



Annual Report 2025



CONTRA COSTA
**MOSQUITO
& VECTOR
CONTROL**
DISTRICT



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History



As early as 1772, hordes of mosquitoes welcomed the first Europeans as they explored the San Francisco Bay Area, which included Contra Costa County. Mosquito abatement activities in the early 1900s focused on controlling the mosquito that carried malaria parasites and reducing the numbers of nuisance salt marsh mosquitoes. Before 1915, mosquito control in California was financed by subscription and donation.

In 1915, the State Legislature passed a bill that was signed by the governor to provide for the formation, organization, and financing of mosquito abatement districts. Schools in Contra Costa County had to be closed, the waterfront industry was periodically shut down, and recreational areas were abandoned, all due to salt marsh mosquitoes. As a result of the mosquito activity, Contra Costa County citizens, together with several waterfront industries, formed a committee in 1926 to address the need for mosquito control.

Contra Costa Mosquito Abatement District #1 (CCMAD #1) was formed and work began on April 15, 1927. The main purpose of CCMAD #1 was to control marsh mosquitoes in north central Contra Costa County.

Mosquito control was established in the eastern portion of Contra Costa County by the formation of the Diablo Valley Mosquito Abatement District (DVMAD) in 1952. The DVMAD's Jurisdiction was 136 square miles in size and encompassed the communities of Oakley, Brentwood and Byron. The DVMAD headquarters was located in the community of Brentwood. The primary purpose of creating DVMAD was for the control of pasture and irrigation mosquitoes.

In 1986, CCMAD #1 and DVMAD merged to create one countywide agency, Contra Costa Mosquito Abatement District (CCMAD). In 1988, CCMAD purchased land on Mason Circle in Concord and built a new facility that included a greenhouse for mosquitofish rearing. CCMAD expanded services by conducting field surveys and testing the *Ixodes pacificus* tick for the Lyme disease spirochete. Research projects on wetlands were also initiated to determine ways to eliminate mosquito production and enhance wildlife habitat in the county.

In 1993, Contra Costa County transferred its rat and rabies risk reduction programs to CCMAD. Subsequently, CCMAD changed its name to Contra Costa Mosquito and Vector Control District (the District).

Mission Statement

The Contra Costa Mosquito and Vector Control District is a public health agency dedicated to protecting the community from mosquitoes and other vectors of disease.



Principles

The District is Committed To:

PUBLIC HEALTH: We use Integrated Vector Management (IVM) as our core approach to reducing risk to the community.

ENVIRONMENTAL STEWARDSHIP: We use materials and methods that meet or exceed all applicable regulatory requirements.

SCIENCE AND TECHNOLOGY: We work diligently with the scientific community to ensure that our methods are scientifically sound and to advance the state of the art of our discipline.

PUBLIC EDUCATION: We educate and help our residents understand the role they play in assisting us in reducing the risk from vectors of disease.

SAFETY: We are committed to the safety of employees and the public through ongoing attention to facilities, equipment, and training.

MANAGEMENT EFFECTIVENESS: We use management systems protocols, and methods that allow us to fulfill our mission in an efficient, transparent, and fiscally responsible manner.

TEAMWORK AND COLLABORATION: We believe that a productive work environment requires teamwork, active collaboration, and clear and open communication within and across all entities to develop the future.

Special District Classification

The Contra Costa Mosquito and Vector Control District is classified as an independent special district and is not a part of the County government. Contra Costa County encompasses the District's physical jurisdiction for mosquito and vector control services.

Special Districts Are:

- Formed by local residents to provide local services
- Sanctioned by the State of California Government Codes
- Often the most economical means of providing public service
- Independent agencies governed by a board of trustees
- Operated as nonprofit organizations
- Responsible directly to the people
- Accountable, accessible, efficient



Financials



Who Pays for District Services?

Contra Costa County property owners who pay property taxes along with benefit assessment charges fund District operations. The countywide benefit assessment was implemented in 1996 and it varies among four zones in Contra Costa County according to the benefit of District services and generates revenue that is used to provide mosquito and vector surveillance and control services to the residents. This revenue stream rose 4.5% in fiscal year 2025 compared to the prior fiscal year 2024, although Contra Costa County property tax assessed values have increased at a slower pace than in previous years. Contra Costa County property owners, who pay property taxes and assessments, are typically the source of almost all district revenue. In 2025, the District received 91% of its annual revenue from property taxes and benefit assessments, with approximately 72% of funding coming from property taxes to county parcels and approximately 19% coming from benefit assessment funds.

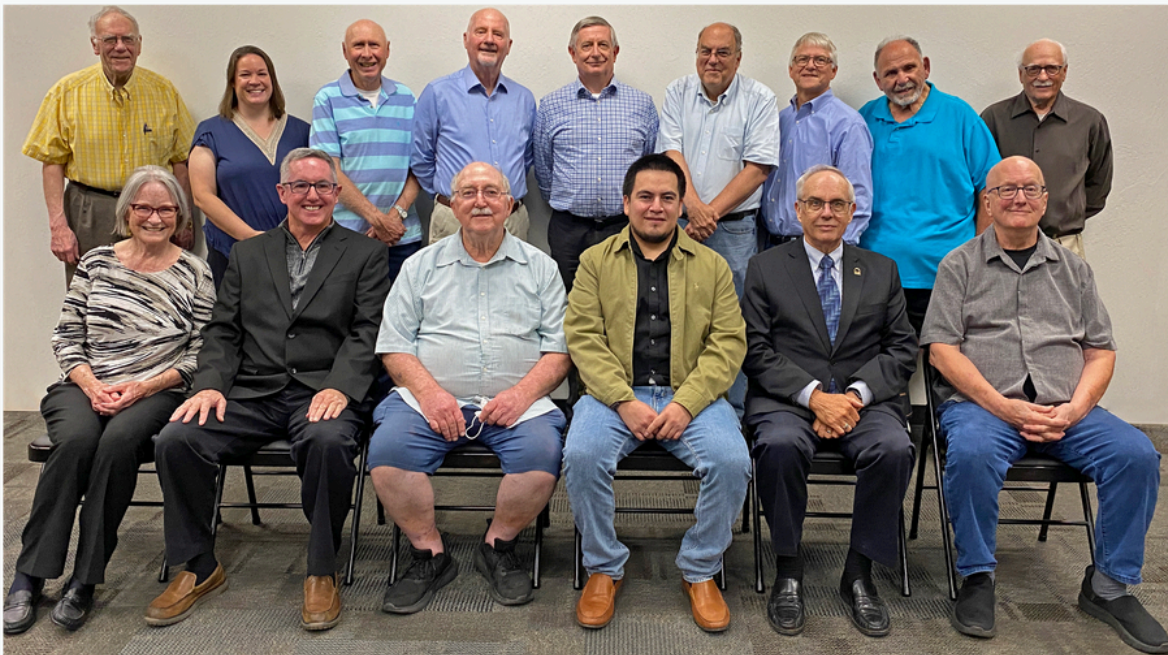
As mandated by government code, the District is annually audited by an outside firm. The firm audits the District's financial statements to obtain reasonable assurance that they are free of material misstatement, and conform to the generally accepted accounting principles (GAAP). The audit firm reviews accounting principles used, all financial disclosures, and the overall financial statement presentation. The District annually receives an Unqualified Opinion, which is the best opinion bestowed.

