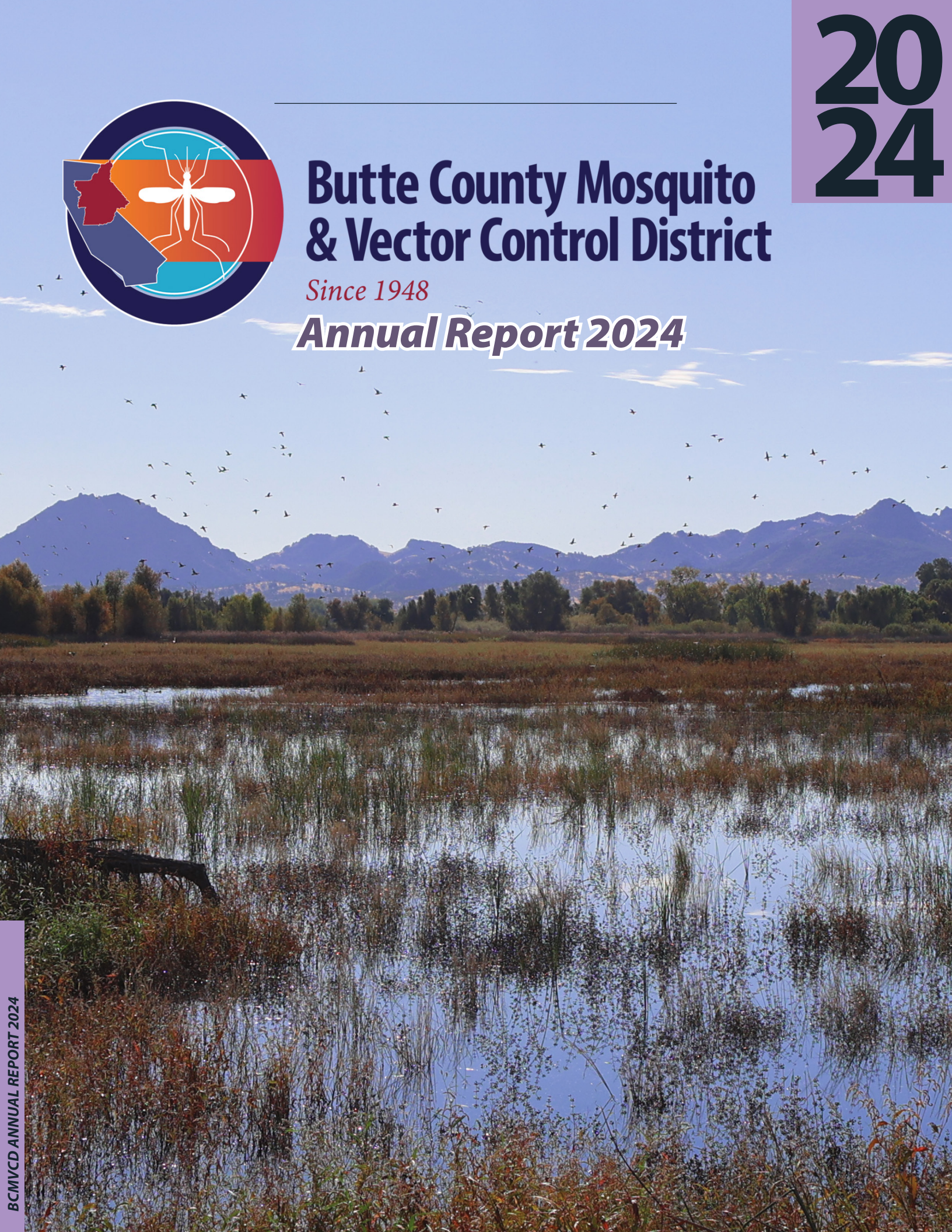
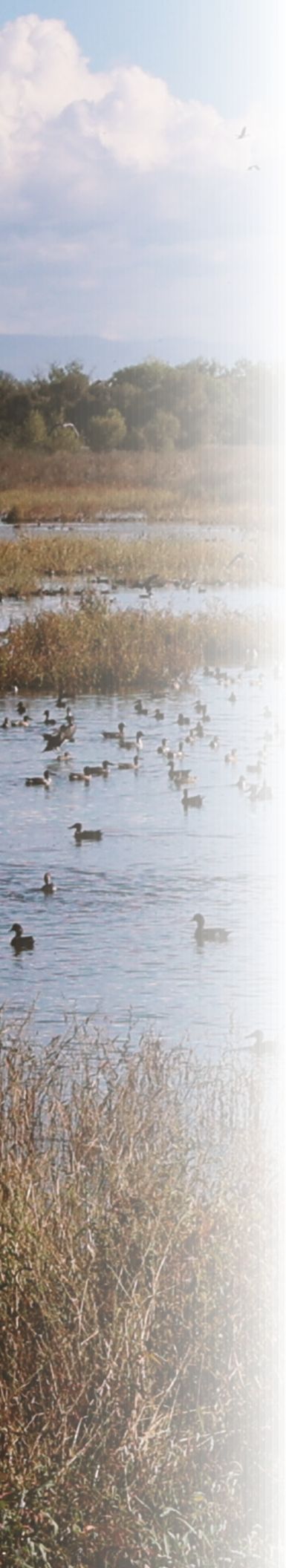
2024

Butte County Mosquito & Vector Control District

Since 1948

Annual Report 2024





BUTTE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT

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CONTACT INFORMATION

Butte County Mosquito and Vector Control District
5117 Larkin Road, Oroville, California 95965
(530) 533-6038 (530) 342-7350
Fax (530) 534-9916
Visit us on the web at www.buttemosquito.com

Front cover and inside cover: Gray Lodge Wildlife Area

MANAGER'S FOREWORD

It is my honor to submit the 2024 Annual Report for the Butte County Mosquito and Vector Control District. The District had a very successful year serving the residents of Butte County and Hamilton City by utilizing an integrated vector management (IVM) approach that included public education and outreach, vector surveillance, reduction of breeding grounds by physical and cultural control by altering the environment and/or management practices, and by using sound biological and chemical control methods. This report outlines the work conducted by the District to accomplish its primary goal of protecting public health.

The prevention of vector-borne disease outbreaks remains the District's primary goal and its most important responsibility to the public. West Nile virus (WNV) has long been considered to be endemic in the state of California and remains the District's largest public health concern. The state observed another extremely active WNV season and for the past several years St. Louis encephalitis has again started to become active in parts of the state. The extraordinary efforts to combat the WNV epidemic and St. Louis encephalitis resurgence in California should be credited to the combined efforts of more than 60 mosquito and vector control districts and local health departments, working in close cooperation with the California Department of Public Health and numerous other agencies indirectly related to mosquito and vector control.

For the fifth year in a row, Aedes aegypti, a major public health concern and an invasive species, was collected and identified in Butte County. Detections of this mosquito were found in Chico, Oroville, Thermalito, Biggs, Paradise, Gridley and Hamilton City. Through the challenges of 2024, the District was still able to perform the essential services the public we serve has come to rely on and responded to 2286 service requests.

The District continues to aggressively control unmaintained / abandoned swimming pools, catch basins, storm drains, and retention / detention ponds and works in partnership with other local agencies and governments to maintain improper functioning utilities that could and have bred mosquitoes.

Regardless of drought conditions, the over-watering of landscaped yards and environments continues to add to the mosquito breeding problems in urban mosquito sources and extends the length of our mosquito season. In addition to urban mosquito breeding problems, the District continues surveillance and control in agricultural, rural, and wetland areas that breed mosquitoes. Due to two newly established invasive mosquito species in the state of California and now within Butte County, the District has greatly expanded surveillance efforts to detect either of these two species of mosquitoes. The District continues to conduct surveillance of ticks of medical importance and control of yellowjackets.

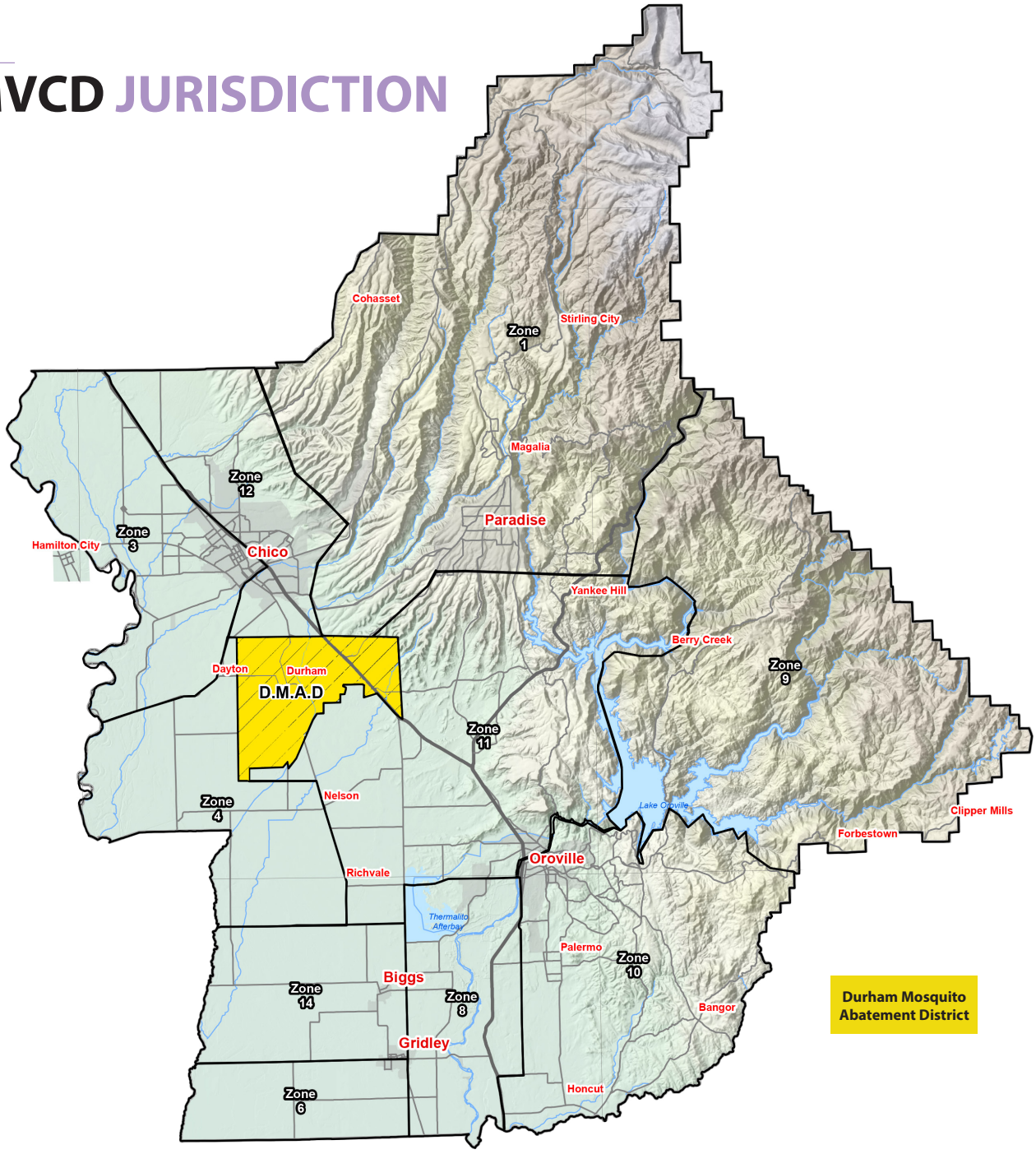
"The Mission of the Butte County Mosquito and Vector Control District is primarily to suppress mosquito-transmitted disease and to also reduce the annoyance levels of mosquitoes and diseases associated with ticks, fleas, and other vectors through environmentally compatible control practices and public education." To achieve this goal the District provides continual surveillance of mosquitoes and other vectors to ascertain the threat of disease transmission and annoyance levels and then uses integrated vector management methods to keep mosquitoes and other vectors below those levels. The District continues to work in cooperation with property owners, residents, social groups, and other governmental agencies to minimize mosquito breeding and to reduce the threat of mosquito-transmitted diseases.

The Board of Trustees and employees continue to plan and search for better ways to improve our programs to be prepared for future disease outbreaks that would be a threat to the health of Butte County and Hamilton City residents. We look forward to providing our services to you in the future and if you have any questions or need more information, please visit our website at ButteMosquito.com or call us at 530-533-6038 or 530-342-7350.

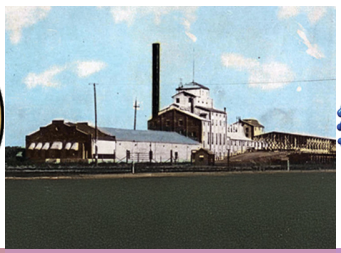
Respectfully,

MATTHEW C. BALL
District Manager

BCMVCD JURISDICTION



DISTRICT HISTORY



District Formed

Butte County Mosquito Abatement District formed to manage Malaria epidemic

1948

Relocation

Relocated Main Office from City of Biggs to current location in City of Oroville

1950s

Annex Hamilton City

Annexation of Hamilton City in Glenn County, into the District's Service Area

1986

WEE and SLE

Western Equine and St Louis Encephalitis viruses

1990s

District's Name

District's name changed to Butte County Mosquito and Vector Control District

1993

Mission

The mission of the Butte County Mosquito and Vector Control District is to primarily suppress mosquito-transmitted disease and to also reduce the annoyance levels of mosquitoes and diseases associated with ticks, fleas and other vectors through environmentally compatible control practices and public education.

Main Office Location

5117 Larkin Road
Oroville, CA. 95965

Substation Location

444 Otterson Drive
Chico, CA. 95928

West Nile Virus

West Nile Virus Arrives in Butte County

2004

New Chico Substation

New Substation location opened in south Chico

2011

Benefit Assessment

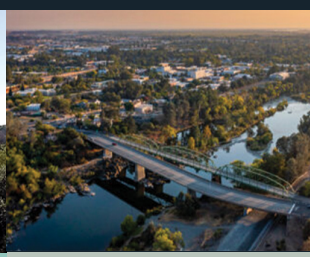
Special Benefit Assessment to improve all services provided by the District

2014

Annex DMAD Areas

Annexation of Durham Mosquito Abatement's 23 mi^2 of Rice and Wetlands

2018



Annex OMAD

Annexation of Oroville Mosquito Abatement District's 12 mi^2 service area

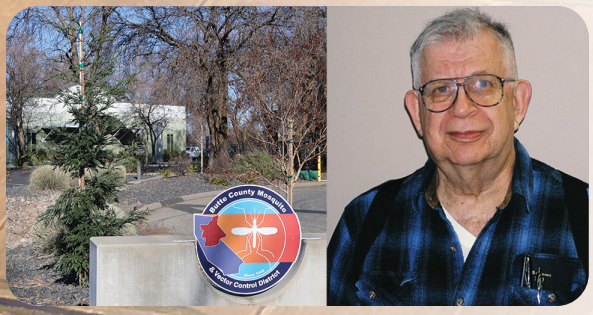
2021

BUTTE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT PERSONNEL

BOARD OF TRUSTEES

Name	Title	Represents	Started	Expires	Years Served
Andrew Haymond	Trustee	District 1	01/09/2024	12/31/2025	01
Carl Starkey	Trustee	District 2	01/08/2013	12/31/2024	12
Philip LaRocca	Trustee	District 3	02/12/2019	12/31/2026	06
Darlene Fredericks*	Trustee	District 4	01/01/2022	12/31/2025	03
Steve Ostling	Trustee	District 5	01/09/2024	12/31/2027	01
James Bo Sheppard	President	City of Biggs	12/13/2010	12/31/2026	14
Dr. Larry Kirk	Vice President	City of Chico	02/01/2012	12/31/2025	13
Bruce Johnson	Asst Secretary	City of Gridley	01/01/2016	12/31/2023	09
Melissa Schuster	Secretary	Town of Paradise	12/13/2016	12/31/2026	08
Eric Smith	Trustee	City of Oroville	01/16/2024	12/31/2025	01
Vacant Seat	Trustee	Hamilton City			

*Not seen in picture



Dr. Albert Beck dedicated 50 years of service to the Board, sharing his invaluable knowledge and wisdom throughout his tenure. It is with great sadness that the District announces his passing in 2024. To honor Dr. Beck's remarkable contributions, a memorial tree has been planted along with a commemorative plaque and the District flags were hung at half-mast an entire week. Please note that no District funds were used for this tribute.

