

**Front Line  
of  
Real Time Mosquito Control**



**Beach Mosquito Control  
2024/2025 Annual Report**

# **BEACH MOSQUITO CONTROL DISTRICT'S**

## **MISSION STATEMENT:**

Beach Mosquito Control District seeks to protect the public's health, safety, and welfare by using science-based, environmentally sensitive, integrated mosquito control techniques employing public education, surveillance source reduction, biological control, and the judicious use of pesticides to enhance the quality of life for the district's residents.

## **Board of Commissioners**

**Treasurer**



**Larry J. Couch Sr.**

**850-596-2461**

**Chairman**



**John P. Smith PhD**

**850-319-9475**

**Secretary**



**Brandon Caldwell**

**850-691-5195**

## **Goals and Objectives**

The primary goal of the District is to safeguard public health, safety, and welfare by implementing effective mosquito control measures. The district achieves this through a combination of science-based, environmentally responsible techniques, which include:

- **Public Education:** Informing residents about mosquito control practices and prevention methods.
- **Surveillance:** Monitoring mosquito populations and activity to assess risk and target interventions.
- **Source Reduction:** Eliminating or reducing mosquito breeding habitats to minimize population growth.
- **Biological Control:** Utilizing natural predators and biological agents to control mosquito larvae and adults.
- **Judicious Use of Pesticides:** Applying pesticides only when necessary and in a manner that minimizes environmental impact.

These objectives are designed to enhance the quality of life for all district residents while maintaining commitment to environmental sensitivity and scientific rigor.

## **Performance Measures for Goals and Objectives:**

To ensure the District's goals and objectives are being met, the following performance measures are implemented:

- **Public Education:** Track the number of community outreach events, educational materials distributed, and resident feedback surveys to measure awareness and engagement.
- **Surveillance:** Monitor and report the frequency of mosquito population assessments, accuracy of risk mapping, and the number of targeted intervention sites.
- **Source Reduction:** Quantify the reduction in identified breeding habitats through regular inspections and record the percentage decrease in larval presence over time.
- **Biological Control:** Evaluate the effectiveness of natural predator introductions by measuring larval and adult mosquito population changes in treated areas.
- **Judicious Use of Pesticides:** Document pesticide application rates, monitor for environmental impact, and ensure compliance with safety protocols through regular audits.

These measures help the District assess progress, refine strategies, and maintain accountability in protecting public health and the environment.



**James F. Clauson**  
**Director**

**Beach Mosquito Control District**

**[www.pcbeachmosquito.org](http://www.pcbeachmosquito.org)**

**Phone: (850) 233-5030**

**FAX: (850) 233-5033**

# Administration

## 2024-25 Beach Mosquito Control District

### Board of Commissioners

#### Chairman's Message

It is with great pride and sincere appreciation that I present the Beach Mosquito Control District Annual Report for the fiscal year spanning October 1, 2024, through September 30, 2025.

This report highlights the operational achievements of our dedicated departments and documents our continued commitment to sound financial stewardship. Beyond a record of expenditures and activities, it reflects the direction we are charting toward our mission—ensuring a healthier, more comfortable environment for all residents and visitors.

Throughout the year, we have maintained a focus on evaluating and refining our strategies, optimizing resources, and establishing clear performance benchmarks. The data contained within these pages demonstrates our ongoing dedication to excellence, transparency, and continuous improvement in service delivery.

On behalf of my fellow Commissioners, Larry Couch and Brandon Caldwell, I extend my deepest gratitude to the entire District staff. Their professionalism, diligence, and unwavering commitment to public health are the foundation of our success.

We remain steadfast in our mission and welcome the opportunity to engage with the community we serve. Should you have any questions about the services of the Beach Mosquito Control District, please do not hesitate to contact me or my fellow Commissioners. Our contact information can be found on our website at <https://pcbeachmosquito.com>.

Thank you for your continued trust and support.

**John P. Smith**

Chairman

*Beach Mosquito Control District*

## **Beach Mosquito Control District's Director's Message**

I am pleased to present Beach Mosquito Control District's (BMCD) annual report to the citizens of Panama City Beach and surrounding Beach Communities. The mosquito season was somewhat mild (relative to abundance of mosquitoes) than the previous year. We had somewhat light rains throughout the summer of 2025. We had sporadic mosquito-borne diseases in our sentinel chicken flocks. This report will cover the BMCD's calendar year beginning October 1, 2024, through September 31, 2025.

While you review this report, please note the additional improvements that were made while working diligently to accomplish the mission statement for our district. These goals would not have been accomplished without the support of the local taxpayers.