Revenues	2023/2024	2024/2025
Property Taxes	7,731,744	8,050,513
Benefit Assessment	2,086,779	2,093,231
Contracts	171,388	61,507
Interest	612,542	928,410
Miscellaneous	66,505	20,146
TOTAL REVENUES	10,668,958	11,153,807

EXPENDITURES	2023/2024	2024/2025
Salaries, Wages, Benefits	6,511,139	6,072,552
Operations	1,473,074	1,640,296
Capital	145,462	582,331
Debt Service (Principal and Interest)	0	41,664
TOTAL EXPENSES	8,129,675	8,336,843

Board of Trustees

The District's Board of Trustees consists of one trustee from each Contra Costa County city, appointed by their respective City Council, and three appointed by the County Board of Supervisors to provide guidance to the Mosquito and Vector Control District knowledgeably and effectively. They serve for a term of two or four years and are dedicated to serving the community.



Standing: Warren Clayton, Pinole; Jennifer Hogan, Pleasant Hill; Perry Carlston, Concord; Michael Krieg, Oakley; Peter Pay, San Ramon; Chris Dupin, Richmond; James Frankenfield, Moraga; Daniel Pellegrini, Martinez; Jim Dolgonas, El Cerrito

Seated: Peggie Howell, Walnut Creek; Chris Cowen, Contra Costa County; Richard Ainsley, Ph.D., Pittsburg; Alfredo Perez, Antioch; G. Mark Graham, Danville; Eric Hinzal, Clayton

Not Pictured: Damien Wong, Hercules; Darryl Young, Contra Costa County; James Pinckney, Contra Costa County; Vinnoy Mereddy, Brentwood; Kevin Marker, Orinda

Personnel

Administration

From Left to Right: Natalie Martini, Financial Administrator; Andrew Pierce, Public Information and Technology Officer; Nola Woods, Public Affairs Director; Emily Mendoza, Public Affairs Aide; Stacy Stark, Human Resources and Administration Manager; Christine Widger, Customer Service Specialist; and Paula Macedo, DVM, Ph.D., General Manager

Not Pictured: Wayne Shieh, IT Systems Administrator



Scientific Programs



From Left to Right: Eric Ghilarducci, Senior Vector Ecologist; Olivia Zaragoza, Laboratory Technician; Steve Schutz, Ph.D., Scientific Programs Manager; Damien Clauson, Vector Ecologist; and Annika Olson, Laboratory Technician

Personnel

Operations



Back Row: David Wexler, Operations Manager; John Boyd, Vector Control Technician (VCT); Chris Doll, VCT; Godwin Baladad, VCT; Elijah Bull, VCT; Steve Fisher, Vector Control Inspector (VCI); Miguel Munoz, VCI, Osvaldo "Obi" Mendoza, VCI; and Terry Davis, Operations Supervisor

Front Row: Tim Mann, Operations Supervisor; Rachel Mendoza, VCT; Heidi Budge, Vector Control Planner; Rubi Hernandez, VCT; Joe Cleope, VCI; Patrick Vicencio, VCI; Miaja McCauley, VCI; Shaun Redman, VCI; and Luis Franco, VCT

Not Pictured: Lawrence Brown, VCI, Josefa Cabada, VCI, and Brandon French, VCT



Programs and Services

Integrated Vector Management

Integrated Vector Management (IVM) is a decision-making process for the optimal use of tools for efficient, cost-effective, and sustainable control of vectors. The District implements IVM practices to guide decisions using an evidence-based approach that respects our environment. Interventions for a particular vector are based on the strengths, weaknesses, potential risks, and costs of each action, and a combination thereof, to determine what tactic is most appropriate for a given place and time.

Vector Surveillance

Investigating vector populations, vector habitats, and disease pathogens including trapping and laboratory analysis of vectors to evaluate populations and disease threats, and direct visual inspection of known or suspected vector habitats.



Physical Control

Managing vector habitat, especially through vegetation management, water control and maintenance or improvement of channels and other water sources, maintenance of paths, and trapping vectors that pose a threat to public health and welfare.



Public Education

Encouraging reduction or prevention of vector habitats on private and public property through shared information.



Biological Control

Rearing and stocking mosquitofish *Gambusia affinis*; and possibly using other predators or pathogens of vectors.



Chemical Control

Applying products including bacterial and selective insecticides to reduce populations of immature or adult mosquitoes and other invertebrate threats to public health, and rodenticides to control rats and other rodent threats to public health.

Programs and Services

Mosquitoes

Countywide Service: Inspection and control of mosquitoes including placement of mosquitofish in water features when appropriate. There are 23 established mosquito species in Contra Costa County. Bites can cause pain, allergic reaction and secondary infection. They can transmit viruses such as West Nile, St. Louis Encephalitis, Western Equine encephalomyelitis and other pathogens such as dog heartworm. The District regularly surveys 10,000+ acres of marshland, 60,000 acres of irrigated farmland and numerous ponds, creeks and residential sources countywide.



Rats and Mice

Residential Service: Inspection to identify potential attractants or habitat locations for rats and mice and advice for prevention and control. Two species of rats are common in Contra Costa County: the Norway rat and the roof rat. One species of mouse is common in Contra Costa County: the house mouse. Rats and mice can transmit pathogens of disease through waste products and nesting material. Viruses and bacteria that can be transmitted from rats and mice to humans are Salmonellosis, Leptospirosis, Hantavirus, and Arenavirus.



Skunks

Residential Service: Inspection and advice for residents on how to reduce potential contact/conflicts between humans and skunks to reduce the risk of rabies by discouraging skunks from visiting their property. Two species of skunks are common in Contra Costa County: Spotted Skunk and Striped Skunk. Skunks are natural predators of garden pests and rodents.



Ground-Nesting Yellowjackets

Residential Service: Inspection and control of ground-nesting yellowjackets only. Ground-nesting yellowjackets build nests in abandoned rodent burrows, the hollow areas near the root systems of shrubs, under railroad ties or under wood piles. They are natural predators of garden pests and incidental pollinators. Yellowjacket bites and stings are painful and can result in anaphylactic shock.



Ticks

District Service: The District provides a biting and stinging pest identification service that includes tick identification services and tips on tick bite prevention and tick removal for the public. Four species of ticks commonly bite people in Contra Costa County. The Western black-legged tick (*Ixodes pacificus*) transmits Lyme disease.



