County experiencing rapid or planned population growth, in accordance with District Policy #2019-02 – Expansion Policy. A feasibility study was conducted, involving discussions between District leadership and key stakeholders, including government officials, public land managers, landowners, and conservation-focused non-governmental organizations. The District's Board of Commissioners subsequently passed Resolution #10 – 2020-2021, authorizing the expansion, followed by a similar approval from the Collier County Board of Commissioners through Resolution No. 2021–237.

In August 2022, a referendum was held, allowing taxpayers in the proposed expansion area to vote on the measure. The referendum passed with 71% of the vote. Since the expansion of a special district necessitates a special act, Representative Lauren Melo sponsored a local bill during the 2023 Legislative Session, which stalled in committee. However, in the 2024 Legislative Session, Representative Lauren Melo reintroduced the bill, which passed unanimously in both the House of Representatives and the Senate, and received approval from Governor Ron DeSantis.

The new boundaries (green), totaling 730.3 square miles, will take effect on October 1, 2024. Public lands (yellow) are excluded from District boundaries, and all mosquito control activities performed on these lands require an Arthropod Management Plan, per 5E-13 FAC.



# DISTRICT DEPARTMENTS

## **Administration**

### *Finance*

The mission of the Finance department is to ensure financial transparency, reporting accuracy, and compliance with regulations, all while protecting the District's financial assets. We are dedicated to upholding the highest standards of integrity and accountability, fostering trust among taxpayers and the public.

### *Human Resources*

**Cultivating Excellence Through People:** At Collier Mosquito Control District the Human Resources department is committed to cultivating excellence through our people. We strive to attract, develop, and retain top talent by providing meaningful opportunities for growth, fostering a culture of respect and accountability, and aligning HR strategies with Collier Mosquito Controls overarching mission and vision.

### *Information Technology*

The mission of the Information Technology department is to protect the security and integrity of the District's critical applications, data and communication infrastructure systems utilizing best practices in network administration. Through diligent cybersecurity operations, we aim to mitigate the risks posed by cyberthreats, contributing to the security of our data and availability of our systems. Further, the IT department seeks to provide cost-effective administrative, development, and technical support services to enhance the District's overall ability to meet and advance its mission while ensuring provided services are consistent with sound stewardship of tax-payer investment.

## **Communications**

The mission of the Communications department is to advance the District's public health mission through education, outreach and raising awareness of the risks posed by mosquitoes. Our goal is to establish CMCD as a trusted community partner in protecting the health and comfort of the citizens and visitors we serve.

## **Facilities Maintenance**

The mission of the Facilities and Fleet Maintenance Department is to uphold the operational readiness and integrity of our organization's fleet and facilities. We are committed to ensuring that all vehicles, equipment, and infrastructure are maintained to the highest standards of safety, reliability, and efficiency. Through proactive maintenance practices, innovative solutions, and a dedicated team, we strive to optimize asset performance, minimize downtime, and enhance the overall operational effectiveness of our organization. Our goal is to support the mission and objectives of our organization by providing reliable, sustainable, and cost-effective maintenance services.

## Aviation Maintenance

The mission of the Aviation Maintenance department is to ensure the highest possible dispatchability of our aerial fleet, maintaining safety as our top priority. We are dedicated to achieving near 100% dispatchability through rigorous maintenance practices, continuous training, and adherence to the highest safety standards. By upholding excellence in aircraft maintenance, we support the effective execution of our mission to control mosquitoes, safeguarding public health in our community.



## Flight

The mission of the Flight department is to ensure the safe, efficient and impactful operation of CMCD's aircraft, dedicated to safeguarding the health and welfare of our residents. Through diligent aerial operations, we aim to mitigate the risks posed by mosquitoes, contributing to the well-being and comfort of our community.

## Operations

The Operations department supports the District's integrated mosquito management program through comprehensive and science-based strategies. The department performs mosquito surveillance activities, conducts domestic inspections, and plans and executes all aerial and ground-based missions using adulticide and larvicide techniques. The department's Field Technicians serve as the public face of the organization in the field, applying their knowledge to deliver effective and efficient interventions while adhering to the highest standards of professionalism. Informed decision-making, backed by ongoing research, ensures these control operations contribute to immediate and long-term public health outcomes with reduced adverse impacts to the environment.