In addition, I would like to extend special thanks to Beach Mosquito Control District's dedicated Commissioners, administrative staff and employees for their support and quality service given to the Beach Mosquito Control District. The citizens ultimately benefit from this dedicated and professional service.

Please feel free to call myself or any of the staff at Beach Mosquito Control District for any mosquito related question or issue. We are here to serve you, the taxpayers.

*Sincerely,*

A handwritten signature in cursive script that reads "James F. Clauson". The signature is fluid and includes a long, sweeping underline.

*James F. Clauson*

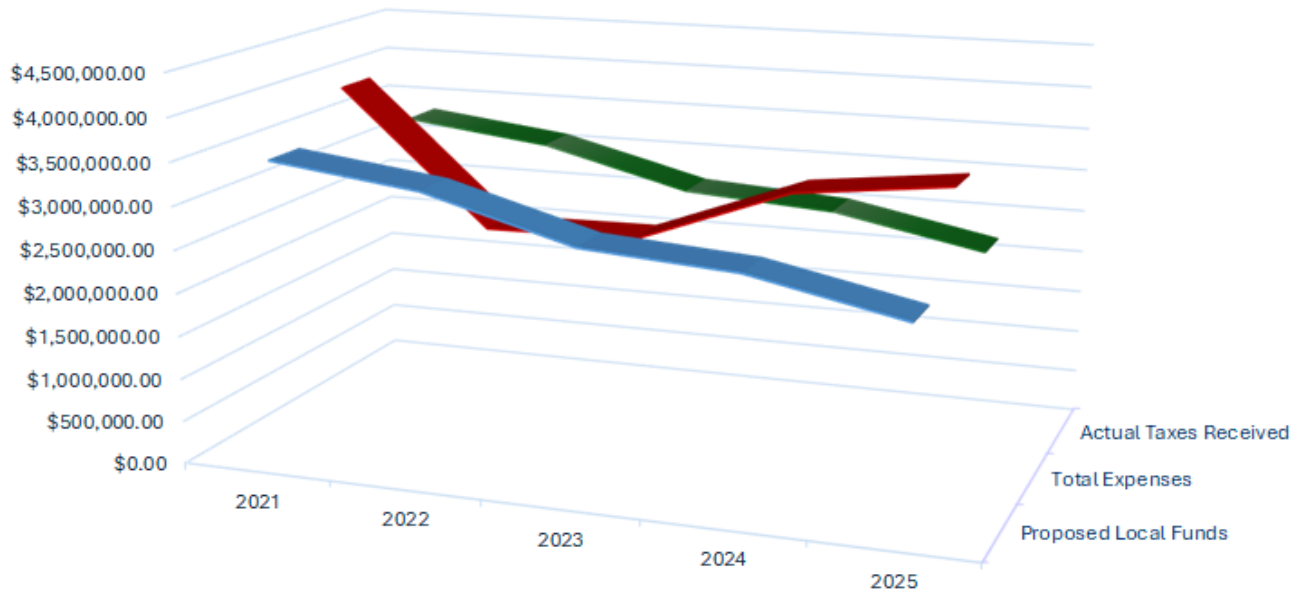
### **Administrative Office Duties Include:**

- ❖ Maintains computerized bookkeeping (Quick Books) system according to established accounting regulations.
- ❖ Maintain employee times via Time-Clock Plus software.
- ❖ Manage all revenue funds and maintain various bank accounts.
- ❖ Responsible for all billing records pertaining to District insurance policies including employee health, vehicle and property, liability, and workers compensation, including but not limited to contact with agents, filing claims and final audits.
- ❖ Assist Director in preparation of bids and annual budget preparation.
- ❖ Prepare financial statements and required state and financial activity reports monthly.
- ❖ Participates in staff meetings to include taking minutes.
- ❖ Attends Board of Commissioner's meetings and produces minutes of said meetings.
- ❖ Responsible for monitoring requirements for TRIM and Special Taxing Districts, including preparing required ads.
- ❖ Keeps all HR records and files including personnel files, 457 plan, Florida Retirement System

Because Beach Mosquito Control District is an Independent Special Taxing Governmental Entity, **all** office related duties (payroll, employee time, insurance, Human Resource personnel matters, etc.) are conducted in house.