BCMVCD STAFF

ADMINISTRATION

Matt Ball *District Manager* AAron Lumsden *Assistant Manager* Maritza Sandoval *Administrative Manager*
Amanda Bradford *Entomologist II* Shane Cassity *Regional Supervisor II* Charlie Favilla *Regional Supervisor I*
Ryan Rothenwander *Vector Ecologist/Fish Biologist* Del Boyd *Pilot II* Sara MacKenzie *Office Assistant*

MOSQUITO & VECTOR CONTROL SPECIALISTS (MVCS)

Shane Robertson *MVCS IV*, Eric Dillard *MVCS III*, Glen Williams *MVCS III*, Kenny Armstrong *MVCS II*
Kellen Larson *MVCS II*, Jeremy Edwards *MVCS II*, Aaron Goff *MVCS II*, Frank Lopez *MVCS II*
Michael Langley *MVCS I*

MOSQUITO & VECTOR CONTROL ASSISTANT SEASONALS*

Jay Alexander, Kelcei Avakian, Erin Carmichael, Colton Chenoweth, Daniel Flesher, Jonathan Harris
Landon Herman, Daniel Mayer, Jason St. Clair, Trevor Wagoner, Dustin Williams, Faith Freitas

**Not seen in picture*

Jack Bequette dedicated 19 years of service to the Board. It is with great sadness that the District announces his passing in 2024. He will be remembered fondly for his warm spirit, infectious sense of humor and unique way of connecting with others, in which he used to foster friendships and bring smiles to those he met. Jack's memory will forever live in the hearts of those who knew him. District flags were hung half-mast all week in his honor.

MOSQUITO BIOLOGY

There are more than 3,500 species of mosquitoes around the world and in California we have about 50 species. Only a few species are considered public health threats due to their potential to transmit mosquito-borne diseases to humans. People who have been bitten by a mosquito infected with viruses such as West Nile, Saint Louis Encephalitis, Dengue, and Zika may develop life-threatening or life-altering diseases. For the District and residents of Butte County to effectively reduce mosquito populations and the chance of getting a mosquito-borne disease, it is important to understand the habits and behaviors of the different mosquito species. This water can range in quality, and it can be in any container imaginable. The mosquito goes through four separate and distinct stages of its lifecycle: egg, larva, pupa, and adult. Some species can go through their entire life cycle in as little as four days. All mosquitoes must have water to complete their lifecycle.

Egg

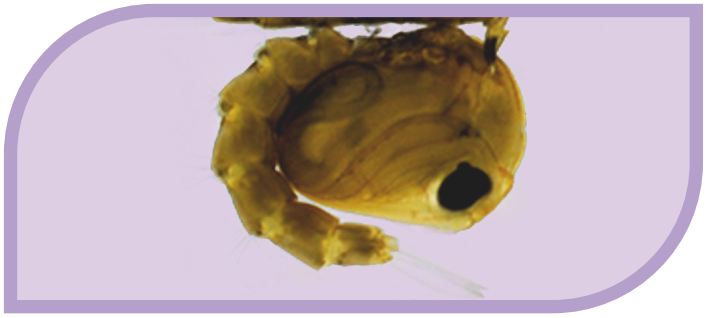
Eggs are laid on or near water, or where water may collect or accumulate. They may be laid one at a time or stuck together in rafts of 100-300 eggs. Most eggs hatch into larvae within 48 hours of coming into contact with water.

Larva

Larvae live in water and breathe air from the surface. Larvae feed on micro-organisms and organic matter in the water. They shed their skin four times growing larger after each molt. The stages between molts are called instars. When the 4th instar larva molts it becomes a pupa.

Pupa

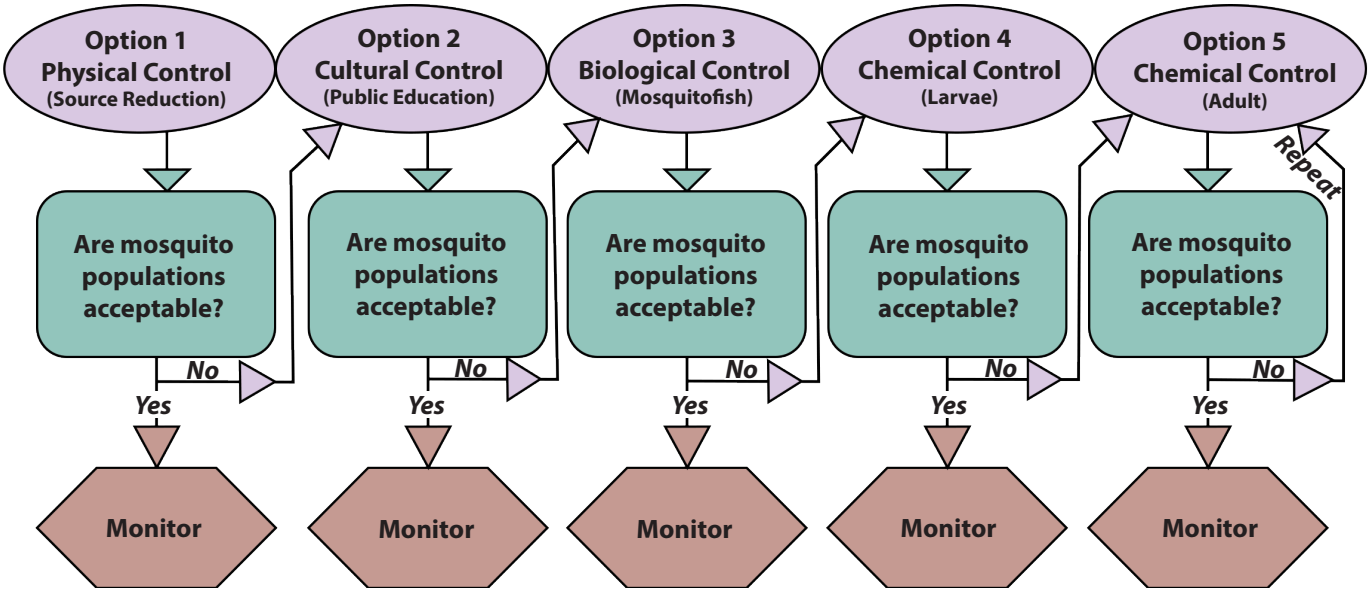
Mosquito pupae also float at the water surface and breathe air. When disturbed, they dive in a tumbling motion and then float back to the surface. The pupal stage is a non-feeding stage. This is the time the mosquito turns into an adult. It takes two days before the adult is fully developed.



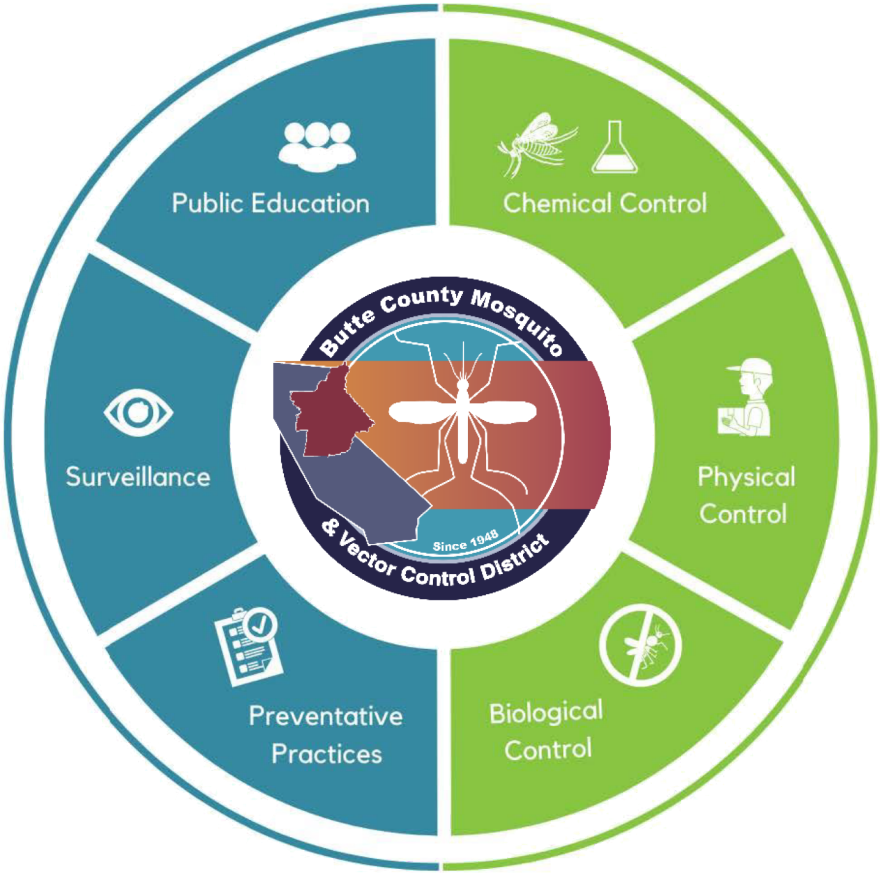
Adult

Newly emerged adults rest on the surface of the water for a short time to allow itself to dry before taking flight. Female mosquitoes feed to get a sufficient blood meal to develop eggs. Male mosquitoes feed only on plant nectar. The life span of the adult mosquito usually depends on several factors: species, temperature, humidity, gender, and time of year. Males live shorter lives.

INTEGRATED VECTOR MANAGEMENT



Integrated Pest Management (IPM) is an effective and environmentally sensitive approach to pest management that relies on a combination of common sense practices. The District's IPM program uses current and comprehensive information on the life cycles of pests and their interaction with the environment. This information, along with available pest control methods, is used to manage pest nuisance and public health threats by the most economical means and with the least possible hazard to people, property, and the environment. The District's IPM includes public education, physical control, biological control, chemical control, and continuous monitoring. Each time one of the District's state certified vector control technicians locates a mosquito breeding source, the flow chart above is followed.



Simply cleaning up around the yard, dumping containers and storing things properly can eliminate mosquito breeding sources.

Using materials such as sand or a water absorbing polymer, can fill in tree holes, excluding them from holding water and preventing mosquito breeding.

PHYSICAL CONTROL
SOURCE REDUCTION

The best method of mosquito control is source elimination (the complete removal of standing water). All mosquitoes need water to breed; unfortunately water is vital to keep lawns green, to grow crops, to sustain life, and to provide habitat for other aquatic insects and animals. District Mosquito and Vector Control Specialists actively work with property owners, land managers, and municipalities to reduce the amount of water needed for irrigation, to observe or consider best management practices, to actively participate in the design of new developments, and the overall reduction of standing water on a property.

PUBLIC EDUCATION OUTREACH
BEST MANAGMENT PRACTICES

The District's mission is to protect residents from mosquitoes and other vectors that transmit disease. Public education and information are important parts to the success of combating diseases such as West Nile virus and Lyme disease. The District's education program consists of public appearances at local city and county fairs, participation in the state Mosquito and Vector Awareness week, and presentations at schools and local civic groups. In addition to the above, the District strives to find new and more effective ways of better educating the public by arming residents with knowledge to prevent mosquito bites and reduce or eliminate mosquito-breeding through informational pamphlets, website information, best management practice manuals, repellent suggestions, one-on-one interaction, and homeowner safeguards. In 2010, the District and the Board of Trustees adopted a final version of a 'Best Management Practices to Reduce Mosquitoes' (BMP) manual. The manual provides property owners with tools and techniques to minimize mosquito populations through the proper use of land management practices while reducing the use of pesticides. The BMP manual is assembled from a number of sources including scientific literature, state and inter-agency documents, and from experienced vector control professionals. The BMP manual includes general guidance to all properties that can, have, and will breed mosquitoes. A copy of the BMP manual can be viewed on the District's website at buttemosquito.com. The manual has successfully been used to reduce mosquito populations/public health threats without the need of additional pesticides.

PUBLIC EDUCATION HIGHLIGHTS

The District aims to educate Butte County residents on preventing mosquito bites and the spread of mosquito-borne illnesses. Residents are encouraged to avoid bites by staying indoors at dusk and dawn, wearing repellent and protective clothing, and ensuring window and door screens are intact. They should also check their property for mosquito breeding sources and eliminate standing water.

In 2024, the District continued its partnership with Lamar Advertising, featuring six rotating billboards with the slogan "Fight the Bite: Cover Up. Repel. Eliminate," as well as bus and bus-shelter ads and digital billboards displaying, "Don't let small bugs become big problems" in Chico and Oroville.

With the detection of *Aedes aegypti* mosquitoes in Chico, Oroville, Biggs, Gridley, Paradise, Thermalito, and Hamilton City, the District distributed brochures, door hangers, and conducted door-to-door inspections near these areas.

The District also renewed its contract with Action News Now, running a PSA on KIXE-PBS from May through September. Radio advertising with Deer Creek Broadcasting and Results Radio and newsprint ads in the Enterprise-Record, Chico News & Review, and Upgraded Living magazine ran during this period as well.

District Public Relations Highlights 2024

-Billboard Ads -Bus and Shelter Ads -Newsprint Ads (Chico News & Review/Enterprise-Record/Upgraded Living Magazine) -Print, Radio, and Television Interviews -Television Public Service Announcements (Action News Now/KIXE-PBS)

PUBLIC HEALTH WARNING: REPORT DAY-BITING MOSQUITOES

Please call the BUTTE COUNTY MOSQUITO & VECTOR CONTROL DISTRICT to schedule an inspection at (530) 533-6038

INVASIVE MOSQUITOES FOUND IN YOUR AREA

Actual Size: About ¼ inch long

WHY THE CONCERN?

Aedes aegypti is an invasive mosquito in California that is capable of transmitting several diseases including Zika, dengue, and chikungunya. While there have been no local transmissions detected to date, the identification and control of this invasive mosquito is important to protect public health.

About *Aedes aegypti* mosquitoes

- Small dark mosquito that bites during the day.
- Prefers to dwell in urban areas indoors and outdoors.
- They especially like to bite ankles, wrists and elbows.
- They lay eggs in small sources of water around homes.
- They are very difficult to control.
- They complete their life cycle in 7-10 days. The adults live for about 3 weeks.
- Invasive *Aedes* are "container breeders". Individual eggs are glued to the sides of containers. Eggs are resistant to drying out and can survive for many months until water covers them.