## Research

The Research department is committed to advancing the science of mosquito control, not only for Collier County but also for the broader mosquito control industry. The department supports the District's integrated mosquito management program through a science-based approach, conducting forward-thinking research into mosquito biology, ecology, and susceptibility to control materials, while also assessing mosquito-borne disease presence and risk. These efforts contribute to the broader goal of protecting public health and comfort from mosquitoes and the diseases they transmit, while also ensuring environmental sustainability. Recognizing the complexity and diversity of mosquito behavior and ecology, the department's research aims to deepen our understanding of these trends and proactively address current and emerging threats caused by mosquitoes in Collier County.



## Technical Development

The Technical Development department is dedicated to enhancing the District's integrated mosquito management program through the strategic implementation of new technologies. With geographic information systems (GIS) and unmanned aerial systems (UAS), we support data-driven and spatially aware decision making. By integrating these and other technologies, we strive to improve the District's mission effectiveness and efficiency.



# 2024-2029 FIVE YEAR STRATEGIC PLAN

## Preamble

For 75 years, the Collier Mosquito Control District (the District) has been tasked with controlling both disease-carrying and pestiferous mosquitoes within its boundaries. The District's longevity and growth with the community are a testament of its enduring mission and vision.

Collier County continues to see unprecedented growth in both permanent population and development. This growth is expected to continue for decades to come, ultimately more than doubling the current population and occupying the majority of privately held land within the county. As of October 1, 2024, the District will see its tenth expansion to nearly double in size from 400 to more than 700 square miles

The District has a relatively clear picture of expected need (quantity/quality) for mosquito control services within the District in the coming years. Achieving mission success will necessitate strategic investment in the District's infrastructure, technology, and workforce. This includes addressing the challenges posed by an aging aerial fleet and outdated facilities, while scaling operations to meet the needs of a growing community. To effectively manage both current and emerging disease threats, mitigate nuisance mosquito populations, and enhance integrated mosquito management practices, it is essential to adopt cost-effective and environmentally sustainable solutions.

Unpredictable variables include natural disasters, introduction of new vectors, changing disease threats, and economic instability, among others. A well vetted strategic plan seeks to minimize any negative impacts from these variables on the District's ability to remain efficient, effective and improving.

Strategic Planning during past years has served the District well. The yearly goals and financial planning along the way have provided sound feedback in its refinement. During the next five years the Plan will no doubt evolve with the times. Assessment of success (or failure) of discrete projects along the way provides feedback for enhancement of outcomes in the longer term.

The purpose of this Strategic Plan is to articulate:

1. How the District will provide continued, valuable service to a rapidly growing community;
2. Measurable achievements with an associated timeline; and
3. A roadmap to facilitate continued, sound budgeting and policymaking practices

## Organizational-Level Plan

Simultaneous accomplishment of several projects over the next five (5) years will require focus, commitment, and excellent communication amongst all involved. In brief, the District will:

1. Execute a "Master Plan" for the organization prepared by the collaborative efforts of staff, architects, engineers, and BOC members, among others;
2. Recruit and retain employees with skills, potential, and integrity;
3. Complete the majority of its fleet rejuvenation plans;
4. Design and construct a multi-purpose building at the Naples HQ;
  - a. With the proviso that the lease agreement with the Naples Airport Authority is successfully extended;
  - b. Including new laboratory facilities, boardroom, and additional office space;

5. Secure a lease on a parcel (location tbd) at the Immokalee Airport for the construction of a satellite facility;
6. Refine its long-range plans for construction of a new hangar at the Naples HQ, as necessary;
7. Augment its integrated pest management program to include sterile insect technology, aquatic weed management, and drone use for control measures;
8. Explore innovative surveillance and control strategies and delivery methods that emphasizes operational efficiency and effectiveness, environmental sustainability and cost effectiveness.

To see fruition, the Vision of the Collier Mosquito Control District – and its enduring search for solutions – requires smart, caring, creative and capable people, no matter their rank or position. This Strategic Plan for 2025-2029 is just that, a plan, and should be considered a *flexible, working plan/document*. It shall serve to guide not only leadership, but *all* employees in pursuit of excellence.

The following provides a “by department” list of strategies for the District in the coming five years:

### **Mosquito Control – General Workplan**

- Collect, analyze, and act on all relevant data to augment mission efficacy, efficiency, cost-effectiveness, and compliance
- Play integral role in prevention and management of mosquito-borne disease outbreaks
  - Engage directly with FDOH for timely, location-specific surveillance and control
  - Provide accurate, reliable information directly to community via multiple means
  - Participate in education and outreach to enhance source reduction and repellent use
  - Develop vector and/or disease specific response plans, as necessary
- Improve IPM efficacy in all areas of the District by and through
  - providing location/temporal/species specific IPM plans, as appropriate
  - Direct contribution to development of comprehensive arthropod management plans (AMP/ACP) that align with the District’s Mission and Vision, as well as the objectives of partnering land management agencies
  - Participate directly in the evaluation of new control methods, materials and technology as they become available, considering:
    - Benefit to IPM approach to mosquito control
    - Mosquito susceptibility status
    - Safety
    - Cost
    - Environmental sustainability
- Implement and refine the use of field and laboratory data management software
- Work with vendors to secure product selections that are more in-line with evolving District needs
  - To ensure a competitive selection process that prioritizes the most economical, operationally effective and environmentally sustainable products
  - To ensure adequate, flexible on-site inventory of various products
  - To adopt an inventory strategy that maintains sufficient inventory to meet Districts needs while minimizing excess on site

## Administration (including ED, DED, Finance, IT, and HR)

- Oversee and communicate project status to BOC for each of the eight facets of the Strategic Plan noted above
- Executive Director – Top three
  - Recruit and retain – employees for the long term
  - Fleet rejuvenation and augmentation – fixed-wing, rotorcraft, UAS
  - Facilities, including location(s), resources within, and consideration for the future
- Refine approved financial software
- Refine procedure(s) for disaster preparedness/recovery and uninterrupted admin/operations
- Refine administrative SOP's to ease audit process
- Provide sound, actionable feedback to regulating agencies for purposes of improving compliance
- Collaborate with appropriate individuals/teams for longer-term (i.e. five-year) financial planning, allowing for economic fluctuations, unforeseen difficulties, and opportunities
- Information Technology expertise will guide
  - District personnel training against cyber-criminal activities
  - Planning and implementation of hardware, software, and security needs for the District

## Aviation Maintenance

- Participate directly in aircraft acquisition and sales
  - Work directly with ED, Pilots, Maintenance Staff to provide the most appropriate aircraft for the evolving mission at CMCD
  - Review merits and weak points of each type of aircraft under consideration for implementation
  - Objectively provide recommendations to ED and BOC regarding appropriate airframes to best serve District needs
  - Oversee process of sale and delivery of selected aircraft to appropriate buyers
- Act as liaison with aircraft manufacturers during construction of all District aircraft assets
  - Refine projects as appropriate
  - Ensure build milestones are achieved in a timely fashion
  - Review and provide feedback to CFO, ED, and BOC on contractual matters, as appropriate
- Plan for and ensure proper training for maintenance personnel to manage a changing fleet
- Evaluate and make recommendations concerning maintenance plans available for new airframes and powerplants
- Participate in succession planning for department

## Communications

- Oversee and manage messaging pertaining to
  - District services
  - Disease threats
  - New facilities
  - New technologies/methodologies
  - Crises – natural and other
- Play integral role in opening and maintaining lines of communication with landowners, managers, and agencies involved in District operations

- Augment education and outreach programs to improve awareness of CMCD public health efforts, methods, Mission and Vision
- Refine service request and treatment notification technologies to improve reliability and resistance to attack from cyber criminals
- Establish effective messaging education for all employees and Commissioners
- Seek yearly pre-season preparation messaging via various local media outlets
- Collaborate with ED, Research, Operations, BOC, architects & engineers to create learning/education areas outdoors on the HQ campus
- Work with community partners to increase visibility to community and demonstrate interagency cooperation

## Facilities

- Act as primary contact/manager on-site for District construction projects to include:
  - Working directly with architects, engineers, and construction personnel
  - Providing necessary feedback of project status, timelines, and costs to leadership
  - Facilitating timely completion of projects on time and on budget
- Work directly with Operations/Research/Flight/Flight Maintenance on various projects to enhance safety and efficiency of mission execution, including
  - Product loaders for helicopters
  - Loading vessels/trailers for rotorcraft
  - Safety devices, best practices, and long-term improvements
- Manage fleet of ground vehicles to maintain the highest possible functionality, safety, and efficiency
- Oversee sale and purchase of ground vehicles as necessary to keep fleet “right sized”, dispatchable, reliable, and safe
- Collaborate with ED, BOC, and staff to ensure optimal facility efficiency, safety, and cleanliness

## Flight

- Anticipate for and provide adequate numbers of professionally trained pilots to meet an evolving mission
- Ensure pilot/personnel are both current and proficient in all appropriate types of mission flight
- Seek/provide opportunities for advancement of certificates and ratings for pilots
- Provide mission-specific feedback to Operations, Research, and ED to improve safety, efficacy and efficiency
- Seek and implement new technologies to improve safety
  - Collision avoidance
  - Wildlife avoidance
  - Ground proximity
  - Situational/Positional awareness
  - Navigation and obstacles