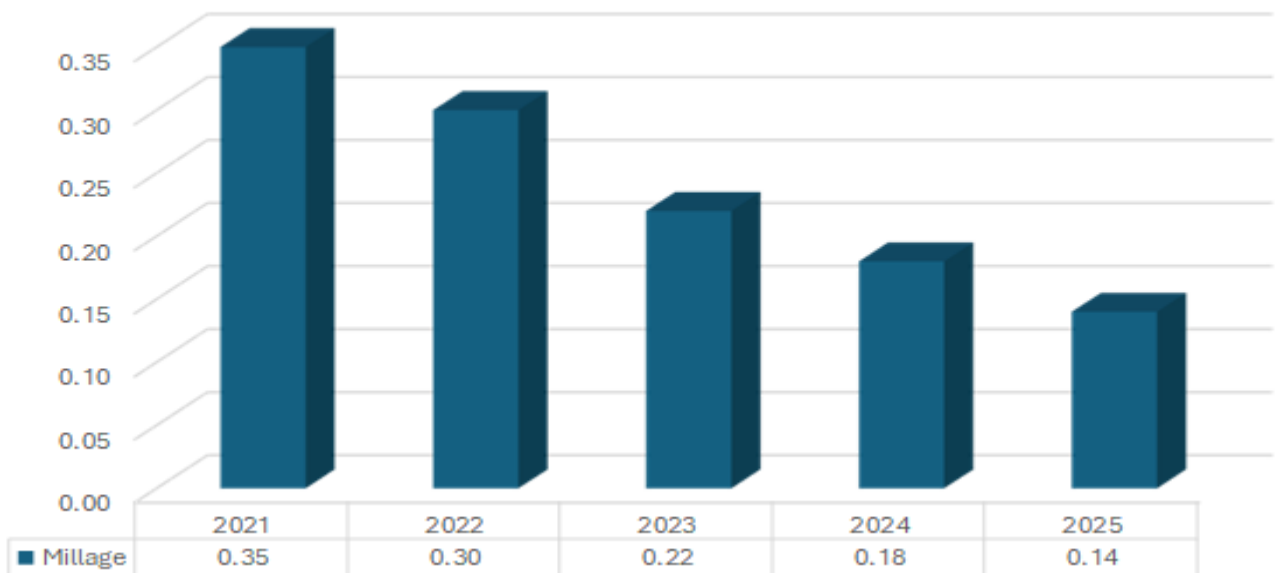
Proposed Local Funds are the monies that Beach Mosquito Control District bases the budget on. Total Expenses are the funds used to operate Beach Mosquito Control District. Actual Taxes Received are the local funds that were received through Ad Valorem Taxes. Millage is the final rate that was voted on and accepted by the Beach Mosquito Control District Board of Commissioners. When expenses exceed income as indicated on the graph, reserves make up the difference. BMCD keeps a prudent amount of money in reserve.

### Beach Mosquito Control District Ad Valorem Receipts



	2021	2022	2023	2024	2025
Proposed Local Funds	\$3,477,762.00	\$3,260,297.00	\$2,777,985.00	\$2,656,670.00	\$2,294,305.00
Total Expenses	\$4,011,872.16	\$2,447,199.55	\$2,470,927.97	\$3,140,564.40	\$3,345,405.02
Actual Taxes Received	\$3,325,017.33	\$3,111,051.89	\$2,663,589.26	\$2,547,581.48	\$2,200,862.14

### Beach Mosquito Control Millage Rates



## **Public Relations/Education Summary 2024-2025**

Education and communication to the public is extremely important when operating an effective and sophisticated mosquito control district. They are essential for an integrated approach to mosquito control. BMCD accomplished this by teaching in the classrooms of the various schools in the district. Also, civic events are held throughout the district all year long. We are very proactive with our message to the taxpayers and visitors to our area.

### **Total Number of Days Spent at These Events & Parades 31**

#### **Summary BMCD's Education Program:**

Total number of different events = 18      The actual number of days spent at events = 31

Total number of students attending our in-school programs in PCB schools = 3,654

University Academy Students = 750

\*(Number does not include Teachers & Parents/Guardians attending program at University Academy)

FSU Public Health Students = 5

**Total Number of Students Attending BMCD's Education programs = 4,409**

### **176 Classes were attended (Number does not include classroom staff or visitors)**

#### **Events 2024-2025**

**Two Very Large events BMCD annually participates in are: Cops & Kids and Kid Fest**

**Spring Kids Fest 2025:** Attendance at this event exceeded 7,000.

**Fall Cops & Kids = 2024:** Over 3,000 Visitors

**Gulf World: World Oceans Day (June) & Ghostly Gathering (Oct.)** 2,535 Visitors

**2025 PCB Winter Appreciation Days:** 1,500 total, 3 days event

**2025 Camp Helen Spring Scavenger Event:** 300 children

**West Bay Elementary School Science Night:** 200 Families attended.

#### **2024 Building Relations with Hardware Stores**

**PCB Ace Hardware:** 200 visitors each visit. (Spring & Fall), total 400 visitors

**Home Depot:** 225 visitors

**Lowe's:** 235 visitors

**PCB Concert Series:** PCB Parks & Recs. 10 Weeks long event  
3 concerts with 1,000 people each concert  
7 with average crowd of 450 = 3,150

**Lake Powell Coastal Clean-Up:** (Fall) BMCD Tent (one person), (Event staff helps w/tent)  
Event Attendance:(150 to 200) (Public Lands)

**2024 Camp Helen Pumpkin Patch:** BMCD typically participates in 2 or 3 days for  
this 5-week event. Averages up to 325 + each  
day.