Honey Bees

Residential Service: Inspection and education about bees. Honey bees are beneficial insects and are essential for pollination of many native California crops and plants. Bee swarms are most likely docile unless provoked. Swarms typically move away in a day or two. District employees may treat bee swarms or hives that are a threat to people in public areas.



Mosquito and Disease Surveillance

Monitoring populations of mosquitoes and other disease vectors, and the pathogens they can transmit, is a critical component of the District's Integrated Vector Management (IVM) program, and District staff devote the majority of their time and effort conducting a comprehensive vector surveillance program.

Populations of the 23 distinct mosquito species known to occur in Contra Costa County and any invasive mosquito species are monitored through regular inspection and sampling of known larval habitats, and several different types of adult mosquito traps placed at strategic locations, including 'fixed' sites, which are monitored weekly, and 'random' sites, which change weekly based on factors such as disease detections, public complaints, and larval sample results.

Mosquito species known to carry disease-causing pathogens are also sampled for testing. In addition, during 'mosquito season,' staff collect dead birds reported by the public for virus testing. Certain species of birds, particularly those in the family *Corvidae* are very susceptible to West Nile virus. They can become sick and die within days after being bitten by infected mosquitoes. This makes them a sensitive indicator of virus transmission.

Staff also conduct regular testing of blood samples from flocks of 'sentinel chickens' for antibodies to West Nile and other mosquito-borne viruses. Unlike crows, chickens do not get sick or die, but the presence of virus-specific antibodies in their blood provides a clear indication that infected mosquitoes are present in the area.

Data collected by the District's surveillance program are mapped and used to monitor mosquito populations and determine changes in abundance and risks of disease transmission, helping to direct District employees in their control efforts. The data collected are also shared with other local and state public health agencies, the University of California, and the general public through the VectorSurv website and via regular local, statewide, and nationwide meetings and conferences.

In 2025, District staff consisted of a Scientific Programs Manager, two Vector Ecologists, two Laboratory Technicians and a student intern, who were collectively responsible for the District's surveillance program. In addition to monitoring mosquito populations staff also conducted testing for pesticide resistance in local mosquito populations, monitored the effectiveness of control operations, conducted applied research on vector surveillance and control methods, and identified ticks and other biting or stinging pests submitted by the public.



Mosquito and Disease Surveillance

Virus Surveillance

The District monitors for West Nile virus (WNV), Western equine encephalitis (WEE), and St. Louis encephalitis (SLE) viruses by collecting blood samples from 'sentinel' chicken flocks, collecting adult mosquitoes, and collecting dead birds reported by the public to the California West Nile Virus and Dead Bird Call Center.

Sentinel Chicken Flocks

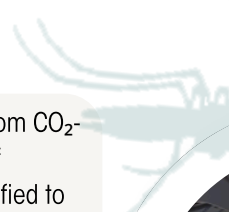
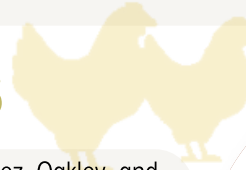
The District maintains four flocks of six chickens each, located in Walnut Creek, Martinez, Oakley, and Holland Tract (near Knightsen), and collects small blood samples bi-weekly to be tested for antibodies to WNV, WEE and SLE viruses at the California Department of Public Health (CDPH) laboratory in Richmond. In 2025, no sentinel chickens tested positive.

Mosquito Samples

Each week from April through October laboratory staff place and collect samples from CO₂-baited traps at 23 'fixed' locations throughout the County and a variable number of 'random' locations as dictated by other potential risk indicators. Samples are identified to species, and known disease vector species are pooled in groups of one to 50 and sent to the Davis Arbovirus Research and Training (DART) laboratory in Davis to be tested for WNV, WEE, and SLE viruses. In 2025, 313 pooled mosquito samples were submitted and three tested positive for WNV, all from the same location near Knightsen.

Dead Bird Surveillance

County residents are encouraged to participate in the dead bird surveillance program by calling the California West Nile Virus and Dead Bird Call Center at 1-877-WNV-BIRD or by filling out an online form at www.westnile.ca.gov. Call center personnel will determine whether a bird is a candidate for testing based on species, condition, and location. Call center personnel will then contact District staff to dispatch a District employee for pickup and testing if needed. Tests are conducted at the District laboratory for preliminary screening and at the DART laboratory at UC Davis. Regardless of whether or not a bird is picked up for testing, all reports are valuable since clusters of dead birds in a particular area can help to direct additional surveillance efforts. In 2025, 515 birds were reported, 53 were tested, and three were positive for West Nile virus. Two birds were from Walnut Creek, and one bird was from San Ramon.