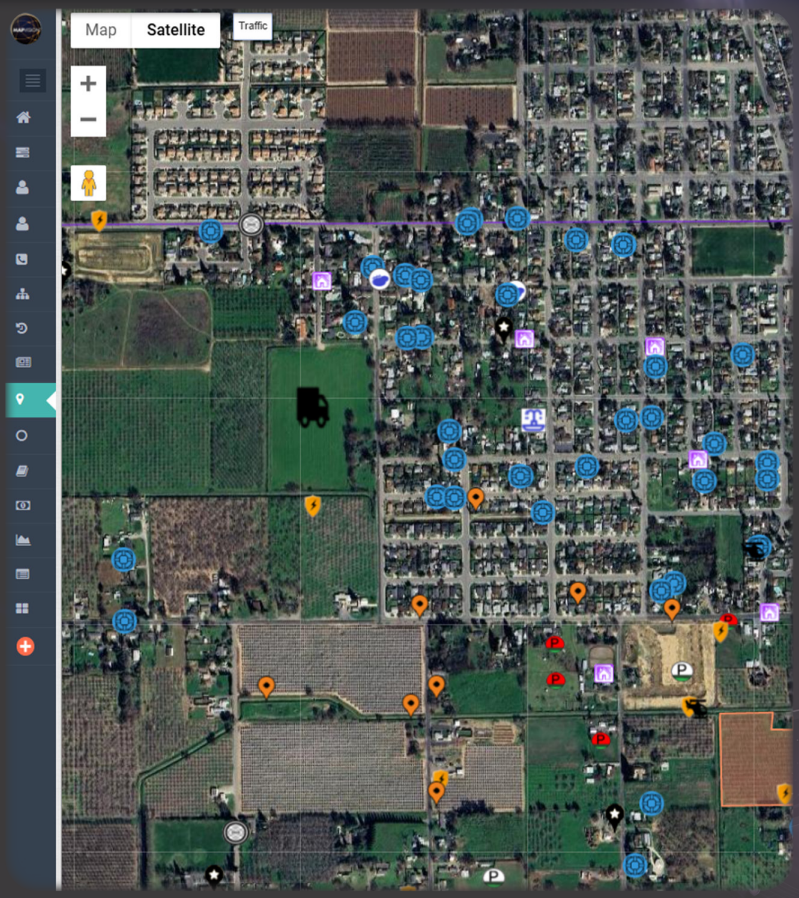
www.buttemosquito.com

-Radio Ads (Deer Creek Broadcasting /Results Radio)
-Invasive *Aedes* (Brochures, Door Hangers, Door-to-Door inspections)
-Chico Home & Garden Show -Paradise Gold Nugget Craft Faire
-State Park Week: North Forebay -Gridley Red Suspenders Days -Oroville Salmon Festival

TECHNOLOGICAL APPLICATIONS

MapVision®

The District continues to utilize the Geographical Information System (GIS) launched in 2018, now featuring the web-based data management system MapVision®. This platform automates workflows across all departments, enhancing data sharing and integrity. Key functionalities include management, billing, time tracking, inventory, operations, and reporting, along with features like inter-agency invoicing and real-time state reporting integration. Notably, MapVision® offers a 'Heightened Surveillance' feature for monitoring invasive species and pathogens, along with a team-based 'Parcel Inspection' program and a 'Resistance Management' module. Overall, MapVision® Enterprise provides an efficient, effective solution for geospatial data management in vector control.



Butte County Mosquito & Vector Control District
Since 1948

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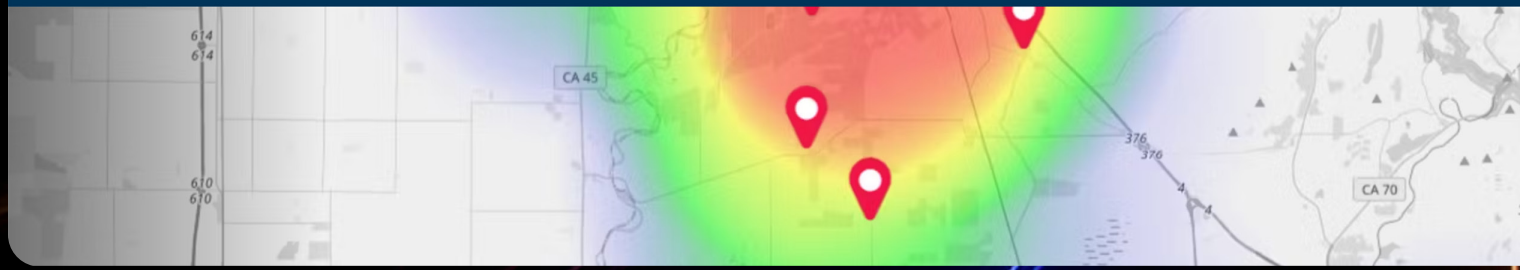
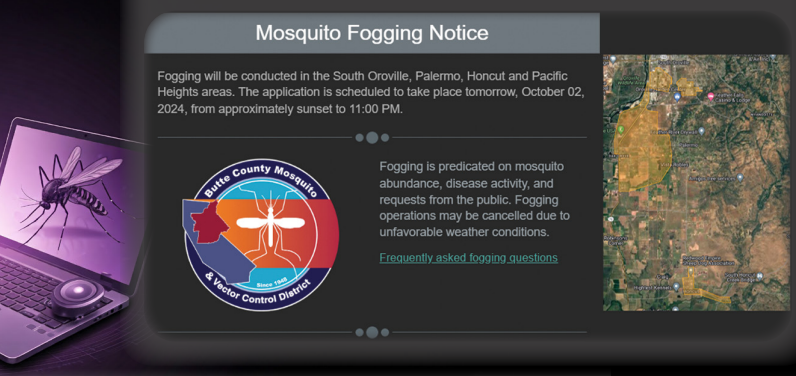


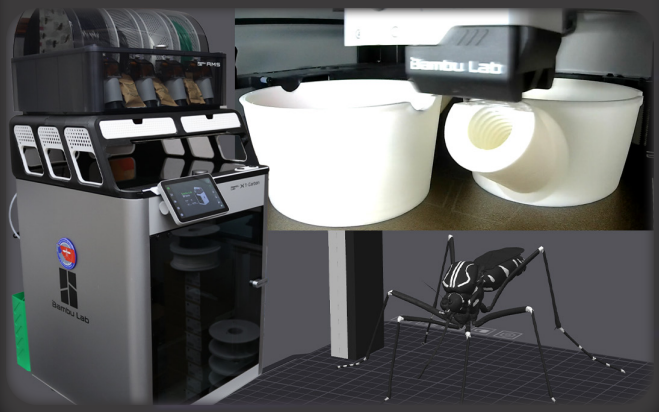
E-mail Notifications

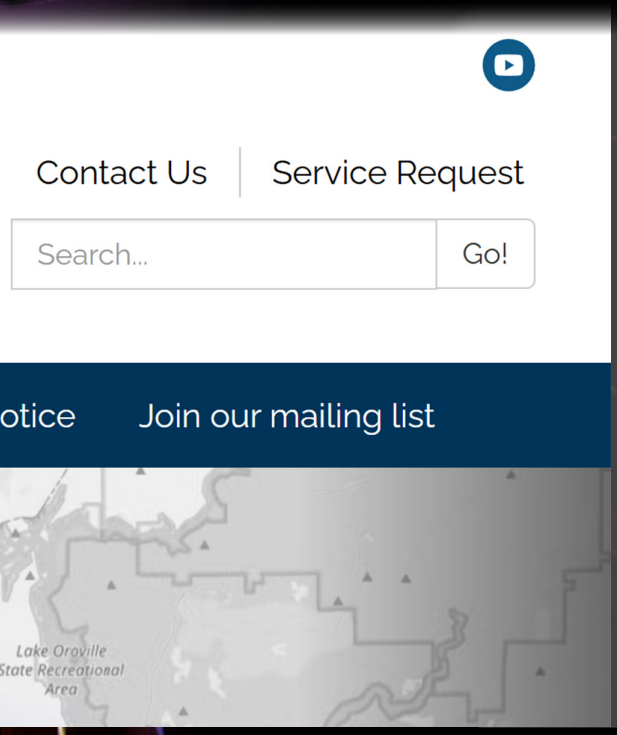
Since 2011, the District has used an email notification system for mosquito fogging to address public concerns and inform relevant agencies. Notifications are sent via Constant Contact, typically 24 hours before fogging, and include maps, pesticide safety information, and scheduling details. The Chico Enterprise Record publishes these notifications to inform readers. Residents can sign up for updates on the District's website, www.buttemosquito.com, which also features pesticide information. Additionally, phone calls are made to inform those without email access.



3-D Printing

Introducing our new 3D printer, a game-changer for maintenance and repairs! This advanced technology allows the District to quickly produce replacement parts for tools and equipment, ensuring minimal downtime. With the ability to customize components, we can create tailored solutions for failed or broken parts that might be difficult to source. This innovative approach enhances our efficiency and responsiveness, making repairs easier and more accessible.





WWW.BUTTEMOSQUITO.COM

On the District website, users can easily request services, sign up for email notifications about upcoming fogging operations, and monitor vector-borne disease activity in the District. They can also access maps showing both current and past fogging locations. Additionally, the site provides access to Board of Trustee meeting agendas and minutes, the latest news impacting the District, and information on viruses and diseases transmitted by mosquitoes and other vectors. Visitors can explore our mosquitofish page to find locations in Butte County and Hamilton City for free mosquitofish pickups. The services page also offers details on yellowjacket and wasp nest removal, tick and insect identification, and a public education section for arranging presentations at schools or community groups. Furthermore, the site features links to pesticide labels and safety data sheets, a frequently asked questions section, and a "Contact Us" page for further inquiries.

VECTOR AND VECTOR-BORNE DISEASE SURVEILLANCE

A vector is any animal that causes discomfort or injury, such as mosquitoes, flies, ticks, mites, and rats, excluding domestic animals, as defined by California State Health and Safety Code, Section 2002(K). Vector surveillance is a key part of the District's Integrated Vector Management Program, focusing on identifying mosquito-breeding sites, monitoring populations, and tracking mosquito-borne diseases. Data collected helps assess public risk, evaluate control efforts, and analyze seasonal mosquito trends. This information is stored in the District's database for historical reference and decision-making.

Mosquitoes caught in one night with EVS Trap

Amanda Bradford
Entomologist II

The District's entomology department, staffed by an Entomologist, Vector Ecologist, and Lab Assistant, identifies trapped mosquito collections and reports population data to the California Department of Public Health. The Lab tests live mosquitoes, dead birds, and sentinel chickens for viruses to monitor mosquito-borne diseases. It also conducts pesticide trials to evaluate chemical effectiveness on mosquitoes, assess impacts on non-target species, and tests new methods or chemicals. Additionally, the Lab identifies ticks, arachnids, and other insects of public health concern.

Gravid Trap

Tick Identification

The District employs an extensive surveillance program for adult and larval mosquitoes across Butte County and Hamilton City in Glenn County. It uses 28 New Jersey light traps, 31 gravid traps, 48 EVS traps, and 7 sentinel chicken flocks to track mosquito populations and virus activity. Mosquito and Vector Control Specialists (MVCS) monitor larvae using one-pint dippers and inspect standing water sources such as rice fields, wetlands, storm drains, ponds, swimming pools, bird baths, fountains, and other containers.

VIRUS SURVEILLANCE

2024 VIRUS SURVEILLANCE REPORT

The District monitors for Western equine encephalitis (WEEV), St. Louis encephalitis (SLEV), and West Nile virus (WNV) activity by collecting blood samples from sentinel chicken flocks, collecting live mosquitoes, and collecting dead wild birds Districtwide.

SENTINEL CHICKEN FLOCKS

Annually, the District maintains 7 sentinel chicken flocks of 6 birds each. Chickens are replaced if they are found dead. The flocks are located in Palermo, Honcut, Gridley, Biggs, South Chico, West Chico, and Hamilton City. Bi-weekly blood samples are taken from the sentinel chickens by the entomology staff and sent to CDPH for testing. The blood sample is tested for SLEV, WEEV, and WNV. In 2024, 28 of the 43 sentinel chickens from all 7 District flocks tested positive for WNV. Seropositive chickens are always delayed at least two weeks from positive mosquito pools in the same location. Therefore, in the upcoming year, future research efforts will be needed to investigate the costs and surveillance efficiency of this program.

Sentinel Chickens

Chicken Coop Palermo, CA

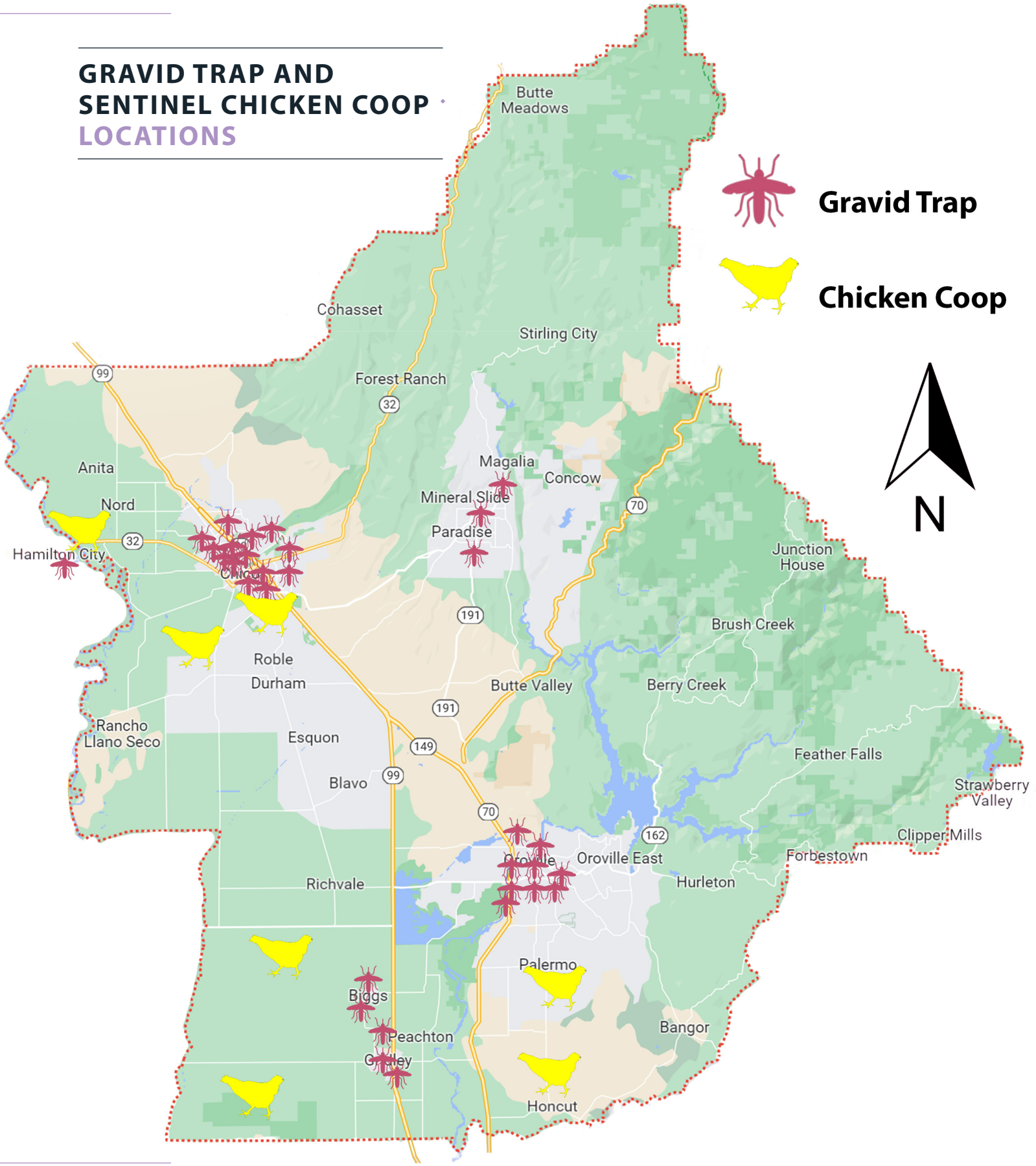
DEAD BIRD SURVEILLANCE

The District has participated in the California Department of Public Health's (CDPH) WNV dead bird testing program. County residents participate in the program by calling CDPH's dead bird hotline (1-877-WNV-BIRD) or by submitting an online form at www.westnile.ca.gov or www.ButteMosquito.com. After a dead bird has been reported, CDPH notifies the District and District staff retrieves the bird and submits it for WNV testing. In 2024, the District identified 4 WNV positive dead birds.