Total 1,625 visitors

**2024 University Academy Community Day:** Mosquito Biology Lab  
Preschool – 8<sup>th</sup> grade 750 Students total.

**Parades:** Christmas, Mardi Gras, Pirate Parade

**Presentations:** Code Enforcement-70, Optimist Club-50, Women’s Civic Club-50 to 100

### **School Programs**

Hutchinson Beach Elementary School = 1,209

Patronis Elementary = 390

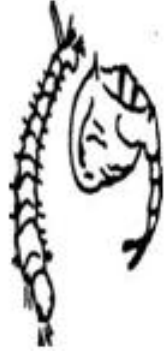
Breakfast Point Academy = 255

West Bay Elementary = 1,075

Walsingham Academy = 725

Total 3,654

**FSU Public Health Students** = 5 (Florida State University Shadowing program where public health students spend a day at the district learning about mosquito control)



# MOSQUITO SURVEILLANCE



**10/01/24 through 09/30/25**



## **MOSQUITO SURVEILLANCE 2024--2025**

BMCD weekly collects mosquitoes using an updraft trap at the U.S. Naval Support Base, PCB. The trap was set for a total of 81 trap nights capturing 1586 mosquitoes. Adulticiding control measures were managed both for aerial and ground applications. Because of no tax revenues from the Navy Base, the district is compensated through a contract with the Base.

### **ADULT SURVEILLANCE**

Our district utilizes several surveillance trapping methods to monitor the local mosquito populations. Traps are set Monday through Friday. The gathered data is collected, compiled, and recorded for maintaining current and historical reports. The number of mosquitoes trapped is significant because it determines if treatment is necessary. In addition, it demonstrates the impact the treatments are having to an area. This year's season consisted of 81 trapping days and nights.

### **DOMESTIC SURVEILLANCE**

Due to growing concern of domestic urban container inhabiting mosquitoes, BMCD has been conducting "artificial container" breeding mosquito surveillance. When the *Aedes aegypti*, aka 'Yellow Fever Mosquito,' is found, an exhaustive survey is conducted at the home and the surrounding neighborhood. *Aedes aegypti* is the main vector of dengue and has been "rediscovered" in the district.

### **SENTINEL CHICKEN FLOCKS**

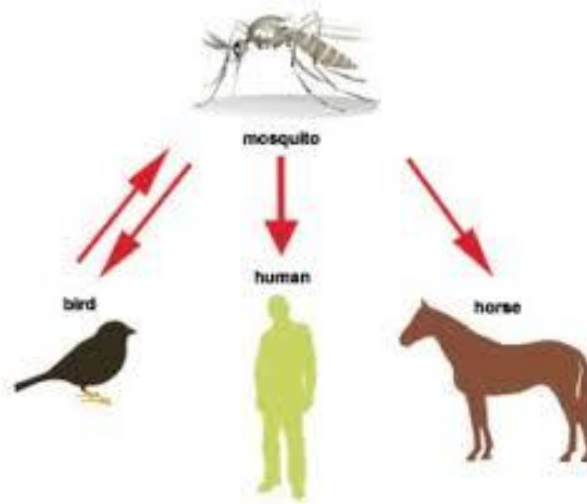
The Beach Mosquito District's weekly sentinel flock arbovirus blood serum collections this year began the first week of October 2024 and ended the last week of September 2025. Three flocks of 6 chickens were set in three separate locations throughout the district. On the east end of the district behind S and S, the central location located at the Panama City Beach Wastewater Management and Treatment Plant and at the west end of our district off West 14<sup>th</sup> Street.