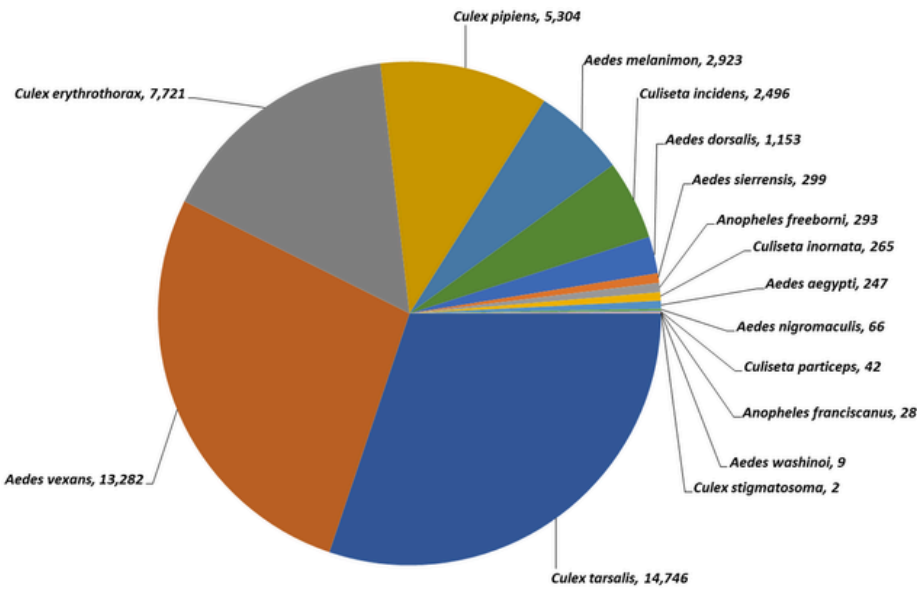


Mosquito and Disease Surveillance

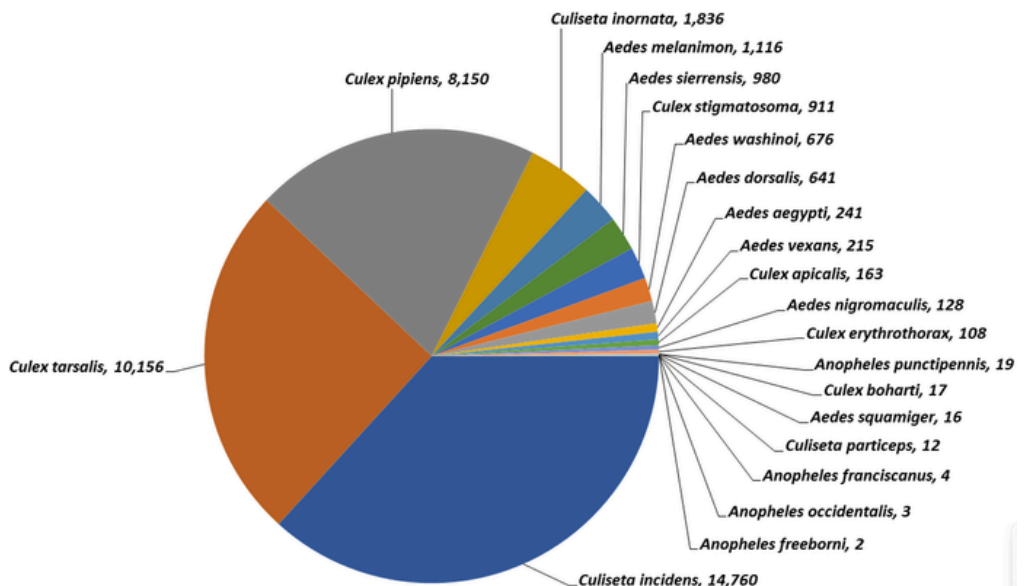
Mosquito Population Monitoring

The District maintains an extensive surveillance program for monitoring larval and adult mosquitoes, including 23 CO₂ traps at 'fixed' (weekly) sites, a variable number of CO₂ traps at 'random' locations, and up to 50 BG Sentinel traps for monitoring invasive species of mosquitoes. Laboratory staff also count and identify larval mosquito samples collected by District employees daily. In 2025, 52,719 larval and 48,309 adult mosquitoes were counted and identified.

Adult Mosquitoes Collected and Identified



Larval Mosquitoes Collected and Identified



Mosquito and Disease Surveillance

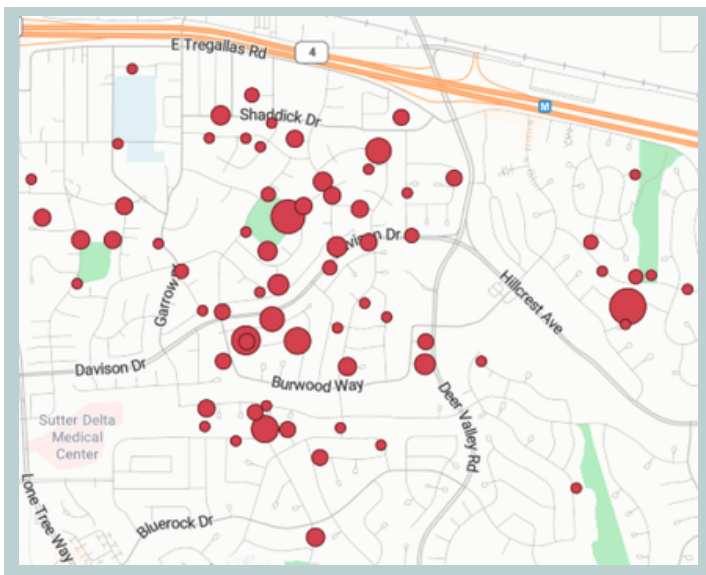
Invasive Mosquito Species Surveillance

Invasive (non-native) mosquito species, including the yellow fever mosquito *Aedes aegypti* and the Asian tiger mosquito *Aedes albopictus* have become established in parts of California and are gradually spreading throughout the State. These species are a concern because they are well-adapted to surviving in urban and suburban backyards, prefer to bite humans during the day, and are capable of transmitting a variety of disease-causing viruses including those that can cause dengue, chikungunya, Zika, and yellow fever.

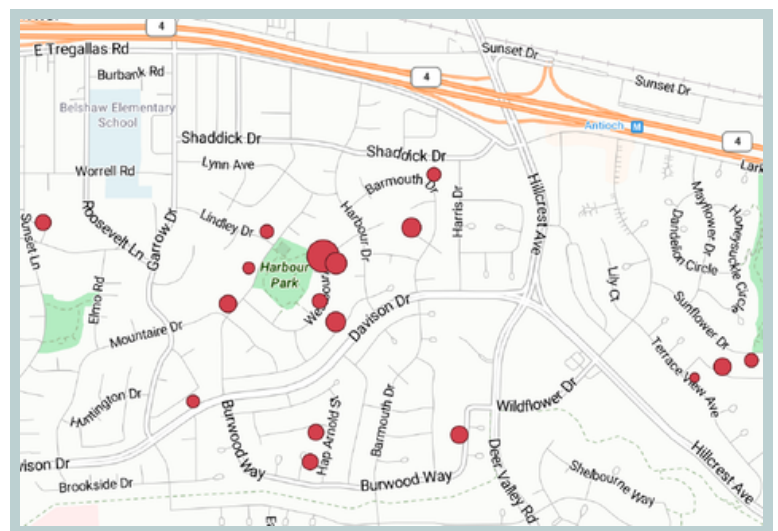
While travel-related cases of these viruses have been reported in California every year, there was little to no risk of secondary spread prior to the establishment of these invasive vector species. Recently, a few locally acquired cases have been reported in Southern California. The District's surveillance program has been setting special traps to monitor for the presence of these mosquitoes for several years, under the assumption that if invasive mosquitoes are detected early they can be stopped or their spread can be slowed. In 2022, *Aedes aegypti* were found in one neighborhood in the city of Martinez. An intensive effort was made to inspect all residential properties in the area and eliminate mosquito sources. No more were found in 2023. In 2024, a few adult *Aedes aegypti* were detected in the city of Concord and a much more extensive population was found in the city of Antioch, leading to additional door-to-door inspections and treatments. In 2025, the District continued to find both larval and adult *Aedes aegypti* in the same area of Antioch, although no additional spread of these invasive mosquitoes was detected.

In 2025, 352 adult *Aedes aegypti* and 241 larvae were collected in Antioch.

Adult *Aedes aegypti* Mosquitoes Collected in Antioch



Larval *Aedes aegypti* Mosquitoes Collected in Antioch



Biological Control

Mosquitofish

The mosquitofish, *Gambusia affinis*, has been used for many years as an effective biological control agent for mosquito larvae. A single adult female mosquitofish can consume up to 300 mosquito larvae per day. These hardy fish can be placed in unmaintained swimming pools, horse troughs and other man-made water sources where native fish are absent, and will survive and reproduce indefinitely as long as they are not exposed to extreme weather or water conditions.