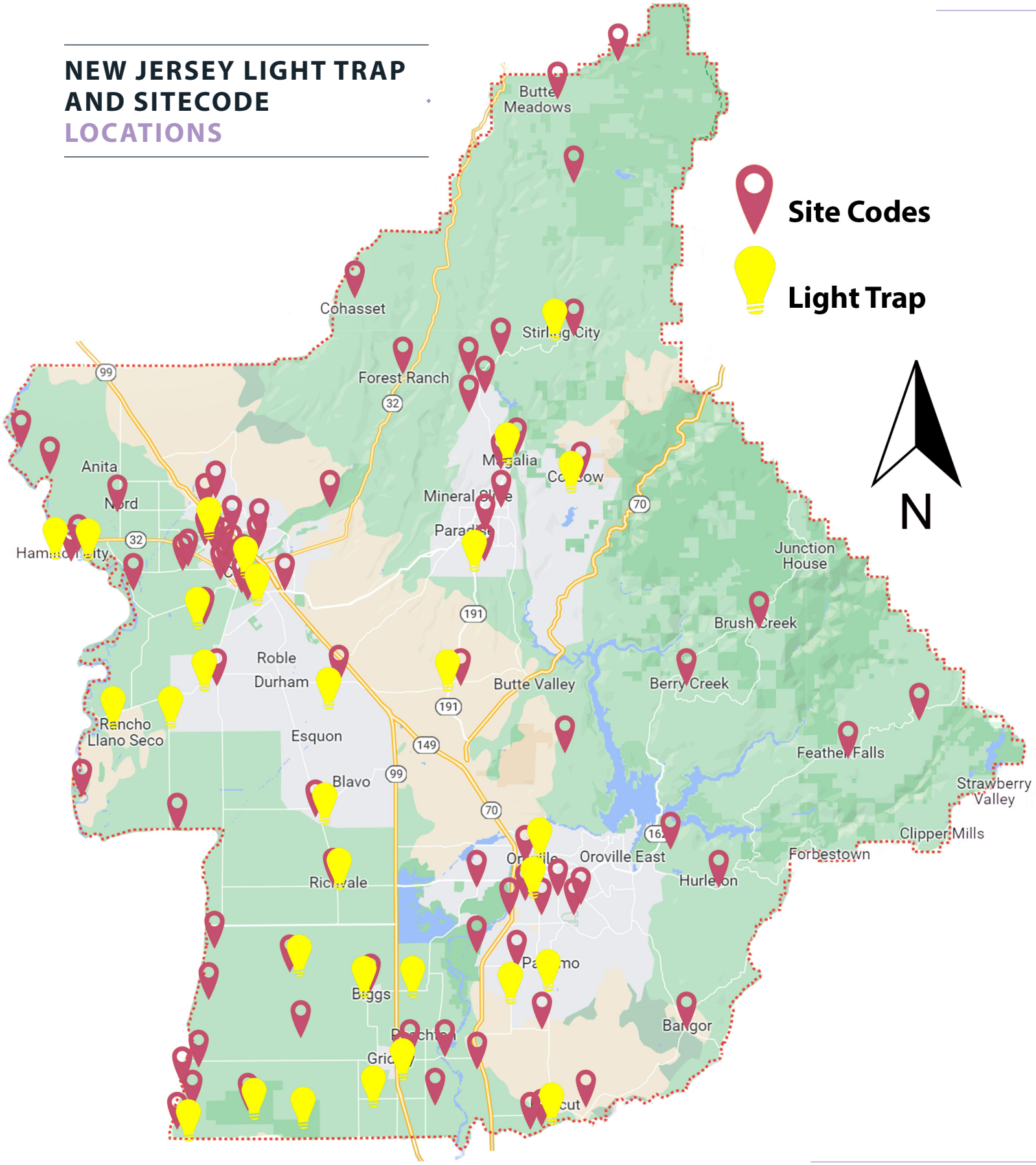
MOSQUITO POOLS

Each week the District's entomology staff strategically places traps known as encephalitis virus surveillance (EVS) traps around the District. The entomology staff will identify and sort the trapped mosquitoes and pool the collections for virus testing. A pool consists of 1 to 50 adult female mosquitoes of the same species. Pooled mosquitoes are transferred to numbered vials and sent to the UC Davis Arbovirus Research and Training (DART) laboratory and are tested for WEEV, SLEV, and WNV. In 2024, the District sent 431 mosquito pool samples with 70 returning positive for WNV.

GRAVID TRAP AND SENTINEL CHICKEN COOP LOCATIONS

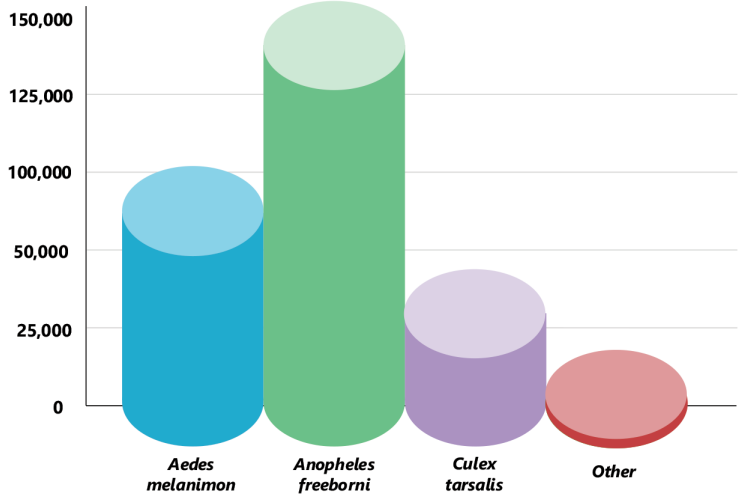


NEW JERSEY LIGHT TRAP AND SITECODE LOCATIONS



NEW JERSEY LIGHT TRAP COLLECTIONS 2024

Mosquito Species	Number Collected	% of Total
An freeborni	154643	52.24%
Ae melanimon	102156	34.51%
Cx tarsalis	33562	11.34%
Ae nigromaculis	2281	0.77%
Cx pipiens	1618	0.55%
Cs inornata	964	0.33%
Cx erythrothorax	312	0.11%
Cx stigmatosoma	260	0.09%
Cs incidens	99	0.03%
Ae vexans	51	0.02%
Ae sierrensis	42	0.01%
An punctipennis	21	0.01%
An franciscanus	11	0.00%
Ae aegypti	8	0.00%
Ae washinoi	2	0.00%
Totals	296030	100.00%



35% Aedes melanimon is a major pest near flooded areas such as duck clubs and wildlife refuges.

52% Anopheles freeborni is one of the District's most abundant pests and is the primary vector of Malaria.

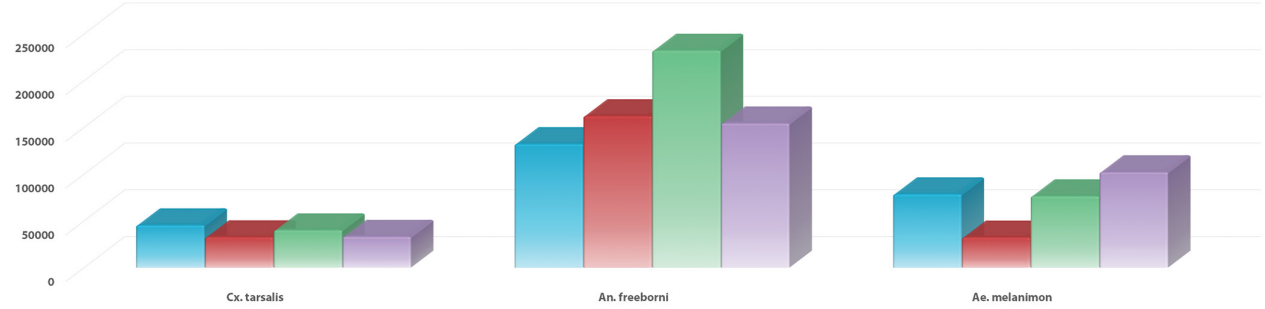
11% Culex tarsalis is the primary vector of West Nile virus and breeds year round in a variety of habitats.

1% Includes Aedes nigromaculis, Culex pipiens, and other species

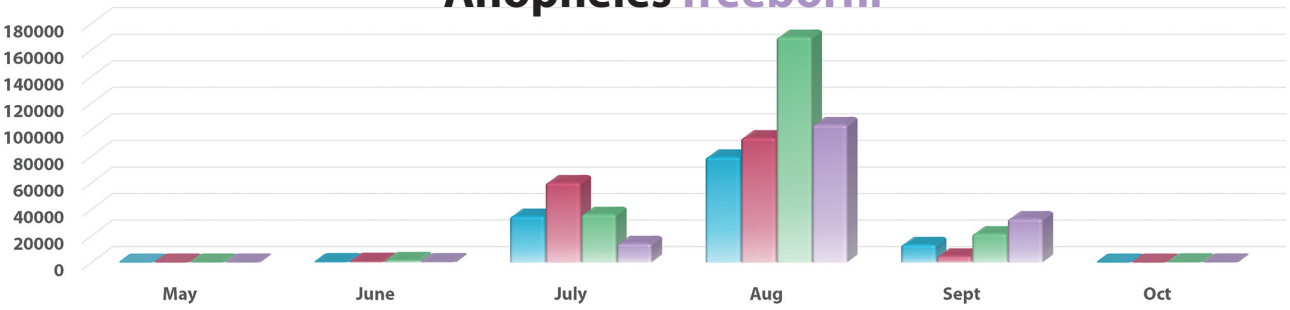
Jeremy Edwards Hanging Light Trap

NEW JERSEY LIGHT TRAP
FLUCTUATIONS 2024

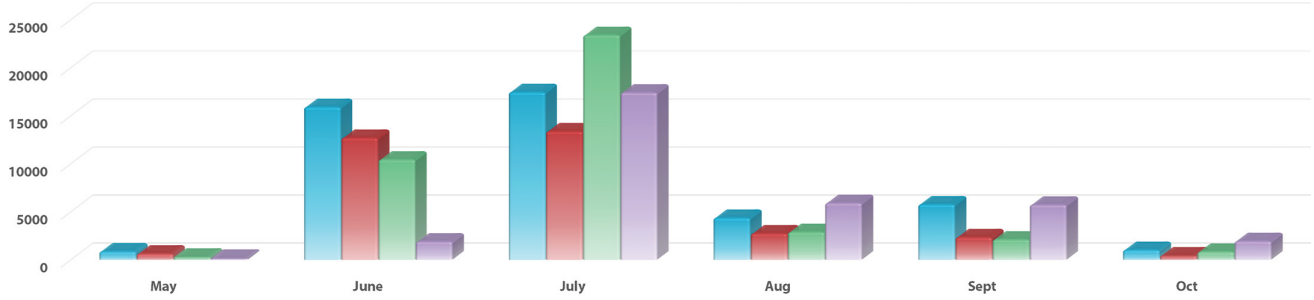
Total Annual Female Mosquitoes



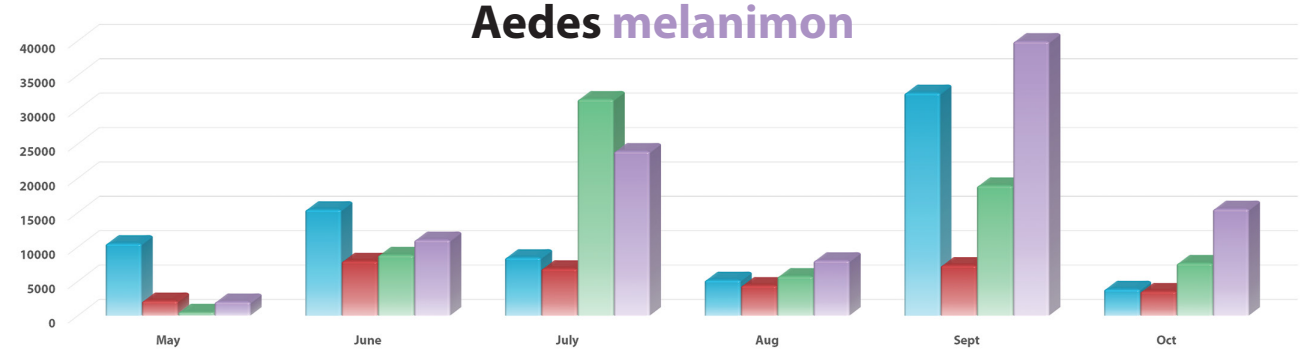
Anopheles freeborni



Culex tarsalis



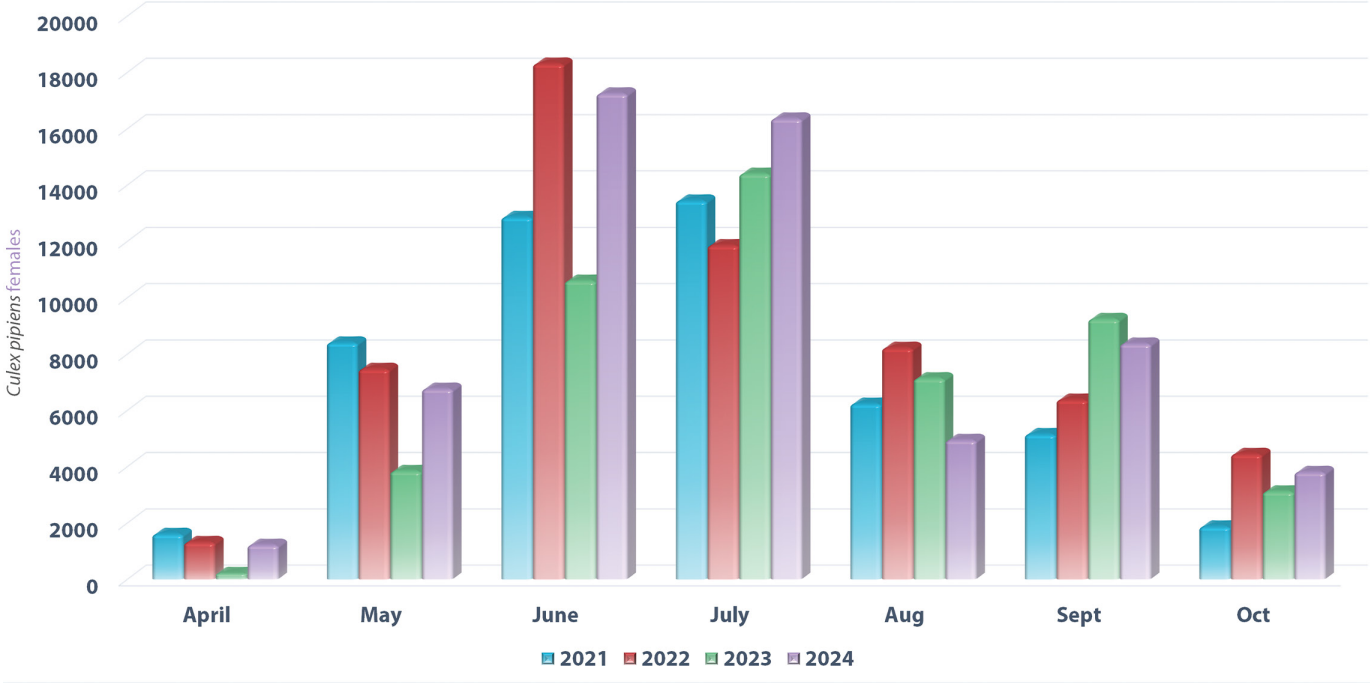
Aedes melanimon



GRAVID TRAP
FLUCTUATIONS 2024

Gravid Trap Fluctuation By Week

Gravid Trap Fluctuation By Month



WEST NILE VIRUS ACTIVITY 2024

West Nile Virus Symptoms

SERIOUS SYMPTOMS IN A FEW PEOPLE

About one in 150 people infected with West Nile virus (WNV) will develop severe illness. The severe symptoms can include high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness, and paralysis. These symptoms may last several weeks, and neurological effects may be permanent. WNV infection can be fatal.