## Operations

- Work directly with DED, Technical Development and Flight departments to maximize functionality in implementation of data management software
- Train Field Technicians to the highest of standards in:
  - Surveillance techniques
  - Data management
  - On-the-spot treatment decisions
  - Truck-mounted larviciding and adulticiding efforts
- Evaluate and plan for staffing needs to ensure the District retains adequate human resources
- Engage collaboratively with Flight, Aviation Maintenance, Research, Technical Development, DED and ED to continually improve
  - Safety of all aspects of the mission
  - Communication
  - Effectiveness and efficiency
- Implement a robust safety program that prioritizes the well-being of all staff, promotes adherence to regulatory compliance and industry best practices, and fosters a culture of continuous improvement
- Participate directly in determination of District storage needs at both Naples and Immokalee locations
- Provide timely feedback on effects of allocation of resources to two airports in years to come
- Ensure timely response to service and treatment requests
- Integrate and implement new technologies, modalities, and methodology into District operations in collaboration with DED, Technical Development and Research departments

## Research

- Lead research and investigations into innovative control strategies, both in the laboratory and field, with a focus on solutions that address mosquitoes resistant to traditional control methods and prioritize environmental sustainability, as new advancements become available
- Work directly with Operations, Aviation Maintenance and Flight departments to ensure proper calibration of all application equipment
- Collaborate with other departments as appropriate to establish best practices in surveillance and control
- Participate and guide District leadership in the creation of new laboratory facilities in future construction
- Create comprehensive insecticide resistance maps with location and species-specific resolution, and continue to monitor species/populations with known insecticide resistance
- Evaluate new tools and methods to increase efficiency and throughput in the laboratory and field for data analytics, sample processing, mosquito identification, disease testing, insecticide resistance monitoring, equipment calibration, etc.
- Continue to collect and provide analysis/recommendations regarding aquatic weed impacts on mosquito populations
- Contribute to industry-wide research and advancements in mosquito control by
  - Actively engage in collaborative research initiatives with vendors, mosquito control Districts, state and federal agencies, academic institutions, and local land management agencies

- Facilitating the development and research of novel control strategies to further advance the field
- Sharing relevant insights and data from local research when appropriate to advance collective knowledge
- Presenting on critical topics to peers within the industry, enhancing public health outcomes and community well-being
- Participating in the Communications Department efforts to establish learning opportunities at schools and in the community

## **Technical Development**

- Lead investigations into the application of high resolution imagery and remote sensing technologies to inform and optimize operational decision-making processes
- Support data-driven, spatially aware decision making by contributing to the District's integrated pest management program through strategic implementation of new technologies
- Engage in collaborative efforts with both developer and end users of various data management software to achieve "full" implementation (ArcGIS, AgMission etc.)
- Create database of historical and current surveillance records for easy access and analytical functionality
- Participate in the planning of new facilities to include storage, workshops, and necessary resources for UAS-related activities
- Engage directly with DED, Research, Operations and IT departments to exploit GIS and custom web/mobile applications according to District needs
- Provide resources for various departments to solve technical problems, including 3-D printed parts, tools, and software solutions

# FY 2024-2025 GOALS AND OBJECTIVES

## Preamble

The Goals for FY 2024-2025 (October 1, 2024 – September 20, 2025) follow. The District is poised – at long last – to begin to realize a vision articulated and agreed-upon in 2017. The creative and talented individuals committed to following through in this realization are well-versed in the requirements for success. With our Board’s support, the valuable service we provide to our community will only continue to return more than a dollar’s value for each dollar invested.

## Administration

### *Executive Director*

- Continue aircraft fleet rejuvenation
  - Complete contract negotiations for new Cessna 408 (SkyCourier)
  - Take delivery of new Cessna 408 (SkyCourier)
  - Collaboratively evaluate current aircraft inventory for individual sale of older ships
- Establish continuing contract with architect(s) and engineer(s) for
  - Establishment of master plan for District
  - Design and construction of necessary facilities as time permits
- Ensure staffing numbers and succession planning are considered in detail and executed in accordance with District needs

### *Finance*

- Research software platforms for management of contracts and agreements
  - Implement adopted platform
- Streamline the budgeting process and increase transparency by and through frequent engagement with Commissioners
- Complete bidding process for a continuing contract with Architect and Engineering firms
- Facilitate the creation of a masterplan to include the construction of a new Multipurpose building at the Naples Airport Authority
- Establish a new lease term with the Naples Airport Authority
- Implement a departmental training program in conjunction with Human Resources
- Implement new system to better distinguish the different types of assets
- Create and implement standards of operations (SOPs) for cross-departmental tasks
- Investigate potential for new organization-wide implementation of requisition software