Following an inspection to determine whether their use is appropriate, mosquitofish may be placed in locations including backyard ponds and unmaintained swimming pools as an environmentally friendly mosquito control tool.

The District's onsite fish facility provides a year-round holding, growth, and distribution location for mosquitofish. In 2025, the District placed a total of 13,979 mosquitofish.



Tick and Pest Insect Identification

District laboratory staff identify and provide information on samples of biting or stinging pests submitted by the public. Ticks that are identified as potential Lyme disease vectors can be returned to the submitter for Lyme disease testing, if desired. The District does not provide a testing service, in accordance with California Department of Public Health (CDPH) recommendations that tick tests should not be relied on for making medical decisions. In 2025, staff identified 64 samples, which included 27 ticks, nine of which were the potential Lyme disease vector *Ixodes pacificus* (Western blacklegged tick).



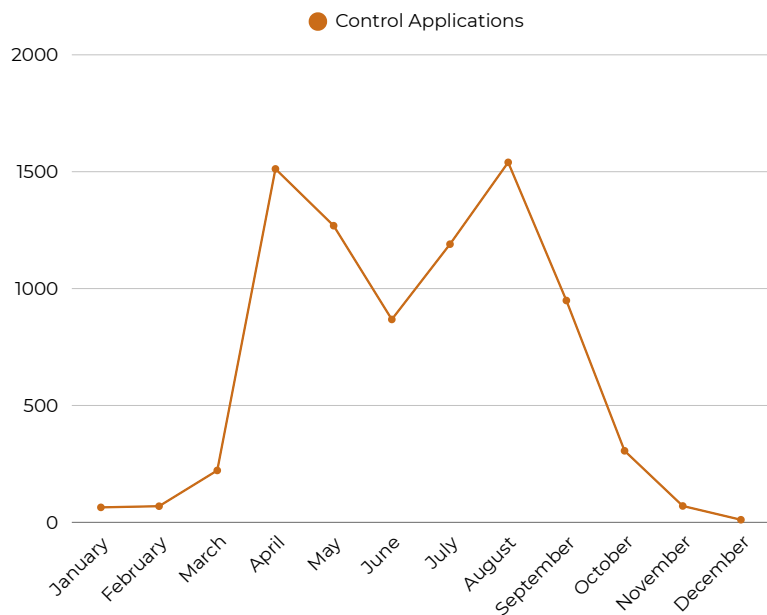
Operations

The District's Operations employees work year-round to reduce the risk of vector-borne disease across the 716 square miles of Contra Costa County by preventing vectors when possible and controlling them when necessary to protect the public health of 1.16 million County residents.

Mosquito Control Operations

Requests for the District's mosquito service accounted for 23% of all service requests received in 2025. 56,073 inspections were recorded, and 8,215 control applications were made in 2025. Throughout 2025, Operations employees continued their monitoring and inspection efforts to detect the presence of the invasive yellow fever mosquito, *Aedes aegypti*, which can transmit the viruses associated with dengue fever, chikungunya, yellow fever, and Zika, was detected again in 2025 in the city of Antioch. *Aedes aegypti* mosquitoes are well-adapted to lay their eggs in a variety of containers commonly found in residential backyards, including children's toys, tools, discarded cans, and planter dishes. District technicians conducted door-to-door visits from June to November to check residential front and backyards for the presence of eggs, larvae, and adults, as well as check for potential mosquito habitat sources.

Vector Control Planning is also part of the District's operations, and it aims to reduce or eradicate current vector sources as well as prevent new sources from being created. In 2025, 21 building permit applications were reviewed for potential vector-related concerns, and corresponding agencies were provided with appropriate feedback where warranted to prevent the creation of new vector habitats. In addition, 40 cemetery inspections were conducted at nine active cemeteries to check for mosquito larvae in flower urns and other containers. Each inspection was followed by a report that was emailed to the cemetery manager. The District continues to advocate for the use of sand and artificial flowers in cemetery vases instead of water to help control mosquito populations.



Operations

Unmanned Aircraft Systems

The District's Unmanned Aircraft Systems (UAS), also called drones, allowed for more efficient inspection of large wetland areas that are difficult to inspect on foot or by off-road vehicles. The information gathered by the UAS help the District plan appropriate treatment of these areas more efficiently. This furthers the District's ability to effectively utilize these systems to achieve operational goals. In 2025, the District achieved a major operational milestone by launching the first drone program in Contra Costa County to target mosquito larvae. This inaugural season delivered immediate and impactful results. Between June and October, the District logged 57 treatment flight hours, successfully covering approximately 998 acres of active areas of mosquito production. This was made possible by utilizing UAS to bypass the difficult, wetland terrain that is typically hard to access. Beyond active treatments, gathering aerial imagery enables the District to instantly pinpoint standing water and mosquito sources—rapidly acquiring critical data that was previously difficult and time-consuming to collect on foot.



Other Equipment

The District's mosquito control program utilizes three boats to access islands and marshes within Contra Costa County that are inaccessible by land. These vessels enable field staff to conduct inspections and implement control measures in these areas, mitigating potential impacts on Contra Costa County residents.

Additionally, the District employs four Argos (amphibious vehicles) to inspect and treat large marshland and wetland areas, and three side-by-side vehicles for inspections and control measures within irrigated pastures and agricultural lands. The District also utilizes a truck-mounted mist sprayer that can be used to conduct larval mosquito control. In a significant logistical operation in 2025, District staff mobilized to conduct a treatment on an island only accessible by boat. This required use of the Landing Craft, transporting all of the equipment including drones needed for the treatment and a generator that charged the drone batteries continuously. The effort resulted in a 50-acre treatment on the island.