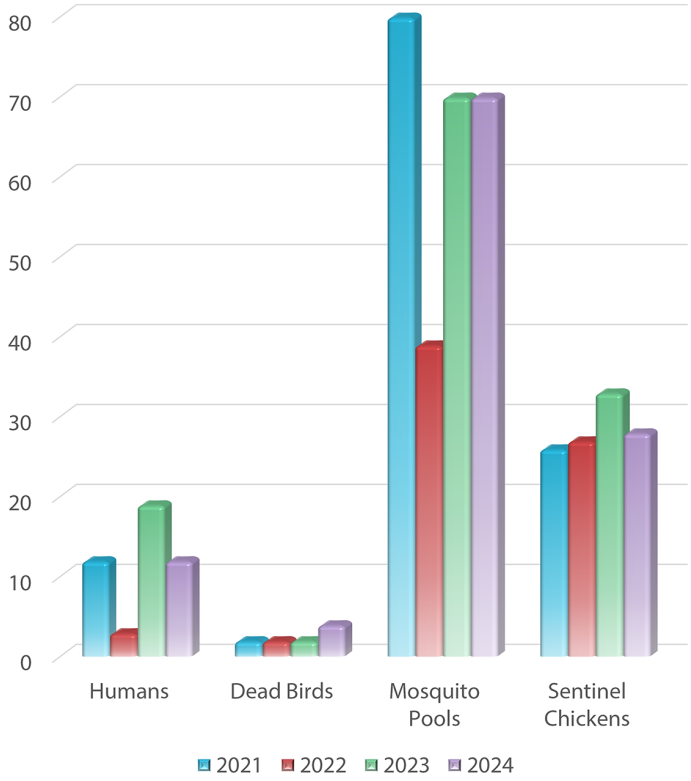
MILDER SYMPTOMS IN SOME PEOPLE

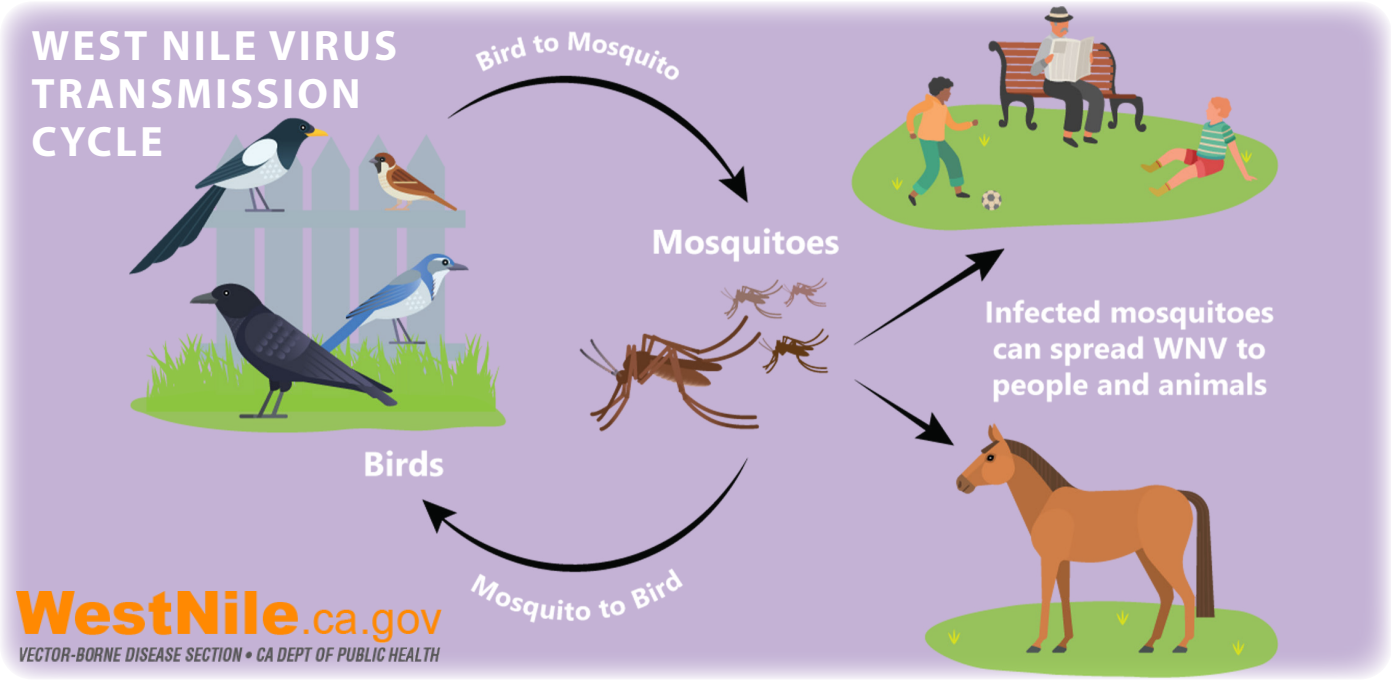
Up to 20 percent of the people who become infected will display symptoms including fever, headache and/or body aches, nausea, vomiting, and sometimes swollen lymph glands or a rash on the chest, stomach, and back. Symptoms can last as little as a few days to several weeks.

NO SYMPTOMS IN MOST PEOPLE

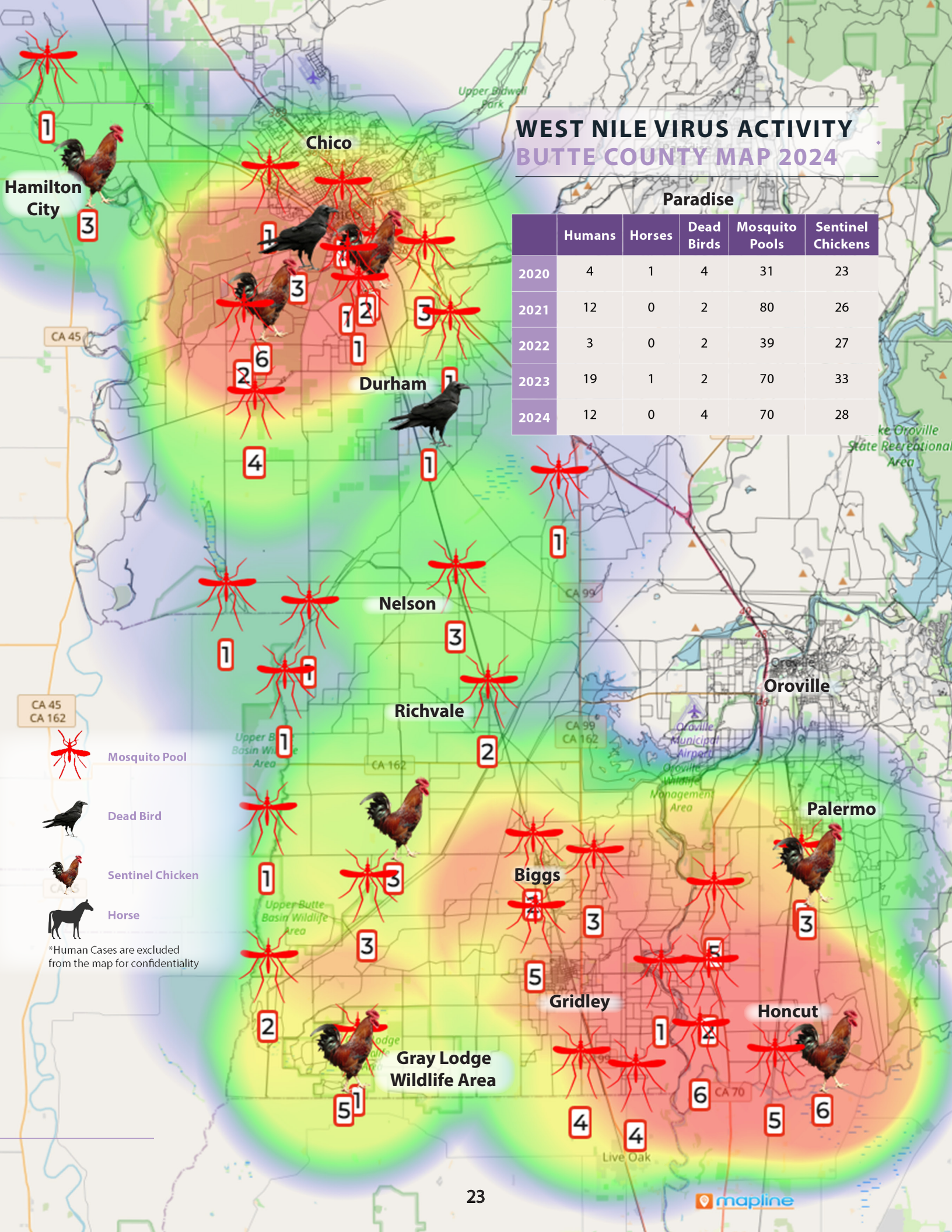
Approximately 80 percent of people (about 4 out of 5) who are infected with WNV will not have any symptoms at all.

West Nile Virus Positives



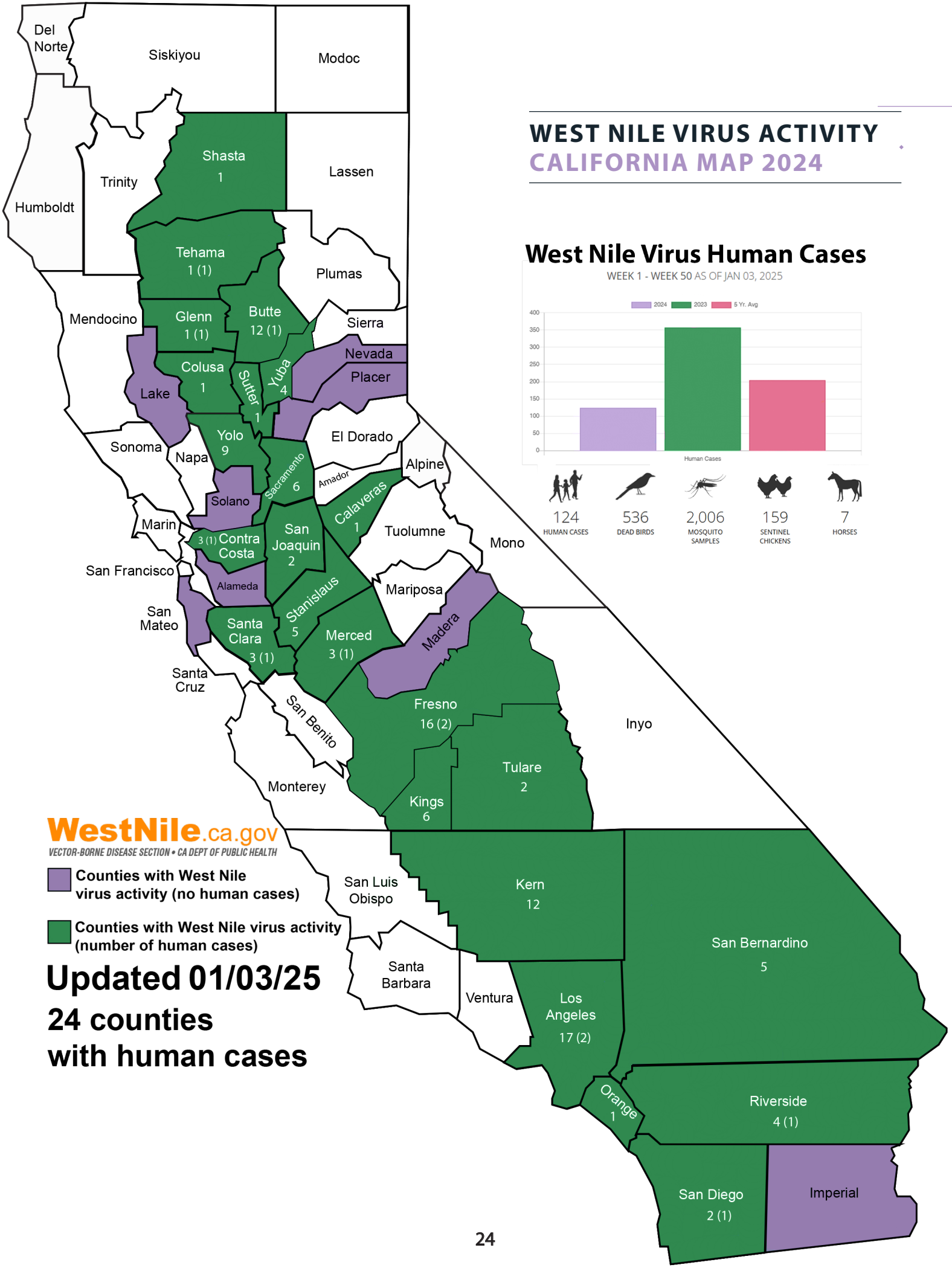


WEST NILE VIRUS ACTIVITY
BUTTE COUNTY MAP 2024



	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
2020	4	1	4	31	23
2021	12	0	2	80	26
2022	3	0	2	39	27
2023	19	1	2	70	33
2024	12	0	4	70	28

WEST NILE VIRUS ACTIVITY
CALIFORNIA MAP 2024



West Nile Virus Human Cases

WEEK 1 - WEEK 50 AS OF JAN 03, 2025

124	536	2,006	159	7
HUMAN CASES	DEAD BIRDS	MOSQUITO SAMPLES	SENTINEL CHICKENS	HORSES

WestNile.ca.gov
VECTOR-BORNE DISEASE SECTION • CA DEPT OF PUBLIC HEALTH

Counties with West Nile virus activity (no human cases)

Counties with West Nile virus activity (number of human cases)

Updated 01/03/25

24 counties with human cases

TICK SURVEILLANCE

Tick surveillance in Butte County is done primarily because of the diseases that ticks can transmit. The two diseases that infect humans most often are Lyme disease, hard tick relapsing fever (HTRF), and anaplasmosis.