### *Human Resources*

- Implement an employee performance management system (i.e., employee evaluation process)
- Create an SOP for the implemented employee evaluation process
- Train all supervisors on employee evaluation process
- Revise Employee Handbook to meet current standards, laws, and statutes for new and existing policies and procedures
- Standardize a District-wide training and development program
- Establish a student loan forgiveness program
- Increase District visibility by attending local career fairs



### *Information Technology*

- Assist in planning for expanded IT infrastructure systems to support facility expansions.
- Upgrade servers to Windows Server 2022 and procure necessary hardware
- Update remaining desktops to Windows 11
- Evaluate enhancement opportunities for District's current cyber security posture
- Upgrade the traffic-monitoring software/server
- Upgrade hardware and technologies for all District departments

### **Aviation Maintenance**

- Succession planning/secure replacements for DOM and Aircraft Records Management Specialist (both retiring)
- Continue purge of surplus and outdated parts & equipment
  - Skyvan
  - Spray equipment
  - Wingman
- Further evaluate needs for Bell 407 special tooling and purchase as required
- Continue working toward standardization of aerial fleet using Marco pumps
- (Multi departmental) Evaluation of performance of Twin Otter (at CMCD) since purchase (three years on)
  - Dispatchability
  - Reliability
  - Ease of obtaining parts and support
  - Quantify problems and problem areas
  - Draft list of desired changes for next ship
- Discuss findings with Aevex (formerly Ikhana) regarding:
  - Options for changes
  - Timeline
  - Revised estimates for pricing
- Explore technologies and options for updates/upgrades to fixed-wing aerial application platforms.
- Explore changing maintenance tracking program to a more user friendly and efficient program
- Continue to evaluate Cessna Sky Courier as possible replacement for the Twin Otter and Skyvans (fleet upgrade) and develop timeline.

### **Communications**

#### *Public Relations*

- Increase social media presence
  - Increase social media following by 15% on each social media platform we use (starting point established on September 30, 2024)
- Increase presence on local TV to reach more residents
  - Pitch at least two TV news stories per month among all of our local TV stations, spreading out the requests between stations so each station goes a few weeks without hearing from us. Major news (ex. District expansion) will be pitched to all stations.
- Increase presence in local print media
  - Obtain at least one print story per quarter in the Naples Daily News. Submit one op-ed per quarter to the NDN.
- Improve outreach with Spanish speakers

- Appear in Spanish language news (Noticias/Telemundo/radio/print) at least once per quarter.
- Increase community awareness of our treatments and how we make treatment determinations
  - Promote the District's treatment notification system with the goal of increasing the number of users by 7,500. (starting point established on September 30, 2024. Increased from previous year to account for expanded district boundaries.

### *Education/Outreach*

- Enhance our classroom education program to reach more students
  - Reach a total of 10,000+ students in classroom and summer camp environments
  - Expand classroom program to include high schools.
- Enhance our image as a leader in the community and the subject-matter experts on supporting public health through integrated mosquito control
  - Increase the number of public outreach events we participate in by 10% (starting point established on September 30, 2024.)
  - Set up tours with at least 10 new community groups that haven't toured our facility in the last year
  - Increase open house attendance by at least 10% (starting point established on April 13, 2024)
  - Give a presentation to every new HOA that joins our District should expansion become official.

### **Facilities Maintenance**

- Work directly with Administration and Architect/Engineering firm(s) to prepare a CMCD Master Plan
- Continue evaluation, availability, and cost/benefit of hybrid/electric technologies in District vehicles
- Construct a new helicopter trailer to replace rusting/aging/smaller version(s)
- Work directly with Finance, ED, Architect/Engineers, and other departments, as appropriate, to meet facility and transportation needs as the District fleet grows and ages

### **Flight**

- Coordinate with and provide feedback to Operations on spray block modifications to improve productivity, efficacy, and safety
- Research and plan new spray blocks commensurate with District expansion
- Identify and address needed training to ensure pilot proficiency in all aircraft during entire scope of District mission-centered missions
- Systematically provide pilot-in-command opportunities for lower-time/experienced pilots
- Train pilots to become dual rated in airplanes and/pr helicopters, as needed
- Send two pilot to attend Bell 407XGI recurrent training and two pilots to attend MD500 initial or recurrent training
- Research the pros and cons of the Cessna Sky Courier and contact current operators for their opinions
  - Visit Cessna/Textron facility in Kansas for thorough tour and test flight of Sky Courier