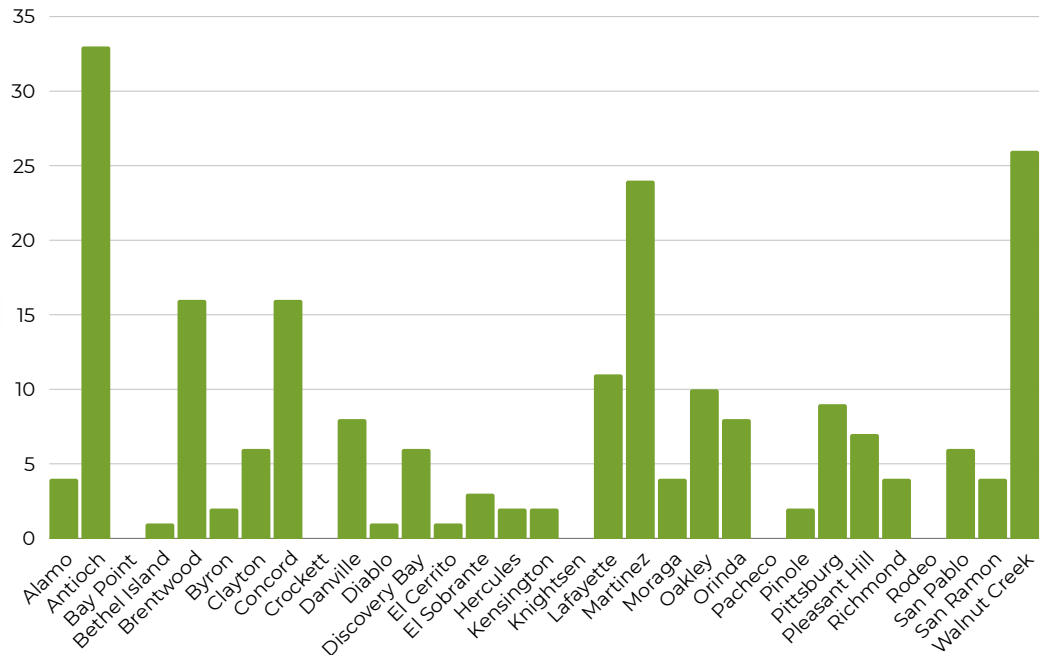
Operations

Unmaintained Swimming Pools

Unmaintained swimming pools continue to be sources of mosquito production throughout Contra Costa County, especially as rainfall refilled pools that were previously empty. In 2025, the District received 245 service requests related to unmaintained swimming pools. Of these, 182 pools were identified as having the potential for mosquito production, 52 pools were stocked with mosquitofish, and 40 pools were confirmed dry. Contact with property owners was unsuccessful at seven properties; these sites will be considered for inspection and possible abatement warrants in 2026.



● Unmaintained Pool Service Requests



Operations

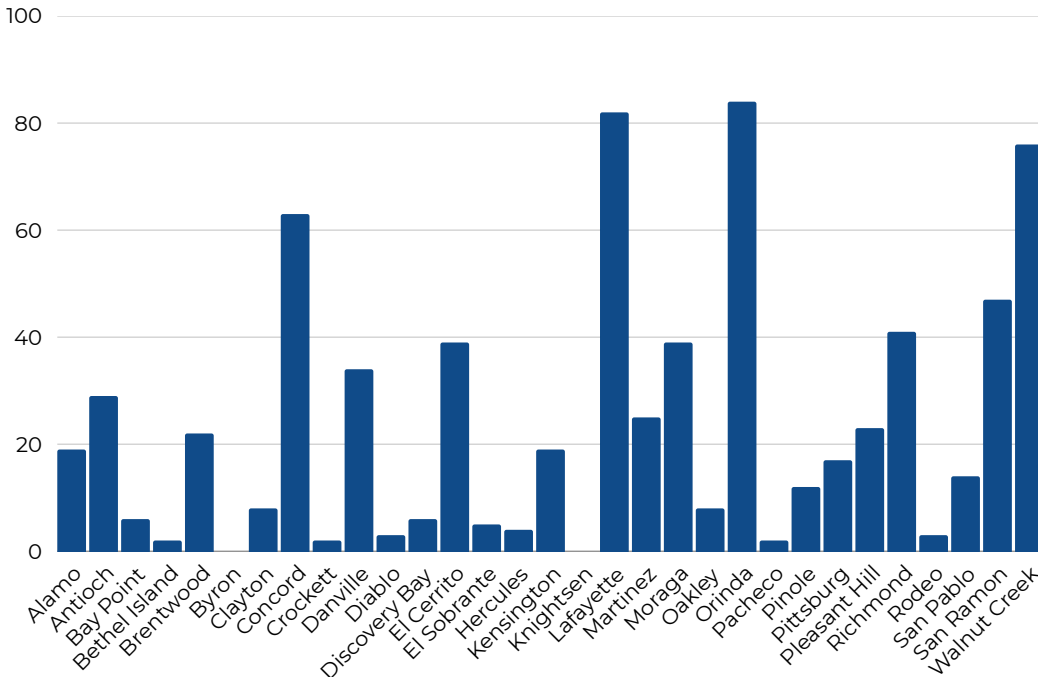
Rats and Mice

District employees provide exterior inspections and advice for residential and commercial property owners within Contra Costa County to reduce the risk of disease associated with rats and mice. The roof rat (*Rattus rattus*), Norway rat (*Rattus norvegicus*), and house mouse (*Mus musculus*) are of primary concern as they live close to humans, are associated with multiple diseases, and can cause significant damage to property and structures. The District received 734 requests for rat and mouse service in 2025. There was no significant change in the amount of rat and mouse activity throughout the County in 2025 compared to the previous year.

The District also conducts monitoring for rat and mouse activity in public spaces throughout Contra Costa County through the use of nontoxic monitoring blocks and suppresses these populations through the use of Environmental Protection Agency (EPA)-registered rodenticides. All products used for monitoring and control are deployed within heavy-duty steel vandal-resistant stations that prevent access by humans and non-target animal populations. Operations employees maintained approximately 145 stations throughout Contra Costa County in 2025 to monitor and suppress rats and mice. These stations are continuously monitored and moved depending on the observed activity at each location.