A total of 699 samples were drawn, prepared, and shipped to the State of Florida Arbovirus Laboratory in Tampa to be analyzed for arbovirus antibodies. This year's total arbovirus positive results for the flocks were as follows: 0 Eastern Equine Encephalitis virus (EEE), 12 West Nile Virus (WNV) and 0 Highlands J virus. These positives indicate that a mosquito-borne virus was detected by the bird being bitten by an infected mosquito carrying the virus. The blood sera-conversion data is crucial to keeping the public safe. Our data is sent to the Bay County Health Department, and they base their decision about alerting the public. This information is also extremely important for us to determine the type of method of mosquito control our district chooses to use. The district response is enhanced larvaciding and adulticiding as needed. The surveillance collection data gathered helps BMCD to take the appropriate precautionary measures to maintain the quality of public health and safety for our community.



### ARBOVIRUS MOSQUITO SURVEILLANCE

West Nile Virus (WNV) surveillance has been performed by testing targeted mosquito vectors for the presence of WNV. Surveillance began July 2025 through September 2025 utilizing CDC Gravid traps. Mosquito pools are sent to the State of Florida Arbovirus Laboratory in Tampa to be analyzed. Because of the low numbers of gravid female mosquitoes, no pools were sent into the State Lab.

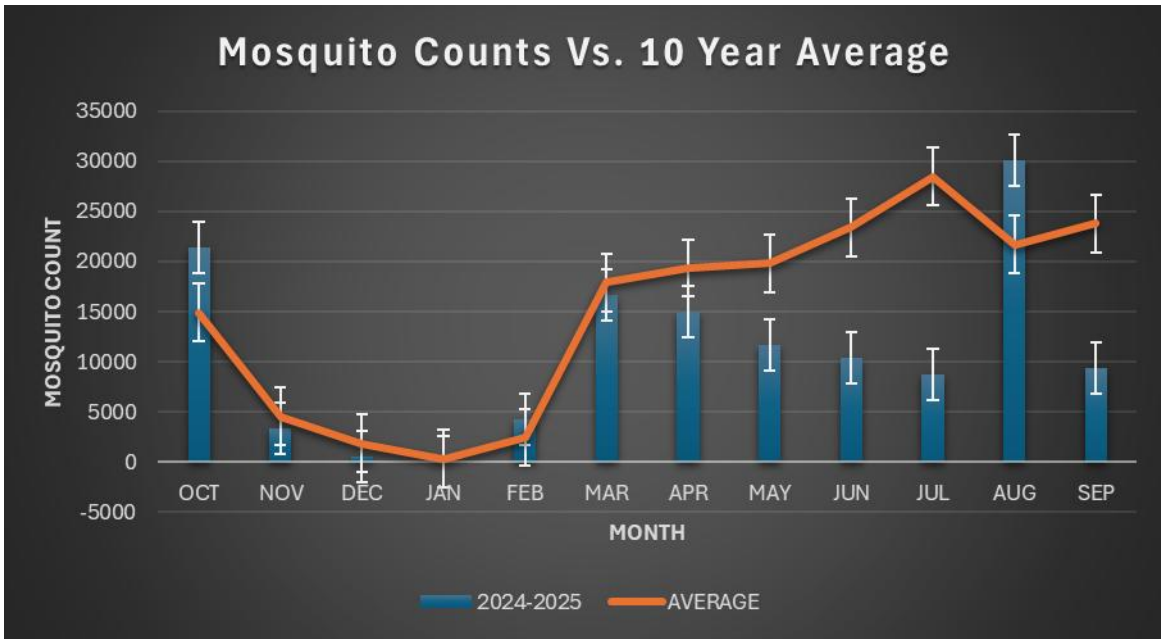


### SUMMARY FOR ADULT MOSQUITO ACTIVITY

October 1, 2024, marked the beginning of BMCD’s 2024-25 mosquito season. The year began with mosquitoes being lower than the ten-year average trapped in our district. Listed are each month and their totals: October- **21,440**, November- **3,385**, and December- **607** mosquitoes. Mid-season and towards the end of summer, the number of mosquitoes trapped had a decline when compared to BMCD’s 10-year average, except for a spike in August. These are a sample of months and their totals for the number of mosquitoes observed: April- **14,959**; July- **8,795** and August- **30,111**. Our area experienced six months of mosquito collections well below the ten-year average. The grand total number of mosquitoes trapped during this past year is **131,711**.

Over half of the rainfall amounts for the season were within an inch of the average with exceptions during the months of March, April, May, August, and September.

<u>Month</u>	<u>Rain</u>	<u>10-yr Average</u>	<u>Increase/ Decrease</u>
March	3.856	2.646	Increase
April	1.01	4.822	Decrease
May	6.307	2.720	Increase
August	5.53	8.980	Decrease
September	1.458	5.476	Decrease



## Operations Report Summary 2024-2025

Beach Mosquito Control District utilizes software to find, track and maintain larval breeding sites throughout the district. By doing this, our operations department can systematically treat known water that breeds mosquitoes. By controlling the larvae, adulticiding is reduced. Below is the number of mosquito breeding sites for 2024/2025.