## Operations

- Extend surveillance coverage through the addition of new landing rate count locations, larval hot spots, and trap sites in the newly expanded District boundaries.
- Enhance container-inhabiting mosquito species surveillance in “hot spot” neighborhoods.
- Integrate barrier treatments into operational use, and investigate its use in Keewaydin, Port of the Islands and recreational facilities.
- Fully integrate ReMoa Tri into operational use for control of a variety of mosquito species.
- Investigate the use of Merus 3.0 to control *Mansonia spp.* using a target vs. wide-area approach in the areas around Ave Maria.
- Integrate more single-brood larvicides and mosquitofish usage into District operations.
- Assign one field technician to complete Part 107 remote pilot’s license.

## Research

- Evaluate efficacy of barrier treatments for mosquito control on Keewaydin island
- Perform mesocosm trials to evaluate efficacy of various larvicidal products
- Create a comprehensive Naled resistance map for *Ae. aegypti*
- Increase insecticide resistance monitoring by testing key target species and source locations
- Evaluate utilizing BG-Counters for treatment justification
- Continue analysis of spatiotemporal patterns in host usage of *Culex nigripalpus*, and expand study to *Anopheles spp.*
- Complete field evaluations of ReMoa Tri efficacy against resistant *Ae. aegypti* populations
- Expand mosquitofish program for operational use
- Use eggshell sampling to validate LiDAR data from coastal larvicide locations to develop a model of *Aedes taeniorhynchus* oviposition sites
- Develop in-house disease testing protocols for pathogen detection, prioritizing *Plasmodium*

## Technical Development

- Continue augmenting drone larvicide treatments (number and acreage) via proactive inspections by Technical Development personnel
- Investigate “proof-of-concept” and compliance requirements of drone-based adulticiding within the District
  - Phase 1, year one: Initiate a review of the regulatory framework and drafting a comprehensive report on use-case scenarios
- Increase the accessibility of small mapping and inspection drones for use by the Operations Department
  - Phase 1, year one: Provide training for select field technicians to acquire Part 107 licenses and offer instruction on the operation of small mapping/inspection drones
- Develop and validate a predictive model of mosquito production sites by analyzing District-collected LiDAR data
  - Employ data to refine treatment polygons for rotary-wing larvicide missions
  - Evaluate additional coastal larvicide locations for LiDAR data acquisition and continue to refine model of *Aedes taeniorhynchus* oviposition sites
- Continue growth of scope and quantity of 3-D printing services for departments as able
- Support Operations Department with surveillance in district expansion areas by providing remote-sensing data, including drone imagery, satellite, and LiDAR
- Transition the District’s flight records retention from the current Microsoft Access database to the District’s ArcGIS Online (AGOL) platform

# FY 2024-2025 PERFORMANCE MEASURES

In accordance with Chapter 189.0694 of the Florida Statutes, all special districts are required to establish performance measures, by October 1, 2024. Mosquito control, particularly, presents unique challenges due to variabilities in mosquito biology, environment and local ecology, to name a few. The evaluation of its success a complex task. Below are the performance measures that the Collier Mosquito Control District will implement for FY 2024-2025.

## Administration

### *Finance*

**Standard:** Maintain a balanced budget during FY 2024-2025 in accordance with 5E-13 regulations.

**Measure:** Submit the Mosquito Control Monthly Report – Local Funds for the previous month to the Board of Commissioners for approval at public meetings, and submit to the Department of Agriculture and Consumer Services (DACS) before the last day of each month.

**Standard:** Ensure effective financial planning for FY 2025-2026 in accordance with 5E-13 regulations.

**Measure:** Present the Detailed Work Plan Budget for Arthropod Control and the Annual Certified Budget for Arthropod Control to the Board of Commissioners for approval during a public meeting, and submit both documents to DACS by the specified deadlines.

**Standard:** Maintain a high standard for internal control to ensure compliance with Generally Accepted Accounting Principles (GAAP) requirements.

**Measure:** Achieve an audit report free of material misstatements from an independent audit firm annually.

### *Human Resources*

**Standard:** Maintain accurate staffing levels to ensure mission readiness.

**Measure:** Target staffing percentage at 90%.

**Standard:** Ensure all employees receive annual regulatory training.

**Measure:** Achieve a 95% completion rate for all mandatory training programs annually.

**Standard:** Provide comprehensive employee benefits and wellness programs to support overall health and well-being.

**Measure:** Attain a 90% employee participation rate in wellness programs annually.

## Aviation Maintenance

**Standard:** Calibrate all aerial adulticide application equipment in accordance with 5E-13.0331(5) regulations.

**Measure:** All aerial adulticide application equipment is calibrated either once annually, or as required by label directions or manufacturer directions, whichever requires calibration more frequently, to ensure application of accurate and uniform dosages in accordance with labeling specifications. Calibrations are properly documented for each aircraft.