● Rat and Mouse Service Requests



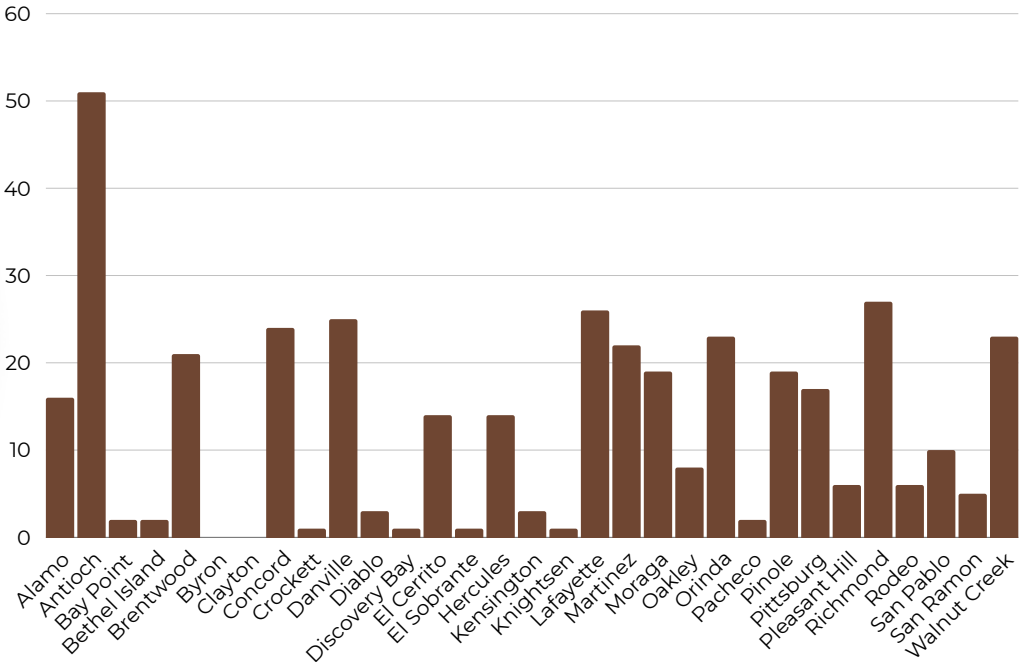
Operations

Skunks

While considered to be a potentially beneficial part of Contra Costa County’s ecosystem, skunks (*Mephitis mephitis*) are one of the primary reservoirs and vectors of rabies in California. Skunks can transmit the rabies virus through their saliva while biting other animals or humans. Rabies can infect the central nervous system and may lead to death if left untreated. The skunk program provides inspection and advice with a focus on informing residents on what they can do to deter and exclude skunks from their property. The best long-term solution is to change the environment, remove food sources, and exclude skunks from a residential property wherever possible.



● Skunk Service Requests



Operations

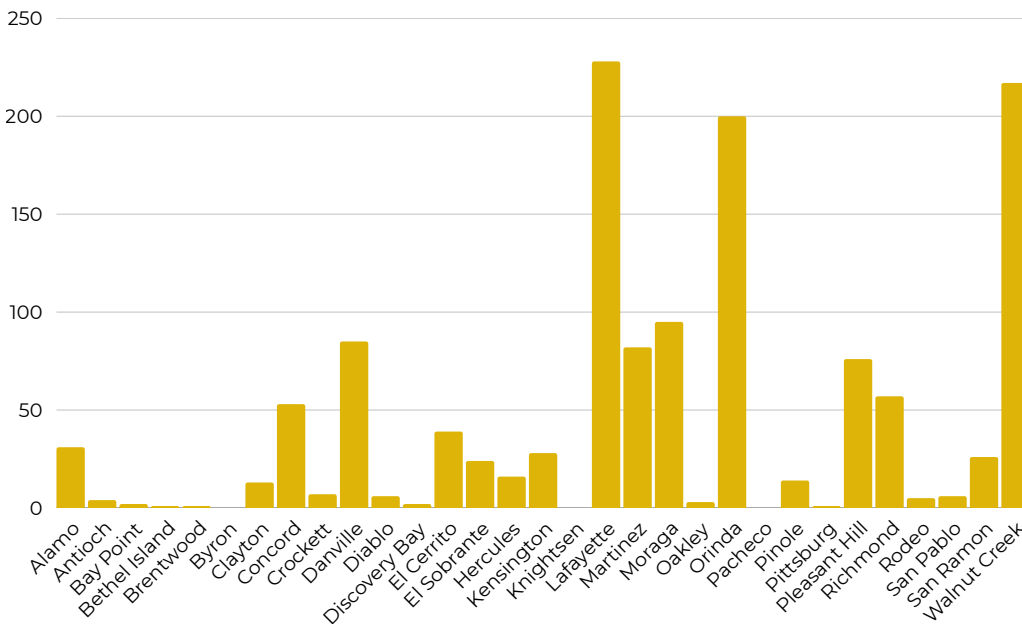
Yellowjackets

Of the four yellowjacket species commonly found in Contra Costa County, the western yellowjacket (*Vespula pennsylvanica*) is of particular concern. This species typically establishes underground nests within abandoned rodent burrows and other subterranean voids. When disturbed, yellowjackets can inflict multiple bites and stings, posing a risk of injury and potentially triggering severe allergic reactions. Because these ground-nesting yellowjackets aggressively seek meat and sugar at barbecues, picnics, and outdoor dining areas, human interaction is frequent, further increasing the risk of stings and bites. The District provides inspection and control services exclusively for ground-nesting yellowjacket nests.

In 2025, the District received 1,330 requests for yellowjacket service. District employees determined that 74% of these requests were nests that warranted control.



● Yellowjacket Service Requests



Operations

Honey Bees



European honey bees (*Apis mellifera*) are crucial pollinators for numerous flowers, crops, and other plant varieties. While generally docile, they will sting if threatened. The District's bee service primarily focuses on providing inspections for bee identification and educating residents about bee behavior. The District does not control established bee hives within structures or on private property. However, the District may address bee swarms or hives posing an immediate threat to public safety in areas such as shopping centers or schools. It is important to note that bee swarms typically relocate within a few days without intervention. Of the 104 requests the District received for bee service in 2025, many were referred to local beekeepers to safely collect and remove the swarms or hives without killing the bees.

Environmental Health

The District follows a Programmatic Environmental Impact Report (PEIR) that considers the effects of District actions while also being held accountable to a National Pollutant Discharge Elimination System (NPDES) permit issued by the California State Water Resources Control Board. NPDES permits are required by the U.S. Environmental Protection Agency and are intended to address water pollution by regulating point sources that discharge pollutants into waters of the United States. The District strives to be respectful of the environment, supporting a collaborative role in the protection of endangered species, conservation and restoration of Bay Area wetlands, and promotion of biorational (low environmental impact) control methods to protect the environment while also safeguarding public health. The District also complies with all state and local regulations regarding hazardous material storage and disposal, wastewater discharge, waste tire disposal, and stormwater discharge, helping to secure the District's lowest possible environmental impact.

As a steward of the environment, the District actively reviews ways to lower the District's carbon footprint. To that end, the District utilizes 100% green renewable energy to reduce the environmental impact the District has on Contra Costa County residents. With an emphasis on environmental stewardship, the District began a renovation project at the main District building, with special attention to lowering the District's impact on the environment. Some of these improvements have included adding EV charging infrastructure to support the District's EV vehicles, converting fluorescent lighting to LED, improved insulation R-value within the building's ducting, and replacement of the building's HVAC system. These efforts were recognized in 2025 when the District received a prestigious award for Leadership in Sustainability.



Training and Certification

District employees complete training sessions designed to ensure they meet or exceed the requirements set forth by all regulatory agencies with jurisdiction over the use of public health pesticides. In 2025, the District employed both online video training options and in-person events. Training sessions reviewed vector biology, control products, equipment, safety procedures, innovations in vector control, updates to District policies and procedures, instruction on the use of new software and technologies, current research topics, and laws and regulations relevant to vector control. Training enabled staff to continue to perform their work with confidence and skill while adhering to safe work practices. District employees are certified through the Vector Control Technician Certification Program of the California Department of Public Health (CDPH). District employees maintain state certification for public health work in vector control to ensure that best practices are followed via continuing education and state-proctored testing. Areas of focus include the safe and effective use of pesticides, the biology and control of mosquitoes, and other invertebrates and vertebrates of public health significance. Certification is renewed every two years through continuing education units provided through approved workshops, presentations, and conferences.