**Number of Sites visited or treated:** 6930 Sites.

Site Category:

**Ditches:** 177:

Inspections: 257

Treatments: 219

Acres Treated: 36.8

**Retention ponds/ depressions & low areas:** 539

Inspections: 530

Treatments: 1,169

Acres Treated: 420.5

**Swimming pools:** 60

Inspections: 67

Treatments: 58

Acres Treated: 0.6

Gambusia (fish): 21 treatments

Briquettes/Other: 34 treatments

**Catch Basins: 5524**

Inspections: As needed

Treatments: 1073 (Catch Basins are grouped into singular site IDs)

Acres Treated: 14.4

**Catch Basins special (Lead to public waterway): 470**

Inspections: As needed

Treatments: 175 (Some Special Catch Basins are grouped into singular site ID's).

Acres Treated: 1.1

**Landing Rate sites: 114** (landing rate is where an individual stands for one minute and counts the number of mosquitoes landing). This gives a realistic human index for the level of mosquito activity. They are conducted at various locations throughout the district.

Inspections: 598

Treatments: 50 (Immediate/Hand Fogging)

Acres Treated: 74

**Tire & Container sites: 17** (not including habitual service request locations).

Inspections: 15

Treatments: 36

Acres Treated: 3.5

**Aerial Larvicide Inspection sites: 157**

Inspections: 71

Treatments/Sorties flown: 19

Acres Treated: 382.4

**Other unclassified site visits:**

Post Treatment Inspections: 27

**Wide Area Larviciding (WALS) (Urban):** This is spraying, with a large blower, a fine mist of larvicide material into the air from the ground and letting it drift and land in mosquito breeding sites. This is highly effective for larval breeding.