Lyme disease is an infectious disease caused by a bacterium, *Borrelia burgdorferi*. Hard tick relapsing fever is an infectious disease caused by a bacterium, *Borrelia miyamotoi*. Anaplasmosis is an illness caused by a bacterium, *Anaplasma phagocytophilum*. Transmission of Lyme disease, hard tick relapsing fever and anaplasmosis is primarily from the Western Black-Legged Tick, *Ixodes pacificus*. All of these disease causative agents and the tick vector can be readily found in Butte County.

District tick surveillance consists of "flagging", where a 3' x 2' piece of thick, fibrous cloth, is dragged along the edge of a trail or dirt road. The ticks attach themselves to the cloth while they are "questing" for a blood meal. Like a mosquito, the female tick needs a blood meal to lay her eggs. Once the ticks are attached to the cloth they are identified, counted, recorded, and then sent off for testing.

In 2024, 66 tick pools were sent off for testing. Results include 1 pool positive for anaplasmosis and 6 pools positive for hard tick relapsing fever. No Lyme disease was identified in any of the pools tested. This information can lead to risk assessment warnings to residents in areas that have high tick activity.

YELLOWJACKET SURVEILLANCE

Yellowjackets are medium sized black and yellow wasps (sometimes black and creme) that are often confused with honey bees, paper wasps, mud daubers, and other wasps. Yellowjackets are social insects that are considered beneficial. They can feed on garden pests and pollinate crops through daily foraging. Yellowjackets can become a public health concern because of their territorial behavior and their affinity for human food and drinks. Yellowjackets can restrict or prevent outdoor activities in areas such as campgrounds, picnic spots, and backyards.

The District will respond to reports of high yellowjacket activity. Mosquito and Vector Control Specialists will then inspect the area and decide if control is appropriate. Control measures may include placing traps or bait, treating nests with an approved insecticide, or physically removing the nest. All pesticide applications are made by state-certified technicians using materials that are registered for use by the Environmental Protection Agency.

Yellow Jacket Service Requests	
Location	**Total SR**
Chico	9
Forest Ranch	4
Magalia	1
Oroville	6
Paradise	7
Total	**27**

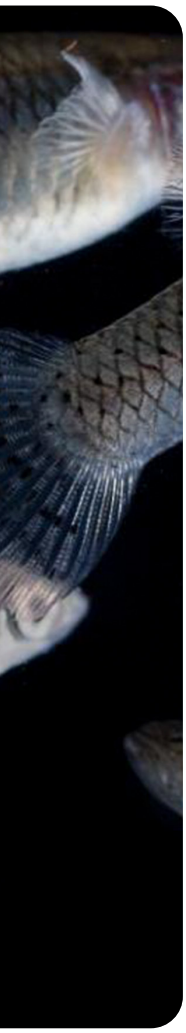
Locating yellowjacket nest

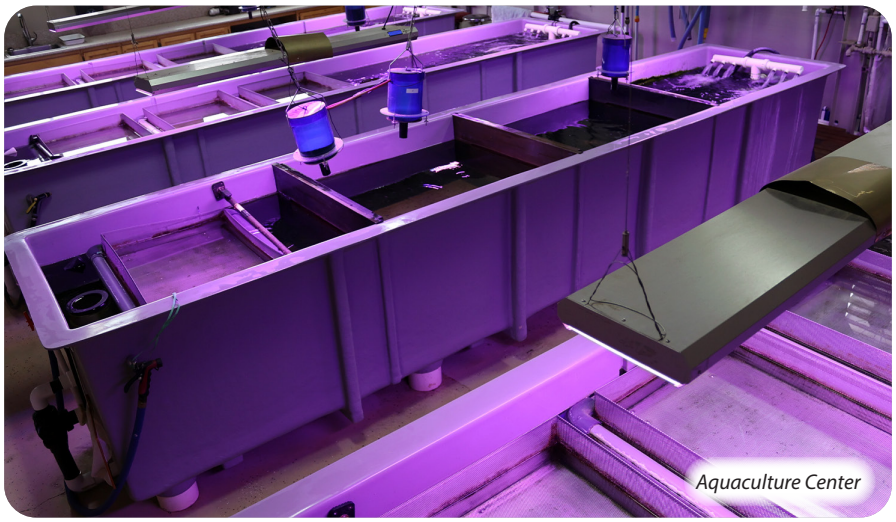
Removing yellowjacket nest

Mosquitofish

BIOLOGICAL CONTROL

Biological control is the intentional use of pathogens, parasites or predators to reduce the size of target mosquito populations. The most popular and successful biological tool is the mosquitofish, *Gambusia affinis*. Butte County Mosquito and Vector Control District maintains five fish ponds at the Oroville headquarters. These ponds produce hundreds of pounds of mosquitofish each year. The mosquitofish are routinely stocked and planted by District personnel to control mosquito populations in sources such as irrigation ditches, industrial, ornamental and artificial ponds, un-maintained swimming pools, semi-permanent and permanent urban sources, rice fields, and wetlands. Mosquitofish are omnivorous and have a voracious appetite for mosquito larvae. The flattened head and protruding mouth enable the fish to readily prey on surface feeding mosquito larvae and pupae. A large female can consume up to 300 larvae per day! All ages, sexes, and sizes of these fish eat mosquito larvae, along with other small aquatic invertebrates and algae. The fish are visual predators and feed during daylight hours. Due to insecticide resistance and environmental concerns associated with chemical control methods, biological control methods are expanding as an effective tool used in the control of mosquito populations.





Aquaculture Center

The Aquaculture Center holds 3 tanks stocked with about 6000 breeding adult fish each. The fry, born live, will instinctively swim upward and through the small holes of the breeding boxes. The holes are far too small for the adults, which is important in keeping the adults from eating their young. The fry are moved to a 4th tank to mature before being used throughout the county.

Fish Plant 2024	Amount (lbs)	Acres Treated	Applications
Zone 1	32.65	65.30	48
Zone 3	11.23	22.46	45
Zone 4	14.00	54.00	13
Zone 6	3.95	7.90	7
Zone 8	11.89	23.78	47
Zone 9	0.75	1.50	3
Zone 10	7.64	15.28	31
Zone 11	12.87	25.74	35
Zone 12	28.41	57.80	102
Zone 14	3.80	7.60	22
Totals	127.19	281.36	353

Female mosquitofish produce eggs that hatch within their bodies, releasing well-developed and very active young or "fry" into the water. Gambusia are prolific, producing three or four broods each summer, depending on the food supply and climate. A brood averages between 30 and 100 fry that reach maturity in three or four months.

AQUACULTURE CENTER

Mosquito and Vector Control Districts across the nation are very familiar with mosquitofish, but most Districts are not as familiar with indoor aquaculture systems. BCMVCD has five ponds on site and a new indoor aquaculture program. The indoor program gives the District the ability to have fish year-round for the public as well as the ability to implement an intensive fish breeding program to replace fish populations in District ponds. The District's aquaculture center has four tanks. Two tanks are for fry production, one for the fry that's collected each day to mature, and the last is used as a holding/quarantine tank that is also used for fry production. The aquaculture center incorporates automatic vibratory feeders, in-line heaters, and dimmable ballast lighting. Studies have shown that consumption of feed, metabolism, and mating behaviors can be changed with light cycles and water temperatures. Temperature, pH, salinity, ammonia, nitrate, nitrite, alkalinity, and dissolved oxygen are tested daily. The District also practices a sustainable yield technique by selecting the correct seine size. This allows small fish to pass through and only large adults will be taken for District needs. These fish can then reach maturity, spawn, and help replenish fish stocks for the following year.

CHEMICAL CONTROL

Chemical control is the use of target specific insecticides to reduce immature and adult mosquito populations. These chemicals are only applied when physical control, public education, and biological control methods are unable to keep mosquito populations tolerable or when emergency control measures dictate the use of chemicals to rapidly terminate or disrupt the transmission of disease to humans.

There are two categories of chemicals used by the District, larvicides and adulticides. Larvicides target mosquito larvae and pupae. Adulticides target adult mosquitoes. The chemicals used by the District are registered with the United States Environmental Protection Agency (EPA), as well as the California Environmental Protection Agency (CAL EPA).

The District relies mainly on larviciding as the primary means of chemical mosquito control. However, there are limitations to larviciding as a main control strategy. In Butte County where mosquito breeding occurs over large areas, the practical application of larvicides is not feasible and periodic adulticiding is necessary to protect nearby communities from the attack of adult mosquitoes. Also, there are areas that are environmentally sensitive and limit the use of larvicides. In these areas, peripheral adulticiding is the only available option.

Jeremy Edwards treating drain

Eric Dillard calibrating fogger

Trevor Wagoner residual spraying

N714Y 'Horse' dispensing granules

2024 MATERIALS USED

Larvicides	Amount		Acres	Applications
Abate 4E	0.20	gals	17.00	17
Altosid P35	53.00	lbs	13.00	2
Altosid SBG II	41,130.68	lbs	4,417.18	112
Altosid XR Extended Residual Briquets	545.00	each	1.27	152
Cocobear Mosquito Larvicide Oil	602.08	gals	194.25	1,260
FourStar BTI CRG	48.00	lbs	6.00	1
MetaLarv S-PT	2,190.10	lbs	763.19	126
MetaLarv XRP	1,986.00	each	4.57	118
Natular DT	9,713.00	each	0.87	129
Natular G30	2,028.00	lbs	201.80	43
Natular SC	7.97	gals	255.00	16
Natular XRT	5,047.00	each	11.62	354
VectoBac -12AS	3,978.33	gals	48,130.65	680
VectoBac FG+	1,600.00	lbs	289.64	9
VectoBac-G	13,057.33	lbs	1,383.04	37
VectoBac GR	72,728.76	lbs	7,679.72	202
VectoMax WSP	1,037.00	each	1.19	185
VectoPrime	510.00	lbs	102.00	23
Adulticides				
Dibrom	720.00	gal	144,000.00	22
Duet	7,555.17	lbs	209,412.90	834
Perm-X UL 4-4	6,149.92	lbs	65,702.84	460
Barrier Sprays				
Suspend SC	12.45	gals	36.56	350
Yellow Jacket Control				
Drione Insecticide	0.10	gal	1.30	14
Herbicides				
Dimension 2EW Herbicide	1.09	gals	4.60	3
Cheetah Pro	2.90	gals	6.76	6
Garlon 4 Ultra	2.60	gals	5.38	6
Roundup Weed and Grass Killer Ready to Use	31.25	gals	0.22	8
Aircraft Application				
Rice Acres Treated	47,966			
Managed Wetlands Acres Treated	13,940			
Ultra-Low Volume Acres Treated	144,000		6 Night Flights	
Total Acres Treated Via Aircraft	205,906			

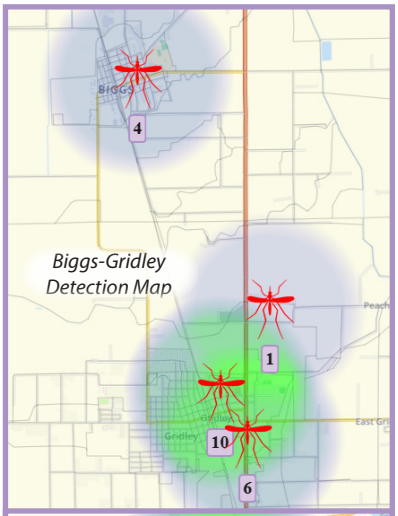
Eric Dillard power spraying a wetland field

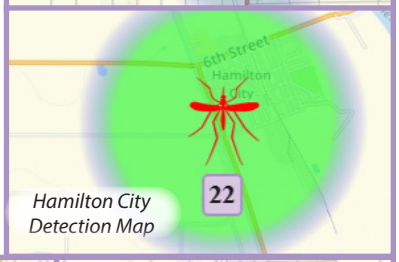
CALIFORNIA INVASIVE SPECIES

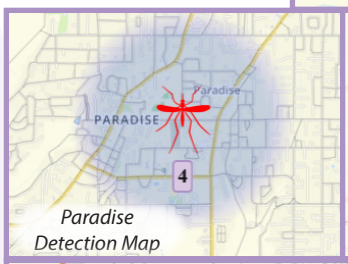
Two invasive (non-native) mosquito species have recently been found in several California cities (see map below). They are named *Aedes aegypti* (the yellow fever mosquito) and *Aedes albopictus* (the Asian tiger mosquito).

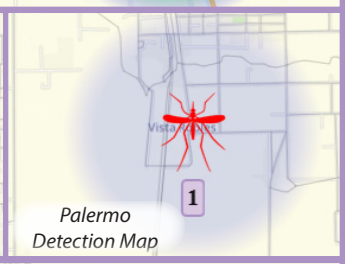
In 2024, The District had 418 detections of *Aedes aegypti* at 33 different locations in the cities of Chico, Oroville, Palermo, Gridley, Biggs, Paradise, Thermalito and Hamilton City. There have been no detections of *Aedes albopictus* in Butte County.

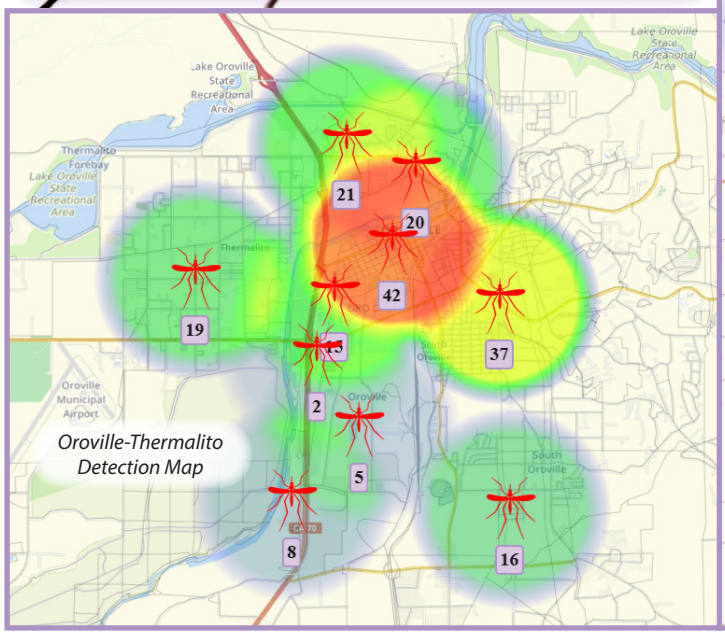
Unlike most native mosquito species, *Aedes aegypti* and *Aedes albopictus* bite during the day. Both species are small black mosquitoes with white stripes on their back and on their legs. They can lay eggs in any small artificial or natural container that holds water. *Aedes aegypti* and *Aedes albopictus* have the potential to transmit several viruses, including dengue, chikungunya, Zika, and yellow fever.