**Standard:** Calibrate all aerial larvicide application equipment annually.

**Measure:** All aerial larvicide application equipment is calibrated at least once annually to ensure application of the correct particle size and accurate and uniform dosages in accordance with labeling specifications. Calibrations are properly documented for each aircraft.

**Standard:** Maintain aircraft dispatchability as close to 100% as possible.

**Measure:** Maintain detailed record of all mission cancellations due to mechanical issues with aircraft or product application systems.

## Communications

**Standard:** Proactively inform District residents of all truck and aerial treatments before they are performed.

**Measure:** Post at least 90% of our missions on social media (some missions may be scheduled with short notices) and send out notifications to residents who have signed up to receive them for 100% of missions.

**Standard:** As a trusted community partner, CMCD is committed to being an active member of the community and providing as much education and information as possible to our residents and visitors.

**Measure:** Perform or participate in at least 20 community outreach events per year (parades, open house, setting up at events hosted by other organizations, HOA presentations, etc.).

**Standard:** Teach the science of mosquito control in the classroom to help Collier's students better understand the ecology of where they live and teach them skills to protect themselves from mosquito bites.

**Measure:** Ensure CMCD educators teach lessons in K, 2nd, 5th and 7th grade classrooms which closely align with at least one Florida education standard.

## Facilities Maintenance

**Standard:** Utilize maintenance management systems for vehicle maintenance.

**Measure:** Implement and monitor the usage of Fleetio to ensure all vehicle maintenance activities are recorded, tracked, and completed on schedule.

**Standard:** Encourage feedback from staff regarding facilities and vehicle maintenance needs, and identify opportunities for improvement.

**Measure:** A representative from Facilities Maintenance attends each safety meeting and supervisors meeting to solicit and collect feedback from staff regarding maintenance needs and recommendations.

**Standard:** Identify the critical areas of facilities maintenance such as cleanliness, safety and equipment needs.

**Measure:** Conduct regular departmental meetings with facilities maintenance staff to identify, document, and prioritize areas requiring maintenance attention.

## Flight

**Standard:** Ensure all fixed-wing and rotary aerial applicators are equipped with the Aerial Category on their Public Health Pest Control (PHPC) license in accordance with 5E-13.040.

**Measure:** Require all fixed-wing and rotary aerial applicators to obtain the PHPC license with the Aerial Category within 3 months of hire, and provide opportunities so that all PHPC license holders with the Aerial Category maintain continued competency through the acquisition of aerial continuing education units.

**Standard:** Pilots in Command will maintain currency in each aircraft category they are rated in.

**Measure:** The Chief Pilot completes annual currency checks in the fixed wing aircraft in accordance with Airman Certification Standards. Annual rotor-wing currency is accomplished through Bell, MD, or another similar vendor.

**Standard:** Ensure accurate record keeping in accordance with 5E-13.0371 after each flight.

**Measure:** After each flight the Pilot in Command completes the necessary documentation and saves it into the record keeping system to be kept on file for at least 3 years.

## Operations

### *Field Operations*

**Standard:** Calibrate all truck mounted adulticide application equipment in accordance with 5E-13.0331(5) regulations.

**Measure:** All truck mounted adulticide application equipment is calibrated either once annually, or as required by label directions or manufacturer directions, whichever requires calibration more frequently, to ensure application of the correct particle size and accurate and uniform dosages in accordance with labeling specifications. Calibrations are properly documented for each unit.

**Standard:** Calibrate all truck mounted larvicide application equipment annually.

**Measure:** All truck mounted larvicide application equipment is calibrated at least once annually to ensure application of the correct particle size and accurate and uniform dosages in accordance with labeling specifications. Calibrations are properly documented for each unit.

**Standard:** Respond to property inspection requests in a timely manner.

**Measure:** Average time to field rectification is within 3 working days (72 h) of receipt for property inspection requests.

**Standard:** Perform adult mosquito surveillance within 24 hr post application (post-counts).

**Measure:** Time to post-count surveillance is within 24 hr post application for 90% of adulticide applications.

**Standard:** Respond to high larval production sites within 7 days of inspection.

**Measure:** Time to larvicide application is within 7 days (depending on instar) post inspection for 90% of inspections.