Public Affairs

As public education is a key part of the ecosystem-based strategy, Integrated Vector Management (IVM), the District's Public Affairs staff play an important role in sharing information with the public in an effort to better educate them on the public health risk that vectors of disease or harm present. Sharing the District's information with members of the public is also critical as staff work to gain their collaboration to reduce the risk of vectors, including mosquitoes, by dumping out standing water at least once each week.



Raising Awareness

Providing presentations and attending events are the primary ways the Public Affairs staff work to educate the people of Contra Costa County each year. In 2025, upon the detection of invasive *Aedes aegypti* in Antioch for a second year in a row, Public Affairs staff expanded the number of ways information is shared regarding important public health information with Contra Costa County residents. 30 presentations were provided to various community groups and schools. Staff also participated in 29 events during the year. The number of events in 2025 resulted in an 81% increase over the previous year's number of events.

Advertising

In 2025, the Public Affairs staff unveiled a new advertising campaign titled, "We Need You." This campaign was designed to strengthen the District's messaging that Contra Costa County residents play a significant role in the success of removing the risk of vectors of disease or harm from their own properties. The Public Affairs staff also continued to use seasonal advertising that focuses on the specific vector of disease or harm that is most prevalent during a specific time of year, in print and online advertising. In addition, the District's print advertising appears in community publications throughout Contra Costa County.



Public Affairs

Responding to Invasive Mosquitoes

As 2025 was the second year that the District detected the dangerous *Aedes aegypti* mosquitoes in Antioch, the Public Affairs staff increased the ways information is shared on what the District is doing and what Antioch residents can do to fight these dangerous mosquitoes. District staff sent 3,532 postcards with important information on *Aedes aegypti* mosquitoes to all of the Antioch residents who live within the area where this dangerous mosquito was detected. The District also worked with Antioch School officials to distribute 14,840 bilingual flyers about these mosquitoes to all 22 public schools in Antioch. The flyers were sent home with each student to share with their families. During the summer, Public Affairs staff also facilitated two Community Meetings at parks in Antioch so that residents could meet with District employees to get their questions answered in person.




CONTRA COSTA MOSQUITO & VECTOR CONTROL DISTRICT

The Contra Costa Mosquito and Vector Control District is a Public Health Agency that has been protecting the people of Contra Costa County from mosquitoes and other vectors of disease of harm since 1927.

FOUND IN ANTIOCH: The District found *Aedes aegypti* mosquitoes in Antioch in September 2024, and again in May 2025.

RISK OF DISEASE: *Aedes aegypti* are dangerous, day-time biting mosquitoes that can transmit the viruses that can cause dengue fever, Zika, yellow fever and chikungunya.

WHAT THE DISTRICT IS DOING: The District is setting traps to identify areas where this dangerous mosquito is present and inspecting properties where we found this mosquito in 2024. As we find more of these mosquitoes, we will inspect more properties in Antioch in an effort to control them.

WE NEED YOU: To dump out any amount of standing water because mosquitoes can develop from egg to adult in water. Contact the District if you experience day-time biting mosquitoes by phone at **925-685-9301** or online: ContraCostaMosquito.com.

District services are paid for by property taxes and benefit assessments, so there is no additional charge for a District service provided at a Contra Costa County residence.



Escaneen aquí para español



WANTED
HAVE YOU SEEN THIS MOSQUITO?



This dangerous, day-biting mosquito has now been found in ANTIOCH, and the Contra Costa Mosquito and Vector Control District needs your help to stop it.

It is dangerous because:

- DISEASES** — It can transmit the viruses that cause Dengue fever, Yellow fever, Zika, and chikungunya to people.
- DAY-BITING** — It typically bites people during the day when they are most likely outdoors.
- STEALTHY** — It is small, hides in shady areas, often bites people below the knee, and feeds quickly so you may not see this mosquito when it bites you.
- LOCAL TRANSMISSION** — Unlike West Nile virus mosquitoes that cannot transmit the virus directly from person to person, this mosquito CAN and DOES transmit viruses from infected to uninfected people. Local transmission of dengue fever has already been reported in areas of Southern California where this mosquito is present.

What You Can Do To Prevent This Dangerous Mosquito

DUMP and SCRUB — This mosquito lays individual eggs just above the water line of outdoor containers. The best way to prevent it is to DUMP out any amount of standing water in any outside container and SCRUB the inside of the container with soap to remove the eggs. Then, DUMP and SCRUB weekly.

CONTACT — The Contra Costa Mosquito and Vector Control District if you experience DAY-BITING Mosquitoes by phone: 925-685-9301 or online: www.ContraCostaMosquito.com.

PROTECTING PUBLIC HEALTH SINCE 1927

JOIN US at the
Contra Costa Mosquito and Vector Control District's
Antioch Community Meetings

When: Saturday, June 28, 2025, 10 a.m. – 2 p.m.
Where: Harbour Park Ashburton Drive and Lindley Drive
and Mountaire Park 3135 Sunset Lane
Why: Because We Need You to help us Protect Public Health!



2024 CCMVCD Community Meeting at Harbour Park in Antioch

The District has detected the dangerous, non-native mosquito *Aedes aegypti* in Antioch 2 years in a row. This day-time biting mosquito can transmit the viruses that cause dengue fever, Zika, yellow fever and chikungunya.

We invite you to talk with us and ask questions about what we are doing to control this dangerous mosquito and how you can help.

We Look Forward to Seeing you On June 28!

Public Affairs



News Coverage

Public Affairs staff issued 10 news releases in 2025. The news releases covered subjects including the detection of *Aedes aegypti* mosquitoes for the second year in a row, the first West Nile virus-infected mosquitoes to be found in Contra Costa County, and the District being honored with a Sustainability Award for the District's effort to make the remodeled District building environmentally sustainable.

The 10 news releases received coverage of 41 news stories from 18 news organizations, including KCBS Radio, KRON4 News, KPIX CBS5 News, ABC 7, NBC Bay Area, East Bay Times, SF Gate, The Mercury News, and the Antioch Herald. Among the news stories, two were published based upon a District newsletter which provided information on the District's rat and mouse service.

Social Media

The District utilizes social media as another means of outreach to residents of Contra Costa County. Social media posts include timely and creative messaging on the District's current social media vehicles: X, Nextdoor, Facebook, and Instagram. In 2025, the Public Affairs staff shared 183 posts on each social media vehicle, with the most popular posts ranging in topics from rat and mouse prevention tips to more light-hearted content.





CONTRA COSTA
**MOSQUITO
& VECTOR
CONTROL**
DISTRICT

155 Mason Circle
Concord, CA 94520



To request service, call
(925) 685-9301 or visit
www.ContraCostaMosquito.com

To receive board meeting agendas, newsletters,
mosquito control notifications, or District news
releases via email, please scan:



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