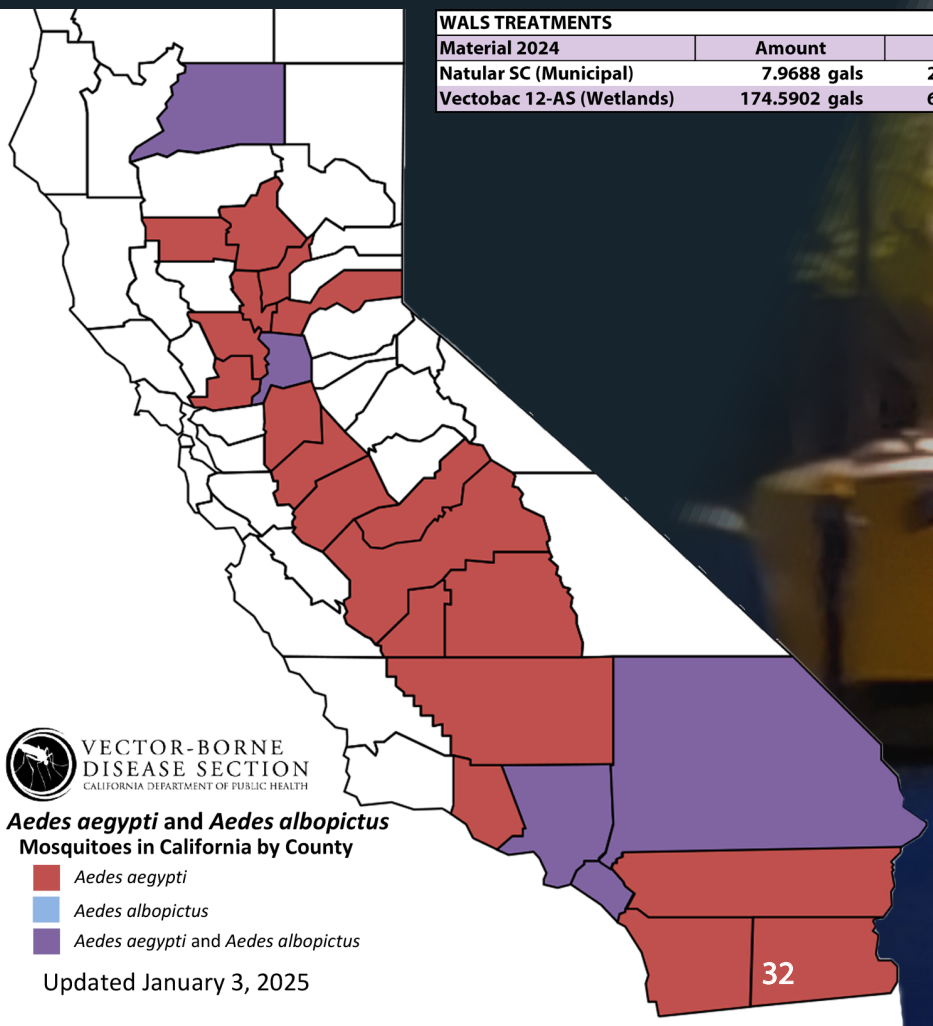
WIDE AREA LARVICIDE SPRAY WALS

Wide Area Larvicide Spray (WALS) is an approach to controlling mosquito larvae, such as invasive *Aedes* larvae, that uses naturally occurring bacterium toxins such as *Bacillus thuringiensis israelensis*(BTi) or Natular(spinosad) to kill mosquito larvae in the water before they emerge into biting adults. This is done with a powerful truck mounted sprayer that sends out a plume of small water droplets containing BTi or Natular with the hope that they will drift their way into the small containers around residences that *Aedes aegypti* and *Aedes albopictus* prefer to lay eggs. The WALS method is another tool that the District utilizes to combat the invasive *Aedes* in Butte County.

A1 Sprayer Used in WALS


WALS Calibration

WALS TREATMENTS			
Material 2024	Amount	Acres	Applications
Natular SC (Municipal)	7.9688 gals	255.0000	16
Vectobac 12-AS (Wetlands)	174.5902 gals	698.3608	20



VECTOR-BORNE DISEASE SECTION
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

Aedes aegypti* and *Aedes albopictus
Mosquitoes in California by County

- *Aedes aegypti*
- *Aedes albopictus*
- *Aedes aegypti* and *Aedes albopictus*

Updated January 3, 2025

WALS Application

AERIAL OPERATIONS

The District maintains a robust aerial program, supported by a team of three dedicated full-time pilots. Each year, the District's aircraft treats over 150,000 acres of wetlands and rice, playing a crucial role in controlling mosquito populations and safeguarding public health. When not in active service, the fleet of three planes, soon to be four, undergoes extensive maintenance and upgrades. This includes repairs, advancements in technology, and enhancements to critical systems such as instruments, panels, altimeters, Satloc, and Ag-Nav systems. Additionally, the aircraft receive routine maintenance, engine part replacements, and occasional repainting to ensure optimal performance and longevity.

Beyond application flights, the Pilot II also oversees aerial surveillance operations. This involves renting a passenger plane to conduct flights over seasonally flooded wetlands and duck clubs to then relay to Mosquito and Vector Control Specialists for larval samples. These surveillance efforts are vital for identifying potential mosquito breeding habitats and guiding the District's strategic response.

In 2020, with the expertise of the District's Pilot, Del Boyd, the team successfully commissioned the construction of a new tank truck, further enhancing operational efficiency. This commitment to innovation and upkeep reflects the District's dedication to maintaining a state-of-the-art aerial program in service of the community.

New tank truck

N714Y 'Horse' winter manitenance

This year, the District experienced a pivotal moment that reminded of both the risks and resilience inherent in the mission to protect public health. The aircraft known as Jaws (N6633K), a steadfast guardian in the District's aerial operations, was involved in a crash. While the accident grounded the plane, we are deeply grateful that our pilot walked away, hurt but alive, embodying the courage and determination that defines the District.

The journey forward has been one of reflection and renewal. With our pilot's inspiring return to duty, the District took the opportunity to re-evaluate and strengthen aerial operations. Today, the District proudly operates with three highly skilled pilots and are expanding the fleet with two new aircraft—a Thrush and an Agcat.

While N6633K is no longer in the skies, its legacy endures. The tireless hours it spent safeguarding the communities of Butte County serves as a lasting reminder of the dedication and teamwork that make our work possible. The District honors Jaws and the District's pilots with gratitude and respect, knowing their service paved the way for an even stronger future.

As the District welcomes these new aircraft into service, the mission will carry forward the lessons learned and the spirit of resilience, ready to meet the challenges ahead with renewed strength and purpose.

'Jaws' en route to treatment

New Thrush aircraft FAA# N533MC

'Jaws' crash site

Kenneth J. Armstrong Tree Trimming

Shane Robertson Building Fire Line

Glen Williams Metal Fabrication

Eric Dillard Fogger Maintenance

DISTRICT SHOP

The District's shop provides the maintenance and repairs for over 30 vehicles, 3 forklifts, 1 backhoe, 3 ATV's, 2 amphibious Tritons, 2 tank trucks and 4 utility trailers. Additionally, the shop is responsible for the maintenance and repairs to the District's electric and gas ULV foggers, back cans, power sprayers, chainsaws, weed eaters, lawn mowers, and other mechanical items. The shop is also responsible for repairing and installing improvements to the District facilities and grounds when and where necessary. Often the shop will repair the District's security system, lighting fixtures, plumbing fixtures, and other items as needed.

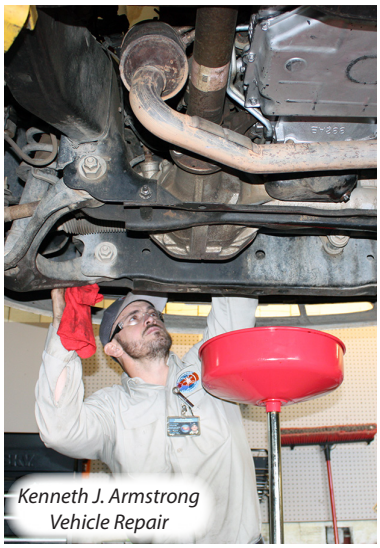
DISTRICT IMPROVEMENTS

The District has made significant strides this year, enhancing community impact and public health in Butte County. Outdated aboveground storage tanks were replaced with safer models. Aging trees along the driveway were swapped for fresh greenery and grass. The worn asphalt driveway was upgraded, and plans are underway to expand the vehicle garage next year for storage of more equipment and materials.

New and safer aboveground storage tank installation

Irrigation and tree boring

New trees and grass along new driveway



Kenneth J. Armstrong Vehicle Repair

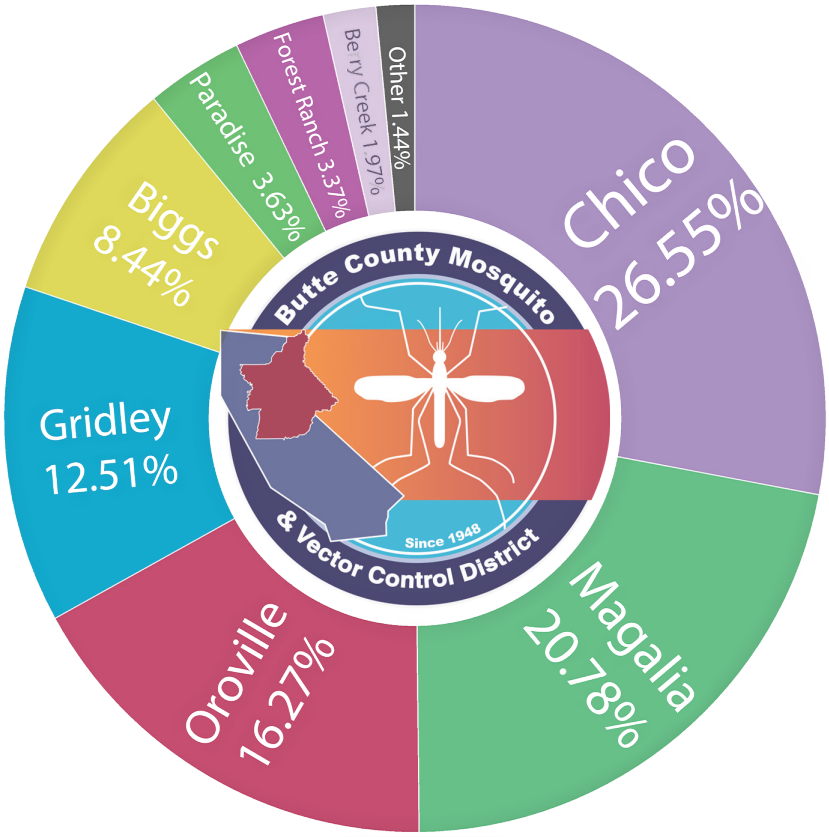
FRONT OFFICE

Professional and courteous customer service is the number one priority for the District's administrative staff. The tasks of the administrative personnel involve serving the residents of Butte County and Hamilton City, the employees of the District, accounting, budgeting, responding to telephone inquiries, maintaining public records, coordinating policies, and reporting to the Board of Trustees.

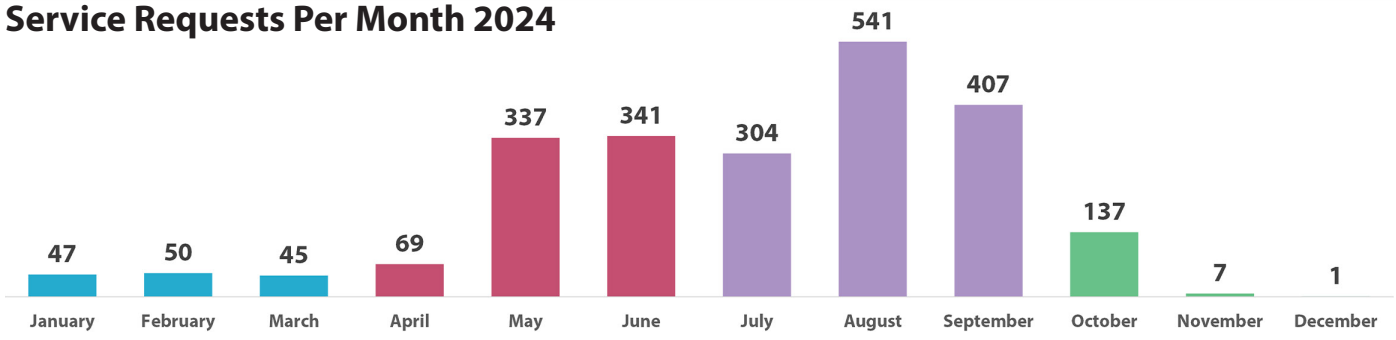
Office Assistant Sara MacKenzie

SERVICE REQUESTS

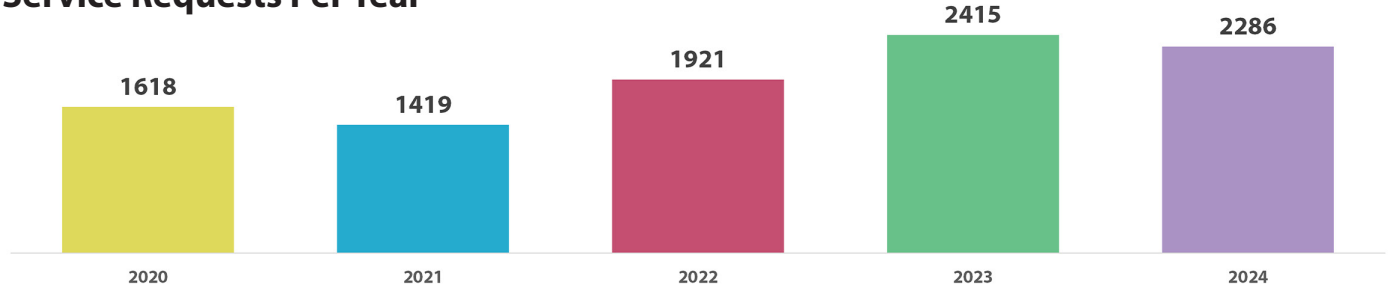
Chico	607	26.55%
Magalia	475	20.78%
Oroville	372	16.27%
Gridley	286	12.51%
Biggs	193	8.44%
Paradise	83	3.63%
Forest Ranch	77	3.37%
Berry Creek	45	1.97%
Durham	33	1.44%
Richvale	24	1.05%
Dayton	17	0.74%
Forbestown	14	0.61%
Palermo	14	0.61%
Bangor	10	0.44%
East Biggs	10	0.44%
Stirling City	7	0.31%
Other	6	0.26%
Butte Valley	5	0.22%
Cohasset	5	0.22%
Hamilton City	2	0.09%
Butte Meadows	1	0.04%
Totals	2286	100.00%



Service Requests Per Month 2024



Service Requests Per Year



SPECIAL BENEFIT ASSESSMENT

To address the growing needs placed upon the district and to expand and enhance existing services, the District attempted and passed a Special Benefit Assessment on all properties within the District's Service Area. With these additional revenues the District has the ability to enhance/improve all services provided by the District. Below is a non-exhaustive list of services that have been and continue to be enhanced:

- Increase seasonal staff and possibly permanent staff to better the services the District provides (e.g. surveillance, control, education, etc.)
- Expand the District's public education and outreach program to better educate those that the District serves to services provided, the elimination of mosquito and other vector habitat, and how to protect oneself from mosquito and vector-borne disease.
- Expand the District's mosquito surveillance program to better identify mosquitoes of medical importance, increase the amount of traps used, increase the amount of mosquitoes tested, commence with the surveillance of invasive species such as Asian Tiger Mosquito and Yellow Fever Mosquito (both of which have been introduced into California) and also to expand mosquito testing of newly introduced mosquito-borne disease such as chikungunya virus, Rift Valley fever, dengue fever, and others.
- Expand the District's tick surveillance to monitor more public use lands, test collected ticks for the presence of tick-borne disease, and conduct tick control trials.
- Expand and improve the District's mosquitofish program. Purchase mosquitofish rearing tanks to provide an environment in which mosquitofish propagate year-round rather than seasonally allowing the District to keep up with the requests of the public and to have more fish available to District staff to stock in mosquito-breeding areas to lower larval mosquito populations.
- Increase the amount of public health pesticide applications should surveillance data indicate a need based on treatment thresholds and/or resident service requests. Possibly lower the treatment thresholds for larvae and adult mosquitoes.
- Purchase new capital such as spray equipment and vehicles to lower maintenance costs, increase fuel mileage, and increase the reliability of service.
- Continue to and enhance investing in mosquito control research and new technology to identify better ways of protecting the public's health.