### *Safety and Compliance*

**Standard:** Ensure effective operational planning for FY 2025-2026 in accordance with 5E-13 regulations.

**Measure:** Present the Integrated Mosquito Management Plan to the Board of Commissioners for approval at a public meeting, and submit the approved plan to DACS by the designated deadline.

**Standard:** Maintain sufficient chemical inventory and track all chemical usage in accordance with 5E-13 regulations.

**Measure:** Submit the Monthly Activity Report for the previous month to the Board of Commissioners for approval at a public meeting, and submit to DACS before the last day of each month.

**Standard:** Review the Pesticide Discharge Management Plan to ensure compliance with the Clean Water Act (CWA) and 62-621.300(8) regulations.

**Measure:** Review and update the Pesticide Discharge Management Plan annually, with the updated plan signed by the Executive Director.

**Standard:** Review the Chemical Emergency Response Plan to ensure compliance with SARA Title III of 1986.

**Measure:** Review and update the Chemical Emergency Response Plan annually, and review the plan with staff during in-house training events.

**Standard:** Review the Adverse Incident Response Plan to ensure compliance with the Federal Insecticide, Rodenticide and Fungicide Act (FIFRA) and 62-621.300(8).

**Measure:** Review and update the Adverse Incident Response Plan annually, and review the plan with staff during in-house training events.

**Standard:** Ensure all full-time applicators and loaders are licensed for Public Health Pest Control (PHPC) in accordance with 5E-13.040.

**Measure:** Require full-time pesticide applicators and loaders to obtain the PHPC license within 12 months of hire, and provide opportunities so that all PHPC license holders maintain continued competency through the acquisition of public health and core continuing education units.

**Standard:** Ensure all pesticide applicators and loaders receive in-house training covering topics defined in 5E-13.039(2).

**Measure:** Require all applicators and loaders to attend a minimum of 2 in-house training events annually, such as the Annual Chemical Safety Training (OSHA HAZWOPER) and the Annual Hangar Safety Meeting.

**Standard:** Establish an in-house Safety Committee to ensure the safety and occupational health of all district staff.

**Measure:** Conduct and document a safety inspection quarterly by the Safety Coordinator or designee, and hold quarterly Safety Committee meetings to address and rectify any safety concerns at the District.

## Research

### *Surveillance and Laboratory*

**Standard:** Annually review Treatment Threshold Values.

**Measure:** By February 1st of each year, review and update Treatment Threshold Values using data collected from the previous three years.

**Standard:** Perform arbovirus testing of mosquito pools within 3 working days (72 h) of trap collection.

**Measure:** Document time to conduct arbovirus testing of mosquito pools to show completion within 3 working days (72 h) of trap collection.

**Standard:** Perform operational trap identification within 3 working days (72 h) of trap collection.

**Measure:** Document time to trap closeout after trap collection to show completion within 3 working days (72 h).

### *Field Validation*

**Standard:** Perform insecticide resistance monitoring to ensure effectiveness of control materials in accordance with labeling specifications and industry best practices.

**Measure:** Ensure that resistance testing (CDC Bottle Bioassay) includes major mosquito species present in the District, with particular focus on those known to transmit mosquito-borne diseases.

**Standard:** Perform larval mosquito surveillance within 7 days post larvicide application (backchecks).

**Measure:** Document time to backcheck surveillance falls within 7 days post application for 90% of aerial larvicide applications (excluding pretreatments).

### **Technical Development**

**Standard:** Ensure all staff utilizing drones are FAA Certified Remote Pilots per 14 CFR Part 107.

**Measure:** Require all staff utilizing drones to obtain their Remote Pilot certification within 6 months of hire, and ensure formalized training is received and documented for any new Unmanned Aircraft System (UAS) platform acquired by the District.

**Standard:** Ensure all UAS aerial applicators are equipped with the Aerial Category on their Public Health Pest Control (PHPC) license in accordance with 5E-13.040.

**Measure:** Require all UAS aerial applicators to obtain the PHPC license with the Aerial Category within 6 months of hire, and provide opportunities so that all PHPC license holders with the Aerial Category maintain continued competency through the acquisition of aerial continuing education units.

**Standard:** Leverage light-detection-and-ranging (LiDAR) data to refine and optimize treatment polygons for rotary-wing larvicide missions—ensuring precise targeting of mosquito production sites and effective mosquito management.

**Measure:** Perform LiDAR collections for 4 coastal larvicide locations and refine (if necessary) the treatment polygon to target mosquito-prone areas.