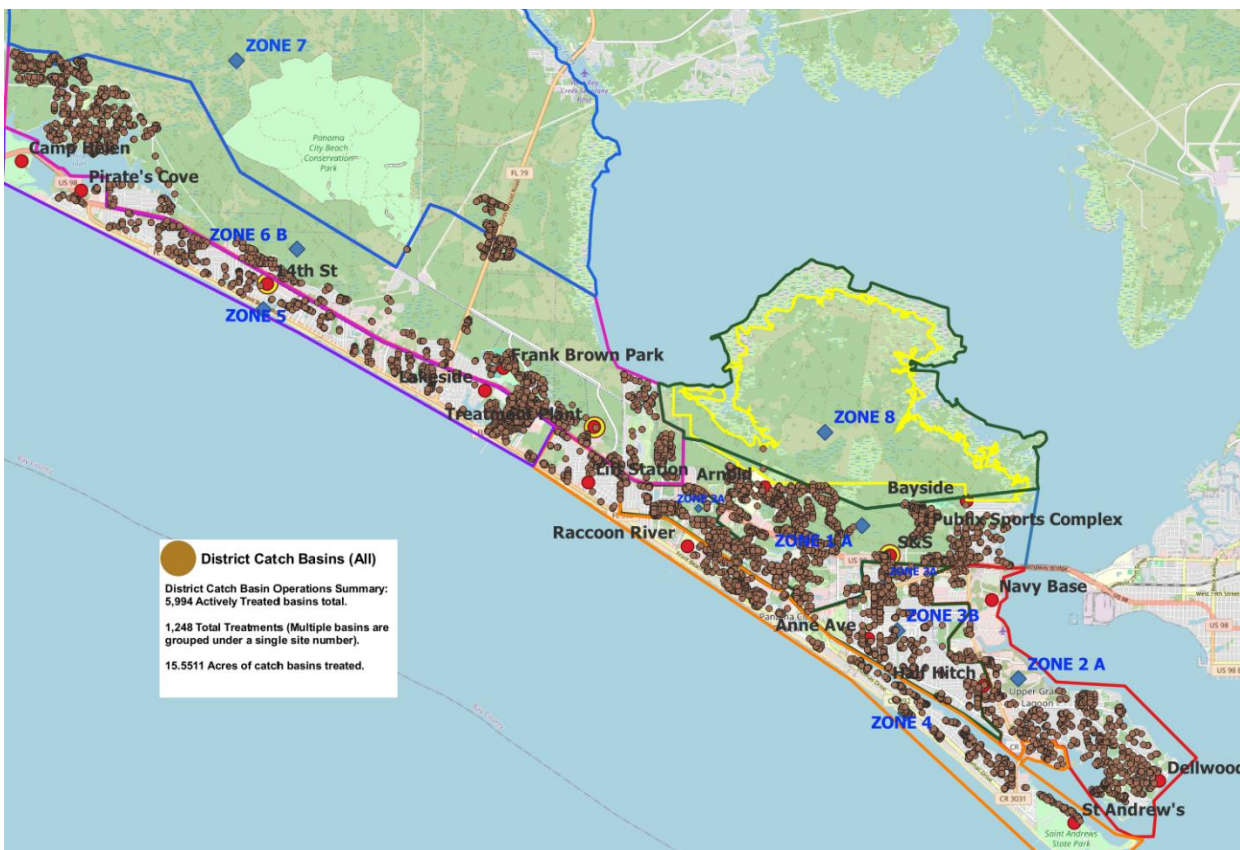
Missions: 30

Acres Treated: 3045

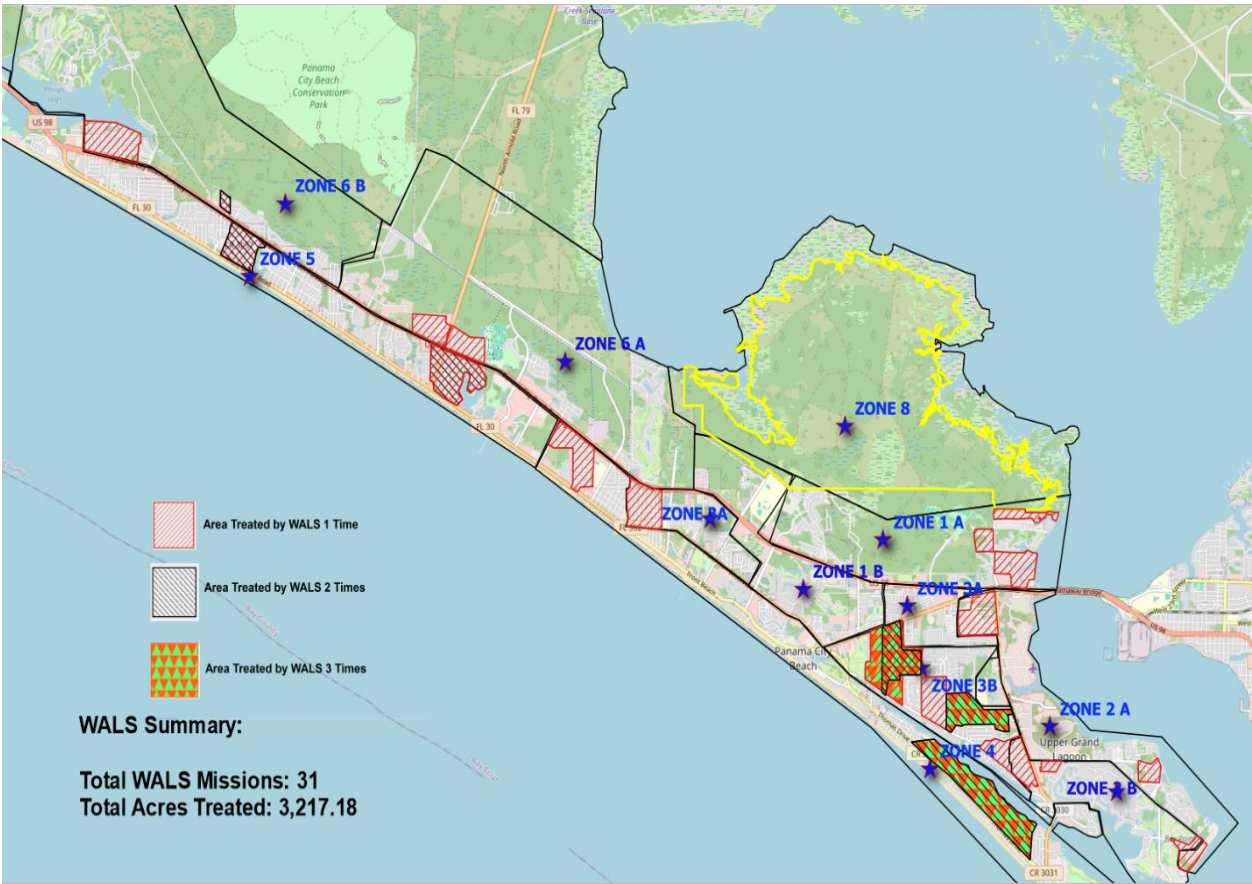
**Wide Area Larviciding (WALS) (Rural):**

Missions: 1

Acres Treated: 172.1







# Annual Aerial Adulticiding & Larviciding Summary

Ultimately, the most effective and efficient method of controlling mosquitoes, both larva and adults, is through aerial treatments. BMCD owns 2 helicopters. The 1972 surplus Army OH 58 (Kiowa) is used for larviciding.