This funding measure has strengthened, enhanced, and improved the District's baseline services provided. With newly introduced invasive species as well as new and reemerging vector-borne disease, mosquito and vector control's importance will only continue to grow.

TRANSPARENCY CERTIFICATE

District Transparency
Certificate of Excellence

July 2024 –Sept 2027

The Special District Leadership Foundation is proud to present this
District Transparency Certificate of Excellence to

Butte County Mosquito & Vector Control District

In recognition of the district's program requirements designed to promote transparency in their operations and governance
to the public and other stakeholders.

Sandy Seifert Raffelson, SDLF Board President

Neil McCormick, SDLF Chief Executive Officer

Since 2014, the Butte County Mosquito and Vector Control District has been honored with the Transparency Certificate of Excellence from the Special District Leadership Foundation (SDLF). This recognition reflects the District's dedication to transparency, accountability, and effective governance. To receive this distinction, special districts must complete eight key transparency requirements, such as conducting ethics training for all board members, ensuring meetings are open and comply with public meeting laws, and submitting financial and compensation reports to the State Controller on time. The District also fulfilled fifteen website-related requirements, ensuring that critical public information—such as board agendas, past meeting minutes, current budgets, and the latest financial audit—is easily accessible. Additionally, the District demonstrated its commitment to public engagement through regular newsletters and active participation in community outreach projects, fostering stronger connections with its constituents and promoting awareness of its governance practices.

"This award is a testament to the Butte County Mosquito and Vector Control District's commitment to open government," said Matthew Ball, District Manager. "The District's entire Board of Trustees and staff are to be commended for their contributions that empower the public with information and facilitate engagement and oversight."

FISCAL YEAR 2023/2024 FINANCIALS

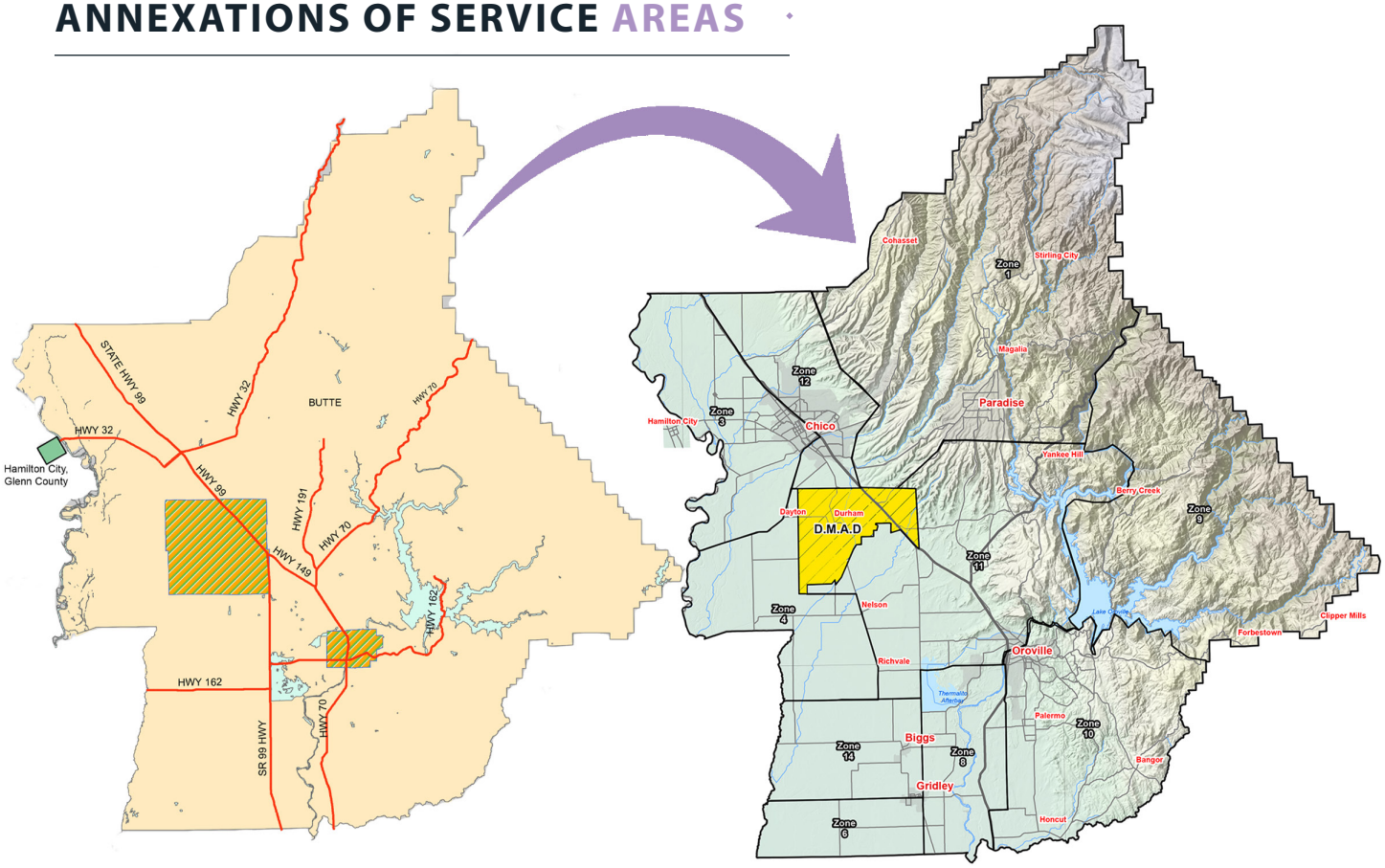
	Actual	Budget	$ Over Budget	% of Budget
Income				
Current Secured Property Taxes	2,722,878.74	2,425,010.00	297,868.74	112.28%
Current Unsecured	195,965.65	171,655.00	24,310.65	114.16%
Prior Unsecured	8,113.56	3,500.00	4,613.56	231.82%
Supplemental Current Secured	69,299.90	40,000.00	29,299.90	173.25%
RDA - Residual	553,924.01	355,000.00	198,924.01	156.04%
RDA - Pass-Thru	884,841.75	750,000.00	134,841.75	117.98%
Miscellaneous Taxes	2,579.76	7,800.00	-5,220.24	33.07%
Interest Income	199,744.54	40,000.00	159,744.54	499.36%
ST- Tax Backfill Secured	28,592.00	0.00	28,592.00	100.0%
ST - Other Revenue	1,616.71	0.00	1,616.71	100.0%
HOPTR - Homeowner's Exemption	31,263.42	30,000.00	1,263.42	104.21%
Benefit Assessment	1,018,748.04	1,000,000.00	18,748.04	101.88%
Special Household Assessments	2,797.68	2,800.00	-2.32	99.92%
Benefit Assessment Hamilton Cit	7,867.87	6,800.00	1,067.87	115.7%
Charges for Current Services	429,646.16	235,000.00	194,646.16	182.83%
Miscellaneous Revenues	65,689.34	20,000.00	45,689.34	328.45%
Total Income	6,223,569.13	5,087,565.00	1,136,004.13	122.33%
Expense				
Salaries & Benefits				
Salaries & Wages	1,616,769.06	1,675,588.00	-58,818.94	96.49%
Payroll Expenses	144,055.56	142,122.00	1,933.56	101.36%
Worker's Compensation	69,353.00	70,000.00	-647.00	99.08%
Health Insurance	490,007.97	502,152.00	-12,144.03	97.58%
Public Employees Retirement PER	464,375.75	468,740.00	-4,364.25	99.07%
PERS- ADP	350,000.00	350,000.00	0.00	100.0%
PERS- 115 Trust	150,000.00	150,000.00	0.00	100.0%
Total Salaries & Benefits	3,284,561.34	3,358,602.00	-74,040.66	97.8%
Services & Supplies				
Gas, Oil & Grease	131,074.39	150,000.00	-18,925.61	87.38%
Repairs & Parts - Airplanes	24,673.52	30,000.00	-5,326.48	82.25%
Repairs & Parts- Vehicle & Equi	45,037.00	55,000.00	-9,963.00	81.89%
Office Supplies	16,372.48	15,000.00	1,372.48	109.15%
Shop and PPE Supplies	21,426.20	30,000.00	-8,573.80	71.42%
Education & Publicity	77,874.42	75,000.00	2,874.42	103.83%
Pesticides	946,825.49	875,263.00	71,562.49	108.18%
Tools & Equipment	46,701.89	40,000.00	6,701.89	116.76%
Communications	21,059.67	35,000.00	-13,940.33	60.17%
Travel	9,071.08	10,000.00	-928.92	90.71%
Utilities	51,630.53	48,000.00	3,630.53	107.56%
Rent	5,438.00	5,500.00	-62.00	98.87%
Special Services	164,101.57	170,000.00	-5,898.43	96.53%
Trustee Allowance	9,700.00	13,200.00	-3,500.00	73.49%
General Insurance	191,101.41	194,000.00	-2,898.59	98.51%
Employee Training, Fees & Dues	7,590.50	15,000.00	-7,409.50	50.6%
District Membership,Fees & Dues	37,316.32	43,000.00	-5,683.68	86.78%
Miscellaneous	7,915.19	15,000.00	-7,084.81	52.77%
Laboratory Research & Supplies	39,697.55	50,000.00	-10,302.45	79.4%
IT Equipment	65.19	0.00	65.19	100.0%
Special Discretionary	31,774.08	30,000.00	1,774.08	105.91%
Gambusia	9,620.60	15,000.00	-5,379.40	64.14%
Total Services & Supplies	1,896,067.08	1,913,963.00	-17,895.92	99.07%
Capital Outlay				
Buildings and Improvements	118,407.70	118,500.00	-92.30	99.92%
Vehicles	323,780.67	340,000.00	-16,219.33	95.23%
Spray Equipment	166,845.73	166,845.73	0.00	100.0%
Aircraft	101,878.40	120,000.00	-18,121.60	84.9%
Laboratory Equipment	0.00	10,000.00	-10,000.00	0.0%
Communications Capital Outlay	36,000.00	36,000.00	0.00	100.0%
Total Capital Outlay	746,912.50	791,345.73	-44,433.23	94.39%
Appropriation for Contingencies	0.00	1,303,795.27	-1,303,795.27	0.0%
Total Expense	5,927,540.92	7,367,706.00	-1,440,165.08	80.45%

Butte County Mosquito and Vector Control District
Balance Sheet
June 30, 2024

	General Fund	Reclassifications & Eliminations	Statements of Net Position
Current assets:			
Cash and investments (note 2)	$ 8,315,783	-	8,315,783
Cash and investments (note 2)	471,359	-	471,359
Accrued interest receivable	-	-	-
Accounts receivable – charge for services	102,723	-	102,723
Materials and supplies inventory	954,813	-	954,813
Prepaid expenses	53,160	-	53,160
Total current assets	9,897,838	-	9,897,838
Non-current assets:			
Capital assets, not being depreciated (note 3)	-	615,403	615,403
Capital assets, being depreciated (note 3)	-	3,043,615	3,043,615
Total non-current assets	-	3,659,018	3,659,018
Total assets	9,897,838	3,659,018	13,556,856
Deferred outflows of resources:			
Deferred pension outflows (note 7)	-	2,343,108	2,343,108
Total deferred outflows of resources	-	2,343,108	2,343,108
Current liabilities:			
Accounts payable and accrued expenses	-	-	-
Accrued salaries and benefits	64,422	-	64,422
Long-term liabilities – due within one year:			
Compensated absences (note 4)	46,380	-	46,380
Termination benefits (note 5)	-	6,252	6,252
Lease obligation (note 6)	-	2,490	2,490
Total current liabilities	110,802	8,742	119,544
Non-current liabilities:			
Long-term liabilities – due in more than one year:			
Compensated absences (note 4)	185,518	-	185,518
Lease obligation (note 6)	-	64,401	64,401
Net pension liability (note 7)	-	3,980,527	3,980,527
Total non-current liabilities	185,518	4,044,928	4,230,446
Total liabilities	296,320	4,053,670	4,349,990
Deferred inflows of resources:			
Deferred pension inflows (note 7)	-	642,982	642,982
Total deferred inflows of resources	-	642,982	642,982
Fund balance: (note 8)			
Restricted	471,359	(471,359)	-
Non-spendable	1,007,973	(1,007,973)	-
Assigned	231,898	(231,898)	-
Unassigned	7,890,288	(7,890,288)	-
Total fund balance	9,601,518	(9,601,518)	-
Total liabilities and fund balance	$ 9,897,838		
Net position: (note 9)			
Net investment in capital assets		3,592,127	3,592,127
Restricted		471,359	471,359
Unrestricted		6,843,506	6,843,506
Total net position		10,906,992	10,906,992

*Insert from Fiscal Year 2023/2024 Annual Fiscal Report

ANNEXATIONS OF SERVICE AREAS



PREVIOUS SERVICE AREA MAP **NEW SERVICE AREA MAP**

The Butte County Mosquito and Vector Control District (BCMVCD) covers nearly 1,800 square miles, and includes all of Butte County, except the small area served by the Durham Mosquito Abatement District (DMAD) which was formed earlier. The District also includes Hamilton City and wetlands along the eastern border of Glenn County.

- In June 2018, Local Agency Formation Commission of Butte County (LAFCo) adopted resolution No. 13 2017/18 approving the detachment and annexation of a portion of the DMAD territory to the BCMVCD, increasing the District's service area by 14,775 acres of mixed agriculture.
- In August 2020, LAFCo adopted Resolution No. 01 2020/2021 approving the reorganization/ dissolution of the Oroville Mosquito Abatement District (OMAD) and subsequent annexation of territory to the BCMVCD. The annexation was finalized in 2021, adding approximately 7,660 acres of service area and the responsibility for mosquito abatement services in that area to the BCMVCD.

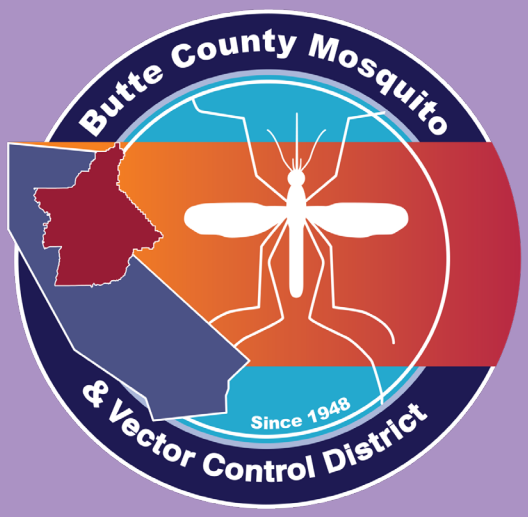
Collectively, all these areas served by the BCMVCD are known as the "Service Area." The BCMVCD is the only agency providing mosquito and vector control and vector-borne disease protection and prevention services in the Service Area and provides its services to properties accommodating approximately 220,000 residents.


modern
FIREGUARD

NOTES SECTION

District Headquarters
5117 Larkin Rd.
Oroville, CA 95965

District Substation
444 Otterson Dr.
Chico, CA 95928


Butte County Mosquito
& Vector Control District
Since 1948