The 2020 Bell 505 is used for adulticiding. Both supplement the normal groundwork when the level of mosquitoes is excessive. Below is specific information that pertains to these valuable assets:

Conducted or complied with 13 airframe inspections or maintenance items on the 505.

Conducted or complied with 4 engine inspections or maintenance items on the 505.

Conducted or complied with 16 standard annual or continued airworthiness inspections on the 505.

Conducted or complied with 5 FAA airworthiness directives or service bulletins on the 505.

Conducted or complied with 7 miscellaneous additional maintenance requirements on the 505.

New fittings and valves on the tank.

Custom metal work on the tank.

Conducted or complied with 26 standard maintenance requirements on OH58.

Conducted or complied with 5 unscheduled maintenance requirements on the OH58, such as the sheared starter shaft.

Applied over 3000lbs of larvicide material.

## 1 October 2024 – 30 September 2025

- **Combined Total Helicopter Treatment Flight Time: 15.5 hours**
- **Total Flight Missions Flown: 6**

### Adulticiding Missions Flown:

<u>Product Used</u>	<u>Area Treated</u>	<u>Application Rate</u>
Dibrom	0	.67 oz/acre

### Larviciding Missions Flown: 2

<u>Product Used</u>	<u>Area Treated</u>	<u>Application Rate</u>
2800 lbs. Vectobac GS	679 acres	7.1 lbs. per acre
<b>Total Acres Larvicided:</b>	<b>679 acres</b>	

**2020 Bell 505**



**1972 OH 58 (Kiowa)**



## Professional Training, Presentation and State & National Meetings

We are always striving to offer our district the safest and healthiest quality of cost effective mosquito control. In order to maintain and improve our level of service, it's very important to continue educating our employees with up-to-date knowledge. This is accomplished through attending educational conferences or taking classes. In addition, Beach Mosquito Control District employees actively participate at these meetings by delivering presentations on their involvement with current research and development projects that benefit the mosquito control industry.

This past year, Beach Mosquito Control District staff and commissioners attended the following professional meetings: The annual Florida Mosquito Control Association (FMCA), The Florida Mosquito Control Association Aerial Short Course, The Florida Mosquito Control Association Dodd Short Courses, FMCA Legislative Tallahassee Days, and the American Mosquito Control Association (AMCA). We are proud to highlight district personnel speaking at State and National meeting and providing training.

FASD, (Florida Association of Special Districts) Quarterly meeting October 2024- James

FMCA, (Florida Mosquito Control Association) 2024- James, Teahna, Eddie, Larry, Dale

FASD Quarterly Meeting January 2025- James

DODD (Specialized Mosquito Training, Gainesville, Fl.) Jan 2025- James, Cindy, Dale, Mike, Michelle, Sara, Teahna, Kyle, Travis

2025 AMCA (American Mosquito Control Association)- Cindy, James, John, Larry, Teahna, Travis

VAI (Vertical Association International) conference 2025- James

FMCA Tallahassee Days- Cindy, James

2025 Anastasia Mosquito Control District's Annual Workshop- Teahna and Sara

FMCA Fly-In- James, John, Drew

FMIT Insurance Summit- James

2025 AMCA Washington Days- James and Cindy

FASD Annual Conference- James

Safran Annual Helicopter Meeting- James



# Spot & Stop Mosquito Breeding

Do your part!!!

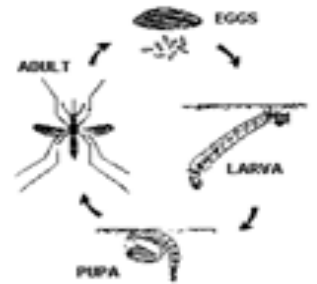
Weekly Check for Standing Water on  
your property.

For Free Mosquito Assistance for Panama City Beach

Contact: Beach Mosquito Control District

Phone: (850) 233-5030

Visit: [www.pcbeachmosquito.org](http://www.pcbeachmosquito.org)



## Meet the Beach Mosquito Control District Staff Members



**Left side, out to in: Cindy Mulla, Michelle Buell, Teahna Stephens, Sara Deaton, James Clauson, Travis Kern**

**Right side: out to in: Eddie Summers, Michael Yawn, Andrew Lewis, Kyle Pridgen, Lee Duke**

**They Can Fly... But They Can't Hide!  
We've Got Them Under Control**

